

SKAGIT COUNTY PLANNING & DEVELOPMENT SERVICES

1800 Continental Place
Mount Vernon, Washington 98273
360/336-9410

RECEIVED

SEP 24 2013

SKAGIT COUNTY
PDS

ON-SITE SEWAGE SYSTEM CERTIFICATION
FOR AS-BUILT DRAWINGS AND/OR INSTALLATIONS

Skagit County Code Section 12.05.150 (4) state in part: "The designer or installer . . . shall develop and submit a complete and detailed, "as-built" or "record" drawing to both the Health Officer and the On-Site Sewage System's owner that include measurements to existing site features enabling the first tank manhole to be easily located, and a dimensioned reserve area."

Please complete and answer all questions and return.

Johnson

Terry

Property Owner (last, first and middle initial)

13240 Buchanan

Site Address

Plat, Division, Lot, Block

12 34 04

69917

Section

Township

Range

Parcel #

Gudmunson Septic Inc

Lyrch & Assoc.

Designer's Name

Installer's Name

On-site Sewage Permit Number: SW09-0332

How many bedrooms? 3

Have you attached any as-built plans/specifications? NE

INSTALLATION CERTIFICATION: I hereby certify that this sewage system was completed on Date: _____ and I have determined it was installed in accordance with the approved plans and specifications, or as indicated on the attached as-built documents, and in conformance with the County On-site Sewage Rules and Regulations (Skagit County Code Chapter 12.05).

Designer's Signature: _____

* * * * * COUNTY USE ONLY BELOW THIS LINE * * * * *

GPS location: N 48.45230 W 122.24302 A 17.2

Reviewed by: Greg Gebeys Date: 10-9-13

Gudmunson Septic, Inc.

P.O. Box 2745 Mount Vernon, WA 98273

(360)424-4137 • (800)977-2400 • Gudmunsonseptic@aol.com

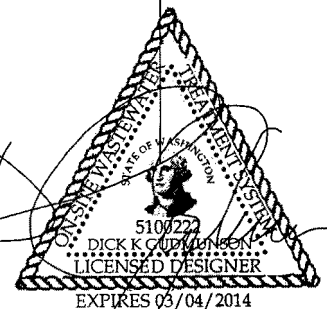
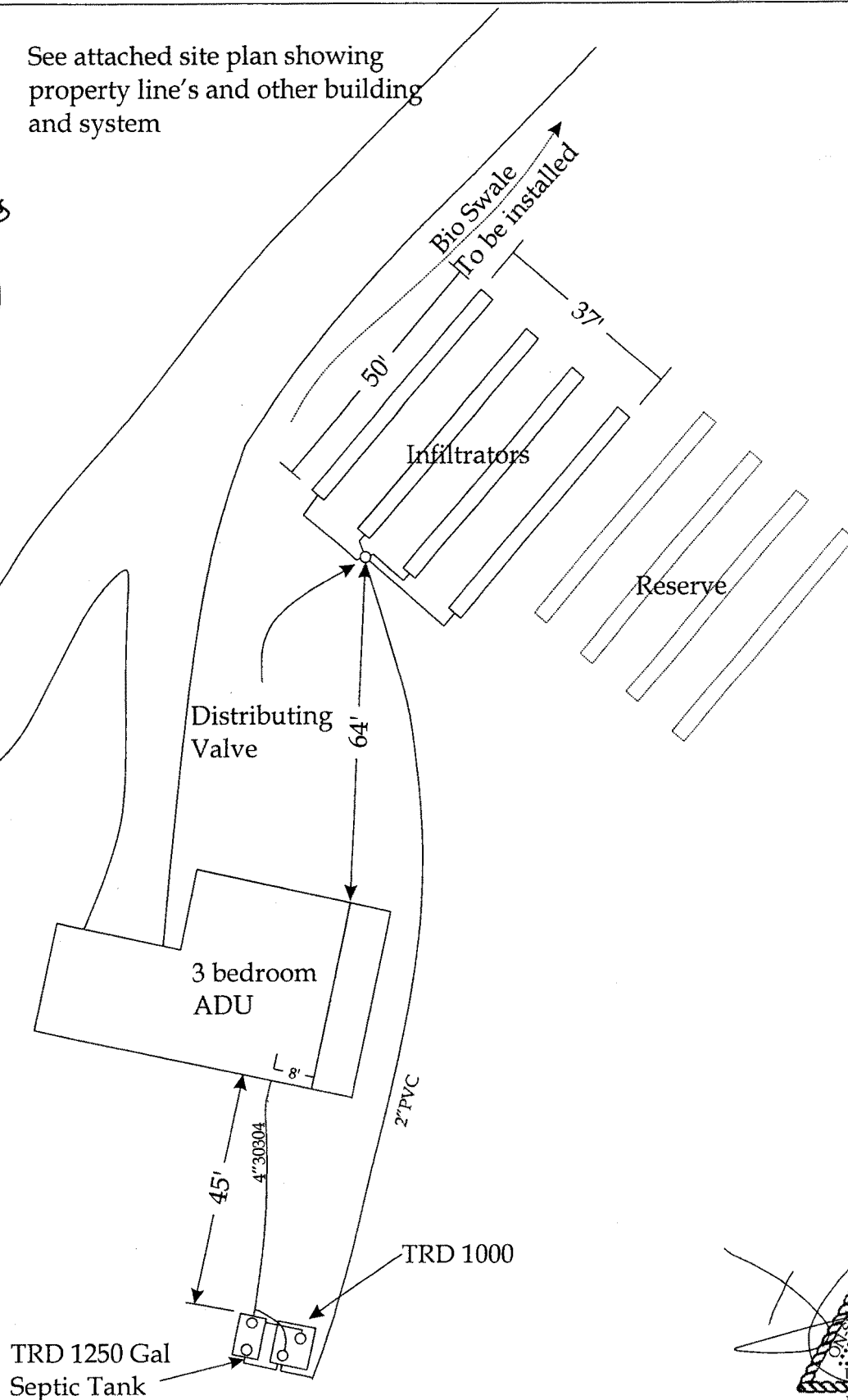
Job # 113094

Client Name Johnson

Property ID# P69917

SCALE 1" = 30' PAGE OF

See attached site plan showing
property line's and other building
and system



SCPHD On site Sewage System (OSS) Installation Certification Setup Form
(Required with as built submittal for all OSS other than gravity flow)

APPLICANT AND PROPERTY INFORMATION			
Parcel number: <u>69917</u>		Date: <u>9/24</u>	
Address: <u>13240 Buchanan</u>		Name: <u>Johnson</u>	
SYSTEM INFORMATION			
OSS Type: <u>TRD / Press</u>		**Is system permanently wired to structure: <u>YES</u> NO	
TANK INFORMATION			
Septic tank capacity: <u>1250</u>		Pump tank capacity: <u>—</u>	Gallons/ dose: <u>30</u>
Maximum daily flow: <u>360</u>		Doses/ day: <u>12</u>	
CONTROL PANELS			
Mechanical: yes no		Floatless panel: yes no	Pump to Gravity: yes no
Type: <u>TRD</u>	High water alarm working: <u>yes</u> no	Redundant off working: <u>yes</u> no	
Counter reading:	Timer cycling correctly: <u>yes</u> no	On/off working: <u>yes</u> no	
On time: <u>3min</u>	Off time: <u>2HR</u>	Override link: yes no	
PROPRIETARY TREATMENT PRODUCT (PTP)			
PTP type: <u>T</u>	High water alarm working: <u>yes</u> no	Aerator working: <u>yes</u> no	
Unit model and size: <u>TRD 1000</u>	UV light functioning: <u>yes</u> no		
PRESSURE (including DRIP) DISTRIBUTION LATERALS			
Lateral squirt height (inches): <u>60</u>	Valves: <u>yes</u> no	Valves accessible: <u>yes</u> no	
Laterals to finished grade: <u>yes</u> no	Orifice size: <u>3/16</u>	Orifice spacing: <u>72"</u>	
Pump make and model: <u>Shuf 20</u>	Post filter gauge reading (Drip): <u>—</u>		
GLENDONS			
All units checked for equal flow: yes no		Riser over splitter valve: yes no	
SANDFILTER / MOUND			
Ends accessible: yes no		Depth of media:	
Floats in sandfilter functioning: yes no		Valves installed: yes no	
COMMENTS:			
<u>* Install setting SET & CONFIRMED</u>			
<u>By TRD</u>			
SIGNATURE CERTIFIED INSTALLER / DESIGNER			
Company: <u>GVD MURKIN</u>			
Signature: <u>[Signature]</u>			
Date: <u>9/24/13</u>		**Do NOT submit as built until OSS is permanently wired to structure	



Skagit County Planning & Development Services

1800 Continental Place • Mount Vernon, WA 98273

Inspections (360) 336-9306 • Office (360) 336-9410 • Fax (360) 336-9416

SW09-0332

Date Stamp

SEP 18 2009
RECEIVED

Legal Lot..... Existing Fee
Critical Areas..... done w/ 98-0871 \$ 650-

Do Not Write Above This Line For Office Use Only

Any person may appeal a determination by the staff or request a waiver from the requirements found in Ordinance #10136 (Skagit County Code, Chapter 12.04). See Section 12.04.110 for details.

Owner or Agent's Signature

Date

Linda L. Benjamin
Application

9/14/09

Property Owner (last, first, m.i.) <u>Johnson Terry</u>		Phone # () <u>661-0543</u>
Mailing Address <u>13240 Buchanan Lane Mt. Vernon</u>		Zip Code <u>98273</u>
Assessor's Account Number(s) <u>4027-000-016-0003</u>	P - Number <u>69917</u>	Sec / Twp / Rge <u>12/34/4</u>
Existing Plat Name or No. <u>Sun Add. to Clear Lake</u>	Lot # <u>16</u>	Lot Size (acres) <u>5.56</u>
Location and/or Site Address <u>Same as above 13240 Buchanan Ln</u>		
Site Evaluator / Phone # <u>Linda L. Benjamin</u>	Designer / Phone # <u>Same / 853-7362</u>	Contractor's # <u>5100217</u>
Any previous site evaluations/designs for this site? <u>yes</u>	Name or Project Number? <u>Terry Johnson</u>	What year was work done? <u>598-0401</u>
PERMIT TYPE: <input checked="" type="checkbox"/> Site Evaluation & Design <input type="checkbox"/> Design Only <input type="checkbox"/> Site Evaluation Only		
SITE EVALUATION: <input checked="" type="checkbox"/> Existing Lot <input type="checkbox"/> Proposed Lot		
DESIGN STATUS: <input checked="" type="checkbox"/> New Design <input type="checkbox"/> Repair <input type="checkbox"/> Redesign <input type="checkbox"/> No Design Submitted <input type="checkbox"/> Table 6 Repair		
DESIGN TYPE: <input type="checkbox"/> Conventional <input checked="" type="checkbox"/> Pressurized <input type="checkbox"/> Mound <input type="checkbox"/> Sand Filter <input type="checkbox"/> Aerobic/Mound <input type="checkbox"/> Sand-lined Trench <input checked="" type="checkbox"/> Aerobic <input type="checkbox"/> Aerobic/Drip <input type="checkbox"/> Other, describe:		
Residential Non-Residential- Recreational		
SYSTEM USE: <u>3</u> # of bedrooms <input type="checkbox"/> # of occupants <u>120</u> gal/day/bdrm <input type="checkbox"/> gal/day/occupant <u>360</u> total daily flow <input type="checkbox"/> total daily flow <u>ADU</u>		

REV

Johnson, Terry

Tracking Permit

09-0332

(Print Last Name, First above this line)

Proposed Plat
Review

____ Short Plat (2 - 4 lots)
____ Long Plat (5 or more lots)
Lot # ____ of ____ lots.

Proposed Plat Name or No.?

Lot Size (acres)

Do Not Write Below This Line

For Office Use Only

NOTES:

Holes filled in 9-23-09

48.45230

122.24302

17.2

INSPECTIONS:

Site
Evaluation

GG, 10-6-09

Design
Review

GG, 10-14-09

Soil/Site
Preparation

____/____

Above/below
Grnd Devices

GG, 8-29-13

Self-
Inspection

____/____

Pressure
Test (head)

GG, ~5'

Open

Trenches

____/____

Final Inspection

GG, 8-29-13

Installed
As Designed

No, House 5' side of road

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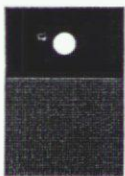
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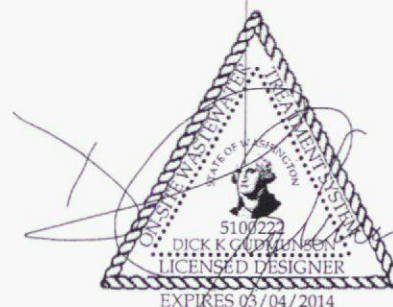
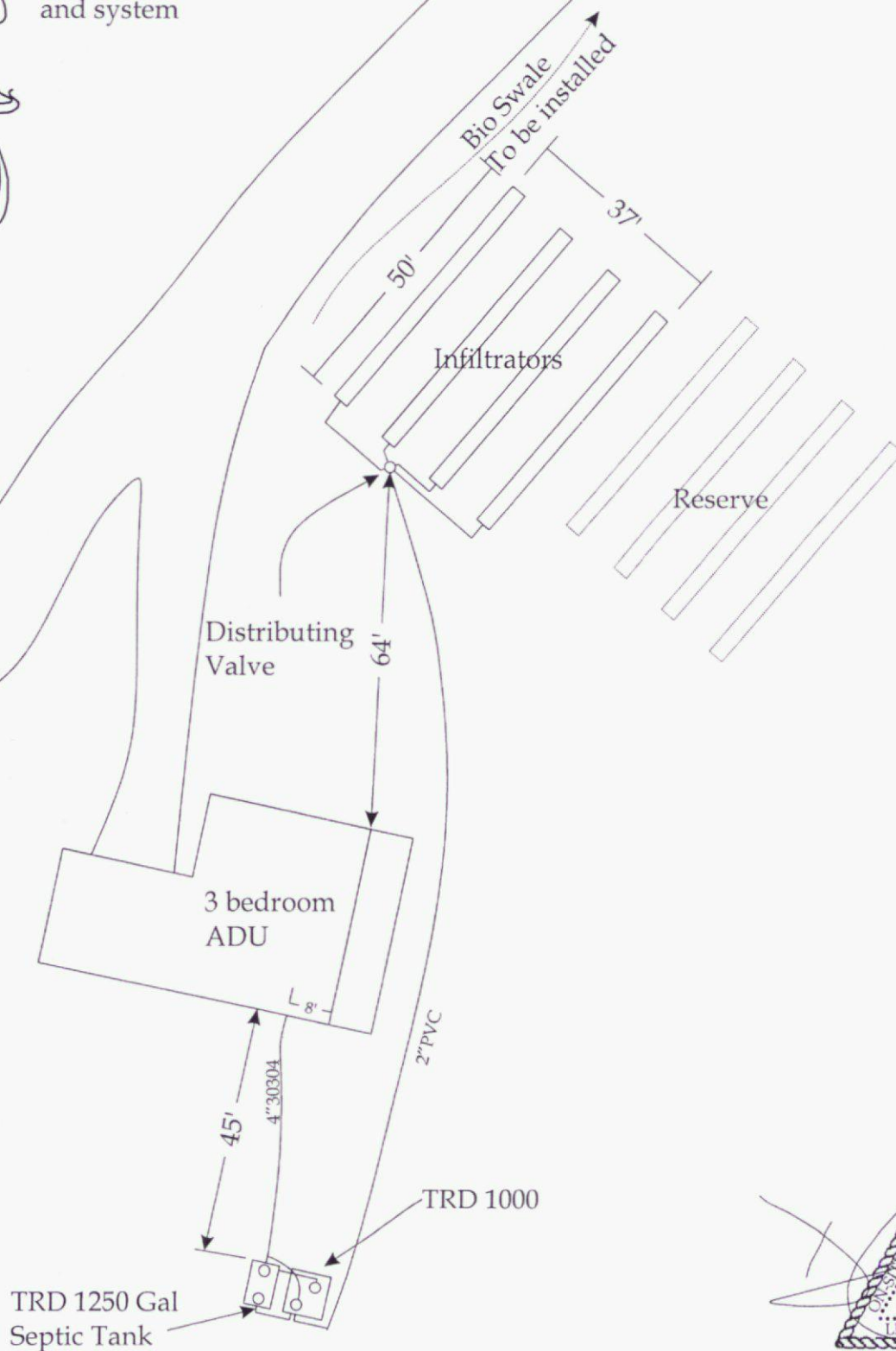
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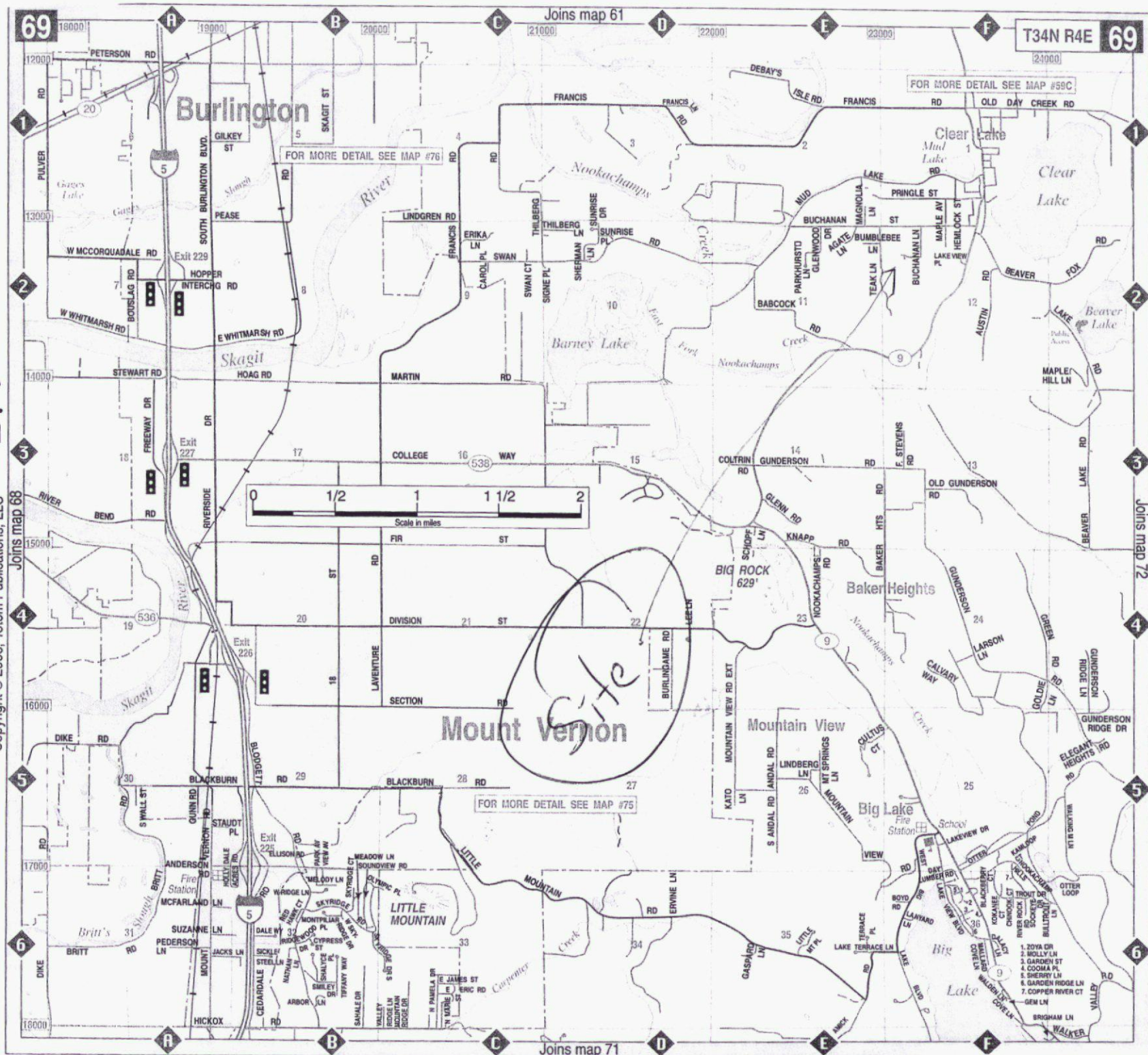
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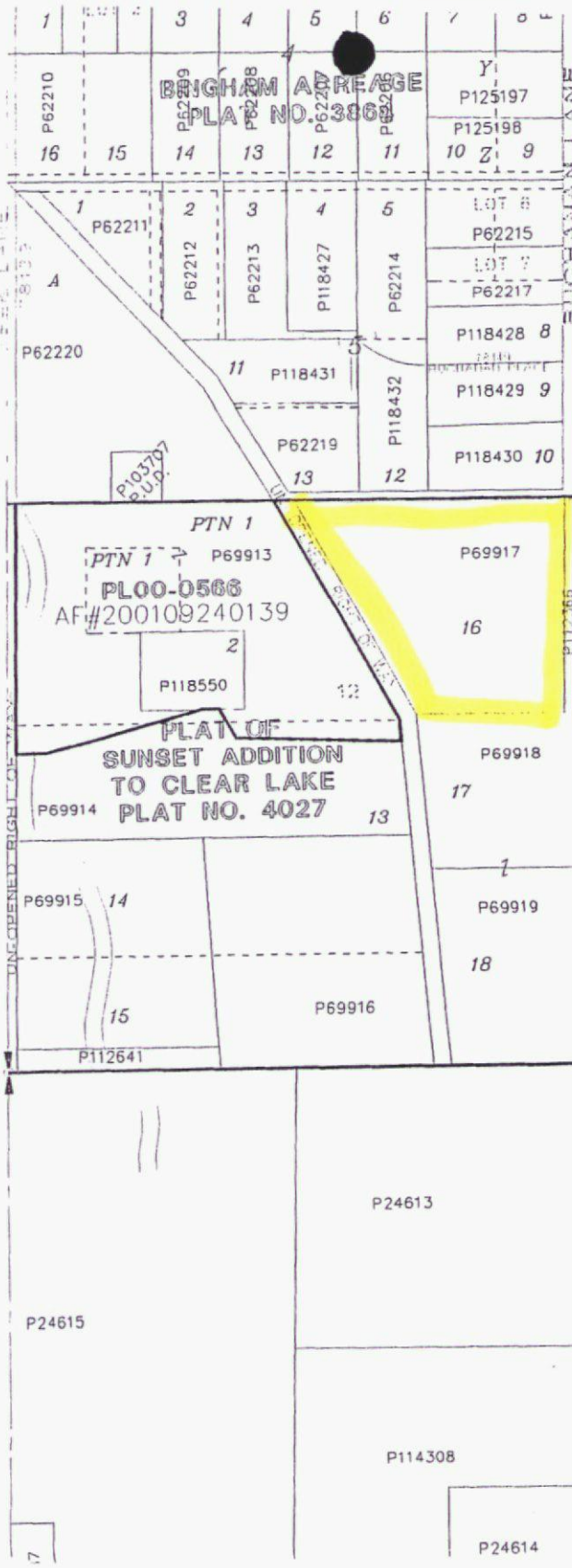


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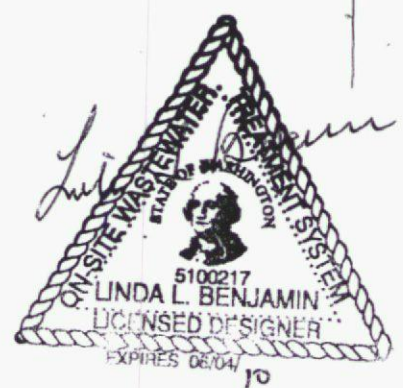
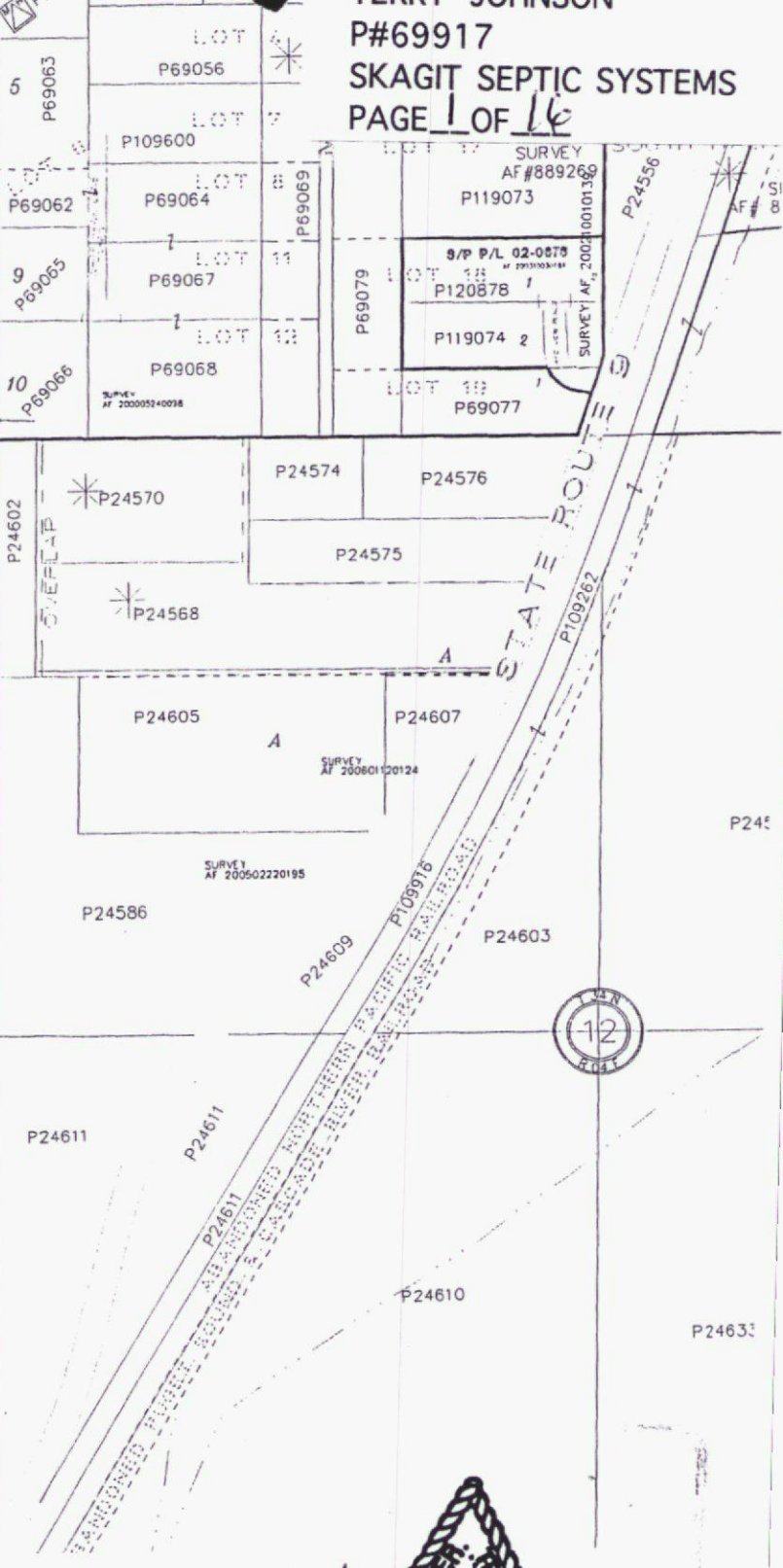


Island Skagit



Wm. SHAUGER ACRES
PLAT NO. 3007

TERRY JOHNSON
P#69917
SKAGIT SEPTIC SYSTEMS
PAGE 1 OF 16



SOILS INFORMATION SHEET

DATE: 7/23/09
TIME: 11:00 am
SCS: _____

TERRY JOHNSON
P#69917
SKAGIT SEPTIC SYSTEMS
page 2 of 14

Linda L. Benjamin
LICENSED DESIGNER
#5100217
ON-SITE SEWAGE
STATE OF WASHINGTON
SKAGIT SEPTIC SYSTEMS

SOIL LOG #1
0 to 12 in. very fine sandy loam
12 to 24 in. loam
24 to ___ in. clay
____ to ____ in. _____

SOIL LOG #2
0 to 18 in. gravelly loam
18 to ___ in. clay
____ to ____ in. _____
____ to ____ in. _____

SOIL LOG #3
0 to 18 in. gravelly loam
18 to ___ in. clay
____ to ____ in. _____
____ to ____ in. _____

SOIL LOG #4
____ to ____ in. _____
____ to ____ in. _____
____ to ____ in. _____
____ to ____ in. _____

SITE, DESIGN AND CONSTRUCTION
REQUIREMENTS NOT SPECIFICALLY
MENTIONED HERE SHALL CONFORM
TO APPLICABLE COUNTY AND STATE
STANDARDS.

WATER TABLE: 18"
SOIL TYPE: 4
APP. RATE: .6 AT 6"
TYPE SYSTEM: AT4 to
pressure DF
OWNER MAY DESIGN: YES _____ NO ☒
SEWER MAIN WITHIN 200' YES _____ NO ☒
SURFACE WATER WITHIN 200': YES _____ NO ☒
WELL WITHIN 100': YES _____ NO ☒
VEGETATION: grass
VERTICAL SEPARATION: 36" w/
pre-treatment



NOTICE TO BUILDER:

Code requires 4 inspections
during the progress of this
construction. Contact designer
concerning time and fees.

Linda L. Benjamin
 LICENSED DESIGNER
 #5100217
 ON-SITE SEWAGE
 STATE OF WASHINGTON
 SKAGIT SEPTIC SYSTEMS

TERRY JOHNSON
 P#69917
 SKAGIT SEPTIC SYSTEMS
 page 3 of 16

NOTE: There are no wells or surface water within 100'. All measurements are + or -. Tanks may be moved to suit owner/installer. Tanks to be set at or above ground level to prevent winter water table intrusion. This Drainfield to be installed in driest time of the year. No traffic or stacking of materials in drainfield area. Drainfield is dosed by TRD 1000 to a rotating valve that will dose one trench at a time.

NOTICE TO BUILDER:

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SCALE: 1"=40'

WATER: P.U.D.

rev.10/11/09 llb

area shown is portion of 5.56 acres

490'

existing 3 br.
 single family
 residence

possible location for
 proposed ADU

1250 gal.
 TRD 1000
 ATU

4" tightline
 astm 3034
 w/cleanout

1250 gal. 2-comp.
 septic tank retro
 for TRD 1000

125'

2" PVC

drive from Buchanan Lane

CURTAIN DRAIN

valve box
 w/rotator valve

2" PVC

2-4%

4-50' pressure trenches
 chambers for rock
 10' on center, 36" wide
 total depth is 6"

reserve area

90'

DESIGN
 OCT 14 2009 GG
 ISSUED

DESIGN:
 3 BR. X 120 GPD=360 GPD
 360 GPD/.6=600 SQ.FT.
 USE 200' LINEAL X 36" WIDE
 TOTAL DEPTH IS 6"

df area for
 main house

SITE, DESIGN AND CONSTRUCTION
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 TO APPLICABLE COUNTY AND STATE
 STANDARDS.

600'

DESIGN SPECIFICATIONS:

TERRY JOHNSON

P#69917

SKAGIT SEPTIC SYSTEMS

page 9 of 16

A. FLOW

$$\frac{3}{BR.} \times 120 GPD = 360 GPD$$
$$360 GPD / .6 = 600 SQ./FT.$$

USE: 200' lineal x 36" wide x 6" Deep

B. MANIFOLD

MANIFOLD LENGTH: 90' (?)

LATERAL LENGTH: 48"

HOLE SIZE: 3/16"

HOLE SPACING: 48'

$$\frac{1}{44} \text{ HOLES/LENGTH} \times \frac{4}{48} = 44 \text{ HOLES}$$
$$44 \times .59 = 25.9 GPM$$

SITE, DESIGN AND CONSTRUCTION REQUIREMENTS NOT SPECIFICALLY MENTIONED HERE SHALL CONFORM TO APPLICABLE COUNTY AND STATE STANDARDS.

C. PUMP SIZE

ELEVATION DIFFERENCE: 5'

DISTAL PRESSURE: 2'

FRICTION LOSS:

_____	FT. 1" PVC	_____
<u>192</u>	FT. 1 1/4" PVC	<u>4.09</u>
<u>220</u>	FT. 2" PVC	<u>2.63</u>
_____	FT. 3" PVC	_____

TOTAL: 13.72

all pipe is sch. 40



26 GPM @ 14' HEAD

PUMP: Hydromatic OSP33 or equiv.

DOSING: _____ GAL. PER DOSE

SET OFF TIMER AT _____ HOURS. SET ON TIMER AT _____ MINUTES.

ACTUAL TIME TO BE SET BY DOING A DRAW DOWN AT TIME OF INSTALLATION.

Dosing Control by TRD 1000.

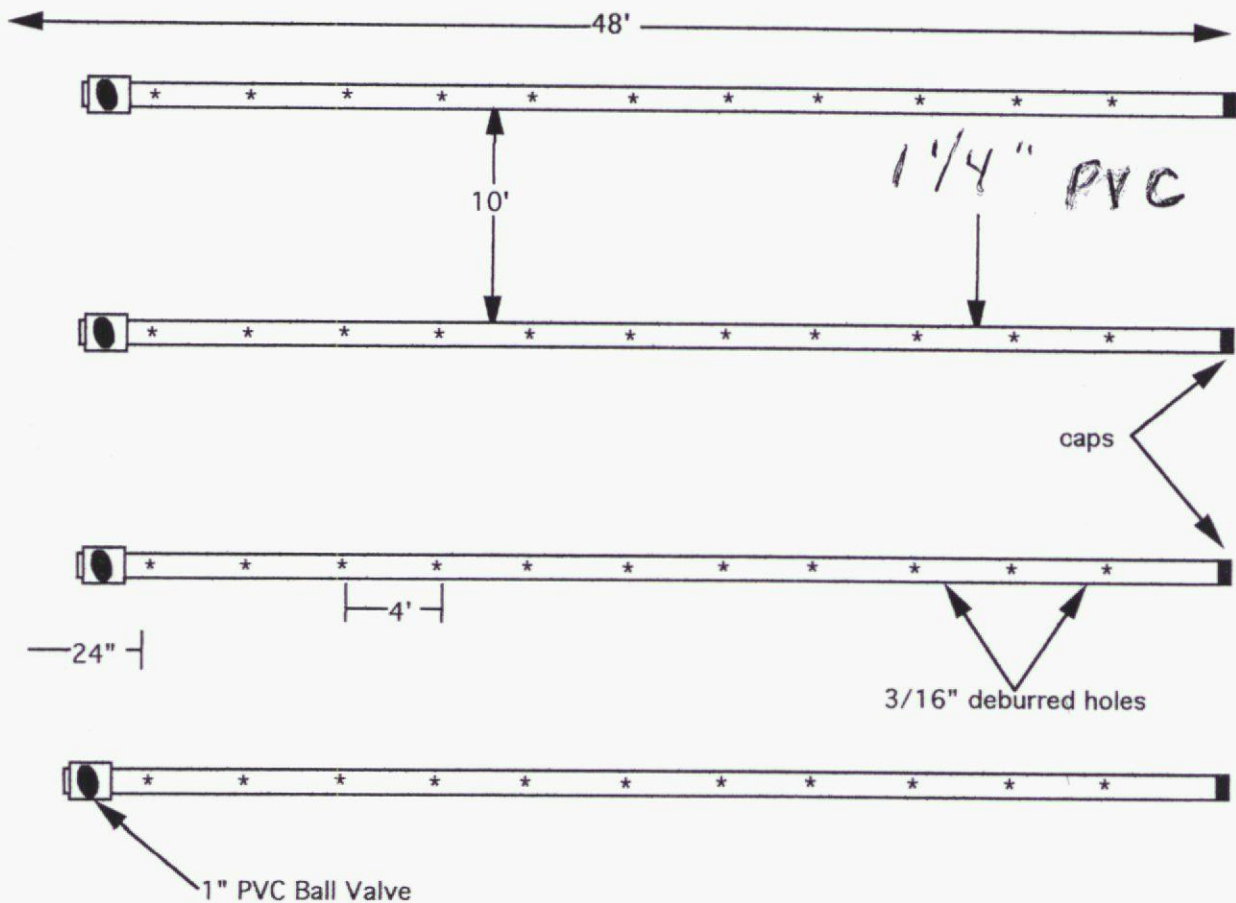
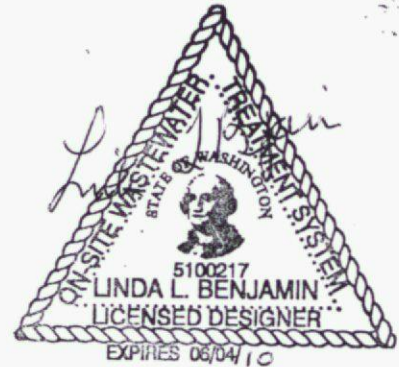
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page 10 of 16

DOSING PIPE DETAIL
4 - 50' TRENCHES
10' ON CENTER APART



NOTICE TO BUILDER:

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construction. Contact designer
concerning time and fees.

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NOTE: Ends of laterals turn up for clean-out. See next page for detailed drawing. Ball valves
will be enclosed in a valve box.

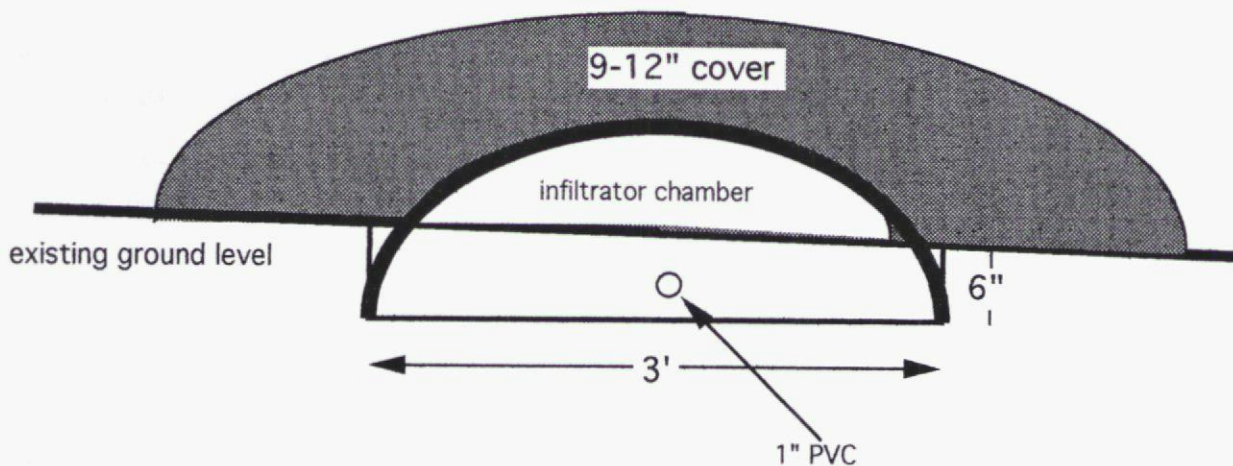
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page 11 of 16

PRESSURE TRENCH PROFILE

2-4 % SLOPE

6" DEEP



NOTE: SEE PAGE 12 FOR DETAIL ON END OF LATERALS. PIPE MAY BE LAID ON GROUND OR SUSPENDED FROM THE CHAMBER. INSPECTION PORT REQUIRED IN EACH TRENCH.

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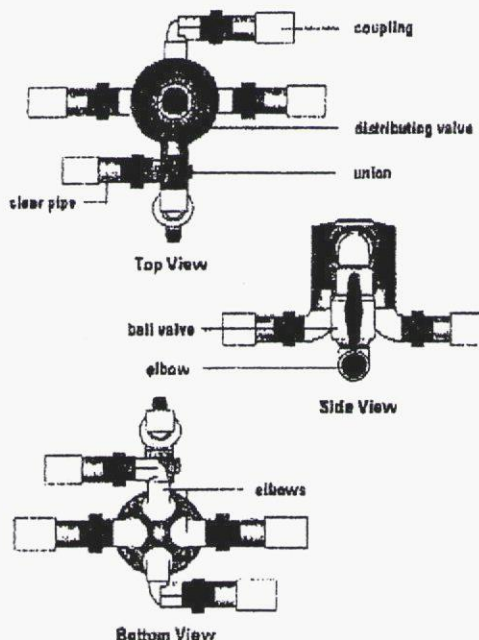
Distributing Valves

Submittal
Data Sheet

OSI
Orenco Systems
Incorporated
1-800-348-9843

Applications

Automatic Distributing Valve Assemblies are used to pressurize multiple zone distribution systems including textile filters, sand filters and drainfields.



General

Orenco's Automatic Distributing Valve Assemblies are mechanically operated and sequentially redirect the pump's flow to multiple zones or cells in a distribution field. Valve actuation is accomplished by a combination of pressure and flow. Automatic Distributing Valve Assemblies allow the use of smaller horsepower pumps on large sand filters and drainfields. For example, a large community drainfield requiring 300 gpm can use a six-line Valve Assembly to reduce the pump flow rate requirement to only 50 gpm.

Orenco only warrants Automatic Distributing Valves when used in conjunction with High-Head Effluent Pumps with Biotube® Pump Vaults to provide pressure and flow requirements, and to prevent debris from fouling valve operation. An inlet ball valve and a section of clear pipe and union for each outlet are provided for a complete assembly that is easy to maintain and monitor. Ideal valve location is at the high point in the system. Refer to Automatic Distributing Valve Assemblies (NTP-VA-1) for more information.

Standard Models

V4402A, V4403A, V4404A, V4605A, V4606A, V6402A, V6403A, V6404A, V6605A, V6606A.

Nomenclature

V ☐ ☐ ☐ A
 Indicates assembly
 Number of active outlets
 Model series:
 44 = 4400 series (2-4 outlets)
 46 = 4600 series (5-6 outlets)
 64 = 6400 series (2-4 outlets)
 66 = 6600 series (5-6 outlets)
 Distributing valve

Specifications

Materials of Construction

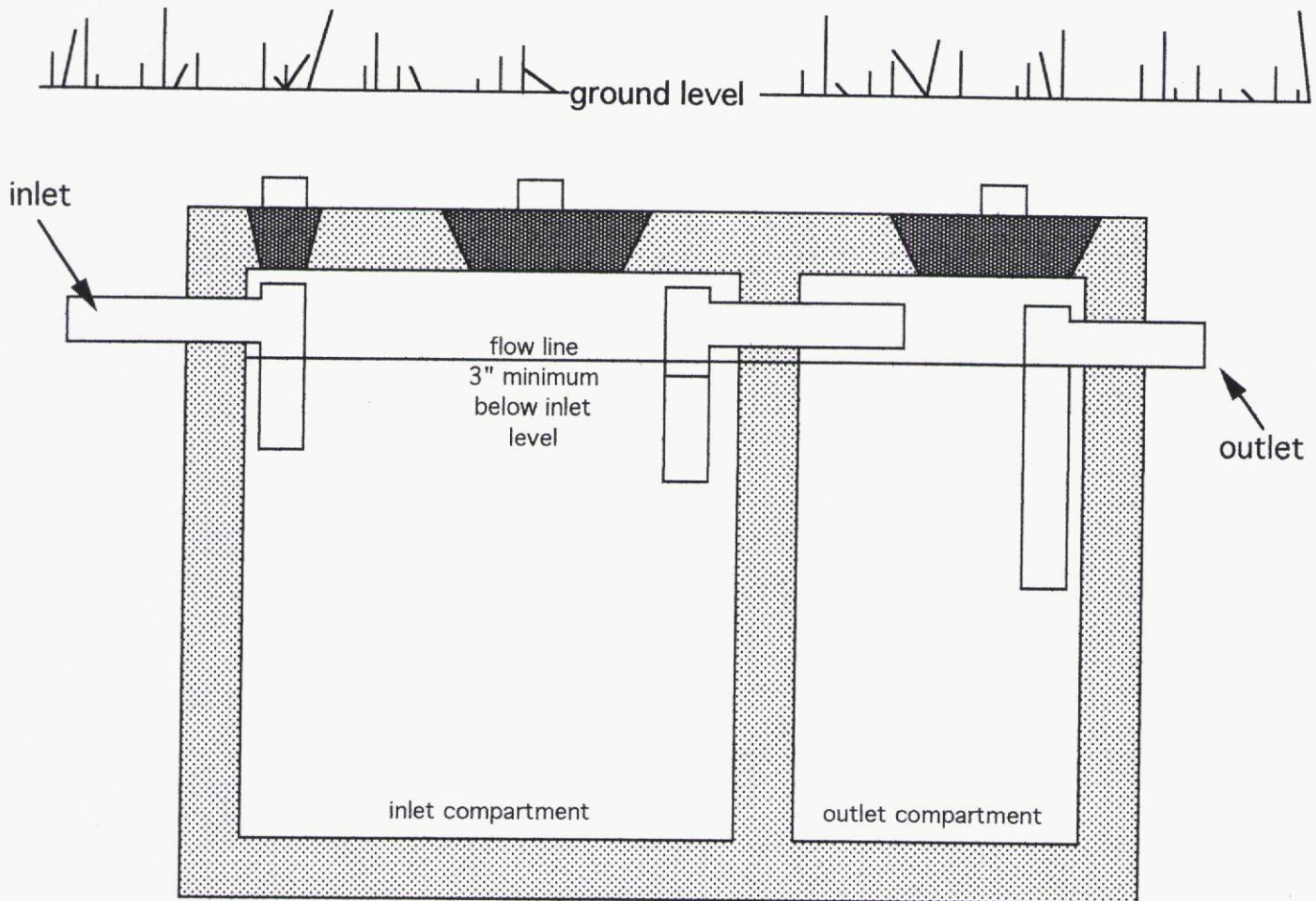
All Fittings:	Sch. 40 PVC per ASTM specification
Unions:	Sch. 80 PVC per ASTM specification
Ball Valve:	Sch. 40 PVC per ASTM specification
Clear Pipe:	Sch. 40 PVC per ASTM specification
V4XXX Distributing Valves:	High-strength noncorrosive ABS polymer and stainless steel
V6XXX Distributing Valves:	High-strength noncorrosive ABS polymer, stainless steel, and die cast metal



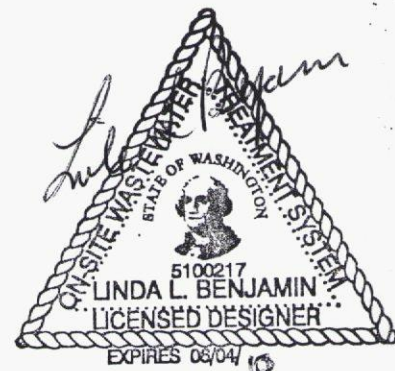
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page 5 of 16

CROSS SECTION OF A TYPICAL
1250 GALLON SEPTIC TANK



1. outlet compartment to hold between 500 and 700 gals.
2. risers required over any compartment lid over 12" below ground level.
3. tank is waterproof, reinforced concrete.
4. tank dimensions to measure 1250 gals. below flow line.
5. this tank will need a sludge return fitting to be specified by the TRD 1000 (ADVANCED TREATMENT SYSTEMS)



of the TRD 1000

- Rated #1, in Environmental Health & Safety in on-site sewage disposal on the market today
- Employs Advanced Sequence Batch Reactor (SBR) Technology, ensuring consistent batch to batch processing
- The TRD 1000 utilizes an IPC-2K Programmable Controller to control all system operations, alarming and monitoring
- The only 24 hour computerized Tele-monitoring NSF approved system of it's kind on the market today, allowing for continual monitoring of all safety factors such as pumps, compressors, air hoses, filters, levels, etc. The system will call the service or maintenance company in the event of an alarm. With this system, the home owner should not be troubled if an alarm should occur.
- Exceeds ANSI/NSF International Standard 40 for Class 1 Effluent, (BODs <2.5 mg/L and TSS<2.5 mg/L), the lowest and most consistent results of any approved system on the market today.
- Exceptional Nitrate Reduction.
- The first aerobic system to be rated in Fecal Coliform Removal.
- Competitive, affordable cost with low maintenance requirements.
- Two year full parts and labor service warranty with a continuing Service Contract between the Buyer and the Certified TRD 1000 Wastewater Treatment System Representative.
- This system is available in concrete models and comes pre-assembled with control panel mounted to the tank.

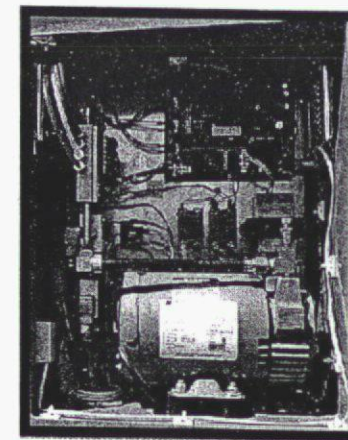
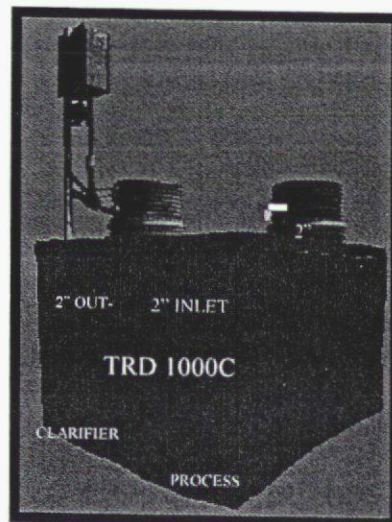
How The TRD 1000 Systems Work

The TRD system sequentially treats effluent by aeration through activated sludge in a process which includes chemical flocculation to increase processed water purity. After each batch, a portion of the activated sludge is transferred back to the sludge separator using unique air jet system.

This assures that the treated volume, and conditions in the process vessel remain constant from batch to batch. After sludge transfer is complete, the clear effluent is transferred to the clarifier tank. An ultra violet treatment unit is available to provide removal of fecal coliform during final effluent discharge.

Class 1 Effluent

The system has proven to be exceptionally reliable. In recent tests performed by the National Sanitation Foundation (NSF), the unit consistently produced effluent with less than BODs <2.5 mg/L and TSS < 2.5 mg/L. To date the only system tested through NSF for fecal coliform removal. The TRD also has enough performance to meet and exceed Washington States treatment standards 1 & 2, in all three guidelines. With these excellent results there are minimal drain field requirements. (May vary from state to state).



CONTROLLER OVERVIEW

The TRD 1000 utilizes an IPC-2K Programmable Controller to control all system operation, alarming and monitoring.

This controller has eight analog sensor inputs, eight 110V, 5A switched outputs, one 110V, 30A switched output, polite modem and telephone line interface, visual and audible alarm outputs. The processor executes internal instructions at a rate of 5 MIPS (million instructions per second).

Analog sensors are comprised of temperature compensated pressure transducers, used to determine tank levels and manifold pressure.

The software relies on a Real Time Executive (RTX) to provide environment for multiple c running tasks.

The controller rea sequencing data from the internal memory, executing each step. contains the valve codes, the dur step, and the step type.

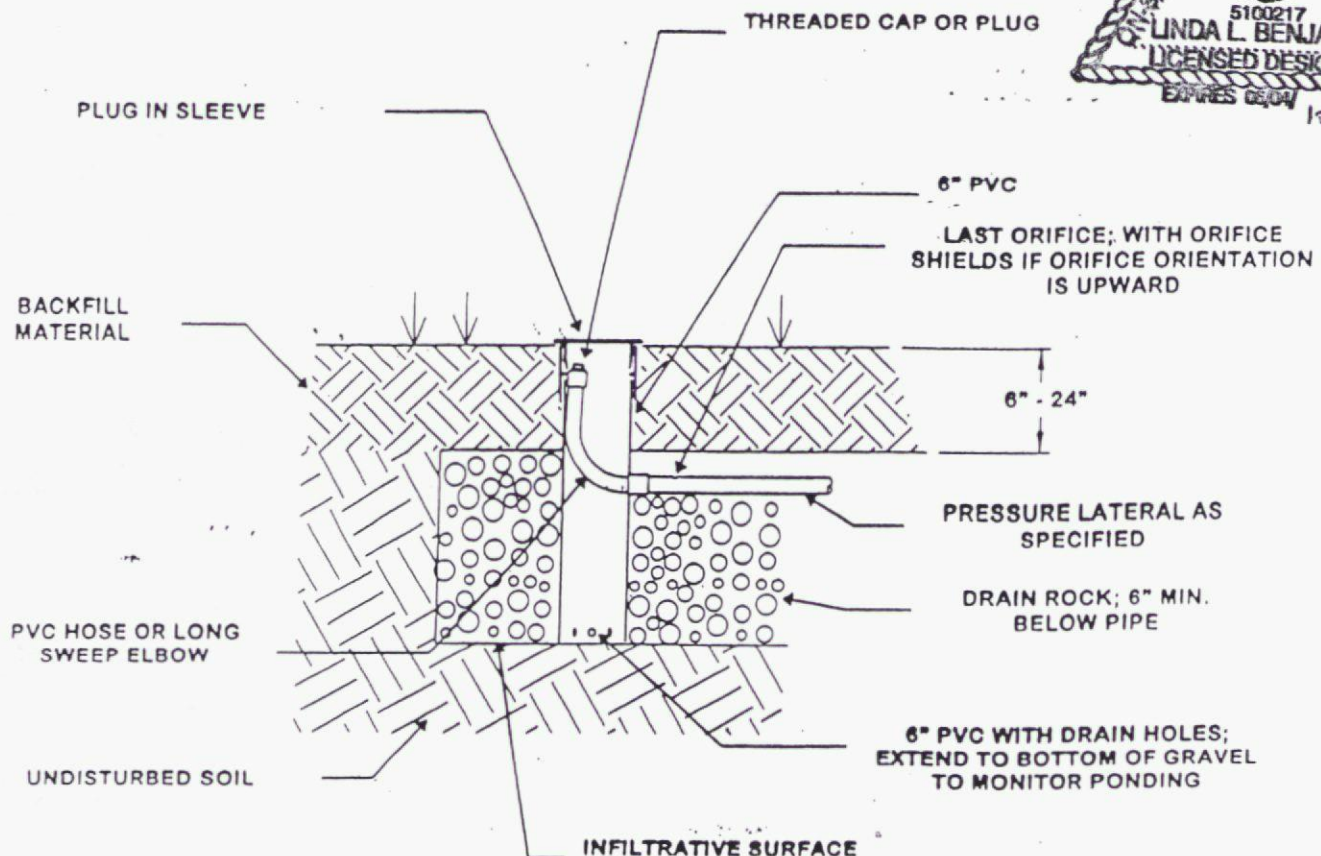
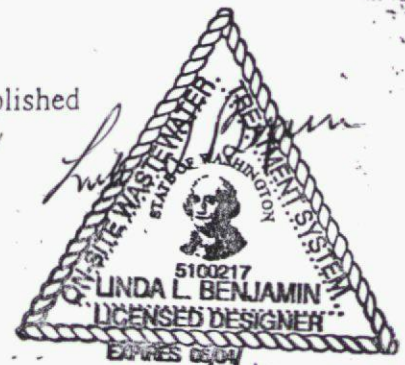
TERRY JOHNSON
P#69917
SKAGIT SEPTIC SYSTEMS
PAGE 1 OF 14

Cleanouts/Monitoring Ports:

All pressure distribution laterals must be equipped with cleanouts/monitoring ports at the distal ends (see Figure 8). These cleanouts/monitoring ports must:

- have threaded removable caps or plugs on the ends of the laterals to allow for cleaning the laterals and for monitoring the lateral pressure,
- be at least 6 inches in diameter to allow access to caps or plugs,
- be accessible from the ground surface,
- be open and slotted at the bottom, and
- be void of gravel to the infiltrative surface to allow visual monitoring of standing water in the trench or bed.

The functions of monitoring and cleanout can be separated and be accomplished in other ways. All designs shall show them in detail and explain how they accomplish the respective tasks.



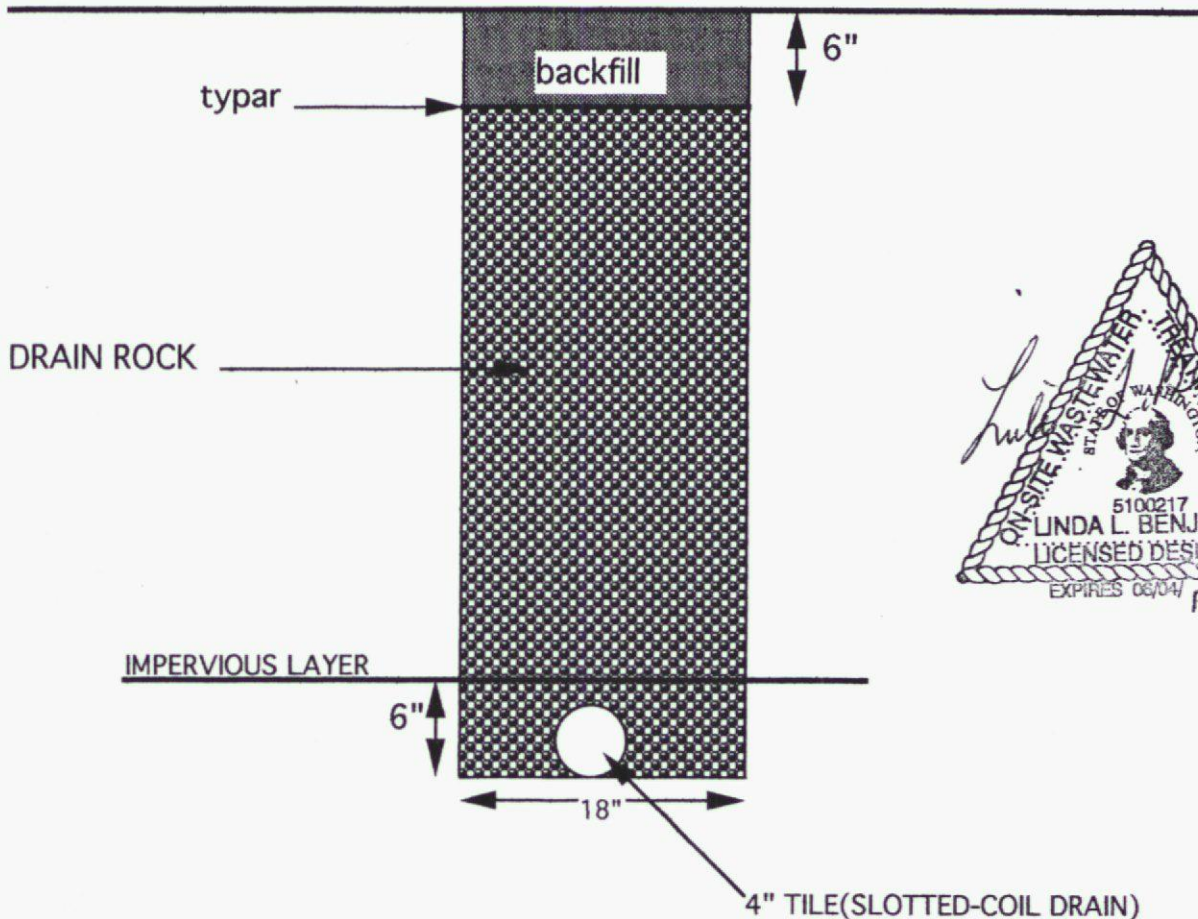
MONITORING/CLEANOUT PORT

Linda L. Benjamin
LICENSED DESIGNER
#5100217
ON-SITE SEWAGE
STATE OF WASHINGTON
SKAGIT SEPTIC SYSTEMS

TERRY JOHNSON
P#69917
SKAGIT SEPTIC SYSTEMS
page 15 of 16

TYPICAL CURTAIN DRAIN

existing ground level



SITE, DESIGN AND CONSTRUCTION REQUIREMENTS NOT SPECIFICALLY MENTIONED HERE SHALL CONFORM TO APPLICABLE COUNTY AND STATE STANDARDS.

NOTICE TO BUILDER:

Code requires 4 inspections during the progress of this construction. Contact designer concerning time and fees.



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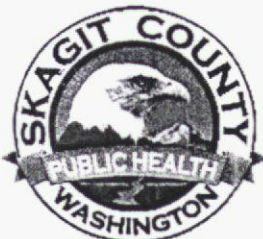
Skagit County Auditor

10/1/2009 Page

1 of

1 9:30AM

SW09-0332

Always working for
a safer and healthier
Skagit County

PETER BROWNING, DIRECTOR
 HOWARD LEIBRAND, M.D., HEALTH OFFICER
 CORINNE STORY, ENVIRONMENTAL HEALTH SUPERVISOR
 PHONE: (360) 336-9380 FAX: (360) 336-9401

OPERATION-MAINTENANCE & MONITORING REQUIREMENT
 FOR PROPRIETARY ONSITE SEWAGE SYSTEMS

This form must be recorded before permit approval
 NOTICE OF ON-SITE SEWAGE SYSTEM MAINTENANCE AGREEMENT REQUIREMENT
 (DESIGN)

GRANTOR: (NAME OF OWNER) Terry Johnson or Jennifer KlunderGRANTEE: SKAGIT COUNTYADDRESS 13240 Buchanan Lane - Mt. VernonPARCEL # 69917

LEGAL DESCRIPTION:

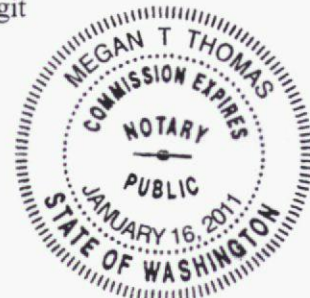
Sunset Add. to Clear Lake Lot # 16

THE FOLLOWING INFORMATION HAS BEEN DISCLOSED TO THE HOMEOWNER AS PER SKAGIT
 COUNTY CODE 12.05.120 AND WASHINGTON ADMINISTRATIVE CODE 246-272A-0015 and 0270:

1. Maintenance & Monitoring Required: The septic system to be installed on this lot will require annual or more frequent as required scheduled maintenance and monitoring.
2. Contract Required: A contract for perpetual maintenance and monitoring must be obtained before the onsite sewage disposal system is put into use.
3. Maintenance Specialist Required: The person performing this service must be certified by the Skagit County Health Department.

I have read and fully understand the conditions contained within this notification.

For witnessing or attesting a signature: State of Washington, County of Skagit

(Owner signature) Jennifer Klunder date 9-22-09Signed or attested before me on 9/22/09 by (Signature of Notary)by [Signature] date 9/22/09 My appointment expires 01/16/2011



PLANNING & DEVELOPMENT SERVICES

1800 Continental Place Mount Vernon, WA 98273

Phone: (360) 336-9410 Fax: (360) 336-9416

Inspection Request Line (360) 336-9306

Onsite Sewage Permit

Permit No: SW09-0332

Permit type: SD

Design type: AERP

Job Address: 13240 BUCHANAN LANE MV

Parcel No: P69917

Lot size: 5.56 acres

Residential(Y/N): Y

Bedrooms or occupants: 3

Total daily flow: 360

Trd Aerobic prressurized 3 bdrm ADU

Status: Issued

Applied: September 21, 2009

Issued: October 14, 2009

Expires: October 13, 2014

Applicant:

JOHNSON TERRY L

360-661-0543

KLUNDER JENNIFER

13240 BUCHANAN LN

MOUNT VERNON WA 98273

Owner:

JOHNSON TERRY L

KLUNDER JENNIFER

13240 BUCHANAN LN

MOUNT VERNON WA 98273

Contractor:

Resident owner, with permission from the Health Officer, may install conventional gravity systems only. (SCC 12.05.140)

A septic system as-built is required in order to final this permit. Any building or buliding permit connected to this septic permit will not be provided with a final inspection or occupancy until the septic as-built has been received.

Notes: _____

Department Agent: _____

Date: 10-14-2009

SW09-0332