

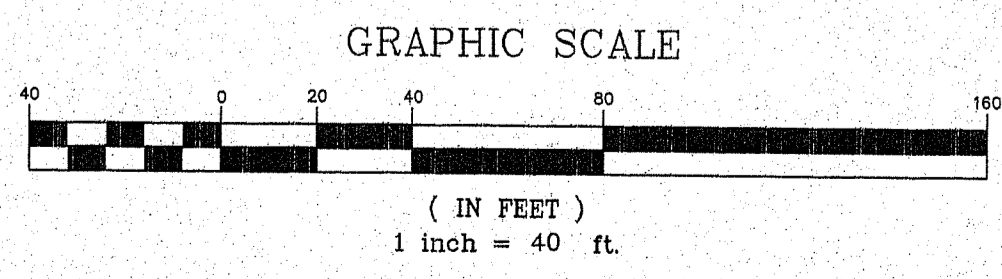
LEGEND

- IPF O Iron Pipe Found
- IRCF O Iron Rod w/ CAP Found
- IRF O Iron Rod Found
- UP 40' UTILITY POLE
- WS WATER SHUTOFF
- DF DRILLHOLE FOUND
- CS CESSPOOL/SEPTIC TANK LID
- W WELL
- SW STONE WALL
- PL PROPERTY LINE
- APL APPROX. PROPERTY LINE
- PF PROP. SILT FENCE
- CD CONTOUR (ASSUMED DATUM)
- EW EXISTING WATERLINE+
- EE EXISTING ELECTRICAL+
- ET EXISTING TREELINE
- SE SOIL EVALUATION
- SD PROPOSED STORMWATER DRAINLINE
- WD PROPOSED WATERLINE
- PC PROPOSED CONTOUR
- ED PROPOSED ELECTRICAL

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 OMTS & FRESHWATER WETLANDS
 ADJUTANT PERMIT APPROVAL
 DATE: 08/22/2022
 APPROVED BY: [Signature]
 TO: [Signature]
 Approved Plans/Permit Must Be Kept at Construction Site

PLAN VIEW
 SCALE: 1" = 40'

RI Environmental Management
 AUG 05 2022
 Office of Water Resources

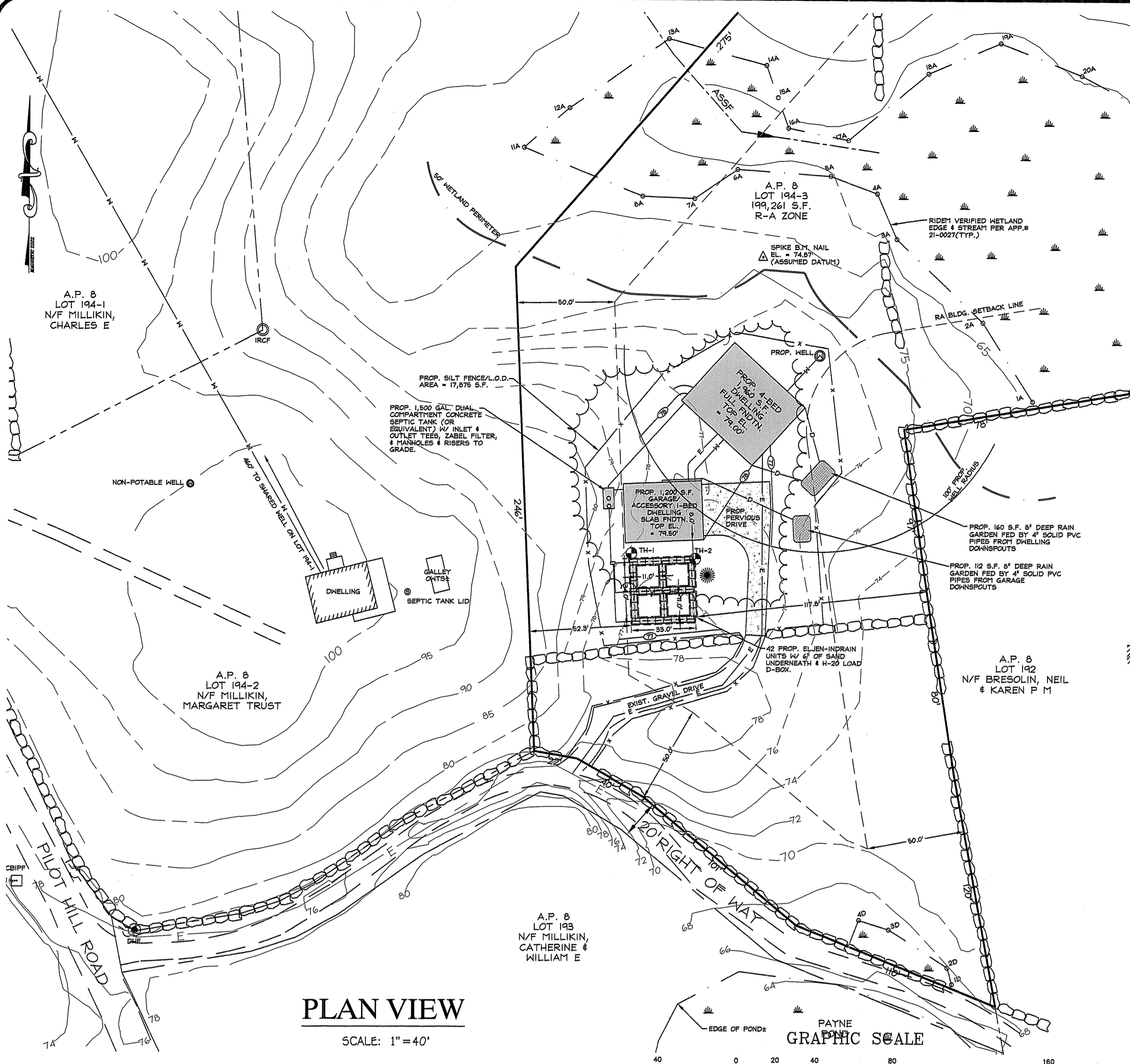


ONSITE WASTEWATER TREATMENT SYSTEM NEW DESIGN-OVERALL
 A.P. 8, LOT 194-3
 PILOT HILL ROAD
 NEW SHOREHAM, RHODE ISLAND
 Prepared For: CHARLIE MILLIKIN

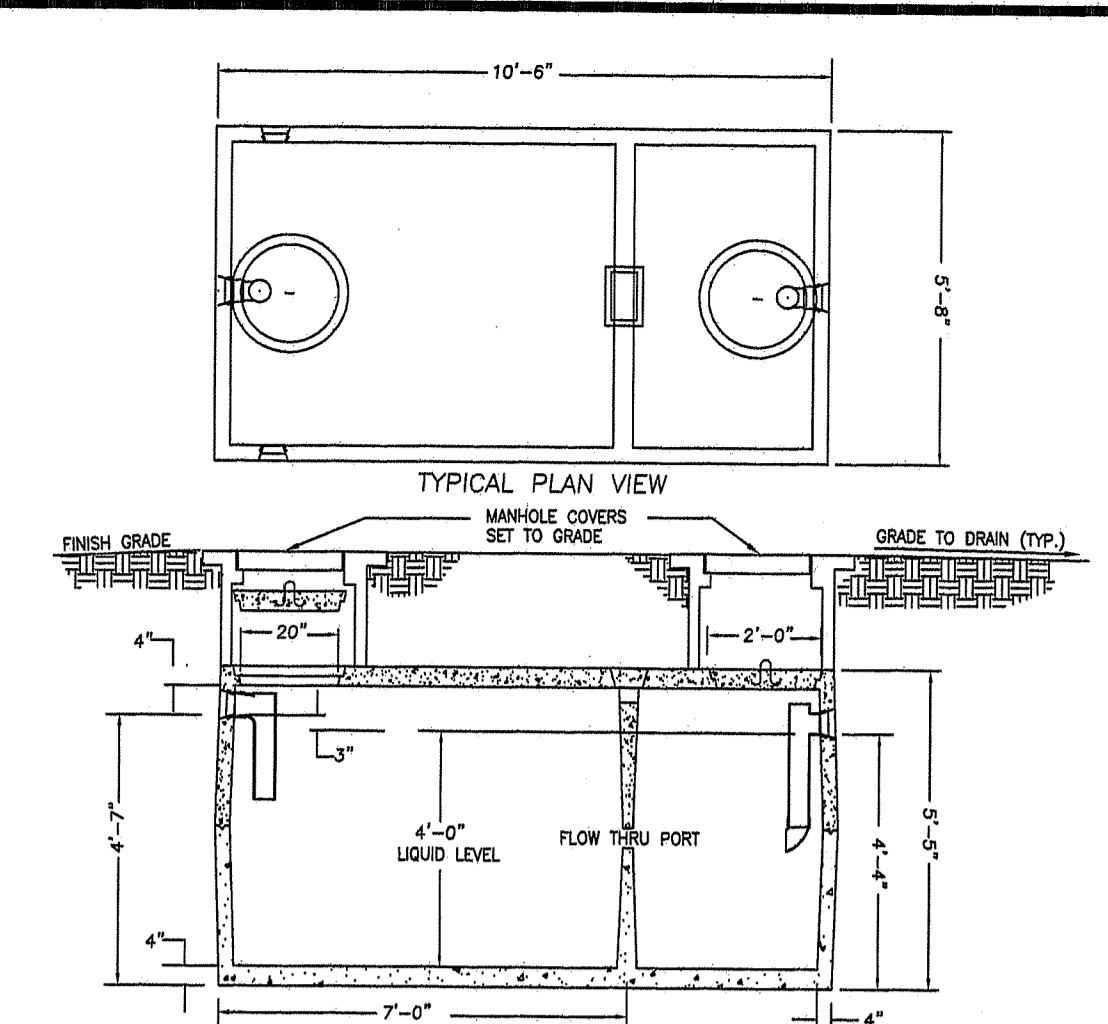
MARCUS CHANNING
 No. 1971
 PROFESSIONAL LAND SURVEYOR

ATLAS LAND SURVEYING, LLC
 PROPERTY & CONSTRUCTION SURVEYING & MAPPING
 91 Parkway Drive ~ Warwick, RI 02886
 401-737-4407
 WWW.ATLASLANDSURVEYING.COM

REVISION: AUG. 2022
 DATE: JUNE 2022
 DRAWN BY: KRC
 SCALE: 1" = 40'
 SHEET 1
 OF 1 SHEETS
 JOB NO. MILLIKIN
 DWG. NO. MILLIKIN-OWTS



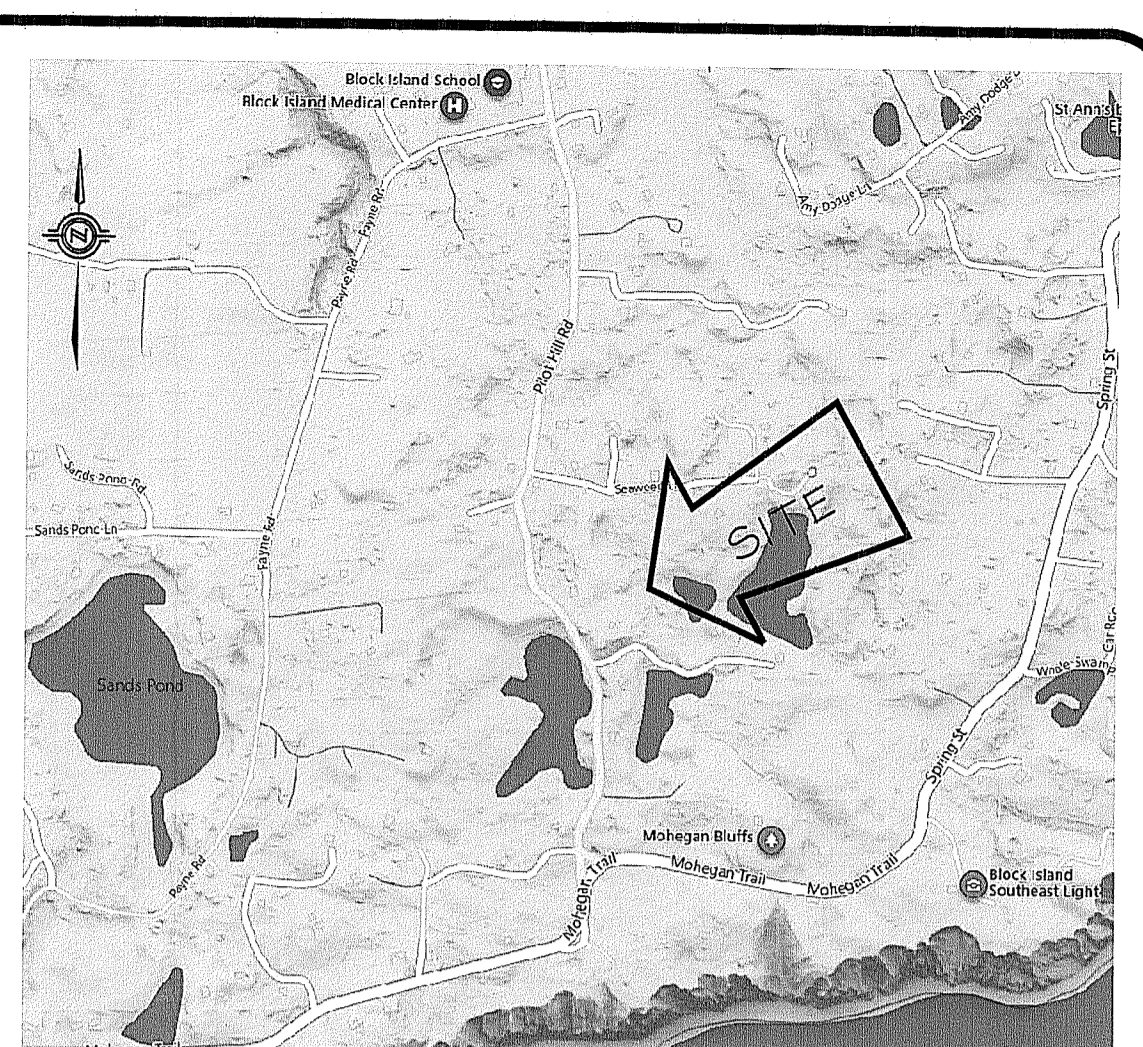
PLAN VIEW
SCALE: 1" = 40'



ZABEL SEPTIC TANK FILTER CROSS SECTION

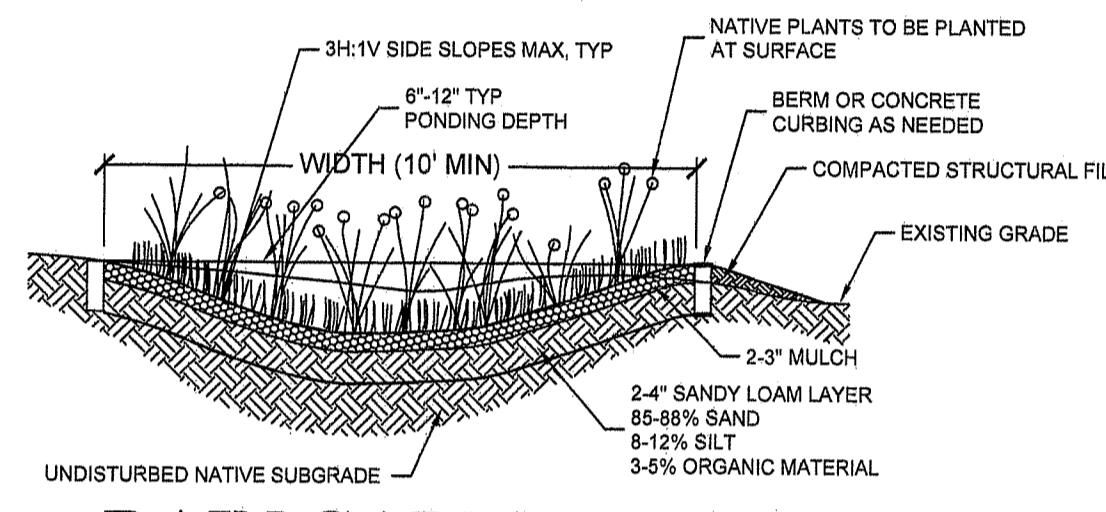
LEGEND

- IPF ○ IRON PIPE FOUND
- IRFO ○ IRON ROD W/ CAP FOUND
- IRF ○ IRON ROD FOUND
- UP, 460 ○ UTILITY POLE
- WS ○ WATER SHUTOFF
- DHF ○ DRILLHOLE FOUND
- CS ○ CESSPOOL/SEPTIC TANK LID
- W ○ WELL
- SW ○ STONE WALL
- PL ○ PROPERTY LINE
- APL ○ APPROX. PROPERTY LINE
- PSF ○ PROP. SILT FENCE
- CON ○ CONTOUR (ASSUMED DATUM)
- EWL ○ EXISTING WATERLINE
- EUGL ○ EXISTING UNDERGROUND ELECTRICLINE
- ETL ○ EXISTING TREELINE
- SE ○ SOIL EVALUATION
- SD ○ PROPOSED STORMWATER DRAINLINE
- PLW ○ PROPOSED WATERLINE
- PC ○ PROPOSED CONTOUR
- EUGL ○ PROPOSED UNDERGROUND ELECTRICLINE



LOCUS MAP

TYPICAL DUAL COMPARTMENT 1,500 GAL. SEPTIC TANK NOT TO SCALE

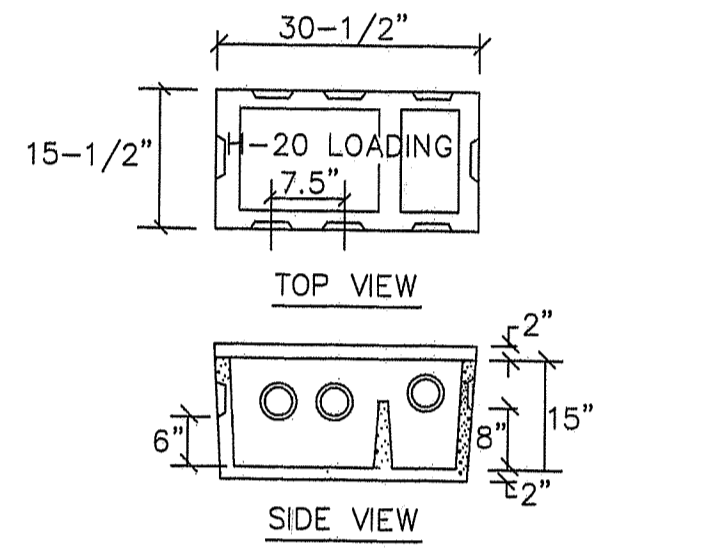


RAIN GARDEN DETAIL
SCALE: N.T.S.

- DESIGN NOTES:**
- PLANTINGS - NATIVE PLANTS ARE PREFERRED, BECAUSE NON-NATIVE AND INVASIVE SPECIES CAN REPRODUCE DOWNSTREAM TO DAMAGE HABITAT AND CHANGE HYDROLOGY. IF NON-NATIVES ARE CHOSEN, BE SURE THAT THEY WILL NOT DAMAGE DOWNSTREAM WATERWAYS.
 - RAIN GARDEN SIZING CRITERIA (PER RI STORMWATER MANAGEMENT GUIDANCE DOCS TABLE 7 & 8): 1,960 SQ. FT. (4-BED) & 1,200 SQ. FT. (1-BED) IS PROPOSED. USING SANDY SOILS & 8" DEEP GARDEN, 160 S.F. (4-BED) & 112 SQ. FT. (1-BED) OF AREA IS REQUIRED. THIS PLAN PROPOSES A RAIN GARDEN THAT SHALL BE ELLIPTICAL IN SHAPE & SHALL NOT BE NARROWER THAN 10' @ ITS MIDPOINT OR SHORTER THAN 17(4-BED) OR 13' (1-BED) IN LENGTH & WILL PROVIDE 160 SQUARE FEET (4-BED) & 112 SQ. FT. (1-BED) OF DRAINAGE AREA.

- CONSTRUCTION NOTES:**
- CONVEY WATER TO THE RAIN GARDEN VIA 4" SDR 35 SOLID PVC. PROVIDE 6" RIP-RAP FOR 4' ALL AROUND PIPE DAYLIGHT LOCATION FOR STABILIZATION & TO MINIMIZE EROSION.
 - BUILD AND VEGETATE RAIN GARDEN AS EARLY AS POSSIBLE TO ESTABLISH PLANTINGS BEFORE DIRECTING STORMWATER RUNOFF TO IT OR DIVERT STORMWATER AROUND FACILITY.
 - THE AREA OF THE RAIN GARDEN SHALL BE FENCED OFF FROM THE FIRST DAY OF EARTH MOVING UNTIL PROJECT COMPLETION TO PREVENT COMPACTION OF THE SUBGRADE DIRT TRACKING ONTO ANY LAYER OF THE FACILITY, AND STOCKPILING OF CONSTRUCTION MATERIALS THAT MAY CLOG THE SURFACE.
 - DURING EXCAVATION OF NATIVE SOILS TO THE BOTTOM OF THE FACILITY, RAINFALL MAY CAUSE FINES TO CLOG THE SURFACE OF THE FACILITY. IF THIS OCCURS DURING CONSTRUCTION, HAND RAKE THE SURFACE TO A DEPTH OF 3" TO RESTORE INFILTRATION CAPACITY.
 - AREA OF L.O.D. WILL BE RESTORED TO ITS ORIGINAL STATE WHEN CONSTRUCTION HAS BEEN COMPLETED.

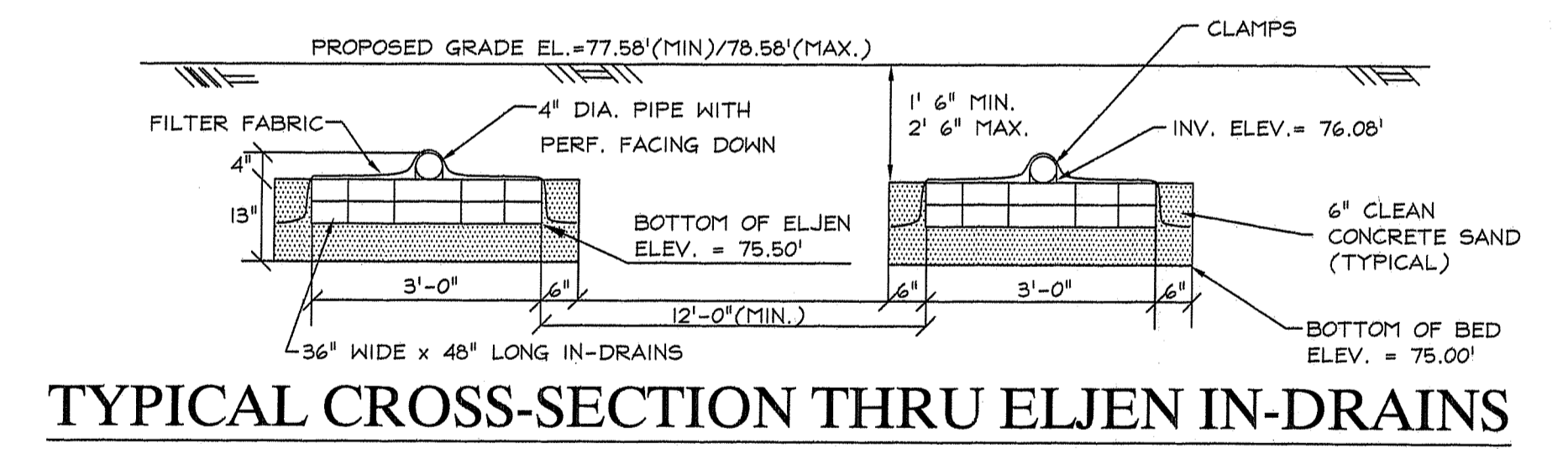
- GENERAL:**
- PROPERTY OWNER SHALL MAINTAIN BMPs IN ACCORDANCE WITH THE 'STATE OF RHODE ISLAND STORMWATER MANAGEMENT GUIDANCE FOR INDIVIDUAL SINGLE FAMILY RESIDENTIAL LOT DEVELOPMENT GUIDELINES'.
 - FOR STORMWATER BEST MANAGEMENT PRACTICES (BMPs) ARE THE RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, AS REVISED. THE MANUAL IS AVAILABLE FOR DOWNLOAD AT THE ORCA AND RIDEM WEBSITES.
 - ALL BMP AREAS SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES SO SOILS DON'T BECOME COMPACTED.
 - ALL AREAS COMPACTED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO PROMOTE INFILTRATION BY TILLING THE TOP 12 INCHES OF SOIL PRIOR TO FINAL STABILIZATION.
- PERVIOUS CRUSHED STONE DRIVEWAY:**
- CRUSHED STONE SHALL BE REPLACED OR RE-GRADING PERFORMANCE AS NECESSARY IN CRUSHED STONE DRIVEWAYS TO MAINTAIN A DESIGN DEPTHS AND A LEVEL SURFACE.
- RAIN GARDEN:**
- THE RAIN GARDEN SHALL BE INSPECTED FOLLOWING AT LEAST THE FIRST TWO PRECIPITATION EVENTS OF AT LEAST 1.0 INCH TO ENSURE THAT THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER, THE RAIN GARDEN SHALL BE MONITORED AND MAINTAINED TO ASSURE PROPER FUNCTIONING, PLANT GROWTH AND SURVIVAL. PLANTS SHALL BE REPLACED ON AN AS-NEEDED BASIS DURING THE GROWING SEASON.
 - SILT/SEDIMENT SHALL BE REMOVED FROM THE RAIN GARDEN WHEN THE ACCUMULATION EXCEEDS ONE INCH, OR WHEN WATER POUNDS ON THE SURFACE OF THE RAIN GARDEN FOR MORE THAN 48 HOURS). THE TOP FEW INCHES OF MATERIAL SHALL BE REMOVED AND SHALL BE REPLACED WITH FRESH SOIL MIXTURE AND MULCH.
 - PRUNING OR REPLACEMENT OF WOODY VEGETATION SHALL OCCUR WHEN DEAD OR DYING VEGETATION IS OBSERVED.
 - SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
 - FERTILIZER OR PESTICIDES SHALL NOT BE APPLIED TO PLANTS WITHIN RAIN GARDENS.
 - PERENNIAL PLANTS AND GROUND COVERS SHALL BE REPLACED AS NECESSARY TO MAINTAIN AN ADEQUATE VEGETATED GROUND COVER. ANNUAL PLANTS MAY ALSO BE USED TO MAINTAIN GROUND COVER.



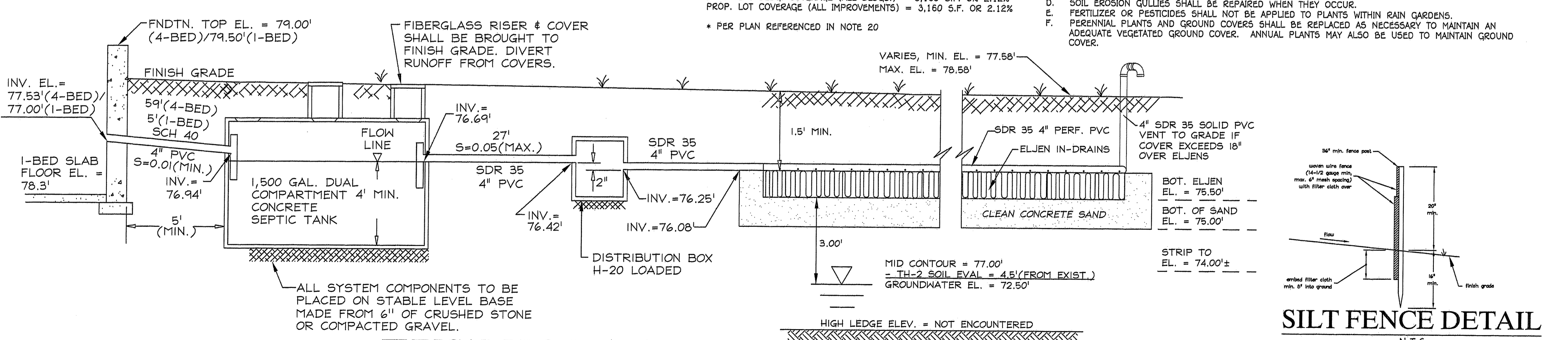
TYPICAL DISTRIBUTION BOX
N.T.S.

OWTS GENERAL NOTES:

- THE PROPERTY IS NOT SUBJECT TO RHODE ISLAND COASTAL RESOURCES MANAGEMENT COUNCIL REVIEW.
 - ALL PRIVATE AND PUBLIC DRINKING WATER LINES WITHIN 50 FEET OF THE PROPOSED ONSITE WASTEWATER TREATMENT SYSTEM (OWTS) ARE SHOWN, UNLESS OTHERWISE NOTED ON SITE PLAN.
 - THERE ARE NO PUBLIC SEWERS AVAILABLE TO THE PROPERTY WITHIN 200 FEET UNLESS NOTED ON SITE PLAN.
 - ALL EXISTING AND PROPOSED PRIVATE DRINKING WATER WELLS, 4'OR THERE RADI, ARE SHOWN WITHIN 200' OF THE PROPOSED OWTS COMPONENTS SHOWN ON THIS PLAN.
 - ALL EXISTING AND PROPOSED WELLS SERVING NON-POTABLE USES WITHIN 100 FEET OF THE OWTS ARE SHOWN, UNLESS OTHERWISE NOTED ON THE SITE PLAN.
 - ALL EXISTING AND PROPOSED PUBLIC DRINKING WATER WELLS WITHIN 500 FEET OF THE PROPOSED OWTS ARE SHOWN, UNLESS OTHERWISE NOTED ON THE SITE PLAN. THE CONSTRUCTION DETERMINATION OF SAID WELLS IS IDENTIFIED ON THE SITE PLAN, UNLESS OTHERWISE NOTED.
 - ALL WATERCOURSES, WETLANDS, AND DRAINS WITHIN 200 FEET OF THE PROPOSED OWTS ARE SHOWN, UNLESS OTHERWISE NOTED ON SITE PLAN.
 - ALL STORM AND SUBSURFACE DRAINS WITHIN 200 FEET OF THE PROPOSED OWTS ARE SHOWN, UNLESS OTHERWISE NOTED ON SITE PLAN. THE ULTIMATE DISCHARGE OF SAID DRAINS ARE IDENTIFIED ON THE SITE PLANS.
 - THE OWTS IS NOT LOCATED WITHIN THE WATERSHED OF A PUBLIC WATER SUPPLY OR OTHER CRITICAL RESOURCE AREA.
 - ALL EXISTING OWTS ON ADJUTING PROPERTIES WITHIN 200 FEET OF A PROPOSED WELL TO SERVICE THE SUBJECT PROPERTY ARE IDENTIFIED ON THE SITE PLAN, UNLESS OTHERWISE NOTED.
 - THE SUBJECT PROPERTY IS NOT LOCATED WITHIN AN IDENTIFIED FLOOD ZONE.
 - IF A PROPOSED WELL IS REQUIRED TO SERVICE THE WATER REQUIREMENTS FOR THE SUBJECT PROPERTY, SAID WELL 'DOES NOT' REQUIRE A VARIANCE FROM RIDEM'S RULES AND REGULATIONS GOVERNING THE DRILLING OF DRINKING WATER WELLS.
- OWTS DESIGN DATA:**
- DESIGN - 115 GALLONS PER BEDROOM - TOTAL DESIGN FLOW = 575 GPD
 - BASED ON THE SOIL EVALUATION, THE MOST RESTRICTIVE SOIL DESIGN CATEGORY IS 5 & 7.
 - THE SOIL APPLICATION RATE = 0.52 GAL/SQ FT/DAY
 - TOTAL REQUIRED LEACHING AREA = 1,105.77 SQUARE FEET
 - TOTAL PROVIDED LEACHING AREA = 1,176 SQUARE FEET
 - LEACHFIELD: 33' W X 34' L (42) ELJEN IN-DRAINS W/ 6" OF SAND UNDERNEATH.
- OWTS GENERAL CONSTRUCTION NOTES:**
- ALL PIPING SHALL BE 4" PVC SCH 40 OR EQUIVALENT, UNLESS OTHERWISE NOTED
 - ALL PIPE SLOPES SHALL BE A MINIMUM OF 1% AND A MAXIMUM OF 5%. REFER TO THE PROFILE
 - THE SEPTIC TANK SHALL BE A CONCRETE TANK WITH THE CAPACITY AS STATED ON THE SITE PLAN
 - THE SEPTIC TANK INLET SHALL EXTEND 1' BELOW THE FLOW LINE AND THE OUTLET TEE SHALL EXTEND 1/3 THE DEPTH BELOW THE FLOW LINE.
 - THE SEPTIC TANK SHALL BE FITTED WITH TWO ACCESS MANHOLE RISERS NOT LESS THAN 20"
 - THE D-BOX, IF REQUIRED, SHALL HAVE A MINIMUM OF 3 SQUARE FEET OF BOTTOM AREA AND BE CAPABLE OF CARRYING A MINIMUM 300 PSF LOAD WITH MINIMAL SIDEWALL DEFLECTION
 - LEACHFIELD STONE, IF USED, SHALL BE 3/4" TO 2" DOUBLE WASHED STONE, FREE OF ALL DEBRIS.
 - SURFACE GRADES WITHIN 10 FEET OF THE LEACHFIELD, THE SLOPE SHALL BE A MINIMUM OF 3% TO MATCH INTO EXISTING GRADES.
 - THE LEACHFIELD AND THE AREA WITHIN 10 FEET FOR THE LEACHFIELD SHALL BE STRIPPED OF ALL TREES, BRUSH, STUMPS AND BOULDERS. THE SIDES AND BOTTOM OF THE EXCAVATION SHALL NOT BE COMPACTED OR 'HEAVED' AND THE BOTTOM SHALL BE SCARIFIED PRIOR TO LEACHFIELD PLACEMENT TO A MINIMUM DEPTH OF 25.00±.
 - REFER TO THE SITE PLAN FOR LEACHFIELD STRIP REQUIREMENTS.
 - THE FINISH GRADE OVER THE SEPTIC TANK SHALL BE GRADED TO DIVERT SURFACE WATER RUNOFF AWAY FROM THE TANK.
 - IF A DRIVEWAY OR PAVEMENT IS TO BE LOCATED NEAR THE PROPOSED OWTS, A FENCE OR CURBING SHALL BE INSTALLED AROUND THE SYSTEM IN THE AREA OF THE PAVEMENT TO PREVENT VEHICULAR TRAFFIC FROM DRIVING ONTO THE SYSTEM.
 - CONTRACTOR TO OBSERVE & CONFIRM ALL EXISTING PLUMBING INSIDE THE DWELLING WILL BE TIED INTO THE PROPOSED SEPTIC TANK SHOWN ON THIS PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY WHERE ALL EXISTING PLUMBING EXISTS THE BUILDING(S), SHOWN ON THIS PLAN, PRIOR TO INSTALLING ANY OWTS COMPONENTS. NEW PLUMBING, INSIDE THE BUILDING(S) SHOWN ON THIS PLAN, MAY BE REQUIRED AS PART OF THIS OWTS INSTALLATION.
- 15. THIS PLAN CONFORMS TO A CLASS 'III' PROPERTY LINE & A CLASS 'III' TOPOGRAPHY AS ADOPTED BY THE RI BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS. THIS SURVEY IS NOT VALID FOR ANY OTHER PURPOSE, OTHER THAN SHOWN ON THIS PLAN, WITHOUT WRITTEN CONSENT.**
- 16. GENERAL OWNER NOTES:**
- POOD/GARAGE GRINDERS INSIDE DWELLING AND DISPOSAL OF GREASES, OILS, AND OR FATS ARE PROHIBITED.
 - VEHICLE PARKING OR TRAFFIC OVER THE OWTS COMPONENTS IS PROHIBITED.
 - BACKWASH WATER FROM A WATER TREATMENT SYSTEM HAS NOT TAKEN INTO CONSIDERATION WITH THE DESIGN OF THIS OWTS. WATER TREATMENT SYSTEM DISCHARGE TO THIS OWTS IS PROHIBITED.
 - THE SEPTIC TANK SHALL BE PUMPED WHEN DEEMED NECESSARY BY OPERATIONS & MAINTENANCE PERSONNEL OR LICENSED SEPTIC INSPECTOR.
- 17. INSTALLER TO PROVIDE DESIGNER W/ ALL COPIES OF MATERIALS PURCHASED & USED ON INSTALLING THIS OWTS PRIOR TO ISSUANCE OF CERTIFICATE OF CONSTRUCTION.**
- 18. THERE ARE NO EXISTING OR PROPOSED SUBSURFACE OR FOUNDATION DRAINS WITHIN 25' OF THE PROPOSED OWTS COMPONENTS SHOWN ON THIS PLAN.**
- 19. REFERENCE RIDEM WETLANDS APP.# 21-0027 FOR ALL WETLANDS & STREAM LOCATIONS SHOWN ON THIS PLAN.**
- 20. REFERENCE PLAN ENTITLED 'PRELIMINARY MINOR SUBDIVISION OF LOT 194-2, ASSESSOR'S PLAT 8 LOCATED ON PILOT HILL ROAD IN THE TOWN OF NEW SHOREHAM, RI OWNED BY MARGARET MILLIKIN TRUST BY HILBERN LAND SURVEYING, SCALE: 1"=50', REVISED 5/21/21' FOR ALL PROPERTY LINE DATA SHOWN ON THIS PLAN.**



TYPICAL CROSS-SECTION THRU ELJEN IN-DRAINS
NOT TO SCALE



TYPICAL PROFILE OF SYSTEM
N.T.S.



SILT FENCE DETAIL
N.T.S.

ONSITE WASTEWATER TREATMENT SYSTEM NEW DESIGN

A.P. 8, LOT 194-3
PILOT HILL ROAD
NEW SHOREHAM, RHODE ISLAND
Prepared For: CHARLIE MILLIKIN

Environmental Management
615 - 4-1212
Office of Wetland Resources

MARCUS CHANNING
No. 1971
PROFESSIONAL LAND SURVEYOR

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SHEET 1
OF 2 SHEETS 2

JOB NO. MILLIKIN
DWG. NO. MILLIKIN-OWTS