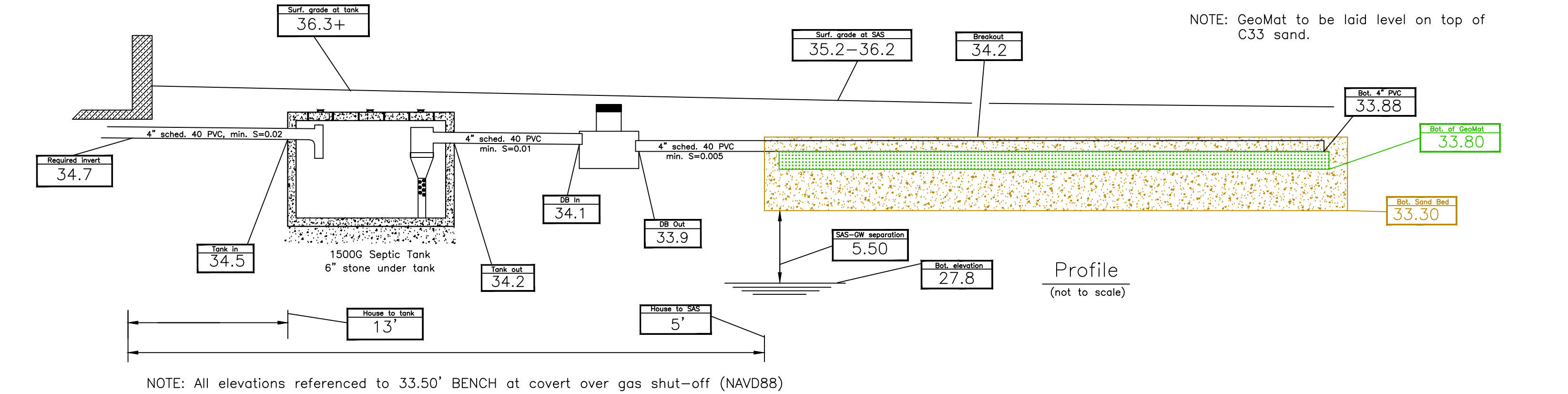




Soil Logs

Elevation (Feet)	Observation Hole #1				
	Perk Rate =	Depth (inches)	Soil Horizon	Soil Texture	Soil Color
34.5	<2 mpi @ 20"-38"	0-12	A	Sandy Loam	10 YR 3/3
33.5		12-110	C1	Coarse Sand	10 YR 6/2
27.8	Mottie	110-112	C2	Sandy Loam	2.5 Y 6/2
25.2					80" 7.5YR 5/8

Elevation (Feet)	Observation Hole #2				
	Perk Rate =	Depth (inches)	Soil Horizon	Soil Texture	Soil Color
34.3	<2 mpi @ 20"-38"	0-12	A	Sandy Loam	10 YR 3/3
33.3		12-100	C1	Coarse Sand	10 YR 6/2
26.6	Mottie				92" 7.5YR 5/8

Calculations:

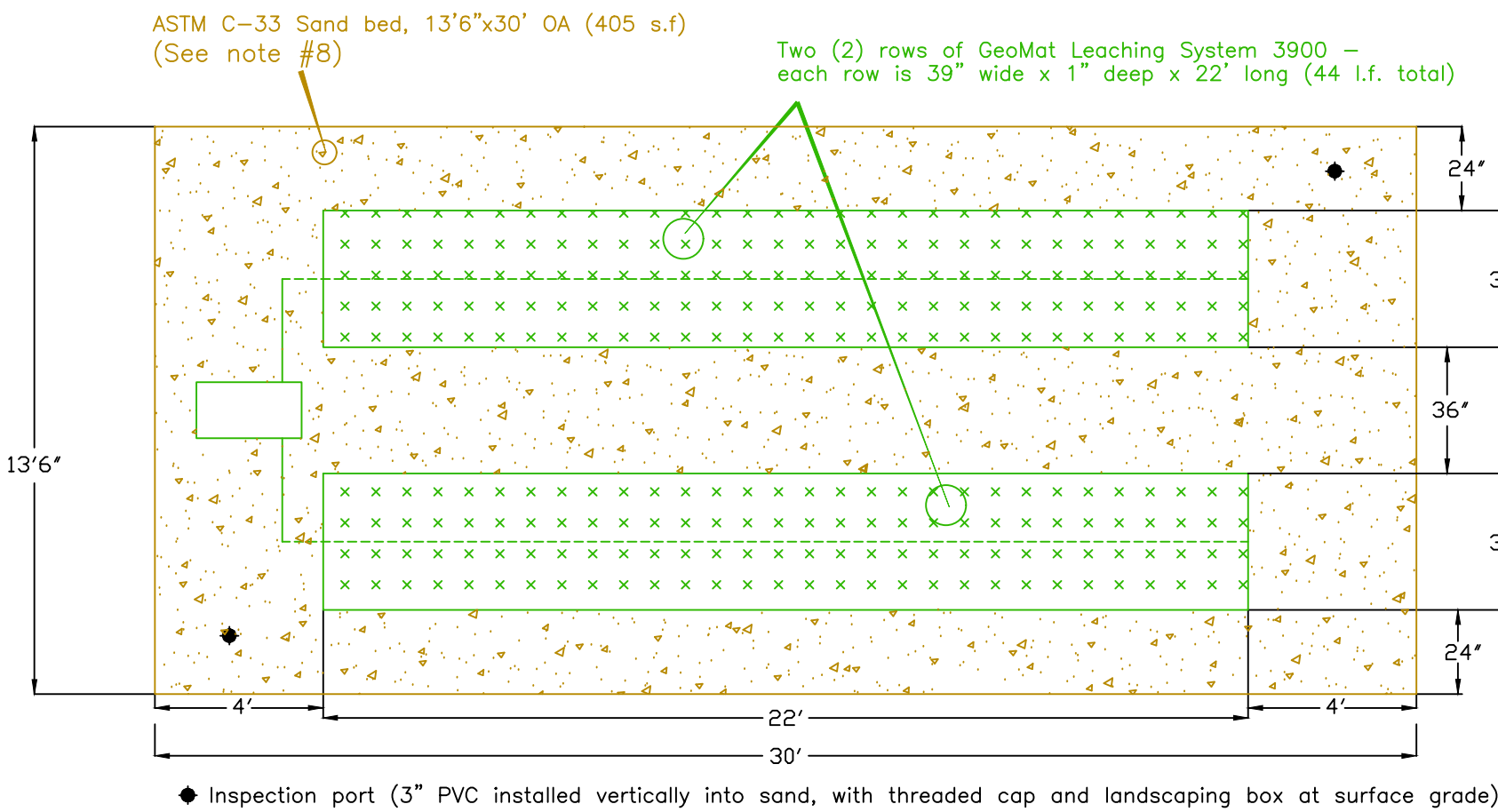
- 1 bedroom, no disposal (min. design standard is 220 G/day - 310 CMR 15.203(2))
The single bedroom in the proposed ADU replaces one bedroom eliminated in the primary dwelling
- Est. Day Flow (EDF) = # B.R. x 110 G/Day
EDF = 220 Gallons per day
- Perk rate = <2 min/inch, Class I soil (Sand in OH-1, C1 horizon)
GeoMat loading rate with 6" ASTM C33 sand under, Class I soil, <2 m.p.i. perk rate = 1.50 G/D/FSF
- Septic Tank - 2 X EDF with 1,500 G minimum
220 X 2 = 440 Gallons - 1,500 Gallon (minimum allowable)
- Soil Absorption System (SAS)
GeoMat size required = EDF/Loading rate
(220 G)/(1.50 G/s.f.) = 147 s.f.
GeoMat Leaching System 3900 (1"dx39"W) = 3.42 s.f./l.f.
147 s.f./3.42 s.f./l.f. = 43 l.f. (required)
Use two rows, each 1" d x 39" w x 22' (44 l.f. provided)
Minimum sand bed = 220 G/D, with perk rate of <2 m.p.i., Class I soils = 400 s.f. (required)
Use sand bed 13'6" w x 30' (405 s.f. provided)

Proposed:

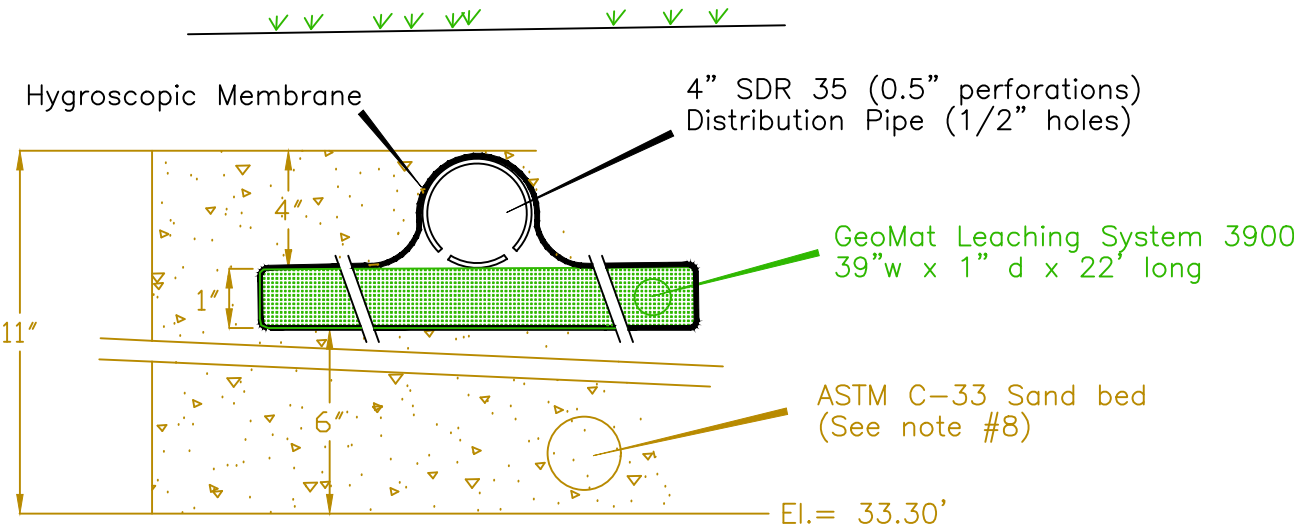
- 1,500 gallon septic tank (H-20 loading)
- Distribution box
- 405 s.f. sand bed (ASTM C-33 sand) - 13'6" w x 30' x 6" d
44 l.f. GeoMat Leaching System 3900, two (2) rows each 39" w x 1" d x 22'

Notes:

- On 6/10/2025 soil tests were made, as shown here, by Terence McSweeney, a Massachusetts Department of Environmental Protection (DEP) approved Soils Evaluator, with P. Brennan 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.



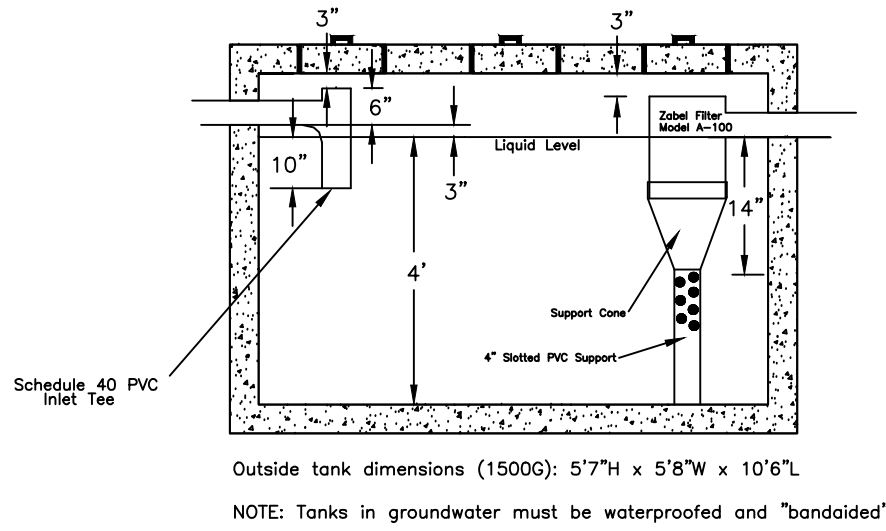
SAS Detail (not to scale)



VARIANCES/DIVERGENCES REQUESTED:

- Town of Hingham, Section VII.J., Thickness of naturally occurring soils under SAS
Existing: 5.5' Required: 6.0'

Tank 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).

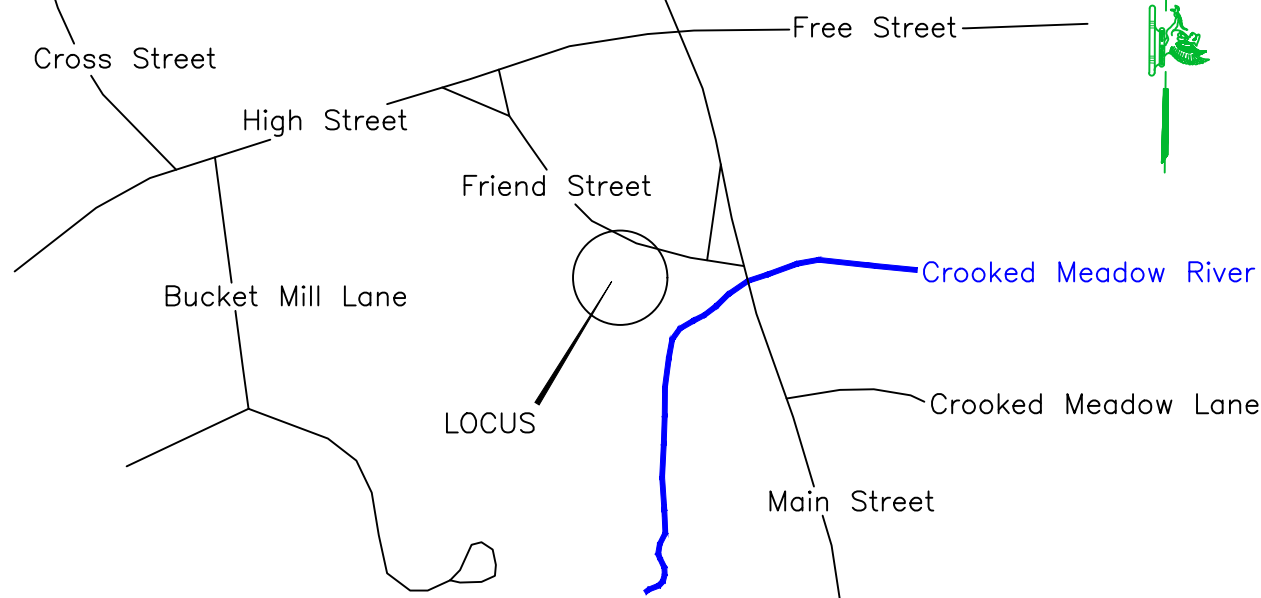
I certify that there are no wells known to me, or reported to be within 500 feet of this proposed SAS, other than those shown on this plan. Public water supply wells in the area, location and distance from locus, are shown herein.

Terence McSweeney

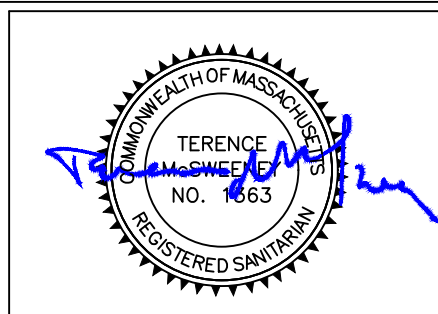
Date

Terence McSweeney, R.S.

Locus Map



Lot Data:
Deed: 50,152/262 - 8/10/2018
Hingham Assessors Map 117/43 - 2.61 acres
Reference Plan:
Hoyt Land Surveying, 3/28/2025



Revisions:

- 1/28/2026 - Swap tank and SAS locations (TM)
- 3/0/2026 - Revise AUD & disturbance area (TM)

McSweeney Associates, Inc.

McS
Environmental
Engineering

Proposed Septic System
10 Friend Street
Hingham, Massachusetts
(Page 1 of 2)

745 Winter Street, Hanson, MA 02341
Thomas F. McSweeney 1984-1977
Brian McSweeney 1983-2015
Terence K. McSweeney 781-826-4571
Colin T. McSweeney 781-570-9381

Job Reference:

Friend 10

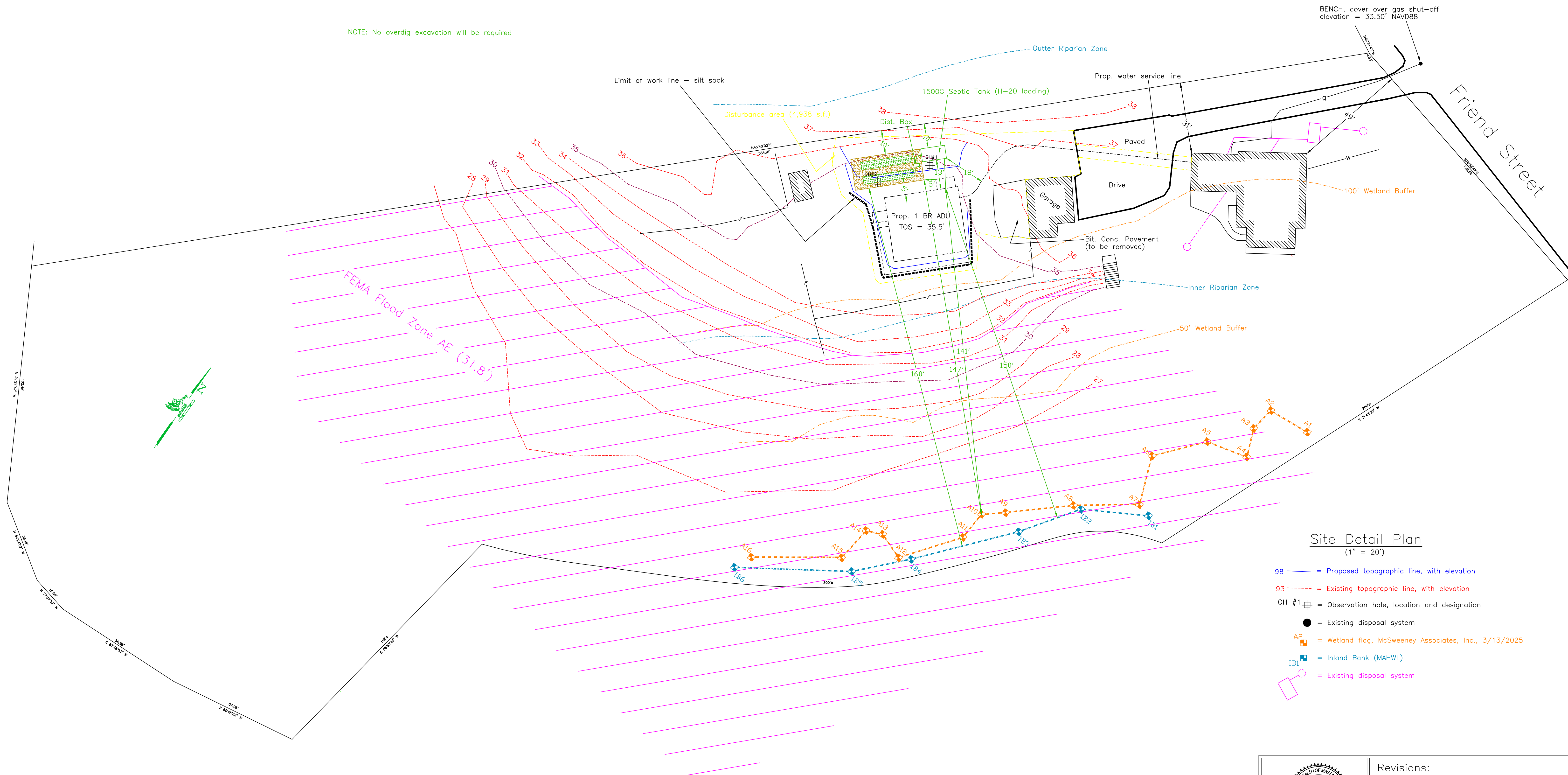
Scale: As Noted

Date: 9/16/2025

Drawn By: T McS

Checked By: C McS

NOTE: No overdig excavation will be required



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
- A1-A6 = Wetland flag, McSweeney Associates, Inc., 3/13/2025
- IB1-IB6 = Inland Bank (MAHWL)
- = Existing disposal system



Revisions:	
1/28/2026	Swap tank and SAS locations (TM)
3/10/2026	Revise AUD and disturbance area (TM)

McS Environmental Engineering	McSweeney Associates, Inc.	Proposed Septic System 10 Friend Street Hingham, Massachusetts (Page 2 of 2)	Job Reference: Friend 10
	745 Winter Street, Hanson, MA 02341	Scale: As Noted	Date: 9/16/2025
	Thomas F. McSweeney 1894-1977 Brian McSweeney 1929-2015 Terence K. McSweeney 781-826-4571 Colin T. McSweeney 781-570-9381	Drawn By: T McS	Checked By: C McS