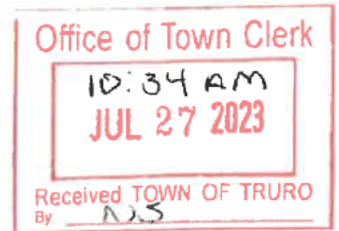




# Truro Board of Health



Tuesday August 1, 2023

Remote Meeting- 4:00- 4:30

**Executive session with Truro Select Board**

Please join our meeting from your computer, tablet or smartphone <https://meet.goto.com/596922797>

You can also dial in using your phone.

United States (Toll Free): [1 866 899 4679](tel:18668994679)

Access Code: 596-922-797

United States: [+1 \(571\) 317-3116](tel:+15713173116)

## EXECUTIVE SESSION

Executive Session with Select Board and Board of Health at 4:00 PM followed by Board of Health meeting at 4:30 PM  
*Move that the Board of Health enter into Executive session pursuant to G.L. c. 30A, §21(a)(6) to consider the purchase, exchange, lease or value of real property if the chair declares that an open meeting may have a detrimental effect on the negotiating position of the public body, and to reconvene in Open Session.*

### Truro Board of Health Regular Meeting

Remote Meeting start time is 4:30 PM

**Remote Meeting Access Instructions:** This will be a remote meeting. Citizens in Truro can view the meeting on Channel 18 and on the web on the "Truro TV Channel 18" button found under "Helpful Links" on the homepage of the Town of Truro website. To view, click on the green "Watch" button in the upper right of the page. **To provide comment during the meeting, please call in toll free at 1-866-899-4679 and enter the following access code when prompted: 972-302-709; or access the meeting from your computer, tablet or smartphone.**

<https://global.gotomeeting.com/join/972302709>

## I. AGENDA ITEMS

1. **Local Upgrade Approval & Local Variance Request:** 24 Cliff Rd, Blair & Paul Resika -(this was continued from the 7/18/2023 meeting)
2. **Local Variance Request:** 5 Valentina Way, Estate of Marguerite Yannetty (this was continued from the 7/18/2023 meeting)
3. **Local Upgrade Approval & Local Variance Request:** 7 Amity Ln, Irene Selver (this was continued from the 7/18/2023 meeting)
4. **Local Upgrade Approval & Local Variance Request:** 38 Toms Hill Rd, Tina Ryman et al (this was continued from the 7/18/2023 meeting)
5. **Local Variance Request:** 6 Toms Hill Path, Thomas D. France et al (this was continued from the 7/18/2023 meeting)
6. **Local Variance Request:** 1 Mill Pond Rd, Mill Pond Road Investment Trust
7. **Request for a waiver of time:** 45 Corn Hill Rd, Rose Investment Trust c/o Mary Rose

**II. PUBLIC COMMENT** Please note that the Commonwealth's Open Meeting Law limits any discussion by members of the Board of an issue raised to whether that issue should be placed on a future agenda



**TOWN OF TRURO**  
**HEALTH & CONSERVATION DEPARTMENT**  
 24 Town Hall Road, Truro 02666  
 508-349-7004 x119

**To:** Truro Board of Health  
**From:** Emily Beebe, Health & Conservation Agent  
**Date:** July 29, 2023  
**Re:** August 1 meeting: septic upgrades- review notes

**24 Cliff Road, Blair & Paul Resika (29/13) : Local Upgrade Approval & Local Variance**

**Request** This upgrade from cesspools will serve an existing 3-Bedroom dwelling on a 13,532 sf parcel on High Head. (the sketch of the floorplan is mis-labeled and a correx will be forthcoming from the engineer for the meeting)

- There is no proposed increase in flow, however, the existing use on this lot size triggers the use of I/A technology. A FAST 0.5 “enhanced treatment unit” is proposed. (This meets BAT\* standards) We expect to have more information about this system at the meeting, including the DEP approval letter.
- Local upgrade variance requests include provision of less than the required separation between the SAS (soil absorption system) and property lines, foundation and the on-site well
- This upgrade appears to be a significant improvement in treatment that will be of benefit to the resource areas.
- No wells in this area appear downstream of the SAS including the locus well.
- Local upgrade approval requests are for provision of less than the required separation between the SAS (soil absorption system) and the adjacent wetland resource area (Coastal Bank)
- The standard of review for the Board of Health is to determine if the design showing reductions to the requirements of title 5 and local regulations will provide as much environmental and public health protection as would a plan without variances. A determination (such as a statement of finding) or a motion should be made to declare whether the proposed project meets this standard of review.

The Board can approve this proposal after:

- 1) making the determination that the standard of review has been met; and
- 2) consideration of a condition of approval that the owner is provided with information about proper care of an I/A septic system, with an explanation about what the Operation and Maintenance requirements will be throughout the year.

\*BAT= Best Available Technology, meaning “enhanced I/A” treatment that can remove nitrogen in the effluent to 10 mg/l maximum

**5 Valentina Way, Estate of Marguerite Yannetty (60/23): Local Variance Request**

This upgrade from a cesspool will serve an existing 3-Bedroom dwelling on a 30,056 sf parcel.

- Assrs. card specifies 2-BR house, however there is also a 1-BR studio with a 1978 title 5 that will be removed.
- The project includes re-location of the existing well from the southeast side of the property to the northeast side, in order to achieve the required separation between the well and the proposed location of the new SAS (soil absorption system).
- It appears that GW flow is toward the southwest, and the arrangement of the locus well and SAS is suitable. There are no wells in this area downstream of the proposed SAS.

- There are no title 5 variances, however, there is a local variance request for provision of less than the required separation between the SAS (soil absorption system) and the septic tank to the adjacent wetland resource area (inland bank of Ryder Pond).
- The standard of review for the Board of Health is to determine if the design showing reductions to the requirements of TBoH regulations will provide as much environmental and public health protection as would a plan without variances. A determination (such as a statement of finding) or a motion should be made to declare whether the proposed project meets this standard of review.
- The property is within the watershed to the Wellfleet Harbor Embayment system with currently accepted MEP reports and Draft total nitrogen TMDL, but not final EPA approved total nitrogen TMDL. This watershed will be designated as a Natural Resource Area Nitrogen Sensitive Area (NSA) upon EPA approval of the total nitrogen TMDL.
- Use of standard I/A technology to remove nitrogen to 19 mg/l. is proposed. An Orenco Advantex AX-20 is included in the design.
- Due to the location within the soon to be designated NSA we would expect the requirement to upgrade to BAT\* standards would be forthcoming but are uncertain of the timeframe. Is the Advantex capable of meeting the BAT standard with a retrofit?

The Board can approve this proposal after:

- 1) making the determination that the standard of review has been met; and
- 2) consideration of a condition of approval that the owner is provided with information about proper care of an I/A septic system, with an explanation about what the Operation and Maintenance requirements will be throughout the year.

\*BAT= Best Available Technology, meaning "enhanced I/A" treatment that can remove nitrogen in the effluent to 10 mg/l maximum

### **7 Amity Lane, Irene Selver (46/18) : Local Upgrade Approval& TBoH Variance Request**

This upgrade from cesspools will serve an existing 4-Bedroom dwelling on a 2-acre parcel, with upland (as defined in TBoH regulations) estimated at approximately 25,000 sf.

- Assrs. card specifies a 4-BR house, no increase in flow is proposed.
- The project includes re-location of the existing well from the east side of the dwelling to the north side, to achieve the required separation between the well and the proposed location of the new SAS (soil absorption system).
- It appears that GW flow is toward the south and west, and although the minimum separation is met we are concerned that the proposed arrangement of the locus well and SAS may not be optimal. An alternate upstream location is suggested, but not required by our regulations at this time. There are no other wells in the area downstream of the proposed SAS.
- A local upgrade approval is sought to allow a 21% reduction in the size of the SAS (soil absorption system) which is mitigated by the proposed use of I/A treatment.
- A local variance request from TBoH regulations for reduction to the required separation between the SAS (soil absorption system) and the septic tank to the adjacent wetland resource areas (Riverfront and Coastal Bank)
- The standard of review for the Board of Health is to determine if the design showing reductions to the requirements of title 5 and TBoH regulations will provide as much environmental and public health protection as would a plan without variances. A determination (such as a statement of finding) or a motion should be made to declare whether the proposed project meets this standard of review.

- The property is within the watershed of the Little Pamet River. We expect that the TBoH requirement to upgrade to BAT\* standards will be forthcoming within 5-7 years.
- Use of standard I/A technology to remove nitrogen to 19 mg/l. is proposed. An Orenco Advantex AX-20 is included in the design.
- Is the Advantex capable of meeting the BAT\* standard with a retrofit?

The Board can approve this proposal after:

- 1) making the determination that the standard of review has been met; and
- 2) consideration of a condition of approval that the owner is provided with information about proper care of an I/A septic system, with an explanation about what the Operation and Maintenance requirements will be throughout the year.

\*BAT= Best Available Technology, meaning "enhanced I/A" treatment that can remove nitrogen in the effluent to 10 mg/l maximum

### **38 Toms Hill Rd, Tina Ryman et al (49/14): Local Upgrade Approval & TBoH Variance**

#### **Requests:**

This upgrade from cesspools will serve an existing 4-Bedroom seasonal cottage on a 31,363-sf parcel located on the Pamet River with upland (as defined in TBoH regulations) estimated at approximately 7,000 sf.

- The assrs. card specifies a 4-BR house, and no increase in flow is proposed.
- The existing well is located north of the dwelling, and parallel (with respect to GW flow direction) with the proposed location of the new SAS (soil absorption system). A 22-foot reduction to the required separation between the well and SAS is requested. A future well location should be shown on the plan for re-location at such time as the current well fails, or water quality declines. A 2022 well water analysis shows normal sodium at 18 mg/l and slightly elevated nitrates, at 1.6 mg/l.
- It appears that GW flow is toward the west. There are no other wells in the area downstream of the proposed SAS.
- Under title 5 local upgrade approvals are sought to allow reduction in required separation between the SAS (soil absorption system) and property lines, the Coastal Bank and the locus well, along with a 21% reduction in the size of the SAS (soil absorption system).
- Under our TBoH regulations, variances are requested for the reduction of the required separation between the SAS (soil absorption system) and the septic tank to the adjacent wetland resource area (Riverfront and Coastal Bank). There is also a variance requested to the requirement that I/A be installed at this location.
  - The I/A Variance request is framed as temporary, as the property is seasonal, and the owners would install I/A when the house becomes year-round or is sold.
  - The I/A variance has been approved at other locations with seasonal use, however, the upgrade trigger was volume of flow on a parcel with considerably more (3+ acres) upland area, as defined in our regulations. Notwithstanding, seasonal use does provide approximately 50% reduction to nutrient loads since the property is not used through the year.
  - The use of I/A treatment would provide suitable mitigation for the variance requests.
  - The property is in Riverfront and within the watershed of the Pamet River. We expect that the Board will need to move to adopt a regulation to trigger upgrades to BAT\* standards within 5-7 years.

- Has this been designed to accommodate easy retrofit with BAT\*- I/A in the future?
- Record a Deed Restriction limiting the use of the property to seasonal (May – October?) unless BAT\*- I/A is added. Install BAT\*- I/A if property is transferred outside of the Family. Install BAT\*- I/A when ordered to do so as part of a Pamet River Watershed Management Plan.
- The standard of review for the Board of Health is to determine if the design showing reductions to the requirements of title 5 and TBoH regulations will provide as much environmental and public health protection as would a plan without variances. A determination (such as a statement of finding) or a motion should be made to declare whether the proposed project meets this standard of review.
- A finding could be made about the mitigation provided in the condition of seasonality, and a schedule for upgrade to BAT\* I/A could be defined.

\*BAT= Best Available Technology, meaning "enhanced I/A" treatment that can remove nitrogen in the effluent to 10 mg/l maximum

#### **6 Toms Hill Path, Thomas D. France et al Local Variance Request:**

This project includes an upgrade from cesspools that serve 2 existing residential structures on a 5.8-acre parcel, that is mostly if not entirely upland (as defined in TBoH regulations).

- Assrs. card specifies 4-BR house, but a septic inspection identified 6 to 7 bedrooms, therefore the property flow (>600 GPD) triggers use of I/A treatment. A variance to TBoH regulations has been requested and I/A is not proposed at this time.
- Stephanie Sequin from R&W and I discussed the outline for an immediate upgrade to the property to comply with the TBoH cesspool upgrade requirements. However, the location dictates we are mindful of future NSA designation of the Pamet. The plans would show:
  - Replacement of the waste line to 1 cesspool by employing a sewage ejector to pump from a lower-level bathroom to the existing Title 5 system for the main house.
  - Replace the second cesspool with a standard Title 5 system for the 3-BR guest studio.
  - Position the components so there is adequate space to add a nitrogen-reducing component in the future, as well as a means to connect the main house system to the nitrogen-reducing component.
  - Designate an area where the leaching system could be expanded in the future to accommodate the flow from the main house.
  - Record a Deed Restriction limiting the use of the property to seasonal (May – October?) unless BAT- I/A is added. Install BAT-I/A if property is transferred outside of the Family. Install BAT-I/A if ordered to do so as part of a Pamet River Watershed Management Plan.

## **1 Mill Pond Rd, Mill Pond Road Investment Trust: Local Variance Request**

This project proposes construction of a 3-BR (Although the plan shows a 4 BR in at least 1 location!) single-family dwelling on a 51,736 sf parcel adjacent to Mill Pond Road, Old County Road and the Pamet River. The parcel is located within the wetland resource area of Riverfront, reducing the available area of upland to approximately 21,367 sf; this provides enough area for a 2-bedroom home under our Local Board of Health regulations.

Local variances are requested for this project. It is important to note that our local regulations are more stringent than title 5:

- Both title 5 and Truro Board of Health (TBoH) regulations require horizontal separation to wetlands, but they have different definitions of wetlands
  - Title 5 does not include Riverfront as a wetland resource area, however, our TBoH regulations do.
  - The title 5 requirements for horizontal separation between the septic tank and SAS(soil absorption system) to most wetlands are 25' and 50' respectively, while the separation required by our TBOH regulations are 100' and 150'.
- Additionally, Title 5 does not define "upland", but our TBoH regulations do.
- TBoH regulations define upland as area that is exclusive as all jurisdictional (WPA) wetland resource areas. Further, only upland may be used in the calculation of lot area available for nitrogen loading.

Variances to our TBoH wetlands setbacks cannot be avoided in most cases that come before you, as they usually relate to existing development that is upgrading.

The plan before you depicts an undeveloped parcel with new construction proposed. The SAS cannot be sited on the lot in compliance with the local setbacks for wetlands.

- 150-foot separation is required between the SAS (Soil absorption system or leaching area) and the wetland resource area. 16' is provided. This is also the case for the reserve area, which also cannot meet the required setback.
- 100' separation is required between the septic tank to Riverfront. 41' is provided.
- A variance to nitrogen loading limitations has been requested to allow construction of a 3-bedroom dwelling, rather than the 2-bedroom allowed under the regulations.

Installation of a standard I/A system is proposed to mitigate these variance requests.

The property is located in Riverfront and is within the watershed of the Pamet River. We expect that the Board will need to move to adopt a regulation to trigger upgrades to BAT\* standards within 5-7 years.

- The standard of review for the Board of Health is to determine if the design showing reductions to the requirements of local regulations will provide as much environmental and public health protection as would a plan without variances. A determination (such as a statement of finding) or a motion should be made to declare whether the proposed project meets this standard of review.

## **Request for a waiver of time: 45 Corn Hill Rd, Rose Investment Trust c/o Mary Rose**

90 Days waiver requested.

**Fee: \$75.00**



**APPLICATION FOR BOARD OF HEALTH VARIANCES**

Date: 7/7/2023

Property Owner's Name: Blair and Paul Resika

Mailing Address: [REDACTED]

Address of Property: 24 Cliff Road

Map and Parcel Number: Map # 29 Parcel # 13

Design Engineer/Sanitarian John M. O'Reilly, P.E., P.L.S.

Firm/Company Name: J.M. O'Reilly & Associates, Inc. Phone #: 508-896-6601

Address: P.O. Box 1773, 1573 Main Street, Brewster, MA 02631

Please check type of variance requested:

**Title 5 Variance Request: Section** 310 CMR 15.211 (Setbacks) Refer to Cover Letter

**Board of Health Variance Request: Section/Article** Section VI; Article 9 - Refer to Cover Letter

Signature (Representative )

7/7/2023

Date

Signature (Property Owner)

HEALTH DEPARTMENT  
TOWN OF TRURO

JUL 07 2023

RECEIVED BY:



# J.M. O'REILLY & ASSOCIATES, INC.

PROFESSIONAL ENGINEERING, LAND SURVEYING & ENVIRONMENTAL SERVICES

Site Development • Property Line • Subdivision • Sanitary • Land Court • Environmental Permitting

July 7, 2023

JMO # 9405

Truro Board of Health  
24 Town Hall Road  
Truro, MA 02536

RE: **Board of Health Variance Request**  
24 Cliff Road, Truro, MA

Map: 29 / Parcel: 13

Dear Board Members,

On behalf of our client, Blair & Paul Resika, J.M. O'REILLY & ASSOCIATES, INC. is filing a request for Variance from Truro Board of Health Regulations for the proposed sewage system upgrade at the above referenced property. The property is currently served by cesspools.

The project proposes to replace the cesspools for the dwelling on the property with a Title 5 sewage disposal system with enhanced I/A treatment. The existing building contains a total of 3 bedrooms, 330 GPD of design flow. The proposal does NOT include any improvements to the existing dwelling.

As required due to existing site location & onsite conditions we are seeking several variances from 310 CMR 15.211 (Min Setback Distances) & Truro Board of Health Regulations, Section 6, Article 9, Setbacks: Variance Requests are as follows:

- |   |               |                        |
|---|---------------|------------------------|
| 1. Soil Absorption System (SAS) not 10 feet to property line    | 5' provided   | 5' Variance Requested  |
| 2. SAS not 20' from Foundation Wall                             | 12' provided  | 8' Variance Requested  |
| 3. SAS not 100 feet from Locus Well                             | 90' provided  | 10' Variance Requested |
| 4. Reserve Area not provided, Removal and Replacement proposed. |               |                        |
| Local Regs  |               |                        |
| 5. SAS not 150 feet from wetland resource (Coastal Bank)        | 132' provided | 18' Variance Requested |

HEALTH DEPARTMENT  
TOWN OF TRURO

JUL 07 2023

RECEIVED BY:



No additions, changes in habitable space or additional bedrooms are proposed. A representative from our office will be present at the July 18, 2023 public hearing so as to further review the proposal and answer any questions the Board may have.

Very truly yours,  
J.M. O'REILLY & ASSOCIATES, INC.



John M. O'Reilly, P.E., P.L.S.  
Principal

Cc: Client  
Encl: Variance Application Package

HEALTH DEPARTMENT  
TOWN OF TRURO

JUL 07 2023

RECEIVED BY:

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# J.M. O'REILLY & ASSOCIATES, INC.

PROFESSIONAL ENGINEERING, LAND SURVEYING & ENVIRONMENTAL SERVICES

Site Development • Property Line • Subdivision • Sanitary • Land Court • Environmental Permitting

TO: Abutters

FROM: J. M. O'REILLY & ASSOCIATES, INC.  
1573 MAIN STREET  
BREWSTER, MA 02631

RE: 24 Cliff Rd, Truro, MA  
**Board of Health Variance Request**

DATE: July 7, 2023

On behalf of our client, Blair & Paul Resika, J. M. O'REILLY & ASSOCIATES, INC. is requesting the Truro Board of Health to review and grant the following Variances from the Truro Board of Health regulations for the proposed sewage system upgrade at the above referenced property.

As required due to existing site location & onsite conditions we are seeking several variances from 310 CMR 15.211 (Min Setback Distances) & Truro Board of Health Regulations, Section 6, Article 9, Setbacks: Variance Requests are as follows:

1. Soil Absorption System (SAS) not 10 feet to property line  
5' provided 5' Variance Requested
2. SAS not 20' from Foundation Wall  
12' provided 8' Variance Requested
3. SAS not 100 feet from Locus Well  
90' provided 10' Variance Requested
4. Reserve Area not provided, Removal and Replacement proposed.

Local Regs

5. SAS not 150 feet from wetland resource (Coastal Bank)  
132' provided 18' Variance Requested

A meeting has been scheduled with the Board of Health at Truro Town Hall on July 18, 2023 at 4:30 pm to discuss the proposal in greater detail. If you plan to attend, please contact the Town or visit the Truro Health Department webpage for further details.

HEALTH DEPARTMENT  
TOWN OF TRURO

JUL 07 2023

RECEIVED BY:



**TRURO ASSESSORS OFFICE**

PO Box 2012 Truro, MA 02666

Telephone: (508) 214-0921

Fax: (508) 349-5506

**Date:** June 30, 2023

**To:** J.M. O'Reilly & Associates, Inc.

**From:** Assessors Department

**Certified Abutters List:** 24 Cliff Road (Map 29 Parcel 13)

Board of Health

Attached is a combined list of abutters for 24 Cliff Road (Map 29 Parcel 13).

The current owner is Paul and Blair Resika.

The names and addresses of the abutters are as of June 23, 2023 according to the most recent documents received from the Barnstable County Registry of Deeds.

Certified by: \_\_\_\_\_

Laura Geiges  
Assistant Assessor / Data Collector

HEALTH DEPARTMENT  
TOWN OF TRURO

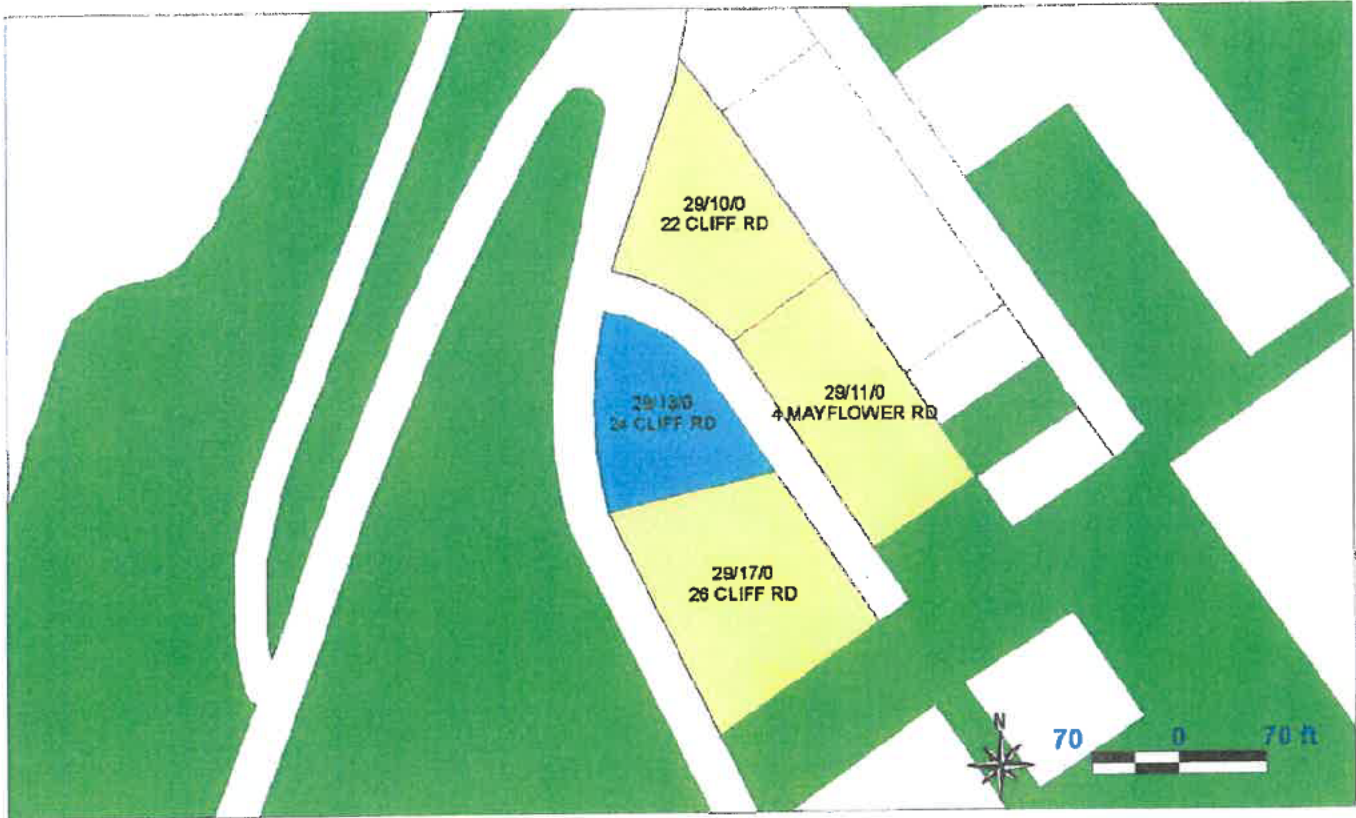
JUL 07 2023

RECEIVED BY: \_\_\_\_\_

24 Cliff Road  
 Map 29 Parcel 13  
 Board of Health

TOWN OF TRURO, MA  
 BOARD OF ASSESSORS  
 P.O. BOX 2012, TRURO MA 02666

Custom Abutters List



| Key  | Parcel ID  | Owner  | Location                     | Mailing Street                                   | Mailing City | ST | ZipCd/Country |
|------|------------|--|------------------------------|--|--------------|----|---------------|
| 645  | 29-10-0-R  | STELLO ROBERT & JENNIFER                           | 22 CLIFF RD                  | PO BOX 762                                       | CHATHAM      | MA | 02633         |
| 646  | 29-11-0-R  | RESIKA PAUL & BLAIR                                | 4 MAYFLOWER RD               | 175 RIVERSIDE DR #6E                             | NEW YORK     | NY | 10024         |
| 6294 | 29-17-0-E  | U S A<br>DEPT OF THE INTERIOR                      | 26 CLIFF RD                  | CAPE COD NATIONAL SEASHORE<br>99 MARCONI SITE RD | WELFLEET     | MA | 02667         |
| 7292 | 40-899-0-E | USA-DEPT OF INTERIOR<br>Cape Cod National Seashore | 0 CAPE COD NATIONAL SEASHORE | 99 Marconi Site Rd                               | Welfleet     | MA | 02667         |

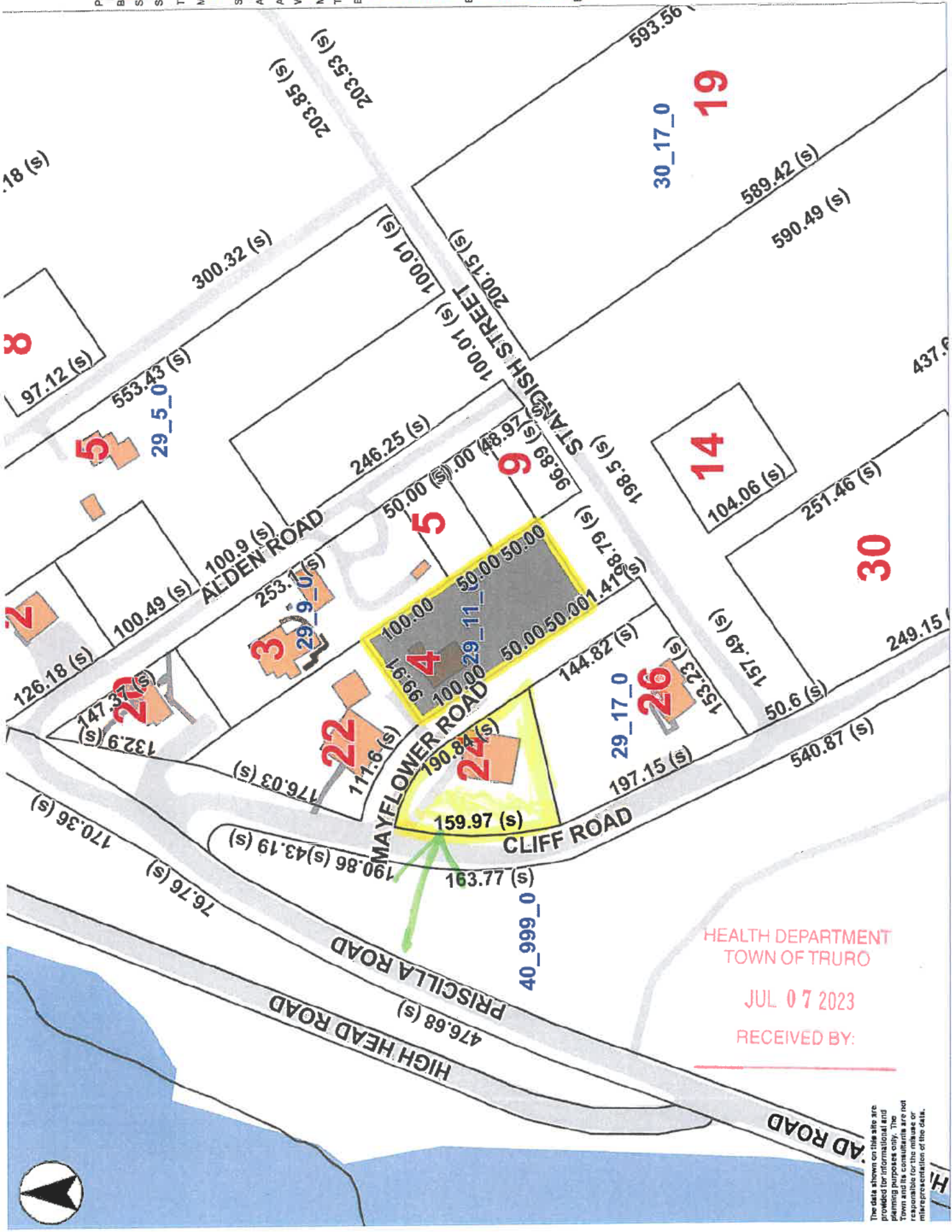
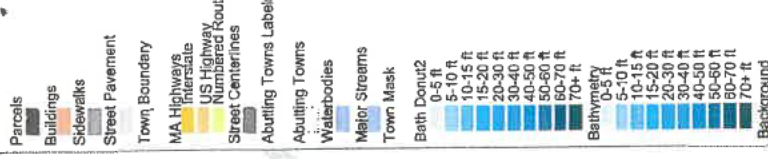
HEALTH DEPARTMENT  
 TOWN OF TRURO

JUL 07 2023

RECEIVED BY:

LG 6/30/2023



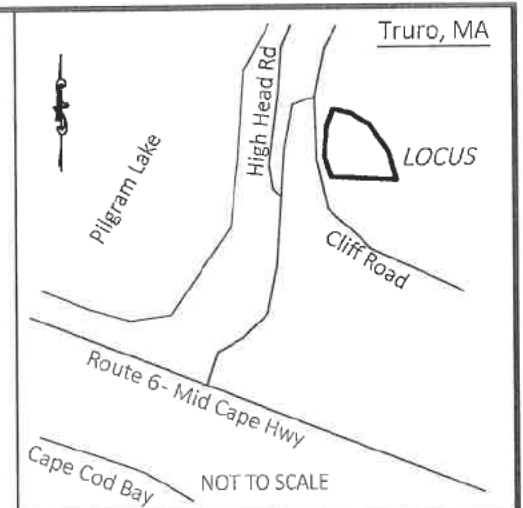


HEALTH DEPARTMENT  
TOWN OF TRURO  
JUL 07 2023  
RECEIVED BY: \_\_\_\_\_

The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.

JOHN M. O'REILLY  
NO. 48733  
REGISTERED LAND SURVEYOR

JOHN M. O'REILLY  
CIVIL  
NO. 36200  
REGISTERED PROFESSIONAL ENGINEER

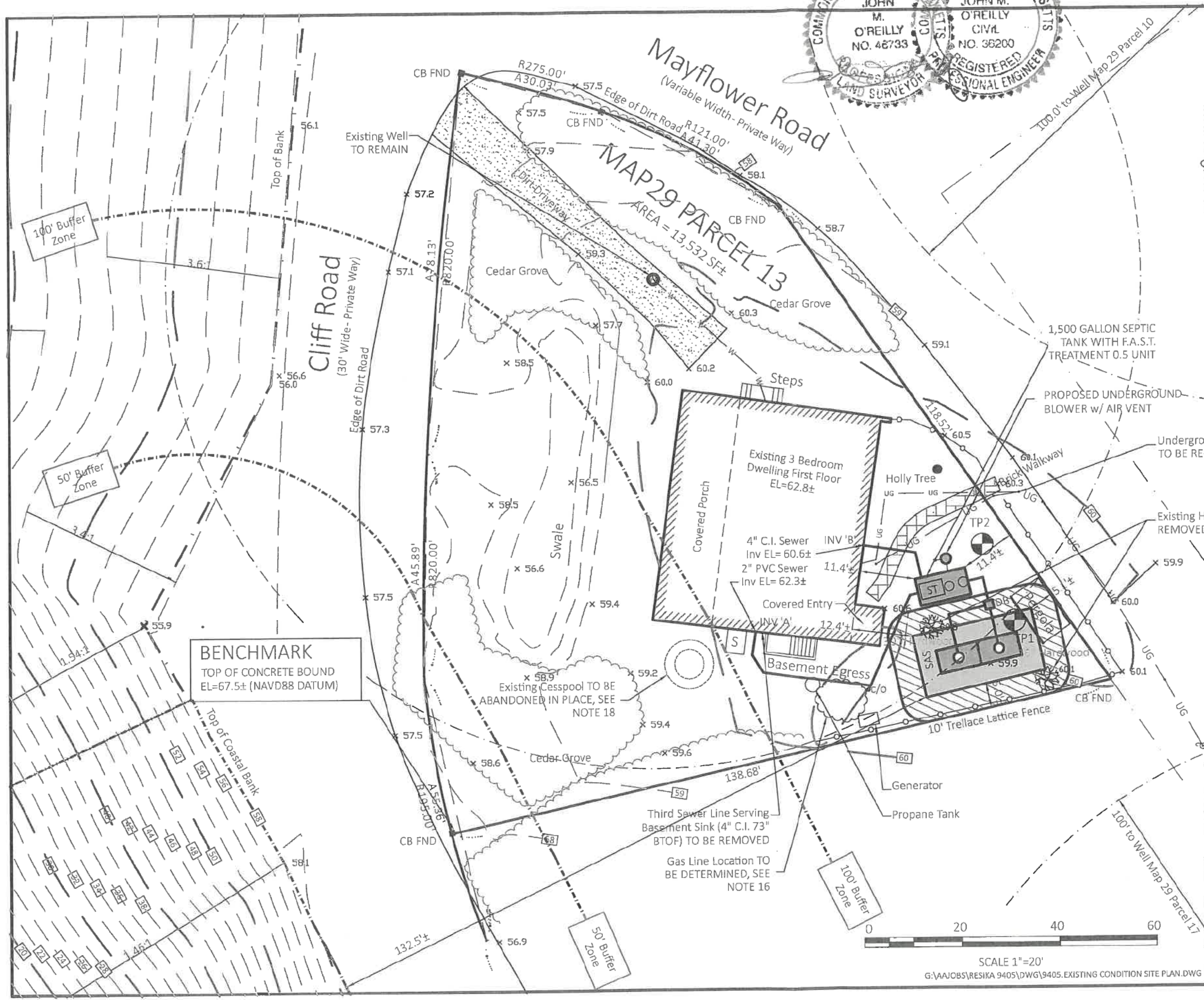


PLAN BOOK 5  
DEED BOOK 4317  
ASSESSORS' MAP 29

PAGE 33  
PAGE 172  
PARCEL 13

**LEGEND**

|  |                               |
|--|-------------------------------|
|  | EXISTING CONTOUR              |
|  | PROPOSED CONTOUR              |
|  | EXISTING SPOT GRADE           |
|  | PROPOSED SPOT GRADE           |
|  | WATER SERVICE LINE            |
|  | OVERHEAD UTILITY SERVICE      |
|  | ELECTRIC / COMM. SERVICE LINE |
|  | GAS SERVICE LINE              |
|  | TEST HOLE / BORING LOCATION   |
|  | SEPTIC TANK                   |
|  | DISTRIBUTION BOX              |
|  | SOIL ABSORPTION SYSTEM        |
|  | RESERVED FOR FUTURE           |
|  | UTILITY POLE                  |
|  | CATCH BASIN                   |
|  | FIRE HYDRANT                  |
|  | WELL                          |
|  | DRAINAGE MANHOLE              |
|  | CONCRETE BOUND, FOUND         |
|  | LIMIT OF WORK                 |
|  | FENCE                         |
|  | EDGE OF CLEARING              |



HEALTH DEPARTMENT  
TOWN OF TRURO

**SHEET 1 OF 2**

JUL 07 2023

RECEIVED BY  
**Paul & Blair Resika**  
175 Riverside Drive, Apt.6E, New York, NY 10024-1616

**SITE & SEWAGE DISPOSAL SYSTEM PLAN**  
24 Cliff Road, North Truro, MA

**J.M. O'REILLY & ASSOCIATES, INC.**  
Professional Engineering & Land Surveying Services

1573 Main Street - Route 6A  
P.O. Box 1773  
(508)896-8801 Office Brewster, MA 02631 (508)896-8802 Fax

|                   |                    |            |               |                         |
|-------------------|--------------------|------------|---------------|-------------------------|
| DATE:<br>7-5-2023 | SCALE:<br>As Noted | BY:<br>BSH | CHECK:<br>MTF | JOB NUMBER:<br>JMO-9405 |
|-------------------|--------------------|------------|---------------|-------------------------|

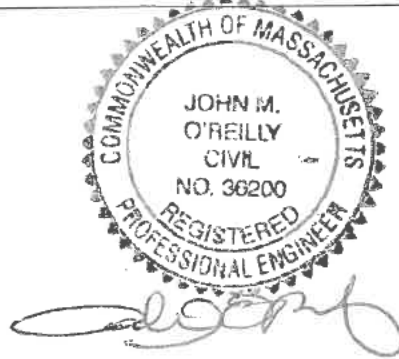
## GENERAL NOTES:

- NEITHER DRIVEWAYS NOR PARKING AREAS ARE ALLOWED OVER SEPTIC SYSTEM UNLESS H-20 COMPONENTS ARE USED.
- THE DESIGNER WILL NOT BE RESPONSIBLE FOR THE SYSTEM AS DESIGNED UNLESS CONSTRUCTED AS SHOWN. ANY CHANGES SHALL BE APPROVED IN WRITING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCEMENT OF WORK.

## CONSTRUCTION NOTES:

- ALL CONSTRUCTION SHALL CONFORM TO THE STATE ENVIRONMENTAL CODE, TITLE 5, AND THE REQUIREMENTS OF THE LOCAL BOARD OF HEALTH.
- SEPTIC TANK(S), GREASE TRAP(S), DOSING CHAMBER(S) AND DISTRIBUTION BOX(ES) SHALL BE SET ON A LEVEL STABLE BASE WHICH HAS BEEN MECHANICALLY COMPACTED, OR ON A 6 INCH CRUSHED STONE BASE.
- SEPTIC TANK(S) SHALL MEET ASTM STANDARD C1127-93 AND SHALL HAVE AT LEAST THREE 20" DIAMETER MANHOLES. THE MINIMUM DEPTH FROM THE BOTTOM OF THE SEPTIC TANK TO THE FLOW LINE SHALL BE 48".
- SCHEDULE 40 PVC INLET AND OUTLET TEES SHALL EXTEND A MINIMUM OF 6" ABOVE THE FLOW LINE OF THE SEPTIC TANK AND SHALL BE INSTALLED ON THE CENTERLINE OF THE TANK DIRECTLY UNDER THE CLEANOUT MANHOLE.
- RAISE COVERS OF THE SEPTIC TANK AND DISTRIBUTION BOX WITH PRECAST CONCRETE WATER TIGHT RISERS OVER INLET AND OUTLET TEES TO WITHIN 6" OF FINISH GRADE, OR AS APPROVED BY THE LOCAL BOARD OF HEALTH AGENT.
- PIPING SHALL CONSIST OF 4" SCHEDULE 40 PVC OR EQUIVALENT. PIPE SHALL BE LAID ON A MINIMUM CONTINUOUS GRADE OF NOT LESS THAN 1%.
- DISTRIBUTION LINES FOR SOIL ABSORPTION SYSTEM (AS REQUIRED) SHALL BE 4" DIAMETER SCHEDULE 40 PVC LAID AT 0.005 FT/FT. LINE SHALL BE CAPPED AT END OR AS NOTED.
- OUTLET PIPES FROM DISTRIBUTION BOX SHALL REMAIN LEVEL FOR AT LEAST 2' BEFORE PITCHING TO SOIL ABSORPTION SYSTEM. WATER TEST DISTRIBUTION BOX TO ENSURE EVEN DISTRIBUTION.
- DISTRIBUTION BOX SHALL HAVE A MINIMUM SUMP OF 6" MEASURED BELOW THE OUTLET INVERT.
- BASE AGGREGATE FOR THE LEACHING FACILITY SHALL CONSIST OF 3/4" TO 1-1/2" DOUBLE WASHED NATIVE STONE FREE OF IRON, FINES AND DUST AND SHALL BE INSTALLED BELOW THE CROWN OF THE DISTRIBUTION LINE TO THE BOTTOM OF THE SOIL ABSORPTION SYSTEM. BASE AGGREGATE SHALL BE COVERED WITH A LAYER OF FILTER FABRIC OR APPROVED EQUIVALENT.
- VENT SOIL ABSORPTION SYSTEM WHEN DISTRIBUTION LINES EXCEED 50 FEET; WHEN LOCATED EITHER IN WHOLE OR IN PART UNDER DRIVEWAYS, PARKING AREAS, TURNING AREAS OR OTHER IMPERVIOUS MATERIAL; OR WHEN PRESSURE DOSED.
- SOIL ABSORPTION SYSTEM SHALL BE COVERED WITH A MINIMUM OF 9" OF CLEAN MEDIUM SAND (EXCLUDING TOPSOIL).
- FINISH GRADE SHALL BE A MAXIMUM OF 36" OVER THE TOP OF ALL SYSTEM COMPONENTS, INCLUDING THE SEPTIC TANK, DISTRIBUTION BOX, DOSING CHAMBER AND SOIL ABSORPTION SYSTEM. SEPTIC TANKS SHALL HAVE A MINIMUM COVER OF 9".
- FROM THE DATE OF INSTALLATION OF THE SOIL ABSORPTION SYSTEM UNTIL RECEIPT OF A CERTIFICATE OF COMPLIANCE, THE PERIMETER OF THE SOIL ABSORPTION SYSTEM SHALL BE STAKED AND FLAGGED TO PREVENT THE USE OF SUCH AREA FOR ALL ACTIVITIES THAT MIGHT DAMAGE THE SYSTEM.

- SOIL REMOVAL: ALL FILL, TOPSOIL AND SUBSOIL SHALL BE REMOVED FOR A DISTANCE OF 5' FROM THE SOIL ABSORPTION SYSTEM DOWN TO THE CLEAN SAND LAYER. PLEASE NOTE FILL CONTAINS LARGE CHUNKS OF CONCRETE. AREA TO BE BACKFILLED WITH CLEAN SAND AND COMPACTED TO MINIMIZE SETTLING.
- INSTALLER TO CONFIRM LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO START OF CONSTRUCTION.
- ALL 4" PVC CLEANOUTS SHALL BE WITHIN 3" OF FINISH GRADE. CLEANOUTS SHALL BE MARKED WITH A PIECE OF #5 REBAR FOR FUTURE LOCATION.
- EXISTING SEPTIC SYSTEM TO BE REMOVED OR ABANDONED-IN-PLACE IN ACCORDANCE WITH 310 CMR 15.354. ANY CONTAMINATED SOIL WITHIN 5' OF THE PROPOSED SOIL ABSORPTION SYSTEM SHALL BE REMOVED AND REPLACED WITH CLEAN SAND. AREA TO BE COMPACTED TO MINIMIZE SETTLING.



## SYSTEM DESIGN CALCULATIONS:

SEWAGE DESIGN FLOW:  
3 BEDROOM DWELLING @ 110 GPD = 330 GPD

LEACHING CAPACITY REQUIRED:  
3 BEDROOMS (MAX.) @ 110 GPD = 330 GPD REQUIRED

SEPTIC TANK CAPACITY REQUIRED:  
DAILY FLOW = 330 GPD @ 200% = 660 GAL. REQUIRED

SEPTIC TANK CAPACITY PROVIDED:  
1500 GALLON SEPTIC TANK (MIN. ALLOWED)

LEACHING CAPACITY PROVIDED:  
ONE (1) 25.0' X 12.83' X 2.0' LEACHING CHAMBER CAN LEACH:  
 $Vt = [(25.0 \times 12.83) + (25.0 \times 2.0)2 + (12.83 \times 2.0)2] \times 0.74 \text{ GPD/SF} = 349.3 \text{ GPD}$   
349 GPD > 330 GPD REQUIRED

NOTE: A GARBAGE DISPOSAL IS NOT PERMITTED WITH THIS DESIGN.

INSTALL:  
ONE (1) - 1500 GALLON SEPTIC TANK  
ONE (1) - 3 OUTLET DISTRIBUTION BOX (H-20 RATED)  
TWO (2) - 500 GALLON LEACH CHAMBERS WITH 4' OF STONE ALL AROUND

## SOIL TEST LOGS:

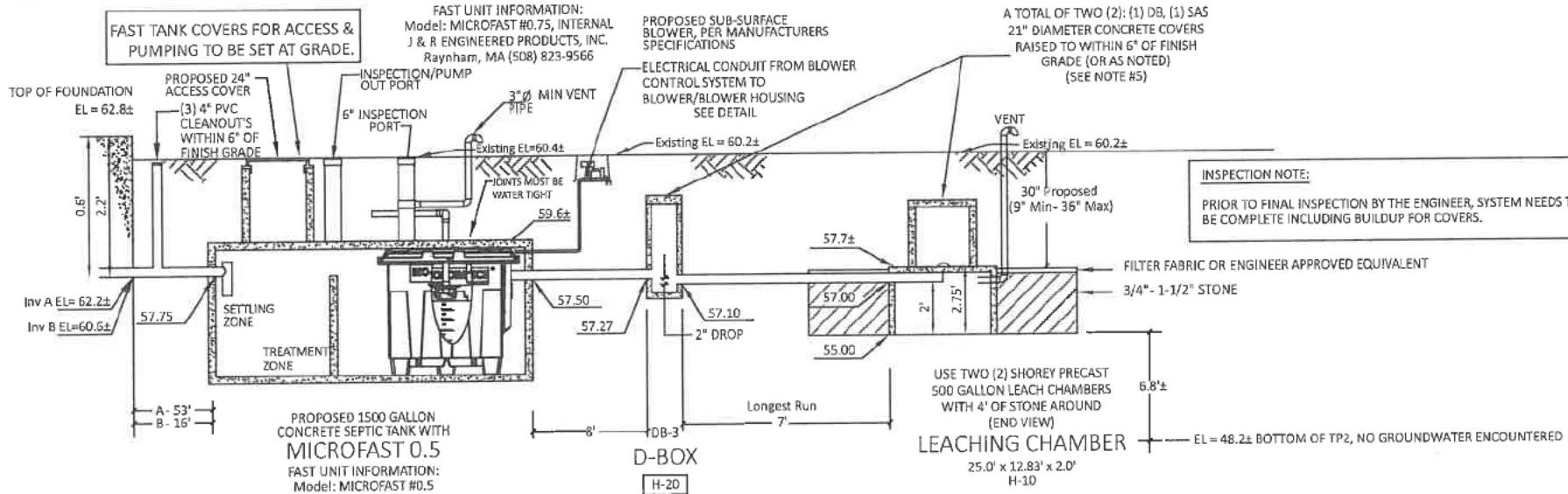
| TEST HOLE 1: EL=60.5±       |              |                     |                      |               |       |
|-----------------------------|--------------|---------------------|----------------------|---------------|-------|
| DEPTH FROM SURFACE (INCHES) | SOIL HORIZON | SOIL TEXTURE (USDA) | SOIL COLOR (MUNSELL) | SOIL MOTTLING | OTHER |
| 0-100"                      | F            | FILL                | N/A                  | NONE          |       |
| 100-152"                    | C1           | COARSE SAND         | 10YR7/6              | NONE          | LOOSE |

| TEST HOLE 2: EL=60.5±       |              |                     |                      |               |                        |
|-----------------------------|--------------|---------------------|----------------------|---------------|------------------------|
| DEPTH FROM SURFACE (INCHES) | SOIL HORIZON | SOIL TEXTURE (USDA) | SOIL COLOR (MUNSELL) | SOIL MOTTLING | OTHER                  |
| 0-19"                       | F            | FILL                | N/A                  | NONE          | CONTAINS CONCRETE DEMO |
| 19-30"                      | Ab           | LOAMY FINE SAND     | 10YR2/2              | NONE          |                        |
| 30-72"                      | B            | LOAMY FINE SAND     | 10YR5/6              | NONE          | PERC @ 51"; <5MIN/IN   |
| 72-148"                     | C            | COARSE SAND         | 10YR7/6              | NONE          | LOOSE                  |

DATE OF TESTING: 05/25/2023  
PERCOLATION RATE: LESS THAN 5 MIN/INCH IN "C" LAYERS.  
WITNESSED BY: MATT FARRELL, EIT, J.M. O'REILLY & ASSOCIATES, INC.  
AROZANA DAVIS, HEALTH AGENT, TRURO HEALTH DEPARTMENT  
NO WATER ENCOUNTERED  
USE A LOADING RATE OF 0.74 GPD/SF FOR SIZING OF SOIL ABSORPTION SYSTEM.

## FLOW PROFILE:

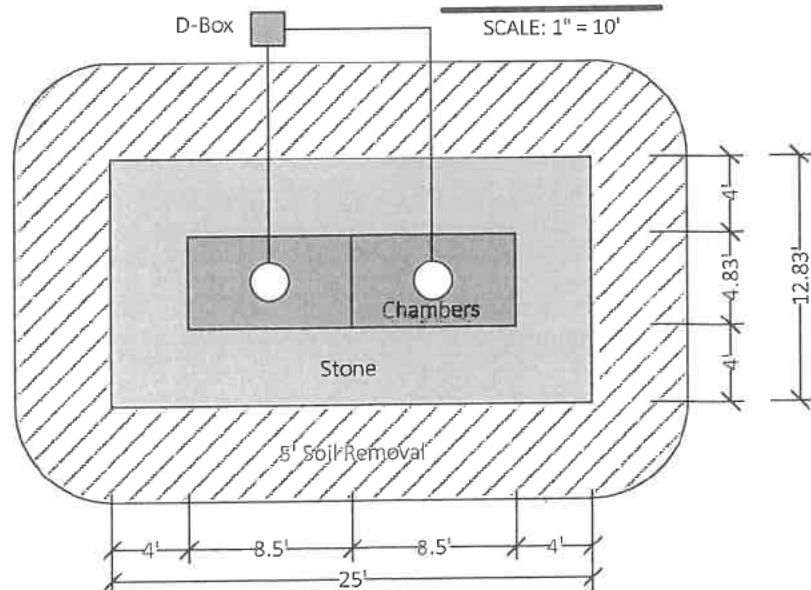
NOT TO SCALE



INSPECTION NOTE:  
PRIOR TO FINAL INSPECTION BY THE ENGINEER, SYSTEM NEEDS TO BE COMPLETE INCLUDING BUILDUP FOR COVERS.

## SAS DETAIL:

SCALE: 1" = 10'

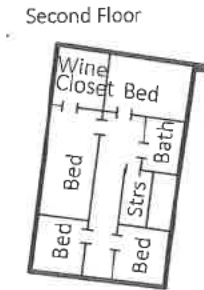


## VARIANCES REQUESTED

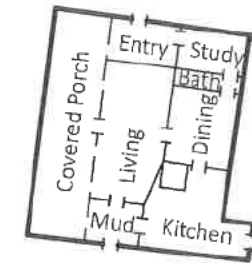
- LOCAL UPGRADE APPROVALS: 310 CMR 15.403
- VARIANCES: 310 CMR 15.211 (Setbacks)
- Soil Absorption System not 10' from Property Line 5' held 5' variance
  - Soil Absorption System not 20' from cellar wall 12.0' held 8.0' variance
  - Soil Absorption System not 100' from Locus Well 90.0' held 10.0' variance
- VARIANCES: 310 CMR 15.248 (Reserve Area)
- No Reserve Area Remove and Replace Requested
- LOCAL REGULATIONS:
- Soil Absorption System not 150' from Wetland 132' held 18' variance

## FLOOR PLAN

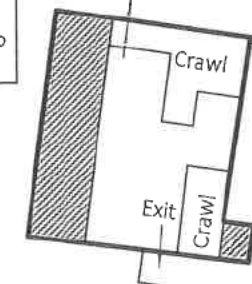
NOT TO SCALE



First Floor



Basement

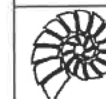


## SHEET 2 OF 2

Paul & Blair Resika

175 Riverside Drive, Apt.6E, New York, NY 10024-1616

SEWAGE DISPOSAL SYSTEM DESIGN & NOTES  
24 Cliff Road, North Truro, MA



J.M. O'REILLY & ASSOCIATES, INC.

Professional Engineering & Land Surveying Services

1673 Main Street - Route 6A

P.O. Box 1773

(508)896-8601 Office Brewster, MA 02831 (508)896-8602 Fax

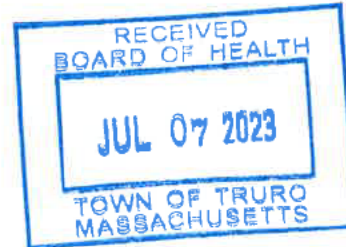
| DATE:    | SCALE:   | BY: | CHECK: | JOB NUMBER: |
|----------|----------|-----|--------|-------------|
| 7-5-2023 | As Noted | BSH | MTF    | JMO-9405    |



**SCHOFIELD BROTHERS OF CAPE COD**  
Land Surveying and Environmental Permitting  
161 Cranberry Highway  
P.O. Box 101  
Orleans, MA 02653-0101  
508-255-2098 - 508-240-1215 (fax)  
E-mail: schobro@capecod.net

July 6, 2023

Truro Board of Health  
24 Town Hall Road  
Truro, MA 02666



RE: 5 Valentina Way

Dear Members of the Board;

Enclosed please find the following with respect to a septic system upgrade requiring local variances at the above referenced address:

- Town of Truro Application for Board of Health Variances Form
- Filing Fee in the amount of \$75.00
- Certified Abutters List from Truro Assessors Office
- Copy of Abutter Notification Letter sent by Certified Mail to abutters
- Floor Plan of Existing Dwellings
- Septic System Design Plan entitled "Proposed Sewage Disposal System For: Two Existing Cottages, 3 Bedrooms Total at: 5 Valentina Way Truro, Massachusetts" dated July 6, 2023.

The subject property is 30,056± square foot lot located at the end of Valentina Way. Two small cottages built in 1953 exist on the site. The two bedroom cottage is currently served by a cesspool and is being upgraded to comply with the Truro Board of Health Regulations. The one bedroom cottage is served by a separate septic system: a septic tank and leaching pit. The property borders on Ryder Pond to the west/southwest.

The existing private water supply well serving the property is to be abandoned and a new well is proposed in order to provide a 100 foot setback between the proposed soil absorption system and the new well. The septic tank and leaching pit serving the one bedroom cottage will be abandoned and removed as it is within the setback to the new well and the one bedroom cottage will be connected to the new septic system too.

The proposed septic system is comprised of a 1500 gallon septic tank with an Advantex AX-20 innovative alternative technology, pump discharge basin, a distribution box and a soil absorption system comprised of leaching galleys in a trench configuration. The Advantex unit will reduce nitrogen to the 19mg/L standard.

**SCHOFIELD BROTHERS OF CAPE COD**  
Land Surveying and Environmental Permitting

Due to the presence of the wetland resource area and their jurisdictional overlap of the property and other site constraints, variances from the Town of Truro Board of Health Regulations Section VI, Article 9 are required for the minimum setback distances for the septic tank and soil absorption system as follows:

Minimum setback distance between a septic tank and wetland: 100' required  
62' provided between proposed septic/Advantex AX-20 tank and Ryder Pond

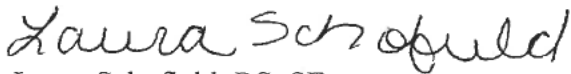
Minimum setback distance between a soil absorption system (SAS) and a wetland: 150 feet required  
106' provided between proposed SAS and Ryder Pond

In our opinion, the proposed septic system offering an innovative alternative technology is a vast improvement over the current cesspool and approval of the requested variances is respectfully requested on behalf of our client.

Please do not hesitate to contact our office if you have questions or concerns. Thank you.

Sincerely,

**Schofield Brothers of Cape Cod** ,



Laura Schofield, RS, SE  
Project Manager

cc: Christine Bernstein

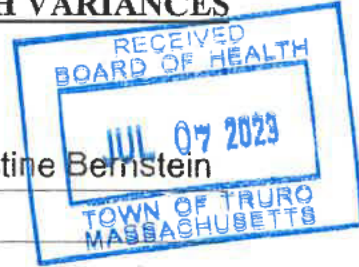
enc

Fee: \$75.00



**APPLICATION FOR BOARD OF HEALTH VARIANCES**

Date: July 4, 2023



Property Owner's Name: Estate of Marguerite Yannetty c/o Christine Bernstein

Mailing Address: [REDACTED]

Address of Property: 5 Valentina Way

Map and Parcel Number: Map # 60 Parcel # 23

Design Engineer/Sanitarian Laura A. Schofield, RS

Firm/Company Name: Schofield Brothers Phone #: 508.255.2098

Address: PO Box 101 Orleans, MA 02653

Please check type of variance requested:

Title 5 Variance Request: Section \_\_\_\_\_

Board of Health Variance Request: Section/Article see attached sheet

Laura Schofield  
Signature (Representative)

Christine Bernstein  
Signature (Property Owner)

7/6/23  
Date

7/05/23

**SCHOFIELD BROTHERS OF CAPE COD**  
Land Surveying and Environmental Permitting  
161 Cranberry Highway  
P.O. Box 101  
Orleans, MA 02653-0101  
508-255-2098 - 508-240-1215 (fax)  
E-mail: schobro@capecod.net

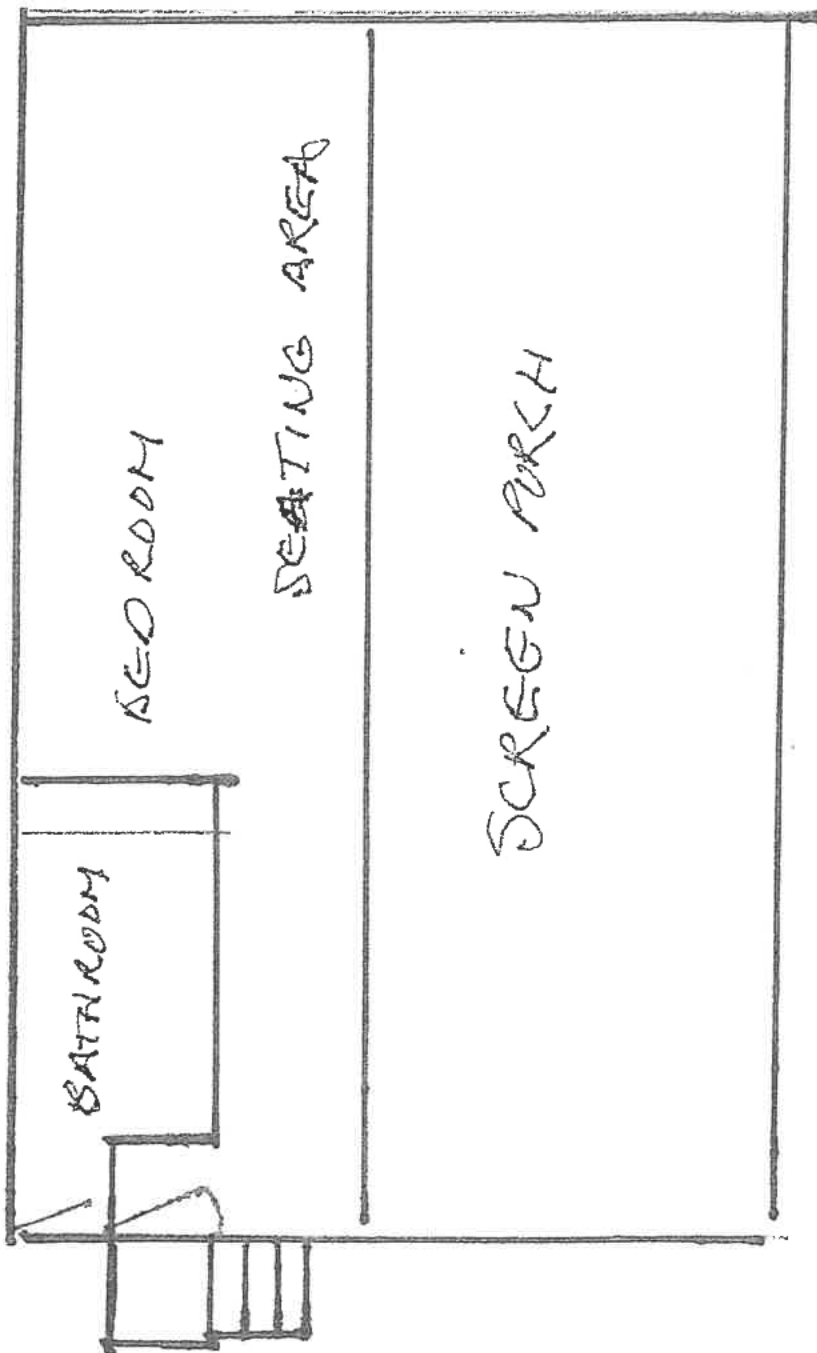
**Truro Board of Health Variance Form Attachment:**

**Truro Board of Health Variance Request:**

Variations from the Town of Truro Board of Health Regulations Section VI, Article 9 are required for the minimum setback distances for the septic tank and soil absorption system as follows:

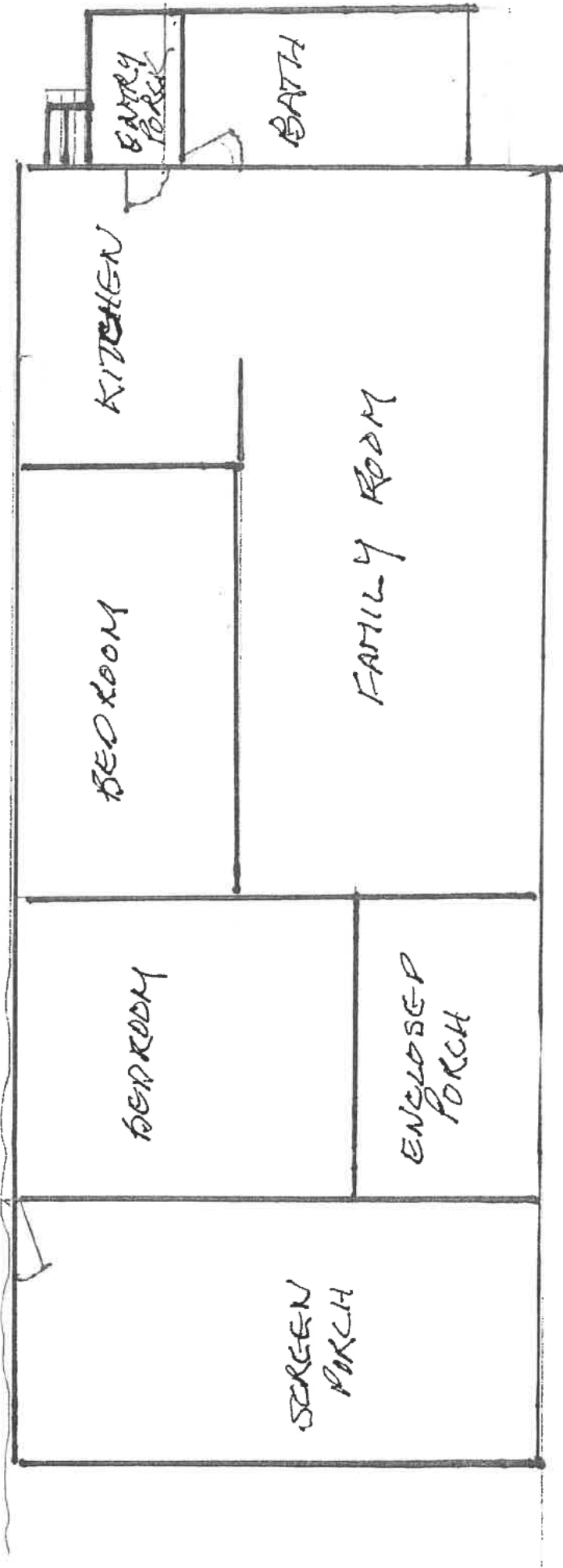
Minimum setback distance between a septic tank and wetland: 100' required  
62 provided between proposed septic/Advantex AX-20 tank and Ryder Pond

Minimum setback distance between a soil absorption system (SAS) and a wetland: 150 feet required  
106' provided between proposed SAS and Ryder Pond



5 VALENTINA WAY  
TRURO  
GUEST COTTAGES

11.22.22



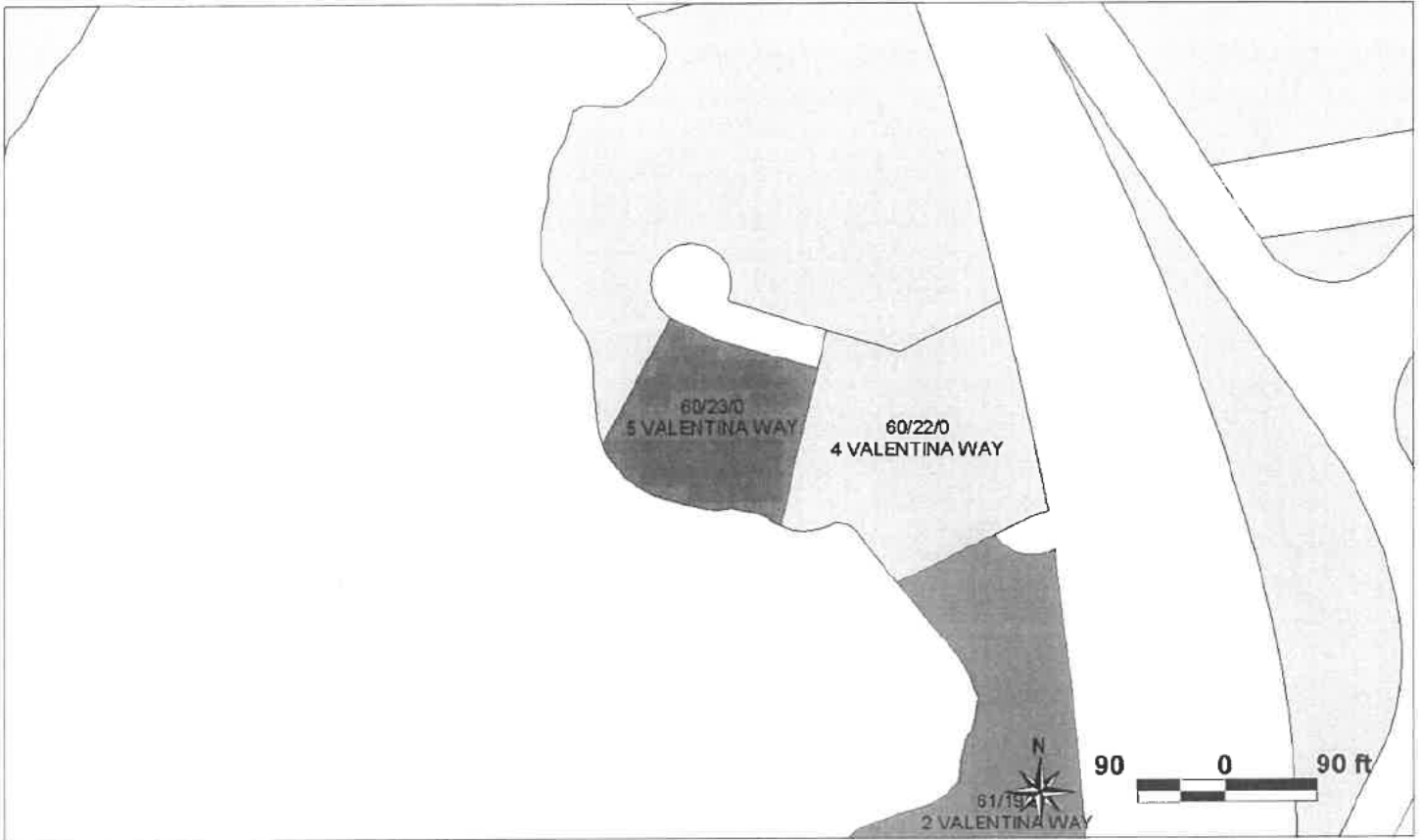
S VALENTINA WAY  
TRUJO  
MAN'S COTTAGE

11.22.22

5 Valentina Way  
 Map 60 Parcel 23  
 Board of Health

TOWN OF TRURO, MA  
 BOARD OF ASSESSORS  
 P.O. BOX 2012, TRURO MA 02666

Custom Abutters List



| Key  | Parcel ID  | Owner   | Location                     | Mailing Street                    | Mailing City | ST | ZipCd/Country |
|------|------------|---|------------------------------|-----------------------------------|--------------|----|---------------|
| 7292 | 40-999-0-E | USA-DEPT OF INTERIOR<br>Cape Cod National Seashore          | 0 CAPE COD NATIONAL SEASHORE | 99 Marconi Site Rd                | Wellfleet    | MA | 02667         |
| 3580 | 60-22-0-R  | EICHER JAMES T ET AL  | 4 VALENTINA WAY              | C/O PRATT DONNA M<br>34 TAYLOR ST | HAVERHILL    | MA | 01832         |
| 3609 | 61-19-0-R  | HICKMAN LLOYD S & MARY S &<br>YANNETTY LINDA & CHRISTINE ET | 2 VALENTINA WAY              | C/O HICKMAN<br>176 CENTER ST      | CARVER       | MA | 02330         |

LG 5/23/2023

**SCHOFIELD BROTHERS OF CAPE COD**  
Land Surveying & Environmental Permitting  
161 Cranberry Highway  
P.O. Box 101  
Orleans, MA 02653-0101  
508-255-2098 - 508-240-1215 (fax)  
E-mail: schobro@capecod.net

July 7, 2023

RE: 5 Valentina Way Septic System Upgrade

Dear Abutter;

You are being notified pursuant to the State Environmental Code Title 5 and the Truro Board of Health Regulations that the Board of Health will hold a public hearing to hear requests for variances from the local Board of Health regulations for a septic system upgrade at the above referenced address. The variances requested are as follows:

A variance from the Town of Truro Board of Health Regulations Section VI, Article 9 is required for the minimum setback distances for the septic tank and soil absorption system as follows:

Minimum setback distance between a septic tank and wetland: 100' required  
62' provided between proposed septic/Advantex AX-20 tank and Ryder Pond

Minimum setback distance between a soil absorption system (SAS) and a wetland: 150 feet required  
106' provided between proposed SAS and Ryder Pond

Copies of the site plan are on file at the Board of Health and may be viewed prior to the public hearing to be held on July 18, 2023. The variance hearing begins at 4:30 pm and will be held remotely.

**Remote Meeting Access Instructions:** For citizens in Truro the meeting may be viewed on Channel 18. It may also be found at the Town web-site home page at [www.Truro-ma.gov](http://www.Truro-ma.gov). "Truro Channel 18" is found under "Helpful Links". To view, click on the green "Watch" button. To provide comment remotely during the meeting, call 1-866-899-4679. Or you may access the meeting from your computer, tablet, or smartphone at <https://global.gotomeeting.com>. Please refer to the published meeting agenda at the Town of Truro website for access codes and further information.

Sincerely,

**Schofield Brothers of Cape Cod**

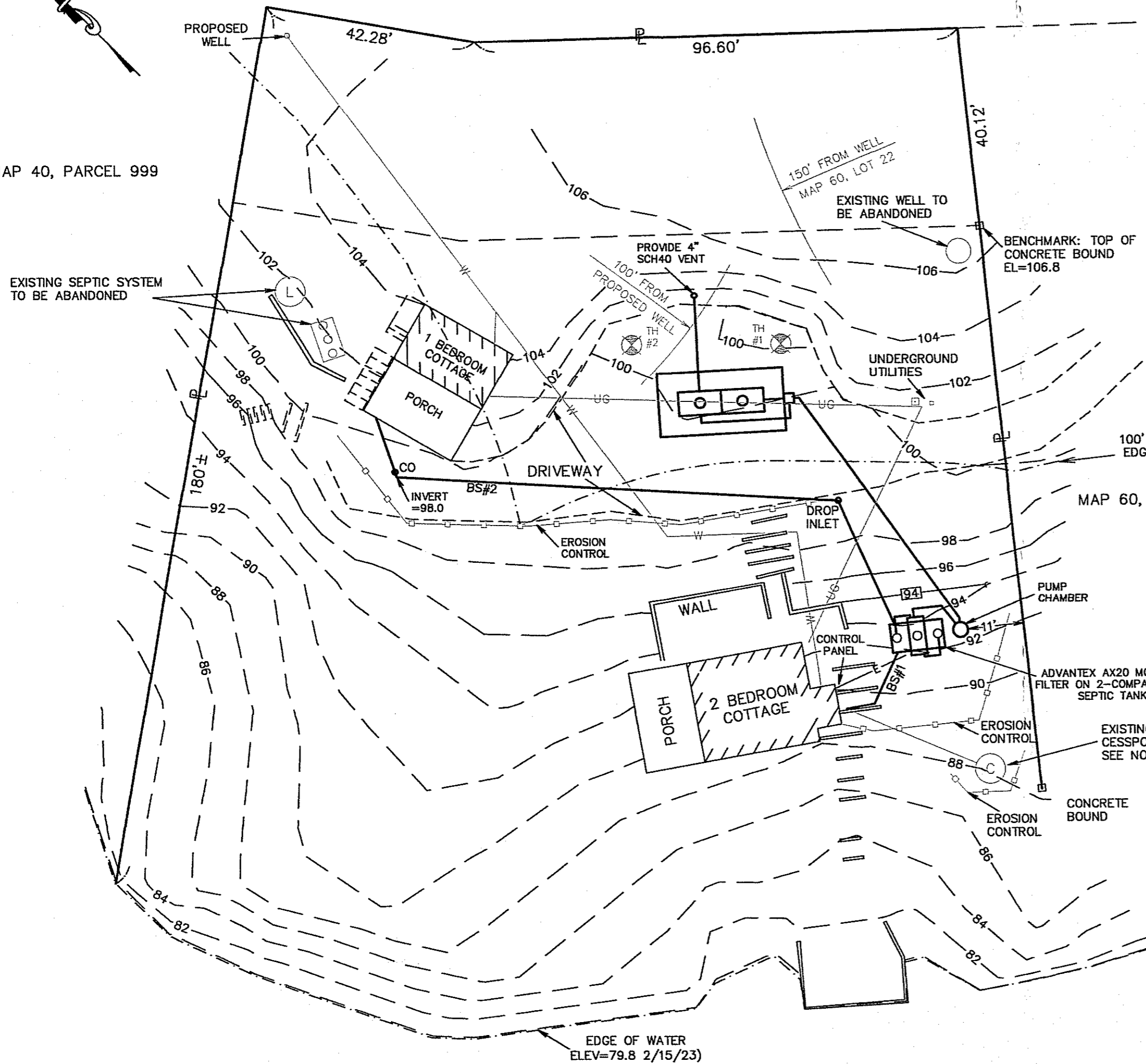


Laura Schofield, RS, SE  
Project Manager



**PLOT PLAN**  
 SCALE: 1 in. = 20 ft.  
 ASSESSOR'S MAP 60 PARCEL 23  
 LOT AREA: 30,056 ±SQ FT

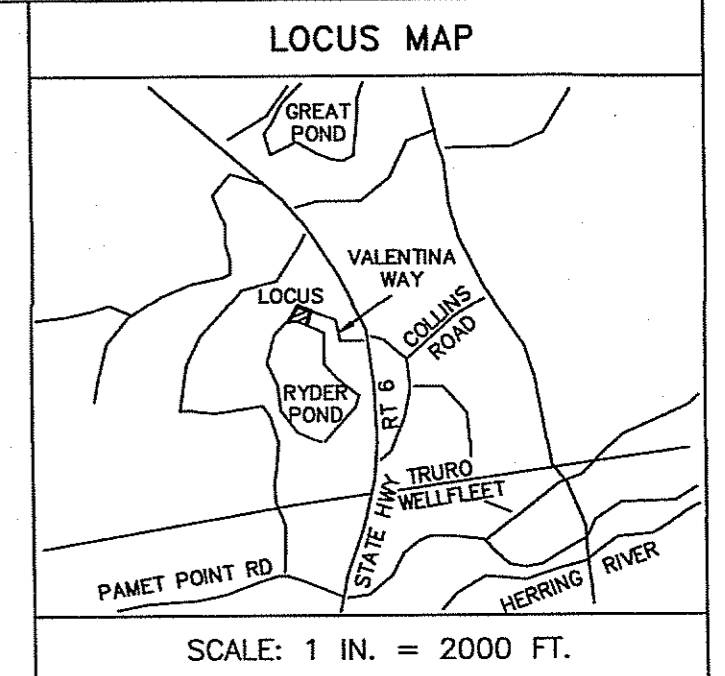
MAP 40, PARCEL 999



RYDER POND  
 EDGE OF WATER  
 ELEV=79.8 2/15/23)

| DEEP TEST HOLE OBSERVATION LOG #1  |                         |              |  |                      |               |  |
|--|-------------------------|--------------|--|----------------------|---------------|--|
| DATE: NOVEMBER 18, 2022  |                         |              | JOB: 0-12614                             |                      |               |  |
| PERFORMED BY: LAURA A. SCHOFIELD, RS, SE   |                         |              | WITNESSED BY: COURTNEY WARREN, TRURO BOH |                      |               |  |
| ELEVATION (FT)   | DEPTH FROM SURFACE (IN) | SOIL HORIZON | SOIL TEXTURE (USDA)                      | SOIL COLOR (MUNSELL) | SOIL MOTTLING | OTHER  |
| 100.0-90.0   | 0-120                   | C            | SAND                                     | 10YR4/6              | NO            | MED-COARSE TEST HOLE PERFORMED IN A PREVIOUSLY DISTURBED AREA. A&B HORIZON WERE ABSENT |
| PARENT GEOLOGICAL MATERIAL: GLACIAL OUTWASH  |                         |              | STANDING WATER IN HOLE: NO               |                      |               |  |
| WEEPING FROM FACE: NO  |                         |              | DEPTH TO BEDROCK:                        |                      |               |  |
| ESTIMATED SEASONAL HIGH GROUNDWATER AT EL. = AT ELEV. 80±                                |                         |              |  |                      |               |  |
| PERCOLATION TEST: TOP OF PERC. AT 30", 24 GAL. ABSORBED IN 4:33 MIN., PERC. RATE < 2 MPI |                         |              |  |                      |               |  |

| DEEP TEST HOLE OBSERVATION LOG #2                         |                         |              |  |                      |               |  |
|---|-------------------------|--------------|--|----------------------|---------------|--|
| DATE: NOVEMBER 18, 2022                                   |                         |              | JOB: 0-12614                             |                      |               |  |
| PERFORMED BY: LAURA A. SCHOFIELD, RS, SE                  |                         |              | WITNESSED BY: COURTNEY WARREN, TRURO BOH |                      |               |  |
| ELEVATION (FT)  | DEPTH FROM SURFACE (IN) | SOIL HORIZON | SOIL TEXTURE (USDA)                      | SOIL COLOR (MUNSELL) | SOIL MOTTLING | OTHER  |
| 100.4-90.4  | 0-120                   | C            | SAND                                     | 10YR4/6              | NO            | MED-COARSE TEST HOLE PERFORMED IN A PREVIOUSLY DISTURBED AREA. A&B HORIZON WERE ABSENT |
| PARENT GEOLOGICAL MATERIAL: GLACIAL OUTWASH               |                         |              | STANDING WATER IN HOLE: NO               |                      |               |  |
| WEEPING FROM FACE: NO                                     |                         |              | DEPTH TO BEDROCK:                        |                      |               |  |
| ESTIMATED SEASONAL HIGH GROUNDWATER AT EL. = AT ELEV. 80± |                         |              |  |                      |               |  |
| PERCOLATION TEST:   |                         |              |  |                      |               |  |



**GENERAL NOTES**

- ELEVATIONS REFER TO AN ASSUMED DATUM. SEE BENCHMARK ON PLAN
- ALL CONSTRUCTION AND MATERIALS TO CONFORM TO TITLE 5 OF THE MASSACHUSETTS STATE ENVIRONMENTAL CODE AND THE BOARD OF HEALTH REQUIREMENTS FOR THE TOWN OF TRURO.
- ANY CHANGES TO THIS PLAN MUST BE APPROVED BY THE BOARD OF HEALTH AND SCHOFIELD BROTHERS OF CAPE COD.
- FOR PROPER PERFORMANCE, THE SEPTIC TANK SHOULD BE INSPECTED AT LEAST ONCE PER YEAR. THE TANK SHOULD BE PUMPED WHEN THE TOTAL DEPTH OF SCUM AND SOLIDS EXCEEDS 1/3 OF ITS LIQUID DEPTH.
- SCHOFIELD BROTHERS OF CAPE COD DOES NOT ASSUME RESPONSIBILITY FOR MATERIALS ENCOUNTERED DURING EXCAVATION.
- ALL UNSUITABLE OR DELETERIOUS MATERIAL ENCOUNTERED MUST BE EXCAVATED AND REMOVED TO A DISTANCE OF 5 FEET FROM ALL SIDES OF THE SOIL ABSORPTION SYSTEM (S.A.S) AND TO A DEPTH AT WHICH THE C HORIZON IS ENCOUNTERED. BACKFILL WITH CLEAN SAND MATERIAL MEETING TITLE 5 SPECIFICATIONS TO APPROX. ELEVATION 96.5. CONTACT SCHOFIELD BROTHERS IF ANY DOUBT OR QUESTIONS ARISE REGARDING SOIL QUALITY.
- INSTALLATION CONTRACTOR SHALL CONTACT SCHOFIELD BROTHERS PRIOR TO BACKFILLING FOR SYSTEM CERTIFICATION.
- THE EXISTING CESSPOOL AND LEACH PIT ARE TO BE PUMPED, ABANDONED AND COLLAPSED OR FILLED WITH CLEAN SAND. THE EXISTING SEPTIC TANK SHALL BE PUMPED, RUPTURED AND FILLED.
- EXISTING BUILDING SEWER INVERTS SHALL BE VERIFIED IN FIELD PRIOR TO COMPONENT INSTALLATION. CONTACT SCHOFIELD BROTHERS IF SIGNIFICANT DISCREPANCIES EXIST.
- SITE RESTORATION REQUIRES ALL STRIPPED TOPSOIL AND SUBSOIL TO BE STOCKPILED AND REUSED AT OWNERS OPTION. RE-SPREAD OVER DISTURBED AREAS TO PROMOTE OPTIMAL GROWTH.
- ALL SEPTIC SYSTEM COMPONENTS ARE DESIGNED FOR A MINIMUM H-10 LOADING. ANY COMPONENT THAT WILL BE SUBJECT TO VEHICLE OR OTHER HEAVY EQUIPMENT TRAFFIC SHALL BE INSTALLED WITH H-20 LOADING CAPACITY.
- UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION.
- NO KNOWN WELLS EXIST WITHIN 200' OF THE PROPOSED LEACHING AREA EXCEPT THOSE THAT ARE SHOWN.
- LEACHING AREA STONE SHALL BE OVERLAIN WITH MIRAFI 500x FILTER FABRIC. THE FILTER FABRIC SHALL EXTEND 12" BEYOND THE STONE.

**GENERAL NOTES (CONTINUED)**

- WHEREVER A SEPTIC SYSTEM LINE CROSSES A WATER SERVICE LINE, BOTH PIPES SHALL BE CONSTRUCTED OF CLASS 150 PRESSURE PIPE AND SHALL BE PRESSURE TESTED TO ASSURE WATERTIGHTNESS OR SLEEVED WITH A 20" PIPE SECTION CENTERED ON THE CROSSING.

| LEGEND |  |
|--------|--|
|        | PROPOSED CONTOUR LINE                      |
|        | EXISTING CONTOUR                           |
|        | WATER LINE                                 |
|        | PROPOSED 1500 GALLON, ADVANTEX SEPTIC TANK |
|        | PROPOSED DISTRIBUTION BOX                  |
|        | PROPOSED LEACHING AREA                     |
|        | EXISTING SPOT ELEVATIONS                   |
|        | TEST HOLE LOCATIONS                        |
|        | PROPERTY LINE                              |
|        | PROPOSED SPOT ELEVATION                    |
|        | OH OVERHEAD UTILITIES                      |
|        | UG UNDERGROUND UTILITIES                   |
|        | FG FINISHED GRADE                          |
|        | UP UTILITY POLE                            |
|        | TOF TOP OF FOUNDATION ELEVATION            |
|        | BS BUILDING SEWER                          |
|        | CO CLEAN OUT                               |

RECEIVED  
 BOARD OF HEALTH  
 JUL 07 2023  
 TOWN OF TRURO  
 MASSACHUSETTS

VARIANCES FROM THE TOWN OF TRURO BOARD OF HEALTH REGULATIONS SECTION VI, ARTICLE 9 ARE REQUIRED FOR THE MINIMUM SETBACK DISTANCES FOR THE SEPTIC TANK AND SOIL ABSORPTION SYSTEM AS FOLLOWS:

MINIMUM SETBACK DISTANCE BETWEEN A SEPTIC TANK AND WETLAND: 100' REQUIRED  
 62' PROVIDED BETWEEN PROPOSED SEPTIC/ADVANTEX AX-20 TANK AND RYDER POND.

MINIMUM SETBACK DISTANCE BETWEEN A SOIL ABSORPTION SYSTEM AND A WETLAND:  
 150' REQUIRED  
 106' PROVIDED BETWEEN PROPOSED SAS AND RYDER POND.

ROBERT JOHN FREEMAN  
 No. 32655  
 PROFESSIONAL LAND SURVEYOR

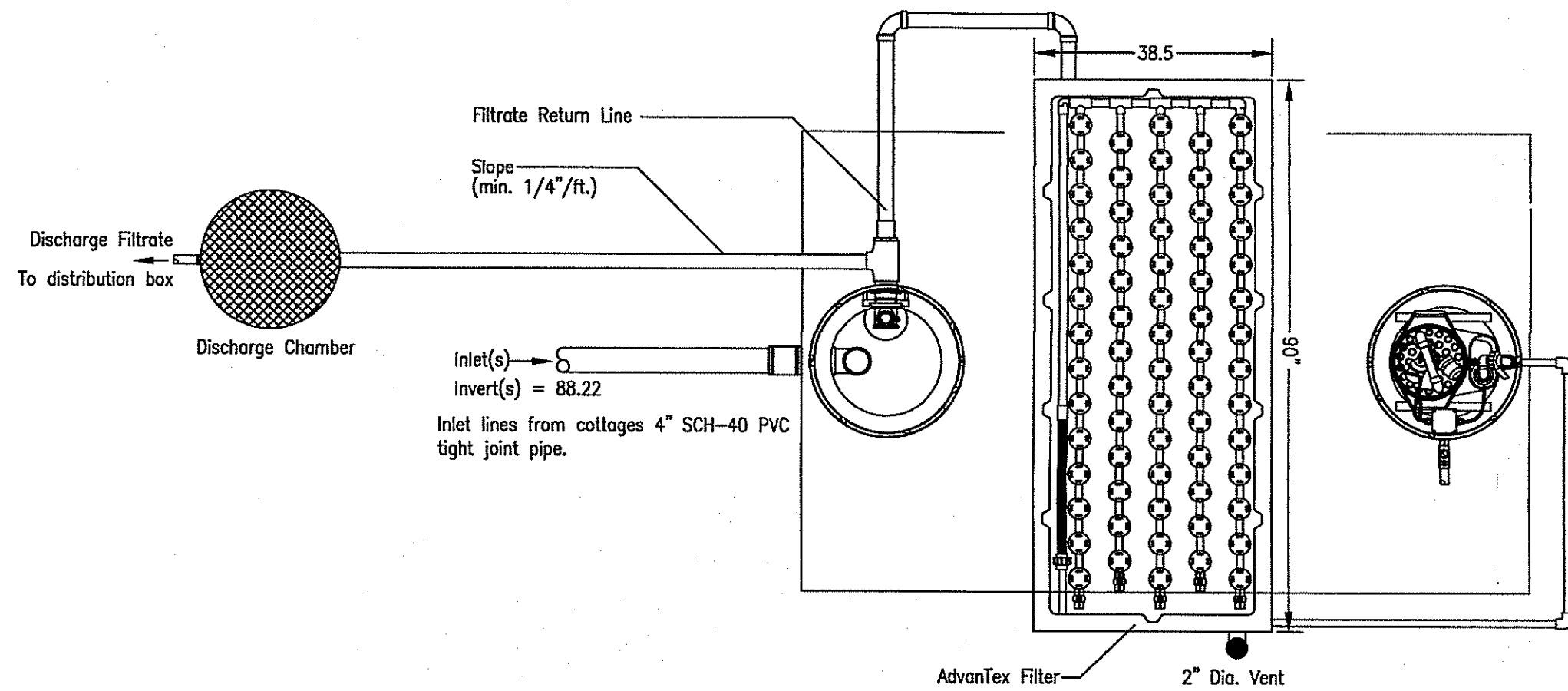
| DESIGN CALCULATIONS   |  |
|---|--|
| 1. ESTIMATED HYDRAULIC LOADING:<br>3 BEDROOMS AT 110 GPD PER BEDROOM = 330 GPD<br>GARBAGE GRINDER IS NOT ALLOWED WITH THIS DESIGN   |  |
| 2. SEPTIC TANK SIZE:<br>AVERAGE DAILY FLOW = 330 GPD X 2 DAYS = 660 GALLONS<br>SEPTIC TANK PROVIDED = 1500 GALLONS  |  |
| 3. DESIGN PERCOLATION RATE = <2 MINUTES PER INCH<br>SOIL TEXTURE SANDS, CLASS 1<br>310 CMR 15.242 EFFLUENT LOADING RATE = 0.74 GPD/SF   |  |
| 4. LEACHING AREA:<br>TOTAL SIDEWALL AREA PROVIDED = 151.2 SF X 0.74 GPD/SF = 111.9 GPD<br>TOTAL BOTTOM AREA PROVIDED = 320 SF X 0.74 GPD/SF = 236.8 GPD<br>MAXIMUM ALLOWABLE LOADING UNDER TITLE 5 = 348 GPD<br>ACTUAL HYDRAULIC LOADING = 330 GPD (SEE 1.)<br>DESIGNED LEACHING AREA EXCEEDS LEACHING AREA REQUIRED UNDER BOTH TITLE 5 AND THE TOWN OF TRURO BOARD OF HEALTH REGULATIONS |  |
| 5. NITROGEN SENSITIVE AREA LOADING CALCULATION:<br>LOT SIZE REQUIRED = 330 GPD X 10,000 SF/110 GPD = 30,000 SF<br>LOT SIZE PROVIDED = 30,056 SF   |  |

**PROPOSED SEWAGE DISPOSAL SYSTEM**

|  |                  |
|--|------------------|
| FOR: TWO EXISTING COTTAGES, 3 BEDROOMS TOTAL<br>AT: 5 VALENTINA WAY<br>TRURO, MA   |                  |
| ASSESSOR'S MAP: 60   | PARCEL: 23       |
| APPLICANT: ESTATE OF MARGUERITE YANNETTY<br>5 VALENTINA WAY<br>TRURO, MA   |                  |
| DATE: JULY 6, 2023   | JOB #: 0-12614   |
| DESIGNED BY:<br>LAS  | DRAWN BY:<br>LAS |
| CHECKED BY:<br>LAS   |                  |
| <br>SCHOFIELD BROTHERS OF CAPE COD<br>LAND SURVEYING - ENVIRONMENTAL PERMITTING<br>P.O. BOX 101, 161 CRANBERRY HIGHWAY ORLEANS, MA<br>(508) 255-2098 |                  |

# AdvanTex™ AX20 Mode3B System Details

NTS

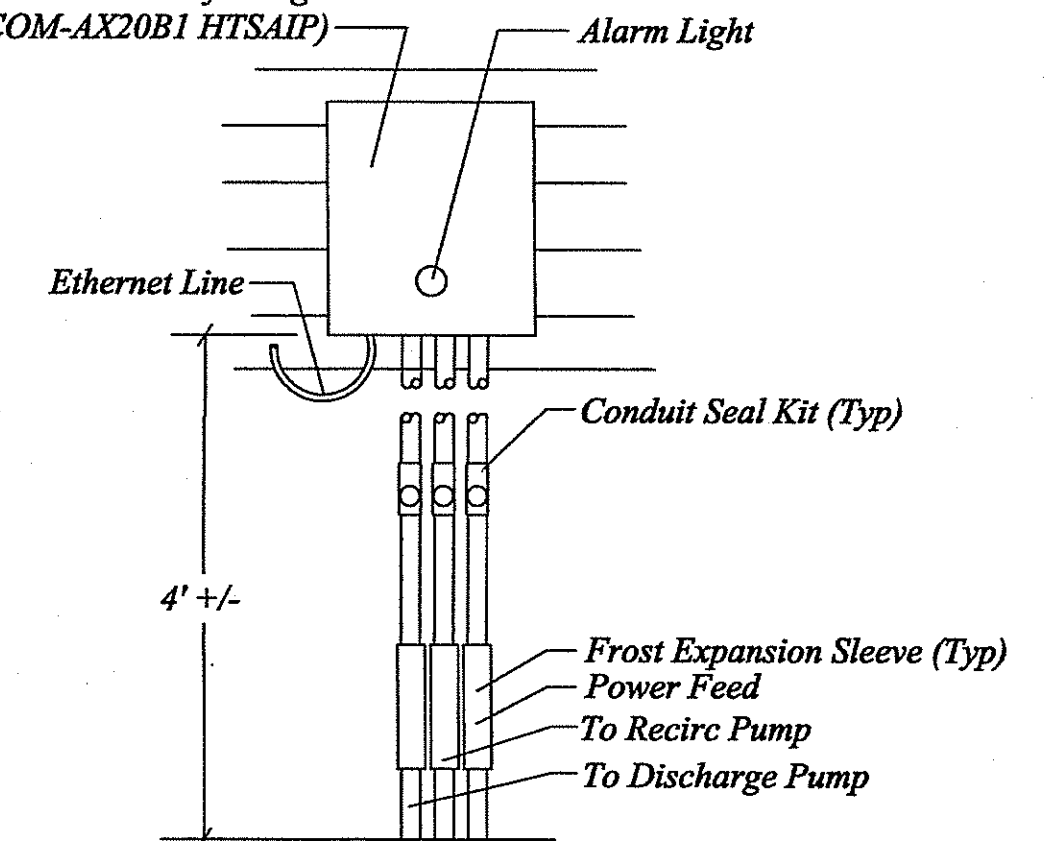


Top View

## General Notes:

1. Ethernet Line is required.
2. Set Treatment Pod over tank on solid level base of 5" clean sand or pea stone.
3. Tank coordination and approval by Cape Cod WinWater is required prior to construction. Tank must meet minimum structural standards and be tested for watertightness.
4. Float and RSV settings based on typical tank dimensions - to be verified upon tank approval.
5. Manufacturer requires this system to be installed and maintained by a trained/authorized installer/maintenance provider in accordance with the manufacturer's instructions. Failure to maintain an ongoing O&M contract may result in voiding of any/all warranties. Other State and/or Local requirements or regulations may apply.
6. For more details regarding components, installation or operation of this system; please contact Cape Cod WinWater 508-862-0166, or an Orenco representative at 1-800-348-9843

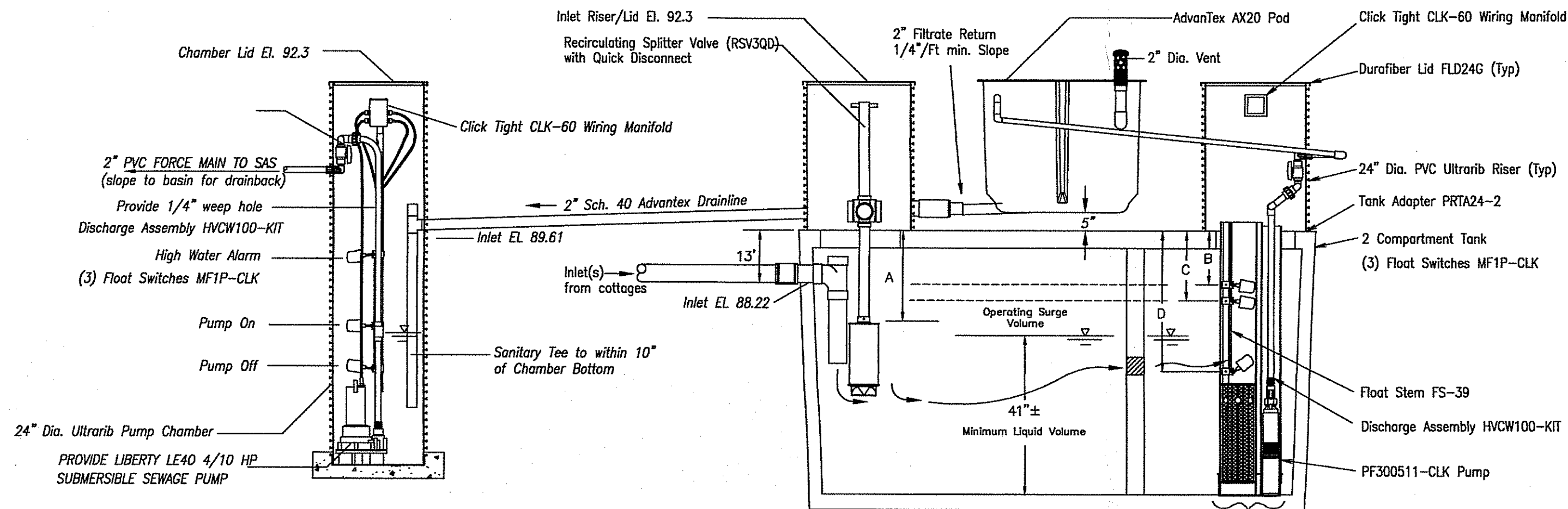
Control Panel Mounted On  
Pressure Treated H Frame with concrete footings  
(VCOM-AX20B1 HTSAIP)



## Electrical Notes: (Per Orenco Systems, Inc.)

1. Required Circuits from main breaker panel:  
(1) 20A BREAKER FOR THE ORENCO PUMP  
(1) 10A BREAKER FOR THE CONTROLS  
A SEPARATE BREAKER WILL BE REQUIRED FOR THE LIBERTY PUMP -

\* CONTRACTOR TO CONFIRM WITH ORENCO REPRESENTATIVE ELECTRICAL REQUIREMENTS FOR PUMPS AND CONTROL PANEL



Side View

No Scale

USE ACME-SHOREY PRECAST CONCRETE ADVANTEX 1500 GALLON (H-10) MONO 2-COMPARTMENT PROCESS TANK OR APPROVED EQUAL PLACE 6" OF CRUSHED STONE ON TO A LEVEL, STABLE, MECHANICALLY COMPACTED BASE.

SETTINGS A-D TO BE SET IN THE FIELD DURING INSTALLATION AS DETERMINED BY AUTHORIZED ORENCO REPRESENTATIVE

ADDITIONAL STORAGE IS PROVIDED IN THE ADVANTEX UNIT, ABOVE THE HIGH WATER LEVEL.

\* CONTRACTOR TO CONFIRM WITH ORENCO REPRESENTATIVE ELECTRICAL REQUIREMENTS FOR PUMPS AND CONTROL PANEL.

OWNER TO APPROVE CONTROL PANEL LOCATION

NOTE: DISCHARGE ASSEMBLY DRAWN TO SHOW KEY COMPONENTS - ALL PIPING AND FITTINGS SHALL BE INSTALLED TO ENSURE DRAIN-BACK INTO THE PUMP BASIN TO AVOID FREEZING OF SHALLOW BURY DISCHARGE PIPING (WHERE APPLICABLE).

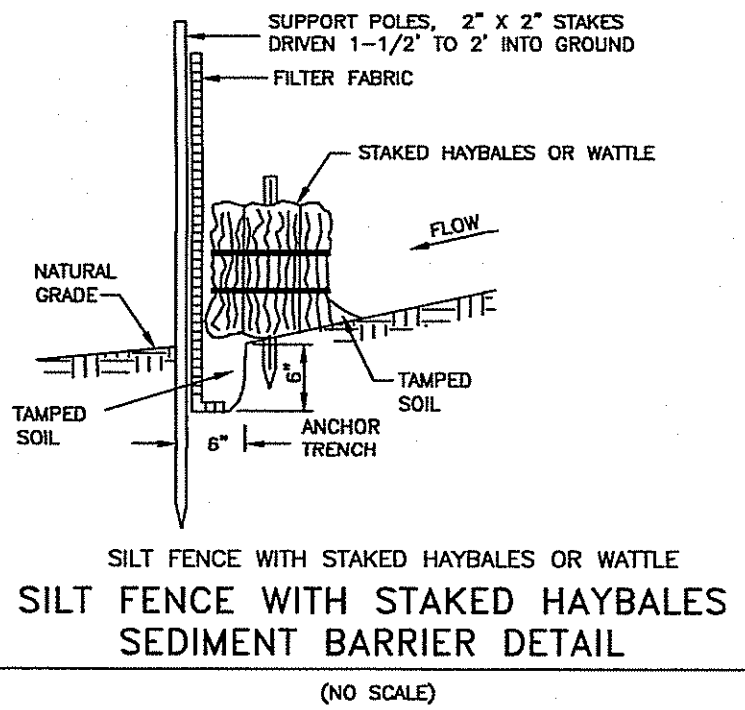
## DISCHARGE PUMP FLOAT SETTING CALCULATIONS

TOTAL DAILY FLOW = 330 GALLON/DAY  
TOTAL CYCLES PER DAY: 330 GALLONS/10 DOSES/DAY = 33 GALLONS/DOSE  
29.3 GAL/DOSE + 10 GAL OF FORCE MAIN FLOW BACK VOLUME = 39.3 GALLONS/DOSE  
DOSE SETTINGS: 39.3 GALLON DOSE / 23.50 GALLON/LIQ. FT. = 1.7 FT.  
PUMP SHALL BE CAPABLE OF OPERATING AT 45 GPM @ 17' TDH

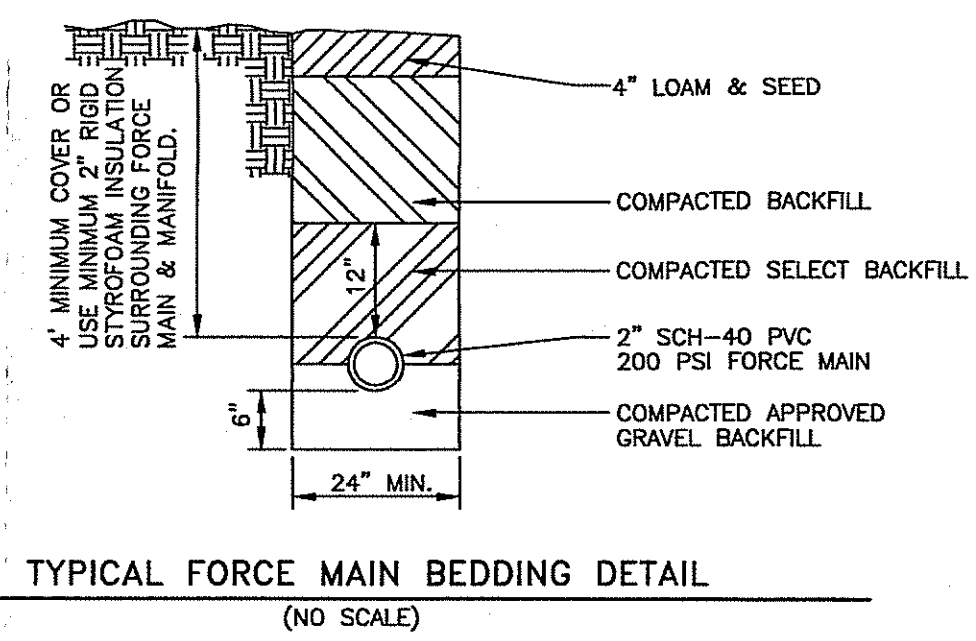
PUMP CHAMBER ELEVATIONS (72" CHAMBER):

RIM = 92.30 (TOP OF CHAMBER)  
INLET = 89.61  
HWA = 89.44 (2" BELOW INLET)  
PUMP ON = 89.00  
PUMP OFF = 87.30  
BOTTOM CHAMBER = 86.30

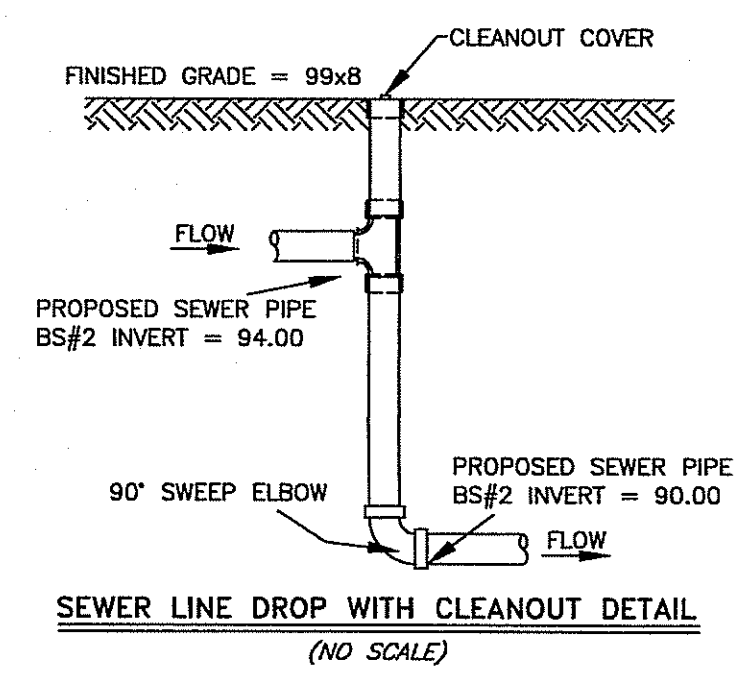
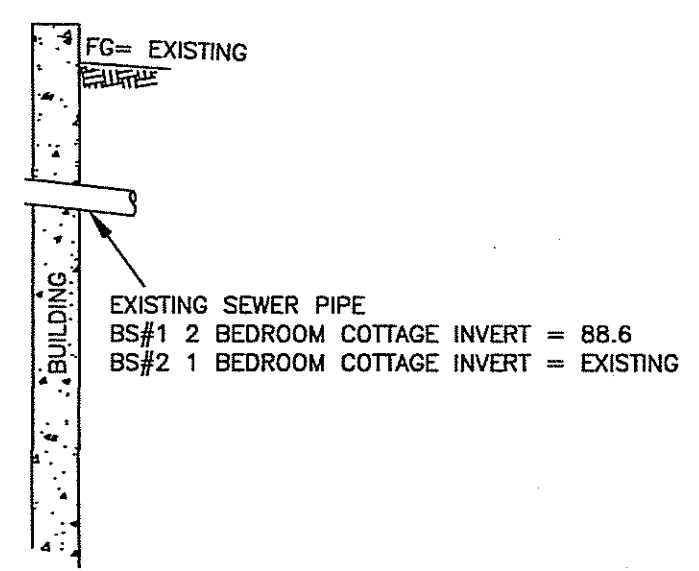
| PROPOSED SEWAGE DISPOSAL SYSTEM  |                    |
|--|--------------------|
| FOR: TWO EXISTING COTTAGES, 3 BEDROOMS TOTAL   |                    |
| AT: 5 VALENTINA WAY<br>TRURO, MA   |                    |
| ASSESSOR'S MAP: 60   | PARCEL: 23         |
| APPLICANT: ESTATE OF MARGUERITE YANNETTY<br>5 VALENTINA WAY<br>TRURO, MA   |                    |
| DATE: JULY 6, 2023   | JOB #: 0-12614     |
| DESIGNED BY:<br>LAS  | CHECKED BY:<br>LAS |
| DRAWN BY:<br>LAS   |                    |
| REGISTERED PROFESSIONAL ENGINEER<br>LAURA A. SCHOFIELD<br>No. 1124   |                    |
| SCHOFIELD BROTHERS OF CAPE COD<br>LAND SURVEYING - ENVIRONMENTAL PERMITTING<br>P.O. BOX 101, 161 CRANBERRY HIGHWAY ORLEANS, MA<br>(508) 255-2098 |                    |



- CONSTRUCTION & EROSION CONTROL NOTES**
1. PRIOR TO ANY DISTURBANCE OF THE SITE, A STAKED SILT FENCE / LIMIT OF WORK SHALL BE INSTALLED IN THE LOCATION SHOWN. THE SILT FENCE SHALL REMAIN IN PLACE UNTIL ALL AREAS UPGRADIENT FROM THE BARRIER HAVE BEEN STABILIZED.
  2. ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED OR WHERE SPECIAL STABILIZATION MEASURES OR LANDSCAPE PLANTINGS ARE NOT PROPOSED SHALL HAVE 4"-6" OF LOAM ADDED AND SEEDED WITH A RYE FESCUE MIX.
  3. ALL AREAS OUTSIDE OF THE LIMIT OF WORK ARE TO BE LEFT UNDISTURBED. DURING THE SITE WORK, ALL PERSONS AND EQUIPMENT SHALL STAY OUT OF THESE AREAS AND PRESERVE EXISTING VEGETATION.

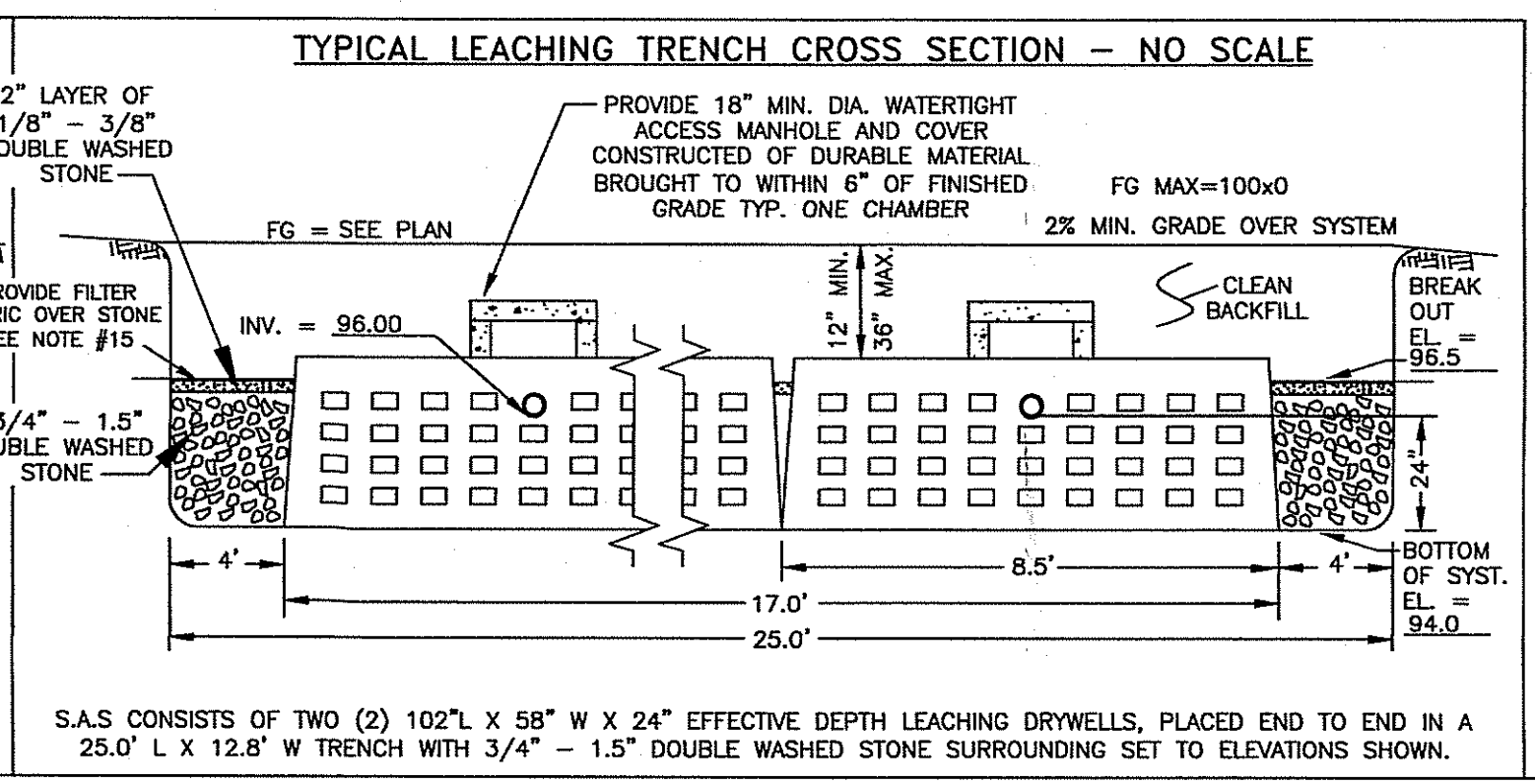
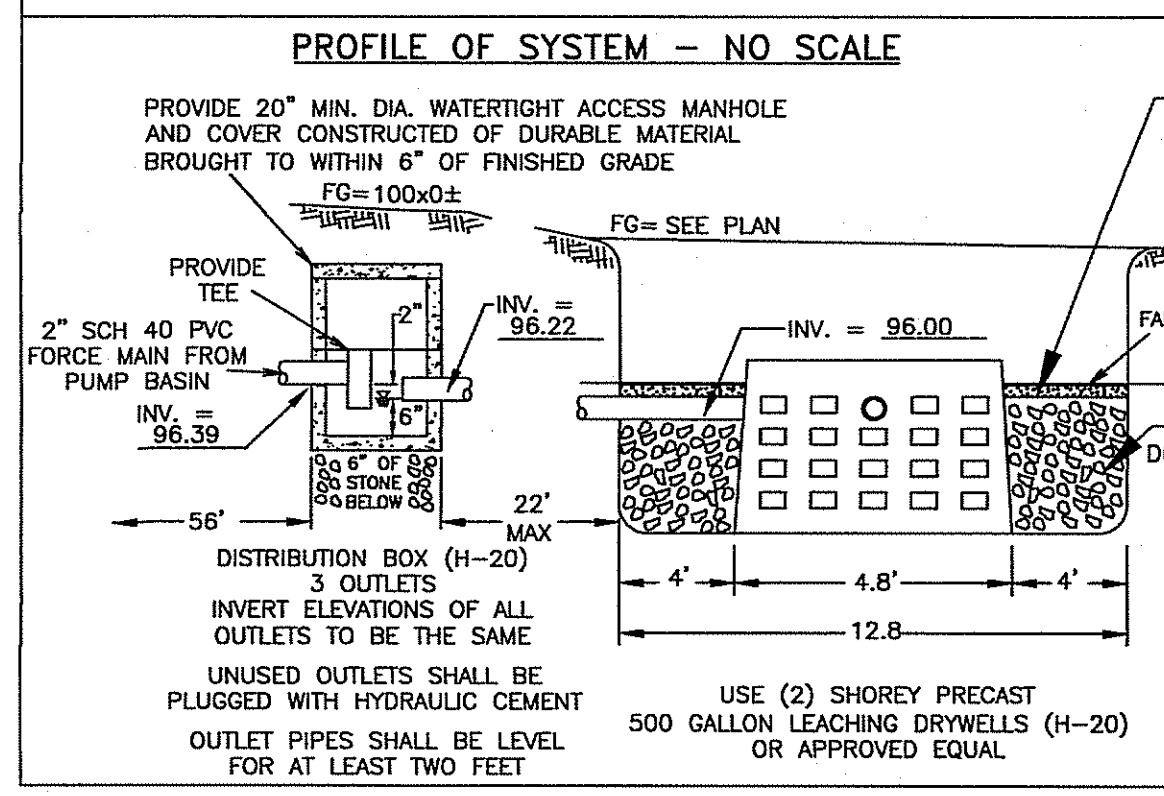
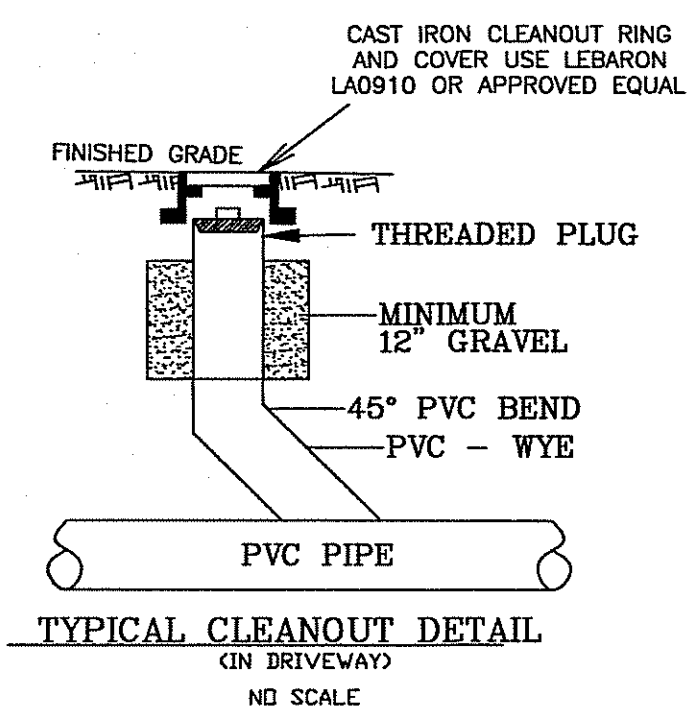


FORCE MAIN SHALL BE LAID IN A "CLASS B" TRENCH BEDDING .  
 ALL PIPING OUTSIDE THE PUMP CHAMBER WHICH IS LESS THAN FOUR (4) FEET BELOW FINAL FINISHED GRADE SHALL BE SURROUNDED WITH A MINIMUM OF TWO (2) INCHES OF RIGID STYROFOAM INSULATION, OR SHALL DRAIN BACK TO PUMP/DISCHARGE CHAMBER. PROVIDE CONCRETE THRUST BLOCKING AT ALL FORCE MAIN BENDS WITH MINIMUM SOIL BEARING SURFACE AREA OF ONE SQUARE FOOT.



\*BUILDING SEWERS WITH A SLOPE GREATER THAN OR EQUAL TO 12% SHALL BE PROVIDED WITH A DROP CLEANOUT.

ALL PIPING SHALL BE 4" SCH-40 PVC TIGHT JOINT PIPE UNLESS OTHERWISE NOTED.



**PROPOSED SEWAGE DISPOSAL SYSTEM**

FOR: TWO EXISTING COTTAGES, 3 BEDROOMS TOTAL  
 AT: 5 VALENTINA WAY  
 TRURO, MA

ASSESSOR'S MAP: 60 PARCEL: 23

APPLICANT: ESTATE OF MARGUERITE YANNETTY  
 5 VALENTINA WAY  
 TRURO, MA

DATE: JULY 6, 2023

DESIGNED BY: LAS  
 DRAWN BY: LAS  
 CHECKED BY: LAS

JOB #: 0-12614

SCHOFIELD BROTHERS OF CAPE COD  
 LAND SURVEYING - ENVIRONMENTAL PERMITTING  
 P.O. BOX 101, 161 GRANBERRY HIGHWAY ORLEANS, MA  
 (508) 255-2098

*(Professional Seal of Laura A. Schofield, Registered Professional Engineer, No. 119)*

**SCHOFIELD BROTHERS OF CAPE COD**  
Land Surveying and Environmental Permitting  
161 Cranberry Highway  
P.O. Box 101  
Orleans, MA 02653-0101  
508-255-2098 - 508-240-1215 (fax)  
E-mail: schobro@capecod.net

July 3, 2023

Truro Board of Health  
24 Town Hall Road  
Truro, MA 02666

RE: Seven Amity Lane

Dear Members of the Board;

Enclosed please find the following with respect to a septic system upgrade requiring local variances at the above referenced address:

- Town of Truro Application for Board of Health Variances Form
- Filing Fee in the amount of \$75.00
- Certified Abutters List from Truro Assessors Office
- Copy of Abutter Notification Letter sent by Certified Mail to abutters
- Floor Plan of Existing Dwelling
- Septic System Design Plan entitled "Proposed Sewage Disposal System for an Existing Four Bedroom Dwelling at 7 Amity Lane Truro, Massachusetts" dated July 5, 2023.

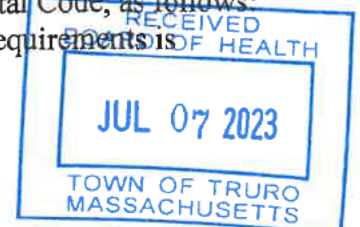
The subject property is a two acre lot located at the end of Amity Lane. A four bedroom dwelling built in 1820 exists on the site. The dwelling is currently served by a cesspool and is being upgraded to comply with the Truro Board of Health Regulations.

The topography of the lot slopes to the west and southwest from the end of Amity Lane. The property borders on the large wetland system associated with the Little Pamet River. Riverfront Area to the Little Pamet River overlaps approximately half of the property. Land Subject to Coastal Storm Flowage is delineated by elevation 13 and is shown on the site plan. A bordering vegetated wetland associated with the Little Pamet River wraps around the property as shown on the site plan and there is a small section of coastal bank

The existing private water supply well serving the property is to be relocated in order to provide a 100 foot setback between the proposed soil absorption system and the re-located well.

The proposed septic system is comprised of a 1500 gallon septic tank with an Advantex AX-20 innovative alternative technology, pump discharge basin, a distribution box and a soil absorption system comprised of leaching galleys in a trench configuration.

A Local upgrade approval is requested pursuant to Title V, the State Environmental Code, as follows:  
15.405(1)(c) A 21% reduction in the required subsurface disposal area design requirements is requested. (25% reduction max allowed)



**SCHOFIELD BROTHERS OF CAPE COD**  
Land Surveying and Environmental Permitting

Due to the presence of the wetland resource areas and their jurisdictional overlap of the property, variances from the Town of Truro Board of Health Regulations Section VI, Article 9 are required for the minimum setback distances for the septic tank and soil absorption system as follows:

Minimum setback distance between a septic tank and wetland: 100' required

0' provided between proposed septic/Advantex AX-20 tank and Riverfront Area (within Riverfront)

36' provided between proposed septic/Advantex AX-20 tank and Land Subject to Coastal Storm Flowage.

80' provided between proposed septic/Advantex AX-20 tank and coastal bank

95' provided between proposed septic/Advantex AX-20 tank and bordering vegetated wetland.

Minimum setback distance between a soil absorption system and a wetland: 150 feet required

37' provided between proposed SAS and Riverfront Area

59' provided between proposed SAS and Land Subject to Coastal Storm Flowage

114' provided between proposed SAS and Bordering Vegetated wetland

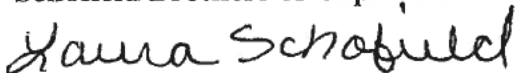
146' provided between proposed SAS and Coastal Bank

In our opinion, the proposed septic system offering an innovative alternative technology is a vast improvement over the current cesspool and approval of the requested variances is respectfully requested on behalf of our client.

Please do not hesitate to contact our office if you have questions or concerns. Thank you.

Sincerely,

**Schofield Brothers of Cape Cod**



Laura Schofield, RS, SE  
Project Manager

cc: Irene Selver & Veronica Selver

enc



**SCHOFIELD BROTHERS OF CAPE COD**  
Land Surveying and Environmental Permitting  
161 Cranberry Highway  
P.O. Box 101  
Orleans, MA 02653-0101  
508-255-2098 - 508-240-1215 (fax)  
E-mail: schobro@capecod.net

**Truro Board of Health Variance Form Attachment:**

**Title 5 Local Upgrade Approval Request:**

A Local upgrade approval is requested pursuant to Title V, the State Environmental Code, as follows:  
15.405(1)(c) A 21% reduction in the required subsurface disposal area design requirements is requested. (25% reduction max allowed)

**Truro Board of Health Variance Request:**

Variances from the Town of Truro Board of Health Regulations Section VI, Article 9 are required for the minimum setback distances for the septic tank and soil absorption system as follows:

Minimum setback distance between a septic tank and wetland: 100' required

0' provided between proposed septic/Advantex AX-20 tank and Riverfront Area (within Riverfront)

36' provided between proposed septic/Advantex AX-20 tank and Land Subject to Coastal Storm Flowage.

80' provided between proposed septic/Advantex AX-20 tank and coastal bank

95' provided between proposed septic/Advantex AX-20 tank and bordering vegetated wetland.

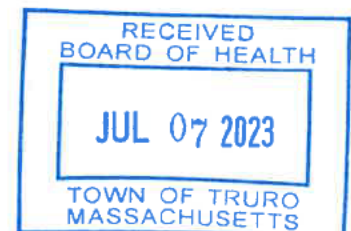
Minimum setback distance between a soil absorption system and a wetland: 150 feet required

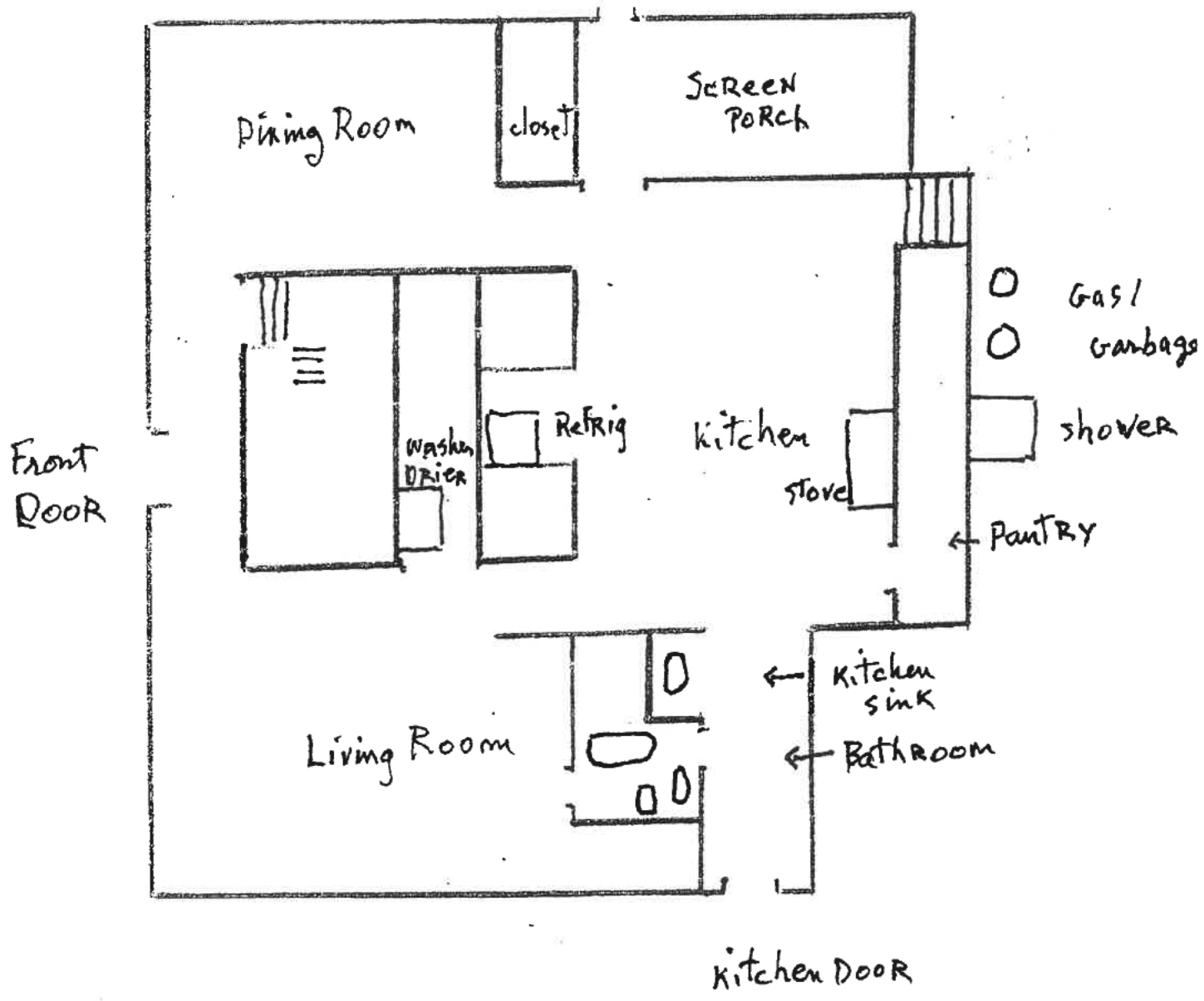
37' provided between proposed SAS and Riverfront Area

59' provided between proposed SAS and Land Subject to Coastal Storm Flowage

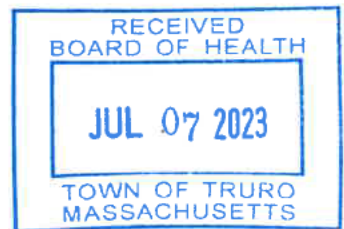
114' provided between proposed SAS and Bordering Vegetated wetland

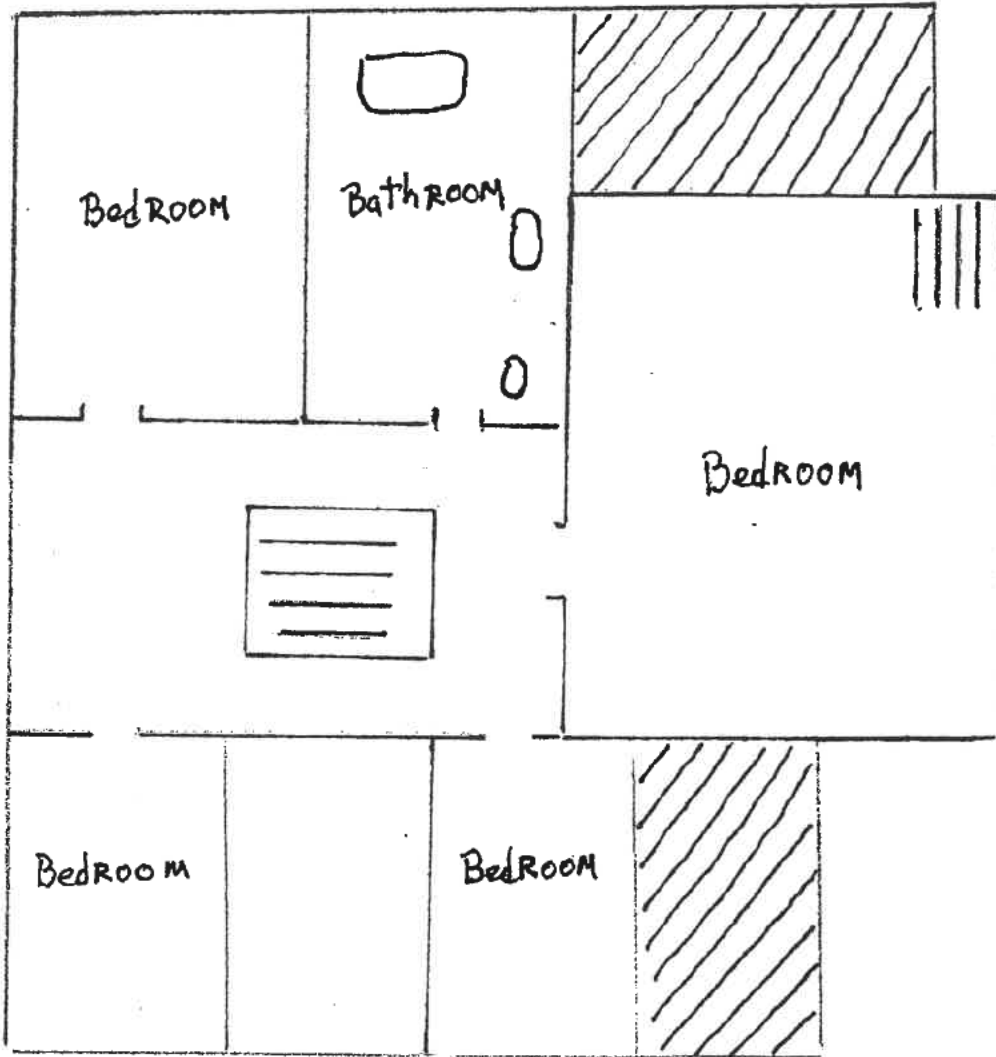
146' provided between proposed SAS and Coastal Bank



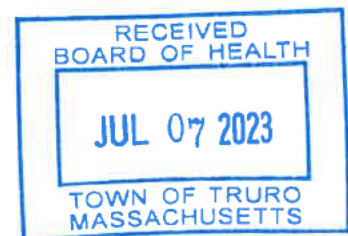


GROUND FLOOR





2ND FLOOR

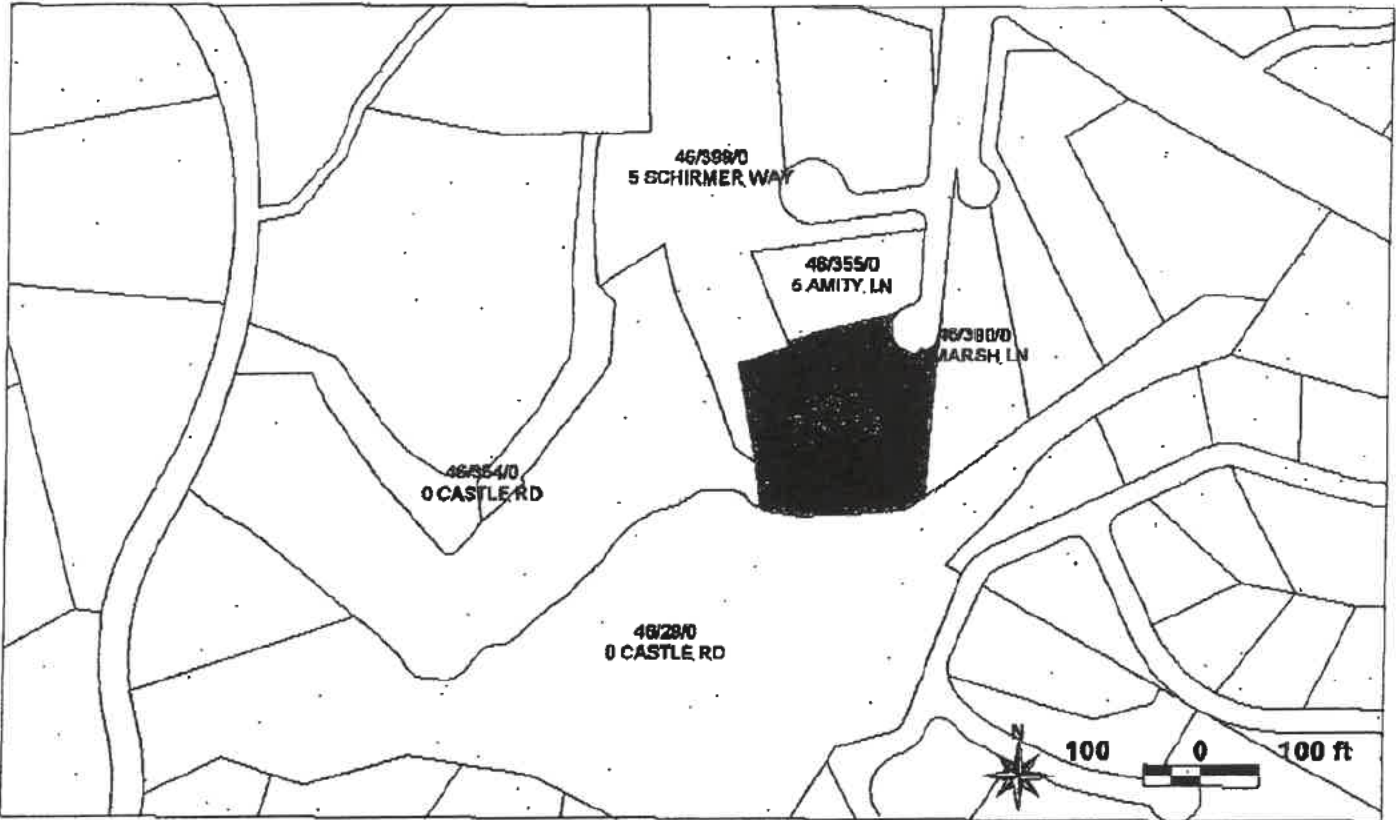




7 Amity Lane  
 Map 46, Parcel 18  
 Board of Health

TOWN OF TRURO, MA  
 BOARD OF ASSESSORS  
 P.O. BOX 2012, TRURO MA 02668

Custom Abutters List



| Key  | Parcel ID  | Owner   | Location       | Mailing Street          | Mailing City | ST | Zip/Cd/Country |
|------|------------|---|----------------|-------------------------|--------------|----|----------------|
| 2257 | 46-28-0-E  | TRURO CONSERVATION TRUST<br>TRS: BETSEY BROWN ET AL | 0 CASTLE RD    | PO BOX 327              | NO TRURO     | MA | 02662-0327     |
| 2569 | 46-354-0-E | TRURO CONSERVATION TRUST<br>TRS: BETSEY BROWN ET AL | 0 CASTLE RD    | PO BOX 327              | NO TRURO     | MA | 02662-0327     |
| 2660 | 46-355-0-R | SELVER IRENE B-LE<br>RMNDR: SELVER-KASSELL ANNA/EVE | 5 AMITY LN     | 380 RIVERSIDE DR APT 2F | NEW YORK     | NY | 10025          |
| 5778 | 46-380-0-R | DELBIGNORE CINDY & JOHN                             | 3 MARSH LN     | 99 YORK ROAD            | MANSFIELD    | MA | 02048          |
| 7451 | 46-388-0-E | TRURO CONSERVATION TRUST<br>TRS: TOM BOW ET AL      | 5 SCHIRMER WAY | PO BOX 327              | NO TRURO     | MA | 02662          |

RECEIVED  
 BOARD OF HEALTH  
 JUL 07 2023  
 TOWN OF TRURO  
 MASSACHUSETTS

*Handwritten signature:* J.P. [unclear]  
 6/30/2022 Page 1

**SCHOFIELD BROTHERS OF CAPE COD**  
Land Surveying & Environmental Permitting  
161 Cranberry Highway  
P.O. Box 101  
Orleans, MA 02653-0101  
508-255-2098 - 508-240-1215 (fax)  
E-mail: schobro@capecod.net

July 7, 2023

RE: 7 Amity Lane Septic System Upgrade

Dear Abutter;

You are being notified pursuant to the State Environmental Code Title 5 and the Truro Board of Health Regulations that the Board of Health will hold a public hearing to hear requests for variances from applicable State and Local regulations for a septic system upgrade at the above referenced address. The variances requested are as follows:

Local upgrade approval requested pursuant to Title V, the State Environmental Code, is:

15.405(1)(c) A 21% reduction in the required subsurface disposal area design requirements is requested.  
(25% reduction max allowed)

A variance from the Town of Truro Board of Health Regulations Section VI, Article 9 is required for the minimum setback distances for the septic tank and soil absorption system as follows:

Minimum setback distance between a septic tank and wetland: 100' required

0' provided between proposed septic/Advantex AX-20 tank and Riverfront Area (within Riverfront)  
36' provided between proposed septic/Advantex AX-20 tank and Land Subject to Coastal Storm Flowage.  
80' provided between proposed septic/Advantex AX-20 tank and coastal bank  
95' provided between proposed septic/Advantex AX-20 tank and bordering vegetated wetland.

Minimum setback distance between a soil absorption system (SAS) and a wetland: 150 feet required

37' provided between proposed SAS and Riverfront Area  
59' provided between proposed SAS and Land Subject to Coastal Storm Flowage  
114' provided between proposed SAS and Bordering Vegetated wetland  
146' provided between proposed SAS and Coastal Bank

Copies of the site plan are on file at the Board of Health and may be viewed prior to the public hearing to be held on July 18, 2023. The variance hearing begins at 4:30 pm and will be held remotely.

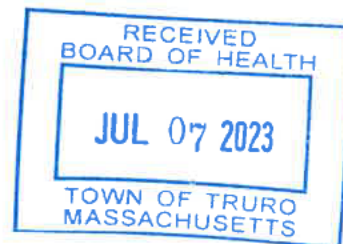
**Remote Meeting Access Instructions:** For citizens in Truro the meeting may be viewed on Channel 18. It may also be found at the Town web-site home page at [www.Truro-ma.gov](http://www.Truro-ma.gov). "Truro Channel 18" is found under "Helpful Links". To view, click on the green "Watch" button. To provide comment remotely during the meeting, call 1-866-899-4679. Or you may access the meeting from your computer, tablet, or smartphone at <https://global.gotomeeting.com>. Please refer to the published meeting agenda at the Town of Truro website for access codes and further information.

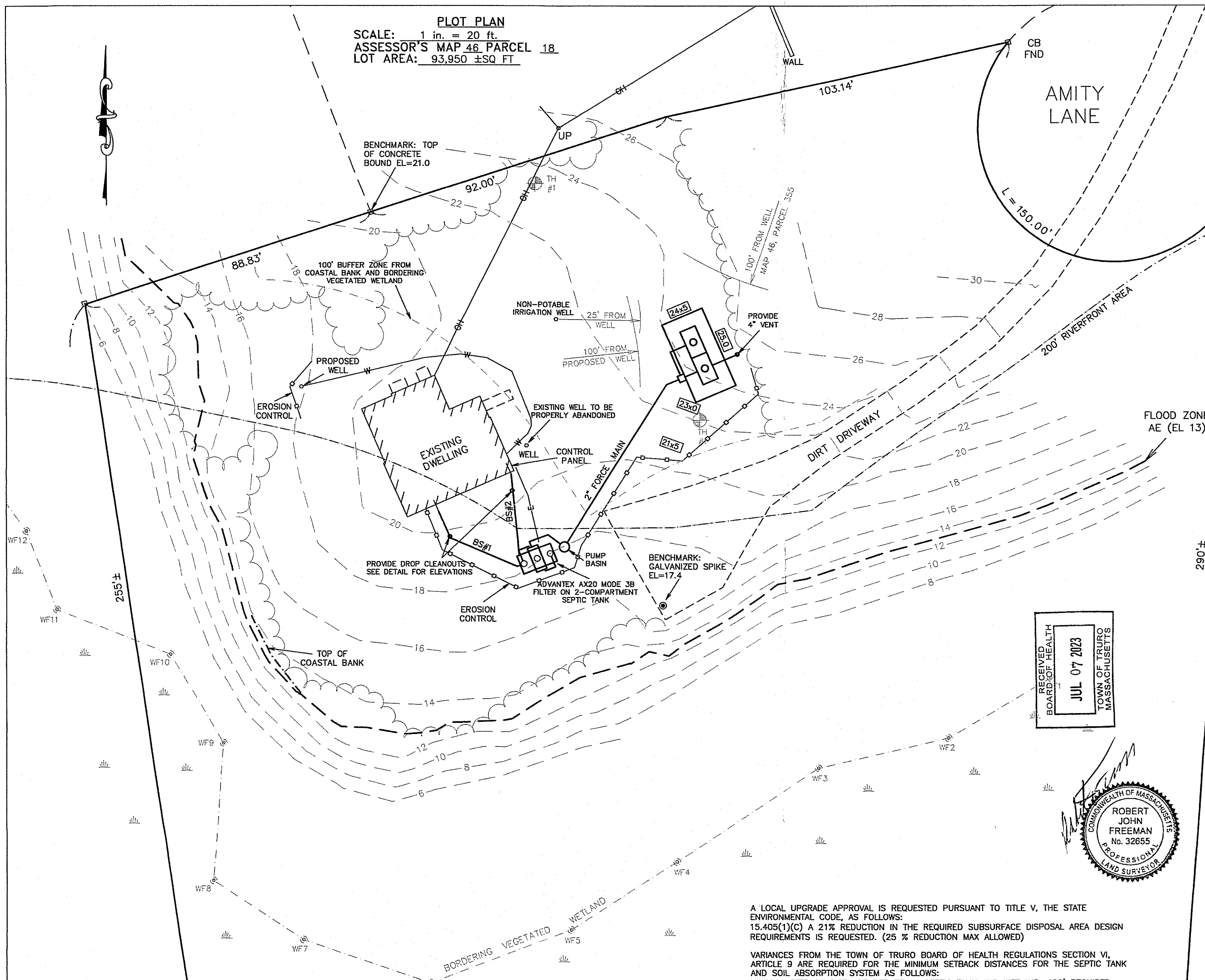
Sincerely,

**Schofield Brothers of Cape Cod**

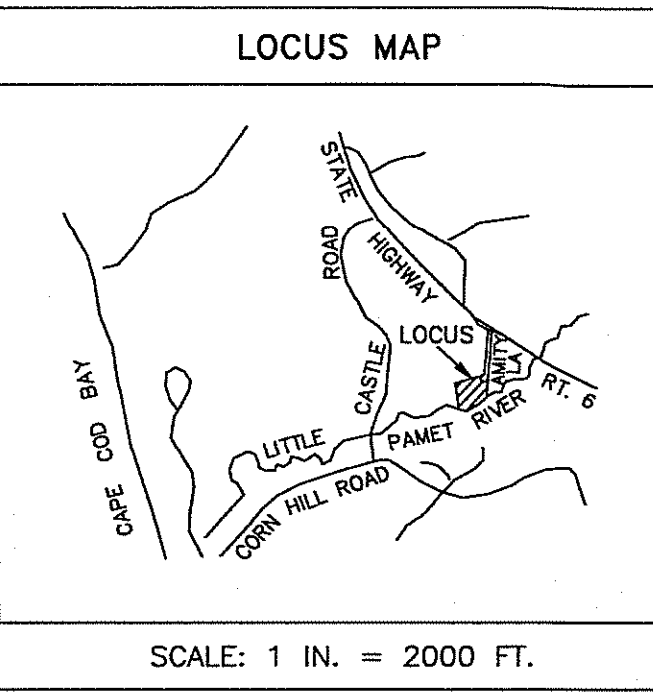
*Laura Schofield*

Laura Schofield, RS, SE  
Project Manager





**PLOT PLAN**  
 SCALE: 1 in. = 20 ft.  
 ASSESSOR'S MAP 46 PARCEL 18  
 LOT AREA: 93,950 ± SQ FT

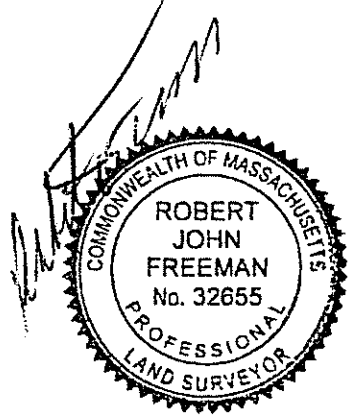


**LEGEND**

|     |  |
|-----|--|
| XX  | PROPOSED CONTOUR LINE                                    |
| XX  | EXISTING CONTOUR   |
| W   | WATER LINE   |
| □   | PROPOSED 1500 GALLON, ADVANTEK 2-COMPARTMENT SEPTIC TANK |
| □   | PROPOSED DISTRIBUTION BOX                                |
| □   | PROPOSED LEACHING AREA                                   |
| ##  | EXISTING SPOT ELEVATIONS                                 |
| ⊕   | TEST HOLE LOCATIONS                                      |
| ⊕   | PROPERTY LINE  |
| ⊕   | PROPOSED SPOT ELEVATION                                  |
| OH  | OVERHEAD UTILITIES                                       |
| UG  | UNDERGROUND UTILITIES                                    |
| FG  | FINISHED GRADE   |
| UP  | UTILITY POLE   |
| TOF | TOP OF FOUNDATION ELEVATION                              |
| BS  | BUILDING SEWER   |
| CO  | CLEAN OUT  |

- GENERAL NOTES**
- ELEVATIONS REFER TO NAVD 88 DATUM. SEE BENCHMARK ON PLAN.
  - ALL CONSTRUCTION AND MATERIALS TO CONFORM TO TITLE 5 OF THE MASSACHUSETTS STATE ENVIRONMENTAL CODE AND THE BOARD OF HEALTH REQUIREMENTS FOR THE TOWN OF TRURO.
  - ANY CHANGES TO THIS PLAN MUST BE APPROVED BY THE BOARD OF HEALTH AND SCHOFIELD BROTHERS OF CAPE COD.
  - FOR PROPER PERFORMANCE, THE SEPTIC TANK SHOULD BE INSPECTED AT LEAST ONCE PER YEAR. THE TANK SHOULD BE PUMPED WHEN THE TOTAL DEPTH OF SCUM AND SOLIDS EXCEEDS 1/3 OF ITS LIQUID DEPTH.
  - SCHOFIELD BROTHERS OF CAPE COD DOES NOT ASSUME RESPONSIBILITY FOR MATERIALS ENCOUNTERED DURING EXCAVATION.
  - ANY UNSUITABLE OR DELETERIOUS MATERIAL ENCOUNTERED MUST BE EXCAVATED AND REMOVED TO A DISTANCE OF 5 FEET FROM ALL SIDES OF THE SOIL ABSORPTION SYSTEM (S.A.S) AND TO A DEPTH AT WHICH THE C HORIZON IS ENCOUNTERED. BACKFILL WITH CLEAN SAND MATERIAL MEETING TITLE 5 SPECIFICATIONS TO APPROX. ELEVATION 21.5. CONTACT SCHOFIELD BROTHERS IF ANY DOUBT OR QUESTIONS ARISE REGARDING SOIL QUALITY.
  - INSTALLATION CONTRACTOR SHALL CONTACT SCHOFIELD BROTHERS PRIOR TO BACKFILLING FOR SYSTEM CERTIFICATION.
  - EXISTING CESSPOOL(S) ARE TO BE LOCATED, PUMPED AND FILLED IN PLACE.
  - EXISTING BUILDING SEWER INVERT(S) SHALL BE VERIFIED IN FIELD PRIOR TO COMPONENT INSTALLATION. CONTACT SCHOFIELD BROTHERS IF SIGNIFICANT DISCREPANCIES EXIST.
  - SITE RESTORATION REQUIRES ALL STRIPPED TOPSOIL AND SUBSOIL TO BE STOCKPILED AND REUSED AT OWNERS OPTION. RE-SPREAD OVER DISTURBED AREAS TO PROMOTE OPTIMAL GROWTH. UPON COMPLETION OF CONSTRUCTION DISTURBED AREAS SHALL BE LOADED AND SEEDED OR OTHERWISE STABILIZED.
  - ANY COMPONENT THAT WILL BE SUBJECT TO VEHICLE OR OTHER HEAVY EQUIPMENT TRAFFIC SHALL BE INSTALLED WITH H-20 LOADING CAPACITY.
  - UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION.
  - NO KNOWN WELLS EXIST WITHIN 200' OF THE PROPOSED LEACHING AREA EXCEPT THOSE THAT ARE SHOWN.

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 BOARD OF HEALTH  
 JUL 07 2023  
 TOWN OF TRURO  
 MASSACHUSETTS



A LOCAL UPGRADE APPROVAL IS REQUESTED PURSUANT TO TITLE V, THE STATE ENVIRONMENTAL CODE, AS FOLLOWS:  
 15.405(1)(C) A 21% REDUCTION IN THE REQUIRED SUBSURFACE DISPOSAL AREA DESIGN REQUIREMENTS IS REQUESTED. (25% REDUCTION MAX ALLOWED)

VARIANCES FROM THE TOWN OF TRURO BOARD OF HEALTH REGULATIONS SECTION VI, ARTICLE 9 ARE REQUIRED FOR THE MINIMUM SETBACK DISTANCES FOR THE SEPTIC TANK AND SOIL ABSORPTION SYSTEM AS FOLLOWS:  
 MINIMUM SETBACK DISTANCE BETWEEN A SEPTIC TANK AND WETLAND: 100' REQUIRED 0' PROVIDED BETWEEN PROPOSED SEPTIC/ADVANTEK AX-20 TANK AND RIVERFRONT AREA (WITHIN RIVERFRONT)  
 36' PROVIDED BETWEEN PROPOSED SEPTIC/ADVANTEK AX-20 TANK AND LAND SUBJECT TO COASTAL STORM FLOWAGE.  
 80' PROVIDED BETWEEN PROPOSED SEPTIC/ADVANTEK AX-20 TANK AND COASTAL BANK.  
 95' PROVIDED BETWEEN PROPOSED SEPTIC/ADVANTEK AX-20 TANK AND BORDERING VEGETATED WETLAND.  
 MINIMUM SETBACK DISTANCE BETWEEN A SOIL ABSORPTION SYSTEM AND A WETLAND: 150' REQUIRED  
 37' PROVIDED BETWEEN PROPOSED SAS AND RIVERFRONT AREA  
 59' PROVIDED BETWEEN PROPOSED SAS AND LAND SUBJECT TO COASTAL STORM FLOWAGE  
 114' PROVIDED BETWEEN PROPOSED SAS AND BORDERING VEGETATED WETLAND  
 146' PROVIDED BETWEEN PROPOSED SAS AND COASTAL BANK.

**DEEP TEST HOLE OBSERVATION LOG #1**

DATE: FEBRUARY 10, 2023      JOB: 0-12625

PERFORMED BY: LAURA A. SCHOFIELD RS, SE      WITNESSED BY: COURTNEY WARREN, TRURO BOH

| ELEVATION (FT) | DEPTH FROM SURFACE (IN) | SOIL HORIZON | SOIL TEXTURE (USDA) | SOIL COLOR (MUNSELL) | SOIL MOTTLING | OTHER  |
|----------------|-------------------------|--------------|---------------------|----------------------|---------------|--------|
| 22.0-20.3      | 0-20                    | AP           | SANDY LOAM          | 10YR4/3              |               |        |
| 20.3-19.3      | 20-32                   | BW           | LOAMY SAND          | 10YR4/6              |               |        |
| 19.3-10.2      | 32-142                  | C            | SAND                | 10YR5/6              |               | COARSE |

PARENT GEOLOGICAL MATERIAL: GLACIAL OUTWASH      STANDING WATER IN HOLE:  
 WEEPING FROM FACE: NO      DEPTH TO BEDROCK:  
 ESTIMATED SEASONAL HIGH GROUNDWATER AT EL. =  
 PERCOLATION TEST: TOP OF PERC. AT 38", 24 GAL ABSORBED IN 3:52 MIN., PERC. RATE < 2 MPI

**DEEP TEST HOLE OBSERVATION LOG #2**

DATE: FEBRUARY 10, 2023      JOB: 0-12625

PERFORMED BY: LAURA A. SCHOFIELD RS, SE      WITNESSED BY: COURTNEY WARREN, TRURO BOH

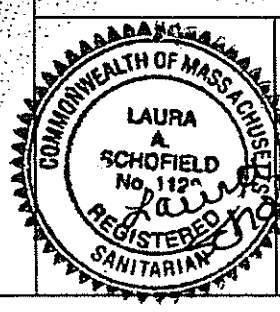
| ELEVATION (FT) | DEPTH FROM SURFACE (IN) | SOIL HORIZON | SOIL TEXTURE (USDA) | SOIL COLOR (MUNSELL) | SOIL MOTTLING | OTHER  |
|----------------|-------------------------|--------------|---------------------|----------------------|---------------|--------|
| 23.1-22.8      | 3-0                     |              | ORGANIC A           | 10YR4/4              |               |        |
| 22.8-21.8      | 0-12                    |              | SANDY LOAM          | 10YR5/8              |               |        |
| 21.8-20.7      | 12-25                   | BW           | SANDY LOAM          | 10YR5/8              |               |        |
| 20.7-11.5      | 25-136                  | C            | SAND                | 10YR5/6              |               | COARSE |

PARENT GEOLOGICAL MATERIAL: GLACIAL OUTWASH      STANDING WATER IN HOLE:  
 WEEPING FROM FACE: NO      DEPTH TO BEDROCK:  
 ESTIMATED SEASONAL HIGH GROUNDWATER AT EL. =  
 PERCOLATION TEST:

**PROPOSED SEWAGE DISPOSAL SYSTEM**

FOR: AN EXISTING 4 BEDROOM DWELLING  
 AT: 7 AMITY LANE, TRURO, MA

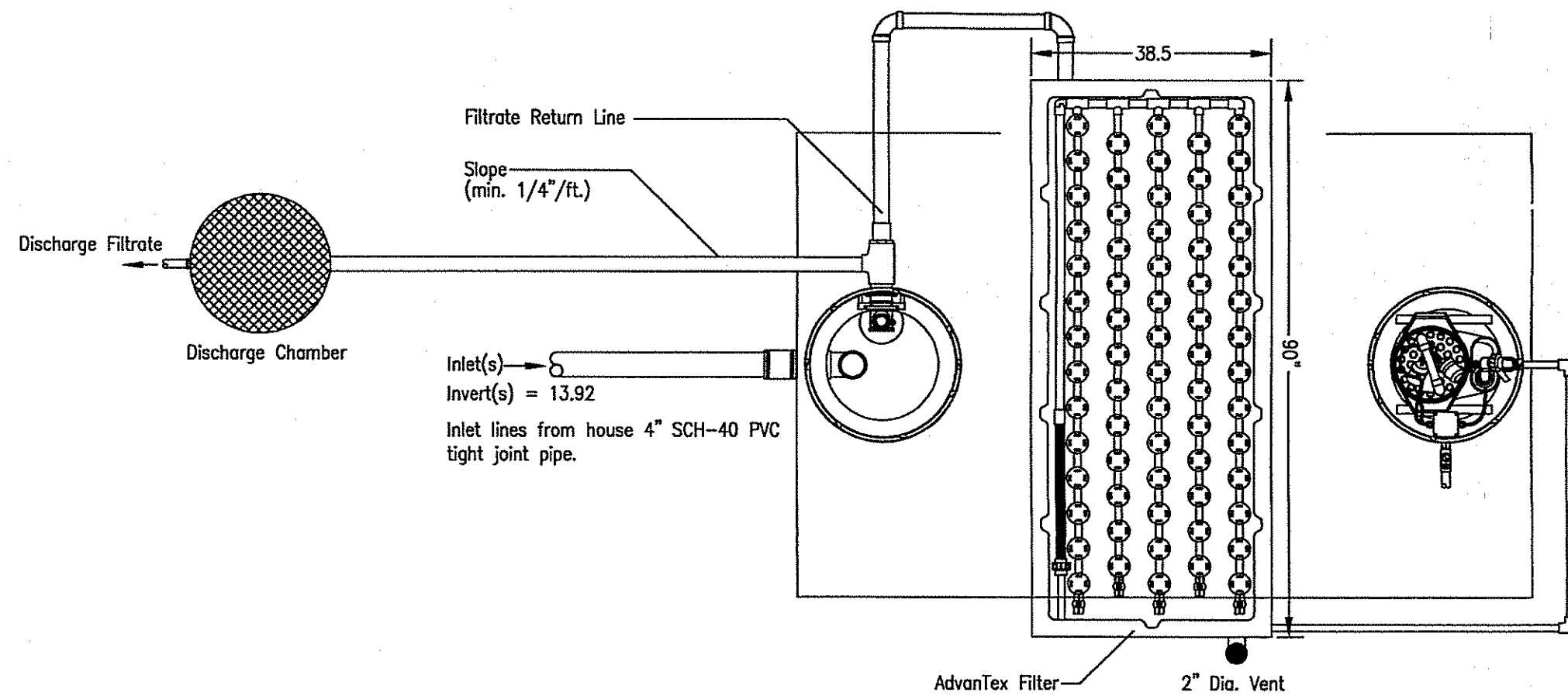
ASSESSOR'S MAP: 46      PARCEL: 18  
 APPLICANT: IRENE SELVER  
 390 RIVERSIDE DRIVE, APT. 2F  
 NEW YORK, NY 10025



DATE: JULY 5, 2023      DESIGNED BY: LAS  
 DRAWN BY: LAS / RJF  
 CHECKED BY: LAS / RJF  
 SCHOFIELD BROTHERS OF CAPE COD  
 LAND SURVEYING - ENVIRONMENTAL PERMITTING  
 P.O. BOX 101, 161 CRANBERRY HIGHWAY ORLEANS, MA  
 (508) 255-2098

# Advantex™ AX20 Mode3B System Details

NTS

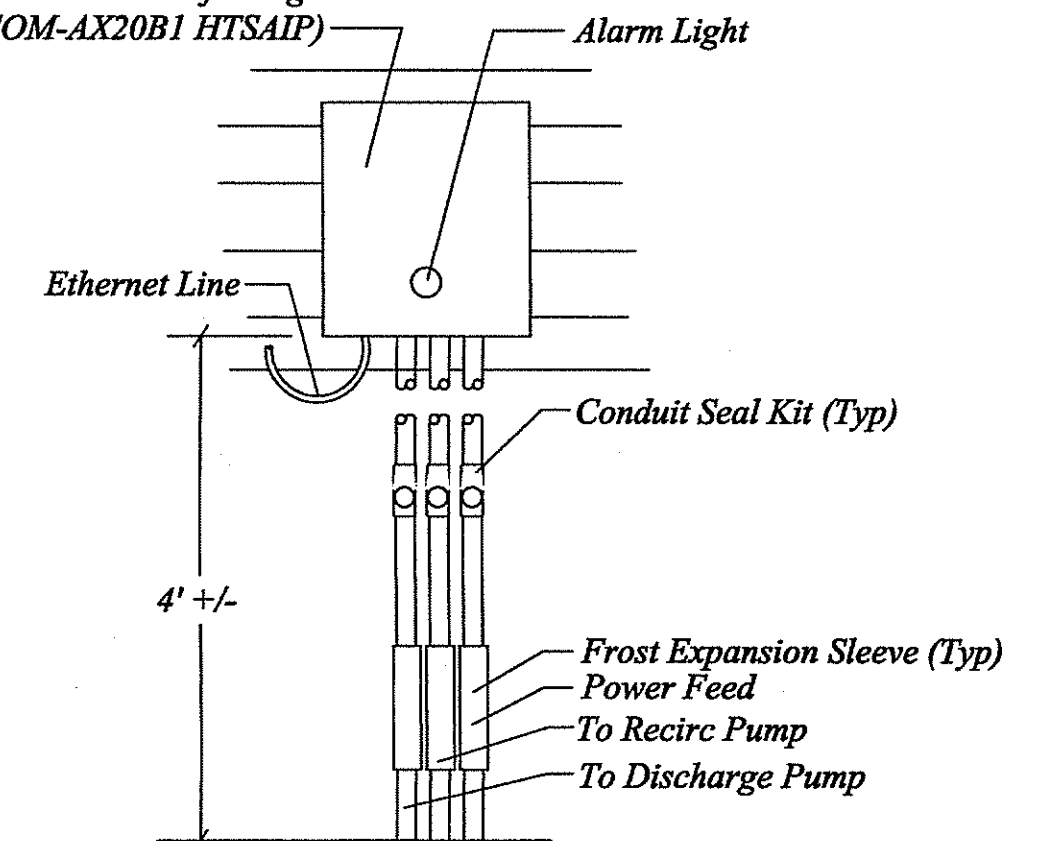


Top View

## General Notes:

1. Ethernet Line is required.
2. Set Treatment Pod over tank on solid level base of 5" clean sand or pea stone.
3. Tank coordination and approval by Cape Cod WinWater is required prior to construction. Tank must meet minimum structural standards and be tested for watertightness.
4. Float and RSV settings based on typical tank dimensions - to be verified upon tank approval.
5. Manufacturer requires this system to be installed and maintained by a trained/authorized installer/maintenance provider in accordance with the manufacturer's instructions. Failure to maintain an ongoing O&M contract may result in voiding of any/all warranties. Other State and/or Local requirements or regulations may apply.
6. For more details regarding components, installation or operation of this system; please contact Cape Cod WinWater 508-862-0166, or an Orenco representative at 1-800-348-9843

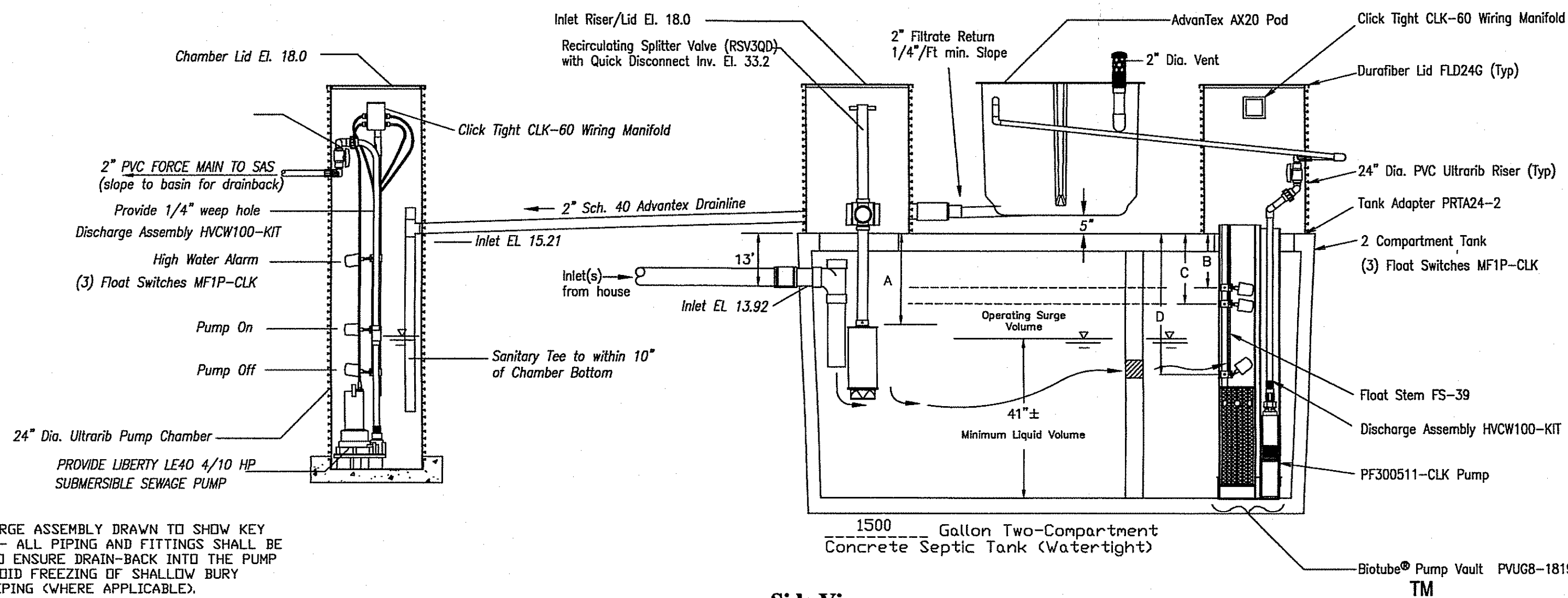
Control Panel Mounted On  
Pressure Treated H Frame with concrete footings  
(VCOM-AX20B1 HTSAIP)



## Electrical Notes: (Per Orenco Systems, Inc.)

1. Required Circuits from main breaker panel:  
(1) 20A BREAKER FOR THE ORENCO PUMP  
(1) 10A BREAKER FOR THE CONTROLS  
A SEPARATE BREAKER WILL BE REQUIRED FOR THE LIBERTY PUMP -

\* CONTRACTOR TO CONFIRM WITH ORENCO REPRESENTATIVE ELECTRICAL REQUIREMENTS FOR PUMPS AND CONTROL PANEL



Side View

No Scale

USE ACME-SHOREY PRECAST CONCRETE ADVANTEX 1500 GALLON (H-10) MONO 2-COMPARTMENT PROCESS TANK OR APPROVED EQUAL PLACE 6" OF CRUSHED STONE ON TO A LEVEL, STABLE, MECHANICALLY COMPACTED BASE.

SETTINGS A-D TO BE SET IN THE FIELD DURING INSTALLATION AS DETERMINED BY AUTHORIZED ORENCO REPRESENTATIVE

ADDITIONAL STORAGE IS PROVIDED IN THE ADVANTEX UNIT, ABOVE THE HIGH WATER LEVEL.

\* CONTRACTOR TO CONFIRM WITH ORENCO REPRESENTATIVE ELECTRICAL REQUIREMENTS FOR PUMPS AND CONTROL PANEL.

OWNER TO APPROVE CONTROL PANEL LOCATION

NOTE: DISCHARGE ASSEMBLY DRAWN TO SHOW KEY COMPONENTS - ALL PIPING AND FITTINGS SHALL BE INSTALLED TO ENSURE DRAIN-BACK INTO THE PUMP BASIN TO AVOID FREEZING OF SHALLOW BURY DISCHARGE PIPING (WHERE APPLICABLE).

## DISCHARGE PUMP FLOAT SETTING CALCULATIONS

TOTAL DAILY FLOW = 440 GALLON/DAY  
TOTAL CYCLES PER DAY = 440 GALLONS / 15 DOSES / DAY = 29.3 GALLONS / DOSE  
29.3 GAL / DOSE + 10 GAL OF FORCE MAIN FLOW BACK VOLUME = 39.3 GALLONS  
DOSE SETTINGS: 39.3 GALLON DOSE / 23.50 GALLON / LIQ. FT. = 1.7 FT.  
PUMP CHAMBER ELEVATIONS (72" CHAMBER):  
RIM = 18.0 (TOP OF CHAMBER)  
INLET = 15.21  
HWA = 15.00 (2" BELOW INLET)  
PUMP ON = 14.70  
PUMP OFF = 13.00  
BOTTOM CHAMBER = 12.00

## PROPOSED SEWAGE DISPOSAL SYSTEM

FOR: AN EXISTING 4 BEDROOM DWELLING  
AT: 7 AMITY LANE, TRURO, MA

ASSESSOR'S MAP: 46 PARCEL: 18

APPLICANT: IRENE SELVER  
390 RIVERSIDE DRIVE, APT. 2F  
NEW YORK, NY 10025

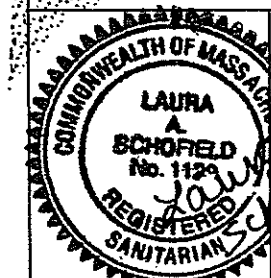
JOB #: 0-12625

DATE: JULY 5, 2023

DESIGNED BY:  
LAS

DRAWN BY:  
LAS / RJF

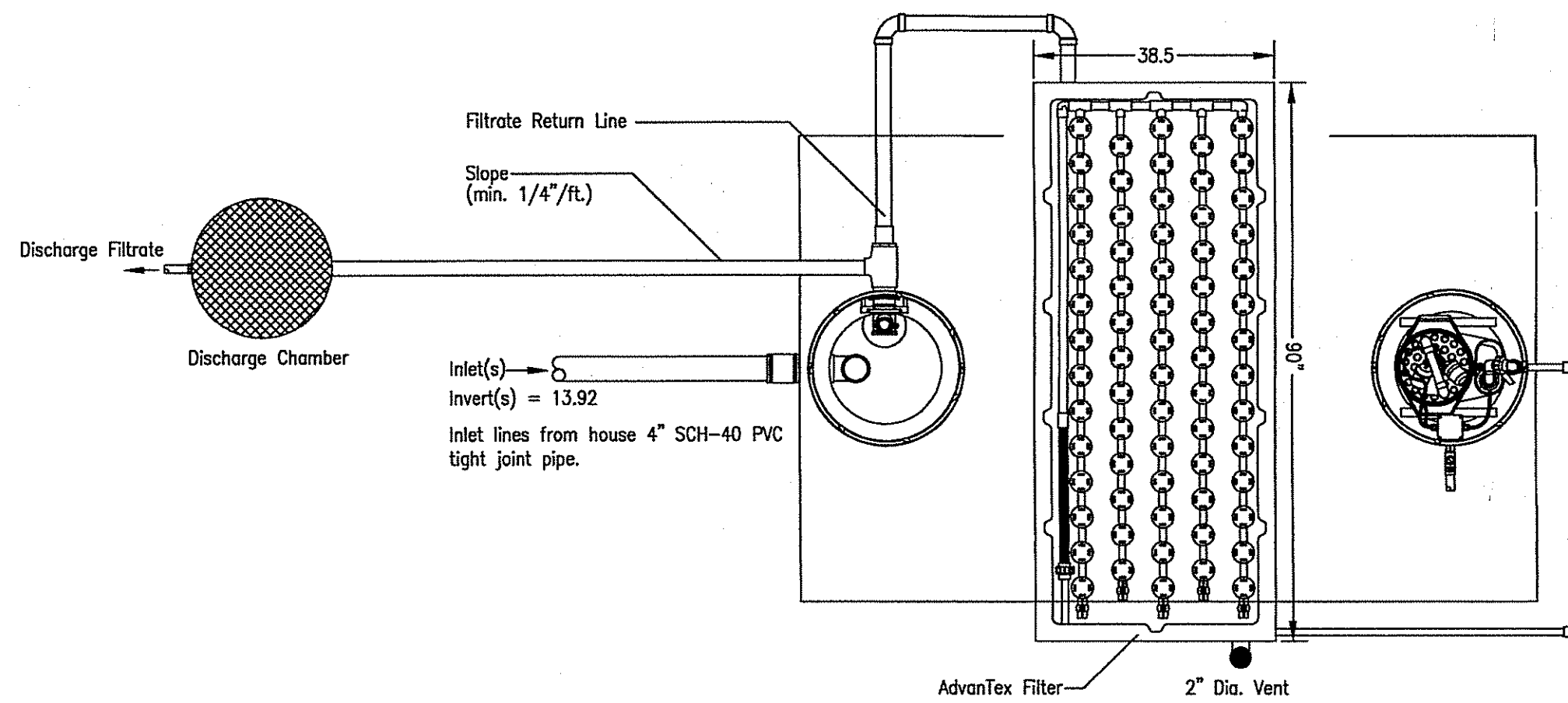
CHECKED BY:  
LAS / RJF



SCHOFIELD BROTHERS OF CAPE COD  
LAND SURVEYING - ENVIRONMENTAL PERMITTING  
P.O. BOX 101, 161 CRANBERRY HIGHWAY ORLEANS, MA  
(508) 255-2098

# Advantex™ AX20 Mode3B System Details

NTS

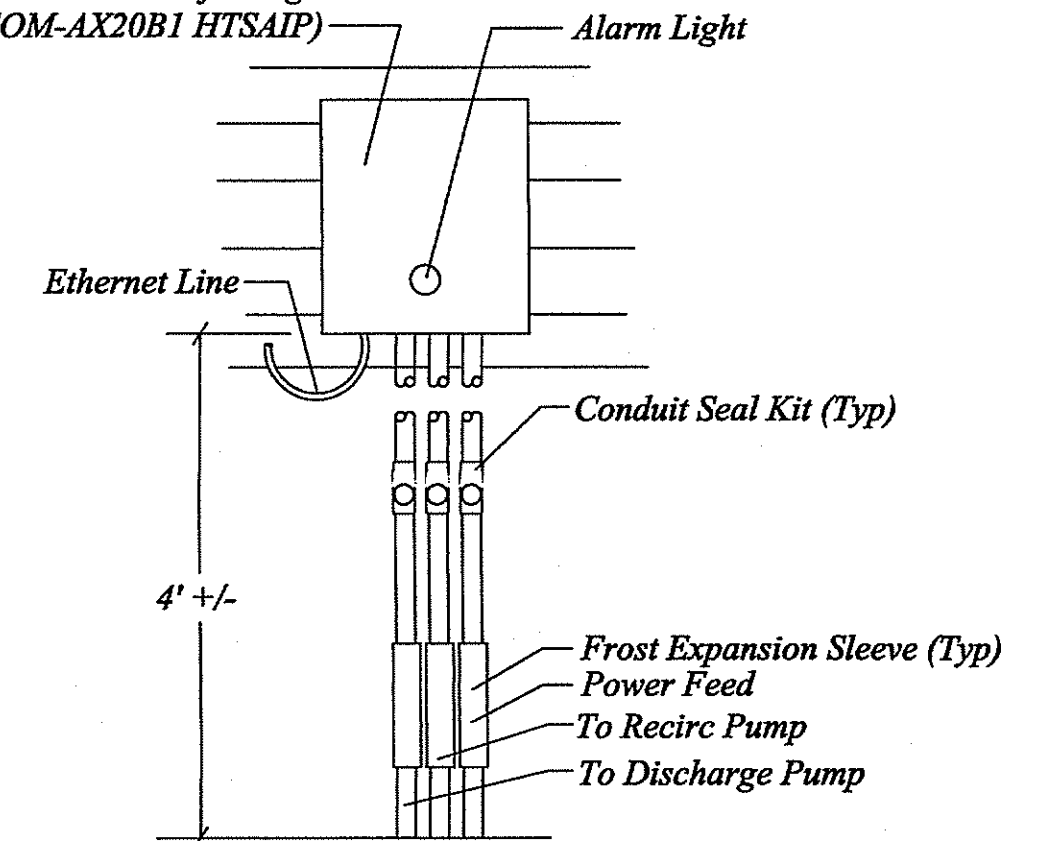


Top View

## General Notes:

1. Ethernet Line is required.
2. Set Treatment Pod over tank on solid level base of 5" clean sand or pea stone.
3. Tank coordination and approval by Cape Cod WinWater is required prior to construction. Tank must meet minimum structural standards and be tested for watertightness.
4. Float and RSV settings based on typical tank dimensions - to be verified upon tank approval.
5. Manufacturer requires this system to be installed and maintained by a trained/authorized installer/maintenance provider in accordance with the manufacturer's instructions. Failure to maintain an ongoing O&M contract may result in voiding of any/all warranties. Other State and/or Local requirements or regulations may apply.
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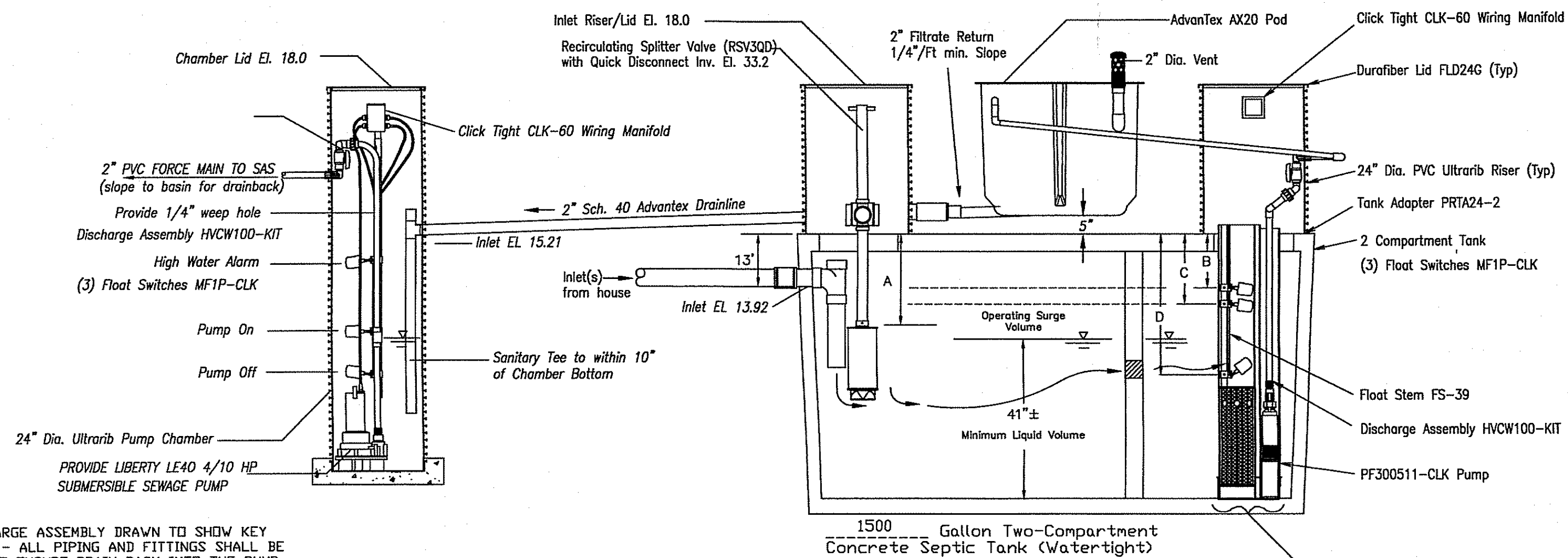
Control Panel Mounted On  
Pressure Treated H Frame with concrete footings  
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(1) 10A BREAKER FOR THE CONTROLS  
A SEPARATE BREAKER WILL BE REQUIRED FOR THE LIBERTY PUMP -

\* CONTRACTOR TO CONFIRM WITH ORENCO REPRESENTATIVE ELECTRICAL REQUIREMENTS FOR PUMPS AND CONTROL PANEL



Side View

No Scale

USE ACME-SHOREY PRECAST CONCRETE ADVANTEX 1500 GALLON (H-10) MONO 2-COMPARTMENT PROCESS TANK OR APPROVED EQUAL. PLACE 6" OF CRUSHED STONE ON TO A LEVEL, STABLE, MECHANICALLY COMPACTED BASE.

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ADDITIONAL STORAGE IS PROVIDED IN THE ADVANTEX UNIT, ABOVE THE HIGH WATER LEVEL.

\* CONTRACTOR TO CONFIRM WITH ORENCO REPRESENTATIVE ELECTRICAL REQUIREMENTS FOR PUMPS AND CONTROL PANEL.

OWNER TO APPROVE CONTROL PANEL LOCATION

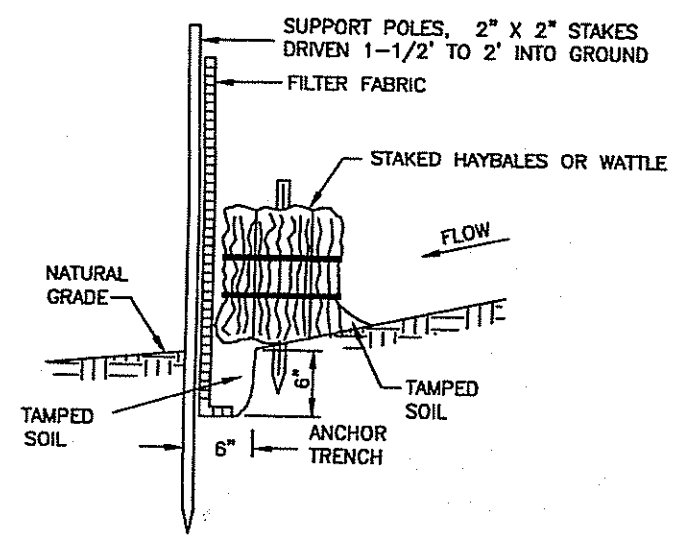
NOTE: DISCHARGE ASSEMBLY DRAWN TO SHOW KEY COMPONENTS - ALL PIPING AND FITTINGS SHALL BE INSTALLED TO ENSURE DRAIN-BACK INTO THE PUMP BASIN TO AVOID FREEZING OF SHALLOW BURY DISCHARGE PIPING (WHERE APPLICABLE).

## DISCHARGE PUMP FLOAT SETTING CALCULATIONS

TOTAL DAILY FLOW = 440 GALLON/DAY  
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PUMP ON = 14.70  
PUMP OFF = 13.00  
BOTTOM CHAMBER = 12.00

| PROPOSED SEWAGE DISPOSAL SYSTEM  |                          |
|--|--------------------------|
| FOR: AN EXISTING 4 BEDROOM DWELLING<br>AT: 7 AMITY LANE, TRURO, MA   |                          |
| ASSESSOR'S MAP: 46   | PARCEL: 18               |
| APPLICANT: IRENE SELVER<br>390 RIVERSIDE DRIVE, APT. 2F<br>NEW YORK, NY 10025  |                          |
| DATE: JULY 5, 2023   | JOB #: 0-12625           |
| DESIGNED BY:<br>LAS  | CHECKED BY:<br>LAS / RJF |
| DRAWN BY:<br>LAS / RJF   |                          |
|  |                          |
| SCHOFIELD BROTHERS OF CAPE COD<br>LAND SURVEYING - ENVIRONMENTAL PERMITTING<br>P.O. BOX 101, 161 CRANBERRY HIGHWAY ORLEANS, MA<br>(508) 255-2098 |                          |

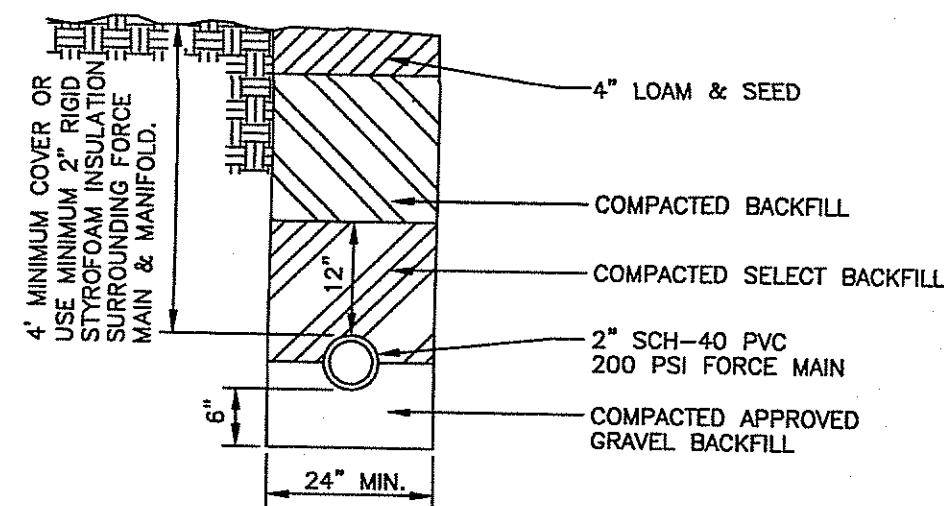


SILT FENCE WITH STAKED HAYBALES OR WATTLE  
SILT FENCE WITH STAKED HAYBALES  
SEDIMENT BARRIER DETAIL

(NO SCALE)

**CONSTRUCTION & EROSION CONTROL NOTES**

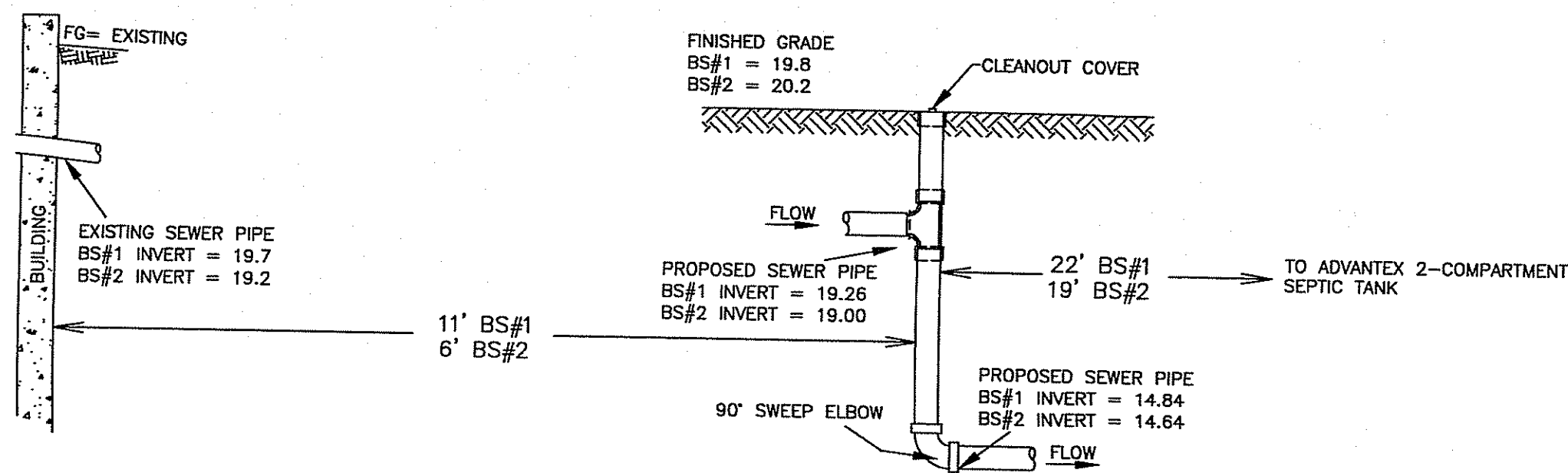
1. PRIOR TO ANY DISTURBANCE OF THE SITE, A STAKED SILT FENCE / LIMIT OF WORK SHALL BE INSTALLED IN THE LOCATION SHOWN. THE SILT FENCE SHALL REMAIN IN PLACE UNTIL ALL AREAS UPGRADIENT FROM THE BARRIER HAVE BEEN STABILIZED.
2. ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED OR WHERE SPECIAL STABILIZATION MEASURES OR LANDSCAPE PLANTINGS ARE NOT PROPOSED SHALL HAVE 4"-6" OF LOAM ADDED AND SEEDED WITH A RYE FESCUE MIX.
3. ALL AREAS OUTSIDE OF THE LIMIT OF WORK ARE TO BE LEFT UNDISTURBED. DURING THE SITE WORK, ALL PERSONS AND EQUIPMENT SHALL STAY OUT OF THESE AREAS AND PRESERVE EXISTING VEGETATION.



TYPICAL FORCE MAIN BEDDING DETAIL

(NO SCALE)

FORCE MAIN SHALL BE LAID IN A "CLASS B" TRENCH BEDDING .  
ALL PIPING OUTSIDE THE PUMP CHAMBER WHICH IS LESS THAN FOUR (4) FEET BELOW FINAL FINISHED GRADE SHALL BE SURROUNDED WITH A MINIMUM OF TWO (2) INCHES OF RIGID STYROFOAM INSULATION, OR SHALL DRAIN BACK TO PUMP CHAMBER.  
PROVIDE CONCRETE THRUST BLOCKING AT ALL FORCE MAIN BENDS WITH MINIMUM SOIL BEARING SURFACE AREA OF ONE SQUARE FOOT.



SEWER LINE DROP WITH CLEANOUT DETAIL

(NO SCALE)

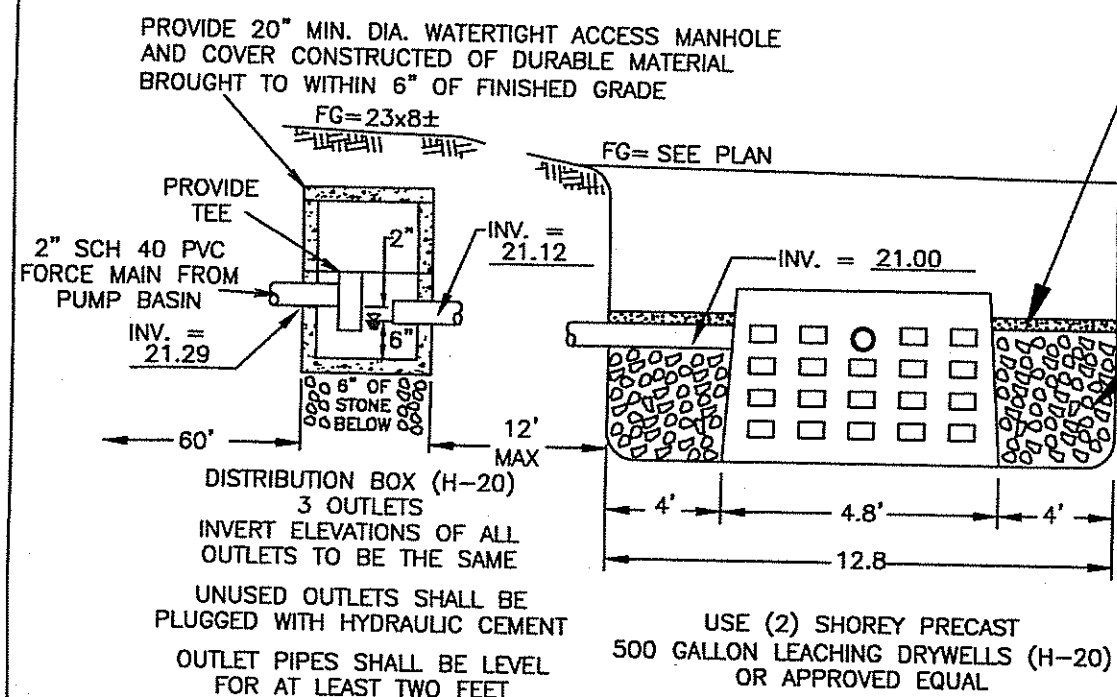
\*BUILDING SEWERS WITH A SLOPE GREATER THAN OR EQUAL TO 12% SHALL BE PROVIDED WITH A DROP CLEANOUT.

ALL PIPING SHALL BE 4" SCH-40 PVC UNLESS OTHERWISE NOTED.

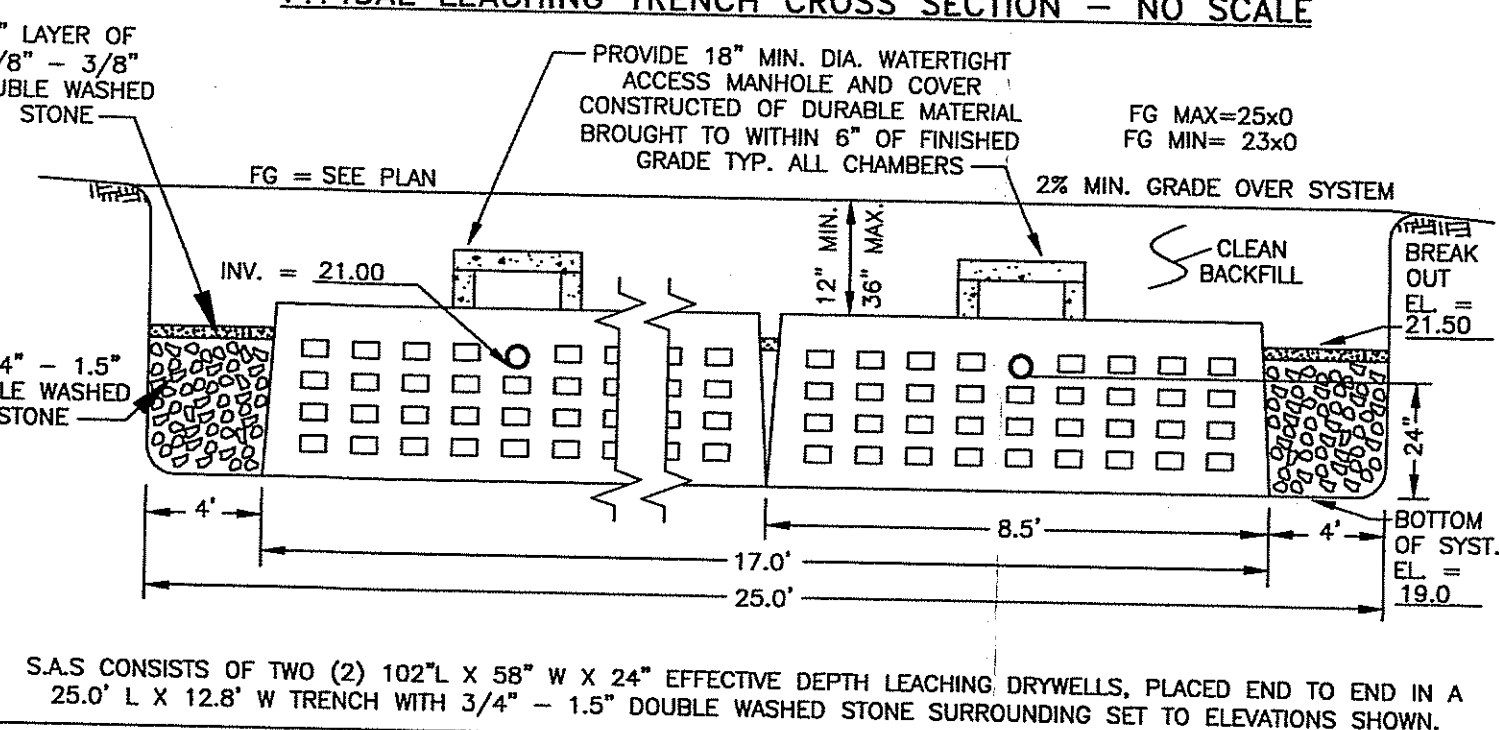
**DESIGN CALCULATIONS**

1. ESTIMATED HYDRAULIC LOADING:  
4 BEDROOMS AT 110 GPD PER BEDROOM = 440 GPD  
GARBAGE GRINDER IS NOT ALLOWED WITH THIS DESIGN
  2. SEPTIC TANK SIZE:  
400 GPD x 200% = 880 GALLON MINIMUM  
USE ACME-SHOREY ADVANTEX PROCESS TANK, ITEM #AX20-15M,  
MONO, 2-COMPARTMENT 1500 GALLON H-10 TANK.
  3. DESIGN PERCOLATION RATE = < 2 MINUTES PER INCH  
SOIL TEXTURE LOAMY SANDS, CLASS 1  
310 CMR 15.242 EFFLUENT LOADING RATE = 0.74 GPD/SF
  4. LEACHING AREA:  
TOTAL SIDEWALL AREA PROVIDED = 151.2 SF x .74 GPD/SF = 111.8 GPD  
TOTAL BOTTOM AREA PROVIDED = 320 SF x .74 GPD/SF = 236.8 GPD  
MAXIMUM ALLOWABLE LOADING UNDER TITLE 5 = 348 \* GPD  
ACTUAL HYDRAULIC LOADING = 440 GPD (SEE 1.)
- \* 21% OF SAS DESIGN REQUIREMENT PROVIDED.  
SEE LOCAL UPGRADE APPROVAL REQUEST

**PROFILE OF SYSTEM - NO SCALE**



**TYPICAL LEACHING TRENCH CROSS SECTION - NO SCALE**



**PROPOSED SEWAGE DISPOSAL SYSTEM**

FOR: AN EXISTING 4 BEDROOM DWELLING  
AT: 7 AMITY LANE, TRURO, MA

ASSESSOR'S MAP: 46 PARCEL: 18

APPLICANT: IRENE SELVER  
390 RIVERSIDE DRIVE, APT. 2F  
NEW YORK, NY 10025

DATE: JULY 5, 2023

DESIGNED BY: LAS  
DRAWN BY: LAS / RJF  
CHECKED BY: LAS / RJF

LAURA A. SCHOFIELD  
REGISTERED  
SANITARIAN

SCHOFIELD BROTHERS OF CAPE COD  
LAND SURVEYING - ENVIRONMENTAL PERMITTING  
P.O. BOX 101, 161 CRANBERRY HIGHWAY ORLEANS, MA  
(508) 255-2098

**SCHOFIELD BROTHERS OF CAPE COD**  
Land Surveying and Environmental Permitting  
161 Cranberry Highway  
P.O. Box 101  
Orleans, MA 02653-0101  
508-255-2098 - 508-240-1215 (fax)  
E-mail: schobro@capecod.net

July 4, 2023

Truro Board of Health  
24 Town Hill Road  
Truro, MA 02666

RE: 38 Toms Hill Road

Dear Members of the Board:

Enclosed for your review please find the following:

- A filing fee in the amount of \$75.00 (ck#5788)
- 7 Copies of the Floor Plan of the Existing Dwelling with rooms labeled
- 7 Copies of the Plan entitled "Proposed Sewage Disposal System for An Existing Four Bedroom Dwelling at 38 Toms Hill Road Truro, Massachusetts" dated 7/5/23
- A copy of the Certified abutter list and a copy of the notification sent to the abutters

HEALTH DEPARTMENT  
TOWN OF TRURO

JUL 07 2023

RECEIVED BY:

The subject property is a 31,363± square foot waterfront lot overlooking Cape Cod Bay to the west and Pamet Harbor to the south. An existing 4 bedroom cottage built in 1955 exists on the site with associated appurtenances. The cottage is served by a single cesspool and a private well. A coastal bank associated with the Little Pamet River estuary exists along the westerly portion of the site.

The proposed septic system is designed to serve the 4 bedroom dwelling. A 1,500 gallon septic tank is provided along with a soil absorption system comprised of Cultec chambers in a stepped trench configuration to maximize the distance to the top of the coastal bank. The leaching area design takes advantage of the reduction of leaching area allowed pursuant to a local upgrade approval and in anticipation of a future innovative/alternative technology being installed at a later date.

There is minimal available upland area on the lot for subsurface sewage disposal. The lot is environmentally sensitive and contains numerous site constraints impacting the septic system design. Several local upgrade approvals from Title 5 are requested as well as several variances from the Truro Board of Health Regulations governing septic system design as follows:

Local upgrade approval requested pursuant to Title V, the State Environmental Code:

15.405(1)(a) Reduction of the required 10 foot separation to property lines as follows:

5 feet provided between the soil absorption system and easterly property line

8 feet provided between the soil absorption system and southerly property line

15.405(1)(c) to allow a 25% reduction in the required subsurface disposal area design requirements

15.405(1)(f) Reduction of system location setbacks from a coastal bank to a soil absorption system  
48 feet provided (50 feet required)

15.405(1)(g) Reduction of the required 100 foot separation between a private water supply well (locus well) and a soil absorption system: 78 feet

**SCHOFIELD BROTHERS OF CAPE COD**  
Land Surveying and Environmental Permitting

Variances Requested from Town of Truro Board of Health Regulations

Section VI- Local Regulations to Supplement Title 5, State Environmental Code:

Relief is requested temporarily from Article 8 – Innovative Alternative Technology (1) *Applicability (d) for upgrades of previously approved systems that exceed current nitrogen loading standards of 110 gpd/10,000 sf of lot area* and from Article 13 – Nitrogen Loading Limitations (2) *Upgrades for systems that exceed current nitrogen loading shall include the use of I/A technology*

Due to the presence of the coastal bank and its jurisdictional overlap of the property, a variance from the Town of Truro Board of Health Regulations Section VI, Article 9 is required for the minimum setback distances for the septic tank and soil absorption system as follows:

Minimum setback distance between a septic tank and wetlands: 100' required  
28' provided from the top of the coastal bank to proposed septic tank.

HEALTH DEPARTMENT  
TOWN OF TRURO

Minimum setback distance between a soil absorption system and a wetlands: 150 feet required  
78' provided between proposed SAS and top of coastal bank

JUL 07 2023

RECEIVED BY:

Section VII – Water Protection Regulations

Article 2(a) – *Regulations In the Pamet River Protection District...all systems...shall be located and installed at least one hundred and fifty (150') feet from all Wetlands as defined herein...*

Relief is requested from this regulation to allow the septic tank and soil absorption system to be within 150 feet of the top of a coastal bank.

The property owners would like to comply with the Board of Health's requirement to upgrade their existing cesspool to a Title 5 system. The septic system shown on the design plan is a substantial improvement with respect to public health and protecting the environment than the existing cesspool the system will replace.

The existing dwelling is a seasonal dwelling that is not winterized and therefore not possible to utilize for most of the year. The property owners would like to phase in the requirement for providing an innovative/alternative technology to such a time that the house is winterized or the house is sold.

Please don't hesitate to contact our office if you have questions or require additional information.

Sincerely,

**Schofield Brothers of Cape Cod**



Laura Schofield, RS  
Project Manager

enc

cc: Tina Ryman



Fee: \$75.00



**APPLICATION FOR BOARD OF HEALTH VARIANCES**

Date: 9/7/22

Property Owner's Name: Tina Ryman et al

Mailing Address: 8 Button Road Easthampton, MA 01027

Address of Property: 38 Toms Hill Road

Map and Parcel Number: Map # 49 Parcel # 14

Design Engineer/Sanitarian Laura Schofield

Firm/Company Name: Schofield Brothers Phone #: 508.255.2098

Address: PO Box 101 Orleans, MA 02653

HEALTH DEPARTMENT  
TOWN OF TRURO

Please check type of variance requested:

Title 5 Variance Request: Section Please refer to attached letter JUL 07 2023

RECEIVED BY: \_\_\_\_\_

Board of Health Variance Request: Section/Article Please refer to attached letter

Laura Schofield  
Signature (Representative)

7/4/23  
Date

+ Tina H. Ryman  
Signature (Property Owner)

SCHOFIELD BROTHERS OF CAPE COD  
Land Surveying and Environmental Permitting  
161 Cranberry Highway  
P.O. Box 101  
Orleans, MA 02653-0101  
508-255-2098 - 508-240-1215 (fax)  
E-mail: schobro@capecod.net

**Truro Board of Health Variance Form Attachment:**

Local upgrade approval requested pursuant to Title V, the State Environmental Code:

15.405(1)(a) Reduction of the required 10 foot separation to property lines as follows:

5 feet provided between the soil absorption system and easterly property line

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15.405(1)(f) Reduction of system location setbacks from a coastal bank to a soil absorption system

48 feet provided (50 feet required)

15.405(1)(g) Reduction of the required 100 foot separation between a private water supply well (locus well) and a soil absorption system: 78 feet (100 required)

RECEIVED BY:  
TOWN OF TRURO

JUL 07 2023

Variations Requested from Town of Truro Board of Health Regulations

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Floor Plan at  
38 Tom's Hill Rd

HEALTH DEPARTMENT  
TOWN OF TRURO

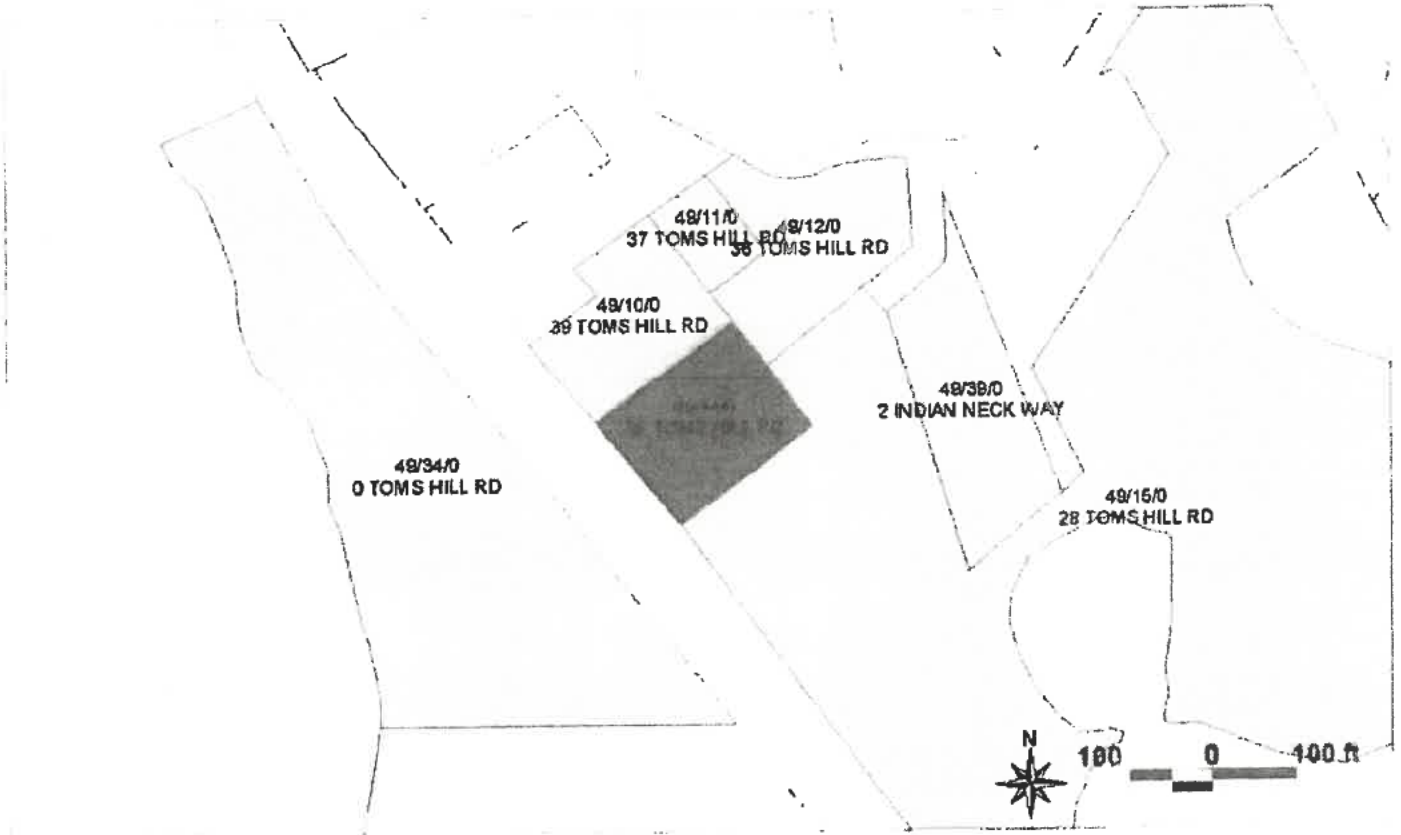
JUL 07 2023

RECEIVED BY:

FIRS

TOWN OF TRURO, MA  
 BOARD OF ASSESSORS  
 P.O. BOX 2012, TRURO MA 02666

Custom Abutters List



| Key  | Parcel ID | Owner   | Location          | Mailing Street                       | Mailing City | ST | ZipCd/Country |
|------|-----------|---|-------------------|--------------------------------------|--------------|----|---------------|
| 2762 | 49-10-0-R | TOMS HILL PROPERTIES LLC<br>MGR: SUSAN H ARESON                 | 39 TOMS HILL RD   | PO BOX 65                            | TRURO        | MA | 02666         |
| 2763 | 49-11-0-R | TOMS HILL PROPERTIES LLC<br>MGR: SUSAN H ARESON                 | 37 TOMS HILL RD   | PO BOX 65                            | TRURO        | MA | 02666         |
| 2764 | 49-12-0-R | MOYNIHAN FAMILY REALTY TRUST<br>TRS: MOYNIHAN CORNELIUS ET AL   | 36 TOMS HILL RD   | 58 WASHINGTON AVE                    | CAMBRIDGE    | MA | 02140-2811    |
| 2765 | 49-14-0-R | RYMAN TINA HELEN TRS&JEWEL H&<br>BEALE DONALD L&KUHN MATTHEW LT | 38 TOMS HILL RD   | 8 BUTTON ROAD                        | EASTHAMPTON  | MA | 01027         |
| 2766 | 49-15-0-R | HART REALTY TRUST<br>TRS: HART MELISSA A ET AL                  | 28 TOMS HILL RD   | C/O HART NICHOLAS D<br>66 OAK STREET | LEXINGTON    | MA | 02421         |
| 2784 | 49-34-0-E | TOWN OF TRURO   | 0 TOMS HILL RD    | PO BOX 2030                          | TRURO        | MA | 02666-2030    |
| 5565 | 49-39-0-E | TRURO CONSERVATION TRUST<br>TRS: BETSEY BROWN ET AL             | 2 INDIAN NECK WAY | PO BOX 327                           | NO TRURO     | MA | 02652-0327    |

HEALTH DEPARTMENT  
 TOWN OF TRURO  
 JUL 07 2023  
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LG 7/5/23

SCHOFIELD BROTHERS OF CAPE COD  
Land Surveying & Environmental Permitting  
161 Cranberry Highway  
P.O. Box 101  
Orleans, MA 02653-0101  
508-255-2098 - 508-240-1215 (fax)  
E-mail: schobro@capecod.net

July 7, 2023

RE: 38 Toms Hill Road Septic System Upgrade

Dear Abutter;

You are being notified pursuant to the State Environmental Code Title 5 and the Truro Board of Health Regulations that the Board of Health will hold a public hearing to hear requests for variances from applicable State and Local regulations for a septic system upgrade at the above referenced address. The variances requested are as follows:

Local upgrade approval requested pursuant to Title V, the State Environmental Code:

15.405(1)(a) Reduction of the required 10 foot separation to property lines as follows:

5 feet provided between the soil absorption system and easterly property line

8 feet provided between the soil absorption system and southerly property line

15.405(1)(c) to allow a 25% reduction in the required subsurface disposal area design requirements

15.405(1)(f) Reduction of system location setbacks from a coastal bank to a soil absorption system  
48 feet provided (50 feet required)

15.405(1)(g) Reduction of the required 100 foot separation between a private water supply well (locus well) and a soil absorption system: 78 feet (100 feet required)

Variances Requested from Town of Truro Board of Health Regulations

Section VI- Local Regulations to Supplement Title 5, State Environmental Code:

Relief is requested temporarily from Article 8 – Innovative Alternative Technology (1) *Applicability (d) for upgrades of previously approved systems that exceed current nitrogen loading standards of 110 gpd/10,000 sf of lot area* and from Article 13 – Nitrogen Loading Limitations (2) *Upgrades for systems that exceed current nitrogen loading shall include the use of I/A technology*

Due to the presence of the coastal bank and its jurisdictional overlap of the property, a variance from the Town of Truro Board of Health Regulations Section VI, Article 9 is required for the minimum setback distances for the septic tank and soil absorption system as follows:

Minimum setback distance between a septic tank and wetlands: 100' required  
28' provided from the top of the coastal bank to proposed septic tank.

Minimum setback distance between a soil absorption system and a wetlands: 150 feet required  
78' provided between proposed SAS and top of coastal bank

JUL 07 2023

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**SCHOFIELD BROTHERS OF CAPE COD**  
Engineering - Land Surveying  
Environmental Permitting

Section VII – Water Protection Regulations

Article 2(a) – *Regulations In the Pamet River Protection District...all systems...shall be located and installed at least one hundred and fifty (150') feet from all Wetlands as defined herein...*

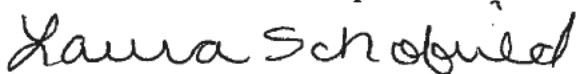
Relief is requested from this regulation to allow the septic tank and soil absorption system to be within 150 feet of the top of a coastal bank.

Copies of the site plan are on file at the Board of Health and may be viewed prior to the public hearing to be held on July 18, 2023. The variance hearing begins at 4:30 pm and will be held remotely.

**Remote Meeting Access Instructions:** For citizens in Truro the meeting may be viewed on Channel 18. It may also be found at the Town web-site home page at [www.Truro-ma.gov](http://www.Truro-ma.gov). “Truro Channel 18” is found under “Helpful Links”. To view, click on the green “Watch” button. To provide comment remotely during the meeting, call 1-866-899-4679. Or you may access the meeting from your computer, tablet, or smartphone at <https://global.gotomeeting.com>. Please refer to the published meeting agenda at the Town of Truro website for access codes and further information.

Sincerely,

**Schofield Brothers of Cape Cod**



Laura Schofield, RS, SE  
Project Manager

HEALTH DEPARTMENT  
TOWN OF TRURO

JUL 07 2023

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**PLOT PLAN**  
 SCALE: 1 in. = 20 ft.  
 ASSESSOR'S MAP 49 PARCEL 14  
 LOT AREA: 31,363 SQ.FT.±

MAP 49, PARCEL 10

MAP 49, PARCEL 12

100' FROM WELLS  
 MAP 49, PARCEL 10 & 11

MAP 49, PARCEL 15

LOCAL UPGRADE APPROVAL REQUESTED PURSUANT TO TITLE V, THE STATE ENVIRONMENTAL CODE:

15.405(1)(A) REDUCTION OF THE REQUIRED 10 FOOT SEPARATION TO PROPERTY LINES AS FOLLOWS:  
 5 FEET PROVIDED BETWEEN THE SOIL ABSORPTION SYSTEM (SAS) AND EASTERLY PROPERTY LINE  
 8 FEET PROVIDED BETWEEN THE SAS AND SOUTHERLY PROPERTY LINE

15.405(1)(C) TO ALLOW A 25% REDUCTION IN THE REQUIRED SUBSURFACE DISPOSAL AREA DESIGN REQUIREMENTS

15.405(1)(F) REDUCTION OF SYSTEM LOCATION SETBACKS FROM A COASTAL BANK TO A SAS, 48 FEET PROVIDED (50 FEET REQUIRED)

15.405(1)(G) REDUCTION OF THE REQUIRED 100 FOOT SEPARATION BETWEEN A PRIVATE WATER SUPPLY WELL (LOCUS WELL) AND A SAS: 78 FEET PROVIDED (100' REQUIRED)

VARIANCES REQUESTED FROM THE TOWN OF TRURO BOARD OF HEALTH REGULATIONS SECTION VI—LOCAL REGULATIONS TO SUPPLEMENT TITLE 5, STATE SANITARY CODE:

RELIEF IS REQUESTED TEMPORARILY FROM ARTICLE 8 - INNOVATIVE ALTERNATIVE TECHNOLOGY (1) APPLICABILITY (D) FOR UPGRADES OF PREVIOUSLY APPROVED SYSTEMS THAT EXCEED CURRENT NITROGEN LOADING STANDARDS OF 110 GPD/10,000SF OF LOT AREA AND FROM ARTICLE 13 - NITROGEN LOADING LIMITATIONS (2) UPGRADES FOR SYSTEMS THAT EXCEED CURRENT NITROGEN LOADING SHALL INCLUDE THE USE OF I/A TECHNOLOGY.

A VARIANCE FROM THE TOWN OF TRURO BOARD OF HEALTH REGULATIONS SECTION VI, ARTICLE 9 IS REQUIRED FOR THE MINIMUM SETBACK DISTANCES FOR THE SEPTIC TANK AND SAS AS FOLLOWS:

MINIMUM SETBACK DISTANCE BETWEEN A SEPTIC TANK AND WETLANDS: 100' REQUIRED 28' PROVIDED FROM THE TOP OF THE COASTAL BANK TO THE PROPOSED SEPTIC TANK.  
 MINIMUM SETBACK DISTANCE BETWEEN A SAS AND A WETLANDS: 150 FEET REQUIRED 78' PROVIDED BETWEEN THE PROPOSED SAS AND TOP OF COASTAL BANK.

SECTION VII - WATER PROTECTION REGULATIONS  
 ARTICLE 2(A) - REGULATIONS IN THE PAMET RIVER PROTECTION DISTRICT...ALL SYSTEMS...SHALL BE LOCATED AND INSTALLED AT LEAST ONE HUNDRED AND FIFTY (150') FEET FROM ALL WETLANDS AS DEFINED HEREIN...  
 RELIEF IS REQUESTED FROM THIS REGULATION TO ALLOW THE SEPTIC TANK AND SAS TO BE WITHIN 150 FEET OF THE TOP OF A COASTAL BANK.

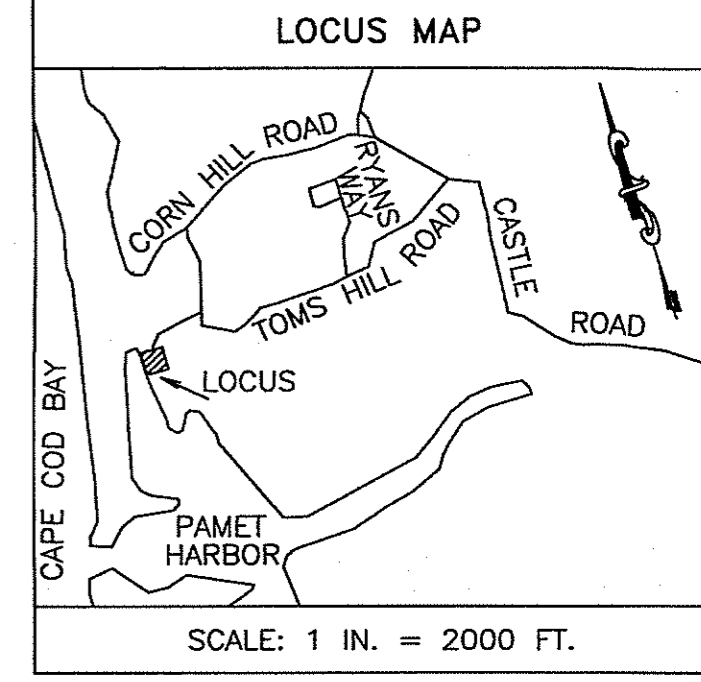
| DEEP TEST HOLE OBSERVATION LOG #1                 |                         |              |  |                      |               |       |
|---|-------------------------|--------------|--|----------------------|---------------|-------|
| DATE: MAY 6, 2022                                 |                         |              | JOB: 0-12568                           |                      |               |       |
| PERFORMED BY: LAURA SCHOFIELD, RS, SE             |                         |              | WITNESSED BY: AROZANA DAVIS, TRURO BOH |                      |               |       |
| ELEVATION (FT)                                    | DEPTH FROM SURFACE (IN) | SOIL HORIZON | SOIL TEXTURE (USDA)                    | SOIL COLOR (MUNSELL) | SOIL MOTTLING | OTHER |
| 77.0-75.9   | 0-13                    | A/FILL       | VARIABLE SAND                          | VARIABLE             |               |       |
| 75.9-71.5   | 13-68                   | FILL         | SAND                                   | 10YR6/4              |               |       |
| 71.5-70.6   | 68-77                   | OLD A        | SANDY LOAM SAND                        | 10YR3/4              |               |       |
| 70.6-69.3   | 77-82                   | BW           | SANDY LOAM SAND                        | 10YR4/6              |               |       |
| 69.3-65.2   | 82-142                  | C            | SAND                                   | 10YR6/6              |               |       |
| PARENT GEOLOGICAL MATERIAL: GLACIAL OUTWASH       |                         |              | STANDING WATER IN HOLE: NO             |                      |               |       |
| WEEPING FROM FACE: NO                             |                         |              | DEPTH TO BEDROCK:                      |                      |               |       |
| ESTIMATED SEASONAL HIGH GROUNDWATER BELOW EL 65.2 |                         |              |  |                      |               |       |
| PERCOLATION TEST:                                 |                         |              |  |                      |               |       |

| DEEP TEST HOLE OBSERVATION LOG #2   |                         |              |  |                      |               |       |
|---|-------------------------|--------------|--|----------------------|---------------|-------|
| DATE: MAY 6, 2022   |                         |              | JOB: 0-12568                           |                      |               |       |
| PERFORMED BY: LAURA SCHOFIELD, RS, SE   |                         |              | WITNESSED BY: AROZANA DAVIS, TRURO BOH |                      |               |       |
| ELEVATION (FT)  | DEPTH FROM SURFACE (IN) | SOIL HORIZON | SOIL TEXTURE (USDA)                    | SOIL COLOR (MUNSELL) | SOIL MOTTLING | OTHER |
| 79.1-78.1   | 0-12                    | A            | LOAMY SAND                             | 10YR4/3              |               |       |
| 78.1-77.0   | 12-25                   | BW           | LOAMY SAND                             | 10YR4/6              |               |       |
| 77.0-67.1   | 25-144                  | C            | SAND, COARSE                           | 10YR6/6              |               |       |
| PARENT GEOLOGICAL MATERIAL: GLACIAL OUTWASH   |                         |              | STANDING WATER IN HOLE: NO             |                      |               |       |
| WEEPING FROM FACE: NO   |                         |              | DEPTH TO BEDROCK:                      |                      |               |       |
| ESTIMATED SEASONAL HIGH GROUNDWATER BELOW EL 67.1                                       |                         |              |  |                      |               |       |
| PERCOLATION TEST: TOP OF PERC. AT 30", 24 GAL ABSORBED IN 4:15 MIN., PERC. RATE < 2 MPI |                         |              |  |                      |               |       |

A CONFIRMATORY TESTHOLE SHALL BE PERFORMED PRIOR TO INSTALLATION OF TRENCHES

**GENERAL NOTES (CONT.)**

14. PLASTIC MEMBRANE IMPERMEABLE BARRIER SHALL BE:  
 - OF SUFFICIENT TENSILE STRENGTH TO WITHSTAND PERFORATION, INCLUDING CRACKING, TEARING, AND BREAKING;  
 - AT LEAST 40 MILS IN THICKNESS, AND HAVE SIGNIFICANT DURABILITY AND RESISTANCE TO THE TEMPERATURE AND MOISTURE CONDITIONS EXPECTED IN THE SUBSURFACE ENVIRONMENT; AND  
 - INSTALLED WITHOUT GAPS OR HOLES AND SO THAT PERFORATIONS DO NOT DEVELOP AFTER INSTALLATION.
- FOR TRENCH A:  
 TOP OF IMPERMEABLE BARRIER ELEV = 69.5  
 BOTTOM OF IMPERMEABLE BARRIER = 66.0
- FOR TRENCH B:  
 TOP OF IMPERMEABLE BARRIER ELEV = 67.5  
 BOTTOM OF IMPERMEABLE BARRIER = 63.0
15. CULTREC DESIGN PURSUANT TO MODIFIED CERTIFICATION FOR GENERAL USE PERMIT.

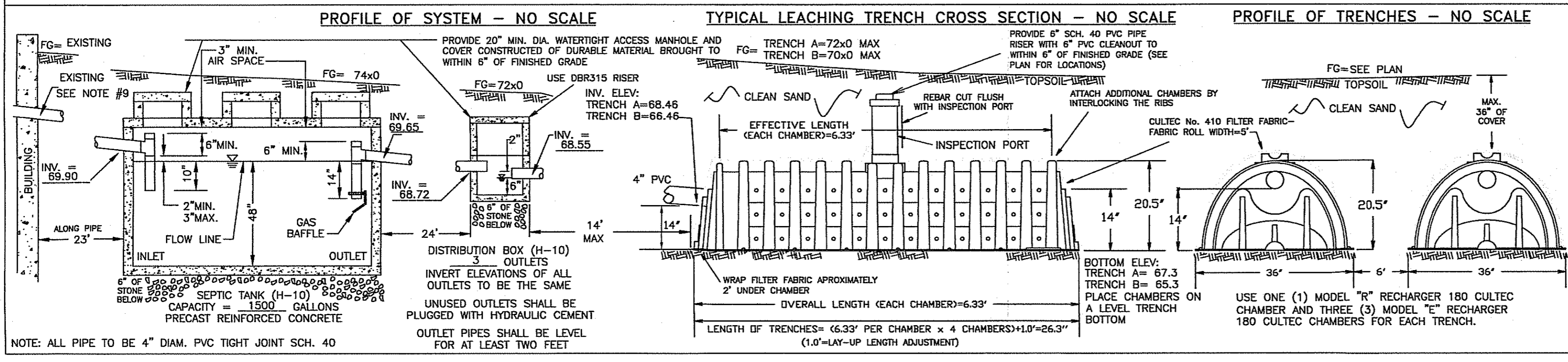


**GENERAL NOTES**

- ELEVATIONS REFER TO NAVD 88 DATUM. SEE BENCHMARK ON PLAN.
- ALL CONSTRUCTION AND MATERIALS TO CONFORM TO TITLE 5 OF THE MASSACHUSETTS STATE ENVIRONMENTAL CODE AND THE BOARD OF HEALTH REQUIREMENTS FOR THE TOWN OF TRURO.
- ANY CHANGES TO THIS PLAN MUST BE APPROVED BY THE BOARD OF HEALTH AND SCHOFIELD BROTHERS OF CAPE COD.
- FOR PROPER PERFORMANCE, THE SEPTIC TANK SHOULD BE INSPECTED AT LEAST ONCE PER YEAR. THE TANK SHOULD BE PUMPED WHEN THE TOTAL DEPTH OF SCUM AND SOLIDS EXCEEDS 1/3 OF ITS LIQUID DEPTH.
- SCHOFIELD BROTHERS OF CAPE COD DOES NOT ASSUME RESPONSIBILITY FOR MATERIALS ENCOUNTERED DURING EXCAVATION.
- ANY UNSUITABLE OR DELETERIOUS MATERIAL ENCOUNTERED MUST BE EXCAVATED AND REMOVED TO A DISTANCE OF 5 FEET FROM ALL SIDES OF THE SOIL ABSORPTION SYSTEM (S.A.S) AND TO A DEPTH AT WHICH THE C HORIZON IS ENCOUNTERED. BACKFILL WITH CLEAN SAND MATERIAL MEETING TITLE 5 SPECIFICATIONS TO APPROX. TOP OF CHAMBER ELEVATION. CONTACT SCHOFIELD BROTHERS IF ANY DOUBT OR QUESTIONS ARISE REGARDING SOIL QUALITY.
- INSTALLATION CONTRACTOR SHALL CONTACT SCHOFIELD BROTHERS FOR A CONFIRMATORY TEST HOLE AND PRIOR TO BACKFILLING FOR SYSTEM CERTIFICATION.
- EXISTING CESSPOOL IS TO BE PUMPED, ABANDONED AND REMOVED.
- EXISTING BUILDING SEWER INVERT(S) SHALL BE VERIFIED IN FIELD PRIOR TO COMPONENT INSTALLATION. CONTACT SCHOFIELD BROTHERS IF SIGNIFICANT DISCREPANCIES EXIST.
- SITE RESTORATION REQUIRES ALL STRIPPED TOPSOIL AND SUBSOIL TO BE STOCKPILED AND REUSED AT OWNERS OPTION. RE-SPREAD OVER DISTURBED AREAS TO PROMOTE OPTIMAL GROWTH.
- ALL SEPTIC SYSTEM COMPONENTS ARE DESIGNED FOR A MINIMUM H-10 LOADING. ANY COMPONENT THAT WILL BE SUBJECT TO VEHICLE OR OTHER HEAVY EQUIPMENT TRAFFIC SHALL BE INSTALLED WITH H-20 LOADING CAPACITY.
- UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION.
- NO KNOWN WELLS EXIST WITHIN 200' OF THE PROPOSED LEACHING AREA EXCEPT THOSE THAT ARE SHOWN.

**DESIGN CALCULATIONS**

- ESTIMATED HYDRAULIC LOADING:  
 $\frac{4 \text{ BEDROOMS AT } 110 \text{ GPD PER BEDROOM}}{4} = 440 \text{ GPD}$   
 GARBAGE GRINDER IS NOT ALLOWED WITH THIS DESIGN
  - SEPTIC TANK SIZE:  
 AVERAGE DAILY FLOW =  $440 \text{ GPD} \times 2 \text{ DAYS} = 880 \text{ GALLONS}$   
 SEPTIC TANK PROVIDED = 1500 GALLONS
  - DESIGN PERCOLATION RATE = <2 MINUTES PER INCH  
 SOIL TEXTURE SANDS, CLASS 1  
 310 CMR 15.242 EFFLUENT LOADING RATE = 0.74 GPD/SF
  - LEACHING AREA REQUIRED:  
 TOTAL SQUARE FOOTAGE REQUIRED BY TITLE 5 =  
 $440 \text{ GPD} \div 74 \text{ GPD/SF} = 595 \text{ SF}$  REQUIRED MINIMUM
- LEACHING AREA PROVIDED:  
 CULTREC SYSTEM: RECHARGER 180 (8) CHAMBERS PROVIDED  
 MASSACHUSETTS ALLOWABLE EFFECTIVE LEACHING AREA = 8.9 SF/LF (FOR TRENCH CONFIGURATION)  
 8 CHAMBERS x 6.3 LF/CHAMBER x 8.9 SF/LF = 448 SF PROVIDED\*  
 \* 25% REDUCTION IN SAS REQUESTED



**PROPOSED SEWAGE DISPOSAL SYSTEM**

FOR: AN EXISTING 4 BEDROOM DWELLING  
 AT: 38 TOMS HILL ROAD  
 TRURO, MA

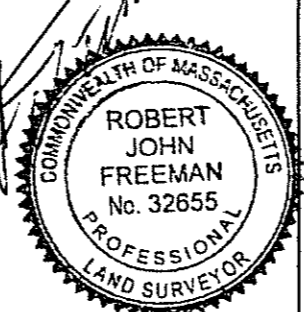
ASSESSOR'S MAP: 49 PARCEL: 14  
 APPLICANT: TINA RYMAN TEL. NO.: (973)216-8782  
 8 BUTTON ROAD EASTHAMPTON, MA 01027

DATE: JULY 5, 2023

DESIGNED BY: LAS  
 DRAWN BY: LAS  
 CHECKED BY: LAS

LABOURA SCHOFIELD REGISTERED SANITARIAN

SCHOFIELD BROTHERS OF CAPE COD  
 LAND SURVEYING - ENVIRONMENTAL PERMITTING  
 P.O. BOX 101, 161 CRANBERRY HIGHWAY ORLEANS, MA (508) 255-2098



**LEGEND**

|        |                                  |
|--------|----------------------------------|
| XX     | PROPOSED CONTOUR LINE            |
| XX     | EXISTING CONTOUR                 |
| ⊙      | EXISTING CESSPOOL                |
| W      | WATER LINE                       |
| ⊙⊙⊙    | PROPOSED 1500 GALLON SEPTIC TANK |
| □      | PROPOSED DISTRIBUTION BOX        |
| ▭      | PROPOSED LEACHING TRENCH         |
| ## x # | EXISTING SPOT ELEVATIONS         |
| ⊙      | TEST HOLE LOCATIONS              |
| —      | PROPERTY LINE                    |
| ## x # | PROPOSED SPOT ELEVATION          |
| —OH    | OVERHEAD UTILITIES               |
| —UG    | UNDERGROUND UTILITIES            |
| FG     | FINISHED GRADE                   |
| IP     | INSPECTION PORT                  |

RECEIVED BY: [Signature] JUL 07 2023 DEPARTMENT OF TRURO

Fee: \$75.00



**APPLICATION FOR BOARD OF HEALTH VARIANCES**

Date: July 13, 2023

Property Owner's Name: Mill Pond Road Investment Trust

Mailing Address: 268 Jerusalem Road, Cohasset, MA, 02025

Address of Property: 1 Mill Pond Road

Map and Parcel Number: Map # 54 Parcel # 68

Design Engineer/Sanitarian Bob Rego, P.E.

Firm/Company Name: River Hawk Environmental, LLC Phone #: 781-536-4639

Address: 511 West Grove Street, Suite 301, Middleborough, MA, 02346

Please check type of variance requested:

Title 5 Variance Request: Section None Required

Board of Health Variance Request: Section/Article (1) Article 9 - SAS to Wetlands: a reduction from 150 to 16.7' from SAS to the 200' Riverfront Area (RA) ; (2) Article 9 - Septic Tank to Wetlands: a reduction from 100 to xx' from the Septic tank to the 200' RA: (3) Article II - Buildable upland calculation for Nitrogen Loading limitations - A waiver allowing the use of the outer riparian zone of the riverfront area to be used in the buildable upland area calculations is requested.

Signature (Representative) \_\_\_\_\_  
  
 Signature (Property Owner)

07/13/2023  
 Date  
07/13/2023

HEALTH DEPARTMENT  
 TOWN OF TRURO  
 JUL 14 2023  
 RECEIVED BY: \_\_\_\_\_



# NARRATIVE TO ACCOMPANY BOARD OF HEALTH VARIANCE REQUEST

## 1 MILL POND ROAD, TRURO, MA

### 1.0 PROJECT DESCRIPTION

The Subject Property is a 51,736 square foot parcel situated along the northerly side of Mill Pond Road in Truro, Massachusetts. The Subject Property is bounded to the south by Mill Pond Road and the north and east by residential properties. The Subject Property is currently undeveloped with the exception of a private water supply well.

Eagle Creek (a tributary to the Atlantic Ocean) is located south of the Subject Property. Eagle Creek has been determined to be a perennial stream. Bordering Vegetated Wetlands (BVW) associated with the tributary are located along the northern border of the stream. The 200-foot Riverfront Area (RA) associated with the perennial tributary encompasses the southern portion of the Subject Property (Approximately 30,369 sf). The mean annual high water line associated with the tributary was determined to be the Mean High Water Line in accordance with 310 CMR 10.23.

According to the Flood Insurance Rate Map (FIRM) for the Town of Truro (Community Panel No. 25001C0227j), dated July 16, 2014, a small portion the Subject Property is located in a Zone AE (elevation 12 feet).

According to the 14<sup>th</sup> Edition of the Massachusetts Natural Heritage Atlas (published August 1, 2021), the Subject Property does not lie within an Estimated Habitat of Rare Wildlife.

### 2.0 PROPOSED WORK

The proposed work includes: the construction of single-family dwelling and associated driveway, septic system, and utilities. Portions of the proposed driveway is located in the 200-foot RA.

All of the septic system components are located outside of the 200-foot RA.

### 3.0 REGULATORY COMPLIANCE

The proposed septic system for the Project has been designed as shown on the Site Plan and described within this narrative to meet all of the applicable requirements of 310 CMR 15.000 (Title 5).

#### Variations from Town of Truro Board of Health Regulations (effective July 1, 2023):

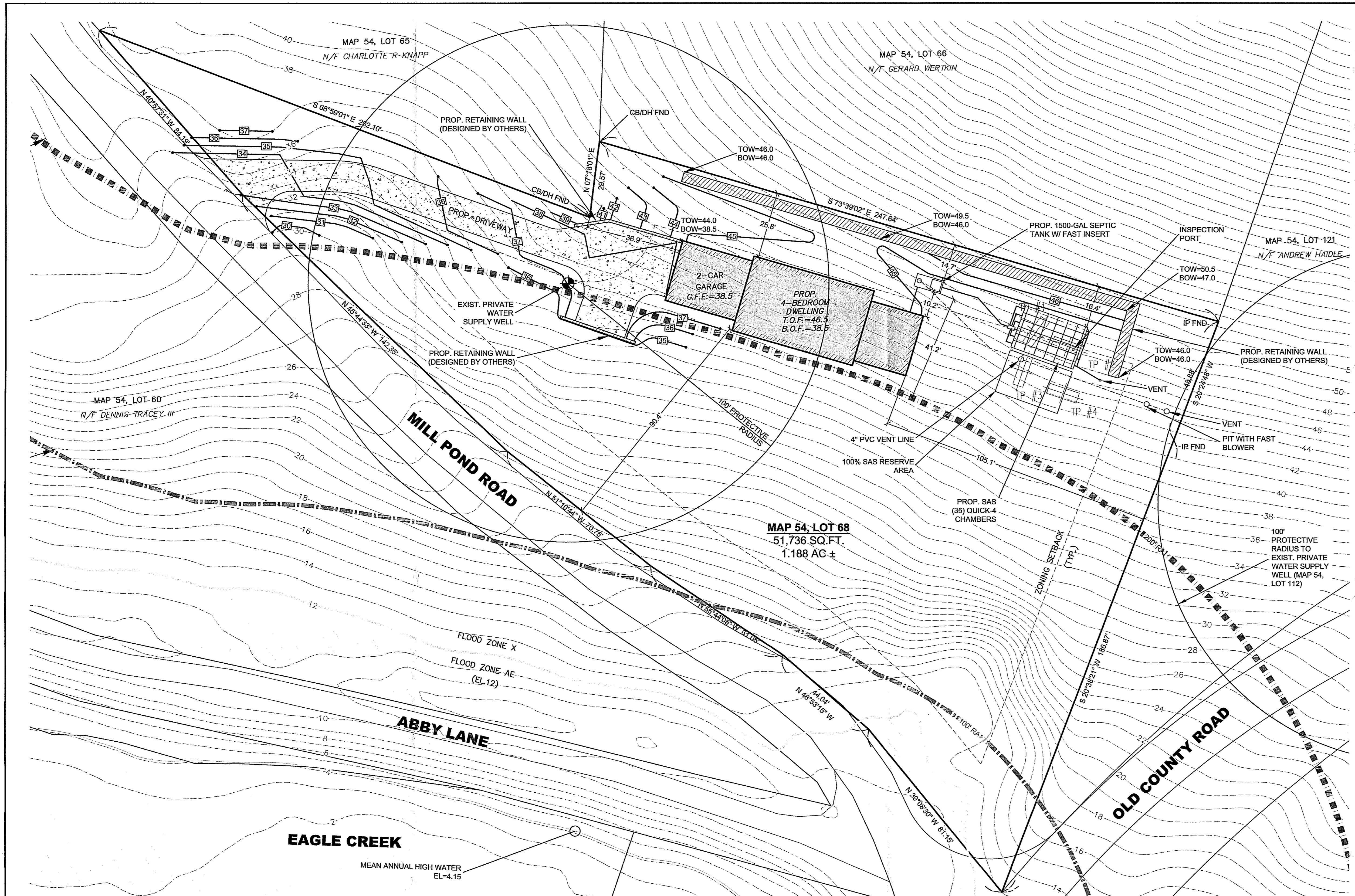
The following variances from BOH Regulations are requested:

HEALTH DEPARTMENT  
TOWN OF TRURO

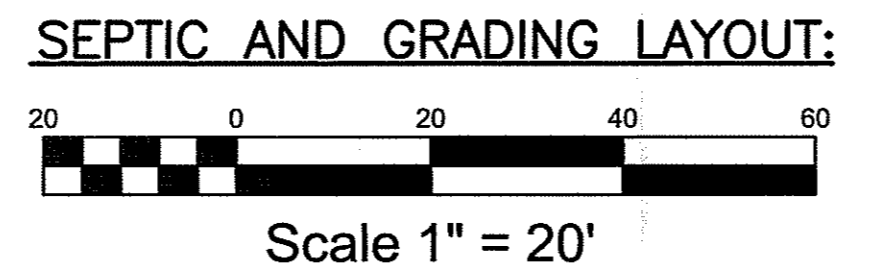
JUL 14 2023

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1. Article 9 - SAS to wetlands: A reduction from 150 to 16.7' from SAS to the 200' Riverfront Area (RA) is requested. The bank of Eagle Creek is 217' from the reserve SAS. There is a paved roadway (Mill Pond Road) and a gravel roadway (Abby Lane) between the SAS and the bank. The SAS is approximately 36 feet higher than the bank of Eagle Creek. The soils underlying the SAS are sand. Effluent from the SAS will leach downward to the water table and travel with the groundwater gradient toward Eagle Creek. Given this flow path, there will be more than sufficient amount of filtration of the effluent. In addition, a denitrifying treatment system will be employed to reduce the nitrogen to levels in the effluent.
  
2. Article 9 - Septic tank to wetlands: A reduction from 100' to 41.2' from septic tank to the 200' RA is requested. The bank of Eagle Creek is 217' from the reserve SAS. There is a paved roadway (Mill Pond Road) and a gravel roadway (Abby Lane) between the SAS and the bank. The septic tank will not discharge liquid to the subsurface. There will be no impact from the Septic Tank to the RA.
  
3. Article 11 - Buildable upland calculations for nitrogen loading limitations: A variance allowing the use of the outer riparian zone (between 100' and 200' from the bank) of the Riverfront Area to be used in the buildable upland area calculations is requested. There is a paved roadway (Mill Pond Road) and a gravel roadway (Abby Lane) between the SAS and the bank. The lot was created prior to the existence of the Riverfront Act. The total lot area is 51,736 square feet. In accordance with Title V, this is enough area to support a 5 bedroom home in a Nitrogen Sensitive Area. We are proposing a 3-bedroom home with a denitrifying treatment system. If the outer riparian zone is allowed to be used in the area calculation, there will be 48,091. That is sufficient to support a 4-bedroom home without a denitrifying system.



**MAP 54, LOT 68**  
51,736 SQ.FT.  
1.188 AC ±



**ZONING TABLE**

ZONING DISTRICT: RESIDENTIAL

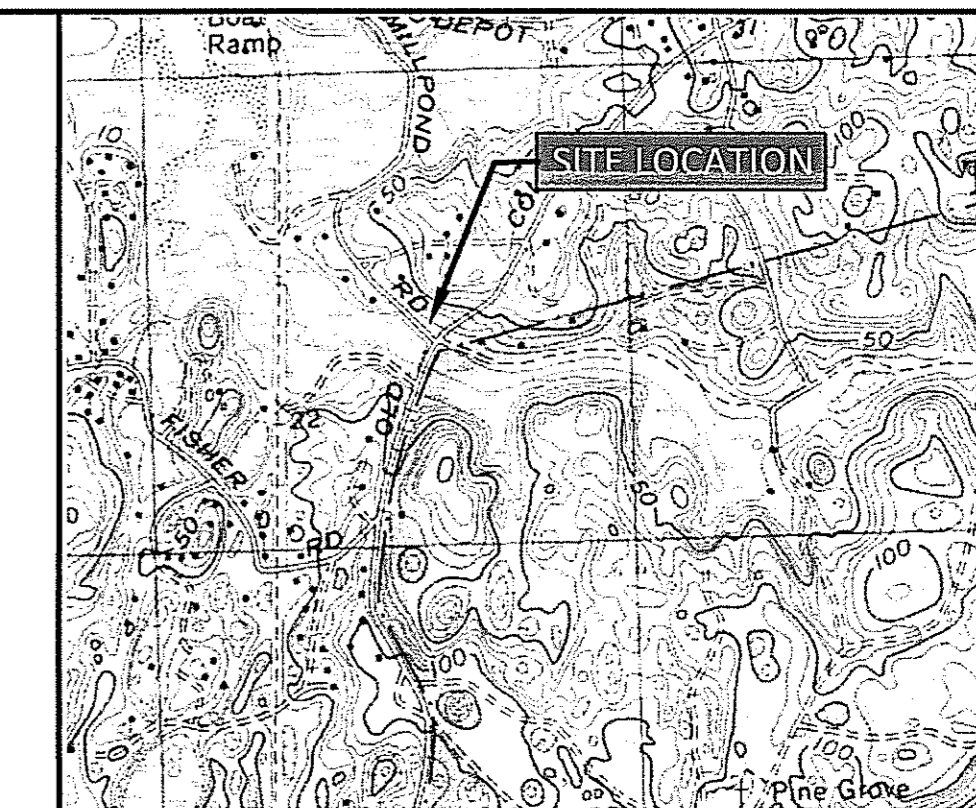
| REQUIREMENT           | REQUIRED | PROPOSED     |
|-----------------------|----------|--------------|
| MINIMUM LOT AREA (SF) | 33,750   | 51,736±      |
| MINIMUM FRONTAGE (FT) | 150      | 483.35       |
| MINIMUM SETBACKS:     |          |              |
| FRONT (FT)            | 25       | 90.4         |
| SIDE (FT)             | 25       | 36.9 & 105.1 |
| REAR (FT)             | 25       | 25.8         |

**LOCAL VARIANCE REQUESTS**

- VARIANCES FROM THE FOLLOWING PROVISIONS OF THE TRURO BOARD OF HEALTH REGULATIONS ARE REQUESTED:
- ARTICLE 9 - SAS TO WETLANDS: A REDUCTION FROM 150 TO 16.7' FROM SAS TO THE 200' RIVERFRONT AREA (RA).
  - ARTICLE 9 - SEPTIC TANK TO WETLANDS: A REDUCTION FROM 100' TO 41.2' FROM SEPTIC TANK TO THE 200' RA.
  - ARTICLE 11 - BUILDABLE UPLAND CALCULATIONS FOR NITROGEN LOADING LIMITATIONS: A WAIVER ALLOWING THE USE OF THE OUTER RIPARIAN ZONE OF THE RIVERFRONT AREA TO BE USED IN THE BUILDABLE UPLAND AREA CALCULATIONS.

**LEGEND**

| DESCRIPTION              | EXISTING |
|--------------------------|----------|
| MEAN ANNUAL HIGH WATER   | ---      |
| LIMIT OF BVW/TOP OF BANK | --- ---  |
| 100' RIVERFRONT AREA     | ====     |
| 200' RIVERFRONT AREA     |          |
| CONTOUR                  | ---52--- |
| SPOT ELEVATIONS          | 84X0     |
| TREE LINE                | ~~~~~    |
| CONSERVATION POST        | ⊠        |



**SITE LOCATION**  
NOT TO SCALE

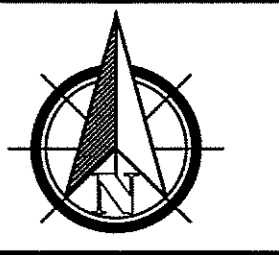
**SITE ADDRESS**  
1 MILL POND RD.  
TRURO, MA 02652

**CURRENT OWNER**  
MILL POND INVESTMENT TRUST  
THOMAS W. LITTAUER, TRUSTEE  
268 JERUSALEM RD.  
COHASSET, MA 02025

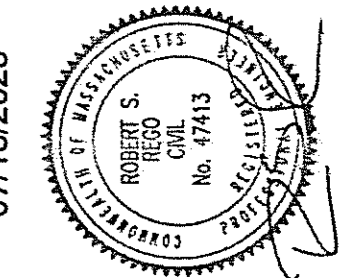
**ASSESSOR'S REFERENCES**  
54-68-0

**DEED REFERENCES**  
BK. 17860 - PG. 326

**TOWN OF TRURO ZONING DESIGNATION**  
RESIDENTIAL



MILL POND INVESTMENT TRUST  
THOMAS W. LITTAUER, TRUSTEE  
268 JERUSALEM ROAD  
COHASSET, MA 02025



**RiverHawk ENVIRONMENTAL**  
CIVIL ENGINEERING & ENVIRONMENTAL CONSULTING  
2183 OCEAN STREET, MARSHFIELD, MA 02050  
781-558-4659 www.riverhawkllc.com

**NOTES**

- THE EXISTING TOPOGRAPHY IS BASED ON 2021 LIDAR DATA FROM NOAA.
- THE LOCATION OF THE TOP OF BANK FOR THE PERENNIAL STREAM LOCATED SOUTH OF THE SUBJECT PROPERTY WAS DETERMINED BASED ON INTERPRETATION OF LIDAR POINT DATA FROM 2021.
- PORTIONS OF THE SUBJECT PROPERTY ARE LOCATED IN A PRIORITY HABITATE AS SHOWN ON THE LATEST EDITION OF THE MASSACHUSETTS NATURAL HERITAGE ATLAS.

**DELINEATION ABBREVIATIONS**

- BVW - BORDERING VEGETATED WETLAND
- TOB - TOP OF BANK
- MHW - MEAN ANNUAL HIGH WATER
- TOF - TOP OF FOUNDATION
- BFE - BASEMENT FLOOR ELEVATION
- GFE - GARAGE FLOOR ELEVATION
- TOW - TOP OF WALL
- BOW - BOTTOM OF WALL

HEALTH DEPARTMENT  
TOWN OF TRURO  
JUL 14 2023  
RECEIVED BY:

**IMPACT SUMMARY**

| DESCRIPTION                           | AMOUNT    |
|---------------------------------------|-----------|
| TOTAL LOT AREA                        | 51,736 SF |
| LOT AREA OUTSIDE RIVERFRONT AREA      | 21,367 SF |
| TOTAL RIVERFRONT AREA ON LOT          | 30,369 SF |
| TOTAL RIVERFRONT AREA IMPACT (SF)     | 3,000 SF  |
| OUTER RIPARIAN RIVERFRONT AREA (SF)   | 26,724 SF |
| TOTAL OUTER RIPARIAN IMPACT (SF)      | 3,000 SF  |
| INNER RIPARIAN RIVERFRONT AREA (SF)   | 3,645 SF  |
| INNER RIPARIAN IMPACT                 | 0 SF      |
| TOTAL LOT AREA OUTSIDE INNER RIPARIAN | 48,091 SF |

**SITE PLAN**  
1 MILL POND ROAD  
TRURO, MA

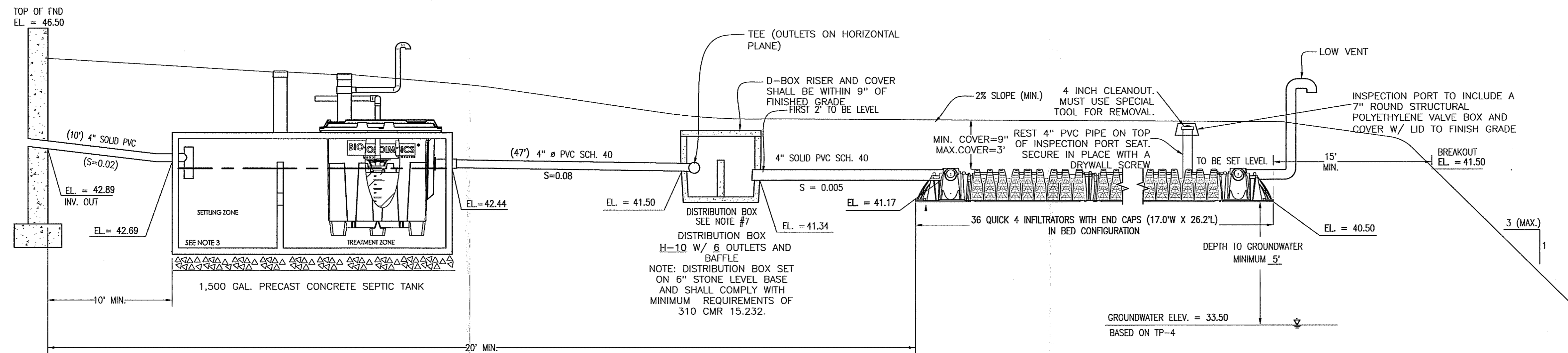
**SITE LAYOUT PLAN**

SP1.1

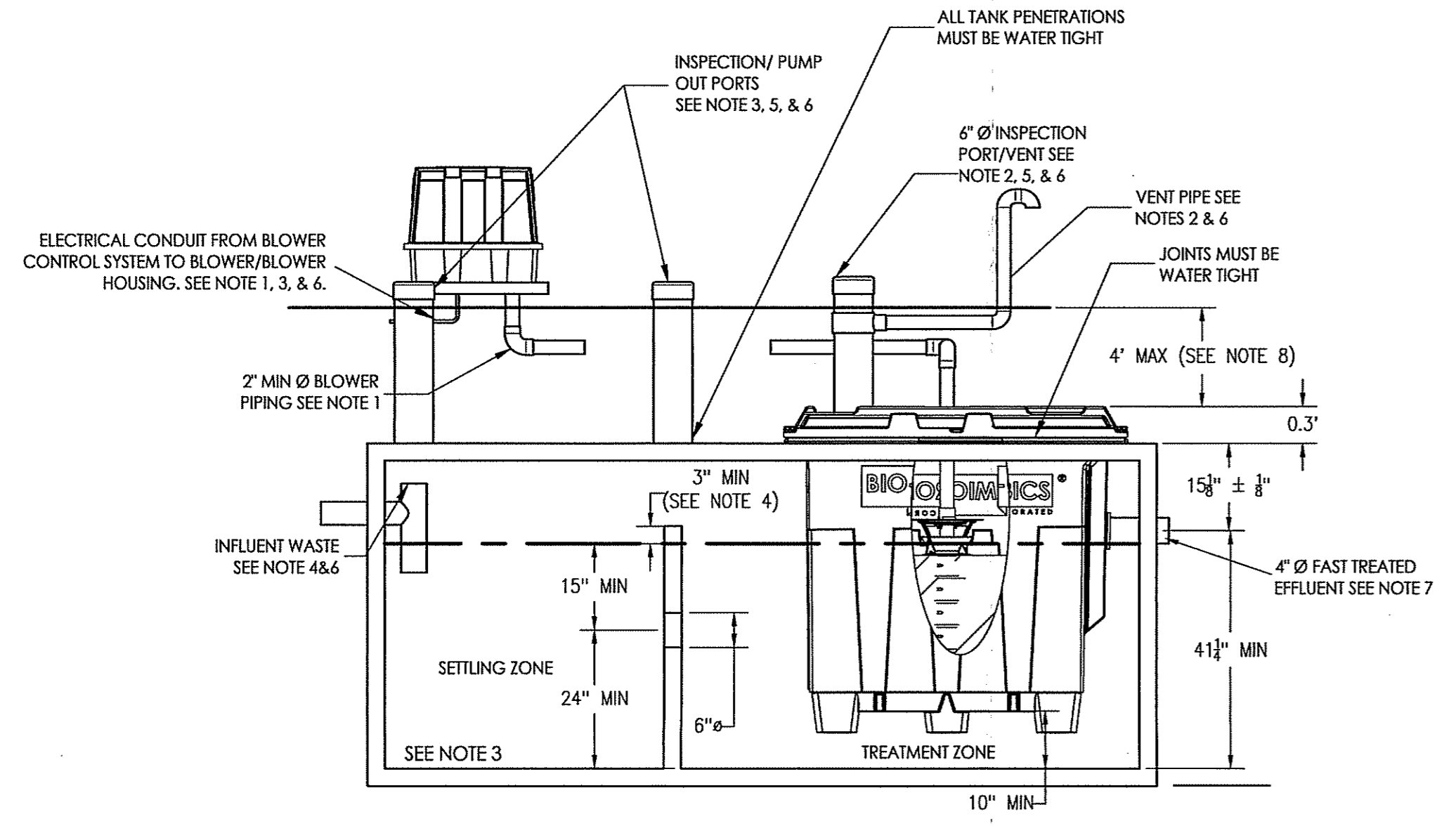
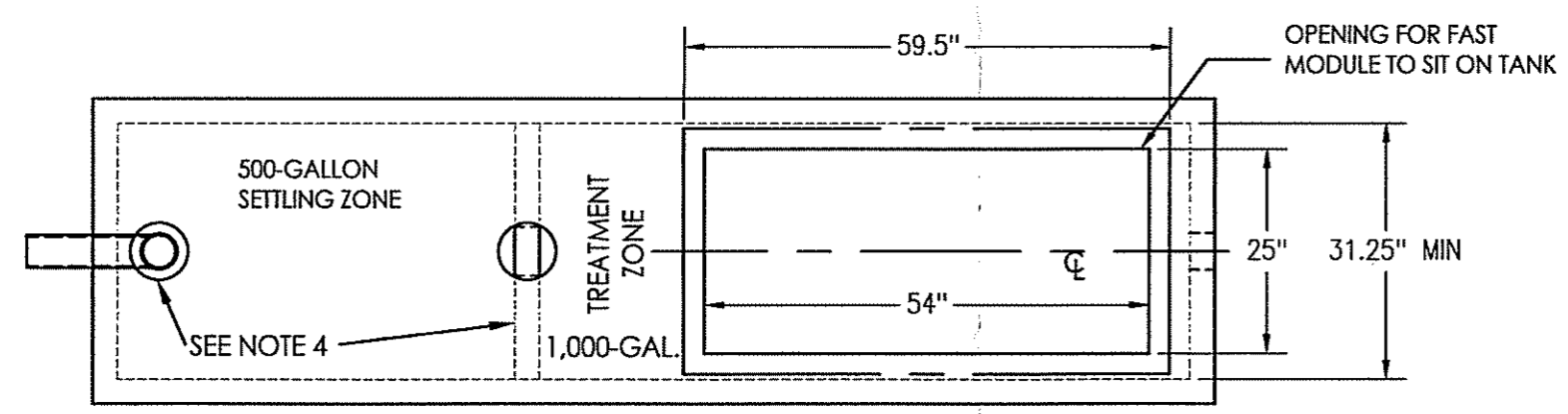
| REV | DATE | DESCRIPTION | BY | APP. |
|-----|------|-------------|----|------|
|     |      |             |    |      |

07/13/2023

| DATE:         | PROJECT NO. | SCALE:   | DRAWN BY: | CHECKED BY: | APPROVED BY: |
|---------------|-------------|----------|-----------|-------------|--------------|
| JULY 13, 2023 | 00381-05-01 | AS SHOWN | AWL       | RSR         | RSR          |



**SEPTIC SYSTEM PROFILE**  
NOT TO SCALE



**FAST NOTES:**

- BLOWER PIPING TO FAST MAY NOT EXCEED 100 FT TOTAL LENGTH AND USE 4 ELBOWS MAXIMUM. FOR DISTANCES GREATER THAN 100 FT - CONSULT FACTORY. BLOWER MUST BE LOCATED ABOVE FLOOD/STANDING WATER LEVELS ON A CONCRETE BASE.
- VENT TO BE LOCATED ABOVE FINISH GRADE OR HIGHER TO AVOID INFILTRATION. CAP WITH VENT GRATE WITH AT LEAST 3 SQ IN. OF OPEN SURFACE AREA. SECURE WITH STAINLESS STEEL SCREWS.
- OR RUN VENT TO DESIRED LOCATION AND COVER OPENING WITH VENT GRATE WITH AT LEAST 7.1 SQ IN. OF OPEN SURFACE AREA. SECURE WITH STAINLESS STEEL SCREWS. VENT PIPING MUST NOT ALLOW EXCESS MOISTURE BUILD UP OR BACK PRESSURE.
- ALL APPURTENANCES TO FAST® (E.G. TANK PUMP OUTS, ETC.) MUST CONFORM TO ALL COUNTRY, STATE, PROVINCE, AND LOCAL PLUMBING AND ELECTRICAL CODES. THE BLOWER CONTROL SYSTEM IS PROVIDED BY BIO-MICROBICS, INC. EITHER THE INFLUENT PIPE TEE SHALL BE FITTED WITH A PIPE CAP OR THE BAFFLE SEPARATING THE TWO ZONES SHALL BE EXTENDED TO THE TOP OF THE TANK. IF CHOOSING TO USE THE PIPE CAP; DRILL A 1/4" VENT HOLE IN THE CAP AND THE BAFFLE SHALL BE AT LEAST 3" HIGHER THAN THE WATER LEVEL AS SHOWN ON THE DRAWING.
- ALL INSPECTION, VIEWING AND PUMP OUT PORTS MUST BE SECURED TO PREVENT ACCIDENTAL OR UNAUTHORIZED ACCESS.
- TANK, ANCHORS, PIPING, CONDUIT, BLOWER HOUSING PAD AND VENTS ARE PROVIDED BY OTHERS.
- ALL PIPING AND ANCILLARY EQUIPMENT INSTALLED AFTER FAST® MUST NOT IMPEDE OR RESTRICT FREE FLOW OF EFFLUENT.
- NO MORE THAN 4 FT OF FILL MAY BE PLACED OVER UNIT LID. REFER TO INSTALLATION MANUAL FOR MORE DETAILS.

**SOIL DATA:**

DATE: 07/06/2023  
PERFORMED BY: JAKE URETSKY (RIVER HAWK ENVIRONMENTAL, LLC)

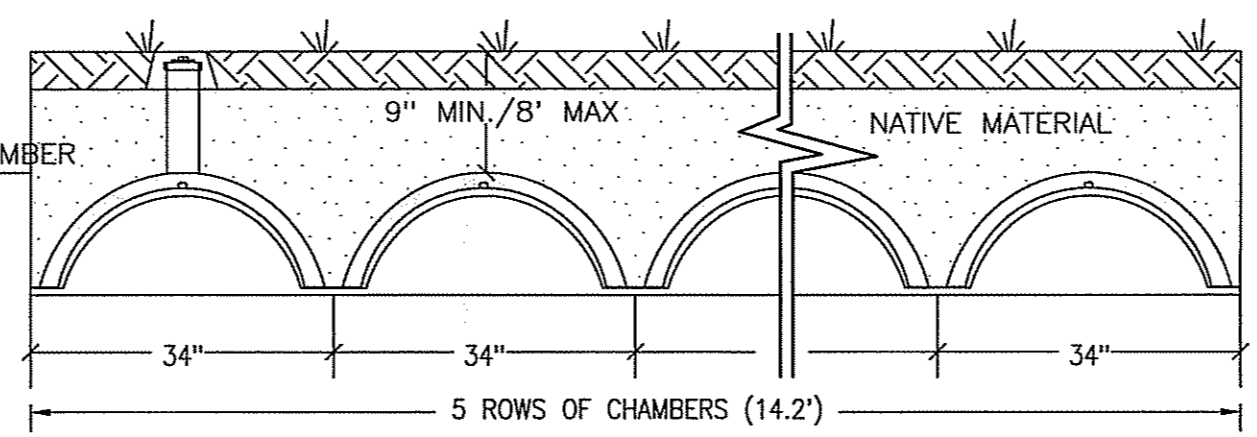
WITNESSED BY: COURTNEY WARREN (TRURO BOH)

| SOIL HORIZ. | TP-1      | DEPTH (INCHES) | ELEV. (FEET) | SOIL HORIZ. | TP-2      | DEPTH (INCHES) | ELEV. (FEET) | SOIL HORIZ. | TP-3      | DEPTH (INCHES) | ELEV. (FEET) | SOIL HORIZ. | TP-4      | DEPTH (INCHES) | ELEV. (FEET) |
|-------------|-----------|----------------|--------------|-------------|-----------|----------------|--------------|-------------|-----------|----------------|--------------|-------------|-----------|----------------|--------------|
| A           | SAND      | 0              | 47.5         | O           | ORGANIC   | 0              | 47.4         | O           | ORGANIC   | 0              | 43.7         | O           | ORGANIC   | 0              | 43.5         |
| A           | 10YR 2/1  | 6              | 47.0         | A           | 10YR 2/1  | 8              | 46.8         | A           | 10YR 2/1  | 5              | 43.4         | A           | 10YR 2/1  | 8              | 42.8         |
| Bw          | 7.5YR 5/6 | 28             | 45.2         | Bw          | 7.5YR 5/6 | 23             | 45.6         | Bw          | 7.5YR 5/6 | 23             | 41.9         | Bw          | 7.5YR 5/6 | 22             | 41.7         |
| C           | SAND      | 46"-64"        | 37.5         | C           | SAND      | 2.5Y 7/4       | 37.5         | C           | SAND      | 2.5Y 7/4       | 33.8         | C           | SAND      | 42"-60"        | 33.5         |
|             |           |                |              |             |           |                |              |             |           |                |              |             |           |                |              |

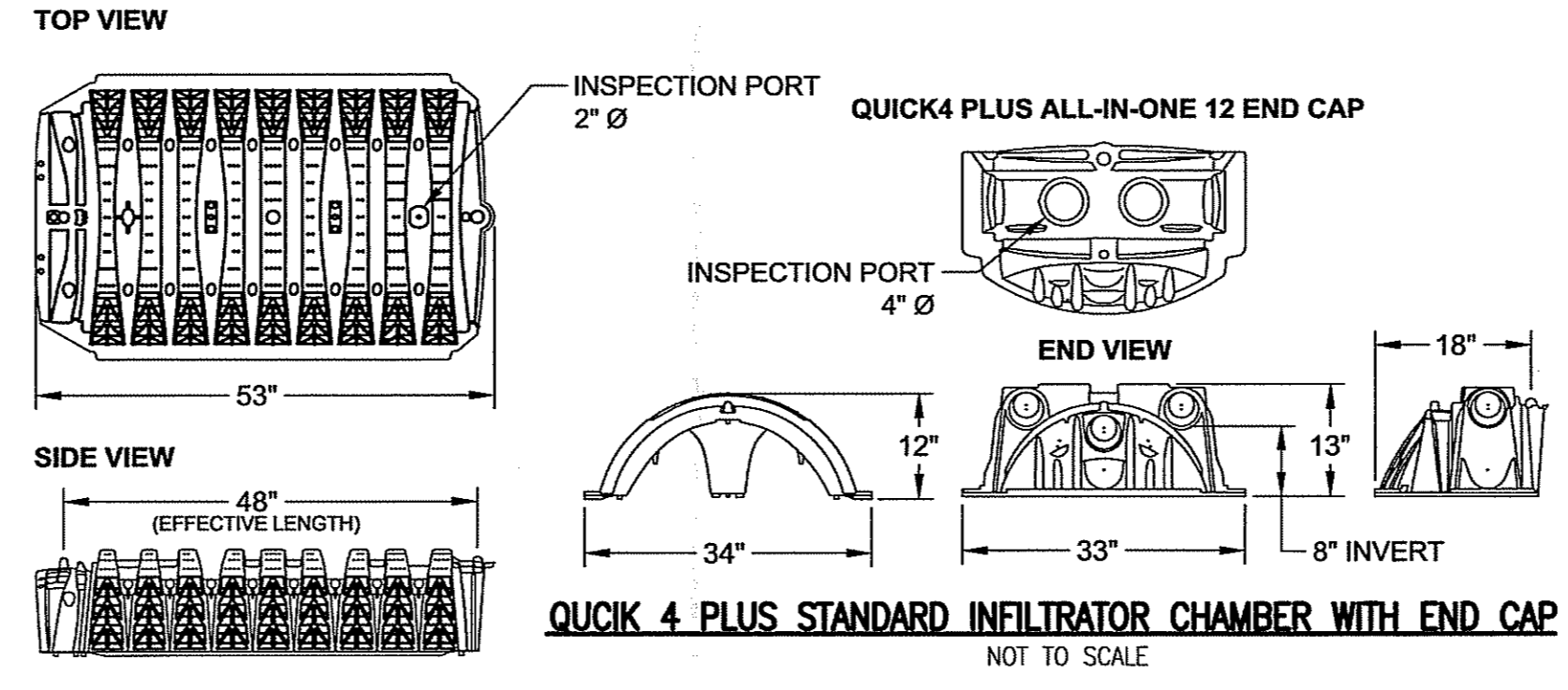
MOTTLING - NOT OBSERVED  
WEEPING - NOT OBSERVED  
STANDING WATER - NOT OBSERVED  
NO REDOX FEATURES

S.H.G.E. = >37.5  
PERC. = <2 MPI

NOTE:  
1. THE O, A, AND B LAYERS ARE TO BE REMOVED BELOW THE SAS AND REPLACED WITH CLEAN FILL IN ACCORDANCE WITH 310 CMR 15.255(3). UNSUITABLE SOIL TO BE REMOVED TO A DISTANCE OF 5' BEYOND THE LIMITS OF THE SOIL ABSORPTION SYSTEM.



**CROSS SECTION OF BED**  
NOT TO SCALE



**QUICK 4 PLUS STANDARD INFILTRATOR CHAMBER WITH END CAP**  
NOT TO SCALE

**DESIGN DATA:**

**DESIGN FLOW:**  
PROP. 3-BEDROOM DWELLING  
3 BEDROOMS x 110 GPD/BEDROOM = 330 GPD  
PERC RATE = <2 MIN/INCH

**SOIL ABSORPTION SYSTEM:**  
PERCOLATION RATE - <2 MIN/INCH (CLASS I SOIL)  
USE DESIGN LOADING RATE = 0.74 GPD/SF  
LEACHING AREA REQ'D = (330 GPD) / (0.74 GPD/SF) = 446 SF  
USE QUICK 4 PLUS INFILTRATOR CHAMBERS IN BED CONFIGURATION (446 S.F.) = 94 FT OF CHAMBERS REQUIRED (4.73 S.F./FT.)  
FROM TABLE 3 OF CERTIFICATION FOR GENERAL USE: EFFECTIVE AREA IS EQUAL TO 4.73 FOR A BED OR FIELD CONFIGURATION (94 FT) = 24 CHAMBERS REQUIRED - USE 36 CHAMBERS AND 12 END CAPS PER MASSDEP APPROVAL  
FROM TABLE 1 OF MODIFIED CERTIFICATION FOR GENERAL USE: EFFECTIVE LENGTH IS EQUAL TO 4 FOR A BED OR FIELD CONFIGURATION (36 CHAMBERS) X (4.0 FT./CHAMBER) = 144 FT. (6 CAPS) X (15"/CAP) = 7.5 FT. (6 END CAPS) X (11.5"/END CAP) = 5.75 FT. TOTAL AREA = 144' + 7.5' + 5.75' = 157.25 FT LEACHING AREA PROVIDED: (4.73 S.F./FT.) X (157.25 FT.) = 744 S.F. > 446 S.F. DAILY FLOW CAPACITY: 744 SF X 0.74 GPD/SF = 550 GPD > 330 GPD REQ'D

**PROPERTY NOTES:**

- THE PROPERTY IS SHOWN ON THE TOWN OF TRURO ASSESSORS PARCEL ID 2926 MAP 54 PARCEL 6B.
- FOR TITLE REFERENCE TO THE SUBJECT PROPERTY REFER TO BOOK 17860, PAGE 326 AT THE BARNSTABLE COUNTY REGISTRY OF DEEDS.
- SINCE EAGLE CREEK IS TIDAL, THE MEAN ANNUAL HIGH WATER LINE WAS DETERMINED IN ACCORDANCE WITH 310 CMR 10.23.
- PORTIONS OF THE PROPERTY ARE LOCATED IN ZONE AE, AS SHOWN ON THE FLOOD INSURANCE RATE MAPS (F.I.R.M.) OF BARNSTABLE COUNTY, MASSACHUSETTS, MAP NUMBER 25001C0227J DATED JULY 16, 2014. ALL PROPOSED WORK INCLUDING THE SEPTIC SYSTEM IS NOT IN A FLOOD ZONE.

**NOTES:**

- THE CONTRACTOR SHALL NOTIFY THE LOCAL BOARD OF HEALTH AND RIVER HAWK ENVIRONMENTAL, LLC, AT LEAST 48 HOURS PRIOR TO REQUIRED INSPECTIONS. THE REQUIRED INSPECTIONS ARE AS FOLLOWS:  
A. AFTER LEACH FIELD EXCAVATION PRIOR TO PLACEMENT OF SAND  
B. AFTER PLACEMENT OF TANKS AND LEACHING CHAMBERS  
C. PRIOR TO BACKFILL, THE CONTRACTOR IS TO PROVIDE A CURRENT SIEVE ANALYSIS SHOWING THE SAND MEETS 310 CMR 15.255(3) SPECIFICATIONS IF REQUESTED BY THE DESIGN ENGINEER.  
D. DURING BACKFILLING IN ACCORDANCE WITH 310 CMR 15.021 (2)  
E. FINAL INSPECTION AFTER LOAM AND SEED HAVE BEEN PLACED
- BENCHMARK IS TOP OF WELL CASING, AS INDICATED ON PLAN ELEVATION= 37.94 (NAVD88)
- HEAVY EQUIPMENT SHALL NOT BE ALLOWED TO OPERATE OVER THE LIMITS OF THE SEWAGE DISPOSAL FIELD DURING THE COURSE OF CONSTRUCTION OF THE SYSTEM.
- NO FIELD MODIFICATIONS TO THE SEWAGE SYSTEM SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER AND THE LOCAL BOARD OF HEALTH.
- UNLESS OTHERWISE NOTED ALL SYSTEM COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSION OF 310 CMR 15.000 (TITLE V) AND ANY APPLICABLE LOCAL RULES. SEPTIC TANK AND D-BOX SHALL BE MANUFACTURED BY ACME SHOREY PRECAST OR APPROVED EQUAL AND SHALL WITHSTAND H-10 OR H-20 (AS INDICATED ON PLAN) LOADING CRITERIA. GROUT TO BE USED AT ALL POINTS WHERE PIPES ENTER OR LEAVE ALL CONCRETE STRUCTURES IN ORDER TO PROVIDE A WATERTIGHT SEAL. MORTAR ALL INLET AND OUTLETS NOT USED ON ALL CONCRETE STRUCTURES.
- THE FIRST TWO FEET OF EACH LINE EXITING THE DISTRIBUTION BOX SHALL BE LEVEL.
- THIS SYSTEM IS NOT DESIGNED TO ACCOMMODATE A GARBAGE GRINDER.
- THERE ARE NO KNOWN WELLS WITHIN 100' OF THE PROPOSED SOIL ABSORPTION SYSTEM.
- IN ACCORDANCE WITH 310 CMR 15.221, ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE.
- INSTALLER SHALL BE TRAINED AND CERTIFIED BY INFILTRATOR WATER TECHNOLOGIES, LLC FOR INFORMATION ON THE INFILTRATOR QUICK4 CHAMBER. SEE CERTIFICATION FOR GENERAL USE TRANSMITTAL NUMBER X259183 DATE OF ISSUANCE FEBRUARY 19, 2015 REV. JUNE 12, 2015. ALSO SEE STANDARD CONDITIONS FOR ALTERNATIVE SOIL ABSORPTION SYSTEMS WITH GENERAL USE CERTIFICATION AND/OR APPROVED FOR REMEDIAL USE REVISED: MARCH 5, 2018.
- THE PROPERTY IS LOCATED IN A ZONE II (WELL HEAD PROTECTION AREA).
- LOCATION OF UTILITIES ARE CONSIDERED APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION AND INVERTS OF UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE UNDER MASSACHUSETTS STATE LAW TO NOTIFY DIGSAFE (1.888.DIG.SAFE) TO LOCATE UTILITIES IN THE PROJECT AREA 72 HOURS PRIOR TO THE START OF EXCAVATION.

MILL POND INVESTMENT TRUST  
THOMAS W. LITTAUER, TRUSTEE  
288 JERUSALEM ROAD  
COHASSETT, MA 02025

07/13/2023

**RiverHawk**  
ENVIRONMENTAL  
CIVIL ENGINEERING & ENVIRONMENTAL CONSULTING  
2183 OCEAN STREET, MARSHFIELD, MA 02060  
781-568-4639 www.RiverHawk.com

**SITE PLAN**  
1 MILL POND ROAD  
TRURO, MA

**DETAILS**

PROJECT NO. 00381-103-01  
DATE: JULY 13, 2023

SCALE: AS SHOWN

DRAWN BY: AWL  
DESIGNED BY: RSR  
CHECKED BY: RSR  
APPROVED BY: RSR

DESCRIPTION: BY: APP.

D1.1

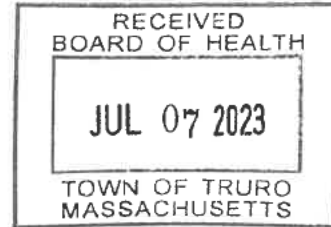


# J.C. ELLIS DESIGN COMPANY, INC.

SEPTIC SYSTEM DESIGN & ENGINEERING – SEPTIC INSPECTION –  
SITE PLANNING – WETLAND CONSULTATION & PERMITTING  
P.O. BOX 81, NORTH EASTHAM, MA 02651 PHONE 508-240-2220 FAX 508-240-2221  
EMAIL jcellisdesign@verizon.net

July 6, 2023

Truro Board of Health  
24 Town Hall Road  
P.O. Box 2030  
Truro, MA 02666

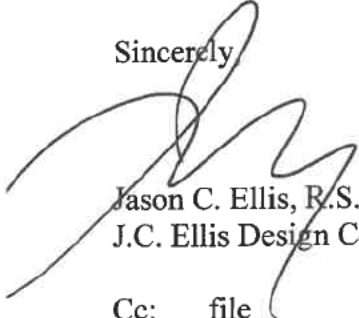


**Re: Waiver of Time Request – Septic System Upgrade  
Rose Investment Trust  
45 Corn Hill Road, Truro, MA  
Assessor's Map 45 Parcel 116**

Dear Board,

The Rose Investment Trust is proposing an upgrade of the existing cesspool at 45 Corn Hill Road in anticipation of a property transfer scheduled for July 19, 2023. Due to the busy summer season and the high demand of installation contractors, a waiver of time is requested to install the new septic system after the anticipated closing.

Sincerely

  
Jason C. Ellis, R.S., L.S.I.T.  
J.C. Ellis Design Co., Inc.

Cc: file

V 2023-15

**Fee: \$75.00**



TRURO HEALTH & CONSERVATION DEPARTMENT  
24 Town Hall Road, Truro 02666

RECEIVED BOARD OF HEALTH

JUL 07 2023

TOWN OF TRURO MASSACHUSETTS

**APPLICATION FOR BOARD OF HEALTH WAIVER OF TIME**

BOH Reg. Section VI, Article 3(1)a. Required Upgrade Upon Property Transfer

Date: June 8, 2023 Board of Health Hearing Date: July 18, 2023

Address of Property: 45 Corn Hill Road

Map & Parcel: 45 116

Anticipated Date of Property Transfer: July 19, 2023

Length of Time Requested to Complete Upgrade: 90 days

Design Engineer/Sanitarian: J.C. Ellis Design Co. Inc. Phone #: 508-240-2220

**SELLER'S INFORMATION:**

Seller/Property Owner's Name: Rose Investment Trust c/o Mary Rose

Mailing Address: PO BOX 776, Truro, MA 02666-0776

Phone #: [REDACTED] Fax: \_\_\_\_\_ Email: [REDACTED]

Seller's R.E. Broker: SARAH PECHUKIS Phone #: [REDACTED]

Email: [REDACTED]

**BUYER'S INFORMATION:**

Buyer's Name: MARISSA MANDEL LAUREN JOHNSON

Mailing Address: 5 KYLIE COURT PROVINGTOWN MA 02657

Phone #: [REDACTED] Fax: \_\_\_\_\_ Email: [REDACTED]

Buyer's R.E. Broker: TIM BROWN-SEASCAP BURY Phone #: [REDACTED]

Email: [REDACTED]

Please attach the following to this form: (1) a narrative explaining why you can't comply with Section VI, Article 3(1)a, Required Upgrade Upon Property Transfer, and (2) a statement from your engineer/designer, stating that they have been retained by the seller/buyer to complete the Title 5 upgrade.

Mary Rose, Trustee  
Signature (Property Owner)

07/04/2023  
Date

Lauren Johnson  
Signature (Buyer)

Jul 3, 2023  
Date

## **Minutes of the Truro Board of Health, Tuesday June 20, 2023**

This was a remote meeting.

### **Board members in attendance:**

Chair Tracey Rose, Board Members: Helen Grimm, Tim Rose and alternate Candida Monteith;

Also Present: Assistant Health Agent Courtney Warren.

Absent: Jason Silva and Brian Koll

The meeting was called to order at 4:45 PM by the Chair, who described the remote meeting procedures and the process for public participation.

**PUBLIC COMMENT:** No Public Comment was made.

**License to conduct a Recreational Camp for Children-** Renewal for Camp Lightbulb, North Pamet Road. Puck Markham, founder, and director was on the call to discuss the application for renewal of the camp license for the 7<sup>th</sup> year. The Board found the paperwork in order and moved to approve the application. **MOTION:** Board member Helen Grimm moved to approve the application; **Second:** Board member Tim Rose. **Vote: 4-0-0, the motion passed.**

**Local variance and local upgrade approval requests: 40 Fisher Road.**(Map 53, Parcel 34)  
This project is an upgrade from cesspools to a title 5 system on a parcel with an area of approximately 5,700 square feet. The design provides the advanced treatment unit (Avantex AX-20) to remove nitrate nitrogen and other nutrients from the wastewater. Gary Locke and William Rogers, PE were present to discuss the requests for variances under the Local Board of Health regulations, and for Local upgrade approval under title 5. The local upgrade requests include reduction to sideline setbacks, separation to crawlspace, required setbacks to the locus well and the well at the property abutting (at 38 Fisher). The separation between the soil absorption system and the locus well and the abutters well was held at 50 feet. The water quality from both wells was analyzed and found to be of good quality without apparent impacts from septic systems. Assistant Agent Courtney Warren suggested that the water quality testing include a test for Ammonia nitrogen.

**MOTION:** Board member Tim Rose moved to approve the application; **Second:** Board member Helen Grimm.

**DISCUSSION:** The Assistant Agent requested the Board consider adding a condition to the approval to require annual well water quality testing to include Ammonia nitrogen. **Tim Rose Amended his motion** to approve as presented with the condition that the well water be tested to include the analysis for the level of ammonia nitrogen; this was **Seconded** by Board member Helen Grimm; **Vote: 4-0-0 unanimously in favor, the motion passed.**

**Request for discussion: Regarding cesspool upgrade for 97 Castle Road.** Map 46, Parcel 17  
The Chair opened the discussion by describing the locus as very unusual property, as it is not an enclosed cottage. She clarified the purpose of the discussion stating that there would not be a vote that evening, and there was no consideration of a variance either, but there was to be a discussion to clarify what the property owner is seeking. The Chair stated that there was not another Camp-type property like this, and that the Board members were encouraged to ask

questions to allow for the best decision to develop and finished her opening comments asking that the owner consider allowing a site visit by the Board.

The Assistant Agent stated that the goal of the discussion was to determine what the board needed to understand, to come to a decision about how to move forward regarding the cesspool on the property. The matter was first heard by the Board on December 20, 2022, and the Board asked for a water test and a report on the condition of the cesspool. The water test was completed, and results were in the packet. The Chair asked the owner, Clark DeCiantis to let the Board know what they propose.

The property is owned by several siblings who live in New Jersey, Vermont, North Carolina and Connecticut. He described it as a wooden tent with no plumbing inside, and a flush-toilet in a shed. Inside the 10-ft. x 16-ft. main structure (the wooden tent) are 3 bunk beds, an oven and a counter. There is an attached screened-in porch, with a small brick terrace all located on 2.6-acres on very high ground. Mr. DeCiantis stated that they only visit in the summer, and do not want to have to change it. He further described it as a campsite that is occupied for about 60 days/year.

There was brief discussion on how difficult it was to hire an inspector to look at the cesspool, and the owner asked if they needed to submit an inspection, if the Board was just going to require an upgrade. Board member Tim Rose suggested that someone looking at the cesspools might have some ideas about the next steps that he could take.

The Chair explained that cesspools are automatically failed, and that keeping it is not an option, and that further, the Board of Health is responsible for protecting groundwater. She again asked if a site visit would be possible. Mr. DeCiantis said he thought it was possible, and that he would ask his siblings about their schedule. The Assistant Agent asked if someone needed to be there for the site visit and Clark reiterated that he wanted to check in with his siblings first.

Alternate member Candida Monteith asked the owner to restate why he did not believe he needed to upgrade to title 5. Mr. DeCiantis stated that since it's a campsite, what is there is enough until they make changes to it. He asked what options exist beyond a title 5, such as a composting toilet.

The Chair reiterated that the Board of Health regulation required them to submit a plan, and felt the owner was asking a lot of the Board of Health. She stated that everyone on Cape Cod needed to do the right thing to protect groundwater, and not doing anything-is not an option. The Assistant Agent suggested that this underscored the importance of a site visit. Mr. DeCiantis replied that he would talk to his siblings about the site visit.

**Water Resources Update:** the June 2023 (attached) report was presented by Agent Courtney Warren.

**Minutes: February 21, 2023.** No changes were proposed. **Motion** to approve: Board member Helen Grimm moved to approve the application; **Second:** Board member Tim Rose. Vote: 4-0-0, the motion passed.



**March 21, 2023-** Several Board members were absent at that meeting and could not vote; these minutes were tabled. **Motion** to place on the next Agenda: moved by Board member Helen Grimm; **Second:** Alternate member Candida Monteith. **Vote:** 4-0-0 the motion passed.

**April 4, 2023- executive session meeting minutes.** No changes were proposed. **Motion** to approve: moved by Board member Helen Grimm; **Second:** Alternate member Candida Monteith. **Vote:** 4-0-0 the motion passed.

**April 18, 2023** No changes were proposed. **Motion** to approve: moved by Board member Helen Grimm; **Second:** Alternate member Candida Monteith. **Vote:** 4-0-0 the motion passed

**Report of the Chair-** the Chair reported on the recent re-appointment process with the Select Board, and all incumbents were re-appointed.

**Health Agent's Report:** The Assistant Agent Courtney Warren stated Outer Cape Community Solutions presents Outer Cape Wellness programming/ social determinants of Health to the Truro Select Board 6/27 at 5 PM. The link to the meeting will be available through the Health Department. Also, the Health Agents attended a Town Hall with Outer Cape Community Solutions and the State DPH Office of Rural Health.

**Board member Helen Grimm moved to adjourn the meeting; Second: Board member Candida Monteith. Vote: 3-0-0, the motion passed.**

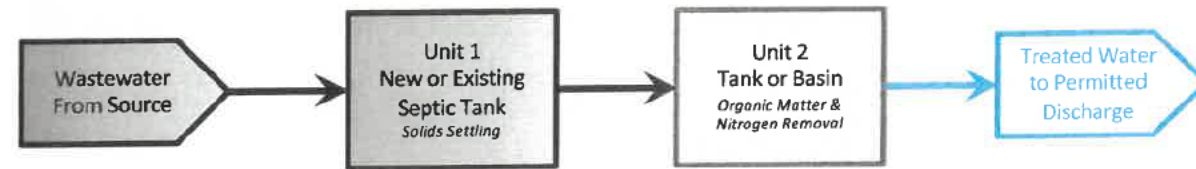
**The meeting was adjourned at 6:01 P.M.**

Minutes prepared by Emily Beebe



## NitROE® WWTS Process

This NitROE® WWTS consists of two or more treatment tanks depending on the design flow of wastewater being treated. For a single family residence with three bedrooms, only two tanks are needed. The first one is a conventional septic tank for settling of suspended matter. The second one is the same-size tank, but it contains the treatment components to remove organic matter and nitrogen. Schematically, a single family residence NitROE® WWTS is as shown in the diagram below:



Gravity moves wastewater through the system so that the only mechanical equipment is an air pump, which quietly operates from under a landscaped enclosure. If one puts an ear to the enclosure, a slight hum can be heard. *The NitROE® upgrades conventional septic systems so that there is always a minimum of septic system treatment even in a power outage.*

For larger installations, multiple, underground larger tanks or basins are more typical still relying on gravity flow. In larger installations, Unit 1 can be configured to provide enhanced removal of the solids. Larger installations also have an option of vegetated habitats on top of Unit 2.

## Notable NitROE® WWTS Features

- Permitted by Massachusetts and approved by a number of local boards of health
- High quality effluent with enhanced nutrient removal beneficially reusable
- Allows continued use of existing septic-tank system by upgrading treatment
- Straight-forward construction using local materials, labor and contractors
- Simple, quiet, low-energy operation without odors and low operation and maintenance
- Can be part of the landscaping with a vegetated habitat surface



## Contact Information

For more information about the NitROE® WWTS, please contact us:

[info@kleantu.com](mailto:info@kleantu.com)

(800)303-4748

**Flush & Forget™**

**KleanTu® LLC**

# NitROE® Waste-Water Treatment System

- Out of Sight / On Site
- Produces Highly Treated Water
- Quiet without Odors
- Enhanced Nutrient Removal
- Affordable with Low Operation & Maintenance Cost

The NitROE® Waste-Water Treatment System (WWTS) combines long-established treatment processes in an innovative way to provide reliable, high efficiency treatment of domestic wastewater. KleanTu® LLC developed the NitROE® WWTS with the design flexibility to be scaled small enough to serve a single residence or large enough for commercial and residential developments and even a small community. The system is underground and out of site. Alternately, it can be integrated into the landscape with vegetated surface. The installation and operating costs are significantly lower than tank-based wastewater treatment plants.

The NitROE® WWTS produces a highly treated water including removal of nutrients such as nitrogen compounds. The feature of nutrient removal makes the NitROE® WWTS especially applicable in areas where nitrogen compounds are causing degradation of groundwater and surface waters, especially in coastal communities such as in New England, the Chesapeake Bay area and Florida.

The highly treated water from the system supports a number of ways for permitted disposition including to an existing or new underground leach field, to a surface water or to reuse such as irrigation, a positive environmental benefit. The NitROE® WWTS is ideal for situations where it is physically or economically impractical to connect to a sewer system conveying wastewater to a conventional wastewater treatment plant.

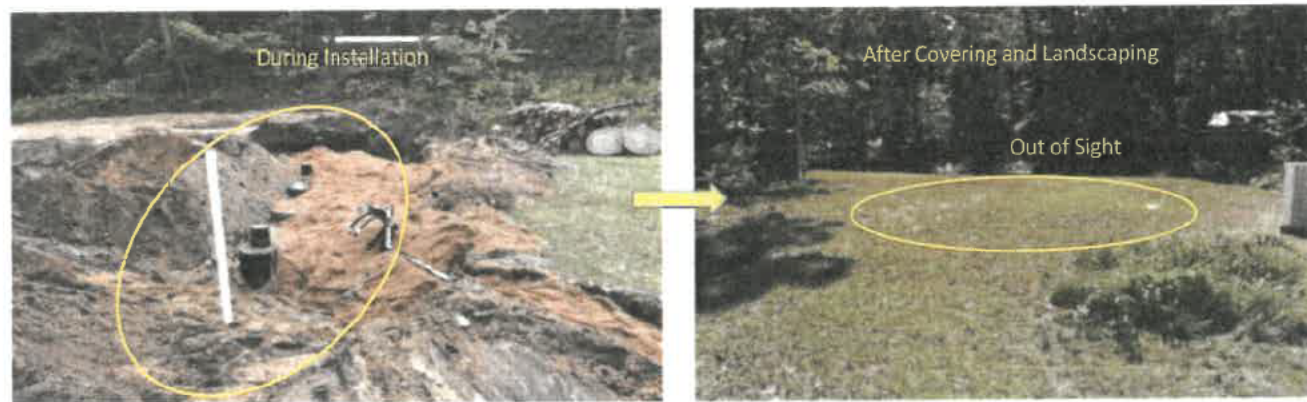
## Case Histories

To date KleanTu® has installed 34 NitROE® WWTSs on the Island of Martha's Vineyard and Cape Cod. Design flows have ranged from 330 gallons per day (GPD) for single residences up to 6,000 GPD for a multi-residential facility with up to 110 residents. All of these installations produce a highly treated water with substantial removal of organic matter, suspended solids and nitrogen compounds. All of these installations have been under permits issued by the Massachusetts Department of Environmental Protection and with approval of local Boards of Health. The case histories below illustrate some of these installations.



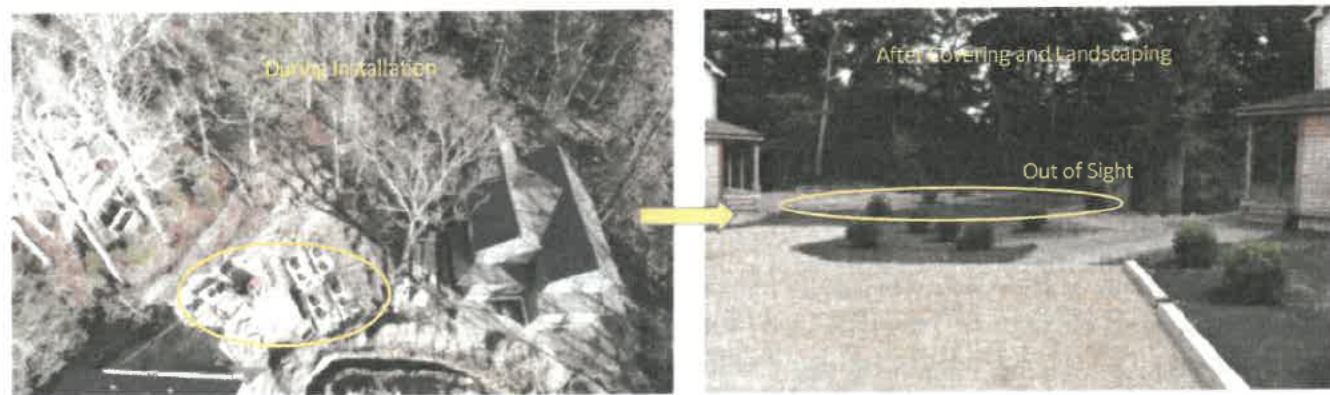
**Three-Unit Housing Complex, Martha's Vineyard - 1,000 GPD Design Flow**

This NitROE® WWTS treats the domestic wastewater from three nearby residences created from a previous family estate. After treatment, effluent goes into a leach field beneath the landscaping. The picture below shows the system during installation and after covering and landscaping.



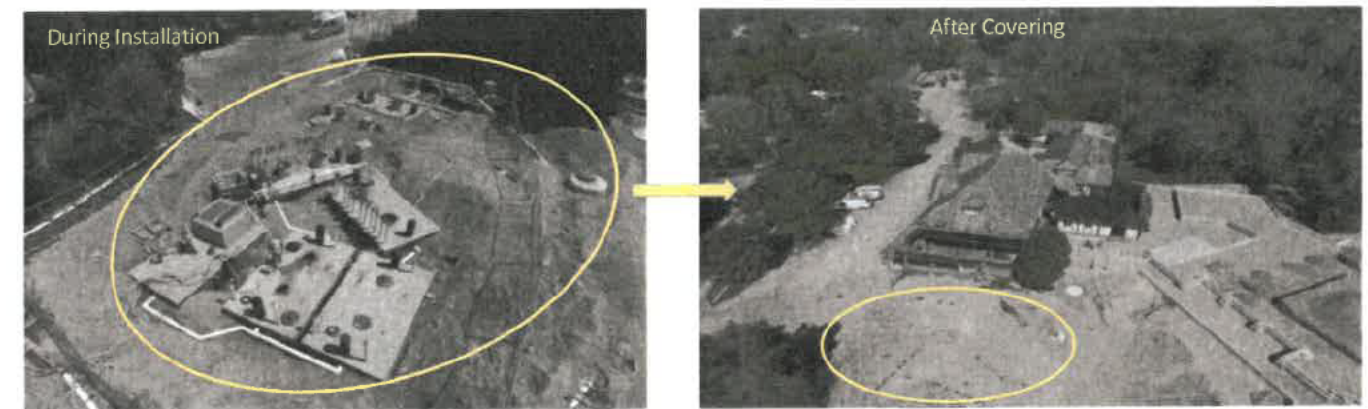
**Six-Unit Townhouse Complex, Martha's Vineyard - 2,000 GPD Design Flow**

This NitROE® WWTS treats the domestic wastewater from six residences arrayed in three two-unit townhouses. The treated wastewater goes into a leach field beneath the landscaping and parking areas. The picture below shows the system during installation and after covering and landscaping.

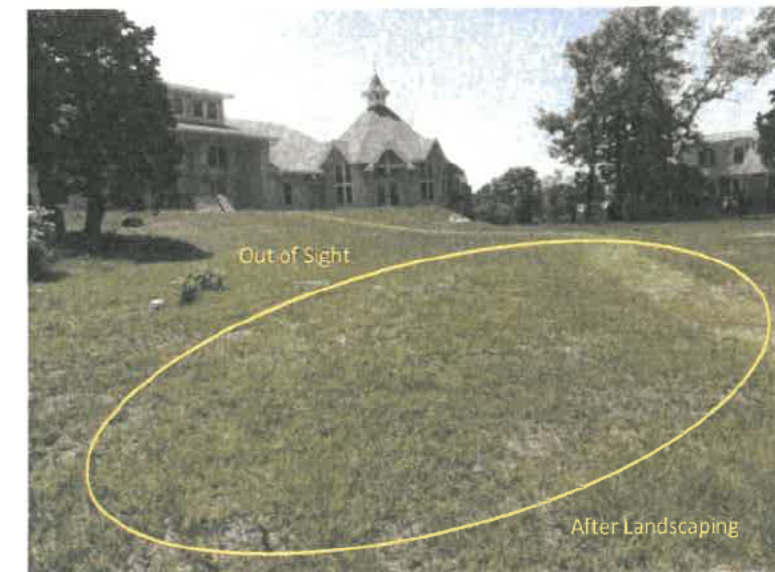


**Campus of College Light Opera Company, Cape Cod - 6,000 GPD Design Flow**

This multi-tank NitROE® WWTS treats the domestic wastewater from living quarters with up to 110 summer residents, a cafeteria and offices. After treatment, effluent goes into a leach field beneath the parking lot. The picture below shows the system during installation and after covering.



By June 2021, the site work was complete including the landscaping over top of the NitROE® WWTS and ready for the 2021 summer season. The picture below shows the grassed area covering the installation.



The website of the College Light Opera Company highlights the installation of the NitROE® WWTS as a nitrogen reducing septic system:

<http://www.collegelightoperacompany.com/septic-project.html>