

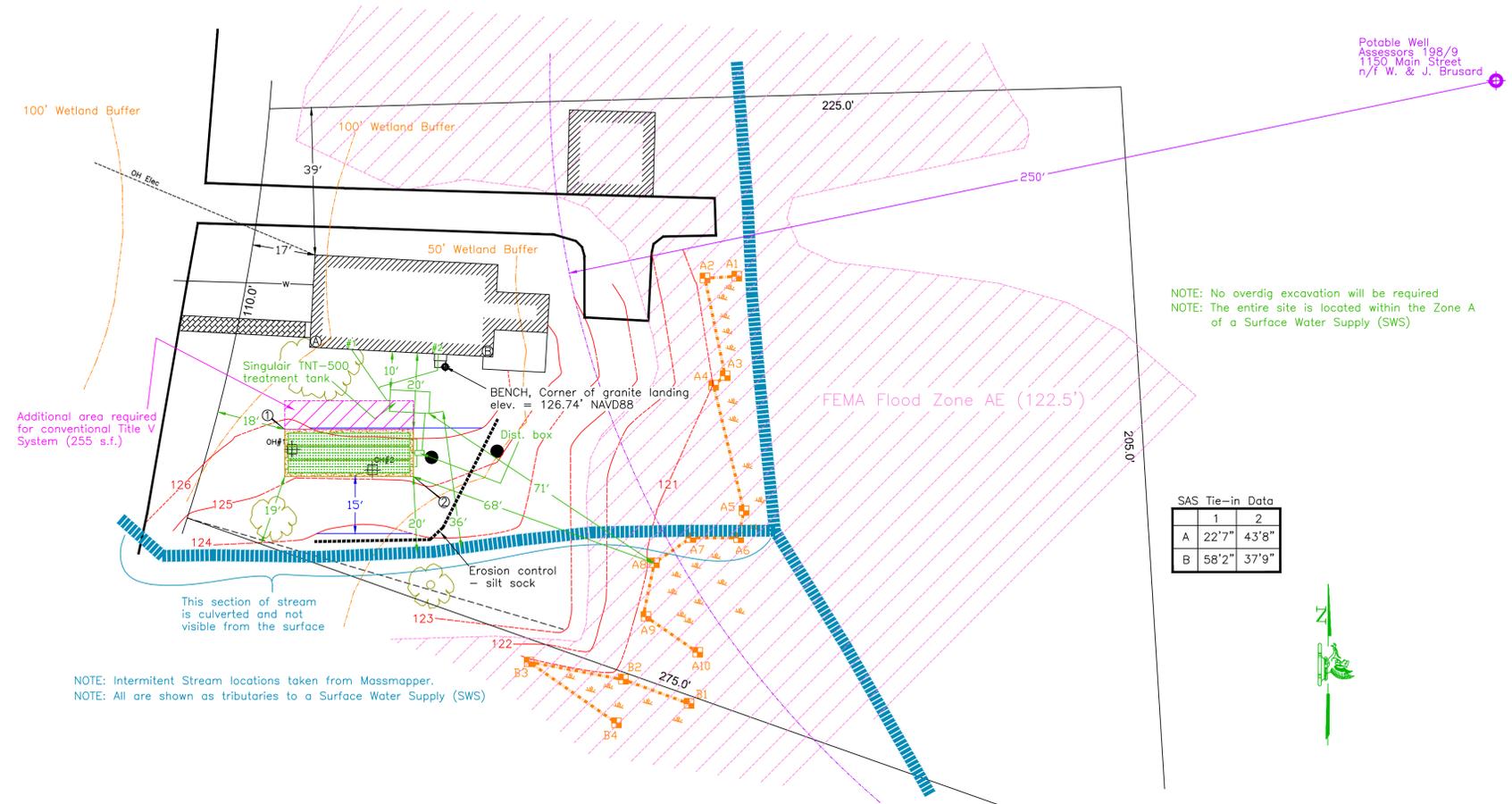
SAS Detail  
(not to scale)

Soil Logs

Observation Hole #1							
Elevation (Feet)	Perk Rate = 8 mpi @ 70"-88"	Soil	Soil	Soil	Soil	Soil	
Depth (inches)	Horizon	Texture	Color	Mottling			
125.7	0-54	Fill					
121.2	54-70	O/A	Sandy Loam	10 YR 3/3	None		
119.9	70-108	C	Loamy Sand*	2.5 Y 5/2	80"	7.5R 5/8	
116.7	Mottled & Water						
* See attached sieve analysis results							

Observation Hole #2							
Elevation (Feet)	Perk Rate =	Soil	Soil	Soil	Soil	Soil	
Depth (inches)	Horizon	Texture	Color	Mottling			
125.2	0-42	Fill					
121.7	42-60	O/A	Sandy Loam	10 YR 3/3	None		
120.2	60-108	C	Loamy Sand*	2.5 Y 5/2	70"	7.5R 5/8	
119.4	Mottled & Water						



SAS Tie-in Data

	1	2
A	22'7"	43'8"
B	58'2"	37'9"

Site Detail Plan  
(1" = 20')

- 98 — Proposed topographic line, with elevation
- 93 - - - Existing topographic line, with elevation
- OH #1 ⊕ = Observation hole, location and designation
- = Existing disposal system
- ⊠ = Wetland flag, McSweeney Associates, Inc., 12/25
- ⊞ = Wetland Resource Area (BWV)
- ▬▬▬▬ = Intermittent Stream (from MassMapper)

Notes:

- On 10/7/2025 soil tests were made, as shown here, by Terence McSweeney, a Massachusetts Department of Environmental Protection (DEP) approved Soils Evaluator, with B. Nees observing for the Board of Health. The logs of these tests are as follows, with location as #1 and #2 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.
- 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.
- Geomat Leaching System to be placed on 6" bed of ASTM C-33 sand. These materials must meet the following sieve specifications:
  - 3/8" sieve 100% passing
  - #4 sieve 95 - 100% passing
  - #8 sieve 85 - 100% passing
  - #16 sieve 50 - 85% passing
  - #30 sieve 25 - 60% passing
  - #50 sieve 10-30% passing
  - #100 sieve 2-10% 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 completed Treatment Plant Permit Application, with fully executed Singulair maintenance agreement, must be provided to the Hingham Board of Health prior to obtaining a Certificate of Compliance.
- A Singulair 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:

- 9 rooms total (4 bedrooms), no disposal
- Est. Day Flow (EDF) = # B.R. x 110 G/Day  
EDF = 440 Gallons per day
- Perk rate = 8 min/inch, Class I soil (Loamy sand in OH-1, C horizon)  
Geomat loading rate with 6" ASTM C33 sand under, Class I soil, 8 m.p.i. perk rate = 1.34 G/D/SF
- Septic Tank = 2 X EDF with 1,500 G minimum  
440 X 2 = 880 Gallons - 1,500 Gallon (minimum allowable)
- Soil Absorption System (SAS)  
Geomat size required = EDF/Loading rate  
(440 G)/(1.34 G/s.f.) = 328 s.f.  
Geomat Leaching System 3900 (1" x 39" w) = 3.42 s.f./l.f.  
328 s.f./3.42 s.f./l.f. = 96 l.f. (required)  
use three rows, each 17' x 39" w x 32' l (96 l.f. provided)  
Minimum sand bed = 440 G/D, with perk rate of 8 m.p.i., Class I soils = 400 s.f. (required)  
Use sand bed 12'5" x 34' (422 s.f. provided)

Proposed:

- Singulair TNT-500 Treatment tank
- Distribution box
- 422 s.f. sand bed (ASTM C-33 sand) - 12'5" w x 34' x 6" d  
96 l.f. Geomat Leaching System 3900, three (3) rows, each 17' x 39" w x 32'

VARIANCES/DIVERGENCES REQUESTED:

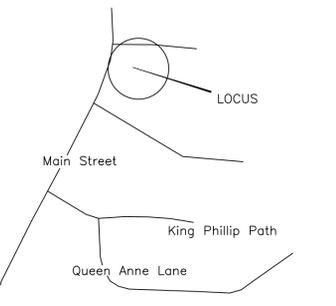
- Town of Hingham, Section VII.E., SDS to wetland setback  
Proposed: 68' Required: 100'
- Town of Hingham, Section VII.J., Thickness of naturally occurring soils under SAS  
Proposed: 0.5' Required: 5.0'
- Town of Hingham, Section VII.M., Construction in fill thickness of naturally occurring, unsaturated, soils under SAS  
Proposed: 0.5' Required: 5.0'
- 310 CMR 15.405(1)(g), SAS to tributary to Surface Water Supply (SWS)  
Proposed: 20' Required: 200'
- 310 CMR 15.405(1)(g), Treatment tank to tributary to Surface Water Supply (SWS)  
Proposed: 36' Required: 200'
- 310 CMR 15.405(1)(g), SAS to wetlands bordering SWS or tributary thereto  
Proposed: 68' Required: 100'
- 310 CMR 15.405(1)(g), Treatment tank to wetlands bordering SWS or tributary thereto  
Proposed: 71' Required: 100'
- 310 CMR 15.405(1)(i), Allow the use of a sieve analysis in place of percolation testing data

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).

I certify that there are no wells known to me, or reported to be within 500 feet of this proposed SAS, other than those shown on this plan. Public water supply wells in the area, location and distance from locus, are shown herein.

Terence McSweeney Date Terence McSweeney, R.S.

Locus Map



Lot Data:  
Deed: 16274/323 - 6/8/1998  
Hingham Assessors Map 198/77 - 38,100 s.f.  
Reference Plan:  
L. W. Perkins, Engr., 4/7/1941  
B: 6 P: 341, Plymouth County RoD



Revisions:


<p>McSweeney Associates, Inc.</p> <p><b>McS</b></p> <p>Environmental Engineering</p>	<p>Proposed Septic System</p> <p>1154 Main Street</p> <p>Hingham, Massachusetts</p> <p>745 Winter Street, Hanson, MA 02341</p> <p>Thomas F. McSweeney 1894-1977</p> <p>Brian McSweeney 1923-2015</p> <p>Terence K. McSweeney 781-826-4571</p> <p>Colin T. McSweeney 781-570-9381</p>	<p>Job Reference: Main1154</p> <p>Scale: As Noted</p> <p>Date: 12/3/2025</p> <p>Drawn By: T McS</p> <p>Checked By: C McS</p>
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