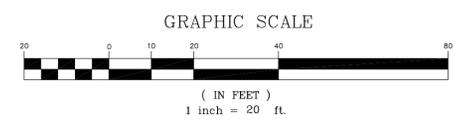
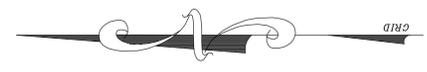


TEST PIT RESULTS

6/11/11 JSO

TEST PIT #	DATE	SOIL DESCRIPTION	WATER
TEST PIT #202	6/11/11	0-6" DARK BROWN SANDY LOAM TOPSOIL 6-14" RED BROWN SANDY LOAM 14-36" GREY BROWN VERY FINE SANDY LOAM MOTTLING @ 18", WATER @ 32"	
TEST PIT #203	6/11/11	0-6" DARK BROWN SANDY LOAM TOPSOIL 6-20" GREY BROWN FINE SANDY LOAM 20-36" GREY BROWN VERY FINE SANDY LOAM MOTTLING @ 20", NO WATER	
TEST PIT #204	6/11/11	0-6" DARK BROWN SANDY LOAM TOPSOIL 6-22" DARK BROWN SANDY LOAM 22-40" GREY BROWN VERY FINE SANDY LOAM MOTTLING @ 20", NO WATER	
TEST PIT #205	6/11/11	0-8" DARK BROWN SANDY LOAM TOPSOIL 8-16" DARK BROWN SANDY LOAM 16-40" DARK GREY BROWN VERY FINE SANDY LOAM MOTTLING @ 18", NO WATER	
TEST PIT #206	6/11/11	0-6" DARK BROWN SANDY LOAM TOPSOIL 6-30" DARK BROWN SANDY CLAY LOAM MOTTLING @ 12", NO WATER	
TEST PIT #207	6/11/11	0-6" DARK BROWN SANDY LOAM TOPSOIL 6-12" RED BROWN SANDY LOAM 12-42" GREY BROWN VERY FINE SANDY LOAM MOTTLING @ 15", NO WATER	
TEST PIT #208	6/11/11	0-4" DARK BROWN SANDY LOAM TOPSOIL 4-20" RED BROWN SANDY LOAM 20-38" DARK BROWN FINE SANDY LOAM MOTTLING @ 20", NO WATER	
TEST PIT #209	6/11/11	0-6" DARK BROWN SANDY LOAM TOPSOIL 6-20" RED BROWN SANDY LOAM 20-48" DARK BROWN FINE SANDY LOAM MOTTLING @ 30", NO WATER	



LEGEND

- 336--- EXISTING CONTOUR
- 336— PROPOSED CONTOUR
- - - - - APPROXIMATE PROPERTY LINE
- - - - - APPROXIMATE SETBACK LINE
- IRON PIN FOUND
- CONCRETE MONUMENT FOUND
- SS— GRAVITY SEWER LINE
- FM— FORCE MAIN
- W— WATER LINE
- OE— OVERHEAD ELECTRIC
- UE— UNDERGROUND ELECTRIC
- ⊙ TEST PIT
- ⊙ PERCOLATION TEST
- ⊙ BENCHMARK
- ⊙ DRILLED WELL
- ⊙ POWER POLE
- ⊙ DECIDUOUS TREE
- ⊙ CONIFEROUS TREE
- ⊙ EDGE OF BRUSH/WOODS
- ⊙ FENCE
- ⊙ DRAINAGE SWALE

MINIMUM ISOLATION DISTANCES

(Contact Engineer for any Clarifications or Conflicts)

Disposal Field	Horizontal Distance (Ft.)	
	Up Slope	Down Slope
Drilled Well - Up Slope of System	100*(Min.)	50
Drilled Well - Down Slope of System	200*(Min.)	50
Service Water Lines	25	25
Roadways, Driveways	10	5
Stream, Watercourse, Lake or Impoundment	50	25
Drainage Swales, Roadway Ditches	25	—
Foundation, Footing Drains	35 (75 Downslope)	10
Replacement Area - Sides	10	—
Replacement Area - Uphill or Downhill	25	—
Property Line - 10' from toe or 25' from edge of disposal system, whichever is greater.	25	—
Property Line - Downgradient Toe	25	—

*Isolation distances to well locations may vary due to site conditions - contact Engineer for verification with the Vermont Water Supply Rule.

PERC TEST RESULTS

DATE	ENGINEER
6/15/11	JCB/GAC

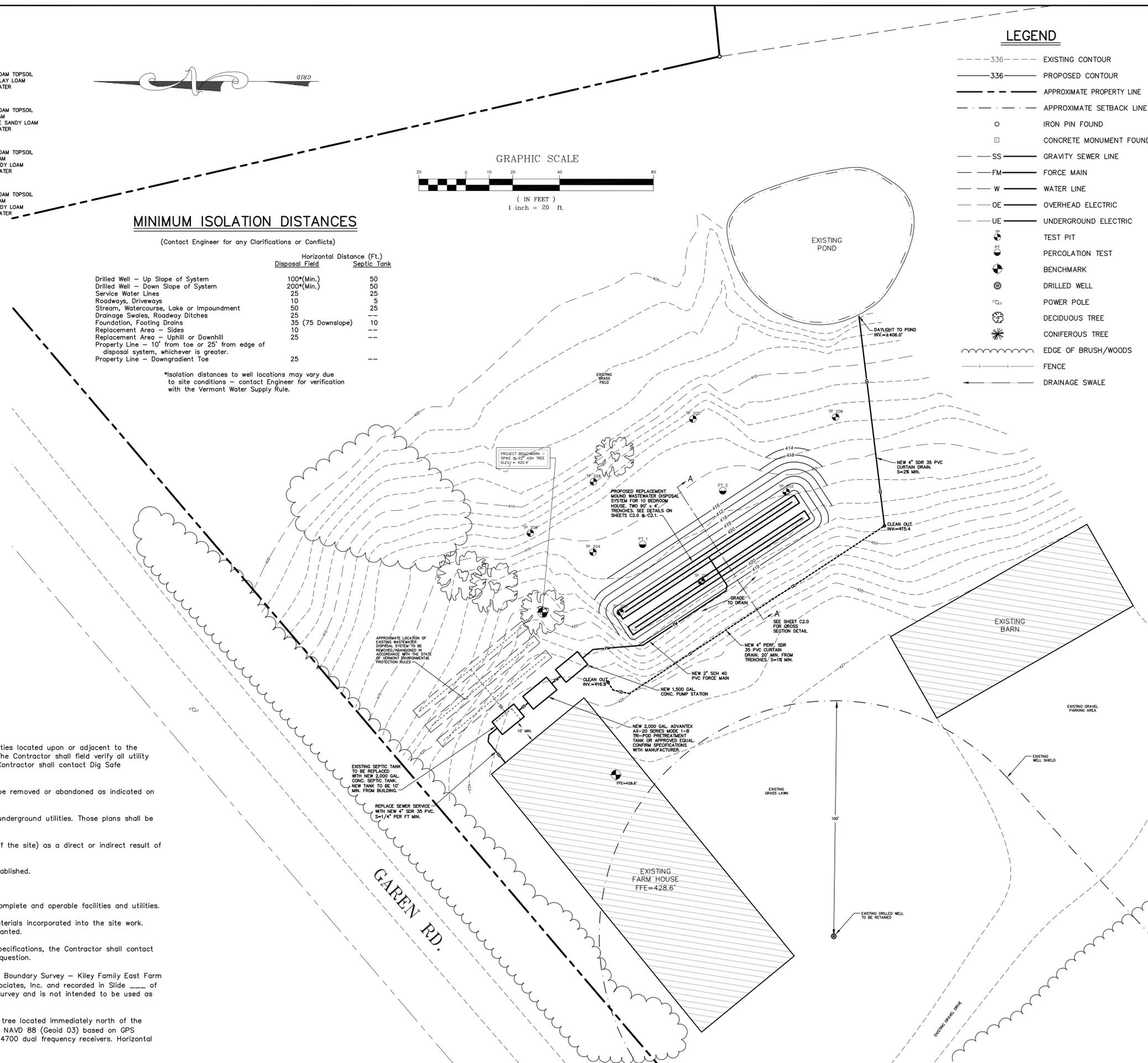
PERC TEST #1 - 40 MIN./IN.
PERC TEST #2 - 40 MIN./IN.

DESIGN DATA FOR REPLACEMENT SYSTEM

- Design Data Flow:**
- Two 3 bedroom apartments = 2 x (3 @ 140 gpd) = 840 gpd
 - Two 2 bedroom apartments = 2 x (2 @ 140 gpd) = 560 gpd
 - Total Design Flow = 840 gpd + 560 gpd = 1,400 gpd
- Septic Tank Size:**
- Design Flow = 1,400 gpd
 - Tank Size = 1.5 x 1,400 = 2,100 gal
 - Use 2,000 gal septic tank, additional capacity in Advantex tank
- Application Rate:**
- Use 1.0 gal/sf for mound design
 - Double rate through use of pre-treatment
 - Use 2.0 gal/sf for system
- Absorption Trench Area:**
- 1,400 gal @ 2 gal/sq ft = 700 sq ft required
 - Use two 4 ft x 90 ft trench = 720 sq ft provided
- Pump Requirements:**
- Each lateral to have eighteen orifices
 - Thirty-six 1/4" dia. ori. @ 1.28 gpm/ori. = 46 gpm
 - TDH @ 46 gpm
 - Elevation 6 ft
 - Friction 6 ft
 - Residual 3 ft
 - Total 15 ft
 - Use SHEF50 (1/2 Hp) effluent pump or approved equal
 - Confirm pump selection with Engineer prior to construction
- Desktop Mounding Analysis:**
- Ave. Slope = 4.5%
 - Soil Condition = Sandy Loam
 - f = 18.7
 - h = 18 - 6 = 1.0'
 - LLR = 18.7 x 1.0 = 18.7 gpd/lf
 - Length = 1,400 gpd / 18.7 gpd/lf = 74.9 lf required
 - Design Length = 90 lf provided
- Replacement System:**
- Not required due to mound primary system design

GENERAL NOTES:

- Utilities shown do not purport to constitute or represent all utilities located upon or adjacent to the surveyed premises. Existing utility locations are approximate only. The Contractor shall field verify all utility conflicts. All discrepancies shall be reported to the Engineer. The Contractor shall contact Dig Safe (888-344-7233) prior to any construction.
- All existing utilities not incorporated into the final design shall be removed or abandoned as indicated on the plans or directed by the Engineer.
- The Contractor shall maintain as-built plans (with ties) for all underground utilities. Those plans shall be submitted to the Owner at the completion of the project.
- The Contractor shall repair/restore all disturbed areas (on or off the site) as a direct or indirect result of the construction.
- All grassed areas shall be maintained until full vegetation is established.
- Maintain all trees outside of construction limits.
- The Contractor shall be responsible for all work necessary for complete and operable facilities and utilities.
- The Contractor shall submit shop drawings for all items and materials incorporated into the site work. Work shall not begin on any item until shop drawing approval is granted.
- If there are any conflicts or inconsistencies with the plans or specifications, the Contractor shall contact the Engineer for verification before work continues on the item in question.
- Property line information is based upon a plat entitled "Plat of Boundary Survey - Kiley Family East Farm Partnership", dated May 2, 2008, prepared by Civil Engineering Associates, Inc. and recorded in Slide ____ of the town of Charlotte Land Records. This plan is not a boundary survey and is not intended to be used as one.
- The project benchmark, of 420.4', is a spike set in a 22" Ash tree located immediately north of the proposed wastewater disposal system. Vertical datum referenced to NAVD 88 (Geoid 03) based on GPS observations performed during the topographic survey with Trimble 4700 dual frequency receivers. Horizontal datum based on a magnetic reading taken at the time of survey.



SITE ENGINEER:

CIVIL ENGINEERING ASSOCIATES, INC.
10 MANSFIELD VIEW LN., So. BURLINGTON, VT 05403
802-864-2323 FAX: 802-864-2271 web: www.cae-vt.com

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DRAWN
JSO

CHECKED
SAV

APPROVED
JSO

OWNER:

**KILEY FAMILY
EAST
PARTNERSHIP**

2033 DORSET ST.
CHARLOTTE, VT 05445

PROJECT:

**PROPOSED
REPLACEMENT
WASTEWATER
SYSTEM**

PRINDLE & GAREN RD.
CHARLOTTE, VT 05445

LOCATION MAP

1" = 400'

DATE	CHECKED	REVISION

**WASTEWATER
DISPOSAL
SYSTEM
SITE PLAN**

DATE SEPT., 2011	DRAWING NUMBER C1.1
SCALE 1" = 20'	PROJ. NO. 11114.01

SITE ENGINEER:



CIVIL ENGINEERING ASSOCIATES, INC.
 10 MANSFIELD VIEW LN., So. BURLINGTON, VT 05403
 802-864-2323 FAX: 802-864-2271 web: www.cea-vt.com

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OWNER:

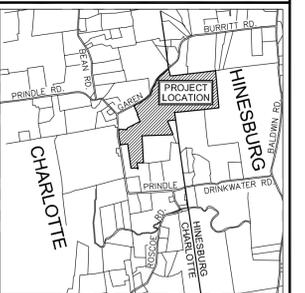
**KILEY FAMILY
 EAST
 PARTNERSHIP**

2033 DORSET ST.
 CHARLOTTE, VT 05445

PROJECT:

**PROPOSED
 REPLACEMENT
 WASTEWATER
 SYSTEM**

PRINDLE & GAREN RD.
 CHARLOTTE, VT 05445



LOCATION MAP

1" = 400'

DATE	CHECKED	REVISION

**WASTEWATER
 DETAILS PLAN**

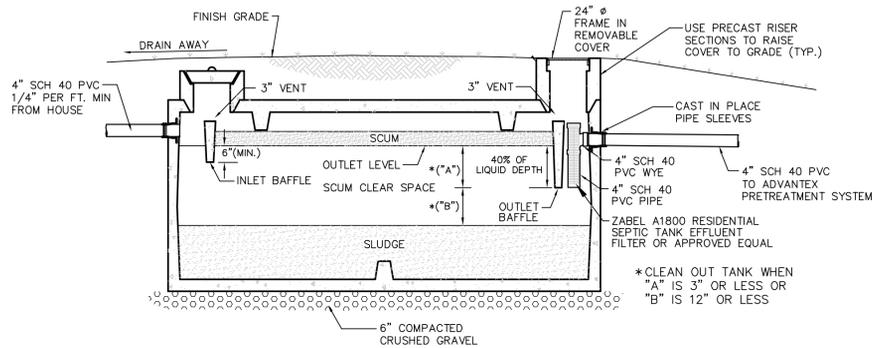
DATE
 SEPT., 2011

SCALE
 AS SHOWN

PROJ. NO.
 11114

DRAWING NUMBER

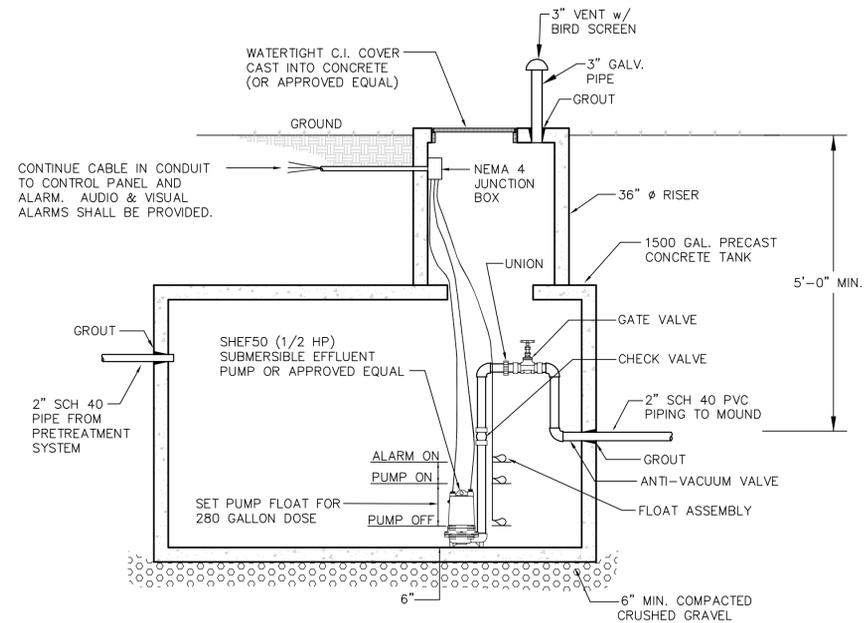
C2.1



2000 GALLON SEPTIC TANK
 N.T.S.

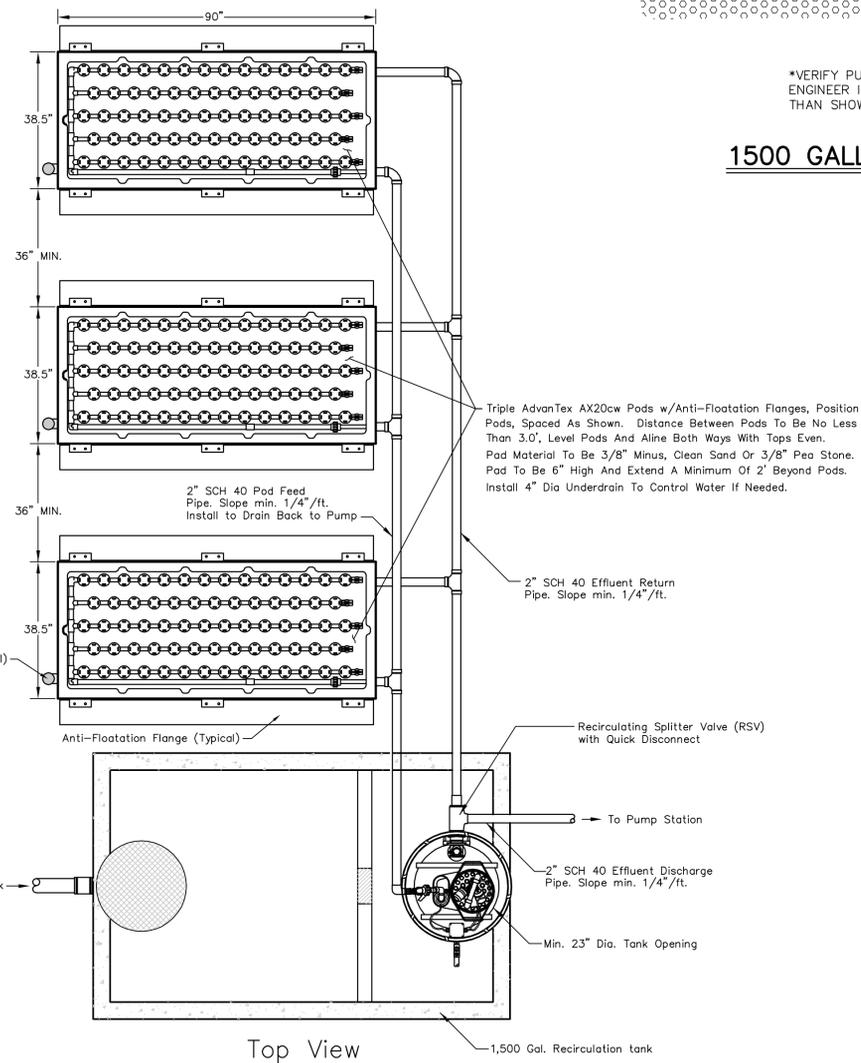
SEPTIC TANK NOTES

- Septic tank shall be a precast concrete tank, unless otherwise approved.
- Maintenance
 - At least once a year, the depth of sludge and scum in the septic tank should be measured. The tank should be pumped if:
 - The sludge is closer than twelve inches to the outlet baffle or;
 - The scum layer is closer than three inches to the outlet baffle.
 - Under no circumstances should anyone enter a septic tank.
- Recommendations
 - The use of garbage grinders is discouraged as sludge accumulation in the septic tank can be increased by up to 40%. If used, the septic tank will require more frequent pumping.
 - The septic system is designed to handle human waste and toilet paper, plus water from plumbing fixtures such as toilets, baths and sinks. Moderate use of household cleaners, detergents and bleach should not damage your system; however, indiscriminate use may cause problems. Non-degradable paper products and any other non-biodegradable substances should not be put in your wastewater system.
 - Minimize the amount of water used in the household. Excessive water could flush solids from the septic tank to the disposal field which leads to clogging or plugging of the piping. When dishwashers and washers are used, make sure loads are full and stagger their use to reduce peak flows, i.e. stagger loads of laundry over several days instead of one day.
- Walkways, patios and decks or other permanent structures should not be constructed over the septic tank.
- There should be no need to use commercial "starter", "bacterial feeds", or "cleaners", etc. Bacteria in a septic tank system occurs naturally.

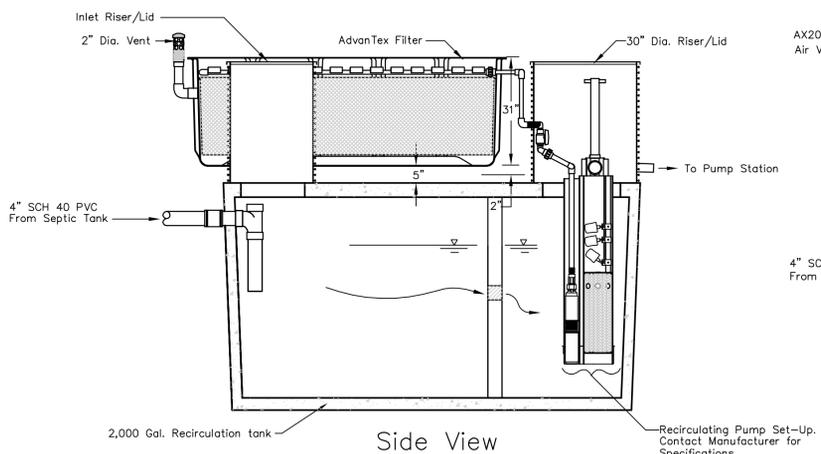


1500 GALLON PUMP STATION DETAIL
 N.T.S.

*VERIFY PUMP REQUIREMENTS WITH THE ENGINEER IF FINAL SITE SELECTED IS OTHER THAN SHOWN ON PLAN



Top View



Side View

ADVANTEX™ PRETREATMENT SYSTEM
 AX 20 SERIES - MODE 1B (2,000 GAL.) N.T.S.

*REFER TO MANUFACTURER SPECIFICATIONS FOR ADDITIONAL INSTALLATION INFORMATION.