

NOTE: All elevations referenced to 33.50' BENCH at covert over gas shut-off (NAVD88)

Soil Logs

Observation Hole #1					
Elevation (Feet)	Perk Rate	20" - 38"			
Depth (Inches)	Soil Horizon	Soil Texture	Soil Color	Soil Mottling	
34.5					
33.5	0-12	A	Sandy Loam	10 YR 3/3	None
27.8	12-110	C1	Coarse Sand	10 YR 6/2	None
25.2	110-112	C2	Sandy Loam	2.5 Y 6/2	80" 7.5YR 5/8

Observation Hole #2					
Elevation (Feet)	Perk Rate	20" - 38"			
Depth (Inches)	Soil Horizon	Soil Texture	Soil Color	Soil Mottling	
34.3					
33.3	0-12	A	Sandy Loam	10 YR 3/3	None
26.6	12-100	C1	Coarse Sand	10 YR 6/2	92" 7.5YR 5/8

Calculations:

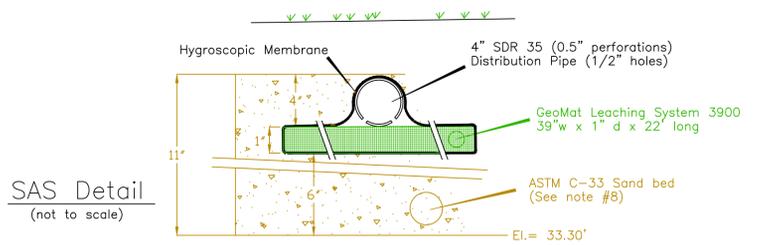
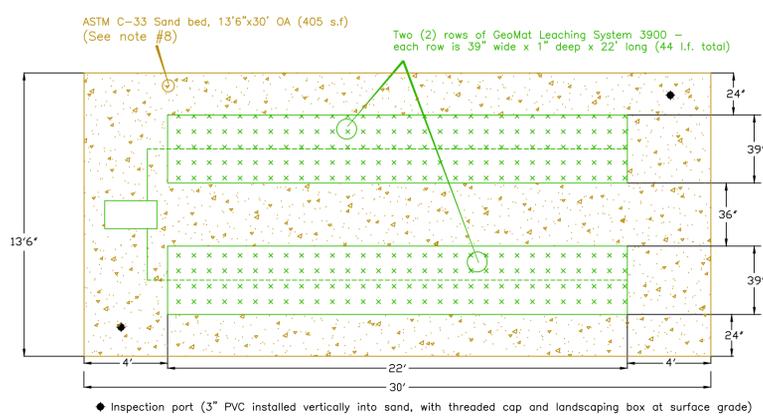
- 1 bedroom, no disposal (min. design standard is 220 G/day - 310 CMR 15.203(2)). The single bedroom in the proposed ADU replaces one bedroom eliminated in the primary dwelling.
- Est. Day Flow (EDF) = # B.R. x 110 G/Day
EDF = 220 Gallons per day
- Perk rate = <2 min/inch, Class I soil (Sand in OH-1, C1 horizon)
GeoMat loading rate with 6" ASTM C-33 sand under, Class I soil, <2 m.p.i. perk rate = 1.50 G/D/SF
- 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 1'2" 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" 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" 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.

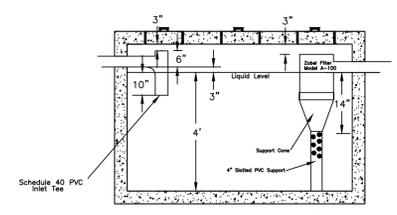


SAS Detail
(not to scale)

VARIANCES/DIVERGENCES REQUESTED:

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

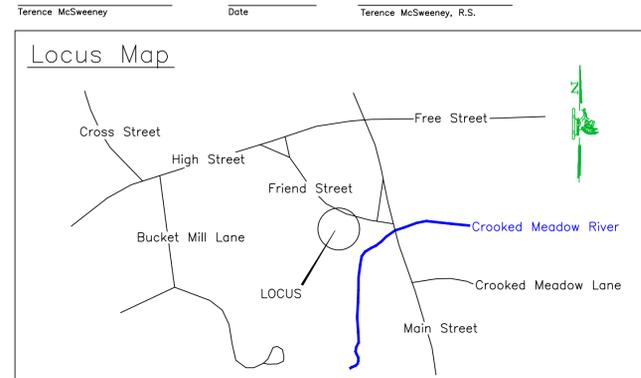
Tank Detail
Not to scale



Outside tank dimensions (1500G): 57"H x 5'8"W x 10'6"L
NOTE: Tanks in groundwater must be waterproofed and "banded"

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.



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)

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 1994-1997
Brian McSweeney 1993-2015
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

BENCH, cover over gas shut-off
elevation = 33.50' NAVD88

Limit of work line - silt sock

Prop. water service line

1500G Septic Tank (H-20 loading)

Dist. Box

Prop. 1 BR ADU
TOS = 35.5'

Garage

Drive

Paved

100' Wetland Buffer

Inner Riparian Zone

50' Wetland Buffer

FEMA Flood Zone AE (31.8')

Friend Street

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
- A2 ⊕ = Wetland flag, McSweeney Associates, Inc., 3/13/2025
- IB1 ⊕ = Inland Bank (MAHWL)
- ⊕ = Existing disposal system



Revisions:	1/28/2026 - Swap tank and SAS locations (TM)

McSweeney Associates, Inc. Environmental Engineering	Proposed Septic System 10 Friend Street Hingham, Massachusetts (Page 2 of 2)	Job Reference: Friend 10
	745 Winter Street, Hanson, MA 02341 Thomas F. McSweeney 1994-1997 Brian McSweeney 1993-2015 Terence K. McSweeney 781-826-4571 Colin T. McSweeney 781-570-9381	Scale: As Noted
		Drawn By: T McS
		Checked By: C McS

LOCUS NOTES:
 CURRENT OWNER
 CHRISTINE CADEGAN REVOCABLE TRUST
 OWNER'S REFERENCE:
 BOOK 50152 PAGE 262
 ASSESSORS REFERENCE:
 MAP 117 LOT 43

LOT AREA:
 112,156 S.F.±
 2.57 AC.±

ZONE:
 RES B

FEMA REFERENCE:
 ZONE X
 ZONE AE 31.8
 FIRM 25023C0084K
 DATED 7-03-24

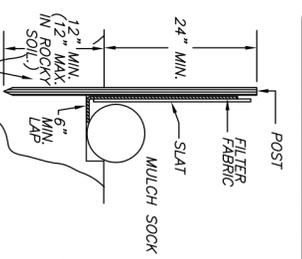
DATUM REFERENCE:
 HORIZONTAL - NAD 83 MASS MAIN 2001
 VERTICAL - NAVD 88

EXISTING SEPTIC NOTE:
 THE LOCATIONS OF EXISTING SEPTIC COMPONENTS AS SHOWN WERE TAKEN FROM RECORDS AVAILABLE WITH THE HINGHAM HEALTH DEPARTMENT AND NOT SURVEYED BY THIS OFFICE. THE LOCATIONS ARE NOT WARRANTED TO BE CORRECT.

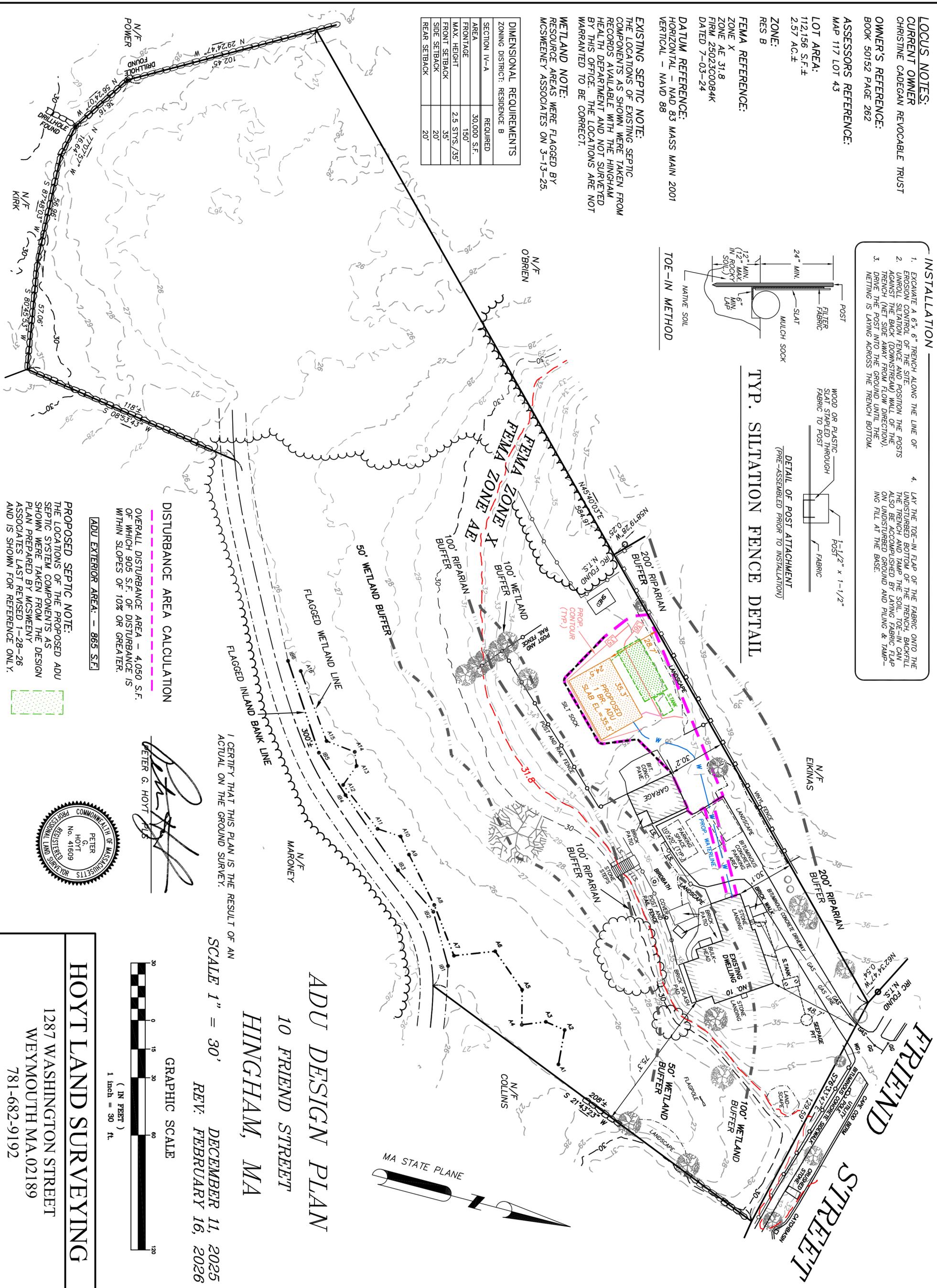
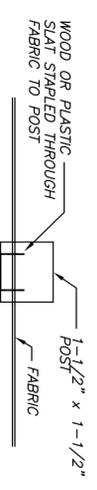
WETLAND NOTE:
 RESOURCE AREAS WERE FLAGGED BY MCSWEENEY ASSOCIATES ON 3-13-25.

DIMENSIONAL REQUIREMENTS	
ZONING DISTRICT: RESIDENCE B	REQUIRED
SECTION IV-A	30,000 S.F.
AREA	150'
FRONTAGE	2.5 STYS./35'
MAX. HEIGHT	35'
FRONT SETBACK	20'
SIDE SETBACK	20'
REAR SETBACK	20'

- INSTALLATION**
1. EXCAVATE A 6"x 6" TRENCH ALONG THE LINE OF EROSION CONTROL OF THE SITE.
 2. UNROLL SILT SOCK TRENCH AND POSITION THE POSTS THROUGH THE SOCK (LOOKING FROM ALLOCATION OF TRENCH LINE SIDE TO THE GROUND UNIT). THE NETTING IS LAYING ACROSS THE TRENCH BOTTOM.
 3. DRIVE THE POST INTO THE GROUND UNTIL THE NETTING IS LAYING ACROSS THE TRENCH BOTTOM.
 4. LAY THE TOE-IN FLAP OF THE FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH. BROOKHILL AND STUBBER USED THE SOILING FABRIC FLAP ON UNDISTURBED GROUND AND FILLING & TAMING ING FILL AT THE BASE.



TYP. SILTATION FENCE DETAIL
 (PRE-ASSEMBLED PRIOR TO INSTALLATION)



DISTURBANCE AREA CALCULATION
 OVERALL DISTURBANCE AREA - 4,050 S.F.
 OF WHICH 905 S.F. OF DISTURBANCE IS WITHIN SLOPES OF 10% OR GREATER.

ADU EXTERIOR AREA: - 865 S.F.

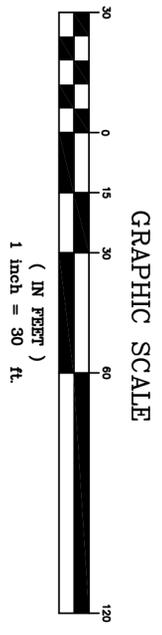
PROPOSED SEPTIC NOTE:
 THE LOCATIONS OF THE PROPOSED ADU SEPTIC SYSTEM COMPONENTS AS SHOWN WERE TAKEN FROM THE DESIGN PLAN PREPARED BY MCSWEENEY ASSOCIATES LAST REVISED 1-28-26 AND IS SHOWN FOR REFERENCE ONLY.

I CERTIFY THAT THIS PLAN IS THE RESULT OF AN ACTUAL ON THE GROUND SURVEY.

PETER G. HOYT
 REGISTERED PROFESSIONAL LAND SURVEYOR



SCALE 1" = 30'
 DECEMBER 11, 2025
 REV. FEBRUARY 16, 2026



ADU DESIGN PLAN
 10 FRIEND STREET
 HINGHAM, MA

HOYT LAND SURVEYING
 1287 WASHINGTON STREET
 WEYMOUTH MA. 02189
 781-682-9192