

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

April 14, 2022

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

**RE: Local Upgrade Approval Request – Tight Tank
4 Richmond Road (Map 37.4, Parcel 43)**

Dear Members of the Board:

On behalf of the homeowners/applicants, Stephen and Josephine Smith, please accept this letter as a request under local upgrade approval section 310 CMR 15.405.3(b) to install a tight tank at the above referenced property. As identified below, in more detail, it is the professional opinion of Bracken Engineering, Inc. (BEI) that no other feasibly alternative to upgrade the system in accordance with 310 CMR 15.201 through 15.293 exists that will protect the health, safety and welfare of the environment and general public.

Outlined below are the site conditions precluding the installation of a soil absorption system, as well as a comprehensive alternatives analysis for the installation of a tight tank:

Existing groundwater elevation at the site is restrictive. Per record soil log data at the subject site (dated 9/7/2017) and groundwater information from a neighboring parcel (dated 9/18/2011), groundwater was found to be at elevation 2.3 (approximately 2.8' below grade).

The existing parcel is approximately 3,844 s.f. in size. The majority space on the parcel, not already occupied by structure, falls within the 150' Buffer Zone to a Salt Marsh per Mass GIS. The existing dwelling and decks, constructed in 1950 per the assessors' records, are approximately 1,410± s.f. in total. It is infeasible for the required soil absorption system, septic tank, required pre-treatment unit(s) and pump chamber to fit within the confines of the available space.

In summary, it would be detrimental to both environmental concerns and public health to propose a soil absorption at the above referenced locus. Any system proposed would provide only minimal separation between existing property lines, dwellings, foundations, groundwater and/or existing septic systems. As such, BEI is requesting that the Bourne Board of Health diverge from the goal of full compliance by granting the local upgrade approval requested above. The design allows for the best feasible upgrade within the borders of the lot, and has the least effect on public health, safety and the environment.

In addition to the above request, the following Local Upgrade Approvals are requested in association with the proposed tight tank:

1. Local Upgrade Approval is requested for a 4± ft reduction in setback to a property line from a septic component for a 6± ft setback to the proposed tight tank from the existing property line.
2. Local Upgrade Approval is requested for the reduction of the minimum 12" separation for high groundwater to the inlet tee.



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 or zac@brackeneng.com or robert@brackeneng.com.

Sincerely,

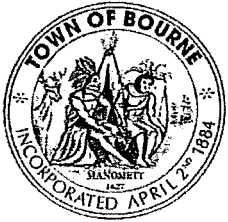
BRACKEN ENGINEERING, INC.

A handwritten signature in black ink, appearing to read 'Zachary L. Basinski', written over a horizontal line.

Zachary L. Basinski, P.E., C.F.M.
Project Manager

A handwritten signature in black ink, appearing to read 'Robert E. Dewar', written over a horizontal line.

Robert E. Dewar, E.I.T
Project Engineer



Bourne Board of Health Application for Septic Variance Requests



In accordance with the established procedures of the Bourne Board of Health, this application for septic variances and waivers is relevant to requests for relief 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, or increases in flow to on-site sewage disposal systems with design flows of less than 10,000 gallons/ day.

1. Facility Name and Address:

Owner's Name Josephine B. Smith

Facility's Street Address 4 Richmond Road

Owner's Telephone Number 941-740-3739 (Stephen Smith)

Owner's E-mail Address c/o Stephen Smith - smitty25509@gmail.com

Owner's Mailing Address 1321 Bay Street, Taunton, MA 02780-1004

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

Preparer's Name Zachary L. Basinski, PE, CFM

Company Bracken Engineering, Inc.

Telephone Number 508-833-0070

E-mail Address zac@brackeneng.com

Mailing Address 49 Herring Pond Road, Buzzards Bay

State/ Zip Code MA / 02532

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

Residential Commercial Institutional School Industrial

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

Single-family dwelling

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

Pumped System Gravity System Pressure Dosed Other Tight Tank

6. Describe the proposed septic system components: Tight tank and associated audio/visual alarm.

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

Design flow of proposed system: 110 GPD @ 2 BDR = 220 GPD
Total design flow of facility: 220


8. Enclose a letter of request for variances which makes reference to the specific provisions of Title 5 and 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 the regulations.


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

- Application Fees paid to the Town of Bourne.
- Letter of request (see samples)
- Six sets of complete plans and specifications. One with original stamp of design engineer.
- Nitrogen Loading Calculation Sheet(s)
- 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 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 for all leaching facilities proposed within 100ft of a wetland/ watercourse
- Percentage of Increase Worksheet is 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  OWNER'S REP./AGENT
BRACKEN ENGINEERING, INC. Date 4/14/22
Print Name Josephine B. Smith

Signature of Preparer  BRACKEN ENGINEERING, INC. Date 4/14/22
Print Name Zachary L. Basinski, PE, CFM
Bracken Engineering, Inc. (AGENT)

For Office Use Only

Completed Application Received: _____

Reviewed By: _____

Hearing Date: _____

Permit #: _____

Circle all that apply:

Approved

Continued

Disapproved

Other

Notes: _____

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

Table with 2 columns: Applicant/Location info and Owner/Designer info. Includes fields for Location, Map/Parcel#, Lot#, Installer's Name, Address, Telephone#, Owner's Name, Address, Telephone#, and Designer's Name.

Type of Building Single-family dwelling Lot Size 3,844+/- sq. ft. Dwelling - No. of Bedrooms 2 Garbage grinder () Other - Type of Building No. of persons Showers (), Cafeteria () Other Fixtures Design Flow (min. required) 110 gpd Calculated design flow 220 GPD Design flow provided 220 gpd Plan: Date April 13, 2022 Number of sheets 1 Revision Date Title Proposed Sewage Disposal Plan in Bourne, MA Description of Soil(s) See Plan for full description Soil Evaluator Form No. T5 forms 11 & 12 Name of Soil Evaluator Shawn MacInnes Date of Evaluation 9/7/2017

DESCRIPTION OF REPAIRS OR ALTERATIONS Installation of a new 3,000 gallon tight tank.

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 _____

COMMONWEALTH OF MASSACHUSETTS

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.

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.

Town of Bourne

Conservation Commission

Nitrogen Loading Calculation Sheet for Residential Housing

The following calculation sheet is based upon Technical Bulletin 91-001 issued by the Cape Cod Commission and deals with nitrate nitrogen (NO₃-N) Use the information from your PLAN OF RECORD to provide the following:

4 Richmond Road (Existing Conditions)

Number of Bedrooms (Title 5 Definition)	=	2	Bedrooms
Lot Size (in square feet of upland areas)	=	3,844	sq.ft. Upland
Impervious Surfaces;**roof area	=	1,251	sq.ft.
**Paved Area	=	629	sq.ft.
Natural Area = lot area minus all impervious surfaces	=	1,964	sq.ft.
Lawn Area in sq. ft.	=	1,916	sq.ft.

TITLE 5 FLOW = 110 GAL./ DAY PER BEDROOM

WASTEWATER FLOWS (NITROGEN LOAD & WATER LOAD)

Nitrogen from Title 5 design = 14,572 mg NO₃-N / day / bedroom: or 7911 mg NO₃-N / day/ bedroom with IA Treatment

Water from Title 5 design = 416.3 H₂O / day / bedroom

1a) Number of bedrooms = 2 x 14572 = 29144.00 mg. NO₃-N / day

1b) Number of bedrooms = 2 x 416 = 832.00 L H₂O / day

Actual Nitrogen load = 6071.5 mg NO₃-N / day/ bedroom: 3296 mg NO₃-N / day/ bedroom with IA Treatment

Actual Water load = 173.5 L H₂O / day / bedroom

*Note: This assumes 2.5 people / unit average occupancy within the Town

2a) Number of bedrooms = 2 x 6071.5 = 12143.00 mg. NO₃-N / day

2b) Number of bedrooms = 2 x 173.5 = 347.00 L H₂O / day

IMPERVIOUS SURFACES (NITROGEN LOAD & WATER LOAD)

NO₃-N load number sq. ft. of roof surface X 0.19395 mg NO₃-N / sq. ft.

H₂O load number sq. ft. of roof surface X 0.2586 L / sq. ft.

3a) Roof surface = 1251 sq. ft. X 0.19395 = 242.63 mg NO₃-N

3b) Roof surface = 1251 sq. ft. X 0.2586 = 323.51 L H₂O / day

NO₃-N load number sq. ft. of paved surface X 0.388 mg / sq. ft.

H₂O load number sq. ft. of paved surface X 0.2586 L / sq. ft.

4a) NO₃-N = 629 sq. ft. paved surface X 0.388 mg / sq. ft. 244.05 mg NO₃-N

4b) H₂O = 629 sq. ft. paved surface X 0.2586 L / sq. ft. 162.66 L H₂O

LAWN NITROGEN LOADING = 0.933 mg / sq. ft. lawn surface

$$5) \text{ sq. ft. of lawn} = 1916 \times 0.933 = 1787.63 \text{ mg}$$

NATURAL AREA WATER LOADING

$$\text{Natural area} = \text{lot size} - \text{impervious surfaces} = 1964 \text{ sq. ft.}$$

$$6) \text{ Natural area} = 1964 \times \text{water recharge factor} = 266.71 \text{ L}$$

(0.1358 L / sq. ft. for Bourne)

SUMMARY OF NITROGEN LOADING

Estimated Title 5 Nitrogen & Water Loading

7a) ADD the above NO₃N load

1a	(+)	3a	(+)	4a	(+)	5	
29144		242.63		244.05		1787.63	31418.31 mg NO ₃ -N / day

7b)

1b	(+)	3b	(+)	4b	(+)	6	
832		323.51		162.66		266.71	1584.88 L H ₂ O / day

7c) DIVIDE 7a by 7b = 19.8 ppm NO₃-N*****

Actual Nitrogen & Water Loading

8a) ADD the above NO₃N load:

2a	(+)	3a	(+)	4a	(+)	5	
12143		242.63		244.05		1787.63	<u>14417.31</u> mg NO ₃ -N / day

8b) ADD the above water (H₂O) load:

2b	(+)	3b	(+)	4b	(+)	6	
347		323.51		162.66		266.711	<u>1099.88</u> L H ₂ O / day

8c) DIVIDE 8a by 8b = 13.1 ppm NO₃-N*****

FINAL CALCULATION ADD 7c & 8c (ppm) = 32.9 divide by 2 = 16.5 ppm NO₃-N

This is the actual nitrate nitrogen load for the project as designed. The target for coastal areas is 5 ppm nitrate nitrogen. Certain critical embayments may require a LOWER figure to prevent degradation.

*****If your nitrate nitrogen load exceeds the target limit **USE A SECOND CALCULATION SHEET TO SHOW ALTERNATIVES IN TRYING TO ACHIEVE THE 5 PPM NITRATE NITROGEN LEVEL*****

Town of Bourne

Conservation Commission

Nitrogen Loading Calculation Sheet for Residential Housing

The following calculation sheet is based upon Technical Bulletin 91-001 issued by the Cape Cod Commission and deals with nitrate nitrogen (NO₃-N) Use the information from your PLAN OF RECORD to provide the following:

4 Richmond Road (Proposed Conditions)

Number of Bedrooms (Title 5 Definition) (Tight Tank = No bedrooms)	=	0	Bedrooms
Lot Size (in square feet of upland areas)	=	3,844	sq.ft. Upland
Impervious Surfaces;**roof area=	1,251	sq.ft.	**Paved Area = 629 sq.ft.
Natural Area = lot area minus all impervious surfaces	=	1,964	sq.ft.
Lawn Area in sq. ft.	=	1,916	sq.ft.

TITLE 5 FLOW = 110 GAL./ DAY PER BEDROOM

WASTEWATER FLOWS (NITROGEN LOAD & WATER LOAD)

(No Nitrogen Load from Wastewater due to installation of Tight Tank)

Nitrogen from Title 5 design = 14,572 mg NO₃-N / day / bedroom: or 7911 mg NO₃-N / day/ bedroom with IA Treatment

Water from Title 5 design = 416.3 H₂O / day / bedroom

1a) Number of bedrooms = 0 x 14572 = 0.00 mg. NO₃-N / day

1b) Number of bedrooms = 0 x 416 = 0.00 L H₂O / day

Actual Nitrogen load = 6071.5 mg NO₃-N / day/ bedroom: 3296 mg NO₃-N / day/ bedroom with IA Treatment

Actual Water load = 173.5 L H₂O / day / bedroom

*Note: This assumes 2.5 people / unit average occupancy within the Town

2a) Number of bedrooms = 0 x 6071.5 = 0.00 mg. NO₃-N / day

2b) Number of bedrooms = 0 x 173.5 = 0.00 L H₂O / day

IMPERVIOUS SURFACES (NITROGEN LOAD & WATER LOAD)

NO₃-N load number sq. ft. of roof surface X 0.19395 mg NO₃-N / sq. ft.

H₂O load number sq. ft. of roof surface X 0.2586 L / sq. ft.

3a) Roof surface = 1251 sq. ft. X 0.19395 = 242.63 mg NO₃-N

3b) Roof surface = 1251 sq. ft. X 0.2586 = 323.51 L H₂O / day

NO₃-N load number sq. ft. of paved surface X 0.388 mg / sq. ft.

H₂O load number sq. ft. of paved surface X 0.2586 L / sq. ft.

4a) NO₃-N = 629 sq. ft. paved surface X 0.388 mg / sq. ft. 244.05 mg NO₃-N

4b) H₂O = 629 sq. ft. paved surface X 0.2586 L / sq. ft. 162.66 L H₂O

LAWN NITROGEN LOADING = 0.933 mg / sq. ft. lawn surface

$$5) \text{ sq. ft. of lawn} = 1916 \times 0.933 = 1787.63 \text{ mg}$$

NATURAL AREA WATER LOADING

$$\text{Natural area} = \text{lot size} - \text{impervious surfaces} = 1964 \text{ sq. ft.}$$

$$6) \text{ Natural area} = 1964 \times \text{water recharge factor} = 266.71 \text{ L} \\ \text{(0.1358 L / sq. ft. for Bourne)}$$

SUMMARY OF NITROGEN LOADING

Estimated Title 5 Nitrogen & Water Loading

7a) ADD the above NO₃N load

1a	(+)	3a	(+)	4a	(+)	5	
0		242.63		244.05		1787.63	2274.31 mg NO ₃ -N / day

7b)

1b	(+)	3b	(+)	4b	(+)	6	
0		323.51		162.66		266.71	752.88 L H ₂ O / day

7c) DIVIDE 7a by 7b = 3.0 ppm NO₃-N*****

Actual Nitrogen & Water Loading

8a) ADD the above NO₃N load:

2a	(+)	3a	(+)	4a	(+)	5	
0		242.63		244.05		1787.63	<u>2274.31</u> mg NO ₃ -N / day

8b) ADD the above water (H₂O) load:

2b	(+)	3b	(+)	4b	(+)	6	
0		323.51		162.66		266.711	<u>752.88</u> L H ₂ O / day

8c) DIVIDE 8a by 8b = 3.0 ppm NO₃-N*****

FINAL CALCULATION ADD 7c & 8c (ppm) = 6.0 divide by 2 = 3.0 ppm NO₃-N

This is the actual nitrate nitrogen load for the project as designed. The target for coastal areas is 5 ppm nitrate nitrogen. Certain critical embayments may require a LOWER figure to prevent degradation.

*****If your nitrate nitrogen load exceeds the target limit **USE A SECOND CALCULATION SHEET TO SHOW ALTERNATIVES IN TRYING TO ACHIEVE THE 5 PPM NITRATE NITROGEN LEVEL*****

We, Francis M. Smith and Josephine B. Smith
of 1321 Bay Street, Taunton, Bristol County, Massachusetts,
being unmarried, for consideration paid, and in full consideration of Love and Affection

grant to Stephen Smith of 106 Erin Road, East Taunton, MA 02718 and Dawn Boucher of 3 Stanley Drive, Taunton, MA 02780, as joint tenants with *entireties* covenants

the land in that part of Bourne, Barnstable County, Massachusetts called Pocasset, and bounded and described as follows:

Being Lot 83 as shown on a Plan of Lots at Pocasset Beach dated April 21, 1921, Hayward & Hayward, Surveyors, recorded with the Barnstable County Registry of Deeds in Plan Book 45 at Page 31, to which Plan reference is hereby made for a further and more particular description.

Said lot contains 3,843 square feet, more or less.

Being the same premises conveyed to these grantors by deed of Charles F. Knapp and Eleanor F. Knapp recorded in the Barnstable County Registry of Deeds in Book 1401, Page 1019.

The grantors herein reserve to themselves a life estate in the property described above.

Property Address: Richmond Road, Pocasset

Witness our hands and seals this 31st day of May, 1996

Francis M. Smith
Josephine B. Smith

The Commonwealth of Massachusetts

Bristol, ss. May 31, 1996

Then personally appeared the above named Francis M. Smith and Josephine B. Smith and acknowledged the foregoing instrument to be their free act and deed before me



Alan B. Medeiros
My commission expires Sept. 25, 1998

(*Individual — Joint Tenants — Tenants in Common.)

GRANT OF RIGHT OF ENFORCEMENT OF RESTRICTION

In accordance with 310 CMR 15.260(6), I, Josephine B. Smith being the owner of that certain parcel of land, together with the buildings thereon, now known and numbered as 4 Richmond Road, (Assessors Map 37.4, Parcel 43), Bourne, Barnstable County, as described in a deed recorded at the Barnstable County Registry of Deeds in Book 27597, Page 117, and further described as follows: said parcel of land shown as lot 83 on a plan entitled, "Plan of Lots at Pocasset Beach, Bourne, Mass", dated April 21, 1921, prepared by Hayward & Hayward Surveyors, Brockton, Mass, recorded with Barnstable County Registry of Deeds in Plan Book 45, Page 31; (the "Property"), for and in consideration of the issuance to me by the TOWN OF BOURNE, acting by and through its Board of Health (the "Town"), of a Certificate of Compliance for a tight tank installed to service the Property as a remedial upgrade of the failed system serving the Property under Disposal Works Construction Permit # _____ issued on xx/xx/2022 and for other good and valuable consideration paid, the receipt and sufficiency of which are hereby acknowledged, hereby grant to the Town the right to enforce the following restriction for so long as the Property is served by a tight tank:

For as long as the Property is served by one 3,000 gallon tight tank, the use of the Property shall be limited to a residential use generating maximum daily flows of 220 gallons per day (2 bedrooms).

COMMONWEALTH OF MASSACHUSETTS

_____ SS

Josephine B. Smith

Witness our hands and seals this _____, 2022.

On this _____ day of _____ 2022, before me, the undersigned notary public, personally appeared: _____ and proved to me through satisfactory evidence of identification which were _____ to be the person(s) whose name(s) are signed on the proceeding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public
My Commission Expires:

Approved and Accepted By:

Terri A. Guarino, R.S., C.H.O.
Health Director
Town of Bourne

Date: _____

DRAFT



Terri A. Guarino
Health Agent

TOWN OF BOURNE BOARD OF HEALTH

24 Perry Avenue
Buzzards Bay, MA 02532
www.townofbourne.com/health
Phone (508) 759-0600 ext. 1513
Fax (508) 759-0600



GRANT OF TITLE 5 BEDROOM COUNT DEED RESTRICTION

This Grant of Title 5 Bedroom Count Deed Restriction is made as of _____ day of _____, 2022 by Josephine B. Smith (“Grantors”), of Taunton, Bristol County, MA 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 in Bourne, Barnstable County, Massachusetts, with the buildings and improvements thereon, pursuant to a deed from Francis M. Smith and Josephine B. Smith to Grantor, dated 8/5/2013, and recorded with Barnstable County Registry of Deeds in Book 27597, Page 117 being shown as Lot 83 on a plan entitled, “Plan of Lots at Pocasset Beach, Bourne, Mass”, dated April 21, 1921, prepared by Hayward & Hayward Surveyors, Brockton, Mass, recorded with Barnstable County Registry of Deeds in Plan Book 45, Page 31 (“Property”); 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 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 **Two Bedrooms**, such that at no time shall there exist more than **Two 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 One Winter Street, 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.

COMMONWEALTH OF MASSACHUSETTS

_____ SS

Josephine B. Smith

Witness my hand and seals this _____, 2022.

On this _____ day of _____ 20____, before me, the undersigned notary public, personally appeared: _____ and proved to me through satisfactory evidence of identification which were _____ to be the person(s) whose name(s) are signed on the proceeding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public
My Commission Expires:

Approved and Accepted By:

Date: _____

Terri A. Guarino, R.S., C.H.O
Health Agent
Town of Bourne

DRAFT

TIGHT TANK OPERATIONS AND MAINTENANCE PLAN

PROJECT LOCATION: 4 Richmond Road (Map 37.4, Parcel 43)

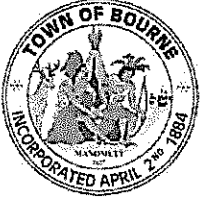
DESIGN FLOW: Two (2) bedrooms

OWNER &

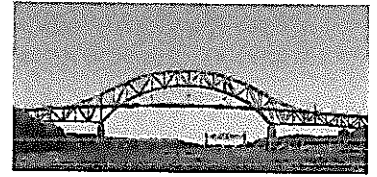
RESPONSIBLE PARTY: Josephine B. Smith
1321 Bay Street
Taunton, MA 02780-1004

The design, installation, and maintenance of the tight tank shall be in conformance with 310 CMR 15.260 and 310 CMR 15.351 of the State Environmental Code, Title 5, and the approved design plans. The tight tank is meant to hold and store the discharge of **sanitary sewage only**, and can be permitted for a year-round residential facility. The tight tank shall be maintained as follows:

1. The property owner shall maintain a contract with a septage hauler that is licensed in the Town of Bourne. The tight tank shall be inspected and pumped on a weekly basis. More frequent pumping may be required depending up on the use of the structure. A copy of the contract shall be provided to the Town of Bourne Health Department.
2. An accessible, watertight 24" (min.) cover to grade over the tank shall be maintained for year round access.
3. The high-water alarm shall be installed to allow for at least 660 gallons of emergency storage above the alarm level. The alarm system shall include both audio and visual alarms.
4. The high water alarm shall be inspected and tested once a year by a licensed septage hauler or licensed electrician. A report shall be submitted to the Town of Bourne Health Department specifying the condition of the alarms and, if any, the necessary requirements for service or maintenance.
5. The tight tank shall be thoroughly pumped, cleaned, and inspected for structural integrity and water tightness by a licensed professional engineer every five (5) years from the date of installation. Inspection and repair records shall be sent to the Town of Bourne Health Department.



TOWN OF BOURNE
Board of Assessors
24 Perry Avenue
Buzzards Bay, MA 02532
(508) 759-0600 Ext. 1510 ♦ Fax (508) 759-8026



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

Rui Pereira, MAA
Director of Assessing

March 17, 2022

Josephine B. Smith
c/o Bracken Engineering, Inc.
49 Herring Pond Rd.
Buzzards Bay, MA 02532

Re: Abutters List for Map 37.4 Parcel 43
Property address: 4 Richmond 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 37.4 Parcels 42 & 44; Map 38.3 Parcel 160 & 165.

Your payment of \$10.00 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: 1 Abutters List
 Database: LIVE
 Filter: Key IN 7764,7766,8135,8139
 Sort:

Report #24: Owner Listing Report
 Fiscal Year 2023

Bourne MA

Key	Parcel ID	Owner	Location	LC/CI	Bk-Pg(Cert) /Dt	Mailing Street	Mailing City	ST	Zip Cd/County
7764	37.4-42-0	NENDZA RICHARD J & KRISTEN C	1 RICHMOND RD	N	30966/40	7 BUTTERFIELD LANE	MEDFIELD	MA	02052
				1010	12/15/2017				
7766	37.4-44-0	YESPY JEFFREY A & CARRIE A TRS YESPY FAMILY TRUST	8 RICHMOND RD	N	32322/136	18 LIVEMORE ROAD	BOXFORD	MA	01921
				1010	9/24/2019				
8135	38.3-160-0	ELLIS MAUREEN & JANICE ELLIS BALLERINI	105 WINGS NECK RD	N	20507/297	105 ROGERS AVE	SOMERVILLE	MA	02144
				1010	11/25/2005				
8139	38.3-165-0	KENNEDY STEPHEN J & ETAL TRS HARBOR VIEW RD RLTY TRUST	16 HARBOR VIEW RD	N	25737/327	37 FARLEY AVE	IPSWICH	MA	01938
				1010	10/7/2011				

Total Records 4

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

April 14, 2022

CERTIFIED MAIL

RE : Notice of Public Hearing

Dear Abutter:

In accordance with the State Environmental Code, Title 5: 310 CMR 15.00, you are hereby notified that the owners, **Stephen & Josephine B. Smith**, have requested a hearing before the Bourne Board of Health to 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 **4 Richmond Road (Map 37.4 Parcel 43), Pocasset** where you are listed as an abutter. At said hearing the Board will discuss and possibly vote on:

- **Local Upgrade Approval is requested for the use of a tight tank in accordance with the provisions of 310CMR 15.260 (Title 5)**
- **Local Upgrade Approval is requested for a 4'± reduction in required setback to a property line from a septic component for a 6'± setback to a property line from a proposed tight tank.**
- **Local Upgrade Approval is requested for the reduction of the minimum 12" separation for high groundwater to the inlet tee.**

This hearing is tentatively scheduled for Wednesday, May 11, 2022 at **5:00 p.m.** in Conference Room 2 of the Bourne Veteran's Memorial Community Building, 239 Main Street, Buzzards Bay. Information regarding the hearing may be available for your review one week prior to the meeting by contacting the Bourne Health Department at 508-790-0600, 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 no less than 48 hours in advance of the hearing. Please confirm the date, time, and location of the meeting with the Town, in case of any changes. Should you have any questions or concerns, please do not hesitate to contact the undersigned at zac@brackeneng.com or the Bourne Health Department at 508-790-0600, Ext. 1513.

Sincerely,

BRACKEN ENGINEERING INC.

A handwritten signature in black ink, appearing to read 'Zachary L. Basinski', is written over a horizontal line.

Zachary L. Basinski, PE, C.F.M
Project Manager
Agent for the Applicant

7020 1810 0000 2123 9693

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Total Postage & Fees: \$ 7.33



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Maureen. Ellis &
Janice Ellis Ballerini
105 Rogers Avenue
Somerville, MA 02144

4 Richmond Road, Bourne - BOH

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Postage

Richard J. & Kristen C. Nendza
7 Butterfield Lane
Medfield, MA 02052

4 Richmond Road, Bourne - BOH

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Total Postage & Fees: \$ 7.33



Postage

Jeffrey A. & Carrie A. Yespy, TRS
Yespy Family Trust
18 Livemore Road
Boxford, MA 01921

4 Richmond Road, Bourne - BOH

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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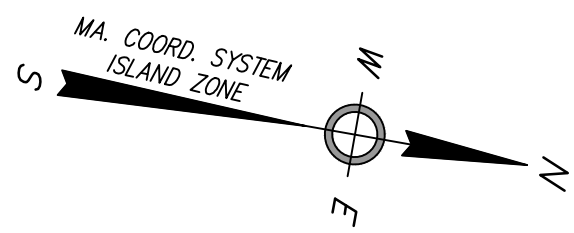


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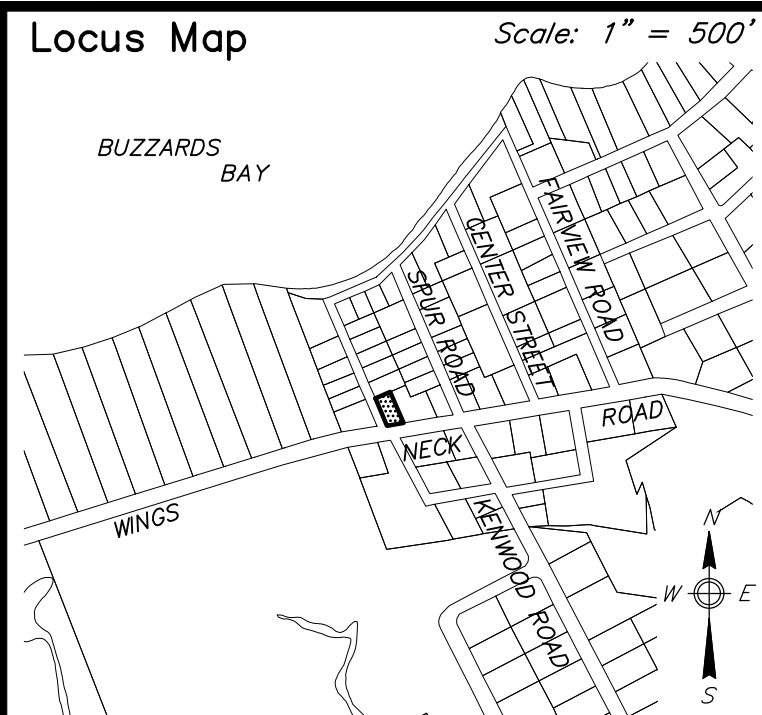
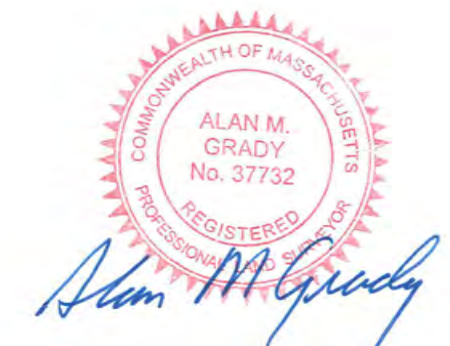
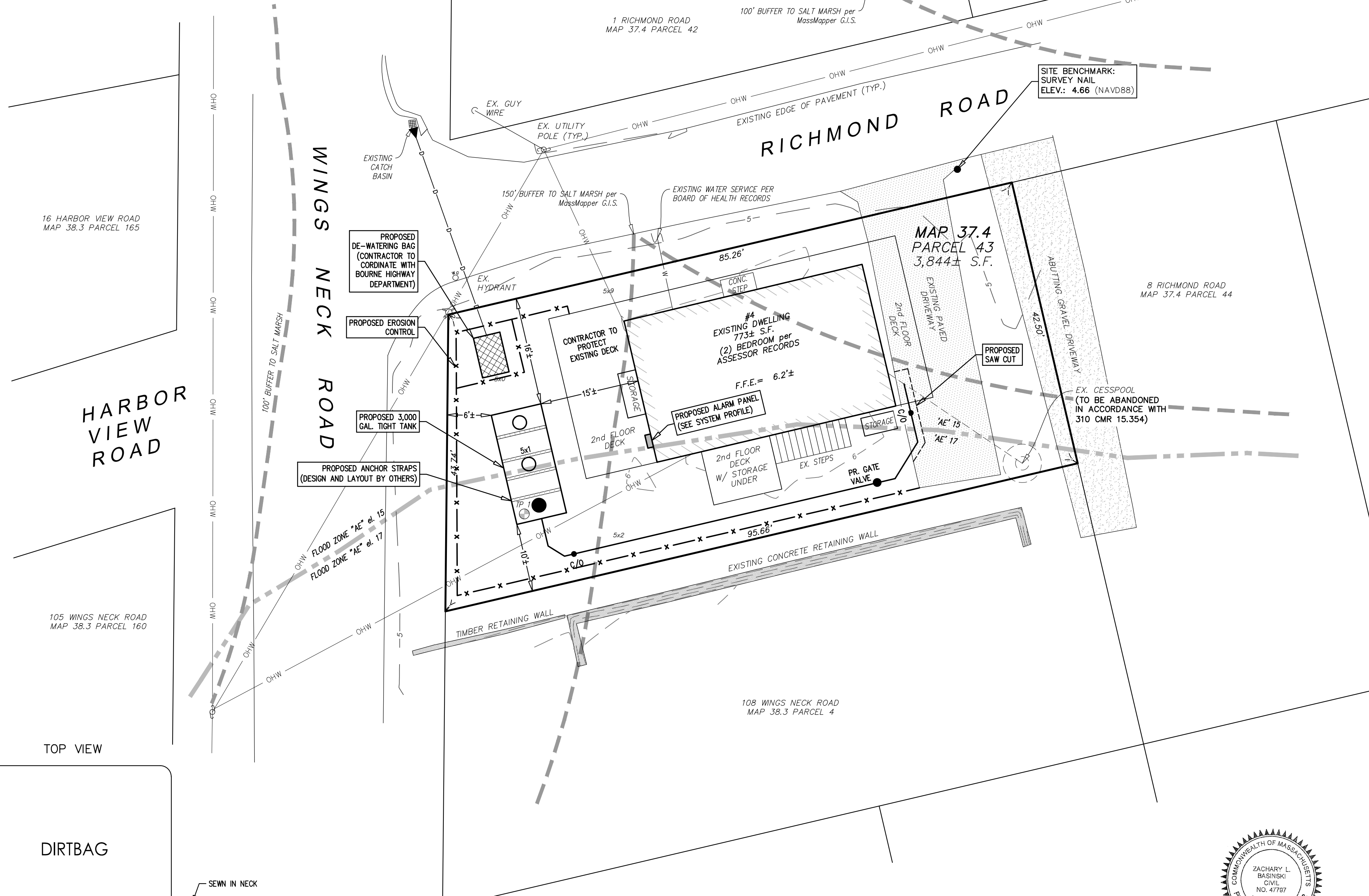
Stephen J. Kennedy, etal TRS
Harbor View Road
37 Farley Avenue
Ipswich, MA 01938

4 Richmond Road, Bourne - BOH

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



MASS COORDINATE SYSTEM
MAINLAND ZONE MERIDIAN
DETERMINED USING A
CARLSON BR7 GPS RTK UNIT
COLLECTION DATE 12/16/2021



- BENCHMARK: ELEVATION = 4.66 (NAVD88) SURVEY NAIL IN PAVEMENT
- 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: STEPHEN SMITH, JOSEPHINE SMITH, 1321 BAY STREET, TAUNTON MA, 02780
- DEED REFERENCE: Deed Bk: 27597 Pg: 117
- PLAN REFERENCE: Plan Bk: 45 Pg: 31 (LOT 83)
- 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.
- LOCUS DOES NOT FALL WITHIN A ZONE II WELLHEAD PROTECTION AREA.
- LOCUS DOES NOT FALL WITHIN AN NHESP ESTIMATED HABITAT OF RARE WILDLIFE AND PRIORITY HABITAT OF RARE SPECIES.
- LOCUS DOES FALL WITHIN SPECIAL FLOOD HAZARD ZONES AE (el. 15) and AE (el. 17) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25001C-0484-G dated 7/16/14.
- THE VISUAL/AUDIO ALARM PANEL IS TO BE MOUNTED ON THE SIDE OF THE BUILDING IN AN EXTERNAL SPOT VISIBLE FROM RICHMOND ROAD.
- TIGHT TANK SHALL BE ADDITIONALLY SECURED THROUGH THE INSTALLATION OF HELICAL ANCHORS - DESIGN BY OTHERS.
- PRIOR TO THE ISSUANCE OF THE DISPOSAL WORKS CONSTRUCTION PERMIT, A COPY OF EITHER THE LOCAL APPROVING AUTHORITIES OR THE DEPARTMENT WRITTEN APPROVAL SHALL BE REGISTERED IN THE CHAIN OF TITLE AT THE BARNSTABLE COUNTY REGISTRY OF DEEDS.
- PRIOR TO THE CERTIFICATE OF COMPLIANCE BEING ISSUED, THE SYSTEM OWNER IS TO REGISTER A DEED RESTRICTION LIMITING THE DWELLING TO TWO (2) BEDROOMS MAX AT THE BARNSTABLE COUNTY REGISTRY OF DEEDS ALONG WITH A NOTICE IDENTIFYING THE USE OF A TIGHT TANK ON THE PROPERTY.
- CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL ABUTTING SEPTIC SYSTEMS DURING CONSTRUCTION.

LOCAL UPGRADE APPROVAL REQUESTED:

15.405.3(b) - LOCAL UPGRADE APPROVAL IS REQUESTED FOR THE USE OF A TIGHT TANK IN ACCORDANCE WITH THE PROVISIONS OF 310 CMR 15.268.

15.405.1(a) - LOCAL UPGRADE APPROVAL IS REQUESTED FOR A 4" REDUCTION IN SETBACK TO A PROPERTY LINE FROM A SEPTIC COMPONENT FOR A 6"± SETBACK TO A PROPERTY LINE FROM THE PROPOSED TIGHT TANK.

15.405.1(i) - LOCAL UPGRADE APPROVAL IS REQUESTED FOR THE REDUCTION OF A 12" SEPARATION FROM HIGH GROUNDWATER TO THE INLET TEE.

*** RECORD SOIL LOGS ***

TP NO.	1
GRD. EL.	5.1
GW. EL.	2.3

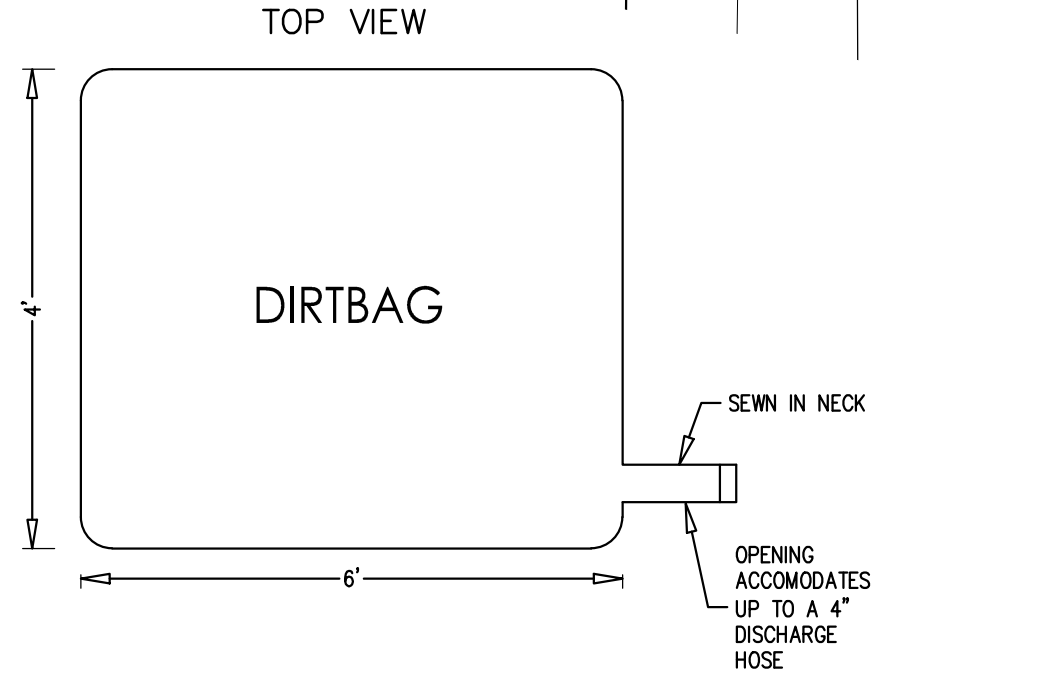
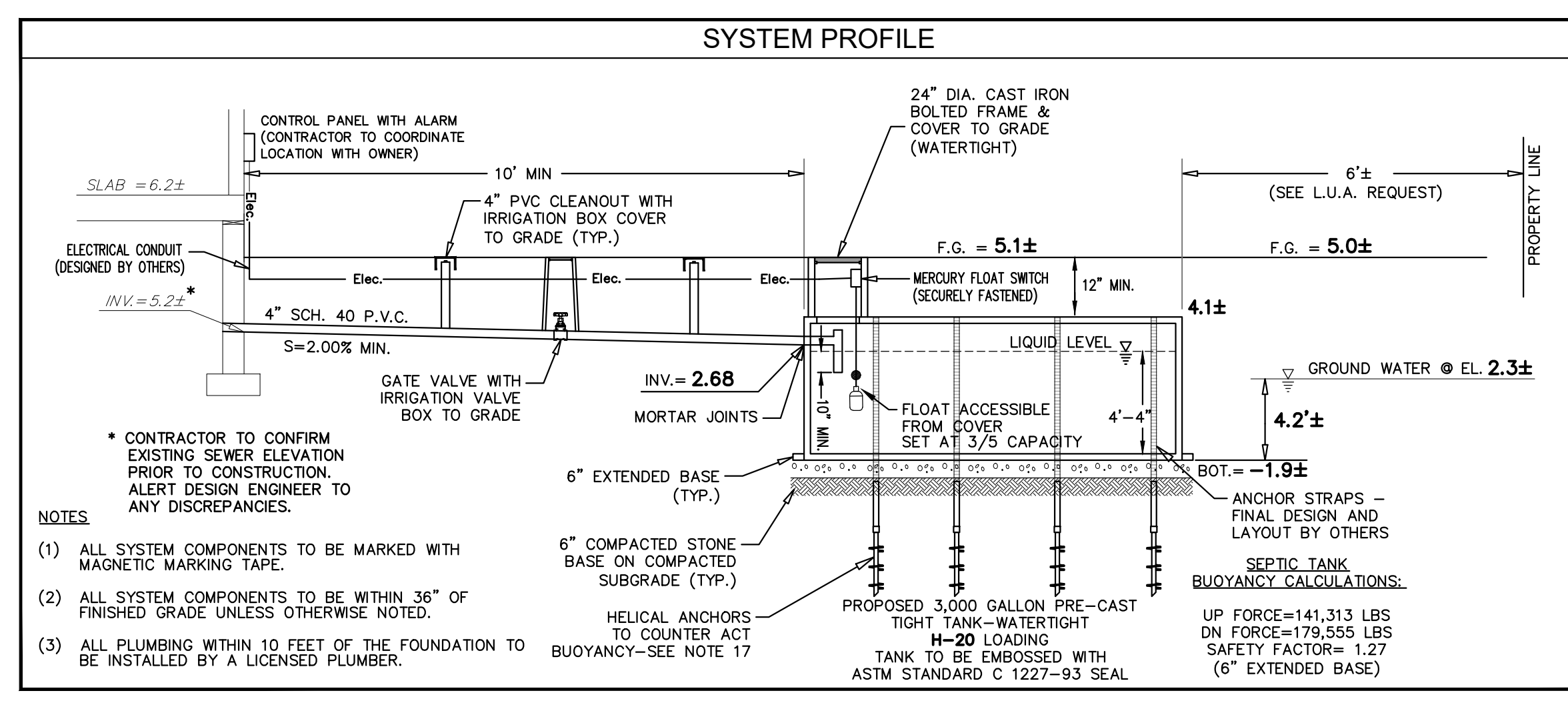
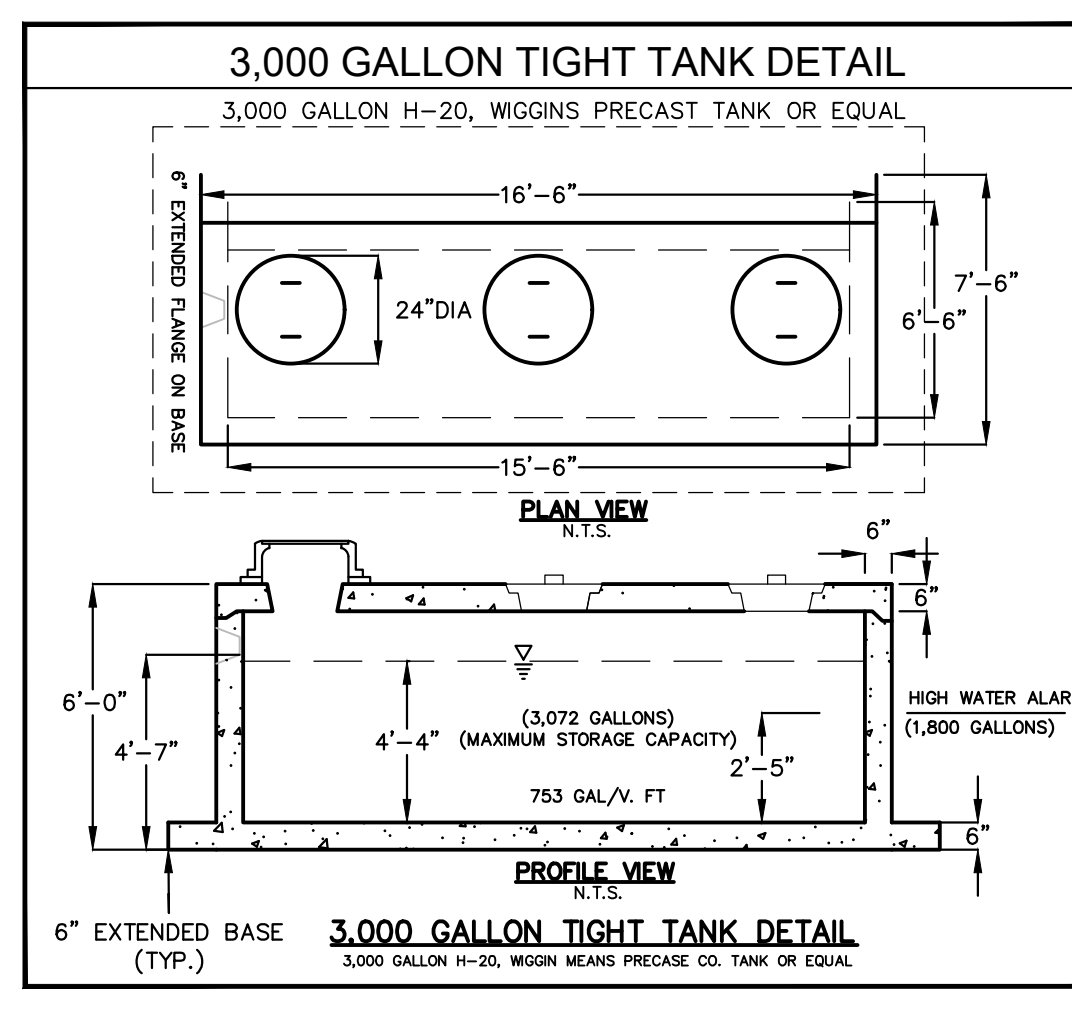
0"	FILL	5.1
24"	A SANDY LOAM TOYR 2/1	3.1
33"	B MED. LOAMY SAND TOYR 4/4	2.4
39"	C MEDIUM SAND TOYR 4/3	1.9
62"	STANDING @ 62"	-0.0
85"	STANDING @ 62"	-1.9

DATE PERFORMED: SEPTEMBER 7, 2017
 SOIL EVALUATOR: SHAWN MACINNES
 WITNESSED BY: ZACKARY SEABURY - HEALTH DEPT.
 PERC. RATE: <2 MINUTES/INCH
 SOIL CLASS: CLASS 1
 MAX. GROUND WATER ELEV.: @ EL. 2.3**
 METHOD OF DETERMINATION: MONITORING WELL

**SOIL LOGS OBTAINED FROM BOARD OF HEALTH RECORD PLAN BY MACINNES CONSULTING, dated MAY, 22, 2018.
 **DESIGN GROUNDWATER ELEVATION OBTAINED FROM A SOIL EVALUATION & SUBSEQUENT GROUNDWATER MONITORING WELL DATA, BY THIS FIRM AT #18 RICHMOND ROAD SEPTEMBER 18, 2011. WITNESSED BY CINDY COFFIN.
 -MORE CONSERVATIVE GROUNDWATER OBSERVATION USED FOR THIS DESIGN-

DESIGN CALCULATIONS

NUMBER OF BEDROOMS:	2 BEDROOMS
DESIGN FLOW REQUIRED:	110 GPD per BEDROOM = 220 GPD
TIGHT TANK REQUIRED:	500% DAILY FLOW = 1,100 GPD (2,000 GAL. MIN.)
TIGHT TANK PROVIDED:	3,000 GALLONS
PUMPING SCHEDULE:	IN ACCORDANCE WITH APPROVAL



- NOTES:**
- DIRTBAG TO BE MANUFACTURED BY ACF ENVIRONMENTAL OR APPROVED EQUAL.
 - DIRTBAG TO BE PLACED ON STRAW BASE
 - SEAMS MUST BE HIGH STRENGTH DOUBLE STITCHED "J" SEAMS.
 - SEAM MUST BE TESTED UNDER ASTM-4884.

DB55 FABRIC PROPERTIES

PROPERTY	TEST METHOD	MARV
TENSILE STRENGTH	ASTM D-4632	205 LBS
ELONGATION	ASTM D-4632	50%
CBR PUNCTURE	ASTM D-6241	525 LBS
UV RESISTANCE	ASTM D-4355	70%
AOS	ASTM D-4751	80 US SIEVE
PERMITTIVITY	ASTM D-4491	1.4 SEC-1
FLOW RATE	ASTM D-4491	90 GPM/SF



DIRTBAG DETWATERING BAG DETAIL
NOT TO SCALE

Prepared By:

BRACKEN ENGINEERING, INC.

49 HERRING POND ROAD, BUZZARDS BAY, MA 02532
 (tel) 508.833.0070 (fax) 508.833.2282

19 OLD SOUTH ROAD, NAUTUCKET, MA 02554
 (tel) 508.325.0044 www.brackeneng.com

PROPOSED SEWAGE DISPOSAL PLAN IN BOURNE, MA

Prepared For:
STEPHEN SMITH
 #4 RICHMOND ROAD, MAP 37.4 PARCEL 43

No.	Date	Revision Description	By
1	APRIL 13, 2022		JPH/BE

Drawn: JPH/BE Checked: ZLB/AMG Sheet: 1 of 1