

VICINITY MAP  
NO SCALE



### SOIL TEST DATA

SOIL TESTING AND EVALUATION BY: PAUL G. GUNN, S.E.#14392  
SOIL TESTING WITNESSED BY: RALPH COLE, P.L.S.  
DATE: NOVEMBER 25, 2020

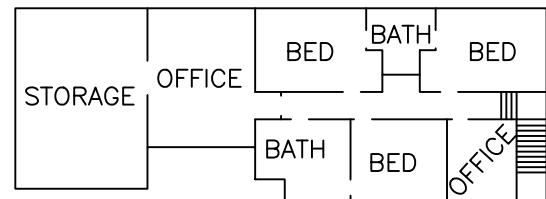
TP-1	APPROX. GRADE EL. 42.9	TP-2	APPROX. GRADE EL. 42.5	TP-3	APPROX. GRADE EL. 41.8	TP-4	APPROX. GRADE EL. 41.4
EL. 40.9	FILL	EL. 41.5	A HORIZON LOAMY SAND 10YR 3/1	EL. 40.8	A HORIZON LOAMY SAND 10YR 3/1	EL. 40.4	A HORIZON LOAMY SAND 10YR 3/1
EL. 40.4	B HORIZON LOAMY SAND 10YR 5/6	EL. 40.5	B HORIZON LOAMY SAND 10YR 5/6	EL. 39.6	B HORIZON LOAMY SAND 10YR 5/6	EL. 38.9	B HORIZON LOAMY SAND 10YR 5/6
EL. 38.9	C HORIZON SANDY LOAM 2.5Y 5/4	EL. 32.5	C HORIZON SANDY LOAM 2.5Y 5/4	EL. 31.8	C HORIZON SANDY LOAM 2.5Y 5/4	EL. 31.4	C HORIZON SANDY LOAM 2.5Y 5/4
EL. 32.9	WEeping OBSERVED: NONE MOTTLING OBSERVED: 50" (EL. 38.7) PERC. RATE: 17 MPI @ 56"-74" ESHW: 50" (EL. 38.7)	WEeping OBSERVED: NONE MOTTLING OBSERVED: 34" (EL. 39.7) PERC. RATE: 25 MPI @ 36"-54" ESHW: 34" (EL. 39.7)	WEeping OBSERVED: NONE MOTTLING OBSERVED: 40" (EL. 38.5) PERC. RATE: 26 MPI @ 34"-52" ESHW: 40" (EL. 38.5)	WEeping OBSERVED: NONE MOTTLING OBSERVED: 36" (EL. 38.4) PERC. RATE: NONE ESHW: 36" (EL. 38.4)	WEeping OBSERVED: NONE MOTTLING OBSERVED: 32" (EL. 38.7) PERC. RATE: 20 MPI @ 24"-42" ESHW: 36" (EL. 38.7)	WEeping OBSERVED: NONE MOTTLING OBSERVED: 32" (EL. 38.7) PERC. RATE: 20 MPI @ 24"-42" ESHW: 36" (EL. 38.7)	WEeping OBSERVED: NONE MOTTLING OBSERVED: 32" (EL. 38.7) PERC. RATE: 20 MPI @ 24"-42" ESHW: 36" (EL. 38.7)

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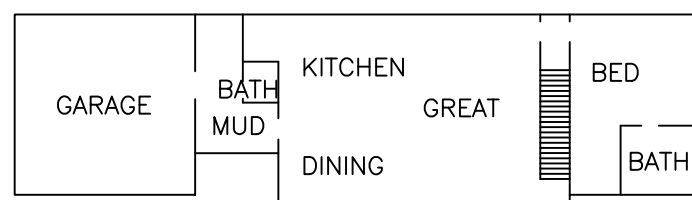
SOIL TESTING AND EVALUATION BY: GREGORY J. MORSE, P.E., S.E.#2906  
SOIL TESTING WITNESSED BY: RALPH COLE, P.L.S.  
DATE: APRIL 13, 2021

TP-4	APPROX. GRADE EL. 41.4
EL. 40.6	A HORIZON SANDY LOAM 10YR 3/2
EL. 39.2	B HORIZON LOAMY SAND 10YR 5/6
EL. 31.4	C HORIZON SANDY LOAM 2.5Y 5/4

WEeping OBSERVED: NONE  
MOTTLING OBSERVED: 32" (EL. 38.7)  
PERC. RATE: 20 MPI @ 24"-42"  
ESHW: 36" (EL. 38.7)



SECOND FLOOR



FIRST FLOOR

### PROPOSED FLOOR PLAN

NOT TO SCALE

### ZONING TABLE

TOWN OF SCITUATE "RESIDENCE R-2" ZONING DISTRICT	CRITERIA	REQUIRED
LOT AREA	20,000 S.F.	
FRONTAGE	100'	
FRONT YARD	30'	
SIDE YARD	15'	
REAR YARD	30'	
LOT WIDTH	125'	
MAX. HEIGHT	30'/3 STORIES	

### \*\*REMOVE & REPLACE\*\*

CONTRACTOR TO EXCAVATE ALL UNSUITABLE MATERIAL TO A DEPTH OF 30"± (TO C HORIZON) & REPLACE WITH CLEAN TITLE 5 PERC SAND TO EL.= 43.58 DIRECTLY UNDER AND WITHIN 5'-FT. HORIZONALLY OF THE PROPOSED SOIL ABSORPTION SYSTEM.  
(APPROX. SAND VOL. = 1.2% x 50'L x 29.81'W x (43.58-38.9) / 27 = 310 C.Y. ±

### SCHEDULE OF ELEVATIONS

1. INV. OF PIPE AT FOUNDATION = 45.7± (MIN.) (CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION)	6. INV. OF 4" PIPE AT CHAMBER INLET = 43.29
2. INV. OF PIPE AT SEPTIC TANK INLET = 45.45	7. BOTTOM OF CHAMBER = 42.70
3. INV. OF PIPE AT SEPTIC TANK OUTLET = 45.20	8. TOP OF CHAMBER (BREAKOUT) = 43.78
4. INV. OF PIPE AT DIST. BOX INLET = 43.52	9. FINISHED GRADE OVER SEPTIC TANK = 47.2(MIN) - 49.5(MAX)
5. INV. OF PIPE AT DIST. BOX OUTLET = 43.35	10. FINISHED GRADE OVER LEACHING CHAMBERS = 44.8(MIN) - 46.8(MAX)

### GENERAL NOTES

- SEPTIC SYSTEM INSTALLATION CONTRACTORS SHALL BE LICENSED BY THE BOARD OF HEALTH AND MUST COMPLY WITH ALL REQUIREMENTS OF THE BOARD OF HEALTH DISPOSAL WORKS CONSTRUCTION PERMIT AND ANY CONDITIONS, IF ISSUED BY THE CONSERVATION COMMISSION.
- ALL CONSTRUCTION MUST COMPLY WITH TITLE 5 OF THE STATE ENVIRONMENTAL CODE 310 CMR 15 & THE ANY LOCAL BOARD OF HEALTH SUPPLEMENTAL REGULATIONS.
- THERE SHALL BE NO CHANGES MADE IN THIS PLAN WITHOUT THE WRITTEN PERMISSION OF THE BOARD OF HEALTH AND DESIGN ENGINEER.
- ANY CHANGE IN SITE CONDITIONS, DISCREPANCIES, ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF MORSE ENGINEERING PRIOR TO THE COMMENCEMENT OF WORK.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH TITLE 5 (310 CMR 15) AND THE LOCAL BOARD OF HEALTH REQUIREMENTS TO THE FULLEST EXTENT PRACTICABLE. NO GUARANTEE TO THE SYSTEMS PERFORMANCE IS EXPRESSED OR IMPLIED.
- SOIL TEST DATA SHOWN IS LIMITED TO THE CONDITIONS EXISTING AT THE SUBJECT TEST PIT LOCATION ONLY. IF DIFFERENT SOIL CONDITIONS ARE FOUND IN THE AREA OF THE PROPOSED SOIL ABSORPTION SYSTEM THEY SHALL BE BROUGHT TO THE ATTENTION OF MORSE ENGINEERING IMMEDIATELY.
- THE CONTRACTOR SHALL NOTIFY DIGSAFE PRIOR TO ANY EXCAVATION AT THE SUBJECT PROPERTY. IT IS SPECIFICALLY CAUTIONED THAT THE SUBSURFACE UTILITIES SHOWN ARE APPROXIMATE ONLY AND HAVE BEEN COMPILED FROM AVAILABLE RECORDS AND OBSERVABLE SITE FEATURES. UTILITIES OTHER THAN THOSE SHOWN MAY BE PRESENT AT THIS LOCATION.
- THIS PLAN HAS BEEN PREPARED SPECIFICALLY AS A SEPTIC SYSTEM DESIGN AND IS NOT TO BE USED TO ESTABLISH PROPERTY LINES OR BUILDING SETBACKS. PROPERTY LINES AND BUILDING LOCATIONS ARE GRAPHIC ONLY. PROPERTY LINES NOT HAVING BEEN VERIFIED, NO REPRESENTATION OR CERTIFICATION AS TO THE ACCURACY OF THOSE SHOWN IS IMPLIED.
- CONTRACTOR TO VERIFY AND ENSURE THAT ALL INTERIOR PLUMBING IS DIRECTED INTO PROPOSED SEPTIC SYSTEM. ANY VARIATIONS FROM THE DESIGN AS SHOWN SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.

### CONSTRUCTION/INSPECTION NOTES

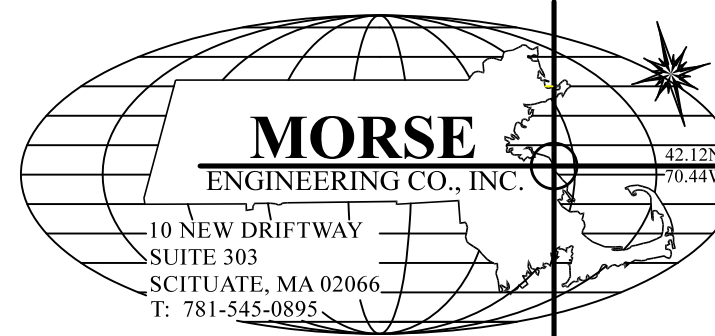
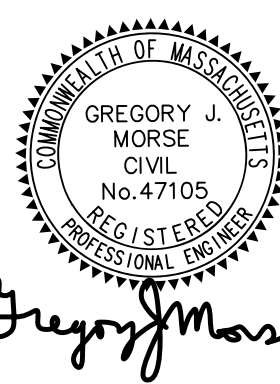
- CONTRACTOR SHALL COORDINATE INSPECTION TIMES WITH THE LOCAL BOARD OF HEALTH AND DESIGN ENGINEER 24-HOURS IN ADVANCE OF THE FOLLOWING INSPECTIONS:
  - AFTER EXCAVATION FOR TANKS, TO VERIFY 6" STONE BASE, PRIOR TO TANK INSTALL.
  - AFTER EXCAVATION OF ALL UNSUITABLE MATERIAL FROM SOIL ABSORPTION AREA.
  - PRIOR TO COVERING THE CONSTRUCTED SYSTEM.
  - AFTER SYSTEM BACKFILL AND FINAL GRADING.
- ALL CONSTRUCTION MUST COMPLY WITH TITLE 5 OF THE STATE ENVIRONMENTAL CODE 310 CMR 15 & THE ANY LOCAL BOARD OF HEALTH SUPPLEMENTAL REGULATIONS.
- ALL TIGHT-JOINT PLUMBING SHALL BE CONSTRUCTED OF SCH. 40 PVC PIPE WITH CLEANED AND CEMENTED FITTINGS, UNLESS OTHERWISE NOTED.
- ALL PRECAST/PIPE CONSTRUCTION JOINTS AND FITTINGS SHALL BE MADE WATERTIGHT BY PARGING WITH HYDRAULIC CEMENT.
- THE CONTRACTOR SHALL PROVIDE A SIEVE ANALYSIS OF THE TITLE 5 PERC SAND UTILIZED FOR FILL TO VERIFY THAT IT MEETS THE REQUIREMENTS OF 310 CMR 15.255(3). TITLE 5 SAND FILL SHALL COMPLY WITH THE FOLLOWING:

SIEVE SIZE	PARTICLE SIZE
#4	4.75 mm
#50	0.30 mm
#100	0.15 mm
#200	0.075 mm
- THE CONTRACTOR SHALL PREVENT ANY HEAVY CONSTRUCTION MACHINERY AND/OR TRUCKS FROM DRIVING OVER THE PROPOSED SOIL ABSORPTION SYSTEM LOCATION.
- THE CONTRACTOR SHALL INSTALL MAGNETIC TAPE OVER SYSTEM PIPING & COMPONENTS FOR FUTURE SUBSURFACE LOCATION.
- THE DESIGN ENGINEER SHALL CERTIFY AND PREPARE AN "AS-BUILT" PLAN FOR SUBMITTAL TO THE BOARD OF HEALTH UPON SEPTIC SYSTEM COMPLETION.
- ALL DISTURBED AREAS SHALL BE RESTORED WITH 4" LOAM & SEED POST CONSTRUCTION.
- CONTRACTOR SHALL ABANDON EXISTING SEPTIC COMPONENTS IN ACCORDANCE WITH 310 CMR SEC. 15.354 OF TITLE 5 AND LOCAL REGULATIONS BY PUMPING DRY, CRUSHING AND ABANDONING.

### SITE NOTES

- LOCUS DOES NOT LIE WITHIN A DEP DESIGNATED ZONE II RESOURCE AREA.
- ALL KNOWN WETLAND RESOURCE AREAS ON THE SUBJECT PROPERTY OR WITHIN 100' OF THE PROPOSED PROJECT ARE SHOWN.
- PROPERTY LINE DATA WAS OBTAINED FROM DEED (BOOK 1964, PAGE 78) AND PLANS ON FILE AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS.
- THERE WERE NO ACTIVE/POTABLE WELLS OBSERVED WITHIN 100' OF THE PROPOSED SYSTEM.
- THE LOCUS LIES IN FEMA FLOOD ZONE "AE" (EL. 31) & ZONE "X" AS SHOWN ON FEMA COMMUNITY MAP PANEL 25023C 0128K DATED NOVEMBER 4, 2016. ZONE "AE" IS DESCRIBED AS AN AREA WITHIN THE 100 YEAR FLOOD PLAIN. ZONE "X" IS DESCRIBED AS AN AREA OF MINIMAL FLOODING ABOVE THE 100 YR. FLOOD BOUNDARY.

### \*CONTRACTOR TO BE INFILTRATOR CERTIFIED\*



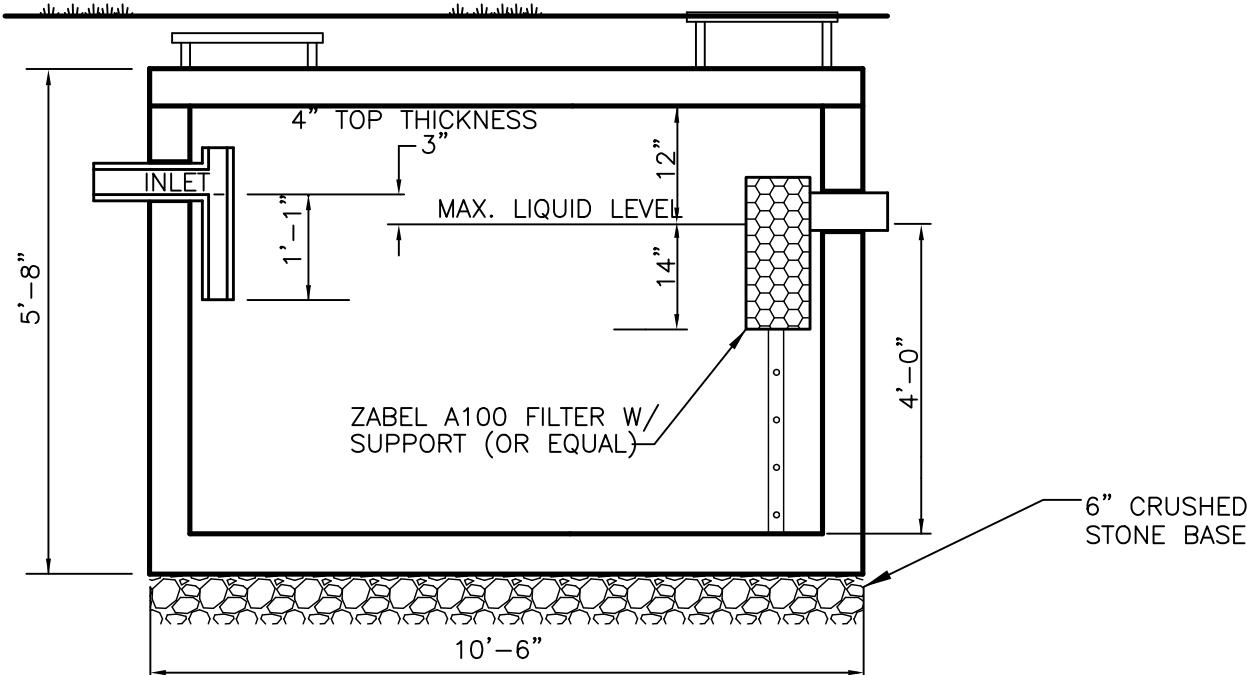
PROJECT:	215 TILDEN ROAD (ASSESSOR'S PARCEL: 39-27-25-F) SCITUATE, MASSACHUSETTS	DESIGN:	JDG
		CHECK:	GJM
		JOB NO:	20-373
APPLICANT:	STEPHEN CONNOLLY 96 PRATT ROAD SCITUATE, MA 02066	DATE:	2/3/2021
		REV:	3/29/21
PLAN TITLE:	SITE & SEPTIC DESIGN PLAN	4/16/21	
		SHEET:	1

### DESIGN DATA

- BUILDING TYPE: RESIDENTIAL
- NO. OF BEDROOMS: 4
- DESIGN FLOW: 4 BEDROOMS x 110 G.P.D./BED = 440 G.P.D.
- DESIGN PERCOLATION RATE: 26 MPI (TP-3)
- GARBAGE DISPOSAL: NO
- SEPTIC TANK DESIGN REQUIREMENT: 200% DESIGN FLOW  
440 X 2 = 880 GAL. (USE 1500 GAL. SEPTIC TANK)
- LEACH AREA REQUIREMENTS GALLONS/SQ. FT. (CLASS II SOILS)  
BOTTOM: 0.33 GAL./S.F. SIDE: 0.33 GAL./S.F.
- TOTAL LEACH AREA REQUIRED:  
TITLE 5: 440 GPD / (0.33 GPD/S.F.) = 1,333.3 S.F.  
PROVIDED: 7 ROWS OF 8 INFILTRATOR ARC-36 LEACHING CHAMBERS  
56 CHAMBERS x 5'L (EA.) x 4.8 S.F./L.F.\* = 1,344 S.F.  
CAPACITY: 1,344 S.F. x 0.33 GPD/S.F. = 443.5 GPD  
\*EFFECTIVE AREA PER GENERAL USE CERTIFICATION ISSUED BY DEP.

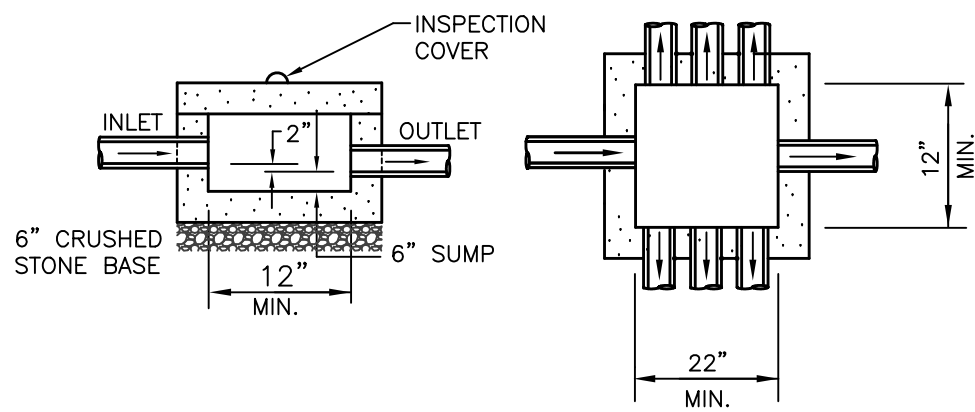


1,500 GAL. SEPTIC TANK DETAIL



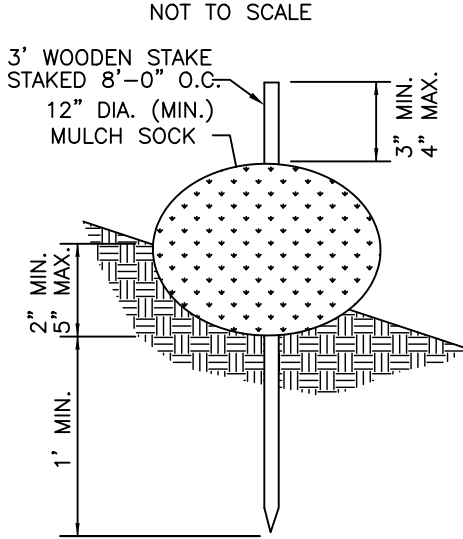
1. THE SEPTIC TANK INLET COVER SHALL BE EXTENDED TO WITHIN 6" OF FINISHED GRADE. THE SEPTIC TANK OUTLET COVER SHALL BE EXTENDED TO FINISHED GRADE.
2. ALL PIPE CONNECTION AND CONSTRUCTION JOINTS SHALL BE SEALED WITH HYDRAULIC CEMENT.
3. SEPTIC TANK SHALL BE INSTALLED ON A LEVEL 6" CRUSHED STONE BASE.
4. OUTLET SHALL BE EQUIPPED WITH A ZABEL A100 EFFLUENT FILTER (OR APPROVED EQUAL).

7 OUTLET DISTRIBUTION BOX

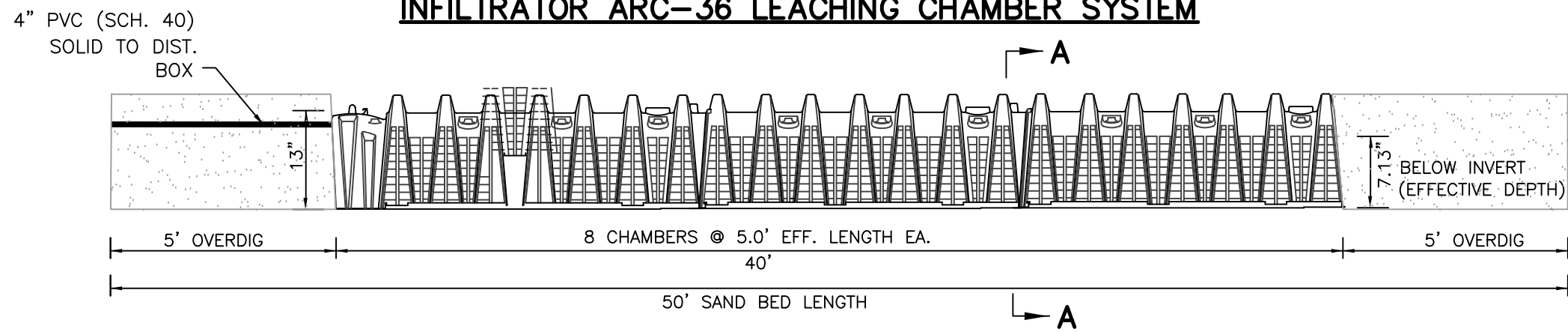


- NOTES:
1. DISTRIBUTION BOX COVER SHALL BE EQUIPPED WITH RISERS AS NECESSARY TO BRING THE COVER TO WITHIN 6" OF FINISHED GRADE.
  2. ALL PIPE CONNECTION AND CONSTRUCTION JOINTS SHALL BE SEALED WITH HYDRAULIC CEMENT.
  3. DISTRIBUTION BOX TO BE INSTALLED ON A LEVEL 6" CRUSHED STONE BASE.
  4. THE FIRST 2 FT. OF PIPE EXITING THE DISTRIBUTION BOX SHALL BE INSTALLED LEVEL.

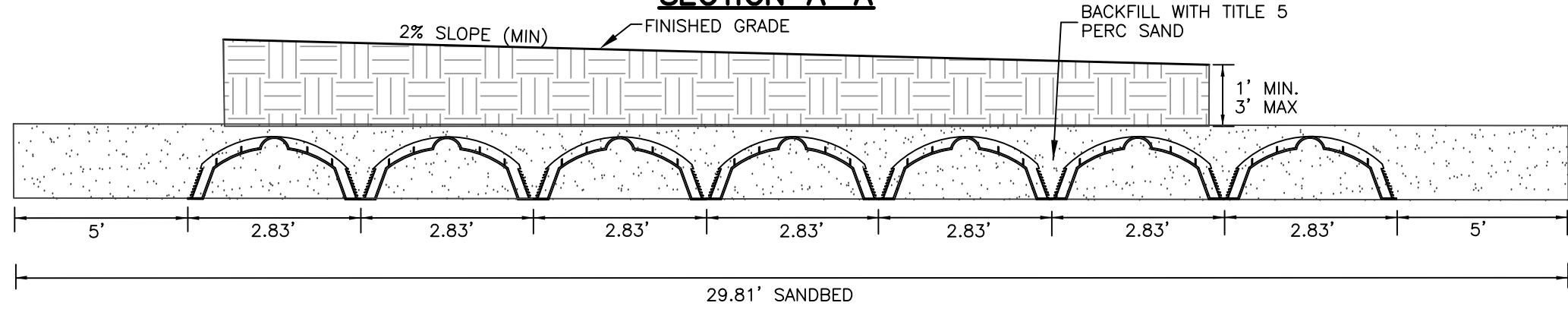
STAKED MULCH SOCK DETAIL



INFILTRATOR ARC-36 LEACHING CHAMBER SYSTEM

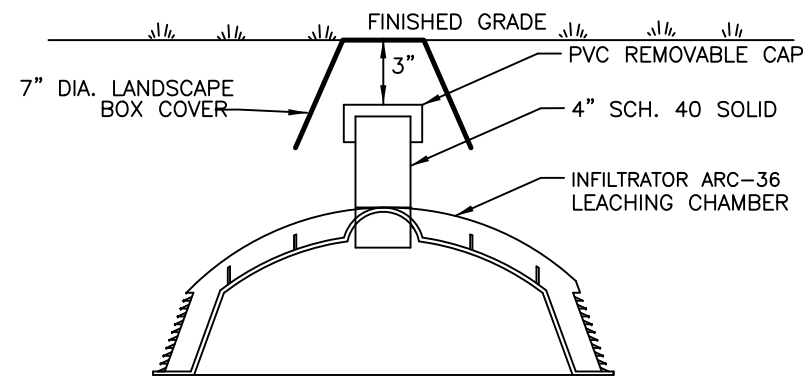


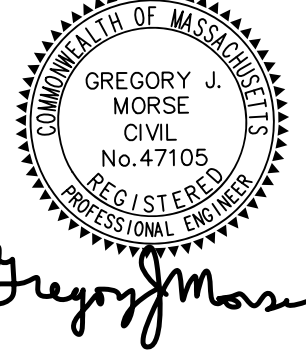

INFILTRATOR ARC 36 LEACHING CHAMBERS  
SECTION A-A



- NOTES :
- 1.) NO STONE BELOW OR AROUND CHAMBERS IS REQUIRED.
  - 2.) BACKFILL CHAMBERS WITH CLEAN COARSE SAND IN ACCORDANCE WITH 310 CMR 15.255 (3) TO THE TOP OF THE CHAMBER.
  - 3.) DO NOT BACKFILL WITH ANY STONES 3" OR LARGER AGAINST CHAMBERS.
  - 4.) CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

INSPECTION PORT



 <i>Gregory J. Morse</i>	PREPARED BY:	 <b>MORSE</b> ENGINEERING CO., INC. 10 NEW DRIFTWAY SUITE 303 SCITUATE, MA 02066 T: 781-545-0895	
	PROJECT:		215 TILDEN ROAD (ASSESSOR'S PARCEL: 39-27-25-F) SCITUATE, MASSACHUSETTS
	DESIGN:		JDG
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		SHEET: 2	