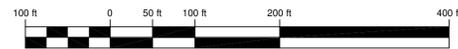
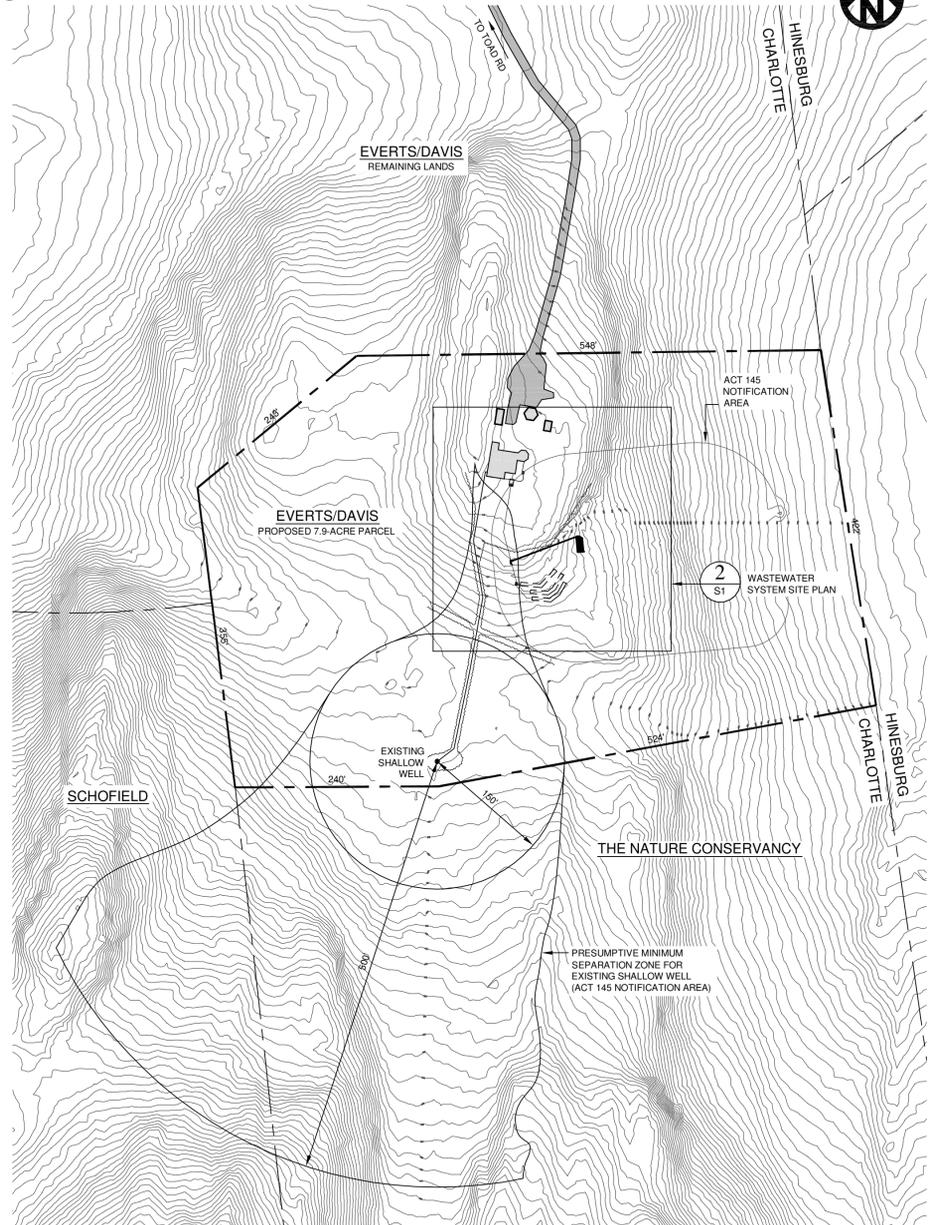


1 PARCEL PLAN
S1 SCALE: 1" = 100'



THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.

Legend

- — — — — PROPERTY LINE
- - - - - 124 EXISTING SURFACE CONTOUR
- 124 PROPOSED FINISH GRADE CONTOUR
- W EXISTING WATER SERVICE
- S EXISTING SEWER SERVICE
- PROPOSED SEWER SERVICE
- ⊙ EXISTING SHALLOW WELL
- ① DETAIL NUMBER
- S1 DETAIL REFERENCE
- APPEARS ON PLAN SHEET
- AB-4 BORING NUMBER
- >3.8/3.8 AUGER BORING LOCATION
- DEPTH (FT) TO EVIDENCE OF HIGH GROUNDWATER / BEDROCK
- PT-1 TEST NUMBER
- 22.5 PERCOLATION TEST LOCATION
- PERCOLATION RATE (MINUTES PER INCH)

SURVEY NOTE:

1. THE WASTEWATER SYSTEM DESIGN IS SHOWN ON A BASE PLAN CREATED FROM A TOPOGRAPHIC SURVEY OF THE SUBJECT PROPERTY. LAMOUREUX & DICKINSON DID NOT PERFORM DEED RESEARCH OR A BOUNDARY SURVEY AND THEREFORE CANNOT PROVIDE DEFINITIVE BOUNDARY INFORMATION. THE PROPERTY LINES DEPICTED ARE BASED ON:
 - 1.1. A PLAN ENTITLED "PLAT SHOWING A PROPOSED SUBDIVISION SURVEY OF LANDS OF EDWARD A. EVERTS & DEBORAH C. DAVIS, TOAD ROAD, CHARLOTTE & HINESBURG, CHITTENDEN COUNTY, VERMONT," DATED JANUARY 19, 2010, AND PREPARED BY RONALD L. LAROSE, L.S. THE PROPERTY OWNERS' DESCRIPTION AND TOWN OF COLCHESTER TAX MAPS, SURVEYED LOCATION OF TWO IRON PILES.
 - 1.2. TOPOGRAPHY WAS CREATED FROM THE 2004 CHITTENDEN COUNTY LIDAR DATA AND, AROUND THE HOUSE AND IN THE VICINITY OF THE WASTEWATER SYSTEMS, FROM FIELD SURVEY PERFORMED BY LAMOUREUX & DICKINSON.

SOIL PROFILE SUMMARY

LOGGED ON NOV 28, 2011 BY BRIAN TREMBACK

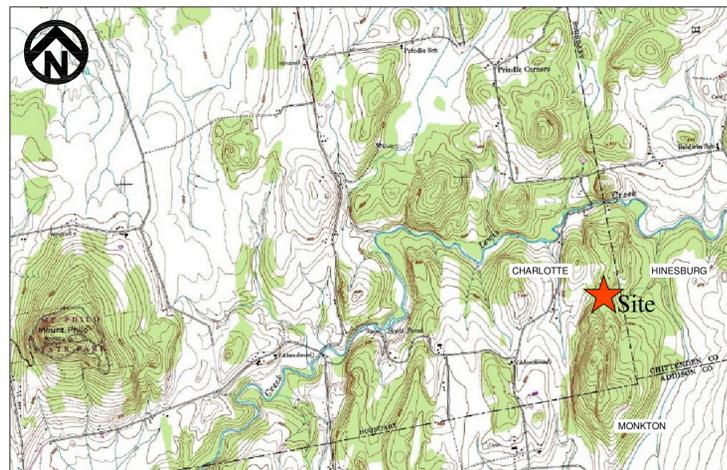
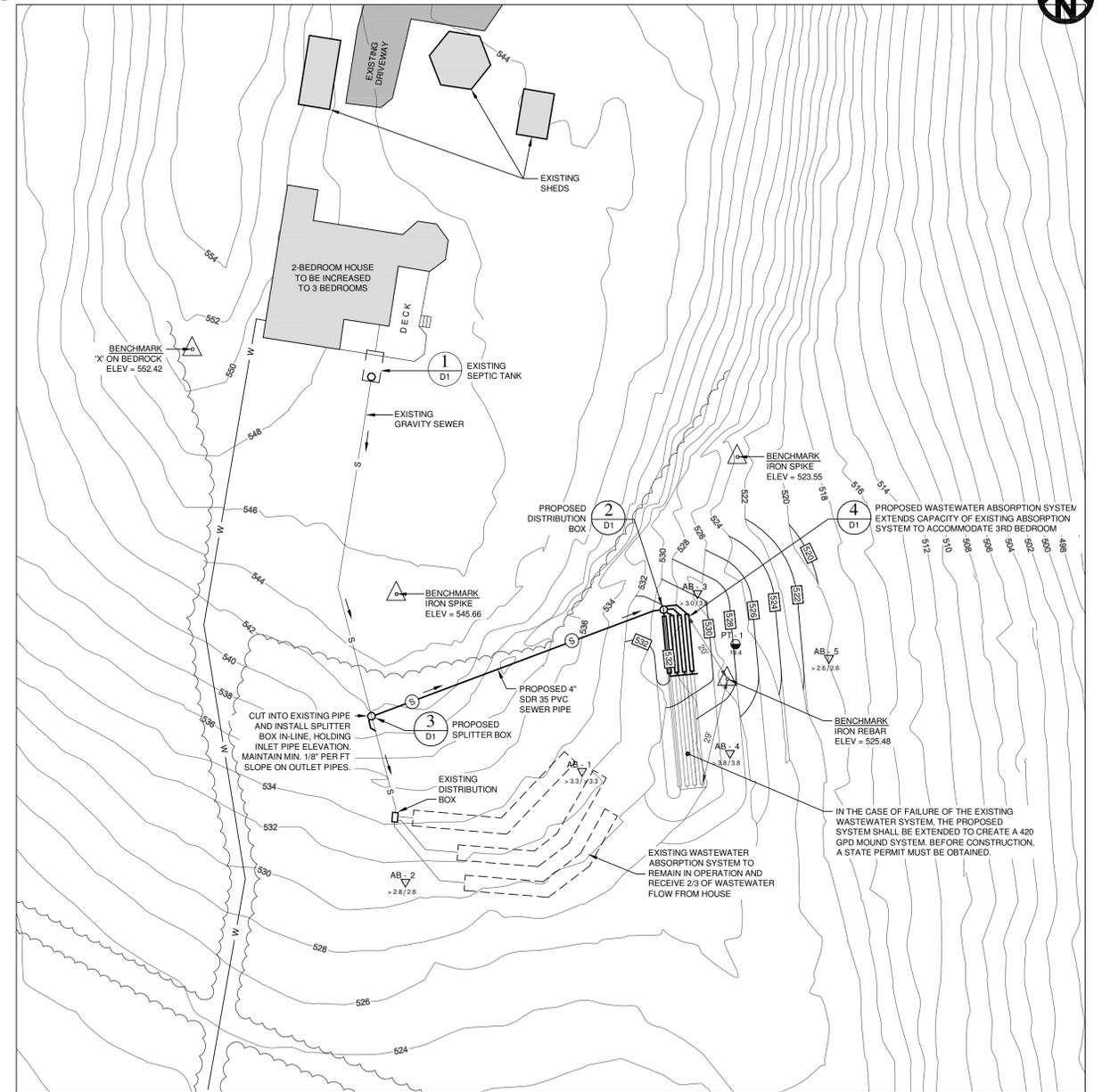
TEST NUMBER	DEPTH TO EVIDENCE OF SEASONAL HIGH GROUNDWATER (FT)	DEPTH TO EXISTING GROUNDWATER (FT)	DEPTH TO BEDROCK (FT)
AB-1	> 3.3	> 3.3	> 3.3
AB-2	> 2.8	> 2.8	2.8
AB-3	> 3.0	> 3.0	3.0
AB-4	> 3.8	> 3.8	3.8
AB-5	> 2.6	> 2.6	2.6

PERCOLATION TEST

PERFORMED BY ANDREW PARADEE ON DEC 21, 2011

TEST NUMBER	TEST DEPTH (FT)	PERCOLATION RATE (MIN/IN)
PT-1	1.5	19.4

2 WASTEWATER SYSTEM SITE PLAN
S1 SCALE: 1" = 40'

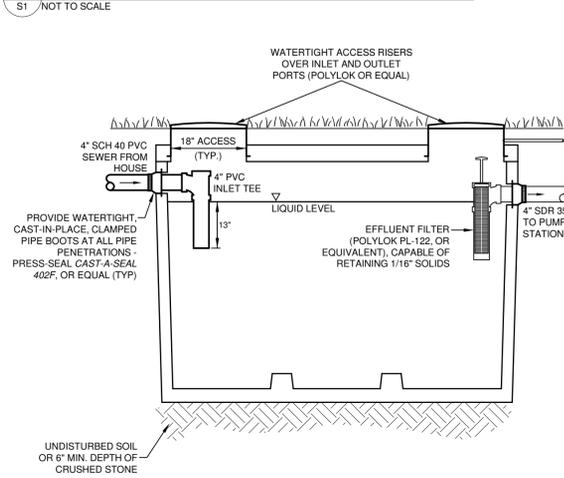


Location Map
NOT TO SCALE

Date	Revision	By
These plans shall only be used for the purpose shown below:		
<input type="checkbox"/> Sketch/Concept	<input type="checkbox"/> Act 250 Review	
<input type="checkbox"/> Preliminary	<input type="checkbox"/> Construction	
<input type="checkbox"/> Final State Review	<input type="checkbox"/> Record Drawing	
Everts & Davis Property 360 Toad Road, Charlotte, Vermont		Project No. 11097
Survey L&D		Design BJT
Drawn BJT		Checked DJG
Wastewater System Design		Date Jan 16, 2012
Scale As shown		Sheet number S1
Lamoureux & Dickinson Consulting Engineers, Inc. 14 Morse Drive, Essex, VT 05452 802-878-4450 www.LDengineering.com		2 sheets total



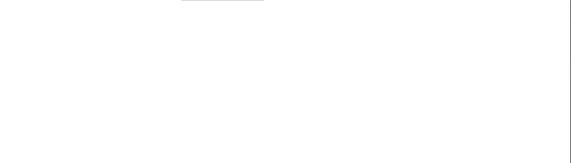
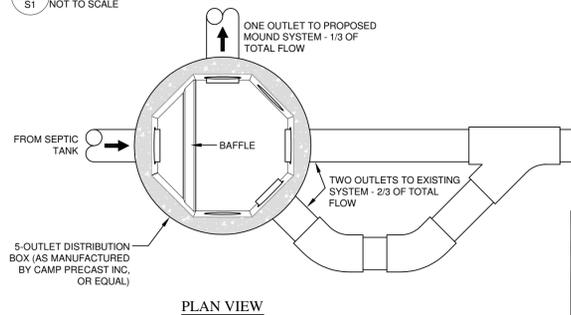
1. 1,000 GAL. PRECAST CONCRETE SEPTIC TANK



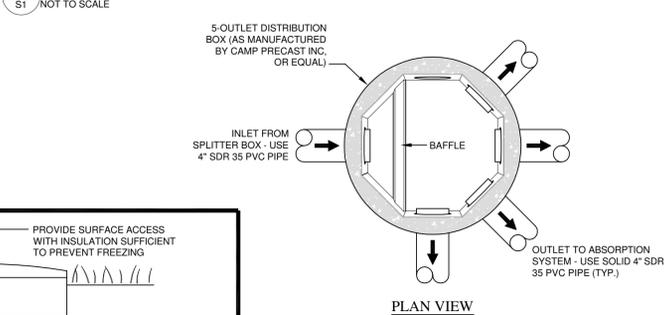
SEPTIC TANK SPECIFICATIONS

- DESIGN DATA: DESIGN FLOW = 420 GPD; USE A 1,000-GALLON SEPTIC TANK.
- IF THE TANK DOES NOT MEET THESE REQUIREMENTS, AND IT CANNOT BE REPAIRED OR MODIFIED, IT SHALL BE REPLACED.
 - THE TANK IS STRUCTURALLY SOUND.
 - THE TANK HAS THE NECESSARY VOLUME.
 - THE TANK HAS NO MEASURABLE LEAKS. THE CONTRACTOR SHALL ASCERTAIN THIS BY PERFORMING AN INFILTRATION OR EXFILTRATION TEST.
 - THE INFILTRATION TEST SHALL BE PERFORMED ONLY IF THE LEVEL OF GROUNDWATER IS ABOVE THE TOP OF THE TANK OR AT A LEVEL DETERMINED BY THE ENGINEER TO BE THE SEASONAL HIGH GROUNDWATER LEVEL. PUMP THE SEPTIC TANK SO THAT NO MORE THAN A FEW INCHES OF LIQUID REMAINS. PLUG THE INLET PIPE FROM THE HOUSE AND BEGIN THE 2-HOUR TEST PERIOD. ANY VISIBLE INFLOW OR MEASURABLE RISE IN WATER LEVEL DURING THE TEST PERIOD SHALL BE CONSIDERED A FAILURE. AN EXFILTRATION TEST MAY BE PERFORMED IF THE GROUNDWATER LEVEL IS NO HIGHER THAN THE INVERT OUT OF THE SEPTIC TANK. PLUG THE INLET PIPE FROM THE HOUSE AND THE OUTLET PIPE TO THE PUMP STATION. FILL THE TANK UNTIL THE WATER LEVEL RISES AT LEAST 2 INCHES INTO THE ACCESS PORT OF THE TANK. BEGIN THE 2-HOUR TEST PERIOD. ANY MEASURABLE DROP IN WATER LEVEL SHALL BE CONSIDERED A FAILURE.
 - THE TANK SHALL BE FITTED WITH AN EFFLUENT FILTER CAPABLE OF RETAINING 1/16" SOLIDS AND A SURFACE ACCESS RISER TO SERVICE THE FILTER.
- IF THE TANK DOES NOT MEET THESE REQUIREMENTS, AND IT CANNOT BE REPAIRED OR MODIFIED, IT SHALL BE REPLACED.
 - ANY NEW SEPTIC TANK SHALL BE WATERTIGHT AND CONSTRUCTED OF STEEL-REINFORCED, 5,000 PSI, PRE-CAST CONCRETE. DO NOT EXCEED THE MANUFACTURER'S RECOMMENDED DEPTH OF COVER. IF VEHICLE LOADS ARE ANTICIPATED OVER THE SEPTIC TANK, IT SHALL BE RATED FOR H-20 LOADING.
 - THE TANK SHALL BE FITTED WITH AN EFFLUENT FILTER CAPABLE OF RETAINING 1/16" SOLIDS.
 - WATERTIGHT SURFACE ACCESS RISERS SHALL BE PROVIDED OVER THE INLET AND OUTLET PORTS OF THE TANK. THE RISERS AND LID SHALL PREVENT INFILTRATION BY SURFACE OR GROUND WATER. THE EXCAVATION MUST BE AT LEAST 12" WIDER AND LONGER THAN THE TANK DIMENSIONS.
 - EACH PIPE PENETRATION SHALL BE EQUIPPED WITH A WATERTIGHT, CAST-IN-PLACE, CLAMPED BOOT.
 - IF LEDGE IS ENCOUNTERED AT A DEPTH INSUFFICIENT TO ACCOMMODATE THE SPECIFIED TANK, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR ALTERNATE STRUCTURE RECOMMENDATIONS.
 - BACKFILL SIDES AND TOP OF TANK WITH SAND OR GRAVEL. ALL BACKFILL AROUND THE TANK SHALL BE THOROUGHLY COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO-T-99 STANDARD PROCTOR.

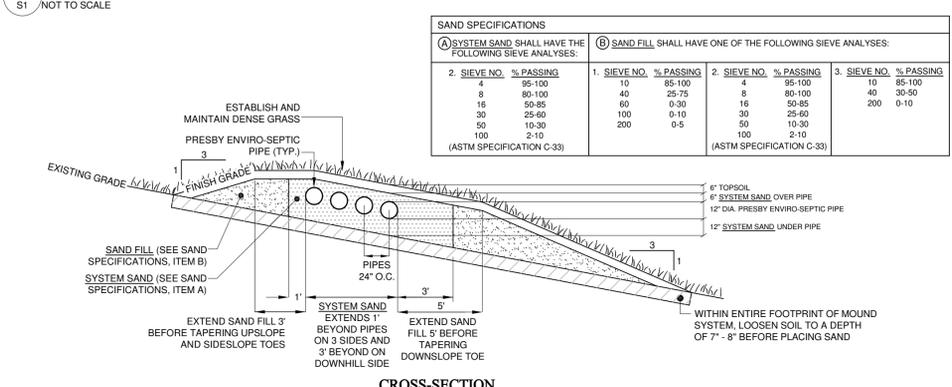
2. PRECAST CONCRETE SPLITTER BOX



3. PRECAST CONCRETE DISTRIBUTION BOX



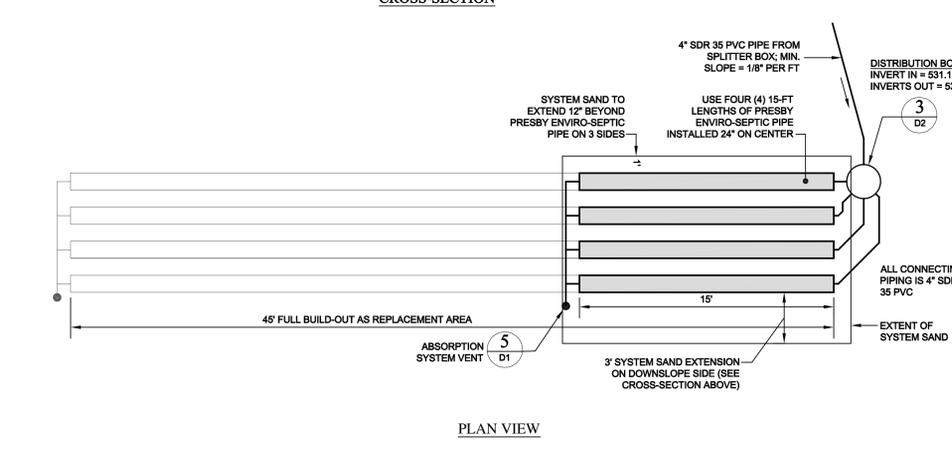
4. WASTEWATER ABSORPTION SYSTEM



SAND SPECIFICATIONS

A) SYSTEM SAND SHALL HAVE THE FOLLOWING SIEVE ANALYSES:		B) SAND FILL SHALL HAVE ONE OF THE FOLLOWING SIEVE ANALYSES:	
2. SIEVE NO.	% PASSING	1. SIEVE NO.	% PASSING
4	95-100	10	85-100
8	80-100	40	25-75
16	50-85	60	0-30
30	25-60	100	0-10
50	10-30	200	0-5
100	2-10	100	2-10

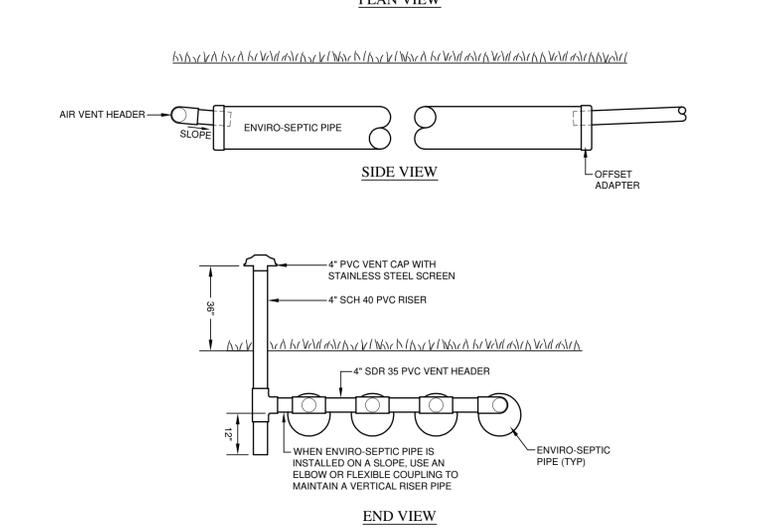
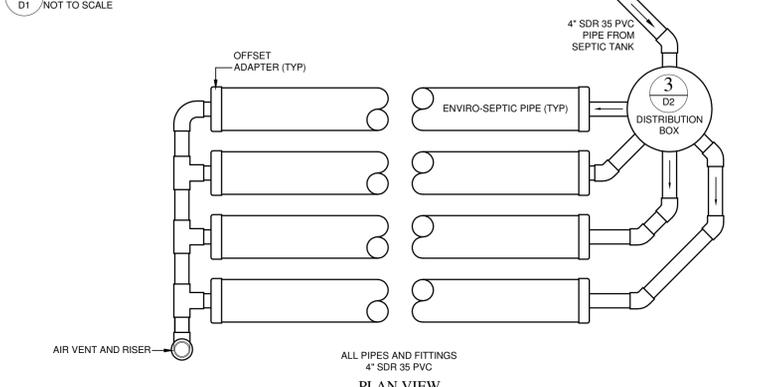
(ASTM SPECIFICATION C-33)



ABSORPTION SYSTEM SPECIFICATIONS

- INSTALL SYSTEM IN ACCORDANCE WITH VERMONT INNOVATIVE/ALTERNATIVE SYSTEM APPROVAL #2004-02 (2010 RENEWAL). THE MANUFACTURER'S INSTALLATION MANUAL, THE VERMONT WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES, AND THESE PLANS.
- DO NOT INSTALL SYSTEM ON FROZEN GROUND OR LEAVE SYSTEM UNCOVERED FOR EXTENDED PERIODS OF TIME.
- CONSTRUCTION EQUIPMENT SHALL BE KEPT OFF THE AREA TO BE USED FOR EFFLUENT ABSORPTION AS MUCH AS POSSIBLE TO PREVENT UNDESIRABLE COMPACTION OF THE SOILS.
- ABOVE-GROUND VEGETATION SHALL BE CLOSELY CUT AND REMOVED FROM THE GROUND SURFACE THROUGHOUT THE ABSORPTION AREA. ONCE CLEARING OF THE LAND IS COMPLETED, THE AREA SHALL BE FENCED TO PREVENT VEHICLES AND EQUIPMENT FROM DRIVING ON THE SOIL.
- PREPARE THE SOIL SURFACE BY PLOWING, OR TURNING UP WITH A BACKHOE BUCKET, THE UPPER 7-8" OF SOIL OVER THE ENTIRE FOOTPRINT OF THE WASTEWATER ABSORPTION SYSTEM.
- PLACE SAND FILL MEETING ONE OF THE THREE SPECIFICATIONS IN ITEM 'B' IN THE TABLE, OVER THE PREPARED AREA AS SHOWN ON THE PLAN. THE SAND FOR 6 INCHES BELOW, 6 INCHES ABOVE, AND FOR A DISTANCE OF 1 FOOT AROUND THE PERIMETER OF THE PRESBY ENVIRO-SEPTIC PIPES SHALL MEET THE SPECIFICATIONS FOR SYSTEM SAND SHOWN IN ITEM 'A' OF THE TABLE. EACH ENVIRO-SEPTIC PIPE SHALL BE INSTALLED LEVEL AT THE SPACING SHOWN AND TEMPORARILY HELD IN PLACE (USING GRADE STAKES OR A SIMILAR METHOD) SO THAT THEIR POSITIONS DO NOT SHIFT AS SAND IS BEING ADDED.
- PROVIDE LIGHT COMPACTION BY WALKING THE SAND INTO PLACE BETWEEN THE PIPES. INSTALL THE VENT AS SHOWN ON THE PLAN.
- INSPECTION: THE ENGINEER MUST OBSERVE THE PLOWING OF THE SURFACE BEFORE PLACING SAND AND, LATER, THE PIPING IN PLACE BEFORE COVERING WITH SAND AND TOPSOIL.
- AFTER INSPECTION OF THE ABSORPTION SYSTEM PIPING, COVER WITH SIX (6) INCHES OF SYSTEM SAND, AND THEN AN ADDITIONAL 6 INCHES OF TOPSOIL.
- THE AREA OVER AND AROUND THE WASTEWATER SYSTEM SHALL BE GRADED SUCH THAT THERE ARE NO AREAS CAPABLE OF PONDING WATER AND SO THAT THERE IS SUFFICIENT SLOPE TO ENSURE DRAINAGE.
- THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH AS-BUILT INFORMATION AND CERTIFICATION THAT THE SYSTEM WAS INSTALLED IN ACCORDANCE WITH THE PLANS AND ALL PERTINENT APPROVALS AND PERMITS ISSUED FOR THE PROJECT.

5. ABSORPTION SYSTEM PIPING - LOT 3



WASTEWATER SYSTEM DESIGN DATA

- IT IS THE OPINION OF THE DESIGNER THAT THE SOIL CONDITIONS WITHIN THE PROPOSED WASTEWATER SYSTEM AREA MEET THE REQUIREMENTS OF THE VERMONT ENVIRONMENTAL PROTECTION RULES-CHAPTER 1 FOR A PRESCRIPTIVE WASTEWATER SYSTEM.
- THE PROPOSED WASTEWATER SYSTEM IS IN AN AREA LARGE ENOUGH TO ACCOMMODATE A SYSTEM FOR A 3-BEDROOM HOUSE. HOWEVER, BECAUSE THE EXISTING SYSTEM IS FUNCTIONING AND WAS DESIGNED AND INSTALLED IN AN AREA OF COMPLYING SOILS, IT IS PROPOSED THAT THE SYSTEM CONTINUE TO BE USED AND THAT A NEW SYSTEM BE CONSTRUCTED TO ACCOMMODATE ONLY THE INCREASED FLOW. A SIMPLE FLOW SPLITTER IS PROPOSED TO DIVERT 1/3 OF THE FLOW TO THE NEW SYSTEM. IN THE EVENT OF SYSTEM FAILURE, THE PROPOSED SYSTEM CAN BE EXPANDED TO ACCOMMODATE THE DESIGN FLOW OF A 3-BEDROOM HOUSE.
- BASIS OF DESIGN (USING PRESBY ENVIRO-SEPTIC PIPE)

PORTION OF SYSTEM TO HANDLE INCREASE IN FLOW:	
NO. OF BEDROOMS =	1
PERCOLATION RATE =	19 MIN/IN
MIN. LENGTH OF PIPE (FROM TABLE A) =	60 FT
PIPE SPACING FOR 18% SLOPE AND PERCOLATION RATE OF 19 MIN/IN (FROM TABLE B) =	2.00 FT O.C.
SYSTEM SAND AREA REQUIRED TO MEET 50% OF PIPE AND STONE SYSTEM (FROM TABLE D)	
MIN. SYSTEM SAND AREA =	136 SQ FT
SYSTEM DESIGN: USE 60 FT OF ENVIRO-SEPTIC PIPE CONSISTING OF FOUR (4) 15-FT LENGTHS SPACED 2.00 FT ON CENTER. SYSTEM SAND AREA PROVIDED = 153 SQ FT (17 FT x 9 FT).	
- FULL BUILD-OUT FOR 3-BEDROOM HOUSE:

NO. OF BEDROOMS =	3
PERCOLATION RATE =	19 MIN/IN
MIN. LENGTH OF PIPE (FROM TABLE A) =	180 FT
PIPE SPACING FOR 18% SLOPE AND PERCOLATION RATE OF 19 MIN/IN (FROM TABLE B) =	2.00 FT O.C.
SYSTEM SAND AREA REQUIRED TO MEET 50% OF PIPE AND STONE SYSTEM (FROM TABLE D)	
MIN. SYSTEM SAND AREA =	409 SQ FT
SYSTEM DESIGN: USE 180 FT OF ENVIRO-SEPTIC PIPE CONSISTING OF FOUR (4) 45-FT LENGTHS SPACED 2.00 FT ON CENTER. SYSTEM SAND AREA PROVIDED = 423 SQ FT (47 FT x 9 FT).	

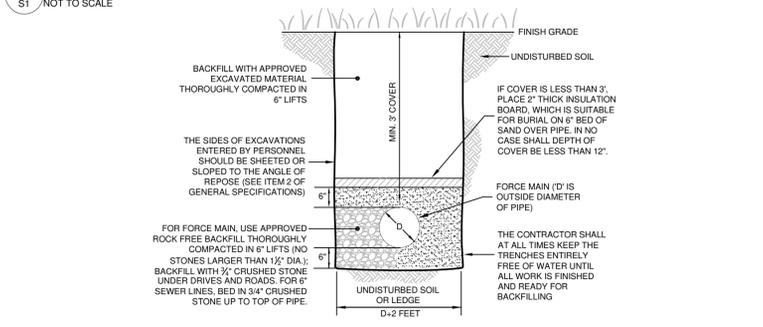
INSPECTION

- CONSTRUCTION OBSERVATION AND CERTIFICATION IS OFTEN REQUIRED BY STATE AND LOCAL PERMITS. IT IS RECOMMENDED THAT CONSTRUCTION OF THE IMPROVEMENTS DETAILED ON THESE PLANS BE OBSERVED BY LAMOUREUX & DICKINSON CONSULTING ENGINEERS INC. (L&D) TO DETERMINE IF THE WORK IS BEING PERFORMED IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. L&D WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT MAY ARISE FROM FAILURE TO FOLLOW THESE PLANS AND SPECIFICATIONS AND THE DESIGN INTENT THAT THEY CONVEY, ANY CHANGES MADE IN THE PLANS AND SPECIFICATIONS OR IN THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS WITHOUT L&D'S PRIOR KNOWLEDGE AND CONSENT, AND/OR FAILURE TO SCHEDULE OBSERVATION OF THE WORK AND TESTING IN PROGRESS.
- THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR NOTIFYING THE ENGINEER AND THE TOWN FOR INSPECTION OF THE WASTEWATER SYSTEM AT APPROPRIATE STAGES OF CONSTRUCTION. THE REQUIREMENTS FOR CONTACTING THE ENGINEER ARE LISTED BELOW. THE CONTRACTOR SHALL ALSO DETERMINE THE TOWN'S REQUIREMENTS FOR INSPECTION.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 24 HOURS IN ADVANCE FOR INSPECTION OF EACH OF THE FOLLOWING ITEMS:
 - THE PLOWED SOIL BEFORE PLACING SAND
 - STRUCTURES AND PIPES BEFORE BACKFILLING
 - FINAL GRADING OVER THE WASTEWATER SYSTEM COMPONENTS

GENERAL SPECIFICATIONS

- UTILITIES INFORMATION SHOWN HEREON WERE OBTAINED FROM THE BEST AVAILABLE SOURCES AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN HEREON.
- THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.
- LAMOUREUX & DICKINSON DOES NOT UNDERTAKE OR ASSUME ANY RESPONSIBILITY FOR SAFETY ON THE CONSTRUCTION SITE BUT DOES DEMAND THE CONTRACTOR THAT THE SAFETY OF EXCAVATIONS ENTERED BY PERSONNEL SHOULD BE SHEETED OR SLOPED TO THE ANGLE OF REPOSE; AND IN ANY CASE, THE CONTRACTOR SHOULD WORK IN STRICT COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL EXISTING VEGETATION, PAVEMENT AND STRUCTURES NECESSARY TO DEVELOP THIS PROPERTY UNLESS OTHERWISE NOTED ON THESE PLANS. CONTRACTOR SHALL REMOVE ALL TRASH FROM SITE UPON COMPLETION OF CONSTRUCTION.

6. SEWER TRENCH



Date	Revision	By
These plans shall only be used for the purpose shown below:		
<input type="checkbox"/> Sketch/Concept	<input type="checkbox"/> Act 250 Review	
<input type="checkbox"/> Preliminary	<input type="checkbox"/> Construction	
<input checked="" type="checkbox"/> Final State Review	<input type="checkbox"/> Record Drawing	
Everts & Davis Property		
360 Toad Road, Charlotte, Vermont		
Wastewater System Details and Specifications		
Lamoureux & Dickinson Consulting Engineers, Inc.		
14 Morse Drive, Essex, VT 05452 802-878-4450 www.LDengineering.com		

Project No. 11097
Survey L&D
Design BJT
Drawn BJT
Checked DJG
Date Jan 16, 2012
Scale AS SHOWN
Sheet number D2
2 sheets total

