

GENERAL SEPTIC NOTES

- THE PROPOSED SEPTIC SYSTEM IS TO BE CONSTRUCTED TO CONFORM TO THE LATEST REVISION OF THE STATE OF CONNECTICUT PUBLIC HEALTH CODE.
- IT IS THE RESPONSIBILITY OF THE INSTALLER TO CALL "CALL BEFORE YOU DIG" 1-800-922-4455, TWO FULL WORKING DAYS PRIOR TO ANY EXCAVATION WORK ON THE PROPERTY.
- IT IS THE RESPONSIBILITY OF THE INSTALLER TO KEEP THE LOCAL HEALTH DEPARTMENT AND THE ENGINEER OF RECORD INFORMED OF CONSTRUCTION PROGRESS. NO DEVIATIONS FROM THE APPROVED DESIGN PLAN SHALL BE ALLOWED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER AND SANITARIAN. ENGINEER AND SANITARIAN WILL BE CONTACTED IF SOIL CONDITIONS OTHER THAN THOSE SHOWN ON PLAN ARE ENCOUNTERED AND WORK WILL BE HALTED PENDING REVIEW OF THOSE CONDITIONS.
- THE INSTALLATION OF THE SEPTIC SYSTEM SHALL BE UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER.
- ELEVATIONS SHOWN REFER TO THE INVERT (FLOW LINE) OF THE PROPOSED LEACHING SYSTEM UNLESS NOTED OTHERWISE.
- BASED ON AN OBSERVED PERCOLATION RATE OF 1" IN 20 MINUTES AND A 6 BEDROOM DWELLING, A 1,500 GALLON SEPTIC TANK AND 1,012.5 SQ. FT. OF EFFECTIVE LEACHING AREA MUST BE PROVIDED AS PER THE STATE OF CONNECTICUT HEALTH CODE. INSTALL 80' OF ELJEN MANTIS DOUBLE WIDE 100 GALLERIES PROVIDING 1,200 SQ. FT. OF EFFECTIVE LEACHING AREA.
- UTILIZATION OF EXISTING SEPTIC TANK WILL BE BASED UPON THE INTEGRITY OF THE TANK AND BAFFLES DETERMINED PRIOR TO LEACHING SYSTEM CONSTRUCTION.
- PROVIDE A 1,500 GALLON, TWO COMPARTMENT SEPTIC TANK MADE OF CONCRETE WITH A MINIMUM 4,000 PSI CONCRETE PER ASTM STANDARDS. SEPTIC TANK ACCESS SHALL BE OUTFITTED WITH 24" DIAMETER RISERS TO FINISHED GRADE WHERE SOIL COVER OVER THE TANK EXCEEDS 12 INCHES. SEAL ALL JOINTS WATER TIGHT. ALL TANK INLET AND OUTLET PIPING SHALL BE SEALED WITH A POLYETHYLENE GASKET, "POLYLOK" OR EQUIVALENT. TANK TO BE WATER TIGHT.
- SEPTIC TANK BAFFLES SHALL CONFORM TO TECHNICAL STANDARDS OF THE PUBLIC HEALTH CODE.
- SEPTIC TANK SHALL HAVE AN APPROVED NON-BYPASS EFFLUENT FILTER AT THE OUTLET.
- ALL PIPING BETWEEN HOUSE AND SEPTIC TANK SHALL BE FOUR INCHES IN DIAMETER WITH A MINIMUM SLOPE OF 1/4" PER FOOT OR SIX INCHES IN DIAMETER WITH A MINIMUM SLOPE OF 1/8" PER FOOT. PIPE SHALL BE LAID WITH TIGHT JOINTS AND IN A STRAIGHT LINE WITH UNIFORM GRADES. ACCESSIBLE MANHOLES OR SURFACE CLEANOUTS SHALL BE PROVIDED AT ONE OR MORE CUMULATIVE CHANGES OF DIRECTION EXCEEDING 45 DEGREES OR WHERE BUILDING SEWER EXCEEDS 75 FEET IN LENGTH. MATERIALS TO BE ALLOWED BY TECHNICAL STANDARDS.
- ALL PIPE USED BETWEEN SEPTIC TANK AND LEACHING AREA SHALL BE 4" SDR-35 PVC PIPE WITH WATER TIGHT JOINTS OR EQUIVALENT ALLOWED BY TECHNICAL STANDARDS. PIPE SHALL BE SET ON A MINIMUM SLOPE OF 1/8" PER FOOT.
- DISTRIBUTION BOXES ARE TO BE SET ON A STABLE FOOTING OF 12" MINIMUM DEPTH OF 1" CRUSHED STONE.
- ALL FILTER FABRIC SHALL BE 1.5 OZ./YD. (ASTM D-5261), PERMEABILITY OF 1.0 SEC. (ASTM D-4491) AND A TRAPEZOID TEAR OF 15 LBS. (ASTM D-4533) OR EQUIVALENT.
- NO FOOTING DRAINS OR OTHER GROUNDWATER DRAINS SHALL BE INSTALLED WITHIN 25' OF PROPOSED SEPTIC SYSTEM OR WITHIN 50 FEET OF SEPTIC SYSTEM IF DRAIN IS DOWN GRADIENT.
- PRIOR TO CONSTRUCTION ACTIVITIES THE LEACHING SYSTEM AREAS SHALL BE ROPED OFF OR OTHERWISE DELINEATED SO AS TO KEEP CONSTRUCTION TRAFFIC OFF THE SEPTIC AREA.
- STRIP AND STOCKPILE TOPSOIL AND REMOVE BOULDERS PRIOR TO PLACING FILL. ALL TOPSOIL MUST BE REMOVED IN FILL SYSTEMS.
- GRAVEL FILL TO BE DUMPED AT THE EDGE OF PREPARED LEACHING AREA AND PUSHED ONTO HARROWED SURFACE WITH TRACK MACHINE IN 12" (MAX) LIFTS. GRAVEL TO BE COMPACTED TO 90-95% STANDARDS PROCTOR DENSITY - ASTM D-698. THE ENGINEER OF RECORD AND THE HEALTH DEPARTMENT MUST APPROVE THE SELECT GRAVEL PRIOR TO ITS PLACEMENT.
- SELECT FILL SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL, FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. SELECT FILL SHALL MEET THE FOLLOWING REQUIREMENTS:
 - THE SELECT FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN THE 3 INCH SIEVE.
 - UP TO 45% OF THE DRY WEIGHT OF THE REPRESENTATIVE SAMPLE MAY BE RETAINED ON THE #4 SIEVE.
 - THE MATERIAL THAT PASSES THE #4 SIEVE IS TO BE REWEIGHED AND A SECOND SIEVE ANALYSIS COMPLETED.
 - THE REMAINING SAMPLE SHALL MEET THE FOLLOWING GRADATION CRITERIA:

| SIEVE SIZE | PERCENT PASSING |
|------------|-----------------|
| #4 | 100 |
| #10 | 70-100 |
| #40 | 10-50 |
| #100 | 0-20 |
| #200 | 0-5 |

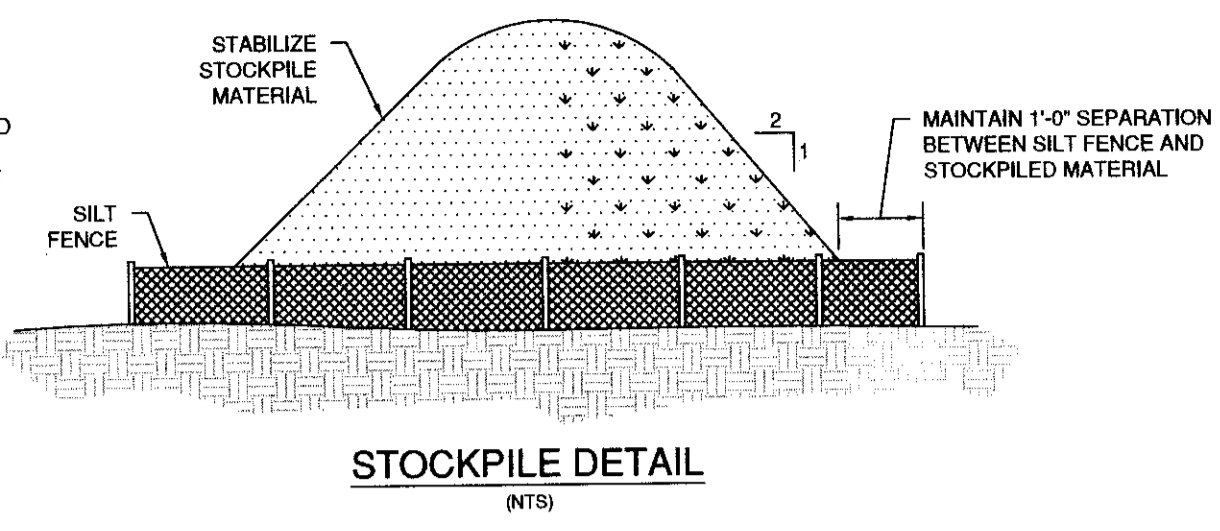
 *PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10%, AND THE #200 SIEVE DOES NOT EXCEED 5%.
- NON-SELECT FILL SHALL BE A CLEAN LOAM OR BETTER FREE OF ORGANIC MATTER.
- THIS SYSTEM IS NOT DESIGNED FOR BACKWASH FROM A WATER SOFTENING SYSTEM OR THE OUTFLOW FROM A GARBAGE DISPOSAL OR TUB (BATH TUB, WHIRLPOOL, JACUZZI, ETC.) IN EXCESS OF 100 GALLONS.
- MEASUREMENTS FOR AS-BUILT DRAWING TO BE COMPLETED BY PROFESSIONAL ENGINEER PRIOR TO BACKFILLING.
- FINAL GRADING TO BE COMPLETED IMMEDIATELY AFTER INSPECTION AND COMPLETION OF MEASUREMENTS FOR AS-BUILT DRAWING.
- THERE ARE NO WELLS WITHIN 75' OF PROPOSED SEPTIC SYSTEM.
- THIS DESIGN CONFORMS TO APPLICABLE CODES AND ACCEPTED PRACTICE. NO OTHER WARRANTY IS EXPRESSED OR IMPLIED.
- LANDTECH CONSULTANTS, INC., ASSUMES NO RESPONSIBILITY FOR SEPTIC SYSTEM SITE PREPARATION, LOCATION OR INVERT ELEVATIONS IN COMPLIANCE WITH THE APPROVED PLAN, UNLESS IT SUPERVISES EACH PHASE OF SYSTEM INSTALLATION.
- MLSS NOT CONSIDERED DUE TO ABSENCE OF RESTRICTED LAYER WITHIN 60 INCHES.
- BASED ON A VISUAL INSPECTION OF NEIGHBORING PROPERTIES AND A REVIEW OF AVAILABLE RECORDS, NO PART OF THE PROPOSED SEPTIC SYSTEM IS WITHIN THE REQUIRED SEPARATION DISTANCE FROM A WATER SUPPLY WELL, OR CLOSED LOOP GEOTHERMAL SYSTEM BOREHOLE/TRENCH AS DEFINED IN TABLE 1 OF THE "TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS", LATEST REVISION.

SEPTIC SYSTEM DESIGN CALCULATIONS LOT #1

OF BEDROOMS = 6 (5 BEDROOM RESIDENCE + 1 POOL CABANA)
 PERCOLATION RATE = 1 INCH 10.1 - 20.0 MINUTES USED FOR DESIGN
 (OBSERVED PERCOLATION RATE OF 1" IN LESS THAN 20.0 MINUTES)
 SQUARE FEET OF LEACHING AREA REQUIRED = 1,012.5 SF

PROPOSED SEPTIC SYSTEM LEACHING FIELD
 80 LF OF ELJEN MANTIS DW-100
 80 LF X 20.0 SF/LF = 1,200 SF OF LEACHING AREA PROVIDED

PROPOSED RESERVE AREA
 80 LF OF ELJEN MANTIS DW-100
 80 LF X 20.0 SF/LF = 1,200 SF OF LEACHING AREA PROVIDED



MLSS CALCULATION - PRIMARY

HYDRAULIC FACTOR (HF):
 HYDRAULIC GRADIENT AT BOTH ENDS OF SYSTEM = (389.2 - 386.0) / 60 = 5.3%; (388.7 - 386) / 50 = 5.4%
 AVG. HYDRAULIC GRADIENT = (5.3 + 5.4) / 2 = 5.35%
 HYDRAULIC GRADIENT = 4.1-6.0%

AVERAGE DEPTH OF TEST HOLES WITHIN THE SYSTEM = DTH=65" (USE 60")
 DEPTH OF DOWNGRADIENT TEST HOLE = DTH=872" (USE 60")
 AVERAGE DEPTH OF RESTRICTIVE LAYER = (66 + 60) / 2 = 58"
 HF = 20

FLOW FACTOR (FF):
 NUMBER OF BEDROOMS = 6 (5 BEDROOM RESIDENCE + 1 POOL CABANA)
 FF = 2.25

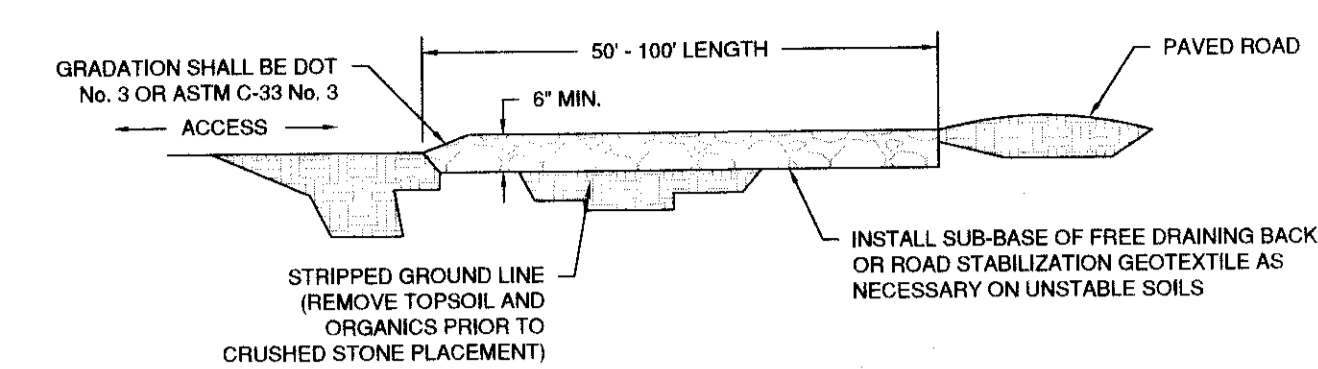
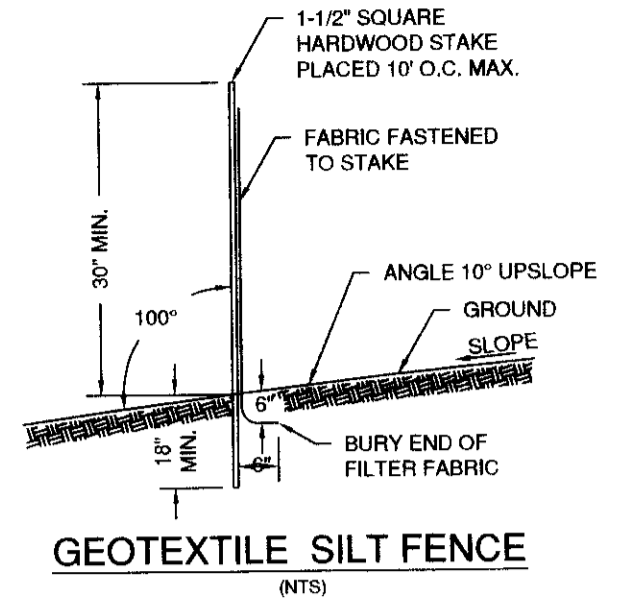
PERCOLATION FACTOR (PF):
 PERCOLATION RATE = 1" IN 10.1 - 20.0 MINUTES
 PF = 1.25

MLSS = HF X FF X PF
 MLSS = 20 X 2.25 X 1.25
 MLSS = 56.25 FEET

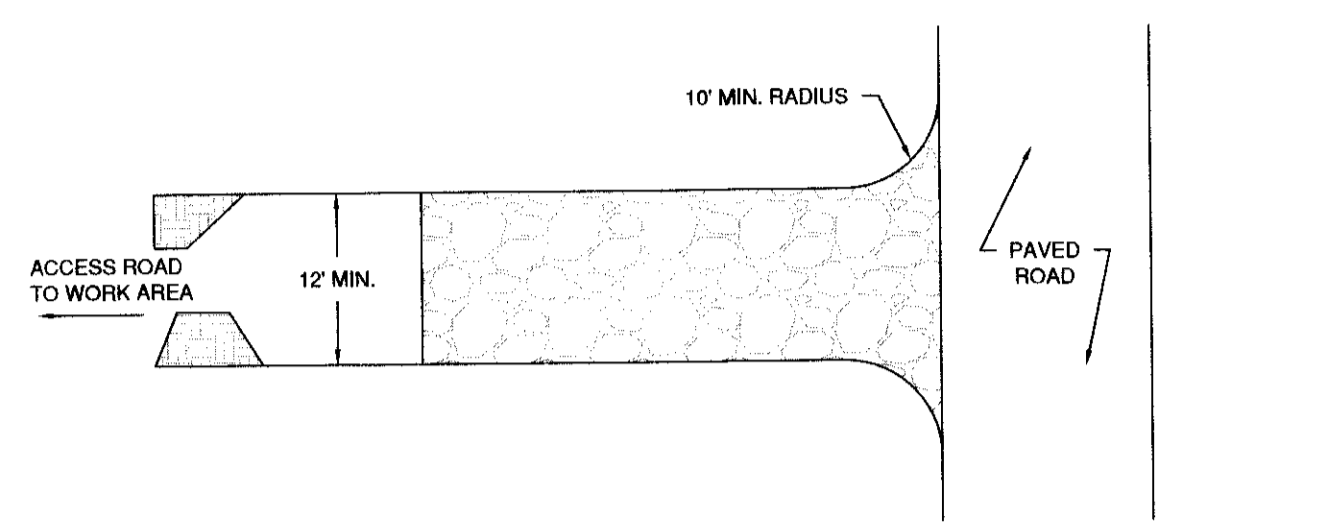
PRIMARY LEACHING SYSTEM SPREAD = 70 FEET

INVERT ELEVATIONS

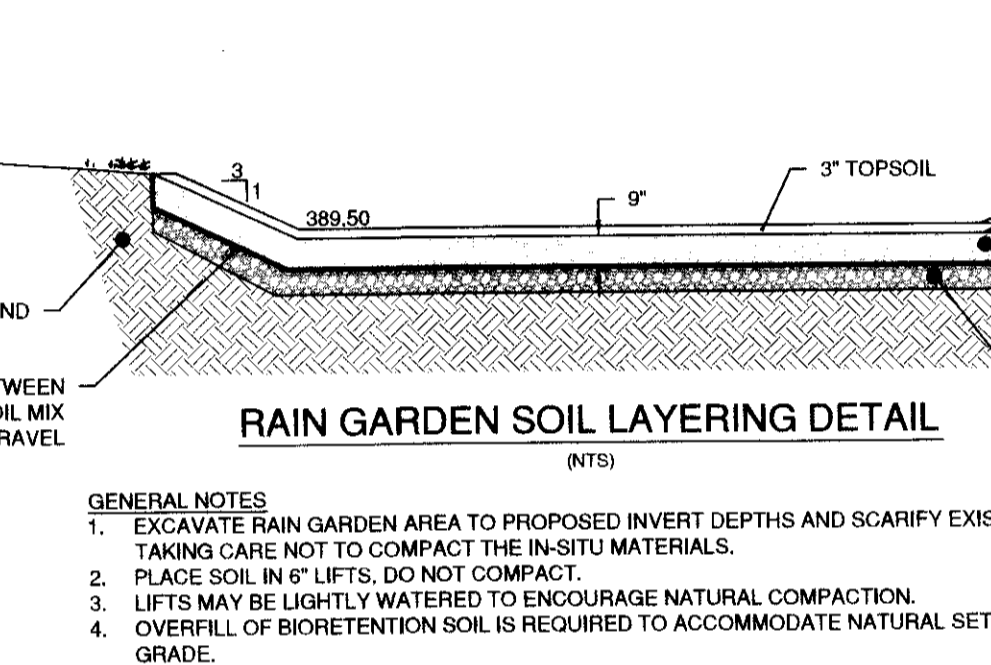
HOUSE SEWER AT FOUNDATION = 389.00 MIN.
 SEPTIC TANK INLET = 387.00
 OUTLET = 386.75
 DISTRIBUTION BOX INLET = 386.40
 LATERALS = 386.30
 SEPTIC GALLERIES INLET = 386.25
 BOTTOM = 385.25



CONSTRUCTION ENTRANCE (NTS)

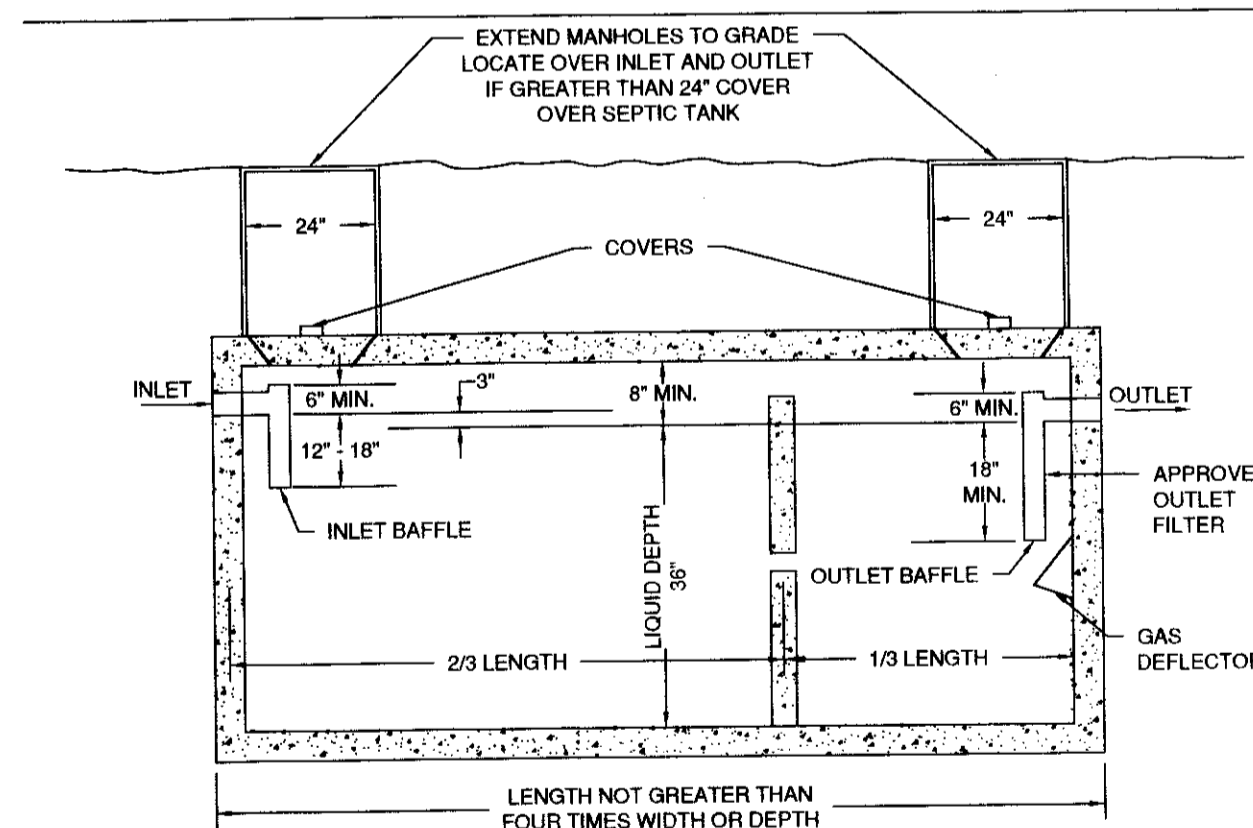


RAIN GARDEN SOIL LAYERING DETAIL (NTS)



ELJEN MANTIS DW-100 TYPICAL CROSS SECTION (NTS)

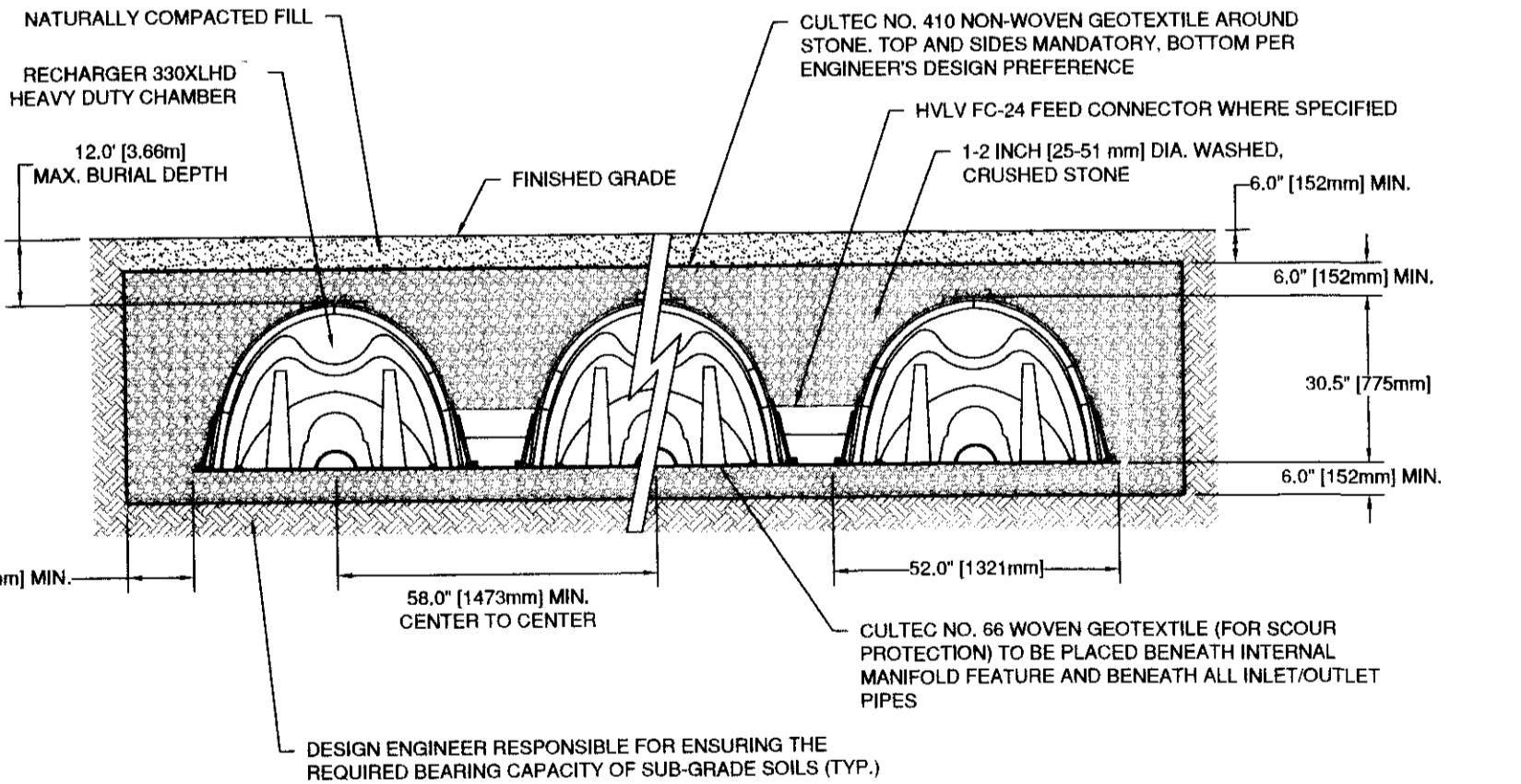
NOTE: VENTING REQUIRED WHEN MORE THAN 18" OF COVER AS MEASURED FROM THE TOP OF THE UNIT TO FINISHED GRADE



DISTRIBUTION BOX WITH BAFFLE (NTS)

SEPTIC TANK (NTS)

| SEPTIC TANK DIMENSIONS | | | |
|------------------------|--------|-------|--------|
| CAPACITY (GALLONS) | LENGTH | WIDTH | HEIGHT |
| 1,500 | 11'6" | 6' | 4'9" |



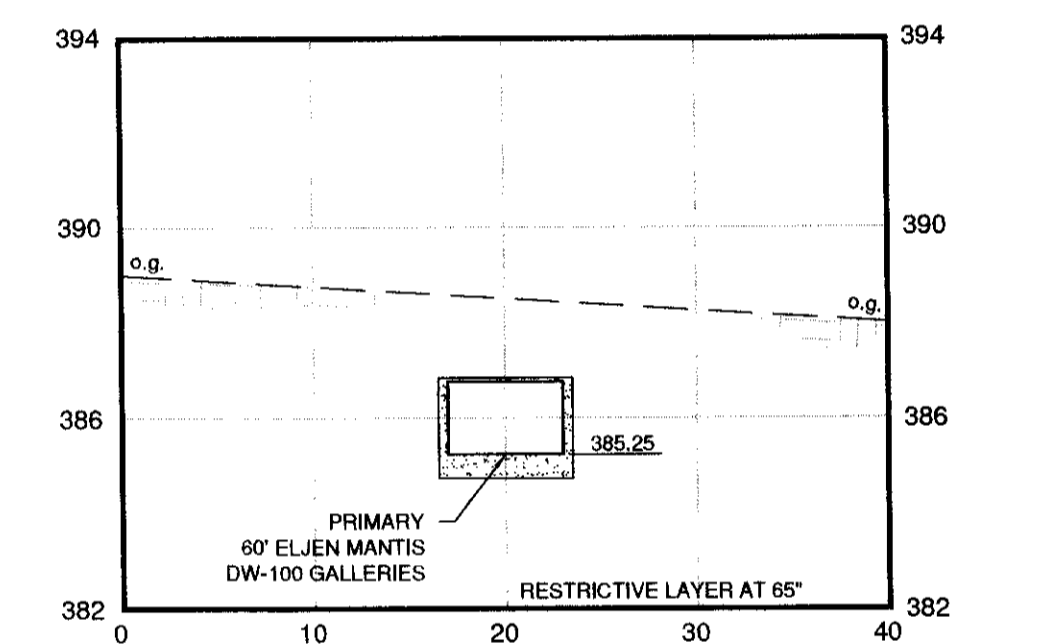
GENERAL NOTES
 RECHARGER 330XL HD BY CULTEC, INC. OF BROOKFIELD, CT.
 STORAGE PROVIDED = 11.32 CF/FT (1.05 m³/m) PER DESIGN UNIT.
 REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
 THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS

ALL RECHARGER 330XL HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER.
 ALL RECHARGER 330XL HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

CULTEC RECHARGER 330XLHD HEAVY DUTY (NON-TRAFFIC APP.) TYPICAL CROSS SECTION (NTS)

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- LAND DISTURBANCE WILL BE KEPT TO A MINIMUM; RESTABILIZATION WILL BE SCHEDULED AS SOON AS POSSIBLE.
- SILT FENCE WILL BE INSTALLED ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES, SOIL STOCKPILE AREAS, AND IN THOSE AREAS SHOWN ON THE PLAN.
- ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE STATE OF CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, 2002.
- EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO LAND DISTURBANCE WHENEVER POSSIBLE.
- ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PROPERLY MAINTAINED UNTIL STABILIZATION HAS BEEN ACHIEVED.
- ADDITIONAL CONTROL MEASURES WILL BE INSTALLED DURING THE CONSTRUCTION PERIOD IF NECESSARY OR REQUIRED. A MINIMUM OF 50 FEET OF SILT FENCE SHALL BE STORED AT THE SITE FOR EMERGENCY USE.
- ANY EXCAVATIONS THAT MUST BE DEWATERED WILL BE PUMPED INTO AN ACTIVE DRAINAGE SYSTEM OR DISPERSED IN AN UNDISTURBED FIELD AREA. THE INLETS OF ALL PUMPS ARE TO BE FLOATED A MINIMUM OF 24 INCHES OFF THE BOTTOM OF THE EXCAVATION.
- WATER AND CALCIUM CHLORIDE SHALL BE APPLIED TO UNPAVED ACCESSWAYS TO PREVENT WIND GENERATED SEDIMENTS AND DUST.
- DEBRIS AND OTHER WASTES RESULTING FROM EQUIPMENT MAINTENANCE AND CONSTRUCTION ACTIVITIES WILL NOT BE DISCARDED ON-SITE.
- SEDIMENT REMOVED FROM CONTROL STRUCTURES WILL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH INTENT OF THE PLAN.
- SILT FENCES SHALL HAVE SEDIMENT REMOVED WHEN THE DEPTH OF THE SEDIMENT IS EQUAL TO 1/2 TO 3/4 THE HEIGHT OF THE FENCE. FENCES SHALL BE PROPERLY INSTALLED AND RIPPED FENCE OR BROKEN POSTS REPAIRED AS SOON AS PRACTICAL.
- ANTI-TRACKING PADS AND GRAVEL CHECK DAMS SHALL BE REPLACED WHEN VOID SPACES ARE FULL OR STRUCTURES ARE BREACHED, AS APPLICABLE.
- TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND THE SOIL SURFACE STABILIZED WHEN CONSTRUCTION IS COMPLETE AND THE SOIL SURFACES ARE PERMANENTLY STABILIZED. STRUCTURAL COMPONENTS SHALL BE CLEANED OF ALL SEDIMENT UPON COMPLETION OF CONSTRUCTION.
- THE OWNER IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE PLANNING AND ZONING COMMISSION OF ANY TRANSFER OF THIS RESPONSIBILITY, AND FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT PLAN IF AND WHEN THE TITLE OF LAND IS TRANSFERRED.



SECTION A - A
 SCALE: HORIZ. 1"=10'
 VERT. 1"=4'

Civil Engineering, Site Planning, Environmental Science & Engineering, Surveying, Planning, Permit Coordinating & Management, Construction Management & Financing

LANDTECH

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PREPARED FOR: **PETER STOFA**

PROJECT LOCATION: **27 OLD OAKS ROAD EASTON, CT**

TITLE: **PROPOSED SITE IMPROVEMENTS FOR A NEW SINGLE FAMILY RESIDENCE/NOB DETAILS**

PROJECT No. **20216-01**

SCALE: **NTS** DATE: **1/18/2021**

DRAWN BY: **SM** CHECKED BY: **PR**