



030043001

POSTED AT THE CONSTRUCTION SITE

Becker 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 Tax Parcel Number 03.0043.001 911 Address

Legal Description: Pt SW 1/4 NE 1/4; Brgat SE Cor Section 6 TWP 138N Range 40W

Lake Name none Lake Classification none Township Name Burlington

Owner's Name Randy Schultz Address 15786 4Meadow Lane

City Detroit Lakes State/Zip Mn 56501 Phone Number 846-1865

Number of Bedrooms 4 Well Casing Depth Design Flow 600 GPD Depth of other Wells within 100 ft of system none Garbage Disposal (Yes) (No) Grinder Pump/Lift Station In House (Yes) (No)

Type of Observation: Probe Pit Boring Original Soil (Yes) (No) Compacted Soil (Yes) (No) Proposed Design Type of Drainfield Depth to Restricting Layer 722" Maximum of Depth of System 48" Perc Rate Soil Sizing Factor .87

SOIL BORING LOG

Table with 4 columns: DEPTH (INCHES), TEXTURE, COLOR & MUNSELL NO., STRUCTURE. Rows include 1-7, 7-31, 31-45, 45-82.

SOIL BORING LOG

Table with 4 columns: DEPTH (INCHES), TEXTURE, COLOR & MUNSELL NO., STRUCTURE. Rows include 1-15, 15-35, 35-50, 50-82.

Attach Perc Test Information If Required

Name and Address of Designer Richard Vaneberg Detroit Lakes Phone 847-7372

MPCA Number 1910 Date of Site Evaluation 10-31-00 Signature of Designer [Signature]

Name of Installer (if different from Designer) MPCA Number

\*FOR USE BY BECKER COUNTY ENVIRONMENTAL SERVICES DEPARTMENT ONLY\*

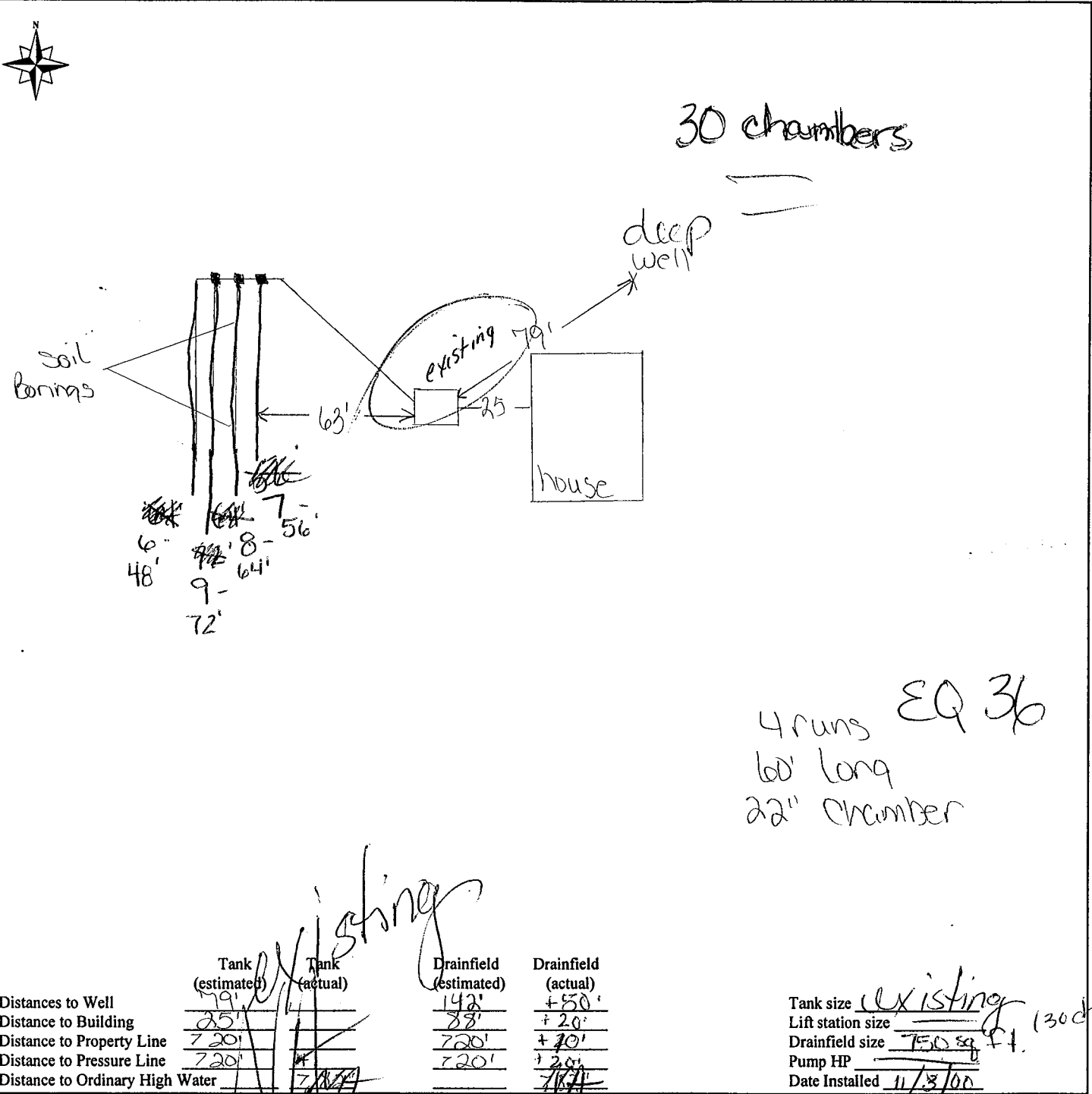
- Any changes to the permit must first be approved by Becker County Planning & Zoning. No system shall be covered up without inspection by Becker County Planning & Zoning. Inspections must be scheduled at least 24 hours prior to time requested.

Date Received 10/1/00 Application Fee 75.00 State Surcharge .50 Total 75.50

[ ] Application is hereby denied [X] Application is hereby granted to Randy Schultz to install an individual septic system according to the specifications of the site evaluation and design submitted to the Becker County Environmental Services Office. By Order of: Heidi Moltzen Signature of Becker County Qualified Employee Date Permit Issued 11/1/00 Permit Number 15563 This permit expires on 11/1/01

The site plan must be drawn to dimension or to scale:

- \*Dimensions of Lot
- \*Existing & Proposed Buildings
- \*Easements & setbacks
- \*Scale - One inch = 50 ft
- \*Well & Water Line Locations within 100 ft of System
- \*Distance from Property Lines
- \*Tank Access Route
- \*Location of any Unsuitable Soil
- \*Soil Borings & Per Test Locations
- \*Distance from OHWM
- \*Distance from buildings
- \*Alternate Drainfield Location



**\*FOR USE BY BECKER COUNTY ENVIRONMENTAL SERVICES DEPARTMENT ONLY\***

**CERTIFICATE OF COMPLIANCE**

- ( ) Certificate Is Hereby Denied
- () 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.

Nancy Young \_\_\_\_\_ Zoning Inspector \_\_\_\_\_ 11/3/00 \_\_\_\_\_  
 Signature Title Date

(Certificate of Compliance is not valid unless signed by a Registered Qualified Employee)

BECKER COUNTY PLANNING & ZONING

829 Lake Avenue, P O Box 787  
 Detroit Lakes, MN 56502-0787  
 Phone (218) 846-7314, Fax (218) 846-7266

Onsite Septic System Site Evaluation/Design

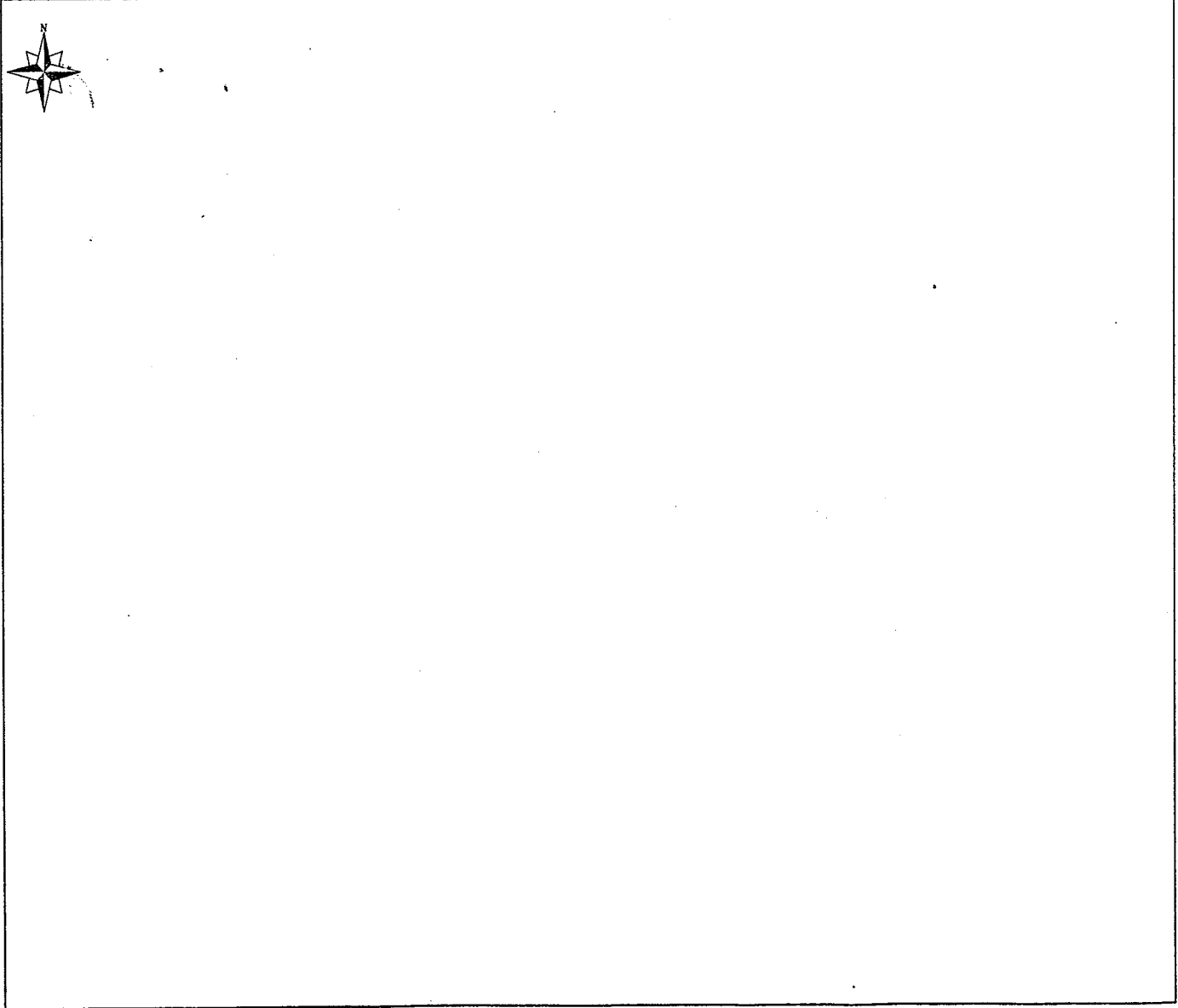
Fire Number \_\_\_\_\_  
 Tax Parcel Number R03.0043.001

Legal Description: <u>Rt. 9W 1/4 OF NE 1/4; BEL. AT GE COR TH W 1327.10' TO W. COR, N 531.28', ETAV S 110.27 AC'S</u>			
Lake/Stream Name <u>N/A</u>	Lake/Stream Class <u>---</u>	Section <u>06</u>	TWP <u>138N</u>
Range <u>40W</u>		Township Name <u>BURNINGTON</u>	
Property Owner <u>RANDY CHULTZ</u>	Address <u>P.O. BOX 1777</u>	City, State, Zip Code <u>DETROIT LAKES, MN 56502</u>	Phone Number <u>218.846.1865</u>
ISTS Designer I / Designer II <u>MICHAEL HAUGH</u>	License Number <u>770</u>	Address <u>P.O. BOX 2; DET. LAKES, MN 56502</u>	Phone Number <u>847.7391</u>

Site Plan

The site plan must be drawn to dimension or to scale:

- All Wells within 100 feet of the System
- Distance from all Wells within 100 ft of System
- Existing & Proposed Buildings
- Easements
- Distance from Water Lines within 50 ft of System (existing & proposed)
- Distance from OHW
- Distance from Property Lines
- Location of any Unsuitable Disturbed/Compacted Soil
- Soil Boring & Perc Test Locations
- Dimensions of Lot
- Tank Access Route
- Scale - One inch = 20 ft



SOIL INFORMATION

TEST HOLE #1

TEST HOLE #2

DEPTH IN INCHES	SOIL TEXTURE	MUNSELL COLOR	STRUCTURE	DEPTH IN INCHES	SOIL TEXTURE	MUNSELL COLOR	STRUCTURE
0-3	SAND (TOPSOIL)	10YR 4/4	BLOCKY PLATY PRISMATIC <del>NONE</del>	0-6	SAND (TOPSOIL)	10YR 4/4	BLOCKY PLATY PRISMATIC <del>NONE</del>
3-5 1/2	SAND	10YR 6/3	BLOCKY PLATY PRISMATIC <del>NONE</del>	6-9 1/2	SAND	10YR 6/3	BLOCKY PLATY PRISMATIC <del>NONE</del>
			BLOCKY PLATY PRISMATIC NONE				BLOCKY PLATY PRISMATIC NONE
			BLOCKY PLATY PRISMATIC NONE				BLOCKY PLATY PRISMATIC NONE
Depth to standing water	N/A - NOT OBSERVED			Depth to standing water	N/A - NOT OBSERVED		
Depth to mottling	+5 1/2"			Depth to mottling	+5 1/2"		

Describe the surface features (slope, runoff, weather conditions, vegetation type, evidence of compaction, etc.)

LAWN AREA (S.W. FACING @ 10-12% SLOPE TO WEST)

SYSTEM IS  NEW  REPAIR SYSTEM DESIGN  GRAVITY FLOW  PRESSURE DISTRIBUTION

WATER USES:

- WASHING MACHINE
- DISHWASHER
- WATER SOFTENER
- GARBAGE DISPOSAL

NUMBER OF BEDROOMS 4  
 NUMBER OF BATHROOMS 2  
 TOTAL SQ. FT OF STRUCTURE 2500  
 TANK SIZE 1000

DEPTH OF SYSTEM 16"

SYSTEM DESIGN FLOW 500 GPD

SOIL SIZING FACTOR .83

PUMP SIZE N/A

TYPE OF RESIDENCE

- TYPE I  TYPE II
- TYPE III  TYPE IV

LIFT STATION SIZE N/A  
 SOIL TREATMENT  
 AREA SIZE 540 SQ FT  
 DOSE VOLUME N/A

LENGTH OF LIFT LINE N/A

TOTAL DYNAMIC HEAD N/A

WELL INFORMATION-Property's Well DEPTH OF WELL +5 1/2'

TYPE OF WELL DRILLED-DEEP

Neighboring wells (within 100 ft of system) Depth of Wells NONE WITHIN 100'

Type of Wells NONE OTHER

Name of Designer I MICHAEL HAUNT  
 Designer II

Date of Site Evaluation 16 JULY 96

MPCA Number 7H-770

Phone 218.847.7391

I certify that the site evaluation has been completed in accordance with all provisions of ISTS Minnesota Rules Chapter 7080.

Signature of Evaluator [Signature] Date 16 JULY 96

For Office Use Only

Date Site Evaluation / Design received 7/16/96 Received by Hebi Molltz  
 Date Site Evaluation approved 7/16/96 Approved by Hebi Molltz

# INDIVIDUAL SEWAGE TREATMENT SYSTEM WORKSHEET

## FLOW

A. Estimated 600 gpd  
 measured \_\_\_\_\_ x 1.5 = \_\_\_\_\_ gpd

## SEPTIC TANK VOLUME

B. 1000 gallons

## SOILS (Site evaluation data)

C. Depth to restricting layer = +52' feet  
 D. Maximum depth of system C - 3 ft = 3'-10" feet  
 E. Texture SAND Percolation rate 1.11 MPI  
 F. SSF 87 sq ft/gpd  
 G. Slope 10-12%

Estimated Sewage Flows in Gallons per day (gpd)				
Number of Bedrooms	Type I	Type II	Type III	Type IV
2	300	225	180	60% of the values in Type I, II or III columns
3	450	300	218	
4	600	375	256	
5	750	450	294	
6	900	525	332	
7	1050	600	370	
8	1200	675	408	

## Septic Tank Capacities (in gallons)

Number of Bedrooms	Minimum Liquid Capacity	Liquid capacity with garbage disposal
2 or less	750	1125
3 or 4	1000	1500
5 or 6	1500	2250
7, 8 or 9	2000	3000

## TRENCH BOTTOM AREA

H. For trenches with 6 inches of rock below the pipe:  
 $A \times F = \_\_\_ \times \_\_\_ = \_\_\_ \text{ sq ft of bottom area}$   
 I. For trenches with 12 inches of rock below the pipe:  
 $A \times F \times 0.8 = \_\_\_ \times \_\_\_ \times 0.8 = \_\_\_ \text{ sq ft of bottom area}$   
 J. For trenches with 18 inches of rock below the pipe:  
 $A \times F \times 0.66 = \_\_\_ \times \_\_\_ \times 0.66 = \_\_\_ \text{ sq ft of bottom area}$   
 K. For trenches with 24 inches of rock below the pipe:  
 $A \times F \times 0.6 = \_\_\_ \times \_\_\_ \times 0.6 = \_\_\_ \text{ sq ft of bottom area}$

## BED BOTTOM AREA

L. For seepage beds with 6 or 12 inches of rock below the pipe;  
 $1.5 \times A \times F = 1.5 \times \_\_\_ \times \_\_\_ = \_\_\_ \text{ sq ft of bottom area}$

## ROCK VOLUME IN CU FT

M. Rock depth below distribution pipe plus 0.5 foot times bottom area:  
 $M = \text{Rock depth} + 6 \text{ inches} \times \text{Area (H,I,J,L,K)}$   
 $(\_\_\_ + 0.5 \text{ ft}) \times \_\_\_ = \_\_\_ \text{ cu ft}$

## ROCK VOLUME IN CU YDS

N. Volume in cu ft divided by 27  
 $M \div 27 = \text{cu yds} \_\_\_ \div 27 = \_\_\_ \text{ cu yds}$

## ROCK WEIGHT

O. Cubic yards times 1.4 = tons  
 $N \times 1.4 = \text{tons} \_\_\_ \times 1.4 = \_\_\_ \text{ tons}$

## SYSTEM LENGTH

P. Select trench width = \_\_\_\_\_ ft  
 Q. Divide bottom area by trench width: (H, I, J, or K) + P = lineal feet  
 $\_\_\_ \div \_\_\_ = \_\_\_ \text{ lineal feet}$

Q1. Gravelless Design

$A \times F \div (3 \text{ for } 10" \text{ pipe, } 2 \text{ for } 8" \text{ pipe, width of the Chamber})$   
 $600 \times 87 \div 3 = 1106 \text{ feet}$   
APPROX 180 L.F.

## LAWN AREA

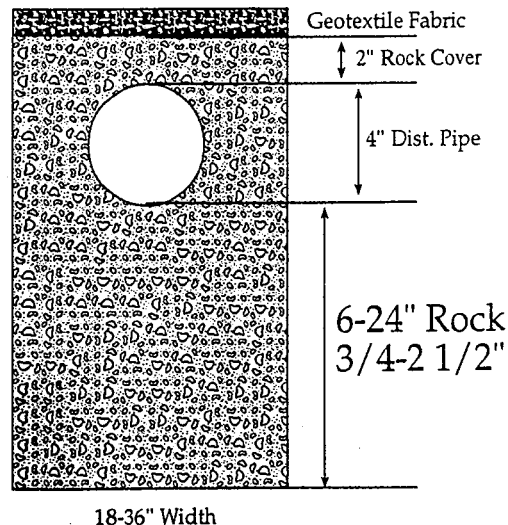
R. Select trench spacing, center to center = 6 feet  
 S. Multiply trench spacing by lineal feet R x Q = sq ft of lawn area  
 $6 \times 180 = 1080 \text{ sq ft}$

## Soil Characteristics and Required Areas for Sewage Treatment

Percolation Rate in Minutes per Inch (MPI)	Soil Texture	Square feet per gallon per day
Faster than 0.1 *	Coarse Sand	-----
0.1 to 5	Sand	0.83
0.1 to 5	Fine Sand **	1.67
6 to 15	Sandy Loam	1.27
16 to 30	Loam	1.67
31 to 45	Silt Loam	2.00
46 to 60	Clay Loam	2.20
Slower than 60***	Clay	-----

- \* Soil too coarse for sewage treatment. Use systems for rapidly permeable soils.
- \*\* Soil having 50% or more of fine sand plus very fine sand.
- \*\*\* Soil with too high a percentage of clay for installation of an inground standard system.

**6 inches = 0% Reduction\***  
**12 inches = 20% Reduction**  
**18 inches = 34% Reduction**  
**24 inches = 40% Reduction**  
 \* sizing for gravelless trench



If the site evaluation determines a mound system, please attach the mound design worksheets.

**PERCOLATION TEST SHEET**

Test hole location E. TRAINFIELD Hole # 1 Date test hole was prepared: 16 July 90  
 Diameter of hole: 4 inches  
 Depth of hole bottom: 10 inches  
 Soil Data from test hole:

depth, inches: 0-7  
 soil texture: SAND-TOPSOIL  
 soil color: BROWN  
YELLOWISH BROWN

Method of scratching sidewall: N/A-SAND Depth of pea size gravel in bottom of hole: 2 inches  
 Date and hour of initial water filling: 7:00 7/16 Depth of initial water filling: 10" above hole bottom  
 Method used to maintain 12" of water depth in hole for 4 hours: N/A-SAND  
 Percolation test conducted by: MICHAEL + PAUL Percolation test started at: 7:09  
 Maximum water depth above hole bottom during test: 10 inches

TIME	INTERVAL (MINUTES)	WATER DEPTH (fraction)	WATER DROP (decimal)	PERC RATE CALCULATION
7:09	START 10	9 1/4"	9.25	10 $\frac{9.25}{10}$ = 0.925 PERC
7:19	REFILL 10	9 3/16"	9.19	10 $\frac{9.19}{10}$ = 0.919 PERC
7:29	REFILL 10	9 7/16"	9.19	10 $\frac{9.19}{10}$ = 0.919 PERC
7:39	REFILL 10	9 7/16"	9.19	10 $\frac{9.19}{10}$ = 0.919 PERC
	REFILL			
	REFILL			
	REFILL			
	REFILL			
	REFILL			
	REFILL			
	REFILL			

CONVERSIONS  
 1/16 = .06  
 1/8 = .13  
 3/16 = .19  
 1/4 = .25  
 5/16 = .31  
 3/8 = .38  
 7/16 = .44  
 1/2 = .5  
 9/16 = .56  
 5/8 = .63  
 11/16 = .69  
 3/4 = .75  
 13/16 = .81  
 7/8 = .88  
 15/16 = .94

**Ten Percent Calculation \***

**A, B, C**  
 Largest # of ABC = 1.09  
 Smallest # of ABC = 0.925  
 Average # of ABC = 1.0

**C, D, E**  
 Largest # of CDE = 0.919  
 Smallest # of CDE = 0.919  
 Average # of CDE = 0.919

**F, G, H**  
 Largest # of FGH = 0.919  
 Smallest # of FGH = 0.919  
 Average # of FGH = 0.919

**B, C, D**  
 Largest # of BCD = 0.919  
 Smallest # of BCD = 0.919  
 Average # of BCD = 0.919

**D, E, F**  
 Largest # of DEF = 0.919  
 Smallest # of DEF = 0.919  
 Average # of DEF = 0.919

**F, G, H**  
 Largest # of FGH = 0.919  
 Smallest # of FGH = 0.919  
 Average # of FGH = 0.919

PERC. = 1.09

**PERCOLATION TEST SHEET**

Test hole location W. TRAINFIELD Hole # 2 Date test hole was prepared: 16 July 90  
 Diameter of hole: 4 inches  
 Depth of hole bottom: 10 inches  
 Soil Data from test hole:

depth, inches: 0-6  
 soil texture: SAND-TOPSOIL  
 soil color: BROWN  
YELLOWISH BROWN

Method of scratching sidewall: N/A-SAND Depth of pea size gravel in bottom of hole: 2 inches  
 Date and hour of initial water filling: 7:00 7/16 Depth of initial water filling: 2 above hole bottom  
 Method used to maintain 12" of water depth in hole for 4 hours: N/A-SAND  
 Percolation test conducted by: MICHAEL + PAUL Percolation test started at: 7:06  
 Maximum water depth above hole bottom during test: 10 inches

TIME	INTERVAL (MINUTES)	WATER DEPTH (fraction)	WATER DROP (decimal)	PERC RATE CALCULATION
7:06	START 10	9"	9.00	10 $\frac{9.00}{10}$ = 0.90 PERC
7:16	REFILL 10	8 5/16"	8.94	10 $\frac{8.94}{10}$ = 0.894 PERC
7:26	REFILL 10	9"	9.00	10 $\frac{9.00}{10}$ = 0.90 PERC
7:36	REFILL 10	9"	9.00	10 $\frac{9.00}{10}$ = 0.90 PERC
	REFILL			
	REFILL			
	REFILL			
	REFILL			
	REFILL			
	REFILL			

CONVERSIONS  
 1/16 = .06  
 1/8 = .13  
 3/16 = .19  
 1/4 = .25  
 5/16 = .31  
 3/8 = .38  
 7/16 = .44  
 1/2 = .5  
 9/16 = .56  
 5/8 = .63  
 11/16 = .69  
 3/4 = .75  
 13/16 = .81  
 7/8 = .88  
 15/16 = .94

**Ten Percent Calculation \***

**A, B, C**  
 Largest # of ABC = 1.11  
 Smallest # of ABC = 0.9  
 Average # of ABC = 1.0

**C, D, E**  
 Largest # of CDE = 0.9  
 Smallest # of CDE = 0.9  
 Average # of CDE = 0.9

**F, G, H**  
 Largest # of FGH = 0.9  
 Smallest # of FGH = 0.9  
 Average # of FGH = 0.9

**B, C, D**  
 Largest # of BCD = 1.11  
 Smallest # of BCD = 0.9  
 Average # of BCD = 1.0

**D, E, F**  
 Largest # of DEF = 0.9  
 Smallest # of DEF = 0.9  
 Average # of DEF = 0.9

**F, G, H**  
 Largest # of FGH = 0.9  
 Smallest # of FGH = 0.9  
 Average # of FGH = 0.9

PERC. = 1.11



Site Plan as approved on Site Evaluation.

site plan attached

For Office Use Only

Application Fee 245<sup>00</sup> State Surcharge .50 Total 245<sup>50</sup>

Application is hereby denied

Application is hereby granted to R. Schultz to install an individual septic system according to the specifications of the site evaluation and design submitted to the Becker County Environmental Services Office. By Order of:

Hebi Moltze  
Signature of Becker County Qualified Employee

7/10/96  
Date

This permit expires on 2/16/97



# APPLICATION FOR SEWAGE SYSTEM CERTIFICATE OF COMPLIANCE With The Becker County Zoning Ordinance

Application Number <b>10109</b>
Tax Parcel Number <b>03-0043-001</b>
Fire Number of Project Location

### A. GENERAL INFORMATION

1. Applicant's Name (Last, First, M.I.) <b>Schultz Randy</b>		2. Authorized Agent (if applicable)	
3. Mailing Address (Street, RFD, Box Number, City, State, Zip Code) <b>PO Box 1777 Detroit Lakes MN 56502</b>			
4. Day Phone	5. Evening Phone <b>846-1865</b>	6. Section <b>6</b>	7. Township <b>Burlington</b>

### B. PROPERTY DESCRIPTION

1. Lot(s), Block, Subdivision Name  
**Pt SW1/4 NE1/4 Beg at SE Cor Th W 1327.10' to W Cor N**

<p><b>SEWAGE SYSTEM DATA</b></p> <p>Anticipated Use</p> <p>a. <input checked="" type="checkbox"/> Single Family</p> <p>b. <input type="checkbox"/> Multiple Family</p> <p>c. <input type="checkbox"/> Commercial</p> <p>d. <input type="checkbox"/> Other (specify)</p> <p>Type of Installation</p> <p>a. <input type="checkbox"/> Septic Tank Only</p> <p>b. <input type="checkbox"/> Drainfield Only</p> <p>c. <input checked="" type="checkbox"/> Septic Tank &amp; Drainfield</p> <p>d. <input type="checkbox"/> Holding Tank</p> <p>e. <input type="checkbox"/> Septic Tank/Drainfield Lift Station</p> <p>Type of Drainfield</p> <p>a. <input checked="" type="checkbox"/> Standard System</p> <p>b. <input type="checkbox"/> Mound (pressure distribution)</p> <p>Well Data</p> <p>a. Depth <b>+50</b></p> <p>b. Diameter _____</p> <p>Type of Well</p> <p>a. <input checked="" type="checkbox"/> Drilled</p> <p>b. <input type="checkbox"/> Sand Point</p>	<div style="text-align: center;"> <p><b>1 Inch Equals _____</b></p> <p><b>DESIGN</b></p> <p style="text-align: right;">Installed by Hugh Landscaping 7/19/96</p> </div> <p style="text-align: center; font-size: small;">Show Distance Between Sewage System And Buildings, Property Lines, Lake, Road And All Wells Within 125 Feet.</p>
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	Tank	Drainfield		Tank	Drainfield
Distances to Well:	= <u>75'</u>	= <u>175'</u>	Distance to Pressure Line:	= <u>+60'</u>	= <u>+60'</u>
Distance to Building:	= <u>25'</u>	= <u>125'</u>	Tank Capacity (gal. & Area of Drainfield (ft <sup>2</sup> ))	= <u>1000</u>	= <u>540</u>
Distance to Property Line:	= <u>120'</u>	= <u>120'</u>	Distance to Ordinary High Water Level:	= <u>NA</u>	= <u>NA</u>
Drainfield separation from Highest Known Ground Water Level, Impervious Lens or Soil Mottling:			=	= <u>+3FT</u>	

I hereby certify with my signature that all data on my application forms, plans and specifications are true and correct:

*Hugh Landscaping, Inc.*  
Signature of Applicant Date

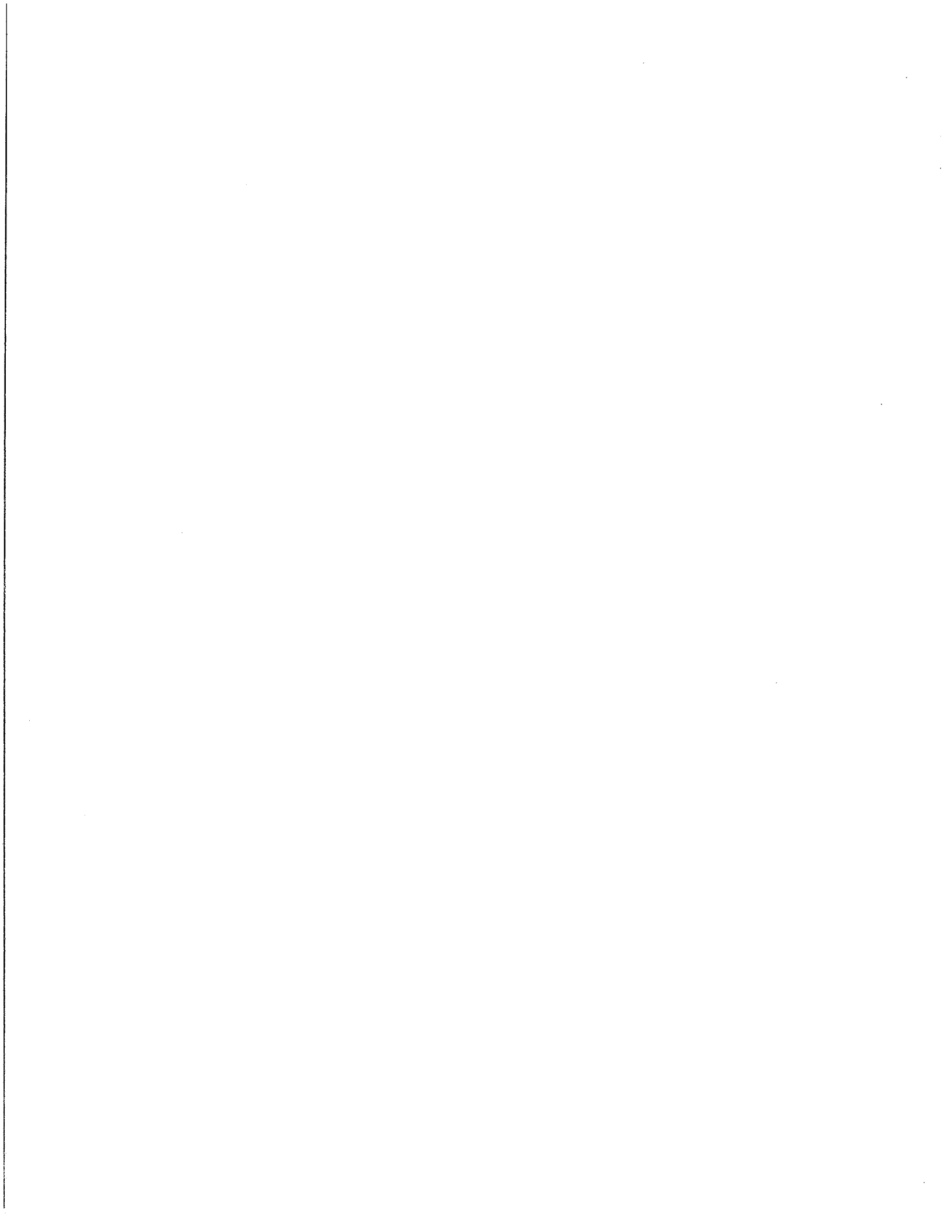
### TO BE COMPLETED BY PLANNING AND ZONING

CERTIFICATE IS HEREBY DENIED: (See back For Reasons)

CERTIFICATE IS HEREBY GRANTED: Based upon the application, addendum from, plans, specifications and all other supporting data. With proper maintenance this system can be expected to function satisfactory, however this is not a guarantee.

**BECKER COUNTY PLANNING AND ZONING**

*Hebi Moltzen*  
Signature  
*Inspector*  
Title Date  
**7/24/96**



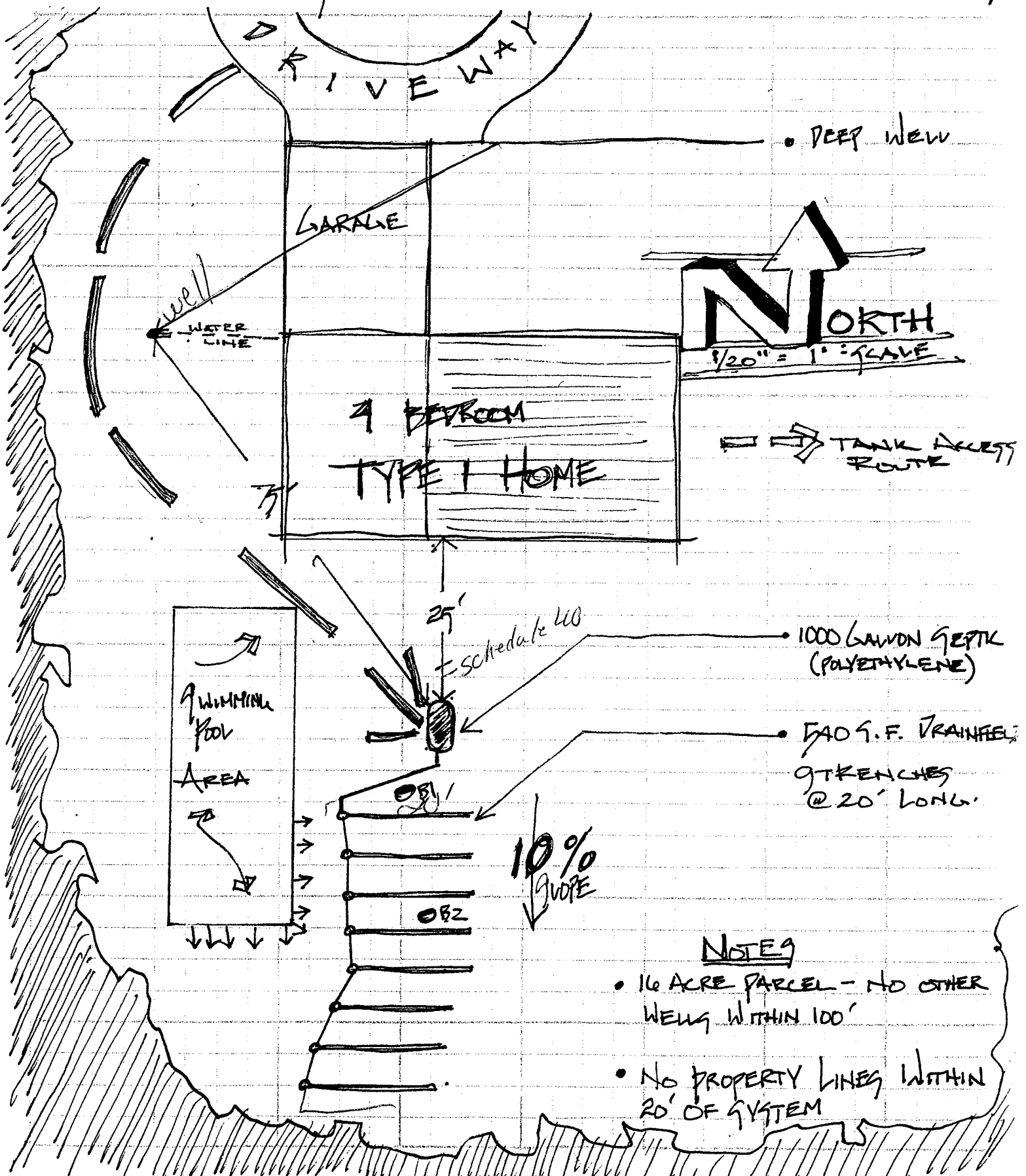


PROJECT

RANDY SCHULTZ

DATE

16 Jun '96



• DEEP WELL

**N** NORTH  
3/20" = 1' SCALE

TANK ACCESS ROUTE

• 1000 GARDON GEOTEK (POLYETHYLENE)

• 540 S.F. DRAINFIELD  
9 TRENCHES @ 20' LONG.

10% SLOPE

NOTES

- 16 ACRE PARCEL - NO OTHER WELLS WITHIN 100'
- NO PROPERTY LINES WITHIN 20' OF SYSTEM



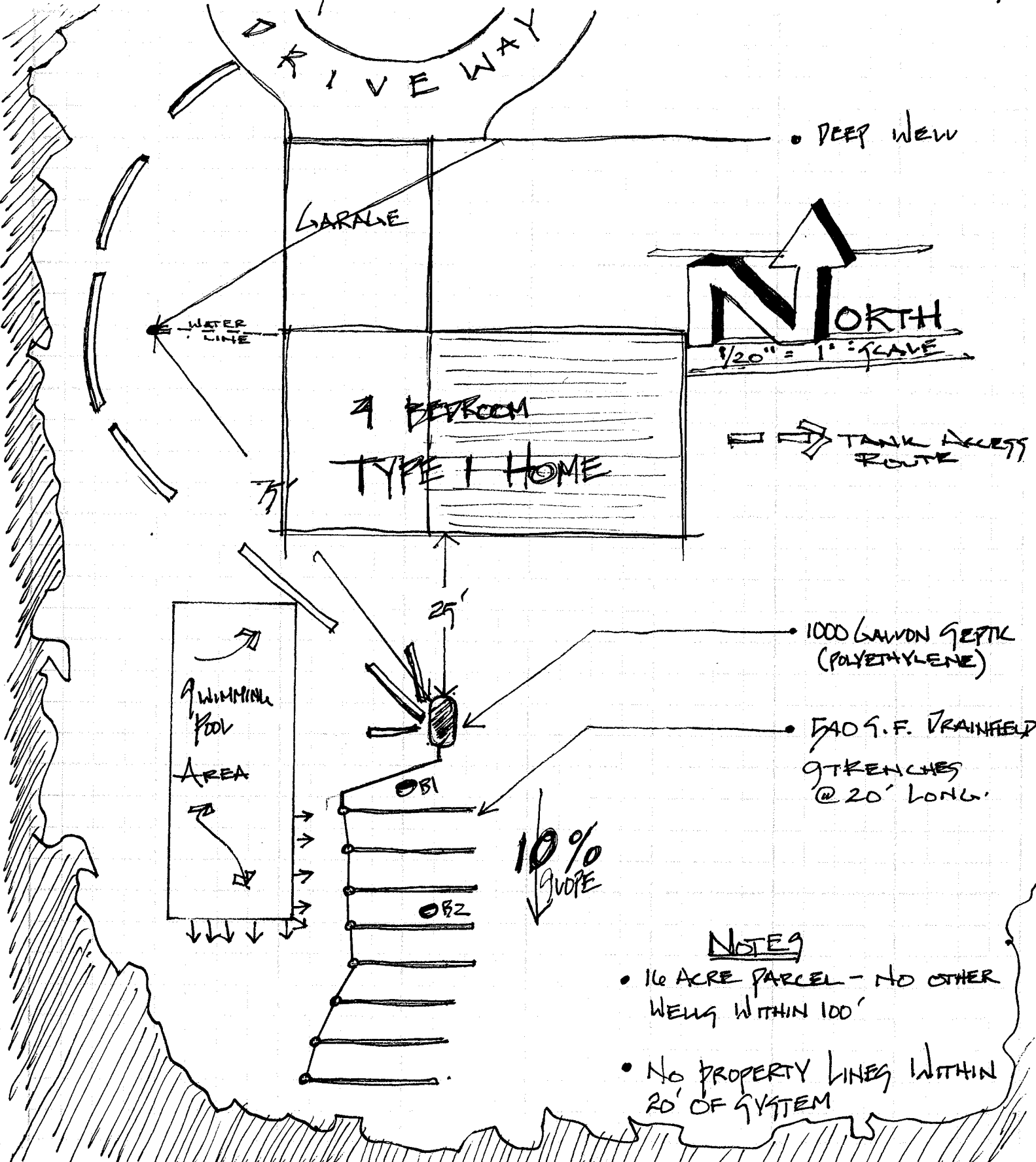
ELK RIVER CONCRETE PRODUCTS • 7575 GOLDEN VALLEY ROAD • SUITE 395 • MINNEAPOLIS, MN 55427  
 (612) 545-PIPE • INWARD WATS--800 + 552-1158 • FAX (612) 545-8399

PROJECT

RANDY SCHULTZ

DATE

16 Jun '96



• DEEP WELL

GARAGE

WATER LINE

4 BEDROOM

TYPE I HOME

**N** NORTH  
 1/20" = 1' SCALE

TANK ACCESS ROUTE

SWIMMING POOL AREA

• 1000 GALLON SEPTIC (POLYETHYLENE)

• 540 S.F. DRAINFIELD  
 9 TRENCHES @ 20' LONG.

10% SLOPE

OB1

OB2

NOTES

- 16 ACRE PARCEL - NO OTHER WELLS WITHIN 100'
- NO PROPERTY LINES WITHIN 20' OF SYSTEM

