

REVISIONS:  
 04/14/93  
 ADDED PERCOLATION TEST  
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VERMONT  
 AGENCY OF  
 TRANS.

CLARENDON, VT

**Ennon**  
 Engineering  
 Environmental • Civil • Sanitary  
 Route 78 • P.O. Box 127  
 North Clarendon, Vermont 05759  
 (802)775-3437

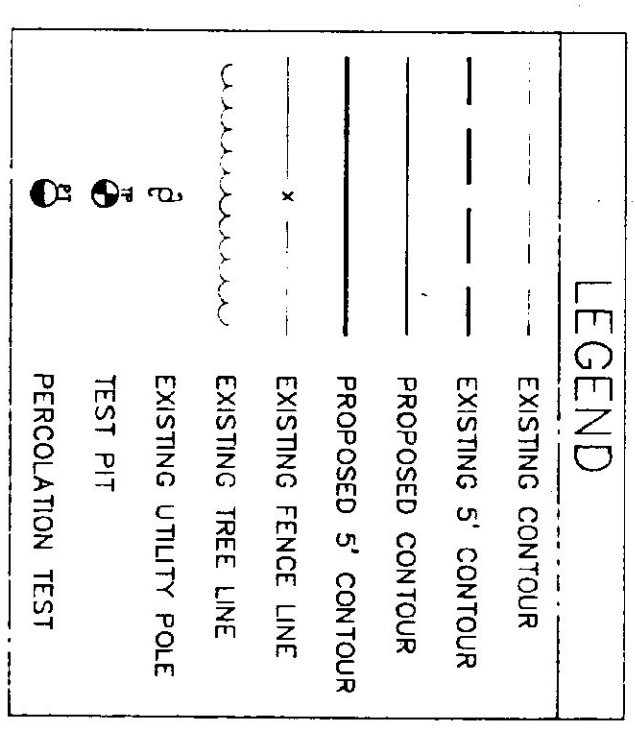
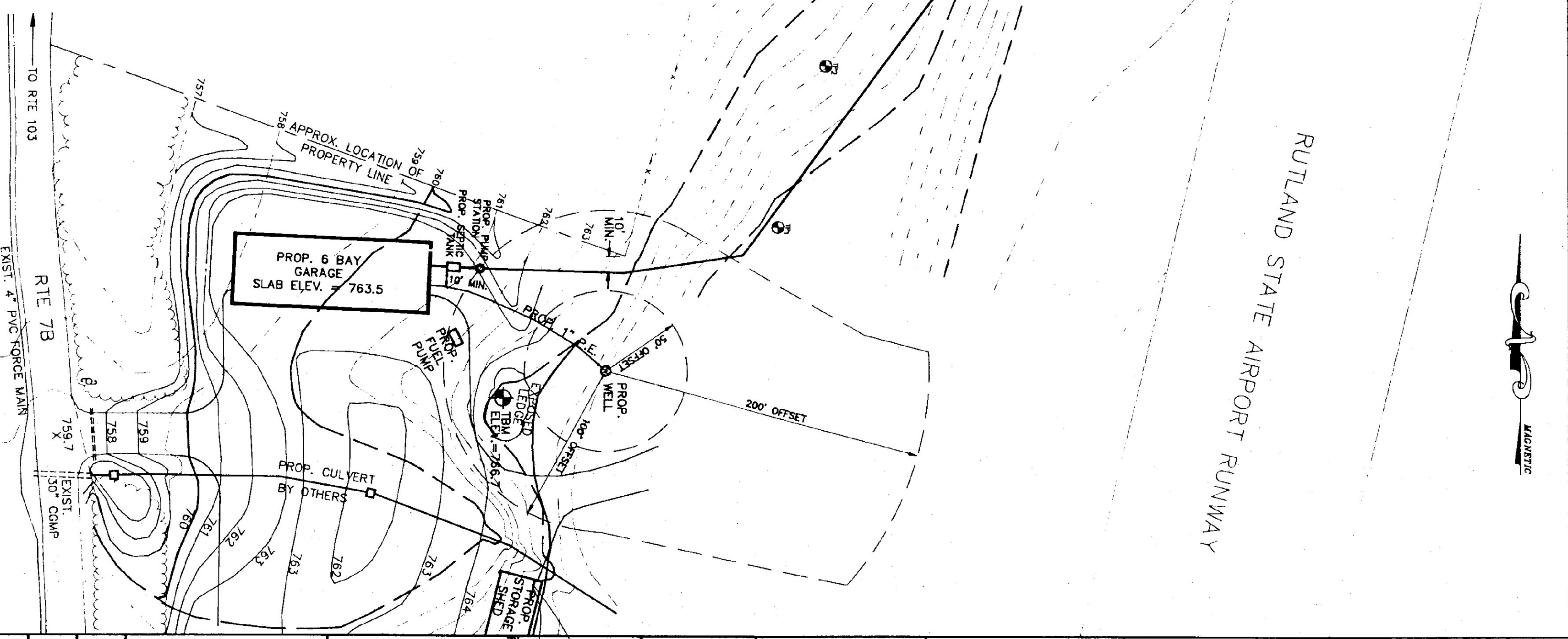
THE SIGNATURE BELOW INDICATES MY APPROVAL FOR SUBMITTAL TO THE RELEVANT AGENCIES FOR THEIR REVIEW AND PERMIT APPROVALS ONLY. THIS SIGNATURE IS NOT APPROVED FOR PERCOLATION TEST RESULTS. PERCOLATION TEST RESULTS ARE ISSUED. APPROPRIATE APPROVALS ARE GRANTED, AND MY PROFESSIONAL ENGINEERING STAMP IS APPLIED ON THIS DOCUMENT.

REGULATORY APPROVAL STAMP  
 DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
 Approved By: *David E. Swift*  
 Permit #: *AM-1-0507*  
 DATE: *April 15, 1993*

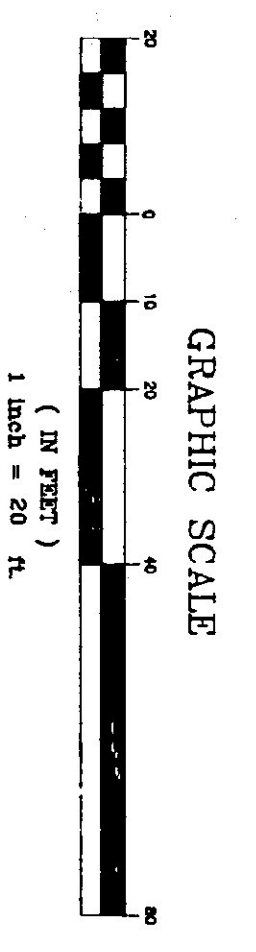
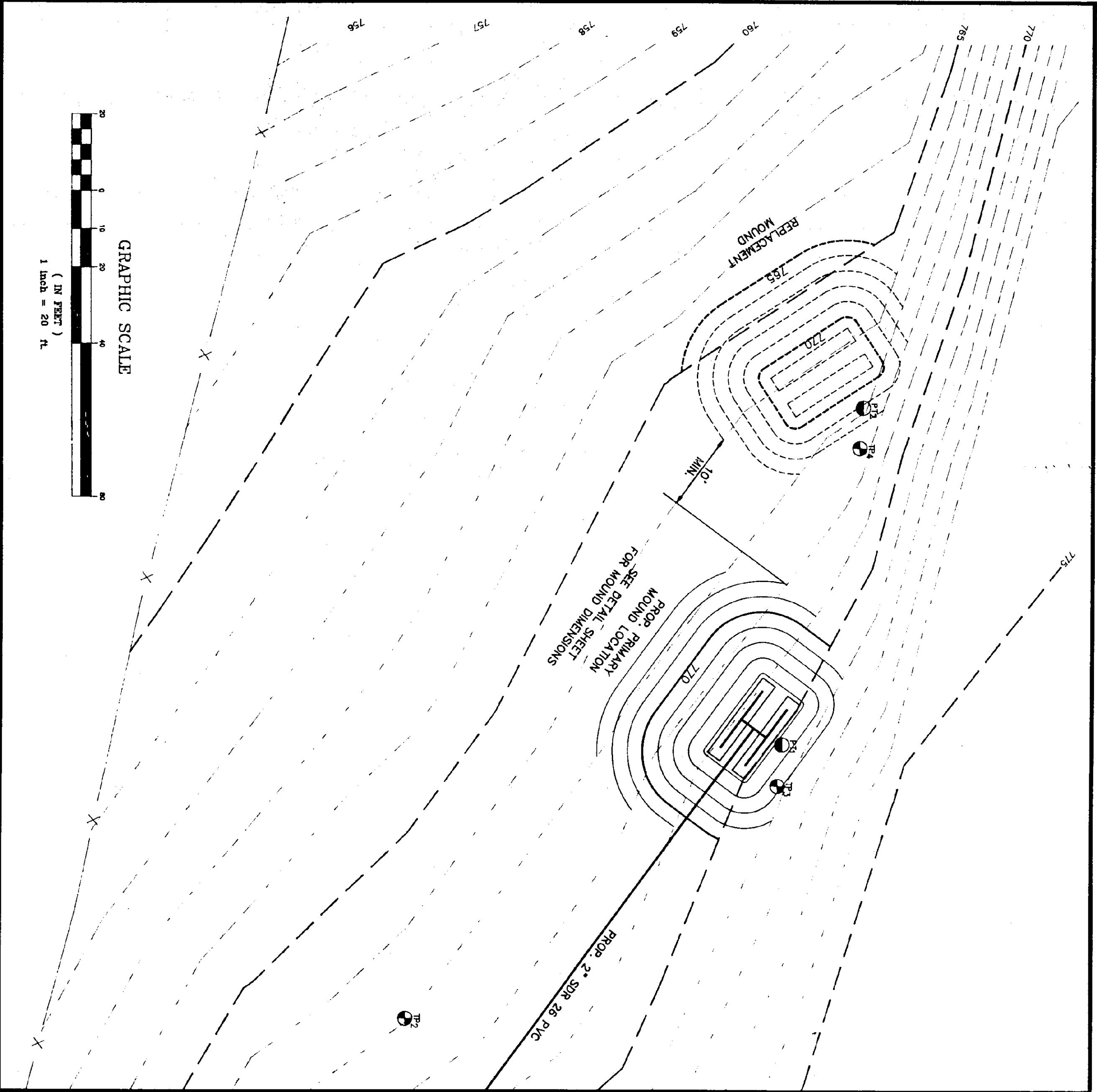
SEWER  
 DESIGN

SCALE: AS NOTED  
 DATE: 03/01/93  
 DESIGN BY: BJE  
 DRAWN BY: JBT  
 SHEET NO: P-2  
 PROJECT NO: 9228

Upon completion of construction and prior to building occupancy and the engineer issuing the final construction report, the contractor shall submit a final report on the supervision and management shall certify in writing that all systems were installed in accordance with the approved plans and conditions. Any deviations from the plans must be noted on a set of as-builts and furnished with the certification.



- NOTES:
1. PROPERTY LINE LOCATION & CONTOURS BY OTHERS, CONTRACTOR TO COORDINATE.
  2. IN LOCATIONS WHERE APPROXIMATE CONTACT ENGINEERS IF DIFFERENT THAN PLANS.
  3. CIR TO LOCATE PROPOSED WELL A MIN. OF 10' FROM ANY PROPERTY LINES. SEE DETAIL SHEET FOR WELL DETAIL.



TEST PIT #1

Depth	Dominant Color	Mottles	Texture	Structure	Consistence
0-8"	dk brn	no	frozen	no	friable
9-12"	olive brn	yes	fsi	dk	friable
13-17"	olive brn	yes	sl	dk	friable
18-22"	olive	yes	sl	dk	friable
23-27"	olive	yes	ledge	?	mod.
28-45"	olive	no			mod.
46"					

TEST PIT #3

Depth	Dominant Color	Mottles	Texture	Structure	Consistence
0-11"	dk brn	no	frozen	no	loose
12-16"	olive brn	no	fsi	no	loose
17-21"	olive brn	no	fsi	no	loose
22-26"	olive brn	no	fsi	no	loose
27-31"	refusal	no		no	loose
32-36"					loose
37-41"					loose
42-46"					loose
47-51"					loose
52-56"					loose
57-61"					loose

TEST PIT #2

Depth	Dominant Color	Mottles	Texture	Structure	Consistence
0-5"	dk brn	no	frozen	no	mod.
6-10"	lt brn	yes	fsi	dk	mod.
11-15"	lt brn	yes	fsi	dk	mod.
16-20"	red brn	yes	fsi	dk	mod.
21-25"	red brn	yes	fsi	dk	mod.
26-30"	red brn	yes	fsi	dk	mod.
31-35"	red brn	yes	fsi	dk	mod.
36-40"	red brn	yes	fsi	dk	mod.
41-45"	red brn	yes	fsi	dk	mod.
46-50"	red brn	yes	fsi	dk	mod.
51-55"	red brn	yes	fsi	dk	mod.
56-60"	red brn	yes	fsi	dk	mod.
61-65"	red brn	yes	fsi	dk	mod.
66-70"	red brn	yes	fsi	dk	mod.
71-75"	red brn	yes	fsi	dk	mod.
76-80"	red brn	yes	fsi	dk	mod.
81-85"	red brn	yes	fsi	dk	mod.
86-90"	red brn	yes	fsi	dk	mod.
91-95"	red brn	yes	fsi	dk	mod.
96-100"	red brn	yes	fsi	dk	mod.

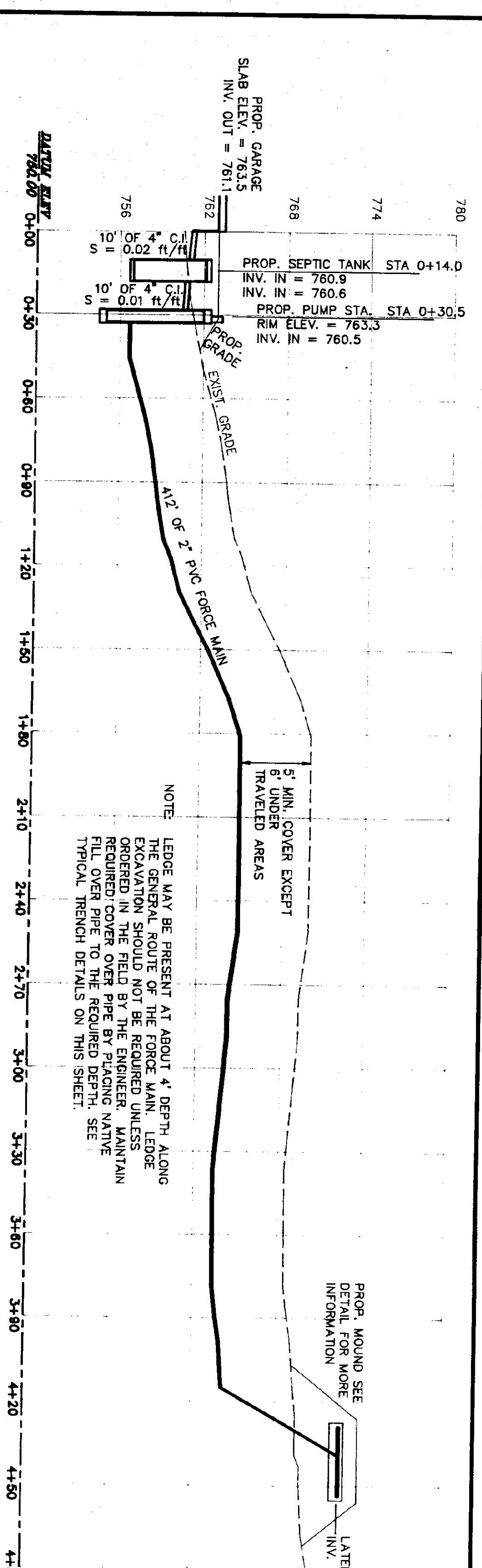
TEST PIT #4

Depth	Dominant Color	Mottles	Texture	Structure	Consistence
0-14"	dk brn	no	fsi	no	loose
15-19"	ylt brn	no	fsi	no	loose
20-24"	ylt brn	no	fsi	no	loose
25-29"	red brn	no	fsi	no	loose
30-34"	red brn	no	fsi	no	loose
35-39"	red brn	no	fsi	no	loose
40-44"	red brn	no	fsi	no	loose
45-49"	red brn	no	fsi	no	loose
50-54"	red brn	no	fsi	no	loose
55-59"	red brn	no	fsi	no	loose
60-64"	red brn	no	fsi	no	loose
65-69"	red brn	no	fsi	no	loose
70-74"	red brn	no	fsi	no	loose
75-79"	red brn	no	fsi	no	loose
80-84"	red brn	no	fsi	no	loose
85-89"	red brn	no	fsi	no	loose
90-94"	red brn	no	fsi	no	loose
95-99"	red brn	no	fsi	no	loose
100-104"	red brn	no	fsi	no	loose

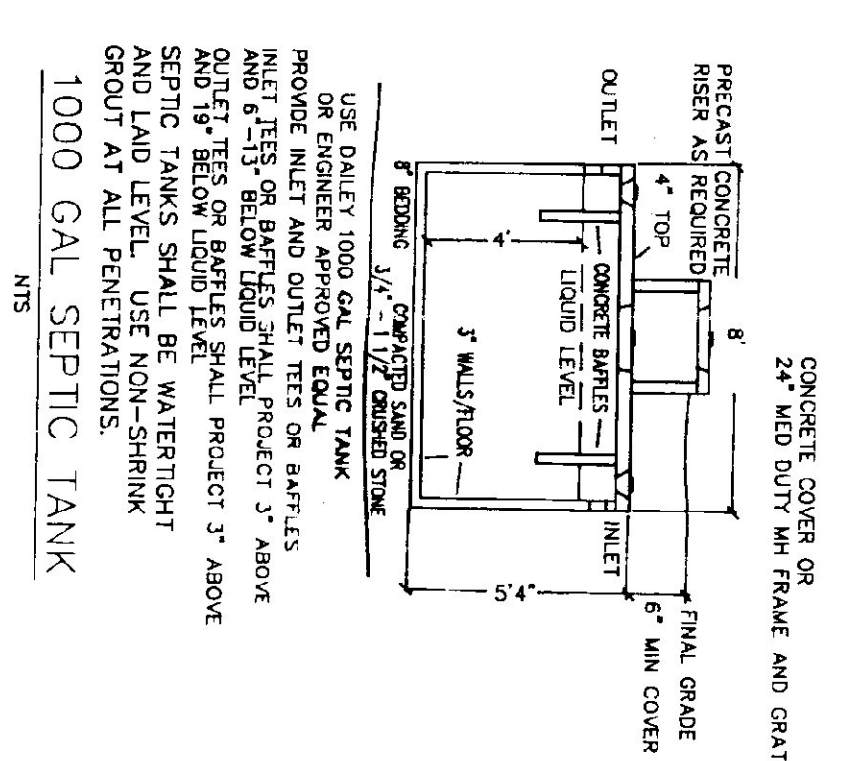
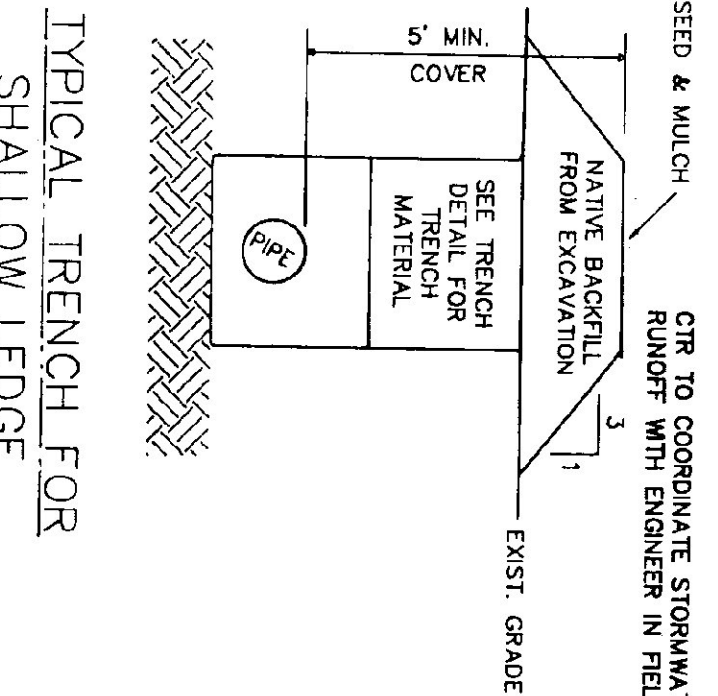
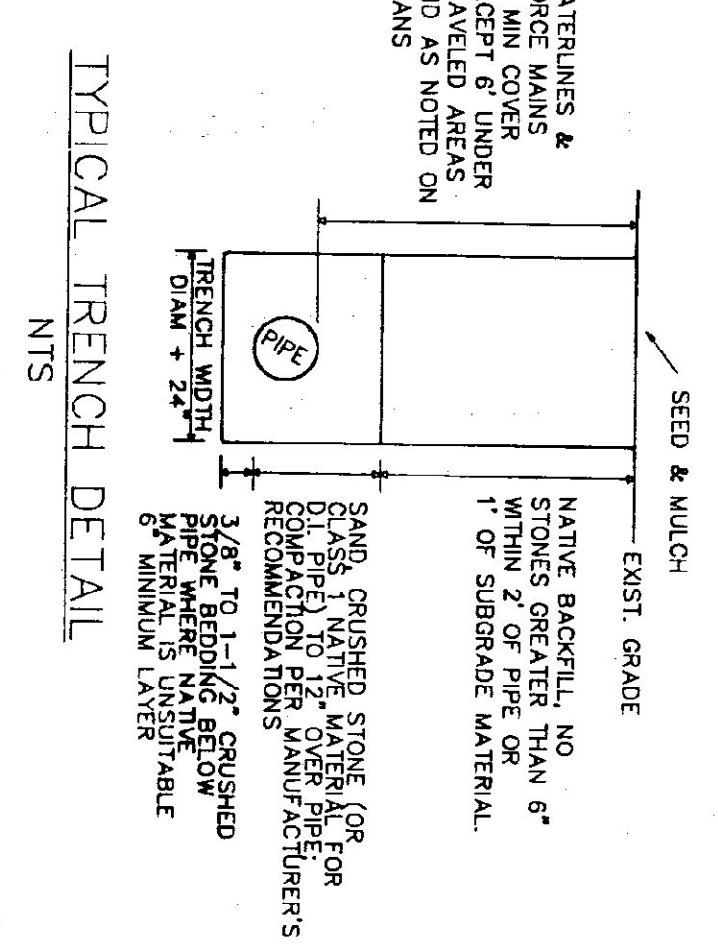
PERC. TEST #1  
 RATE = 10 min./inch

PERC. TEST #2  
 RATE = 4.6 min./inch

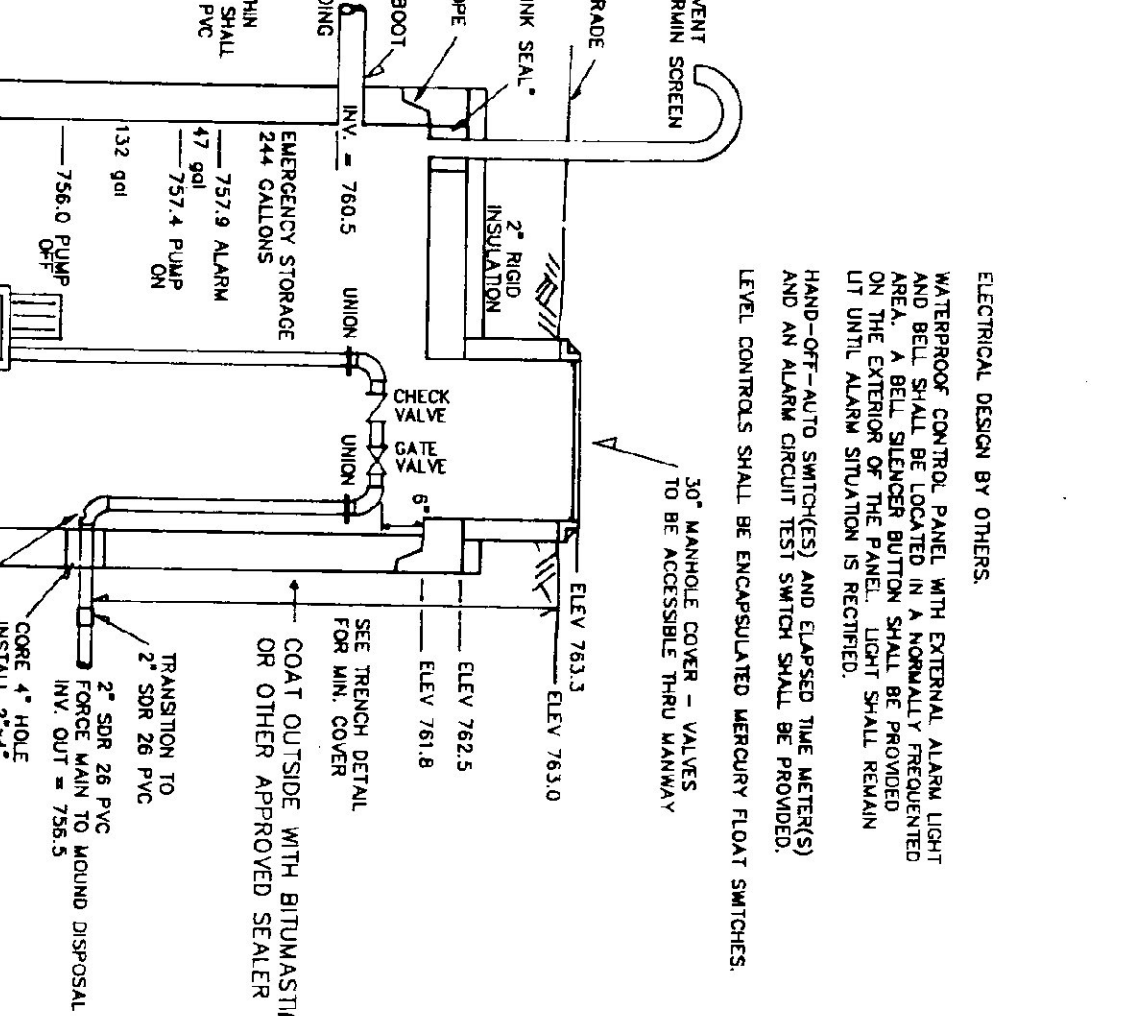
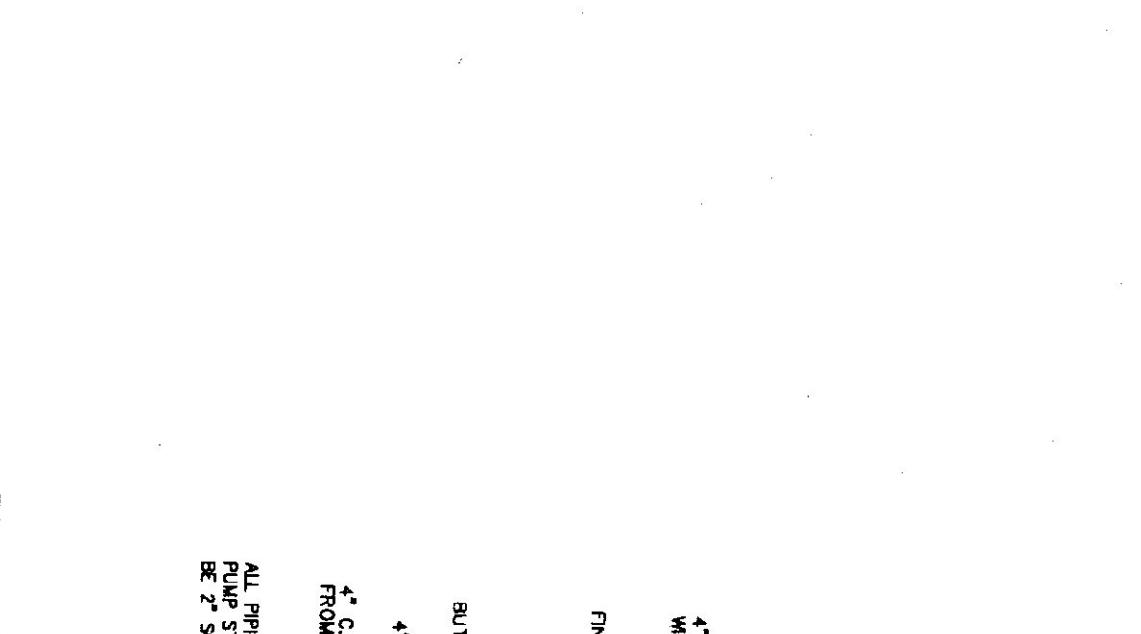
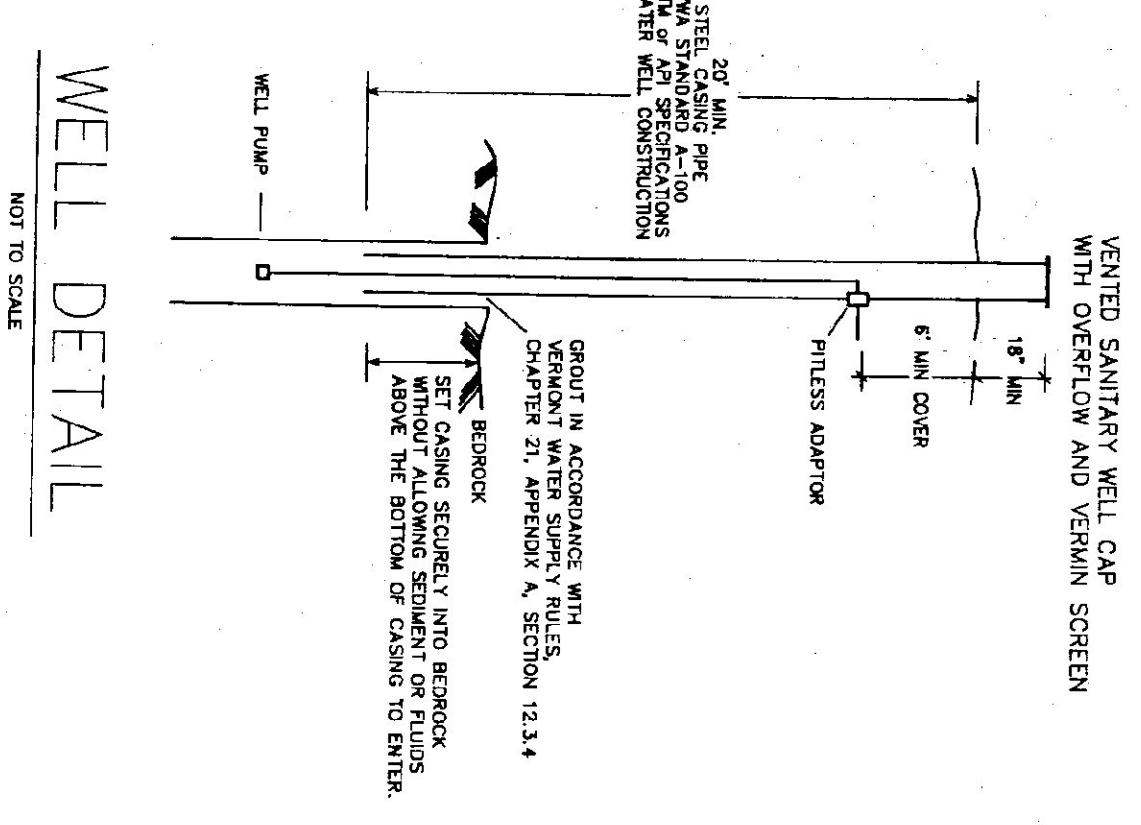
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 North Clarendon, Vermont 05759  
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**PROPOSED SEWER**  
SCALE: HORIZ. 1" = 30'  
VERT. 1" = 3'



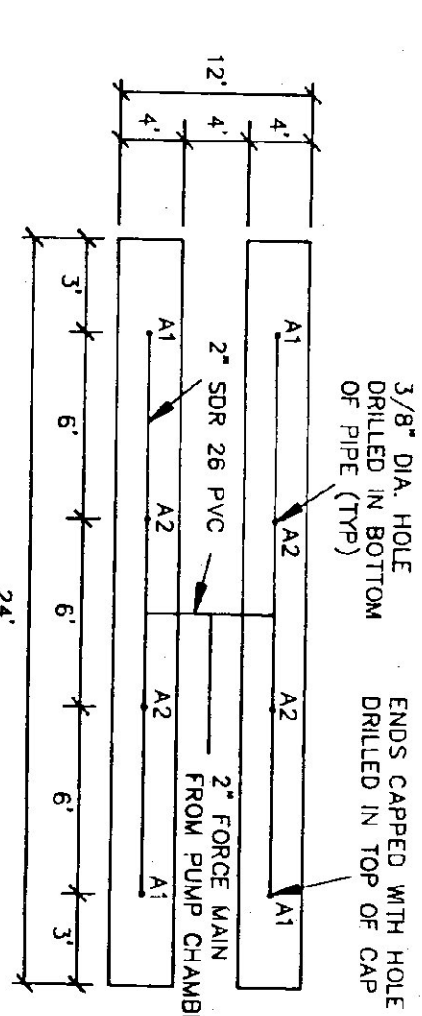
**1000 GAL SEPTIC TANK**  
NTS



**4'-0" ID PRECAST PUMP STATION**  
NTS

**BASIS OF DESIGN**

AVERAGE DAILY FLOW	10 employees @ 15 gpd each = 150 gpd									
FIELD SIZE	(150 gpd) / (1.2 gpd/ft <sup>2</sup> ) = 125 ft <sup>2</sup> REQUIRED (150 gpd) / (1.2 gpd/ft <sup>2</sup> ) = 125 ft <sup>2</sup> AVAILABLE									
BASAL AREA	(150 gpd) / (0.75 gpd/ft <sup>2</sup> ) = 200 ft <sup>2</sup> REQUIRED 24' x 40' = 960 ft <sup>2</sup> AVAILABLE									
HYDRAULICS	ELEVATION HEAD 772.8 - 756.0 = 16.8 ft FRICTION HEAD 27" PVC FORCE MAIN 440' @ C=100 USE: GARDUS 2885-MECON 1/2 HP PUMP OPERATING POINT = 29.7 gpm @ 58.5 TDH									
FIELD HYDRAULICS AT OPERATING POINT	<table border="1"> <tr> <th>PIPE</th> <th>FLOW (gpm)</th> <th>HEAD (ft)</th> </tr> <tr> <td>A1</td> <td>3.712</td> <td>5.015</td> </tr> <tr> <td>A2</td> <td>3.713</td> <td>5.020</td> </tr> </table>	PIPE	FLOW (gpm)	HEAD (ft)	A1	3.712	5.015	A2	3.713	5.020
PIPE	FLOW (gpm)	HEAD (ft)								
A1	3.712	5.015								
A2	3.713	5.020								
MAN FLOW	MAN FLOW 3.713 gpm MIN FLOW 3.712 gpm % DIFFERENCE 0.05%									
PIPE STATION LEVELS	ON/OFF 1.4' = 132 gallons PUMP RUN TIME 132 gal / 29.7 gpm = 4.4 min STORAGE VOLUME 2.6' = 244 gallons									
DESIGN	(132 gal/dose) - (63 gal dose back) = 69 gal/dose (150 gpd) / (60 gal/dose) = 2.2 doses/day									



**FIELD PLAN**  
NTS

**FOUND CONSTRUCTION NOTES:**

1. CONSTRUCTION OBSERVATION AND PERFORMANCE TESTING. ALL FOUNDATION CONSTRUCTION SHALL BE OBSERVED AND TESTED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT A FOUNDATION CONSTRUCTION REPORT TO THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. PRIOR TO ANY CONSTRUCTION ACTIVITY.
3. ALL TESTS WITHIN 10' OF THE DISPOSAL AREA AND WITHIN 10' OF THE FORCE MAIN SHALL BE CONDUCTED. THE CONTRACTOR SHALL SUBMIT A FOUNDATION CONSTRUCTION REPORT TO THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. THE SOIL MOISTURE CONTROL SHALL BE INSTALLED WHEN THE SOIL MOISTURE CONTROL IS TO BE INSTALLED. THE SOIL MOISTURE CONTROL SHALL BE INSTALLED PRIOR TO PLACING THE SOIL UNDERLAY AND SHALL BE 6" TO 8" DEEP.
5. PRIOR TO PLACING THE SOIL UNDERLAY, THE SOIL MOISTURE CONTROL SHALL BE INSTALLED.
6. THE SOIL MOISTURE CONTROL SHALL BE INSTALLED PRIOR TO PLACING THE SOIL UNDERLAY AND SHALL BE 6" TO 8" DEEP.
7. EQUIPMENT SHALL NOT BE OPERATED ON THE PAVED SURFACE AND/OR ON THE EFFLUENT DISPOSAL AREA. THE CONTRACTOR SHALL SUBMIT A FOUNDATION CONSTRUCTION REPORT TO THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. THE AREA SURROUNDING THE FOUNDATION SHALL BE GRADED TO PROVIDE DRAINAGE OF SURFACE RUNOFF AWAY FROM THE FOUNDATION.
9. THE CONTRACTOR SHALL SUBMIT A FOUNDATION CONSTRUCTION REPORT TO THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
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**TYPICAL MOUND SECTION**  
NTS

**VERMONT AGENCY OF TRANS.**

CLARENDON, VT

**Ennon Engineering**  
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(802)775-3437

REGULATORY APPROVAL STAMP

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Approved By: *David E. Smith*  
Permit #: 05-1-0387  
DATE: Apr. 2, 1993

**MISC. DETAILS**

SCALE: AS NOTED

DATE: 03/01/93

DESIGN BY: BUE

DRAWN BY: JBT

SHEET NO: P-3

PROJECT NO: 9228

APR 15 1993