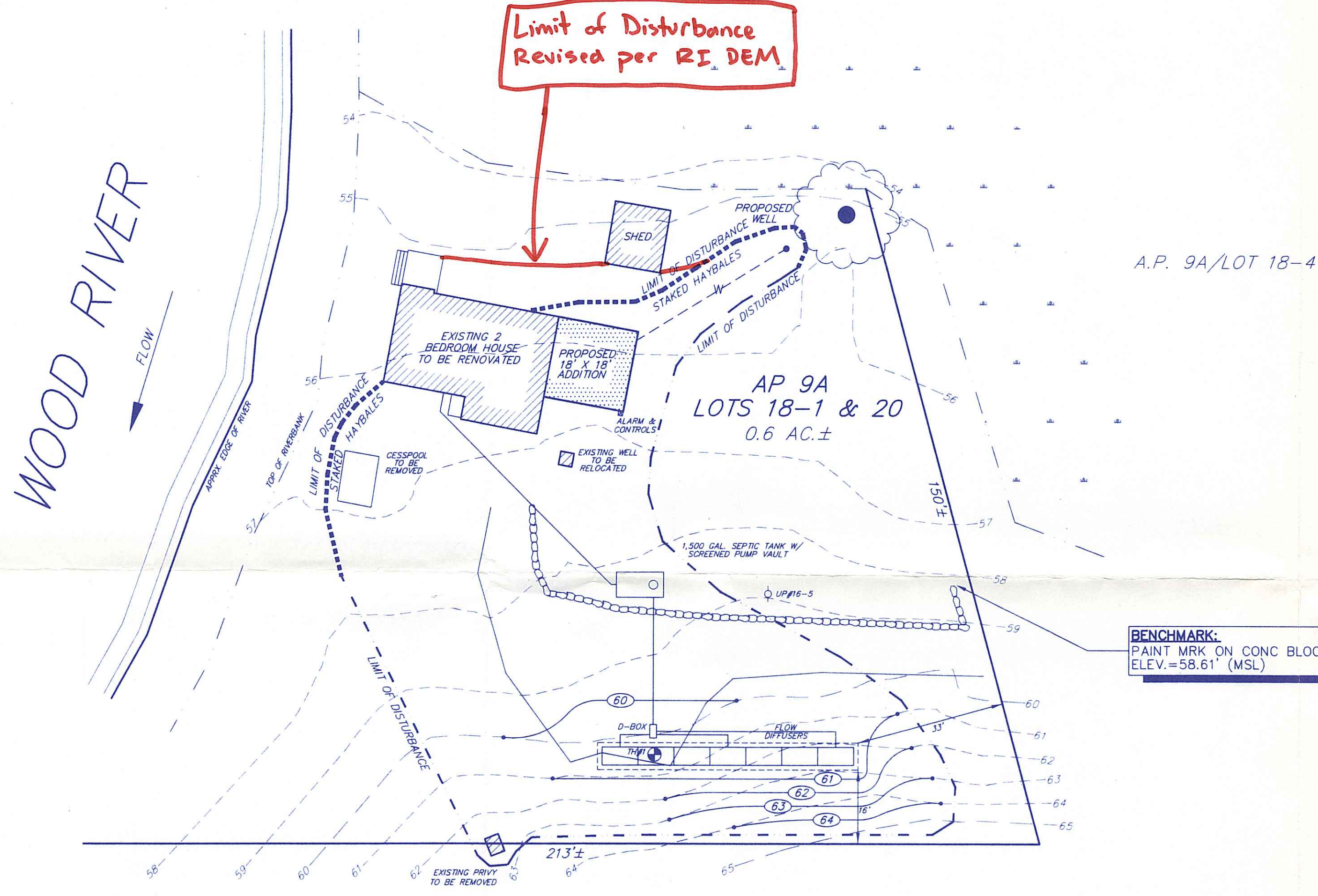


LOCATION MAP  
(Not To Scale)



Limit of Disturbance  
Revised per R.I. DEM

A.P. 9A/LOT 18-4

AP 9A  
LOTS 18-1 & 20  
0.6 AC.±

BENCHMARK:  
PAINT MKR ON CONC BLOCK  
ELEV. = 58.61' (MSL)

NOTE:  
100 YEAR FLOODPLAIN  
ELEV. = 54 M.S.L.

PLAN VIEW OF SYSTEM

SCALE: 1" = 20'



ZONING CLASSIFICATION = R-3 (SUBSTANDARD LOT OF RECORD)  
SETBACKS: FRONT- 50' SIDE- 35' REAR- 100'

LEGEND:		PERCOLATION TEST DATA				SOIL TEST DATA			
40	PROP. CONTOUR	PERC NO.	DATE	DEPTH	ELEV.	RATE	DEEP TEST PIT NO. 1	11/19/08	DEEP TEST PIT NO.
40.5	PROP. FIN. GRADE						SURFACE ELEVATION = 60.5'		SURFACE ELEVATION =
40	EXIST. CONTOUR						DEPTH/SOIL		SOIL DESCRIPTION
40x8	EXIST. SPOT GRADE								SOIL DESCRIPTION
⊙	VERIFIED TEST HOLE	DESIGN PERCOLATION RATE: 20 MPI				SEE ATTACHED SOIL EVALUATION			
⊙	PERCOLATION TEST	SOIL CATEGORY: 1, 3 & 7							
---	PROPERTY LINE	GROUND WATER @ DEPTH OF 72"				GROUND WATER @ DEPTH OF			
---	WATER SERVICE	ELEV. = 54.5' VERIFIED WT-0829-1476				ELEVATION = VERIFIED WT=			
---	STORM DRAIN								

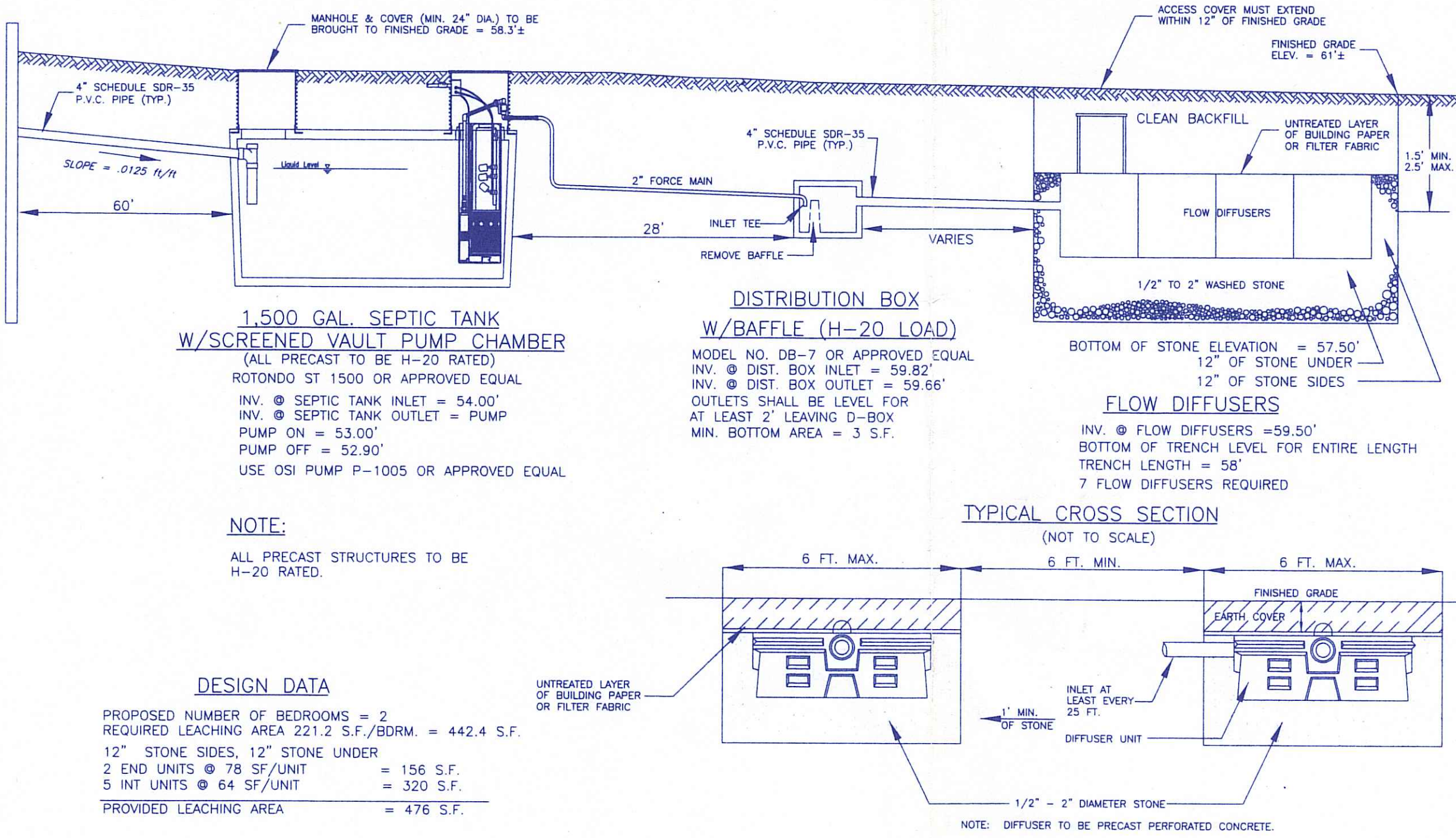
MAPPING NOTE:

THIS SURVEY AND PLAN CONFORM TO A CLASS III STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.

EXISTING FIRST FLOOR = 58.5'  
INV. OF PIPE AT BLDG. = 54.75'  
BASEMENT FLOOR = N/A

PROFILE OF SYSTEM

(NOT TO SCALE)



1,500 GAL. SEPTIC TANK  
W/SCREENED VAULT PUMP CHAMBER  
(ALL PRECAST TO BE H-20 RATED)  
ROTONDO ST 1500 OR APPROVED EQUAL  
INV. @ SEPTIC TANK INLET = 54.00'  
INV. @ SEPTIC TANK OUTLET = PUMP  
PUMP ON = 53.00'  
PUMP OFF = 52.90'  
USE OSI PUMP P-1005 OR APPROVED EQUAL

NOTE:

ALL PRECAST STRUCTURES TO BE H-20 RATED.

DESIGN DATA

PROPOSED NUMBER OF BEDROOMS = 2  
REQUIRED LEACHING AREA 221.2 S.F./BDORM = 442.4 S.F.  
12" STONE SIDES, 12" STONE UNDER  
2 END UNITS @ 78 SF/UNIT = 156 S.F.  
5 INT UNITS @ 64 SF/UNIT = 320 S.F.  
PROVIDED LEACHING AREA = 476 S.F.

LICENSED DESIGNER SYSTEM REQUIREMENTS

NOTICE TO OWNER & INSTALLER - THE EXACT LOCATION OF THE PROPOSED LEACHING SYSTEM SHALL BE FIELD STAKED BY THE LICENSED DESIGNER AS PART OF HIS CONSTRUCTION OBSERVATION CONTRACT WITH THE OWNER. A 72 HOUR NOTICE IS HEREBY REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION. A PRE-CONSTRUCTION MEETING BETWEEN THE LICENSED DESIGNER & LICENSED INSTALLER AT THE SITE IS REQUIRED FOLLOWING THE FIELD STAKING OF THE LEACHING SYSTEM.

- THE LICENSED DESIGNER SHALL BE RESPONSIBLE FOR WITNESSING AND INSPECTING THE INSTALLATION OF ANY OWTS WHICH HE/SHE DESIGNED. IN NO CASE SHALL THE PERSON WITNESSING AND INSPECTING THE INSTALLATION OF THE OWTS BE THE LICENSED INSTALLER WHO INSTALLS THE SYSTEM, EXCEPT FOR THE REPAIR OF AN EXISTING OWTS. ANY PERSON ASSISTING A LICENSED DESIGNER IN WITNESSING AND OBSERVING THE INSTALLATION OF AN OWTS MUST BE AN EMPLOYEE OF THE SAME BUSINESS ENTITY AS THE LICENSED DESIGNER, AND SUCH PERSON MUST WORK UNDER THE LICENSED DESIGNER'S DIRECT SUPERVISION IN RESPECT TO WITNESSING AND INSPECTING THE INSTALLATION OF THE OWTS.
- PRIOR TO INSTALLATION OF AN OWTS IN AREAS SERVED BY PRIVATE WELLS, THE DESIGNER MUST VERIFY THAT CONDITIONS ON SITE AND ADJACENT TO THE SITE ARE THE SAME AS AT THE TIME OF DESIGN APPROVAL, OR HAVE NOT CHANGED IN A MANNER THAT WOULD AFFECT THE ORIGINAL DESIGN. IF CONDITIONS HAVE CHANGED IN A MANNER THAT WOULD AFFECT THE ORIGINAL DESIGN, THE DESIGNER SHALL NOTIFY THE DEPARTMENT PRIOR TO INSTALLATION.
- THE INSTALLER SHALL NOTIFY THE DESIGNER DURING NORMAL BUSINESS HOURS AT LEAST 72 HOURS PRIOR TO THE PLANNED INSTALLATION OF ANY OWTS. THE DEPARTMENT, AT ITS DISCRETION, MAY INSPECT ANY ASPECT OF THE INSTALLATION OF THE SYSTEM.
- THE DESIGNER MUST AT A MINIMUM, INSPECT AND MAKE MEASUREMENTS, WHERE APPROPRIATE, OF THE FOLLOWING COMPONENTS AND STEPS IN THE INSTALLATION OF THE OWTS:
  - THE EXPOSED BOTTOM OF THE EXCAVATION FOR THE LEACH FIELD;
  - THE SIZE AND CONDITION OF ALL STRUCTURES SUCH AS THE SEPTIC TANK, D-BOX, GALLEYS, FLOW DIFFUSERS, ETC.;
  - THE ELEVATIONS OF ALL PIPE INVERTS;
  - ALL SAND MEDIA AND AGGREGATE IS IN ACCORDANCE WITH SPECIFICATIONS AND IS PLACED IN ACCORDANCE WITH THE DESIGN PLAN;
  - COMPLETED INSTALLATION PRIOR TO COVERING;
  - THE TYPE OF BACKFILL AND THAT THE BACKFILL IS PROPERLY PLACED AND COMPACTED;
  - FINAL SOIL COVER INCLUDING 10 FT PERIMETER; AND
  - ALL HORIZONTAL SET-BACKS, INCLUDING FROM THE BUILDING AND ANY WELLS ON-SITE OR ON ADJUTING LOTS.
- IF CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION WHICH INDICATE THAT THE SYSTEM CANNOT BE INSTALLED OR IS NOT INSTALLED IN ACCORDANCE WITH THE PERMIT, OR ANY TERMS AND CONDITIONS CONTAINED THEREIN, THE DESIGNER SHALL NOTIFY THE DIRECTOR AS SOON AS POSSIBLE, BUT NO LATER THAN 24 HOURS AFTER DISCOVERY. THE DEPARTMENT SHALL ISSUE WRITTEN GUIDANCE ON SPECIFICATIONS FOR CONSTRUCTION TOLERANCES AS WELL AS CONDITIONS UNDER WHICH AS-BUILT PLANS AND REDESIGNED PLANS ARE REQUIRED. THE INSTALLER SHALL STOP CONSTRUCTION IF CONDITIONS ARE SUCH THAT A REDESIGN IS REQUIRED. NOTIFICATION IS NOT REQUIRED IF ALL DESIGN ELEMENTS ARE WITHIN THE TOLERANCES ESTABLISHED BY THE DEPARTMENT THROUGH WRITTEN GUIDANCE. IN RESPONSE TO THE DESIGNER'S NOTIFICATION, THE DIRECTOR SHALL EITHER:
  - AUTHORIZE THE INSTALLER TO PROCEED WITH THE WORK ON-SITE AND REQUIRE THE DESIGNER TO PROVIDE APPROPRIATE DOCUMENTATION TO THE DEPARTMENT AS MAY BE REQUIRED BY THE DIRECTOR;
  - REQUIRE THE DESIGNER TO SUBMIT AS-BUILT PLANS WITHIN 10 BUSINESS DAYS AFTER THE OWTS IS INSTALLED TO RECORD CHANGES THAT ARE IN COMPLIANCE WITH THE STANDARDS IN THESE REGULATIONS, BUT WHICH NEED TO BE DOCUMENTED; OR
  - REQUIRE THE DESIGNER TO SUBMIT REDESIGNED PLANS AND SPECIFICATIONS TO THE DIRECTOR FOR APPROVAL SHOWING CHANGES FROM THE ORIGINAL APPROVED APPLICATION, PLAN AND SPECIFICATIONS.
- THE LICENSED DESIGNER SHALL PROVIDE:
  - DAILY INSPECTION REPORT (WEATHER CONDITIONS, PERSONS ON-SITE, WORK ACCOMPLISHED AND OTHER INFORMATION CUSTOMARILY INCLUDED IN INSPECTION REPORTS);
  - A MINIMUM OF TWO PHOTOGRAPHS OF THE SYSTEM BEING INSTALLED;
- THE INSTALLER SHALL PROVIDE THE LICENSED DESIGNER THE INFORMATION BELOW THAT CAN BE USED TO VERIFY THAT THE INSTALLATION OF THE OWTS WAS PERFORMED AS SPECIFIED:
  - LIST OF ALL MATERIALS USED, THEIR SOURCE, AND THE DATES DELIVERED TO THE SITE; AND
  - PRODUCT SPECIFICATION SHEETS, IF DIFFERENT FROM THOSE SPECIFIED IN THE APPROVED DESIGN.
- CERTIFICATE OF CONSTRUCTION
  - THE DESIGNER THAT IS RESPONSIBLE FOR THE SYSTEM INSTALLATION IN ACCORDANCE WITH RULE 44 SHALL COMPLETE A CERTIFICATE OF CONSTRUCTION THAT CERTIFIES THAT THE ISDS WAS INSTALLED IN CONFORMANCE WITH THE APPROVED APPLICATION, PLANS, SPECIFICATIONS, APPLICABLE STATUTES AND REGULATIONS AND THAT HE OR SHE IS RESPONSIBLE FOR HAVING OBSERVED THE INSTALLATION. THE CERTIFICATE OF CONSTRUCTION SHALL BE ON FORMS PROVIDED BY THE DIRECTOR.
  - THE CERTIFICATE OF CONSTRUCTION SHALL BE SUBMITTED TO THE DIRECTOR WITHIN FIVE BUSINESS DAYS AFTER THE OWTS, BUILDING FOUNDATION, DRINKING WATER WELL AND OTHER APPURTENANCES, AS MAY BE SPECIFIED IN WRITTEN DEPARTMENT GUIDANCE HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE DESIGN PLAN. THE DESIGNER SHALL PROVIDE A COPY OF THE CERTIFICATE OF CONSTRUCTION TO THE PROPERTY OWNER.
  - IN ADDITION TO THE CERTIFICATION IN RULE 44 ABOVE, THE CERTIFICATE OF CONSTRUCTION SHALL BE LIMITED TO, BUT NOT BE LIMITED TO, THE FOLLOWING:
    - NAME AND LICENSE NUMBER OF THE DESIGNER;
    - NAME AND LICENSE NUMBER OF THE INSTALLER;
    - DISTANCES FROM TWO BUILDING FOUNDATION CORNERS TO THE SEPTIC TANK MANHOLE, TO THE DISTRIBUTION BOX, AND TO THE LEACH FIELD CORNERS.
- ONCE THE DESIGNER HAS CERTIFIED THAT THE OWTS HAS BEEN PROPERLY INSTALLED, THE DESIGNER SHALL PROVIDE INFORMATION AND RECOMMENDATIONS TO THE OWNER OF THE OWTS ON SYSTEM SPECIFIC OPERATION AND MAINTENANCE PRACTICES TO PREVENT AGAINST PREMATURE SYSTEM FAILURE AND POLLUTION OF THE WATERS OF THE STATE.
- THE DESIGNER IS NOT RESPONSIBLE FOR ANY NEGLIGENT ACT OR OMISSION OF A USER OF AN OWTS, INCLUDING BUT NOT LIMITED TO, FAILURE TO PROPERLY USE AND MAINTAIN THE SYSTEM, WHICH CAUSES DAMAGE TO THE ISDS.

GENERAL NOTES

(ONLY CIRCLED NOTES APPLY)

- ALL OTHER DESIGN, CONSTRUCTION AND MAINTENANCE REQUIREMENTS WHETHER NOTED HEREON OR NOT, SHALL BE IN CONFORMANCE WITH RULES & REGULATIONS ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF INDIVIDUAL SEWAGE DISPOSAL SYSTEMS, JANUARY 1, 2008 BY R.I. DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, AUTHORITY: CHAPTER 42-35 PURSUANT TO CHAPTERS 42-17.1, 23-19.5 & 5-56.1 OF THE RHODE ISLAND GENERAL LAWS OF 1956, AS AMENDED.
- MAINTAIN INVERT ELEVATION 59.50' FOR 10' AROUND SYSTEM.
- THE DISTRIBUTION BOX SHALL HAVE A BOTTOM AREA OF 3 S.F. AND BE H-20 LOAD.
- ALL TREES, BRUSH AND STUMPS WITHIN 10 FEET OF LEACH FIELD TO BE REMOVED.
- THERE SHALL BE NO SUBSURFACE FOUNDATION OR STORM DRAINS LOCATED 25' UPGRADIENT OR 50' DOWNGRADIENT OF THE OWTS.
- COMPLY WITH ANY ADDITIONAL TERMS OF APPROVAL AS MAY BE REQUIRED BY R.I.D.E.M.
- SCHEDULE 35-SDR P.V.C. PIPE OR EQUAL FOR ALL OWTS PIPING.
- THE LEACH FIELD AND EXTENDING 0 FEET INTO THE LEACH FIELD PERIMETER FROM THE TRENCH SIDE WALLS MUST BE STRIPPED OF TREES, BRUSH, TOPSOIL, SUBSOIL, UNDESIRABLE MATERIAL AND SOIL CONTAINING FINES AND THE EXCAVATION SCARPED AND BACKFILLED WITH CLEAN, COARSE GRAVEL (RULE 32.12) (THE LEACH FIELD SHALL BE THE HORIZONTAL AND VERTICAL LINES CIRCUMSCRIBING THE OUTERMOST EDGES INCLUDING THE AREA BETWEEN THE CHAMBERS OR TRENCHES AND THE DEPTH TO THE BOTTOM OF STONE.)
- BENCHMARK TO BE SET WITHIN 100' OF PROPOSED OWTS LOCATION PRIOR TO CONSTRUCTION.
- THERE ARE NO WELLS WITHIN 200' OF THE PROPOSED OWTS NOR ARE THERE ANY OTHER OWTS WITHIN 100' OF THE PROPOSED WELL, EXCEPT AS NOTED.
- ALL PIPING TO CONSIST OF POLYVINYL CHLORIDE PIPE (P.V.C.) SCHEDULE 35-SDR, UNLESS OTHERWISE NOTED.
- HEAVY MACHINERY SHALL NOT BE PERMITTED TO PASS OVER THE LEACH FIELD.
- FOR PROPER PERFORMANCE, THE SEPTIC TANK SHOULD BE INSPECTED AT LEAST ONCE A YEAR AND WHEN TOTAL DEPTH OF SCUM AND SOLIDS EXCEED 1/3 THE LIQUID DEPTH OF THE TANK, THE TANK SHOULD BE PUMPED.
- THE DESIGNER WILL NOT BE RESPONSIBLE FOR THE PERFORMANCE OF THIS SYSTEM UNLESS CONSTRUCTED AS SHOWN. ANY OTHER ALTERATIONS MUST BE APPROVED BY THE DESIGNER.
- PROPERTY LINES: UNLESS OTHERWISE INDICATED THE PROPERTY LINES SHOWN HEREON ARE APPROXIMATE ONLY. THEY HAVE BEEN DEVELOPED FROM TAX MAPS, PLATS, RECORD AND OTHER SOURCES OF INFORMATION. THESE REPRESENTATIONS ARE NOT TO BE CONSIDERED AS AN ACCURATE BOUNDARY SURVEY AND ARE SUBJECT TO CHANGES THAT AN ACCURATE SURVEY MAY DISCLOSE.
- THERE ARE NO PUBLIC WELLS WITHIN 500' OF THE PROPOSED OWTS, EXCEPT AS SHOWN.
- THERE ARE NO COASTAL PONDS OR TRIBUTARIES THERETO INCLUDING STORM AND SUBSURFACE DRAINS DIRECTLY DISCHARGING THERETO WITHIN 200' OF PROPOSED OWTS, EXCEPT AS SHOWN.
- SUBJECT PARCEL IS SITUATED IN THE COASTAL POND CRITICAL RESOURCE AREA.
- REPLUMB EXISTING STRUCTURE AS NECESSARY TO MATCH THE INVERTS OF THE PROPOSED OWTS.
- ANY FILL ENCOUNTERED IN THE AREA OF THE PROPOSED LEACHING SHALL BE REMOVED AND REPLACED WITH BANK RUN GRAVEL MEETING RULE 32.12.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED FEB 23 2009 FILE # 08-0380  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
Nancy L. Freeman

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

PROPOSED ONSITE WASTEWATER TREATMENT SYSTEM  
DESIGNED FOR A 2 BEDROOM DWELLING  
@ A.P. 9A/LOTS 18-1 & 20  
SITUATED IN THE TOWN OF RICHMOND, R.I.  
APPLICANT:  
RAYMOND B. MARR  
751 MAIN STREET  
PAWTUCKET, RI 02860



NO.	REVISION	DATE

WILLIAM D. DOWDELL  
No. 4217  
REGISTERED PROFESSIONAL ENGINEER

**DOWDELL**  
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CIVIL & ENVIRONMENTAL ENGINEERS  
SURVEYORS & LAND PLANNERS  
P.O. BOX 1984 • 39145 OLD POST ROAD  
CHARLESTOWN, RHODE ISLAND 02813  
(401) 364-1027

JOB NO. 2629	DRAWN BY: R.L.C.
DWG. NO. 2629-OWTS	CHECKED: W.D.D.
SCALE: 1"=20'	APPROVED: W.D.D.
SHEET: 1	DATE: DEC. 11, 2008
1 OF 1 SHEETS	