

GENERAL NOTES:

- THIS SITE IS NOT LOCATED WITHIN A CRITICAL RESOURCE AREA, DRINKING WATER RESERVOIR, GROUNDWATER RESERVOIR, OR NATURAL RESOURCE AREA AS DEFINED BY CRMC & RIDEM.
- ACCORDING TO THE FEMA NATIONAL FLOOD INSURANCE RATE MAP, COMMUNITY PANEL # 44007 C0130G, REVISED 3/2/2009, UPLAND AREAS OF THE SITE ARE CLASSIFIED AS ZONE X, UNSHADED, WHICH IS DEFINED AS AREAS OF MINIMAL FLOOD HAZARD - AREAS WHICH ARE OUTSIDE THE SPECIAL FLOOD HAZARD AREA (SFHA). A PORTION OF THE SITE ADJACENT TO CLEAR RIVER HAS BEEN CLASSIFIED AS ZONE A (AREAS SUBJECT TO INUNDATION BY THE 1-PERCENT-ANNUAL-CHANCE FLOOD) WITHOUT A BASE FLOOD ELEVATION. THE RIVERBANK IS DEFINED BY STEEP HIGH BANKS IN THE VICINITY OF THE SITE WHICH OFFERS SEVERAL FEET OF FREEBOARD TO CONTAIN FLOOD WATERS. THE PROPOSED DWELLING WILL BE SET ABOVE THE ELEVATION OF THE DAM STRUCTURE.
- ON-SITE SOILS ARE CLASSIFIED BY THE RHODE ISLAND SOIL SURVEY AS CANTON AND CHARLTON VERY STONY FINE SANDY LOAMS, 3 TO 8% SLOPES (CHB) - SOILS SUITABLE FOR DEVELOPMENT; SOIL CATEGORY B.
- THIS PARCEL WILL BE SERVICED BY PRIVATE WELL WATER; PRIVATE SEWER; ELECTRIC POWER & TELECOMMUNICATIONS OF CHOICE. NO PUBLIC WASTEWATER SYSTEM LIES WITHIN 200' OF THE PROPOSED WORK.
- ALL STORM & SUBSURFACE DRAINS WITHIN 200' OF THE PROPOSED OWTS HAVE BEEN SHOWN. ALL WETLANDS WITHIN 100' ARE SHOWN.
- ALL PRIVATE DRINKING WATER WELLS WITHIN 200' OF THE PROPOSED OWTS HAVE BEEN SHOWN. ALL PUBLIC WELLS WITHIN 500' OF THE SITE HAVE BEEN SHOWN. PUBLIC WATER SERVICE IS NOT PROVIDED IN THIS NEIGHBORHOOD. PUBLIC SEWERS ARE NOT AVAILABLE AT THIS TIME TO THE SITE.
- PLAN REFERENCE: RECORDED PLAN IN THE BURRILLVILLE LAND EVIDENCE RECORDS PLAT BOOK 2018, PAGE 47.

EROSION & SEDIMENT CONTROL NOTES:

- EXTREME CARE SHALL BE EXERCISED TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING A WETLAND, STREET, OR NEIGHBORING PROPERTY. THE CONTRACTOR SHALL IMMEDIATELY CLEAN AND RESTORE ANY DISTURBED AREAS.
- ALL EROSION CONTROL METHODS, MATERIALS, AND MAINTENANCE SHALL BE ACCOMPLISHED ACCORDING TO THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ALL TEMPORARY EROSION AND SEDIMENT CONTROLS, AS SHOWN ON THE PLANS AND DIRECTED BY THE ENGINEER. ALL RUNOFF SHALL BE CONTROLLED. IN NO CASE SHALL ANY DIRECT RUNOFF BE ALLOWED TO ENTER ONTO ADJUTING PROPERTIES OR INTO THE WETLAND BUFFERS.
- FILTER SOCKS / SILT FENCING SHALL BE PLACED IMMEDIATELY DOWN SLOPE OF SOIL DISTURBANCE AREAS AS SHOWN ON THE PLANS. BALED HAY EROSION CHECKS SHALL BE PLACED AT ALL DRAINAGE STRUCTURE INLETS, EXISTING AND PROPOSED, DURING CONSTRUCTION. ADDITIONAL CONTROLS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
- SPOIL AND STOCKPILE MATERIALS REMAINING EXPOSED FOR LONGER THAN 30 DAYS SHALL BE ENCLOSED WITH SILT FENCING OR FILTER SOCKS AND COVERED WITH EROSION CONTROL MIX (NOTE 9).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROLS UNTIL ALL AREAS ARE STABILIZED. CONTROLS SHALL REMAIN IN PLACE UNTIL A GOOD STAND OF VEGETATION IS ESTABLISHED.
- SEEDING - SEED IS TO BE DISTRIBUTED EVENLY OVER THE TOP 1 INCH OF TOPSOIL. SEED SHALL BE URI #2, OR APPROVED EQUAL. APPLY AT A RATE OF 5-7 # / 1,000 S.F. BUFFER AREAS SHALL BE SEEDED WITH CONSERVATION MIX.
- SLOPE PROTECTION BLANKETS USED AT THIS PROJECT SHALL BE THE 100% BIODEGRADABLE STRAW AND COCONUT FIBER BLANKETS WHICH SHALL DISINTEGRATE IN-PLACE, NOT REQUIRING FUTURE MAINTENANCE.
- EROSION CONTROL MATERIALS** SHOULD THE VEGETATION PLANTING SEASON BE PASSED, WINTER MULCHING OF ALL EXPOSED SURFACES SHALL BE COMPLETED BY DECEMBER 1. WINTER MULCHING SHALL CONSIST OF THE FOLLOWING EROSION CONTROL MIX:

- EROSION CONTROL MIX** USE EROSION CONTROL MIX AS A LONG-TERM SOIL COVER THAT WILL EVENTUALLY ALLOW THE GROWTH OF VEGETATION, IF DESIRED.
- EROSION CONTROL MIX INCLUDES SHREDDED OR COMPOSTED BARK, STUMP GRINDINGS, OR OTHER COMPOSTED WOOD PRODUCTS. WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, OR PROCESSED WOOD ARE NOT ACCEPTABLE.
- APPLY THE EROSION CONTROL MIX AS A LAYER AT LEAST THREE INCHES THICK. DO NOT COMPACT THE MIX WITH EQUIPMENT.
- HAY MULCH**
- USE HAY MULCH AS A TEMPORARY MEASURE TO PROTECT BARE SOILS OR TO COVER NEWLY SEEDED AREAS.
- APPLY AT A RATE OF TWO SQUARE BALES (70-90 POUNDS) PER 1000 SQ FT OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE.
- ANCHOR THE HAY MULCH USING ONE OF THE FOLLOWING METHODS:
 - STAPLE JUTE OR PLASTIC NETTING OVER THE MULCH ACCORDING TO THE NET OR JUTE MANUFACTURER'S RECOMMENDATION.
 - STRETCH TWINE BETWEEN PEGS IN A CROSS-CROSS PATTERN OVER THE MULCH (4-6 PEGS PER SQ YD).
- MULCHING SHALL FOLLOW GUIDELINES IN THE RI SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, CHAPTER 4 & CHAPTER 5. A TEMPORARY MULCHING, STRAW / HAY SHALL BE APPLIED AT 90# / 1,000 S.F. FREE FROM WEEDS AND ANCHORED WITH MULCH NETTING.

IMPORTANT OWTS CONSTRUCTION NOTES:

- ALL DESIGN, CONSTRUCTION AND MAINTENANCE REQUIREMENTS SHALL BE IN CONFORMANCE WITH THE LATEST AMENDED VERSION OF THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, OFFICE OF WATER RESOURCES, "RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION, AND MAINTENANCE OF ON-SITE WASTEWATER TREATMENT SYSTEMS (OWTS)," HEREIN REFERRED TO AS THE "REGULATIONS".
- CLEAR ALL TREES AND STUMPS WITHIN 10' OF THE SYSTEM. STRIP ALL TOPSOIL, SUBSOIL, AND/OR UNSUITABLE MATERIAL WITHIN THE PROPOSED FIELD. BOTTOM AND SIDES OF LEACHING FIELD SHALL NOT BE SMEARED OR COMPACTED, SCARIFY PRIOR TO PLACING SAND.
- A FIVE (5') PERIMETER STRIP IS REQUIRED FOR THIS INSTALLATION.
- ALL BACKFILL AROUND THE TANKS SHALL BE CLEAN AND FREE OF FINES TO ALLOW FOR DISPERSAL OF STORMWATER AWAY FROM THE TANKS & TREATMENT UNITS.

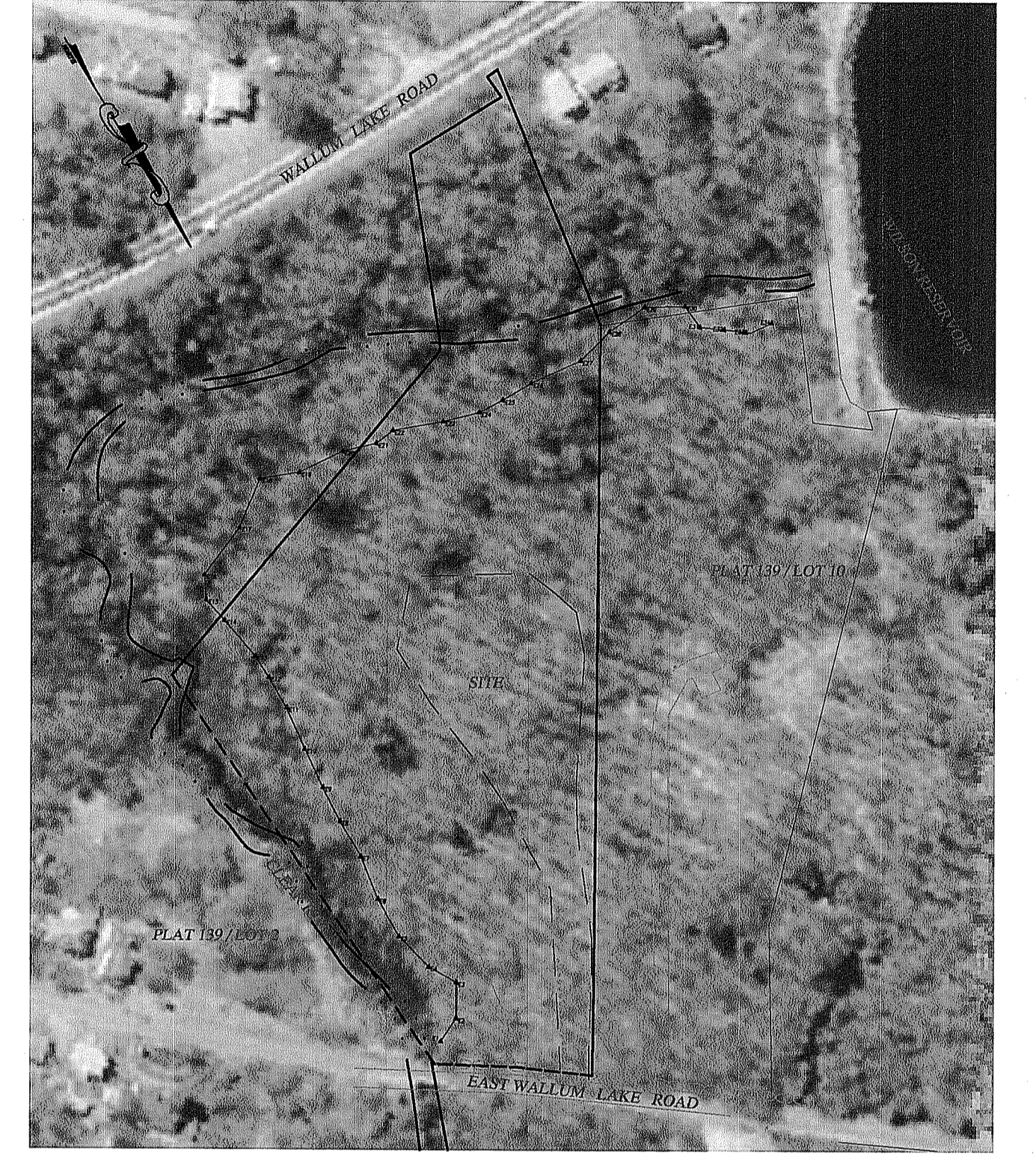
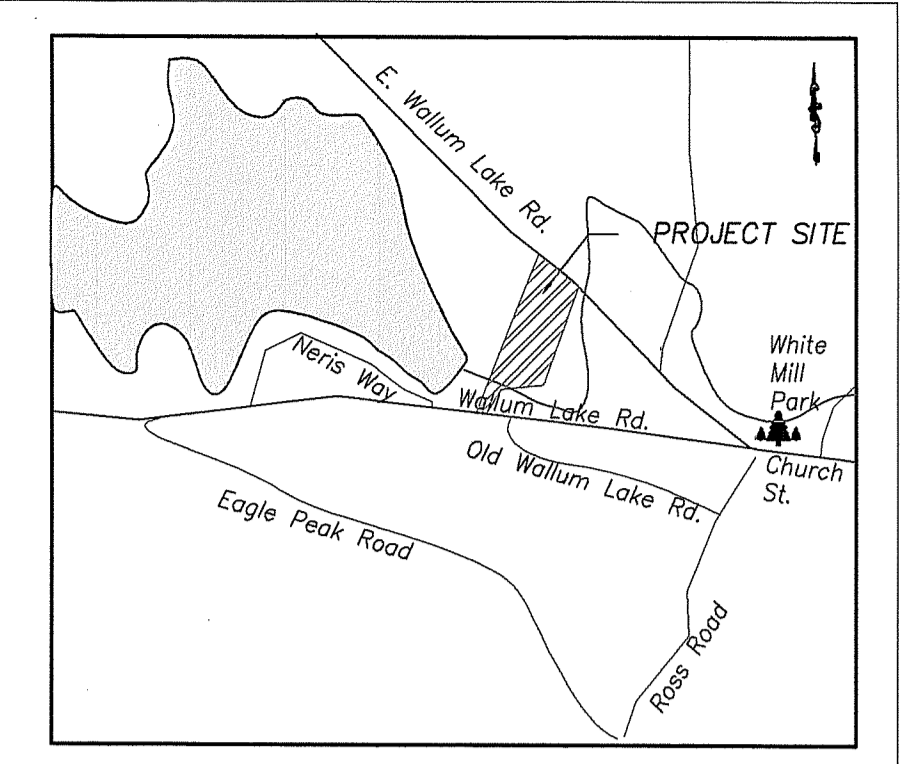
O.W.T.S. DESIGN DATA:

RESIDENTIAL DWELLING
 NUMBER OF UNITS: 4 BEDROOM
 DESIGN FLOW PER UNIT: 115 GPD/BEDROOM
 TOTAL DESIGN FLOW: 460 GALLONS PER DAY

SEPTIC TANK REQUIREMENTS: 1,000 GAL FOR 1ST 3 BEDS + 250/BED
 SEPTIC TANK PROVIDED: 1,500 GALLON 2-COMPARTMENT

DRAINFIELD REQUIREMENTS:
 DESIGN LOADING RATE: 0.61 GAL/DAY/SF
 460 GPD / 0.61 GPD/SF = 754 SF
 REQUIRED SQUARE FOOTAGE = 754 SF

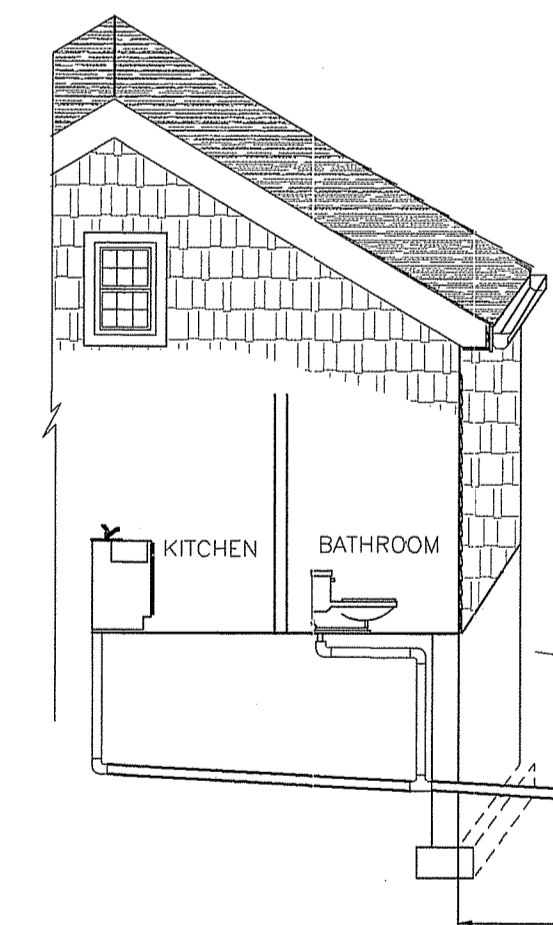
PROVIDED SQUARE FOOTAGE = ELJEN IN-DRAIN UNITS WITH 6" ASTM C-33 SAND UNDER AND AROUND
 754 SF / 28 SF/UNIT = 27 UNITS
 27 UNITS PROVIDED @ 28 SF PER UNIT
 27 X 28 = 756 S.F. PROVIDED



PROPERTY OVERVIEW
 SCALE: 1" = 150'

CONSTRUCTION PROCEDURE:

- THE INSTALLER MUST NOTIFY THE LICENSED DESIGNER AT LEAST 10 DAYS PRIOR TO THE START OF CONSTRUCTION WITH A VALID INSTALLER'S LICENSE NUMBER. A PRE-CONSTRUCTION MEETING WITH THE ENGINEER, INSTALLER, AND HOMEOWNER SHALL THEN BE SCHEDULED PRIOR TO COMMENCING ANY WORK.
- THE INSTALLER SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES WITH DIGSAFE OR OTHER APPROPRIATE UTILITIES PRIOR TO CONSTRUCTION. UTILITIES ARE SHOWN APPROXIMATE FOR PLANNING PURPOSES. ALL EXISTING INVERTS ELEVATIONS SHALL BE CONFIRMED PRIOR TO CONSTRUCTION. DAMAGES TO ANY UNDERGROUND UTILITIES BY THE CONTRACTOR SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- THE INSTALLER SHALL PROVIDE THE DESIGNER WITH THE LIST OF ALL MATERIALS USED, THEIR SOURCE, AND THE DATE DELIVERED TO THE SITE.
- THE INSTALLER SHALL NOTIFY THE ENGINEER OF HIS/HER PROGRESS SO THAT THE ENGINEER CAN INSPECT AND MAKE MEASUREMENTS AND INSPECTIONS PRIOR TO BACKFILL.
- IF CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION WHICH INDICATE THE SYSTEM CAN NOT BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS, THE INSTALLER SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE AND SUSPEND CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL ITEMS & TERMS LISTED ON THE APPROVED OWTS AND FRESHWATER WETLANDS APPLICATIONS.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 OWTS & FRESHWATER WETLANDS
 JOINT PERMIT APPROVAL

OWTS# 0703-1097 PWW# 19-0277
 APPROVED: [Signature] DATE 12/3/19
 No Changes Allowed Without RIDEM Approval
 Approved Plans/Permit Must Be Kept at Construction Site

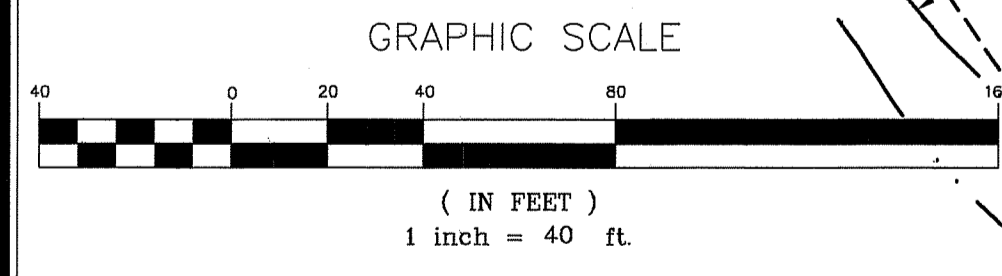
O.W.T.S. ELEVATION SCHEDULE

BUILDING SEWER	ELEV. 441.50
1,500 GALLON INV.	ELEV. 441.05
1,500 GALLON OUT INV.	ELEV. 440.80
DOSING APPARATUS	
D-BOX IN INV.	ELEV. 440.42
D-BOX OUT INV.	ELEV. 440.25
DRAINFIELD	
DESIGN GRADE:	ELEV. 439.0
DRAINFIELD INVERT:	ELEV. 440.08
BOTTOM OF ELJEN UNIT:	ELEV. 439.5
BOTTOM OF SAND:	ELEV. 439.0
EST. GROUNDWATER TABLE:	ELEV. 436.5 (30')
COVER OVER FIELD 441.1 (MIN) - 442.1 (MAX)	
SOIL CAT: 6 DESIGN LOADING RATE: 0.61 GPD/SF 30" GWT BASED UPON SOIL PITS 7/9/19 (by others)	
TH 1	30" GWT IMP. LAYER @ 98"
TH 2	30" GWT IMP. LAYER @ 126"
TH 3	30" GWT

TYPICAL PROFILE

NOTICE TO SYSTEM OWNERS

- THE OWNER SHALL REVIEW AND UNDERSTAND OPERATION AND MAINTENANCE REQUIREMENTS OF THE OWTS. THE DESIGNER IS NOT RESPONSIBLE FOR ANY NEGLIGENT ACT OF OMISSION OF A USER OF AN OWTS, INCLUDING BUT NOT LIMITED TO FAILURE TO PROPERLY USE AND MAINTAIN THE SYSTEM. IT IS THE OWNER'S RESPONSIBILITY TO ENSURE THE WASTEWATER FLOWS DO NOT EXCEED THE DESIGN FLOWS & THE OWTS IS PROTECTED FROM PHYSICAL DISTURBANCE OR VEHICULAR TRAFFIC.
- THE USE OF GARBAGE DISPOSALS IS NOT PERMITTED & LINT FILTERS ARE REQUIRED ON WASHING MACHINES.
- TOXIC CHEMICALS, PAINTS, & CLEANERS SHALL NOT BE DISPOSED OF IN THE SYSTEM. SEE THE OWNER'S MANUAL FOR A LIST OF APPROVED CLEANING SUBSTITUTIONS. BRINE DISCHARGE FROM WATER SOFTENERS SHALL NOT BE DISCHARGED TO THE SYSTEM. FAILURE TO ADHERE BY THESE POLICIES WILL VOID THE MANUFACTURER'S WARRANTY.



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOUR
- EXISTING SITE CONDITIONS
- PROPOSED CONDITIONS
- PROPERTY LINE
- EXISTING WATER LINE
- EXISTING UTILITY POLE
- EXISTING DRAINAGE
- TREELINE
- STONEWALL
- FENCE
- TEST HOLES / SOIL PROBES
- EROSION CONTROLS

LANDSCAPING REQUIREMENTS:
 EVERGREEN SCREEN
 STAGGER PLANTINGS 7' O.C.

EVERGREEN TREES:
 5' TALL BALLED AND BURLAPPED - MYRTICA PENNSYLVANICA - NORTHERN BAYBERRY
 TAXUS OCCIDENTALIS - ARBORVITAE
 OR JUNIPERUS VIRGINIANA - EASTERN RED CEDAR

3' TALL BALLED AND BURLAPPED
 MYRTICA PENNSYLVANICA - NORTHERN BAYBERRY
 VACCINIUM CORYMBOSUM - HIGH BUSH BLUEBERRY
 ILEX VERTICILLATA - WINTERBERRY
 VEURUM DENTATUM - SOUTHERN ARROWWOOD

SINGLE FAMILY SITE PLAN
 ASSESSOR'S PLAT 139/ LOT 9
 EAST WALLUM LAKE ROAD
 BURRILLVILLE, RHODE ISLAND

PREPARED BY:
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 16 WEST MAIN STREET
 WICKFORD, RHODE ISLAND 02852
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NOV 29 2019
 Office of Water Resources

TERRIA GENITES
 No. 8672
 REGISTERED PROFESSIONAL ENGINEER
 DWR 9/16/19

REV.	DATE	DESCRIPTION
1	11/11/19	EVERGREEN SCREEN
2	11/28/19	ELECTRICAL SERVICE, OWTS DESIGN GRADES

1

GENERAL TANK REQUIREMENTS

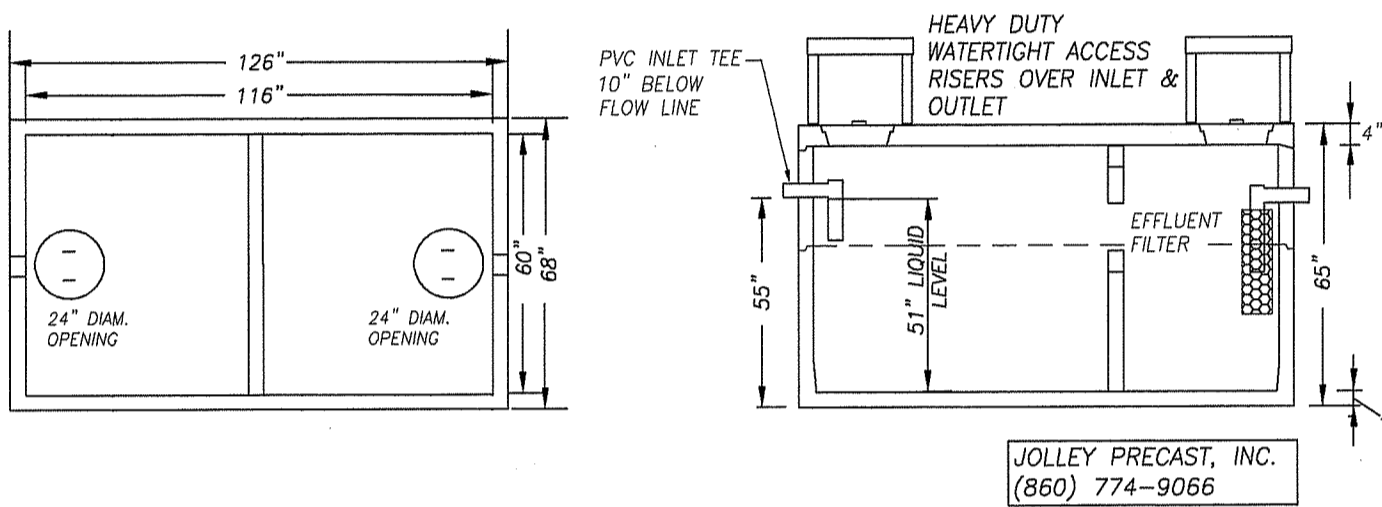
- TANKS SHALL BE CONSTRUCTED OF LIGHTWEIGHT MATERIAL AND SHALL BE OF SOUND AND DURABLE CONSTRUCTION NOT SUBJECT TO EXCESSIVE CORROSION, DECAY, OR FROST DAMAGE. MANUFACTURER SHALL CERTIFY TANK CONSTRUCTION FOR DEPTHS OF BURIAL SHOWN. TANKS ARE NOT SUBJECT TO DAMAGING, CRACKING OR BUCKLING FAILURE DUE TO SETTLEMENT OR SOIL PRESSURES.
- MANUFACTURING STANDARDS: CONCRETE TANKS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE ASTM STANDARD SPECIFICATIONS FOR PRECAST CONCRETE SEPTIC TANKS C-1227-02 OR THE LATEST AMENDED VERSION. ANY WEAP HOLES IN THE PRECAST REINFORCED CONCRETE TANK SHALL BE PLACED ON THE SIDE OF THE TANK BOTTOM TO ALLOW FOR SAFE INSPECTION AND ASSURANCE THAT THE WEAP HOLE HAS BEEN FLOODED.
- EACH SEPTIC TANK SHALL BE CLEARLY AND PERMANENTLY MARKED AT THE INLET END OF THE TANK WITH THE FOLLOWING:
 - DATE OF MANUFACTURE
 - NAME OR TRADEMARK OF MANUFACTURER
 - SEPTIC TANK CAPACITY
 - INDICATION OF EXTERNAL LOADS CAPACITY
- CONCRETE TANKS SHALL BE SEALED WITH BUTYL RUBBER MASTIC BETWEEN SECTIONS AND WRAPPED WITH A 6" OF BUTYL MASTIC WRAP AROUND EXTERIOR OF TANK.
- ALL BACKFILL AROUND THE TANK & APPARATUS SHALL BE CLEAN AND FREE OF FINES TO ALLOW FOR DISPERSAL OF STORMWATER AWAY FROM THE TANK.
- ALL INLETS AND OUTLETS SHALL BE FITTED WITH RESILIENT CONNECTORS MEETING ASTM C 923. TANKS SHALL BE SUPPLIED WITH A RUBBER CAST IN PLACE GASKET AT THE INLET AND OUTLET. STAINLESS STEEL CLAMPS SHALL BE USED TO FASTEN RUBBER GASKET AROUND PIPE.
- ALL TANKS SHALL HAVE A MANHOLE OPENINGS WITH REINFORCED RISERS TO GRADE.

ADDITIONAL SEPTIC TANK REQUIREMENTS

SCH 40 PVC TEES: INLET TEE DEPTH: EXTEND TO 12" BELOW FLOW LINE
 OUTLET TEE DEPTH: EXTEND TO 1/2 TANK DEPTH
 TOP OF TEES: 6" ABOVE FLOW LINE
 VENTILATION: TEES TO BE LEFT OPEN; ENSURE A 3" MIN. AIR SPACE BETWEEN TOP OF TEE & TANK.

ACCESS OPENINGS & RISERS:

MINIMUM SIZE: TWENTY FOUR (24") INSIDE DIAMETER
 LOCATION: OVER OUTLET TEE (MANDATORY) - OVER INLET TEE (REQUIRED).
 RISER COVERS: GASKETED FIBERGLASS LIDS W/ STAINLESS STEEL BOLTS OR CONCRETE OR METAL LID W/ A MINIMUM WEIGHT OF 59 (LBS) PROVIDE AN "NON-CORROSIVE" LABEL ON EACH RISER WARNING "ENTRANCE TO TANK COULD BE FATAL"



1,500 GALLON 2-COMPARTMENT SEPTIC TANK
NOT TO SCALE

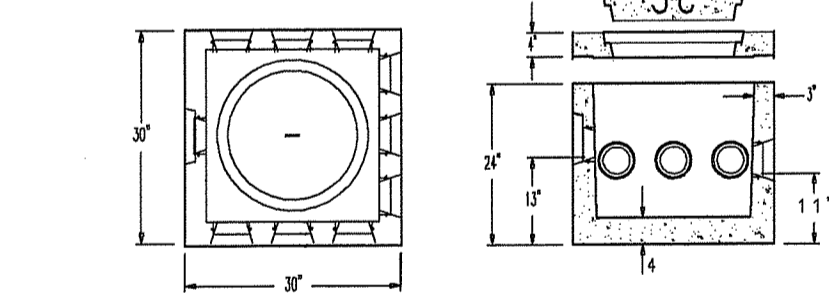
DISTRIBUTION BOX REQUIREMENTS

THE DISTRIBUTION BOX SHALL BE CONCRETE OR OTHER APPROVED DURABLE MATERIAL CAPABLE OF CARRYING THREE HUNDRED POUNDS PER SQUARE FOOT (300 PSF) WITH MINIMAL SIDEWALL DEFLECTION, & MEET THE REQUIREMENTS IN RULE 31 OF THE REGULATIONS.

MINIMUM SIZE: BOTTOM AREA SHALL BE 3 SQUARE FEET
INLET & OUTLET PIPES: DISTRIBUTION PIPING SHALL EXTEND INTO THE BOX ONE INCH. JOINTS SHALL BE WATER TIGHT & MADE WITH A NON SHRINKING CASSET MATERIAL; INLET BAFFLE OR TEE IS REQUIRED.

ACCESS OPENINGS & RISERS:
 MINIMUM SIZE: EIGHTEEN INCHES (18") INSIDE DIAMETER
 LOCATION: BROUGHT TO GRADE AT D-BOX
 RISER COVERS: GASKETED FIBERGLASS LIDS W/ STAINLESS STEEL BOLTS OR CONCRETE OR METAL LID W/ A MINIMUM WEIGHT OF 59 (LBS)

INSTALLATION: D-BOX LIDS, RISERS & INLET PIPING SHALL BE INSTALLED WATER TIGHT & INSTALLED ON A LEVEL COMPACTED BASE.
SUBSTITUTION: A TYPING D-BOX MAY BE USED AS LONG AS ALL OTHER REQUIREMENTS FOR DURABILITY & WATER TIGHTNESS ARE MET. RISERS SHALL BE BROUGHT TO GRADE FOR ALL TYPING D-BOXES.



DISTRIBUTION BOX DETAIL

DRAINFIELD REQUIREMENTS

1. IN ADDITION TO THE REQUIREMENTS ON THESE PLANS, THE INSTALLER SHALL FOLLOW MANUFACTURER'S INSTRUCTIONS OUTLINED IN "GEOTEXTILE SAND FILTER, RHODE ISLAND DESIGN & INSTALLATION MANUAL, AUGUST 2014," PUBLISHED BY ELJEN CORPORATION.

- SITE PREPARATION:**
- AVOID COMPACTION OF THE DRAINFIELD & SURROUNDING SOILS: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE AREA IS TAPED OFF AND PROTECTED FROM VEHICULAR MOVEMENT PRIOR TO & FOLLOWING CONSTRUCTION OF THE DWT'S.
 - CLEARING: ALL TREES, SHRUBS, AND STUMPS WITHIN 10' OF THE SYSTEM SHALL BE REMOVED.
 - ONLY TRUCKED VEHICLES SHALL BE ALLOWED WITHIN THE DRAINFIELD AREA.
- EXCAVATION:**
- THE DRAINFIELD AREA SHALL BE STRIPPED OF ALL TOPSOILS (A HORIZONS) AND STOCKPILED ON SITE; 5' STRIP IS REQUIRED.
 - DISPERSAL TRENCHES SHOULD THEN BE EXCAVATED. THE TRENCHES SHALL BE EXCAVATED TO MINIMUM DEPTH OF 6" BELOW THE BASE OF THE ELJEN UNITS (13" BELOW THE PROPOSED INVERT). AT THIS TIME, THE BOTTOM BED OF THE DRAINFIELD SHALL BE INSPECTED BY THE ENGINEER TO DETERMINE FINAL EXCAVATION DEPTH.
 - IF IT IS NOT POSSIBLE TO EXCAVATE ONLY WITHIN THE TRENCHES, THE FULL EXCAVATED AREA SHALL BE REPLACED WITH PROPERLY COMPACTED GRAVEL THAT MEETS THE REQUIREMENTS OF RULE 32.12 OF THE REGULATIONS SHALL BE PLACED THROUGHOUT THE TRENCH EXCAVATION AREA TO AN ELEVATION 2" ABOVE THE DISTRIBUTION LINES.
 - THE BOTTOM EXCAVATION SHALL BE LEVEL. ONCE THE FINAL TRENCH BOTTOM IS DETERMINED, THE RECEIVING LAYER (SIDES AND BOTTOM) SHALL BE SCARIFIED TO MAXIMIZE THE INTERFACE BETWEEN THE NATIVE SOIL & ASTM C-33 SAND.

TRENCH INSTALLATION:

- MINIMIZE UN-NECESSARY WALKING IN THE TRENCH ONCE THE AREA HAS BEEN SCARIFIED.
- PLACE 6" OF CONCRETE SAND IN THE BASAL AREA AND COMPACT WITH A HAND TAMPING TOOL OR VIBRATING COMPACTOR.
- PLACE THE ELJEN MODULES, PAINTED STRIP FACING UP, END TO END, ON TOP OF THE SAND ALONG THEIR FOUR FOOT LENGTH.
- INSTALL DISTRIBUTION HEADERS (4" SDR 35 UNPERFORATED PVC PIPE) FROM DISTRIBUTION BOX; DROP TWO INCHES FROM D-BOX TO FIELD. INSTALL PERFORATED PIPES LEVEL, CONNECT ENDS, PROVIDE A 1' LENGTH OF UNPERFORATED PIPE AT START OF TRENCH.
- INSTALL THE 4" PERFORATED DISTRIBUTION PIPE CENTERED ALONG THE ELJEN MODULES. SECURE EACH PIPE WITH MANUFACTURER SUPPLIED WIRE CLAMPS, ONE PER MODULE. ORIFICES SHALL BE SET AT 5 & 7 O'CLOCK POSITION.
- FOLLOWING INSPECTION BY THE ENGINEER, THE INSTALLER SHALL PLACE THE ELJEN PROVIDED GEOTEXTILE FABRIC LENGTHWISE DOWN THE TRENCH, WITH THE FABRIC FITTED TO THE PERFORATED PIPE ON TOP OF THE MODULES. SEE MANUFACTURER'S REQUIREMENTS FOR FABRIC TENSION.
- PLACE 6" OF CONCRETE SAND ALONG BOTH SIDES OF THE MODULES TO SECURE THE FABRIC IN PLACE.

BACKFILL / LOAM & SEED:

- COMPLETE BACKFILL WITH NATIVE SOIL OR BACKFILL MEETING THE REQUIREMENTS BELOW TO 12 - 18" OVER THE ELJEN SYSTEM. DO NOT USE WHEELED EQUIPMENT OVER THE SYSTEM. LIGHT TRACK MACHINE MAY BE USED WITH EXTREME CAUTION. DIVERT SURFACE RUNOFF & GRADE TO PREVENT PONDING. LOAM & SEED AS DIRECTED.

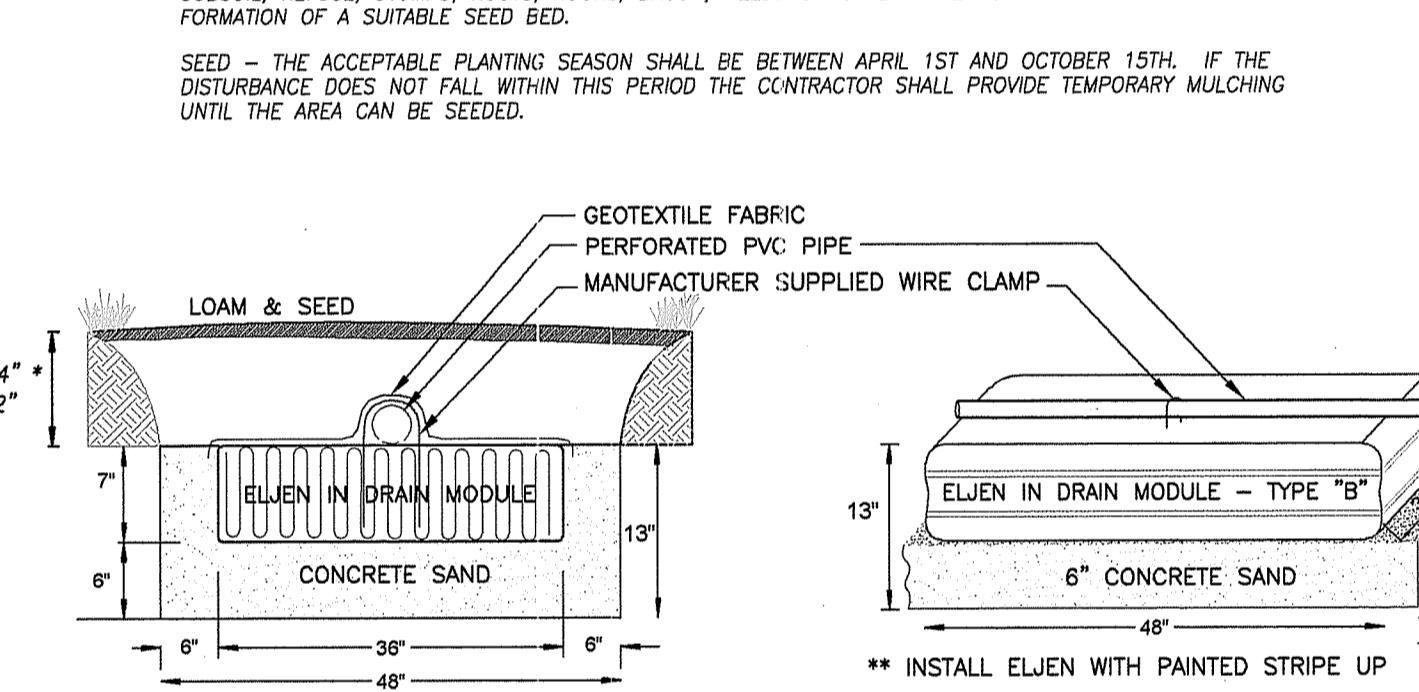
MATERIALS:

SIEVE SIZE	% PASSING
3/4"	100%
#4	55%-100%
#10	40%-100%
#40	10%-50%
#100	0%-20%
#200	0%-5%

BACKFILL: BACKFILL MATERIAL SHALL BE COMPOSED OF HARD, DURABLE STONE AND COARSE TO FINE SAND, FREE OF PEAT, VEGETABLE OR ORGANIC MATTER, CLAY LUMPS & OTHER DEBRIS. THE GRANULAR TILL SHALL BE READILY COMPACTABLE AND SHALL NOT CONTAIN ANY STONES THAT ARE IN EXCESS OF 6".

LOAM: LOAM - THE CONTRACTOR SHALL PROVIDE A MINIMUM OF FOUR (4") INCHES OF LOAM ON AREAS UP TO 10X IN GRADE. ALL OTHER AREAS OVER 10X GRADE SHALL RECEIVE A MINIMUM OF SIX (6") INCHES. THE MATERIAL TO BE FURNISHED SHALL CONSIST OF LOOSE, FINE, SANDY LOAM OR LOAM TOPSOIL FREE OF SUBSOIL, REFUSE, STUMPS, ROOTS, ROCKS, BRUSH, WEEDS OR OTHER MATERIAL WHICH WOULD PREVENT THE FORMATION OF A SUITABLE SEED BED.

SEED: THE ACCEPTABLE PLANTING SEASON SHALL BE BETWEEN APRIL 1ST AND OCTOBER 15TH. IF THE DISTURBANCE DOES NOT FALL WITHIN THIS PERIOD THE CONTRACTOR SHALL PROVIDE TEMPORARY MULCHING UNTIL THE AREA CAN BE SEEDED.



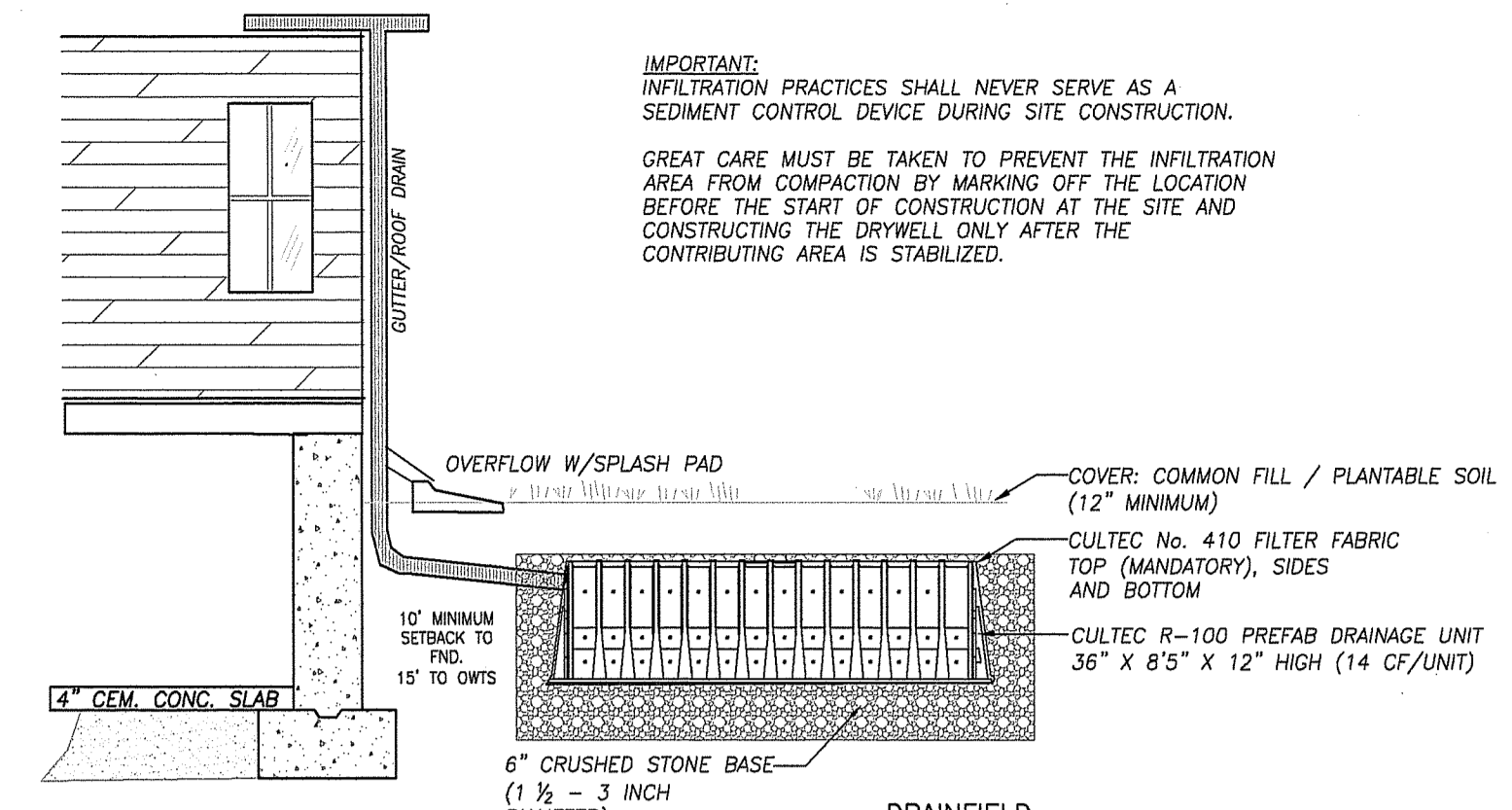
ELJEN IN DRAIN MODULE - TYPE "B"

INFILTRATION SYSTEM CONSTRUCTION NOTES

- INFILTRATION TRENCH OR CHAMBER SYSTEMS MAY NOT RECEIVE RUN-OFF FROM THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE INFILTRATION SYSTEM HAS RECEIVED FINAL STABILIZATION. EXCESSIVE EQUIPMENT AND TRAFFIC SHALL BE RESTRICTED FROM TRAVELING OVER THE INFILTRATION TRENCH OR CHAMBER AREAS TO MINIMIZE COMPACTION OF THE SOIL.
- EXCAVATE THE INFILTRATION CHAMBER TO THE DESIGN DIMENSIONS. EXCAVATED MATERIALS SHALL BE PLACED AWAY FROM THE TRENCH/CHAMBER SIDES TO ENHANCE TRENCH WALL STABILITY. LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE TRENCH SIDES IN ORDER TO PREVENT FABRIC PUNCTURING OR TEARING OF THE FILTER FABRIC DURING SUBSEQUENT INSTALLATION PROCEDURES. THE SIDE WALLS OF THE TRENCH/CHAMBER SHALL BE ROUGHENED WHERE SHEARED AND SEALED BY HEAVY EQUIPMENT.
- INFILTRATION CHAMBERS SHOULD CONSIST OF CULTEC RECHARGER C-100 HD UNITS. ANY SUBSTITUTIONS MUST BE OF EQUAL SIZE AND COMPRISED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HDPE) AND MEET ASTM H10 AND H20 STANDARDS. (CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5833)
- A CLASS "C" GEOTEXTILE OR BETTER SHALL INTERFACE BETWEEN THE TRENCH/CHAMBER SIDE WALLS AND BETWEEN THE STONE RESERVOIR AND GRAVEL FILTER LAYERS. A PARTIAL LIST OF NONWOVEN FILTER FABRICS THAT MEET THE CLASS "C" CRITERIA IS CONTAINED INCLUDES (MIRAFI 180-N, AMOCO 4552, WEBTEC N70, GEOLON N70, GARHAGE FX-805)
- THE WIDTH OF THE GEOTEXTILE MUST INCLUDE SUFFICIENT MATERIAL TO CONFORM TO TRENCH/CHAMBER PERIMETER IRREGULARITIES AND FOR A 6-INCH MINIMUM TOP OVERLAP. THE FILTER FABRIC SHALL BE TUCKED UNDER THE SAND LAYER ON THE BOTTOM OF THE INFILTRATION TRENCH/CHAMBER FOR A DISTANCE OF 6 TO 12 INCHES.
- THE STONE AGGREGATE SHOULD BE PLACED IN LIFTS AND COMPACTED USING PLATE COMPACTORS. A MAXIMUM LOOSE LIFT THICKNESS OF 8 INCHES IS RECOMMENDED. THE GRAVEL STONE FOR THE INFILTRATION TRENCH/CHAMBER SHALL BE WASHED AND MEET ONE OF THE FOLLOWING ASTM STD. M-43; SIZE NO. 2 OR NO. 3.
- CARE SHALL BE EXERCISED TO PREVENT NATURAL OR FILL SOILS FROM INTERMIXING WITH THE STONE AGGREGATE. ALL CONTAMINATED STONE AGGREGATE SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED STONE AGGREGATE.
- VOIDS CAN BE CREATED BETWEEN THE FABRIC AND THE EXCAVATION SIDES AND SHALL BE AVOIDED. REMOVING Boulders OR OTHER OBSTACLES FROM THE TRENCH WALLS IS ONE SOURCE OF SUCH VOIDS; THEREFORE, NATURAL SOILS SHOULD BE PLACED IN THESE VOIDS AT THE MOST CONVENIENT TIME DURING CONSTRUCTION TO ENSURE FABRIC CONFORMITY TO THE EXCAVATION SIDES.
- PVC SHOULD BE IN ACCORDANCE WITH ROOT SPECIFICATION SECTION M.04 DRAINAGE AND THE FOLLOWING PROVISIONS, AS APPLICABLE. PVC DISTRIBUTION PIPES SHALL BE SCHEDULE 40 AND MEET ASTM STD. D 1784. ALL FITTINGS AND PERFORATIONS (1/2 INCH IN DIAMETER) SHALL MEET ASTM STD. D 2729.

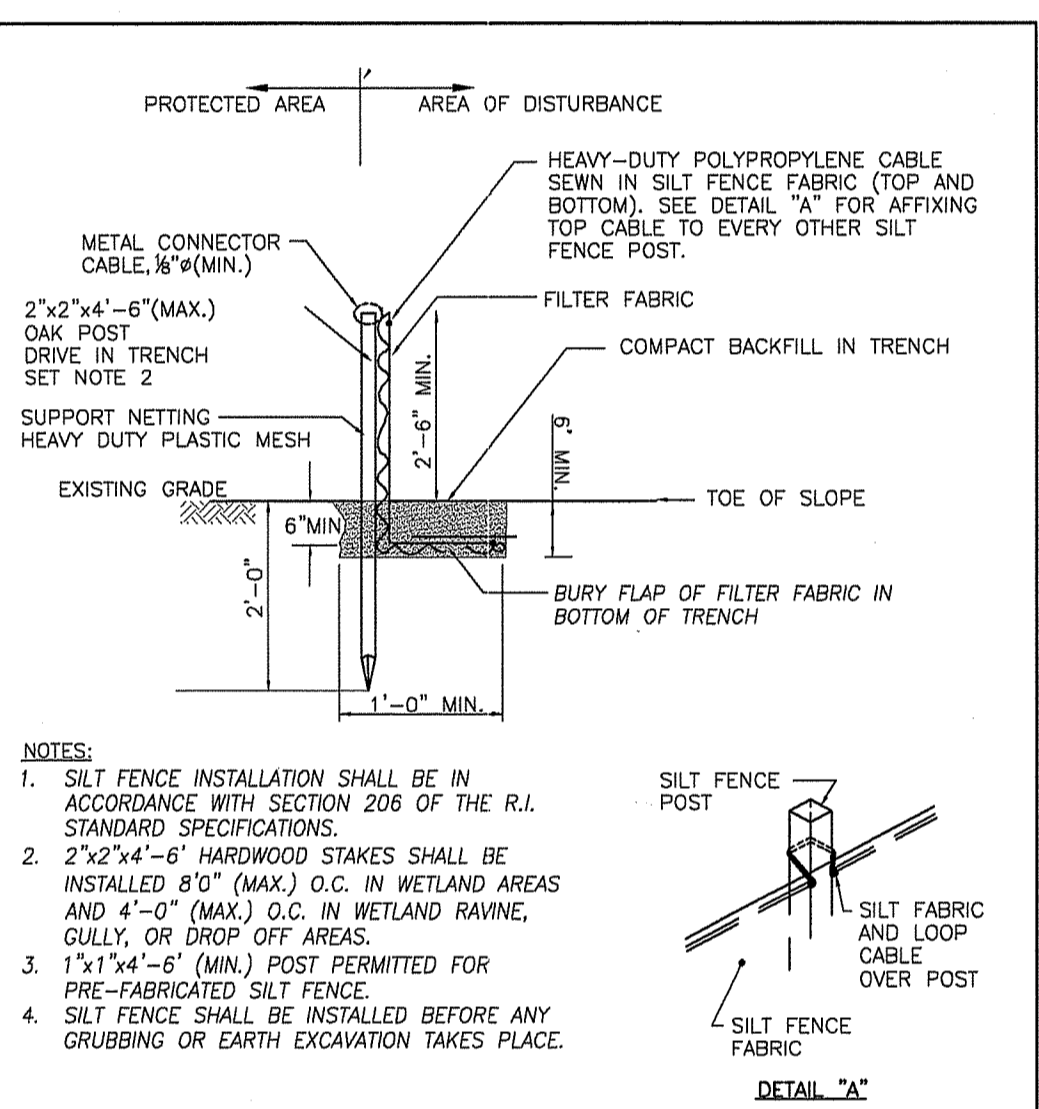
ROOF DRYWELL INFILTRATION SYSTEM

CULTEC C-100 PREFAB DRAINAGE UNIT
36" X 85" X 12" HIGH (14 CF/UNIT)



DESIGN ELEVATION:	ELEV.	439.00
GROUNDWATER:	ELEV.	436.50
6" STONE BASE:	ELEV.	438.50
CULTEC INVERT:	ELEV.	439.00
CULTEC TOP CHAMBER:	ELEV.	440.00
COVER OVER SYSTEM:	ELEV.	440.00 - 441

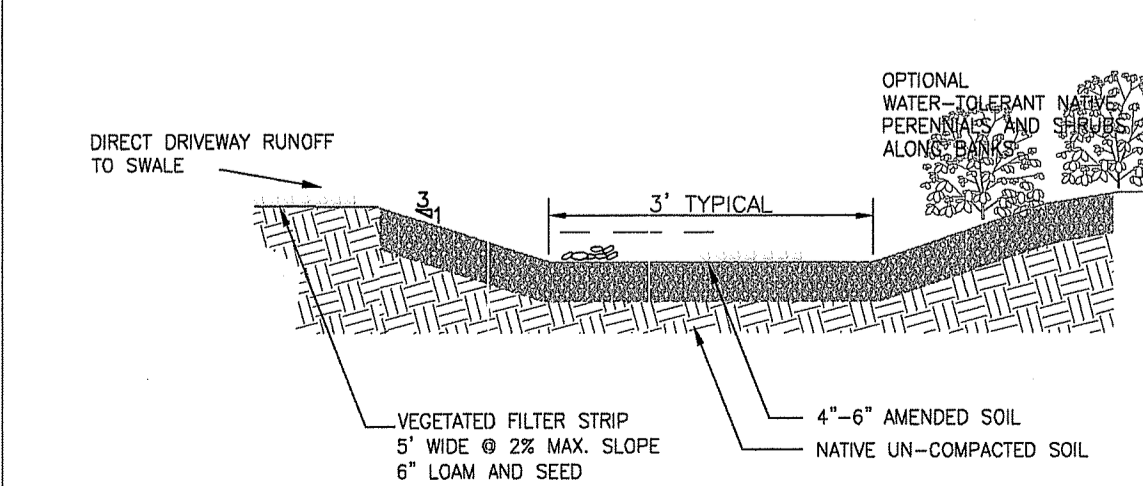
IMPORTANT: INFILTRATION PRACTICES SHALL NEVER SERVE AS A SEDIMENT CONTROL DEVICE DURING SITE CONSTRUCTION. GREAT CARE MUST BE TAKEN TO PREVENT THE INFILTRATION AREA FROM COMPACTION BY MARKING OFF THE LOCATION BEFORE THE START OF CONSTRUCTION AT THE SITE AND CONSTRUCTING THE DRYWELL ONLY AFTER THE CONTRIBUTING AREA IS STABILIZED.



RHODE ISLAND DEPARTMENT OF TRANSPORTATION
SILT FENCE DETAIL
R.I. STANDARD 9.2.0

SWALE CONSTRUCTION NOTES:

- THE GRASS SWALE SHALL BE CONSTRUCTED FOLLOWING THE COMPLETION AND STABILIZATION OF OTHER SITE WORK. COMPACTION OF THE BIO-RETENTION AREA PRIOR TO AND DURING CONSTRUCTION MUST BE AVOIDED. EXCAVATION SHALL BE COMPLETED USING LIGHT EQUIPMENT WITH WIDE TRACKS. IF THE AREA DOES BECOMES COMPACTED, SOIL MUST BE TILLED TO A MINIMUM DEPTH OF 12".
- COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE SWALE BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL, ROLLER, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE PERFORMED TO REFRACTURE THE SOIL PROFILE THROUGHOUT THE 12-INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.
- AMENDED SOILS SHALL CONSIST OF A 50/50 MIXTURE OF NATIVE TOP SOILS & AGED COMPOST.

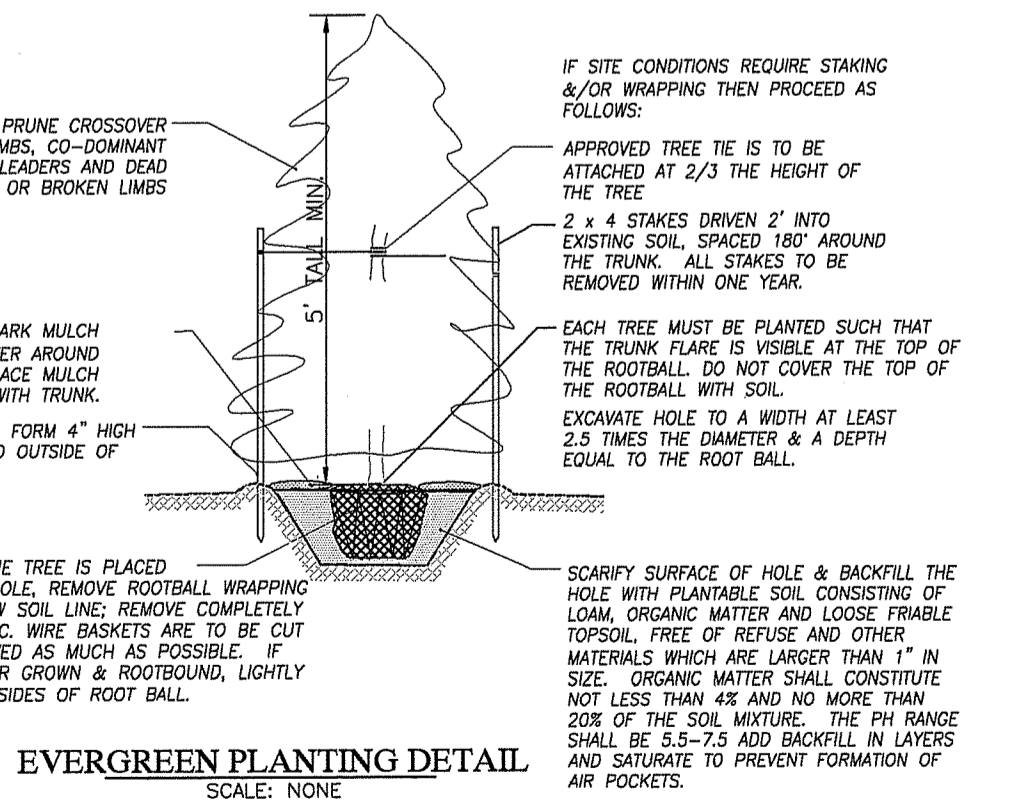


ACCEPTABLE PLANTING MATERIALS:

PREPARATION: AREAS TO BE SEEDED SHALL BE BROUGHT TO AN ELEVATION 6" BELOW THE PROPOSED FINISHED GRADE. THE SUBGRADE IS TO BE SCARIFIED TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE TO RESULT IN UNCOMPACTED SOIL. THEN A 6" LAYER OF LOAM TOPSOIL IS TO BE APPLIED AND RAKED TO FINISHED GRADE. LOAM IS TO BE GOOD QUALITY TOPSOIL, FERTILE, AND FREE OF WEEDS, STICKS, & STONES OVER 1" IN SIZE.

GENERAL LAWN		REGULATED AREAS & WATERWAYS	
MIX	% BY VOLUME	MIX	% BY VOLUME
CREEPING RED FESCUE	40	PERENNIAL RYEDGRASS	25 1
IMPROVED KENTUCKY BLUEGRASS	20	CREEPING RED FESCUE	25 1
KENTUCKY BLUE 98/85	20	ANNUAL RYE	25
PERENNIAL RYEDGRASS	20	TALL FESCUE	17
		KENTUCKY BLUEGRASS	5
		COLONIAL BENTGRASS	1
		RED TOP	5
		WHITE CLOVER*	5
		* CLOVER SEED TO BE INOCULATED	

SHADE / LOW MAINTENANCE (URI #1)
 APPLICATION RATE: < 5 LBS / 1,000 S.F.
 MIX: CHEWING FESCUE 50, KENTUCKY BLUE 98/85 40, COLONIAL BENTGRASS 10



EVERGREEN PLANTING DETAIL
SCALE: NONE

MAINTENANCE REQUIREMENTS

- SHORT TERM REQUIREMENTS**
- THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY OF THE MAINTENANCE PROGRAM AND THE IMPLEMENTATION OF ALL STRUCTURAL AND NON-STRUCTURAL BEST MANAGEMENT PRACTICES (BMPs) DURING CONSTRUCTION. THE SUPERINTENDENT SHALL IMPLEMENT A REGULAR INSPECTION SCHEDULE AND PROVIDE THE APPROPRIATE LABOR AND MATERIALS TO REMEDY ANY SUBSTANDARD ELEMENTS.
 - ALL EROSION CONTROLS SHALL BE MAINTAINED IN WORKING ORDER BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL REMAIN IN-PLACE UNTIL AN APPROVED GROUND COVER IS ESTABLISHED.
 - ALL DISTURBED SLOPES SHALL BE RE-SEEDED OR PROTECTED PRIOR TO OCTOBER 15. AFTER THIS DATE, WINTER MULCHING SHALL BE PROVIDED IN AREAS WHERE VEGETATION HAS NOT BEEN ESTABLISHED.
 - HAYBALES AND SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A DAILY BASIS AND AFTER EVERY RAINFALL EVENT FOR EFFECTIVENESS. THE CONTRACTOR SHALL REPLACE OR REPAIR THE CONTROLS AS REQUIRED AND SHALL ALSO REMOVE ANY SEDIMENT WHICH ACCUMULATES UP TO ONE-HALF THE HEIGHT OF THE BALE/FENCE.
 - CONSTRUCTION ENTRANCES PROTECTED BY STONE STABILIZATION PADS SHALL BE DRESSED WITH ADDITIONAL STONE FOR THICKNESS OR LENGTH AS CONDITIONS WARRANT. AS WITH ALL EROSION CONTROLS, THE PADS SHALL BE INSPECTED EITHER PRIOR TO OR FOLLOWING ALL RAINFALL EVENTS. SEDIMENTS TRACKED OR CARRIED ONTO THE PUBLIC RIGHT OF WAY SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR.
 - AT THE COMPLETION OF THE PROJECT, ACCUMULATED SEDIMENTS IN PIPES, AND ALL DRAINAGE COMPONENTS SHALL BE REMOVED BY THE CONTRACTOR. ACCUMULATED SILTS OR SEDIMENTS SHALL BE REMOVED FROM THE GRASSED AREAS. ANY MECHANICAL MAINTENANCE SHALL BE DONE SO AS NOT TO COMPACT LOAM WITHIN LANDSCAPED AREAS. ANY SEDIMENTS OR DEPOSITED MATERIAL SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER GROWTH OF ALL VEGETATIVE FEATURES FOR A PERIOD OF ONE YEAR FOLLOWING CONSTRUCTION. ALL AREAS UNDEVELOPED SHALL BE TOPSOILED, PLANTED, SEEDED, OR SOODED AT NO ADDITIONAL COST TO THE OWNER.
- LONG TERM - OPERATIONAL NOTES / MAINTENANCE**
- LONG TERM MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE OWNER UPON FINAL ACCEPTANCE OF THE PROJECT.
 - VEGETATION SHALL BE PRESENT IN ALL REQUIRED AREAS. GRASSES SHALL BE RE-SEEDED AND PLANTINGS REPLANTED AS REQUIRED TO THE INTENT OF THESE PROVISIONS.
 - ANY SEDIMENTS OR DEPOSITED MATERIAL SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

SINGLE FAMILY SITE PLAN
 ASSESSOR'S PLAT 139 / LOT 9
 EAST WALLUM LAKE ROAD
 BURRILLVILLE, RHODE ISLAND

PREPARED BY:
 JEFFREY J. CAMPOPIANO, P.E.
 16 WEST MAIN STREET
 WICKFORD, RHODE ISLAND 02852
 PHONE: (401) 298-3037

REV. DATE DESCRIPTION

2