



WHATCOM COUNTY
HEALTH DEPARTMENT
509 Girard Street
Bellingham, WA 98225
Phone 676-6724

ON-SITE SEWAGE SYSTEM
CONSTRUCTION PERMIT

Parcel # 400126 406079

Permit Approval Date: 07-10-2006

Name Grandview Golf
Last First

Permit Expiration Date: 07-10-2011

Site address 7738 Portal Way

Phone Number _____

Installer _____

It is hereby agreed that the installation of this OSS shall comply with all applicable requirements of WCC 24.05 On-Site Sewage Control Regulations. **A FINAL INSPECTION, BY THE WHATCOM COUNTY HEALTH DEPARTMENT IS REQUIRED BEFORE COVERING.**

Issuance of an OSS permit does NOT imply or signify fulfillment or satisfaction of any other legal requirement, such as building codes or zoning ordinances. Permit holders are cautioned that compliance with other agency permit requirements, such as obtaining a land disturbance permit from Whatcom County Planning and Development Services, should be accomplished prior to commencement of any construction.

Operation and Maintenance (O&M) is required for every OSS. Attached are the O&M requirements for this OSS.

I have read and understand the above statements

Signature of owner/agent

OSS type:

- Conventional gravity
- Conventional pressure distribution
- Alternative System:
 - Sand filter
 - Aerobic Treatment Unit (ATU)
 - ATU w/disinfection
 - Pressure mound
 - Non-pressurized mound
 - Glendon Biofilter
- Other _____

OSS to be installed ONLY by licensed installer. Homeowner may not install OSS.

Comments/Conditions: _____

Fee \$ 65 Receipt _____
Received By RS Date 7-10-06

Final Inspection By _____
Date _____

On-Site Sewage System (OSS) Application

Name Grandview Golf
 Last First
 Address 7738 Portal Way
Custer Wa. 98240-9520
 Phone 3663947

WHATCOM COUNTY
 HEALTH DEPARTMENT
 509 Girard Street
 Bellingham, WA 98225
 (360) 676-6724

Fee 390.
 Receipt # 1914
 Date 7-6-06
 By [Signature]

Address of Site 7738 Portal Way Parcel # 400126406079
 N S W Side of Portal Way Rd. 0.3 Miles S E W of Arnie Rd
 Lot size 72.58 ac. No. of bedrooms 480 Water source Custer Wa. Ann. Watershed Code 0-1
 Septic tank capacity 1000 gallons Receiving soil loading rate 1.0 gal/sq.ft./da
 Pump tank capacity 930, 1000 with flood capacity gallons Water Table Depth 60"
 APPLICATION TYPE: New Construction Repair As-built Expansion

Soil horizons to 5' or impermeable layer:

18"	Loamy sand
60"	Medium sand roots present. get coarser with depth.

I hereby certify that the information submitted on this design correct and meets all requirements of Whatcom County Sewage System Regulations.
 Designer Signature [Signature]
 Date of Submittal EXP/2006/06

Comments: On demand non pressurized bed. Comment page attached. Water meter reading attached.

Health Department Use Only

page # 1

Comments S&I - soils as stated dry @ bottom. No mottles noted. No compression noted. good bed. S&I noted on map as shown.
 Application & Permit approved [Signature] Date 7-10-06
 OSS System Type Conventional Gravity
 Conditions _____
 Application not approved _____ Date _____
 Reasons _____

Pursuant to WCC 24.05.27 (1) Notice of decision - Adjudicative Proceeding " Any decision or action of the local health officer with respect to installation permits of an OSS may be appealed to the Sewage Control Appeals Board." Contact Environmental Health for further information and the procedure. A fee is charged.
 07-06-05 2011-14 CHECK 390.00

BID DESIGN

Rob VanderVeen
2074 Willeys Lk. Rd.
Custer Wa. 98240

Phone 360 384 6333 / Fax 360 384 6333

GRANDVIEW GOLF CLUB HOUSE

Date 7/6/06

PROPOSED EFFLUENT SOURCE INFORMATION

Facility will be used for golfers rest and refreshment and staff.

3 club house staff plus up to 7 in the shop using EPA info. $10 \times 10 \text{ GPD} = 100 \text{ GPD}$.

The peak water flow according to meter reading was 1675 gallons for a month. Less at least 25% for out door equipment cleaning. $1675 - 25\% = 1256 / 30 \text{ days} = 42 \text{ GPD}$.

Highest use month served 4090 patrons. EPA estimates about 2 GPD minimum per similar patron. The minimum rate is justified by water meter readings. $4090 / 30 \times 2 \text{ GPD} = 273 \text{ GPD}$ may be produced from patrons using EPA estimates.

100 GPD for staff plus 273 GPD from patrons for a total of up to 373 GPD currently needed. 107 GPD extra capacity built in to provide for safety and possible future expansion. Perhaps up to 5000 or more patrons per month may be acceptable. *RV*

Club house seats up to 44 patrons. Beer, soda, hot dogs, and chips are typically served.

Refreshment counter equipment listed below.

- 3 residential style refrigerators.
- 2 residential style freezers.
- 1 walk in freezer.
- 1 3 compartment sink.
- 1 mens washroom - 1 sink, 1 urinal, 1 toilet.
- 1 Ladies washroom - 1 sink, 2 toilets.
- 1 microwave oven
- 1 hot dog rotisserie
- 1 toaster oven

Beer served in glasses. Tongs for hot dogs. All other items to be served in to go disposable containers. Preparation will not include mixing or blending. All left over or spoiled food must be thrown out with the trash, not down the drain. The intent is to limit the need for washing containers, utensils, and blenders in an effort to protect the sewage disposal system from high volume and high waste strength.

The occasional events are catered.



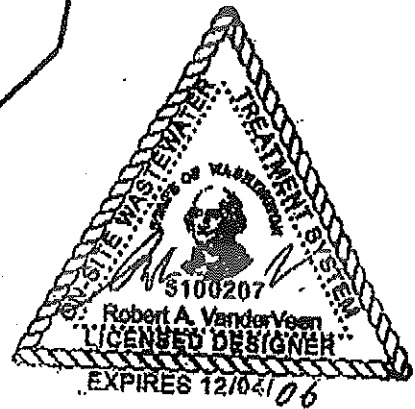
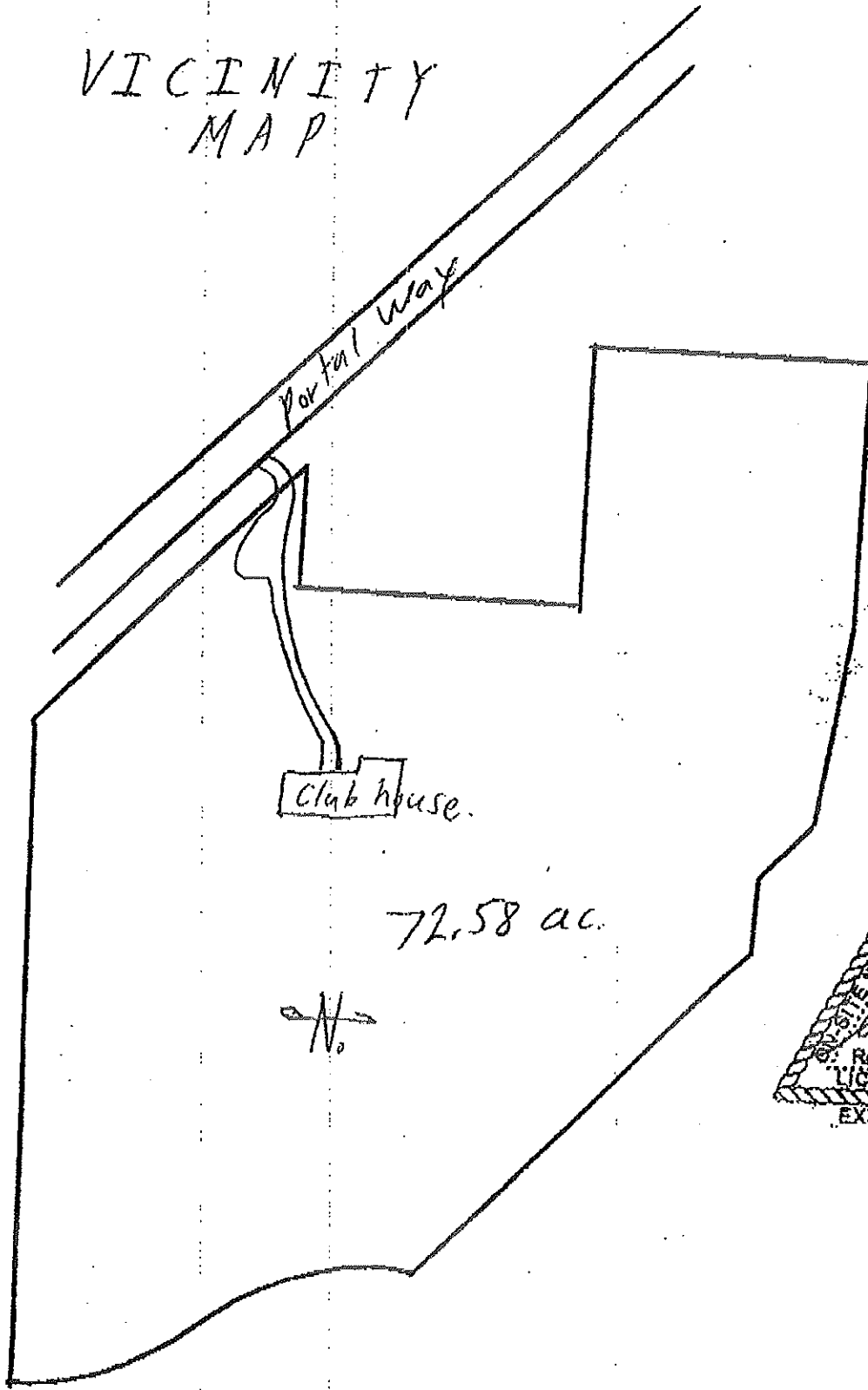
Name Grandview Golf
Site Portal Way Rd.

(SDS) Sewage Disposal System Design

Designer Rob VanderVeen / Bid Design

Date 7/6/06

VICINITY MAP



Name Grandview Golf (SDS) Sewage Disposal System Design

Site Portal Way Rd.

Designer Rob VanderVeen / Bid Design

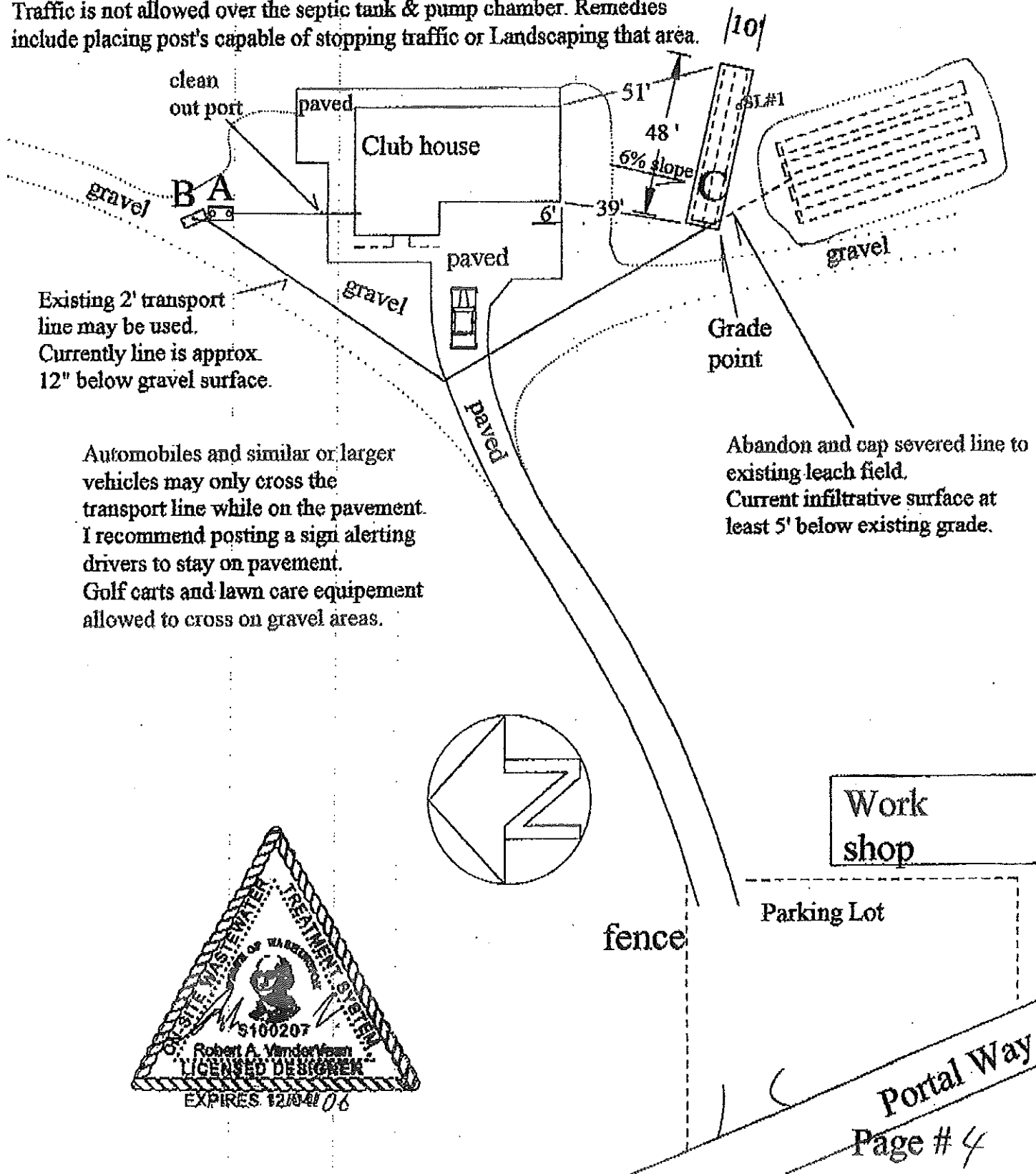
Date 7/6/06

40'-1" scale of SDS components & features of influence measured topographically.

Property boundaries as indicated by the client.

The lettered components of this SDS are explained in the legend on the following page.

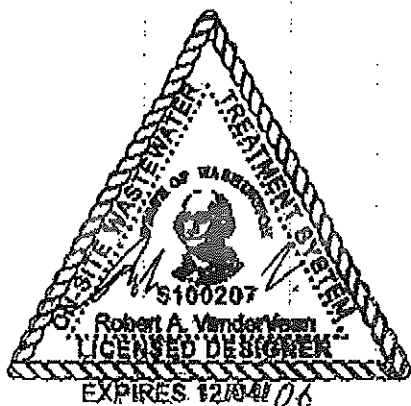
Traffic is not allowed over the septic tank & pump chamber. Remedies include placing post's capable of stopping traffic or Landscaping that area.



Existing 2' transport line may be used. Currently line is approx. 12" below gravel surface.

Automobiles and similar or larger vehicles may only cross the transport line while on the pavement. I recommend posting a sign alerting drivers to stay on pavement. Golf carts and lawn care equipment allowed to cross on gravel areas.

Abandon and cap severed line to existing leach field. Current infiltrative surface at least 5' below existing grade.



Work shop

Parking Lot

fence

Portal Way
Page # 4

Owner Grandview Golf
Site Portal Way Rd.

PUMP CHAMBER

no scale this page

Designer Rob VanderVeen / Bid Design

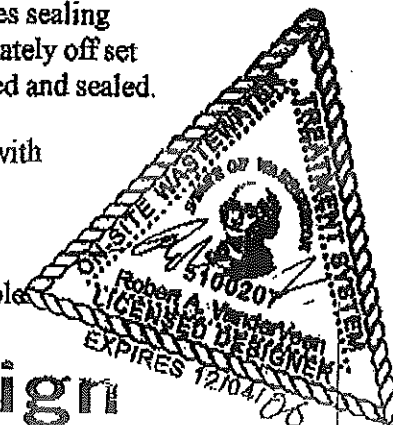
Date 7/10/06

B= Existing approx. 930 gallon pump chamber. Tank must be water tight, This includes sealing all risers, joints and unions. Inspector note lack of volume in this chamber is approximately off set with the flood volume of the existing septic tank. The outlet of this tank must be capped and sealed. The septic tank must have a screen on the outlet or the pump must have a screen vault.

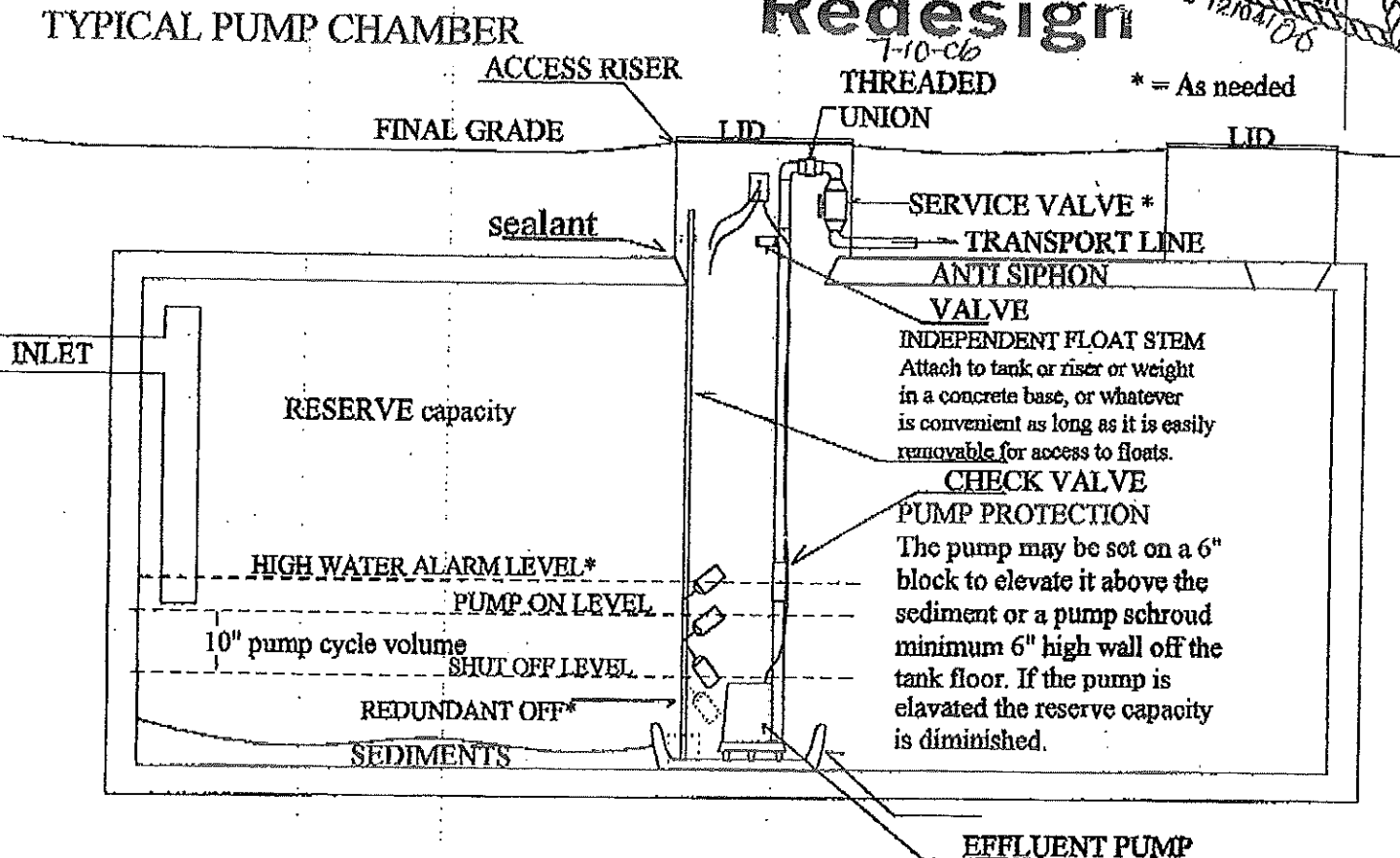
It is unlikely a screen vault will fit into the tank. If a vault is used it must not interfere with the floats and should be easily removable for cleaning.

PUMP REQUIREMENTS. Pump should deliver a total head of at least 11' provided it is located approximately as intended on the design. 8' elevation + 3' transport line friction loss. Timed dosing is not required. It is highly likley the existing pump is suitable.

PUMP CONTROLS. Set float control assembly so pump will automatically pump approximately 120 gallons per dose.



Redesign



OTHER REQUIREMENTS AND COMMENTS:

Access to the chamber manholes must be at final grade, risers may be used to accomplish this. The chamber must be water tight and includes sealing all joints and unions, especially on sites with a high water table.

CAUTION: A larger dose such as could happen if operating the pump manually can be harmful to the system.

OPTION: Typically an alarm panel is attached to a post near the pump chamber. Some home owners may want to locate the panel on or near the building. In my opinion pumps with longer leads or an electrician should be able to facilitate this.

TANK VOLUME approximately 12 gallons per inch of depth.

SEWAGE DISPOSAL SYSTEM PRESSURIZATION WORK SHEET

OWNER Grandview Golf
 SITE Portal Way Rd.
 DESIGNER Rob VanderVeen / Bid Design

Date 7/6/06

A Daily wastewater flow 480 gallons. (120 gal/day X 3 bedrooms)

- B 1. Infiltration rate of fine sand 1.0 gal / sq ft / day
 480 sq ft bed area.
2. Bed configuration: (A) 10' wide.
 (B) 48' ft long, total
 480 sq ft bed area.

- C Distribution system design: (pipe is schedule 40)
- 1&2 Orifice diameter: 3/16" at 30" spacing. Oriented at 6 O'clock
 3. Lateral length: 47' (48' bed length - 1' = 47')
 4. Approximately 18 orifices per lateral (47' lateral / 30")
 5. Lateral diameter 2"
 6. Laterals spaced 3.5' apart and 1.5' from bed edges
 - 7&8 Transport pipe: 2" diameter, 200' long
 - 9&10 Manifold diameter: 2", length is 6'



D Design of the pumping system

1. 86 gallons is 7 X lateral volume + manifold and transport drain volumes
 Dose volume of loamy sand is 120 gallons
 Dosing volume will be 120 gallons at a daily frequency of 4
2. 930 gallon pump chamber,
3. Pump capacity: 28 gallons a minute
 0.59 orifice discharge rate X 3 laterals X approximately 18 orifices
4. Total pump head: 11'
 6' elevation difference
 3' friction loss
 2' residual pressure (head desired)
5. Suggested pump selection: 1/3 - 4/10 HP.

Name Grandview Golf
Site Partal Way Rd.

SEWAGE DISPOSAL SYSTEM DESIGN legend

This page is not to scale

Designer Rob VanderVeen Bid Design

7/10/06

A= Existing 1000 gallon capacity two compartment septic tank. Model (SUPER TANK). Suplier is Premier Plastics LTD 1 800 61 4473. Access to the tank manholes must be within 12" of final grade and topograohy must slope away from manholes for 5' or more, risers may be needed. Manhole covers and or risers must be water tight. Pump must be removed and a 4" tight line installed from filtered outlet to neighboring pump chamber. Gravity flow must be attained or system must be redesigned to include a new pump chamber.

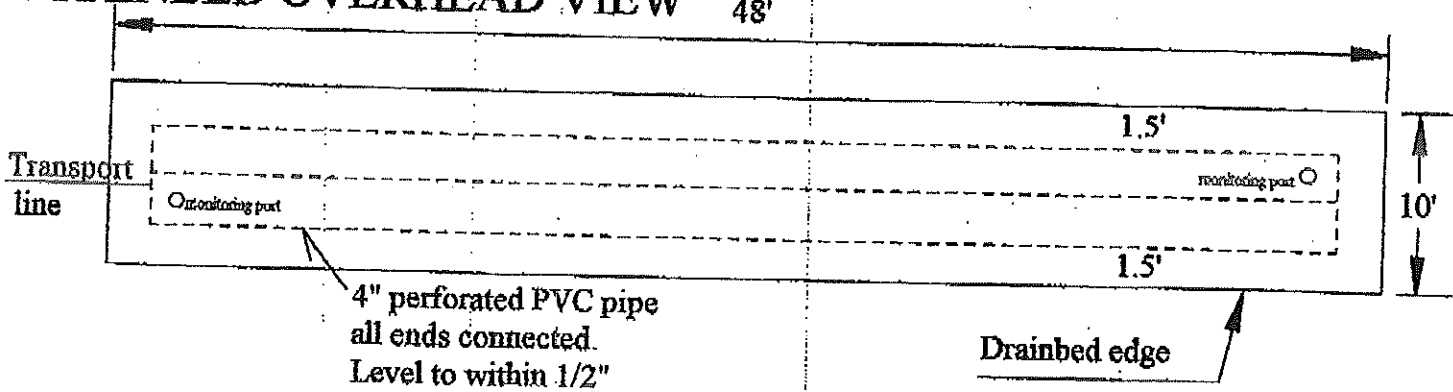
B= Existing approx. 930 gallon pump chamber. Appears in good condition. Details on following pages.

C= Drained, 48' long by 10' wide by 24" deep from grade point and level to within 1".

After inspection place geotextile and backfill.

DRAINBED OVERHEAD VIEW

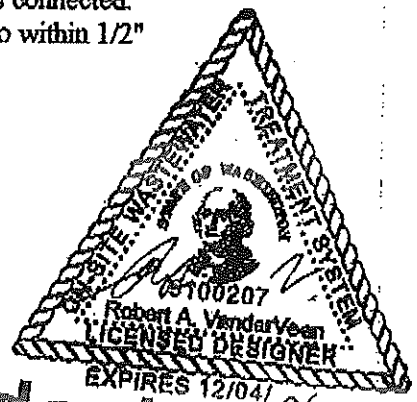
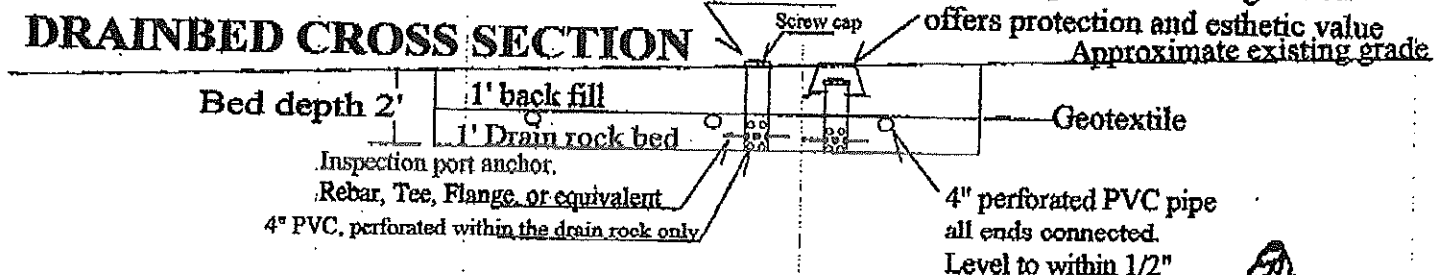
48'



Monitoring port. Locate one at each end of the drain bed.

Optional port base configuration offers protection and esthetic value
Approximate existing grade

DRAINBED CROSS SECTION



The existing grade at the grade point shown on the plot sketch is the grade point for measuring excavation depths. The bottom of the drainbed must be excavated level and the soil at the bottom of the excavation must not be smeared, pulverized or compacted during the excavation. The cover soil or backfill placed over the drainbed must be permeable. Call before you dig 1 800 424 5555.