

TEST HOLE DATA
 Test holes excavated and witnessed 3-19-96, 3-20-96, 3-21-96,
 3-22-96, 3-25-96 and 3-26-96 by Edward J. Coppola, P.E. and
 witnessed by Paul D'Ono Westbrook Sanitarian.

- LOT #1**
- TH #1A**
 0-6" topsoil
 6-28" loamy subsoil (yellow-brown)
 28-39" silt-clay (yellow-brown)
 39-59" clay (grey-red)
 59-84" fine to med sand w/ silt (black)
 mottling @ 34" water @ 80" no refusal roots to 28"
- TH #1B**
 0-6" topsoil
 4-33" loamy to sandy subsoil (yellow-brown)
 33-42" silt (yellow-brown)
 42-66" fine to med sand w/ silt (brown) large boulders
 no mottling no water refusal @ 66" roots to 12"
- TH #1C**
 0-6" topsoil
 6-26" loamy subsoil (yellow-brown)
 33-36" silt-clay (yellow-brown)
 36-48" clay (grey-red)
 48-84" fine to med sand w/ silt (black-grey)
 mottling @ 32" water @ 54" no refusal roots to 26"

PERCOLATION TEST SUMMARY
 (by Edward J. Coppola, P.E.)

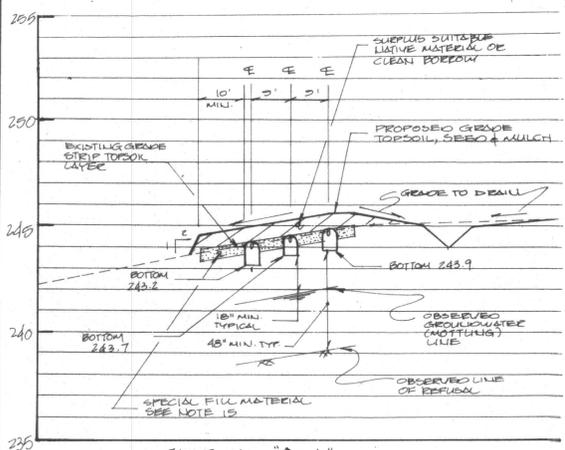
Percolation Test #	Date Tested	Results of Test
1	4-21-96	1" in 15.0 min
2	4-21-96	1" in 10.0 min

BASIS FOR SEPTIC SYSTEM DESIGN

- EFFECTIVE LEACHING SYSTEM AREA REQUIRED BY THE STATE HEALTH CODE FOR A 4 BEDROOM HOUSE AND 10-20 MINUTE PER INCH PERCOLATION RATE = 900 S.F.
- EFFECTIVE LEACHING SYSTEM AREA PROVIDED = 252 S.F. OF 12" HIGH BY 34" WIDE PLASTIC LEACHING TRENCH (ENVIROCHAMBERS) @ 3.6 S.F./L.F. = 907 S.F.

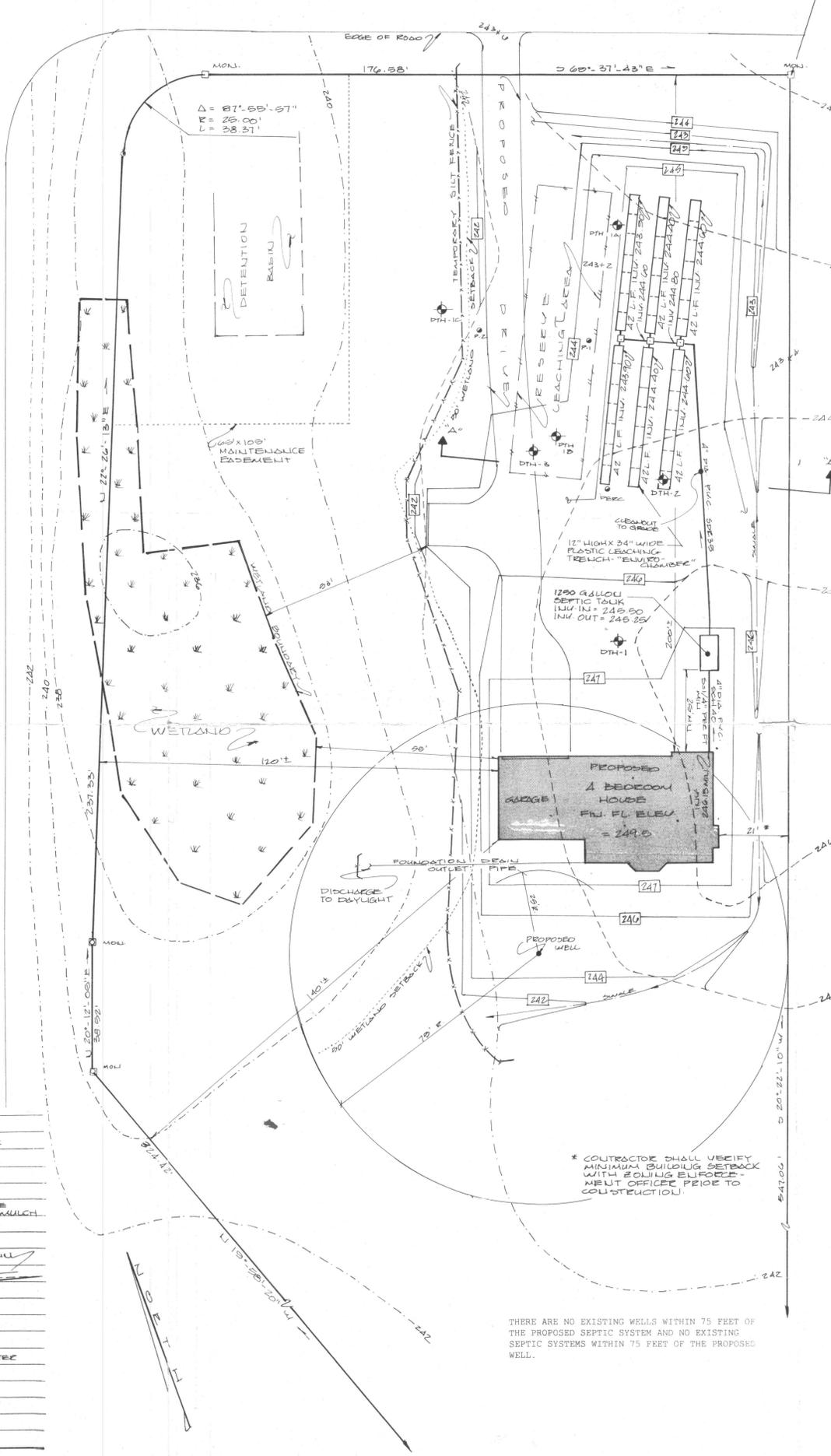
MINIMUM LEACHING SYSTEM SPREAD (M.L.S.S.)

4 BEDROOM HOUSE:
 MLSS = HYDRAULIC FACTOR X FLOW FACTOR X PERCOLATION FACTOR
 HYDRAULIC FACTOR = 28 (DEPTH TO RESTRICTIVE LAYER = 32")
 (HYDRAULIC GRADIENT = 4%)
 FLOW FACTOR = 600 GAL/DAY X 300 = 2.0
 PERCOLATION FACTOR = 1.5 (10 TO 20 MINUTES PER INCH)
 MLSS = 28 X 2.0 X 1.5 = 84 L.F.
 LSS PROVIDED = 87



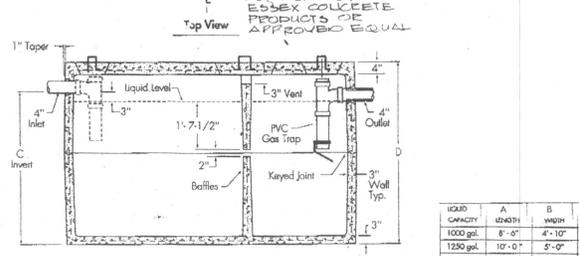
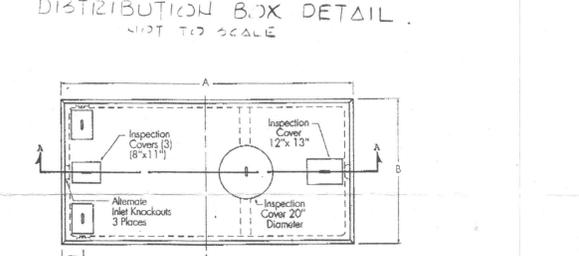
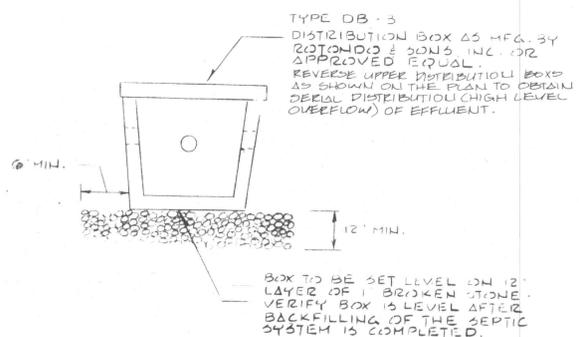
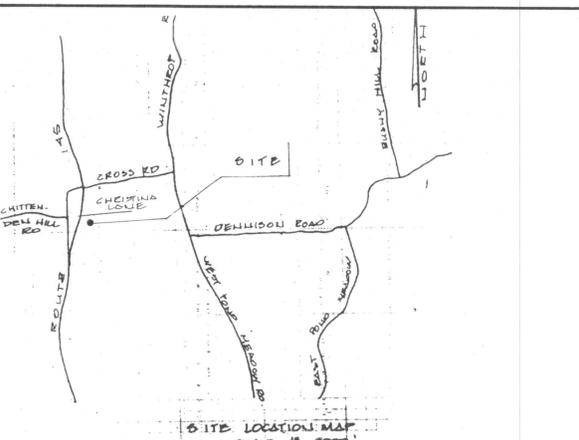
SECTION "A-A"
 SCALE: 1" = 20' H. & 1" = 4' V.

CHRISTINA LANE



THERE ARE NO EXISTING WELLS WITHIN 75 FEET OF THE PROPOSED SEPTIC SYSTEM AND NO EXISTING SEPTIC SYSTEMS WITHIN 75 FEET OF THE PROPOSED WELL.

BEULCHAMER - TOP OF MONUMENT
 ELEV = 246.12



LIQUID CAPACITY	A	B	C	D
1000 gal	8'-0"	4'-10"	4'-0"	3'-4"
1250 gal	10'-0"	5'-0"	4'-0"	3'-4"
1500 gal	10'-0"	5'-6"	4'-0"	3'-4"

- SOIL TEST RESULTS**
 MARCH 10, 1999
 LOT 1 HORSE HILL FARMS
 CHRISTINA LANE WESTBROOK
- DEEP TEST HOLE 1**
 0"-3" TOPSOIL, LEAF LITTER
 3"-27" ORANGE BROWN FINE SANDY LOAM, LOOSE DAMP
 27"-80" BROWN SILTY SAND WITH POCKETS OF SILT; FIRM, DAM STONES AND COBBLES NO REFUSAL
 MOTTLING AT 34" NO GROUNDWATER ROOTS TO 42"
- DEEP TEST HOLE 2**
 0"-2" TOPSOIL, LEAF LITTER
 2"-26" BROWN SILTY LOAM LOOSE, DAMP
 26"-48" BROWN/BLACK SANDY SILT AND SILT POCKETS BROWN FINE TO MEDIUM SAND AND SILTY SAND FIRM, DAMP NO REFUSAL NO GROUNDWATER MOTTLING AT 32" ROOTS TO 48"
- DEEP TEST HOLE 3**
 0"-2" TOPSOIL, LEAF LITTER
 2"-24" ORANGE BROWN FINE SANDY LOAM, LOOSE DAMP
 24"-68" LIGHT BROWN SANDY SILT, LOOSE, DAMP BROKEN STONES AND COBBLES, FIRM, DAMP WET REFUSAL AT 68" GROUNDWATER AT 60" MOTTLING AT 40" ROOTS TO 40"
- PERCOLATION TEST**
 HOLE DEPTH = 31"
 TIME READING CHANGE RATE
 4 0-50
 11:20 12-0/8" 4-0/8" 3.1
 11:25 13-7/8" 1-7/8" 2.2
 11:30 14-7/8" 1-0/8" 2.6
 11:35 15-6/8" 7/8" 2.2
 11:40 16-5/8" 6/8" 2.7
 11:45 17-1/8" 4/8" 10.4
 11:50 17-5/8" 4/8" 10.4
 11:55 18-1/8" 4/8" 10.4
 12:00 18-4/8" 3/8" 13.3
 12:05 18-7/8" 3/8" 13.3
 12:10 19-2/8" 3/8" 13.3
 12:15 HOLE DRY
 PERCOLATION RATE = 13.3 MINUTES PER INCH
- NOTES:**
- PROPOSED CONSTRUCTION SHALL CONFORM TO THE 1999 STATE OF CONNECTICUT PUBLIC HEALTH CODE AND TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS AS AMENDED.
 - ELEVATIONS AND CONTOURS ARE BASED ON AN ASSUMED DATUM.
 - ELEVATIONS SHOWN REFER TO THE INVERT (FLOW LINE) OF THE PROPOSED LEACHING SYSTEM UNLESS NOTED OTHERWISE.
 - PERCOLATION RATE FOR SEPTIC SYSTEM DESIGN = 10 TO 20 MINUTES PER INCH.
 - THE MINIMUM DISTANCE FROM WELL TO SEPTIC SYSTEM IS 75 FEET.
 - SEPTIC TANK CONSTRUCTION JOINTS SHALL BE SEALED WITH ASPHALT CEMENT. ALL PIPE CONNECTIONS TO THE SEPTIC TANK AND DISTRIBUTION BOXES SHALL BE SEALED WITH A POLYETHYLENE GASKET ("POLY-LOK" R APPROVED EQUAL).
 - SEPTIC TANK Baffles SHALL CONFORM TO SECTION VA-1 TECHNICAL STANDARDS OF THE STATE HEALTH CODE.
 - LEACHING SYSTEM AREA SHALL BE LIMED, FERTILIZED, SEEDED AND MULCHED UPON COMPLETION OF CONSTRUCTION.
 - THE FINAL HOUSE LOCATION IS NOT GUARANTEED TO COINCIDE WITH THE PROPOSED HOUSE LOCATION SHOWN ON THIS PLAN AND SHOULD NOT BE USED TO STAKE OUT THE PROPOSED SEPTIC SYSTEM. FIELD STAKEOUT SHOULD BE BASED ON PHYSICAL FEATURES EXISTING PRIOR TO THIS DESIGN SUCH AS STONEMAN, PROPERTY LINE PINS, UTILITY POLES, ETC.
 - IF FIELD CONDITIONS (LEDGE, GROUNDWATER, MOTTLING) ARE ENCOUNTERED AT SHALLOWER DEPTHS THAN SHOWN IN THE DEEP TEST HOLE RESULTS, CONSTRUCTION SHALL BE HALTED AND THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
 - SOIL TEST RESULTS SERVING AS THE BASIS FOR THIS DESIGN WERE CONDUCTED BY ROGER NEMERGUT P.E. AND WITNESSED BY THE TOWN SANITARIAN.
 - NO DEVIATIONS FROM THE APPROVED DESIGN PLAN SHALL BE ALLOWED WITHOUT THE PRIOR APPROVAL OF TOWN SANITARIAN OF THE DESIGN ENGINEER.
 - EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO FIELD MODIFICATION AS NECESSARY AS REQUIRED BY THE DESIGN ENGINEER OR TOWN OFFICIALS.
 - THE PROPOSED LEACHING SYSTEM AREA IN THOSE AREAS WHERE THE BOTTOM OF THE PROPOSED LEACHING SYSTEM IS AT OR ABOVE THE BOTTOM OF THE EXISTING TOPSOIL LAYER OR IN ALL AREAS WHERE SEPTIC SYSTEM FILL IS REQUIRED.
 - FILL MATERIAL, IF REQUIRED, SHALL BE CLEAN BANK RUN SAND AS FOLLOWS:
 A. FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN 3"
 B. FILL SHALL NOT CONTAIN MORE THAN 45% GRAVEL (BETWEEN NOS. 4 AND 3" SIEVE).
 C. NO MORE THAN 45% OF THE MATERIAL SHALL BE RETAINED ON THE NO. 4 SIEVE.
 D. FILL, LESS THE GRAVEL, SHALL MEET THE FOLLOWING CRITERIA:
 SIEVE NO. PERCENT PASSING
 4 0-50
 40 0-20
 100 0-20
 200 0-5
 - FILL SHALL BE PLACED IN 12" MAXIMUM LIFTS AFTER THE STRIPPED LEACHING SYSTEM AREA HAS BEEN SCARIFIED. TRUCKS OR OTHER CONSTRUCTION EQUIPMENT SHALL NOT BE DRIVEN OVER THE SCARIFIED AREA PRIOR TO FILL PLACEMENT TO AVOID SMearing.
 - PRIOR TO PLACEMENT, FILL MATERIAL SHALL BE INSPECTED AND APPROVED BY THE LOCAL HEALTH DEPARTMENT AND THE DESIGN ENGINEER.
 - SEPTIC TANKS SHALL BE TWO COMPARTMENT TANKS WITH HEAVY DUTY STEEL HANDLES FOR MANHOLE ACCESS COVERS AND GAS Baffles INSTALLED ON OUTLET PIPING.
 - TOPOGRAPHIC SURVEY PROVIDED BY DONALD R. CARLSON, L.S.
 - ALL PIPE DOWNSTREAM OF THE SEPTIC TANK SHALL BE 4" DIAMETER P.V.C. ASTM D3034 SDR 35 OR APPROVED EQUAL.
 - THE SITE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 1-800-922-4455 PRIOR TO CONSTRUCTION TO VERIFY THE EXTENT AND LOCATION OF EXISTING UNDERGROUND UTILITIES.
 - BATH TUBS WITH RECOMMENDED FILL CAPACITIES GREATER THAN 100 GALLONS WILL REQUIRE PRIOR APPROVAL OF THE TOWN SANITARIAN AND ENLARGEMENT OF THE LEACHING SYSTEM. THE BUILDER/OWNER SHALL CONTACT THE DESIGN ENGINEER TO DETERMINE IF THE SITE CAN ACCOMMODATE THE LARGER LEACHING SYSTEM REQUIRED FOR THE BATH TUB AND TO MAKE THE NECESSARY PLAN MODIFICATIONS FOR THE SYSTEM ENLARGEMENT.
 - IF A GARBAGE DISPOSAL IS INSTALLED IN THE HOUSE, THE SEPTIC TANK SHALL BE INCREASED TO THE NEXT LARGER SIZE.
 - IMMEDIATELY UPON COMPLETION OF THE SEPTIC SYSTEM INSTALLATION AND FINAL APPROVAL BY THE HEALTH DEPARTMENT THE SEPTIC SYSTEM SHALL BE BACKFILLED, TOPSOILED, SEEDED AND MULCHED. THE FINAL GRADING SHALL CONFORM TO THE DESIGN PLAN AND SHALL ENSURE THAT SURFACE RUNOFF IS DIRECTED AWAY FROM THE LEACHING SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES SHALL NOT BE REMOVED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED IN DISTURBED AREAS.
 - THE DESIGN ENGINEER SHALL BE CONTACTED PRIOR TO BACKFILLING THE SEPTIC SYSTEM TO ALLOW HIM TO TAKE THE NECESSARY FIELD MEASUREMENTS FOR THE PREPARATION OF A CERTIFIED "AS-BUILT" SEPTIC SYSTEM PLAN IF REQUIRED BY THE LOCAL HEALTH DEPARTMENT PRIOR TO THEIR ISSUANCE OF A PERMIT TO DISCHARGE OR CERTIFICATE OF OCCUPANCY.
 - THE YARD SHALL BE FINAL GRADED AWAY FROM THE HOUSE FOUNDATION AT A MINIMUM 2% SLOPE (1/4" PER FOOT) FOR A MINIMUM DISTANCE OF 20 FEET.
 - NO GRADING OR OTHER DISTURBANCE OF THE AREA OF THE PROPOSED SEPTIC SYSTEM WILL BE ALLOWED PRIOR TO INSTALLATION. NO PARKING, EQUIPMENT STORAGE OR TRAFFIC IN THE AREA OF THE SEPTIC SYSTEM WILL BE ALLOWED BEFORE OR AFTER INSTALLATION OF THE SYSTEM.
 - WETLAND BOUNDARIES SHOWN AS TAKEN FROM THE APPROVED SUBDIVISION MAP.

LEGEND

- - - 98 - - - EXISTING CONTOUR
- 98 - - - PROPOSED CONTOUR
- DTH-3 DEEP TEST HOLE
- DISTRIBUTION BOX

LOT 1 HORSE HILL FARMS
 CHRISTINA LANE
 WESTBROOK, CONNECTICUT
 PREPARED FOR: QUESTA BUILDING & DESIGN

APRIL 25, 1999
 SCALE: 1" = 20 FT
 SHEET 1 OF 1

SEPTIC SYSTEM DESIGN PLAN

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