

SITE NOTES:

- RECORD OWNER: 255 NEWBURY ROAD NOMINEE TRUST, 245 NEWBURY ROAD, ROWLEY, MA 01969, ASSESSOR'S MAP 1, LOT 26, BOOK 13918, PAGE 477
- RECORD PLANS: "PLAN OF LAND IN ROWLEY AND IPSWICH, PROPERTY OF ESTATE OF ROGER K. LEAVITT, SCALE 1" = 60" PREPARED BY ESSEX SURVEY SERVICES, INC., DATED JANUARY 30, 1967, RECORDED WITH THE ESSEX REGISTRY OF DEEDS, PLAN BOOK 123, PLAN 33.
- WETLANDS: WETLAND RESOURCE AREAS WERE DELINEATED BY DEROSA ENVIRONMENTAL CONSULTANTS, INC. IN MAY, 2021.
- WATER SUPPLY: THERE ARE NO KNOWN DRINKING WATER SUPPLY ZONE II'S AND NO KNOWN INTERIM WELLHEAD PROTECTION ZONES ON THE SUBJECT PARCEL BASED ON THE DEPARTMENT OF ENVIRONMENTAL PROTECTION MAPS AND THE PARCEL IS NOT LOCATED WITHIN A NITROGEN SENSITIVE AREA.
- FLOOD PLAIN: THE AREA OF WORK ON THE PROPERTY IS SITUATED IN A ZONE 'X' AS ILLUSTRATED ON THE MOST RECENT FLOOD INSURANCE RATE MAP PANEL 2509C0262F WITH EFFECTIVE DATE OF JULY 3, 2012.
- DATUM: ELEVATION SHOWN HEREON ARE BASED ON AN ASSUMED DATUM.
- ZONING DISTRICT: OUTLYING DISTRICT, WATER PROTECTION DISTRICT

SEPTIC SYSTEM DESIGN DATA:

- BUILDING TYPE: SINGLE FAMILY DWELLING
- NO. OF BEDROOMS: 3 BEDROOMS
- DESIGN FLOW (ROWLEY B.O.H.): 3 X 150 GPD/BEDROOM = 450 GPD
- DESIGN PERCOLATION RATE: CLASS I SOIL, <2 MPI, LTAR = 0.74 GPD/SF
- GARBAGE DISPOSAL: THE SYSTEM IS NOT DESIGNED FOR A GARBAGE GRINDER. USE OF A GARBAGE GRINDER IS NOT PERMITTED.
- SEPTIC TANK DESIGN REQUIREMENT: MIN. 200% DESIGN FLOW (USE 2 COMP. TANK) MIN. 200% DESIGN FLOW FOR FIRST COMPARTMENT = 2 X 450 GPD = 900 GAL. MIN. 100% DESIGN FLOW FOR SECOND COMPARTMENT = 450 GAL. TANK REQUIREMENT = 1,350 GAL. MIN. USE 1,500 GAL 2-COMPARTMENT (MONOLITHIC) SEPTIC TANK (NOTE: MICROFAST 0.5 SYSTEM PROPOSED IN SEPTIC TANK)
- PRIMARY LEACH BED: DESIGN PERCOLATION RATE: CLASS I SOIL, <2 MPI, LTAR = 0.74 GPD/SF DESIGN FLOW (ROWLEY B.O.H.): 3 X 150 GPD/BEDROOM = 450 GPD LEACHING AREA REQUIRED: 450 GPD / 0.74 = 609 SF (REQUIRED) USE 25'x24'-4" LEACH BED: AREA = 609.3 SF, CAPACITY = 450 GAL.
- RESERVE LEACH BED: DESIGN PERCOLATION RATE: CLASS I SOIL, <2 MPI, LTAR = 0.74 GPD/SF DESIGN FLOW (ROWLEY B.O.H.): 3 X 150 GPD/BEDROOM = 450 GPD LEACHING AREA REQUIRED: 450 GPD / 0.74 = 609 SF (REQUIRED) USE 25'x24'-4" LEACH BED: AREA = 609.3 SF, CAPACITY = 450 GAL.

LOCAL B.O.H. VARIANCE REQUESTS

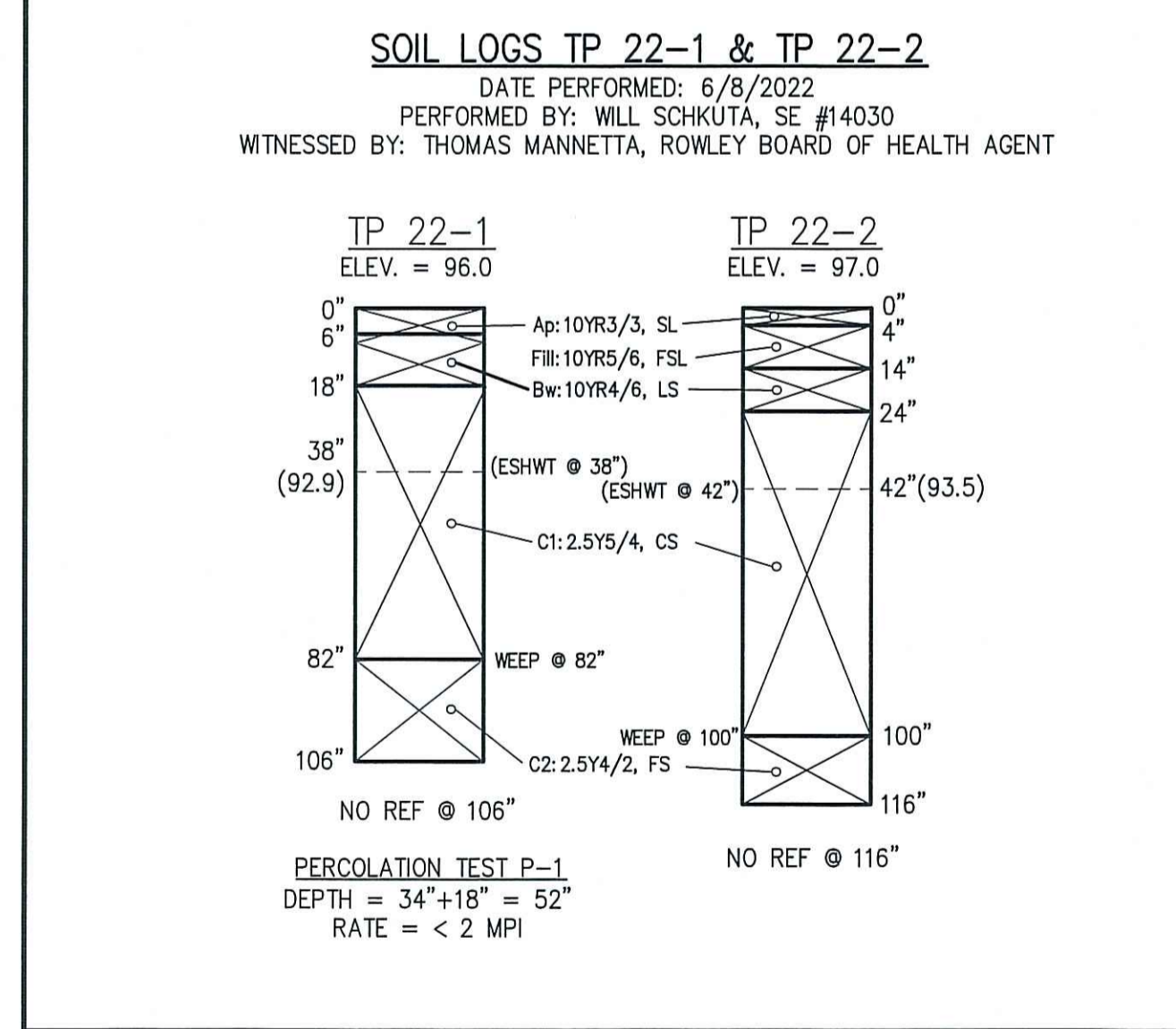
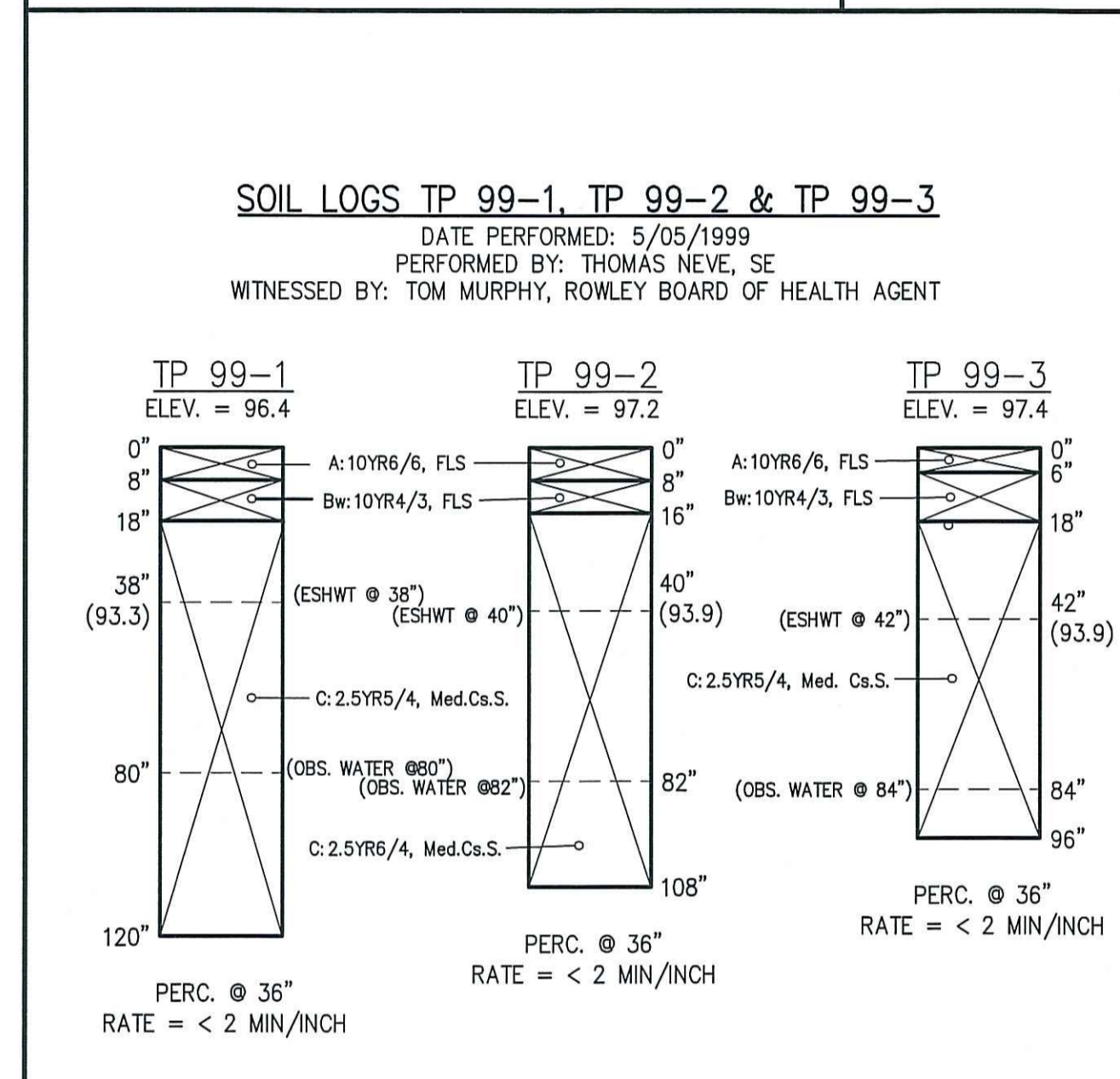
| | LOCAL (BOH) | STATE (TITLE 5) | REQUEST |
|--|-------------|---|---|
| DISTANCE BETWEEN DISPOSAL SYSTEM AND THE LOT LINE (ROWLEY BOARD OF HEALTH REGULATIONS, SECTION 2.1.a) | 30' | 10' | 13' (LEACH BED) 27' (SEPTIC TANK) |
| USE OF RETAINING WALL OR IMPERVIOUS BARRIER TO MITIGATE GRADING REQUIREMENTS ON NEW CONSTRUCTION (ROWLEY BOARD OF HEALTH REGULATIONS, SECTION 2.1.g) | NOT ALLOWED | N/A | ALLOW FOR USE OF RETAINING WALL AND IMPERVIOUS BARRIER |
| SETBACK FROM DISPOSAL SYSTEM TO ANY WETLAND (ROWLEY BOARD OF HEALTH REGULATIONS, SECTION 2.1.b) | 100' | 50' (SOIL ABSORPTION SYSTEM) 25' (SEPTIC TANK) | 72' (SOIL ABSORPTION SYSTEM - PRIMARY) 52' (SOIL ABSORPTION SYSTEM - RESERVE) 57' (SEPTIC TANK) |

SETBACK CERTIFICATIONS:

- NO PART OF THE PROPOSED SEPTIC SYSTEM LIES WITHIN AN AREA NOTED BY DEP AS AN ESTIMATED SETBACK AREA FOR TITLE 5.
- THERE ARE NO KNOWN WELLS WITHIN 100' OF THE PROPOSED LEACHING FACILITY.
- DISTANCE TO MILL RIVER = 5,200'±
- DISTANCE TO ZONE II = 500'±
- NO TRIBUTARIES TO SURFACE WATER SUPPLIES EXIST WITHIN 200' OF THE PROPOSED SEPTIC TANK OR S.A.S.
- THERE ARE NO OTHER LEACHING FACILITIES WITHIN 75' OF THE PROPOSED LEACHING FACILITY.

The Morin-Cameron GROUP, INC.
 CIVIL ENGINEERS / ENVIRONMENTAL CONSULTANTS
 LAND SURVEYORS / LAND USE PLANNERS
 66 ELM STREET, DANVERS, MASSACHUSETTS 01923
 P: 978-777-8586, W: WWW.MORINCAMERON.COM

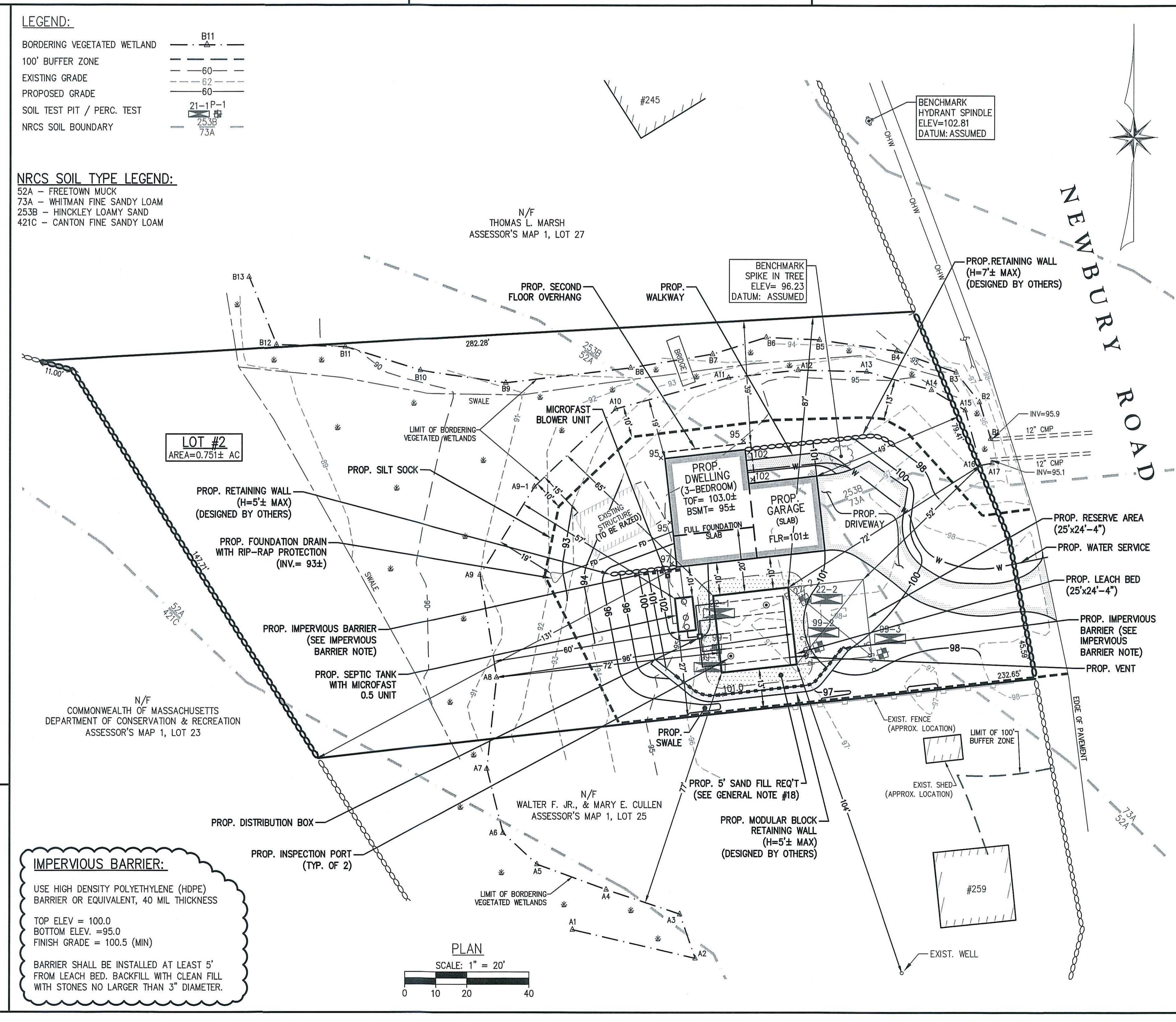
JOHN MORIN
 CIVIL ENGINEER
 No. 9886
 COMMONWEALTH OF MASSACHUSETTS
 PROFESSIONAL REGISTRATION
 5/23/23



PROPOSED IMPERVIOUS AREA CALCULATION:

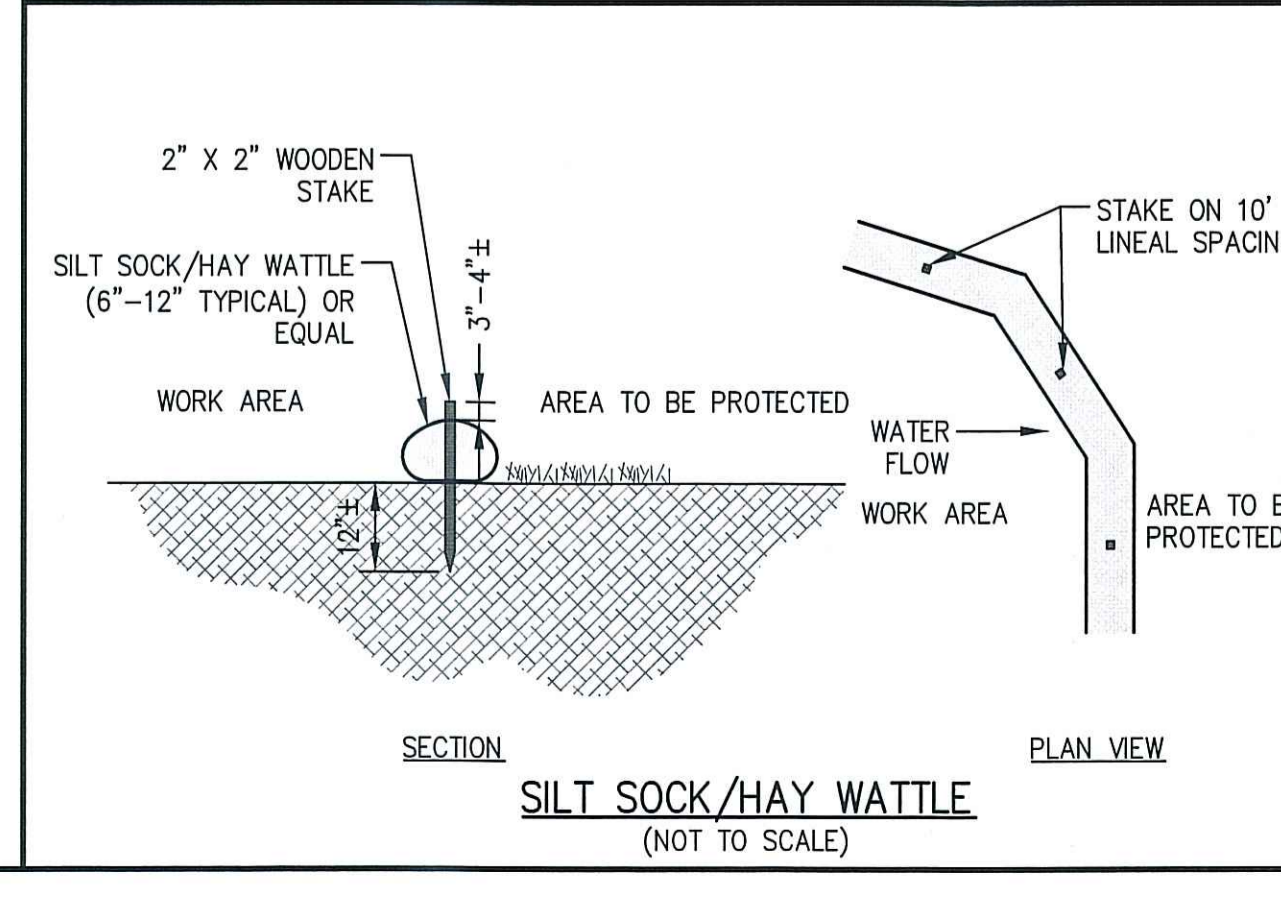
DWELLING = 1,520 SF
 DRIVEWAY = 1,200 SF
 WALKWAY = 125 SF
 RETAINING WALL = 195 SF

TOTAL = 3,040 SF (9.3% OF LOT AREA)



GENERAL NOTES:

- THIS PLAN IS TO SHOW THE DESIGN OF THE SUBSURFACE SEWAGE DISPOSAL SYSTEM ONLY. THE SYSTEM IS DESIGNED FOR FLOWS ESTIMATED UNDER DESIGN CRITERIA.
- SYSTEM IS DESIGNED ONLY TO ACCOMMODATE SANITARY SEWAGE ASSOCIATED WITH NORMAL DOMESTIC USAGE AND CONSISTING OF WATER-CARRIED PUTRESCIBLE WASTE.
- THE SYSTEM IS NOT DESIGNED FOR A GARBAGE GRINDER. USE OF A GARBAGE GRINDER IS NOT PERMITTED.
- THE PLAN SHOWS ONLY THOSE FEATURES THAT WERE VISUALLY APPARENT ON DATE OF THE TOPOGRAPHY.
- THE INSTALLER OF THIS SYSTEM MUST BE LICENSED BY THE LOCAL BOARD OF HEALTH FOR INSTALLATION OF THE LEACHING FACILITY.
- THERE ARE NO KNOWN POTABLE WELLS WITHIN 100 FEET OF THE PROPOSED LEACHING FACILITY.
- DISPOSAL SYSTEM AREAS ARE TO BE RAKED (SCARIFIED) BEFORE INSTALLATION OF STONE. ALL STONES EXCEEDING 2 INCHES IN EXCAVATION ARE TO BE REMOVED FROM THE LEACHING AREA BED.
- FINISHED SURFACE OF THE LEACHING AREA SHALL BE GRADED TO ASSURE WATER RUNOFF (2% MINIMUM SLOPE).
- ALL DISTURBED AREAS TO BE LOAMED, SEEDED, AND MAINTAINED TO PREVENT EROSION.
- THE SEPTIC TANK SHOULD BE PERIODICALLY INSPECTED AND MAINTAINED AND SHOULD BE PUMPED WHEN THE SLUDGE IN THE BOTTOM EXCEEDS 1/4 OF THE DEPTH.
- ALTERNATE MANUFACTURERS FOR CONCRETE STRUCTURES AND EQUIPMENT SHOWN ON THESE PLANS MAY BE USED UPON THE WRITTEN APPROVAL OF THE DESIGN ENGINEER. ALTERNATE MANUFACTURERS WILL NOT BE USED IF THE USE OF THEIR EQUIPMENT REQUIRES DESIGN CHANGES.
- NO CHANGES ARE TO BE MADE IN THE FIELD WITHOUT THE APPROVAL OF THE BOARD OF HEALTH OR ITS DESIGNEE AND THE DESIGN ENGINEER.
- ALL WORK IS TO COMPLY WITH THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION AGENCY STATE SANITARY CODE, TITLE 5 AND ANY LOCAL BOARD OF HEALTH SUPPLEMENTARY REGULATIONS.
- THE LOCAL BOARD OF HEALTH AGENT WILL CONDUCT PERIODIC INSPECTIONS AS NEEDED.
- THESE PLANS AND SPECIFICATIONS ARE INTENDED TO BE EXPLANATORY OF THE WORK TO BE DONE AND OF EACH OTHER, BUT SHOULD ANY OMISSION, ERRORS, OR DISCREPANCIES APPEAR, THEY SHALL BE SUBJECT TO CORRECTION AND INTERPRETATION BY THE DESIGN ENGINEER THEREBY DEFINING AND FULFILLING THE INTENT OF THE PLANS. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO INSTALLATIONS.
- ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE IN ACCORDANCE WITH 310 CMR 15.221(12).
- UNDERGROUND UTILITY INFORMATION AND LOCATIONS WERE NOT AVAILABLE AT THE TIME OF SURVEY. LOCATIONS OF ALL UTILITIES SHOULD BE CONFIRMED WITH THE UTILITY PROVIDER PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DISSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- FILL REQUIREMENT: REMOVE TOPSOIL, FILL AND SUBSOIL FOR A DISTANCE OF 5 FEET BEYOND THE LEACHING FACILITY. REPLACE WITH FILL AS SPECIFIED IN 310 CMR 15.000, "TITLE 5" SECTION 15.255 (3). FOR THE BOUNDARY OF THE SAND FILL REQUIREMENT, SEE PLAN VIEW, CROSS-HATCHED AREA ON SYSTEM PROFILE. A SIEVE ANALYSIS SHALL BE PERFORMED ON THE FILL MATERIAL TO BE USED. A COPY OF THE SIEVE ANALYSIS RESULTS SHALL BE SUBMITTED TO THE BOARD OF HEALTH.



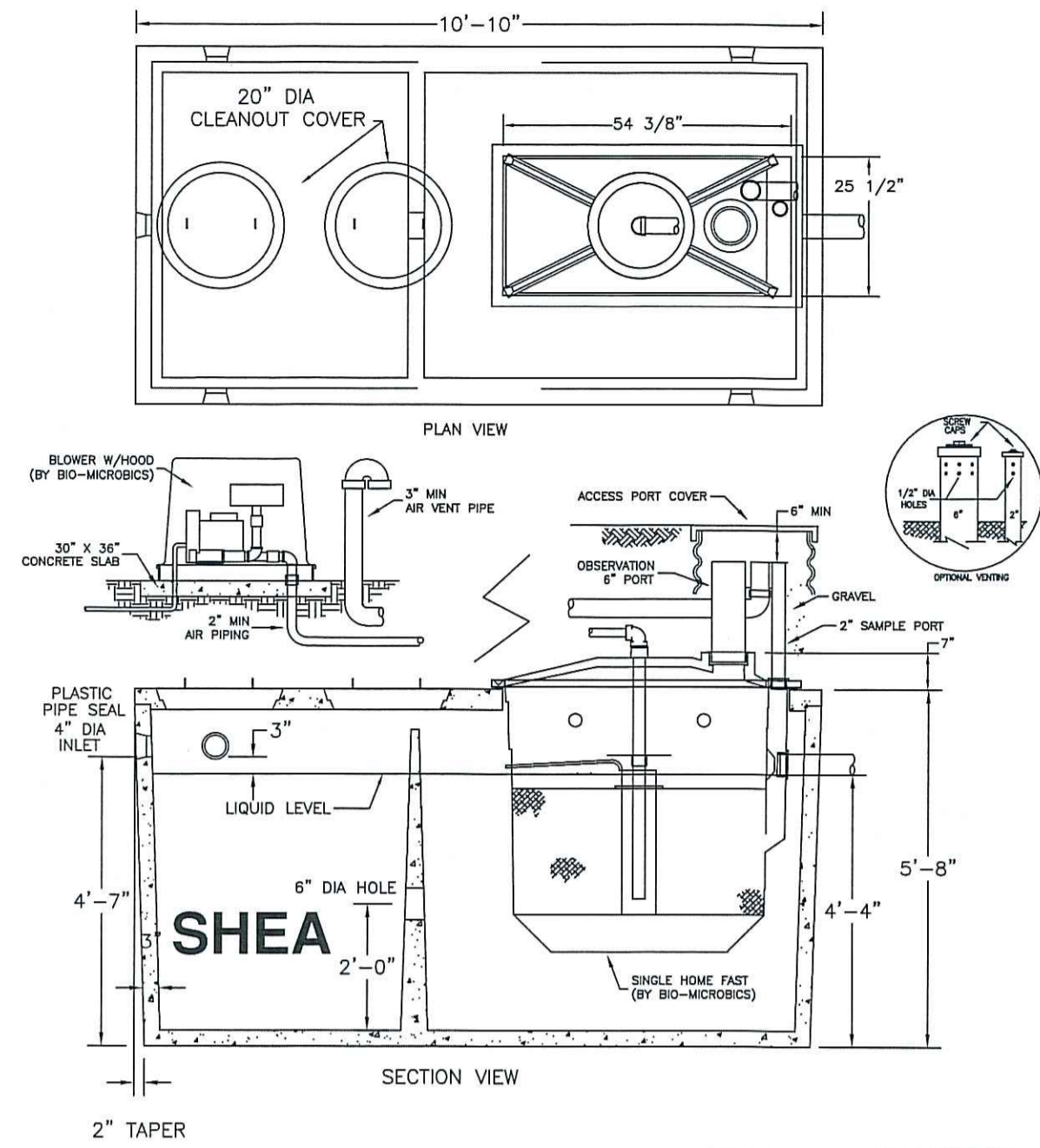
SANITARY DISPOSAL SYSTEM DESIGN PLAN
 IN
ROWLEY, MASSACHUSETTS
255 NEWBURY ROAD
 (ASSESSOR'S MAP 1, LOT 26)
 PREPARED FOR:
255 NEWBURY ROAD NOMINEE TRUST

DRAWING NO. **S - 1807**
 SHEET NO. **1 OF 2**

REVISIONS

| NO. | DESCRIPTION | DATE |
|-----|---|-----------|
| 1 | MODIFY LEACH BEDS AND ADD P.A.S.T. UNIT | 5-16-2023 |
| 2 | ADD ADDITIONAL IMPERVIOUS BARRIER | 5-23-2023 |

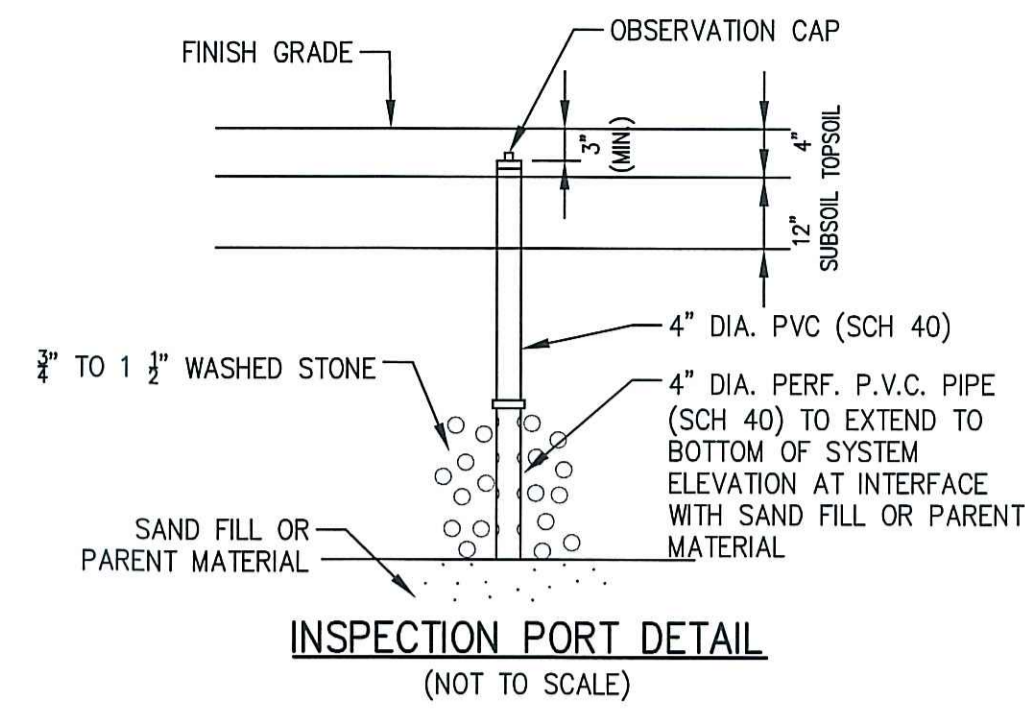
DATE: OCTOBER 24, 2022



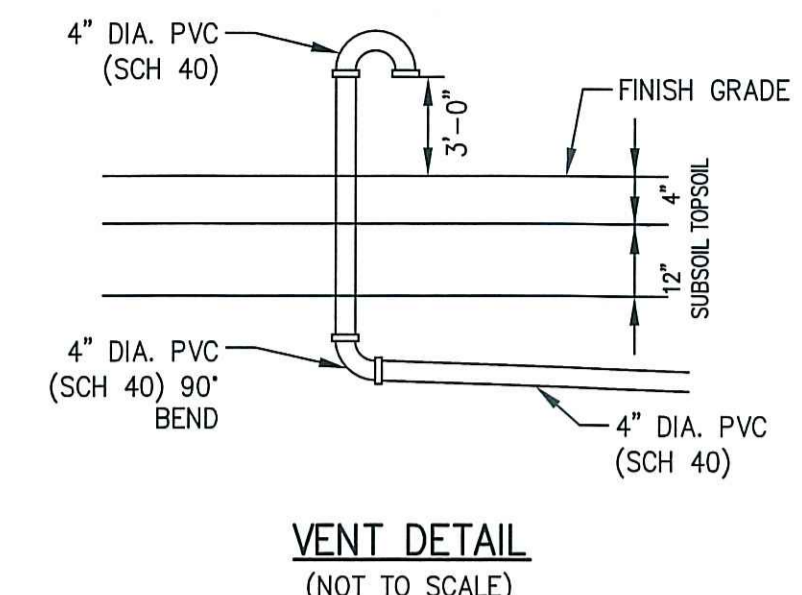
- NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
 2. DESIGN CONFORMS WITH 310 CMR 15.00, DEP TITLE 5 REGS, FOR ALTERNATIVE SEPTIC SYSTEMS.
 3. ALL REINFORCEMENT PER ASTM C1227-93.
 4. CAPACITY: 500 GPD (MICROFAST .9 (900GPD) AVAILABLE).
 5. TONGUE & GROOVE JOINT SEALED WITH BUTYLE RESIN.
 6. BLOWER MUST BE WITHIN 100FT OF FAST UNIT, LOCATED ABOVE GRADE HIGHER THAN FAST UNIT.

ITEM NO 1500MCF51 11,900#

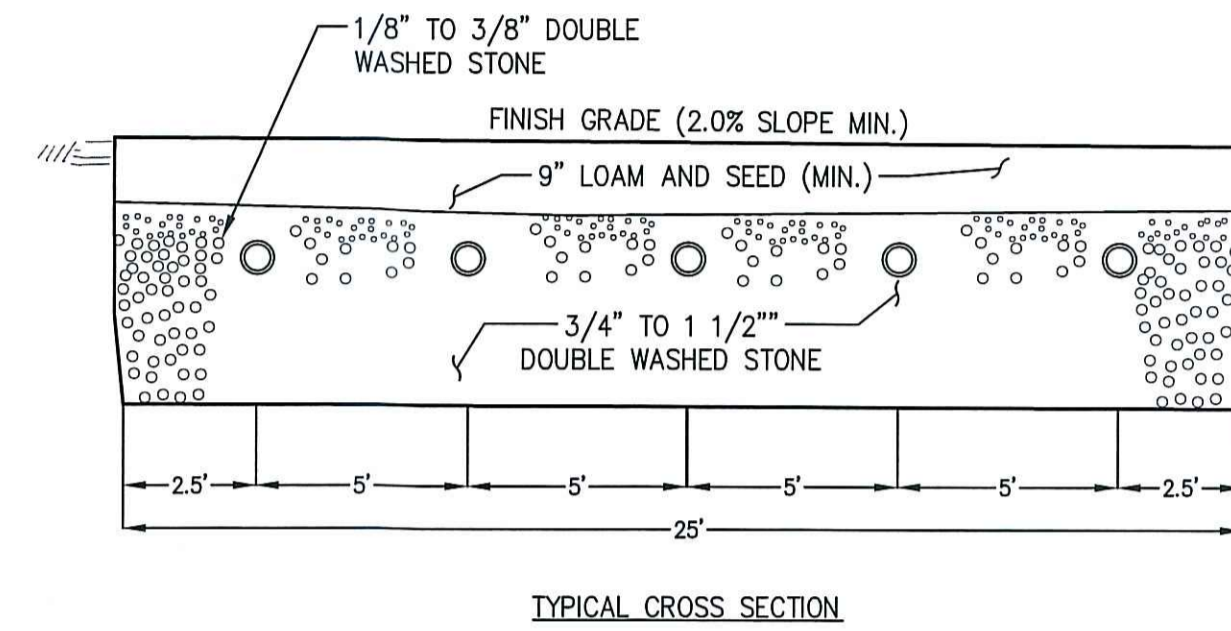
1,500 GAL. 2-COMPARTMENT SEPTIC TANK WITH MICROFAST 0.5 UNIT
(NOT TO SCALE)



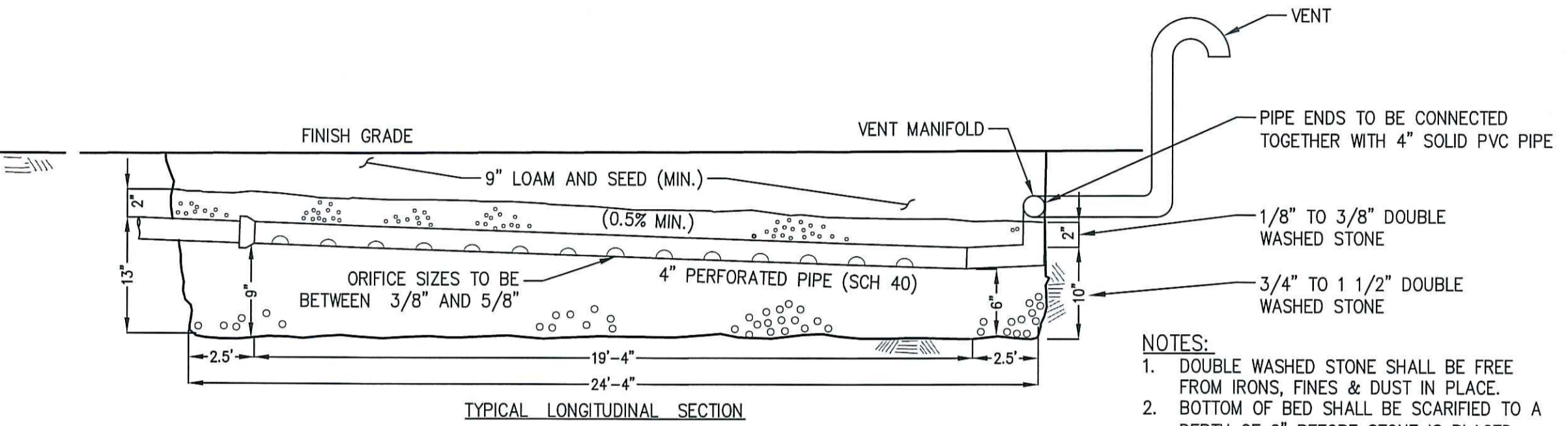
INSPECTION PORT DETAIL
(NOT TO SCALE)



VENT DETAIL
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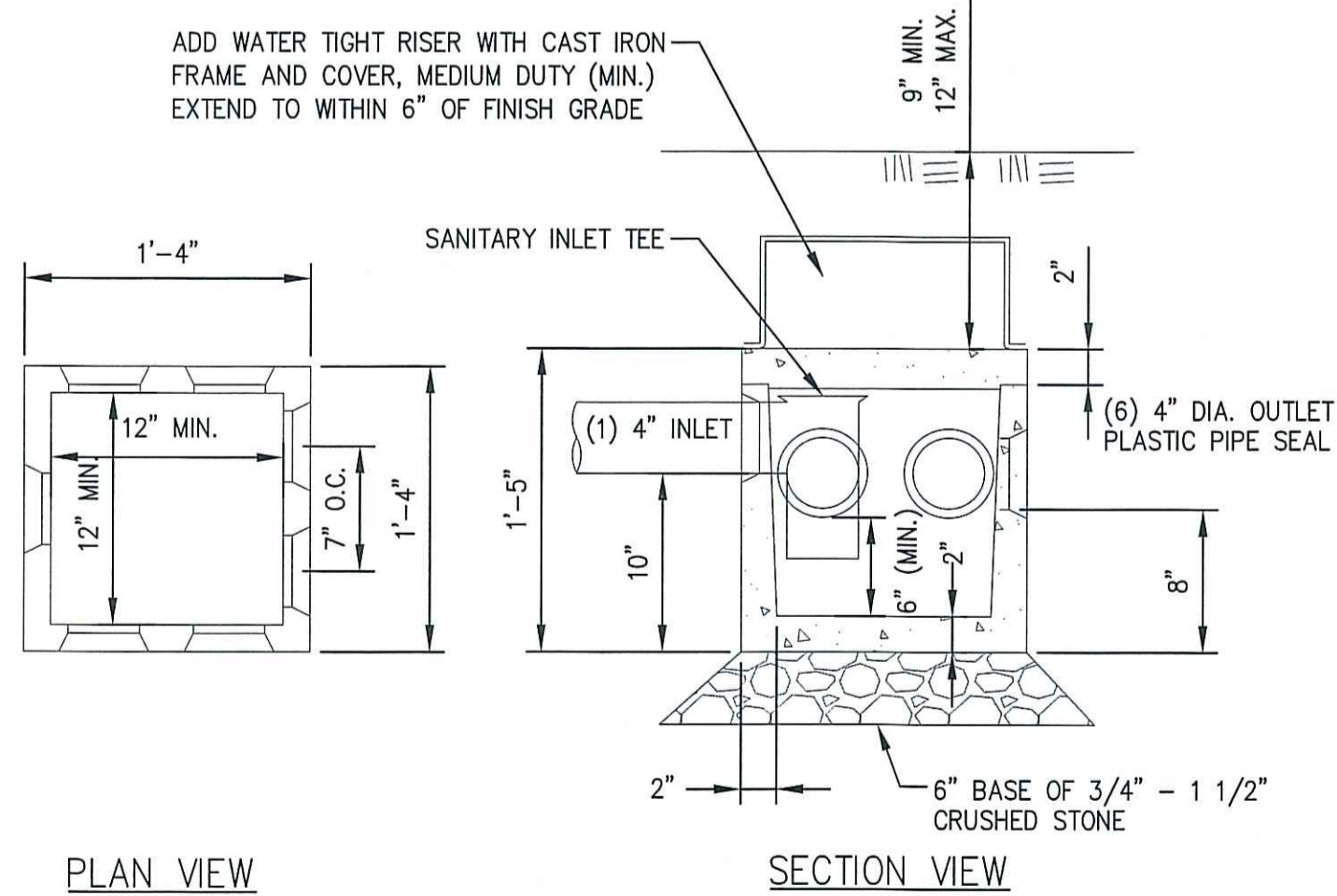


TYPICAL CROSS SECTION



LEACH BED (25' X 24'-4" PRIMARY)
(NOT TO SCALE)

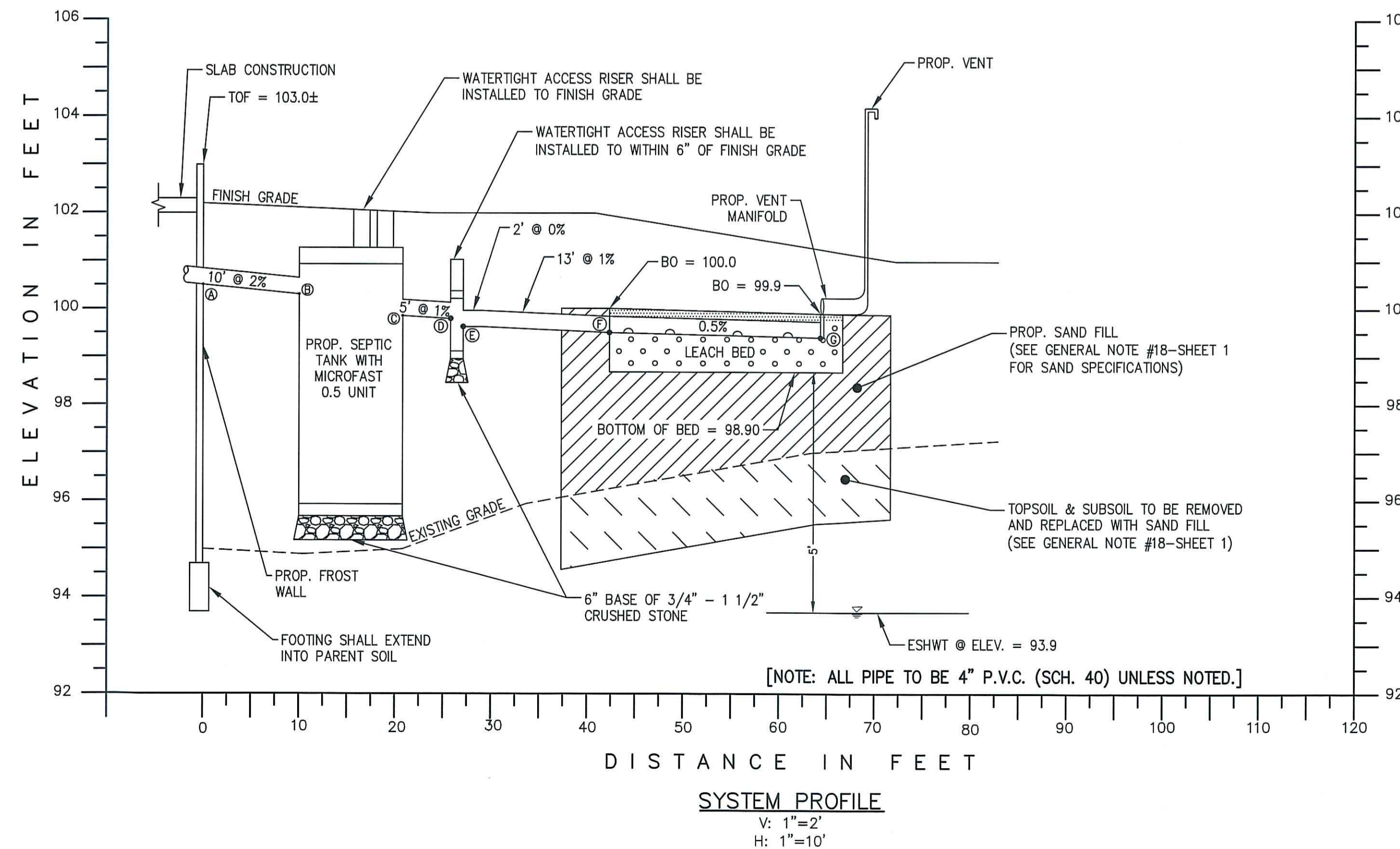
- NOTES:
1. DOUBLE WASHED STONE SHALL BE FREE FROM IRONS, FINES & DUST IN PLACE.
 2. BOTTOM OF BED SHALL BE SCARIFIED TO A DEPTH OF 6" BEFORE STONE IS PLACED.
 3. ALL PIPING TO BE 4" PVC (SCH 40) OR EQUIVALENT.



| SHEA CONCRETE ITEM NO. | WEIGHT |
|------------------------|--------|
| B-6DB W/COVER | 226# |
| B-6DBC COVER ONLY | 45# |

- NOTES:
1. ANY UNUSED CUT OUTS SHALL BE PERMANENTLY SEALED AND SHALL BE WATER TIGHT.
 2. INLET AND OUTLET PIPE WALL PENETRATIONS SHALL BE MADE WATER TIGHT WITH NON-SHRINK GROUT OR OTHER CONNECTION AS REQUIRED FOR SEPTIC TANKS.

6-OUTLET DISTRIBUTION BOX:
(NOT TO SCALE)



SCHEDULE OF INVERTS

- Ⓐ INV. @ FROST WALL = 100.31
- Ⓑ SEPTIC TANK IN = 100.11
- Ⓒ SEPTIC TANK OUT = 99.86
- Ⓓ D-BOX IN = 99.81
- Ⓔ D-BOX OUT = 99.64
- Ⓕ INV. LEACHING BED START = 99.51
- Ⓖ INV. LEACHING BED END = 99.40

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