City Hall: 218-692-2688
Planning & Zoning: 218-692-2689
Fax: 218-692-2687

13888 Daggett Bay Rd
Crosslake, Minnesota 56442
www.cityofcrosslake.org

CITY OF CROSSLAKE

PLANNING COMMISSION/BOARD OF ADJUSTMENT
September 24, 2021
9:00 A.M.

Crosslake City Hall
13888 Daggett Bay Rd, Crosslake MN 56442
(218) 692-2689

PUBLIC HEARING NOTICE

Applicant: Real Deal LLC & Dale Hathaway

Authorized Agent: N/A

Site Location: 13192 Gladick Lane, Crosslake, MN 56442 on Rush Lake-GD

Variance for:

- Lake setback of 38 feet where 75 feet is required to proposed structure
- Road right-of-way (ROW) setback of 11.5 feet where 35 feet is required to proposed structure
- Lake setback of 35 feet where 75 feet is required to proposed septic system

To construct:

- 2,458 square foot structure consisting of a 4 level house and attached garage plus a 340 square foot deck
- A new septic system

Notification: Pursuant to Minnesota Statutes Chapter 462, and the City of Crosslake Zoning Ordinance, you are hereby notified of a public hearing before the City of Crosslake Planning Commission/Board of Adjustment. Property owners have been notified according to MN State Statute 462 & published in the local newspaper. Please share this notice with any of your neighbors who may not have been notified by mail.

Information: Copies of the application and all maps, diagrams or documents are available at Crosslake City Hall or by contacting the Crosslake Planning & Zoning staff at 218-692-2689. Please submit your comments in writing including your name and mailing address to Crosslake City Hall or (crosslakepz@crosslake.net).

STAFF REPORT

Property Owner/Applicant: Real Deal LLC & Dale Hathaway

Parcel Number(s): 14170610, 14170611

Application Submitted: August 9, 2021

Action Deadline: October 7, 2021

City 60 Day Extension Letter sent / Deadline: N/A / N/A

Applicant Extension Received / Request: N/A / N/A

City Council Date: N/A

Authorized Agent: N/A

Variance for:

- Lake setback of 38 feet where 75 feet is required to proposed structure
- Road right-of-way (ROW) setback of 11.5 feet where 35 feet is required to proposed structure
- Lake setback of 35 feet where 75 feet is required to proposed septic system

To construct:

- 2,458 square foot structure consisting of a 4 level house and attached garage plus a 340 square foot deck
- A new septic system

Current Zoning: Shoreland District

Existing Impervious Coverage:	**Proposed Impervious Coverage:**
7.0%	20.0%

- A stormwater management plan was submitted with the variance application
- Septic design was submitted to Crow Wing County for approval pending variance outcome

Development Review Team Minutes held on 7-20-2021:

- Property is located on Rush Lake at 13192 Gladick Lane with a lake setback of 75 feet
- Discussion on application requirements, procedure, schedule, fee and the requirements/need for a complete application packet by 4:30 PM of the deadline date; payment policy; notification methods; variances are limited to 2 years with substantial completion
- A Land Use Permit will be required prior to construction

Property owner was informed that before they could be placed on a public hearing agenda the following information is required:

1. A certificate of survey meeting the requirements outlined in Article 8, Sec. 26-222 of the City Land Use Ordinance
2. Grade and Elevation illustration, along with the Cut and fill calculations
3. Wetland delineation or a no wetland statement/letter
4. A septic design
5. A complete Variance application with the $500.00 public hearing fee

Parcel History:

- Gladick First Addition established in 1968
- August 1971 – 20x30 dwelling & septic

Agencies Notified and Responses Received:

County Highway Dept: Comment received 7-16-2021
DNR: No comments were received as of 9-9-2021
City Engineer: N/A
Lake Association: No comments were received as of 9-9-2021
Township: N/A
Crosslake Public Works: No comments were received as of 9-9-2021
Crosslake Park, Recreation & Library: N/A
Concerned Parties: 9-7-2021 comment received from Silvernail

POSSIBLE MOTION:

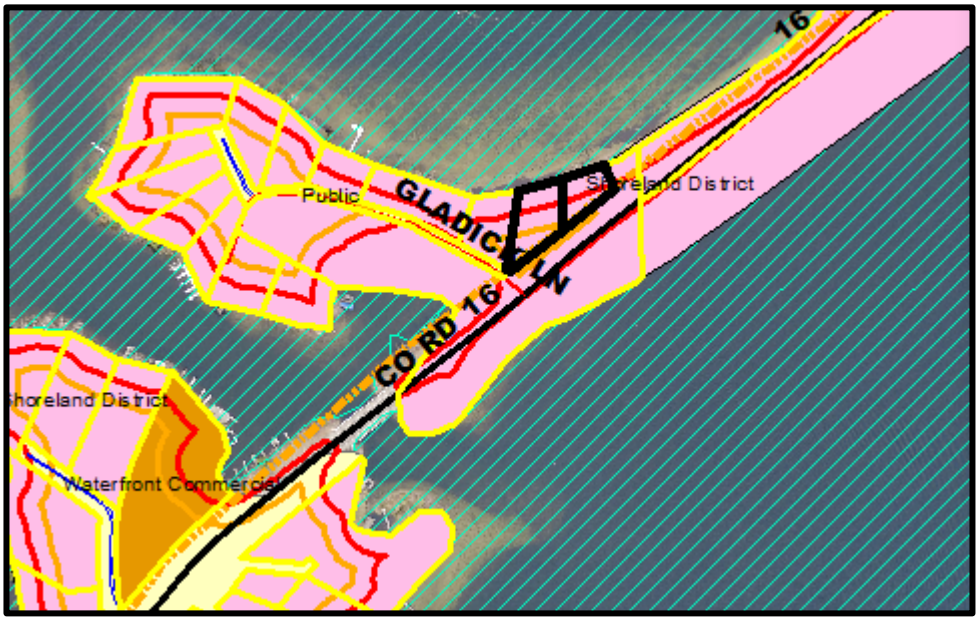
To approve/table/deny the variance to allow:

- Lake setback of 38 feet where 75 feet is required to proposed structure
- Road right-of-way (ROW) setback of 11.5 feet where 35 feet is required to proposed structure
- Lake setback of 35 feet where 75 feet is required to proposed septic system

To construct:

- 2,458 square foot structure consisting of a 4 level house and attached garage plus a 340 square foot deck
- A new septic system

As shown on the certificate of survey dated 9-8-2021



CERTIFICATE OF SURVEY

LOTS 2 & 3, BLOCK ONE, GLADICK FIRST ADDITION, SECTION 17, TOWNSHIP 137 NORTH, RANGE 27 WEST, CROW WING COUNTY, MINNESOTA
TOTAL AREA = 16,629 SQ.FT.± / 0.4 ACRES±
BUILDABLE AREA = 100 SQ. FT.

RUSH LAKE

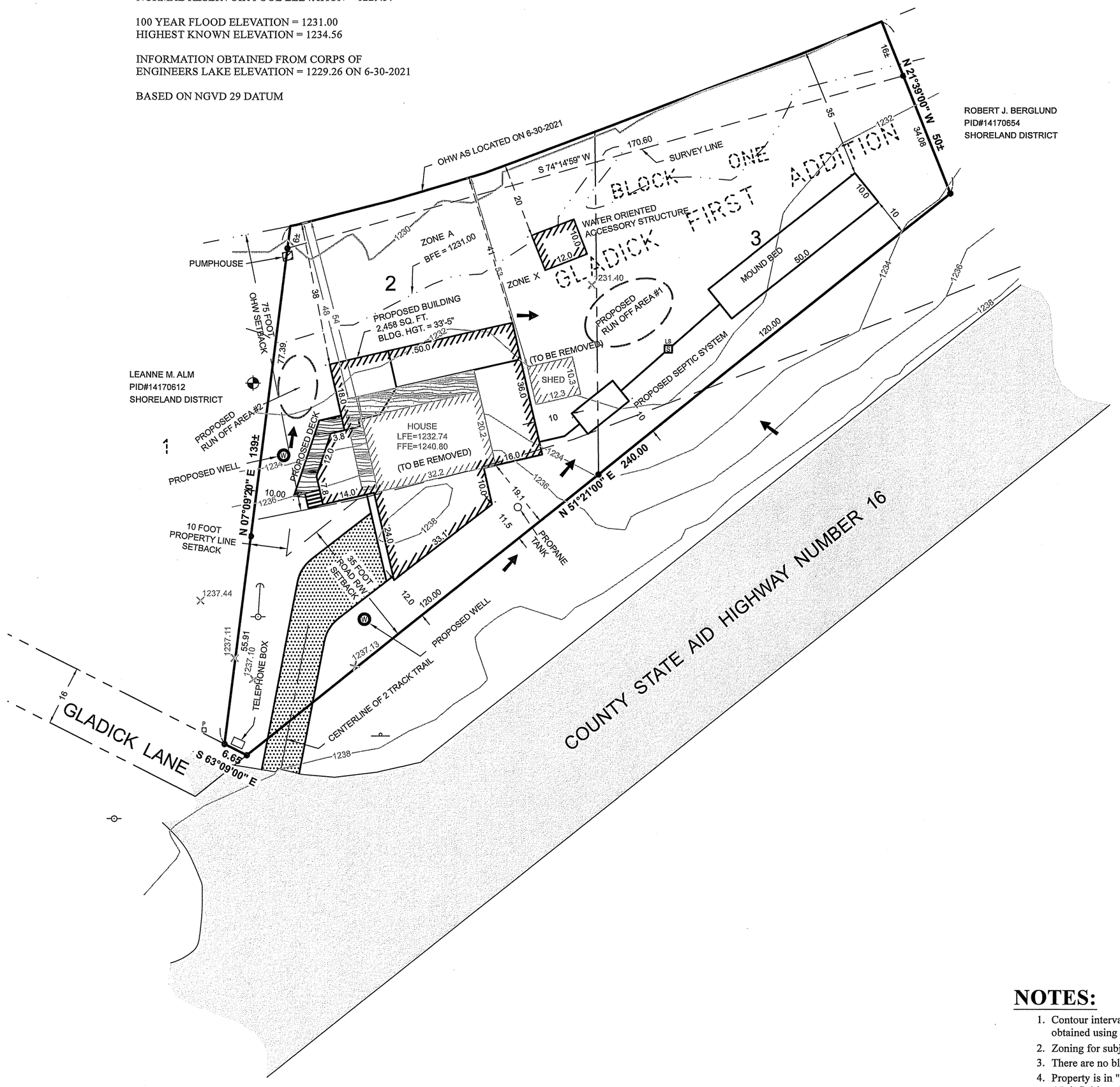
GENERAL DEVELOPMENT CLASSIFICATION

NORMAL RESERVOIR POOL ELEVATION = 1229.57

100 YEAR FLOOD ELEVATION = 1231.00
HIGHEST KNOWN ELEVATION = 1234.56

INFORMATION OBTAINED FROM CORPS OF ENGINEERS LAKE ELEVATION = 1229.26 ON 6-30-2021

BASED ON NGVD 29 DATUM



LEGAL DESCRIPTION PER DOCUMENT NUMBER A-870108

Lots Two (2) and three (3), Block One (1), Gladick First Addition, according to the plat thereof on file and of record in the Office of the County Recorder, Crow Wing County, Minnesota.

together with all hereditaments and appurtenances.

IMPERVIOUS CALCULATIONS

EXISTING	IMPERVIOUS AREA (sq.ft.)	Net Area (sq.ft)	Percent Impervious (sq.ft)
House	650	16,629	3.9%
Shed & Pump House	132	16,629	0.8%
Concrete	178	16,629	1.1%
Driveway	206	16,629	1.2%
Total	**1,166**	**16,629**	**7.0%**

IMPERVIOUS CALCULATIONS

PROPOSED	IMPERVIOUS AREA (sq.ft.)	Net Area (sq.ft)	Percent Impervious (sq.ft)
Proposed Building	2,458	16,629	14.8%
Water Oriented Accessory Structure	120	16,629	0.7%
Concrete	49	16,629	0.3%
Driveway	707	16,629	4.3%
Total	**3,334**	**16,629**	**20.0%**

RUN OFF CALCULATIONS					
Total Impervious Surface Area (from table above)	3,334 sq. ft.	X	0.0833 ft.	=	278 cu. ft.

PROPOSED RUN OFF AREA #1

TOP SURFACE AREA = 308 SQ. FT.
BOTTOM SURFACE AREA = 138 SQ. FT.
1' DEEP WITH 3:1 SIDE SLOPES
TOTAL RUN OFF STORAGE PROPOSED = 223 CU. FT.

PROPOSED RUN OFF AREA #2

TOP SURFACE AREA = 137 SQ. FT.
BOTTOM SURFACE AREA = 35 SQ. FT.
1' DEEP WITH 3:1 SIDE SLOPES
TOTAL RUN OFF STORAGE PROPOSED = 86 CU. FT.

TOTAL PROPOSED RUN OFF AREA

309 CU. FT.

LEGEND

- DENOTES EXISTING SIGN(S)
- DENOTES EDGE OF EXISTING BITUMINOUS
- DENOTES EDGE OF EXISTING CONCRETE
- DENOTES EDGE OF EXISTING WOODEN DECKING
- 1208 DENOTES EXISTING INTERMEDIATE CONTOURS
- 1210 DENOTES EXISTING INDEX CONTOURS
- 1234.5 DENOTES SPOT ELEVATION (EXISTING GRADE)
- DENOTES EXISTING UTILITY POLE W/ GUY WIRE
- DENOTES EXISTING PHONE PEDESTAL & PHONE BOX
- **BENCHMARK:** SET 3/8" IRON ROD IN EAST FACE OF A 24" SPRUCE
  ELEV. = 1232.76
  BASED ON NGVD 29 DATUM
- DENOTES MONUMENT FOUND

ORIENTATION OF THIS BEARING SYSTEM IS BASED ON THE RECORDED PLAT OF GLADICK FIRST ADDITION.

NOTES:

1. Contour interval as shown = 2 foot. Based on NGVD 29 datum. Contours shown have been obtained using standard survey topographic methodologies. Field located on 6-30-2021.
2. Zoning for subject tract = "Shoreland District".
3. There are no bluffs within surveyed property.
4. Property is in "Zone X" and "Zone A" as per the FIRM, Flood Insurance Rate Map. "Zone A" definition: Areas of 100-year flood base elevations and flood hazard factors not determined. "Zone X" definition: Areas of minimal flooding.
5. No wetlands were found on 6-4-2021 at the site per Ben Meister, Meister Environmental, LLC. MN Certified Wetland Delineator #1031.
6. Parcel IDs of subject parcel: 14170610 & 14170611.
7. The E911 address of subject parcel: 13192 Gladick Lane.
8. Walk Out Level to OHW = 38 feet
   Main Level to OHW = 38 feet
   Second Level to OHW = 42 feet

N

20 0 20 40

SCALE IN FEET
ON 22" x 34" SHEET

30206 Rasmussen Road
Suite 1
P. O. Box 874
Pequot Lakes, MN 56472
218-568-4940
www.stonemarksurvey.com

I HEREBY CERTIFY THAT THIS SURVEY, PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

CYNTHIA M. HIDDE PLS#21182 — DATE 9/8/2021 — LIC. NO. 44881

REVISIONS		
DATE	DESCRIPTION	BY
8-9-2021	added WOAS and revised impervious	RJF
8-9-2021	CITY COMMENTS	CMH

DATE: 8-9-2021
SCALE: HORZ. 1"=20' VERT. NONE
PROJECT No.: 21182
FILE NAME: C21182.dwg
FIELD BOOK: BOOK 464 PG. 14&15
PROJECT MANAGER: CMH
CHECKED BY: CMH
DRAWN BY: RJF

CERTIFICATE OF SURVEY

Merry Brummer
9987 209th Avenue NW
Elk River, MN 55330

SHEET 1 OF 1

Cad 9/8/2021 2:53 PM - F:\Drawings\2021\21182 Brummer\C21182.dwg

Cheryl

From: Merry Brummer <merrybb5@gmail.com>
Sent: Tuesday, August 10, 2021 2:06 PM
To: Jon Kolstad; schruppexcavating@gmail.com
Subject: 13192 Gladick Lane cut and fill info for Variance Application

Hi Jon,

I spoke with Raymond Schrupp and he gave me the following volumes for Cut and Fill for our project at 13192 Gladick Lane.

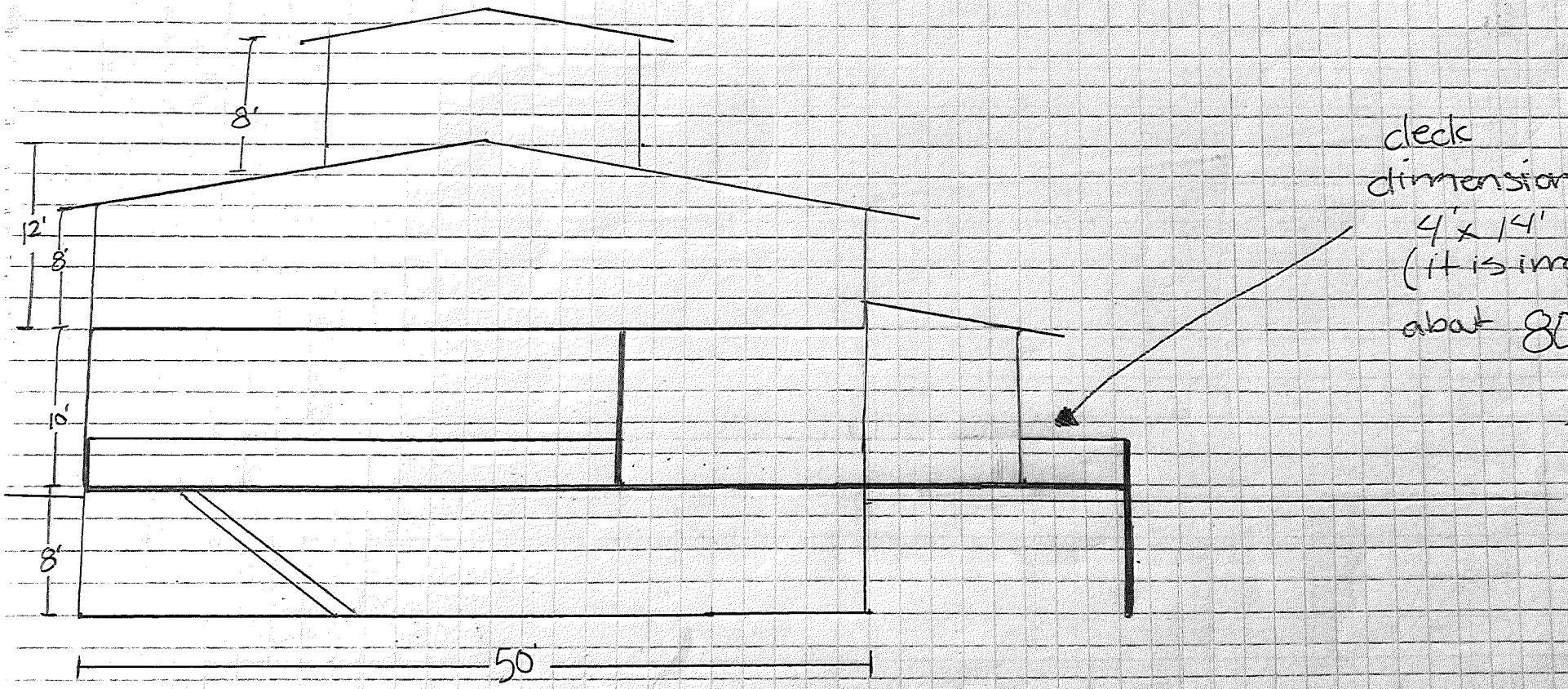
125 yards cut for basement
155 yards fill for septic

He said we can use the cut from the basement for the septic then bring in whatever else is needed.

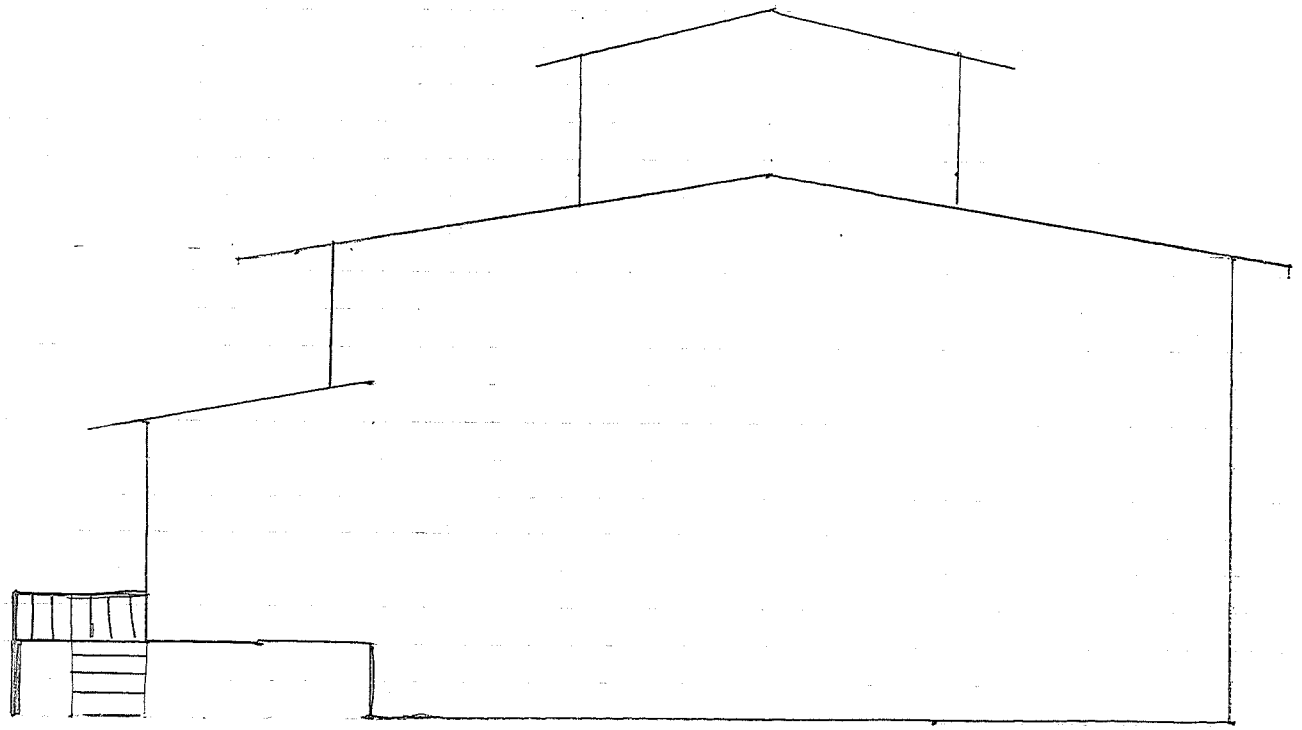
Please let me know if you have any questions or need more information.

Thank you,

Merry Brummer
Real Deal LLC
612-598-8917

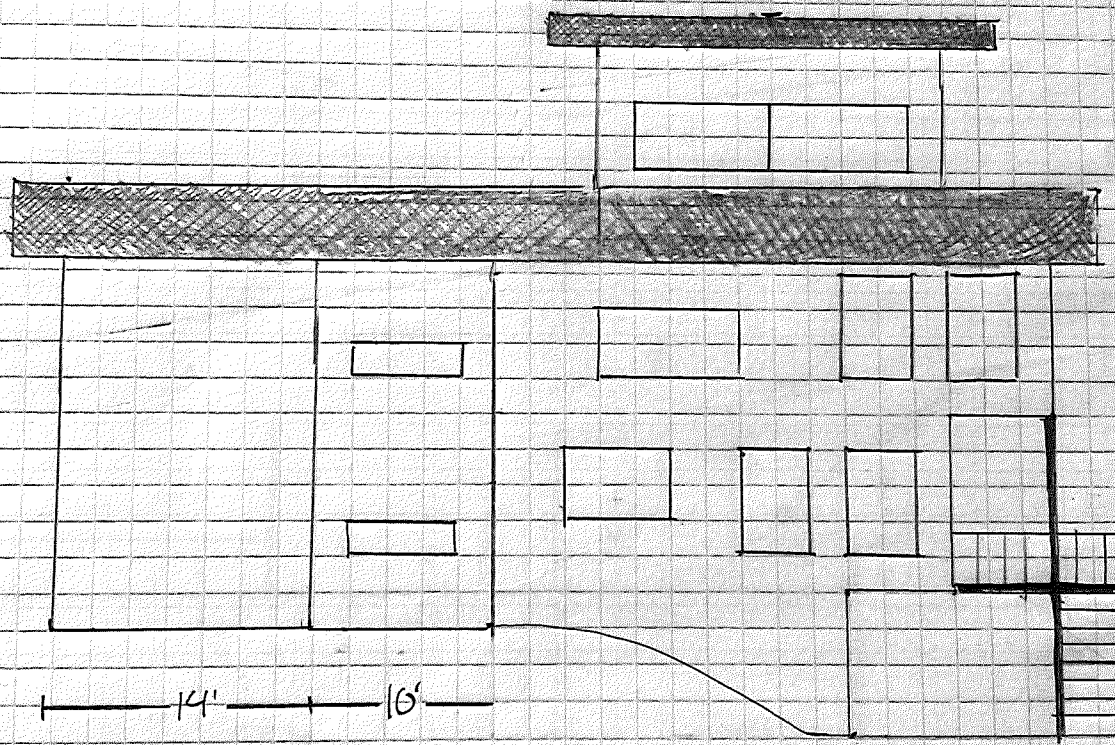


West Elevation (lake side)



East Elevation (road side)

North side Elevation



deck dimensions
10' x 34'
340 sq. ft.

14' 16'

20' 16'

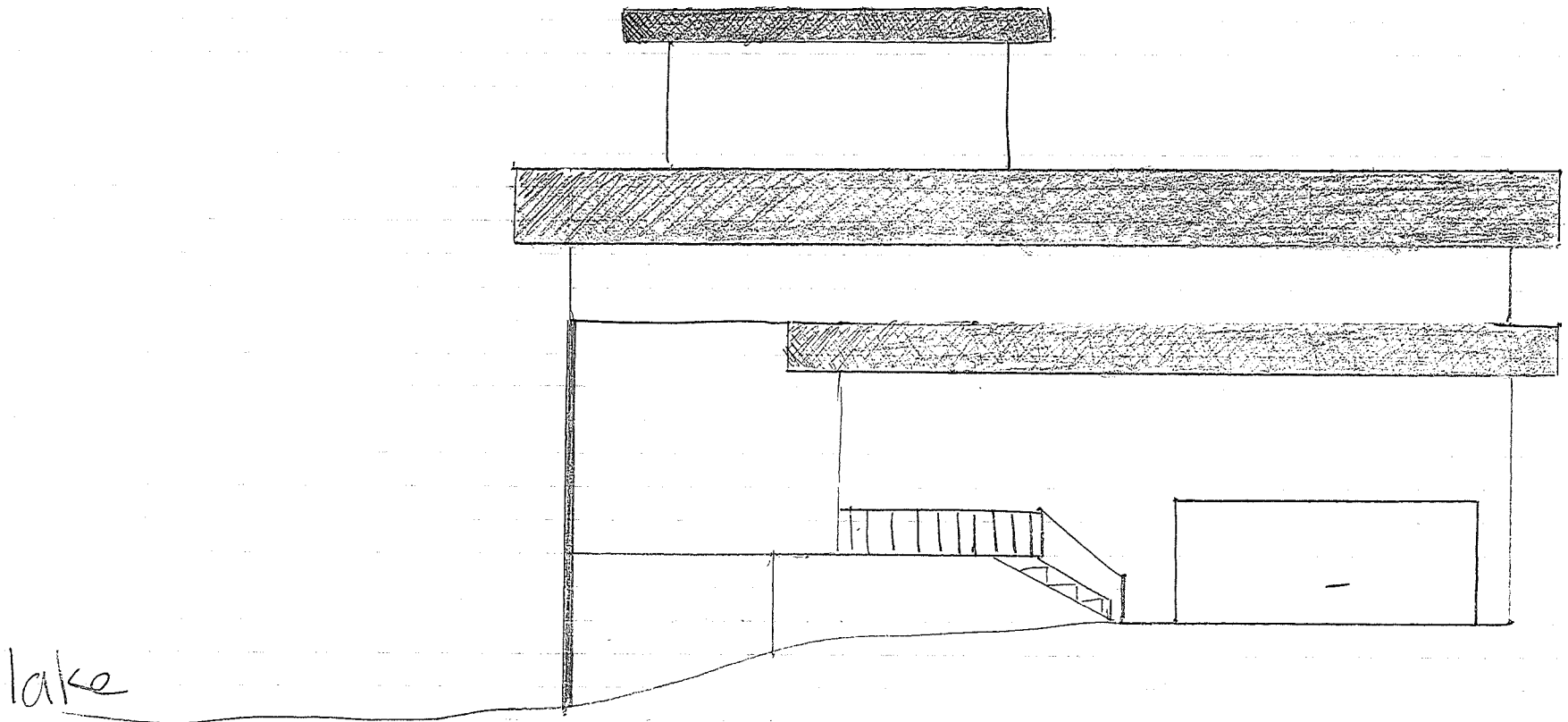
26'

32'

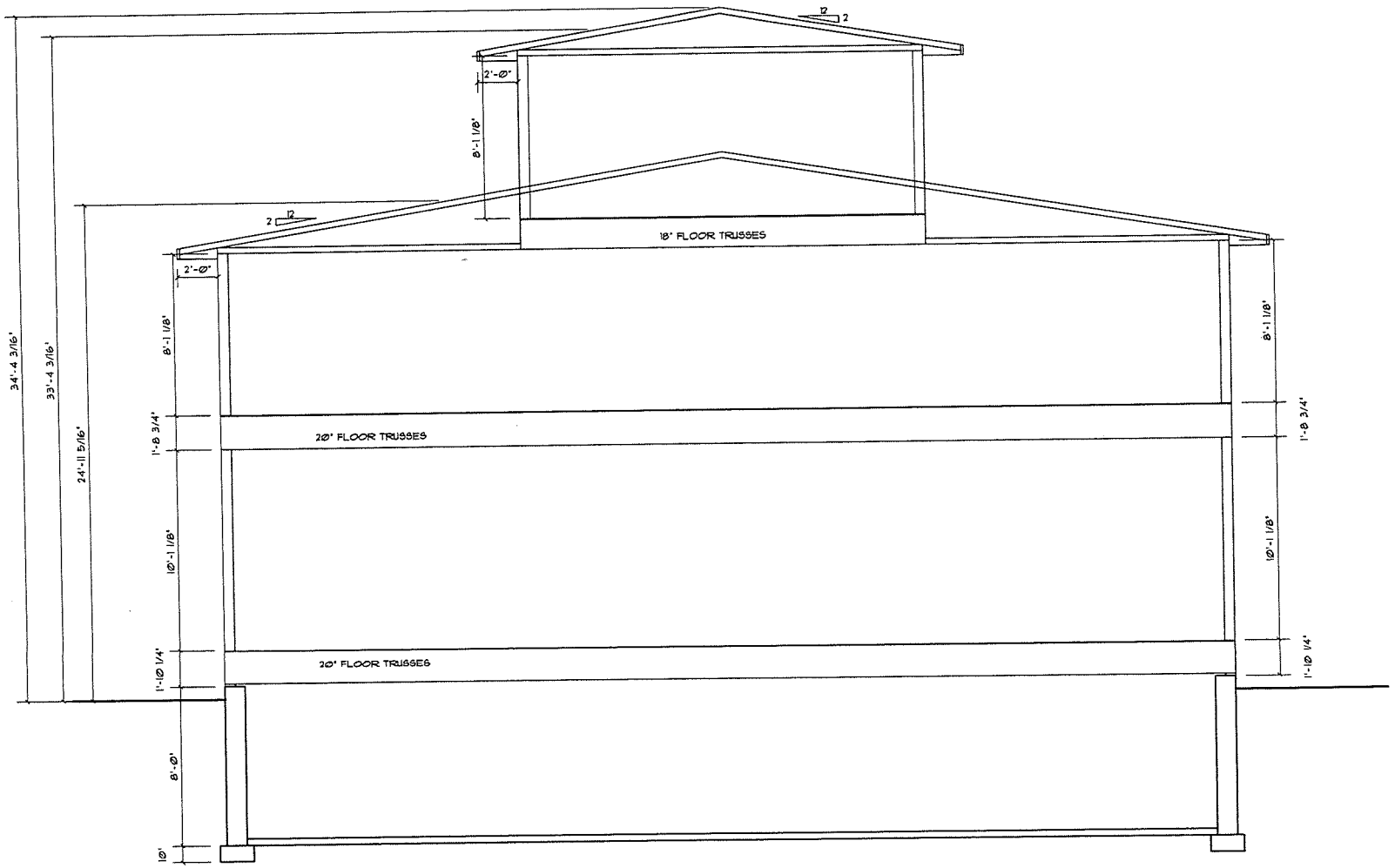
Lake

road

Foundation to lake 54'
House to lake 42'
deck/patio to lake 38



South Elevation



GABLE ROOF 2:12

mid-peak calculation

Crow Wing County Environmental Services
Field Evaluation Sheet

Property Owner: MERRY BRUMMER Date: 6/20/2021
Mailing Address: 9987 209 AVE NW
City ELK RIVER State: MN Zip 55303
Home Phone Number: ___-___-___ Cell: 612-598-8917
Site Address: 13192 GLADICK LN
City CROSS LAKE State: MN Zip 52462
Driving directions if no address issued: ___
Legal Description: LOT 2 BLK 1 AND LOT 3 BLK 1 GLADICK 1ST ADDITION
Sec. 17 Twp: 137 Range: 27 Township Name: CITY OF CROSS LAKE
Parcel Number: 14170611 14170610
Lake/ River: RUSH Lake/River Classification: GD

Description of Soil Treatment Areas

	(Proposed) Site #1		(Alternate) Site #2	
Disturbed Areas	Yes X	No ___	Yes ___	No ___
Compacted Areas	Yes ___	No X	Yes ___	No ___
Flooding	Yes ___	No X	Yes ___	No ___
Run on Potential	Yes X	No ___	Yes ___	No ___
Limiting Layer Depth	SB1 24"	SB2 ___	SB1 ___	SB2 ___
Slope % and Direction	ON SITE			
Landscape Position	OUTWASH PLAIN			
Vegetation Types	BASSWOOD			
Soil Texture	SAND			
Soil Sizing Factor	.83			

Soil Sizing Factors/Hydraulic Loading Rates

Perc. Rate	Texture	SSF	HLR	Perc. Rate	Texture	SSF	HLR
<0.1	Coarse Sand			16 to 30	Loam	1.67	0.60
0.1 to 5	Sand	0.83	1.20	31 to 45	Silt Loam	2.00	0.50
0.1 to 5	Fine Sand	1.67	0.60	46 to 60	Clay Loam	2.20	0.45
6 to 15	Sandy Loam	1.27	0.79	> 60	Clay Loam	****	0.24

Designer Name: Tom Espersen MPCA License Number 1719
Address: 22324 Echo Lane, Merrifield MN 56465
Cell: 218-820-4520
Designer Signature: Tom Esp Date: 6/20/2021
E-mail: tom.espersen54@gmail.com

Crow Wing County Environmental Services
Mound Design Sheet Page I of II

Property Owner MERRY BRUMMER Date 6/20/2021

Number of Bedrooms: 4 Classification: I

Water Using Appliances: Washer X Softener X Dishwasher X Whirlpool ___ Humidifier ___

Well Info: Deep (50'+) TBD Shallow (<50') ___

Setbacks

Tank(s) to: Well 50 House 10 Prop. Line 10

Drainfield to: Well 50'+ House 20'+ Prop. Line 0

Sewer Line to well 50

Air Test needed? YES

Flow Data: 2 BR Residential Minimum

A. Estimated GPD 600 Measured GPD ___

Estimated Flow in Gallons per Day (GPD)			
Bedrooms	Class I	Class II	Class III
2	300	225	180
3	450	300	218
4	600	375	256
5	750	450	294
6	900	525	332
7	1050	600	370
8	1200	675	408

Tank Sizing

B. Septic Tank Capacity (1,500 gal. Min.) 2500 Gals.
Compartmentalized: X Filtered: OPTIONAL
Garbage Disposal: No Basement Lift Station: YES
a. If yes to either or both, see Septic Tank Capacity table

C. Pump Tank Capacity (Per 7080.0160) 500 Gals.
a. Alarm Type ELECT

Septic Tank Capacity			
Bedrooms	Minimum	GD or BL	Both
6 or less	1,500	2,250	3,000
7 or 8	2,000	3,000	4,000

Soils

D. Depth to Restricting Layer: 24 In.
E. Depth of Clean Sand at Upslope Edge: 18 In.
F. Native Soil Texture: SAND
H. Native Soil Sizing Factor: .83
a. Perc. Rate (Optional) ___ MPI
I. Land Slope: ON SITE %

Rock Layer Dimensions and Volume

Texture	SSF	Abs. Width Ratio
Coarse sand		1.00
Sand	0.83	(1.00)
Fine Sand	1.67	2.00
Sandy Loam	1.27	1.52
Loam	1.67	2.00
Silt Loam	2.00	2.40
Clay Loam	2.20	2.67

J. (A) x .83= 498 (500) Sq. Ft.
K. Select Rock Layer Width 10 Ft.
L. Length of Rock Bed: (J)/(K) = 50 Ft.
M. Multiply Rock Area (J) by Rock Depth: 500 Cu. Ft.
N. Divide (M) by 27: 19 Cubic Yards
O. Multiply (N) x 1.4 for tonnage: 27 Tons of Rock

Absorption Width

P. Select Absorption Width Ratio from Table. Absorption Width Ratio = 1.0
Multiply Absorption Width Ratio (P) by Rock Layer Width (K) to determine Absorption Width:
a. Absorption Width Ratio x Rock Bed Width = 10 ft. of Absorption Width

Designer Signature Tom Cyr Date 6/20/21 Page 2 of 10

Crow Wing County Environmental Services
Minimum Mound Size Design Sheet Page II of II

Property Owner: MERRY BRUMMER Date: 6/20/2021

1. Subtract the rock layer width from the absorption width to obtain the minimum downslope berm toe: (P.a.) 10 ft. – (K) 10 ft. = 0 ft.
2. Determine the depth of clean sand fill at the upslope edge of the rock layer:
   a. Separation of 3' min. - 2 ft. = 1.5 ft. of washed sand
3. Add depth of washed sand for separation (2) at upslope edge, depth of rock layer (1ft.) to depth of cover (1ft.) to determine the mound height at the upslope edge of the rock layer:
   a. 1.5 ft. + 1ft. + 1ft. = 3.5 ft.

Berm Multiplier Table											
Slope	Upslope Berm Multipliers						Downslope Berm Multipliers				
%	3\1	4\1	5\1	6\1	7\1	8\1	3\1	4\1	5\1	6\1	7\1
0	3.0	(4.0)	5.0	6.0	7.0	8.0	3.0	(4.0)	5.0	6.0	7.0
1	2.91	3.85	4.76	5.66	6.54	7.41	3.09	4.17	5.26	6.38	7.53
2	2.83	3.70	4.54	5.36	6.14	6.90	3.19	4.35	5.56	6.82	8.14
3	2.75	3.57	4.35	5.08	5.79	6.45	3.30	4.54	5.88	7.32	8.86
4	2.68	3.45	4.17	4.84	5.46	6.06	3.41	4.76	6.25	7.89	9.72
5	2.61	3.33	4.00	4.62	5.19	5.71	3.53	5.00	6.67	8.57	10.77
6	2.54	3.23	3.85	4.41	4.93	5.41	3.66	5.26	7.14	9.38	12.07
7	2.48	3.12	3.70	4.23	4.70	5.13	3.80	5.56	7.69	10.34	13.73
8	2.42	3.03	3.57	4.05	4.49	4.88	3.95	5.88	8.33	11.54	15.91
9	2.36	2.94	3.45	3.90	4.30	4.65	4.11	6.25	9.09	13.04	18.92
10	2.31	2.86	3.33	3.75	4.12	4.44	4.29	6.67	10.00	15.00	23.33
11	2.26	2.78	3.23	3.61	3.95	4.26	4.48	7.14	11.11	17.65	30.43
12	2.21	2.70	3.12	3.49	3.80	4.08	4.69	7.69	12.50	21.43	43.75

4. Enter upslope berm value from Berm Multiplier table: 4.0
5. Multiply berm multiplier by the upslope mound height to determine the upslope mound width: (3.a.) 4 x 3.5 = 14 ft.
6. Multiply rock layer width by landslope to determine the drop in elevation: (K) 10 ft. x 0 % = 0 ft.
7. Add depth of clean sand for slope difference at down slope edge to upslope rock edge height to determine the downslope height: (6) 0 + (3) 3.5 = 3.5 ft.
8. Select down slope berm multiplier: 4.0
9. Multiply the downslope mound height by the selected berm multiplier to determine the downslope mound width: (7) 3.5 x (Multiplier) 4.0 = 14 ft.
10. Compare the values of Step (1) 0 and (9) 14.
    a. Select the greater of the two as the downslope berm width 14 ft.
11. The total mound width is the sum of the upslope berm width, rock layer width, and the downslope berm width: (5) 14 + (K) 10 + (10.a.) 14 = 38 ft.
12. Total mound length is the sum of the rock layer length plus the upslope berm width added to each end: (5) 50 + (L) 14 + (5) 14 = 78 ft.

13. Final Mound Dimensions: (11) 38 ft. by (12) 78 ft.

Designer Signature: [signature] Date: 6/20/2021 Page 3 of 10

Crow Wing County Environmental Services
Pump Selection and Pressure Distribution Sheet

Property Owner: MERRY BRUMMER Date: 6/20/2021

A. Gravity Distribution
   a. Minimum flow 10 GPM Maximum flow 45 GPM
   b. If pumping to gravity distribution, go to (E) Pump Head Requirements Section.

B. Pressure Distribution
   a. X End Manifold _____ Center Manifold
   b. Select number of laterals: 3 and size 2"
      i. Select perforation spacing: 3 Ft.
   c. End Manifold: Rock bed length: 50 - 2 feet = 48 lateral length
   d. Center Manifold: Rock Bed Length/2 = _____ - 1 foot = _____ lateral length

C. Total Perforation Determination
   a. Length of lateral / perforation spacing + 1 for end cap = Perforations per lateral:
      48' ft. / 3' spacing = 16 + 1 = 17 perforations per lateral
   b. Total Number of perforations = Number of laterals x perforations per lateral.
      (B.b.) 3 x (C.a.) 17 = 51 Total number of perforations.

Volume of Liquid in Pipe	
Pipe Dia.	Gal./Ft.
1.25	0.078
1.5	0.11
2	(0.17)

Maximum Number of Perfs. Per Lateral			
Spacing	Pipe Diameter		
Ft./In.	1.25	1.5	2
2.5/30	14	18	28
3.0/36	13	17	26
3.3/40	12	16	25
4.0/48	11	15	23
5.0/60	10	14	22

D. Pump Flow Requirements

Perforation Discharges in GPM/perf.

Feet of Head	Perforation Diameter In Inches 7/32	1/4	
1.0	0.56	(0.74)	Use 1.0 for single homes
2.0	0.80	1.04	Use 2.0 feet for anything else

Total Perforations: (C.b.) 51 x GPM/perf. .74 = 38 GPM

E. Pump Head Requirements
   a. Elevation difference between pump and point of discharge: 7 ft.
   b. If pumping to pressure, add 5 feet to (E.f.) or zero if pumping to gravity distribution.
   c. Add 25% to pipe length for friction loss through fittings:
      i. 30 Length x 1.25 = 37.5 feet of pipe.

Friction Loss in Plastic Pipe											
	Flow Rate in GPM										
Pipe Diam.	20	25	30	35	40	45	50	55	60	65	70
1.5	2.47	3.73	5.23	6.96	8.91	11.07	13.46				
2	0.73	1.11	1.55	2.06	(2.64)	3.28	3.99	4.76	5.60	6.48	7.44
3	0.11	0.16	0.23	0.30	0.39	0.48	0.58	0.70	0.82	0.95	1.09

   d. Select Friction Loss from table based on flow and pipe diameter:
      i. Pipe length (E.c.) 37.5 x Friction loss 2.64 / 100 = 1 Ft.
   e. Determine Drainback: Pipe Length 30 x Gal/Ft. .17 = 5 Gallons
   f. Total Head: (E.a.) 7 + (E.b.) 5 + (E.d.) 1 = 13 Ft. of Head

F. Select a pump with at least (D.) 38 GPM and (E.f.) 13 Ft. of Head

Designer Signature Tom Gross Date: 6/20/21 Page 4 of 10

Crow Wing County Environmental Services
Soil Boring Logs for Proposed and Alternate Sites

Property Owner: MERRY BRUMMER Date: 6/20/2021

*Record depths of all horizons.
*Record all Redoximorphic Features, Restricting Layers and Saturated Soils.
*Include all Chroma and Hue values in boring log.

#1 Proposed Site

Depth in Inches	Texture	Munsell Color
0-3	T. SOIL	10YR 3/3
3-24	SAND	10YR 4/4
24+	WATER / REDOX	

#2 Proposed Site

Depth in Inches	Texture	Munsell Color

#1 Alternate Site

Depth in Inches	Texture	Munsell Color

#2 Alternate Site

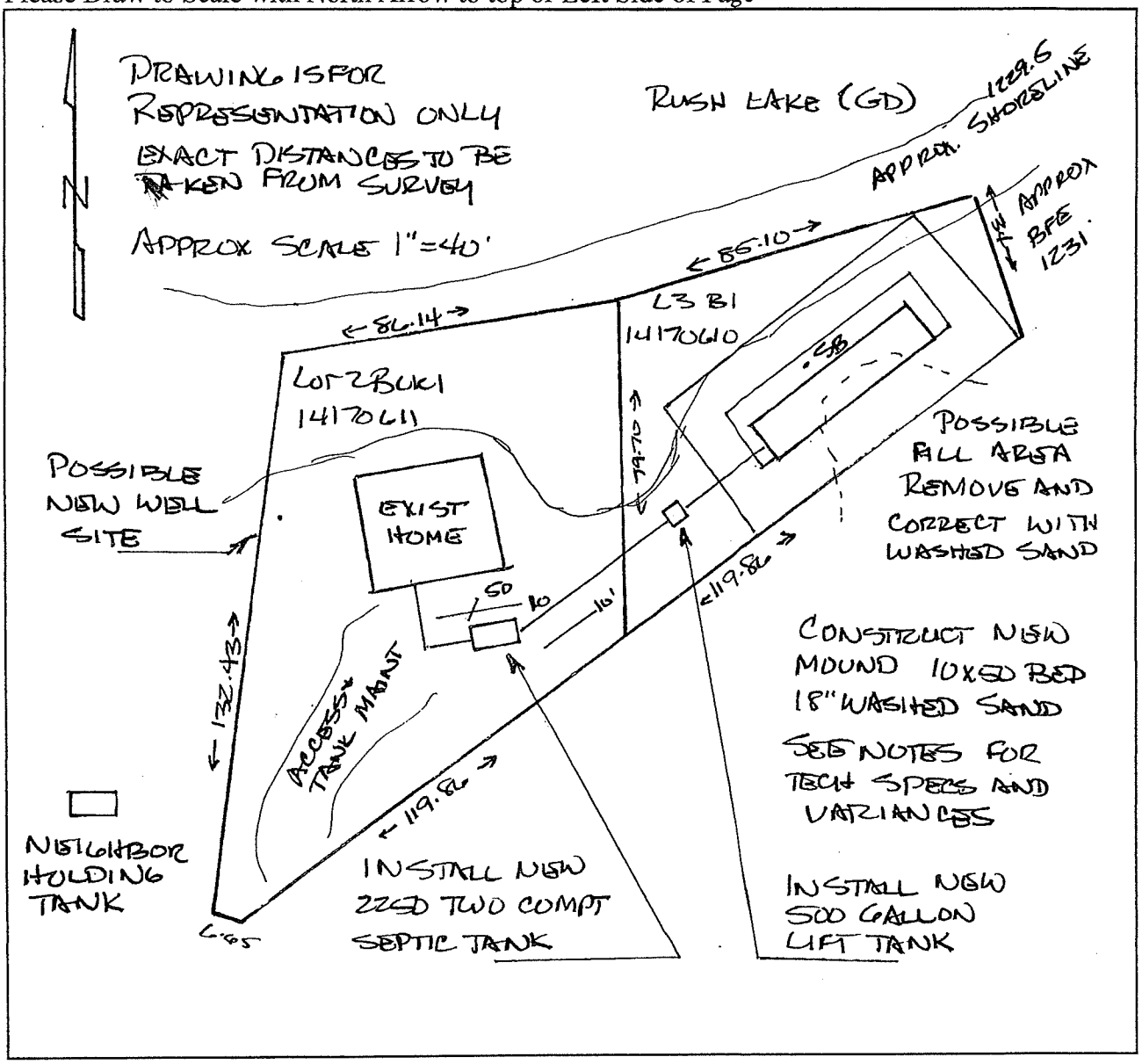
Depth in Inches	Texture	Munsell Color

Designer Signature: Tom Ryan Date: 6/20/21 Page 5 of 10

Crow Wing County Environmental Services
Site Sketch for Septic System

Property Owner: MERRY BRUMMER Date: 6/20/2021

Please Draw to Scale with North Arrow to top or Left Side of Page



Show Existing or Proposed:

Water Wells within 100 ft. of drainfield — Water lines within 10 ft. of drainfield
All Drainfield Areas and Boring Locations — Disturbed/Compacted Areas — Component Location
OHW as Needed — Lot Easements — Access Route for Tank Maintenance
Property Lines, all Existing and Proposed Structures, all Relative Setbacks

Elevations:

1229.5	Benchmark Elevation WATER LEVEL	1227	Pump Elevation
1237.5	Elevation of Sewer Line at House	1234	Pump Discharge Elevation
1237	Tank Inlet Elevation	1229.8	Restricting Layer Elevation
1233.3	Drainfield Elevation		

Designer Signature: [signature] Date: 6/20/2021
License Number: 1719 Page 6 of 10

Addendum to Merry Brummer Septic System Design 6/20/2021

Variances:

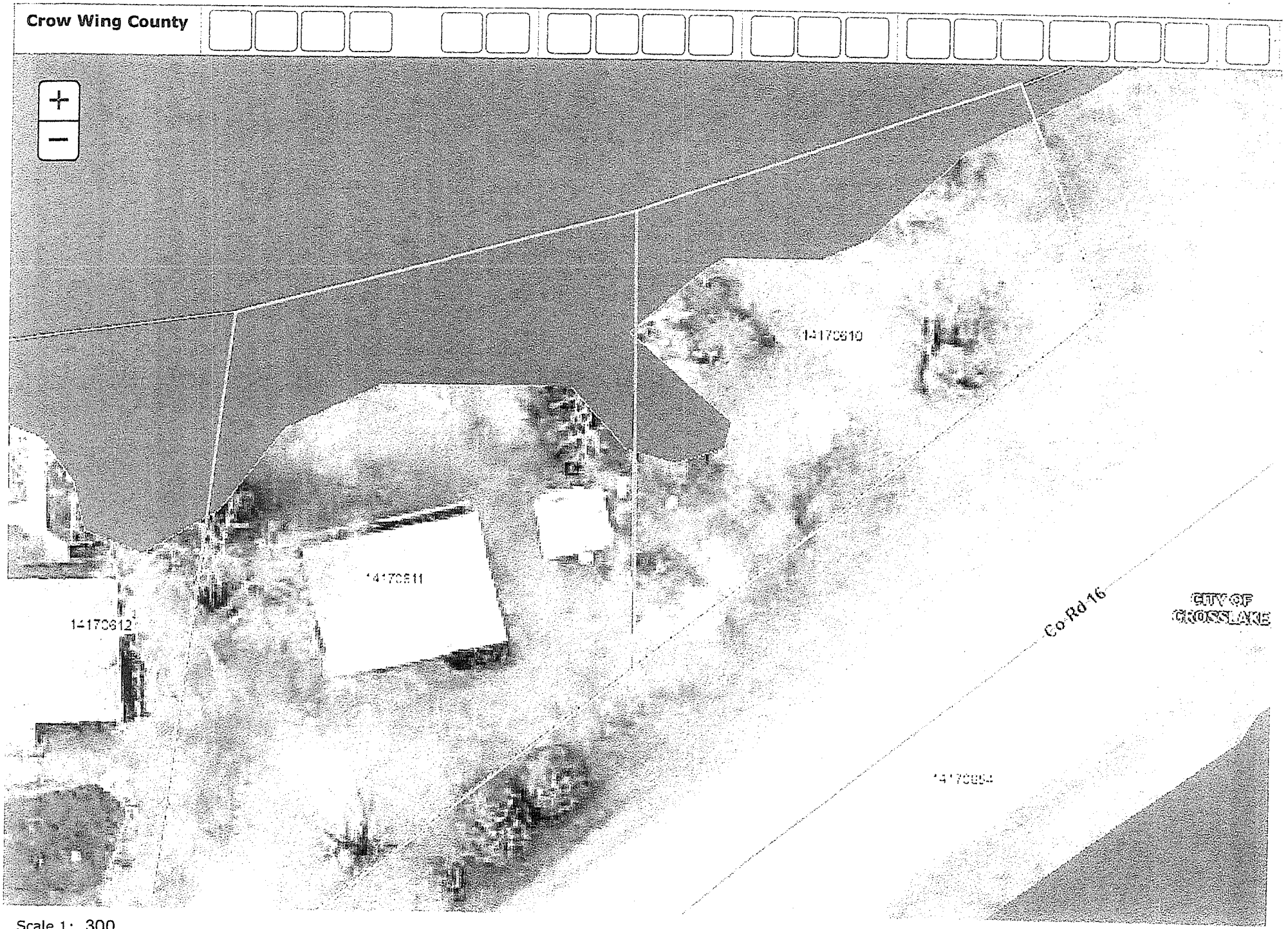
1) The site consists of two lots: Lots 2 and 3, Block 1 of Gladick First Addition which was platted in 1968. Zoning regulations were nonexistent at that time. Many things have changed since then, particularly how we handle sewage. There is virtually no building envelope in compliance with todays' rules and regulations.
2) To be specific, the following variances will be required to install a septic system that will meet the technical requirements of MN Chapter 7080 and City Ordinances:
    a. Beginning from the assumed OHW/Shoreline of Rush Lake, setbacks to the toe of the mound will be approx. 15', to the absorption area will be approx. 30', and to the rock bed will be approx. 35'. All of these are less than the 75' required for a GD Lake. Final distances will need to be determined from the survey which is in process.
    b. Crow Wing County claims a 50' Right of Way from the center of County Road 16. The entire mound will lay inside this ROW. The rules of this are not clear, but Crow Wing County Highway Department will need to be consulted on this matter.
    c. The toe of a mound is allowed to go to the property line. Variances are not needed for this unless the City of Cross Lake requires them.
    d. Part of the toe of the mound is in the Flood Zone. The treatment zone is above the Base Flood Elevation of 1231 ft. above sea level.

Construction Notes:

1) This mound is placed on the edge of the Flood Plain. Elevations and placement relating to property lines are critical, and attention needs to be paid to them. If there are any questions, please do not hesitate to reach out to the designer.
2) Minimum requirements for sand depth require 12 inches. Sand placement for this mound will be 18 inches to provide 42 inches of separation for treatment under normal conditions.
3) An increase in the absorption area on three sides of the rock bed are to be incorporated in the construction on this mound as shown on the design site sketch.
4) 2) and 3) are included to provide an extra measure of treatment given the proximity to Rush Lake.
5) Some of the mound site has had fill deposited in it. Remove fill and correct with washed sand as needed.
6) A diversion for storm water and runoff from County Road 16 needs to be added to prevent damage to the mound.

Respectfully Submitted,
Tom Espersen, Designer.
MPCA License Number 1719

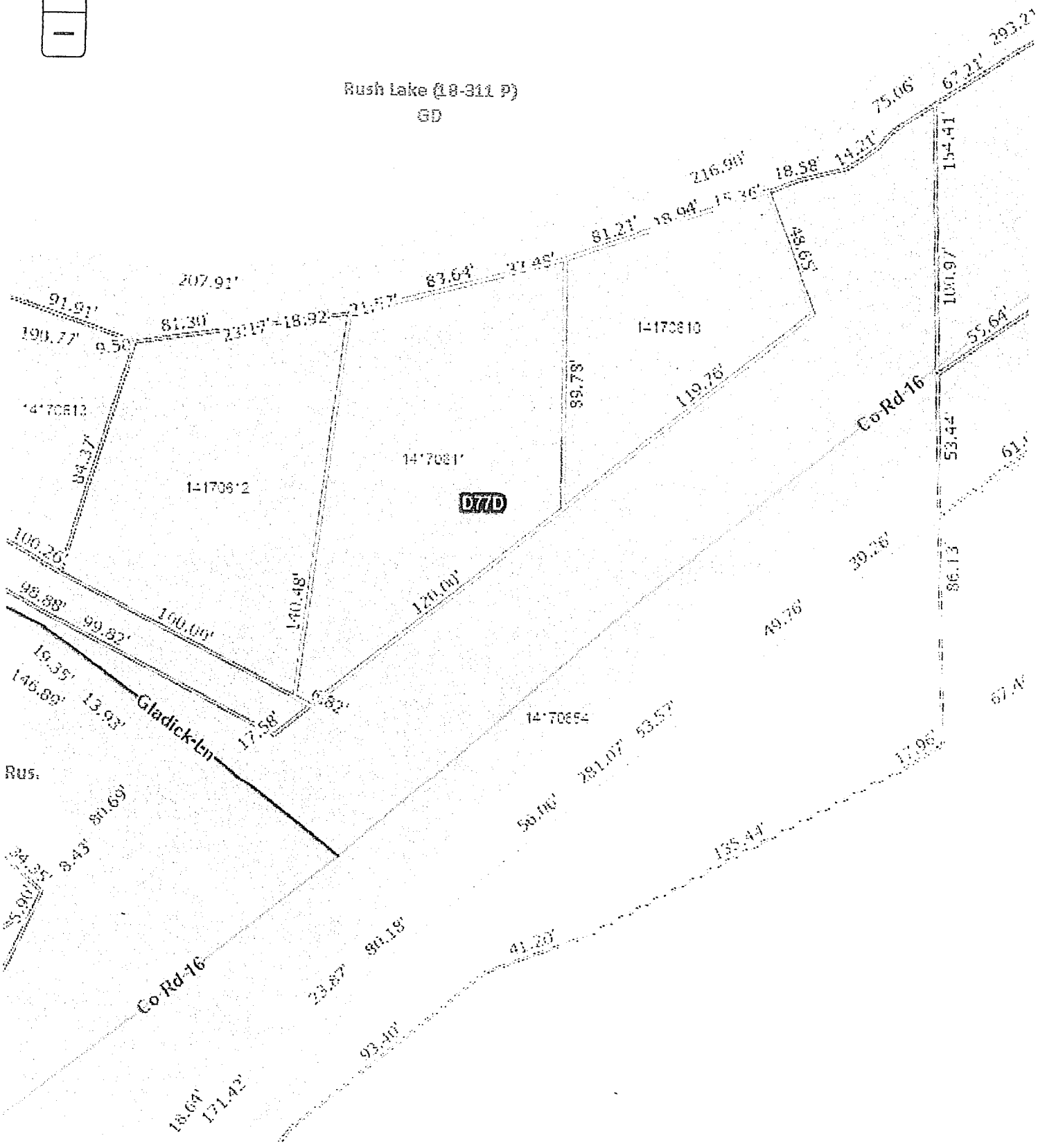
7/10



Scale 1: 300

8/10

Crow Wing County



9/10

Scale 1: 600

Map Unit Description (MN)

Crow Wing County, Minnesota

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation]

D77D--Graycalm-Grayling complex, 12 to 25 percent slopes

Graycalm

Extent: 25 to 65 percent of the unit
Landform(s): rises on outwash plains
Slope gradient: 12 to 25 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .15
Land capability, nonirrigated 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 4 in	Loamy sand	rapid	0.35 to 0.43 in	4.5 to 5.5
Bw1 -- 4 to 20 in	Loamy sand	rapid	1.29 to 1.61 in	5.0 to 6.0
Bw2 -- 20 to 31 in	Sand	rapid	0.44 to 0.66 in	5.0 to 6.0
E and Bt -- 31 to 79 in	Sand	rapid	2.38 to 3.81 in	5.5 to 6.5

Grayling

Extent: 29 to 45 percent of the unit
Landform(s): rises on outwash plains
Slope gradient: 12 to 25 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .20
Land capability, nonirrigated 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 8 in	Loamy sand	rapid	0.63 to 0.87 in	5.1 to 6.5
Bw -- 8 to 47 in	Sand	rapid	1.95 to 4.29 in	5.1 to 6.5
BC -- 47 to 79 in	Sand	rapid	1.59 to 2.23 in	5.1 to 6.5

This report provides a semitabular listing of some soil and site properties and interpretations that are valuable in communicating the concept of a map unit. The report also provides easy access to the commonly used conservation planning information in one place. The major soil components in each map unit are displayed. Minor components may be displayed if they are included in the database and are selected at the time the report is generated.

10/10

UNIVERSITY
OF MINNESOTA

Septic System Management Plan for Above Grade Systems

The goal of a septic system is to protect human health and the environment by properly treating wastewater before returning it to the environment. Your septic system is designed to kill harmful organisms and remove pollutants before the water is recycled back into our lakes, streams and groundwater.

This **management plan** will identify the operation and maintenance activities necessary to ensure long-term performance of your septic system. Some of these activities must be performed by you, the homeowner. Other tasks must be performed by a licensed septic maintainer or service provider. However, it is YOUR responsibility to make sure all tasks get accomplished in a timely manner.

The University of Minnesota's *Septic System Owner's Guide* contains additional tips and recommendations designed to extend the effective life of your system and save you money over time.

Proper septic system design, installation, operation and maintenance means safe and clean water!

Property Owner Merry Brummer

Property Address 13192 Gladick Ln. Property ID 14170611

System Designer Tom Espersen Phone 218-820-4520

System Installer Phone

Service Provider/Maintainer Phone

Permitting Authority City of Cross Lake Phone 218-692-2688

Permit # Date Inspected

Keep this Management Plan with your *Septic System Owner's Guide*. The *Septic System Owner's Guide* includes a folder designed to hold maintenance records including pumping, inspection and evaluation reports. Ask your septic professional to also:

- Attach permit information, designer drawings and as-builts of your system, if they are available.
- Keep copies of all pumping records and other maintenance and repair invoices with this document.
- Review this document with your maintenance professional at each visit; discuss any changes in product use, activities or water-use appliances.

For a copy of the *Septic System Owner's Guide*, call 1-800-876-8636 or go to http://shop.extension.umn.edu/

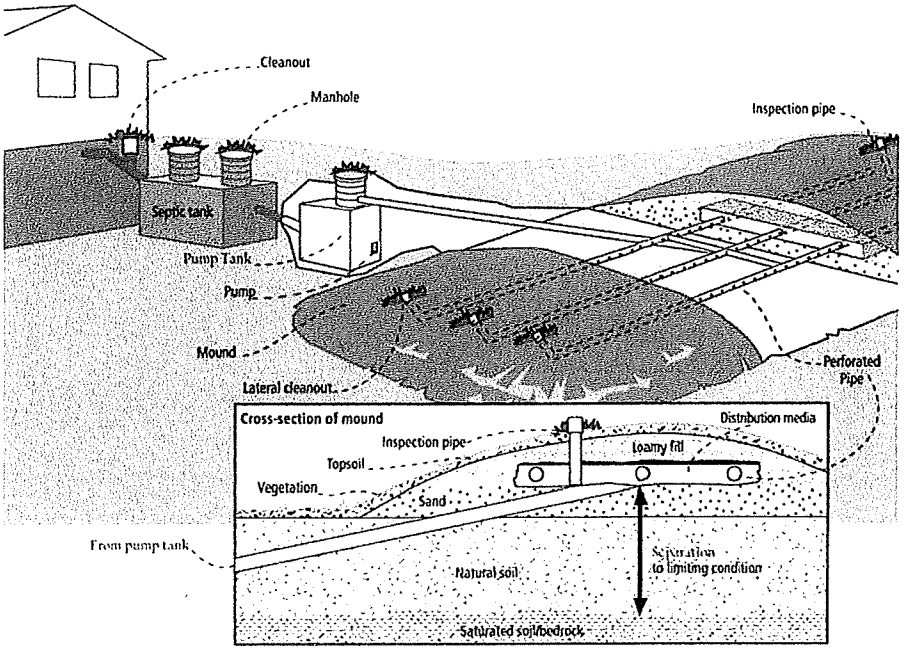
http://septic.umn.edu

Version 11/03/2010

UNIVERSITY OF MINNESOTA

Septic System Management Plan for Above Grade Systems

Your Septic System



Septic System Specifics

System Type: (•) I ( ) II ( ) III ( ) IV* ( ) V*

(Based on MN Rules Chapter 7080.2200 – 2400)

☐ System is subject to operating permit*

☐ System uses UV disinfection unit*

Type of advanced treatment unit _____

**Additional Management Plan required*

Dwelling Type

Number of bedrooms: 4

System capacity/ design flow (gpd): 600

Anticipated average daily flow (gpd): 300

Comments _____

Business? ____ What type? _____

Well Construction

Well depth (ft): To be drilled

☐ Cased well Casing depth: _____

☐ Other (specify): _____

Distance from septic (ft): _____

Is the well on the design drawing? (•) Y ( ) N

Septic Tank

☑ One tank *Tank volume:* 2250 *gallons*

Does tank have two compartments? (•) Y ( ) N

☐ Two tanks *Tank volume:* _____ *gallons*

☐ Tank is constructed of _____

☐ Effluent Screen *type*: Optional

☑ Pump Tank 500 gallons

☐ Effluent Pump *make/model*: _____

Pump capacity 40 GPM

TDH 14 Feet of head

☐ Alarm location Dosing tank

Soil Treatment Area (STA)

Mound/At-Grade area (width x length): 38 ft x 78 ft

Rock bed size (width x length): 10 ft x 50 ft

Location of additional STA: None

☐ Cleanouts or inspection ports

☐ Surface water diversions

☐ Additional STA not available

Homeowner Management Tasks

These operation and maintenance activities are your responsibility. Use the chart on page 6 to track your activities.

Identify the service intervals recommended by your system designer and your local government. The tank assessment for your system will be the shortest interval of these three intervals. Your pumper/maintainer will determine if your tank needs to be pumped.

System Designer: check every 24 months

Local Government: check every _____ months

State Requirement: check every 36 months

My tank needs to be checked every 24 months

Seasonally or several times per year

- *Leaks.* Check (listen, look) for leaks in toilets and dripping faucets. Repair leaks promptly.
- *Surfacing sewage.* Regularly check for wet or spongy soil around your soil treatment area. If surfaced sewage or strong odors are not corrected by pumping the tank or fixing broken caps, call your service professional. *Untreated sewage may make humans and animals sick.*
- *Alarms.* Alarms signal when there is a problem; contact your maintainer any time the alarm signals.
- *Lint filter.* If you have a lint filter, check for lint buildup and clean when necessary. Consider adding one after washing machine.
- *Effluent screen.* If you do not have one, consider having one added the next time the tank is cleaned.

Annually

- *Water usage rate.* A water meter can be used to monitor your average daily water use. Compare your water usage rate to the design flow of your system (listed on the next page). Contact your septic professional if your average daily flow over the course of a month exceeds 70% of the design flow for your system.
- *Caps.* Make sure that all caps and lids are intact and in place. Inspect for damaged caps at least every fall. Fix or replace damaged caps before winter to help prevent freezing issues.
- *Water conditioning devices.* See Page 5 for a list of devices. When possible, program the recharge frequency based on *water demand (gallons)* rather than *time (days)*. Recharging too frequently may negatively impact your septic system.
- *Review your water usage rate.* Review the Water Use Appliance chart on Page 5. Discuss any major changes with your pumper/maintainer.

During each visit by a pumper/maintainer

- Ask if your pumper/maintainer is licensed in Minnesota.
- Make sure that your pumper/maintainer services the tank through the manhole. (NOT though a 4" or 6" diameter inspection port.)
- Ask your pumper/maintainer to accomplish the tasks listed on the Professional Tasks on Page 4.

Professional Management Tasks

These are the operation and maintenance activities that a pumper/maintainer performs to help ensure long-term performance of your system. Professionals should refer to the O/M Manual for detailed checklists for tanks, pumps, alarms and other components. Call 800-322-8642 for more details.

- Written record provided to homeowner after each visit.

Plumbing/Source of Wastewater

- Review the Water Use Appliance Chart on Page 5 with homeowner. Discuss any changes in water use and the impact those changes may have on the septic system.
- Review water usage rates (if available) with homeowner.

Septic Tank/Pump Tanks

- *Manhole lid.* A riser is recommended if the lid is not accessible from the ground surface. Insulate the riser cover for frost protection.
- *Liquid level.* Check to make sure the tank is not leaking. The liquid level should be level with the bottom of the outlet pipe. (If the water level is below the bottom of the outlet pipe, the tank may not be watertight. If the water level is higher than the bottom of the outlet pipe of the tank, the effluent screen may need cleaning, or there may be ponding in the drainfield.)
- *Inspection pipes.* Replace damaged caps.
- *Baffles.* Check to make sure they are in place and attached, and that inlet/outlet baffles are clear of buildup or obstructions.
- *Effluent screen.* Check to make sure it is in place; clean per manufacturer recommendation. Recommend retrofitted installation if one is not present.
- *Alarm.* Verify that the alarm works.
- *Scum and sludge.* Measure scum and sludge in each compartment of each septic and pump tank, pump if needed.

Pump

- *Pump and controls.* Check to make sure the pump and controls are operating correctly.
- *Pump vault.* Check to make sure it is in place; clean per manufacturer recommendations.
- *Alarm.* Verify that the alarm works.
- *Drainback.* Check to make sure it is operating properly.
- *Event counter or run time.* Check to see if there is an event counter or run time log for the pump. If there is one, calculate the water usage rate and compare to the anticipated average daily flow listed on Page 2.

Soil Treatment Area

- *Inspection pipes.* Check to make sure they are properly capped. Replace caps that are damaged.
- *Surfacing of effluent.* Check for surfaced effluent or other signs of problems.
- *Lateral flushing.* Check lateral distribution; if cleanouts exist, flush and clean as needed.
- *Ponding.* Check for ponding. Excessive ponding in at-grade and mound beds indicates problems.

All other components – inspect as listed here:

Water-Use Appliances and Equipment in the Home

Appliance	Impacts on System	Management Tips
Garbage disposal	• Uses additional water. • Adds solids to the tank. • Finely-ground solids may not settle. Unsettled solids can exit the tank and enter the soil treatment area.	• Use of a garbage disposal is not recommended. • Minimize garbage disposal use. Compost instead. • To prevent solids from exiting the tank, have your tank pumped more frequently. • Add an effluent screen to your tank.
Washing machine	• Washing several loads on one day uses a lot of water and may overload your system. • Overloading your system may prevent solids from settling out in the tank. Unsettled solids can exit the tank and enter the soil treatment area.	• Choose a front-loader or water-saving top-loader, these units use less water than older models. • Limit the addition of extra solids to your tank by using a liquid or easily biodegradable detergents. • Install a ling filter after the washer and an effluent screen on your tank. • Wash only full loads. • Limit use of bleach-based detergents. • Think even – spread your laundry loads throughout the week.
2nd floor laundry	• The rapid speed of water entering the tank may reduce performance.	• Install an effluent screen in the septic tank to prevent the release of excessive solids to the soil treatment area. • Be sure that you have adequate tank capacity.
Dishwasher	• Powdered and/or high-phosphorus detergents can negatively impact the performance of your tank and soil treatment area. • New models promote "no scraping". They have a garbage disposal inside.	• Use gel detergents. Powdered detergents may add solids to the tank. • Use detergents that are low or no-phosphorus. • Wash only full loads. • Scrape your dishes anyways to keep undigested solids out of your septic system.
Grinder pump (in home)	• Finely-ground solids may not settle. Unsettled solids can exit the tank and enter the soil treatment area.	• Expand septic tank capacity by a factor of 1.5. • Include pump monitoring in your maintenance schedule to ensure that it is working properly. • Add an effluent screen.
Large bathtub (whirlpool)	• Large volume of water may overload your system. • Heavy use of bath oils and soaps can impact biological activity in your tank and soil treatment area.	• Avoid using other water-use appliances at the same time. For example, don't wash clothes and take a bath at the same time. • Use oils, soaps, and cleaners in the bath or shower sparingly.
Clean Water Uses	**Impacts on System**	**Management Tips**
High-efficiency furnace	• Drip may result in frozen pipes during cold weather.	• Re-route water into a sump pump or directly out of the house. Do not route furnace recharge to your septic system.
Water softener Iron filter Reverse osmosis	• Salt in recharge water may affect system performance. • Recharge water may hydraulically overload the system.	• These sources produce water that is not sewage and should not go into your septic system. • Reroute water from these sources to another outlet, such as a dry well, draintile or old drainfield. • When replacing consider using a demand-based recharge vs. a time-based recharge. • Check valves to ensure proper operation; have unit serviced per manufacturer directions
Surface drainage Footing drains	• Water from these sources will likely overload the system.	

Maintenance Log

Track maintenance activities here for easy reference. See list of management tasks on pages 3 and 4.

Activity	Date accomplished									
Check frequently:										
Leaks: check for plumbing leaks										
Soil treatment area check for surfacing										
Lint filter: check, clean if needed										
Effluent screen: if owner-maintained										
Check annually:										
Water usage rate (monitor frequency____)										
Caps: inspect, replace if needed										
Water use appliances – review use										
Other:										

Notes: _____

_____

Mitigation/corrective action plan: _____

_____

_____

_____

_____

"As the owner of this SSTS, I understand it is my responsibility to properly operate and maintain the sewage treatment system on this property, utilizing the Management Plan. If requirements in this Management Plan are not met, I will promptly notify the permitting authority and take necessary corrective actions. If I have a new system, I agree to adequately protect the reserve area for future use as a soil treatment system."

Property Owner Signature: _____ Date _____

Management Plan Prepared By: Tom Espersen Certification # C 4102

Permitting Authority: City of Cross Lake

From:	Mark Melby
To:	Cheryl; Heidi Lindgren; Ted Strand
Cc:	Jon Kolstad; Rob Hall; Jory Danielson; Tim Bray
Subject:	RE: July 20, 2021 DRT
Date:	Friday, July 16, 2021 7:45:58 AM
Attachments:	image001.png

Highway comments:
For the Bronce application – The highway department does not support variance requests for buildings not meeting right of setback requirements.

Mark Melby
Engineering Coordinator
Highway Department
Office - 218-822-2694
Cell - 218-839-6207
www.crowwing.us

Our Vision: Being Minnesota's favorite place.
Our Mission: Serve well. Deliver value. Drive results.
Our Values: Be responsible. Treat people right. Build a better future.

Let us know how we are doing: *Customer Service Survey.*

From: Cheryl <cstuckmayer@crosslake.net>
Sent: Wednesday, July 14, 2021 2:23 PM
To: Heidi Lindgren <heidi.lindgren@state.mn.us>; Ted Strand <publicwk@crosslake.net>; Mark Melby <Mark.Melby@crowwing.us>
Cc: Jon Kolstad <jkolstad@crosslake.net>
Subject: July 20, 2021 DRT

Good afternoon,

Please review the attachment(s). As always, any comments you would like to contribute to our meeting, please put in writing or present in person.

Mark, the first attachment is on the corner of Cty 16 & Gladick

Any commissioner that would like to attend contact Jon.

Cheryl

From: Brooke Silvernail <brookesil@outlook.com>
Sent: Tuesday, September 7, 2021 3:20 PM
To: crosslakepz@crosslake.net
Subject: Hathaway application

Importance: High

WE regretfully will not be in town when this meeting is scheduled to occur. We are totally against this project, size and requested setbacks. Don't you have any respect for what this does to our neighborhood? A four level house!!! The requested setbacks are not logical. The old house is already too close to the lake 54", not the 38" requested. What's the hardship? There is none to justify allowing it to be even closer than the old home. How can a four level house meet the height restriction of your ordinance. Come on, this is ridiculous. We all know that this will become a VRBO which we already have two on our little peninsula of 11 homes. These are ruining our neighborhood and making it a resort instead. This is not good for the hotel/resorts already in our City and surrounding areas. Allowing this much home on that little lot is insane and creates more of a hazard for us who own our homes here already. This large of a home means many more people living so close to a major highway too. It just doesn't make sense. Where's the storm water plan – just designating run off areas which are extremely close to the Flood Zone A which questions if they will work without running off into the lake. This is not enough area (even if it calculates out for 278 s.f. for a lot this small with so much home and garage plus a water oriented accessory structure. Nothing is included for the runoff from Gladick Lane and Highway 16 which drain into this lot too. There is not nearly enough parking for a home this size either. You know darn well that they will be parking on the grass or on our street or on Highway 16. How many bedrooms (there is no mention of this)? What's that calculate to how many people can stay here? Please don't approve this project as it's already a substandard lot with a home now proposed to be three times the size of what was there and 50% more impervious coverage. This is far and above what makes sense and their requests for variances do not prove a hardship.

Brooke & Laurie Silvernail
13086 Gladick Lane
Crosslake, MN 56442

PS: At least send out a site plan in the future that is larger in size (at least double in size) so you can read what it says. It's so small you need a magnifying glass. Thank you.

Sent from Mail for Windows 10

Variance Application
Planning and Zoning Department
13888 Daggett Bay Road, Crosslake, MN 56442
218.692.2689 (Phone) 218.692.2687 (Fax) www.cityofcrosslake.org

Receipt Number: 969548 Permit Number: 210173V

Property Owner(s): Real Deal LLC + Dale Hathaway

Mailing Address: 13459 Island View Rd, Crosslake MN 56442

Site Address: 13192 Gladick Lane, Crosslake, MN 56442

Phone Number: 612-598-8917

E-Mail Address: merryb65@gmail.com

Parcel Number(s): 14170610 + 14170611

Legal Description: Gladick First Addition Lot 3 & 2 Block 1

Sec 17 Twp 137 Rge 26 ☐ 27 ☒ 28 ☐

Lake/River Name: Rush

Do you own land adjacent to this parcel(s)? ____ Yes X No

If yes list Parcel Number(s) ____

Authorized Agent: na

Agent Address: -

Agent Phone Number: -

Variances
(Check applicable requests)

- ☑ Lake/River Setback — 38 house 75' required 4 level Home
- ☑ Road Right-of-Way Setback — 11.5 house 35' required
- ☐ Bluff Setback
- ☐ Side Yard Setback
- ☐ Wetland Setback
- ☐ Septic Tank Setback
- ☑ Septic Drainfield Setback — 35' Lake 75' required
- ☐ Impervious Coverage
- ☐ Accessory Structure
- ☐ Building Height
- ☐ Patio Size
- ☐ _____
- ☐ _____

Signature of Property Owner(s) MK [signature] Date 8-9-21

Signature of Authorized Agent(s) — Date ____

- All applications must be accompanied by a signed Certificate of Survey
- Fee $500 for Residential and Commercial Payable to "City of Crosslake" App $500 + Copies $6.00 = $506.00
- No decisions were made on an applicant's request at the DRT meeting. Submittal of an application after DRT does not constitute approval. Approval or denial of applications is determined by the Planning Commission/Board of Adjustment at a public meeting as per Minnesota Statute 462 and the City of Crosslake Land Use Ordinance.

For Office Use:
Application accepted by C. S. Date 8-9-2021 Land Use District SD

Lake Class GD Septic: Compliance Design SSTS Design Submitted Installation ____

Practical Difficulty Statement

Pursuant to City of Crosslake Ordinance Article 8 – Variances may be granted when it is found that strict enforcement of the Land Use Ordinance will result in a "practical difficulty".

Please answer the following questions regarding the "practical difficulty" for your variance request.

1. Is the Variance request in harmony with the purposed and intent of the Ordinance?
   Yes ☐ No ☐
   Why:
   Defer to the Planning Commission/Board of Adjustment

2. Is the Variance consistent with the Comprehensive Plan?
   Yes ☐ No ☐
   Why:
   Defer to the Planning Commission/Board of Adjustment

3. Is the property owner proposing to use the property in a reasonable manner not permitted by the Land Use Ordinance?
   Yes ☒ No ☐
   Why: Yes, the property is an irregular lake lot with a very small building envelope. Because of the lot building envelope there is no other location available to build the structure without encoaching on the lake.

4. Will the issuance of a Variance maintain the essential character of the locality?
   Yes ☒ No ☐
   Why: The existing structure is an abandonded house and is an eyesore. The new structure will beautify the neighboorhood and will be consistent with the property next door which is a beach-style home.

5. Is the need for a Variance due to circumstances unique to the property and not created by the property owner?
   Yes ☒ No ☐
   Why: Yes, the property contains an abandoned house + shed, it is falling down and is an earsore.

6. Does the need for a Variance involve more than economic considerations?
   Yes ☒ No ☐
   Why: Yes, the existing structne is uninhabitable, there are holes in the roof and the entire structure is unstable.

City of Crosslake Planning Commission/Board of Adjustment

FINDINGS OF FACT

SUPPORTING / DENYING A VARIANCE REQUEST

A Variance may be granted by the Planning Commission/Board of Adjustment when it is found that strict enforcement of the Land Use Ordinance will result in a "practical difficulty" according to Minnesota Statute Chapter 462. The Planning Commission/Board of Adjustment should weigh each of the following questions to determine if the applicant has established that there are "practical difficulties" in complying with regulations and standards set forth in the Land Use Ordinance.

1. Is the Variance request in harmony with the purposes and intent of the Ordinance?
   Yes No
   Why:

2. Is the Variance consistent with the Comprehensive Plan?
   Yes No
   Why:

3. Is the property owner proposing to use the property in a reasonable manner not permitted by the Land Use Ordinance?
   Yes No
   Why:

4. Will the issuance of a Variance maintain the essential character of the locality?
Yes No
Why:

5. Is the need for a Variance due to circumstances unique to the property and not created by the property owner?
Yes No
Why?

6. Does the need for a Variance involve more than economic considerations?
Yes No
Why: