340088000

1:00

ecker County Planning & Zoning
835 Lake Ave, P O Box 787
Detroit Lakes, MN 56502-0787
Phone (218)-846-7314; Fax (218)-846-7266

Onsite Septic System Site Evaluation/Design

1. **PROPERTY DATA** (as it appears on the tax statement) 0088
Parcel Number(s) of property system will be installed 34.026.000
(if parcel is a new split and a parcel number has not yet been issued, indicate the main parcel number from which the new parcel has been split from)
Section 14 Township 141 Range 36 Township Name Two Inlets
Lake Name Two Inlets Lake Classification RD
Legal Description: ~~West Sub Div~~ lot 3
Project Address: County Rd 50 Two Inlets Lake

2. **PROPERTY OWNER INFORMATION** (as it appears on the tax statement, purchase agreement or deed).
Owner's First Name Frank Owner's Last Name Gould
Mailing Address P.O. Box 8477 City, State, Zip Rapid City, SD 57709
Phone Number

3. **DESIGNER/INSTALLER INFORMATION**
Designer Name Lee A. Hendricks Company Name L & B Excavating Inc License # 1158
Address P.O. Box 185 Phone Number (218) 564-5731
Installer Name Same Company Name Same License #
Address Phone Number

4. **SYSTEM DESIGN INFORMATION**
Date of Site Evaluation 5/15/05

EXISTING SYSTEM STATUS – Check One
_____ No existing system-new structure
_____ Cesspool/Seepage
_____ Failing (other than cesspool)
__X__ Undersized
_____ Replacement or repair to existing

What will new system serve? Check one
_____ Dwelling
__X__ Resort/Commercial
_____ Commercial (non resort)
_____ Other – explain below

Design Flow 1700 Gallons Per Day
Number of Bedrooms 4 bedroom lodge
Garbage Disposal _____ Yes __X__ No
Grinder Pump in House ____ Yes __X__ No
Lift station in House ____ Yes __X__ No

Well Depth Shallow
Depth of other wells within 100 ft of system _____

Original Soil __X__ Compacted Soil _____
Type of Soil Observation
____ Pit ____ Probe __X__ Boring
Depth to Restricting Layer 72"
Maximum Depth of System 36"

Size of All Tanks to Be installed
_____ gal Septic Tank
1000 gal Lift Station
_____ gal Holding Tank
_____ gal Other Tanks

Type of Drainfield Medium to be used
X Chamber
____ H10 ____ EQ36
_____ Drainfield Rock
_____ Rock Depth
_____ Gravelless
_____ Experimental
_____ No Drainfield

1080 sq ft Actual (Quick4)

Type of Alarm Outside
Size of Lift Pump BN53
Size of Lift Line 2"

Type of Drainfield to be installed	Size of Drainfield sq ft to be installed
X Trench	1080² A sq ft
_____ At-grade	_____ sq ft
_____ Pressure Bed	_____ sq ft
_____ Seepage Bed	_____ sq ft
_____ Mound	_____ sq ft

SETBACKS	TANK	DRAINFIELD
Distance to Well	100	100
Distance to Building	30	100
Distance to Property Line	500	200
Distance to OHW	—	4
Distance to Pressure Line	—	5

Perc Rate 6-15 Soil Sizing Factor 1.27 *If SSF other than .83, attach Perc Test Data

Depth	Texture	Color	Structure		Depth	Texture	Color	Structure
0-6	Top Soil	10YR 3/2	Sandy		Same as	1st	Hole	
6-24	Sandy loam	10YR 6/8	Sand					
24-48	Sandy loam	10YR 7/8	Sandy					
48-72	Sandy Loam	10YR 8/6	Sand					

5. DESIGNER'S CERTIFIED STATEMENT

I, Lee A. Hendrickson certify that I have completed the preceding design work in accordance with all
(Print Name of Designer)
applicable requirements (including, but not limited to Minnesota Chapter 7080 and the Becker County Individual Sewage Treatment System Ordinance).

Lee A. Hendrickson — Signature of Designer
6/23/05 — Date

**********FOR OFFICE USE ONLY**********

Application Approved by: David A Stolle Date: 6/23/05
Amount Paid $ 100.00 Receipt Number 84818 Permit Number 3089414

CERTIFICATE OF COMPLIANCE

( ) Certificate Is Hereby Denied
(X) Certificate is Hereby Granted Based upon the Application, addendum from, plans, specifications and all other supporting data. With property maintenance, this system can be expected to function satisfactory, however, this is not a guarantee.

David A Stolle — Signature
ISTS inspector — Title
6/28/05 — Date
(Certificate of Compliance is not valid unless signed by a Registered Qualified Employee)
Date System Installed 6/24/05 Inspected by David A Stolle

BECKER COUNTY

835 LAKE AVENUE, P.O. BOX 787
DETROIT LAKES, MINNESOTA 56502-0787
(218) 846-7314

Application No.
Tax Parcel No.

SKETCH PLAN
FORM H

Please be as complete as possible. Include all of the items listed below where applicable.

GENERAL CHECKLIST

- [ ] scale
- [ ] north arrow
- [ ] lot dimensions
- [ ] structure location
- [ ] side lot setback
- [ ] road setback
- [ ] septic tank location
- [ ] drainfield location
- [ ] location of all wells within 100' of drainfield
- [ ] fill & grading limits
- [ ] vegetation alteration limits

WATER RESOURCE CHECKLIST

- [ ] location of ordinary high water level (OHWL)
- [ ] location of present water line
- [ ] setback from OHWL
- [ ] location of highest known water level
- [ ] existing local drainage
- [ ] location of wetland areas

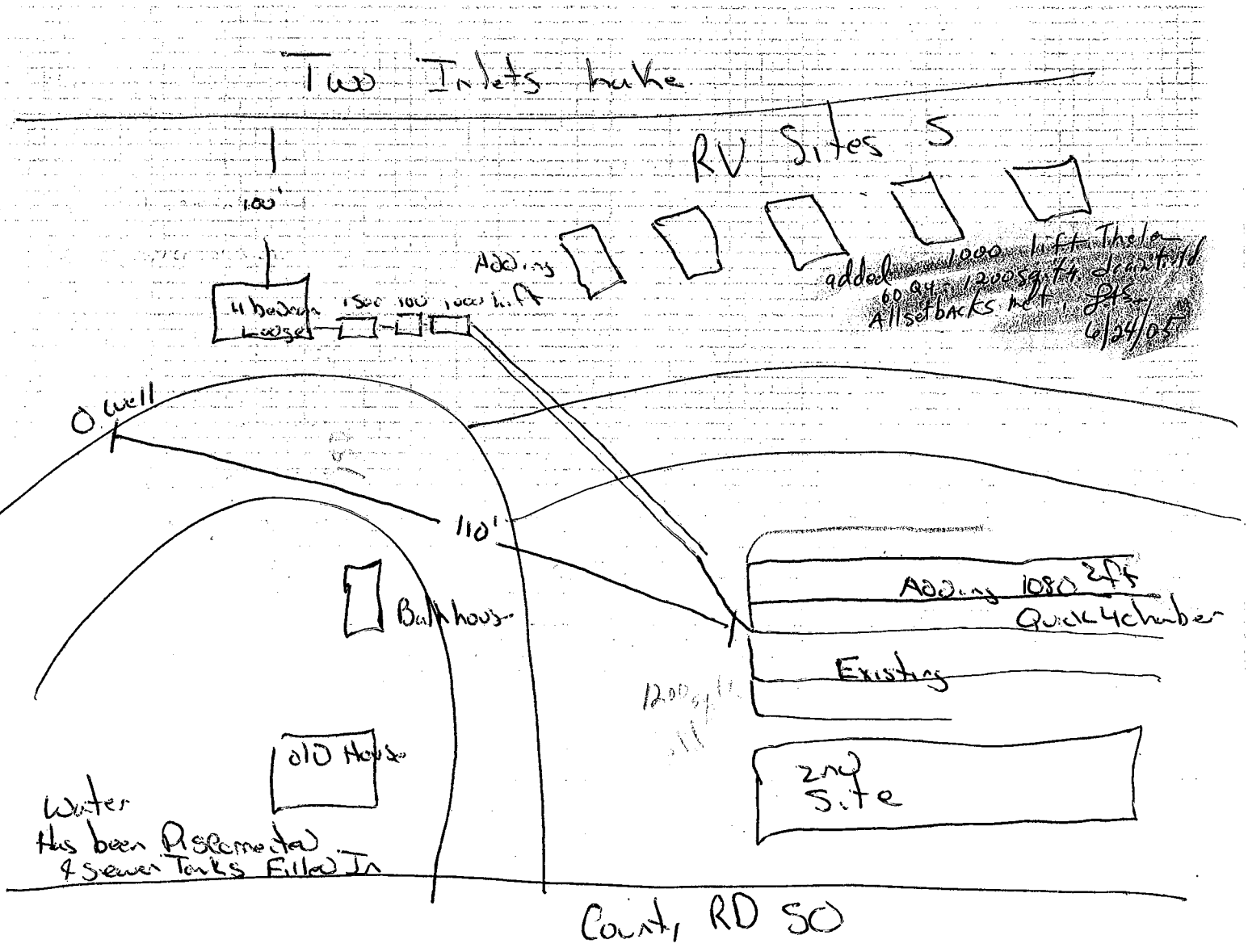
Scale of Diagram: 1 inch = _____ feet

Drawing By: _____

Date of Drawing: _____

Remarks: This is an Addition of 1000 gallon lift and 1080 sq ft of Drainfield

Signature Lee C. Kelly



COUNTY OF BECKER

Planning and Zoning

835 Lake Avenue • P.O. Box 787
Detroit Lakes, MN 56502-0787 • Fax: 218-846-7266
Phone: 218-846-7314

July 7, 2003

Frank Gould
Gould's Heart Desire LLC
P O Box 8477
Rapids City, SD 57709-8477

Dear Mr. Gould:

Our office has received final word from the State of Minnesota as far as the sizing for campgrounds. The new system recently installed on your Two Inlets Lake property is currently undersized and will have to be enlarged. Below please find the sizing requirements, what was installed and what needs to be installed to bring the system into compliance.

Tank sizing:

4 bedroom house	600 gallons per day
5 campsites	500 gallons per day
6 camping cabins	600 gallons per day
Total gallons per day	1700 gallons per day

1700 gallons per day x 0.75 + 1125 = 2400 gallon tank sizing
Current tanks 1500 gallon & 1000 gallon for a total of 2500 gallons
*No new tanks are required.

Drainfield sizing:

4 bedroom house	600 gallons per day
5 campsites	500 gallons per day
6 camping cabins	600 gallons per day
Total gallons per day	1700 gallons per day

1700 gallons x 1.27 soil sizing factor = 2159 sq ft of drainfield
Current drainfield 1080 sq ft

** Additional drainfield required to be added 1079 sq ft.

Becker County Planning and Zoning
835 Lake
PO Box 787
Detroit Lakes, MN
Phone: (218) 846-7314
Fax: (218) 846-7266

Individual Sewage Treatment System Permit Application

1. PROPERTY DATA (as it appears on tax statement)

Parcel number(s) of property system will be installed on: 34.0016.000

(If parcel is a new split and a parcel number has not yet been issued, indicate the main parcel number from which the new parcel was split from)

Legal Description and Sect - Twp - Range: 14 141 36 West Side Div Lot 3

Parcel Address: Co Rd 450 Two Inlet Park

2. PROPERTY OWNER INFORMATION (as it appears on tax statement, purchase agreement or deed)

First name Edward Last Name Bowers

Mailing Address PO Box 8477 City, State Zip Rapid City SD 57709

Phone Number

3. DESIGNER/INSTALLER INFORMATION

Company Name: Thelen Excavating License #: 534 Address: 33438 535th Ave PARK RAPIDS MN 56470

Designer Name: Leonard Thelen SR Registration #: 534 Telephone Number: 218-732-5345

PLEASE REMEMBER TO SIGN THIS APPLICATION ON THE BACK PAGE!

Will the system be installed by the designer? (circle one) (YES) NO Unknown/To be bid

COMPLETE INSTALLER INFORMATION IF INSTALLER IS KNOWN AND DIFFERENT THAN THE DESIGNER!

Company Name: Thelens Excavating License #: 534 Address: 33438 535th Ave PARK RAPID MN 5647[illegible]

Designer Name: Leonard Thelen SR Registration #: 534 Telephone Number: 218-732-5345

4. SYSTEM DESIGN INFORMATION

Existing System Status - CHECK ONE

- X No existing system - new home/structure
- ____ Cesspool/Seepage
- ____ Failing (other than cesspool/seepage pit)
- ____ Undersized (addition to drainfield/tanks needed)
- ____ Repairs needed to existing system
- ____ Replacement needed of existing system
- ____ Unknown
- ____ Other - explain below

Explanation:

____ Check box if system will be experimental

Date of Site Evaluation 6-19-03

Gallons Per Day 450

4 BR Typ I

What will new system serve? CHECK ONE

- X Dwelling
- ____ Resort/Campground ____ Commercial Units
- ____ Commercial (non-resort)
- ____ other - explain below

Check ALL tank types to be installed:

- X SepticTank/500
- X LiftStation/1000
- ____ HoldingTank
- ____ OtherTanks

Check type of drainfield medium to be used:

- X Chamber
- ____ Drainfield Rock
- ____ Gravelless
- ____ No drainfield

Check type of drainfield to be installed:

- X Trench 1080
- ____ At-grade
- ____ Pressure Bed
- ____ Seepage Bed
- ____ Mound

RECEIVED
JUN 20 2003
ENV. SERVICES

Design Flow GPD 850	Well Depth Shallow	Original Soil or Compacted Soil	Depth to Restricting Layer 6
Number of Bedrooms 4	Depth of wells of	Type of Soil Observation	Maximum Depth of System 3
Garbage Disposal YES (NO)	within 100 feet	PROBE PIT (BORING	Perc Rate 6-15
Grinder pump/lift station in house YES (NO)	system		Soil Sizing Factor 1.27

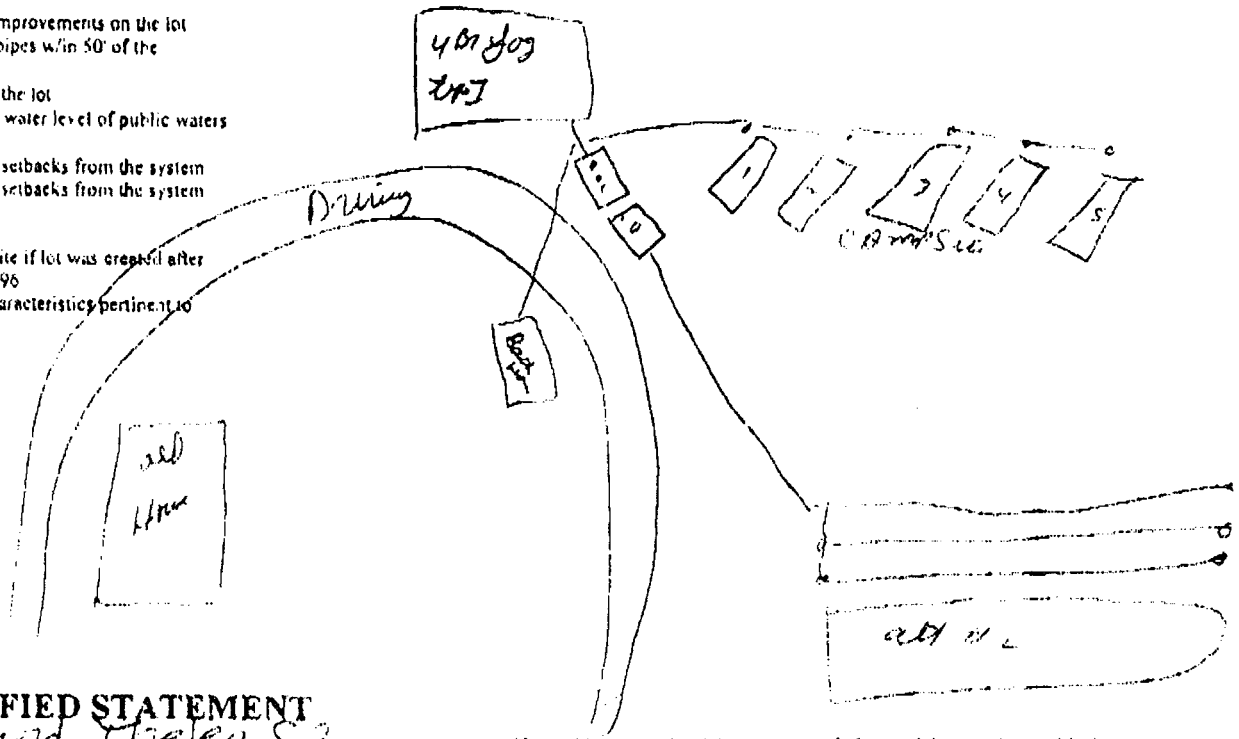
	Tank	Drainfield
Distance to well	100	100
Distance to Building	10	100
Distance to Property Line	500	200
Distance to OHW (Ordinary Highwater Mark)	80	94
Distance to Pressure Line	50	

Depth	Texture	Color	Structure	Depth	Texture	Color	Structure
6	fsand	10YR	3/2				
24	msand	10YR	4/8				
48	msand	10YR	3/8				
61	msand	10YR	5/6				

5. SITE PLAN - indicate capacity of all tanks, size of drainfield, and depth of well(s)

SHOW PROPOSED AND/OR EXISTING:

1. Water supply wells w/in 100' of the proposed ISTS
2. Buildings or improvements on the lot
3. Buried water pipes w/in 50' of the proposed ISTS
4. Easements on the lot
5. Ordinary high water level of public waters
6. Property lines
7. ALL required setbacks from the system
8. ALL required setbacks from the system
9. Site contours
10. ISTS
11. Alternative site if lot was created after January 23rd, 1996
12. Other site characteristics pertinent to system design



7. CERTIFIED STATEMENT

I, Leonard Hiebel Sr. (PRINT NAME) certify that I have completed the preceeding design work in accordance with all applicable requirements (including, but not limited to Minnesota Chapter 7080 and the Becker County Individual Sewage Treatment System Ordinance)

Leonard Hiebel (SIGNATURE) 6-15-03 (DATE)

For Office Use Only

7. SUBMITTAL INFORMATION Check all documents included in submittal

___ Design Sheets ___ Perc ___ Monitoring and Disposal Contract ___ Application Fee ___ Other (see below)

Application reviewed by: Debi Mottaz

Notes:

PUMP SELECTION PROCEDURE

1. Determine pump capacity
   Gravity distribution
   1. Minimum is 10 GPM
   2. Maximum is 45 GPM
   Pressure Distribution
2. a. Select number of perforated laterals _____
   b. Select perforation spacing = _____ ft.
   c. Subtract 2 ft from rock layer length
   _____ - 2 = _____ feet.

ROCK LAYER LENGTH

3. Determine the number of spaces between perfs:
   _____ / _____ = _____ spaces
   (Length of lateral) / (perf. spacing)
   a. _____ spaces + 1 = _____ perforations per lateral
   b. Multiply perforations per lateral by number of laterals
   to get total number of perforations:
   _____ x _____ = _____
   (perforations per lateral) x (laterals) = (perforations)
   c. _____ X _____ = _____ GPM
   (Perforations) x (gpm/perfs)

SELECTED PUMP CAPACITY 25 GPM

4. Determine head requirements
   1. Elevation difference between pump & point of discharge:
   6' feet
   2. If pumping to a pressure distribution system, add 5 feet for gravity add zero _____ feet
   3. Friction Loss
      a. Enter friction loss table with GPM and pipe diameter. Read friction loss in feet per 100 ft in table.
      F.L. = 1.50 ft/100 of pipe
      b. Determine total pipe length from pump to discharge point.
      Add 25% to pipe length for fitting loss.
      150 length x 1.25 = 187.5 feet.
      c. Calculate total friction loss by multiplying friction loss in 100 ft. of pipe by equivalent pipe length (B):
      Friction loss = 187.5 x 1.50 /100 = 2.08
   4. Total head required is the sum of the elevation difference, pressure head requirements and total friction loss:

6 (1) + 8 (2) + 3 (3c) TOTAL HEAD 9

SELECT A PUMP TO DELIVER AT LEAST 25 GPM WITH AT LEAST 9 FEET OF TOTAL HEAD
RN #53

If laterals are connected to a header pipe in a pressure system, select the minimum size lateral diameter, enter the table with perforation spacing and the number of perforations per lateral

Selected minimum size of lateral _____
For a manifold system the values will be ½ of above

Perforation discharges (GPM)

Head (feet)	Perforation diameter (inches)	
	7/32	1/4
10a	0.56	0.74
15	0.69	0.90
20b	0.80	1.04

a. Use 10 feet single across
b. Use 20 feet for anything else

FRICTION LOSS IN PLASTIC PIPE

Flow Rate GPM	1"	2"	3"
20	2.17	0.73	0.11
25	3.76	1.11	0.16
30	5.23	1.55	0.23
35	6.96	2.06	0.30
40	8.91	2.64	0.39
45	11.07	3.28	0.48
50	13.46	3.99	0.58
55		4.76	0.70
60		5.60	0.82
65		6.48	0.95
70		7.44	1.09

Max. No. of 1.4" perfs per lateral (30% var)

Perforation spacing (feet)	1"	1½"	2"
2.5 feet	14	19	23
3.0 feet	13	17	26
3.3 feet	12	16	25
4.0 feet	11	15	23
5.0 feet	10	14	22

COUNTY OF BECKER

Planning and Zoning

835 Lake Avenue • P.O. Box 787
Detroit Lakes, MN 56502-0787 • Fax: 218-846-7266
Phone: 218-846-7314

April 16, 2004

Frank Gould
Gould's Heart Desire LLC
P O Box 8477
Rapid City, SD 57709-8477

RE: property on Two Inlets Lake

Dear Mr. Gould:

Enclosed please find a copy of a letter dated 7/7/2003, which stated what needed to be done to bring the newly installed septic system into compliance.

The tanks installed (1500 & 1000) would be adequate in size for a 4 bedroom house, 5 campsites and 6 camping cabins. 1079 sq ft of drainfield would have to be added to the current drainfield (1080 sq ft). Either a new lift station would have to be installed to accommodate the flow of 2400 gallons or another septic tank would have to be installed in front of the existing tanks.

The septic system serving the existing house would have to be brought into compliance, which would probably require a whole new system. This would be determined by the contractor.

If you have further questions, please contact our office.

Sincerely,

Debi Moltzan,
Supervisor of Inspectors

Enclosure

Cc: 34.0088.000
Leonard Thelen

The septic system serving the existing house will also have to be upgraded. The above figures do not include this home.

Please make arrangements to have the new system enlarged and the existing home brought into compliance as soon as possible. The new system will not be certified until this has been completed. Failure to enlarge the new system and upgrade the existing home is a violation of the conditional use permit and could mean revocation of the conditional use permit.

If you have any questions, please contact our office.

Sincerely,

Debi Moltzan,
Supervisor of Inspectors

Cc: 34.0088.000
Leonard Thelen