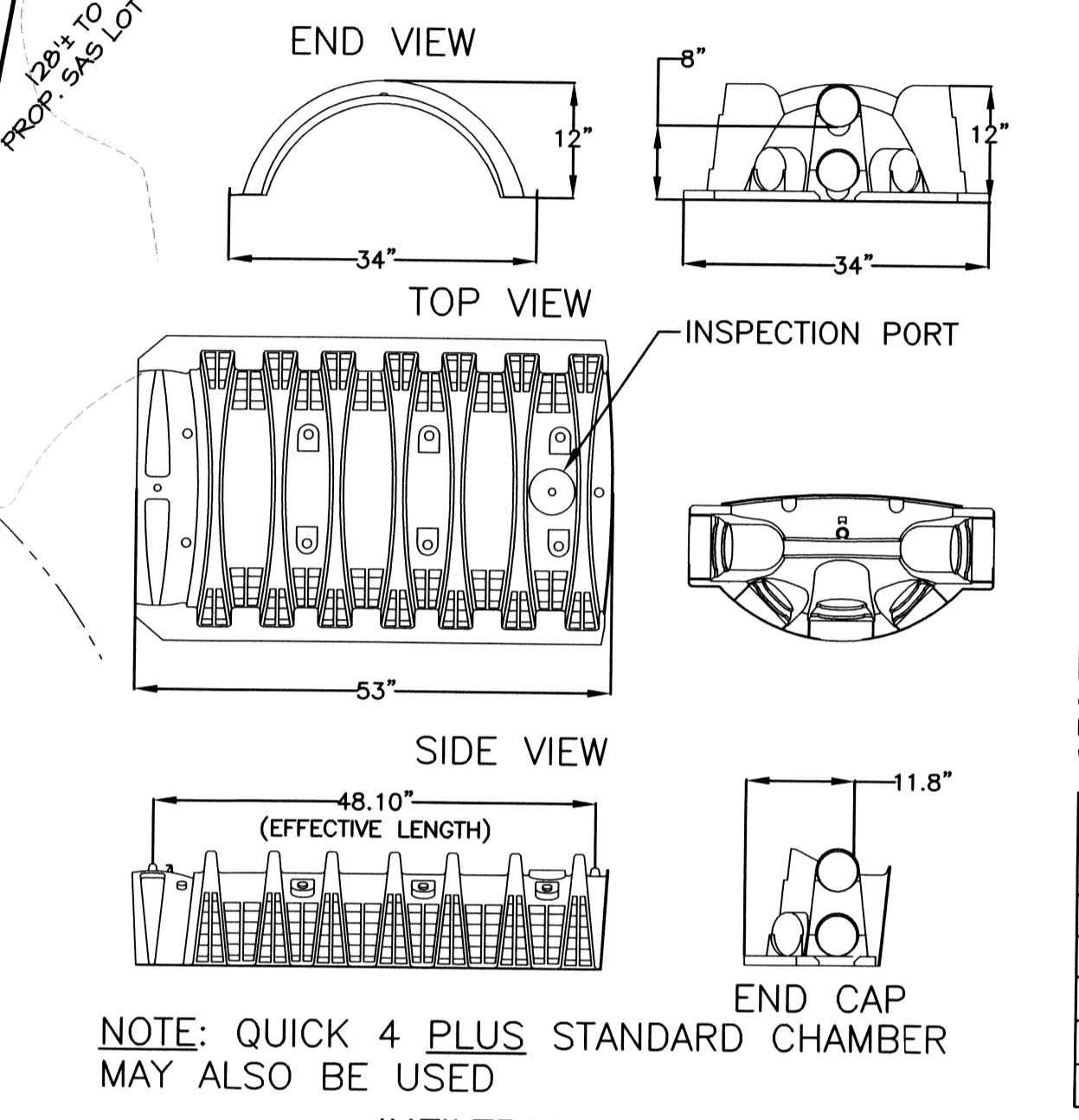


BENCH MARK:
 MAG NAIL IN BIT. BERM
 ELEV. 158.12

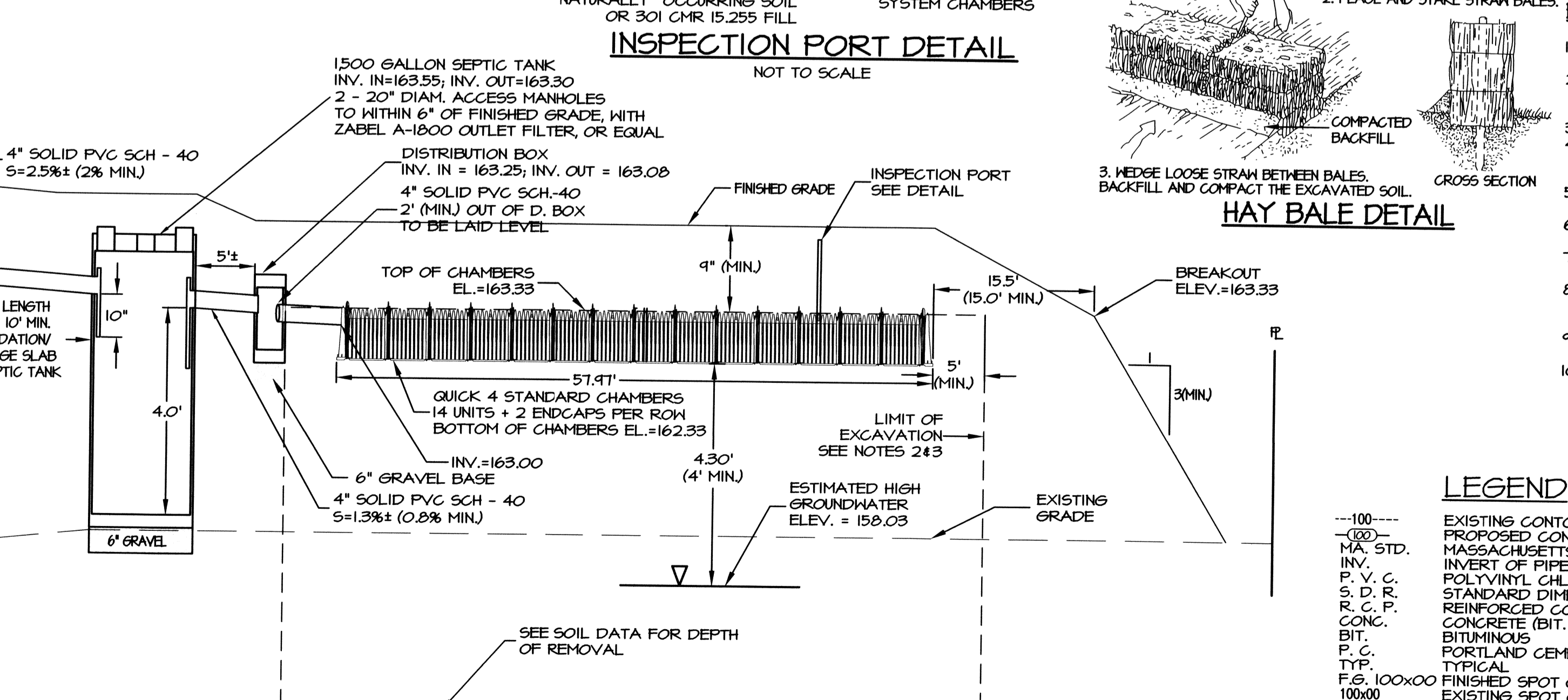
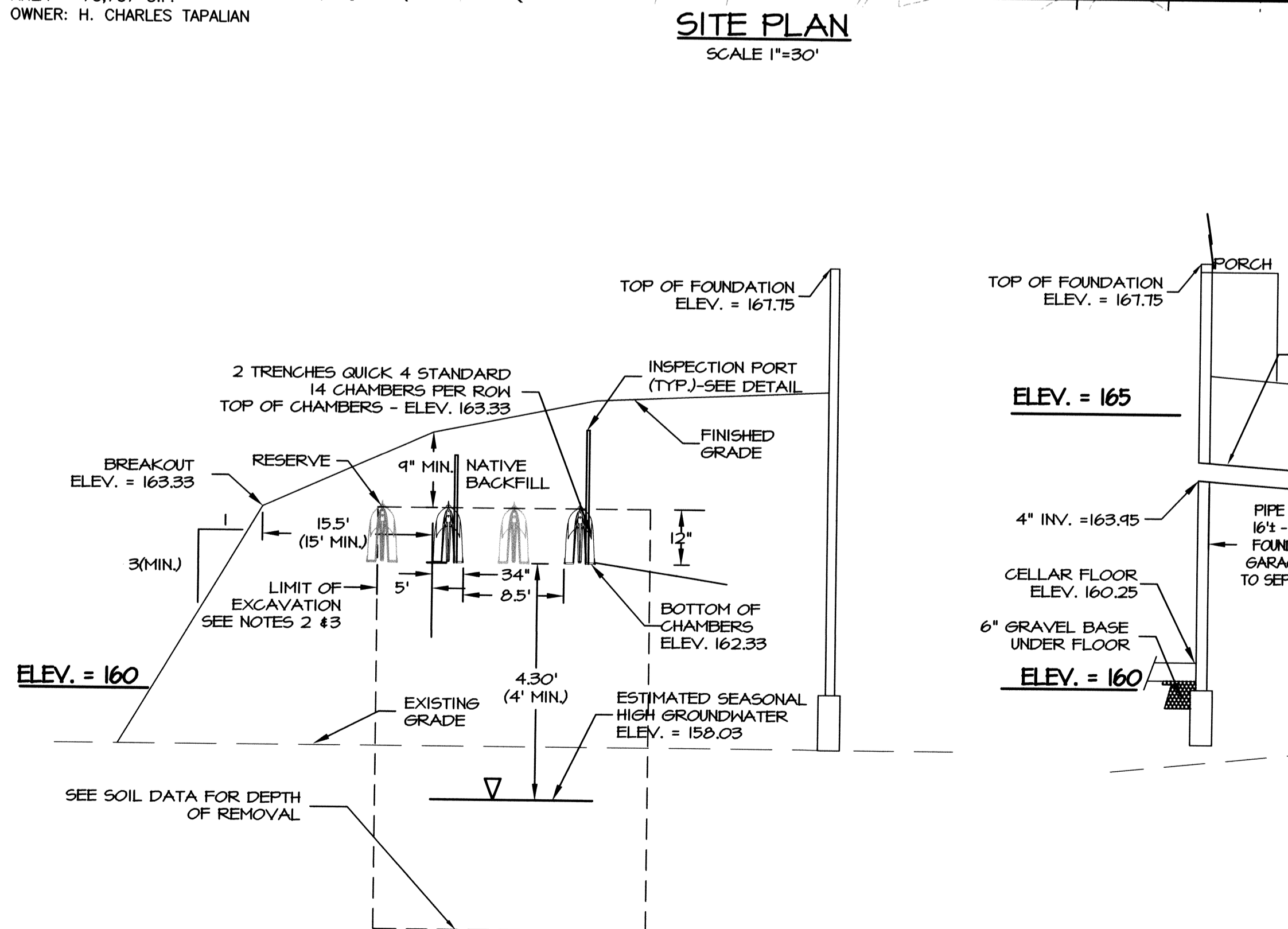
DESIGN DATA
 DAILY SEWAGE FLOW - 4 BEDROOMS
 • DAILY FLOW = 110 GAL/BEDROOM = 440 GALLONS PER DAY
 SEPTIC TANK REQUIREMENTS
 • VOLUME = 2 X DAILY FLOW = 880 GALLONS - USE 1500 GALLON SEPTIC TANK
 LEACHING AREA REQUIREMENTS
 • PERCOLATION RATE = 15 MINUTES PER INCH (DOH I)
 • DESIGN FOR 15 MINUTES PER INCH - SOIL TEXTURE CLASS II
 • EFFLUENT LOADING RATE = 0.56 GAL. PER SQ. FT.
 • USE INFILTRATOR QUICK 4 STANDARD CHAMBERS - 8" INVERT
 • QUICK 4 PLUS STANDARD CHAMBERS ALSO ALLOWED
 • CHAMBERS IN TRENCH CONFIGURATION
 • EFFECTIVE LEACHING AREA = 6.46 SFLF
 • PROVIDE 2 ROWS WITH 14 CHAMBERS PER ROW + 2 END CAPS
 TOTAL LEACHING AREA
 • 28 CHAMBERS X 4 LF/CHAMBER + 4 END CAP X 0.40 LF/CAP = 115.4 LF
 TOTAL LEACHING CAPACITY = 115.4 LF X 6.46 SFLF = 806 SF.
 • 806 SF. X 0.56 GAL/SF = 451 GAL/DAY > 440 GPD

CONVENTIONAL DESIGN DATA
 LEACHING AREA REQUIREMENTS
 • DESIGN FOR 15 MINUTES PER INCH - SOIL TEXTURE CLASS II
 • EFFLUENT LOADING RATE = 0.56 GALLONS PER SQUARE FOOT
 • 2 TRENCHES, 10' DEEP, 18' LONG (WITH RESERVE BETWEEN)
 • SIDEHALL AREA = (2 X 18') X (2 X 3') X 10' X 2 TRENCHES = 324 S.F.
 • BOTTOM AREA = 18' X 3' X 2 TRENCHES = 468 SQUARE FEET
 TOTAL LEACHING AREA = 192 SQUARE FEET
 TOTAL LEACHING CAPACITY = 192 S.F. X 0.56 GAL/DAY/SF = 443 GAL/DAY > 440 GPD



ELEVATION SCHEDULE

DESCRIPTION	ELEVATION
INVERT AT FOUNDATION	163.95
INVERT IN - SEPTIC TANK	163.55
INVERT OUT - SEPTIC TANK	163.50
INVERT IN - DIST. BOX	163.50
INVERT OUT - DIST. BOX	163.00
INVERT BEGINNING CHAMBERS	163.00
ELEV. TOP OF CHAMBERS (BREAKOUT)	163.33
ELEV. BOTTOM OF CHAMBERS	162.33
EST. SEASONAL HIGH GW	158.03



LOT 13 - DEEP OBSERVATION HOLE 1
 ORIGINAL ELEVATION - 158.10

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
0 - 8"	A	SANDY LOAM	10 YR 3/4		MASSIVE	FRIABLE	
8" - 24"	Bw	FINE SANDY LOAM	10 YR 4/4		MASSIVE	FRIABLE	COBBLY
24" - 57"	Cd1	FINE SANDY LOAM	2.5 Y 5/4	26" MANY, PROM. COARSE	MASSIVE	FRIABLE	DEPTH VARIES
57" - 130"	Cd2	SANDY LOAM	2.5 Y 3/3		MASSIVE	FRIABLE	GRAVELLY, COBBLY, STONY

OBSERVED STANDING GROUNDWATER - 122" PERC. @ 47" + 18" = 15 MPI
 OBSERVED WEeping GROUNDWATER - 116" REMOVE TO C22 HORIZON
 ESTIMATED SEASONAL HIGH GW - 26" (ELEV. 155.93) DESIGN FOR CLASS II SOIL

LOT 13 - DEEP OBSERVATION HOLE 2
 ORIGINAL ELEVATION - 158.47

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
0 - 8"	A	SANDY LOAM	10 YR 3/4		MASSIVE	FRIABLE	
8" - 29"	Bw	SANDY LOAM	10 YR 4/4		MASSIVE	FRIABLE	
29" - 124"	Cd	SANDY LOAM	2.5 Y 4/3	22" COMMON, DIST. CRS.	MASSIVE	FRIABLE	GRAVELLY, COBBLY, STONY

OBSERVED STANDING GROUNDWATER - 116" REMOVE TO INTO C4 HORIZON
 OBSERVED WEeping GROUNDWATER - 112" DESIGN FOR CLASS II SOIL
 ESTIMATED SEASONAL HIGH GW - 22" (EL. 156.64)

LOT 13 - DEEP OBSERVATION HOLE 3
 ORIGINAL ELEVATION - 159.00

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
0 - 6"	A	SANDY LOAM	10 YR 3/4		MASSIVE	FRIABLE	
6" - 30"	Bw	SANDY LOAM	10 YR 4/4	25" MANY, PROM. COARSE	MASSIVE	FRIABLE	
30" - 117"	Cd	SANDY LOAM	2.5 Y 4/4		MASSIVE	FRIABLE	GRAVELLY, COBBLY, STONY

OBSERVED STANDING GROUNDWATER - 113" REMOVE TO INTO C4 HORIZON
 OBSERVED WEeping GROUNDWATER - 110" DESIGN FOR CLASS II SOIL
 ESTIMATED SEASONAL HIGH GW - 25" (EL. 156.92)

LOT 13 - DEEP OBSERVATION HOLE 4
 ORIGINAL ELEVATION - 158.57

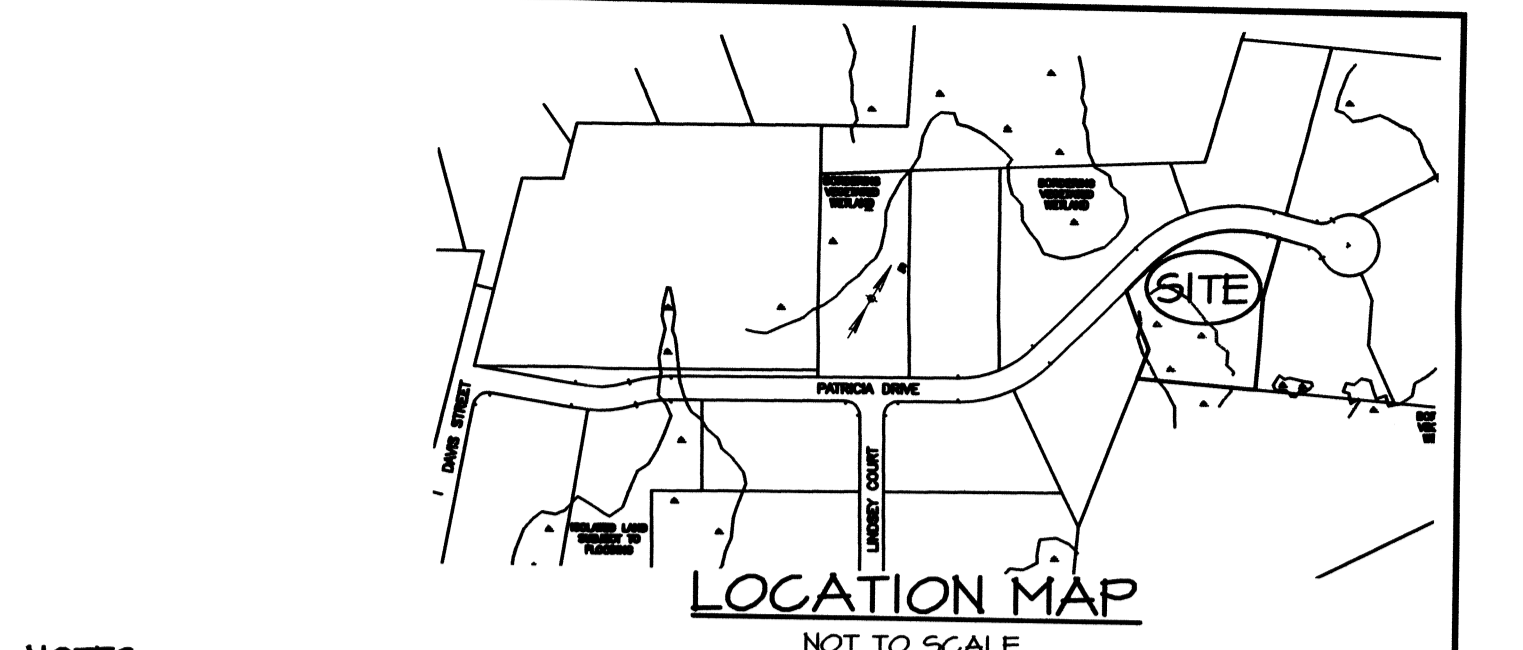
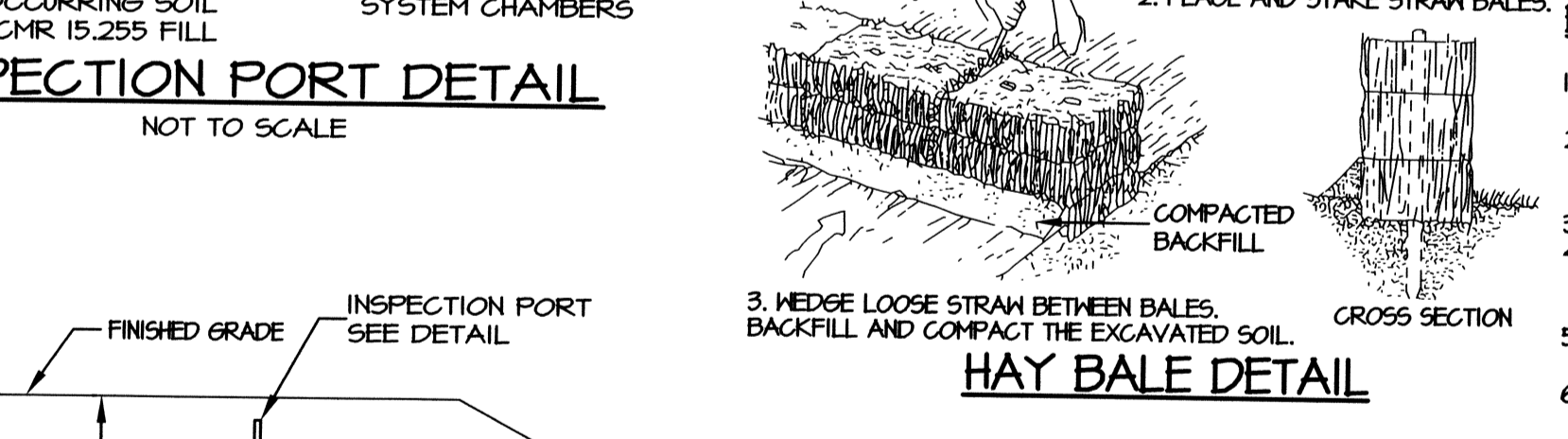
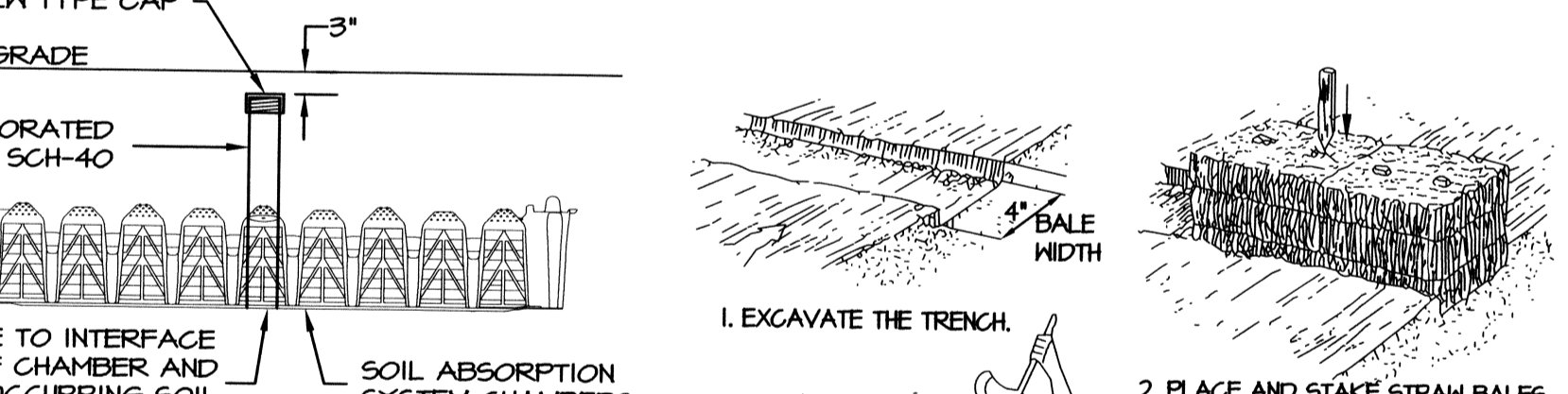
DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
0 - 5"	A	SANDY LOAM	10 YR 3/4		MASSIVE	FRIABLE	SOME SURFACE BOULDERS
5" - 37"	Bw	SANDY LOAM	10 YR 4/6		MASSIVE	FRIABLE	
37" - 97"	Cd	SANDY LOAM	2.5 Y 4/3	32" COMMON, PROM. CRS.	MASSIVE	FRIABLE	GRAVELLY, COBBLY, VERY STONY
97"	R						PART OF HOLE

OBSERVED STANDING GROUNDWATER - 110" REMOVE TO INTO C4 HORIZON
 OBSERVED WEeping GROUNDWATER - 106" DESIGN FOR CLASS II SOIL
 ESTIMATED SEASONAL HIGH GW - 32" (EL. 155.90)
 WITNESS: BETH HALLAL, SEEKONK BOARD OF HEALTH TESTING PERFORMED BY: CAPUTO AND WICK LTD. DATE OF SOIL TEST - DECEMBER 2, 2013

LOT 13 - DEEP OBSERVATION HOLE Y2K-11
 ORIGINAL ELEVATION - 159.2

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
+3" - 0	0						
0 - 24"	B	SANDY LOAM	10 YR 5/8				
24" - 52"	Cd1	SILT LOAM	2.5 Y 5/6	30" COMM. 10 YR 6/8			BASIL (SIC)
52" - 128"	C2	LOAMY SAND	2.5 Y 5/3				10% GRAVEL-

OBSERVED GROUNDWATER - 120" WEeping FROM PIT FACE - 118" GROUNDWATER READING 3/23/2001 - 14" (ELEV. 158.03)
 ESTIMATED S.H.G.W. = 14" (EL. 158.03) PERC. RATE = 6 MPI @ 72" REMOVE TO C2 HORIZON
 TESTING WITNESSED BY: HAROLD CHENEVERT, JR., SEEKONK BOARD OF HEALTH DATE OF TESTING - 9/28/00
 TEST PERFORMED BY: DEAN MONSEES



- NOTES:**
- WORK SHALL CONFORM TO THE 310 C.M.R. 15.00 STATE ENVIRONMENTAL CODE - TITLE 5 AND THE RULES AND REGULATIONS OF THE SEEKONK BOARD OF HEALTH.
 - STRIP ALL TOPSOIL, SUBSOIL AND UNSUITABLE MATERIAL, TREE ROOTS AND STUMPS AND ANY OTHER IMPROVISED OR SPECIFIED SOIL IN THE AREA OF THE SYSTEM AND 5 FEET HORIZONTALLY BEYOND THE EDGE OF THE SYSTEM STONE IN ALL DIRECTIONS, WHERE POSSIBLE. STRIP MATERIAL VERTICALLY 3" MINIMUM INTO THE NATURALLY OCCURRING PERVIOUS MATERIAL. REPLACE WITH GRANULAR FILL MEETING THE LATEST SPECIFICATIONS OF 310 C.M.R. 15.25(3). ACTUAL FILL MATERIAL IS SUBJECT TO APPROVAL BY THE DESIGN ENGINEER AND/OR SEEKONK HEALTH AGENT. THE DESIGN ENGINEER AND/OR THE SEEKONK HEALTH AGENT MAY ALSO REQUIRE A SIEVE ANALYSIS OF THE FILL MATERIAL.
 - THE CONTRACTOR IS TO REMOVE ALL UNSUITABLE MATERIAL BELOW THE PROPOSED SOIL ABSORPTION SYSTEM PRIOR TO INSTALLATION. SEE DEEP OBSERVATION HOLES SOIL DATA FOR FURTHER INFORMATION. UNSUITABLE MATERIAL USED TO BACKFILL THE TEST HOLES SHALL BE REMOVED AND REPLACED WITH GRANULAR FILL MEETING THE LATEST SPECIFICATIONS OF 310 C.M.R. 15.25(3).
 - ALL PIPE TO BE PER P.V.C. SCHEDULE 40 UNLESS OTHERWISE NOTED.
 - PLACE 6" MINIMUM COMPACTED GRANULAR FILL UNDER SEPTIC TANK, AND DISTRIBUTION BOX.
 - SOIL TESTING FOR THIS PROJECT WAS PERFORMED BY DEAN MONSEES AND WITNESSED BY THE SEEKONK BOARD OF HEALTH AGENT, HAROLD CHENEVERT, JR. ADDITIONAL TESTING HAS BEEN PERFORMED BY CAPUTO AND WICK, LTD. AND WITNESSED BY BETH HALLAL, SEEKONK BOARD OF HEALTH AGENT. IF CONDITIONS ENCOUNTERED DURING CONSTRUCTION VARY SUBSTANTIALLY FROM THOSE SHOWN ON THIS PLAN, NOTIFY CAPUTO AND WICK, LTD. BEFORE PROCEEDING WITH CONSTRUCTION. **IF IN DOUBT, ASK.**
 - INLET AND OUTLET TEES FOR SEPTIC TANK ARE TO BE LOCATED DIRECTLY BELOW ACCESS COVERS.
 - SEPTIC TANK AND DISTRIBUTION BOX SHALL BE DESIGNED FOR 15-10, AND SHALL BE PROTECTED FROM VEHICULAR TRAFFIC BOTH DURING AND AFTER INSTALLATION.
 - IT IS RECOMMENDED THAT THE SEPTIC TANK BE INSPECTED TWICE A YEAR, AND BE CLEANED WHEN THE SOLIDS EQUAL ONE THIRD THE LIQUID DEPTH. EFFLUENT FILTER MUST BE CLEANED ANNUALLY, AT A MINIMUM.
 - BREAKOUT ELEVATION = 163.33. NO FINISHED GRADE BELOW 163.33 FOR 15 FEET (MINIMUM) FROM THE EDGE OF THE LEACHING AREA.
 - CONTRACTOR SHALL CONTACT "DIG-SAFE" PRIOR TO CONSTRUCTION. LOCATION OF UTILITIES ON THIS PLAN ARE FROM BEST AVAILABLE EXISTING INFORMATION, BUT ARE ONLY TO BE CONSIDERED APPROXIMATE. EXISTING AND PROPOSED WATER WELLS FOUND WITHIN 200' OF PROPOSED SEWAGE DISPOSAL SYSTEM ARE INDICATED ON THE PLAN. EXISTING AND PROPOSED SEWAGE DISPOSAL SYSTEMS FOUND WITHIN 200' OF PROPOSED WATER WELL ARE INDICATED ON THE PLAN. CONTRACTOR SHALL PROVIDE FOR DEWATERING AS REQUIRED AND ALL WORK SHALL BE PERFORMED UNDER DRY CONDITIONS PER 310 C.M.R. 15.25(6).
 - MATERIAL AND EQUIPMENT FROM ALTERNATE MANUFACTURERS MAY BE USED IF EQUAL. APPROVAL FOR ALTERNATE MATERIAL AND/OR EQUIPMENT REQUIRED FROM ENGINEER AND THE BOARD OF HEALTH PRIOR TO CONSTRUCTION. FULL SPECIFICATIONS FOR ALTERNATE EQUIPMENT MUST BE PROVIDED BY THE CONTRACTOR. THE DESIGNER EXPRESSLY DISCLAIMS ANY RESPONSIBILITY FOR MONITORING, INSPECTING OR SUPERVISING THE ACTUAL CONSTRUCTION WORK. AFTER EXCAVATING AND PRIOR TO INSTALLING ANY IMPORTED MATERIAL, CONTACT THE BOARD OF HEALTH AGENT FOR A BOTTOM OF EXCAVATION INSPECTION. AFTER SYSTEM COMPONENTS ARE IN PLACE AND PRIOR TO BACKFILLING, CONTACT THE DESIGNER TO VERIFY THE LOCATION AND ELEVATION OF SYSTEM COMPONENTS AND PREPARE A RECORD DRAWING AS REQUIRED BY THE BOARD OF HEALTH.
 - THE DESIGNER EXPRESSLY DISCLAIMS ANY RESPONSIBILITY, FOR THE INSTALLATION AND MAINTENANCE OF THE SYSTEM. IT SHALL BE THE RESPONSIBILITY OF THE INSTALLER TO CONSTRUCT THE SYSTEM IN ACCORDANCE WITH 310 C.M.R. 15.00 AND LOCAL BOARD OF HEALTH REGULATIONS AND THE RESPONSIBILITY OF THE OWNER FOR PROPERLY MAINTAINING THE SYSTEM IN ACCORDANCE WITH 310 C.M.R. 15.00 AND THE LOCAL BOARD OF HEALTH REGULATIONS.
 - REFER TO 310 C.M.R. 15.00 AND THE LOCAL BOARD OF HEALTH REGULATIONS FOR ADDITIONAL INFORMATION CONCERNING THE CONSTRUCTION AND OPERATION OF THE SYSTEM. THE INSTALLER AND OWNER SHOULD REVIEW AND APPLY 310 C.M.R. 15.00 AND THE LOCAL BOARD OF HEALTH REGULATIONS SYSTEM TO BE CONSTRUCTED BY AN INSTALLER LICENSED BY THE SEEKONK BOARD OF HEALTH.
 - FILL MEETING THE REQUIREMENTS OF 310 C.M.R. 15.25(6) MUST BE PLACED ON SCARIFIED, RELATIVELY DRY NATURAL SOIL. THE CONTRACTOR SHALL PROVIDE FOR DEWATERING AS REQUIRED AND ALL WORK SHALL BE PERFORMED UNDER DRY CONDITIONS PER 310 C.M.R. 15.25(6).
 - THE CELLAR FLOOR ELEVATION SHOWN HAS BEEN SUGGESTED AS A MINIMUM BASED ON OBSERVED GROUNDWATER CONDITIONS. SINCE THE GROUNDWATER LEVELS FLUCTUATE ANNUALLY, NO WARRANTY OF A DRY CELLAR IS EXPRESSED OR IMPLIED.
 - INSTALL MAGNETIC TAPE OVER ALL PIPE AND SYSTEM COMPONENTS.
 - PLAN EXISTING GRADES MAY VARY FROM ORIGINAL GRADES DUE TO SUBDIVISION CONSTRUCTION ACTIVITY.
 - CONTRACTOR MUST BE FAMILIAR WITH CHAMBER PRODUCTS PROPOSED FOR THIS SITE. SEE INFILTRATOR INSTALLATION MANUAL FOR ADDITIONAL DETAILS OF CHAMBER INSTALLATION.

- EROSION AND SEDIMENTATION CONTROL NOTES:**
- ALL PERIMETER EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF EARTHWORK.
 - ACCESSIBLE RESERVES OF HAY BALES AND STAKES ARE TO BE MAINTAINED ON SITE FOR ROUTINE MAINTENANCE AND IN THE EVENT OF UNANTICIPATED PROBLEMS REQUIRING EMERGENCY RESPONSE.
 - HAY BALES SHOULD BE INSTALLED IN ACCORDANCE WITH THE DETAILS PROVIDED.
 - NO WORK IS TO OCCUR ON THE WETLAND SIDE OF THE PERIMETER EROSION AND SEDIMENTATION CONTROLS. ALL PERIMETER CONTROLS SERVE AS THE PROJECT LIMIT OF DISTURBANCE.
 - NO STONES, BRUSH, CONSTRUCTION DEBRIS, LITTER, OR OTHER MATERIALS ARE TO BE DEPOSITED ON THE WETLAND AND SIDE OF THE EROSION AND SEDIMENTATION CONTROLS.
 - ALL DISTURBED SOILS NOT DESIGNATED FOR OTHER SURFACE TREATMENT ARE TO BE LOADED & SEEDED IMMEDIATELY FOLLOWING FINAL GRADING.
 - APPROPRIATE PRECAUTIONS SHOULD BE TAKEN TO PREVENT THE TRANSPORT OF SOIL OFFSITE FROM CONSTRUCTION EQUIPMENT.
 - ALL PERIMETER EROSION AND SEDIMENTATION CONTROLS MUST BE PROPERLY MAINTAINED AND MUST REMAIN IN PLACE UNTIL THE SOILS HAVE BEEN STABILIZED TO THE SATISFACTION OF THE ENGINEER AND THE SEEKONK CONSERVATION COMMISSION.
 - THE SPLIT RAIL FENCE SERVES AS THE LIMIT OF LAWN AND FUTURE YARD ACTIVITIES AND SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION.
 - NO STRUCTURES ARE TO BE PLACED WITHIN 50' OF WETLAND.

I CERTIFY THAT I HAVE CONTACTED THE SEEKONK WATER DISTRICT FOR THE LOCATION OF THE EXISTING WATER SERVICE CURB STOP FOR PLAT 26, LOT 169 AND HAS INFORMED THAT THERE IS NO CURB STOP CURRENTLY FOR THIS LOT. THE PROPOSED DWELLING WILL BE SERVED BY A PRIVATE WELL TO BE INSTALLED IN CONFORMANCE WITH THE SEEKONK BOARD OF HEALTH REGULATIONS.

SEWAGE DISPOSAL SYSTEM
 19 PATRICIA DRIVE
 ASSESSORS PLAT 26 - LOT 169
 SEEKONK, MASSACHUSETTS

CAPUTO AND WICK LTD.
 Land Surveying, Civil Engineering, Environmental Services, Traffic Engineering and Architectural Engineering
 100 PARK STREET AVE.
 REMINGTON, R.I. 02864-1897
 TEL: 401-414-8800
 FAX: 401-414-8810
 www.cawick.com

PROFESSIONAL ENGINEER
 ALAN M. WICK
 C.M.A.A. No. 33256

DATE: AUGUST 2014
 SHEET: 1