

PLAN NOTES:

1. SOIL TESTING INFORMATION USED FOR DESIGN WAS PERFORMED ON JANUARY 14, 2020.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO NAVD88.
3. VEHICULAR TRAFFIC, PARKING OF VEHICLES, STOCKPILING OF MATERIALS, AND STORAGE OF EQUIPMENT OVER LEACHING AREA ARE PROHIBITED AT ALL TIMES.
4. EXISTING TOPOGRAPHIC INFORMATION SHOWN IS THE RESULT FROM AN ACTUAL INSTRUMENT SURVEY CONDUCTED BY WILLIAMS & SPARAGES ON JANUARY 22, 2020.
5. THIS PROJECT DOES NOT LIE WITHIN A NITROGEN SENSITIVE AREA.
6. ACCORDING TO AVAILABLE MAPPING AND INFORMATION, THERE ARE NO PUBLIC OR PRIVATE DRINKING WATER SUPPLY WELLS WITHIN 100- FEET OF THE PROPOSED SEPTIC SYSTEM. IN ADDITION, THE PROPOSED SYSTEM DOES NOT LIE WITHIN 400- FEET OF A ZONE A TO A PUBLIC WATER SUPPLY.

WILLIAMS & SPARAGES LLC HAS BEEN RETAINED TO PREPARE A SEPTIC SYSTEM DESIGN PLAN FOR THE CLIENT, BUT HAS NOT BEEN RETAINED TO CONSTRUCT OR SUPERVISE CONSTRUCTION OF THE SEPTIC SYSTEM. THEREFORE, NO GUARANTEE OR WARRANTY, EXPRESS OR IMPLIED, IS MADE TO THE CLIENT OR TO THE ULTIMATE USER RELATIVE TO ANY SYSTEM INSTALLED PURSUANT TO THIS PLAN SET.

1. THE PLAN SHOWS ONLY THOSE FEATURES THAT WERE VISUALLY APPARENT ON THE DATE OF TOPOGRAPHY. THE ABSENCE OF SUBSURFACE STRUCTURES UTILITIES, ETC. DOES NOT MEAN THAT THEY DO NOT EXIST.
2. THE FINISHED SURFACE OF THE LEACHING AREA SHALL BE GRADED TO ASSURE SURFACE WATER RUNOFF (2% MINIMUM SLOPE IN ACCORDANCE WITH TITLE 5).
3. THE CONTRACTOR SHALL NOTIFY THE DESIGNER OF ANY SITE CONDITION THAT DIFFERS FROM THOSE INDICATED ON THE DESIGN PLAN.
4. IF ANY PART OF THIS DESIGN IS TO BE ALTERED IN ANY WAY, THE DESIGNER AS WELL AS THE APPROVING AUTHORITIES SHALL BE NOTIFIED IN WRITING PRIOR CONSTRUCTION.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR HORIZONTAL AND VERTICAL CONTROL OF ALL SYSTEM COMPONENTS.
6. THE GENERAL CONTRACTOR IS RESPONSIBLE TO CHECK BETWEEN A MINIMUM OF TWO (2) VERTICAL CONTROL BENCHMARKS.
7. THESE PLANS AND SPECIFICATIONS ARE INTENDED TO BE EXPLANATORY OF THE WORK TO BE DONE, 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.
8. ALTERNATE MANUFACTURERS FOR CONCRETE STRUCTURES AND EQUIPMENT SHOWN ON THESE PLANS MAY BE USED UPON WRITTEN APPROVAL OF THE DESIGNER. ALTERNATE MANUFACTURERS WILL NOT BE USED IF THE USE OF THEIR EQUIPMENT REQUIRES DESIGN CHANGES.
9. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING DIG SAFE SYSTEM, INC. (1-888-344-7233 OR 811) TO LOCATE UTILITIES.
10. THE SYSTEM IS DESIGNED ONLY TO ACCOMMODATE SANITARY SEWAGE ASSOCIATED WITH NORMAL DOMESTIC USAGE AND CONSISTING OF WATER-CARRIED PUTRESCIBLE WASTE.
11. DISPOSAL SYSTEM AREAS ARE TO BE RAKED (SCARIFIED) BEFORE INSTALLATION OF STONE. ALL STONES EXCEEDING 2 INCHES IN DIAMETER AND ALL FOREIGN MATERIAL ENCOUNTERED DURING EXCAVATION ARE TO BE REMOVED FROM THE LEACHING AREA BED SURFACE.
12. THIS PLAN SHOWS THE DESIGN OF THE SUBSURFACE SEWAGE DISPOSAL SYSTEM ONLY. THE SYSTEM IS DESIGNED FOR FLOWS ESTIMATED UNDER DESIGN CRITERIA.
13. ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM AFTER THEY ARE BURIED.
14. THE SOIL ABSORPTION SYSTEM SHALL HAVE A MINIMUM OF 1 INSPECTION PORT CONSISTING OF A PERFORATED 4 INCH PIPE PLACED VERTICALLY DOWN INTO THE STONE TO THE NATURALLY OCCURRING SOIL OR SAND FILL BELOW THE STONE. THE PIPE SHALL BE CAPPED WITH A SCREW TYPE CAP WITH A VALVE COVER BOX AT FINISH GRADE.
15. ALL WORK AND MATERIALS SHALL COMPLY WITH THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION STATE ENVIRONMENTAL CODE, TITLE 5 AND LOCAL BOARD OF HEALTH SUPPLEMENTARY REGULATIONS AS REQUIRED.
16. NO GARBAGE GRINDER SHALL BE INSTALLED AS PART OF THIS DESIGN.
17. THE SYSTEM SHALL BE VENTED THROUGH BUILDING PLUMBING AS REQUIRED BY THE BUILDING AND/OR PLUMBING CODE.
18. THE INSTALLER OF THIS SYSTEM MUST BE LICENSED BY THE LOCAL BOARD OF HEALTH.
19. APPLICABLE ZONING BYLAWS AND/OR OTHER LOCAL REGULATIONS SHALL BE CONFIRMED BY THE OWNER PRIOR TO CONSTRUCTION.
20. THE SEPTIC TANK SHALL BE PERIODICALLY INSPECTED AND MAINTAINED AND SHOULD BE PUMPED WHENEVER THE TOP OF THE SLUDGE LAYER IS WITHIN 12-INCHES OF THE BOTTOM OF THE OUTLET TEE OR WHEN THE TOP OF THE SCUM LAYER IS WITHIN 2-INCHES OF THE TOP OF THE OUTLET TEE OR THE BOTTOM OF THE SCUM LAYER IS WITHIN 2-INCHES OF THE BOTTOM OF THE OUTLET TEE.
21. COMPONENTS NOT TO BE BACKFILLED WITHOUT INSPECTION BY BOARD OF HEALTH AND PERMISSION OBTAINED BY BOARD OF HEALTH.
22. DESIGNER TO SUBMIT AN AS-BUILT PLAN OF SYSTEM WITHIN 30 DAYS OF FINAL INSPECTION OF THE SYSTEM.
23. EXCAVATE ALL TOPSOIL, SUBSOIL, AND ANY OTHER UNSUITABLE MATERIAL. FILL MATERIAL FOR SYSTEMS CONSTRUCTED IN FILL SHALL CONSIST OF CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES.
24. FILL MATERIAL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN 2 INCHES. THE FILL MATERIAL SHALL COMPLY WITH THE STATE ENVIRONMENTAL CODE, TITLE 5, 310 CMR 15.255 (3) AS REVISED.
25. CONTRACTOR TO SUPPLY TO THE CITY OR TOWN WITH A CURRENT SIEVE TEST ANALYSES REPORT AT THEIR EXPENSE IF REQUIRED BY THE LOCAL APPROVING AUTHORITY.

MATERIAL NOTES:

AGGREGATE FOR SOIL ABSORPTION SYSTEM:

1. CLEAN DOUBLE WASHED STONE SHALL BE FREE OF IRON PARTICLES, FINES AND DUST IN PLACE.
2. BASE AGGREGATE IN LEACH AREA SHALL CONSIST OF 3/4" TO 1-1/2" DOUBLE WASHED STONE AS DESCRIBED ABOVE.
3. A MINIMUM 2-INCH LAYER OF DOUBLE WASHED STONE RANGING FROM 1/8 TO 1/2 INCH DIAMETER AS DESCRIBED IN NOTE 1 ABOVE SHALL COVER THE BASE AGGREGATE. GEOTEXTILE FABRIC MAY BE SUBSTITUTED FOR THE MINIMUM 2-INCH LAYER OF DOUBLE WASHED STONE.

SOIL ABSORPTION SYSTEM (SAS) SIZING CALCULATIONS:

SEWAGE FLOWS SINGLE FAMILY DWELLING:

NUMBER OF BEDROOMS = 4 BR
 DESIGN FLOW = 165 GPD/BR
 DAILY FLOW = (165 GPD/BR * 4 BR) = 660 GPD

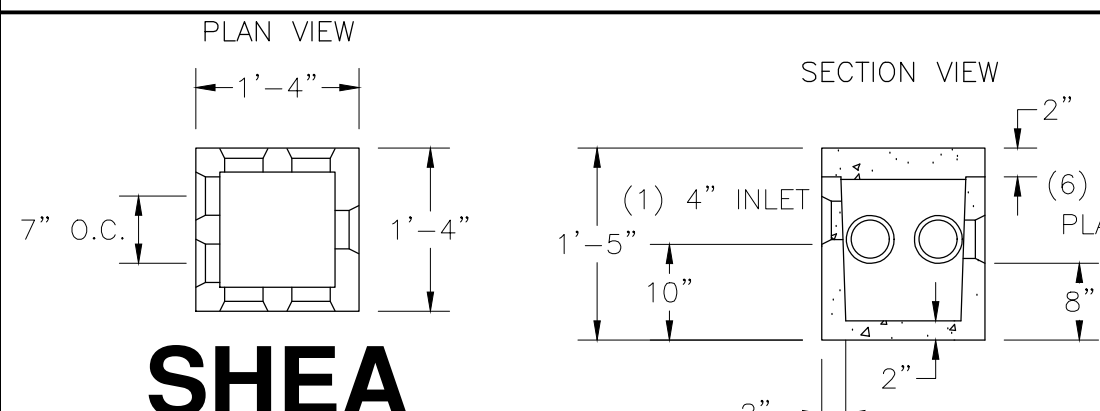
SEPTIC TANK REQUIRED:
 (2*660 GPD) = 1,320 GPD, USE 1,500 GAL. SEPTIC TANK

PRIMARY LEACHING AREA REQUIRED:

FOR CLASS II SOIL WITH A PERCOLATION RATE OF 20 MINUTES PER INCH = 660 GPD/0.53 GPD/S.F. = 1,245.3 S.F.
 LEACHING AREA PROVIDED = LEACH BED 30.00'W x 41.67'L x 0.50'D = 1,250.1 S.F.

RESERVE LEACHING AREA REQUIRED:

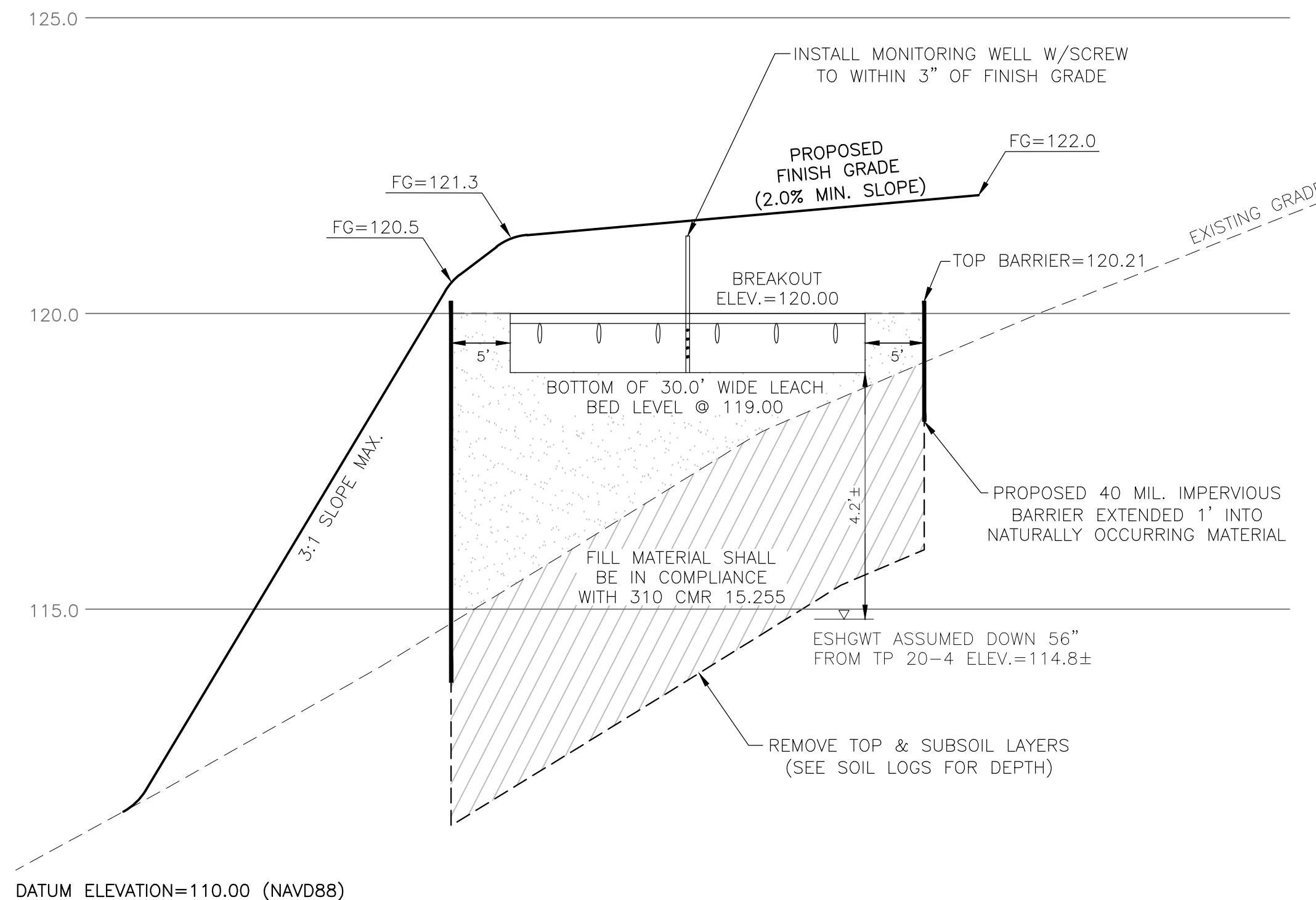
FOR CLASS II SOIL WITH A PERCOLATION RATE OF 17 MINUTES PER INCH = 660 GPD/0.53 GPD/S.F. = 1,245.3 S.F.
 LEACHING AREA PROVIDED = LEACH BED 30.00'W x 41.67'L x 0.50'D = 1,250.1 S.F.



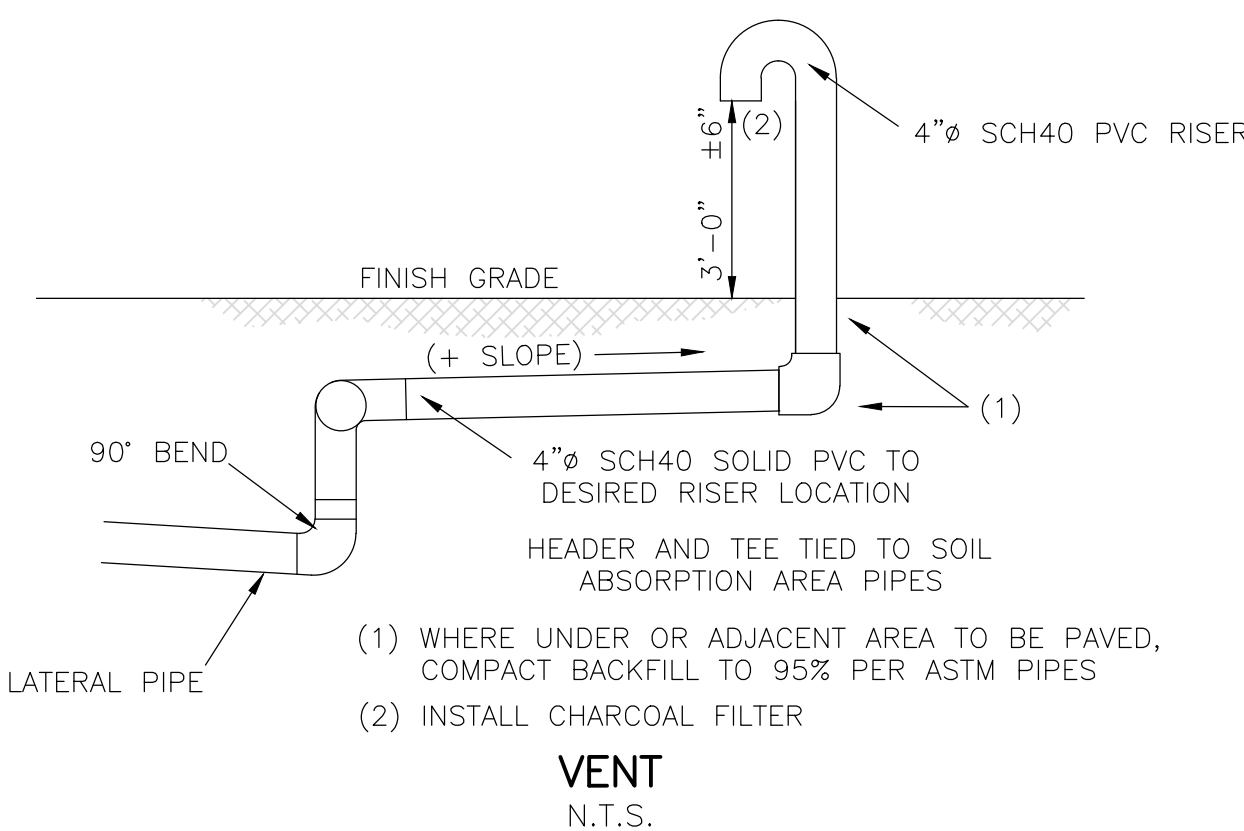
ITEM NO.	DESCRIPTION	WEIGHT
6DB	W/COVER	226#
6DBC	COVER ONLY	45#

6 OUTLET STANDARD DISTRIBUTION BOX
N.T.S.

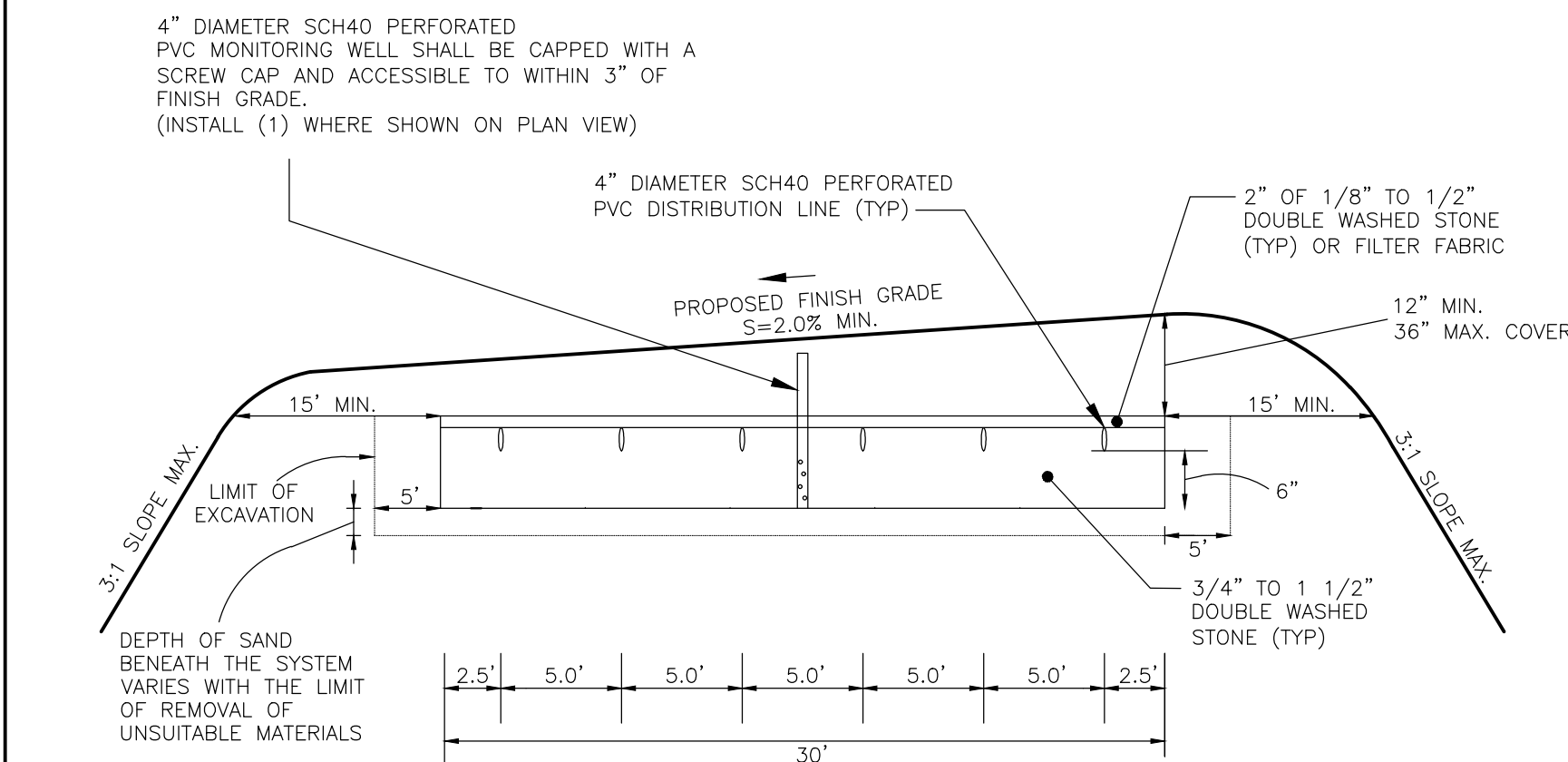
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGN CONFORMS WITH 310 CMR 15.000, DEP TITLE 5 REGS, FOR DISTRIBUTION BOXES.
3. CONTRACTOR SHALL INSURE THAT ALL INLETS AND OUTLETS ARE MADE WATERTIGHT.
4. CONTRACTOR SHALL INSURE THAT DISTRIBUTION BOXES ARE SET ON A MINIMUM OF 6" OF MECHANICALLY COMPACT CRUSHED STONE.
5. THE INVERT ELEVATION OF ALL OUTLETS SHALL BE EQUAL TO EACH OTHER AND LOCATED AT LEAST 2" BELOW THE INVERT OF THE INLET.



SECTION A-A



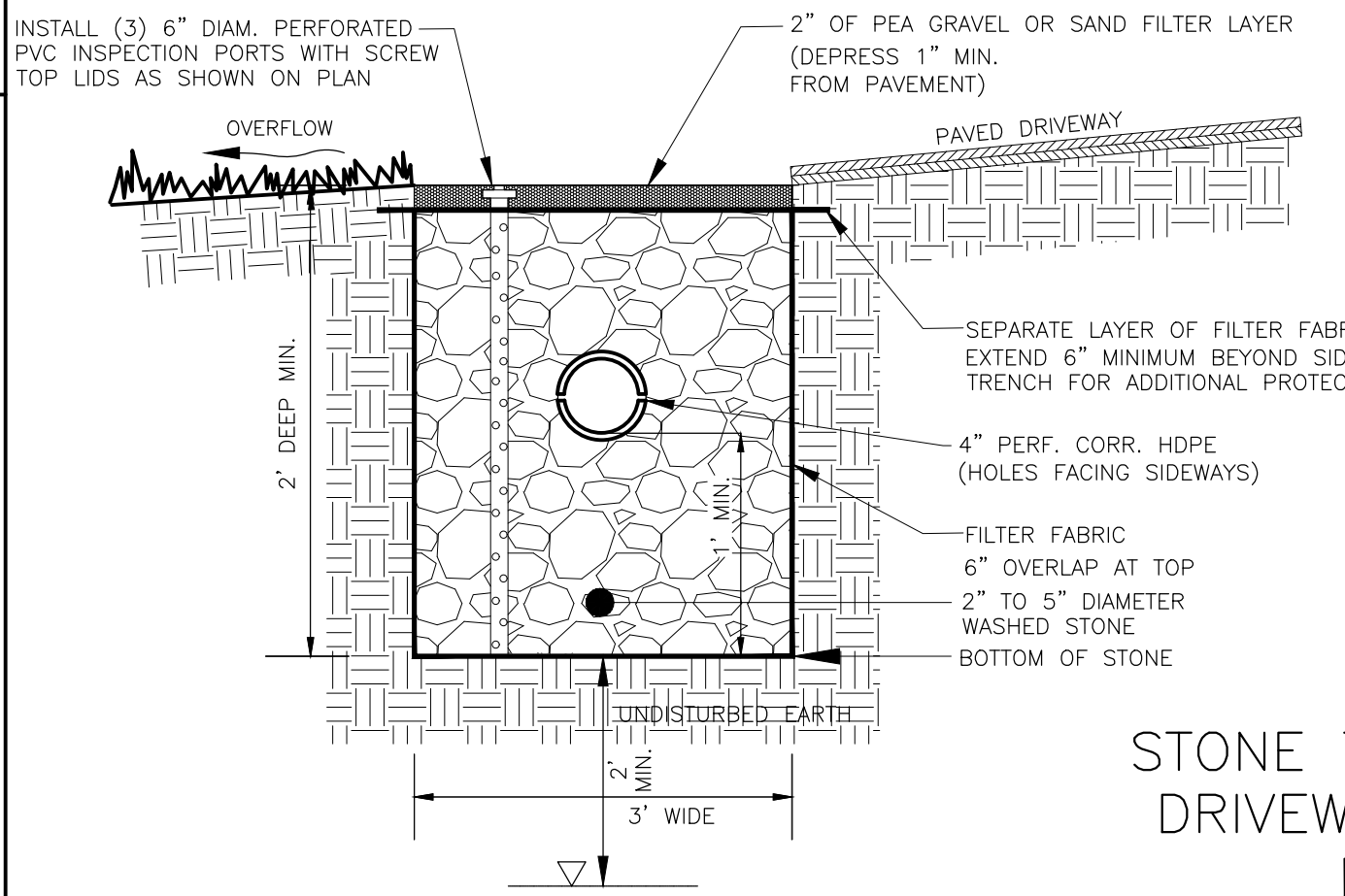
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N.T.S.



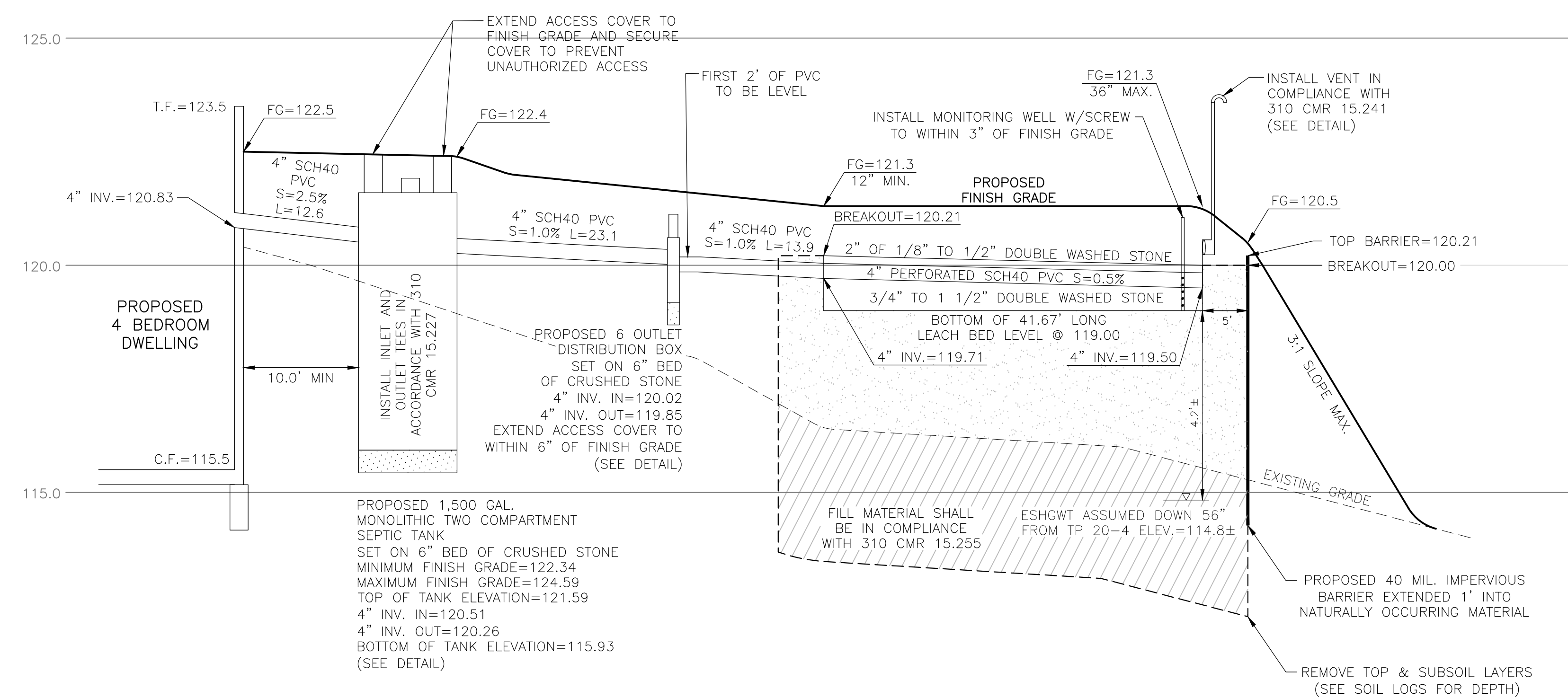
LEACHING FIELD DETAIL
(41.67'L x 30.00'W)
N.T.S.

CONSTRUCTION NOTES:

1. INFILTRATION TRENCHES SHOULD NEVER SERVE AS TEMPORARY SEDIMENT TRAPS FOR CONSTRUCTION.
2. BEFORE THE DEVELOPMENT SITE IS GRADED, THE AREA OF THE INFILTRATION TRENCH SHOULD BE ROPED OFF AND FLAGGED TO PREVENT HEAVY EQUIPMENT FROM COMPACTING THE UNDERLYING SOILS.
3. INFILTRATION TRENCHES SHOULD NOT BE CONSTRUCTED UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. DIVERSION BERMS SHOULD BE PLACED AROUND THE PERIMETER OR THE INFILTRATION TRENCH DURING ALL PHASES OF CONSTRUCTION. SEDIMENT AND EROSION CONTROLS SHOULD BE USED TO KEEP RUNOFF AND SEDIMENT AWAY FROM THE TRENCH AREA.
4. DURING AND AFTER EXCAVATION, ALL EXCAVATED MATERIALS SHOULD BE PLACED DOWNSTREAM, AWAY FROM THE INFILTRATION TRENCH, TO PREVENT REDEPOSITION OF THESE MATERIALS DURING RUNOFF EVENTS. THESE MATERIALS SHOULD BE PROPERLY HANDLED AND DISPOSED OF DURING AND AFTER CONSTRUCTION.
5. LIGHT EARTH-MOVING EQUIPMENT SHOULD BE USED TO EXCAVATE THE INFILTRATION TRENCH. USE OF HEAVY EQUIPMENT CAUSES COMPACTION OF THE SOILS IN THE TRENCH FLOOR, RESULTING IN REDUCED INFILTRATION CAPACITY.

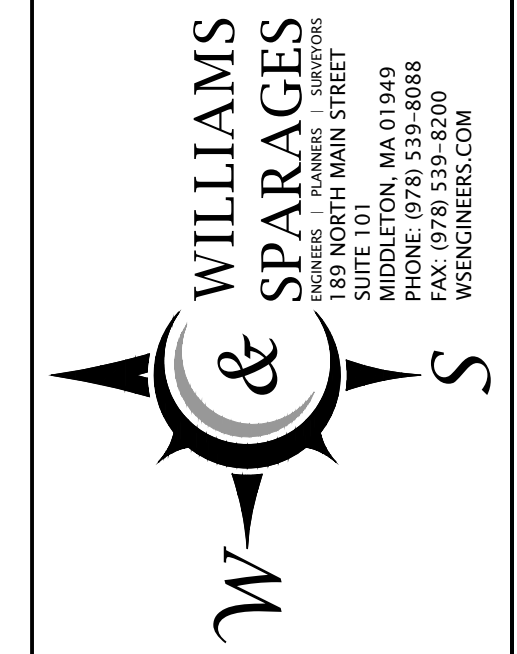


STONE TRENCH FOR DRIVEWAY RUNOFF DETAIL
(NOT TO SCALE)



DATUM ELEVATION=110.00 (NAVD88)

SYSTEM PROFILE



Owner:
ADVA Construction/Design, LLC
9 Kenney Road
Middleboro, MA 01949

Applicant:
Tim McManus
9 Kenney Road
Middleboro, MA 01949
617-417-8389

Designed By: SML
 Drawn By: SML
 Reviewed By: PMB
 Project Manager: PMB
 Job File Number: BOXF-0074
 Drawing File Folder: BOXF74

Drawing Issued for Review Only
 Drawing Issued for Permit
 Drawing Issued for Construction

SEAL

DATE	3/23/2020
BY	3/12/2020

SANITARY DISPOSAL SYSTEM DESIGN PLAN
41 KELSEY ROAD, BOXFORD, MA

NO.	6	20'
DATE	5	
SCALE	1"=10' HOR.	
	1"=2' VER.	
DATE	3/23/2020	
BY	3/12/2020	
DATE	3/23/2020	
BY	3/12/2020	

NO.	6	20'
DATE	5	
SCALE	1"=10' HOR.	
	1"=2' VER.	
DATE	3/23/2020	
BY	3/12/2020	
DATE	3/23/2020	
BY	3/12/2020	

DRAWING: S-2
 SHEET 2 OF 2
 FEBRUARY 6, 2020