



The State of New Hampshire
Department of Environmental Services



Robert R. Scott, Commissioner

APPLICATION FOR INDIVIDUAL SEWAGE DISPOSAL SYSTEM APPROVAL
OWNER CERTIFICATION

Application Work # 201903465

Document Prepared: 7/14/2019

Property Owner: TIMOTHY PROIA
301 CONCORD ROAD
BILLERICA MA 01821

Property Address: 20 TUCKAWAY SHORES ROAD
NOTTINGHAM, NH


THE STATEMENT BELOW MUST BE SIGNED AND DATED BY THE OWNERS

Pursuant to Env-Wq 1003.08, We certify that we are the present owners of the property referenced in this application and that we have seen the plans, and we hereby confirm that the plans are in accordance with our needs and desires. We fully understand that should this plan be approved, no waivers to the construction approval will be allowed and that any change(s) will require a new submission, review, and approval.

Pursuant to Env-Wq 1001.02, We the undersigned agree and consent to the following waiver requests for this application:

1. Rule Env-Wq 1021, Section: 04 Fill Extension; Side Slopes
2. Rule Env-Wq 1008, Section: 04 Minimum Distances
3. Rule Env-Wq 1008, Section: 04 Minimum Distances
4. Rule Env-Wq 1008, Section: 04 Minimum Distances
5. Rule Env-Wq 1008, Section: 04 Minimum Distances
6. Rule Env-Wq 1008, Section: 04 Minimum Distances
7. Rule Env-Wq 1008, Section: 04 Minimum Distances
8. Rule Env-Wq 1008, Section: 04 Minimum Distances
9. Rule Env-Wq 1008, Section: 04 Minimum Distances
10. Rule Env-Wq 1010, Section: 03 Watertightness of Septic Tanks
11. Rule Env-Wq 1010, Section: 06 Septic Tank Design Requirements
12. Rule Env-Wq 1010, Section: 08 Pipe to Tank Connections
13. Rule Env-Wq 1008, Section: 04 Minimum Distances
14. Rule Env-Wq 1021, Section: 04 Fill Extension; Side Slopes


Owner's Signature _____ Date 7/16/2019


Owner's Signature _____ Date 7/16/2019



Advanced Onsite Solutions LLC
PO Box 248
Canterbury, NH 03224
(603)-369-4777
Toll Free: (866) 900-2415
www.aosne.com

RESIDENTIAL INSPECTION AGREEMENT
July 14, 2019

PROPERTY OWNER:

Name: Timothy & Marjorie Proia
Address: 301 Concord Road
City, State, Zip: Billerica Ma 01821

PROPERTY INFORMATION:

Property ID: Tax Map 070 Lot 0048
Address: 20 Tuckaway Shores Road
City, State Zip: Nottingham, NH 03290
Waterbody: Pawtuckaway Lake

Peak Design Flow: 600 gpd (measured in gallons per day)
30-Day average Flow: 300 gpd

USE: Single Family 4-bedroom home

TCS Model No. 250ST-R4-H20

Influent Wastewater Strength: **Estimated** From Grab Sample
BOD₅ = <180 mg/l TSS = < 150mg/l OG= <15 mg

The following inspection and maintenance is required. It is the owner's responsibility to see that this maintenance is performed.

Residential Use (Single Family Home)

1. **State of New Hampshire -THE CLEAN SOLUTION** system shall be inspected every 2 years by a certified AOS Technician.
2. If the Septic System utilizes a pump between the BioCon chamber and the dispersal field, AOS requires either a) a separate pump chamber after the settling chamber (preferred), or b) installation of a Sim/Tech pressure filter or approved equivalent on the outlet side of the pump.
3. After the inspection, you may need to contact your septic pumper to pump out the septic and settling/pump tanks. Maximum time between pumping should not exceed 2 years. More frequent pumping may be required depending on system use and number of occupants. Owner must retain records of pumping.
4. Compressor must run continuously. It should be checked for operation at least once a month unless a compressor alarm has been installed. Compressor Air Filter to be cleaned or replaced yearly. If the Compressor is located in a dusty environment the filter will need to be cleaned more frequently



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5. Typical residential use requires the BioCon Chamber to be pumped and cleaned every 5 to 7 years.
6. Compressor may be disconnected for seasonal homes that have been winterized.
7. Leach fields are designed based on a peak design flow measured in gallons per day. Leach fields are not designed to be loaded at the peak design flow every day. The peak factor is typically twice the average household water consumption over a 30-day period. Leach fields that are loaded at the peak design flow on a daily basis may experience premature failure. It is important to repair leaking water fixtures promptly and to spread out laundry through the week rather than doing several loads in one day.

Additional Maintenance Suggestions:

There is ongoing concern that pharmaceuticals, medical treatments, and personal care products impact how a septic system functions. Studies have shown that these products can disrupt the balance of bacteria in the septic tank, reducing the septic tank's efficiency to break down waste.

The following is recommended:

1. The EPA suggests that unused pharmaceuticals, either prescription or over the counter medicines, not be disposed of in the septic system. Check with your local pharmacy to see if it has a program to dispose of unused medicines.
2. If a resident of the home is undergoing medical treatment with high strength antibiotics, the system should be inspected annually to determine the proper maintenance schedule.

If your system has a septic tank effluent filter or an effluent pump filter, the filters should be checked and cleaned annually. More frequent cleaning maybe required depending on use.

The inspection fee does not cover routine maintenance of the BioCon Chamber (pumping and cleaning) or replacement of components not covered under the warranty. See Sales Agreement for warranty information.

INSPECTION FEE SCHEDULE

New Hampshire - Single Family Residential Homes – The current fee is \$225.00 per inspection plus the cost of replacement parts not covered by warranty.

AOS may adjust the Inspection fees as needed to cover increase in cost of service and goods (i.e. Fuel).

Inspection fees are payable at time of service.

By signing below, the owner or owner's representative warrants that s/he has read and agrees to the terms of the SALES and INSPECTION AGREEMENTS, and agrees to perform the necessary inspections and maintenance outlined

Accepted by Signature:

Date:

Print Below:
Name:

Mailing Address:

City, State Zip:

Timothy J Proia
301 Concord Rd
Bellerica MA 01821

7/16/2019

**DAVID WHITNEY REV. TRUST
18 TUCKAWAY SHORE RIAD
NOTTINGHAM NH 03290**

July 14, 2019


RE: 20 TUCKAWAY SHORE ROAD

To whom it may concern;

Our property abuts the land owned by the Proia family at 20 Tuckaway Shores Road in Nottingham NH. We are aware the Proia family has had a replacement septic system design for their home completed and the proposed field will be approximately 3 feet from our common property. Also the proposed septic tank will be approximately 50 feet from our on-site well. The septic tank will also be waterproofed in accordance with current NHDES regulations.

We have no issue with these proposed waivers.

Thank you


July 16, 2019

NOTES:

- THE PURPOSE OF THIS PLAN
 - TO DESIGN A CONTINGENCY PLAN FOR THE EXISTING 4 BEDROOM YEAR ROUND DWELLING
 - SITE IS CURRENTLY SERVICED BY A DRY-WELL WHICH APPEARS TO BE FUNCTIONING PROPERLY
 - REPLACEMENT DESIGN WILL BE A CLEAN-SOLUTION SYSTEM WITH A PIPE & STONE FIELD
 - THE EXISTING DWELLING MEETS NHDES 1004.24
 - NEW DESIGN WILL NOT BE INSTALLED UNTIL THE EXISTING SYSTEM FAILS
- TOTAL PARCEL AREA= 20,045 SQ. FT. +/- (FROM DEED REFERENCE)
- PERMITS

PREVIOUS NHDES CONSTRUCTION APPROVAL:	PRE-1967
NHDES SUBDIVISION APPROVAL NUMBER:	PRE-1967
- THE MAJORITY OF THIS SITE LIES WITHIN THE 140 SCS SOILS GROUP AS SHOWN ON THE SCS SOILS MAPS FOR THE TOWN OF NOTTINGHAM, NEW HAMPSHIRE. 140 CHATFIELD HOLLIS CANTON COMPLEX
- SYSTEM LOADING CALCULATIONS:

TOTAL NUMBER OF EXISTING BEDROOMS	= 4
4 * 150 GPD/BDRM	= 600 GPD
PERCOLATION RATE:	= 3 MIN./INCH
NHDES MINIMUM LEACHING FIELD SIZE	= 1,000 SQ. FT.
MINIMUM CLEAN SOLUTION FIELD SIZE	= 100 SQ. FT.
- USE 10" X 10" PIPE & STONE SYSTEM FOR A TOTAL EFFECTIVE AREA OF 100 SQ. FT. DESIGN INTENT: BOTTOM OF THE PROPOSED LEACHING FIELD SHALL BE 3.8 FEET BELOW THE EXISTING GRADE ON THE UPHILL SIDE.
- SEPTIC TANK

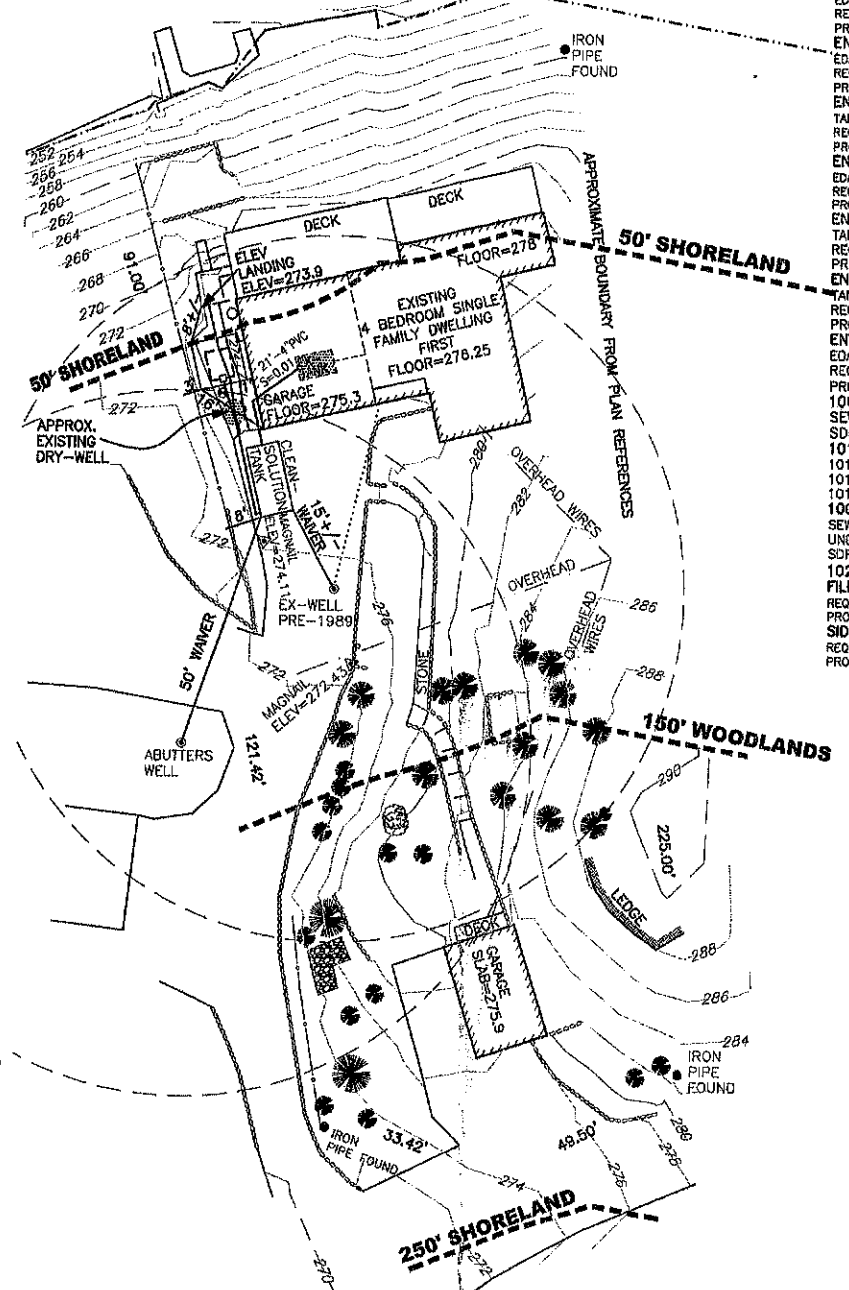
EXISTING 600 GALLON TANK IN GARAGE FLOOR TO REMAIN
ADD (1) CLEAN-SOLUTION 3-COMPARTMENT H-20 LAODING PRECAST CONCRETE SEPTIC TANK (1,500 GALLON/450 GALLON/600 GALLON) AS MANUFACTURED AND DISTRIBUTED LOCALLY BY PHEONIX PRECAST CONCRETE PRODUCTS CONCORD, NH FOR ADVANCED ON-SITE SOLUTIONS
NOTE: CLEAN-SOLUTION TANK MUST BE WATERPROOFED
- DISTRIBUTION BOX: USE (1) 3 OUTLET D-BOX AS MANUFACTURED AND DISTRIBUTED LOCALLY BY PHEONIX PRECAST CONCRETE, OR APPROVED EQUAL
- A WAIVER IS REQUESTED TO ALLOW THE REPLACEMENT SYSTEM TO BE WITHIN 75 FEET OF THE LAKE. OTHER GROUP B AND GROUP 5 SOILS ARE NO CLOSER THAN 75 FEET (PER ENV-WQ 1010.04) FROM THE PROPOSED SYSTEM.
- PIPES LEADING TO AND EXITING FROM THE EXISTING SEPTIC TANK, PUMP CHAMBER AND DISTRIBUTION BOX SHALL BE SEALED WITH AN APPROVED METHOD AS TO MAKE THE JOINTS WATER TIGHT IN ACCORDANCE WITH ENV-WQ 1010.08
- PRIOR TO THE START OF CONSTRUCTION ALL BENCHMARKS SHALL BE VERIFIED FOR ACCURACY.
- FOUNDATION DRAINS: NONE OBSERVED, NO FOUNDATION DRAINS SHALL BE INSTALLED WITHIN 15 FEET OF THE PROPOSED SEPTIC SYSTEM OR WITHIN 5 FEET OF THE PROPOSED SEPTIC TANK.
- NO GARBAGE DISPOSAL IS PROPOSED WITH THIS DESIGN. SHOULD THE PROPOSED HOMEOWNER CHOOSE TO ADD A GARBAGE DISPOSAL THEN THE DESIGN WILL NEED TO BE AMENDED TO INCREASE THE SEPTIC TANK CAPACITY BY 50%. (ENV-WQ 1010.01(C))
- NO SEWAGE GRINDER IS PROPOSED WITH THIS DESIGN. SHOULD THE HOMEOWNER CHOOSE TO ADD A SEWAGE GRINDER THEN THE TANK SIZE SHALL BE TWICE THE SIZE REQUIRED. THIS SHALL BE ACCOMPLISHED BY TANK DUPLICATION OR COMPARTMENTALIZATION. (ENV-WQ 1010.01(D))
- JOINTS ARE TO BE BELLED PVC OR STANDARD SLIP COLLARS.
- 2' OF COVER OVER THE FIELD SHALL BE PROVIDED WHERE MOTOR VEHICLE TRAFFIC WILL PASS OVER THE SEPTIC SYSTEM.
- FILL SHALL NOT BE OF SATURATED MATERIAL.
- ALL TREES, ROOTS, TOPSOIL AND ORGANIC MATERIAL MUST BE REMOVED FROM THE AREA TO BE FILLED OUT TO AND INCLUDING THE AREA UNDER THE IMPERMEABLE SOIL BARRIER. FILL MATERIAL TO BE OF CLEAN MEDIUM TO COURSE SAND, FREE OF TOPSOIL, HUMUS, DREDGINGS OR STONES OVER 6" IN DIAMETER.
- INSTALLER TO PROVIDE MEASURED TIES TO THE PROPERTY OWNER OF THE LOCATION OF THE SEPTIC TANK ACCESS COVERS.
- ANY DISCREPANCIES OR UNUSUAL CONDITIONS SHALL BE REPORTED TO THE DESIGNER BEFORE CONTINUING WITH THE INSTALLATION.
- INSTALLER TO CONTACT DIG-SAFE A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- WATER SOFTENERS, JACUZZI TUBS OR SIMILAR AMENITIES SHALL NOT BE DISCHARGED DIRECTLY INTO THE PROPOSED FIELD. IF SUCH AMENITIES ARE PROPOSED THEN THE CONTRACTOR SHALL NOTIFY THE DESIGNER AND AN ALTERNATIVE FOR THESE SERVICES WILL BE DEVISED AND INSTALLED.
- ELEVATIONS SHOWN ARE FROM THE LAKE LEVEL ELEVATION OBSERVED ON JULY 12, 2019

TEST PIT A
(CONDUCTED ON JUNE 25, 2019)

0'-4"	CRUSHED STONE
4'-60"	FILL MATERIAL (10 YR 4/8) DARK YELLOWISH BROWN LOAMY SAND, GRANULAR, FRIABLE
60'-96"	(10YR 5/4) YELLOWISH BROWN FINE SAND, GRANULAR, FRIABLE

ESHW: NONE OBSERVED
RESTRICTIVE LAYERS: NONE ENCOUNTERED
NO WATER OBSERVED @ 96"
NO LEDGE ENCOUNTERED @ 96"
PERC. RATE: 8 MIN./INCH

PAWTUCKAWAY LAKE



THIS PROPERTY LIES WITHIN THE NH SHORELAND PROTECTION ZONE (RSA 483-B). ALL WORK WITHIN THE PROTECTED SHORELAND SHALL CONFORM TO NHDES AND LOCAL REGULATIONS.

NHDES WAIVERS

ENV-WQ 1008 MINIMUM SETBACKS

EDA TO LOT LINE	10 FEET
REQUIRED	34 FEET
PROVIDED	
EDA TO GARAGE (SLAB)	10 FEET
REQUIRED	14 FEET
PROVIDED	
ENV-WQ 1008 MINIMUM SETBACKS	
TANK TO LOT LINE	10 FEET
REQUIRED	84 FEET
PROVIDED	
ENV-WQ 1008 MINIMUM SETBACKS	
EDA TO LAKE	75 FEET
REQUIRED	50 FEET
PROVIDED	
ENV-WQ 1008 MINIMUM SETBACKS	
TANK TO ON-SITE WELL	50 FEET
REQUIRED	15 FEET
PROVIDED	
ENV-WQ 1008 MINIMUM SETBACKS	
TANK TO ABUTTERS WELL	75 FEET
REQUIRED	50 FEET
PROVIDED	
ENV-WQ 1008 MINIMUM SETBACKS	
EDA TO ON-SITE WELL	75 FEET
REQUIRED	47 FEET +/-
PROVIDED	

1008.04 MINIMUM DISTANCES

SEWER LINE AT HOUSE TO TANK
SDR-26 OR EQUAL

1010 TANK REQUIREMENTS

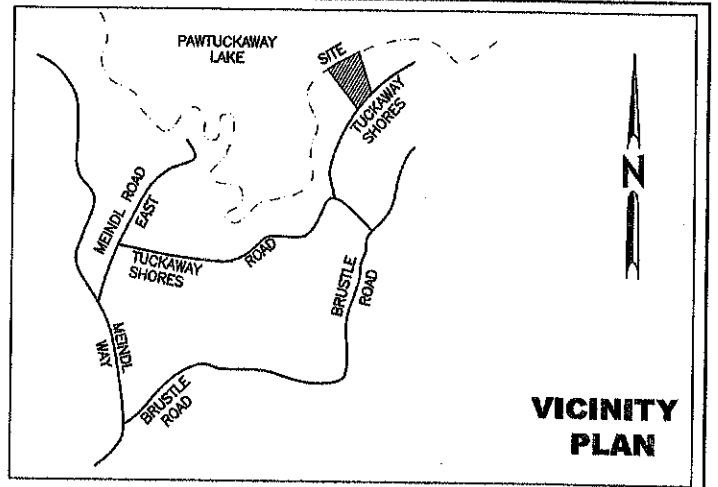
1010.03	WATER TIGHTNESS OF TANK
1010.08	TANK DESIGN REQUIREMENTS
1010.08	PIPE TO TANK CONNECTIONS

1008.04 MINIMUM DISTANCES

SEWER LINE AT HOUSE TO TANK AND UNDER GARAGE FLOOR
SDR-28 OR EQUAL

1021.04 SYSTEM SIDESLOPES/FILL EXTENTION

REQUIRED	3 FEET
PROVIDED	2 FEET
SIDESLOPES	
REQUIRED	3 TO 1
PROVIDED	1 TO 1



- ADVANCED ONSITE SOLUTIONS SYSTEM NOTES:**
- PROPERTY OWNER MUST EXECUTE A SALES AGREEMENT WITH WASTEWATER ALTERNATIVES, INC. (WAI) AT LEAST 2 WEEKS PRIOR TO INSTALLATION AND TO SET THE DATE OF DELIVERY FOR DELIVERY OF THE WAI TANK AND OTHER DESIGN INSTALLATION DETAILS.
 - PROPERTY OWNER MUST BE ABLE TO PROVIDE AT LEAST 2 CIRCUITS AVAILABLE FOR THE AOS
 - PROPERTY OWNER NEEDS TO BE AWARE THAT WITH THIS APPROVAL A SERVICE CONTRACT NEEDS TO BE EXECUTED WITH WAI AS PART OF THE SERVICE CONTRACT THE FOLLOWING MAINTENANCE IS REQUIRED FOR THE PROPER OPERATION OF THE WAI "CLEAN-SOLUTION" SYSTEM.
 - THE SETTLING AREA OF THE WAI SYSTEM AND THE SEPTIC TANK SHALL BE PUMPED OUT.
 - THE WAI COMPRESSOR SHALL BE REBUILT
 - AOS SHALL INSPECT AND TAKE CORRECTIVE ACTION AS NECESSARY
 - FOR ADDITIONAL INFORMATION CONTACT
(AOS) ADVANCED ONSITE SOLUTIONS
PO BOX 248
CANTERBURY, NH 03224
PHONE: (806) 900-2415
HTTP://WWW.AOSNE.COM
 - SHOULD THE PROPERTY BE SOLD, THE SALES AGREEMENT IS TO BE TRANSFERRED TO THE NEW BUYER AND WILL BECOME BINDING ON BOTH THE SELLER AND THE NEW OWNER(S). THE SALES AGREEMENT CONTAINS A MAINTENANCE SCHEDULE. FAILURE TO PERFORM THE REQUIRED MAINTENANCE COULD RESULT IN PREMATURE FAILURE OF THE DISPERSAL FIELD. IN THIS EVENT IT WILL BE THE OWNERS RESPONSIBILITY TO REPAIR THE FIELD.

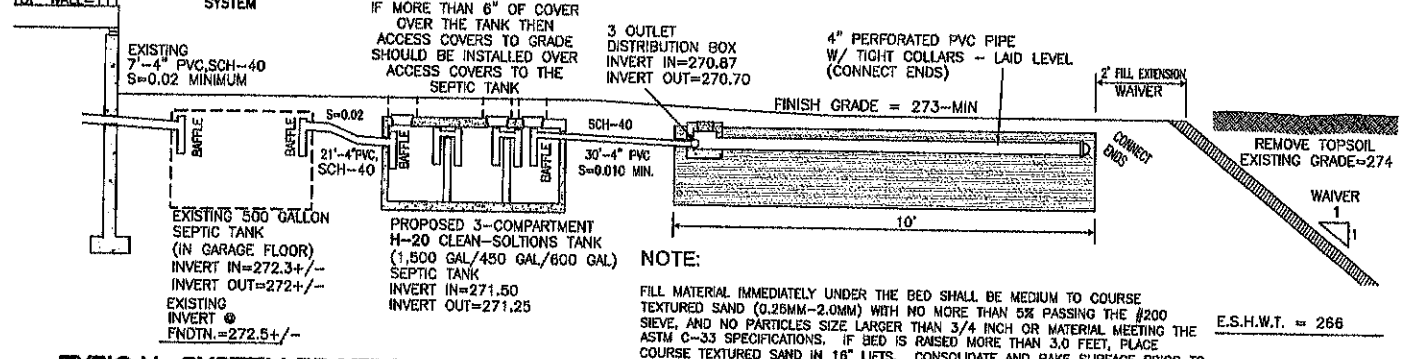
NOTE: PIPES UNDER DRIVEWAYS AND GARAGE FLOOR SHALL MEET ENV-WQ 1009 FOR PIPES UNDER WHEEL LOADS
PROPOSED CLEAN-SOLUTION TANK MUST BE WATERPROOFED

SEPTIC STONE REQUIREMENTS:

ENV-WQ 1016.04(b) APPROVED SEPTIC STONE SHALL BE CLEAN, UNIFORMLY-SIZED CRUSHED STONE, WASHED ROCK OR SIMILAR AGGREGATE, 1.5 INCH, FREE OF FINES WITH A RANGE OF 0.75 INCHES TO 2.5 INCHES IN ACCORDANCE WITH ENV-WQ TABLE 1014-2

ENV-WQ 1016.04(c) APPROVED SEPTIC STONE SHALL MEET THE SIEVE SIZE AND PERCENT PASSING BY WEIGHT REQUIREMENTS IN ACCORDANCE WITH AASHTO, 27TH EDITION, TEST METHOD T011-85, WHICH REPLACES AASHTO 17TH EDITION TEST METHOD T11-85, AND WHICH APPLIES TO SEPTIC STONE AVAILABLE FOR RETAIL PURCHASE, AS SET FORTH IN ENV-WQ TABLE 1014-2

CONTRACTOR TO VERIFY INVERT AT THE SEPTIC TANK PRIOR TO THE START OF CONSTRUCTION ANY DISCREPANCIES SHALL BE REPORTED TO THE DESIGNER BEFORE STARTING CONSTRUCTION OF THE SYSTEM



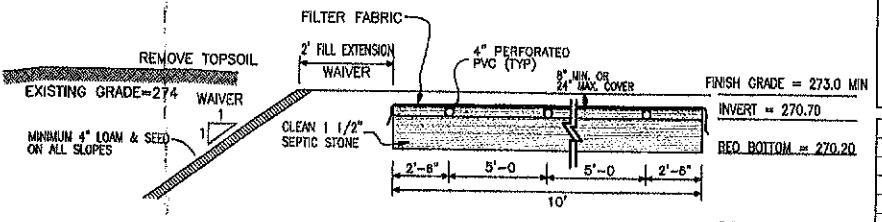
NOTE:

FILL MATERIAL IMMEDIATELY UNDER THE BED SHALL BE MEDIUM TO COURSE TEXTURED SAND (0.25MM-2.0MM) WITH NO MORE THAN 5% PASSING THE #200 SIEVE, AND NO PARTICLES SIZE LARGER THAN 3/4 INCH OR MATERIAL MEETING THE ASTM C-33 SPECIFICATIONS. IF BED IS RAISED MORE THAN 3.0 FEET, PLACE COURSE TEXTURED SAND IN 18" LIFTS. CONSOLIDATE AND RAKE SURFACE PRIOR TO SETTING NEXT LIFT. EXTEND 5 FEET AROUND AND UNDER SIDESLOPES.

E.S.H.W.T. = 266

NOTE:

FILL MATERIAL IMMEDIATELY UNDER THE BED SHALL BE MEDIUM TO COURSE TEXTURED SAND (0.25MM-2.0MM) WITH NO MORE THAN 5% PASSING THE #200 SIEVE, AND NO PARTICLES SIZE LARGER THAN 3/4 INCH OR MATERIAL MEETING THE ASTM C-33 SPECIFICATIONS. IF BED IS RAISED MORE THAN 3.0 FEET, PLACE COURSE TEXTURED SAND IN 18" LIFTS. CONSOLIDATE AND RAKE SURFACE PRIOR TO SETTING NEXT LIFT. EXTEND 5 FEET AROUND AND UNDER SIDESLOPES.



TYPICAL SECTION A-A
(NOT TO SCALE)

SEPTIC SYSTEM DESIGN
TAX MAP 070 LOT 0048
#20 TUCKAWAY SHORES ROAD
NOTTINGHAM, NEW HAMPSHIRE 03290

OWNER OF RECORD/PREPARED FOR:
TIMOTHY & MARJORIE PROIA
301 CONCORD ROAD
BILLERICA, MASSACHUSETTS 01821
RCRD BOOK 5691/PAGE 1645

SCALE: 1"=20' SHEET 1 OF 1 JULY 12, 2019

REVISIONS	DATE