

NOTE: All elevations referenced to 20.39' BENCH at magnetic nail in driveway (NAVD88)

Limits of Overdig. All unsuitable material between breakout elevation (16.2') and the bottom of B horizon must be removed for installation. NOTE: All edges of the overdig excavation must be lined with 40mil rubber membrane from breakout elevation to elevation = 14'. Elevations and volumes are estimated from site data obtained at the time of percolation testing and may vary depending upon conditions encountered at the time of system installation.

Soil Logs

Observation Hole #1					
Elevation (Feet)	Depth (Inches)	Soil Horizon	Soil Texture	Soil Color	Soil Mottling
18.5	0-12	A	Sandy Loam	10 YR 3/3	None
17.5	12-22	B	Loom	10 YR 4/6	None
16.7	22-68	C	Sandy Loam*	2.5 Y 5/3	None
12.8	68	R	Refusal on bedrock		

\* See attached sieve analysis results  
\*\* Per MaDEP sieve analysis policy

NOTE: A second deep observation hole must be completed at time of system installation.

Notes:

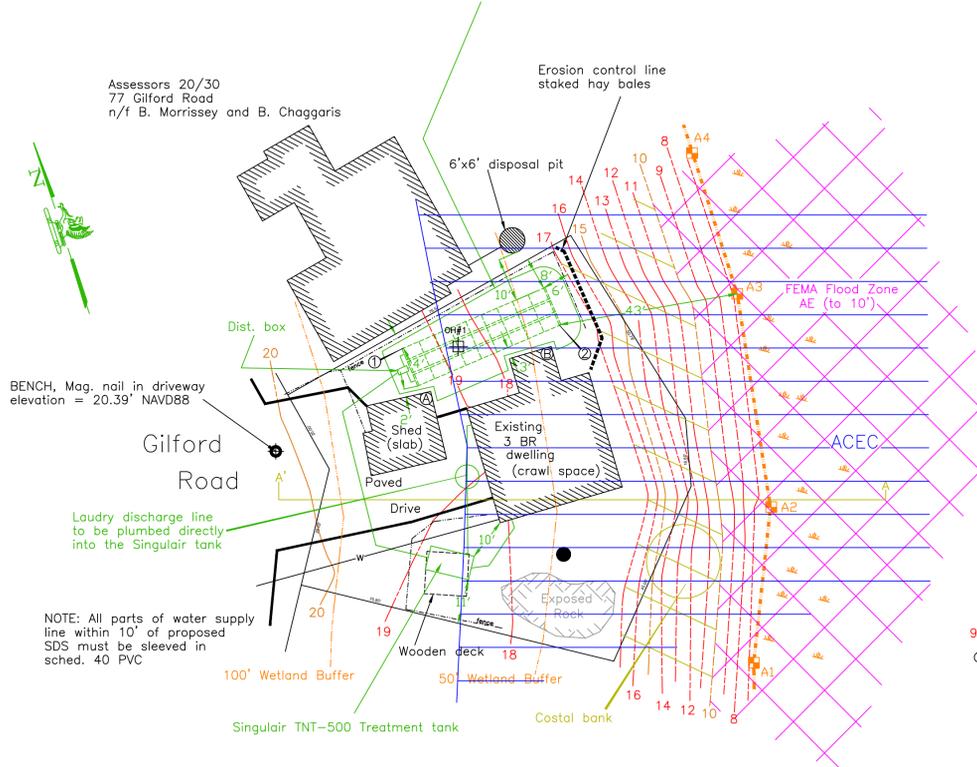
- On 6/17/2025 soil tests were made, as shown here, by T. McSweeney, a Massachusetts Department of Environmental Protection (DEP) approved Soils Evaluator, with P. Brennan, also a DEP approved Soils Evaluator, observing for the Board of Health. The logs of this test is as follows, with location as OH-1 on this plan.
- All stone to be washed free of iron, fines, and dust. All "structures" to be precast concrete. All pipes to be P.V.C. Schedule 40, laid true to line and grade. All "structures" under pavement to be H-20 loading with cast iron covers and frames, set to grade, on all manholes.
- The existing SAS is to be abandoned and disposed of to the satisfaction of the health authority.
- It is the responsibility of the home owner to advise the site engineer of the location of all house plumbing prior to construction of the system.
- No part of the proposed system shall be buried greater than 3' below the surface of the ground.
- A completed Treatment Plant Permit Application, with fully executed Singular maintenance agreement, must be provided to the Hingham Board of Health prior to obtaining a Certificate of Compliance.
- All work to conform to these plans, Title 5 of the Environmental Code (310 CMR 15.00 et. seq.) and supplementary regulations of the Hingham Board of Health.
- House plumbing to be set to the grades specified on this plan, as necessary, with a pipe slope minimum of 0.01.
- All unsuitable material below breakout elevation of 16.2' is to be removed and replaced with material suitable to the health authority, for 5' around SAS. Fill specifications are as follows ("overdig"):
  - No material is larger than 2".
  - Not more than 45% is retained on #4 sieve.
  - For the material which passes the #4 sieve, the following limits apply:
    - #50 sieve 10 - 100% passing
    - #100 sieve 0 - 20% passing
    - #200 sieve 0 - 5% passing
  - Results of sieve analysis submitted to Board of Health for approval prior to installation.
- Property line information as depicted on this plan is to be used for Title V purposes only.
- A Singular deed notice must be recorded in the chain of title for the subject property prior to release of the Certificate of Compliance by the Hingham Board of Health (certified copy to be filed with the Board.)

Calculations:

- 3 bedrooms, no disposal
- Est. Day Flow (EDF) = # B.R. x 110 G/Day  
EDF = 330 Gallons per day
- Perk rate = 30 min/inch (Class II soils, see DEP Sieve Policy)  
Effluent Loading (ELR) = 0.33 G/s.f.
- Septic Tank - 2 X EDF with 1,500 G minimum  
330 X 2 = 660 Gallons, use 1,500 Gallon tank
- Soil Absorption System (SAS)  
SAS size required = EDF/ELR  
(330 G)/(0.33 G/s.f.) = 1000 s.f.  
Singular Remedial Use Permit allows 50% in size = 500 s.f.  
Infiltrator Quick4 Plus Standard LP Chamber in bed configuration = 4.73 s.f./l.f.  
500 s.f./4.73 s.f./l.f. = 106 l.f.  
@ 4 l.f./unit = 27 units  
Use 3 rows of 9 units each (27 units total)

Proposed:

- Singular TNT-500 Treatment tank
- Distribution box
- 27 Infiltrator units in bed configuration (3 rows of 9) as illustrated on SAS detail

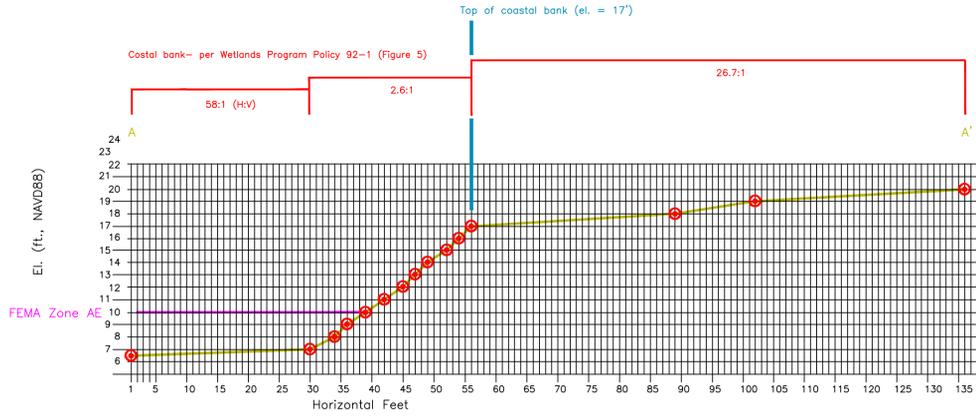


SAS Tie-in Data

	1	2
A	12'	34'1"
B	34'11"	5'4"

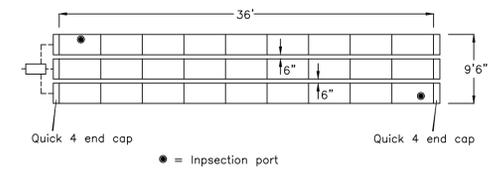
Site Detail Plan  
(1" = 20')

- 93 ----- = Existing topographic line, with elevation
- OH #1 ⊕ = Observation hole, location and designation
- = Existing disposal system
- = Wetland flag, McSweeney Associates, Inc., 9/2025
- A1 = Wetland resource area (salt marsh)



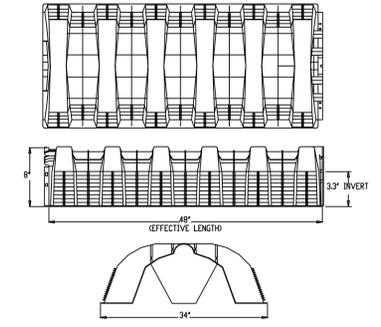
VARIANCES/DIVERGENCES REQUESTED:

- Town of Hingham, Section VII.E., SDS to wetland setback  
Proposed: 43' Required: 100'
- Town of Hingham, Section VII.J., Thickness of naturally occurring soils under SAS  
Proposed: 2.7' Required: 5.0'
- 310 CMR 15.405(1)(a), SAS to property line setback  
Proposed: 4' Required: 10'
- 310 CMR 15.405(1)(b), SAS to crawl space setback  
Proposed: 3' Required: 20'
- 310 CMR 15.405(1)(b), SAS to slab foundation setback  
Proposed: 2' Required: 10'
- 310 CMR 15.405(1)(f), SAS to salt marsh setback  
Proposed: 43' Required: 50'
- 310 CMR 15.405(1)(f), SAS to coastal bank setback  
Proposed: 6' Required: 50'
- 310 CMR 15.104(1)(i), Percolation testing  
Allow use of a sieve analysis in lieu of percolation testing data  
MaDEP Policy #BRP/DWM/PeP-P00-4



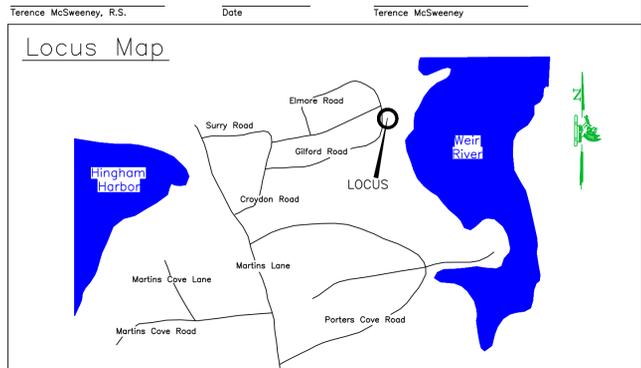
Backfill with native C horizon soils or "Title V" Spec. sand  
"Title V" Spec. sand (see note #9), from bottom of overdig to base of Infiltrator chamber

Infiltrator "Quick-4" Standard LP Chamber



SAS Detail  
(not to scale)

I certify that in the fall of 1997 I was approved by the Mass. Department of Environmental Protection as a Soils Evaluator and that the soils analysis contained herein was performed by me consistent with the training, expertise, and experience described in 310 CMR 15.018(2).



Lot Data:  
Deed: Cert. # 112495 - 9/25/2008  
Hingham Assessors 20/31 - 0.15 acres  
Reference Plan:  
E. W. Branch, C.E., 7/14/1923  
Plan #9564A, Plymouth County Rd

	<b>Revisions:</b> 12/17/2025 - Add ACEC (TM)	Job Reference: <b>Gilford 73</b>
		<b>Proposed Septic System</b> 73 Gilford Road Hingham, Massachusetts
745 Winter Street, Hanson, MA 02341 Thomas F. McSweeney 1994-1977 Brian McSweeney 1983-2015 Terence K. McSweeney 781-826-4571 Colin T. McSweeney 781-570-9381		Job Reference: As Noted Date: 9/18/2025 Drawn By: T McS Checked By: C McS