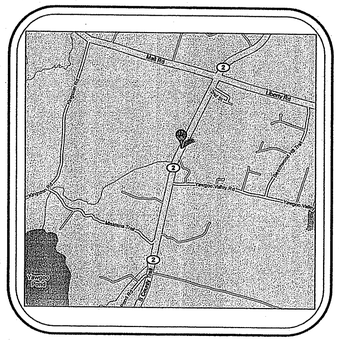
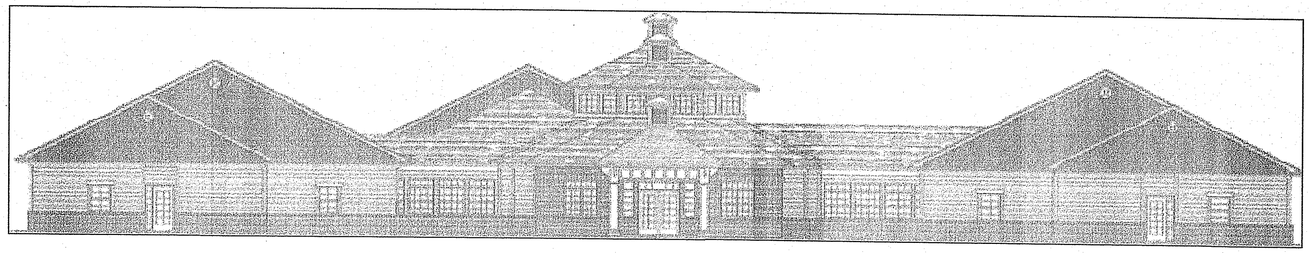
ALBION COURT of EXETER



LOCUS MAP
NOT TO SCALE

DIG-SAFE NOTE:
THE LOCATION OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED BY THE CONTRACTOR WITH THE APPROPRIATE UTILITY COMPANIES. CONTACT DIG-SAFE AT 1-888-344-7233.

SHEET INDEX:



RECEIVED
OCT - 6 2009
ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES

A 64 Bed Alzheimers Care Center for Excellence

prepared for

Jade Investment Group,LLC

567 South County Trail
Suite 111
Exeter, RI 02822

located at

South County Trail
Exeter, Rhode Island

Preliminary Submission

PERMIT SET

APPROVALS:

1. Reference is hereby made to an approved RIDEM Wetlands Insignificant Alteration Permit for Application # 06-0451 Dated: December 14, 2006.

2. Reference is hereby made to an approved RIDEM Preliminary Subdivision Suitability Determination for Application # S 11-51 Dated: April 18, 2007.

3. Reference is hereby made to an approved RIDEM Wetland Edge verification 06-0336.

Notes:
1. The lot is partially wooded.

2. This project includes a community well and the accompanying water main and appurtenances.

3. This project includes a utility corridor to include electric, telephone and cable services.

4. This project includes an Onsite Wastewater Treatment System sized for a 64 bed Specialized Memory Care Community.

5. This project includes provisions for collecting and treating storm waters.

6. The wetland edge was flagged by EA Engineering, Science & Technology, Inc. on 10/29/2007.

7. Wetland flags were located with a positional accuracy of +/- 1'.

8. Basemap and physical data were field surveyed by American Engineering, Inc. on 03/08/2007, Revised on 08/17/2007.

9. Basemap and physical data taken from field survey with a horizontal accuracy of +/- 1' and a vertical accuracy of +/- 1'.

10. A primary access point has been selected for the site and shall be protected with a construction entrance to prevent the tracking of soils on existing roads.

11. The location of all utilities shown are approximate and shall be field verified by the contractor at the time of construction.

12. All disturbed areas shall be protected as necessary from erosion and silting, in compliance with the Erosion Control Plan.

13. All catch basins are to be protected using a systematic haybale protection method until such time as the area has been completely stabilized.

14. All fills and trenches are to be properly compacted in lifts as necessary.

FEMA DETERMINATION
ZONE "C" - AREA OF MINIMAL FLOODING
PANEL NO. - 440032 0027 A
REVISED - March 1, 1982

Being A.P. 71-4-3 and a portion of A.P.71-4-12

ZONING: B
Minimum Lot Size: N/A
Minimum Street Frontage: 150'
Minimum Front Depth: 100'
Minimum Side Depth: 30'
Minimum Rear Depth: 75'

ZONING: RU-4
Minimum Lot Size: 4 Acres
Minimum Street Frontage: 300'
Minimum Front Depth: 100'
Minimum Side Depth: 80'
Minimum Rear Depth: 50'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV - 6 2009 FILE # _____
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

GENERAL NOTES

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE STATE OF RHODE ISLAND AND THE MUNICIPALITY PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR SHALL ALSO OBTAIN THE MOST RECENT MUNICIPAL AND RIDOT STANDARDS BEFORE PROCEEDING WITH CONSTRUCTION.
2. IT SHALL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF ALL EXISTING UTILITIES, STRUCTURES, AND ABUTTING PROPERTIES. THE COST OF ANY REPAIR OR REPLACEMENT OF DAMAGED ITEMS SHALL BE BORNE BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE MUNICIPAL ENGINEERING DEPARTMENT AND ALL UTILITY INSTALLATIONS AND INSPECTIONS WITH THE APPROPRIATE UTILITY CO.. A 48 HOUR ADVANCE NOTICE IS REQUIRED BEFORE WORK COMMENCEMENT.
4. ALL WORK PERFORMED HEREIN SHALL BE GOVERNED BY MUNICIPALITY REGULATIONS AND "RI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (REVISION OF 1971)," WITH ALL CORRECTIONS AND ADDENDA AND THE 1974 R.I. STANDARD DETAILS WITH ALL CORRECTIONS AND ADDENDA.
5. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR QUANTITY TAKE OFF IN COMPUTING ANY ESTIMATES.
6. EMBANKMENT SLOPES AND ALL DISTURBED AREAS ARE TO RECEIVE 4" OF TOPSOIL AND SEED. SEE EROSION CONTROL PROGRAM DETAILS.
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION INDICATED ON THESE PLANS. THAT INCLUDES ANY CONSTRUCTION TO BRING UTILITIES TO THE SITE, ANY REPAIRS, ANY TRENCHING REQUIRED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND SOIL EROSION CONTROL MEASURES.
9. THE LOCATION OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED BY THE CONTRACTOR WITH THE APPROPRIATE UTILITY COMPANIES. CALL DIG-SAFE 1(800)225-4977
10. IN ALL EXCAVATION AND PLACEMENT OF FILL THE CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE R.I. STANDARD SPECIFICATION SECTION 202.

TITLE SHEET
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM | Checked By: DrC
Scale: As Shown | Date: 7/14/2009

REVISIONS

NO.	REVISION	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09

DANIEL R. COTTA 5147 REGISTERED PROFESSIONAL ENGINEER

DANIEL R. COTTA 1918 PROFESSIONAL LAND SURVEYOR NO.

Per RIDEM

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail – Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

Sheet 1 of 19

C.0.0

of 1 sheets

Drawing No.
Dr. ____ Sh. ____

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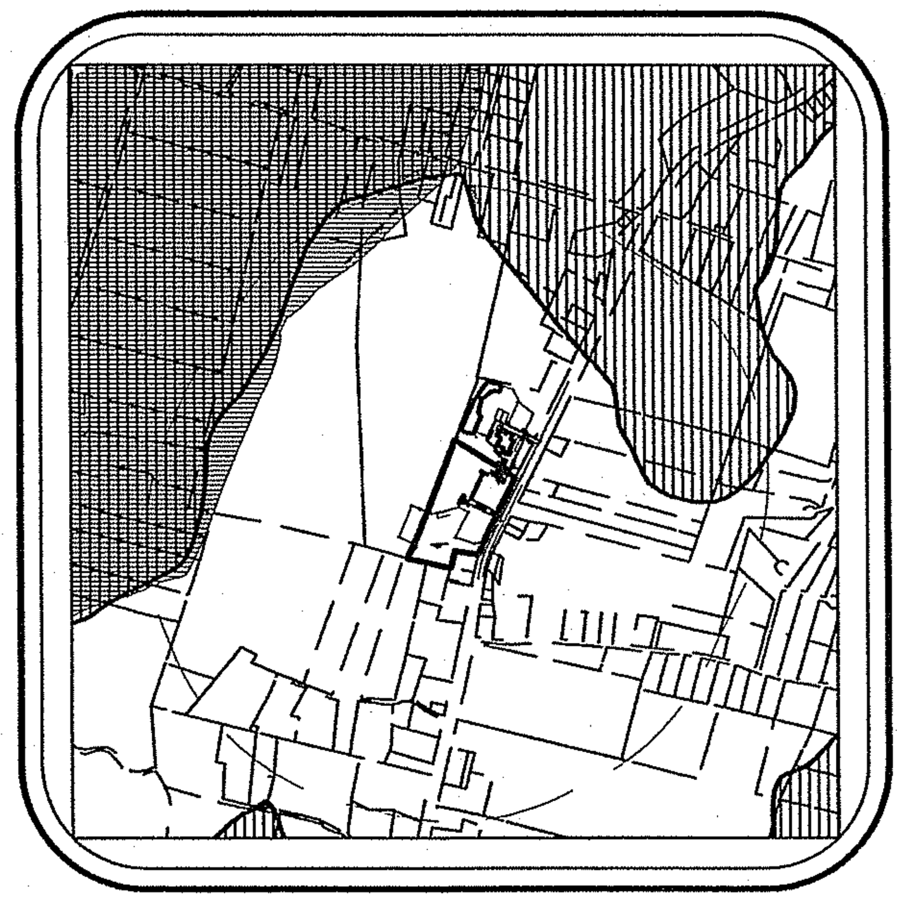


LOCUS MAP
NOT TO SCALE

Subdivision Plan
FOR
ALBION COURT of EXETER

Being A.P. 71-4-3 and a portion of A.P.71-4-12
Area of Proposed Development = 19.38 Acres

Owner / Applicant:
(AP 71-4-3)
Jade Investment Group,LLC
567 South County Trail
Suite 111
Exeter, RI 02822

Owner:
(AP 71-4-12)
Lena Novo, Trustee
110 Mail Road
Exeter, RI 02822

ZONING: B
Minimum Lot Size: N/A
Minimum Street Frontage: 150'
Minimum Front Depth: 100'
Minimum Side Depth: 30'
Minimum Rear Depth: 75'

ZONING: RU-4
Minimum Lot Size: 4 Acres
Minimum Street Frontage: 300'
Minimum Front Depth: 100'
Minimum Side Depth: 80'
Minimum Rear Depth: 50'

Notes:
1. The lot is partially wooded.
2. A portion of AP 71-4-12 lies within the Groundwater Overlay District and within the Natural Heritage Area. No area proposed for development fall within these zones.

APPROVALS
1. Reference is hereby made to an approved RIDEM Wetlands Insignificant Alteration Permit for Application # 06-0451 Dated: December 14, 2006.

2. Reference is hereby made to an approved RIDEM Preliminary Subdivision Suitability Determination for Application # S 11-51 Dated: April 18, 2007.

3. Reference is hereby made to an approved RIDEM Wetland Edge verification 06-0336.

LEGEND
- ANGLE POINT
- RI HIGHWAY BOUND FOUND
- UTILITY POLE FOUND
- 5/8" IRON ROD w/CAP SET
- DRILLHOLE FOUND
- STONEWALL FOUND
- TREELINE/ EDGE OF LANDSCAPING

REFERENCES:

1. Reference is hereby made to that certain Deed as recorded in the Clerk's Office in the Town Hall of the Town of Exeter in Land Evidence Book/Page 0160/0234.

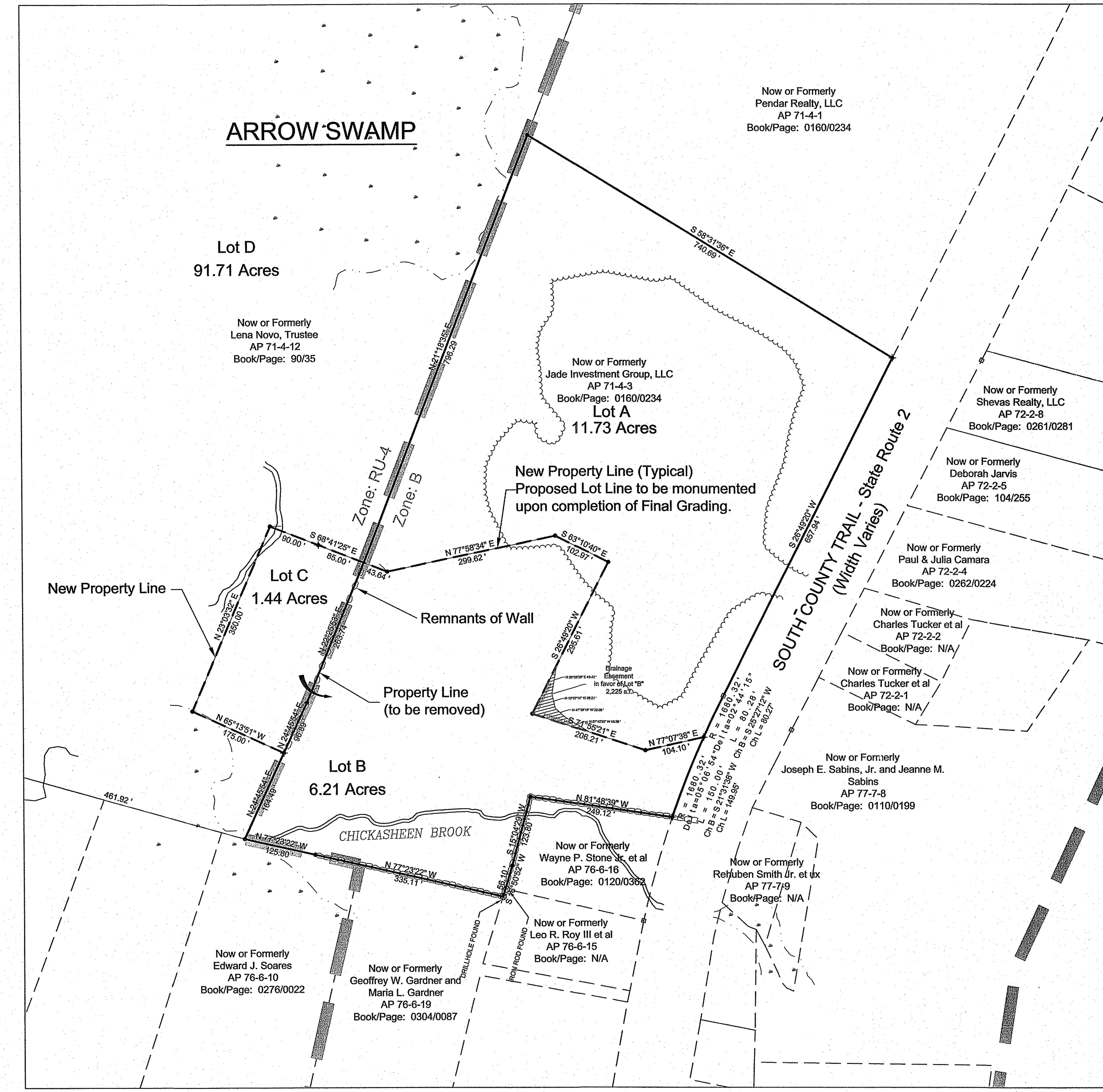
2. Reference is hereby made to that certain Deed as recorded in the Clerk's Office in the Town Hall of the Town of Exeter in Land Evidence Book/Page 90/35.

3. Reference is hereby made to that certain plan entitled "PLAN OF LAND FOR TUPELO INVESTMENT GROUP, LLC LOCATED AT SOUTH COUNTY TRAIL - RTE. #2 EXETER, R.I. SCALE 1" = 100' DATE: 6/30/2000 AMERICAN ENGINEERING DANIEL R. COTTA" said plan being recorded on November 9, 2000 in the Clerk's Office in the Town Hall of the Town of Exeter as Map #345.

4. Reference is hereby made to that certain plan entitled "PLAN OF LAND FOR TUPELO INVESTMENT GROUP, LLC LOCATED AT SOUTH COUNTY TRAIL - RTE. #2 EXETER, R.I. SCALE 1" = 100' DATE: 6/30/2000 AMERICAN ENGINEERING DANIEL R. COTTA Revised 12/11/00 and Revised 07/09/01" said plan being recorded on December 6, 2001 in the Clerk's Office in the Town Hall of the Town of Exeter as Map #360.

5. Reference is hereby made to that certain plan entitled " GEORGE JARVIS SR. EXETER, RHODE ISLAND MAP OF LAND LOCATED IN THE TOWN OF EXETER WASHINGTON COUNTY STATE OF RHODE ISLAND BY RAYMOND W. SCHWAB ASSOCIATES REVISED 1/19/71" said plan being recorded in the Town of Exeter Land Evidence Book/Page 31/69.

6. Reference is hereby made to RHODE ISLAND HIGHWAY PLAT #344.



100 0 100 200 300
Scale: 1" = 100'

Plan Purpose
The purpose of this plan is to show the combined Lot "C" with Lot "B", as a new lot.
Lot "A" being the remaining portion of A.P. 71-4-3 and
Lot "D being the remaining portion of A.P.71-4-12 .
A chart of explanation follows:

Existing Areas
Area of A.P. 71-4-3 = 17.94 Acres
Area of A.P.71-4-12 = 93.15 Acres
Total Area = 111.09 Acres

Proposed Areas
New Lot (B & C) = 7.65 Acres
Remainder of A.P. 71-4-3 (Lot A) = 11.73 Acres
Remainder of A.P. 71-4-12 (Lot D) = 91.71 Acres
Total Area = 111.09 Acres

THE PERIMETER SURVEY AND PLAN OF LOTS "A", "B" AND "C" CONFORMS TO A CLASS I STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.

BY: ______________________ 10/2/09
REGISTERED PROFESSIONAL LAND SURVEYOR DATE

RECEIVED
OCT - 6 2009
ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV - 6 2009 FILE # ______
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

THIS PLAN IS TO BE INDEXED
UNDER THE FOLLOWING ROADS:
1. South County Trail

Subdivision Plan
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM | Checked By: DrC
Scale: 1" = 100' | Date: 7/14/2009

REVISIONS

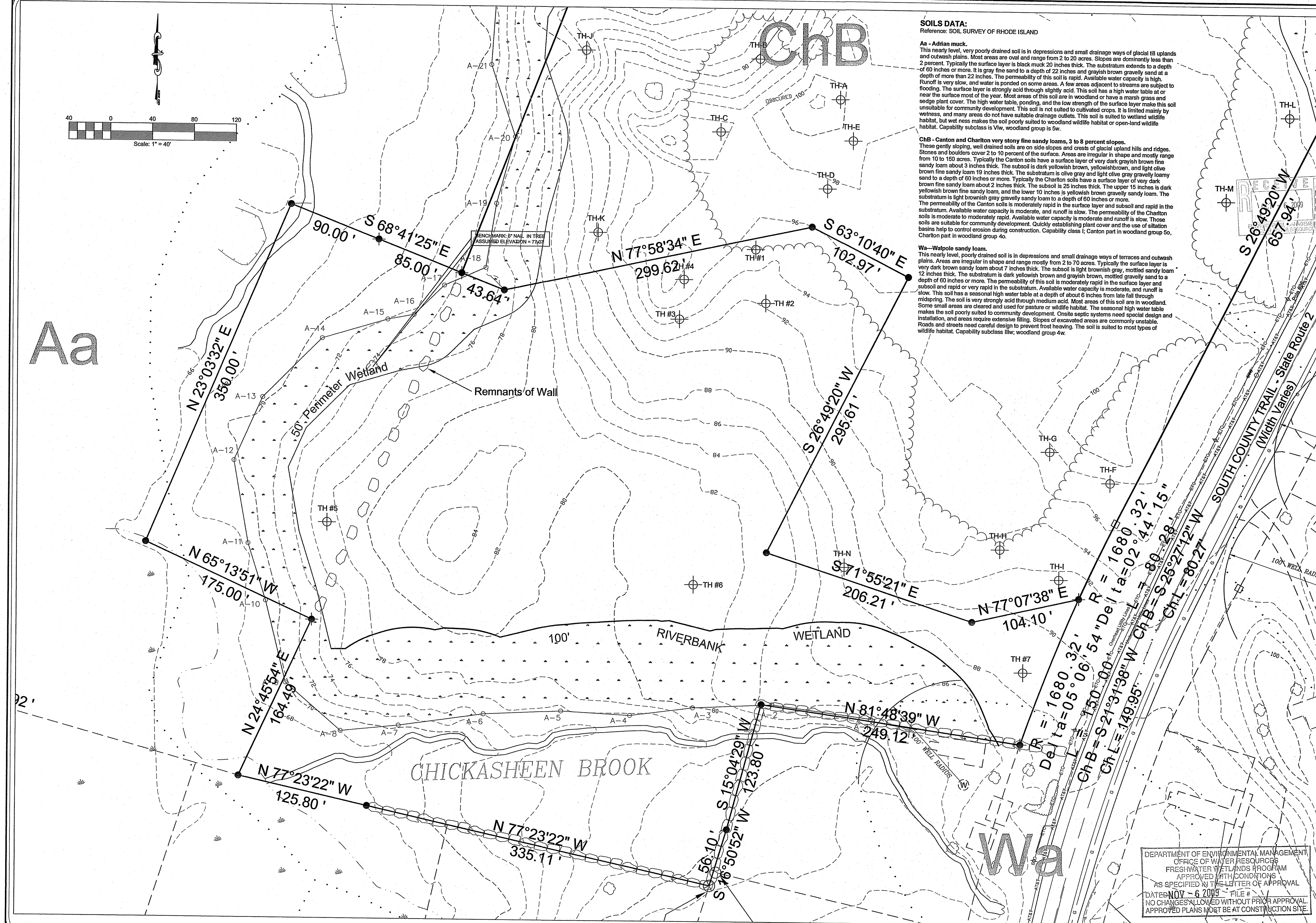
NO.	REVISION	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09

MATTHEW J. COTTA
NO.
PROFESSIONAL LAND SURVEYOR
10/2/09

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail - Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

C.1.0
of 1 sheets
Drawing No.
Dr. ______ Sh. ______

Z:\DWG\10910\1109101.dwg, C.1.0 SUBDIVISION PLAN, 10/1/2009 9:22:15 AM



SOILS DATA:

Reference: SOIL SURVEY OF RHODE ISLAND

Aa - Adrian muck.
This nearly level, very poorly drained soil is in depressions and small drainage ways of glacial till uplands and outwash plains. Most areas are oval and range from 2 to 20 acres. Slopes are dominantly less than 2 percent. Typically the surface layer is black muck 20 inches thick. The substratum extends to a depth of 60 inches or more. It is gray fine sand to a depth of 22 inches and grayish brown gravelly sand at a depth of more than 22 inches. The permeability of this soil is rapid. Available water capacity is high. Runoff is very slow, and water is ponded on some areas. A few areas adjacent to streams are subject to flooding. The surface layer is strongly acid through slightly acid. This soil has a high water table at or near the surface most of the year. Most areas of this soil are in woodland or have a marsh grass and sedge plant cover. The high water table, ponding, and the low strength of the surface layer make this soil unsuitable for community development. This soil is not suited to cultivated crops. It is limited mainly by wetness, and many areas do not have suitable drainage outlets. This soil is suited to wetland wildlife habitat, but wet ness makes the soil poorly suited to woodland wildlife habitat or open-land wildlife habitat. Capability subclass is Vlw, woodland group is 5w.

ChB - Canton and Charlton very stony fine sandy loams, 3 to 8 percent slopes.
These gently sloping, well drained soils are on side slopes and crests of glacial upland hills and ridges. Stones and boulders cover 2 to 10 percent of the surface. Areas are irregular in shape and mostly range from 10 to 150 acres. Typically the Canton soils have a surface layer of very dark grayish brown fine sandy loam about 3 inches thick. The subsoil is dark yellowish brown, yellowishbrown, and light olive brown fine sandy loam 19 inches thick. The substratum is olive gray and light olive gray gravelly loamy sand to a depth of 60 inches or more. Typically the Charlton soils have a surface layer of very dark brown fine sandy loam about 2 inches thick. The subsoil is 25 inches thick. The upper 15 inches is dark yellowish brown fine sandy loam, and the lower 10 inches is yellowish brown gravelly sandy loam. The substratum is light brownish gray gravelly sandy loam to a depth of 60 inches or more.
The permeability of the Canton soils is moderately rapid in the surface layer and subsoil and rapid in the substratum. Available water capacity is moderate, and runoff is slow. The permeability of the Charlton soils is moderate to moderately rapid. Available water capacity is moderate and runoff is slow. Those soils are suitable for community development. Quickly establishing plant cover and the use of siltation basins help to control erosion during construction. Capability class I; Canton part in woodland group 5o, Charlton part in woodland group 4o.

Wa—Walpole sandy loam.
This nearly level, poorly drained soil is in depressions and small drainage ways of terraces and outwash plains. Areas are irregular in shape and range mostly from 2 to 70 acres. Typically the surface layer is very dark brown sandy loam about 7 inches thick. The subsoil is light brownish gray, mottled sandy loam 12 inches thick. The substratum is dark yellowish brown and grayish brown, mottled gravelly sand to a depth of 60 inches or more. The permeability of this soil is moderately rapid in the surface layer and subsoil and rapid or very rapid in the substratum. Available water capacity is moderate, and runoff is slow. This soil has a seasonal high water table at a depth of about 6 inches from late fall through midspring. The soil is very strongly acid through medium acid. Most areas of this soil are in woodland. Some small areas are cleared and used for pasture or wildlife habitat. The seasonal high water table makes the soil poorly suited to community development. Onsite septic systems need special design and installation, and areas require extensive filling. Slopes of excavated areas are commonly unstable. Roads and streets need careful design to prevent frost heaving. The soil is suited to most types of wildlife habitat. Capability subclass IIIw; woodland group 4w.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATE: NOV - 6 2009 FILE #
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

Existing Conditions Plan
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM | Checked By: DrC
Scale: 1" = 40' | Date: 7/14/2009

REVISIONS

NO.	REVISION	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail - Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

Sheet 3 of 19

C.2.0

of 1 sheets

Drawing No.
Dr. ____ Sh. ____

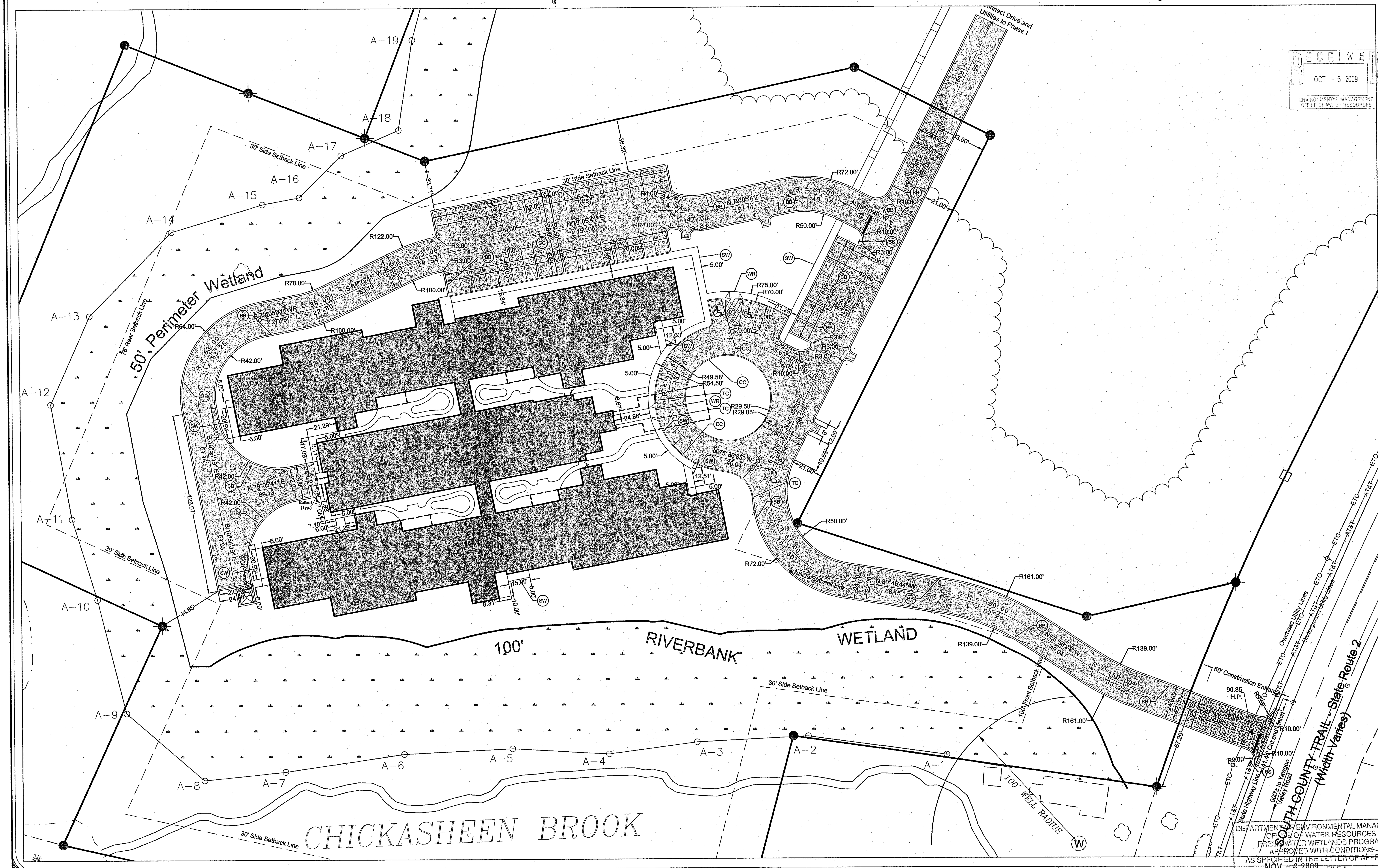
Z:\DWG\10910\109101.dwg, C.2.0 EXISTING CONDITIONS PLAN, 10/1/2009 9:21:54 AM

Dimensional Layout Plan
FOR
ALBION COURT of EXETER

30 0 30 60 90
Scale: 1" = 30'

LEGEND

- (CC) PRECAST CONCRETE LOT CURB - R.I.STD. 7.1.0
- (TC) PRECAST CONCRETE TRANSITION CURB - R.I.STD. 7.1.2
- (BB) BITUMINOUS BERM - R.I.STD. 7.5.1
- (PW) PAVED WATERWAY - R.I.STD. 8.4.0
- (SW) CEMENT CONCRETE SIDEWALK - R.I.STD. 43.1.0
- (WR) WHEELCHAIR RAMP - R.I.STD. 43.3.0
- (SS) STOP BAR & STOP SIGN - R.I.STD. 24.2.0



RECEIVED
OCT - 6 2009
ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV - 6 2009 FILE #
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

Dimensional Layout Plan
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM | Checked By: DrC
Scale: 1" = 30' | Date: 7/14/2009

REVISIONS

NO.	REVISION	BY	DATE
1	TOWN, RIDOT & WETLANDS COMMENTS	ERM	9/27/09

DANIEL R. COTTA
NO. 5147
REGISTERED PROFESSIONAL ENGINEER
10/2/09

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail - Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

Sheet 4 of 19

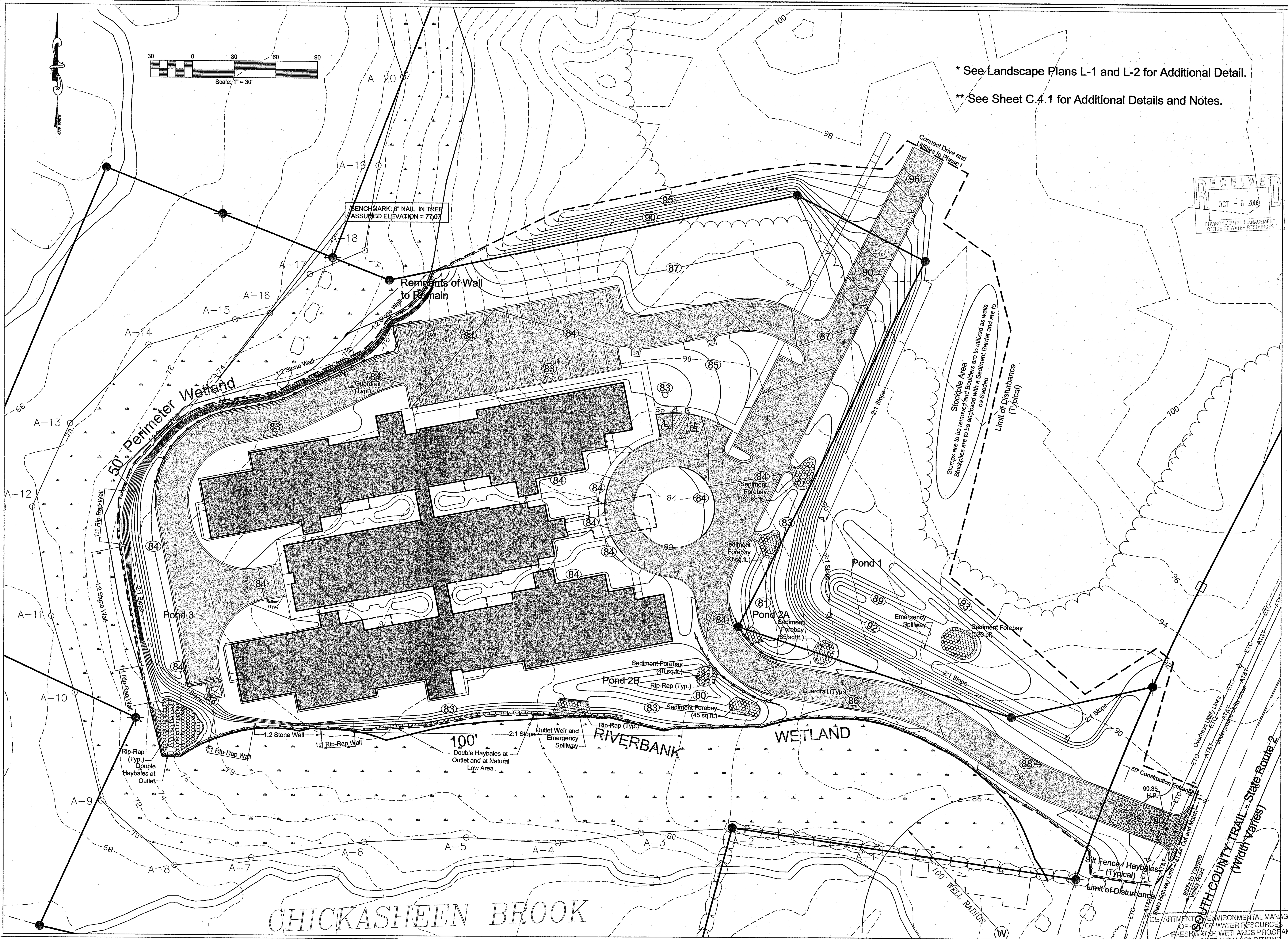
C.3.0

of 1 sheets

Drawing No.
Dr. ______ Sh. ______

* See Landscape Plans L-1 and L-2 for Additional Detail.

** See Sheet C.4.1 for Additional Details and Notes.



Scale: 1" = 30'
30 0 30 60 90
BENCHMARK: 6" NAIL IN TREE ASSUMED ELEVATION = 77.07
Remnants of Wall to Remain
50' Perimeter Wetland
1:2 Stone Wall
Guardrail (Typ.)
1:1 Rip-Rap Wall
1:2 Stone Wall
2:1 Slope
Pond 3
Pond 2B
Pond 2A
Pond 1
Sediment Forebay (61 sq.ft.)
Sediment Forebay (93 sq.ft.)
Sediment Forebay (85 sq.ft.)
Sediment Forebay (40 sq.ft.)
Sediment Forebay (45 sq.ft.)
Sediment Forebay (128 sf)
Emergency Spillway
Rip-Rap (Typ.)
Outlet Weir and Emergency Spillway
100' RIVERBANK
WETLAND
Double Haybales at Outlet and at Natural Low Area
Rip-Rap (Typ.) Double Haybales at Outlet
Stockpile Area
Stumps are to be removed and Boulders are to utilized as walls. Stockpiles are to be enclosed with a Sediment Barrier and are to be Seeded
Limit of Disturbance (Typical)
Connect Drive and Utilities to Phase I
Silt Fence / Haybales (Typical)
Limit of Disturbance
50' Construction Entrance
90.35 H.P.
Overhead Utility Lines
Underground Utility Lines
State Highway Line
SOUTH COUNTY TRAIL - State Route 2 (Width Varies)
100' WELL RADIUS
CHICKASHEEN BROOK

Soil and Erosion Control Plan
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM | Checked By: DrC
Scale: 1" = 30' | Date: 7/14/2009

REVISIONS

NO.	REVISION	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09

DANIEL R. COTTA, No. 5147, REGISTERED PROFESSIONAL ENGINEER, 10/2/09

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail - Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

Sheet 5 of 19

C.4.0

of 1 sheets

Drawing No. Dr. ____ Sh. ____

Z:\DWG\10910\109101.dwg, C.4.0 SOIL AND EROSION CONTROL PLAN, 10/1/2009 9:20:47 AM

General Legend

- Proposed Building
- Property Line
- Existing Index Contour (100)
- Existing Intermediate Contour
- Proposed Contour (95)
- Proposed Gas Line (G)
- Proposed Electric, Telephone and Cable (ETC)
- Proposed Water Line (W)
- Proposed Storm Drain
- Proposed Limit of Disturbance
- Proposed Haybales
- Proposed Siltfence
- Proposed 8" Roof Leader Line
- Proposed Low-Flow Pipe
- Proposed 4' Dia. Stand Pipe
- Proposed Catch Basin
- Proposed Flared End
- ProposedManhole
- Proposed 6' Dia. Catch Basin
- Stormtech Infiltrator Units
- Proposed Retaining Wall
- Proposed Head Wall
- Proposed Fire Tank
- Proposed Well (100' Well Radius)
- Proposed Grease Trap
- Proposed Septic Tank
- Proposed SepticTech Tank
- Proposed OWTS System - Shallow Concrete Chambers
- Proposed Stockpile Area (Stockpile Area)
- Proposed Rip-Rap
- Proposed Drainage Easement
- Proposed Project Sign
- Proposed Bollard (Bollard (Typ.))
- Proposed Paved Waterway
- Proposed Paved Drive/Parking Area
- Proposed Berm
- Proposed Centerline
- Proposed Curb
- Proposed Handicap Space
- Proposed Construction Access

EROSION CONTROL & SOIL STABILIZATION PROGRAM

1. DENUDED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.
2. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15, SHALL BE SEEDED OR PROTECTED BY THAT DATE FOR ANY WORK COMPLETED DURING EACH CONSTRUCTION PERIOD.
3. THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS, AND SHALL CONFORM WITH R. I. STANDARD SPECIFICATION M. 20.
4. THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS, BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOE EACH VARIETY.
5. THE DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING:

PERMANENT SEEDING MIXTURES:

A - MOWED AREA: ALL FLAT OR SLOPES LESS THAN 3:1

MIXTURE	% BY WT.	SEEDING DATES
RED FESCUE	75	APRIL 1 - JUNE 15
KENTUCKY BLUEGRASS	15	AUG. 15 - OCT. 15
COLONIAL BENTGRASS	5	
PERENNIAL RYEGRASS	5	

TOTAL 100#/ACRE

PERMANENT SEEDING MIXTURES:

B - UNMOWED AREA OR INFREQUENTLY MOWED: FLAT OR SLOPES GREATER THAN 3:1

MIXTURE	% BY WT.	SEEDING DATES
RED FESCUE	75	APRIL 1 - JUNE 15
PERENNIAL RYEGRASS	5	AUG. 15 - OCT. 15
COLONIAL BENTGRASS	5	
BIRDSFOOT TREFOIL	15	

TOTAL 100#/ACRE

6. TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW OR FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
7. HAY OR STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 3000-4000 LBS/AC.
8. ALL HAYBALES OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED. IF NEEDED, TEMPORARY SEEDING CAN BE USED TO HELP MINIMIZE EROSION. A TEMPORARY SEEDING GUIDE MUST BE INCLUDED AS A REFERENCE. THE FOLLOWING SPECIES ARE RECOMMENDED:

SPECIES	LBS/ACRE	LBS/1,000 SQ. FT.	SEEDING DATES
ANNUAL RYEGRASS	60	1.5	MAR. 15 - JUNE 15
PERENNIAL SUDAN GRASS	40	1.0	MAY 15 - AUGUST 15
MILLET	40	1.0	MAY 15 - AUGUST 15
WINTER RYE	120	3.0	AUGUST 15 - JUNE 15
OATS	120	3.0	MAR. 15 - JUNE 15
WEEPING LOVEGRASS	20	0.5	MAY 1 - JUNE 30

9. THE CONTRACTOR MUST REPAIR AND OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE.
10. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THRU OCT. 15TH.
11. ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH THE R.I.D.P.W. STANDARD SPECIFICATIONS SECTION 202.
12. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN 15 DAYS OF FINAL GRADING.
13. STOCKPILES OF TOPSOILS SHALL NOT BE LOCATED NEAR WATERWAYS OR WETLANDS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 30% AND STOCKPILES SHALL ALSO BE SEEDED AND/OR STABILIZED.
14. ON BOTH STEEP AND LONG SLOPES CONSIDERATION SHOULD BE GIVEN TO "CRIMPING" OR "TRACKING" TO TACK DOWN MULCH APPLICATIONS.
15. REFERENCE THE SEDIMENTATION CONTROL PROGRAM AND ORDER OF PROCEDURE FOR PROPER COORDINATION.

MAINTENANCE AND RESPONSIBILITY

1. THE CONSTRUCTION SUPERINTENDANT SHALL HAVE THE SOLE RESPONSIBILITY FOR THE DESIGN IMPLEMENTATION. HE SHALL ALSO BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION WORKERS AND SUB-CONTRACTORS ARE AWARE OF THE PROVISIONS OF THE PLAN AND THE ENGINEER'S REPORT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ASPECTS OF THE DESIGN PRIOR TO FINAL APPROVAL BY THE TOWN. DURING THAT TIME, ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHOULD BE CHECKED ON A WEEKLY BASIS AS WELL AS AFTER EACH SIGNIFICANT RAINFALL. ALL SUCH MEASURES SHOULD BE CLEANED OR REPLACED AS NECESSARY.
3. REPLANTING, REGRADING OR OTHER REPAIRS NEEDED AS A RESULT OF EROSION AND SEDIMENTATION SHOULD BE DONE PROMPTLY.
4. ALL VEGETATION NOT SURVIVING AT LEAST ONE FULL GROWING SEASON SHALL BE REPLACED AT THE OWNERS EXPENSE.
5. UPON PROJECT COMPLETION, THE SITE OWNER SHALL ADHERE TO THE FOLLOWING MAINTENANCE RECOMMENDATIONS:

A. MOWING:

THE MOWING OF GRASS IN AND AROUND THE BASIN SHOULD BE DONE AT LEAST ONCE PER GROWING SEASON, PREFERABLY AFTER AUGUST 15 TO PROTECT GROUND NESTING BIRDS AND OTHER ANIMALS. MORE FREQUENT MOWINGS WILL BE REQUIRED FOR BASINS MAINTAINED AS RECREATIONAL OR OPEN SPACE FACILITIES. TRASH AND LITTER MUST BE REMOVED DURING MOWING OPERATIONS.

B. INSPECTIONS:

THE STRUCTURAL INTEGRITY OF THE BASIN, ESPECIALLY ANY IMPOUNDING STRUCTURES, SHOULD BE INSPECTED ON AN ANNUAL BASIS. IN ADDITION, THE INLETS FOR THE BASIN SHOULD ALSO BE INSPECTED ANNUALLY. ANY DEFICIENCIES MUST BE CORRECTED IMMEDIATELY AFTER OBSERVATION. THE BASIN AND ALL STRUCTURES SHOULD BE INSPECTED MORE OFTEN DURING THE FIRST YEAR OF OPERATION, ESPECIALLY AFTER LARGE STORMS, TO ENSURE PROPER STABILIZATION AND FUNCTION.

- EMBANKMENT SUBSIDENCE
- EROSION
- CRACKING
- TREE GROWTH
- OUTLET & SPILLWAY CONDITION
- SEDIMENT ACCUMULATION
- SLOPE STABILITY

ANY DEFICIENCY NOTED DURING THE INSPECTION WILL BE IMMEDIATELY REPAIRED OR REPLACED. IF ENCOUNTERED, TRASH, DEBRIS, ETC. SHOULD BE REMOVED FROM THE DRAINAGE SYSTEM AT LEAST TWICE A YEAR.

RESEEDING OF ANY ERODED OR BARE SPOTS IN OR AROUND THE BASIN MUST BE DONE IMMEDIATELY FOLLOWING EXAMINATIONS TO PREVENT SUBSEQUENT SOIL EROSION. MAINTAINING A FULLY VEGETATED BASIN WITH HEALTHY GRASS IS PARAMOUNT TO A SUCCESSFULLY OPERATING FACILITY.

C. SEDIMENT REMOVAL:

FOLLOWING CONSTRUCTION, THE POND AND BASIN ARE TO BE CLEANED OF ACCUMULATED SEDIMENT ONCE EVERY TEN YEARS. THE RESULTING POND CONDITION AFTER SEDIMENT REMOVAL MUST BE THE ORIGINAL DESIGN CONDITIONS.

ALL REMOVED SEDIMENT IS TO BE TESTED TO DETERMINE POLLUTANT CONTENT. THE SEDIMENT IS TO BE PROPERLY DISPOSED IN UPLAND AREAS BASED UPON THE TEST RESULTS AND LOCAL, STATE AND FEDERAL REGULATIONS.

D. CATCH BASINS, MANHOLES AND DRAIN LINES:

AN INSPECTION MUST OCCUR ON AN ANNUAL BASIS BY QUALIFIED PERSONNEL TO ENSURE PROPER OPERATION. THE INSPECTION SHOULD, AS A MINIMUM, CONCENTRATE ON THE FOLLOWING:

- DAMAGE TO GRATE/COVER
- EVIDENCE OF STANDING WATER
- DEBRIS REMOVAL
- STRUCTURAL ALIGNMENT/INTEGRITY

ANY DEFICIENCY NOTED DURING THE INSPECTION WILL BE IMMEDIATELY REPAIRED OR REPLACED.

SEDIMENTATION CONTROL PROGRAM

1. ALL DISTURBED AREAS SUBJECT TO EROSIVE TENDENCIES WHETHER THEY ARE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SUITABLE SLOPE PROTECTION.
2. DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL.
3. CARE SHALL BE TAKEN SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING EITHER EXISTING OR PROPOSED DRAINAGE OR SEWER STRUCTURES.
4. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED PERIODICALLY AND AFTER PERIODS OF RAINFALL. SUCH DEVICES SHALL BE REPAIRED OR REPLACED AS NEEDED.
5. CARE SHALL BE TAKEN SO AS NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECT TO STORM WATER FLOW.
6. ADDITIONAL HAYBALES, SILT FENCE OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
7. REFERENCE THE "RHODE ISLAND EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1989, WITH ANY AMENDMENTS, AS A GUIDE.

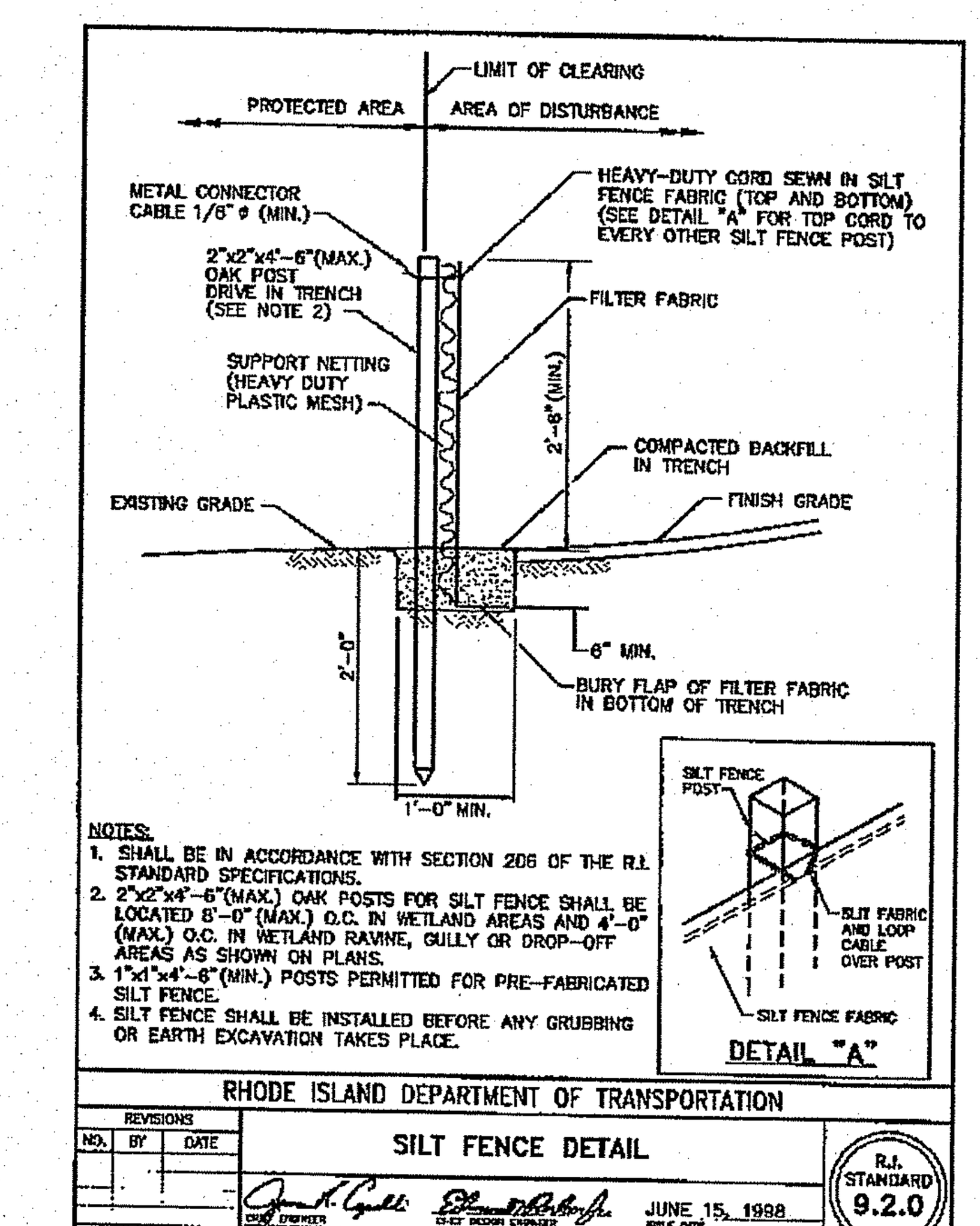
ORDER OF PROCEDURE

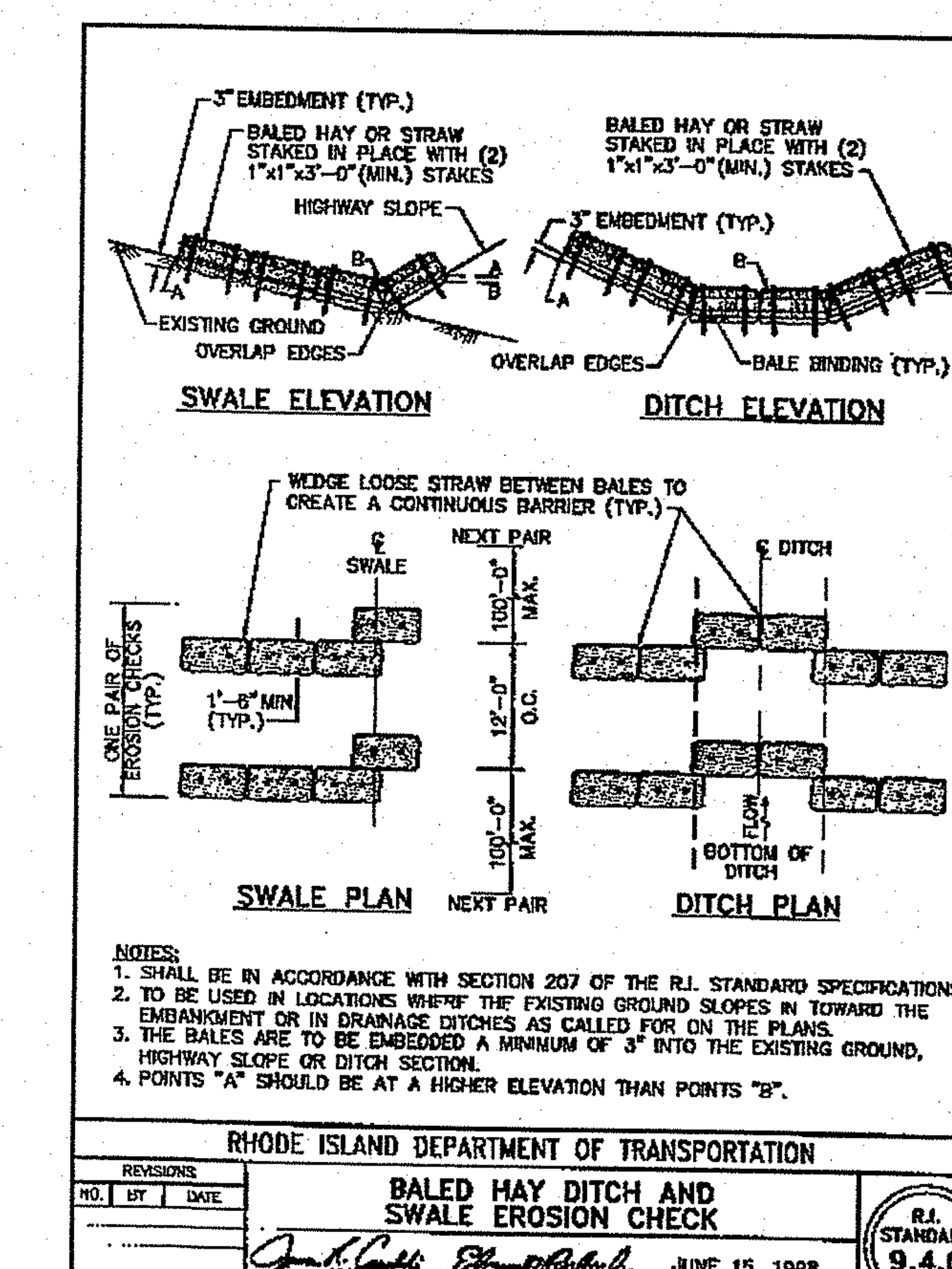
1. IMMEDIATELY UPON COMPLETION OF THE CLEARING AND GRUBBING OPERATION AND PRIOR TO ANY GRADING, TEMPORARY HAYBALES, SILTFENCE OR SANDBAGS SHALL BE PLACED OUTSIDE THE LIMITS OF DISTURBANCE AS SHOWN ON THE PLANS. (I.E. ALONG NEW ROADWAYS, STREAMBANKS, CRITICAL AREAS, ETC.)
2. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PERIODICALLY CLEANED AND MAINTAINED AS PER THE RESPECTIVE PROGRAMS DURING THE CONSTRUCTION OR AS DIRECTED BY THE TOWN OR BY THE ENGINEER.
3. IF WORK PROGRESS IS TO BE INTERRUPTED AT ANY TIME, REFERENCE EROSION AND SEDIMENTATION CONTROL PROGRAMS FOR TEMPORARY CONTROL.

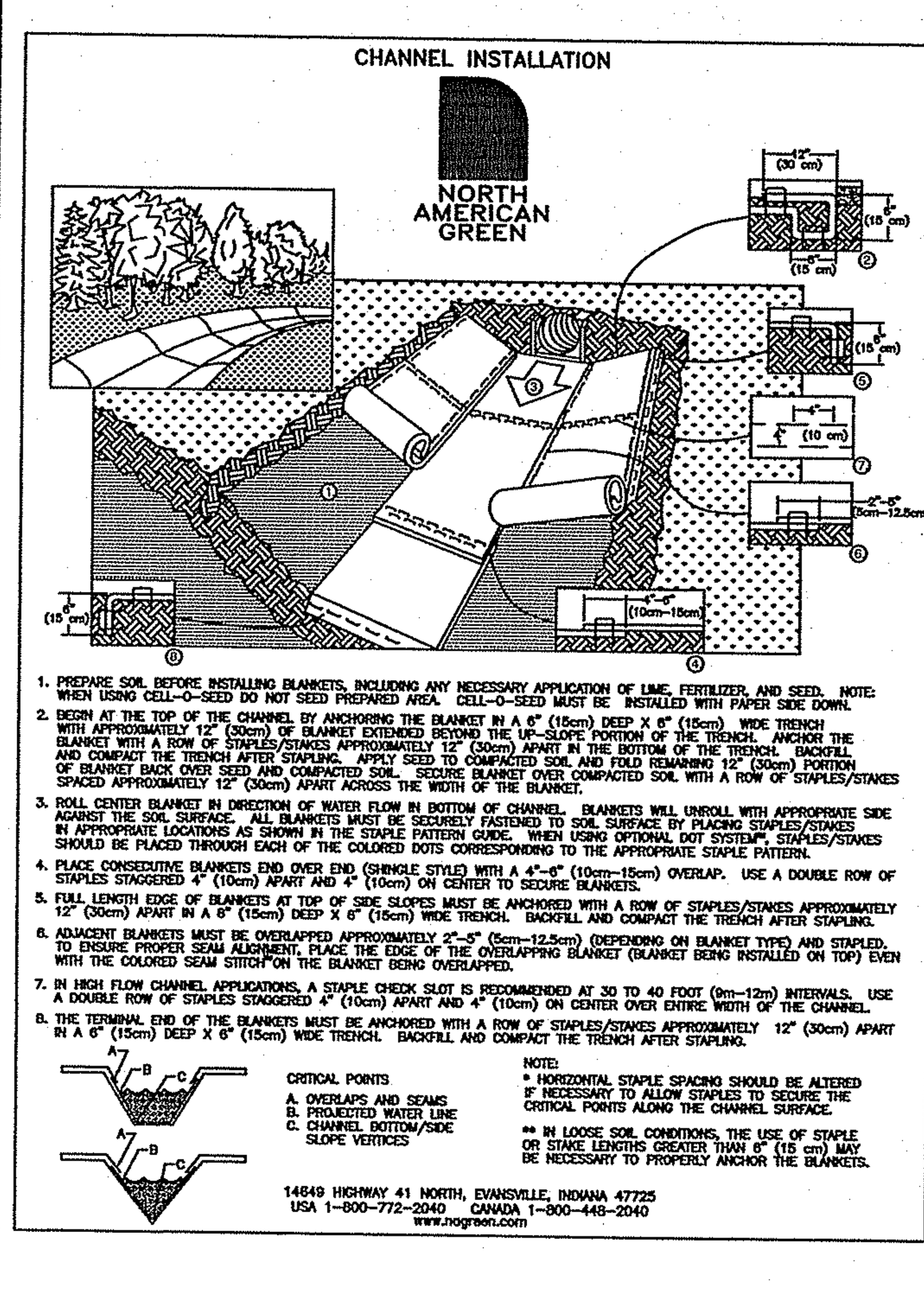
Drain Note:

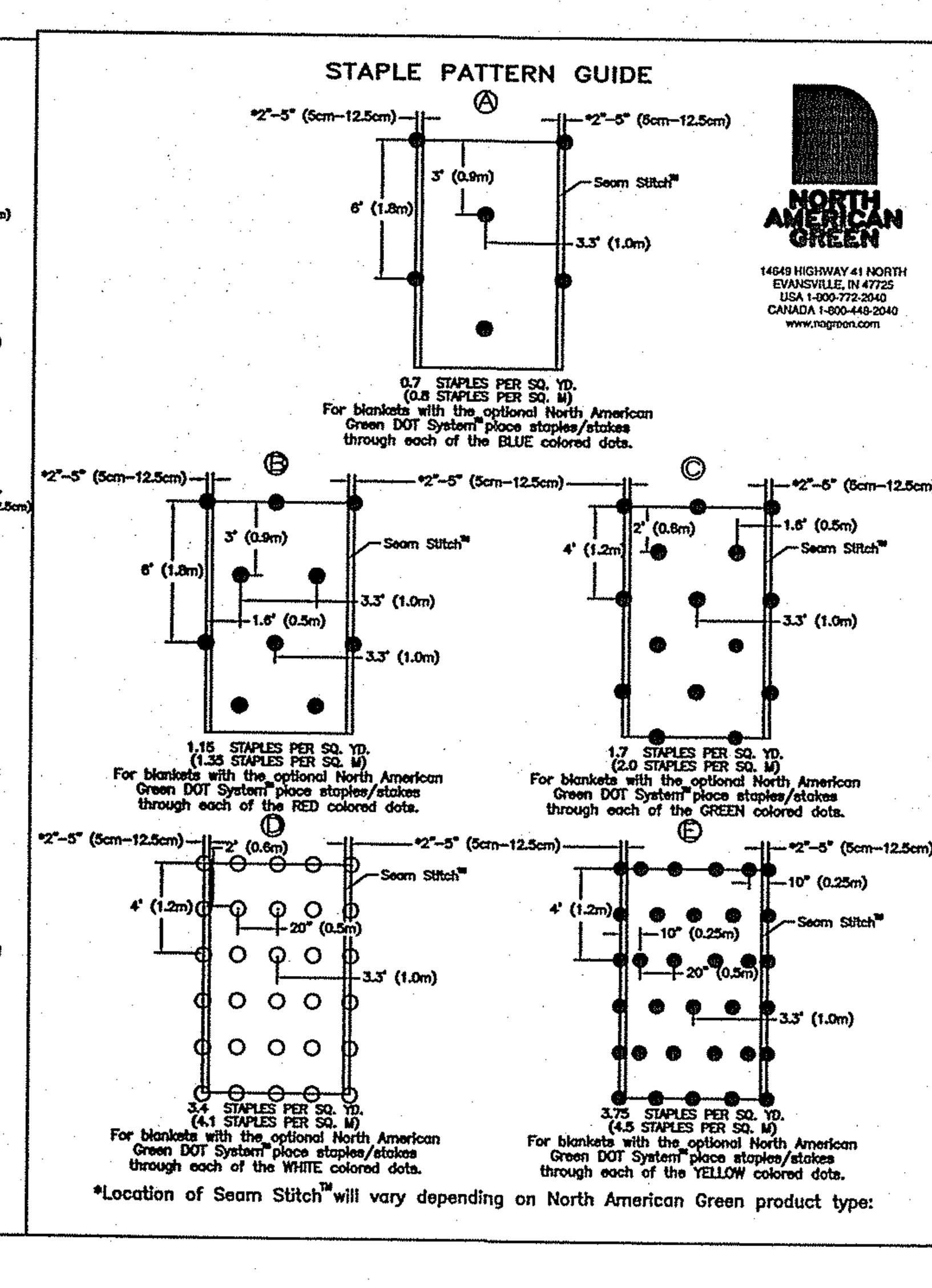
1. All drains within 50' of the OWTS system shall be either above the water table or watertight and bedded in sand or bank run gravel.

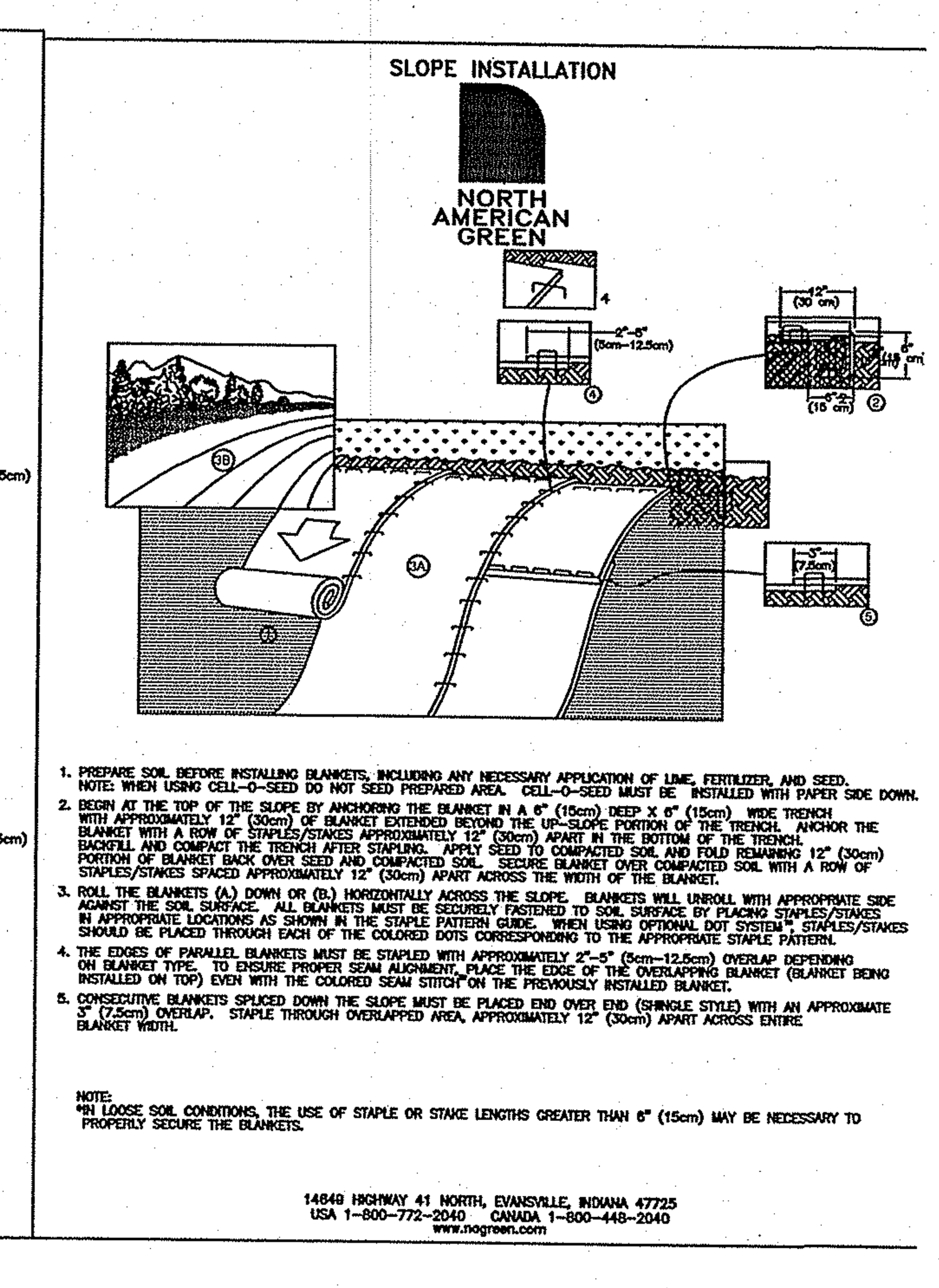
RECEIVED OCT - 6 2009 ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES

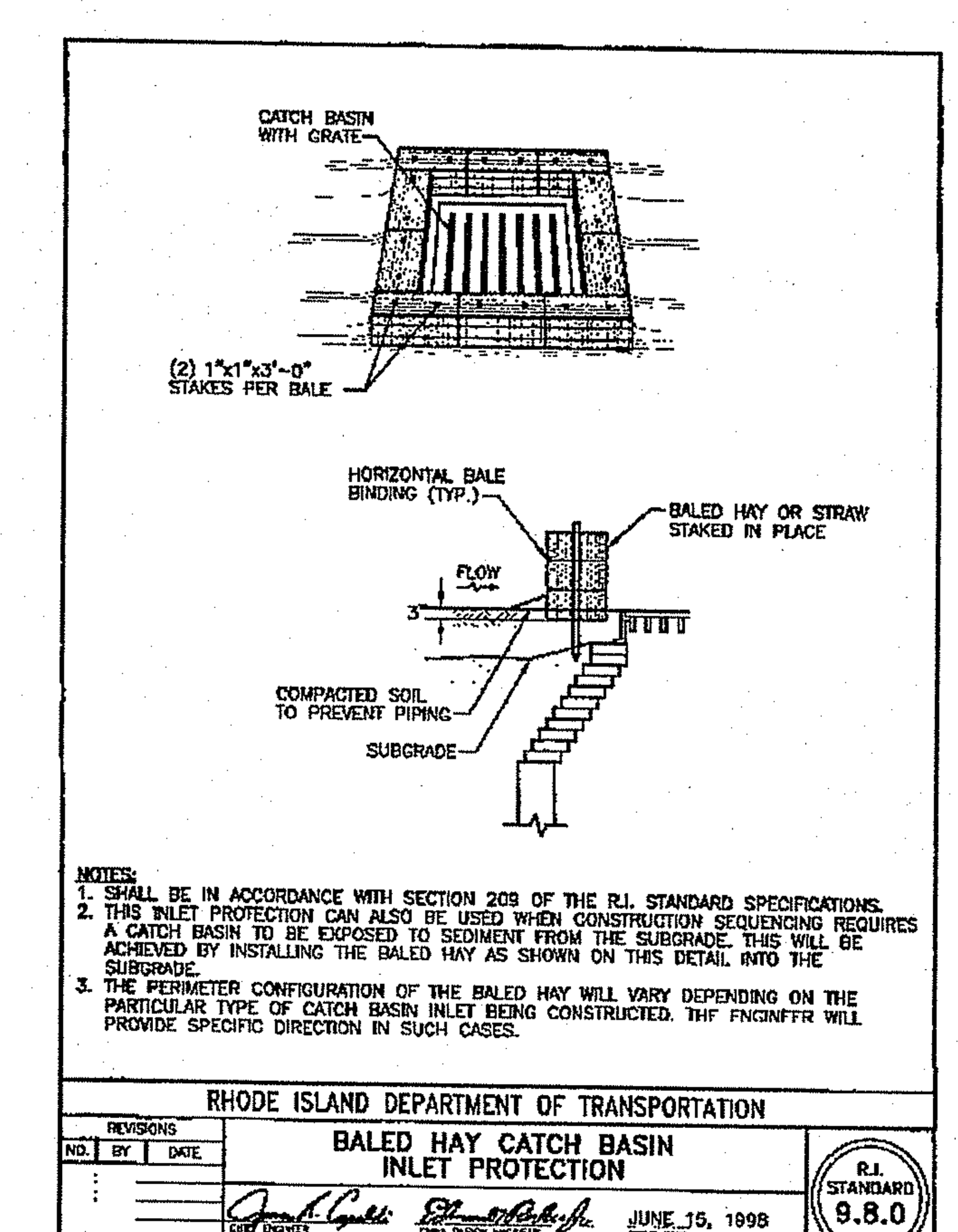




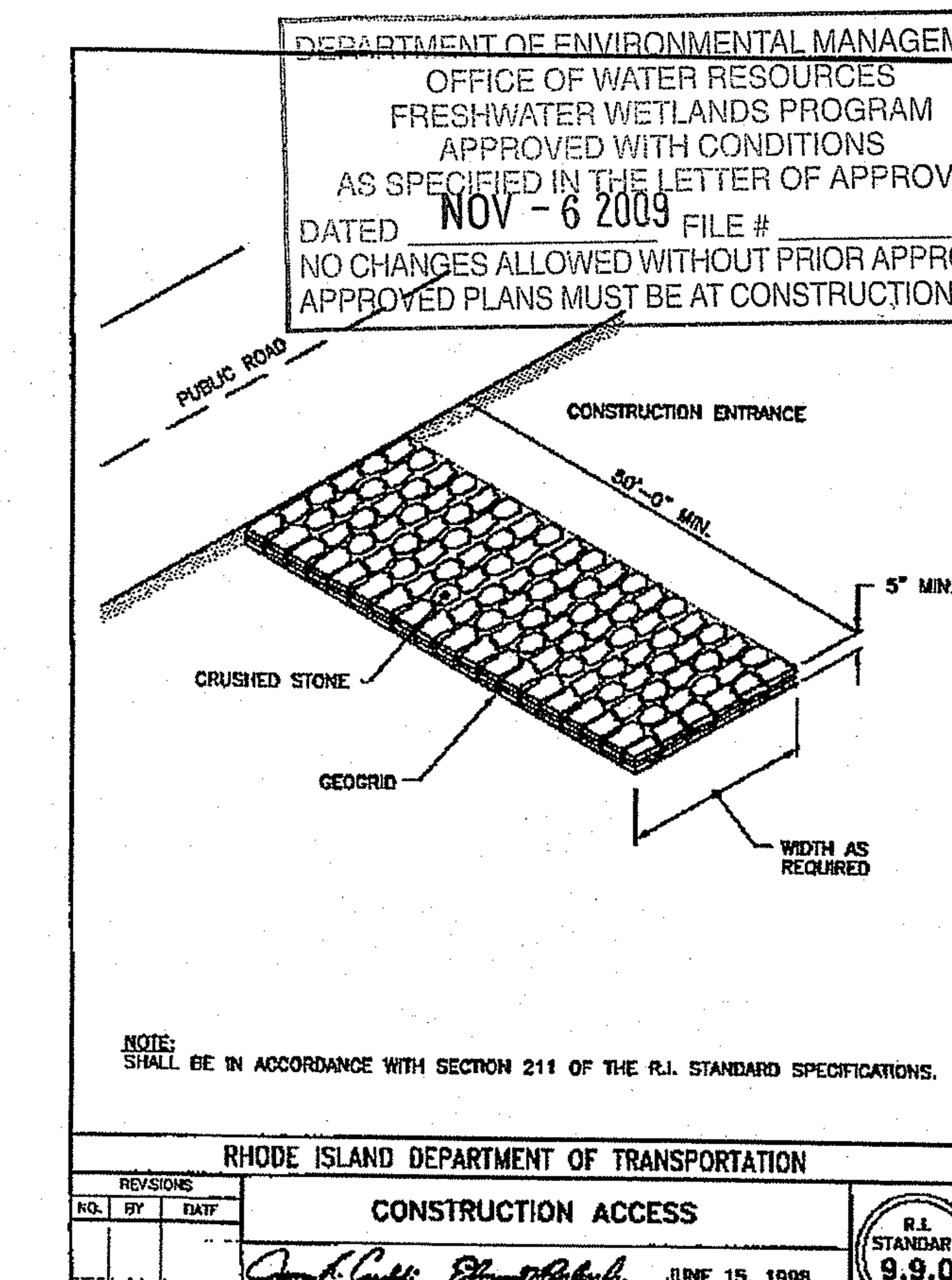








DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV - 6 2009 FILE # ______
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.



Soil and Erosion Control Details
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM | Checked By: DrC
Scale: As Shown | Date: 7/14/2009

REVISIONS

NO.	REVISION	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09

DANIEL R. COTTA NO. 5147 REGISTERED PROFESSIONAL ENGINEER STATE OF RHODE ISLAND 10/2/09

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail - Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

Sheet 6 of 19

C.4.1

of 1 sheets

Drawing No.
Dr. ______ Sh. ______

FROM	TO	ALBION CENTER * STORM DRAIN PIPE DATA PIPE SIZE (In.)	LENGTH (Ft.)	SLOPE (Ft./Ft.)	INVERTS UPPER END	INVERTS LOWER END
LINE "A"						
CB1	CB2	12	20.00	0.0100	83.77	83.57
CB2	CB3	12	88.00	0.0208	83.57	81.74
CB3	CB4	12	55.00	0.0100	81.74	81.19
CB4	CB5	12	66.00	0.0155	81.19	80.17
CB5	MH8	15	104.00	0.0100	79.92	78.88
MH8	CB6	15	100.00	0.0100	78.88	77.88
CB6	MH7	15	58.00	0.0100	77.88	77.30
MH7	CB7	15	80.00	0.0100	77.30	76.50
LINE "B"						
CB9	CB10	12	60.00	0.0100	80.29	79.69
CB10	CB11	12	49.00	0.0100	79.69	79.20
CB11	MH10	12	94.00	0.0100	79.20	78.26
MH10	MH11	12	81.00	0.0100	78.26	77.45
MH11	CB7	12	93.00	0.0102	77.45	76.00
CB7	Infiltrator	24	2.00	0.0000	76.00	76.00
LINE "C"						
CB12	CB13	12	49.00	0.0100	79.69	79.20
CB13	MH12	12	94.00	0.0100	79.20	78.26
MH12	MH13	12	81.00	0.0100	78.26	77.45
MH13	CB8	12	93.00	0.0102	77.45	76.50
CB8	Infiltrator	24	2.00	0.0000	76.00	76.00

FROM	TO	ALBION CENTER * STORM DRAIN PIPE DATA PIPE SIZE (In.)	LENGTH (Ft.)	SLOPE (Ft./Ft.)	INVERTS UPPER END	INVERTS LOWER END
LINE "D"						
MH1	MH2	15	39.00	0.0100	81.39	81.00
MH2	MH3	15	137.00	0.0100	81.00	79.63
MH3	MH4	15	137.00	0.0100	79.63	78.26
MH4	MH5	18	123.00	0.0100	78.01	76.78
MH5	FE2	18	96.00	0.0100	76.78	75.82
LINE "E"						
CB14	CB15	12	20.00	0.0100	84.25	84.05
CB15	FE3	12	155.00	0.0100	84.05	82.50
LINE "F"						
MH8	MH9	18	48.00	0.0000	76.50	76.50
MH9	FE1	18	46.00	0.0100	76.50	76.04
LINE "Crossing Road"						
CB16	CB17	18	20.00	0.0100	80.78	80.57
COURTYARD DRAIN LINES						
YD 10B	YD 10A	8	36.00	0.0100	78.70	78.34
YD 10A	MH10	8	8.00	0.0100	78.34	78.26
YD 11B	YD 11A	8	37.00	0.0100	77.92	77.55
YD 11A	MH11	8	10.00	0.0100	77.55	77.45
YD 12B	YD 12A	8	36.00	0.0100	78.70	78.34
YD 12A	MH12	8	8.00	0.0100	78.34	78.26
YD 13B	YD 13A	8	37.00	0.0100	77.92	77.55
YD 13A	MH13	8	10.00	0.0100	77.55	77.45
ROOF LEADERS MAIN LINE						
Roof Leaders	CB8	8	384.00	0.0100	82.00	78.16

BENCH MARK: 6" NAIL IN TREE
ASSUMED ELEVATION = 77.07

Proposed Drainage Structure Chart

Notes:
1. All Basins are to be 4' diameter RI Std. 4.4.0, unless otherwise noted.
2. All Catch Basins and Manholes are to have a 4' sump.
3. All Catch Basins and Manholes are to have a snout on outlet pipe only.

Line "A"
CB1
Rim = 87.00
12" Inv. Out = 83.77
Sump = 79.77

CB2
Rim = 87.50
12" Inv. In = 83.57
12" Inv. Out = 83.57
Sump = 79.57

CB3
Rim = 85.25
12" Inv. In = 81.74
12" Inv. Out = 81.74
Sump = 77.74

CB4
Rim = 84.00
12" Inv. In = 81.19
12" Inv. Out = 81.19
Sump = 77.19

CB5 (Double-Grate)
Rim = 83.00
12" Inv. In = 80.17
15" Inv. Out = 79.92
Sump = 75.92

MH8
Rim = 84.50
15" Inv. In = 78.88
15" Inv. Out = 78.88
Sump = 74.88

CB6
Rim = 83.00
15" Inv. In = 77.88
15" Inv. Out = 77.88
Sump = 73.88

MH7
Rim = 83.66
15" Inv. In = 77.30
15" Inv. Out = 77.30
Sump = 73.30

Line "B"
CB9
Rim = 83.00
12" Inv. Out = 80.29
Sump = 76.29

CB10
Rim = 83.00
12" Inv. In = 79.69
12" Inv. Out = 79.69
Sump = 75.69

CB11
Rim = 83.20
12" Inv. In = 79.20
12" Inv. Out = 79.20
Sump = 75.20

MH10
Rim = 84.00
8" Inv. In = 78.26
12" Inv. In = 78.26
12" Inv. Out = 78.26
Sump = 74.26

MH11
Rim = 84.00
8" Inv-In = 77.45
12" Inv. In = 77.45
12" Inv. Out = 77.45
Sump = 73.45

CB7 (6' dia. Basin)
Rim = 83.00
15" Inv. In = 76.50
12" Inv. In = 76.50
24" Inv. Out = 76.00
Sump = 72.00

Line "C"
CB12
Rim = 83.00
12" Inv. Out = 79.69
Sump = 75.69

CB13
Rim = 83.20
12" Inv. In = 79.20
12" Inv. Out = 79.20
Sump = 75.20

MH12
Rim = 84.00
8" Inv. In = 78.26
12" Inv. In = 78.26
12" Inv. Out = 78.26
Sump = 74.26

MH13
Rim = 84.00
8" Inv. In = 77.45
12" Inv. In = 77.45
12" Inv. Out = 77.45
Sump = 73.45

CB8 (6' dia. Basin)
Rim = 83.00
12" Inv. In = 76.50
12" Inv. In = 76.50
8" Inv. In = 78.16
24" Inv. Out = 76.00
12" Inv. Out = 76.50
Sump = 72.00

Line "D"
MH1
Rim = 91.50
12" Inv. In = 87.40
15" Inv. Out = 81.39

MH2
Rim = 84.00
15" Inv. In = 81.00
15" Inv. Out = 81.00

MH3
Rim = 84.25
15" Inv. In = 79.63
15" Inv. Out = 79.63

MH4
Rim = 83.75
6" Inv. In = 79.25
15" Inv. In = 78.26
18" Inv. Out = 78.01

MH5
Rim = 88.25
18" Inv. In = 76.78
18" Inv. Out = 76.78

Line "E"
CB14
Rim = 87.25
12" Inv. Out = 84.25
Sump = 80.25

CB15
Rim = 87.25
12" Inv. In = 84.05
12" Inv. Out = 84.05
Sump = 80.05

Line "F"
MH 8 (6' dia. Basin)
Rim = 80.50
24" Inv. In = 76.00
18" Inv. Out = 76.50
Sump = 72.00

MH 9 (6' dia. Basin)
Rim = 80.50
18" Inv. In = 76.50
24" Inv. In = 76.00
18" Inv. Out = 76.50
Sump = 72.00

"Grates at Road Crossing"
CB16
Rim = 84.50
18" Inv. In = 80.78
18" Inv. Out = 80.78
Sump = 76.50

CB17
Rim = 84.50
18" Inv. In = 80.57
18" Inv. Out = 80.57
Sump = 76.50

"Yard Drains in Gardens"
Northeast Garden
YD10A
Rim = 83.50
8" Inv. In = 78.34
8" Inv. Out = 78.34

YD10B
Rim = 83.50
8" Inv. Out = 78.70

Northwest Garden
YD11A
Rim = 83.50
8" Inv. In = 77.55
8" Inv. Out = 77.55

YD11B
Rim = 83.50
8" Inv. Out = 77.92

Southeast Garden
YD12A
Rim = 83.50
8" Inv. In = 78.34
8" Inv. Out = 78.34

YD12B
Rim = 83.50
8" Inv. Out = 78.70

Southwest Garden
YD13A
Rim = 83.50
8" Inv. In = 77.55
8" Inv. Out = 77.55

YD13B
Rim = 83.50
8" Inv. Out = 77.62

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV - 6 2009 FILE #
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

RECEIVED
OCT - 6 2009
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES

Overall Grading & Drainage Plan
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM | Checked By: DrC | Scale: 1" = 30' | Date: 7/14/2009

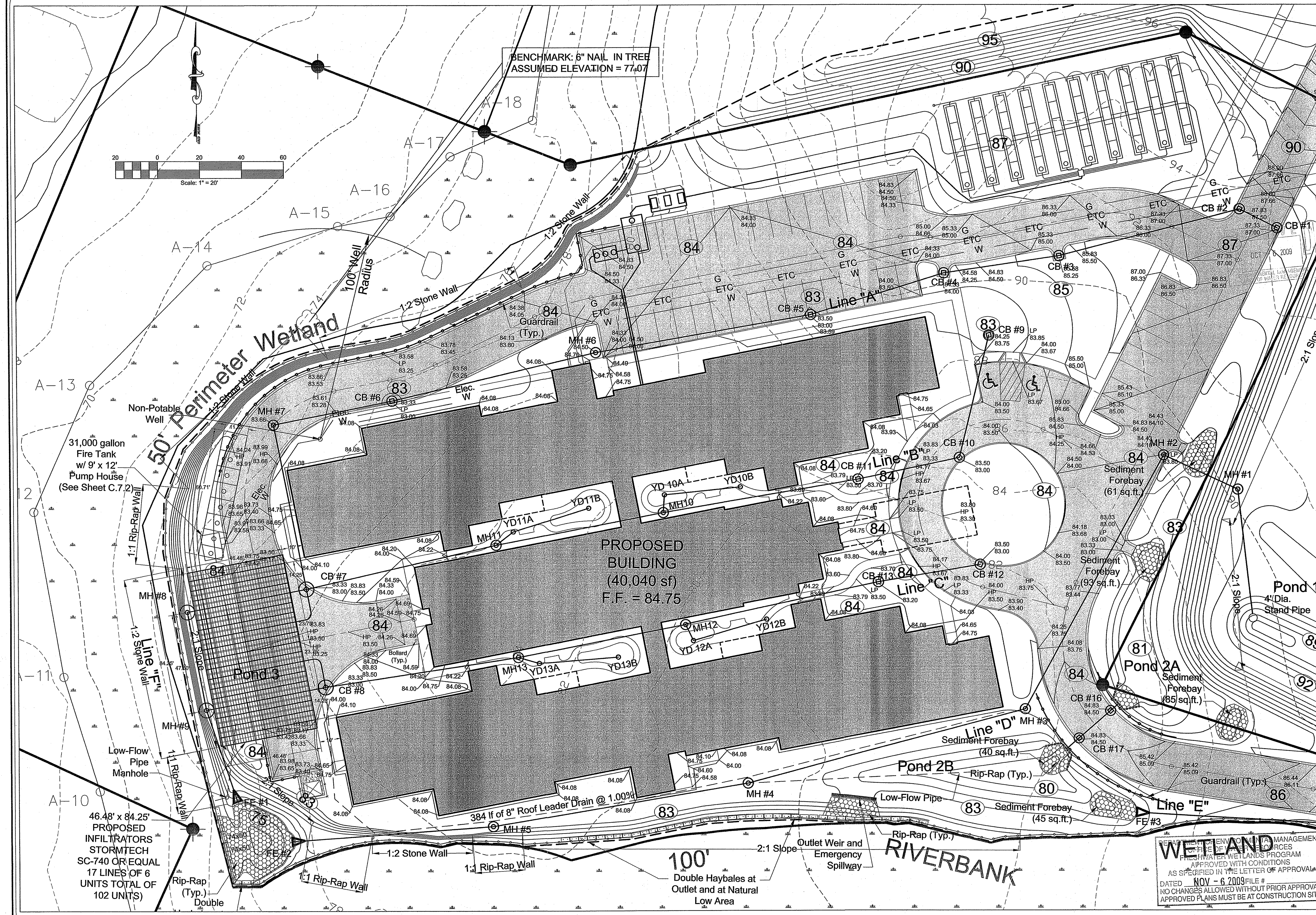
NO.	REVISION	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	9/27/09

DANIEL R. COTTA — No. — REGISTERED PROFESSIONAL ENGINEER — 10/6/09

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA, Professional Engineer / Professional Land Surveyor
400 South County Trail – Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

Sheet 7 of 19
C.5.0
of 1 sheets
Drawing No.
Dr. ____ Sh. ____

Z:\DWG\1091011\1091011.dwg, C.5.0 OVERALL GRADING & DRAINAGE PLAN, 10/2/2009 3:01:41 PM


BENCHMARK: 6" NAIL IN TREE
ASSUMED ELEVATION = 77.07
Scale: 1" = 20'
50' Perimeter Wetland
100' Wetland Radius
1:2 Stone Wall
Non-Potable Well
31,000 gallon Fire Tank w/ 9' x 12' Pump House (See Sheet C.7.2)
1:1 Rip-Rap Wall
PROPOSED BUILDING (40,040 sf) F.F. = 84.75
Line "A"
Line "B"
Line "C"
Line "D"
Line "E"
Line "F"
Pond 1
4' Dia. Stand Pipe
Pond 2A
Pond 2B
Pond 3
Sediment Forebay (61 sq.ft.)
Sediment Forebay (93 sq.ft.)
Sediment Forebay (85 sq.ft.)
Sediment Forebay (40 sq.ft.)
Sediment Forebay (45 sq.ft.)
Rip-Rap (Typ.)
Low-Flow Pipe
Low-Flow Pipe Manhole
Guardrail (Typ.)
Bollard (Typ.)
2:1 Slope
384 lf of 8" Roof Leader Drain @ 1.00%
46.48' x 84.25' PROPOSED INFILTRATORS STORMTECH SC-740 OR EQUAL 17 LINES OF 6 UNITS TOTAL OF 102 UNITS
Outlet Weir and Emergency Spillway
Double Haybales at Outlet and at Natural Low Area
100'
WETLAND
RIVERBANK
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV - 6 2009 FILE #
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

Detailed Grading Plan
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM Checked By: DrC
Scale: 1" = 20' Date: 7/14/2009

REVISIONS.

NO.	REVISION	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09

DANIEL R. COTTA
REGISTERED PROFESSIONAL ENGINEER
10/2/09

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail - Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

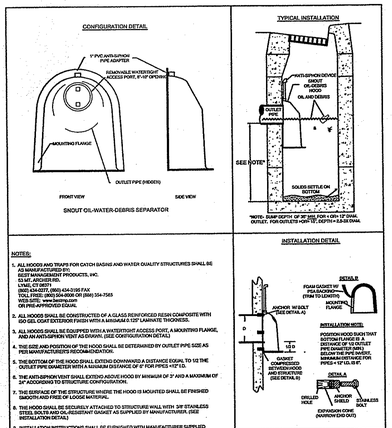
Sheet 8 of 19

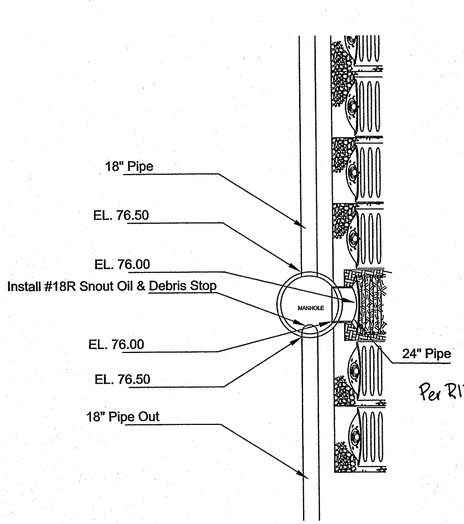
C.5.1

of 1 sheets

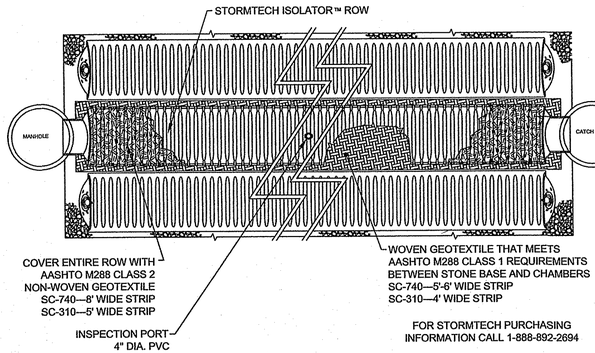
Drawing No.
Dr. ____ Sh. ____

Z:\DWG\10910\1109101.dwg, C.5.1 DETAILED GRADING PLAN, 10/1/2009 9:19:20 AM



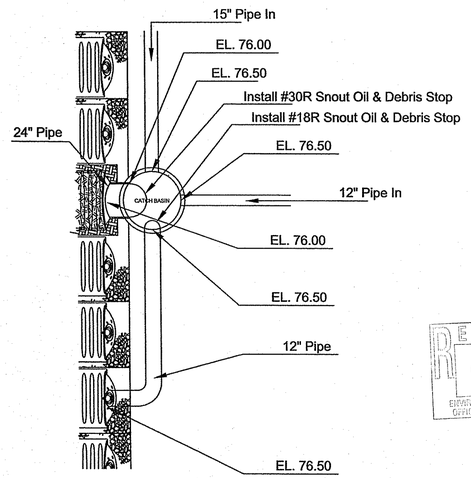


STORMTECH END DETAIL
PLAN VIEW DETAIL
NOT TO SCALE

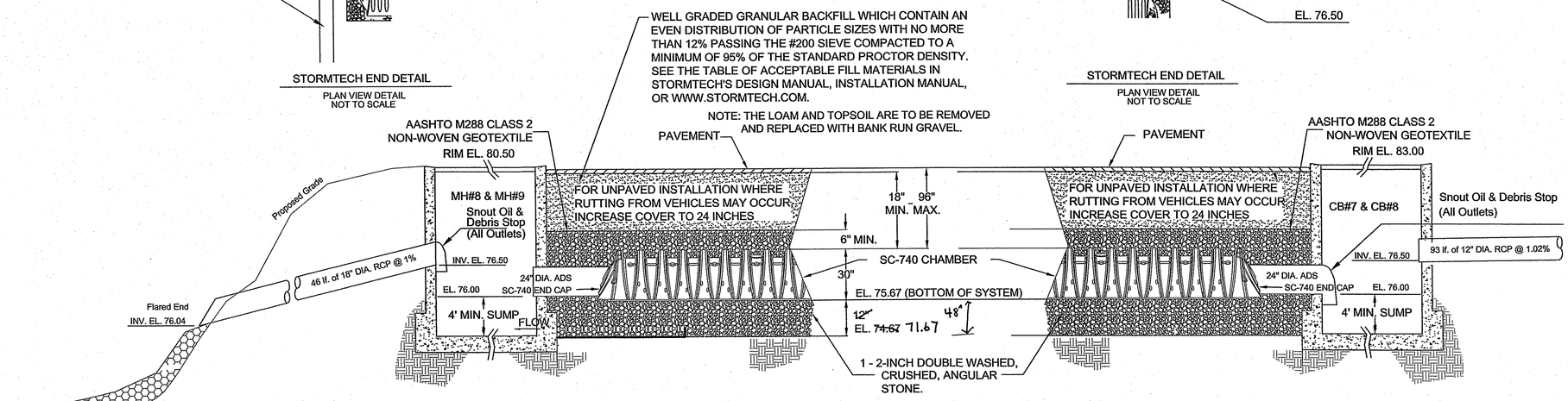


STORMTECH ISOLATOR™ ROW
PLAN VIEW DETAIL
NOT TO SCALE

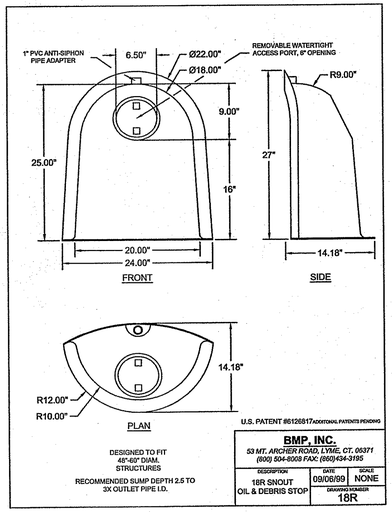
Per RIDEM: This design shall include two Stormtech Isolator™ Rows - one between CB#7 and MH#8, and one between CB#8 and MH#9.

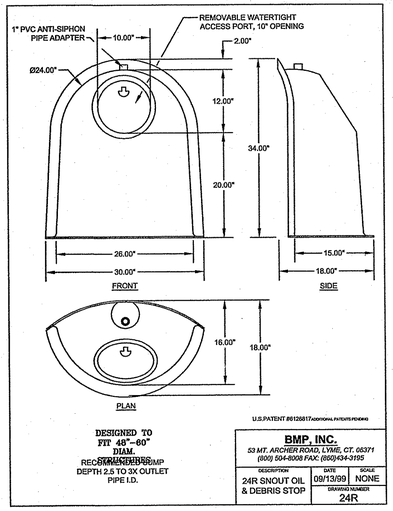


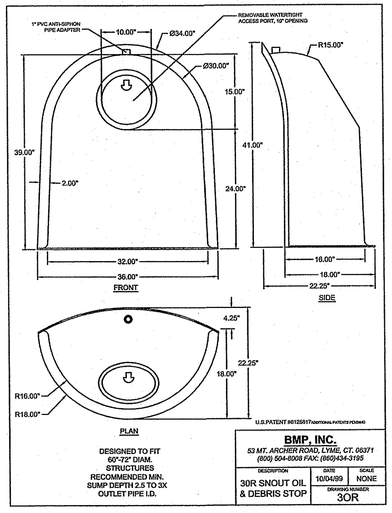
STORMTECH END DETAIL
PLAN VIEW DETAIL
NOT TO SCALE



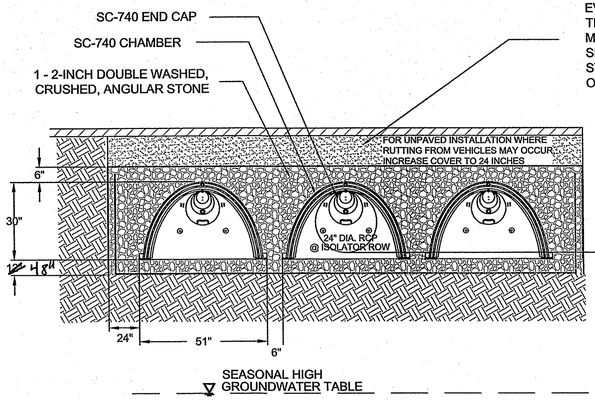
STORMTECH SC-740 CHAMBER SYSTEM
DETAIL @ MANHOLE #9
NOT TO SCALE







WELL GRADED GRANULAR BACKFILL WHICH CONTAIN AN EVEN DISTRIBUTION OF PARTICLE SIZES WITH NO MORE THAN 12% PASSING THE #200 SIEVE COMPACTED TO A MINIMUM OF 95% OF THE STANDARD PROCTOR DENSITY. SEE THE TABLE OF ACCEPTABLE FILL MATERIALS IN STORMTECH'S DESIGN MANUAL, INSTALLATION MANUAL, OR WWW.STORMTECH.COM.



NOTE: THE LOAM AND TOPSOIL ARE TO BE REMOVED AND REPLACED WITH BANK RUN GRAVEL.

STORMTECH SC-740 CHAMBER SYSTEM
TYPICAL CROSS SECTION DETAIL
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV - 6 2009 FILE #
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

RECEIVED
OCT - 6 2009
ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES

Drainage Infiltrator Details FOR ALBION COURT of EXETER

LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM
Checked By: DrC
Scale: As Shown
Date: 7/14/2009

NO.	REVISIONS	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09

DANIEL R. COTTA — No. 6147 — REGISTERED PROFESSIONAL ENGINEER — 10/2/09

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail – Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

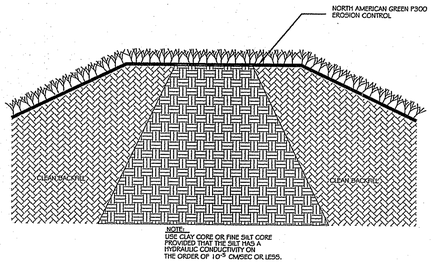
Sheet 9 of 19
C.5.2
of 1 sheets
Drawing No.
Dr. ____ Sh. ____

Z:\DWG\1091\01\1091101.dwg, C.5.2 DRAINAGE INFILTRATOR DETAILS, 10/1/2009 9:18:39 AM

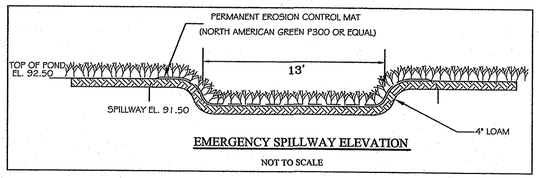
DETENTION BASINS / WATER QUALITY BASINS:

GENERAL NOTES:

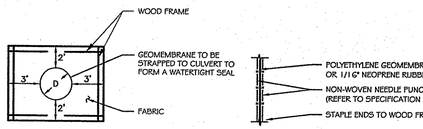
1. ALL TREES, SHRUBS AND STUMPS SHOULD BE REMOVED FROM THE ENTIRE BASIN.
2. TREES OR SHRUBS SHOULD NOT BE PLANTED ON ANY IMPOUNDING EMBANKMENTS (i.e., DIKES OR BERMS) OR WITHIN THE BASIN. SUCH PLANTINGS ARE GENERALLY DISCOURAGED IN ORDER TO REDUCE THE CHANCE OF FAILURE DUE TO ROOT DECAY AND SUBSURFACE DISTURBANCE. GRASSES ARE CONSIDERED THE ONLY ACCEPTABLE VEGETATION FOR PLANTING AND STABILIZING IMPOUNDING EMBANKMENTS.
3. THE ENTIRE BASIN MUST BE STABILIZED WITH A DENSE LAYER OF GRASS IMMEDIATELY FOLLOWING BASIN CONSTRUCTION. THIS MAY REQUIRE THE ADDITION OF 4-6 INCHES OF A LOAMY SOIL SUBSTRATE TO PROMOTE GOOD VEGETATIVE GROWTH AND INFILTRATION. THE ADDITION OF LOAMY SOIL TO THE BASIN MUST BE FACTORED INTO THE OVERALL VOLUME REQUIREMENT. THE BASIN SHALL BE SEEDED WITH TURF-TYPE TALL FESCUES OR SIMILAR.
4. THE DETENTION BASIN SHOULD NOT RECEIVE RUNOFF UNTIL THE ENTIRE CONTRIBUTING WATERSHED AREA HAS BEEN STABILIZED WITH VEGETATION AND OTHER SOIL EROSION AND SEDIMENT CONTROL TECHNIQUES. FAILURE TO DO SO WILL ALLOW EXCESSIVE QUANTITIES OF SEDIMENTS TO ENTER THE BASIN AND WILL NECESSITATE MORE FREQUENT CLEANING OF THE DRAINAGE SYSTEM.
5. THE MAXIMUM ALLOWABLE SLOPE LEADING TO THE BASIN FLOOR SHALL BE 3:1 (3 HORIZONTAL TO 1 VERTICAL) TO FACILITATE MOWING AND OTHER MAINTENANCE OPERATIONS.
6. ALL FILL, INCLUDING THE EMBANKMENT OF THE BASINS, SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH THE R. I. STANDARD SPECIFICATION FOR ROAD AND BRIDGE SECTION 202.
7. CONSTRUCTION OF ALL STORM WATER BASINS SHALL BE SUPERVISED BY A PROFESSIONAL ENGINEER, A REPORT AND PLAN OF AS-BUILT CONSTRUCTION SHALL BE PREPARED.



EMERGENCY SPILLWAY SECTION - BASIN I
NOT TO SCALE

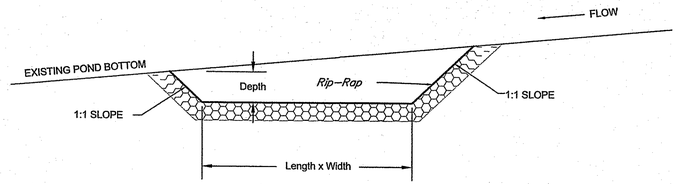


EMERGENCY SPILLWAY ELEVATION
NOT TO SCALE



SECTION | ANTI-SEEP COLLAR DETAILS | FABRIC DETAIL
NOT TO SCALE

NOTES:
1. ALL CULVERTS EXITING PROPOSED PONDS SHALL HAVE AN "ANTI-SEEP COLLAR" INSTALLED AT THEIR MID LENGTH.
2. THE STRAP SHALL BE SUBJECT TO ENGINEERS APPROVAL. THE STRAP MAY BE A POLYPROPYLENE CORD WITH A TENSILE STRENGTH OF 200 POUNDS AND SHALL PROVIDE A PERMANENT, NON-SLIP, TIE.

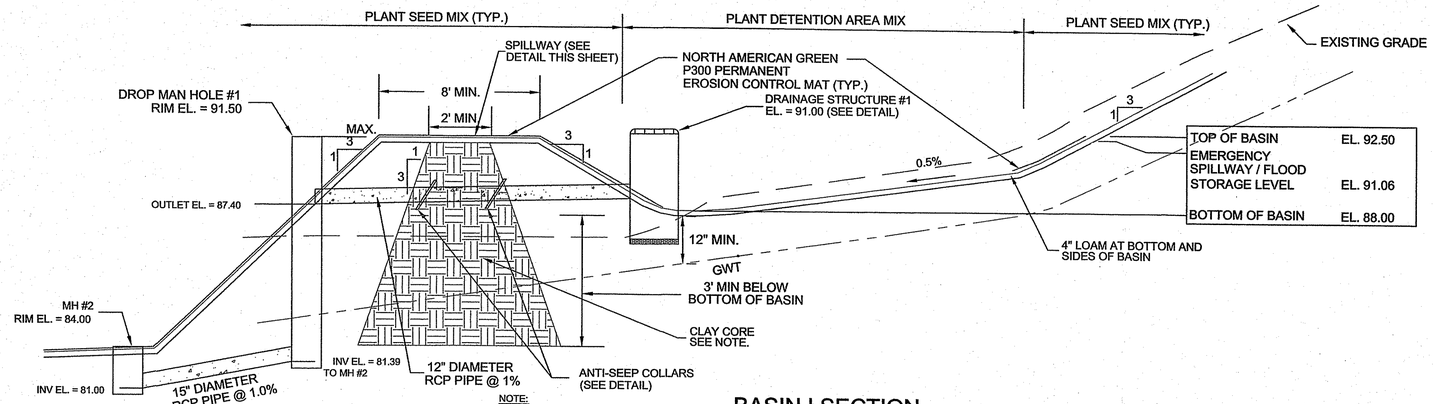


SECTION THRU SEDIMENT FORE BAY
NO SCALE

SEDIMENT FOREBAY DIMENSIONAL CHART

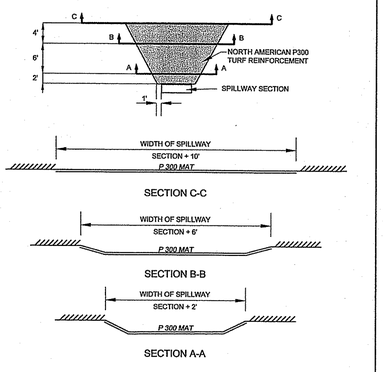
FOREBAY		LENGTH	WIDTH	DEPTH	STORAGE
BASIN I		21.7''	15.3'	1'	320 cf
BASIN 2A	NORTH	14.4'	3.3'	1'	61 cf
	WEST	12.7'	8.2'	1'	93 cf
	SOUTH	14.2'	5.2'	1'	85 cf
BASIN 2B	NORTH	8.6'	3.7'	1'	40 cf
	EAST	8.7	4.6'	1'	45 cf

Note:
Storage Areas are based on an oval constructed to the dimensions shown.



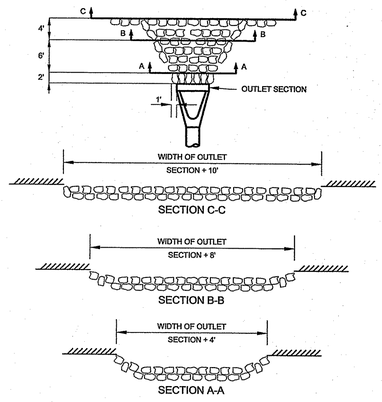
NOTE:
USE CLAY CORE OR FINE SILT CORE PROVIDED THAT THE SILT HAS A HYDRAULIC CONDUCTIVITY ON THE ORDER OF 10^{-5} CM/SEC OR LESS.

BASIN I SECTION
NOT TO SCALE



NORTH AMERICAN P300
TURF REINFORCEMENT AT
SPILLWAY SECTIONS

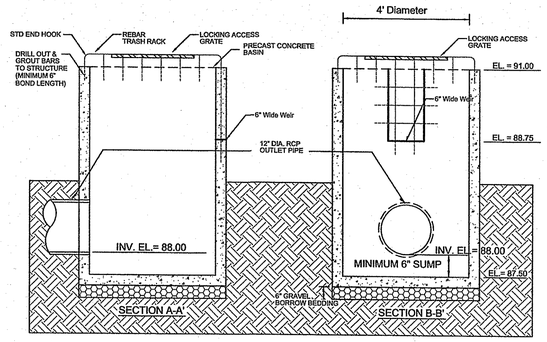
(NOT TO SCALE)



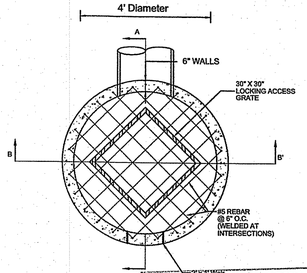
NOTES:
1. CLASS "C" RIP-RAP AND BEDDING TO BE UTILIZED.
2. DIMENSIONS MAY BE MODIFIED BY ENGINEER TO MEET FIELD CONDITIONS
3. UNLESS OTHERWISE SPECIFIED, DUMPED RIP-RAP SHALL BE USED

ROCK FILL RIP-RAP AT
FLARED END SECTIONS

(TYPICAL AT ALL FLARED ENDS)



4' Diameter Standpipe Weir
NOT TO SCALE



Basin Details I
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM | Checked By: DrC
Scale: As Shown | Date: 7/14/2009

REVISIONS

NO.	REVISION	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09

DANIEL R. COTTA — NO. 9947 — REGISTERED PROFESSIONAL ENGINEER — 10/2/09

AMERICAN ENGINEERING, INC.
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Sheet 10 of 19

C.5.3

of 1 sheets

Drawing No.
Dr. ____ Sh. ____

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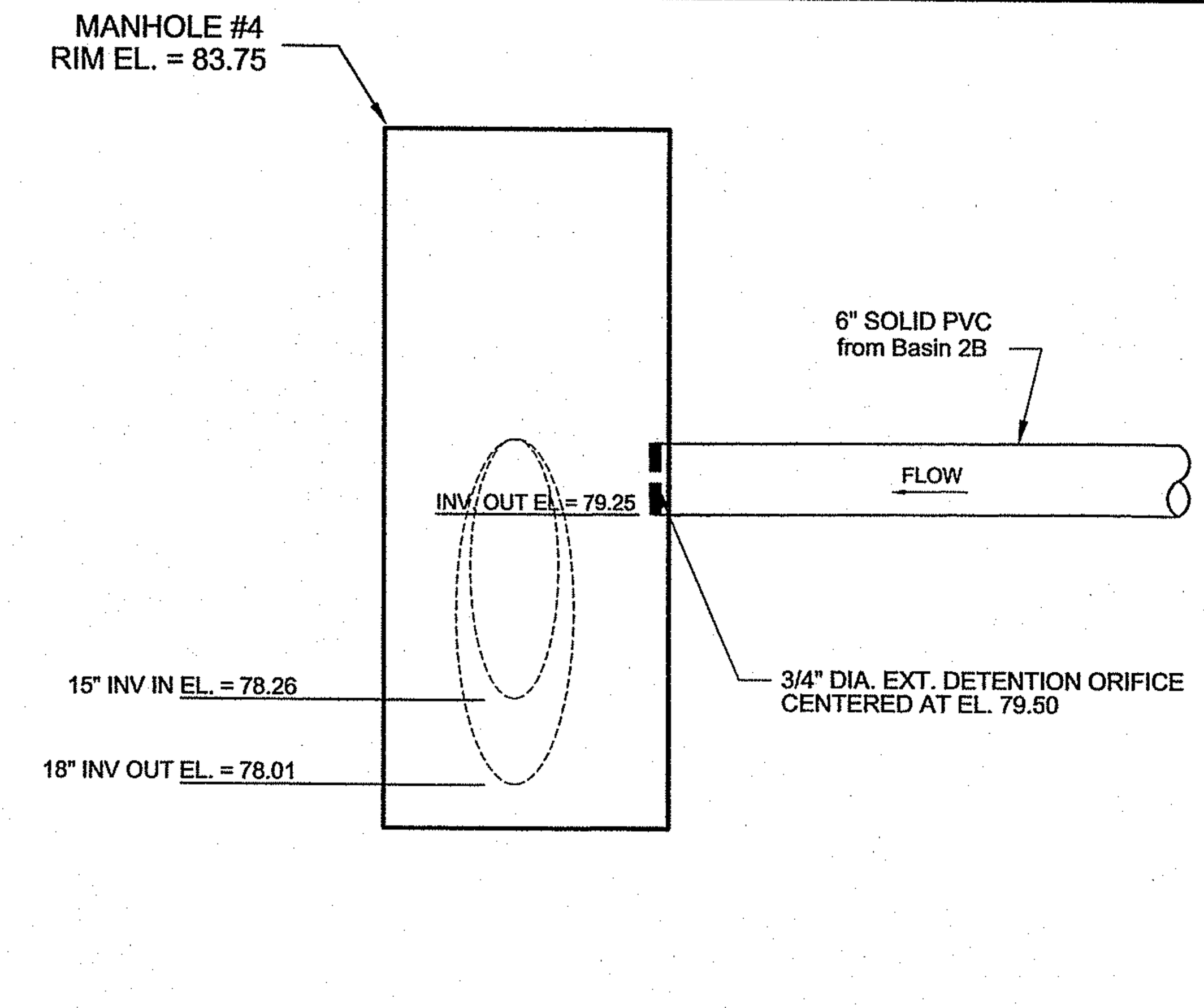
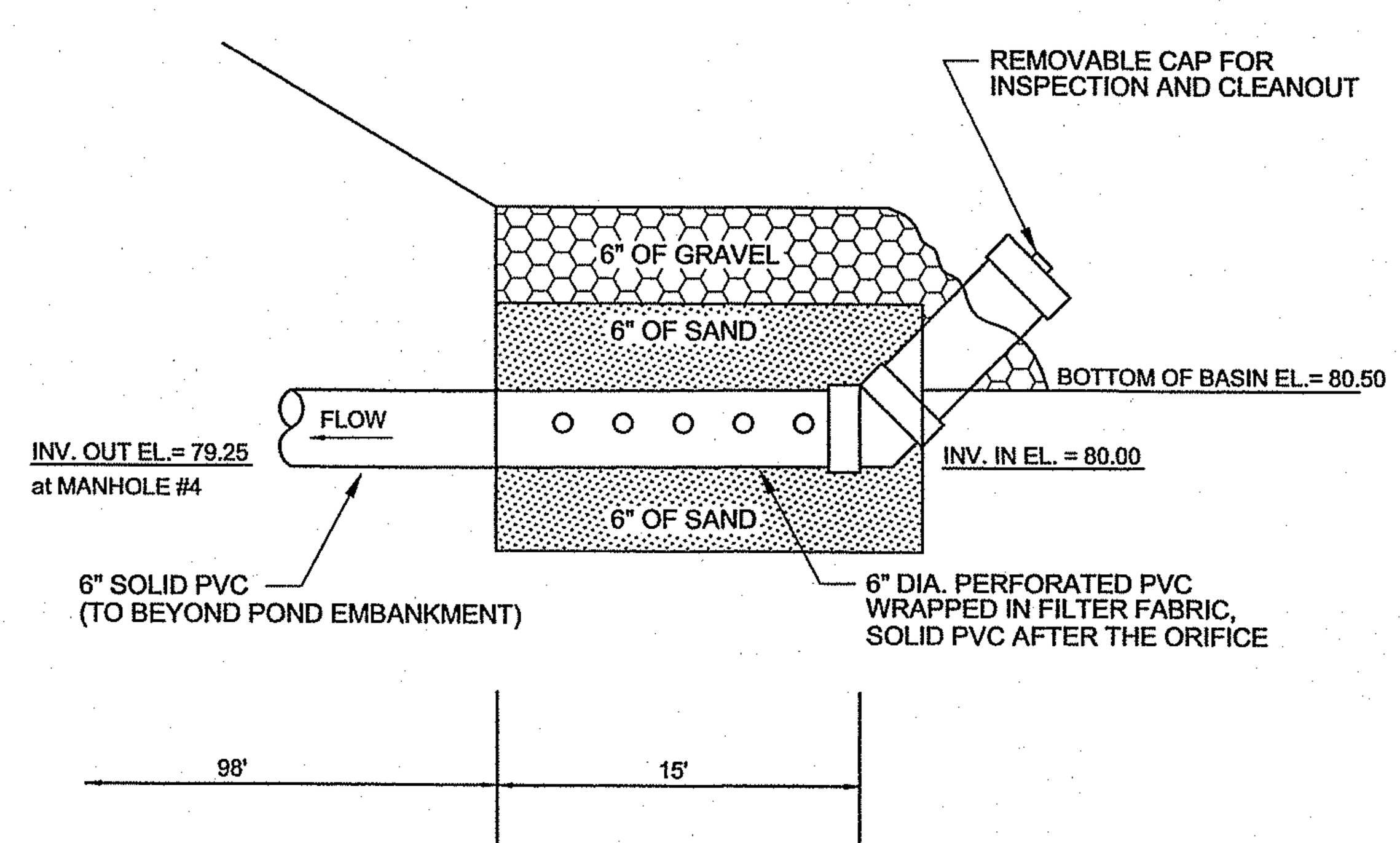


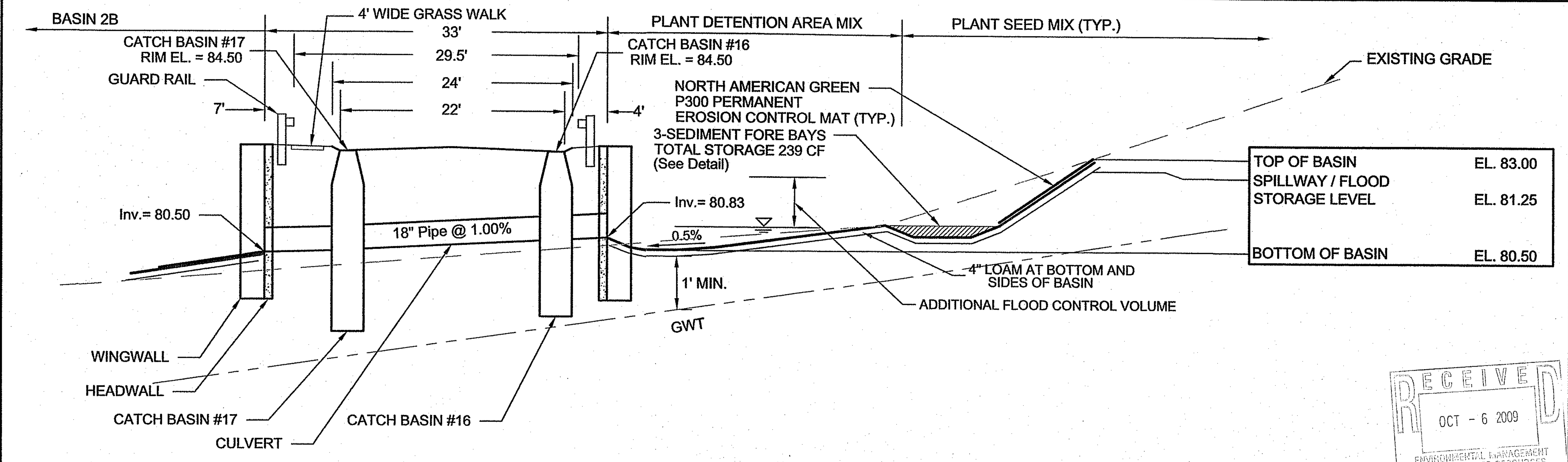
LOW FLOW PIPE W/ EXTENDED DETENTION ORIFICE - MANHOLE #4

NOT TO SCALE



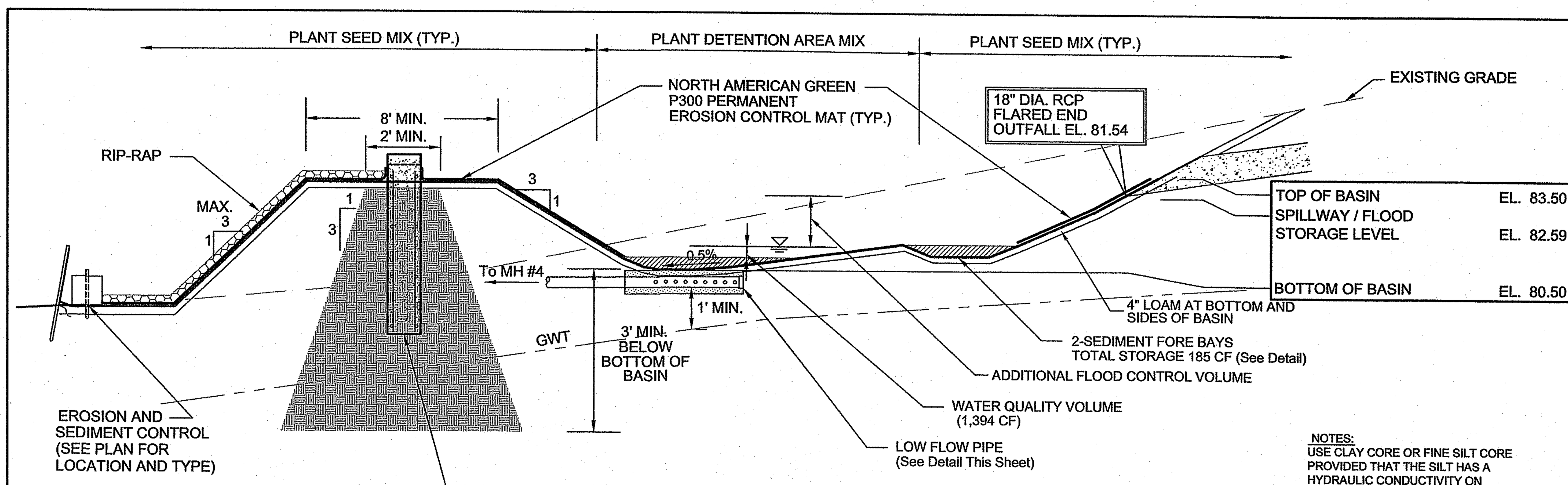
LOW FLOW PIPE W/ EXTENDED DETENTION ORIFICE - BASIN 2B

NOT TO SCALE



BASIN 2A SECTION

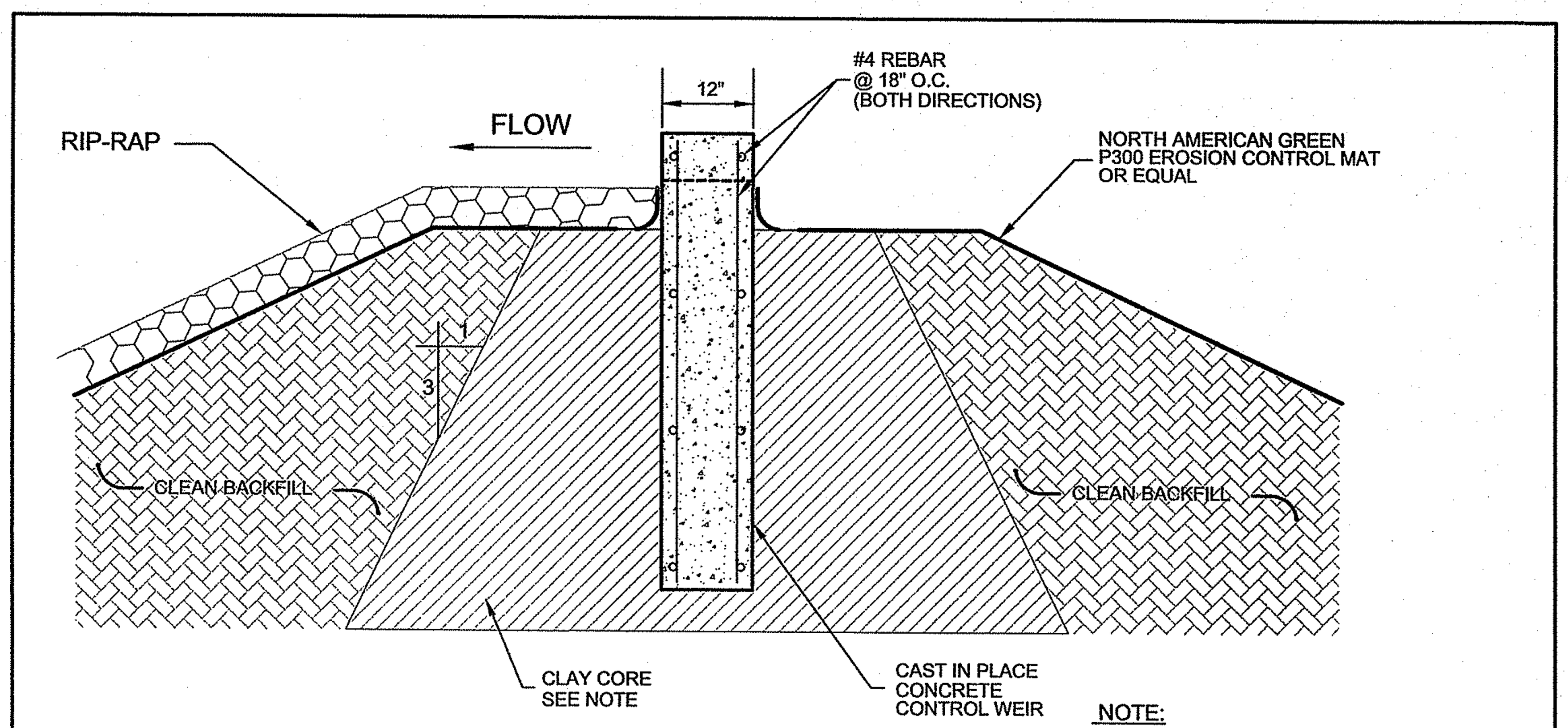
NOT TO SCALE



NOTES:
USE CLAY CORE OR FINE SILT CORE PROVIDED THAT THE SILT HAS A HYDRAULIC CONDUCTIVITY ON THE ORDER OF 10 CM/SEC OR LESS.

BASIN 2B SECTION

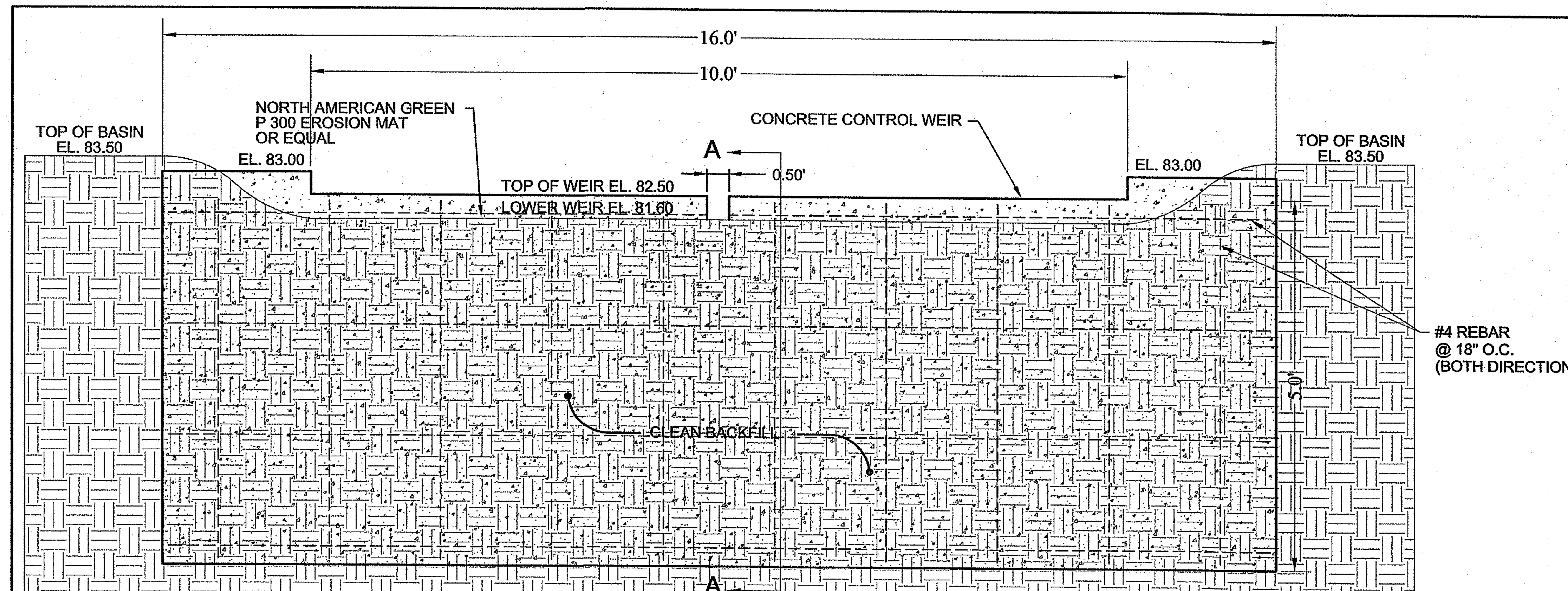
NOT TO SCALE



NOTE:
USE CLAY CORE OR FINE SILT CORE PROVIDED THAT THE SILT HAS A HYDRAULIC CONDUCTIVITY ON THE ORDER OF 10^5 CM/SEC OR LESS.

TYPICAL SPILLWAY SECTION - BASIN 2B (Section A-A)

NOT TO SCALE



SPILLWAY ELEVATION - BASIN 2B

NOT TO SCALE

Basin Details II
FOR
ALBION COURT of EXETER

LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM
Checked By: DrC
Scale: As Shown
Date: 7/14/2009

REVISIONS

NO.	REVISION	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09

DANIEL R. COTTA
NO. 5147
STATE OF RHODE ISLAND
REGISTERED PROFESSIONAL ENGINEER
10/2/09

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
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Sheet 11 of 19

C.5.4

of 1 sheets

Drawing No.
Dr. _____ Sh. _____

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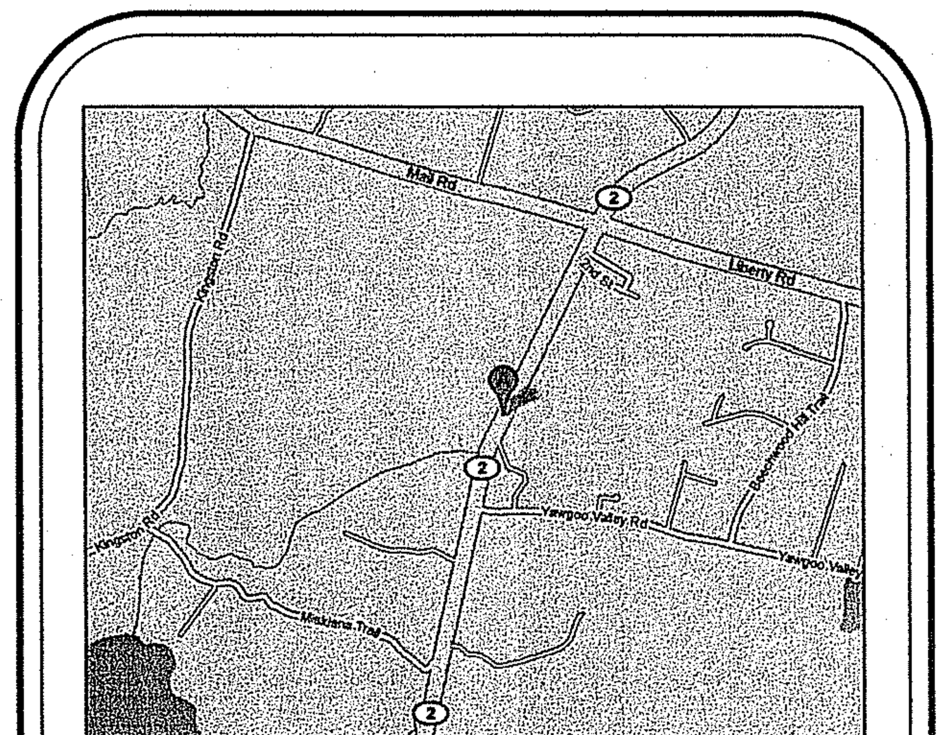
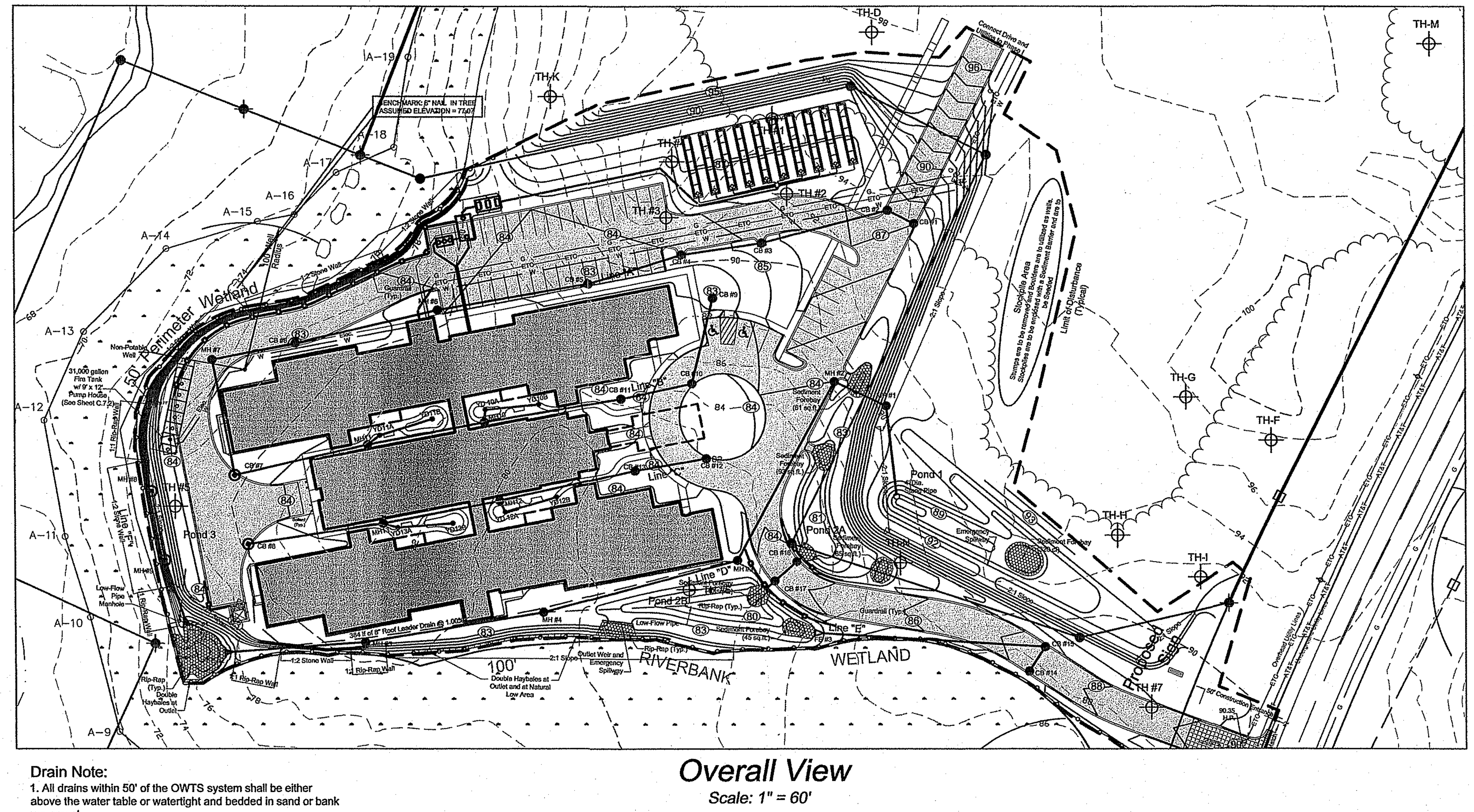


LOCUS MAP

NOT TO SCALE



Drain Note:
1. All drains within 50' of the OWTS system shall be either above the water table or watertight and bedded in sand or bank run gravel.

Design Criteria:
Institutional/Assisted Living Facility - 64 Bed Facility @ 57.5 gal/day = 3,680 gal/day
Total Use = 3,680 gal/day ------> Designed for 4,000 gal/day

Design Calculations:
Using Testhole #1 - Soil Category 1 - Loading Rate Factor = 0.70
Required: 4,000 / 0.70 (factor) = 5714 sf x 40% reduction for treatment = 3,429 sf
Provided: 50 Shallow Concrete Chambers (10 Rows with 5 Chambers per Row)
(20 End Units x 78 = 1,560 sf) + (30 Interior Units x 64 = 1,920 sf) = 3,480 sf Total

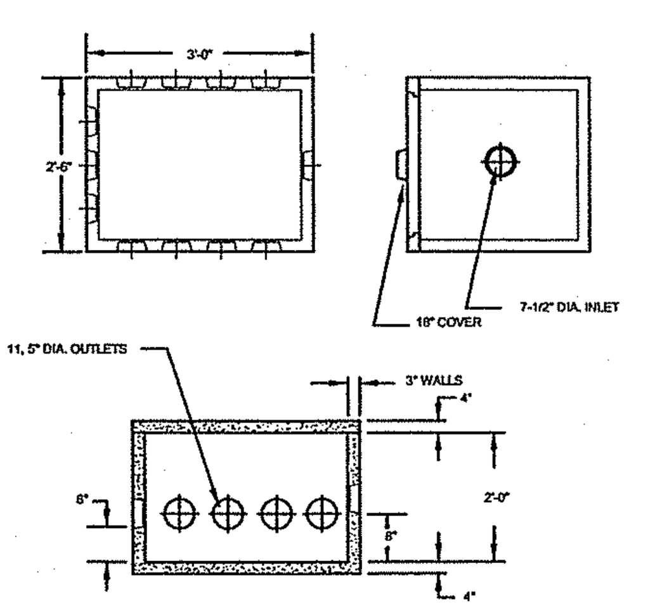
APPROVALS:
1. Reference is hereby made to an approved RIDEM Wetlands Insignificant Alteration Permit for Application # 06-0451 Dated: December 14, 2006.

2. Reference is hereby made to an approved RIDEM Preliminary Subdivision Suitability Determination for Application # S 11-51 Dated: April 18, 2007.

3. Reference is hereby made to an approved RIDEM Wetland Edge verification 06-0336.

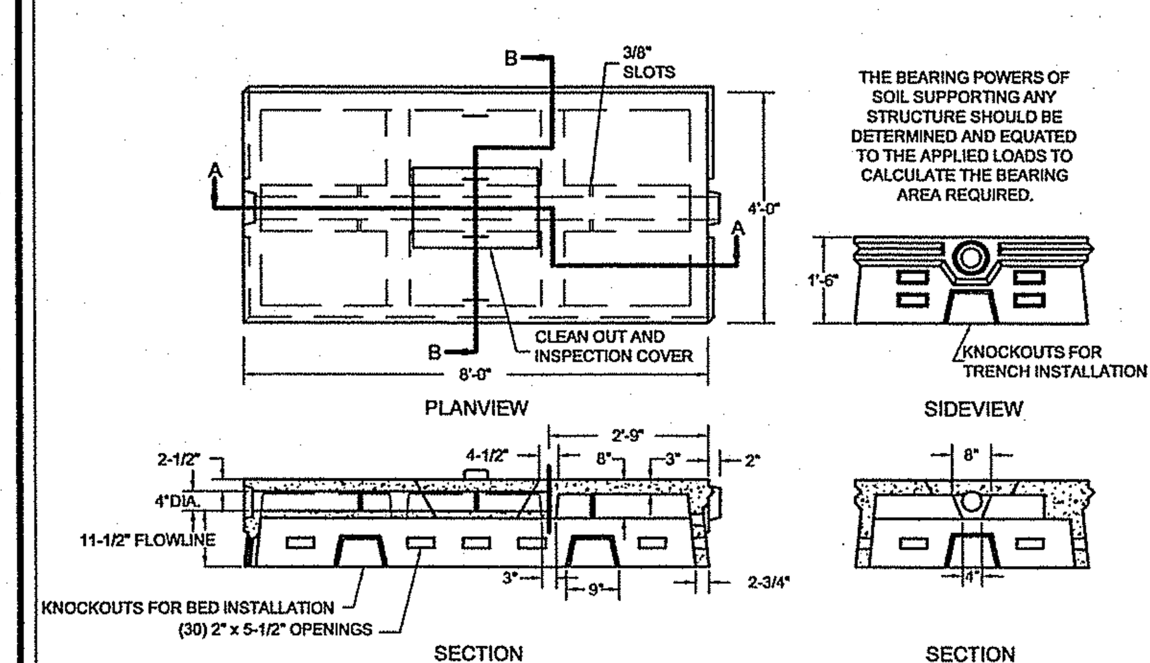
SLEEVED BUILDING SEWER NOTE:
The sewer line shall be sleeved at any point within 10' of a water line or within 25' of a drain line. The sleeve shall be seamless, and it shall have a watertight seal that is fastened to the pipes with a stainless steel retractable clamp. All pipes beneath the paved areas shall be schedule 40.

NOTE TO INSTALLER:
ADD WATER AS NECESSARY TO THE TANK TO COUNTERACT ANY BUOYANT FORCES ACTING UPON THE STABILITY OF THE TANK POSITION WHEN INSTALLING A TANK IN A HIGH WATER TABLE LOCATION.



PRECAST DISTRIBUTION BOX. DB-11 (MUST BE H-20 LOAD CAPABLE)

(CERTIFIED WATERTIGHT IN FIELD)

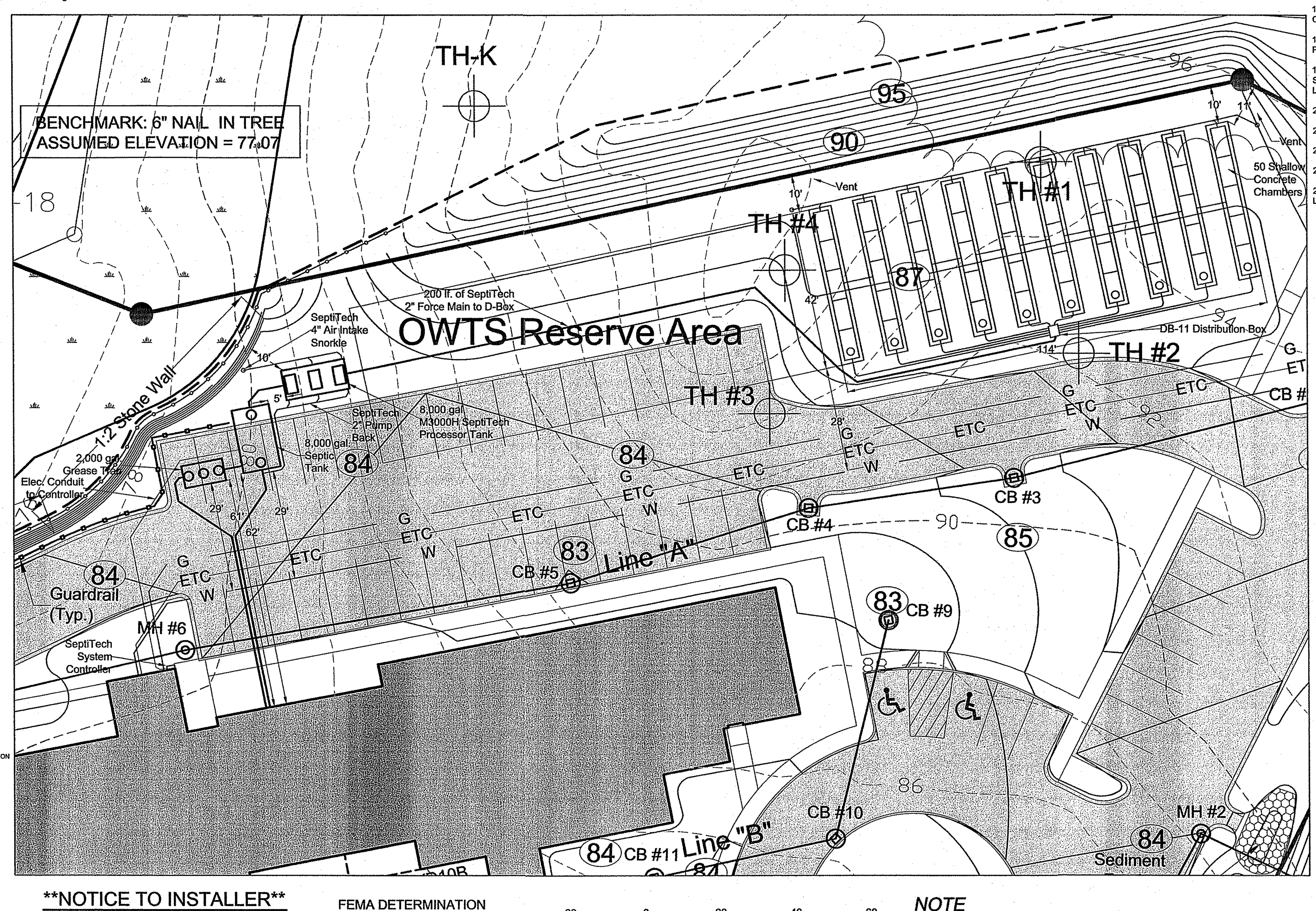


SHALLOW CONCRETE CHAMBER DETAIL

PRECAST LEACHING CHAMBER FD 4x8-L FLOW DIFFUSOR

NOT TO SCALE

(THIS CHAMBER IS HS-20 RATED)



****NOTICE TO INSTALLER****

DESIGNER SUPERVISION REQUIRED. CONTACT DESIGNER 48 HOURS PRIOR TO CONSTRUCTION.

FEMA DETERMINATION
ZONE "C" - AREA OF MINIMAL FLOODING
PANEL NO. - 440032 0027 A
REVISED - March 1, 1982

Scale: 1" = 20'

NOTE

THIS PLAN IS FOR SEPTIC PURPOSES ONLY AND DOES NOT CONSTITUTE A SURVEY

INVERT TABLE

	ELEVATION LOCATION	ELEVATION
A1	INV. AT BUILDING TO GREASE TRAP	80.98
A2	INV. AT BUILDING TO SEPTIC TANK	80.75
B1	INV. AT GREASE TRAP IN	79.78
B2	INV. AT GREASE TRAP OUT	79.53
C1	INV. AT SEPTIC TANK IN	79.43
C2	INV. AT SEPTIC TANK OUT	79.18
D1	INV. AT M3000H PROCESSOR TANK IN	76.50
D2	INV. AT M3000H PROCESSOR TANK OUT	81.73
E	INV. AT D-BOX IN	85.17
F	INV. AT D-BOX OUT	85.00
G	BOTTOM OF CHAMBERS	84.00
H	BOTTOM OF STONE	83.00
I	WATER ELEVATION	80.00
J	FINISH GRADE (MIN.)	86.50
K	FINISH GRADE (MAX.)	87.50

TESTHOLE & PERCOLATION DATA:
American Engineering (3/19/09)
TH 1 - verified at 15.0' (0911-0154)
TH 2 - verified at 12.0' (0911-0154)
TH 3 - verified at 14.0' (0911-0154)
TH 4 - verified at 18.0' (0911-0154)
TH 5 - verified at 11.0' (0911-0154)
TH 6 - verified at 1.5' (0911-0154)
TH 7 - verified at 4.0' (0911-0154)

SOIL CATEGORY 1 - DESIGNED USING A LOADING RATE FACTOR OF 0.70 GAL/SF/DAY

GENERAL NOTES:

1) D-BOX TO BE 3 SQ. FT. MINIMUM, AND BE PROVIDED WITH A SUITABLE BAFFLE. D-BOX MUST BE HS-20 RATED.

2) SEPTIC TANK TO BE PROVIDED WITH AN INLET TEE AND AN OUTLET TEE. MANHOLE COVER IS TO BE BROUGHT TO FINISH GRADE WITH THE RIM SET TO DIVERT SURFACE RUNOFF.

3) NO GRADE WITHIN 10 FEET OF THE PROPOSED SYSTEM SHALL BE LOWER THAN THE INVERTS.

4) NO SLOPE WITHIN 25 FEET OF THE PROPOSED SYSTEM SHALL BE GREATER THAN A 3:1 SLOPE.

5) THE DRAINFIELD AREA IS TO BE KEPT DEBRIS FREE AND PLANTED TO GRASS.

6) TREES AND SHRUBS ARE TO BE KEPT A MINIMUM DISTANCE OF 10' FROM THE DRAINFIELD.

7) THERE ARE NO PUBLIC SEWERS WITHIN 200 FEET OF THE PROPERTY OTHER THAN SHOWN ON PLAN.

8) THERE ARE NO WELLS WITHIN 200 FEET OF THE PROPOSED OWTS OTHER THAN SHOWN ON PLAN.

9) THERE ARE NO OWTS WITHIN 200 FEET OF THE PROPOSED WELL OTHER THAN SHOWN ON PLAN.

10) THERE ARE NO DRAINS WITHIN 100 FEET OF THE PROPERTY OTHER THAN SHOWN ON PLAN.

11) THERE ARE NO PUBLIC WELLS WITHIN 500' OF THE PROPOSED OWTS OTHER THAN SHOWN ON PLAN.

12) THERE ARE NO OWTS WITH A FLOW GREATER THAN 1,000 gpd WITHIN 400' OF THE PROPOSED WELL OTHER THAN SHOWN ON PLAN.

13) THERE ARE NO WATERCOURSES, WETLANDS OR DRAINS WITHIN 200' OF THE PROPOSED OWTS OTHER THAN SHOWN ON PLAN.

14) AREA BETWEEN THE DISPERSAL TRENCHES SHALL REMAIN UNDISTURBED.

15) AREA OF CHAMBERS TO BE STRIPPED 10 FEET ON ALL SIDES OF ALL TREES, STUMPS, BOULDERS, AND BRUSH,

16) IF THE INVERT IS ABOVE ORIGINAL GRADE:
PER RULE 33.5.1 THE LEACHFIELD AND FIVE (5) FEET BEYOND THE LEACHFIELD SHALL BE STRIPPED OF ALL TOPSOIL (A HORIZONS). IN ORDER TO AVOID COMPACTION OF THE B SOIL HORIZON, ONLY TRACKED VEHICLES SHALL BE ALLOWED IN THIS AREA.
PER RULE 33.5.2 PROPERLY COMPACTED GRAVEL THAT MEETS THE REQUIREMENTS OF RULE 32.12 SHALL BE PLACED THROUGHOUT THE EXCAVATION TO AN ELEVATION THAT WILL BE TWO (2) INCHES ABOVE THE TOP OF THE DISTRIBUTION LINES. DISPERSAL TRENCHES SHALL BE EXCAVATED OUT OF THE COMPACTED GRAVEL. THERE SHALL BE A MINIMUM SIX (6) INCH GRAVEL BASE LAYER MEETING THE REQUIREMENTS OF RULE 32.12 BELOW THE STONE.

17) ALL PRE-ASSEMBLED SEPTIC TANKS SHALL BE CERTIFIED WATER TIGHT BY THE MANUFACTURER. ALL TANKS ASSEMBLED ON-SITE SHALL BE CERTIFIED WATERTIGHT IN THE FIELD. CERTIFICATE BY MANUFACTURER OR FROM ON-SITE TESTING SHALL BE INCLUDED WITH BILL OF LADEN.

18) ALL GRAVITY LINES TO BE 6 INCH DIAMETER P.V.C. SCHEDULE 40 OR EQUAL. MINIMUM SLOPE OF 1%. SLOPES GREATER THAN 5% SHALL BE PROHIBITED. ALL PRESSURE LINES SHALL BE PVC (CLASS 200 MINIMUM).

19) THESE PLANS ARE FOR THE SOLE PURPOSE OF DESIGN, APPROVAL AND INSTALLATION OF THE PROPOSED ONSITE WASTEWATER TREATMENT SYSTEM ONLY, AND HAS NOTHING TO DO WITH THE CONSTRUCTION OF THE PROPOSED BUILDING SHOWN OTHER THAN THE APPROXIMATE LOCATION AND ORIENTATION.

20) THE USE OF GARBAGE DISPOSALS IS STRICTLY PROHIBITED.

21) THE USE OF TUBS EQUAL TO OR GREATER THAN 100 GALLONS IS STRICTLY PROHIBITED.

22) ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE RIDEM ONSITE WASTEWATER TREATMENT SYSTEMS REGULATIONS.

23) BILL OF LADEN SHALL BE PROVIDED TO THE DESIGNER FOR ALL SYSTEM COMPONENTS.

24) ACCESS LIDS SHALL WEIGH 59 lbs OR: SHALL BE TAMPER RESISTANT AND MECHANICALLY FASTENED. EACH ACCESS OPENING SHALL HAVE A LABEL STATING "ENTRANCE INTO THE TANK COULD BE FATAL".

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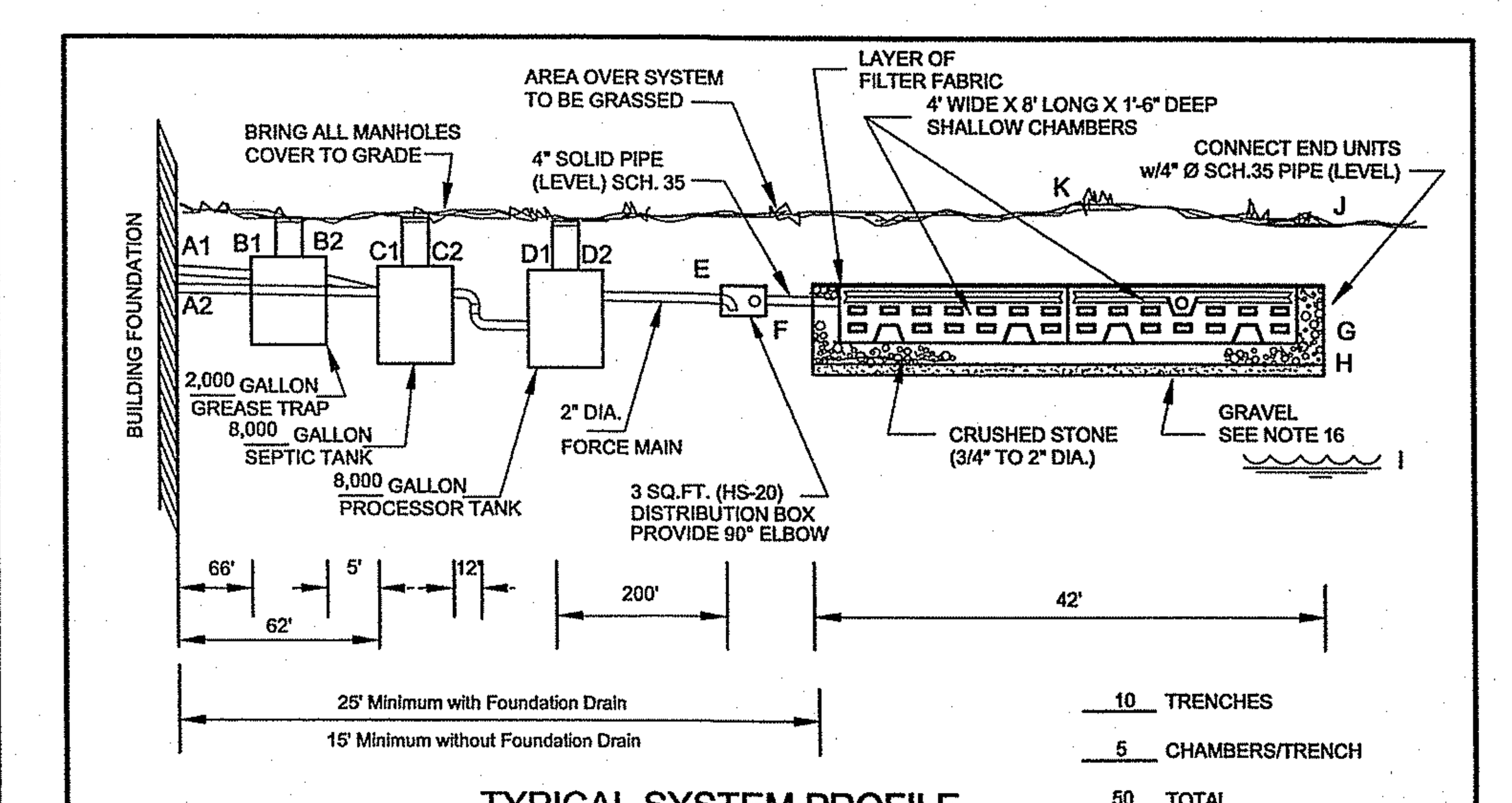
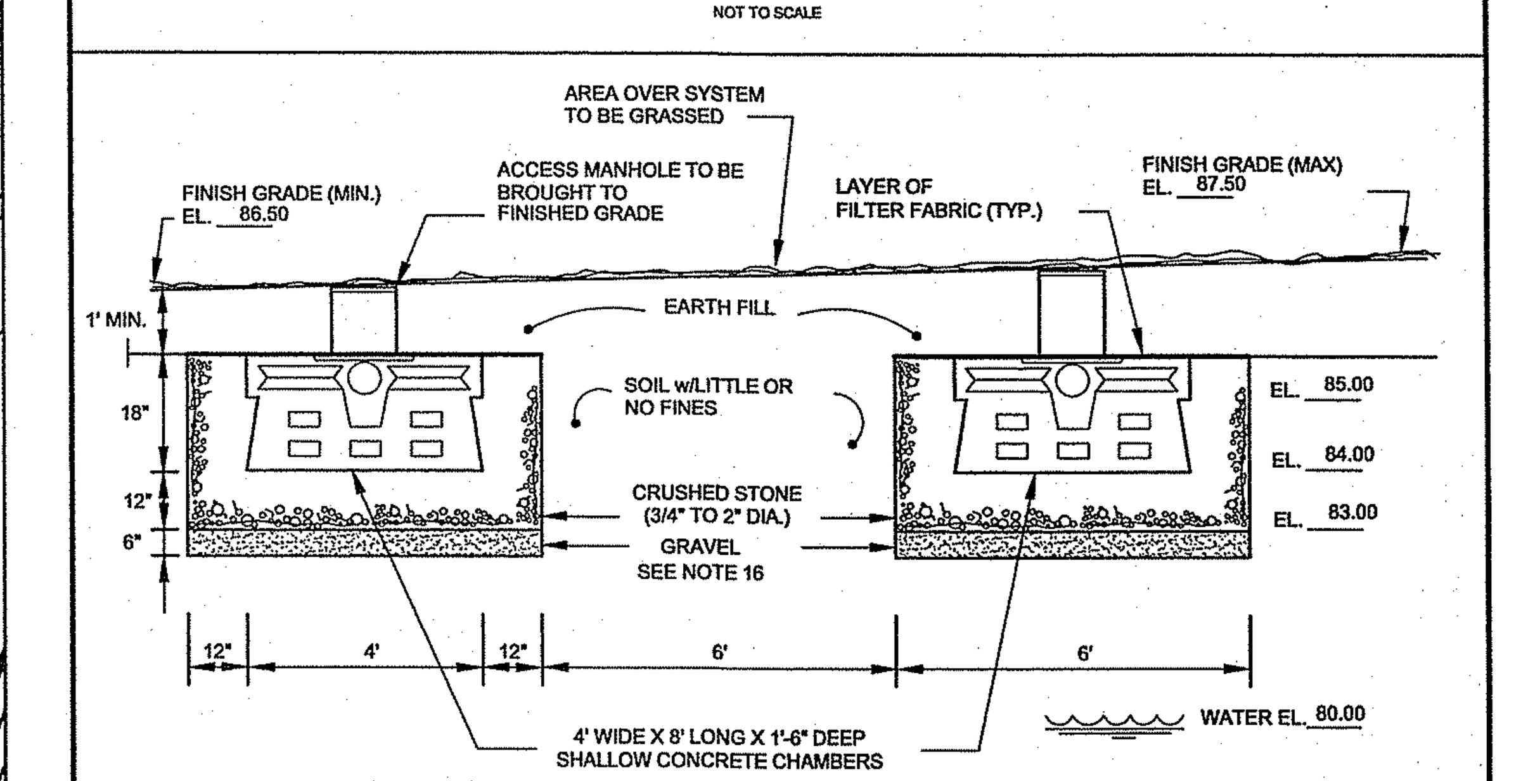
OFFICE OF WATER RESOURCES



TYPICAL SYSTEM PROFILE

NOT TO SCALE



TYPICAL SYSTEM CROSS SECTION

NOT TO SCALE

Concrete Chamber Access Notes:
1. The top of the chamber trench shall have an access opening into a chamber at intervals not greater than fifty (50) feet.
2. Access openings shall have a watertight riser and shall be brought to finished grade.
3. Lids shall be tamper resistant and mechanically fastened.
4. Surface water shall be diverted away from the access openings.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV - 6 2009 FILE #
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

ONSITE WASTEWATER TREATMENT SYSTEM
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

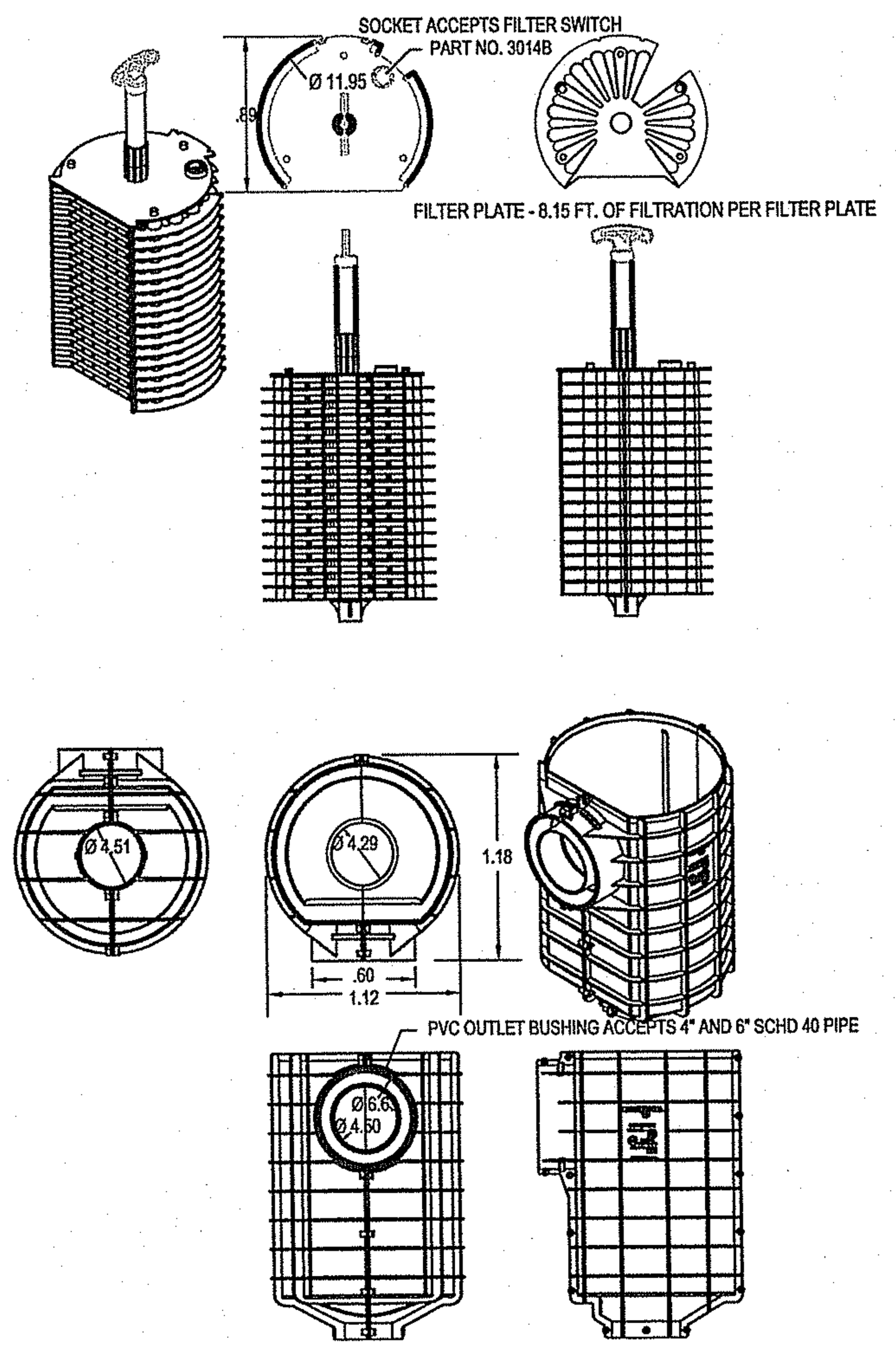
Drawn By: ERM | Checked By: DrC
Scale: As Shown | Date: 7/14/2009

REVISIONS

NO.	REVISION	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09

DANIEL R. COTTA NO. 5147 REGISTERED PROFESSIONAL ENGINEER 10/2/09

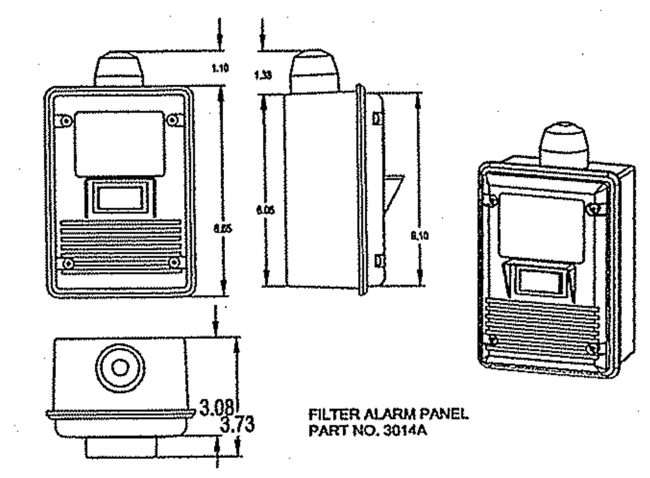
AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail - Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625



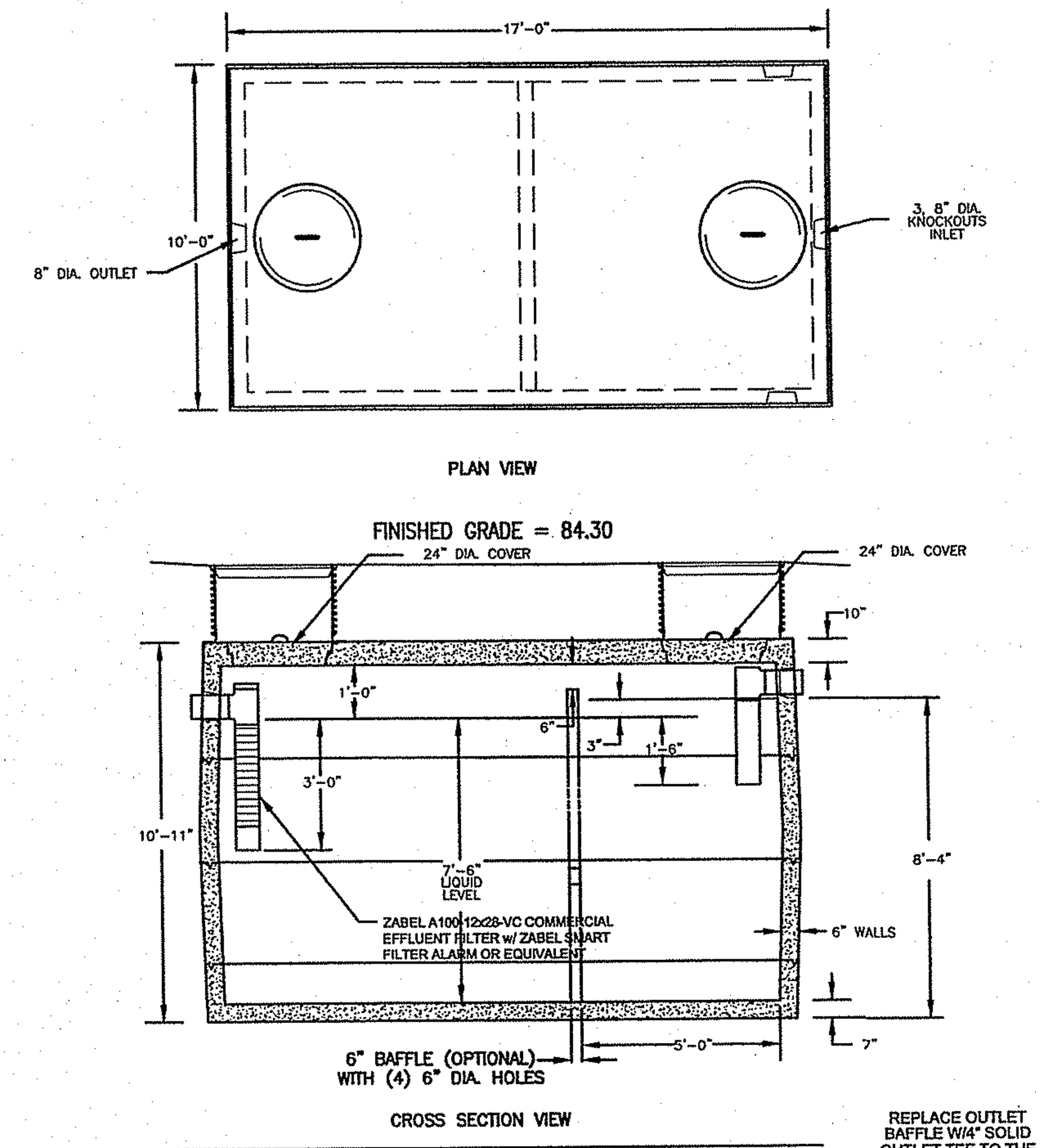
Specifications:

Model A100-12x28-VC
Diameter = 12.5"
Height = 27.75"
Filtration = 1/16"
GPD = 4500

ZABEL A100-12x28-VC COMMERCIAL EFFLUENT FILTER SPECIFICATIONS



ZABEL 3014A Filter Alarm Panel



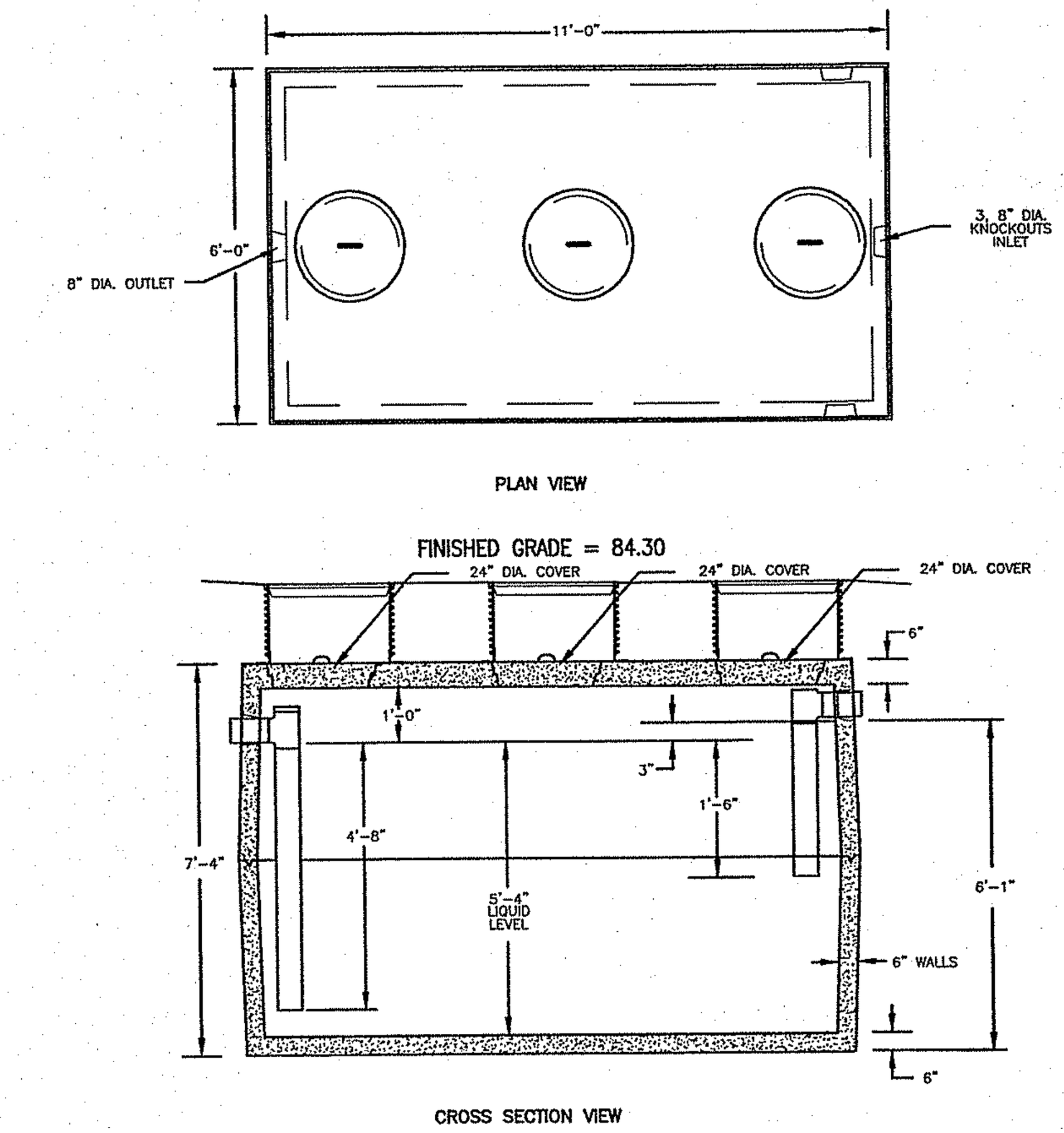
PRECAST SEPTIC TANK.(HS–20) 8,000 GALLONS.

NOTE: ALL 24" DIA. COVERS TO BE BROUGHT TO GRADE
SEPTIC TANK MUST BE CONSTRUCTED TO DIMENSIONS SHOWN

(CERTIFIED WATERTIGHT IN FIELD)

NOTE: ACCESS LIDS SHALL WEIGH 59 lbs OR: SHALL BE TAMPER RESISTANT AND MECHANICALLY FASTENED. EACH ACCESS OPENING SHALL HAVE A LABEL STATING "ENTRANCE INTO THE TANK COULD BE FATAL".

ALL PRE-ASSEMBLED SEPTIC TANKS SHALL BE CERTIFIED WATER TIGHT BY THE MANUFACTURER. ALL TANKS ASSEMBLED ON-SITE SHALL BE CERTIFIED WATERTIGHT IN THE FIELD. CERTIFICATE BY MANUFACTURER OR FROM ON-SITE TESTING SHALL BE INCLUDED WITH BILL OF LADEN.



PRECAST GREASE TRAP.(HS–20) 2,000 GALLONS.

NOTE: ALL 24" DIA. COVERS TO BE BROUGHT TO GRADE
GREASE TRAP MUST BE CONSTRUCTED TO DIMENSIONS SHOWN

(CERTIFIED WATERTIGHT IN FIELD)

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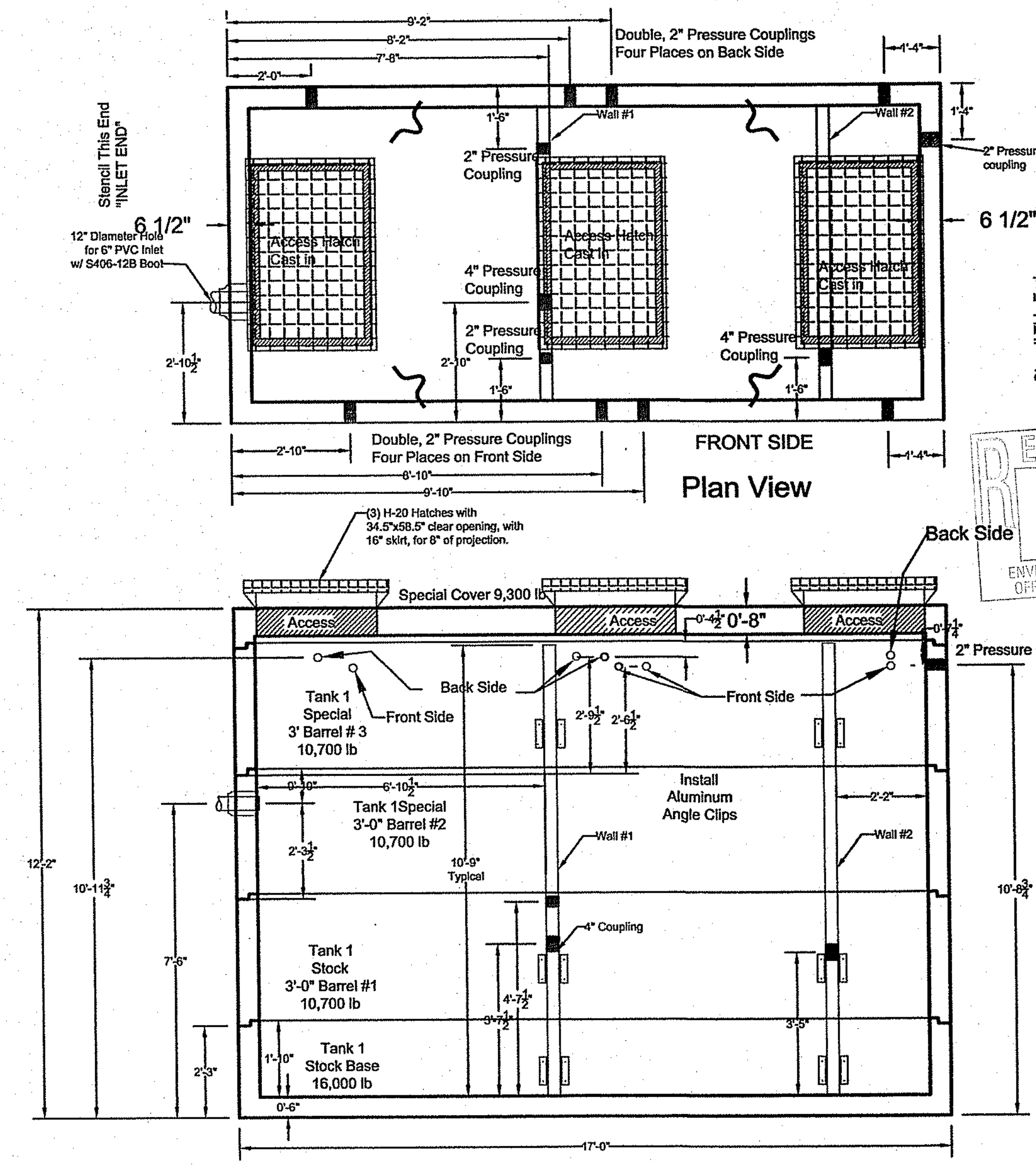
SeptiTech, Inc.

CUSTOMER: Septi-Tech, Inc
JOB NAME: M3000H Processor Tank

Note: ALL PIPE LAYOUT DIMENSIONED TO CENTERLINE



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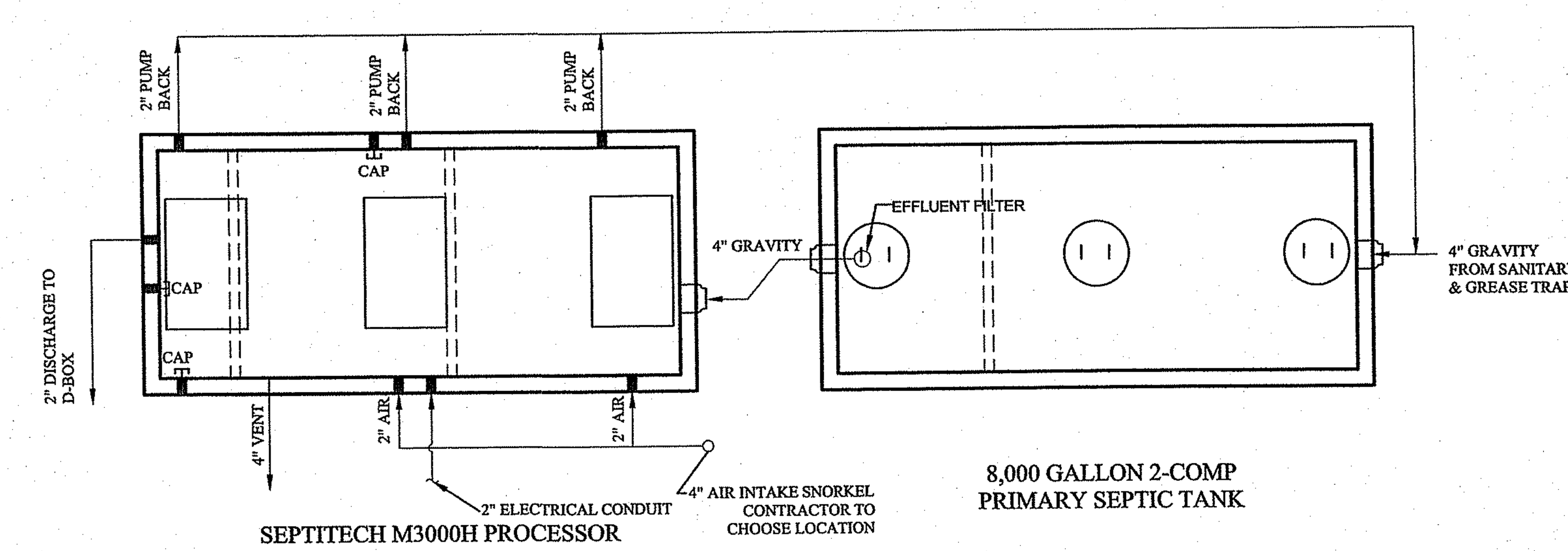
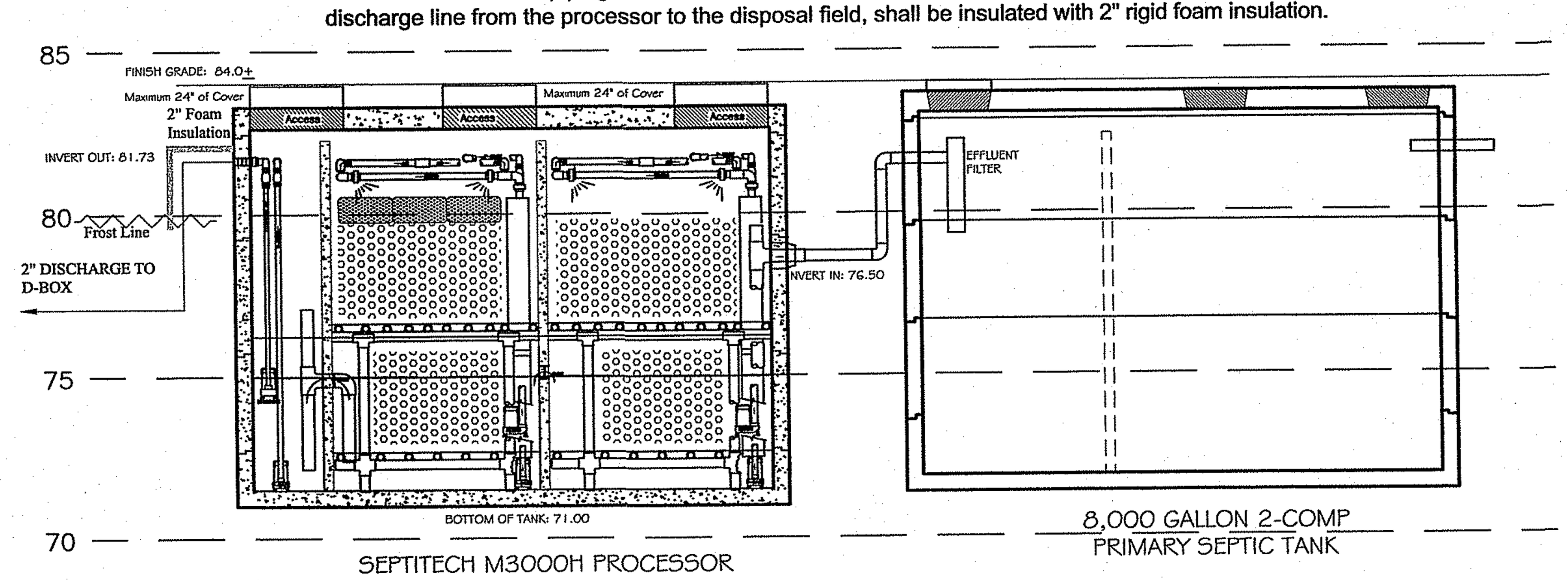


IMPORTANT NOTE: All piping above the frost line and exterior to the SeptiTech processor, including the discharge line from the processor to the disposal field, shall be insulated with 2" rigid foam insulation.



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GREASE TRAP MUST BE CONSTRUCTED TO DIMENSIONS SHOWN

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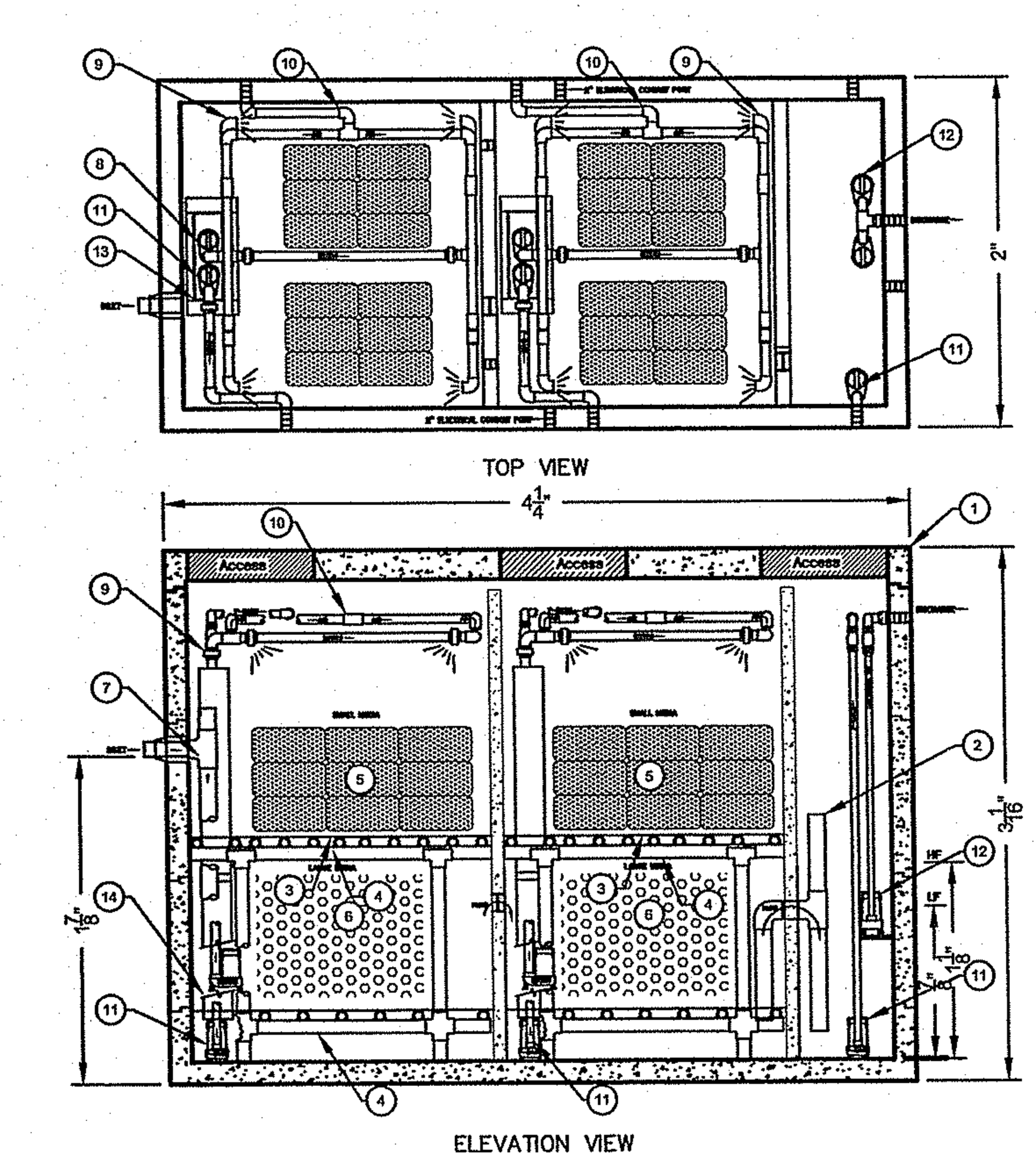

ITEM	QTY.	PART NO.	DESCRIPTION
14	2	#####	Pump Back Chute Assembly
13	2	#####	Pump Chute Assembly
12	1	#####	Duel Discharge Pump Assembly
11	3	#####	Pump Back Pump
10	2	#####	Blaster Air Header Assembly
9	2	#####	Blaster Assembly
8	2	#####	Recirc Pump
7	1	#####	Inlet Piping Assembly
6	2	#####	Large Media
5	2	#####	Small Media
4	4	#####	Support Structure
3	2	#####	Screening Assembly
2	1	#####	Interior Piping Assembly
1	1	#####	8000 Gal. Concrete Tank

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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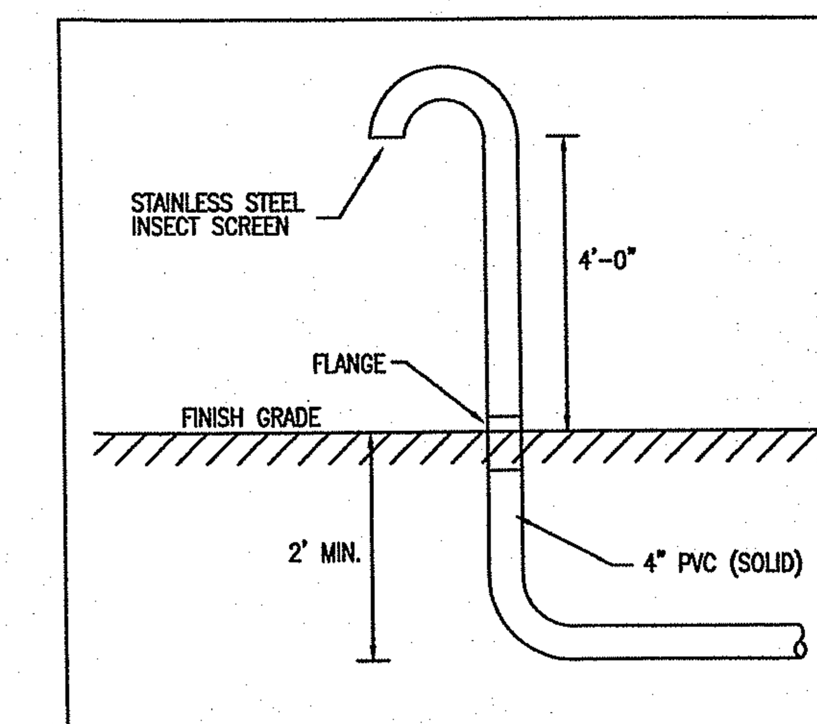

VENT DETAIL
NOT TO SCALE

GENERAL NOTES

- Tank(s) shall not be installed at a depth any greater than 24-inches. Tank installations requiring a depth greather than 24-inches shall do so with prior approval by SeptiTech only. Any risers required to bring the aluminum hatches to grade are the responsibility of the contractor.
- Tank(s) shall be installed with a minimum of 12-inches of compacted crushed stone bedding. Select fill shall be used for backfilling around tanks. Native material may be used if approved by the design engineer.
- Water Testing: Contractor is responsible for water testing the concrete tank(s) once the tank(s) installation has been completed and allowed to set overnight. Water testing shall be conducted in accordance with ASTM C1227.9.2. Installing contractor shall be responsible for providing clean water for the testing, filling the tanks, and pumping the tanks dry once testing is completed.
- Exterior Piping: Contractor is responsible for supplying and installing all exterior piping per SeptiTech installation drawings.
- Air Intake Piping: Air intake snorkel shall be installed within 100 feet of the processor tank. Air intake piping shall be installed such that a positive pitch is provided back towards the processor tank such that any condenstaion build up is free to drain.
- Pipe Insulation: Contractor is responsible for insulating all piping exterior to the SeptiTech processor including the discharge line from the processor to the disposal field.
- Tank Insulation: After concrete tanks have been installed and water testing is completed, contractor shall insulate the top and sides of the processor tank below frost depth (4-feet minimum) down the sides of the tank with 2" rigid foam (blue) board insulation and then complete backfilling. Contractor is also responsible for installing insulation over the top of the forcemain from the SeptiTech system to the disposal field if not buried below frost level in order to prevent freezing.
- Electrical: All electrical work is the responsibility of the contractor's licensed electrician and is not provided by SeptiTech. System Controller should be installed in a heated building where an ambient temperature range of 60 to 90 degrees F is maintained. If the control panel must be located outside, please notify SeptiTech, Inc. so a heater may be installed within the enclosure.

  SeptiTech processors can also be built to 3-phase power requirements. If 3-phase is required, please notify SeptiTech at the time of contract signing.
- Phone Line: Contractor is responsible for installing a dedicated analog phone line to the processor control panel for the autodialer/modem. Phone line must be installed and working in order to have any work performed under warranty. Any work performed on the system without the installation of the phone line shall be at the expense of the owner.

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OWTS DETAILS
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM
Checked By: DrC
Scale: As Shown
Date: 7/14/2009

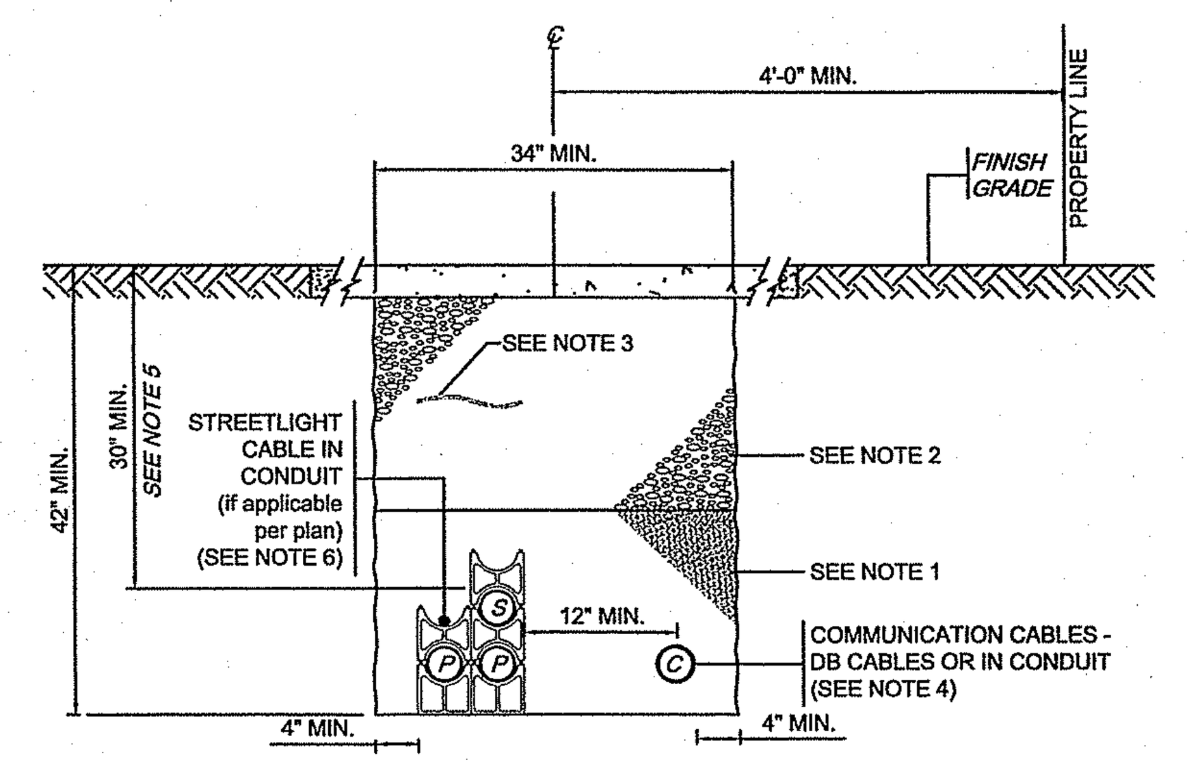
REVISIONS

NO.	REVISION	BY	DATE

DANIEL R. COTTA
NO. 5147
STATE OF RHODE ISLAND
REGISTERED PROFESSIONAL ENGINEER
HOPE
[illegible]
10/2/09

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail – Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

C.6.1
of 1 sheets
Drawing No.
Dr. ______ Sh. ______



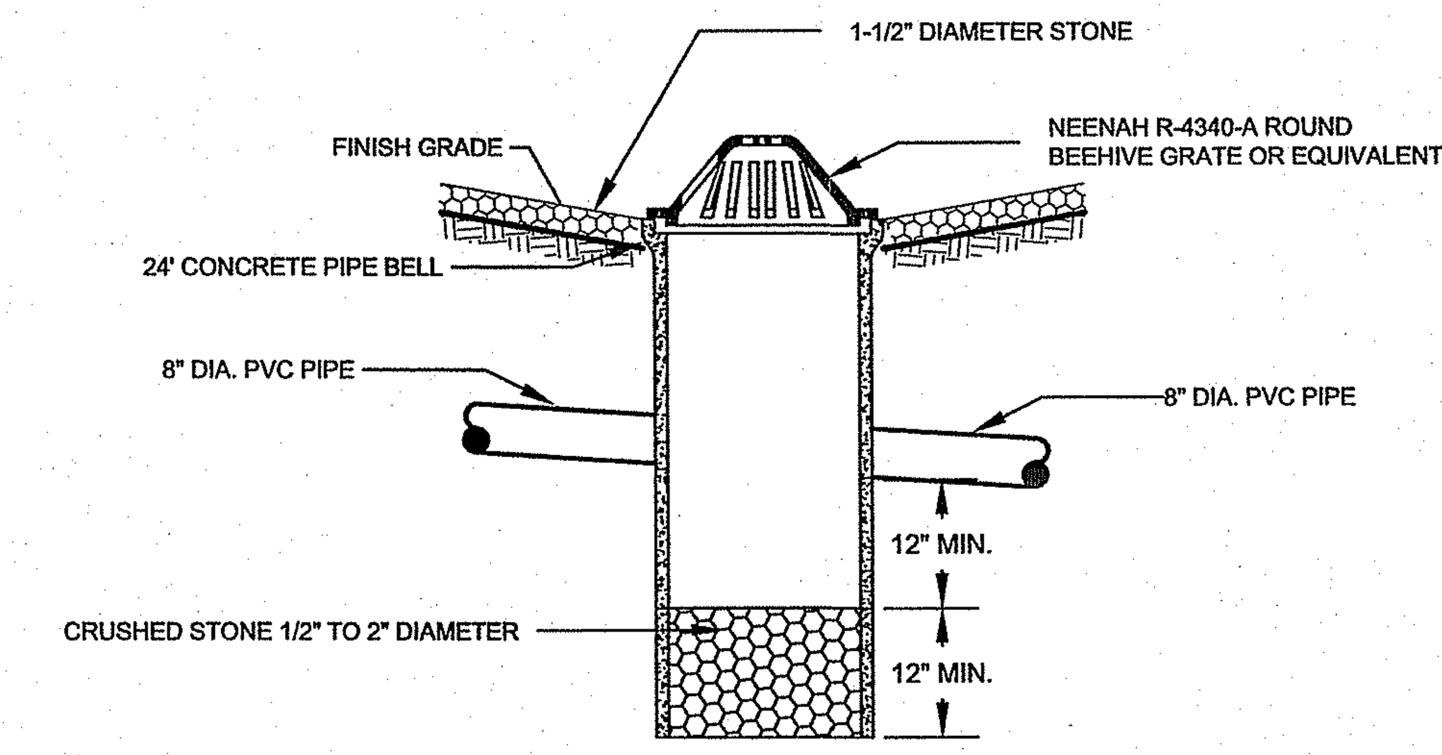
2 PRIMARY CONDUITS, 1 SECONDARY CONDUIT & 1 STREETLIGHT CIC (if applicable per plan)

ELECTRIC, TELEPHONE & CABLE CROSS-SECTION

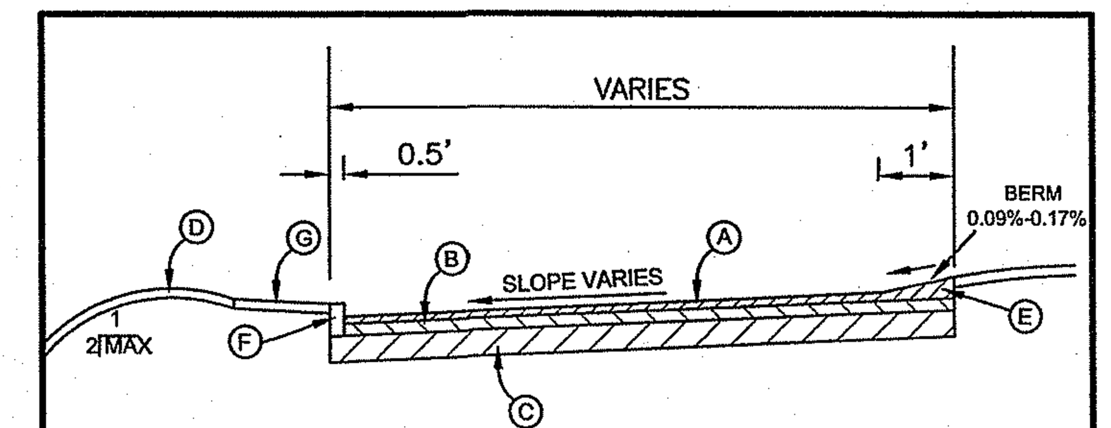
1. 4" OF SCREENED, WASHED SAND ABOVE, BELOW & BOTH SIDES OF ALL CONDUITS.
2. BACKFILL TO BE FREE OF STONES GREATER THAN ONE INCH AND SHALL NOT CONTAIN ASHES, CINDERS, SHELL OR FROZEN MATERIAL.
3. INSTALL PLASTIC WARNING TAPE ABOVE ALL CONDUIT RUNS, APPROXIMATELY 12" BELOW FINISH GRADE.
4. MINIMUM SEPARATION BETWEEN ELECTRIC CONDUIT AND ANY COMMUNICATION CONDUIT/CABLE SHALL BE 12".
5. 30" MINIMUM BURIAL DEPTH FROM FINISH GRADE TO TOP OF PRIMARY/SECONDARY CONDUITS.
6. 24" MINIMUM BURIAL DEPTH FROM FINISH GRADE TO TOP OF STREETLIGHT CIC (CABLE IN CONDUIT). INSTALLATION TO BE ON CURB SIDE OF TRENCH. ALL ROAD CROSSINGS TO BE AT 30" MINIMUM BURIAL DEPTH.
7. MINIMUM BURIAL DEPTH OF CONDUIT TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION TO BE PREVENT DAMAGE FROM TRAFFIC.
FROM FINISH GRADE TO TOP OF CONDUIT KNOCKOUTS.

DISCLAIMER:

The Electric, Telephone and Cable Detail as depicted above is intended to be used as a guide for estimating purposes only. Construction shall be per specifications as issued by the appropriate utility company.



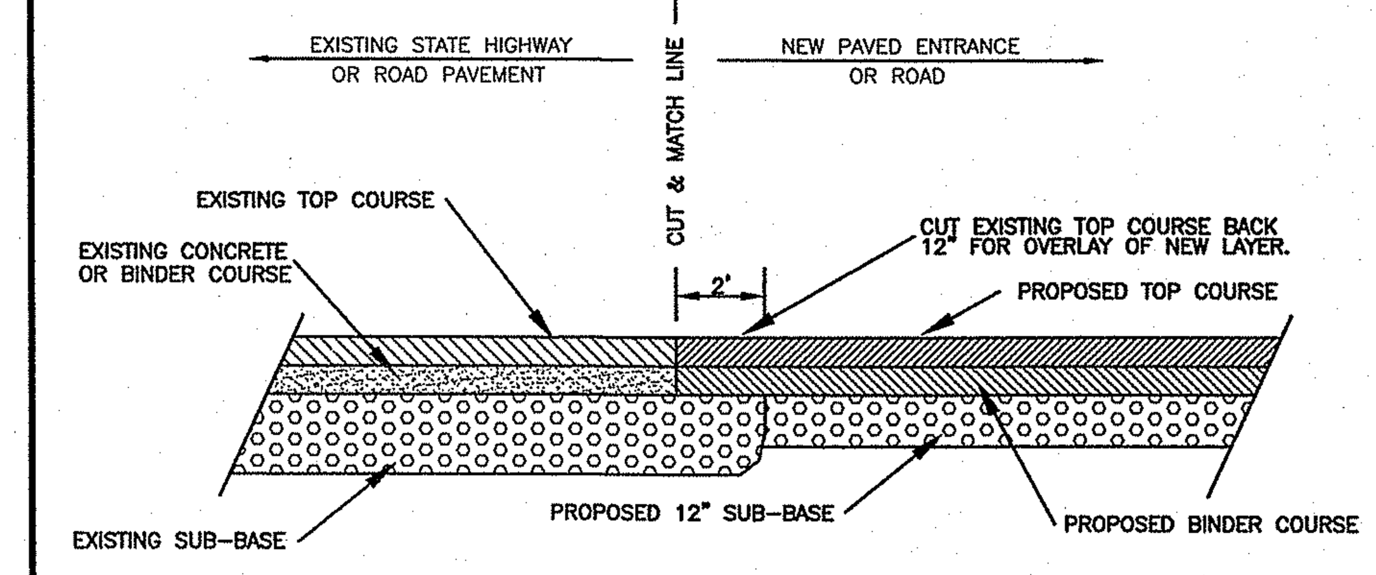
SPECIAL CATCH BASIN DETAIL
Yard Drains - Series 10, 11, 12 and 13 (A & B)
NOT TO SCALE



TYPICAL PAVEMENT SECTION

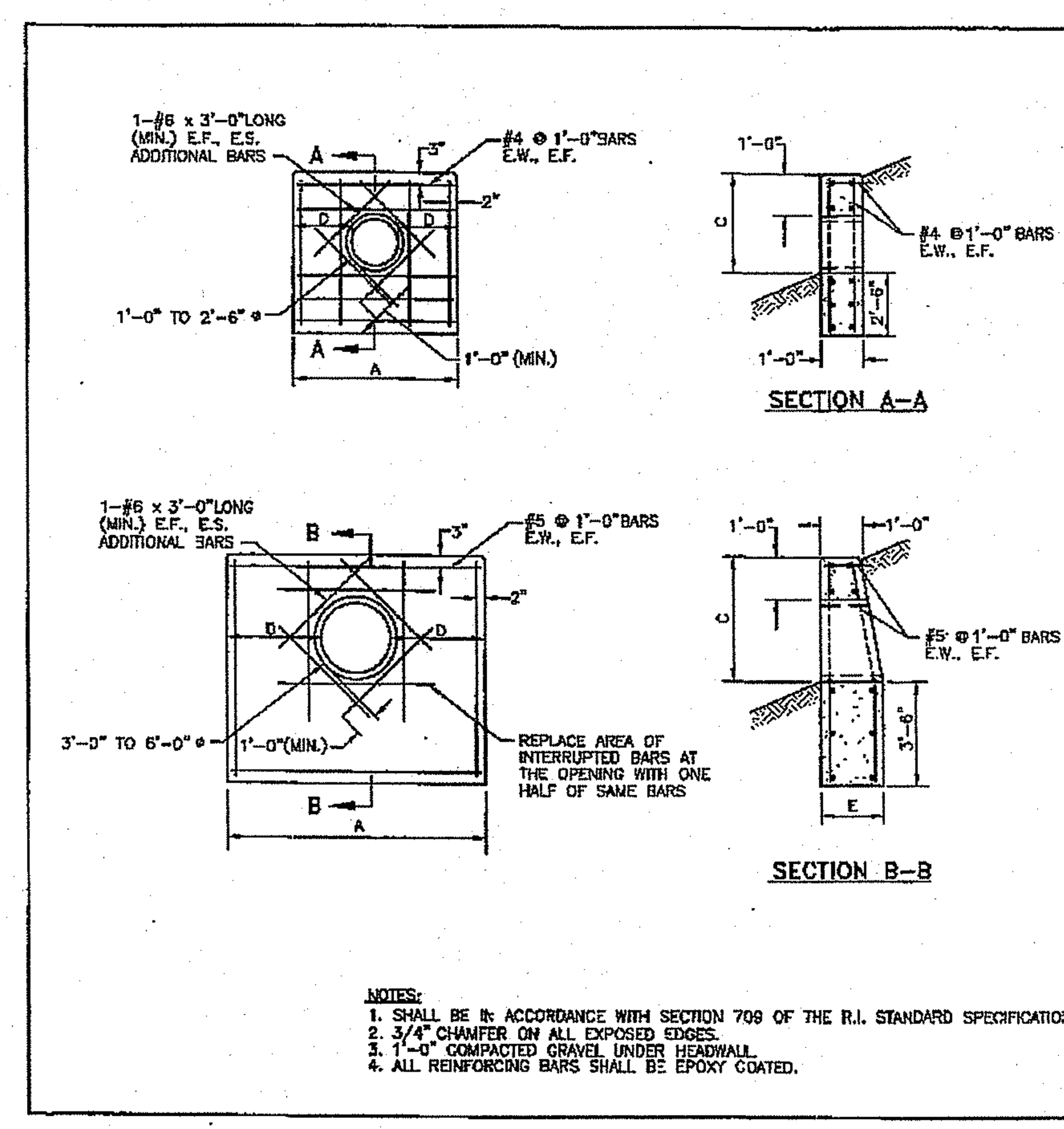
NOT TO SCALE

- (A) 1-1/2" ASPHALT SURFACE COURSE. (2" Asphalt I-1 within Right-of-Way)
- (B) 2-1/2" ASPHALT BINDER COURSE.
- (C) GRAVEL BORROW BASE COURSE 12" IN CUT & FILL.
- (D) 4" LOAM WITH TYPE I, II OR III SEED.
- (E) BITUMINOUS BERM
- (F) Concrete Curb
- (G) Concrete Sidewalk



TYPICAL CUT & MATCH PAVEMENT SECTION DETAIL

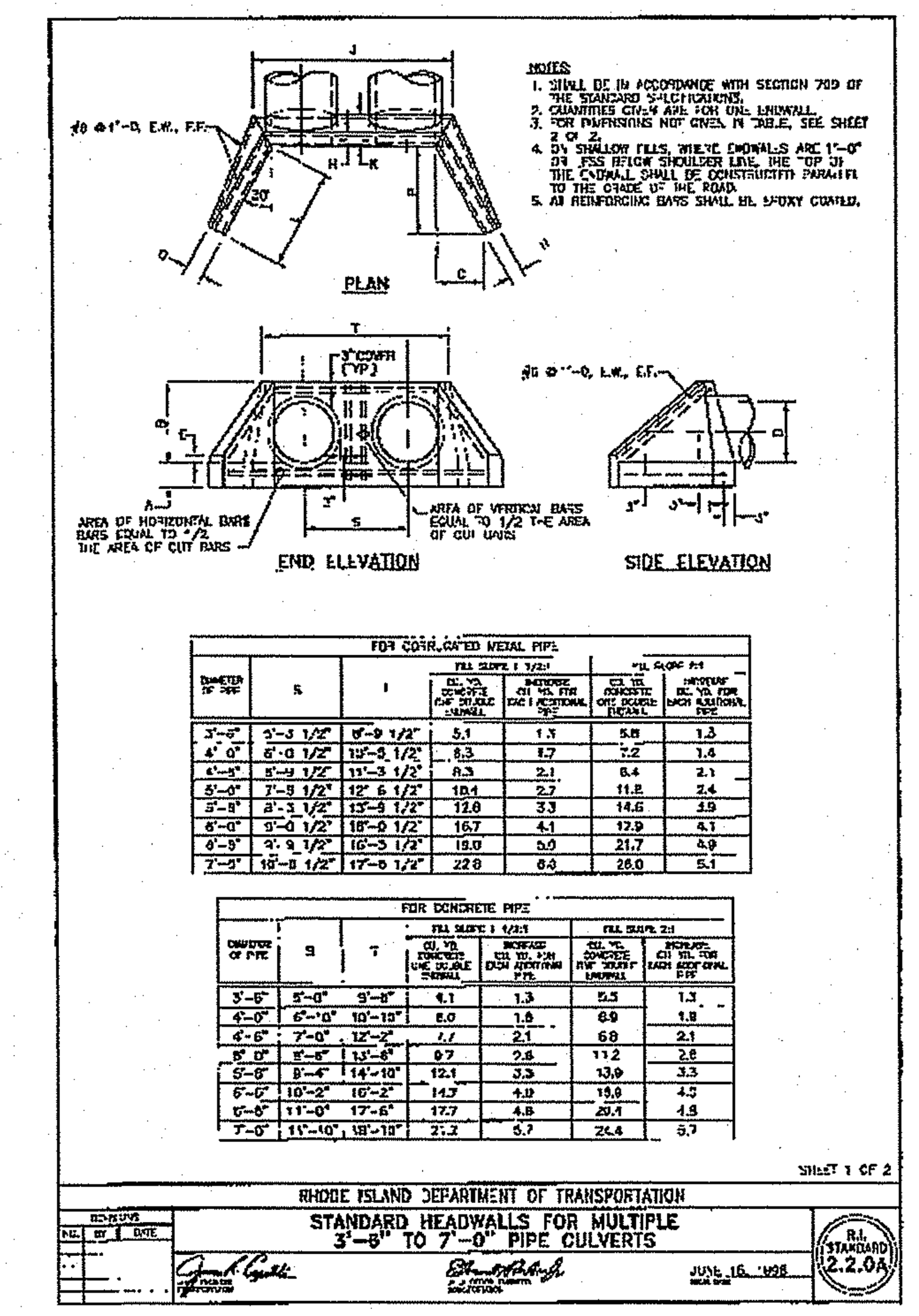
NOT TO SCALE

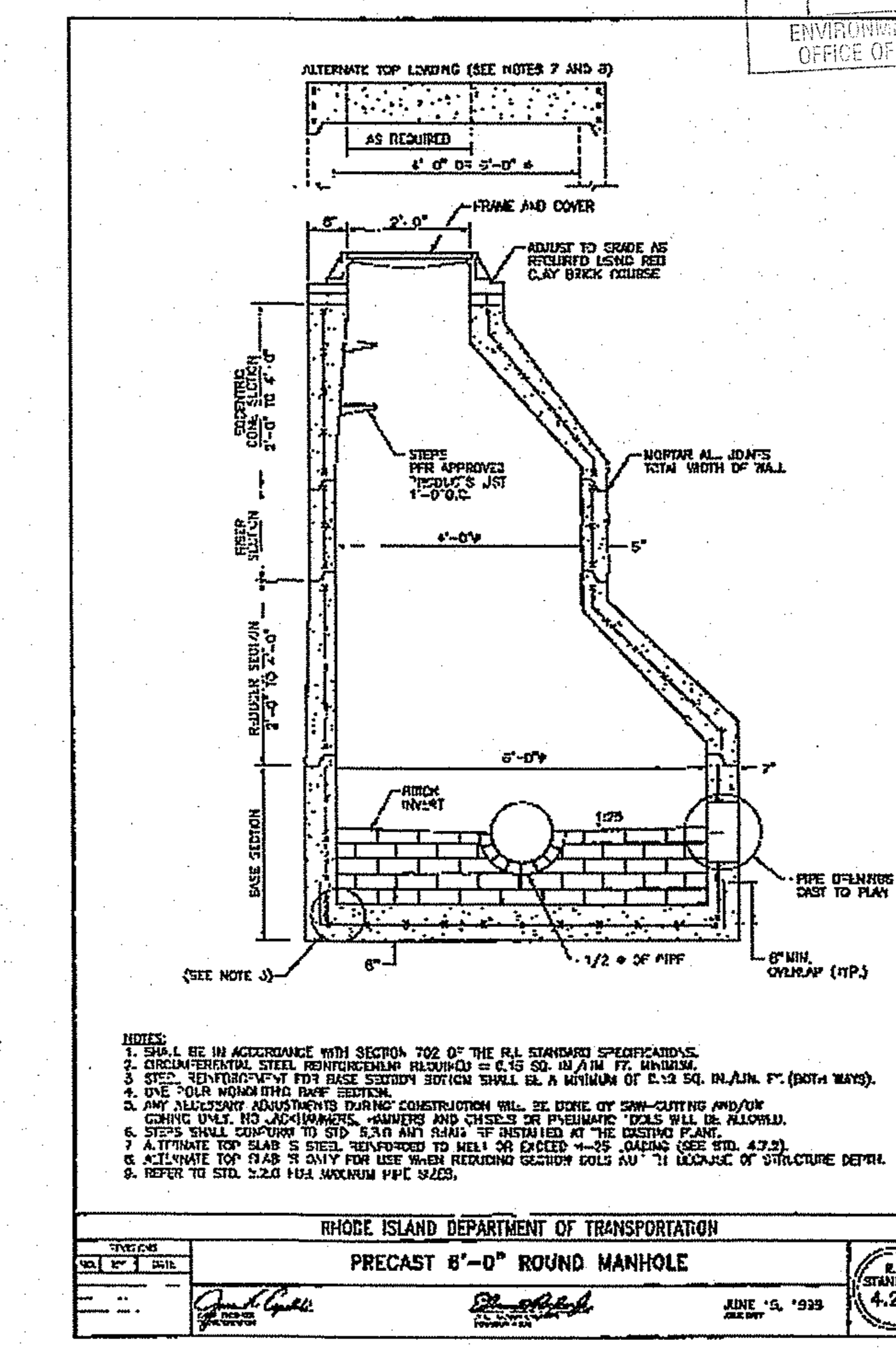


DIAMETER OF PIPE	A	C	D	E	CU. FT. CONCRETE
1'-0"	3'-0"	2'-2"	1'-0"	–	13.2
1'-3"	3'-9"	2'-5"	1'-3"	–	17.2
1'-6"	4'-6"	2'-8"	1'-6"	–	21.5
1'-9"	5'-3"	2'-11"	1'-9"	–	26.0
2'-0"	6'-0"	3'-2"	2'-0"	–	30.9
2'-3"	6'-9"	3'-6"	2'-3"	–	36.5
2'-6"	7'-6"	3'-9"	2'-6"	–	42.0
3'-0"	9'-6"	4'-0"	3'-3"	1'-5"	84.1
3'-6"	11'-0"	4'-6"	3'-9"	1'-7"	111.8
4'-0"	12'-6"	5'-0"	4'-4"	1'-9"	146.5
4'-6"	14'-4"	5'-6"	4'-11"	1'-11"	186.3
5'-0"	16'-0"	6'-0"	5'-6"	2'-1"	232.6
5'-6"	17'-8"	6'-6"	6'-1"	2'-3"	284.9
6'-0"	19'-4"	7'-0"	6'-6"	2'-5"	343.6

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
2. 3/4" CHAMFER ON ALL EXPOSED EDGES.
3. 1'-0" COMPACTED GRAVEL UNDER HEADWALL.
4. ALL REINFORCING BARS SHALL BE EPOXY COATED.

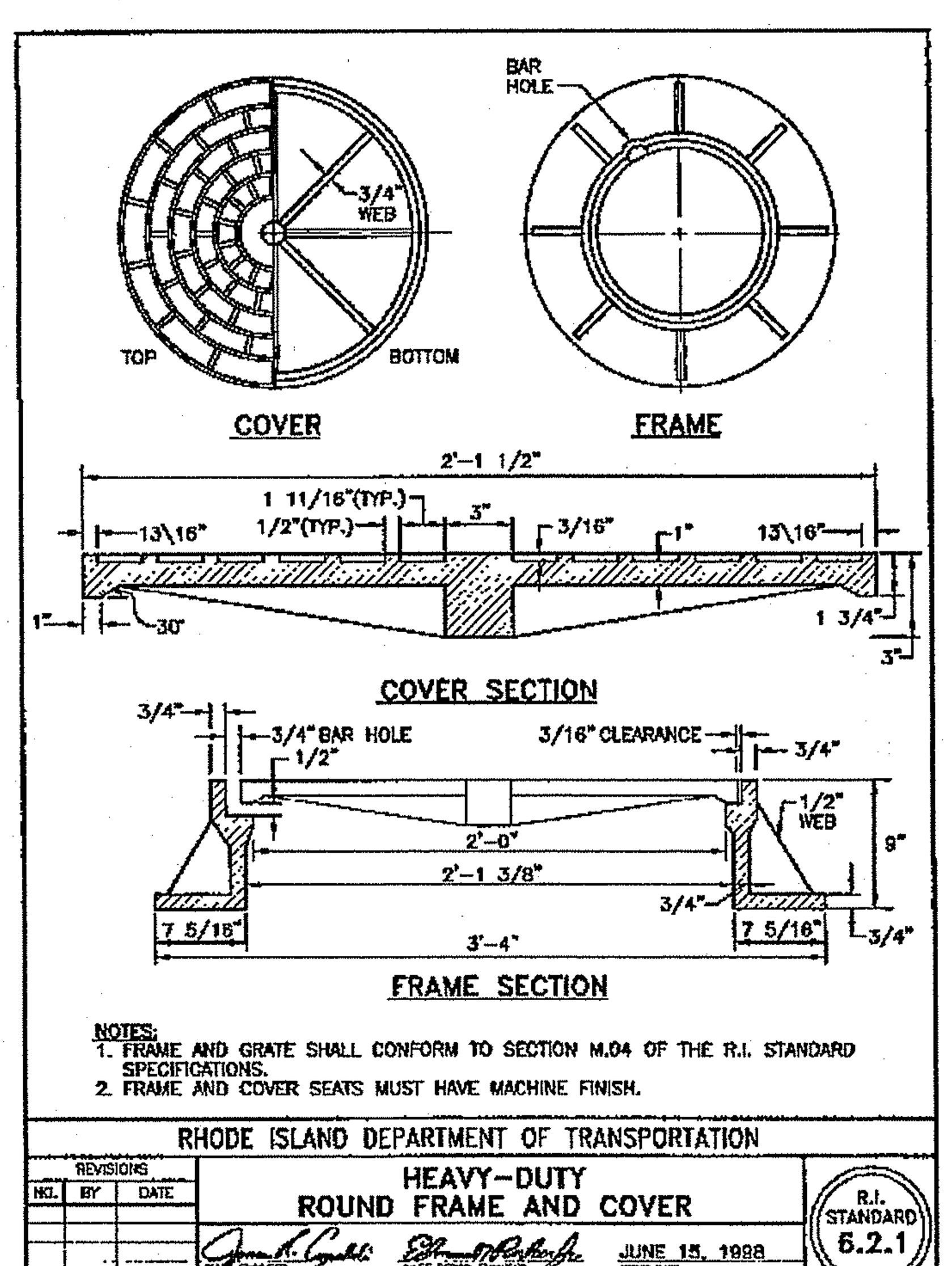
RHODE ISLAND DEPARTMENT OF TRANSPORTATION
CONCRETE HEADWALLS FOR PIPE CULVERTS
JUNE 15, 1998
R.I. STANDARD 2.1.0

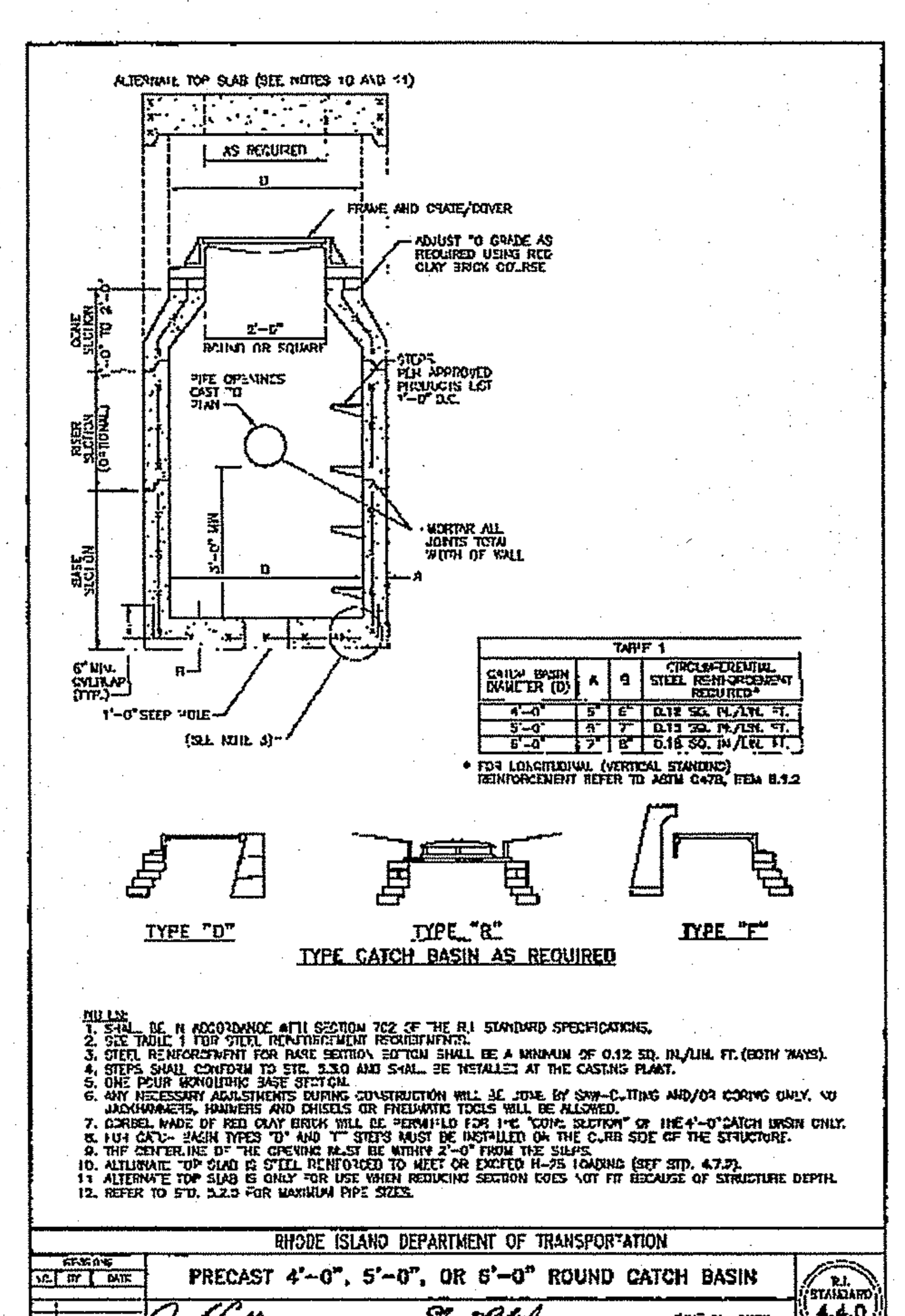


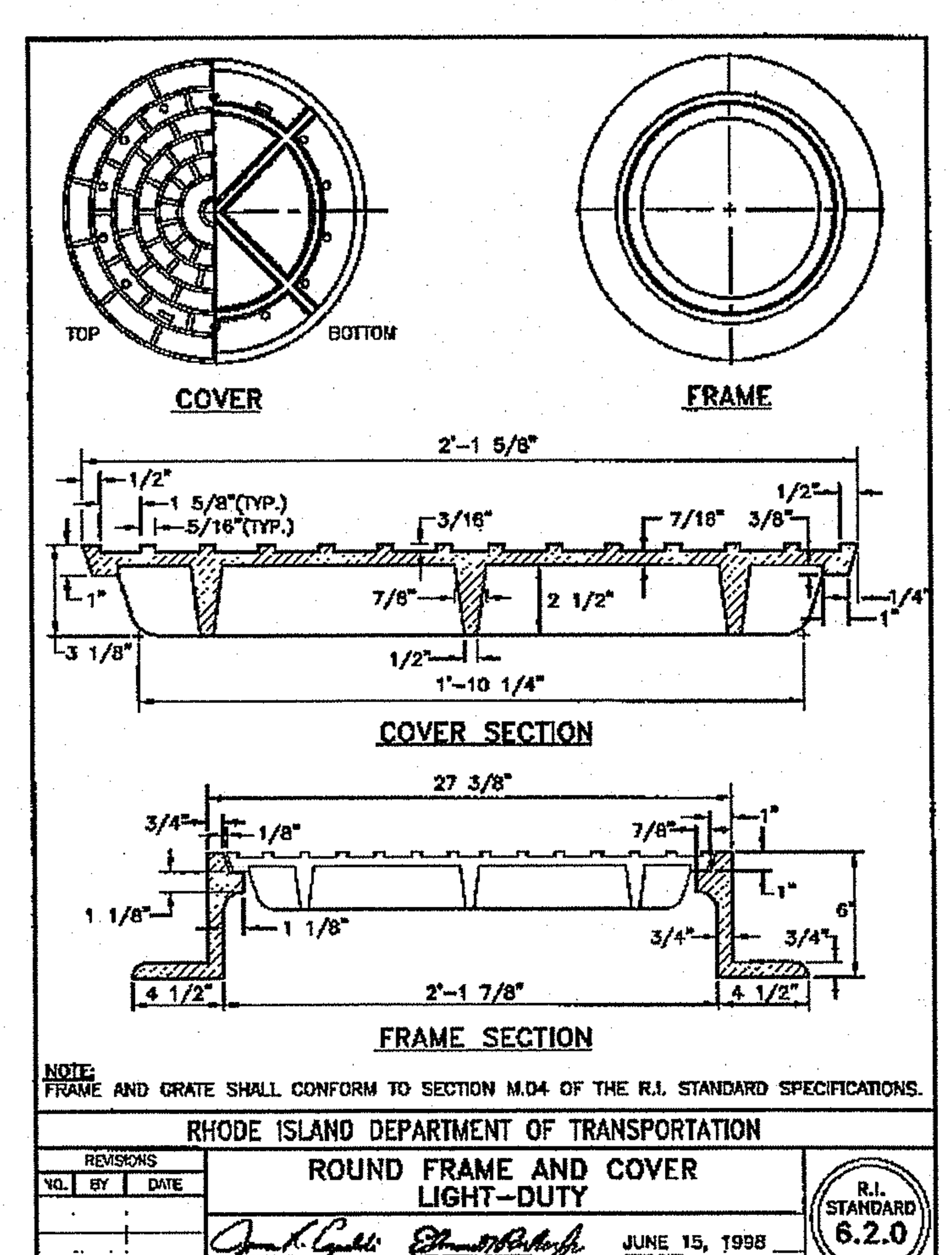


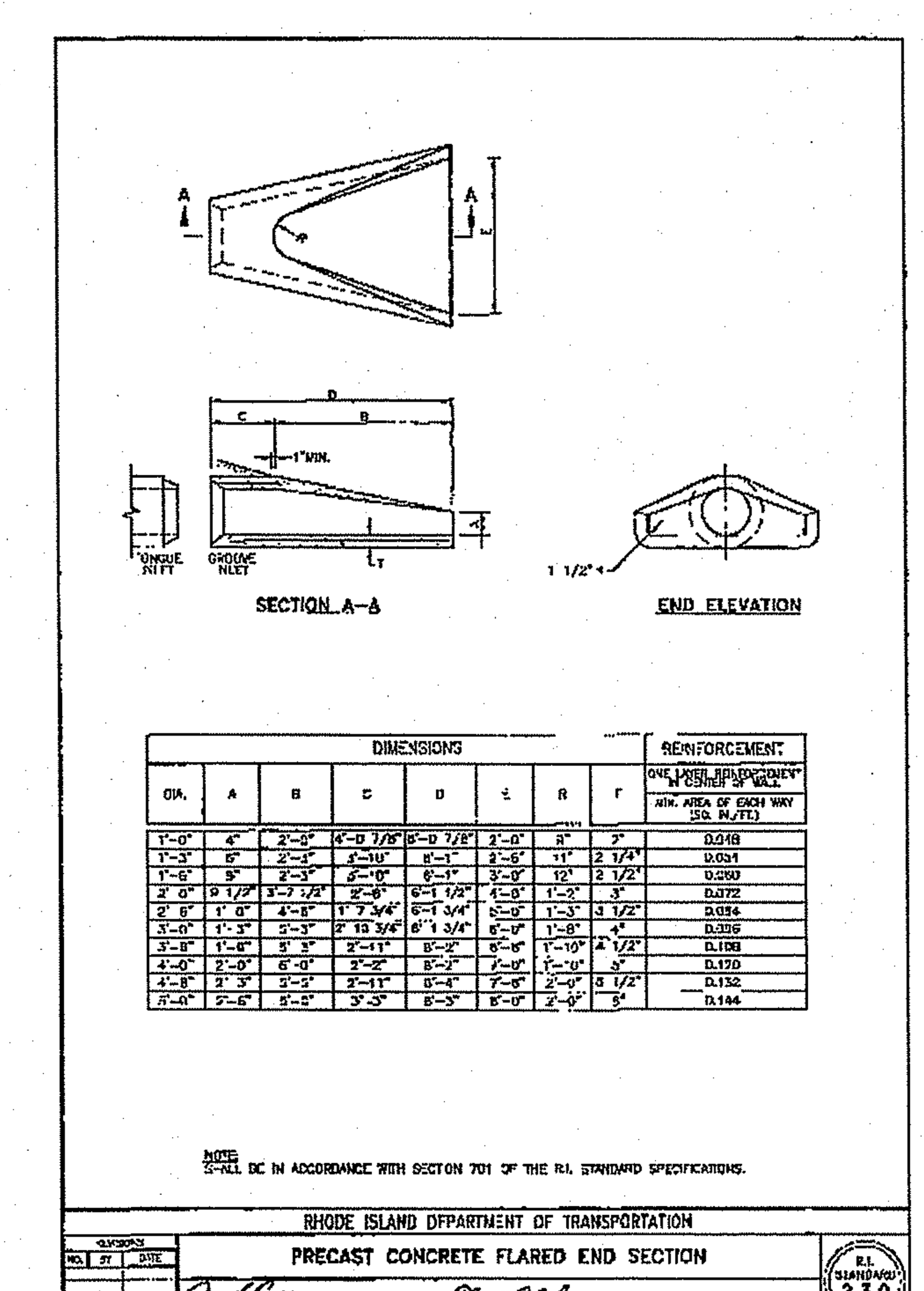
NOTE:
Heavy-Duty Frame and Cover to be utilized in all areas subject to vehicular traffic.

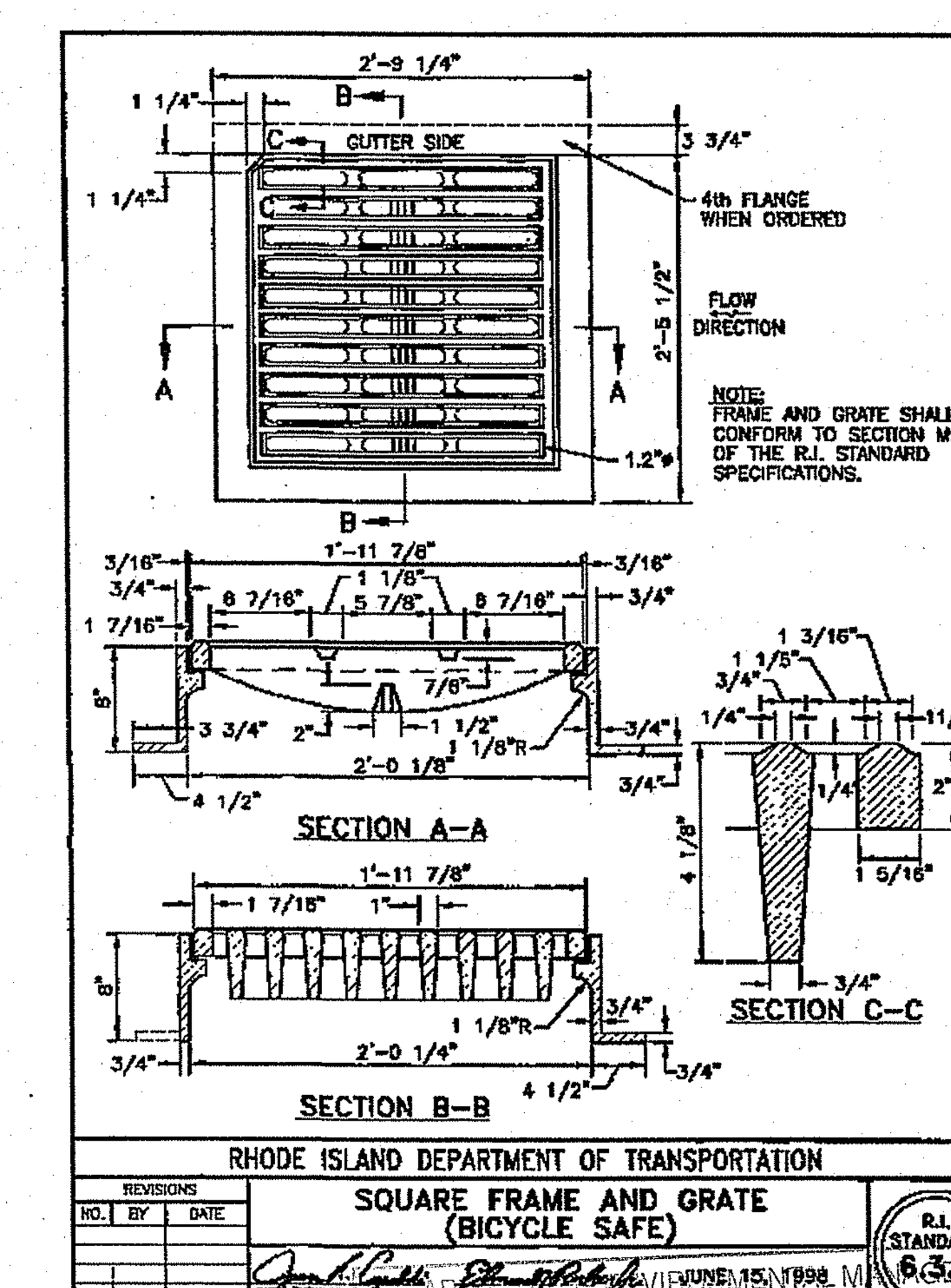
NOTE:
All Catch Basins to be installed with 4' deep sumps and shall be equipped with a snout or inverted elbow extending 2' from the bottom of the drain.











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Drawn By: ERM | Checked By: DrC
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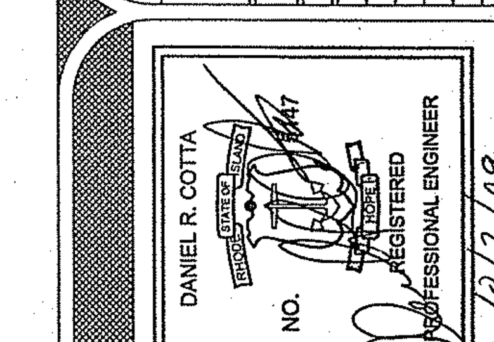
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09



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Sheet 14 of 19

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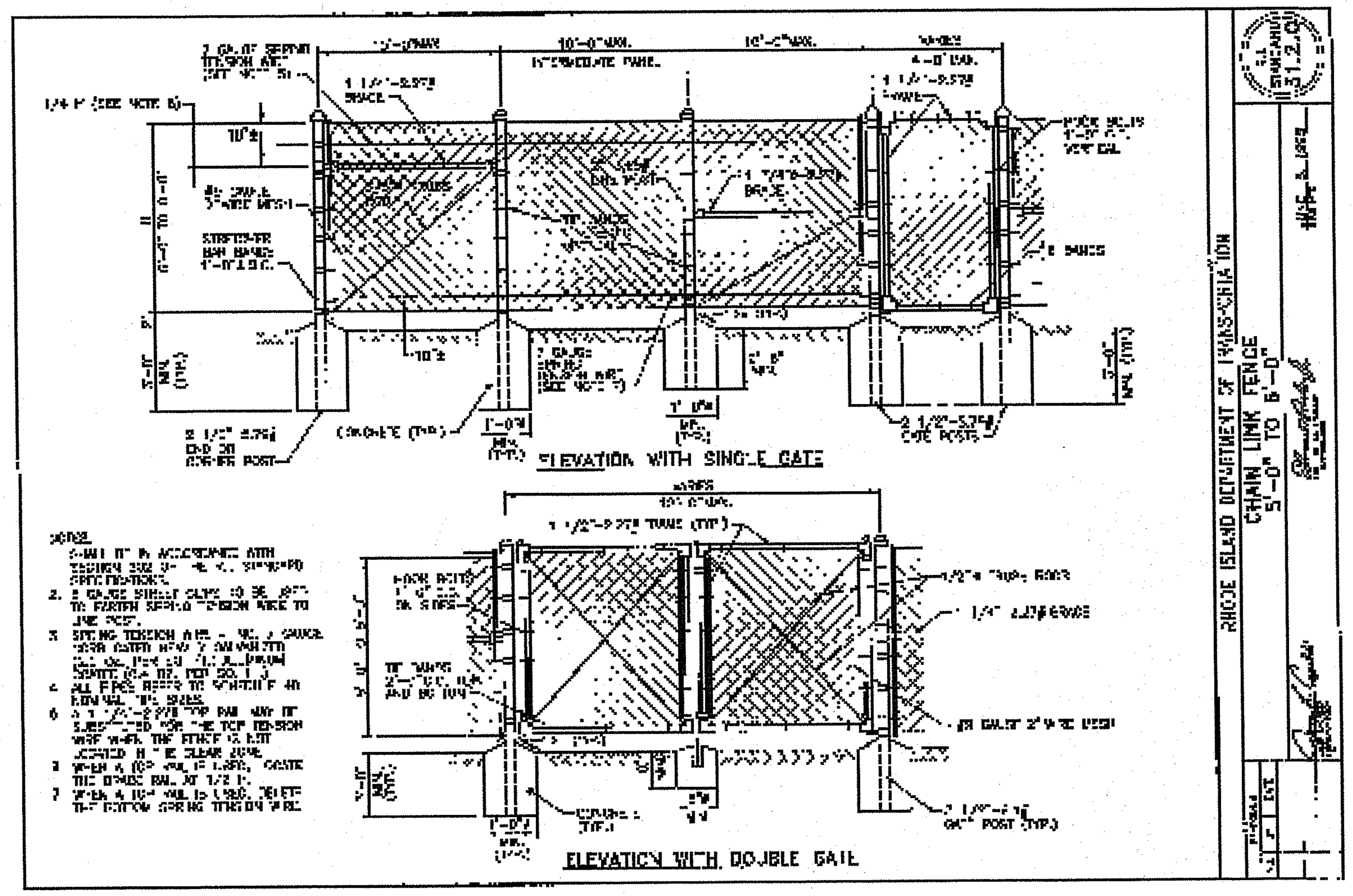
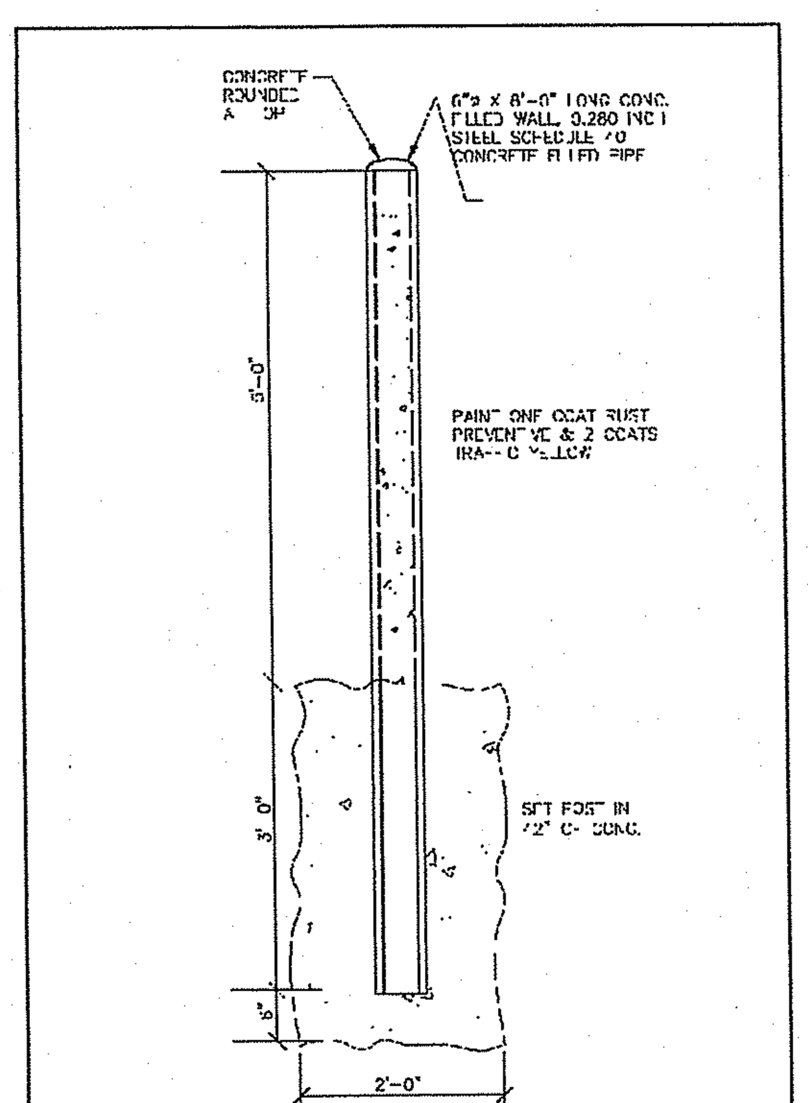
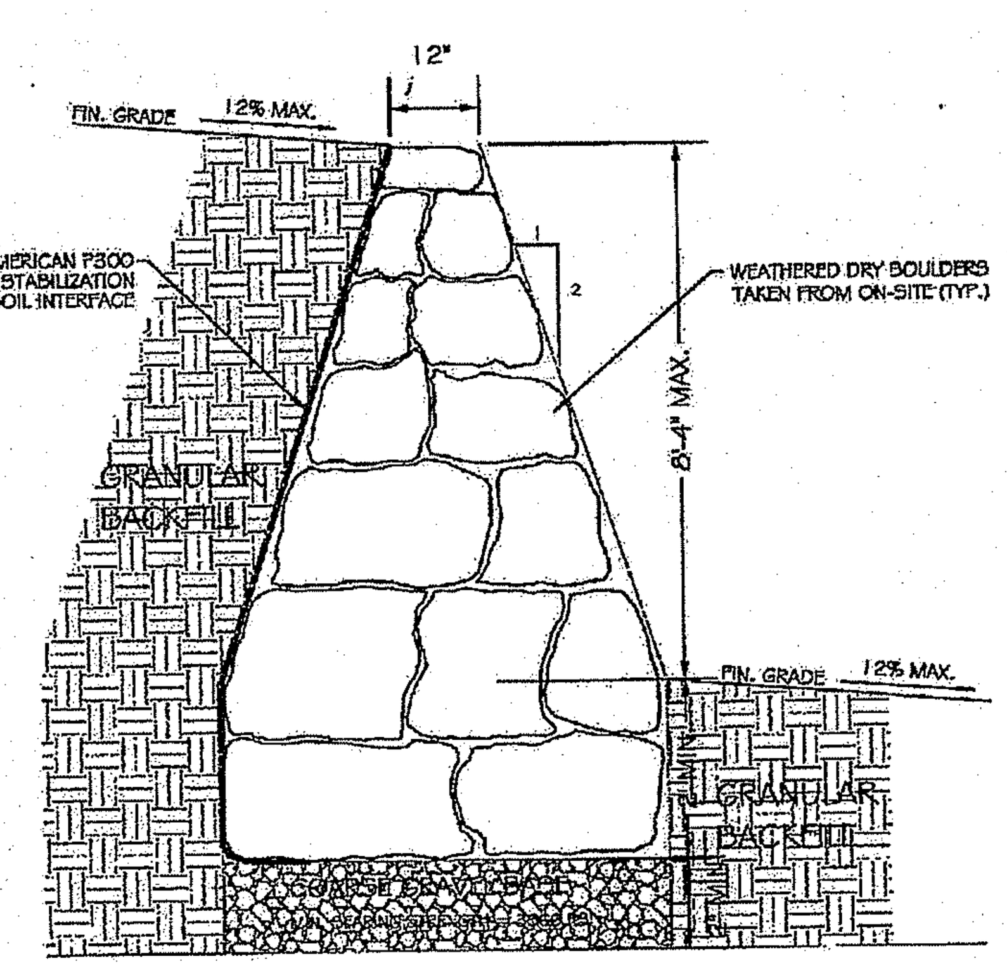
of 1 sheets

Drawing No.
Dr. ____ Sh. ____



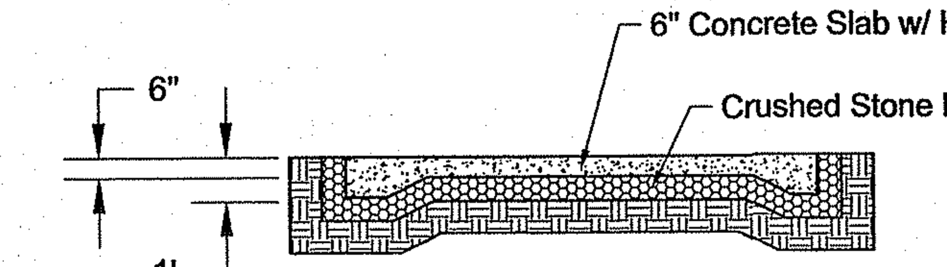


BOLLARD



TYPICAL TERRACED WALL SECTION

NOT TO SCALE



Cross Section

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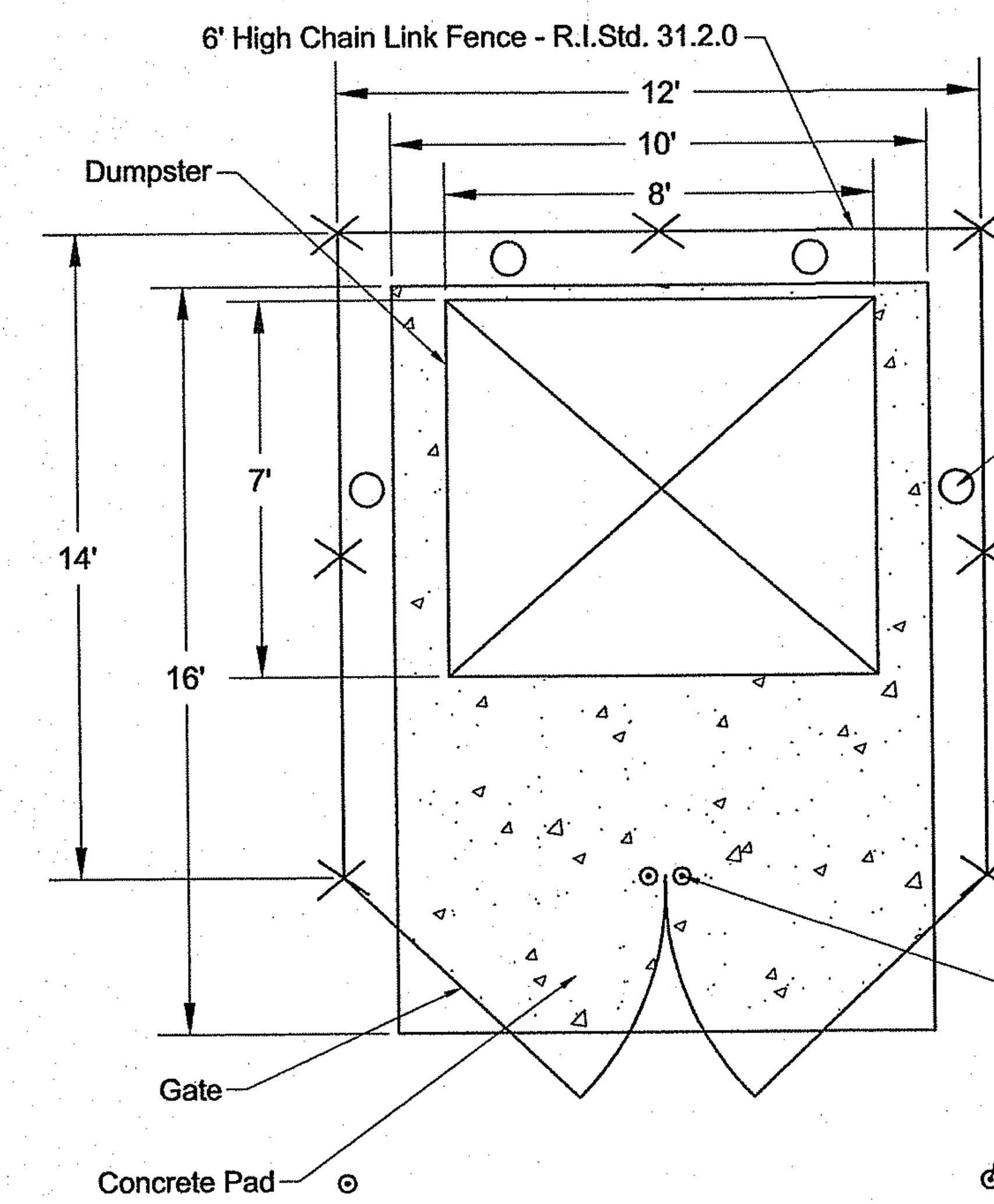

Concrete Dumpster Detail

NOT TO SCALE

NOTES:

1.) FENCE
6 foot high chain link fence (R.I.Std. 31.2.0) w/ black privacy-type slats inserted in galvanized steel mesh fabric.

2.) CONCRETE SLAB
Monolithic, min. 6" thickness w/imbedded 6"x6"/ 10x10 welded wire fabric (W.W.F.), 3000 P.S.I. with fiber mesh reinforcing.

3.) GATES
Constructed of min. 1-1/2" diameter galvanized tubular steel w/privacy-type slats (Black) inserted in galvanized steel mesh fabric, hinge-mounted on min. 3 1/2" diameter galvanized steel post. (Gates and post constructed and installed per applicable building code by licensed fence contractor).

4.) DROP PIN 1/2" dia. 18" long metal rod gate latch. Provide 3/4" dia. hole 6" into concrete for rods. In asphalt provide a 3/4" P.V.C. sleeve, 6" long, or equal.

5.) SOIL
Soil bearing capacity to be at least 2,500 P.S.F.

6.) BOLLARD
3' high, 6" diameter steel pipe bollard filled with concrete, painted traffic yellow, imbedded 3'-0" deep in 24" concrete foundation. (See Detail)

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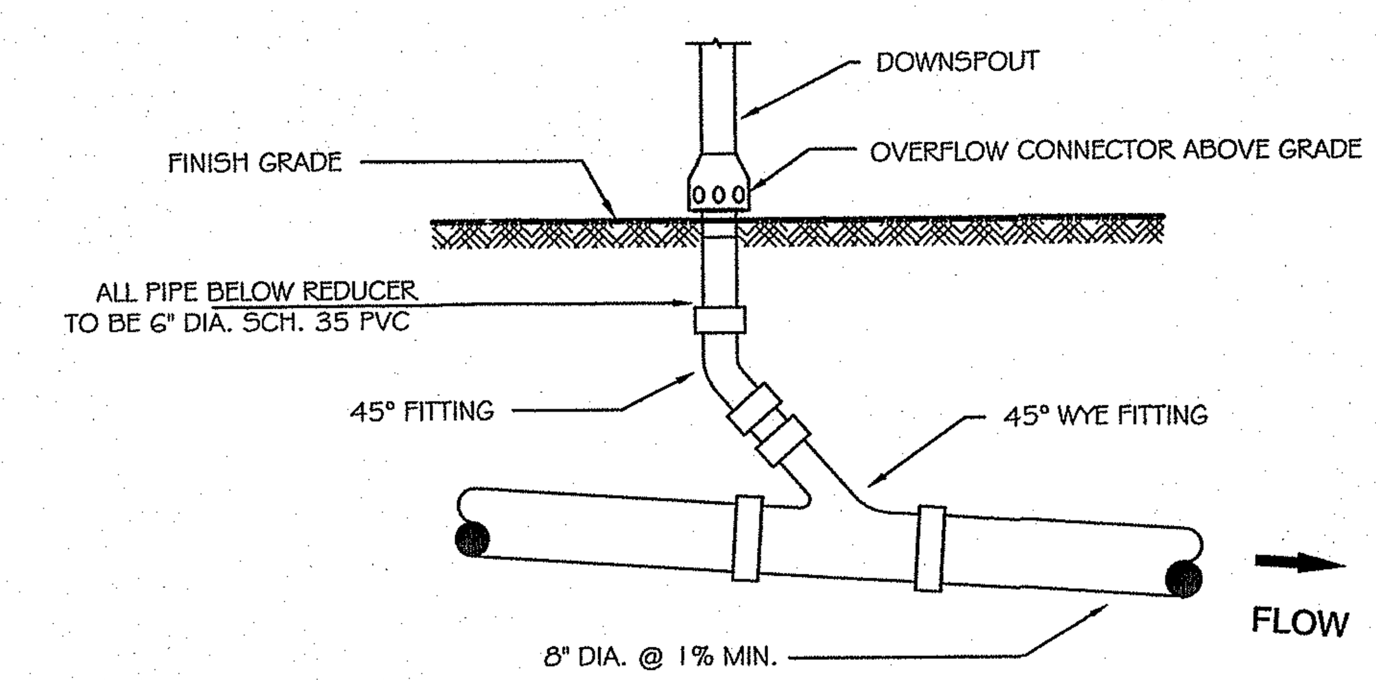
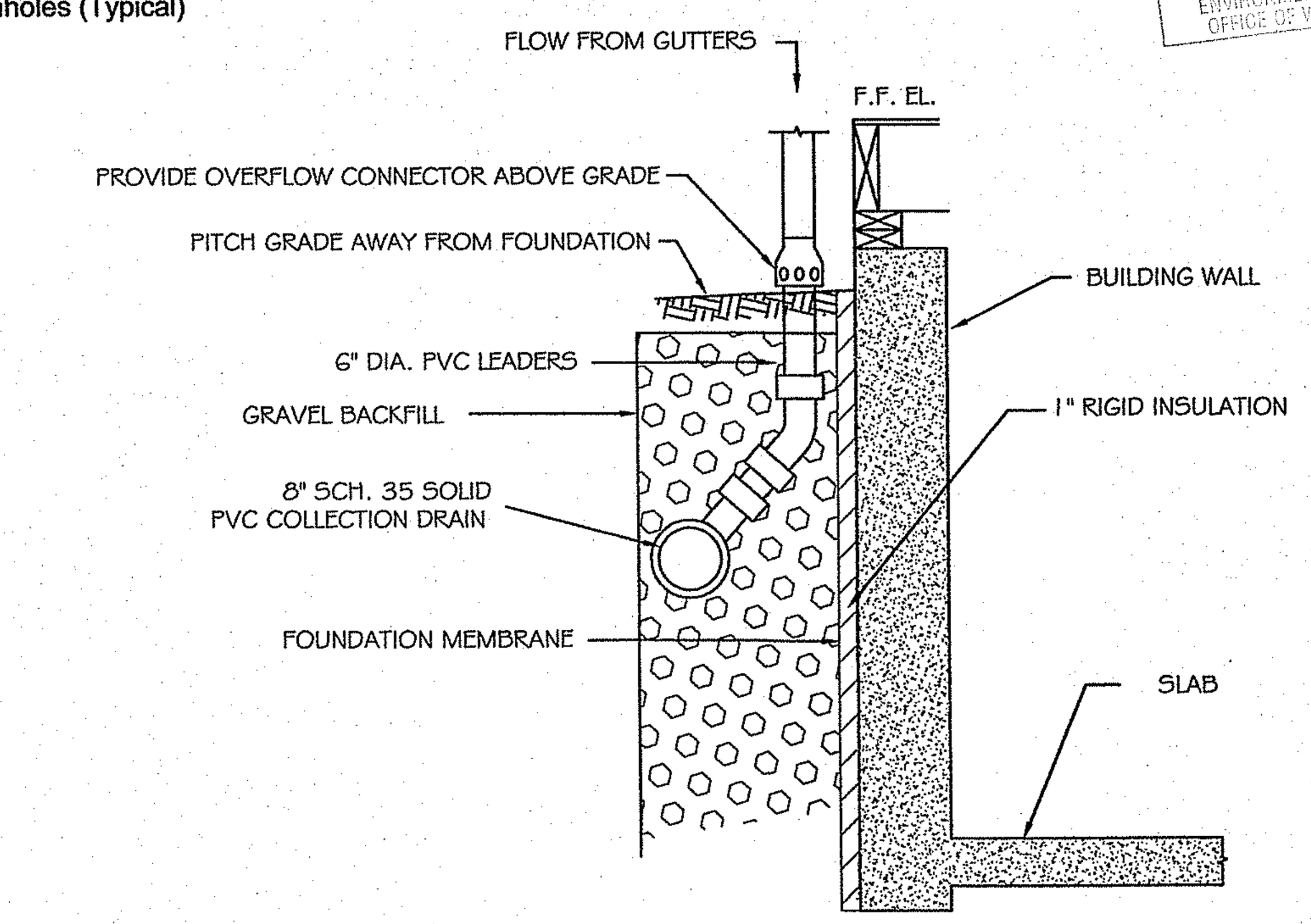


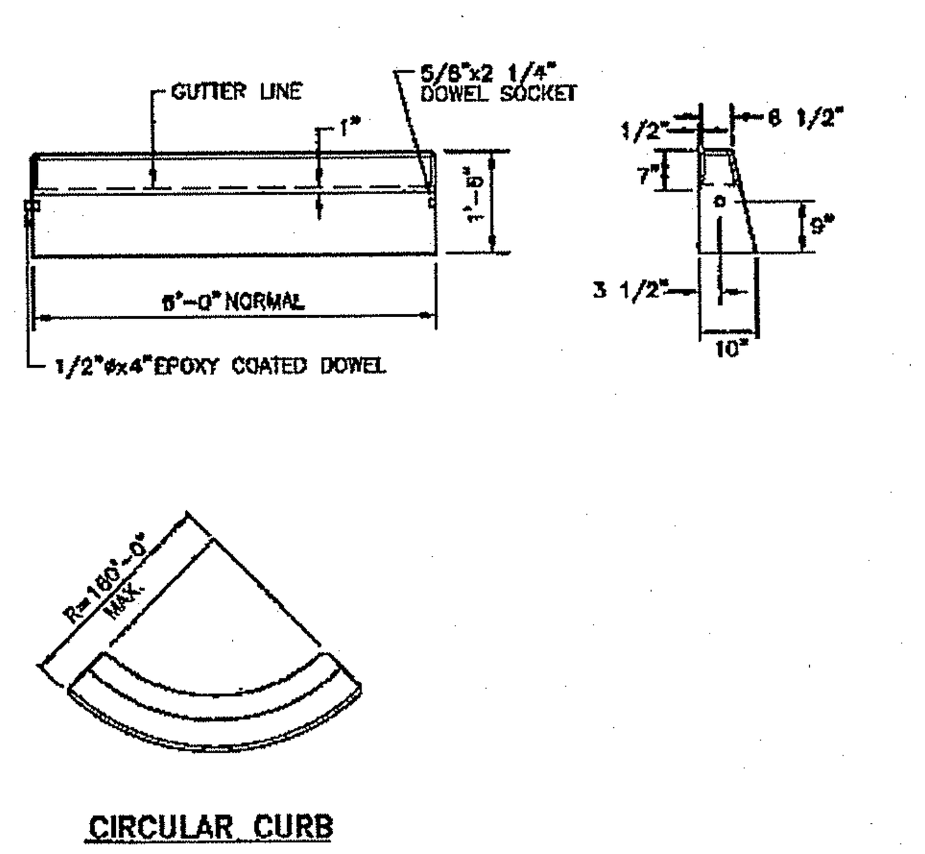
ROOF DRAIN COLLECTION DETAIL

NOT TO SCALE



TYPICAL ROOF DRAIN SECTION

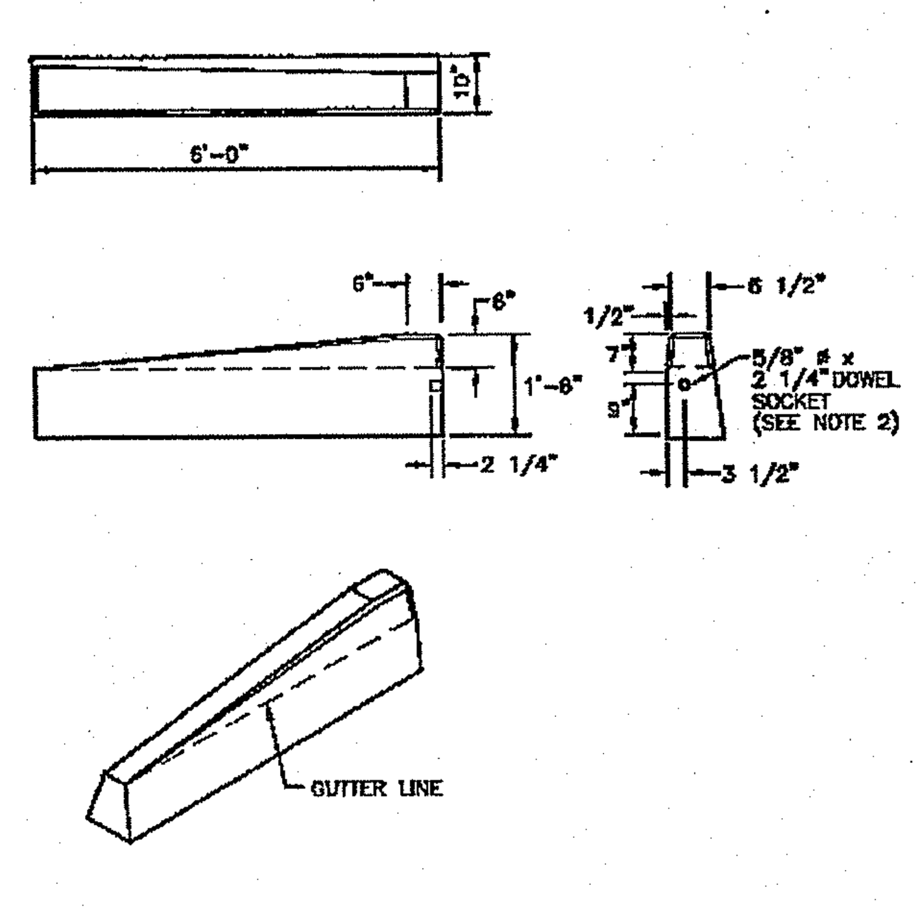
NOT TO SCALE



CIRCULAR CURB

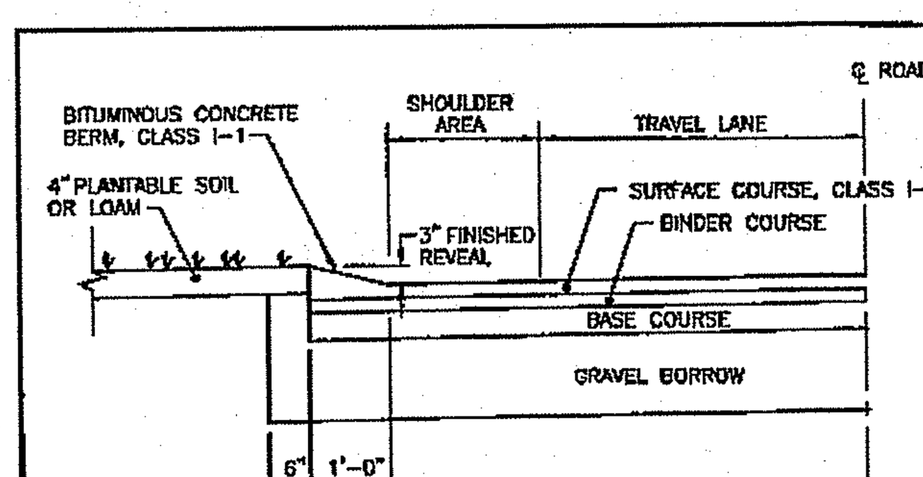
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
5. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
PRECAST CONCRETE CURB
REVISIONS NO. BY DATE
CHIEF ENGINEER TRANSPORTATION — CHIEF DESIGN ENGINEER TRANSPORTATION
JUNE 15, 1998 ISSUE DATE
R.I. STANDARD 7.1.0

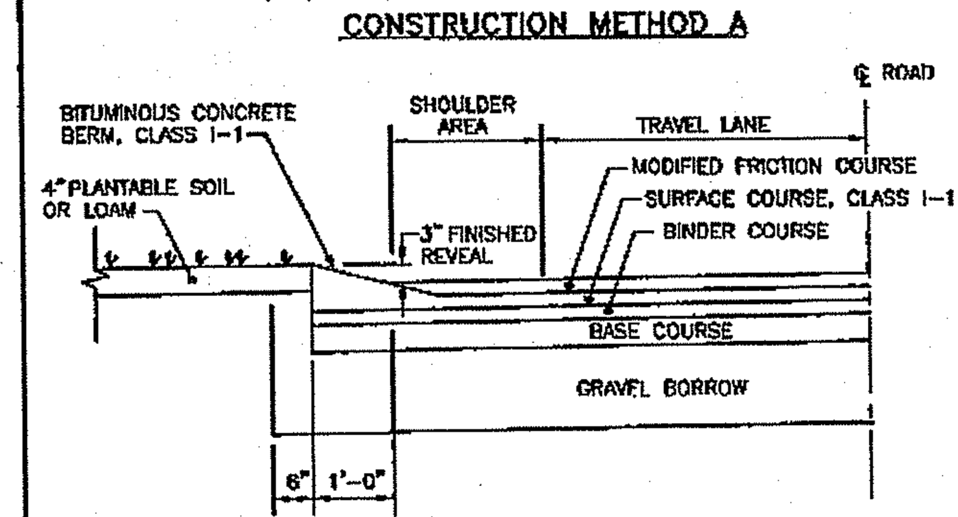


NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" ⌀ x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
6'-0" PRECAST CONCRETE TRANSITION CURB
REVISIONS NO. BY DATE
CHIEF ENGINEER TRANSPORTATION — CHIEF DESIGN ENGINEER TRANSPORTATION
JUNE 15, 1998 ISSUE DATE
R.I. STANDARD 7.1.2



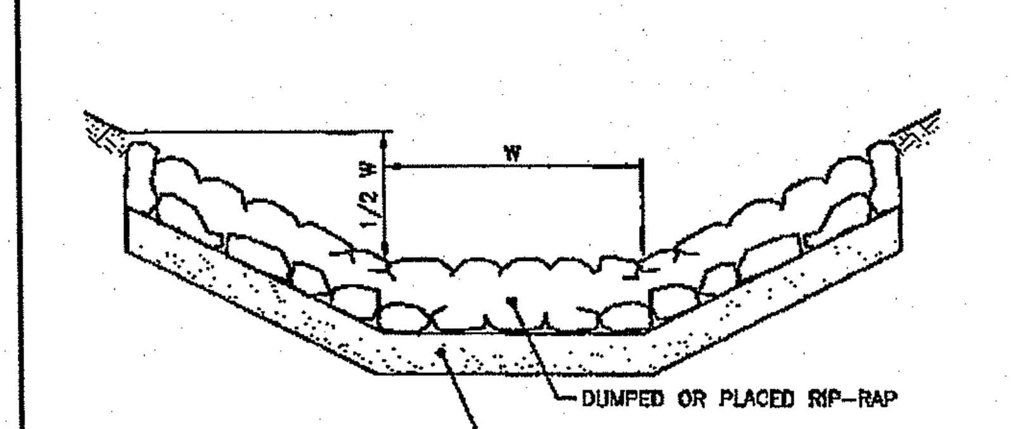
CONSTRUCTION METHOD A



CONSTRUCTION METHOD B

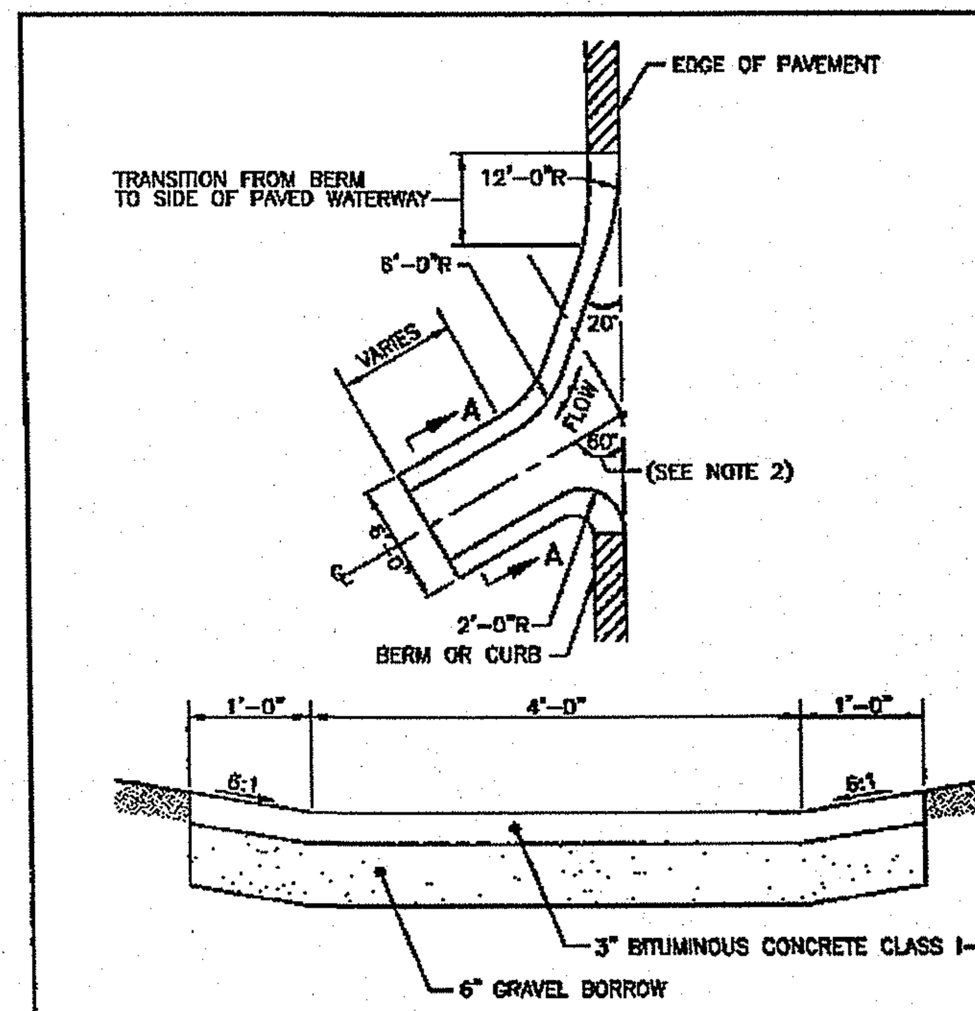
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. BITUMINOUS BERM CAN BE PLACED AT THE SAME TIME THAT THE SURFACE COURSE LAYER IS PLACED ON THE PROJECT ROADWAY, OR IT CAN BE INSTALLED IN A SEPARATE OPERATION.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
BITUMINOUS BERM
REVISIONS NO. BY DATE
CHIEF ENGINEER TRANSPORTATION — CHIEF DESIGN ENGINEER TRANSPORTATION
JUNE 15, 1998 ISSUE DATE
R.I. STANDARD 7.5.1



NOTES:
1. SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.
2. RIP-RAP AND BEDDING SIZE MAY VARY. SEE CONTRACT DOCUMENTS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
RIP-RAP DITCH
REVISIONS NO. BY DATE
CHIEF ENGINEER TRANSPORTATION — CHIEF DESIGN ENGINEER TRANSPORTATION
JUNE 15, 1998 ISSUE DATE
R.I. STANDARD 8.3.0



SECTION A–A

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 711 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN PAVED WATERWAY IS USED AT A LOW POINT THIS ANGLE SHALL BE 90°.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
PAVED WATERWAY
REVISIONS NO. BY DATE
CHIEF ENGINEER TRANSPORTATION — CHIEF DESIGN ENGINEER TRANSPORTATION
JUNE 15, 1998 ISSUE DATE
R.I. STANDARD 8.4.0

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV - 6 2009 FILE # ______
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

RI Standard Details - II
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM | Checked By: DrC
Scale: As Shown | Date: 7/14/2009

REVISIONS			
NO.	REVISION	BY	DATE

DANIEL R. COTTA
NO. 5147
REGISTERED PROFESSIONAL ENGINEER
STATE OF RHODE ISLAND
10/2/09

AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail - Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

Sheet 15 of 19
C.7.1
of 1 sheets
Drawing No.
Dr. ______ Sh. ______

Z:\DWG\1091011\109101.dwg, C.7.1 RI STANDARD DETAILS - II, 10/1/2009 9:14:00 AM

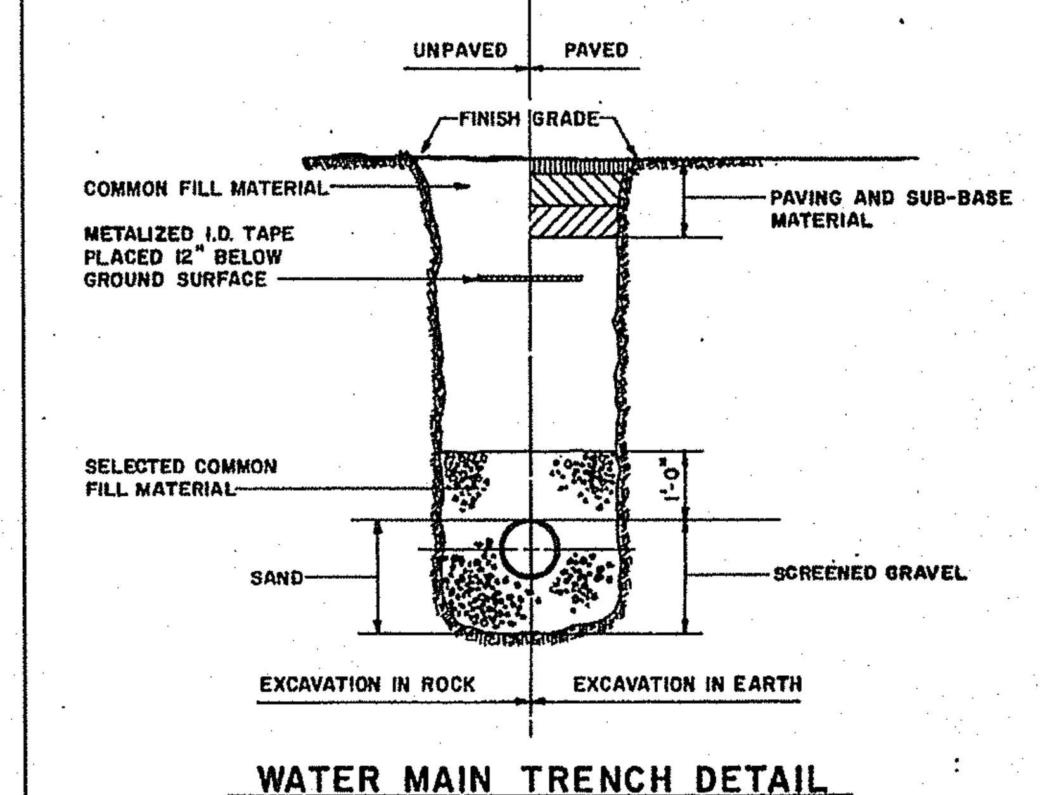
WATER NOTES

1) Unless otherwise specified, all work shall be governed by the recommendation and standards of the American Water Works Association. (AWWA)

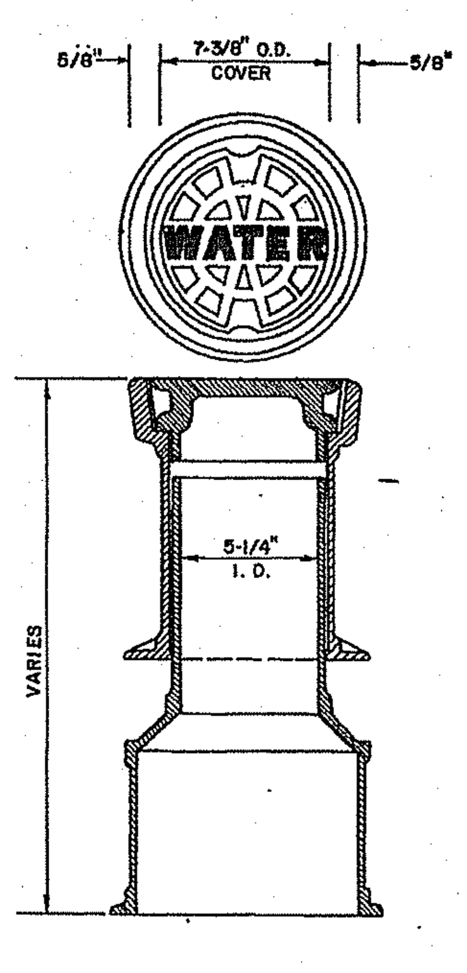
2) Where the proposed water services cross the sanitary sewer, the water main shall be constructed such that the top of the main is at least 18" below the bottom of the sewer main.
In addition, The sewer line shall be sleeved at any point within 10' of a water line or within 25' of a drain line.The sleeve shall be seamless, and it shall have a watertight seal that is fastened to the pipes with a stainless steel retractable clamp. All pipes beneath the paved areas shall be schedule 40.

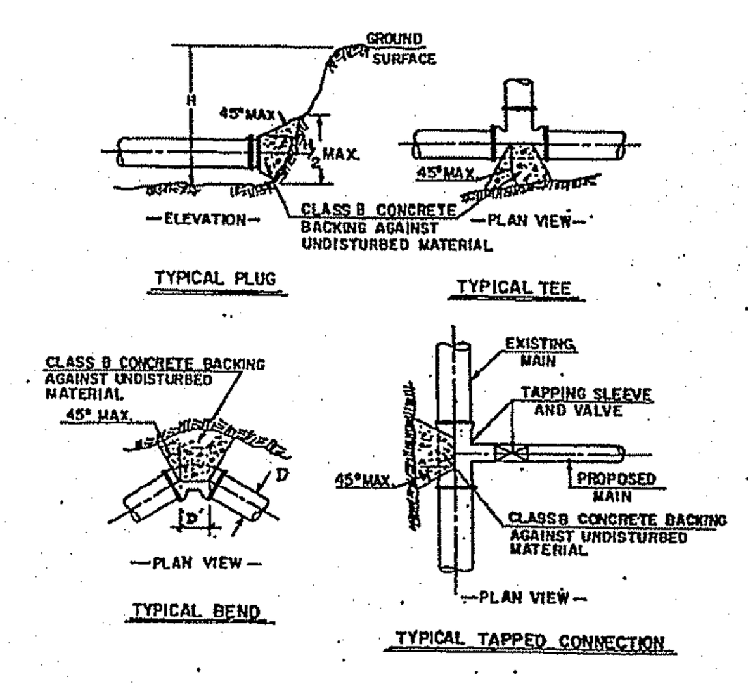
3) All pipe to be HDPE (High Density Polyethylene) Pipe, utilizing DIPS (Ductilt Iron Pipe Sizes) with mechanical joints.

4) Gate valve boxes to be cast iron, extra heavy Buffulo Type. It shall be a two section, telescoping type with 5 1/4" shaft, 8 1/2" diameter and 9" bellshaped bottom section with an extension range of 36" to 60". A cast iron inlaid cover with the word "WATER" imprinted thereon shall be supplied.



WATER MAIN TRENCH DETAIL
NOT TO SCALE





TYPICAL THRUST BLOCK DETAILS
NOT TO SCALE

THRUST BLOCK SCHEDULE

SIZE OF PIPE.	TEE OR TAPPING SLEEVE		1/4 BEND		1/8 BEND		1/16 BEND		1/32 BEND		DEAD END	
	S.F. MIN. BEARING AREA	MAX. C.Y. ALLOWED FOR PAY	S.F. MIN. BEARING AREA	MAX. C.Y. ALLOWED FOR PAY	S.F. MIN. BEARING AREA	MAX. C.Y. ALLOWED FOR PAY	S.F. MIN. BEARING AREA	MAX. C.Y. ALLOWED FOR PAY	S.F. MIN. BEARING AREA	MAX. C.Y. ALLOWED FOR PAY	S.F. MIN. BEARING AREA	MAX. C.Y. ALLOWED FOR PAY
6"	6	1/3	6	1/2	5	1/3	4	1/4	4	1/4	5	1/3
8"	7	1/2	10	3/4	7	1/2	6	1/2	5	1/3	7	1/2
12"	16	3/4	22	1	16	3/4	12	3/4	8	1/2	16	3/4
16"	27	1	38	1-1/4	24	1	16	2/3	10	1/2	27	1

THE ABOVE CHART IS BASED ON A MAXIMUM SOIL BEARING CAPACITY OF 2000 LBS. PER SQUARE FOOT AND A MAXIMUM WATER PRESSURE OF 150 LBS. PER SQUARE INCH. CONCRETE SHALL BE 3000 PSI @ 28 DAYS (CLASS B).

EXETER FIRE DEPARTMENT UNDERGROUND WATER TANK SPECIFICATIONS

1. Tank(s) must be installed and acceptance approval given by the exeter Fire Dept. prior to the issuance of the first certificate of occupancy (C.O.) by the Town of Exeter building official.

2. Plans and specifications for the materials, location and installation of the tank(s) must be approved by the Chief, or his/her designee, of the Exeter Fire Dept., prior to installation.

3. National Fire Protection Association (N.F.P.A.), Standard 22: Water Tanks For Private Fire Protection, and Standard 1142: Water Supplies for Suburban and Rural Fire Fighting, 2001 edition, as amended by this document, will be used as installation guidelines.

4. Tank/Cistern shall be located below the frost line. Bedding for tank shall consist of a minimum of 12" of 3/4" to 1 1/2" crushed stone, compacted. No fill should be used under the stone. Base shall be designed so that cistern will not float when empty.

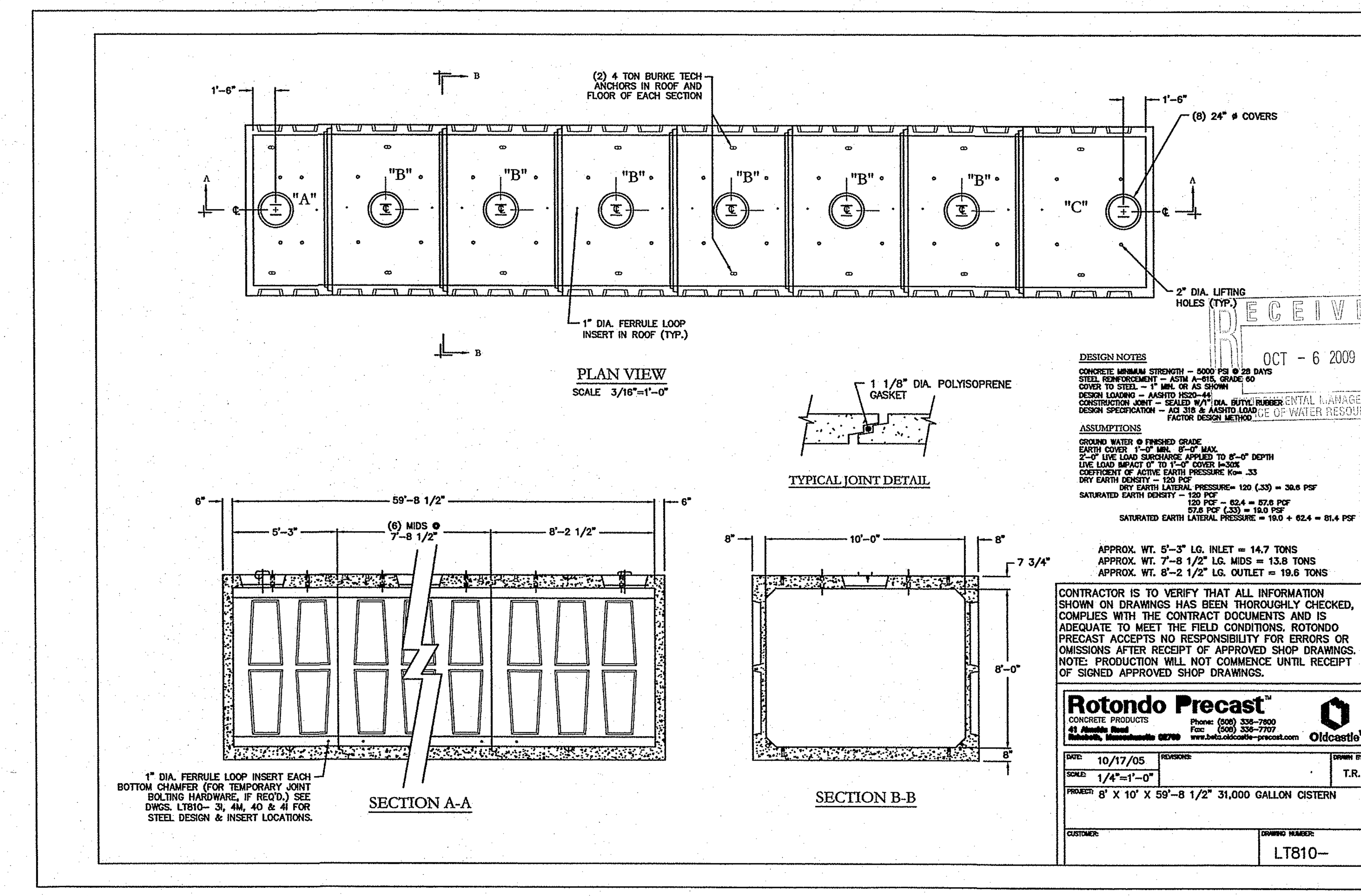
5. Tanks shall be constructed of pre-cast concrete, steel or fiberglass. Poured in place concrete may be acceptable after consultation with the Fire Chief. Concrete shall be 4,000 P.S.I, with reinforcing steel that shall conform to ASTM-A615; Minimum wall thickness is 8", Top of tank shall be installed below frost line, as determined by the building official.

6. Tank access (manhole) shall consist of an adapter, 36"-38" riser and lid with safety screws or bolts. Lid will be at ground level. Risers, such as brick or steel frame are allowable. Premade risers and lids can be purchased at Orenco in Oregon (www.orenco.com) or Zabel in Kentucky (www.zabelzone.com). When using risers of other than an interlocking system the manhole frame and cover shall be the same as utilized by the Town of Exeter, with the exception that it shall be marked water on the cover. The tank access or manhole shall be no less than 24" wide.

7. Backfill over the tank shall be completed in one of the following manners:
a. 3 feet of fill.
b. The top and highest 2 feet of sides of the cistern shall be insulated with vermin-resistant form insulation and 1 foot of fill.
c. All backfill shall extend 10 feet beyond the edge of the cistern and then have a maximum 3:1 slope, loamed and seeded.

8. Prior to surface treatment commencing, the tank must be completed, in service and accepted by the Exeter Fire Dept. Chief or designee.

9. All deviations must be approved by the Fire Chief or his/her designee



RECEIVED
OCT - 6 2009

31,000 Gallon Fire Tank Detail
NTS
For Additional Detail See Fire Protection Plans - Sheet FP 3.00

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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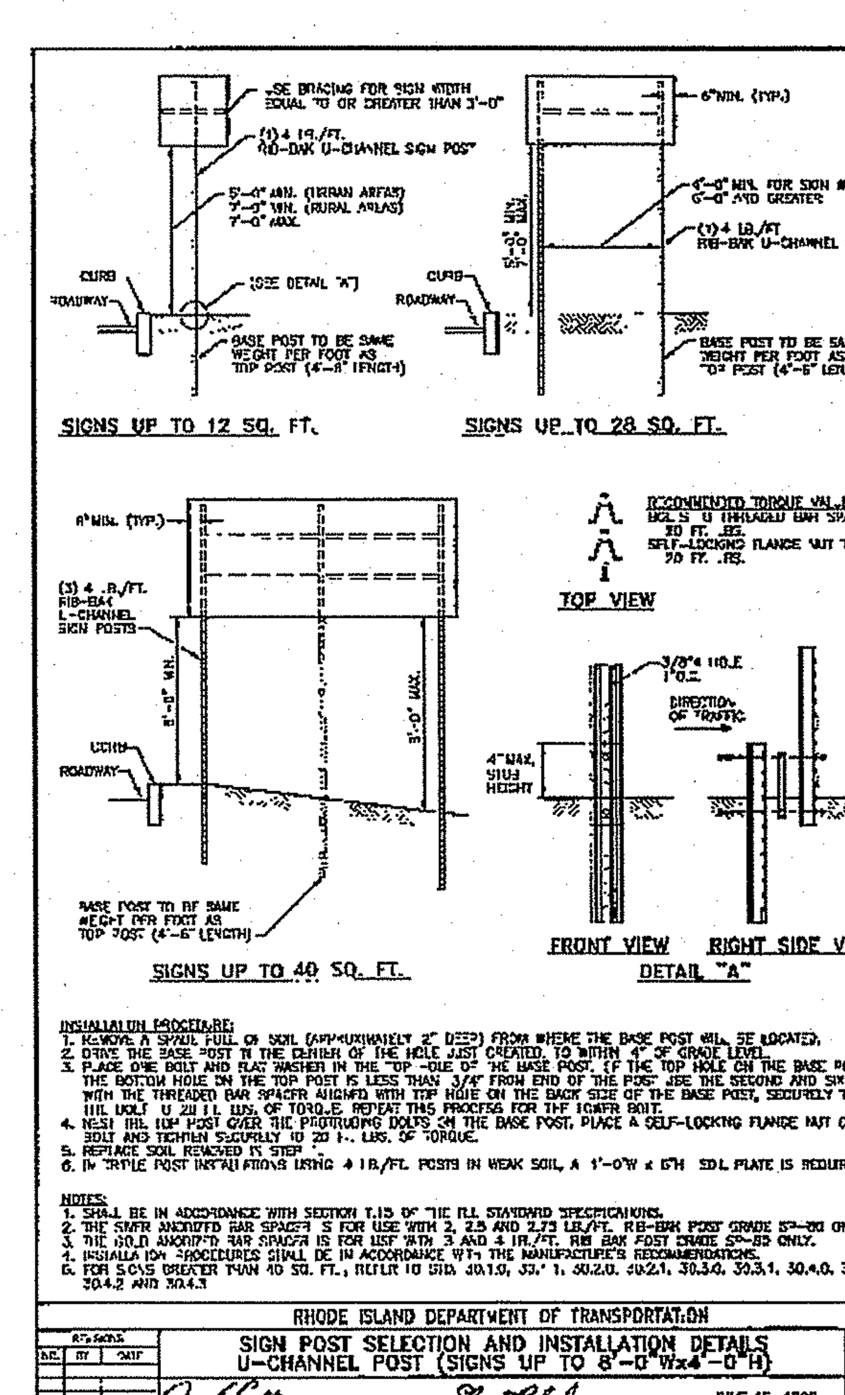
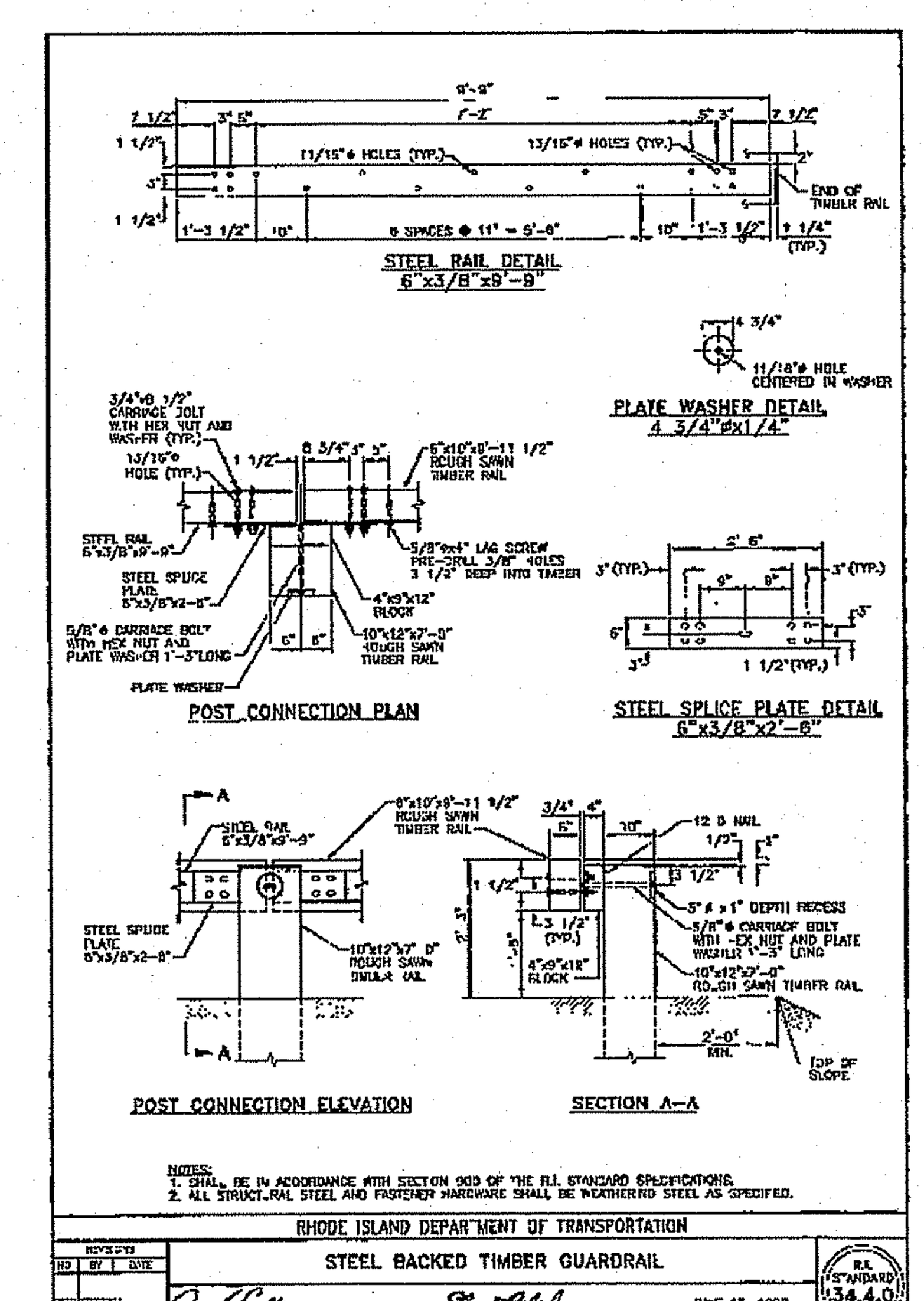
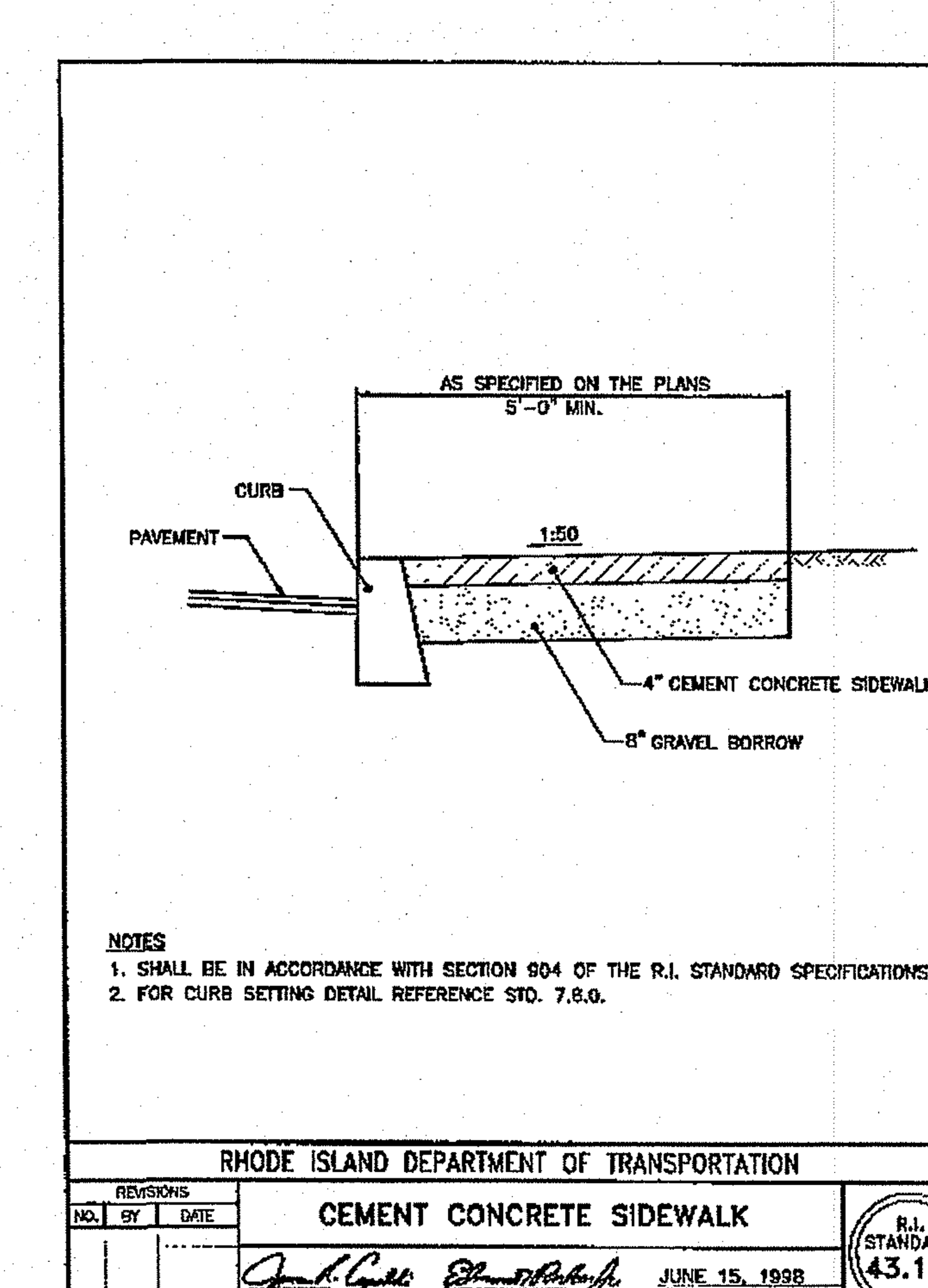
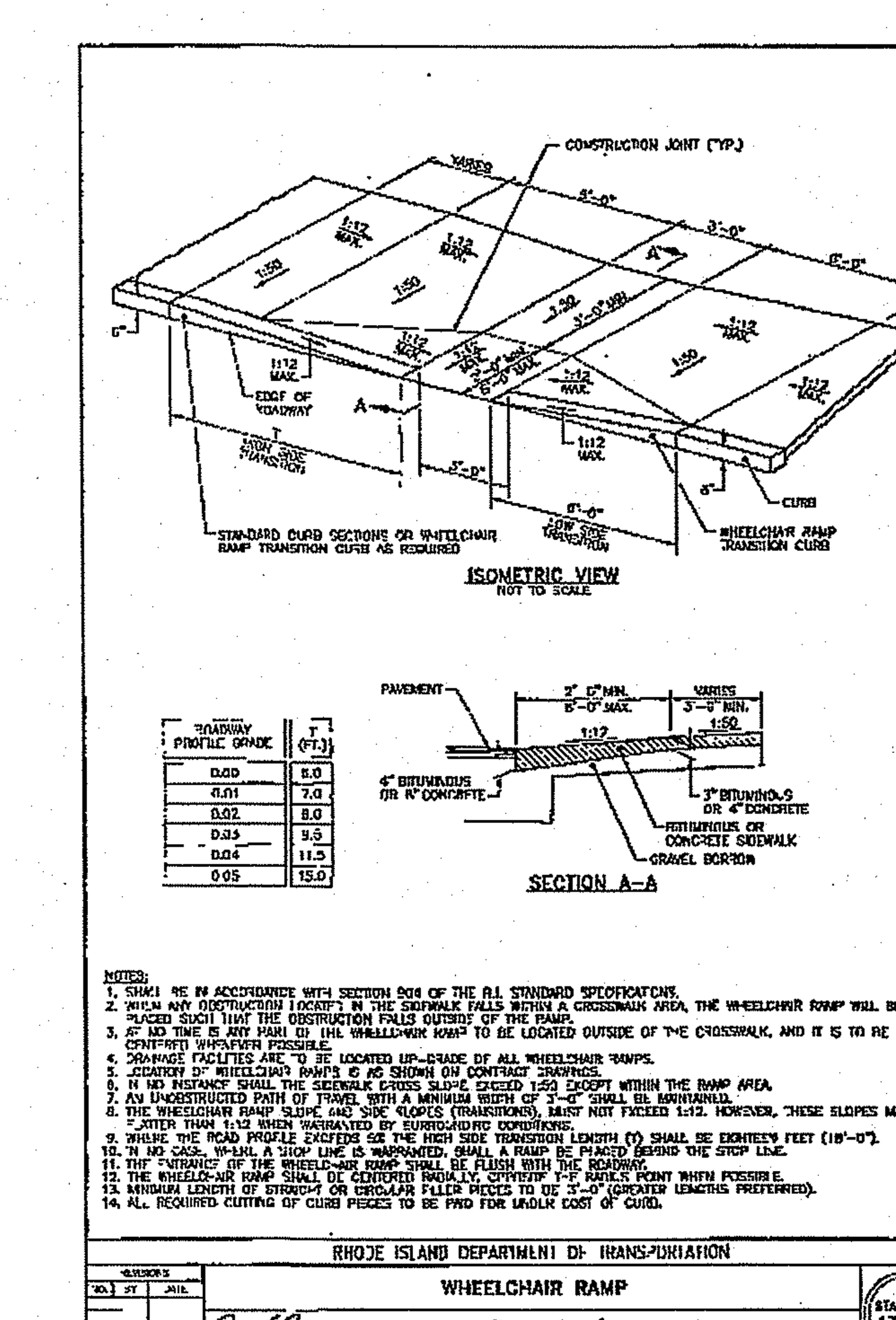
DATED NOV - 6 2009 FILE # ______
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.







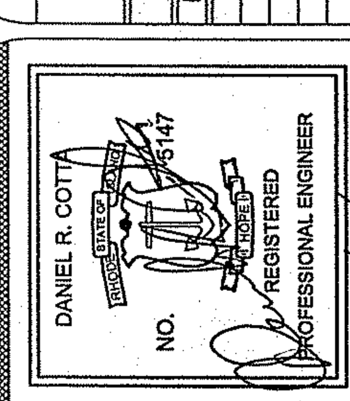


RI Standard Details - III
FOR
ALBION COURT of EXETER
LOCATED AT
South County Trail
Exeter, Rhode Island

Drawn By: ERM | Checked By: DrC
Scale: As Shown | Date: 7/14/2009

REVISIONS

NO.	REVISION	BY	DATE
1.	TOWN, RIDOT & WETLANDS COMMENTS	ERM	8/27/09



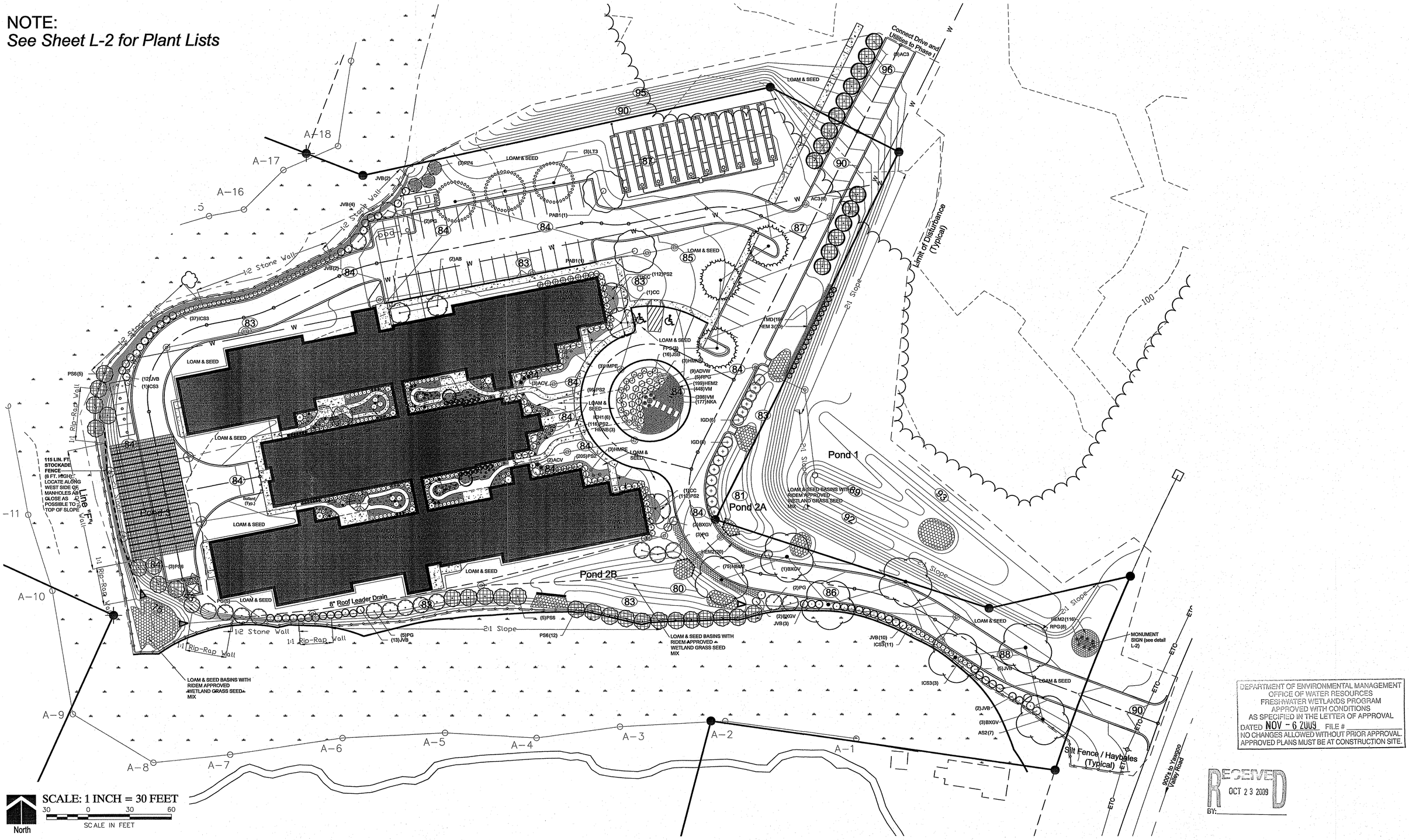
AMERICAN ENGINEERING, INC.
DANIEL R. COTTA Professional Engineer / Professional Land Surveyor
400 South County Trail – Suite A 201
Exeter, Rhode Island 02822
Phone (401) 294-4090 / Fax (401) 294-3625

Sheet 16 of 19

C.7.2
of 1 sheets
Drawing No.
Dr. ______ Sh. ______

Z:\DWG\109101\109101.dwg, C.7.2 RI STANDARD DETAILS - III, 10/1/2009 9:28:02 AM

NOTE:
See Sheet L-2 for Plant Lists



SCALE: 1 INCH = 30 FEET
30 0 30 60
SCALE IN FEET
North

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV - 6 2009 FILE #
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

RECEIVED
OCT 23 2009
BY:

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ARCHITECTS
115 Cedar Street (401) 331-9200
Providence, RI 02903-1082 Fax (401) 331-9270
Massachusetts Office (508) 252-5446
e-mail: rowse@rowsearch.com

LANDSCAPE ARCHITECT:
DIANE C. SOULE & ASSOCIATES, ASLA
LANDSCAPE ARCHITECTURE • GRAPHICS • DESIGN
Smithfield, Rhode Island 401.231.0736 e-mail: diane@DCSA.ws
www.dianesouleandassociates.com

Date: June 30, 2009
Drawn by: DCS Proj. Mgr.: DCSA
Revisions

No.	Date	Description

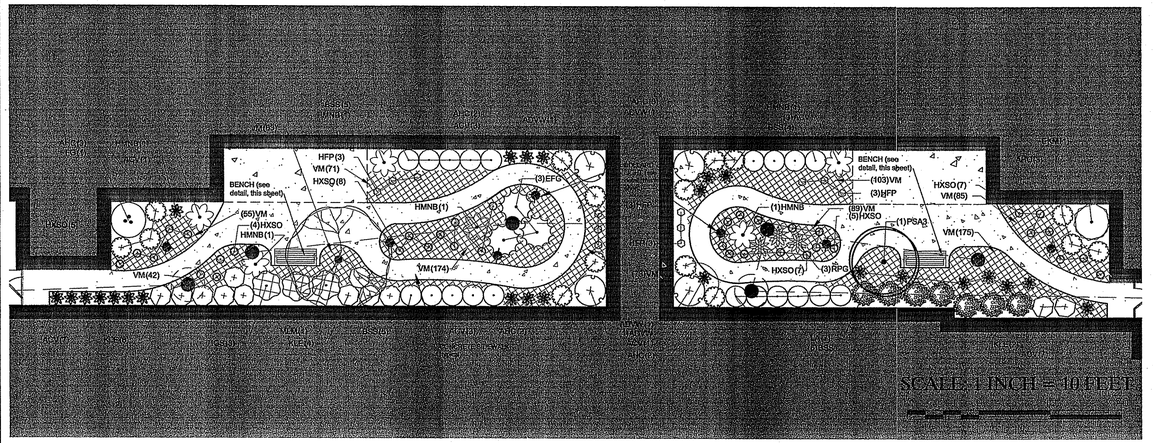
ALBION COURT OF EXETER
64 BED ALZHEIMER'S CARE CENTER FOR EXCELLENCE
ROUTE 2
EXETER, RHODE ISLAND

H.L. GEORGE DEVELOPMENT CORP.
WARREN, RHODE ISLAND

LANDSCAPE PLAN

L-1

CADD ID 17 of 19



PLANT SCHEDULE COURTYARD A & B

SEE PLANT LIST RIGHT for PROJECT-WIDE PLAN LIST

FLOWERING TREES	CODE	QTY	BOTANICAL/COMMON	CONT	CAL
	MLM	1	Magnolia loebneri `Merrill` / Dr. Merrill Magnolia	B & B	1.25" - 1.5"
	PSA3	1	Prunus serrulata `Amanogawa` / Amanogawa Cherry	B & B	2"Cal

SHRUBS	CODE	QTY	BOTANICAL/COMMON	CONT
	ADVW	4	Azalea Glenn Dale Hybrid `Delaware Valley White` / Glen Dale Azalea	5 gal
	AHC	15	Azalea Kurume Hybrid `Hino-Crimson` / Kurume Azalea	5 gal
	BSS	20	Buxus sempervirens `Suffruticosa` / True Dwarf Boxwood	5 gal
	EFG	3	Euonymus fortunei `Emerald Gaiety` TM / Emerald Gaiety Euonymus	3 gal
	EKM	1	Euonymus kiautschovicus `Manhattan` / Spreading Euonymus	5 gal
	FG	1	Fothergilla gardenii / Dwarf Fothergilla/Dwarf Bottle Brush	5 gal
	HMNB	6	Hydrangea macrophylla `Nikko Blue` / Nikko Blue Hydrangea	5 gal
	IGS	3	Ilex glabra `Shamrock`	5 gal
	KLE	12	Kalmia latifolia `Elf` / Dwarf Mountain Laurel	5 gal
	LA	7	Leucothoe axillaris / Coastal Leucothoe	5 gal
	RPG	3	Rhododendron azalea `Purple Gem` / Azalea	5 gal

ANNUALS/PERENNIALS	CODE	QTY	BOTANICAL/COMMON	CONT
	HXSO	36	Hemerocallis x `Stella de Oro` / Stella de Oro Daylily	1 gal

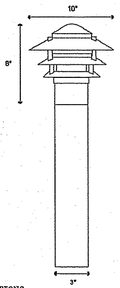
PERENNIALS	CODE	QTY	BOTANICAL/COMMON	CONT
	ACV	25	Astilbe chinensis `Veronica Klose` / Chinese Astilbe	1 gal
	HFP	12	Hosta fortunei `Patriot` / Hosta (white edged)	1 gal

GROUND COVERS	CODE	QTY	BOTANICAL/COMMON	CONT
	VM	930	Vinca minor / Common Periwinkle	flat @ 12" oc

SPJ LIGHTING INC. specification sheet

SPECIFICATION SHEET

SPJ12-07



MODEL: SPJ12-07
MOUNTING : Direct Burial
SOCKET: Medium Base
ELECTRICAL : 12V or 120V
LAMP : Specify

POWDER COAT FINISH OPTIONS:

(V)	VERDE	(GM)	GUN METAL
(M)	MOSS	(R)	RUSTY
(AG)	AGED BRASS	(W)	WHITE
(BR)	BRONZE	(B)	BLACK

LED OPTIONS:
1-3W LED (FB-BP2-3)
OR
1-5W LED (FB-BP2-5)

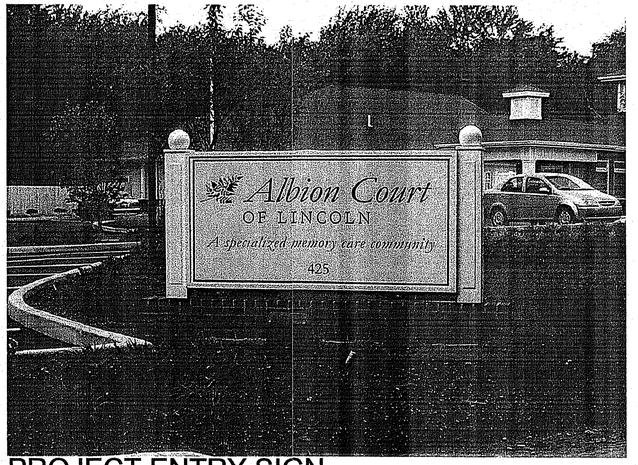
* Specify Post Height (not included)

SITE LIGHTING SCHEDULE

Symbol	Quantity	Description	Lamp	Pole Height
●	16	Wildlife Friendly Aluminum Bollard Pathway Light by SPJ Lighting Model # SPJ12-07	LED, 120 V	48"

BOLLARD LIGHT

NO SCALE



PROJECT ENTRY SIGN

Example of sign similar to what is proposed for this project. Sign will conform to Town of Exeter guidelines.

PLANT SCHEDULE PROJECT-WIDE

DECIDUOUS TREES	CODE	QTY	BOTANICAL/COMMON	CONT	CAL	SIZE
	AB	2	Acer rubrum "Bowhall Red" 6'6" STD.	B & B	2.5"Cal	
	AS2	7	Acer saccharum / Sugar Maple	B & B	2.5"Cal	
	FPS	3	Fraxinus pennsylvanica "Summit" / Summit Ash	B & B	2.5"Cal	
	LT3	3	Liriodendron tulipifera / Tulip Tree	B & B	2"Cal	
	PAB1	2	Platanus acerifolia 'Bloodgood' / London Plane Tree	B & B	2.5"Cal	

EVERGREEN TREES	CODE	QTY	BOTANICAL/COMMON	CONT	CAL	SIZE
	AC3	15	Abies concolor / White Fir	B & B		5'-6' HT.
	JVB	53	Juniperus virginiana / Eastern Red Cedar	B & B		4' - 5' HT.
	PG	17	Picea glauca / White Spruce	B & B		6' - 7' HT.
	PP4	3	Picea pungens / Colorado Spruce	B&B; 4'-5' HT.		
	PS6	26	Pinus strobus / White Pine	B & B		4' - 5' HT.

FLOWERING TREES	CODE	QTY	BOTANICAL/COMMON	CONT	CAL	SIZE
	CC	3	Cercis canadensis / Eastern Redbud	B & B	1.5"Cal	
	MLM	2	Magnolia loebneri 'Merrill' / Dr. Merrill Magnolia	B & B	1.25" - 1.5"	
	PSA3	2	Prunus serrulata 'Amanogawa' / Amanogawa Cherry	B & B	2"Cal	

SHRUBS	CODE	QTY	BOTANICAL/COMMON	CONT
	ADVW	27	Azalea Glenn Dale Hybrid 'Delaware Valley White' / Glen Dale Azalea	5 gal
	AHC	38	Azalea Kurume Hybrid 'Hino-Crimson' / Kurume Azalea	5 gal
	BSS	40	Buxus sempervirens 'Suffruticosa' / True Dwarf Boxwood	5 gal
	BXGV	8	Buxus x 'Green Velvet' / Green Velvet Boxwood	5 gal
	EFG	6	Euonymus fortunei 'Emerald Gaiety' TM / Emerald Gaiety Euonymus	3 gal
	EKM	8	Euonymus kiautschovicus 'Manhattan' / Spreading Euonymus	5 gal
	FG	2	Fothergilla gardenii / Dwarf Fothergilla/Dwarf Bottle Brush	5 gal
	HMNB	19	Hydrangea macrophylla 'Nikko Blue' / Nikko Blue Hydrangea	5 gal
	HMPE	6	Hydrangea macrophylla 'Pink Elf' / Pink Elf Hydrangea	5 gal
	ICH1	26	Ilex crenata 'Helerii' / Heler Japanese Holly	5 gal
	ICS3	52	Ilex crenata 'Steeds' / Steeds Japanese Holly	B&B; 4-5 FT.
	IGD	14	Ilex glabra 'Densa' / Inkberry Holly	36"-42"; B&B
	IGS	6	Ilex glabra 'Shamrock'	5 gal
	IR	5	Ilex verticillata 'Red Sprite' / Red Sprite Winterberry	5 gal
	JSB	16	Juniperus sabina 'Buffalo' / Buffalo Juniper	3 gal
	KLE	23	Kalmia latifolia 'Elf' / Dwarf Mountain Laurel	5 gal
	LA	14	Leucothoe axillaris / Coastal Leucothoe	5 gal
	LFR	9	Leucothoe fontanesiana 'Rainbow' / Rainbow Leucothoe	5 gal
	PJDW	7	Pieris japonica 'Dorothy Wycoff' / Dorothy Wycoff Pieris	5 gal
	PJV	1	Pieris japonica 'Variegata' / Variegated Japanese Pieris	2 gal
	RCB	7	Rhododendron azalea 'Cunningham's Blush' / Rhododendron Cunningham's Blush	5 gal
	RPG	19	Rhododendron azalea 'Purple Gem' / Azalea	5 gal
	RN	4	Rhododendron catawbiense 'Nova Zembla' / Catawba Rhododendron	5 gal
	SPMK	7	Syringa patula 'Miss Kim' / Miss Kim Lilac	5 gal
	TMD	19	Taxus media 'Densiformis' / Dense Yew	5 gal

ANNUALS/PERENNIALS	CODE	QTY	BOTANICAL/COMMON	CONT
	HXSO	73	Hemerocallis x 'Stella de Oro' / Stella de Oro Daylily	1 gal

PERENNIALS	CODE	QTY	BOTANICAL/COMMON	CONT
	ACV	55	Astilbe chinensis 'Veronica Klose' / Chinese Astilbe	1 gal
	AAB2	12	Astilbe x arendsii 'Bridal Veil' / Bridal Veil Astilbe	1 gal
	HFP	24	Hosta fortunei 'Patriot' / Hosta (white edged)	1 gal

GROUND COVERS	CODE	QTY	BOTANICAL/COMMON	CONT
	PS2	1,014	Pachysandra terminalis 'Green Sheen' / Pachysandra	flat @ 12" oc
	VM	2,706	Vinca minor / Common Periwinkle	flat @ 12" oc

PERENNIALS	CODE	QTY	BOTANICAL/COMMON	CONT
	HEM3	70	Hemerocallis hybrid 'Happy Returns' / Happy Returns Daylily	1 gal@ 24" oc
	HEM2	95	Hemerocallis hybrid 'Stella de Oro' / Stella de Oro Daylily	1 gal@ 30" oc
		315	Hemerocallis hybrid 'Stella de Oro' / Stella de Oro Daylily	bulb@ 18" oc
	NKA	177	Narcissus x 'King Alfred' / King Alfred Daffodil	bulb@ 18" oc

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DATED NOV - 6 2009 FILE #
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Date: June 30, 2009
Drawn by:DCS Proj. Mgr.:DCSA
Revisions

No.	Date	Description

ALBION COURT OF EXETER

64 BED ALZHEIMER'S CARE CENTER FOR EXCELLENCE

ROUTE 2
EXETER, RHODE ISLAND

H.L. GEORGE DEVELOPMENT CORP.
WARREN, RHODE ISLAND

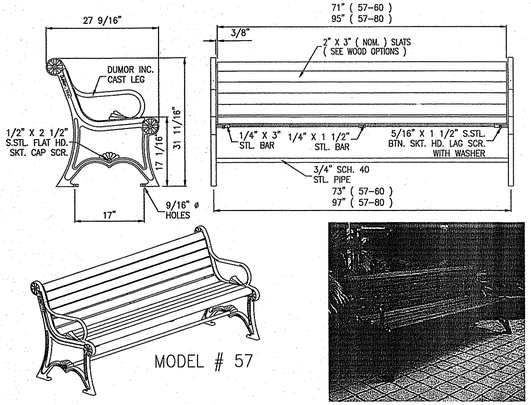
LANDSCAPE NOTES & DETAILS

L-2

CADD ID

DuMor, inc.

DU MOR, INC.
15 INDUSTRIAL CIRCLE, P.O. BOX 142
MIFFLINTOWN, PA 17059-0142
1-800-598-4018
PHONE:(717) 436-2106
FAX:(717) 436-9839
www.dumor.com



MODEL # 57

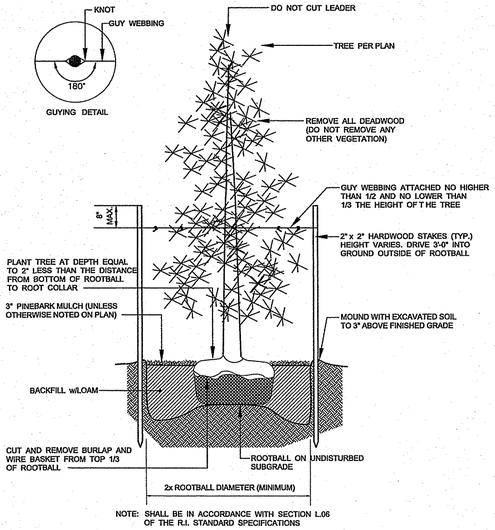
☐SELECT DESIRED LENGTH
☑6' BENCH
☐8' BENCH

☐SELECT DESIRED COLOR
☑BLACK
☐BRONZE
☐BLUE
☐OTHER
☐HUNTER GREEN
☐DEEP RED
☐GREEN

☐SELECT DESIRED SLAT OPTION
☐CLEAR ALL HEART REDWOOD S4S EE
☐C & BTR. DOUGLAS FIR KD S4S EE
☐CLEAR WESTERN RED CEDAR S4S EE
☑PIPE

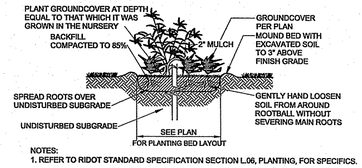
NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER COATING (SEE COLOR OPTIONS).
4. 1/2" X 3 3/4" PLTD. EXPANSION ANCHOR BOLTS PROVIDED.
5. ALL WOOD MEMBERS TREATED WITH CLEAR PRESERVATIVE.
6. CUSTOM LETTERING AVAILABLE FOR RECESSED SIDE PANELS (37 SPACES TOTAL).
7. CONTRACTOR'S NOTE: FOR PRODUCT AND PURCHASING INFORMATION VISIT www.PROJECTmarketsite.com
REFERENCE NUMBER 017-028

BENCH 4 TOTAL PROJECT-WIDE
NO SCALE



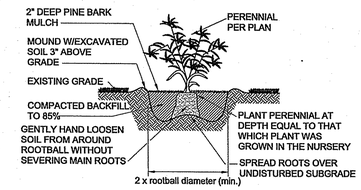
NOTE: SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS

EVERGREEN TREE PLANTING DETAIL
no scale

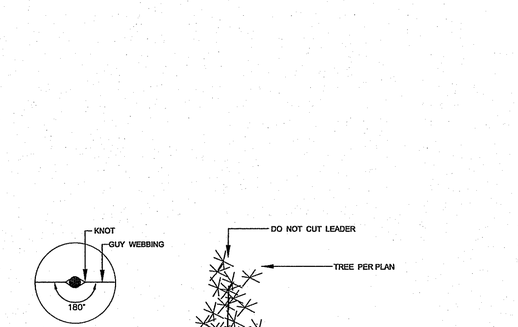


NOTES:
1. REFER TO RIDOT STANDARD SPECIFICATION SECTION L.06, PLANTING, FOR SPECIFICS.

GROUNDCOVER PLANTING DETAIL
no scale

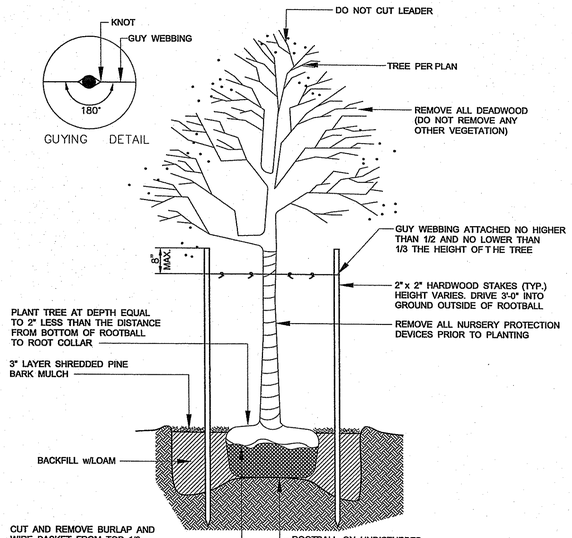


PERENNIAL PLANTING DETAIL
no scale



NOTE: REFER TO RIDOT STANDARD SPECIFICATION SECTION L.06, PLANTING, FOR SPECIFICS

SHRUB PLANTING DETAIL
no scale



NOTE: SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS

TREE PLANTING DETAIL
no scale

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www.dianesoulearchitects.com

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CADD ID | 19 of 19