

**Plan of Land**  
 SCALE: 1"=20'  
 MAP NO.: 7  
 PARCEL NO.: 119  
 AREA: 27,959 S.F.

**VARIANCE REQUEST FROM OAK BLUFFS ZONING BY-LAWS**  
 SECTION XVIII(A)(7)(D): TO REDUCE THE REQUIRED DISTANCE FROM THE PROPOSED SANITARY DISPOSAL FACILITY TO SEVERAL NEIGHBORING SANITARY DISPOSAL FACILITIES FROM 300' DOWN TO 74' (NEAREST) (ASSESSOR PARCEL 7-119.2).

**Legend**

- 100 — EXISTING CONTOUR
- 100+0 EXISTING SPOT ELEVATION
- 100 — PROPOSED CONTOUR
- TH1 PERCOLATION TEST
- X SEWAGE LINE
- W — WATER LINE
- — APPROXIMATE PROPERTY LINE
- O.W. — U.E. — OVERHEAD WIRE OR UNDERGROUND ELECTRIC

- Notes**
- GENERAL NOTES:**
- THIS PLAN IS TO BE USED ONLY FOR THE PERMITTING AND INSTALLATION OF A SEWAGE DISPOSAL SYSTEM. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.
  - NO CHANGES TO THIS PLAN ARE PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL OF SOURATI ENGINEERING GROUP, LLC.
  - INSTALLATION SHALL BE IN STRICT CONFORMITY WITH TITLE 5 OF THE MASSACHUSETTS STATE SANITARY CODE AND THE RULES & REGULATIONS OF THE TOWN OF OAK BLUFFS BOARD OF HEALTH.
  - MACHINERY THAT MAY DISTURB PIPE ALIGNMENT IN THE DISPOSAL SYSTEM SHALL NOT BE USED ON THE DISPOSAL AREA.
  - NO EXISTING WELLS WERE FOUND WITHIN 100' FROM THE PROPOSED SOIL ABSORPTION SYSTEM, OR WITHIN 50' FROM THE SEPTIC TANK.
  - FINISHED SURFACE OF LEACHING AREA SHALL BE GRADED TO INSURE RUNOFF (2% MINIMUM SLOPE).
  - THE SEPTIC TANK AND THE DISTRIBUTION BOX SHALL BE EITHER:
    - A WATER TIGHT ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND WARRANTY, OR
    - MADE WATER TIGHT BY THE MANUFACTURER, EQUIPMENT SUPPLIER OR INSTALLER, USING ASPHALT OR SYNTHETIC POLYMER SEALER SPECIFIED BY THE CONCRETE OR SYNTHETIC MATERIAL MANUFACTURER.
  - SEPTIC TANKS AND DISTRIBUTION BOXES SHALL BE LEVEL AND TRUE TO GRADE ON A LEVEL STABLE BASE THAT HAS BEEN MECHANICALLY COMPACTED AND ONTO WHICH 6 INCHES OF CRUSHED STONE HAVE BEEN PLACED TO MINIMIZE UNEVEN SETTLING.
  - ALL SYSTEM COMPONENTS SHALL BE CONSTRUCTED OF CORROSION RESISTANT MATERIALS.
  - ALL PIPING SHALL BE A MINIMUM OF SCHEDULE 40 PVC UNLESS OTHERWISE NOTED.
  - DISTRIBUTION BOX OUTLET LINES SHALL BE LEVEL FOR A MINIMUM OF THE FIRST TWO FEET OF THEIR LENGTH.

**SOILS LOG**

TEST HOLE #1 DATE: 2/25/2020 ELEV. + 10.2

DEPTH	HORIZON	TEXTURE
00-05"	A	LOAMY SAND
05-26"	B	LOAMY SAND
26-120"	C	LOAMY SAND

GROUND WATER SEEPING AT 10' BELOW GRADE, ESTIMATED HIGH GROUND WATER IS AT EL. 2.2

TEST HOLE #2 DATE: 2/25/2020 ELEV. + 10.0

DEPTH	HORIZON	TEXTURE
00-14"		FILL
14-72"		FILL
72-114"	C	LOAMY SAND

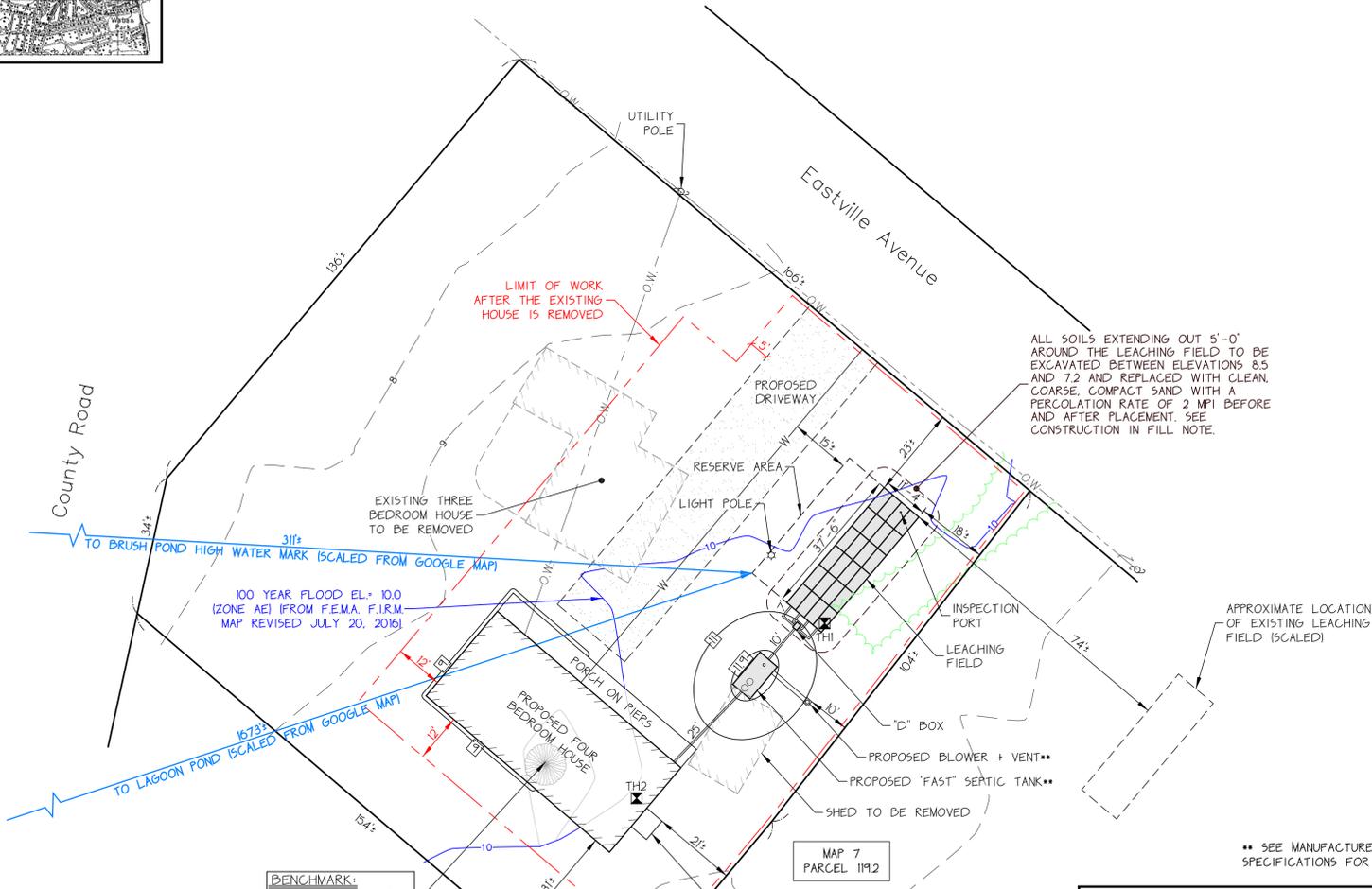
**CONSTRUCTION IN FILL:**

1. FILL MATERIAL FOR SYSTEMS CONSTRUCTED IN FILL SHALL CONSIST OF SELECT ON-SITE OR IMPORTED SOIL MATERIAL. THE FILL BE COMPRISED OF CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES, MIXTURES AND LAYERS OF DIFFERENT CLASSES OF SOIL SHALL NOT BE USED. THE FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN TWO INCHES. A SIEVE ANALYSIS USING A #4 SIEVE SHALL BE PERFORMED ON A REPRESENTATIVE SAMPLE OF THE FILL UP TO 45% BY WEIGHT OF THE FILL SAMPLE MAY BE RETAINED ON THE #4 SIEVE. SIEVE ANALYSIS ALSO SHALL BE PERFORMED ON THE FRACTION OF THE FILL SAMPLE PASSING THE #4 SIEVE. SUCH ANALYSES MUST DEMONSTRATE THAT THE MATERIAL MEETS EACH OF THE FOLLOWING SPECIFICATIONS:

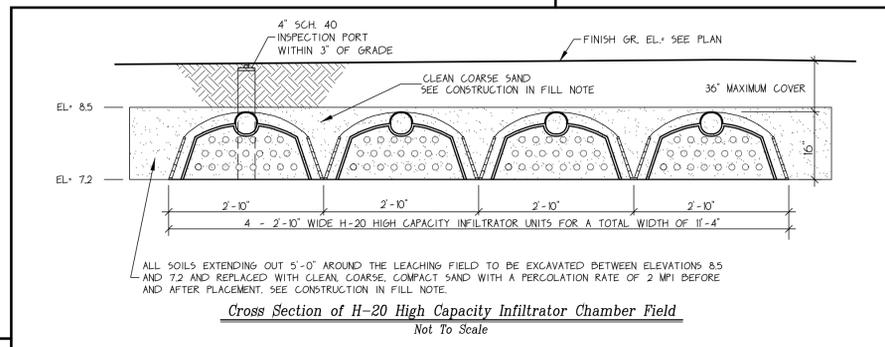
SIEVE SIZE	EFFECTIVE PARTICLE SIZE	% THAT MUST PASS-SIEVE
#4	4.75 MM	100 %
#50	0.30 MM	10 % - 100%
#100	0.15 MM	0 % - 20%
#200	0.075 MM	0 % - 5%

**HIGH CAPACITY INFILTRATOR CHAMBER SOIL ABSORPTION SYSTEM:**

1. THE INFILTRATORS SHALL BE INSTALLED IN STRICT CONFORMITY WITH THE MANUFACTURER SPECIFICATIONS.



- NOTES:**
- THE OWNER SHALL SUBMIT THE EXISTING HOUSE FLOOR PLANS TO THE OAK BLUFFS BOARD OF HEALTH FOR THEIR APPROVAL.
  - ALL UNDERGROUND UTILITIES, INCLUDING WATER, PHONE, AND ELECTRICAL LINES, MUST BE LOCATED BY THE CONTRACTOR AND DIG SAFE SYSTEM, INC. MUST BE CONTACTED AT 1-888-344-7233 PRIOR TO ANY EXCAVATION.
  - ENGINEER SHALL INSPECT BOTTOM OF EXCAVATION IN THE LEACHING FIELD PRIOR TO PLACEMENT OF ANY FILL.
  - THE ENTIRE LOT LIES WITHIN THE COASTAL DISTRICT (INLAND ZONE).
  - EXISTING SOIL ABSORPTION SYSTEM COULD NOT BE LOCATED, SEWAGE DISPOSAL SYSTEM INSTALLER SHALL LOCATE THE EXISTING SOIL ABSORPTION SYSTEM, PUMP DRY, CRUSH AND BACKFILL WITH CLEAN, COARSE, COMPACT SAND. SHOULD THE EXISTING SOIL ABSORPTION SYSTEM IS FOUND TO BE LOCATED WITHIN 5 FEET OF THE PROPOSED LEACHING FIELD, THE EXISTING SOIL ABSORPTION SYSTEM SHOULD BE PUMPED DRY, DUGOUT, REMOVED OFFSITE, AND BACKFILLED WITH CLEAN, COARSE, COMPACT SAND. SEE CONSTRUCTION IN FILL NOTE.
  - EXISTING WATER SERVICE COULD NOT BE LOCATED BY THE OAK BLUFFS WATER DISTRICT. EXISTING WATER SERVICE SHALL BE DISCONNECTED IN ACCORDANCE WITH THE OAK BLUFFS WATER DISTRICT REGULATIONS AND RELOCATED AS SHOWN ON THE PLAN AND APPROVED BY THE OAK BLUFFS WATER DISTRICT.



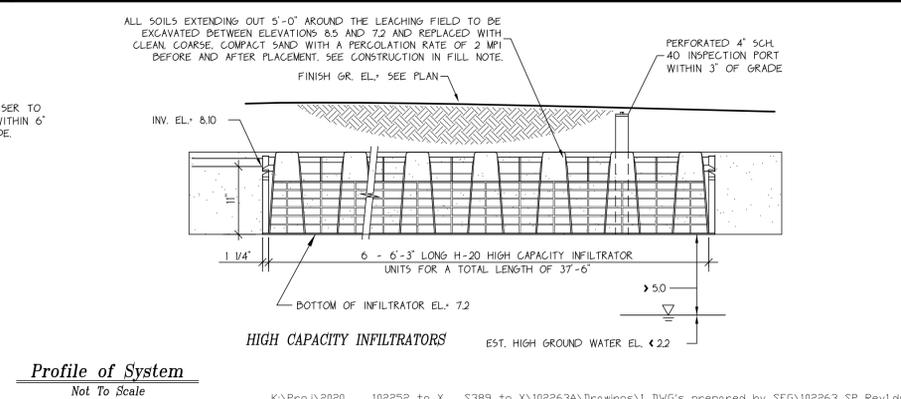
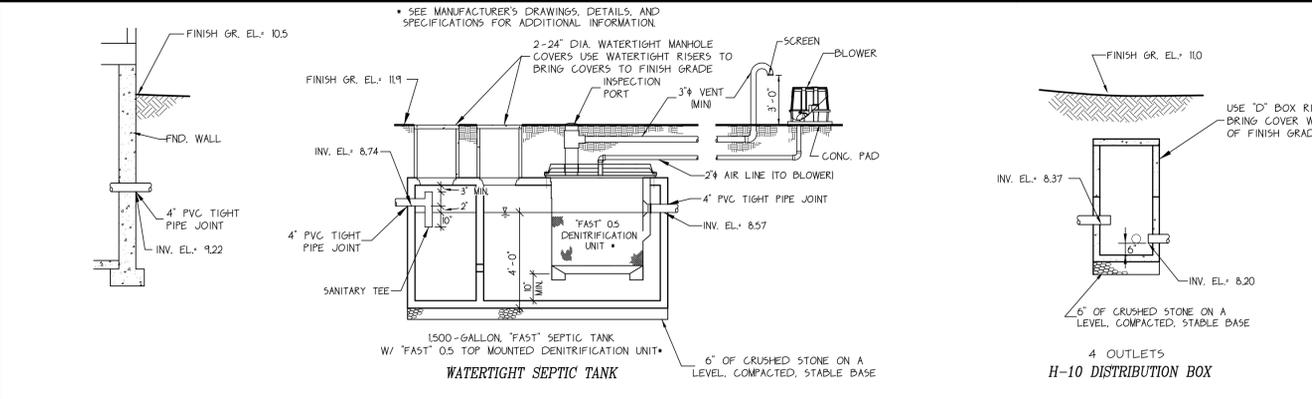
**Design Computations:**

**HYDRAULIC LOADING:**  
 4 BEDROOMS AT 110 GPD = 440 GPD  
 A GARBAGE DISPOSAL IS NOT ALLOWED IN THIS DESIGN.

**SEPTIC TANK SIZE:**  
 USE 1500-GALLON MICROFAST® SEPTIC TANK W/ 'FAST' 0.5 TOP MOUNTED DENITRIFICATION UNIT \*

**LEACHING CAPACITY:**  
 DESIGN PERCOLATION RATE 15.5 MIN/INCH SOIL TYPE: CLASS 1  
 EFFLUENT LOADING RATE 0.74 G/5F/D  
 USE 1 LEACHING FIELD WITH 24 CHAMBERS.

TOTAL AREA OF FIELD = 24 CHAMBERS X 6.25 L/F/CHAMBER X 4.73 S.F./L.F. = 709 S.F.  
 TOTAL LEACHING CAPACITY PROVIDED = 709 S.F. X 0.74 G/5F/D = 525 G/D.  
 TOTAL LEACHING CAPACITY PROVIDED = 525 G/D.  
 TOTAL HYDRAULIC LOADING REQUIRED = 440 G/D.



**New Sewage Disposal System**  
 In The Town Of  
**Oak Bluffs**

Site:  
 Proposed Four Bedroom House  
 Map 7, Parcel 119  
 52 Eastville Avenue

Owner:  
 Eulalie M. Lee  
 4560 Sentinel Post NW  
 Atlanta, GA 30327

Scale: As Shown Date: March 16, 2020  
 Job No.: 102263 Drawn By: H. Chen  
 Drawing No.: 102263SP Designed By: H. Chen  
 Sheet 1 of 1 Checked By: G. Sourati

Professional civil engineers  
**Sourati Engineering Group**  
 Professional Land Surveyors

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 107 Beach Road, Suite 202  
 Vineyard Haven, MA 02568  
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