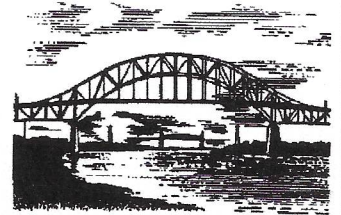


Bourne Board of Health Application for Septic Variance or Waiver Requests



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:

RECEIVED
By Bourne Health Department at 10:00 am, Apr 17, 2024

Owner's Name

Henry W. & Diane S. Sulser

Facility's Street Address

150 Tananto Road

Owner's Telephone Number

Owner's E-mail Address

Owner's Mailing Address

7 Farm Hill Road, Natick, MA 01760-5552

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

Preparer's Name

Glen E. Harrington, R.S.

Company

Geo-Cape Environmental Consultants

Telephone Number

774-238-1813

E-mail Address

aperfectenvironment@gmail.com

Mailing Address

100 Independence Drive, Suite 7-623, Hyannis, MA 02601

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

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: Existing system is a 1,000-gal septic tank to a leaching pit. Proposed system will be a 1,500-gallon septic tank, 1,000-gal pump chamber to a H-20 DB-3 distribution box to two leaching trenches of two H-10 500-gal. chambers in a 20' x 10' x 2' leach trench

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

	EXISTING	PROPOSED
Design flow of system:	440	440
Total design flow of facility: <i>(if more than one system on subject property)</i>		

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.
- 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 Henry W. Sulser Date 4.3.24
 Print Name Henry W. (Ch.P.) Sulser
 Signature of Preparer Glen E. Harrington Date 4/2/24
 Print Name Glen E. Harrington, R.S.

A PERFECT ENVIRONMENT LLC
dba
GEO-CAPE ENVIRONMENTAL CONSULTANTS
100 INDEPENDENCE DRIVE, SUITE 7-623
HYANNIS, MA 02601
Phone: 774-238-1813
Email: aperfectenvironment@gmail.com

April 2, 2024

Ms. Kaitlyn Shea, Assistant Health Agent
Bourne Board of Health
24 Perry Avenue
Buzzards Bay, MA 02532

RE: 9 Pocahontas Road, Bourne, MA

Dear Ms. Shea & Honorable Board Members,

Please accept this letter as a request for approval of four variances from Title 5 under Local Upgrade Approval. The complete variance packet containing the \$125 fee, the variance application, abutters notices, plans, certified abutters list, and floor plans will be sent electronically and six hard copies to your office.

Due to the shape and size of the on-site dwelling and the small area of the property, setback variances are necessary to fit the 1,500-gallon septic tank, 1,000-gallon pump chamber and a compliant soil absorption system (SAS). Five feet of distance is provided from the bottom of the proposed SAS to the adjusted groundwater elevation.

In order to perform the septic system repair, three variances are requested:

1. 310 CMR 15.211/405(1)(a) - A variance is requested to allow the proposed SAS to be constructed 0 feet from the property lines at Tahanto Road and 7 feet to #18 Weetamoe Road in lieu of the required 10 feet.
2. 310 CMR 15.211/405(1)(a) - A variance is requested to allow the pump chamber to be installed 3 feet from the property line at Pocahontas Road in lieu of the required 10 feet.
3. 310 CMR 15.211/405(1)(f) - A variance is requested to allow the proposed SAS to be installed 20 feet from a leaching catch basin in lieu of the required 25 feet. A 40 mil liner is proposed to mitigate the variance.

4. 310 CMR 15.211/405(1)(f) - A variance is requested to allow the proposed septic tank and pump chamber to be installed within 10 feet from the water line in lieu of the required 10 feet. The existing water line shall be replaced and relocated at least 10 feet from the septic components, if possible. The new water shall be sleeved if not relocated greater than 10 feet from the septic system.

Per your email, this variance application will be submitted for a public hearing scheduled on December 13th at 5:30 pm. Abutters have been sent their certified mail notices. The certified mailers (green cards) will be provided upon their return at the meeting.

If there are any questions or comments, please do not hesitate to contact me at the above number.

Sincerely,

A handwritten signature in black ink, appearing to read "Glen E. Harrington". The signature is fluid and cursive, with a long horizontal stroke at the end.

Glen E. Harrington, R.S.

ecc: Client



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.pdf

Facility Address: 150 TAHANTO ROAD
 Preparer's Name: G. HARRINGTON, R.S.
 Date:
 Watershed:

Project Nitrogen load **Proposed Wastewater** **New Construction/ Increases in Flow, Raze & Rebuild, or Repairs/ Upgrades**

1. Project Title-5 wastewater flows: gpd (a)
 Actual wastewater flows: * (b)
 Average wastewater flows: gpd (a)+(b) ÷ 2= (A)
 * Actual water use flows per unit in Bourne

Place in applicable box:
 Yes No Will the project be connected to sewer?
 Yes No Is project Title-5 wastewater flow 10,000 gpd or greater?

Place in applicable box and multiply unsewered wastewater flow by applicable conversion factor:
 Standard Title-5 System (35-ppm-N) x 0.048359
 DEP-approved I/A System (25-ppm-N) x 0.034542
 DEP-approved I/A System (19-ppm-N) x 0.028252
 DEP-approved Enhanced I/A (12-ppm-N) x 0.016580 } Type of system: _____

Wastewater nitrogen load (Title-5 flows) = kg-N/yr (B)
 Wastewater nitrogen load (Actual flows) = kg-N/yr (C)

Existing Conditions

Calculate (A) through (P) as w/ (A) through (P):

Title-5 wastewater flows: gpd
 Actual wastewater flows: *
 Avg. wastewater flows: gpd (A')

Place in applicable box:
 Yes No Is existing development on sewer?
 (If 'Yes', then go to line 2.)

Standard Title-5 System
 DEP-approved I/A System (commercial)
 DEP-approved I/A System (residential)
 DEP-approved enhanced I/A

Wastewater nitrogen load (Title-5 flows) = kg-N/yr (B')
 Wastewater nitrogen load (Actual flows) = kg-N/yr (C')
 wastewater offsets

Stormwater Runoff
 Town of Bourne Recharge rate for Bourne (inches; for natural areas from Technical Bulletin 91-001): (RECH)

Project site area: acres (D)
 Project site wetland area: acres (E)
 Project site upland area: acres (F)
 Pervious unpaved upland: acres (G)

% using LID Paved area: s.f. (H)
 Factor may be adjusted for employment of LID → LID = low impact development
 x 1.4158E-04 = kg-N/yr (I)

Roof area: s.f. (J)
 x 7.0792E-05 = kg-N/yr (K)

Project site area: acres (D)
 Project site wetland area: acres (E)
 Project site upland area: acres (F)
 Pervious unpaved upland: acres (G')

Paved area: s.f. (H')

Paving runoff offset: kg-N/yr (I')

Roof area: s.f. (J')

Roof runoff offset: kg-N/yr (K')

Fertilizer Previous unpaved upland - roof area =
 Managed turf/ lawn area: s.f.
 x 3.4019E-04 = kg-N/yr (L)

Managed Turf/ lawn area: s.f.
 Fertilizer offset: kg-N/yr (L')

Total Nitrogen Load

Total project nitrogen load (Title-5 flows): kg-N/yr (M) = (B)+(I)+(K)+(L)
 Total project nitrogen load (Actual flows): kg-N/yr (N) = (C)+(J)+(K)+(L)
 Nitrogen load per acre (Average): kg-N/yr/acre (O) = (M)+(N) ÷ 2 → (D)

Existing nitrogen load (Title-5 flows): kg-N/yr (M')
 Existing nitrogen load (Actual flows): kg-N/yr (N')
 Nitrogen offset per acre: kg-N/yr/acre (O')

Proposed Nitrogen Loading Concentration

Project nitrogen loading concentration (Title-5 flows): ppm-N (P) = (a) ÷ 723.76 + (G)x(RECH) ÷ 9.7286 + (H) ÷ 10,594 + (K) ÷ 0.75
 Project nitrogen loading concentration (Actual flows): ppm-N (Q) = (b) ÷ 723.76 + (G)x(RECH) ÷ 9.7286 + (H) ÷ 10,594 + (K) ÷ 0.75
 Project nitrogen loading concentration (Average): ppm-N (R) = (P)+(Q) ÷ 2

Existing nitrogen loading concentrations:

Title-5 flows: ppm-N (P')
 Actual flows: ppm-N (Q')
 Average: ppm-N (R')

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): [Redacted]

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

Yes No Does project's nitrogen load (D) 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

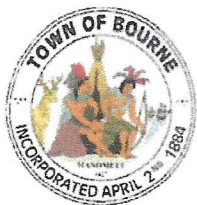
6. Yes No Is project wastewater disposed of within 300 feet of a stream or fresh surface water body? (If 'No', then go to line 7.)

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)

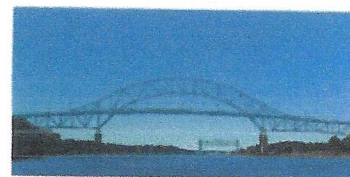
Other Potential Impacts

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.



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



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

Rui Pereira, MAA
Director of Assessing

April 5, 2024

Glen E. Harrington
100 Independence Drive, Suite 7-623
Hyannis, MA 02601

Re: Abutters List for Map 38.1 Parcel 44
Property address: 150 Tahanto 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 38.1 Parcels 16, 17, 43, 45 & 47.

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 7835,7836,7859,7861,7862
 Sort:

Report #24: Owner Listing Report
 Fiscal Year 2025

Bourne MA

Key	Parcel ID	Owner	Location	LC/CI	Bk-Pg(Cert) /Dt	Mailing Street	Mailing City	ST	Zip Cd/County
7835	38.1-160	WYLIE THOMAS R & DELIAN D WYLIE	153 TAHANTO RD	N	28633/185-88 1010 1/15/2015	153 TAHANTO RD	POCASSET	MA	02559
7836	38.1-170	MACEDO MICHAEL & KAREN MACEDO	157 TAHANTO RD	N	35426/74 1010 10/17/2022	276 WILLIAM SCREVEN ST	GEORGETOWN	SC	29440
7859	38.1-430	HUDSON HIGHLANDS LLC	18 WEETAMOE RD	N	35283/22 1010 8/1/2022	23 LINCOLN RD	ASHLAND	MA	01721
7851	38.1-450	AMERAL KARIN & WILLIAM AMERAL & CAITLIN AMERAL	59 POCAHONTAS RD	N	30373/311 1010 3/24/2017	18 WASHINGTON ST	TYNGSBORO	MA	01879
7862	38.1-470	MYERS PHYLLIS B & DONALD I TRS OF PB & DI MYERS REV TR 1/2 EA.	50 POCAHONTAS RD	N	22648/133 1010 2/4/2008	PO BOX 386	POCASSET	MA	02559

Total Records 5

A PERFECT ENVIRONMENT LLC

dba

GEO-CAPE ENVIRONMENTAL CONSULTANTS

100 INDEPENDENCE DRIVE, SUITE 7-623

HYANNIS, MA 02601

Phone: 774-238-1813

Email: aperfectenvironment@gmail.com

DATE: APRIL 2, 2024

TO: ABUTTERS OF #150 TAHANTO ROAD, BOURNE

RE: NOTICE OF PUBLIC HEARING - VARIANCES FROM TITLE 5 REGULATION

In accordance with the State Environmental Code, Title 5: 310 CMR 15.00, you are hereby notified that Mr. Brett Ellis of Done Right Excavation & Septic has requested a hearing before the Board of Health for relief from Title 5 and/or the Bourne Board of Health Regulations for the installation of an upgraded septic system. The location of the property for this proposal is **#150 Tahanto Road, Bourne, MA** where you are listed as an abutter. At said hearing, the board will discuss and possibly vote on:

The variances listed below are divergences from the Title 5 Code in order to design and install the proposed septic system:

1. 310 CMR 15.211/405(1)(a) - A variance is requested to allow the proposed SAS to be constructed 0 feet from the property lines at Tahanto Road and 7 feet to #18 Weetamoe Road in lieu of the required 10 feet.
2. 310 CMR 15.211/405(1)(a) - A variance is requested to allow the pump chamber to be installed 3 feet from the property line at Pocahontas Road in lieu of the required 10 feet.
3. 310 CMR 15.211/405(1)(f) - A variance is requested to allow the proposed SAS to be installed 20 feet from a leaching catch basin in lieu of the required 25 feet. A 40 mil liner is proposed to mitigate the variance.
4. 310 CMR 15.211/405(1)(f) - A variance is requested to allow the proposed septic tank and pump chamber to be installed within 10 feet from the water line in lieu of the required 10 feet. The existing water line shall be replaced and relocated at least 10 feet from the septic components, if possible. The new water shall be sleeved if not relocated greater than 10 feet from the septic system.

This hearing is tentatively scheduled for April 24th at 5:30 pm at Conference Room 2, Bourne Veteran's Memorial Community Building, 239 Main Street, Buzzards Bay, MA. Information regarding the hearing may be available for your review one week prior to the meeting at the Bourne Health Department, 24 Perry Avenue, Buzzards Bay, Monday through Friday from 8:30 am to 4:30 pm.

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 me or the Bourne Health Department at 508-759-0600 ext. 1513.

9589 0710 5270 1280 9021 28

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Georgetown, SC 29440

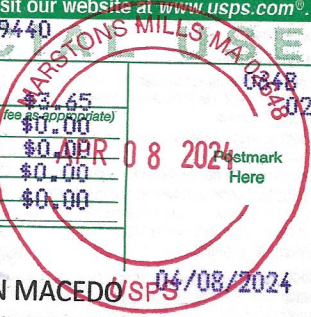
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Extra Services & Fees (check box, add fee as appropriate)	\$3.65
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<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.68

Total \$8.73

MICHAEL & KAREN MACEDO
276 WILLIAM SCREVEN STREET
GEORGETOWN, SC 29440

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



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Tyngsboro, MA 01879

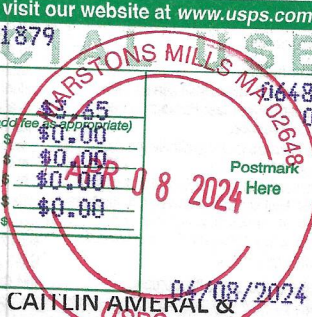
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<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.68

Total \$8.73

KARIN AMERAL, CAITLIN AMERAL &
WILLIAM AMERAL
18 WASHINGTON STREET
TYNGSBORO, MA 01879

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



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Pocasset, MA 02559

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Extra Services & Fees (check box, add fee as appropriate)	\$3.65
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<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.68

Total \$8.73

THOMAS R. WYLIE & DELIAN D. WYLIE
163 TAHANTO ROAD
POCASSET, MA 02559

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



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Ashland, MA 01721

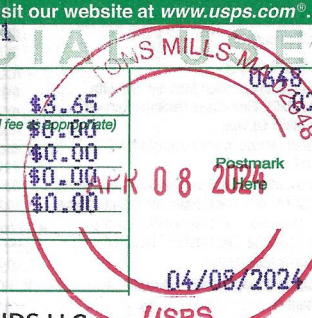
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<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.68

Total \$8.73

HUDSON HIGHLANDS LLC
23 LINCOLN ROAD
ASHLAND, MA 01721

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



9589 0710 5270 1280 9020 81

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Pocasset, MA 02559

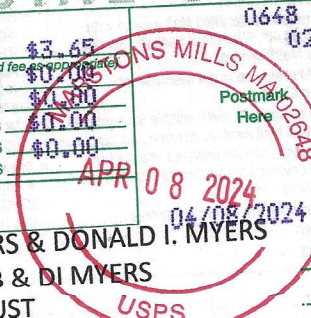
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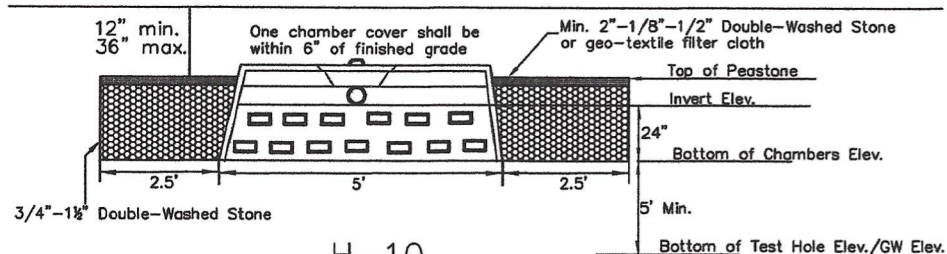
Postage \$0.68

Total \$8.73

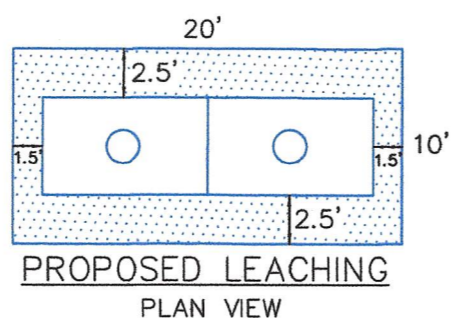
PHYLLIS B. MYERS & DONALD I. MYERS
TRUSTEES OF PB & DI MYERS
REVOCABLE TRUST
P.O. BOX 388
POCASSET, MA 02559

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





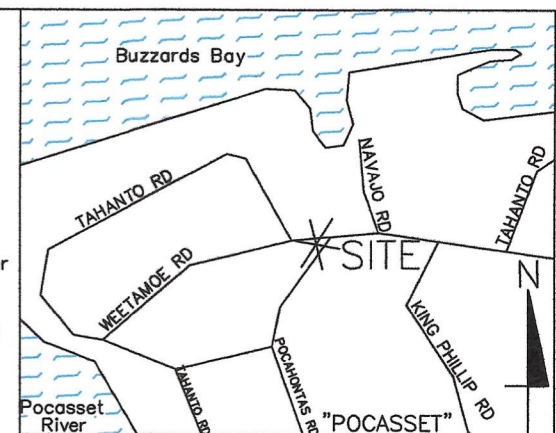
H-10
LEACHING CHAMBERS
CROSS-SECTION
Not to Scale



PROPOSED LEACHING
PLAN VIEW

LEGEND

- Denotes Existing Septic Components
- Denotes Proposed Septic Components
- Existing 2.5' Dia. Tree
- Denotes Overhead Utilities
- Test Hole Location
- Lamp Post
- Approximate location water line
- Existing contour
- Proposed 1,500-gal. H-10 loading septic tank
- Proposed 1,000-gal. H-10 loading "Mono" Pump Chamber
- Denotes Existing Leach Pit (to be pumped and removed)



GENERAL NOTES
LOCUS
NO SCALE

- ADDRESS: #150 TAHANTO ROAD, BOURNE, MA.
- ASSESSOR'S NUMBER: MAP 38.1 PARCEL 1-44-0.
- DEVELOPER'S LOT: LOT #88
- TOPOGRAPHIC INFORMATION WAS COMPILED FROM AN ON THE GROUND INSTRUMENT SURVEY.
- TOWN WATER IS PROVIDED TO THE SITE & SURROUNDING PROPERTIES.
- NO WETLANDS ARE LOCATED WITHIN 150 FEET OF THE PROPOSED SAS.
- UTILITIES LOCATED BY DIGSAFE.
- REFERENCE PLAN: HENRY SULLER, 150 TAHANTO ROAD, MAP 38.1 PARCEL 44, B. 5684 P. 171, SCALE: 1"=20", DATED FEBRUARY 10, 2024.
- THIS DESIGN PLAN IS TO BE UTILIZED FOR THIS SEPTIC REPAIR ONLY.
- EXISTING SEPTIC COMPONENTS LOCATED PER AS-BUILT PLAN ON FILE.
- THE SITE IS LOCATED IN AN AE-15 FLOOD ZONE PER FIRM 25001C0503J, EFFECTIVE 7/16/2014.
- THE DESIGNER IS NOT RESPONSIBLE FOR UNDOCUMENTED SEPTIC COMPONENTS.
- THE SITE IS NOT LOCATED IN AN AREA OF CRITICAL ENVIRONMENTAL CONCERN.
- THE SITE IS NOT LOCATED IN A ZONE II AREA.
- THE SITE IS NOT LOCATED IN A NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM AREA.
- THE SITE IS NOT LOCATED IN THE D.E.P. NATURAL RESOURCE AREA/ NITROGEN SENSITIVE AREA.

SOIL EVALUATION & PERK TEST

DATE OF SOIL EVALUATION: JANUARY 17, 2024
EVALUATION PERFORMED BY: GLEN E. HARRINGTON, R.S.
WITNESS: TERRI GUARINO, R.S., C.H.O.
EXCAVATOR: DONE RIGHT EXCAVATION
PERCOLATION RATE: <2 MPI IN C1 @ T.H. #1

Test Hole No. 1		
DEPTH	SOILS	ELEV.
0		13.78
8"	LOAMY sand 10YR4/1	13.12
28"	Bw LOAMY sand 10YR5/6	11.45
68"	C1 coarse sand 10% STONES 2.5Y6/4	8.11
108"	C2 medium-coarse sand 2.5Y7/3	4.78

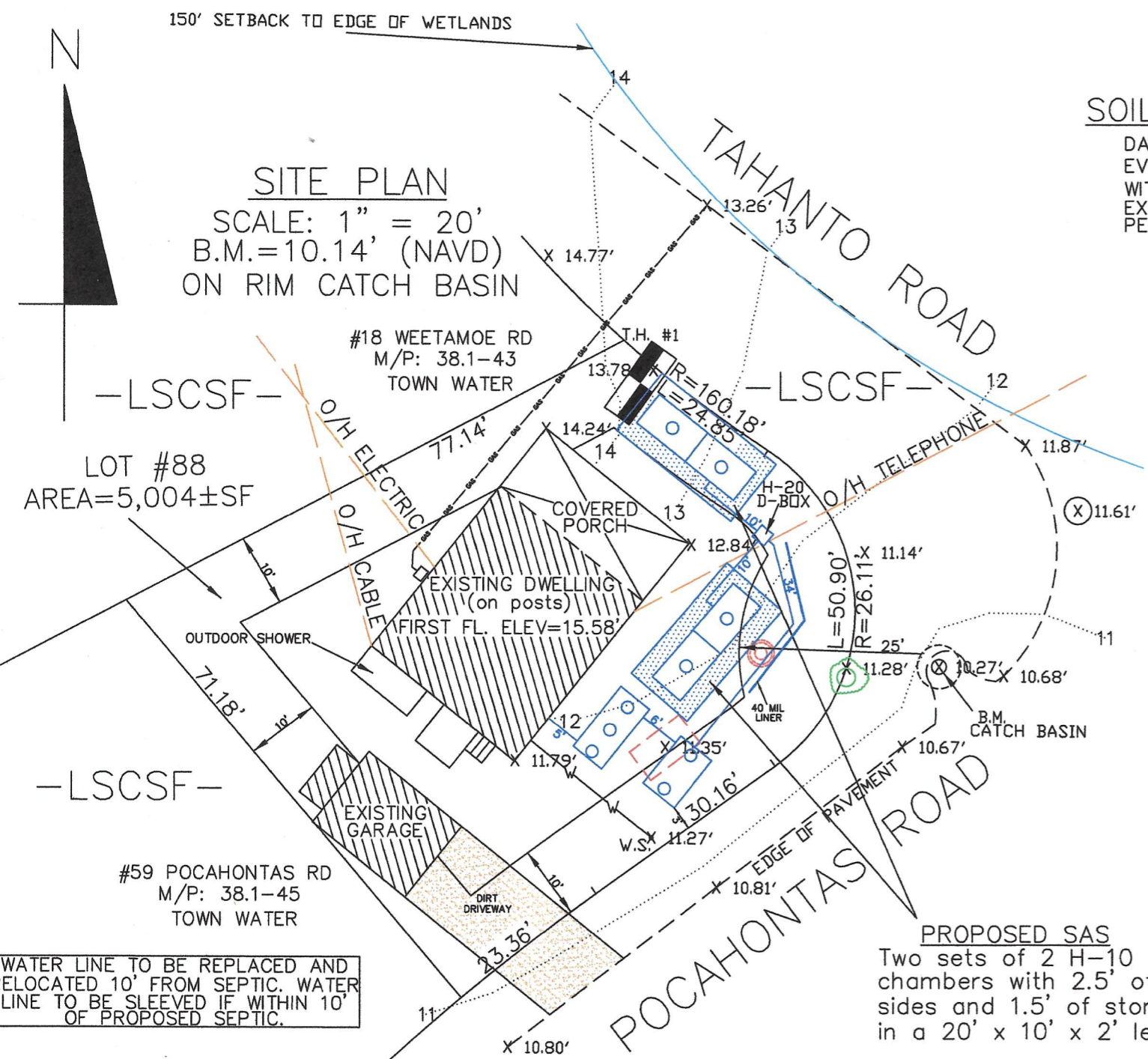
No Observed Ground Water

Design Calculations

Number of Bedrooms: 4 Equivalent to 440 Gal./Day
Garbage Disposal: Not allowed with this design
Septic Tank Capacity Required: 440 gpd x 200% = 880 gpd.
Septic Tank Capacity Provided: Proposed 1,500-gal H-10 septic Tank
Leaching Capacity Required: 440 gpd x LTAR = 595 SF Req'd Area
LTAR for Class I soil at <2 min./inch = 0.74 gal/sq. ft.
Proposed Leaching Structure: 2-20'x10'x2' Leaching Trenches
Bottom Leaching Area Provided = 200 Sq.Ft.
Sidewall Leaching Area Provided = 120 sq. ft.
Total Leaching Area Provided = 320 sq. ft. x 2 = 640 > 595 sq ft req'd.
Leaching Capacity Provided = 640 sq. ft x 0.74 gal/sq.ft. = 473 gpd.

LOCAL UPGRADE APPROVAL VARIANCES

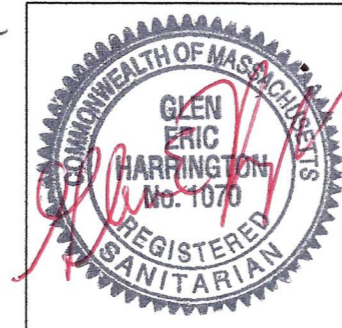
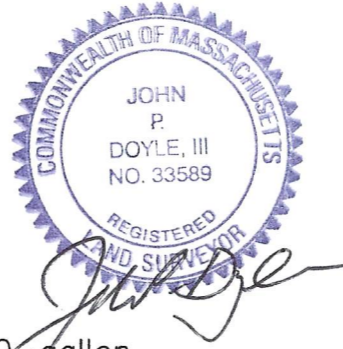
- 310CMR15.211/405(1)(A) - A VARIANCE IS REQUESTED TO ALLOW THE PROPOSED SOIL ABSORPTION SYSTEM TO BE INSTALLED ZERO FEET FROM THE STREET-SIDE PROPERTY LINE AND 7' TO ADJUTER'S PROPERTY LINE IN LIEU OF THE REQUIRED 10 FEET. THE WATER MAIN IS LOCATED ON THE OTHER SIDE OF THE STREET LAYOUT.
- 310CMR15.211/405(1)(A) - A VARIANCE IS REQUESTED TO ALLOW THE PROPOSED PUMP CHAMBER TO BE INSTALLED 3 FEET FROM THE PROPERTY LINE IN LIEU OF THE REQUIRED 10 FEET.
- 310CMR15.211/405(1)(F) - A VARIANCE IS REQUESTED TO ALLOW THE PROPOSED SOIL ABSORPTION SYSTEM TO BE CONSTRUCTED 20 FEET FROM A LEACHING CATCH BASIN IN LIEU OF THE REQUIRED 25 FEET. A 40 MIL THICK LINER WILL BE INSTALLED TO PROVIDE PROTECTION.
- 310CMR15.211/405(1)(G) - A VARIANCE IS REQUESTED TO ALLOW THE PROPOSED SEPTIC TANK AND PUMP CHAMBER TO BE CONSTRUCTED WITHIN 10 FEET OF THE EXISTING WATER LINE. THE WATER LINE IS PROPOSED TO BE REPLACED AND SLEEVED IF WITHIN 10 FEET OF THE NEW SEPTIC SYSTEM.



SITE PLAN

SCALE: 1" = 20'
B.M.=10.14' (NAVD)
ON RIM CATCH BASIN

PROPOSED SAS
Two sets of 2 H-10 500-gallon chambers with 2.5' of stone on sides and 1.5' of stone on ends in a 20' x 10' x 2' leach trench.

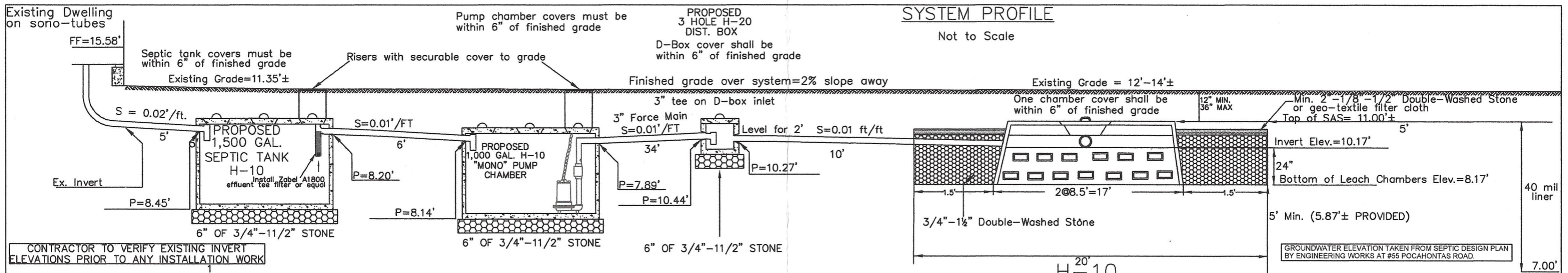


PROPOSED SEPTIC SYSTEM REPAIR
PREPARED FOR
DONE RIGHT EXCAVATION AND SEPTIC SERVICES, INC.
AT
#150 TAHANTO ROAD
BOURNE, MA.

PREPARED BY: A Perfect Environment LLC dba Geo-Cape Environmental Consultants
100 Independence Drive, Suite 7-623 Hyannis, MA 02601
Tel: 774-238-1813
Email: aperfectenvironment@gmail.com

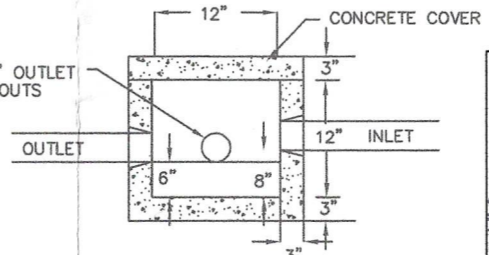
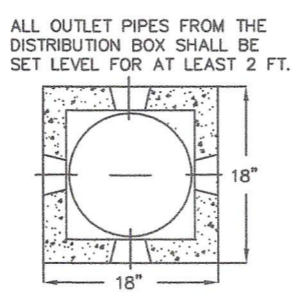
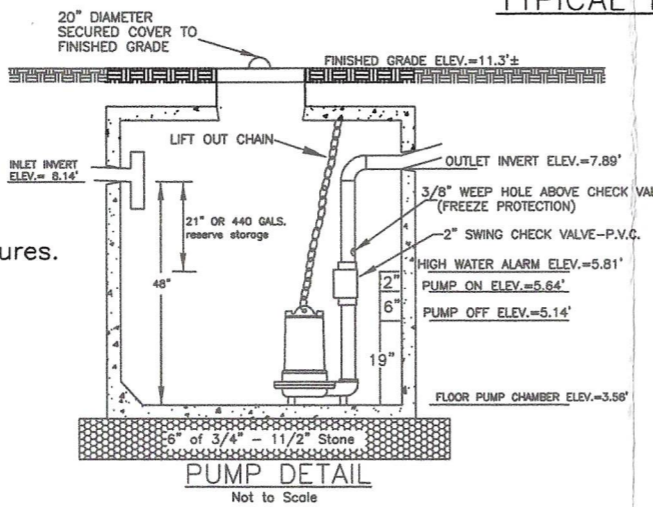
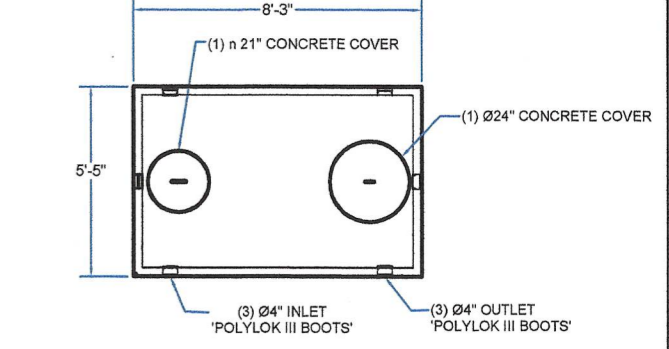
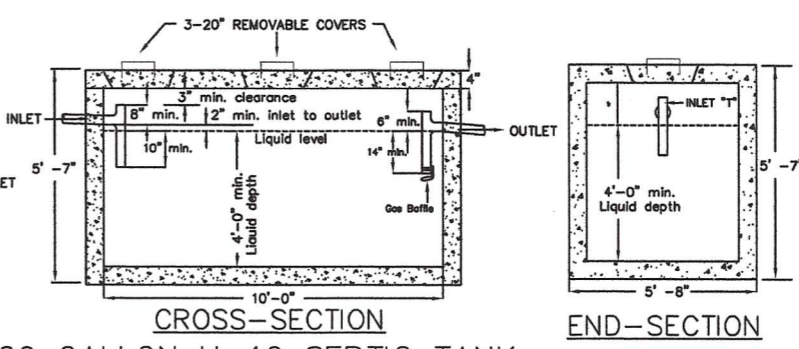
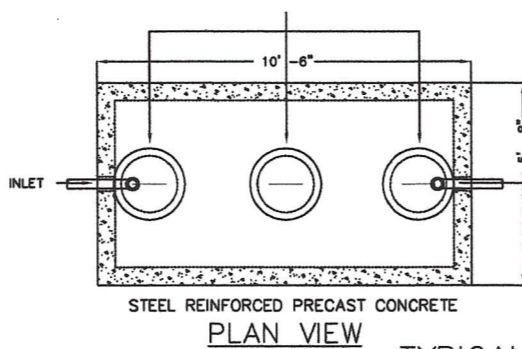
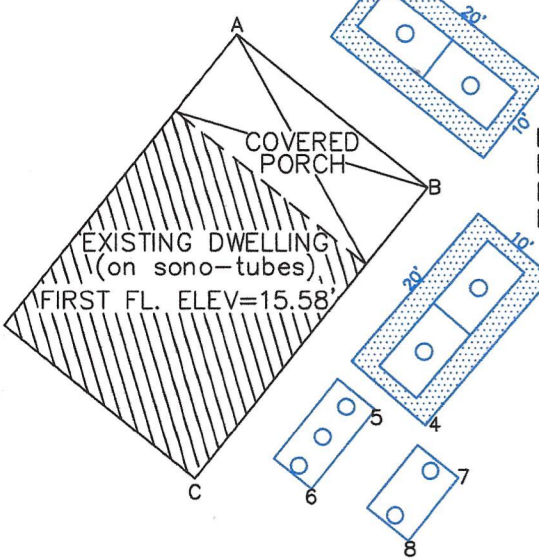
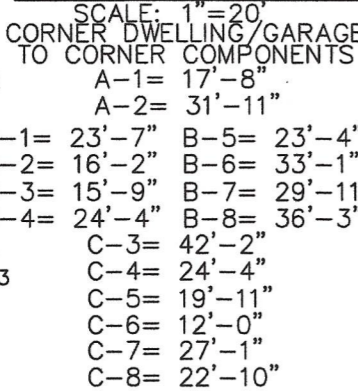
SCALE: 1"=20'	DRAWN BY: TWH	DATE: 29 MARCH 2024
DATUM: APPROX. GIS	FILE: 150TAHANTO4BR	SHEET 1 OF 2

WATER LINE TO BE REPLACED AND RELOCATED 10' FROM SEPTIC. WATER LINE TO BE SLEEVED IF WITHIN 10' OF PROPOSED SEPTIC.



CONTRACTOR TO VERIFY EXISTING INVERT ELEVATIONS PRIOR TO ANY INSTALLATION WORK

SEPTIC LAYOUT



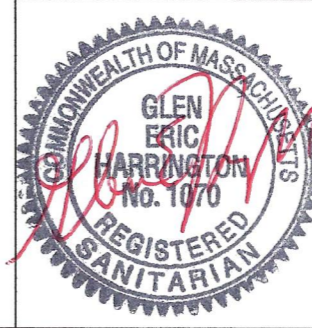
PUMP NOTES & SPECIFICATIONS

1. PROVIDE 1 LIBERTY MODEL LE 41A 4/10 hp, 115 VOLT, SINGLE PHASE SUBMERSIBLE PUMP CAPABLE OF DISCHARGE CAPACITY OF 80 GPM AT 13.6 FEET TDH, OR EQUAL. PUMP SHALL BE CAPABLE OF PASSING A MINIMUM SOLID SIZE OF 2" DIAMETER OR EQUAL.
2. USE LIBERTY SIMPLEX ELECTRIC CONTROL PANEL OUTDOOR MOUNTED W/VISIBLE ALARM OR EQUAL.
3. PUMP SHALL BE INSTALLED IN STRICT COMPLIANCE WITH MANUFACTURER'S SPECIFICATIONS.
4. ALARM SHALL CONSIST OF AUDIBLE SIGNAL & RED WARNING LIGHT TO BE INSTALLED IN BUILDING AND POWERED BY SEPARATE CIRCUIT FROM CIRCUITS TO PUMP.
5. DOSE VOLUME=4 DOSES PER DAY= 440 GAL/4 DOSES=110 GAL./DOSE
6. ELECTRICAL PERMIT REQUIRED FOR ALARM & POWER TO PUMP.
7. ALL OUTDOOR CONNECTIONS TO BE SEALED WITHIN NEMA 4 ENCLOSURES.
8. THE FORCE MAIN SHALL BE 3" DIA. SCH 40 PVC WITH THRUST BLOCKS INSTALLED, AS NECESSARY.
9. INSTALL STAINLESS STEEL SLIDE RAIL SYSTEM AND SIMPLEX DISCHARGE PIPING OR PULL CHAIN OR EQUAL.

CONSTRUCTION NOTES

1. Contractor is responsible for Digsafe notification and protection of all underground utilities, pipes, and site features.
2. The septic tank and distribution box shall be set level on 6" of 3/4"-11/2" stone.
3. Backfill should be clean sand or gravel with no stones over 3" in size.
4. This system is subject to inspection during installation by Geo-Cape Environmental Consultants.
5. The contractor shall install this system in accordance with Title 5 of the Massachusetts Environmental Code and local Board of Health Rules and Regulations.
6. If, during installation the contractor encounters any soil conditions or site conditions that are different from those shown on the soil log or in the design, the installer shall halt installation and immediately notify Geo-Cape Environmental Consultants.
7. No vehicle or heavy machinery shall drive over the septic system unless noted as H-20 septic components.
8. Install Tuf-Tite gas baffle or equal on septic tank outlet tee.
9. All piping shall be SCH 40 PVC.
10. No wells are located within 150' of proposed SAS.
11. Provide one 1,500-gallon H-10 septic tank, one 1,000-gallon H-10 "Mono" pump chamber, one H-20 DB-3 distribution box, and four 500-gallon H-10 precast chambers by Acme-Shorey Precast or equal.
12. Provide magnetic marking tape for convenient location of components.
13. Provide an effluent tee filter, Zabel A1800 or equal, on outlet tee of septic tank. Filter shall be maintained per manufacturers specifications or, at a minimum, annually.
14. Provide one 40 mil. thick rubber or polyethylene liner, as shown.

PROPOSED SEPTIC SYSTEM REPAIR
PREPARED FOR
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AT
#150 TAHANTO ROAD
BOURNE, MA.



PREPARED BY: *A Perfect Environment LLC*
dba
Geo-Cape Environmental Consultants
100 Independence Drive, Suite 7-623
Hyannis, MA 02601
Tel: 774-238-1813
Email: aperfectenvironment@gmail.com

SCALE: 1"=20'	DRAWN BY: TWH	DATE: 29 MARCH 2024
DATUM: APPROX. GIS	FILE: 150TAHANTO4BR	SHEET 2 OF 2