

**MAIN OFFICE:**

49 Herring Pond Road  
Buzzards Bay, MA 02532  
TEL: (508) 833-0070  
FAX: (508) 833-2282



**NANTUCKET OFFICE:**

19 Old South Road  
Nantucket, MA 02554  
TEL: (508) 325-0044  
[www.brackeneng.com](http://www.brackeneng.com)

November 8, 2023

**RECEIVED**

*By Bourne Health Department at 12:08 pm, Nov 08, 2023*

Bourne Board of Health  
Terri Guarino, RS, CHO  
24 Perry Avenue  
Bourne, MA 02532

**RE: Variance Request  
176 Scraggy Neck Road (Map 51.0, Parcel 1)**

Dear Members of the Board:

On behalf of the homeowner, The Long Point Trust c/o Marybeth and Steven Bisson, Bracken Engineering, Inc. (BEI), is requesting a variance to the Town of Bourne Board of Health Regulations to replace an existing cottage with a new single-family dwelling at the above referenced location. Attached with this request are revised plans by this firm dated 9/20/23 and revised Architectural plans dated 9/12/23 to address some of the concerns raised by staff at a site meeting on July 19, 2022.

A Variance is Requested to the following Local Regulation:

150 FOOT SETBACK REG  
TOWN OF BOURNE  
BOARD OF HEALTH

*“A 150 foot setback will be required for all leaching facilities from the edge of a wetland resource or watercourse, as defined in 310 CMR 15.01 Title V. Setback distance shall be measured during periods of highest ground or surface water conditions.”*

This Regulation was last amended on June 1, 1988. 310 CMR 15.01 refers to the “old” Title V in effect when the Board of Health adopted this Regulation. Section 15.01 does not have a definition for “wetland resource” but there is a definition for “watercourse” which includes “wetland”. The definition reads as follows:

*“Watercourse. Any natural or man-made stream, pond, lake, wetland, coastal wetland, swamp or other body of water and should include wet meadows, marshes, swamps, bogs and areas where ground water, flowing or standing surface water or ice provide a significant part of the supporting substrate for a plant community for at least five months of the year.”*

The only applicable resource area that a variance is required for this property is the Salt Marsh which is a coastal wetland and watercourse per the definition above. Based on the above definition, a coastal wetland must be considered as a “body of water”. This is also confirmed in the old Title V 310 CMR 15.03 Location (7) Distances. (1)(2) for setbacks to Watercourses, footnote [2] “All distances shall be measured from the average of the mean annual flood elevation in inland areas and from the Mean High Water in coastal areas.”



Although in our opinion, variances are not required for setbacks to coastal banks, we request the following variances from the 150-foot setback to the proposed Soil Absorption System (SAS) and Reserve Area (RA) to be consistent with past practices of the Board:

- SAS to the Salt Marsh southwest from 150' to 138' (**12' variance**)
- SAS to the Salt Marsh northeast from 150' to 101' (**49' variance**)
- SAS to Coastal Bank southwest from 150' to 66' (**84' variance**)
- SAS to Coastal Bank northeast from 150' to 57' (**93' variance**)
- RA to the Salt Marsh to the south from 150' to 126' (**24' variance**)
- RA to the Salt Marsh to the northeast from 150' to 112' (**38' variance**)
- RA to Coastal Bank southwest from 150' to 51' (**99' variance**)
- RA to Coastal Bank northwest from 150' to 64' (**86' variance**)

The coastal banks existing on-site consist mainly of well vegetated wooded areas (forested upland) subject to protection under M.G.L. c. 131, § 40 or Resource Areas protected under WPA Regulations at 310 CMR 10.00. These banks function exclusively as vertical buffers for storm waters. Please refer to the attached letter from Stan Humphries, Coastal Geologist with Environmental Consulting & Restoration, LLC (ECR) submitted with this request in response to the Horsley letter submitted to the Board dated July 11, 2022. This letter states that the proposed septic system will in no way adversely impact the coastal bank through erosion/destabilization. Also refer to the letter from McArdle Gannon Associates, Inc. Geotechnical Engineers dated November 9, 2022 indicating in their opinion that construction of the dwelling and septic system will not impact the coastal bank.

The Regulation was based on the transport rates in glacial outwash soils to protect water bodies and resource areas that could be impacted by septic system contaminants based on actual groundwater flow. Since coastal banks are not associated with groundwater flow, they should not technically be applicable to the setback requirement.

Also, there are no Title V variances required with this application. The proposed system is located greater than 50' from a BVW, Salt Marsh and the top of any coastal bank. Note: the coastal bank setback is measured from the "most landward edge" of the "top" of coastal bank per 310 CMR 15.211: Minimum Setback Distances footnote (3).

In accordance with the Regulation, a Hydrogeologic study is not required because the SAS and RA are greater than 100 feet from a wetland or watercourse per the applicable definition. As required, this application includes the following documentation prepared by a Professional Engineer:

- Proposed site plan (3 Sheets) which includes: existing conditions information, proposed design information, septic system design and details, wetland resource areas and setbacks to septic system components;
- Soil Evaluation Form including groundwater monitoring information over a tidal cycle;
- Existing and proposed Nitrogen Loading Calculations.



Based on the submitted information, the variances should be granted because of the following:

- The new system will replace an existing cesspool located only 31' from the salt marsh and on the coastal bank. This cesspool provides no treatment, the bottom is only a few feet above the water table and is a direct contaminant source to the salt marsh;
- Nitrogen loading for the proposed 4-bedroom system is only 2.19 parts per million (PPM) well below the typical standard of 5 PPM. Please note that the proposed number of bedrooms has been reduced from 5 to 4 bedrooms as suggested by the Board's Agent;
- The system has been designed to include MicroFast denitrification system;
- The system includes the design of a Presby soil absorption system that is equivalent to a pressure distribution system;
- The system location is located at the highest portion of the lot and maintains a 7.7' separation to groundwater, where a minimum of 5' is required;
- A deed restriction shall be placed on the property limiting it to four bedrooms;

In summary, the upgraded system with the increased flow provides better protection of public health and safety and the environment than the existing system with no increase in flow. Given the size of the property and the facts and circumstances of this particular case, it would be manifestly unjust to apply strict adherence to this Regulation. Furthermore, not granting the variance would deprive the owner of reasonable use of the property when specifically evaluating this property with surrounding properties and previous approvals by the Board.

Thank you for your time and consideration on this matter. We look forward to reviewing this project with the Board of Health at the next scheduled Public Hearing. Should you have any questions regarding this project or require any further information please contact the undersigned at either 508-833-0070 [don@brackeneng.com](mailto:don@brackeneng.com).

Sincerely,

**BRACKEN ENGINEERING, INC.**

A handwritten signature in black ink, appearing to read 'Donald F. Bracken, Jr.', written in a cursive style.

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Donald F. Bracken, Jr., PE, PLS  
President

cc: Marybeth & Steven Bisson  
Glenn Wood Esq.



# Bourne Board of Health Application for Septic Variance or Waiver Requests



In accordance with the established procedures of the Bourne Board of Health, this application is for septic variances and waivers which have not been approved administratively and require approval at a public meeting. Please use the following application form for guidance on how to apply for variances and waivers which serve new construction, changes in use, increases in flow, or repairs and upgrades to on-site sewage disposal systems with design flows of less than 10,000 gallons/ day.

## 1. Facility Name and Address:

**Owner's Name**

THE LONG POINT TRUST, STEPHEN BISSON AND MARYBETH BISSON, TRUSTEES

**Facility's Street Address**

176 SCRAGGY NECK ROAD (MAP 51, PARCEL 1)

**Owner's Telephone Number**

508-335-4856

**Owner's E-mail Address**

MBISSON@COMCAST.NET & SBISSON19@COMCAST.NET

**Owner's Mailing Address**

P.O. BOX 10, CATAUMET, MA 02534

## 2. Applicant or Preparer's Name and Address (if different from above):

**Preparer's Name**

DONALD F. BRACKEN JR., PE

**Company**

BRACKEN ENGINEERING, INC.

**Telephone Number**

508-833-0070

**E-mail Address**

DON@BRACKENENG.COM

**Mailing Address**

49 HERRING POND ROAD, BUZZARDS BAY, MA 02532

## 3. Type of Facility (check all that apply):

Residential    Commercial    Institutional    School    Industrial    Mixed Use

## 4. Describe Facility (i.e. single-family dwelling, 45 seat restaurant): \_\_\_\_\_

SINGLE-FAMILY DWELLING (4 BEDROOM)

## 5. Type of System Proposed (check all that apply):   Conventional Title 5   I/A System

Pumped System    Gravity System    Pressure Dosed    Tight Tank    Other



6. Describe the existing and proposed septic system components: NO BOH RECORDS FOR EXISTING SYSTEM  
PROPOSED: INNOVATIVE / ALTERNATIVE SEPTIC SYSTEM (IA)  
MICROFAST 0.5 UNIT (H-20) 1,500 GALLONG SEPTIC TANK AND PRESBY ENVIRO-SEPTIC LEACHING SYSTEM.

7. Design Flow per 310 CMR 15.203 (in gallons/ day):

110	EXISTING	PROPOSED
Design flow of system:	110	110 GPD
Total design flow of facility: <i>(if more than one system on subject property)</i>		448 GPD

8. Enclose a **letter of request for variances/waivers** which makes reference to the specific provisions of Title 5 and/ or the Board Bourne of Health Regulations for which a variance is sought. Please use this opportunity to demonstrate compliance with 310 CMR 15.410, and to justify the relevant facts and circumstances of the individual case. Note that with regard to variances for new construction, enforcement of the provision from which a variance is sought must be shown to deprive the applicant of substantially all beneficial use of the subject property in order to be manifestly unjust. Be sure to explain why full compliance with the applicable regulations is not feasible, and how a level of environmental protection that is at least equivalent to that provided under Title 5 and the Board of Health Regulations can be achieved without strict application of said regulations.

9. In order for this Application to be deemed complete, it must be accompanied by the following:

- \$125 filing fee + any other applicable permit application fees paid to the Town of Bourne.
- Application for a Disposal System Construction Permit (may be filled out by installer).
- Six copies of Letter of Request describing nature of variances.
- Six sets of complete engineered plans and specifications, one with original stamp of design engineer; plus, one electronic copy. All variances/ waivers must also be listed on the plans per 310 CMR 15.220(4).
- Six sets of floor plans, existing and proposed.
- Six copies of [Nitrogen Loading Calculation Worksheet](#) \*required for all applications.
- If abutter notification is required, one of each of the following must be submitted:
  - A copy of the certified list of abutters from the Assessor’s Department.
  - Sample letter for abutter notification postmarked 10 days prior to meeting date.
  - Proof of certified mailing (receipts) meeting requirements of 310 CMR 15.405(2).
- Proposals for installation of Innovative/Alternative septic systems must be accompanied by:
  - A copy of the Certification for Use including technology specific conditions.
  - Draft [disclosure notice for the I/A technology](#) to be recorded in the deed.
- Hydrogeologic data may be required for new leaching facilities proposed within 100ft of a wetland/watercourse.
- Percentage of Increase Worksheet may be required for waivers or increases in flow.

10. Certification:

“I certify under penalty of law that this document and all attachments, to the best of my knowledge and belief, are true, accurate, and complete. I am aware that there may be significant consequences for submitting false information, including, but not limited to, penalties or fine and/or imprisonment for deliberate violations.”

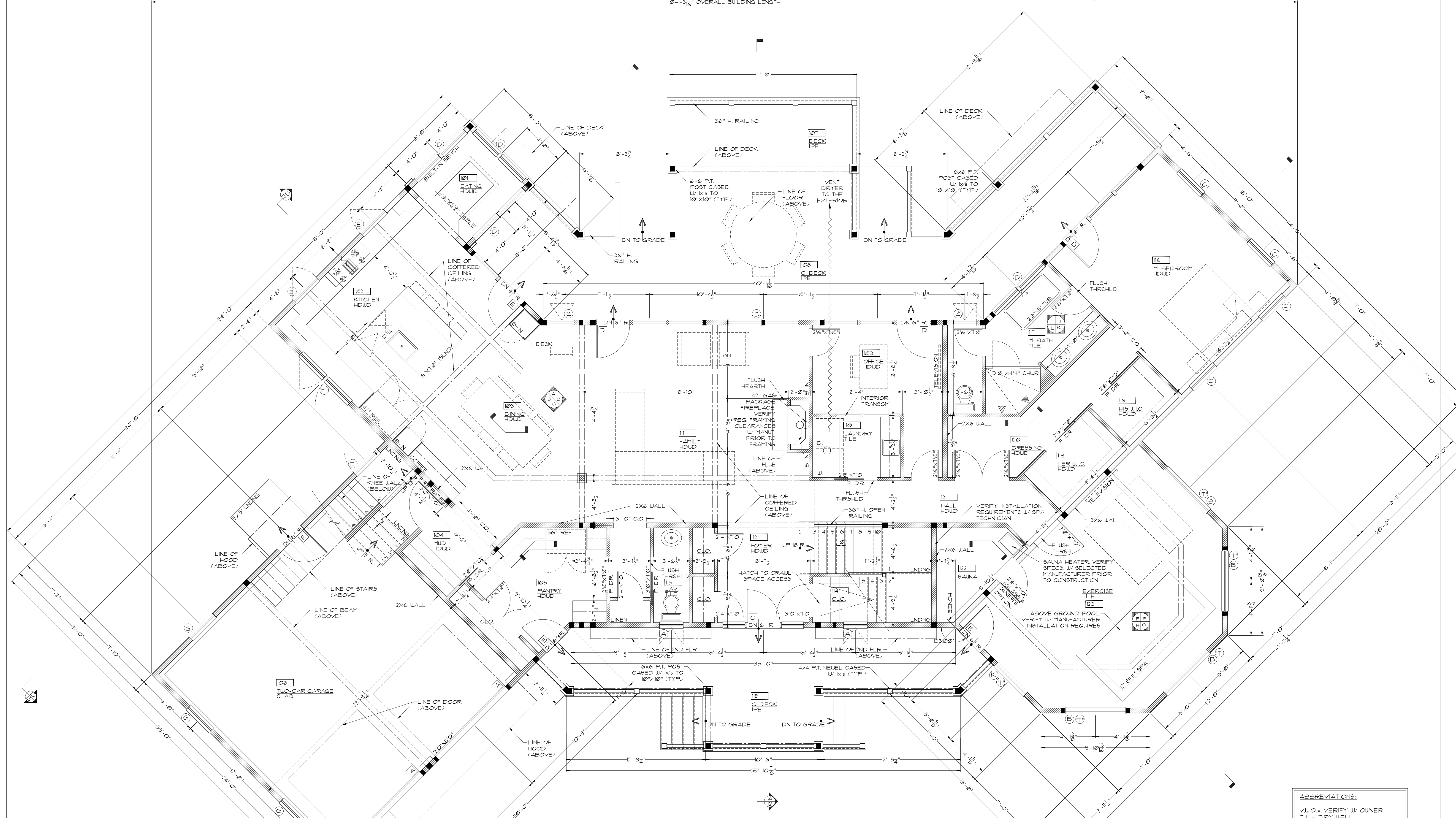
Facility Owner’s Signature Donald F. Bracken, Jr. Agent Date 11-6-23

Print Name DONALD F. BRACKEN, JR. - AGENT

Signature of Preparer SAME Date \_\_\_\_\_

Print Name \_\_\_\_\_





**FIRST FLOOR PLAN**  
SCALE: 1/4"=1'-0"

**DESIGN LOADS:**

LIVE LOADS	
SLEEPING ROOMS	40#/s.f.
OTHER ROOMS	45#/s.f.
SNOW	30#/s.f.
WIND SPEED	130 MPH
EXPOSURE	B
DEFLECTION	
RAFTERS	L/180
FLOORS (WOOD)	L/480
FLOORS (TILE)	L/720

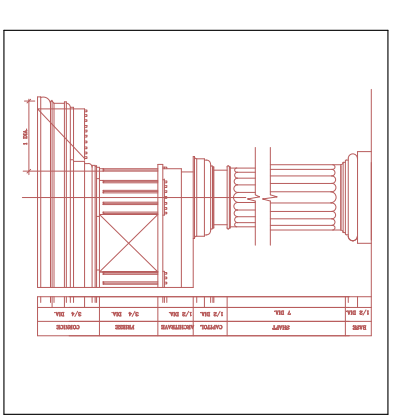
**SQUARE FOOT SUMMARY:**

FIRST FLOOR	2,930 s.f.
SECOND FLOOR	3,116 s.f.
TOTAL (FINISHED)	6,046 s.f.
GARAGE	615 s.f.
DECKS	1,335 s.f.

**ABBREVIATIONS:**

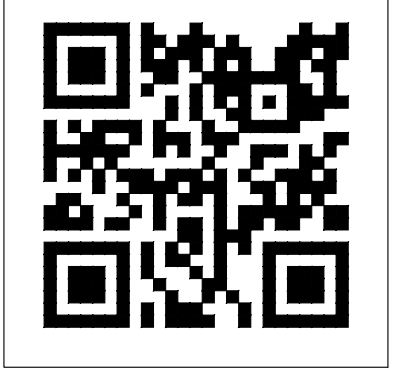
V.I.O.	VERIFY W/ OWNER
D.W.	DRY WELL
D.S.	DOWN SPOUT
P.D.	PERIMETER DRAIN
F.S.	FACE OF STUD
T.O.W.	TOP OF WALL
B.O.F.	BOTTOM OF FOOTING
V.I.F.	VERIFY IN FIELD
T.H.	THRESHOLD
FR.	FACE OF RIM
L.B.D.	LEDGER BOARD
P.T.	PRESSURE TREATED
A.S.	ALL SIDES
H.D.	HOLD DOWN
P.B.	POST BELOW
P.A.	POST ABOVE
B.W.	BASEMENT WINDOW
O.H.	OVER HEAD
M.O.	MASONRY OPENING
C.L.	CENTERLINE

WINDOW SCHEDULE ON SHEET 4 AND DOOR SCHEDULE ON SHEET 5



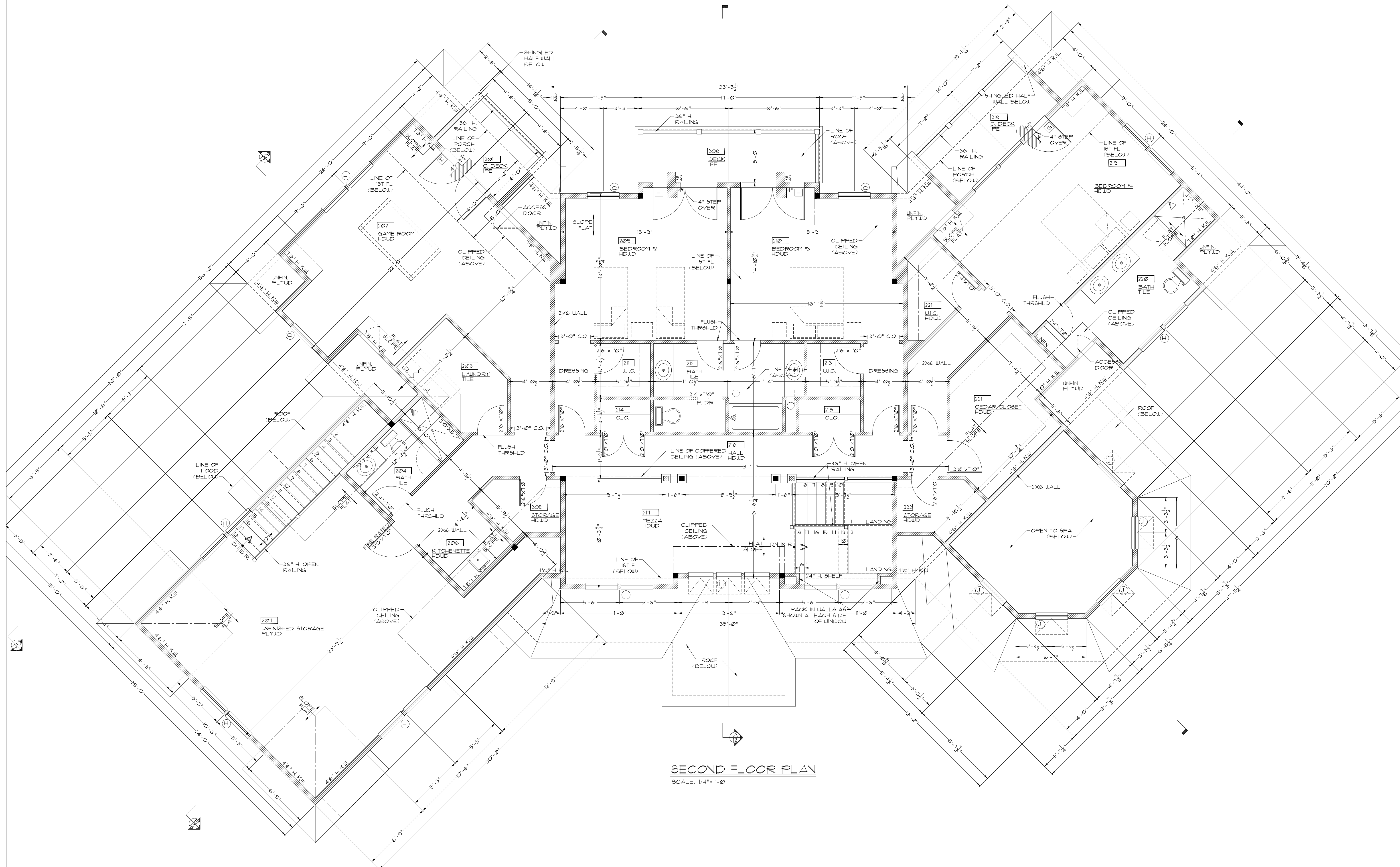
NO.	DATE	REVISIONS	BY

**DRAWING TITLE:** PROPOSED NEW HOUSE FOR BISSON RESIDENCE  
**LOCATION:** 116 SCRAGGY NECK RD. BOURNE, MA  
**ARCHITECT:** WILLIAM F. LEE ARCHITECT & ASSOCIATES, LLC  
 636 MAYFLOWER STREET DUXBURY, MA 02332-3617  
 PHONE 781 - 582 - 1534 BILLEEARCHITECT@AOL.COM

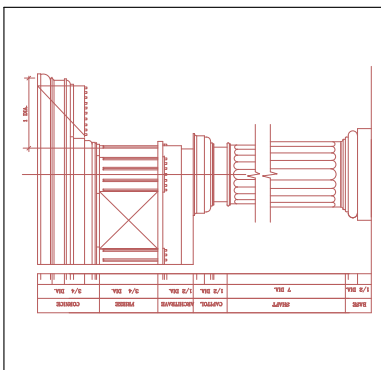


CONSTRUCTION DOCUMENT NO.	
DATE:	9-12-23
DRAWN BY:	LB
SCALE:	AS NOTED
DRAWING NUMBER	
SHEET	1



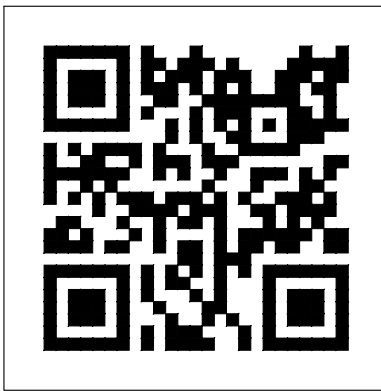


SECOND FLOOR PLAN  
SCALE: 1/4"=1'-0"



NO.	REVISIONS	BY	DATE

DRAWING TITLE: PROPOSED NEW HOUSE FOR BISSON RESIDENCE  
 LOCATION: 176 SCRAGGY NECK RD. BOURNE, MA  
 WILLIAM F. LEE ARCHITECT & ASSOCIATES, LLC  
 636 MAYFLOWER STREET DUXBURY, MA 02332-3617  
 PHONE 781 - 582 - 1534 BILLEEARCHITECT@AOL.COM



CONSTRUCTION DOCUMENT No.	
DATE:	11/23
DRAWN BY:	LB
SCALE:	AS NOTED
DRAWING NUMBER	
SHEET	2



# Town of Bourne - Water Resources Nitrogen Loading and Mitigation Worksheet

See Cape Cod Commission Technical Bulletin 91-001 for further details: [https://capecodcommission.org/resource-library/file?url=/dept/commission/team/Website\\_Resources/regulatory/NitrogenLoadTechbulletin\\_1](https://capecodcommission.org/resource-library/file?url=/dept/commission/team/Website_Resources/regulatory/NitrogenLoadTechbulletin_1)

Facility Address: 176 Scraggy Neck Road  
Preparer's Name: Bracken Engineering, Inc.  
Date: 1/9/2023  
Watershed: Pocasset Harbor

Project Nitrogen Load	Proposed Wastewater	New Construction/ Raze & Rebuild, Increases in Flow, or Repairs/ Upgrades	Existing Conditions														
<p>1. Project Title-5 wastewater flows: <input type="text" value="440.0"/> gpd (a)</p> <p>Actual wastewater flows: <input type="text" value="175.0"/>* (b)</p> <p>Average wastewater flows: <input type="text" value="307.5"/> gpd (a)+(b)+2= (A)</p> <p><small>* Title-5 flows prescribed by TB91-001 for commercial uses</small></p> <p>Place <input checked="" type="checkbox"/> in applicable box:</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Will the project be connected to sewer?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is project Title-5 wastewater flow 10,000 gpd or greater?</p> <p>Place <input type="checkbox"/> in applicable box and multiply unsewered wastewater flow by applicable conversion factor:</p> <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> Standard Title-5 System (35-ppm-N)</td> <td>x</td> <td>0.048359</td> <td rowspan="4" style="font-size: 2em; vertical-align: middle;">}</td> <td rowspan="4">Type of system: <u>  </u> MicroFast</td> </tr> <tr> <td><input type="checkbox"/> DEP-approved I/A System (25-ppm-N)</td> <td>x</td> <td>0.034542</td> </tr> <tr> <td><input checked="" type="checkbox"/> DEP-approved I/A System (19-ppm-N)</td> <td>x</td> <td>0.026252</td> </tr> <tr> <td><input type="checkbox"/> DEP-approved Enhanced I/A (12-ppm-N)</td> <td>x</td> <td>0.016580</td> </tr> </table> <p>Wastewater nitrogen load (Title-5 flows) = <input type="text" value="11.55"/> kg-N/yr (B)</p> <p>Wastewater nitrogen load (Actual flows) = <input type="text" value="4.59"/> kg-N/yr (C)</p>			<input type="checkbox"/> Standard Title-5 System (35-ppm-N)	x	0.048359	}	Type of system: <u>  </u> MicroFast	<input type="checkbox"/> DEP-approved I/A System (25-ppm-N)	x	0.034542	<input checked="" type="checkbox"/> DEP-approved I/A System (19-ppm-N)	x	0.026252	<input type="checkbox"/> DEP-approved Enhanced I/A (12-ppm-N)	x	0.016580	<p>Calculate (A') through (P') as w/ (A) through (P):</p> <p>Title-5 wastewater flows: <input type="text" value="110.0"/> gpd</p> <p>Actual wastewater flows: <input type="text" value="175.0"/>*</p> <p>Avg. wastewater flows: <input type="text" value="142.5"/> gpd (A')</p> <p>Place <input type="checkbox"/> in applicable box:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is existing development on sewer? (If 'Yes', then go to line 2.)</p> <p><input checked="" type="checkbox"/> Standard Title-5 System</p> <p><input type="checkbox"/> DEP-approved I/A System (commercial)</p> <p><input type="checkbox"/> DEP-approved I/A System (residential)</p> <p><input type="checkbox"/> DEP-approved enhanced I/A</p> <p><input type="text" value="5.32"/> kg-N/yr (B')</p> <p><input type="text" value="8.46"/> kg-N/yr (C') wastewater offsets</p>
<input type="checkbox"/> Standard Title-5 System (35-ppm-N)	x	0.048359	}	Type of system: <u>  </u> MicroFast													
<input type="checkbox"/> DEP-approved I/A System (25-ppm-N)	x	0.034542															
<input checked="" type="checkbox"/> DEP-approved I/A System (19-ppm-N)	x	0.026252															
<input type="checkbox"/> DEP-approved Enhanced I/A (12-ppm-N)	x	0.016580															
<p><b>Stormwater Runoff</b></p> <p>Town of Bourne Recharge rate for Bourne (inches; for natural areas from Technical Bulletin 91-001): <input type="text" value="21"/> (RECH)</p> <p>Project site area: <input type="text" value="6.853"/> acres (D)</p> <p>Project site wetland area: <input type="text" value="4.855"/> acres (E)</p> <p>Project site upland area: <input type="text" value="1.997"/> acres (F)</p> <p>Pervious unpaved upland: <input type="text" value="1.898"/> acres (G)</p> <p><input type="text" value="0"/>% using LID Paved area: <input type="text" value="0"/> s.f. (H)</p> <p><small>Factor may be adjusted for employment of LID → LID = low impact development</small> x 1.4158E-04 = <input type="text" value="0"/> kg-N/yr (I)</p> <p>Roof area: <input type="text" value="4,317"/> s.f. (J)</p> <p>x 7.0792E-05 = <input type="text" value="0.3056"/> kg-N/yr (K)</p>			<p>Project site area: <input type="text" value="6.853"/> acres (D)</p> <p>Project site wetland area: <input type="text" value="4.855"/> acres (E)</p> <p>Project site upland area: <input type="text" value="1.997"/> acres (F)</p> <p>Pervious unpaved upland: <input type="text" value="1.975"/> acres (G')</p> <p>Paved area: <input type="text" value="0"/> s.f. (H')</p> <p>Paving runoff offset: <input type="text" value="0.0000"/> kg-N/yr (I')</p> <p>Roof area: <input type="text" value="985"/> s.f. (J')</p> <p>Roof runoff offset: <input type="text" value="0.0697"/> kg-N/yr (K')</p>														
<p><b>Fertilizer</b></p> <p>Previous unpaved upland - roof area = <input type="text" value="6,583"/> s.f.</p> <p>Managed turf/ lawn area <input type="text" value="6,583"/> s.f. x 3.4019E-04 = <input type="text" value="2.239"/> kg-N/yr (L)</p>			<p>Managed Turf/ lawn area: <input type="text" value="8,917"/> s.f.</p> <p>Fertilizer offset: <input type="text" value="3.034"/> kg-N/yr (L')</p>														
<p><b>Total Nitrogen Load</b></p> <p>Total project nitrogen load (Title-5 flows): <input type="text" value="14.10"/> kg-N/yr (M) = (B)+(I)+(K)+(L)</p> <p>Total project nitrogen load (Actual flows): <input type="text" value="7.14"/> kg-N/yr (N) = (C)+(I)+(K)+(L)</p> <p>Nitrogen load per acre (Average): <input type="text" value="1.55"/> kg-N/yr/acre (O) = (M)+(N) ÷ 2 + (F)</p>			<p>Existing nitrogen load (Title-5 flows): <input type="text" value="8.42"/> kg-N/yr (M')</p> <p>Existing nitrogen load (Actual flows): <input type="text" value="11.57"/> kg-N/yr (N')</p> <p>Nitrogen offset per acre: <input type="text" value="1.46"/> kg-N/yr/acre (O')</p>														
<p><b>Proposed Nitrogen Loading Concentration</b></p> <p>Project nitrogen loading concentration (Title-5 flows): <input type="text" value="2.76"/> ppm-N (P) = (a)+723.76 + (G)x(RECH)+9.7286 + (H)+10,594 + (K)+0.75</p> <p>Project nitrogen loading concentration (Actual flows): <input type="text" value="1.50"/> ppm-N (Q) = (b)+723.76 + (G)x(RECH)+9.7286 + (H)+10,594 + (K)+0.75</p> <p>Project nitrogen loading concentration (Average): <input type="text" value="2.13"/> ppm-N (R) = (P)+(Q) ÷ 2</p>			<p><b>Existing nitrogen loading concentrations:</b></p> <p>Title-5 flows <input type="text" value="1.87"/> ppm-N (P')</p> <p>Actual flows <input type="text" value="2.52"/> ppm-N (Q')</p> <p>Average <input type="text" value="2.19"/> ppm-N (R')</p>														

**Resource/ Impact Based Criteria**

**Marine Water Recharge Areas / Coastal Embayments**

2.  Yes  No Is the project located in any of the following watersheds: **Buttermilk Bay Basins, Phinneys Harbor / Back River / Eel Pond, Pocasset River Basin, Pocasset Harbor / Hen Cove / Red Brook Harbor, Megansett / Squeteague Harbors\*\*** ?  
(If 'No', then go to line 3.)

Name of Watershed (from Regional Policy Plan Data Viewer): Pocasset Harbor

Critical Nitrogen-loading limit\*\* :  kg-N/year/acre (S)

Yes  No Does project's nitrogen load (O) exceed the existing load (O') AND the critical nitrogen load (S) ?  
(If 'No', then go to line 3.)

Excess project nitrogen load to be mitigated:  kg-N/yr (T) = LESSER OF (O)-(S) x (F) AND (O)-(O') x (F)

\*\* When a nitrogen-loading limit has been determined through either a Total Maximum Daily Load (TMDL), a Massachusetts Estuaries Project-accepted technical report, or specified by a Commission-approved comprehensive wastewater management plan pursuant to Objective WR3, or if impaired water quality has been documented for the receiving coastal waters, the nitrogen loading limit shall be 0 kg-N/yr per acre pursuant to Objective WR3.

**Groundwater Quality**

3.  Yes  No Does the project's nitrogen loading concentration in groundwater (R) exceed the greater of 5 ppm or the existing concentration (R') ?  
(If 'Yes', the project will need to provide an alternative strategy for meeting these thresholds by using another worksheet)

**Potential Public Water Supply Areas**

4.  Yes  No Is project in a Potential Public Water Supply Area (PPWSA) ?  
(If 'No', then go to line 5.)

Yes  No Does the project's nitrogen loading concentration (R) exceed the greater of 1 ppm or the existing concentration (R') ?  
(If 'Yes', the project must provide an alternative strategy for meeting Objective WR1)

Yes  No Does the project use, treat, generate, store or dispose of hazardous materials in excess of the greater of a) household quantities or b) existing quantities ?  
(If 'Yes', the project must provide an alternative strategy for meeting Objective WR1)

**Wellhead Protection Areas**

5.  Yes  No Is project in a Wellhead Protection Area (WHPA) ?

Yes  No Does the project's nitrogen loading concentration (R) exceed the greater of 5 ppm or the existing concentration (R') ?  
(If 'Yes', the project must provide an alternative strategy for meeting Objective WR1)

Yes  No Does the project use, treat, generate, store or dispose of hazardous materials in excess of the greater of a) household quantities or b) existing quantities ?  
(If 'Yes', the project must provide an alternative strategy for meeting Objective WR1)

**Fresh Water Recharge Areas**

6.  Yes  No Is project wastewater disposed of within 300 feet of a stream or fresh surface water body?  
(If 'No', then go to line 7.)

Yes  No Is the project located in a freshwater recharge area (FWRA) hydraulically upgradient of a stream or fresh surface water body?  
(If 'Yes', the project must provide an alternative strategy for meeting Objective WR2)

**Other Potential Impacts**

7.  Yes  No Will the project withdraw more than 20,000 gallons of water per day ?  
(If 'Yes', then the project must provide documentation demonstrating that there will not be significant impacts to water levels, surface waters and wetlands)

8. **The project must demonstrate compliance with Objective WR4, including use of Low Impact Development to mitigate impacts of stormwater runoff and O & M plans for maintaining stormwater infrastructure and landscaping.**



# GRANT OF TITLE 5 BEDROOM COUNT DEED RESTRICTION

This Grant of Title 5 Bedroom Count Deed Restriction is made as of \_\_\_\_\_, 2023 by The Long Point Trust, Stephen Bisson and Marybeth Bisson, Trustees, with a mailing address of P.O. Box 10, Cataumet, MA 02534, Barnstable County, Massachusetts, pursuant to M.G.L. c. 21A, §13 and 310 CMR 15.000 (collectively, "Title 5").

WITNESSETH

WHEREAS, Grantor, being the owner in fee simple of that certain parcel of land located 176 Scraggy Neck Road, Bourne, Barnstable County, Massachusetts, with the buildings and improvements thereon, pursuant to a deed from Frederick L. Worcester, as Trustee of the Worcester Family Nominee Trust dated May 31, 2002, recorded with Barnstable Registry of Deeds in Book 15363, Page 23, to Grantor, dated December 19, 2007, and recorded with Barnstable County Registry of Deeds in Book 22554, Page 257, said parcel of land, shown as *New Lot 2* on the Lot Line Adjustment Plan of Land in Bourne prepared by Bracken Engineering, Inc., dated June 4, 2020 and recorded with Barnstable County Registry of Deeds in Plan Book 687, Page 11 ("Property"), as supplemental to original plan entitled Plan of Land in Bourne, Mass., owner P.Y DeNormandie Trust, Frederick L. (Ted) Worcester", dated September 8, 1998 prepared by Wm. M. Warwick & Assoc. Inc. and recorded with Barnstable County Registry of Deeds in Plan Book 544, Page 69; and

WHEREAS Grantor desires to restrict the number of bedrooms, as the term bedroom is defined at 310 CMR 15.002 ("Bedroom") and the Board of Health regulation dated effective April 24, 1992 and amended on September 21, 2022, regarding bedroom definition, through the granting of this Title 5 Bedroom Count Deed Restriction;

NOW, THEREFORE, Grantor does hereby GRANT to the Town of Bourne of Barnstable County, Massachusetts, a municipal corporation located in Barnstable County, having a mailing address of 24 Perry Avenue, Buzzards Bay, Massachusetts, and acting by and through its Board of Health ("Local Approving Authority"), for nominal and nonmonetary consideration, the sufficiency and receipt of which are hereby acknowledged, with QUITCLAIM COVENANTS, a TITLE 5 BEDROOM COUNT DEED RESTRICTION ("Restriction") in, on, upon, through, over and under the Property.

Said Restriction operates to restrict the Property as follows:

**1. Restriction.** Grantor hereby restricts the total number of Bedrooms in, on, upon, through, over and under the Property to **Four (4) Bedrooms**, such that at no time shall there exist more than **Four (4) Bedrooms** in, on, upon, through, over and under said Property.

**2. Severability.** Grantor hereby agrees that, in the event that a court or other tribunal determines that any provision of this instrument is invalid or unenforceable:

- (i) That such provision shall be deemed automatically modified to conform to the requirements for validity and enforceability as determined by such court or tribunal; or
- (ii) That any such provision, by its nature, cannot be so modified, shall be deemed deleted from this instrument as though it had never been included herein.

In either case, the remaining provisions of this instrument shall remain in full force and effect.

**3. Enforcement.** Grantor expressly acknowledges that a violation of the terms of this Restriction could result in the following:

(i) upon determination by a court of competent jurisdiction, in the issuance of criminal and civil penalties, and/or equitable remedies, including, but not limited to, injunctive relief, such injunctive relief could include the issuance of an order to modify or remove any improvements constructed upon the Property in violation of the terms of this Restriction; and

(ii) in the initiation of an enforcement action and/or assessment of penalties by the Bourne Board of Health and/or the Massachusetts Department of Environmental Protection, a duly constituted agency with a principal office located at 100 Cambridge Street, 9<sup>th</sup> Floor Boston, MA 02108 (DEP), to enforce the terms of this Restriction pursuant to Title 5; M.G.L. c.111, §§ 2C, 17, 31, 122, 123, 125, 127A-O, inclusive, and 129; and M.G.L c. 83, §11.

**4. Provisions to Run with the Land.** The rights, liabilities, agreements and obligations created under this Restriction shall run with the Property and any portion thereof for the term of this Restriction. Grantor hereby covenants for [himself/herself/itself] and [his/her/its] executors, administrators, heirs, successors and assigns, to stand seized and to hold title to the Property and any portion thereof subject to this Restriction.

The rights granted to the Bourne Board of Health, its successors and assigns, do not provide, however, that a violation of this Restriction shall result in a forfeiture or reversion of Grantor's title to the Property.

**5. Concurrence Presumed.** It is agreed that:

(i) Grantor and all parties claiming by, through, or under Grantor agree to and shall be subject to the provisions of this Restriction; and

(ii) Grantor and all parties claiming by, through, or under Grantor, and their respective agents, contractors, sub-contractors and employees, agree that the Restriction herein established shall be adhered to and shall not be violated, and that their respective interests in the Property shall be subject to the provisions herein set forth.

**6. Incorporation into Deeds, Mortgages, Leases, and Instruments of Transfer.** Grantor hereby agrees to incorporate this Restriction, in full or by reference, into all deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer by which an interest and/or a right to use the Property, or any portion thereof, is conveyed.

**7. Recordation.** Grantor shall record and/or register this Restriction with the appropriate Registry of Deeds and/or Land Registration Office within 30 days of receiving the approved Restriction from the Local Approving Authority. Grantor shall file with the Bourne Board of Health and the DEP a certified Registry copy of this Restriction as recorded and/or registered within 30 days of its date of recordation and/or registration.

**8. Amendment and Release.** This Restriction may be amended only upon the approval and acceptance of such amendment by the Local Approving Authority. Release of this Restriction shall be granted by the Local Approving Authority upon (i) Grantor's request of such release; and (ii) the Property being connected to a municipal sewer system and the septic system serving the Property being abandoned in accordance with 310 CMR 15.354. Any such amendment or release shall be recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office and a certified Registry copy of said amendment or



release shall be filed with the Bourne Board of Health and the DEP within 30 days of its date of recordation and/or registration.

**9. Term.** This Restriction shall run in perpetuity and is intended to conform to M.G.L. c.184, §26, as amended.

**10. Rights Reserved.** This Restriction is granted to the Bourne Board of Health. It is expressly agreed that acceptance of this Restriction by the Bourne Board of Health shall not operate to bar, diminish, or in any way affect any legal or equitable right of the Bourne Board of Health or of DEP to issue any future order with respect to the Property or in any way affect any other claim, action, suit, cause of action, or demand which the Bourne Board of Health or DEP may have with respect thereto. Nor shall acceptance of the Restriction serve to impose any obligations, liabilities, or any other duties upon the Bourne Board of Health.

**11. Effective Date.** This Restriction shall become effective upon its recordation and/or registration with the appropriate Registry of Deeds and/or Land Registration Office.

**12. No construction permits shall be issued for the Property until a certified Registry copy is submitted to the office of the Bourne Board of Health unless written approval is otherwise granted by the Board of Health.**

WITNESS the execution hereof under seal this \_\_\_\_\_ day of \_\_\_\_\_, 2023.

\_\_\_\_\_  
Stephen Bisson, Trustee  
The Long Point Trust

\_\_\_\_\_  
Marybeth Bisson, Trustee  
The Long Point Trust

COMMONWEALTH OF MASSACHUSETTS

\_\_\_\_\_, ss

Date: \_\_\_\_\_

Then personally appeared the above-named Stephen Bisson, Trustee and Marybeth Bisson, Trustee and acknowledged the foregoing instrument to be their free act and deed before me.

\_\_\_\_\_  
Notary Public:  
My commission expires:

Approved and Accepted By:

\_\_\_\_\_  
Terri A. Guarino, RS, CHO  
Health Director  
Town of Bourne

Date: \_\_\_\_\_

**NOTICE OF ALTERNATIVE SEWAGE DISPOSAL SYSTEM**  
M.G.L. c. 21A, § 13 and 310 CMR 15.287(10)

**ADDRESS OF PROPERTY SERVED BY ALTERNATIVE SYSTEM:**

**176 Scraggy Neck Road, Bourne, MA**

**TITLE REFERENCE FOR PROPERTY SERVED BY ALTERNATIVE SYSTEM**

Deed recorded with the **Barnstable** Registry of Deeds in **Book 22554, Page 257**

**NAME(S) OF OWNER OF PROPERTY SERVED BY ALTERNATIVE SYSTEM:**

**The Long Point Trust**  
**Stephen Bisson and Marybeth Bisson, Trustees**

**OWNER(S) MAILING ADDRESS: P.O. Box 10, Cataumet, MA 02563**

WHEREAS, Section 15.280 of Title 5 of the State Environmental Code (“Approval of Alternative Systems”), provides for the Massachusetts Department of Environmental Protection (the “Department”) to approve or certify, as appropriate, all proposals to construct, upgrade or replace on-site sewage disposal systems using alternative systems;

WHEREAS, owners and/or operators of approved or certified alternative systems are subject to general conditions, as specified in Section 15.287 of Title 5 of the State Environmental Code, 310 CMR 15.287, and may be subject to special conditions, as specified in the Department’s approvals or certifications; such general and special conditions potentially including, without limitation, requirements relating to the use of trained operators, periodic inspections, maintenance, sampling, reporting and/or recordkeeping;

WHEREAS, the owners and/or operators this alternative system acknowledges and agrees to comply with the provisions of all of the Bourne Board of Health Alternative Septic System Regulations and any other conditions for the existence of the system;

WHEREAS, Section 15.287(10) of Title 5 of the State Environmental Code, 310 CMR 15.287(10), requires that “prior to obtaining a Certificate of Compliance for installation of a new or upgraded system, the system owner shall record in the chain of title for the property served by the alternative system in the Registry of Deeds and/or Land Registration Office, as applicable, a Notice disclosing both the existence of the alternative on-site system and the Department’s approval of the system. The system owner shall also provide evidence of such recording to the Bourne Board of Health; and

WHEREAS, the Property is served by an alternative sewage disposal system.

NOW, THEREFORE, Notice of an alternative sewage disposal system is hereby given for the above- referenced Property, as follows:

**1. Existence System #1.** An alternative system has been installed as a new or upgraded alternative sewage disposal system, on or adjacent to the Property, and serves the Property. The trade name and model number(s) of the alternative system are as follows:

<b>Trade name of technology:</b>	<i>MicroFAST®</i>
<b>Manufacturer Name:</b>	Bio-Microbics, Inc.
<b>Model number(s):</b>	MicroFAST 0.9 Unit

**2. Approval/Certification.** On 12/29/2010, revised 3/20/2015, the Department, pursuant to its authority under the section of Title 5 as specified below, approved or certified the technology used in the above referenced alternative system, under MassDEP Transmittal Number X232831.

- Certified for general use under 310 CMR 15.288



**3. Existence System #2.** An alternative system has been installed as a new or upgraded alternative sewage disposal system, on or adjacent to the Property, and serves the Property. The trade name and model number(s) of the alternative system are as follows:

**Trade name of technology:** Presby Enviro-Septic® Wastewater Treatment System

**Manufacturer Name:** Presby-Environmental, Inc.

**4. Approval/Certification.** Revised on March 19, 2019, modified October 30, 2019, and February 22, 2022 the Department, pursuant to its authority under the section of Title 5 as specified below, approved or certified the technology used in the above referenced alternative system, under MassDEP Transmittal Number Accela 21-CLM-000073-APP

- Certified for general use under 310 CMR 15.288

A copy of the Department of Environmental Protection’s Approval/Certification is available online at the Department’s website:

<https://www.mass.gov/guides/approved-title-5-innovativealternative-technologies>

*\*\*This Notice of Alternative Sewage Disposal System must be submitted to the Bourne Board of Health\*\**

WITNESS the execution hereof under seal this \_\_\_\_ day of \_\_\_\_\_, 2023, made by the above-named Alternative System Owner.

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**Stephen Bisson, Trustee of the Long Point Trust**

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss

On this \_\_\_\_\_ day of \_\_\_\_\_, 2023, before me, the undersigned notary public, personally appeared Stephen Bisson, Trustee of the Long Point Trust, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

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(official signature and seal of notary)

WITNESS the execution hereof under seal this \_\_\_\_ day of \_\_\_\_\_, 2023, made by the above-named Alternative System Owner.

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**Marybeth Bisson, Trustee of the Long Point Trust**

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss

On this \_\_\_\_\_ day of \_\_\_\_\_, 2023, before me, the undersigned notary public, personally appeared Marybeth Bisson, Trustee of the Long Point Trust, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

---

(official signature and seal of notary)

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Approved and Accepted By:

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Agent of the Board of Health  
Health Department  
Town of Bourne

Attachment: Bourne Board of Health Variance Approval Notification  
Notice of Alternative Technology





Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker  
Governor

Karyn E. Polito  
Lieutenant Governor

Matthew A. Beaton  
Secretary

Martin Suuberg  
Commissioner

### **CERTIFICATION FOR GENERAL USE**

Pursuant to Title 5, 310 CMR 15.000

#### **Name and Address of Applicant:**

Bio-Microbics, Inc.  
8450 Cole Parkway  
Shawnee, KS 66227

#### **Trade name of technology and models:**

FAST Treatment Systems with Nitrogen Reduction including models *MicroFAST® 0.5, 0.75, 0.9, 1.5, 3.0, 4.5, 9.0*, *HighStrengthFAST® 1.0, 1.5, 3.0, 4.5, 9.0* and *NitriFAST® 0.5, 0.75, 1.0, 1.5, 3.0, 4.5, 9.0* (all hereinafter the "System") for facilities with design flows less than 2,000 gallons per day (GPD). Schematic drawings illustrating the models and an Inspection Checklist are part of this Certification.

Transmittal Number: X232831  
Date of Issuance: December 29, 2010, revised March 20, 2015

#### **Authority for Issuance:**

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental Protection (hereinafter "the Department") hereby issues this General Use Approval to: Bio-Microbics, Inc., 8450 Cole Parkway, Shawnee, KS 66227 (hereinafter "the Company"), approving the above referenced FAST technology (hereinafter "the Technology" or "System") for use in the Commonwealth of Massachusetts subject to the conditions herein. Sale and use of the Technology are subject to compliance by the Company, the Designer, the System Installer, the Operator, and the System Owner with the terms and conditions herein. Any noncompliance with the terms or conditions of this Certification constitutes a violation of 310 CMR 15.000.

\_\_\_\_\_  
David Ferris, Director  
Wastewater Management Program  
Bureau of Water Resources

March 20, 2015  
Date

#### **I. Purpose**

This information is available in alternate format. Call Michelle Waters-Ekanem, Diversity Director, at 617-292-5751. TTY# MassRelay Service 1-800-439-2370  
MassDEP Website: [www.mass.gov/dep](http://www.mass.gov/dep)

Printed on Recycled Paper

1. Subject to the conditions of this Approval and any other local requirements, the purpose of this Approval is to allow the use of the System in Massachusetts on a General Use basis. With the necessary permits and approvals required by 310 CMR 15.000, this Certification authorizes the installation and use of the System in Massachusetts.
2. The System may be installed for residential facilities with design flow less than 2,000 GPD where a system in compliance with 310 CMR 15.000 exists on-site or could be built and for which a site evaluation in compliance with 310 CMR 15.000 has been approved by the local approving authority; or by the Department if Department approval is required by 310 CMR 15.000. This Approval allows for the use of the System as an equivalent alternative technology in accordance with 310 CMR 15.202 on facilities for nitrogen reduction in a Department designated nitrogen sensitive or limited area as defined in 310 CMR 15.214 and 15.215.

Non-residential facilities are not allowed under this approval. Non-residential facilities include properties with businesses and/or commercial establishments.

3. The technology shall meet or exceed the following effluent discharge requirements:
  - Effluent Total Nitrogen (TN) concentration of 19 mg/L (for 660 gallons per day per acre -gpda- loading) or 25 mg/L (for 550 gpda loading).
  - Effluent pH range shall be 6.0 to 9.0.
  - The System is approved for use at facilities with a maximum design flow less than 2,000 GPD.
4. The System Owner or the designated System Operator (or 'Operator') has responsibility for oversight and sampling of the System if the property served was allowed to increase the discharge rate per acre above 440 gpda in an area subject to Nitrogen Loading Limitations.

The System Owner will be required to repair, replace, modify or take any other action as required by the Department or the local approving authority, if the Department or the local approving authority determines that the System is not capable of meeting the required reduction in nitrogen in the effluent.

The Company is responsible for the approved technology as described below.

## **II. General Description of the Technology and Design Standards**

1. The tank containing the FAST® insert is installed between the building sewer and the soil absorption system (SAS). The SAS shall be designed and constructed in accordance with 310 CMR 15.100 - 15.279 and subject to the provisions of this Certification.
2. Technology Description - The FAST® system is an aerobic wastewater treatment system that utilizes a completely submerged fixed film process to treat organics and nitrify, and a passive recycle system for denitrification. Each model contains submerged media specific to the application. Microorganisms grow on the media and remove soluble contaminants from the wastewater, utilizing them as a source of energy for growth and production of new microorganisms. The FAST® system insert consists of a liner around the media and an airlift to provide aeration and mixing within the confines of the liner. The area outside the liner in the septic tank remains anoxic for denitrification and a passive recirculation system



moves the aerated wastewater to the outside of the liner to obtain denitrification. The aeration and circulation inside the liner are provided by a blower that pumps air into a draft tube that extends down the center of the media. Treated effluent passes out of the aerobic zone of the treatment plant through a pipe connected directly to a baffled quiescent area in the liner. Final effluent is discharged to a soil absorption system. Specific model considerations are as follows:

- The MicroFAST® 0.5, 0.75 and 0.9, HighStrengthFAST® 1.0 and NitriFAST® 0.5, 0.75 and 0.9 are installed in the second compartment of a two-compartment tank with a total liquid capacity of at least 1,500 gallons constructed in accordance with 310 CMR 15.226.
  - The MicroFAST®, HighStrengthFAST® and NitriFAST® 1.5 are installed in the second compartment of a two compartment 3000-gallon tank constructed in accordance with 310 CMR 15.226.
  - The MicroFAST®, HighStrengthFAST® and NitriFAST® 3.0 is installed in a separate tank constructed in accordance with 310 CMR 15.226 and located between a standard Title 5 septic tank, designed in accordance with 310 CMR 15.223 and 15.224, and the soil adsorption system (SAS). In this larger system, an additional recycle pump may be needed to send nitrified effluent back to the septic tank for added denitrification. Consult the Company for proper layout.
  - The NitriFAST® models can also be used for additional nitrification in series after the MicroFAST® models or HighStrengthFAST® models. In this configuration the tanks used for the NitriFAST® shall be constructed in accordance with 310 CMR 15.226 and meet the minimum dimensions and volumes required by the Company.
  - Flow equalization may also be employed prior to the FAST® system depending on the type of facility. Consult Company for proper layout.
3. All access ports and manhole covers shall be readily removable, of durable material and installed and maintained at grade to allow for maintenance of the System. No structures shall be located directly upon or above the access locations which could interfere with performance, access, inspection, pumping, or repair. Sufficient access for infrequent maintenance of the System treatment media and all other treatment works shall be evaluated, and addressed in the System design if necessary, by the designer. System control panel(s) including alarms shall be mounted in a location accessible to the operator of the System.

4. Wastewater Loading and Effluent Concentration Design Standards

For new residential construction in an area subject to the Nitrogen Loading Limitations of 310 CMR 15.214, and the facility does not meet with the Nitrogen Loading Limitations pursuant to the aggregation provisions of 310 CMR 15.216, an increase in calculated nitrogen loading per acre is allowed for facilities with design flow less than 2000 gpd with limitations as follows:

- The design flow shall not exceed 660 gallons per day per acre (gpda) and the total nitrogen (TN) concentration in the effluent shall not exceed 19 milligrams per liter (mg/L); or

- The design flow shall not exceed 550 gallons per day per acre (gpda) and the total nitrogen (TN) concentration in the effluent shall not exceed 25 milligrams per liter (mg/L).
- TN is measured as the total of TKN (Total Kjeldhal Nitrogen), NO<sub>3</sub>-N (Nitrate nitrogen) and NO<sub>2</sub>-N (Nitrite nitrogen).

### **III. General Conditions**

1. The provisions of 310 CMR 15.000 is applicable to the use and operation of this System, the System owner and the Company, except those that specifically have been varied by the terms of this Certification.
2. Any required operation and maintenance, monitoring and testing shall be performed in accordance with a Department approved plan. Any required sample analysis shall be conducted by an independent U.S. EPA or DEP approved testing laboratory, or a DEP approved independent university laboratory, unless otherwise provided in the Department's written approval. It shall be a violation of this Certification to falsify any data collected pursuant to an approved testing plan, to omit any required data or to fail to submit any report required by such plan.
3. The facility served by the System and the System itself, shall be open to inspection and sampling by the Department and the local approving authority at all reasonable times.
4. In accordance with applicable law, the Department and the local approving authority may require the System owner to cease operation of the system and/or to take any other action as it deems necessary to protect public health, safety, welfare or the environment.
5. The Department has not determined that the performance of the System will provide a level of protection to public health and safety and the environment that is at least equivalent to that of a sanitary sewer system. Accordingly, no System shall be upgraded or expanded, if it is feasible to connect the facility to a sanitary sewer, unless as allowed by 310 CMR 15.004.
6. Design, installation, and use of the System shall be in strict conformance with the Company's DEP approved plans and specifications and 310 CMR 15.000, subject to this Certification.

### **IV. Conditions Applicable to the System Owner**

1. The System owner shall at all times have the System properly operated and maintained by a Company approved Operator in accordance with this Certification, the designer's operation and maintenance requirements and the Company's approved procedures.
2. The System is certified only in connection with the discharge of sanitary wastewater from facilities with a design flow of less than 2000 gpd. Any non-sanitary wastewater generated and/or used at the facility served by the System shall not be introduced into the System and shall be lawfully disposed of.



3. The System Owner shall provide access to the site for the System Operator to perform inspections, maintenance, repairs, responding to alarm events, field testing, and sampling as may be required by the Approval.

Operation and Monitoring Requirements

4. System effluent total nitrogen (TN) concentrations shall not exceed 19 or 25 mg/L and effluent pH shall not be less than 6.0 or more than 9.0. Field test observations of dissolved oxygen (DO) shall equal or exceed 2 mg/L and for Turbidity shall be equal or less than 40 NTU.
5. All samples shall be taken at a flowing discharge point, i.e. distribution box, pipe entering a pump chamber or other Department approved location from the treatment unit.
6. Inspection, operation and maintenance (O&M), sampling, and field testing of the System required by the Approval shall be performed by a Company approved Operator who has been certified at a minimum of Grade Level 4 (four) by the Board of Registration of Operators of Wastewater Treatment Facilities, in accordance with Massachusetts regulations 257 CMR 2.00, and is an approved Title 5 System Inspector in accordance with 310 CMR 15.340.
7. Prior to commencement of construction of the System, the System Owner shall provide to the local approving authority a copy of a signed O&M Agreement that meets the requirements of paragraph IV (8).
8. The System Owner shall maintain, at all times, an O&M Agreement with a qualified System Operator approved by the Company. The Agreement shall be at least for one year and include the following provisions:
  - a) The name of a System Operator who is an approved System Inspector in accordance with 310 CMR 15.340 and who meets any additional qualification requirements specified in the Approval;
  - b) The System Operator must inspect the Alternative System as required by paragraph IV (9) and (12);
  - c) The System Operator shall be responsible for submitting the monitoring results to the System Owner in accordance with paragraph IV (13) and to the local approving authority in accordance with paragraph IV (14); and
  - d) In the case of a System failure, an equipment failure, alarm event, components not functioning as designed, or violations of the Approval, procedures and responsibilities of the System Operator and System Owner shall be clearly defined for corrective measures to be taken immediately. The System Operator shall agree to provide written notification within five days, describing corrective measures taken, to the System Owner and the local board of health.
9. The System Owner shall comply with the following monitoring requirements if the System is subject to a TN concentration limit in accordance with paragraph II (4):

- a) Year-round installations shall be inspected and have effluent sampled for at least the TN parameter quarterly for the first year, then a minimum of twice/year thereafter, at least 5 months apart and with at least one sample taken between December 1 and March 1 of each year. Field testing shall be completed per paragraph IV (11) below, and as determined necessary by the System Operator. See DEP Field Testing Protocol at <http://www.mass.gov/dep/water/laws/policies.htm#t5pols>. Wastewater flow shall be recorded at each inspection, see 'Flow Metering' paragraph IV (10).
- b) Seasonal installations shall be inspected and have effluent sampled for at least the TN parameter a minimum of twice/year. At least one sample must be taken 30 to 60 days after each seasonal occupancy begins. A second sample must be taken no less than 2 months after the first sample. Field testing shall be completed per paragraph IV (11) below, and as determined necessary by the System Operator. Wastewater flow shall be recorded at each inspection, see 'Flow Metering' paragraph IV (10).
- c) Systems in operation prior to issuance of this Approval, which have received approval of sampling reduction from the Department may continue with that System monitoring frequency.

Properties occupied at least 6 months per year are considered year-round properties. Properties occupied less than 6 months per year are considered seasonal properties.

TN is measured as the total of TKN (Total Kjeldhal Nitrogen), NO<sub>3</sub>-N (Nitrate nitrogen) and NO<sub>2</sub>-N (Nitrite nitrogen).

10. Flow Metering: Reporting of residential System water use is not required, however it is recommended the Operator record water meter readings if available at all inspections, or otherwise estimate System flow, to assist in addressing possible operational problems or issues. Flow measurement when recorded shall be based on:
  - a) actual metering data of wastewater flow to the System or actual water meter data of flow to fixtures that discharge to the wastewater system; or
  - b) actual water meter data for the total facility with either actual meter data or estimated flows for non-wastewater usage subtracted from the total facility water usage. If estimating the wastewater portion of metered water usage, the System Operator shall provide a best estimate of wastewater discharged to the System with the method of estimating, such as pump run times, occupancy rates, adjustment due to seasonal outdoor watering use, etc.; or
  - c) for Systems installed under a prior Approval that did not include a wastewater flow data reporting requirement, if no flow meters are available, the System Operator shall provide a best estimate of wastewater discharged to the System with the method of estimating, such pump run times, occupancy rate, etc.
11. Field Testing: Temperature, turbidity, pH and DO shall be measured and recorded in the field whenever the effluent is sampled for TN. See applicable sections of the Department's Field Testing Protocol at <http://www.mass.gov/dep/water/laws/policies.htm#t5pols>.

12. At a minimum, the System Operator shall inspect the System:
  - a) quarterly for the first year then two times per year thereafter;
  - b) in accordance with the approved O&M manual, the Designer's operation and maintenance requirements, and the requirements of the local approving authority; and
  - c) any time there is an alarm event, equipment failure, or system failure.

Recordkeeping and Reporting

13. Within 60 days of any site visit, the System Operator shall submit an O&M report and inspection checklist to the System Owner and the Company. It is recommended the System Owner and Company maintain copies of these items for possible Department audit. The O&M report shall include, at a minimum:
  - a) for a System failing, any corrective actions taken;
  - b) wastewater analyses, wastewater flow data, field testing results and inspection checklists;
  - c) any violations of the Approval;
  - d) any determinations that the System or its components are not functioning as designed or in accordance with the Company specifications; and
  - e) any other corrective actions taken or recommended.
14. By February 15th of each year the System Owner or the System Operator if designated by the owner, shall submit to the local approving authority all monitoring results with all O&M reports and inspection checklists completed by the System Operator during the previous 12 months.
15. Upon determining that the System has failed, as defined in 310 CMR 15.303, the System Operator shall notify the System Owner immediately.
16. Upon determining that the System has failed, as defined in 310 CMR 15.303, the System Owner and the System Operator shall be responsible for the notification of the local approving authority within 24 hours of such determination.
17. The System Owner shall notify the Approving Authority and the Company in writing within seven days of any cancellation, expiration or any other change in the terms and/or conditions of the O&M Agreement required by Paragraph IV (8).
18. Violations of the TN concentration in the System effluent shall not constitute a failure of the System for the purposes of 24-hour notification or 5-day written reporting as required in Paragraphs IV (16) and (8).
19. The System owner shall provide a copy of this Approval, prior to the signing of a purchase and sale agreement for the facility served by the System or any portion thereof, to the proposed new owner.



20. The System owner shall furnish the Department any information that the Department requests regarding the System, within 21 days of the date of receipt of that request.
21. Prior to issuance of a Certificate of Compliance of the System, and after recording and/or registering the Notice required by 310 CMR15.287(10), the System Owner shall provide to the Local Approving Authority a copy of: (i) a certified Registry copy of the Notice bearing the book and page/or document number; and (ii) if the property is unregistered land, a Registry copy of the System Owner's deed to the property, bearing a marginal reference on the System Owner's deed to the property. The Notice to be recorded shall be in the form of the Notice provided by the Department.
22. Prior to signing any agreement to transfer any or all interest in the property served by the System, or any portion of the property, including any possessory interest, the System Owner shall provide written notice of all conditions contained in the Approval to the transferee(s). Any and all instruments of transfer and any leases or rental agreements shall include as an exhibit attached thereto and made a part of thereof a copy of the Approval for the System. The System Owner shall send a copy of such written notification(s) to the Local Approving Authority within 10 days of giving such notice to the transferee(s).

**V. Conditions Applicable to the Company**

1. The Company shall notify the Director of the Wastewater Management Program at least 30 days in advance of the proposed transfer of ownership of the technology for which this Certification is issued. Said notification shall include the name and address of the proposed new owner and a written agreement between the existing and proposed new owner containing a specific date for transfer of ownership, responsibility, coverage and liability between them. All provisions of this Certification applicable to the Company shall be applicable to successors and assigns of the Company, unless the Department determines otherwise.
2. The Company shall develop maintain and update as necessary the following: minimum installation requirements; an operating manual, including information on substances that should not be discharged to the System; a maintenance checklist; and a recommended schedule for maintenance of the System consistent with the Department's requirements essential to consistent successful performance of the installed Systems.
3. The Company shall institute and maintain a program of operator training and continuing education. The Company shall maintain and annually update, and make available the list of qualified operators by February 15th and make the list known to local approving authorities, the Department and to users of the technology.
4. The Company shall furnish the Department any information that the Department requests regarding the System, within 21 days of the date of receipt of that request.
5. The Company shall include copies of this Certification and the procedures described in Section V (3) with each System that is sold. In any contract executed by the Company for distribution or re-sale of the System, the Company shall require the distributor or re-seller to provide each purchaser of the System with copies of this Certification and the procedures described in Section V (3).

6. A copy of the wastewater analyses, wastewater flow data, field testing results, and System Operator O&M reports and inspection checklists from each installed System shall be maintained by the Company or its designee for possible Department audit.
7. If the Company wishes to continue this Certification after its expiration date, the Company shall apply for and obtain a renewal of this Certification. The Company shall submit a renewal application at least 180 days before the expiration date of this Certification, unless written permission for a later date has been granted in writing by the Department. This Certification shall continue in force until the Department has acted on the renewal application.

## **VI. Conditions Applicable to the System Designer**

1. Upon submission of an application for a DSCP, the Designer shall provide to the local approving authority:
  - a) a certification, signed by the owner of record for the property to be served by the System, stating that the property owner:
    - i) has been provided a copy of the Approval, the Owner's Manual, and the Operation and Maintenance Manual, if applicable, and the Owner agrees to comply with all terms and conditions;
    - ii) has been informed of all the owner's costs associated with the operation including, when applicable: power consumption, maintenance, sampling, recordkeeping, reporting, and equipment replacement;
    - iii) understands the requirement for a service contract;
    - iv) agrees to fulfill his responsibilities to provide a Deed Notice as required by 310 CMR 15.287(10) and the Approval;
    - v) agrees to fulfill his responsibilities to provide written notification of the Approval to any new owner, as required by 310 CMR 15.287(5);
    - vi) if the design does not provide for the use of garbage grinders, the restriction is understood and accepted;
    - vii) if the design is for an upgrade of failed or nonconforming system, the System Owner has been provided a copy of the evaluation of the existing system;
    - viii) whether or not covered by a warranty, the System Owner understands the requirement to repair, replace, modify or take any other action as required by the Department or the local approving authority, if the Department or the local approving authority determines that the Alternative System is not capable of meeting the performance standards; and
  - b) a certification, signed by the Designer that the design conforms to the Approval with Conditions and 310 CMR 15.000.

## **VII. Reporting**

1. All notices and documents required to be submitted to the Department by this Certification shall be submitted to:

Director  
Wastewater Management Program  
Department of Environmental Protection,  
One Winter Street - 5th floor  
Boston, Massachusetts 02108

**VIII. Rights of the Department**

1. The Department may suspend, modify or revoke this Certification for cause, including, but not limited to, non-compliance with the terms of this Certification, non-payment of the annual compliance assurance fee, for obtaining the Certification by misrepresentation or failure to disclose fully all relevant facts or any change in or discovery of conditions that would constitute grounds for discontinuance of the Certification, or as necessary for the protection of public health, safety, welfare or the environment, and as authorized by applicable law. The Department reserves its rights to take any enforcement action authorized by law with respect to this Certification and/or the System against the owner or operator of the System and/or the Company.

Transmittal: X232831 (formerly W101238)





Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

# Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker  
Governor

Karyn E. Polito  
Lieutenant Governor

Kathleen A. Theoharides  
Secretary

Martin Suuberg  
Commissioner

## **MODIFIED GENERAL USE CERTIFICATION**

Pursuant to Title 5, 310 CMR 15.00

Name and Address of Applicant:

Presby Environmental, Inc.  
143 Airport Road  
Whitefield, NH 03598

Trade name of technology and models: **Enviro-Septic® Wastewater Treatment System** (hereinafter called the “System”). The Advanced Enviro-Septic Design & Installation Manual, System Installation Form and Inspection Checklist are part of this Certification.

Transmittal Number: Accela - 21-CLM-000073-APP  
Date of Issuance: Revised March 19, 2019, Modified October 30, 2019,  
February 22, 2022

### **Authority for Issuance**

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental, Protection hereby issues this Certification for General Use to: Presby Environmental, Inc., 143 Airport Road, Whitefield, NH 03598 (hereinafter “the Company”), certifying the System described herein for General Use in the Commonwealth of Massachusetts. The sale, design, installation, and use of the System are conditioned on compliance by the Company, the Designer, the Installer and the System Owner with the terms and conditions set forth below. Any noncompliance with the terms or conditions of this Certification constitutes a violation of 310 CMR 15.000.

/s/ Marybeth Chubb  
Marybeth Chubb, Section Chief  
Wastewater Management Program  
Bureau of Resource Protection

2/22/2022  
Date

## Technology Description

The System is an alternative subsurface Soil Absorption System (SAS) that replaces a conventional SAS designed in accordance with 310 CMR 15.000. The System consists of an 11 5/8-inch diameter corrugated, high-density plastic pipe with a 9.5-inch interior diameter and a standard length per unit of 10 feet. The pipe is perforated with eight holes equally distributed around its inner circumference at each corrugation. Each hole has a plastic skimmer extending inwards. The exterior of the pipe has ridges on the peak of each corrugation and is wrapped with two layers fabric materials. The inner layer is a thick layer of coarse, randomly oriented polypropylene fibers. The outer fabric layer is a thinner non-woven geotextile polypropylene. The System includes required connectors designed to connect pipe units together. The System also includes sand surrounding the pipe units, specified as concrete sand meeting the ASTM C-33 specification, also called System Sand. The System Sand must be placed with a minimum thickness of (6") six inches below, (3") three inches above and six inches to the sides of the pipe units.

## Conditions of Approval

The term "System" refers to the Alternative Soil Absorption System in combination with the other components of an on-site treatment and disposal system that may be required to serve a facility in accordance with 310 CMR 15.000.

The term "Approval" refers to the technology-specific Special Conditions, the Standard Conditions for General Use Certification of Alternative Soil Absorption Systems, the General Conditions of 310 CMR 15.287, and any Attachments.

For Alternative Soil Absorption Systems that have been issued General Use Certification for the installation of Systems to serve facilities where the site meets the requirements for new construction, the Department authorizes reductions in the effective leaching area (310 CMR 15.242), subject to the *Standard Conditions that apply to all Alternative Soil Absorption Systems* with General Use Certification found here: <https://www.mass.gov/doc/standard-conditions-for-alternative-soil-absorption-systems-with-general-use-certification/download> and subject to the Special Conditions below applicable to this Technology.

## Special Conditions

1. The System is approved Patented Sand Filter for use as an Alternative Soil Absorption System. In addition to the Special Conditions contained in this Approval, the System shall comply with all Standard Conditions for Alternative Soil Absorption Systems, except where stated otherwise in these Special Conditions.
2. The System is approved for facilities where a conventional system with a reserve area exists or can be built on-site in full compliance with the new construction requirements of 310 CMR 15.000 and has been approved by the local approving authority.

3. This Certification shall not be used for the installation of a System to upgrade or replace an existing failed or nonconforming system, unless the facility meets the siting requirements for new construction, including a reserve area.
4. The separation distance to the estimated seasonal high groundwater elevation shall be measured from the bottom of the System sand below the Enviro-Septic Wastewater Treatment System.
5. The System shall only be installed in bed or field configuration, as described in 310 CMR 15.252. The System shall not be installed in trench configuration and no sidewall area shall be considered in the total effective leaching area provided. The effective leaching area shall be the bottom area only (length times width) of the sand bed.
6. System does not require a five foot over dig as indicated at 310 CMR 15.255(5).
7. Systems shall be installed with differential venting for aeration and inspection access at end of each run of pipe, section or serial bed and whenever the System is installed under impervious surfaces.
8. Serial distribution laterals shall be limited to no more than 500 gpd with each lateral a maximum of 100 feet, and must be laid level. Multi-level systems shall not be allowed.
9. The Advanced Enviro-Septic proprietary product (AES) will be sized at a minimum of seventy (70) linear feet per bedroom (lf/br) and will not exceed 100 feet in length.
10. System component material specifications for the pipe, plastic components, fabric and sand shall comply with the specifications identified in the initial Enviro-Septic I/A technology approval.
11. Prior approval from the Department for any change from these specifications shall be requested in writing.
12. Any changes to the approved plans must receive Local Approving Authority (LAA) approval prior to any changes. Before a Certificate of Compliance can be issued by the LAA the System Designer must include any changes to the approved plan into the as-built plans.
13. Design, installation and operation shall be in strict conformance with the Company's DEP approved plans and specifications of Enviro-Septic Wastewater Treatment System Massachusetts Design and Installation Manuals Copyright September 2019, Presby Environmental, Inc., 310 CMR 15.000 and this Approval.



## **TOWN OF BOURNE**

**Board of Assessors  
24 Perry Avenue  
Buzzards Bay, MA 02532  
(508) 759-0600 Ext. 1510**



Rui Pereira, MAA  
Director of Assessing

Michael Leitzel, Chairperson  
Ellen Doyle Sullivan, Clerk  
Donna Barakauskas, Member

October 25, 2023

The Long Point Trust  
c/o Bracken Engineering, Inc.  
49 Herring Pond Rd.  
Bourne, MA 02532

Re: Abutters List for Map 51 Parcel 1  
Property address: 176 Scraggy Neck Road

As required by the Bourne Board of Health, pursuant with section 310 CMR 15.411(1), this is to certify that the attached list of names and addresses constitutes all of the parties in interest as shown on the most recent tax list of the Town of Bourne.

Abutting properties are: Map 47 Parcel 45; Map 51.1 Parcels 1 & 3.

Your filing fee of \$25.00 has been received by the Bourne Assessor's Office.

**Please be advised that this abutters list is only good for 30 days from the date on this letter. Expired abutters list can be recertified for an additional filing fee.**

See enclosed for abutters mailing addresses.

Board of Assessors

*Ellen Doyle Sullivan -  
Donna Barakauskas  
Michael Leitzel*



Extract: ABUTTERS LIST  
 Database: LIVE  
 Filter: Key IN 14473,10762,10763  
 Sort:

Report #24: Owner Listing Report  
 Fiscal Year 2024

Bourne MA

Key	Parcel ID	Owner	Location	LCI/CI	Bk-Pg(Cert) /Dt	Mailing Street	Mailing City	ST	Zip Cd/County	
14473	47.0-45-0	BISSON STEPHEN & MARYBETH TRS OF LONG POINT TRUST	178-180 SCRAGGY NECK RD	N	22554/257 1090 12/19/2007	PO BOX 10	CATAUMET	MA	02534	
10762	51.1-1-0	KEENE WILLIAM N & HENRY R KEENE JR & SUSAN K MALCOLM	0 WINSOR RD	N	35779/117 1320 5/11/2023	21 SWIFT RD	DARTMOUTH	MA	02748	
10763	51.1-3-0	GALLIGAN MARYFRANCES B TR GALLIGAN BEACH NOM TR	170 SCRAGGY NECK RD	Y	1010 7/13/2000	4 LAUREL TERRACE	WELLESLEY HILLS	MA	02481	
Total Records		3								

MAIN OFFICE:  
49 Herring Pond Road  
Buzzards Bay, MA 02532  
TEL: (508) 833-0070  
FAX: (508) 833-2282



NANTUCKET OFFICE:  
19 Old South Road  
Nantucket, MA 02554  
TEL: (508) 325-0044  
[www.brackeneng.com](http://www.brackeneng.com)

October 31, 2023

**USPS Certified Mail**

RE : Notice of Public Hearing

Dear Abutter:

In accordance with the Town of Bourne Board of Health Regulations, you are hereby notified that **The Long Point Trust, Stephen & Marybeth Bisson, Trustees** have requested a hearing before the Bourne Board of Health for relief from the Bourne Board of Health Regulations for the installation of an upgraded Septic System. The location of the property for which approval is sought is **176 Scraggy Neck Road (Map 51, Parcel 1 (Lot 2)), Cataumet** where you are listed as an abutter. At said hearing the Board will discuss and possibly vote on:

The following variances requested from the 150-foot setback to the proposed Soil Absorption System (SAS) and Reserve Area (RA):

- SAS to the Salt Marsh southwest from 150' to 138' (**12' variance**)
- SAS to the Salt Marsh northeast from 150' to 101' (**49' variance**)
- SAS to Coastal Bank southwest from 150' to 66' (**84' variance**)
- SAS to Coastal Bank northeast from 150' to 57' (**93' variance**)
- RA to the Salt Marsh to the south from 150' to 126' (**24' variance**)
- RA to the Salt Marsh to the northeast from 150' to 112' (**38' variance**)
- RA to Coastal Bank southwest from 150' to 51' (**99' variance**)
- RA to Coastal Bank northwest from 150' to 64' (**86' variance**)

This hearing is **tentatively** scheduled for Wednesday, November 15<sup>th</sup> at **5:30 p.m.** in Conference Room #2 at the Bourne Veteran's Memorial Community Building, 239 Main Street, Buzzards Bay. ***Please confirm the date, time and location of the meeting with the Town, in case of any changes.*** Information regarding the location of the meeting and submission may be available for your review one week prior to the meeting by contacting the Bourne Health Department at 508-759-0600, Ext. 1513, Monday through Friday from 8:30 a.m. until 4:30 p.m.

Meeting agendas are posted on the Town of Bourne website, [www.townofbourne.com/health](http://www.townofbourne.com/health) no less than 48 hours in advance of the hearing. Should you have any questions or concerns, please do not hesitate to contact the undersigned at [don@brackeneng.com](mailto:don@brackeneng.com) or the Bourne Health Department at 508-759-0600, Ext. 1513.

Sincerely,

**BRACKEN ENGINEERING INC.**

A handwritten signature in black ink, appearing to read 'Donald F. Bracken, Jr.', written over a horizontal line.

Donald F. Bracken, Jr., PE, PLS  
President  
Agent for the Applicant

9589 0710 5270 1225 2459 38

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Return Receipt Fee:	\$ 3.55
Total Postage & Fees:	\$ 8.53



William N. Keene,  
Henry R. Keene Jr. &  
Susan K. Malcolm  
21 Swift Road  
Dartmouth, MA 02748

176 Scraggy Neck Road, Bourne – BOH

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Total Postage & Fees:	\$ 8.53



MaryFrances B. Galligan, TR  
Galligan Beach Nom TR  
4 Laurel Terrace  
Wellesley Hills, MA 02481

176 Scraggy Neck Road, Bourne – BOH

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions



No. \_\_\_\_\_

FEE \$250.00

# COMMONWEALTH OF MASSACHUSETTS

Board of Health, BOURNE, MA.

## APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

Application for a Permit to Construct  Repair ( ) Upgrade ( ) Abandon ( ) -  Complete System  Individual Components

Location <u>176 Scraggy Neck Road</u>	Owner's Name <u>The Long Point Trust c/o Stephen &amp; Marybeth Bisson</u>
Map/Parcel# <u>Map 51, Parcel 1</u>	Address <u>PO Box 10, Cataumet, MA 02563</u>
Lot# <u>2</u>	Telephone# <u>508-335-4856</u>
Installer's Name <u>Done Right Excavation &amp; Septic SVS. Brett Ellis</u>	Designer's Name <u>Donald F. Bracken, Jr., PE   Bracken Engineering</u>
Address <u>PO Box 669, Sandwich, MA 02563</u>	Address <u>49 Herring Pond Road, Buzzards Bay, MA 02532</u>
Telephone# <u>774-313-9900</u>	Telephone# <u>508-833-0070</u>

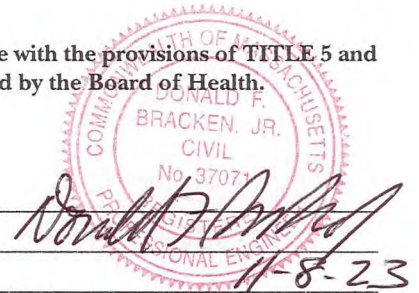
Type of Building SINGLE-FAMILY DWELLING Lot Size 298,496+/- sq. ft.  
 Dwelling - No. of Bedrooms 4 Garbage grinder ( )  
 Other - Type of Building \_\_\_\_\_ No. of persons \_\_\_\_\_ Showers ( ), Cafeteria ( )  
 Other Fixtures \_\_\_\_\_  
 Design Flow (min. required) 110 gpd Calculated design flow 440 Design flow provided 448 gpd  
 Plan: Date May 16, 2022 Number of sheets 3 Revision Date September 20, 2023  
 Title Existing Conditions, Site & Septic Details Plan Set in Bourne, MA  
 Description of Soil(s) See Plan for full description  
 Soil Evaluator Form No. T5 Forms 11 & 12 Name of Soil Evaluator Robert E. Dewar, SE Date of Evaluation 09/21/2021

DESCRIPTION OF REPAIRS OR ALTERATIONS Installation of a new 1,500 gall. MicroFast 0.5 septic tank (H-20), MicroFast Blower Unit (H-10), D-Box (H-20) and SAS to consist of a Presby Enviro-Septic Wastewater Treatment System (H-20) (505 SF area x 2' Deep)

The undersigned agrees to install the above described Individual Sewage Disposal System in accordance with the provisions of TITLE 5 and further agrees to not to place the system in operation until a Certificate of Compliance has been issued by the Board of Health.

Signed \_\_\_\_\_ Date \_\_\_\_\_

Inspections \_\_\_\_\_



No. \_\_\_\_\_

# COMMONWEALTH OF MASSACHUSETTS

FEE \_\_\_\_\_

Board of Health, \_\_\_\_\_, MA.

## CERTIFICATE OF COMPLIANCE

Description of Work:  Individual Component(s)  Complete System

The undersigned hereby certify that the Sewage Disposal System; Constructed ( ), Repaired ( ), Upgraded ( ), Abandoned ( )

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

at \_\_\_\_\_

has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. \_\_\_\_\_, dated \_\_\_\_\_. Approved Design Flow \_\_\_\_\_ (gpd)

Installer \_\_\_\_\_

Designer: \_\_\_\_\_ Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

The issuance of this permit shall not be construed as a guarantee that the system will function as designed.

No. \_\_\_\_\_

FEE \_\_\_\_\_

# COMMONWEALTH OF MASSACHUSETTS

Board of Health, \_\_\_\_\_, MA.

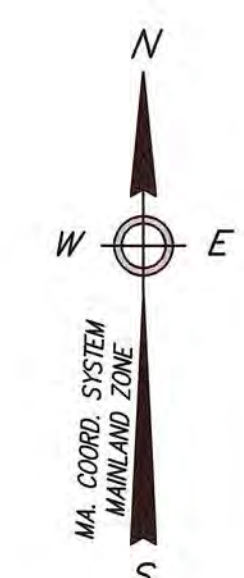
## DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to; Construct ( ) Repair ( ) Upgrade ( ) Abandon ( ) an individual sewage disposal system at \_\_\_\_\_ as described in the application for

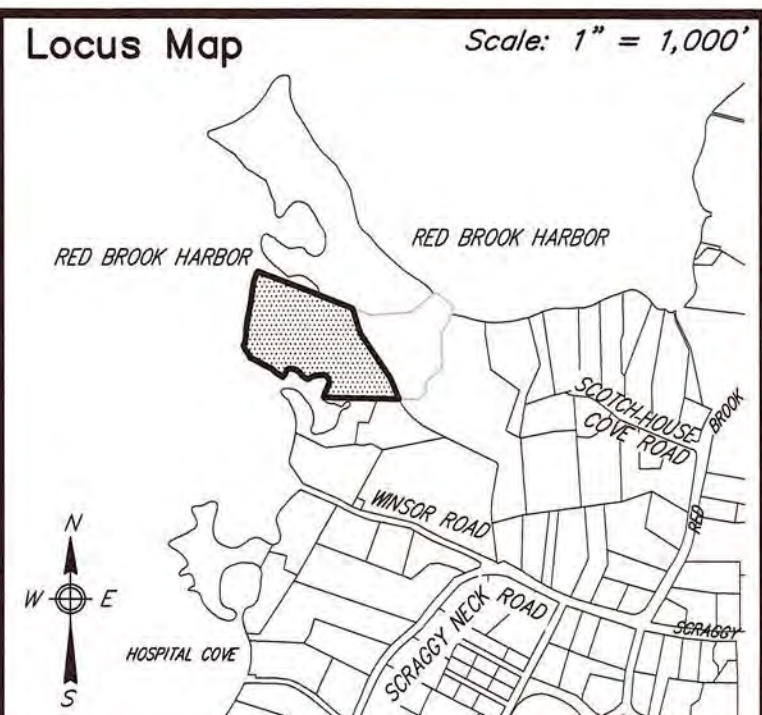
Disposal System Construction Permit No. \_\_\_\_\_, dated \_\_\_\_\_.

Provided: Construction shall be completed within three years of the date of this permit. All local conditions must be met.





MASS COORDINATE SYSTEM  
MAINLAND ZONE MERIDIAN  
DETERMINED USING A  
TOPCON HIPER SR GPS RTK UNIT  
COLLECTION DATE 03/03/2020



**Notes**

- LOCUS: #176 SCRAGGY NECK ROAD MAP 51 PARCEL 01 (LOT 2)
- OWNER: STEPHEN BISSON and MARYBETH BISSON Trustees of THE LONG POINT TRUST PO BOX 10 CATAUMET MA, 02534
- DEED REF: Bk: 22554 Pg: 257
- PLAN REF: Plan Bk: 687 Pg: 11 (LOT 2)
- PORTIONS OF THE LOCUS FALL WITHIN A SPECIAL FLOOD HAZARD ZONE (VE(EL 19), VE(EL 17) AND AE(EL 15)) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAPS No. 25001C-0492-J & 25001C-0511-J, BOTH dated 07/16/2014.
- LOCUS PARTIALLY FALLS WITHIN AN NHESP ESTIMATED HABITAT OF RARE WILDLIFE AND PRIORITY HABITAT OF RARE SPECIES.
- LOCUS DOES NOT FALL WITHIN A ZONE II WELLHEAD PROTECTION AREA OR BOURNE WATER RESOURCE DISTRICT.
- THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- MEAN HIGH WATER ELEVATION DETERMINED USING THE BUZZARDS BAY ESTUARY TIDAL DATUM VIEWER AND COASTAL LIDAR DATA PROVIDED BY NOAA NCEI COASTAL LIDAR ARCHIVE. MEAN LOW WATER ELEVATION WAS DETERMINED USING THE BUZZARDS BAY ESTUARY TIDAL DATUM VIEWER AND INTERPOLATION USING GROUND SHOTS BY THIS FIRM.



**LEGEND**

- EXISTING CONTOUR
- EXISTING COASTAL BANK
- LIMIT OF SALT MARSH LINE
- 100' SALT MARSH BUFFER
- 50' COASTAL BANK BUFFER
- 50' BOTTOM COASTAL BANK BUFFER
- FLOOD ZONE LINE per FEMA FIRM
- ACTUAL "AE" FLOOD LINE el. 15'
- LIMIT OF NHESP JURISDICTION

Prepared By:  
**BRACKEN ENGINEERING, INC.**  
49 HERRING POND ROAD BUZZARDS BAY, MA 02532  
(tel) 608.833.0070 (fax) 608.833.2282  
19 OLD SOUTH ROAD NANTUCKET, MA 02554  
(tel) 508.325.0044 (www.brackengeng.com)

**EXISTING CONDITIONS PLAN IN BOURNE, MA**  
Prepared For:  
**STEPHEN & MARYBETH BISSON TRUSTEES OF THE LONG POINT TRUST**  
#176 SCRAGGY NECK ROAD MAP 51 PARCEL 1 (LOT 2)

No.	Date	Revision Description	By
4	9/20/23	REMOVE ± LABELS	JPH
3	9/26/22	MISC. LABELS	JPH
2	8/22/22	MISC. LABELS	JPH
1	6/14/22	NO CHANGES	JPH

Date: MAY 16, 2022  
Drawn: JPH/BE  
Checked: DFB/AMG  
Sheet: 1 of 3

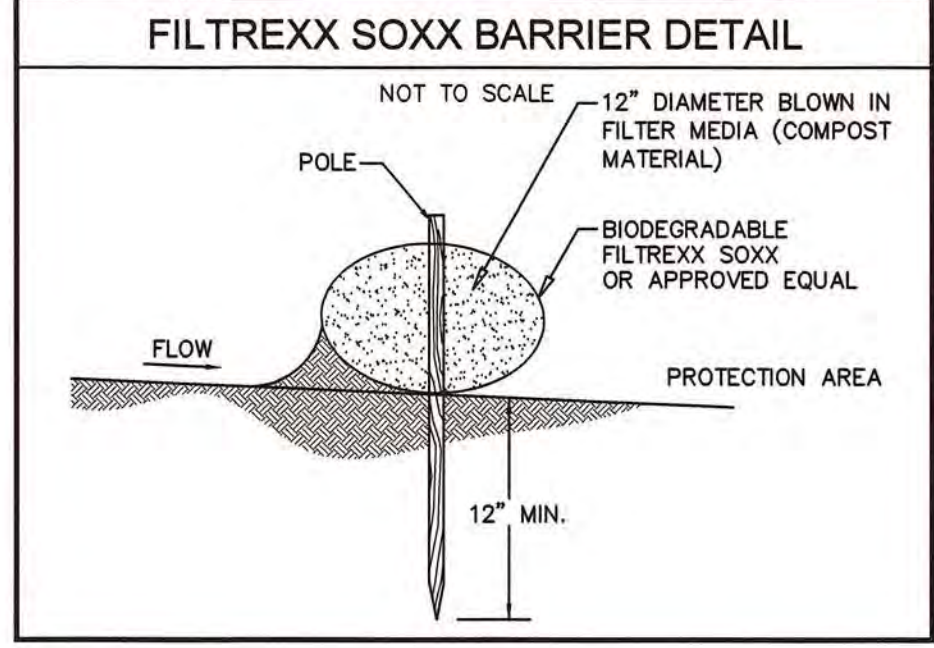
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Donald F. Bracken, Jr.
   
 9-20-23



### DESIGN CALCULATIONS

SOIL TEXTURAL CLASS: CLASS I  
 PERC. RATE: <2 MINUTES/INCH  
 NO. OF BEDROOMS: 4  
 DESIGN FLOW REQUIRED: 440 GPD  
 SEPTIC TANK REQUIRED: 1,500 GALLONS  
 SEPTIC TANK PROVIDED: MicroFAST 0.5 Unit

### LEACHING SYSTEM:

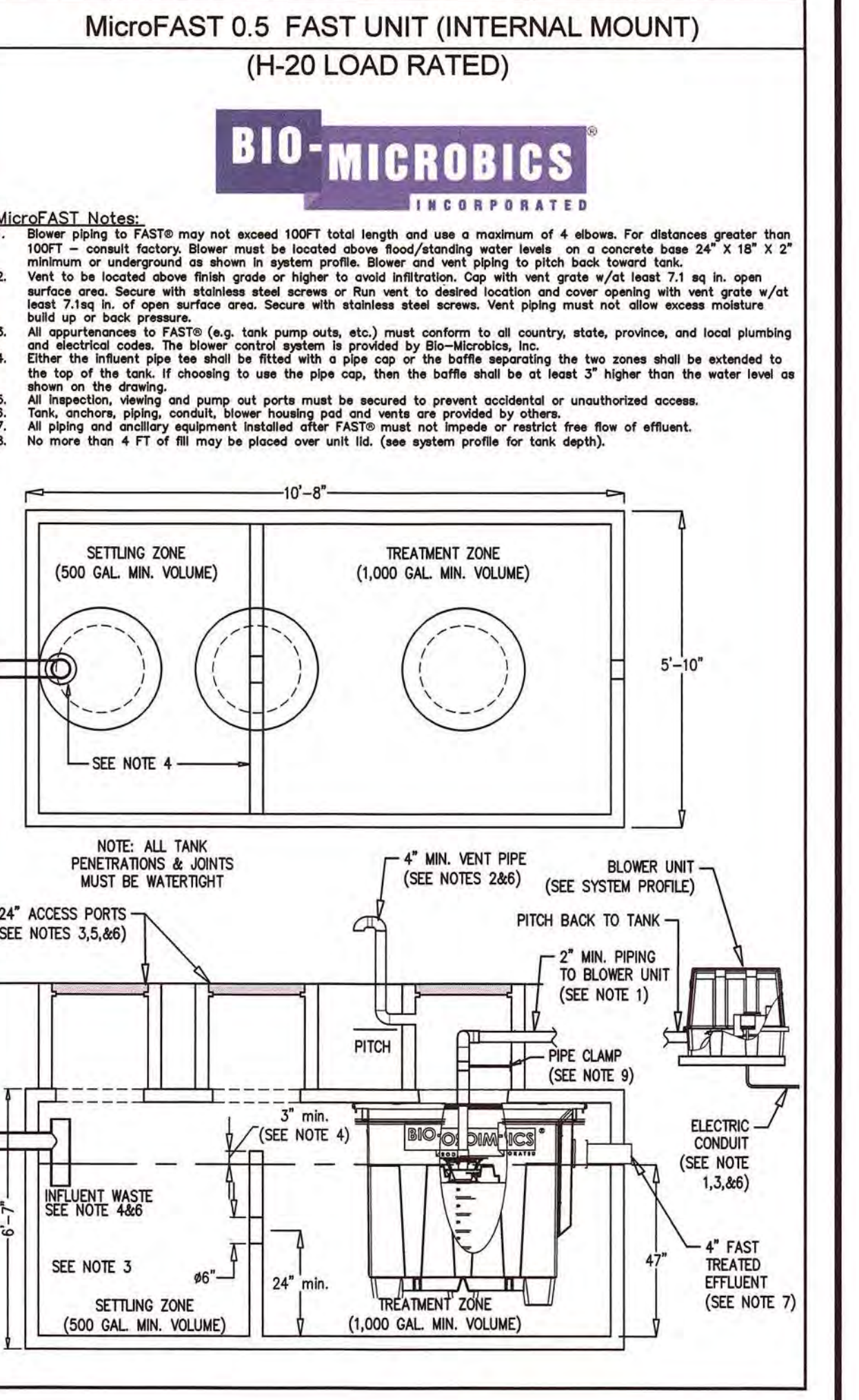
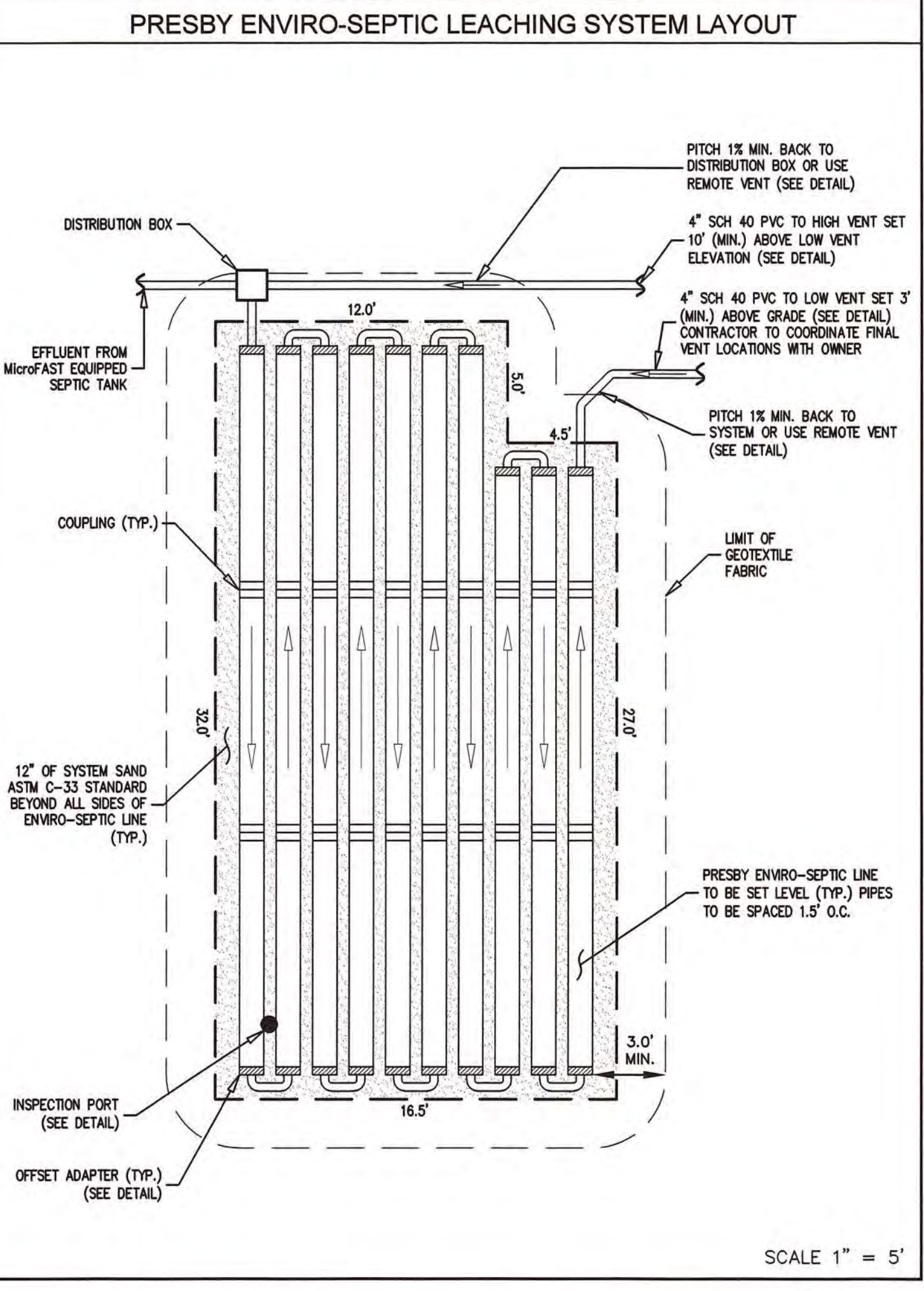
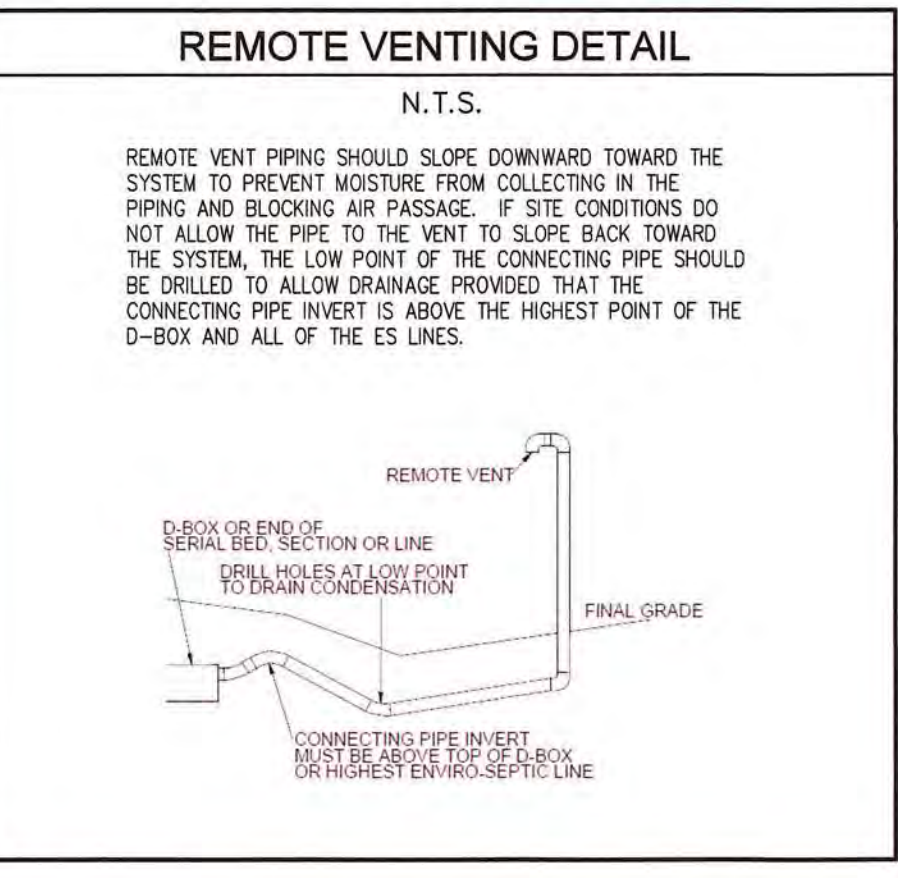
PRESBY ENVIRO-SEPTIC WASTEWATER TREATMENT SYSTEM  
 505 S.F. AREA x 2' DEEP SYSTEM (SEE DETAIL FOR FIELD DIMENSIONS)

### EFFECTIVE LEACHING:

(BASED ON GENERAL USE APPROVAL)  
 TRANSMITTAL No. Accelo-21-CLM-000073-APP  
 ENVIRO-SEPTIC PIPE REQUIRED: 70 L.F. PER 110 GAL/DAY  
 110 GAL/DAY / 70 L.F. = 1.57 GAL/DAY/L.F.

### CONVENTIONAL SYSTEM DESIGN:

12.83' WIDE x 33' LONG x 2' DEEP  
 BOTTOM AREA = 423 S.F. TOTAL = 606 S.F.  
 SIDEWALL AREA = 183 S.F.  
 LOADING RATE = 0.74 GPD/SF  
 FLOW PROVIDED: 448 GPD > 440 GPD

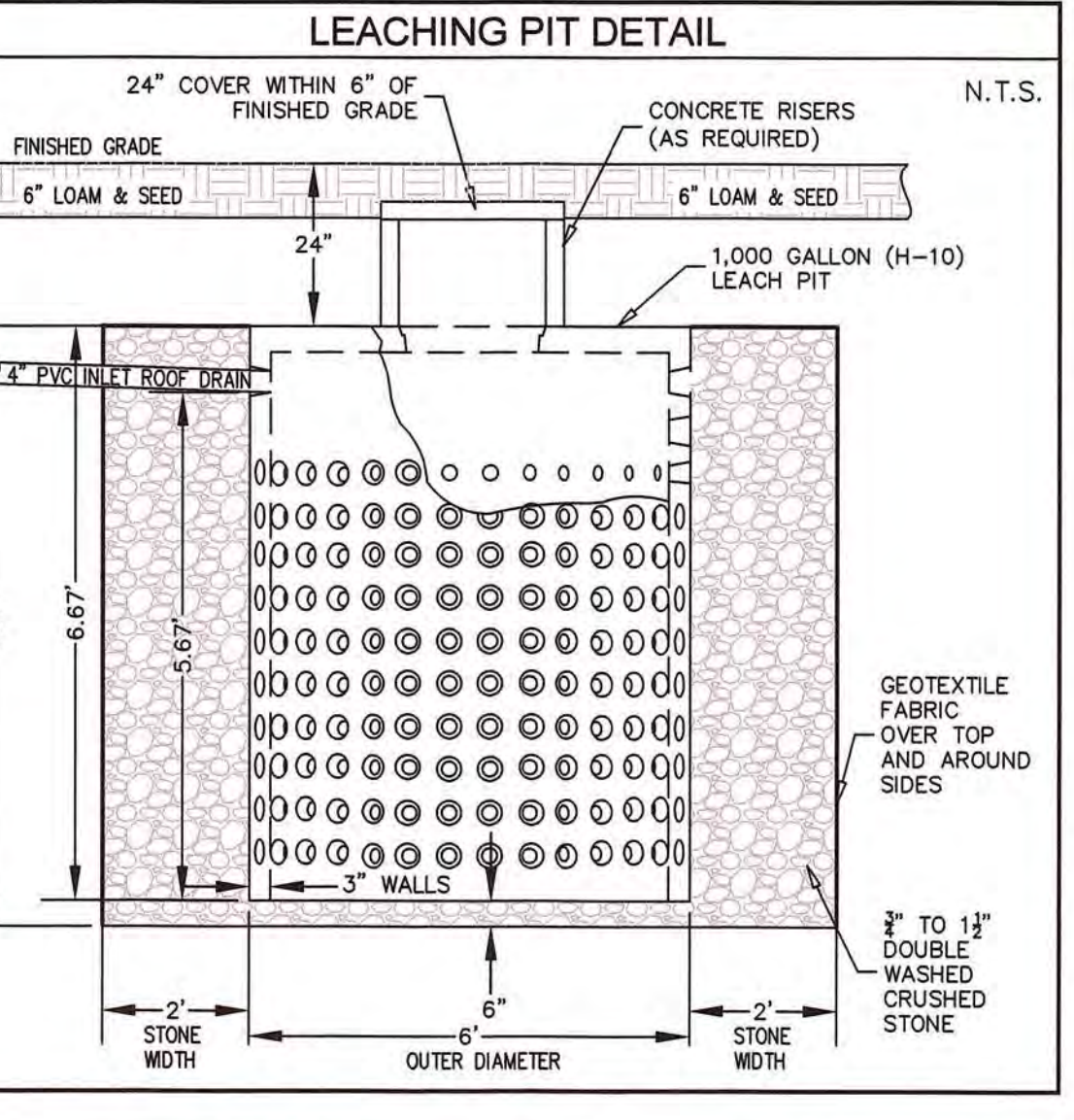
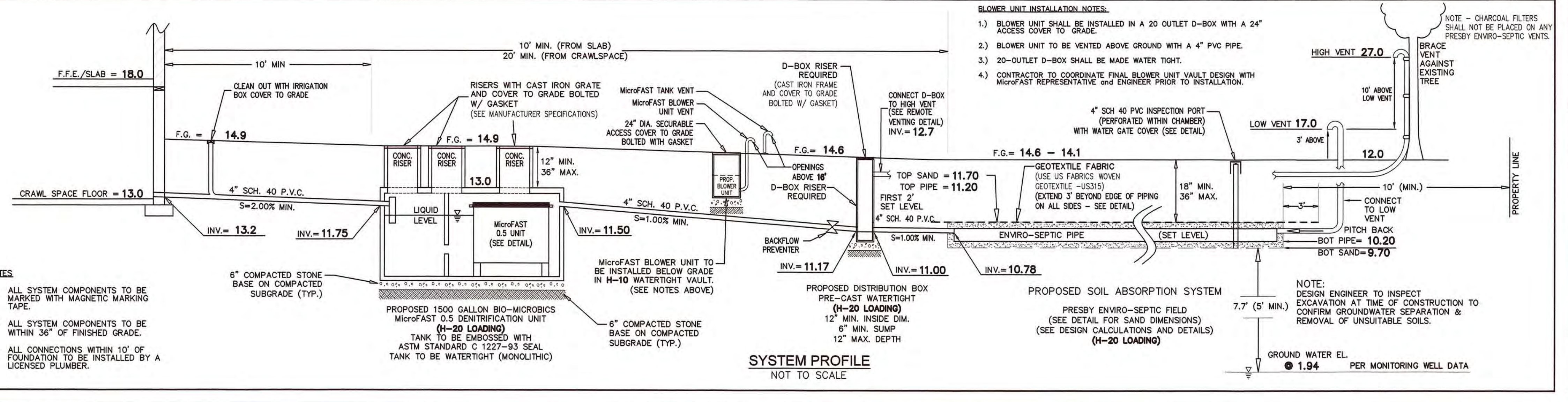
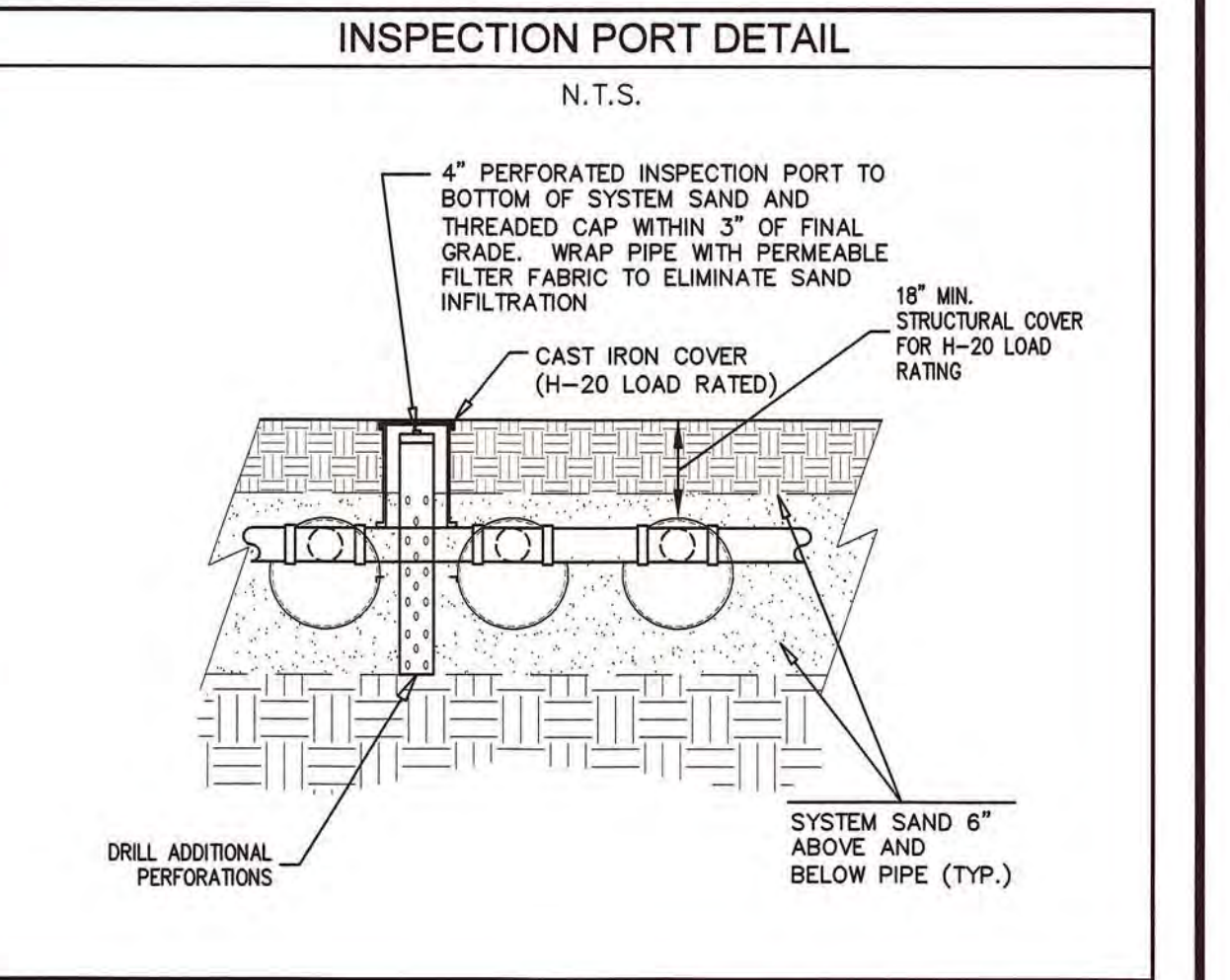
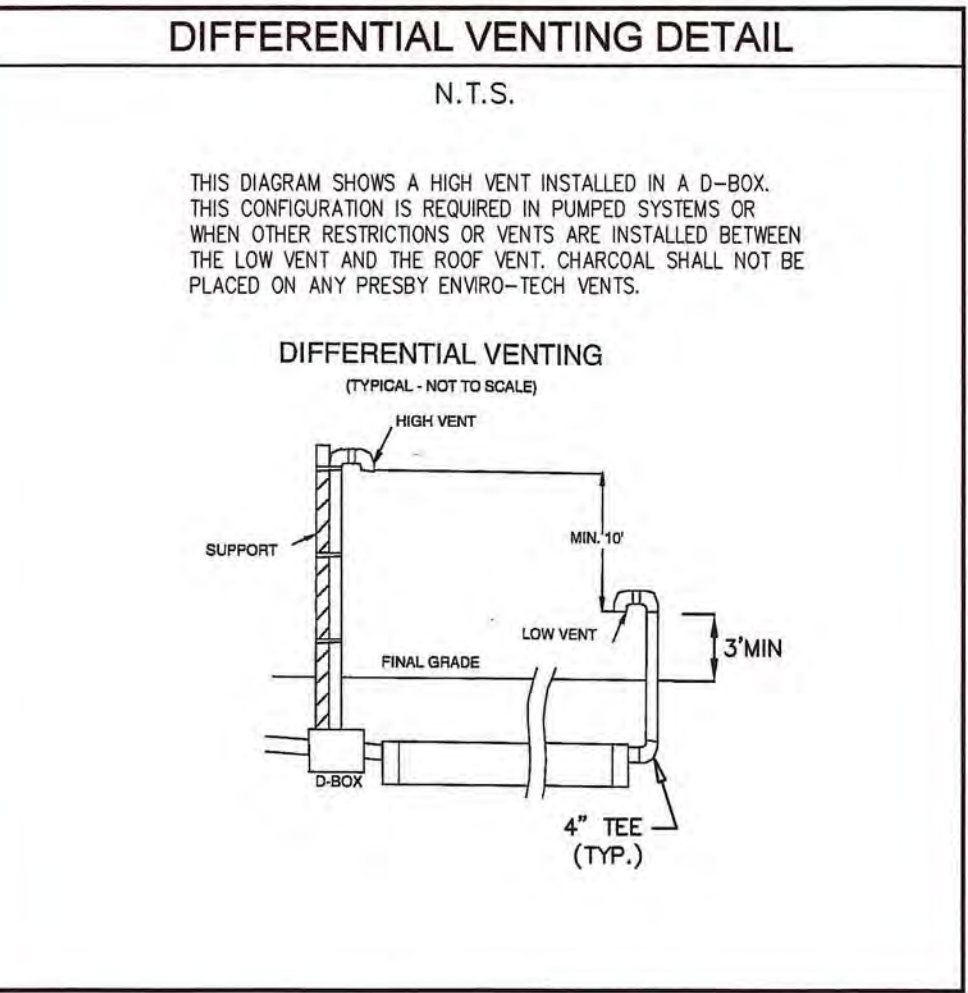
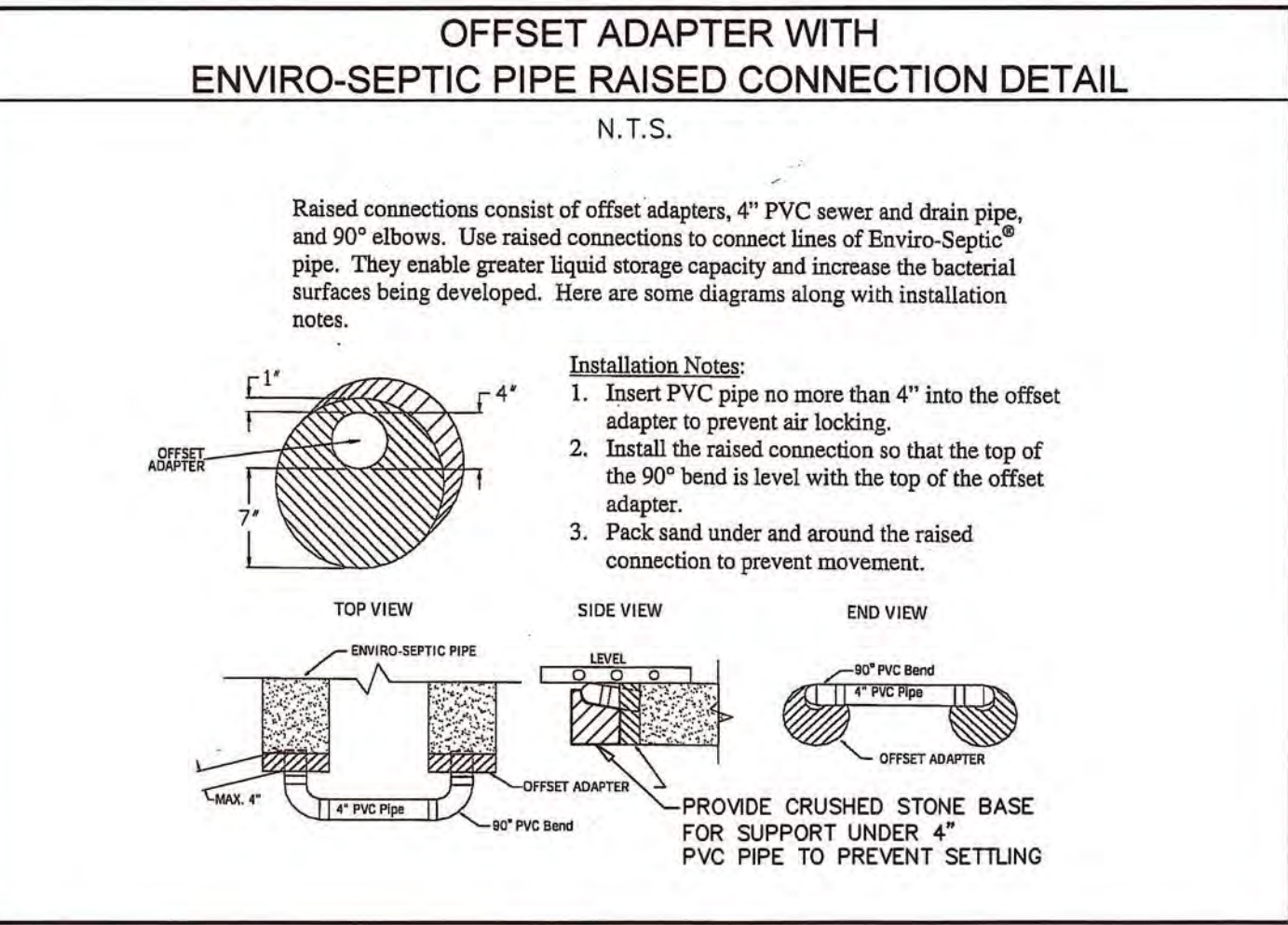
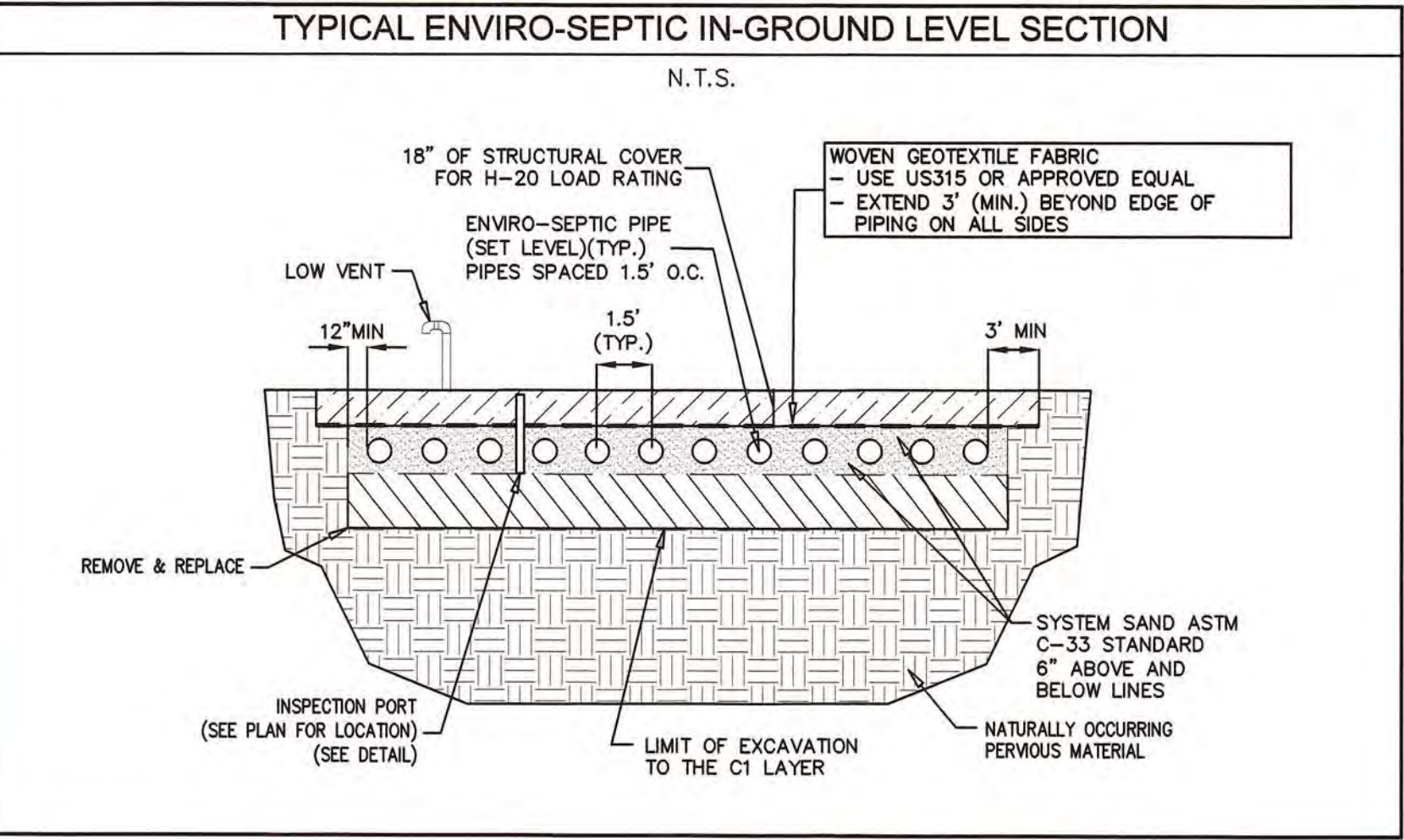


- ### Notes
- BENCHMARK: ELEVATION = 19.31 (NAVD88) ELECTRIC MANHOLE RIM
  - ALL CONSTRUCTION METHODS AND MATERIALS TO CONFORM TO TITLE 5 AND THE TOWN OF BOURNE BOARD OF HEALTH REGULATIONS.
  - ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
  - NO FIELD MODIFICATION TO THE SYSTEM SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE DESIGN ENGINEER AND BOARD OF HEALTH.
  - ALL JOINTS AND COVERS TO BE WATERTIGHT.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES.
  - A CERTIFICATE OF COMPLIANCE MUST BE OBTAINED PRIOR TO BACKFILLING SYSTEM.
  - OWNER/APPLICANT:  
STEPHEN BISSON  
MARYBETH BISSON trustees of  
THE LONG POINT TRUST  
P.O. BOX No. 10  
CATAUMET MA, 02563
  - DEED REFERENCE: Deed Bk: 22554 Pg: 257
  - PLAN REFERENCE: Plan Bk: 687 Pg: 11 (LOT 2)
  - THE DESIGN IS INTENDED TO MEET TITLE 5 AND OTHER APPLICABLE REQUIREMENTS. THIS PLAN DOES NOT GUARANTEE THAT THE SYSTEM WILL BE INSTALLED AS DESIGNED, NOR DOES THIS PLAN GUARANTEE THE OPERATION OF THE SYSTEM.
  - THIS SYSTEM IS NOT DESIGNED NOR INTENDED FOR USE WITH A GARBAGE GRINDER.
  - THE SYSTEM OWNER SHALL BE RESPONSIBLE TO PUMP THE SEPTIC TANK AT LEAST ONCE EVERY THREE YEARS.
  - LOCUS DOES NOT FALL WITHIN A ZONE II WELLHEAD PROTECTION AREA.
  - LOCUS PARTIALLY FALLS WITHIN AN NHESP ESTIMATED HABITAT OF RARE WILDLIFE AND PRIORITY HABITAT OF RARE SPECIES.
  - THE PROPOSED SEPTIC SYSTEM DOES FALL WITHIN A SPECIAL FLOOD HAZARD ZONE "AE" (EL. 15) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25001C-0492-J & 25001C-0511-J BOTH dated 7/16/2014.
  - CONTRACTOR TO REFER TO ALL MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS FOR INSTALLATION OF THE MICROFAST UNIT AND PRESBY ENVIRO-SEPTIC SYSTEM.
  - THE RECORD PROPERTY OWNER IS TO FILE A NOTICE OF DEEDS RESTRICTION AT THE BARNSTABLE COUNTY REGISTRY OF DEEDS PRIOR TO THE INSTALLATION OF THE SYSTEM, INDICATING THE USE OF AN INNOVATIVE/ALTERNATIVE SEPTIC SYSTEM ON THE PROPERTY.
  - HOMEOWNER IS TO ESTABLISH AN OPERATION & MAINTENANCE PLAN WITH A COMPANY CERTIFIED SYSTEM OPERATOR FOR THE MICROFAST UNIT. ALL SYSTEM TESTING, MONITORING & REPORTING IS TO BE CONDUCTED IN ACCORDANCE TO THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) REMEDIAL USE PERMITS.
  - CONTRACTOR TO COORDINATE PLACEMENT OF ALL ALARM/CONTROL PANELS WITH THE HOMEOWNER & SYSTEM MANUFACTURERS PRIOR TO INSTALLATION.
  - CONTRACTOR TO COORDINATE FINAL LOCATIONS OF HIGH AND LOW VENTS WITH OWNER AND ENGINEER.
  - SOIL CONDITIONS ENCOUNTERED DURING EXCAVATION MAY DIFFER FROM THE PREVIOUSLY OBSERVED CONDITIONS AT THE TEST PITS. ADDITIONAL REMOVAL AND REPLACEMENT OF SOIL MAY BE REQUIRED. IF UNDESIRABLE CONDITIONS ARE ENCOUNTERED, THE DESIGN ENGINEER SHALL BE CONSULTED.

### SOIL LOGS

TP NO.	1	2	3	4
GRD. EL.	12.3	12.7	12.8	12.8
GW. EL.	NONE to 2.5	NONE to 2.1	NONE to 2.1	NONE to 2.1
0'	A/O LOAMY SAND 10YR 4/1	FILL	A/O LOAMY SAND 10YR 4/1	A/O LOAMY SAND 10YR 4/1
12"	Bw LOAMY SAND 10YR 5/4	Apb LOAMY SAND 10YR 3/2	Bw LOAMY SAND 10YR 5/4	Bw LOAMY SAND 10YR 5/4
36"	C1 MEDIUM SAND 2.5Y 5/6	Bw MEDIUM SAND 10YR 5/4	C MEDIUM SAND 2.5Y 5/6	C MEDIUM SAND 2.5Y 5/6
80"	C2 MEDIUM SAND 2.5Y 5/6	C MEDIUM SAND 2.5Y 5/6	C MEDIUM SAND 2.5Y 5/6	C MEDIUM SAND 2.5Y 5/6
100"	C3 MEDIUM SAND 2.5Y 6/4	C MEDIUM SAND 2.5Y 5/6	C MEDIUM SAND 2.5Y 5/6	C MEDIUM SAND 2.5Y 5/6
140"	WEEPING @ 128"	NO MOTTLES NO WATER	NO MOTTLES NO WATER	NO MOTTLES NO WATER

DATE PERFORMED: SEPTEMBER 21, 2021  
 SOIL EVALUATOR: ROBERT E. DEWAR, E.L.T. (SE #14230)  
 WITNESSED BY: TERRI GUARINO - BSH AGENT  
 PERC. RATE: <2 MINUTES/INCH (TP #2)  
 SOIL CLASS: CLASS I  
 MAX. GROUND WATER ELEV.: 1.94  
 METHOD OF DETERMINATION: MONITORING WELL  
 (SEE SOIL REPORT FOR MORE DETAILED DESCRIPTION)



Prepared By:

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### SEPTIC DETAILS

IN BOURNE, MA

Prepared For:

STEPHEN & MARYBETH BISSON  
TRUSTEES OF THE LONG POINT TRUST  
#176 SCRAGGY NECK ROAD  
MAP 51 PARCEL 1 (LOT 2)

No.	Date	Revision Description	By
4	9/20/23	REMOVE ± LABELS	JPH
3	9/26/22	REVISE SEPTIC DETAIL LAYOUT	JPH
2	8/22/22	REVISE SEPTIC LAYOUT, MISC. DETAILS	JPH
1	6/14/22	REVISE SEPTIC LAYOUT, MISC. DETAILS	JPH

Date: MAY 16, 2022  
 Drawn: JPH/BEI  
 Checked: DFB/AMG  
 Sheet: 3 of 3

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