

GENERAL NOTES:

- THIS PLAN IS NOT REPRESENTATIVE OF BOUNDARY SURVEY. IF PROPERTY LINES ARE IN QUESTION, THE PROPERTY IS TO BE SURVEYED BY A P.L.S.
- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH 310CMR 15, TITLE 5 OF THE STATE ENVIRONMENTAL CODE AND THE LOCAL BOARD OF HEALTH REGULATIONS.
- NO WORK SHALL BE CONDUCTED UNTIL ALL NECESSARY PERMITS ARE OBTAINED.
- THE SEPTIC SYSTEM SHALL BE INSTALLED BY A CONTRACTOR LICENSED IN THE LOCAL MUNICIPALITY.
- THIS PLAN IS INTENDED FOR THE INSTALLATION OF THE SEWAGE DISPOSAL SYSTEM ONLY. PROPERTY LINES SHALL BE CONSIDERED APPROXIMATE AND SHALL NOT BE USED FOR THE LOCATION OF STRUCTURES, FENCES OR OTHER PROPERTY LINE OFFSETS.
- NO CHANGES SHALL BE MADE TO THE APPROVED PLAN WITHOUT PRIOR APPROVAL OF THE BOARD OF HEALTH AND THE ENGINEER.
- EXISTING CONDITIONS SHOWN HEREON WERE COLLECTED AND DRAFTED BY CHONGRIS ENGINEERING IN OCTOBER 2023.
- WETLANDS WERE DELINEATED BY GODDARD CONSULTING IN NOVEMBER 2023.
- ELEVATIONS SHOWN HEREON ARE REFERENCED TO AN ASSUMED DATUM.

SOIL EVALUATION:

TP-1	Ap	L.S.	10YR3/2	0-12"	NO REDOX
	Bw	M.C-S	10YR6/6	12-42"	
	C	M.C-S	5Y6/3	42-105"	
TP-2	Ap	L.S.	10YR3/2	0-12"	NO REDOX
	Bw	M.C-S	10YR6/6	12-40"	
	C	M.C-S	5Y6/3	40-110"	

ESHGW 36" BELOW GRADE

P-1 AT TP-1 TEST DATE: 10/28/23
DEPTH: 45" EVALUATOR: ALEKSANDR CHONGRIS
RATE: 3 MP SE#14554 (9/14/21, EXP. 10/1/24)
INSPECTOR: KENDELL LONGO

I CERTIFY THAT I AM CURRENTLY APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION PURSUANT TO 310 CMR 15.07 TO SIGN AND SEAL THIS PLAN AND THAT THE TRAINING, EXPERIENCE, AND EXPERIENCE DESCRIBED IN 310 CMR 15.07 FURTHER CERTIFY THAT I AM QUALIFIED TO PREPARE THIS PLAN AND THAT THE ATTACHED SOIL EVALUATION FORMS ARE ACCURATE AND IN ACCORDANCE WITH 310 CMR 15.100 THROUGH 15.107.

SIGNATURE: _____ DATE: _____

DESIGN NOTES & DATA

THE DESIGN OF THE S.A.S. SYSTEM FOLLOWS THE STATE ENVIRONMENTAL CODE, TITLE 5, 310 CMR 15.000

DESIGN PARAMETERS (UPGRADE)

- 3 BEDROOM HOUSE
- DESIGN FLOW (DF) = 330 GPD (TITLE 5)
- DESIGN FLOW (DF) = 495 GPD (LOCAL REG)
- CLASS (LOAMY SAND)
- LOADING RATE = 0.74 GPD/SQ. FT

SIZING OF SEPTIC TANK:

- DETENTION TIME
- 200% x 330 GPD = 660 GPD (TITLE 5)
- D1(C1) = 48 HR CAP. = 2' x DF = 660 GAL. (MIN)
- D1(C2) = 24 HR CAP. = 1' x DF = 330 GAL. (MIN)

USE SHEA CONCRETE 1500 GAL 2 COMP. MONOLITHIC TANK

SIZING OF SOIL ABSORPTION SYSTEM:

CONVENTIONAL SOIL ABSORPTION SYSTEM AREA REQUIRED: AREA: (495 GPD) / (0.74 GPD/SQ) = 669 SF

CONVENTIONAL SAS BED AREA = 20 FT x 35 FT = 700 SF

GARBAGE DISPOSAL SYSTEM IS NOT INCORPORATED FOR THE DESIGN OF THIS SEPTIC SYSTEM AND MAY NOT BE USED.

SPECIFICATIONS:

GENERAL/ALL COMPONENTS

- ALL PIPING SHALL BE 4" SCH 40 PVC.
- BUILDING SEWER SHALL BE IN ACCORDANCE WITH THE PLUMBING CODE, ABSORB 20.
- ALL JOINTS SHALL BE WATERTIGHT.
- IN ACCORDANCE WITH 310CMR15.221 ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.

COVERS/RISERS

- RISERS SHALL BE AFFIXED TO ANY SYSTEM COMPONENT WITH A DEPTH GREATER THAN 6" BRINGING ACCESS TO A POINT 6" OR LESS FROM FINAL GRADE ELEVATION.
- ALL ACCESS COVERS AT THE SURFACE SHALL BE STEEL FRAME AND COVER.
- COVERS SHALL BE OF SUFFICIENT WEIGHT OR OTHERWISE BE SECURED TO PREVENT UNAUTHORIZED OPENING.
- RISERS MAY BE PLASTIC OR CONCRETE.

GRAVITY SEWER

- ALL PIPING SHALL BE A MIN. SCH 40 PVC OR EQUAL.
- STATE PLUMBING CODES SHALL SUPERSEDE THE REQUIREMENT AS NECESSARY.
- BUILDING SEWER SHALL BE SLOPED AT 1% - 2% FROM TIE-IN POINT TO ST INVERT IN.
- PROPOSED BUILDING SEWER PIPE SHALL TIE INTO SCH 40 PVC OR CAST IRON.

SEPTIC TANK

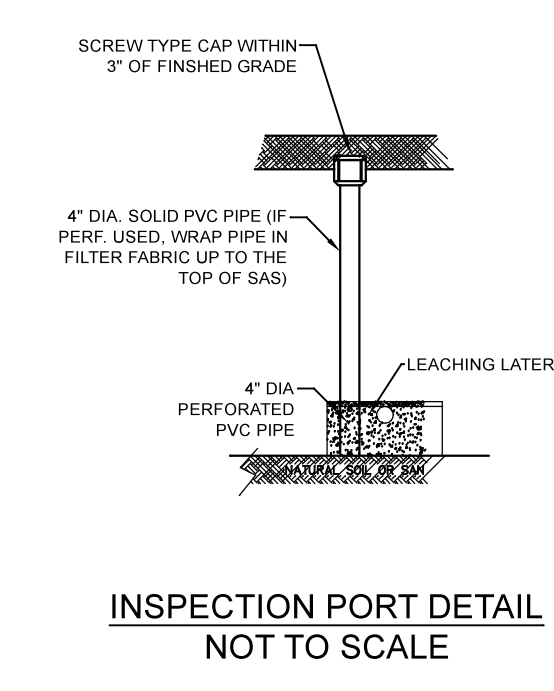
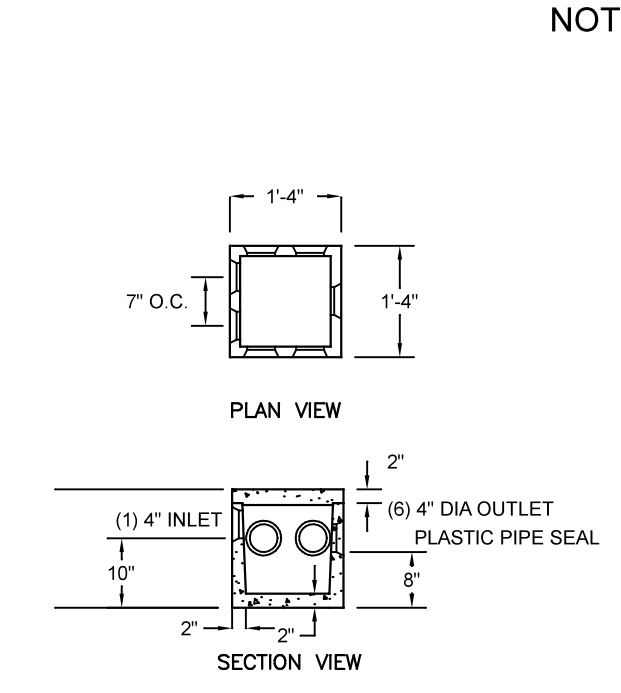
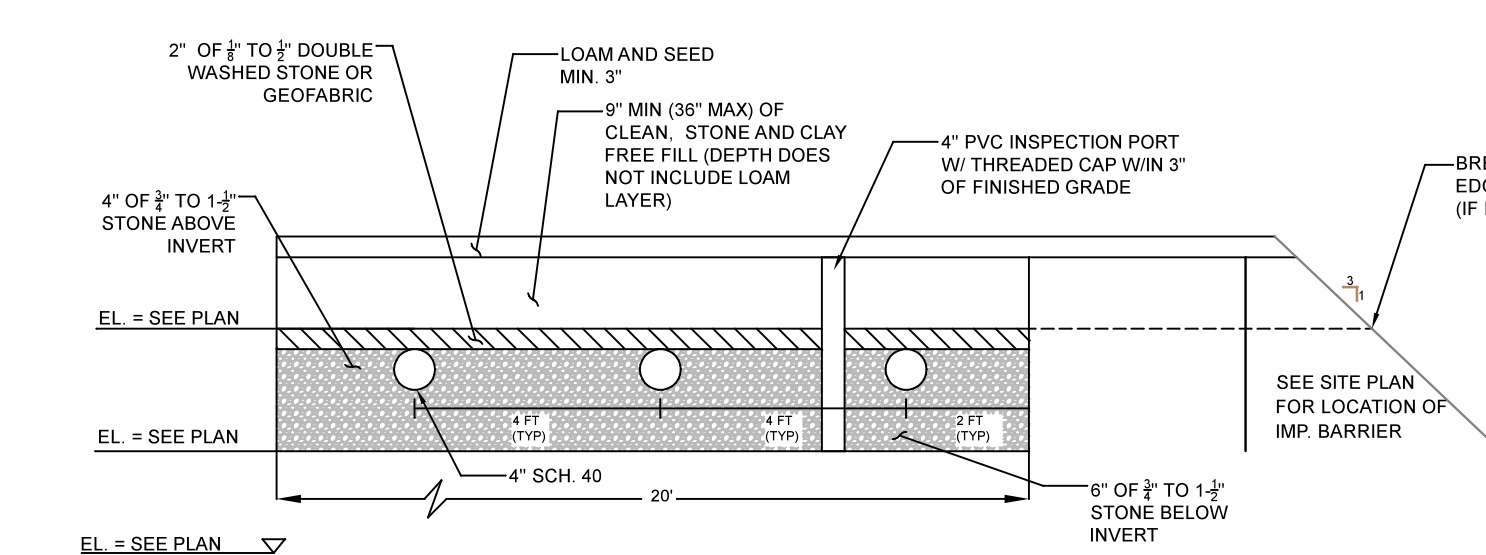
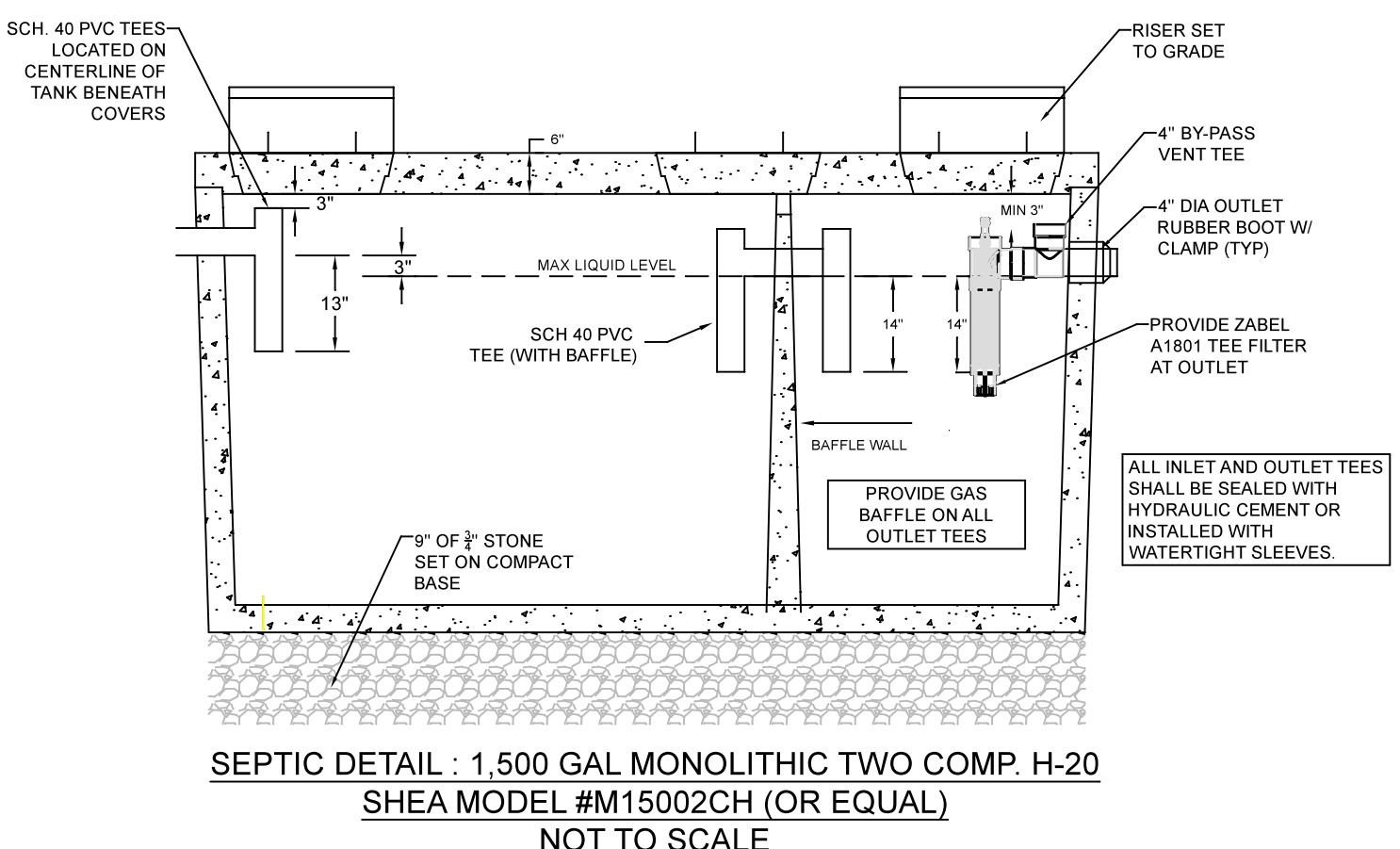
- THE SEPTIC TANK SHALL BE 1,500 GALLON TWO COMPARTMENT MONOLITHIC SEPTIC TANK (H20).
- (SHEA MODEL #M15002CH OR EQUIVALENT)
- FIRST COMPARTMENT SHALL BE MINIMUM OF 1,000 GALLONS; SECOND COMPARTMENT SHALL BE MINIMUM OF 500 GALLONS.
- TEES SHALL BE IN ACCORDANCE WITH 310CMR15.227(6) INLET TEE 10" BELOW FLOW LINE, OUTLET TEE 14" BELOW FLOW LINE (SEE DETAIL).

DISTRIBUTION BOX

- THE D-BOX SHALL BE A 6 OUTLET DBOX.
- (SHEA MODEL #6DB OR EQUAL)
- THE DIST. BOX SHALL BE CONCRETE. INVERT ELEVATIONS OF ALL OUTLETS SHALL BE EQUAL AND TWO INCHES BELOW THE INVERT OF THE INLET.
- D-BOX SHOULD BE H-20.
- THERE SHALL BE A MINIMUM SUMP OF 6" BELOW THE OUTLET INVERT.
- DISTRIBUTION BOX ACCESS MANHOLES SHALL NOT BE MORE THAN 8 INCHES BUT NOT LESS THAN 6 INCHES BELOW GRADE.
- ACCESS COVER SHALL BE WITHIN 6" OF FINAL GRADE WITH AN 18" MINIMUM CAST IRON FRAME AND COVER.

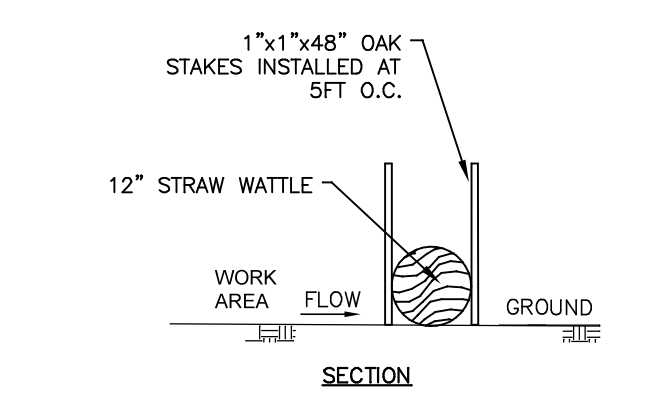
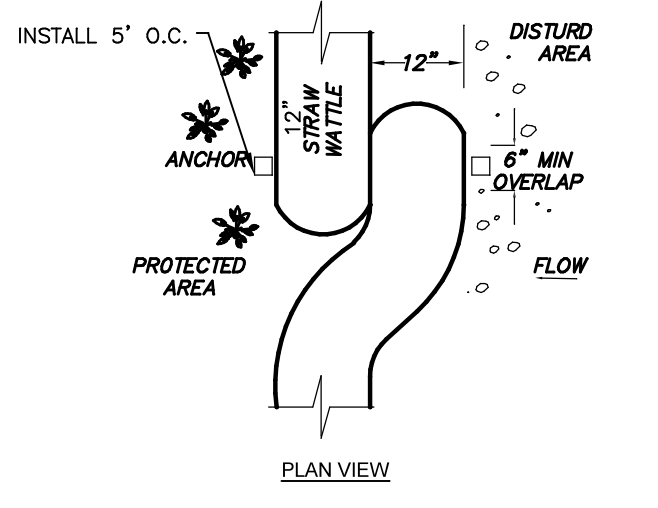
SOIL ABSORPTION SYSTEM

- ANY LEVELING COURSE, OR SAND USED FOR THE SOIL ABSORPTION SYSTEM SHALL COMPLY WITH 310CMR15.255.
- SOIL ABSORPTION SYSTEM PIPE MAY BE SCH 40 PERFORATED PVC GENERAL PURPOSE SEWER PIPE OR SDR35 PERFORATED GRAVITY SEWER PIPE.
- WHERE THE SOIL ABSORPTION SYSTEM IS NOT INSTALLED IN THE C LAYER ALL UNSUITABLE MATERIAL INCLUDING THE A AND B HORIZONS, THE EXISTING SYSTEM AND ANY OTHER DELETERIOUS MATERIAL SHALL BE REMOVED FOR A DISTANCE OF FIVE FEET FROM THE LIMIT OF THE SOIL ABSORPTION SYSTEM.
- THE MINIMUM COVER OVER THE SOIL ABSORPTION SYSTEM SHALL BE 12" AND FILL SHALL BE FREE OF STONES, BOULDERS GREATER THAN 6".
- THE SOIL ABSORPTION SYSTEM SHALL HAVE ONE INSPECTION PORT CONSISTING OF A PERFORATED 4" PIPE PLACED VERTICALLY DOWN INTO THE NATURALLY OCCURRING SOIL OR OR SAND FILL BELOW THE SOIL ABSORPTION SYSTEM. INSPECTION PORT MUST BE ACCESSIBLE WITHIN 3 INCHES OF GRADE.
- THE SOIL ABSORPTION SYSTEM SHALL BE CONSTRUCTED OF A STONE TRENCH WITH A MINIMUM DEPTH OF 6 INCHES BELOW THE LATERALS.
- STONE SHALL BE DOUBLE WASHED 3/4" TO 1 1/2" INCH STONE, FREE OF IRON, FINES AND DUST.
- TWO INCH STONE ABOVE THE BED SHALL BE DOUBLE WASHED 1/2" TO 3/4" STONE, FREE OF IRON, FINE AND DUST. A GEOTEXTILE MAY BE USED IN PLACE OF THE TWO INCH LAYER OVER THE BED.
- THE SYSTEM SHALL BE VENTED AS SHOWN ON THESE PLANS.

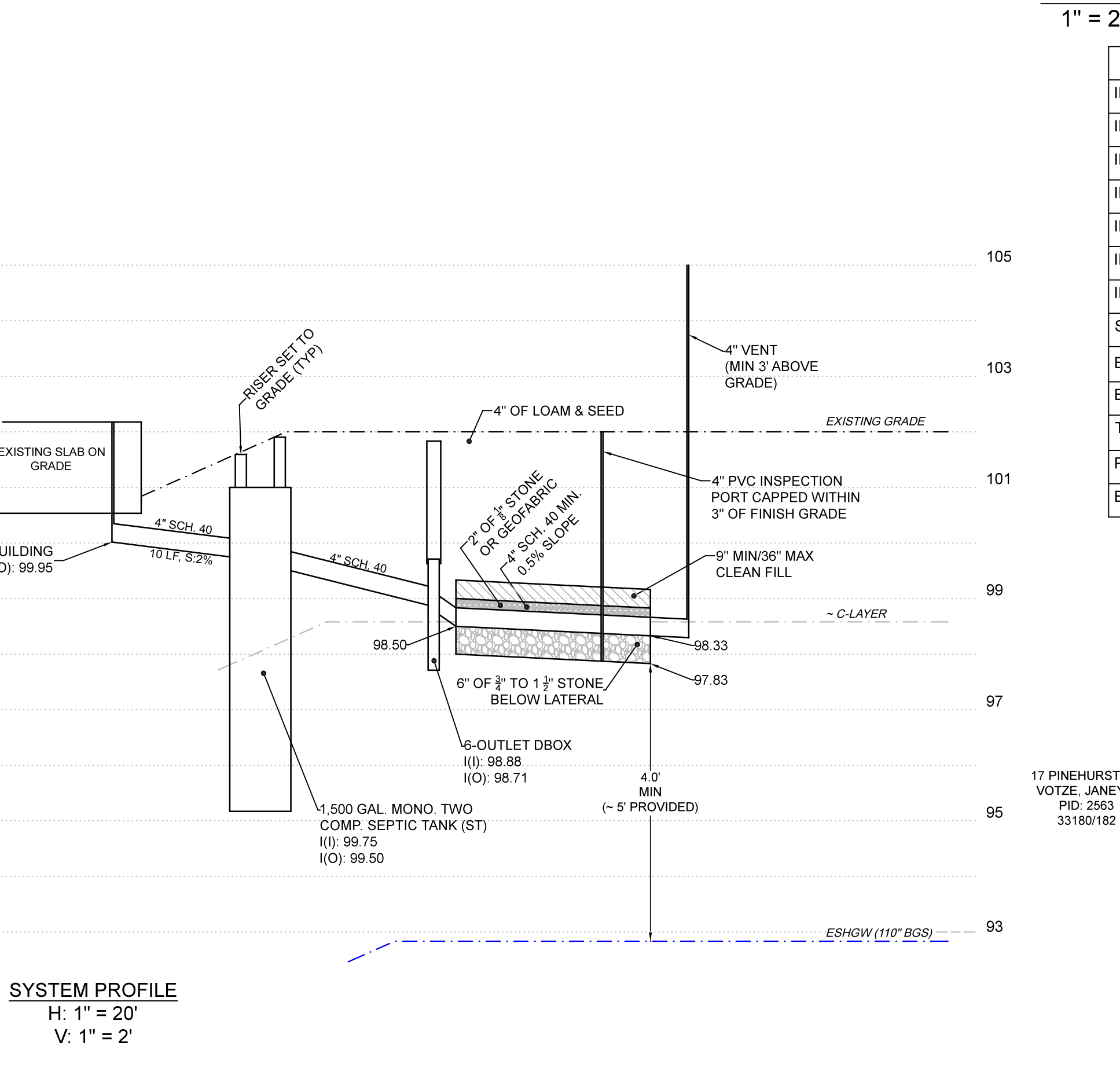
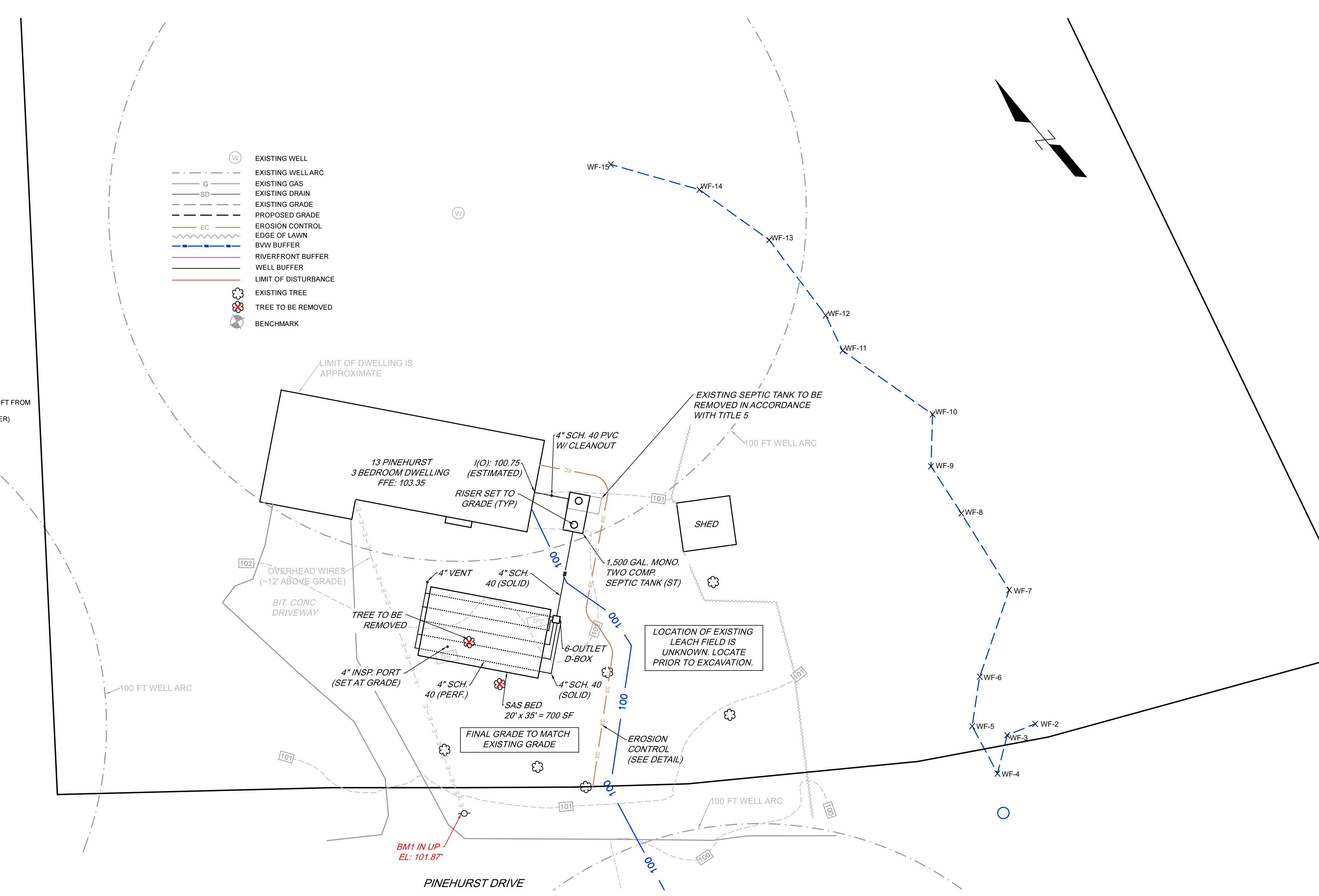


CONSTRUCTION SEQUENCE:

- INSTALL EROSION CONTROL AS SHOWN.
- REMOVE NECESSARY TREES AND STUMPS.
- REMOVE AND SEPARATE TOP SOIL.
- INSTALL SEPTIC SYSTEM.
- BACKFILL ACCORDING TO PLAN.
- PREPARE FINAL GRADING, LOAM AND SEED.
- REMOVE AND DISPOSE OF SILTATION BARRIER ONCE VEGETATION IS WELL ESTABLISHED AND EROSION IS UNDER FULL CONTROL.



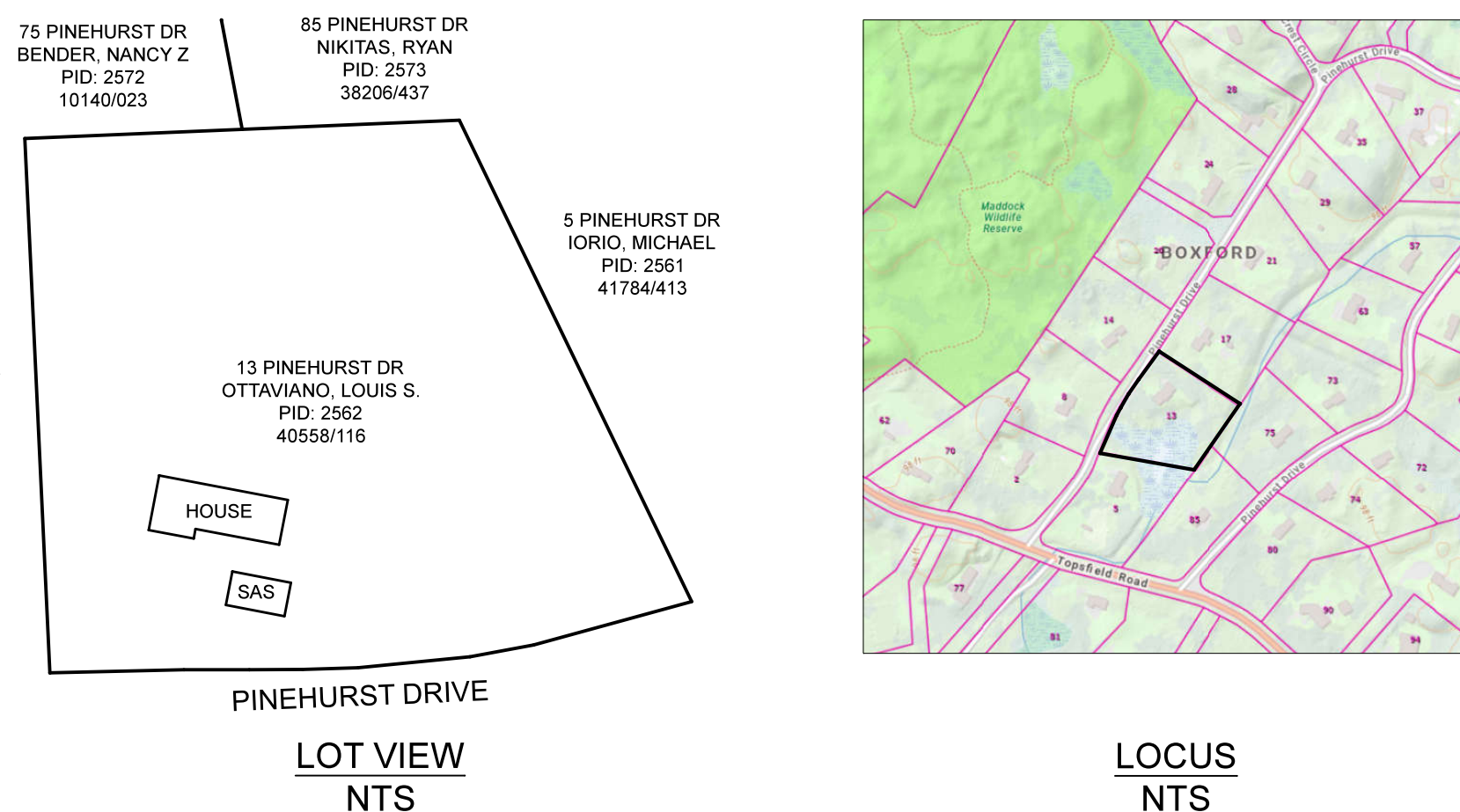
- WATTLE NOTES:**
- WATTLES SHALL BE CONSTRUCTED OF BIODEGRADABLE TUBULAR PLASTIC OR SIMILAR MATERIAL AND SHALL BE FILLED WITH STRAW OR MULCH.
 - INSTALL WATTLES IN LOCATIONS SHOWN ON THE PLAN.
 - INSTALL THE WATTLES SNUGLY INTO 3-5" DEEP TRENCH AND OVERLAP AS SHOWN IN THE DETAIL.
 - INSTALL ANCHOR STAKES ON DOWNHILL SIDE OF THE WATTLES AND AT 5' SPACING ALONG THE LENGTH OF THE WATTLE.
 - AT A MINIMUM, ANCHOR STAKES SHALL BE 1" x 4".
 - INSPECT WATTLES AFTER RAINFALL EVENTS TO ENSURE THEY ARE IN CONTACT WITH THE SOIL AND THOROUGHLY ENTRENCHED, AND REPAIR AS NEEDED.
 - INSPECT DOWN GRADIENT SLOPE AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE SCOUR IS NOT OCCURRING UNDER THE WATTLES AND REPAIR AS NECESSARY.



SCHEDULE OF ELEVATIONS

INV. OF PIPE AT FOUNDATION (ESTIMATED)	99.95
INV. OF PIPE AT SEPTIC TANK INLET	99.75
INV. OF PIPE AT SEPTIC TANK OUTLET	99.50
INV. OF PIPE AT PUMP CHAMBER INLET	-
INV. OF PIPE AT PUMP CHAMBER OUTLET	-
INV. AT D-BOX INLET	98.88
INV. AT D-BOX OUTLET	98.71
START OF LATERAL INVERT (4" PIPE)	98.50
BOT. OF SAS (6" OF 3/4" STONE)	97.83
END OF LATERAL INVERT (4" PIPE)	98.33
TOP OF BREAKOUT	99.00
PROPOSED FINISH GRADE (MIN/MAX)	100/102
ESHGW (120" BELOW HIGHEST CONTOUR)	92.83

- SETBACK BUFFER BULLETS**
- THERE ARE BORDERING VEGETATED WETLANDS, INLAND BANKS OR SURFACE WATERS LOCATED WITHIN 100 FEET OF THE PROPERTY.
 - THERE ARE NO KNOWN PRIVATE WATER SUPPLY WELLS LOCATED WITHIN 100 FT OF THE PROPOSED SYSTEM.
 - PROPERTY IS NOT LOCATED WITHIN A ZONE II ZONE II.
 - PROPERTY IS NOT LOCATED WITHIN A WHPSP PRIORITY HABITATS OF RARE SPECIES ZONE.
 - THERE ARE NO KNOWN CERTIFIED VERNAL POOLS LOCATED WITHIN 100 FT.
 - THERE ARE NO KNOWN FEMA DESIGNATED REGULATORY FLOODWAYS WITHIN 150 FEET.
 - THERE ARE NO IRRIGATION WELLS WITHIN 50 FT.
- LUAA AND WAIVERS**
- NO WAIVERS OR LUAA ARE REQUESTED.



LOCUS NTS