

CITY OF CROSSLAKE

PLANNING COMMISSION/BOARD OF ADJUSTMENT

June 26, 2020

9:00 A.M.

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

PUBLIC HEARING NOTICE

Applicant: Robert W & Barbara J Eng

Authorized Agent: Baratto Brothers

Site Location: 37241 Twin Bay Drive, Crosslake, MN 56442 on Rush Lake-GD

Variance for:

- Lake setback of 46 feet where 75 feet is required to proposed addition
- Lake setback of 59 feet where 75 feet is required to proposed drainfield
- Side yard setback of 5 feet where 10 feet is required to proposed drainfield
- Dwelling setback of 17 feet where 20 feet is required to proposed drainfield
- Lake setback of 45 feet where 75 feet is required to proposed septic tank

To construct:

- 559 square foot addition where 528 square feet require a variance
- 348 square foot deck and steps
- 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: Robert W & Barbara J Eng

Parcel Number(s): 14070613

Application Submitted: May 11, 2020

Action Deadline: July 9, 2020

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: Baratto Brothers

Variance for:

1. Lake setback of 46 feet where 75 feet is required to proposed addition
2. Lake setback of 59 feet where 75 feet is required to proposed drainfield
3. Side yard setback of 5 feet where 10 feet is required to proposed drainfield
4. Dwelling setback of 17 feet where 20 feet is required to proposed drainfield
5. Lake setback of 45 feet where 75 feet is required to proposed septic tank

To construct:

- 559 square foot addition where 528 square feet require a variance
- 348 square foot deck and steps
- Septic system

Current Zoning: Shoreland District

Existing Impervious Coverage:

13.8%

Proposed Impervious Coverage:

16.0%

- A stormwater management plan was submitted with the variance application
- A septic design has been approved contingent on the approval of this variance request

Development Review Team Minutes held on 4-14-2020:

- Property is located on Rush Lake at 37241 Twin Bay Drive with a lake setback of 75 feet
- The proposed additions to be 46' from the OHW
- Additions to the west and north to include, deck, main level, lower level and connection to the existing auxiliary cottage-no proposed change to existing structures per discussion
- Elevation for Rush Lake of 1232.5 to be met – a condition may be placed for a supplemental form
- All setbacks shall be measured to the vertical side of the structure. No part of the structure, such as eaves, can overhang or reduce such setback by more than three feet (Sec. 26-308).
- Setbacks on structures where the eaves exceed 36" shall be measured from the drip line.

- Impervious maximum of 25% and if impervious exceeds 20% a Shoreline Rapid Assessment Model form will be completed; discussion best guess at 17% after proposal
- Your parcel is located within a plat and/or an organization that may have restrictions, you would need to verify those restrictions and clarify that your request is approved by that organization or allowed in the plat
- Design and implement a stormwater management plan (gutters, berm & rain gardens) to update any existing plan, which is required with all variance applications for the entire parcel per Article 8, section 26-222, (2), 1). When wetland is being used it must be filtered to drinking standards before it can flow into any wetland
- A compliant septic compliance inspection is on file dated 5-25-16
- An application will need a septic design submitted to Crow Wing County for approval
- Wetland Delineation is a requirement for a variance or a no wetland statement/letter
- A grade and elevation illustration along with a cut and fill calculation is required-possible spoils may need to be removed from the site
- Discussion on application requirements, procedure, schedule and the requirements/need for a complete application packet by the deadline date, landscaping is a separate permit
- 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 compliance inspection and/or a septic design if project requires
5. A complete Variance application with a \$500.00 public hearing fee

Parcel History:

- Anderson's Twin Bay Shores established in 1967
- October 1991 – Variance of 5 foot from cabin and guest cabin
- November 1991 – 29x29 Basement under existing home
- April 1992 – Update septic
- March 1993 – 24x26 Garage
- January 2004 – Replace roof – change in pitch, no increase in living area
- September 2006 – Reconstruct existing 280 sq ft guest home
- July 2011 – Removal of 6 trees
- June 2016 – Walkway, water-oriented accessory structure (WOAS), and dirt moving

Agencies Notified and Responses Received:

County Highway Dept: N/A

DNR: No comments were received as of 6-15-2020

City Engineer: N/A

Lake Association: No comments were received as of 6-15-2020

Township: N/A

Crosslake Public Works: No comments were received as of 6-15-2020

Crosslake Park, Recreation & Library: N/A

Concerned Parties: Becker email opposed received 6-9-2020

POSSIBLE MOTION:

To approve/table/deny the variance to allow:

- Lake setback of 46 feet where 75 feet is required to proposed addition
- Lake setback of 59 feet where 75 feet is required to proposed drainfield

- Side yard setback of 5 feet where 10 feet is required to proposed drainfield
- Dwelling setback of 17 feet where 20 feet is required to proposed drainfield
- Lake setback of 45 feet where 75 feet is required to proposed septic tank

To construct:

- 559 square foot addition where 528 square feet require a variance
- 348 square foot deck and steps
- Septic system

As shown on the certificate of survey dated 5-19-2020



CERTIFICATE OF SURVEY

LOT 14 AND PART OF LOT 13, BLOCK 1, ANDERSON'S TWIN BAY SHORES,
SECTION 7, TOWNSHIP 137 NORTH, RANGE 27 WEST,
CROW WING COUNTY, MINNESOTA

LEGAL DESCRIPTION PER DOCUMENT NUMBER A-847434

All of Lot Fourteen (14), Block One (1), and that part of Lot Thirteen (13), Block One (1), Anderson's Twin Bay Shores, lying East of the following described line: Beginning at the northwest corner of said Lot 13; thence running South 13 degrees 23 minutes 20 seconds East 174 feet more or less to the northerly shore of the Pine River Channel overflow and there terminating. For the purpose of this description, the North line of said Lot 13 is considered to be due East and West line.

together with all hereditaments and appurtenances belonging thereto.

IMPERVIOUS CALCULATIONS

EXISTING	IMPERVIOUS AREA (sq.ft.)	Net Area (sq.ft.)	Percent Impervious (sq.ft.)
House	799	18,790	4.3%
Guest Cabin	292	18,790	1.6%
Garage	647	18,790	3.4%
Pavers & Concrete	856	18,790	4.6%
Total	2,594	18,790	13.8%

IMPERVIOUS CALCULATIONS

PROPOSED	IMPERVIOUS AREA (sq.ft.)	Net Area (sq.ft.)	Percent Impervious (sq.ft.)
House	799	18,790	4.3%
Guest Cabin	292	18,790	1.6%
Garage	647	18,790	3.4%
Exist. & Proposed Conc. & Pavers	718	18,790	3.8%
Proposed Addition	559	18,790	3.0%
Total	3,015	18,790	16.0%

RUN OFF CALCULATIONS

Total Impervious Surface Area (from table above)	3,015 sq. ft.	X	0.0833 ft.	=	251 cu. ft.
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PROPOSED RUN OFF AREA

TOP SURFACE AREA = 363 SQ. FT.
BOTTOM SURFACE AREA = 147 SQ. FT.
1' DEEP WITH 3:1 SIDE SLOPES
TOTAL RUN OFF STORAGE PROPOSED = 255 CU. FT.

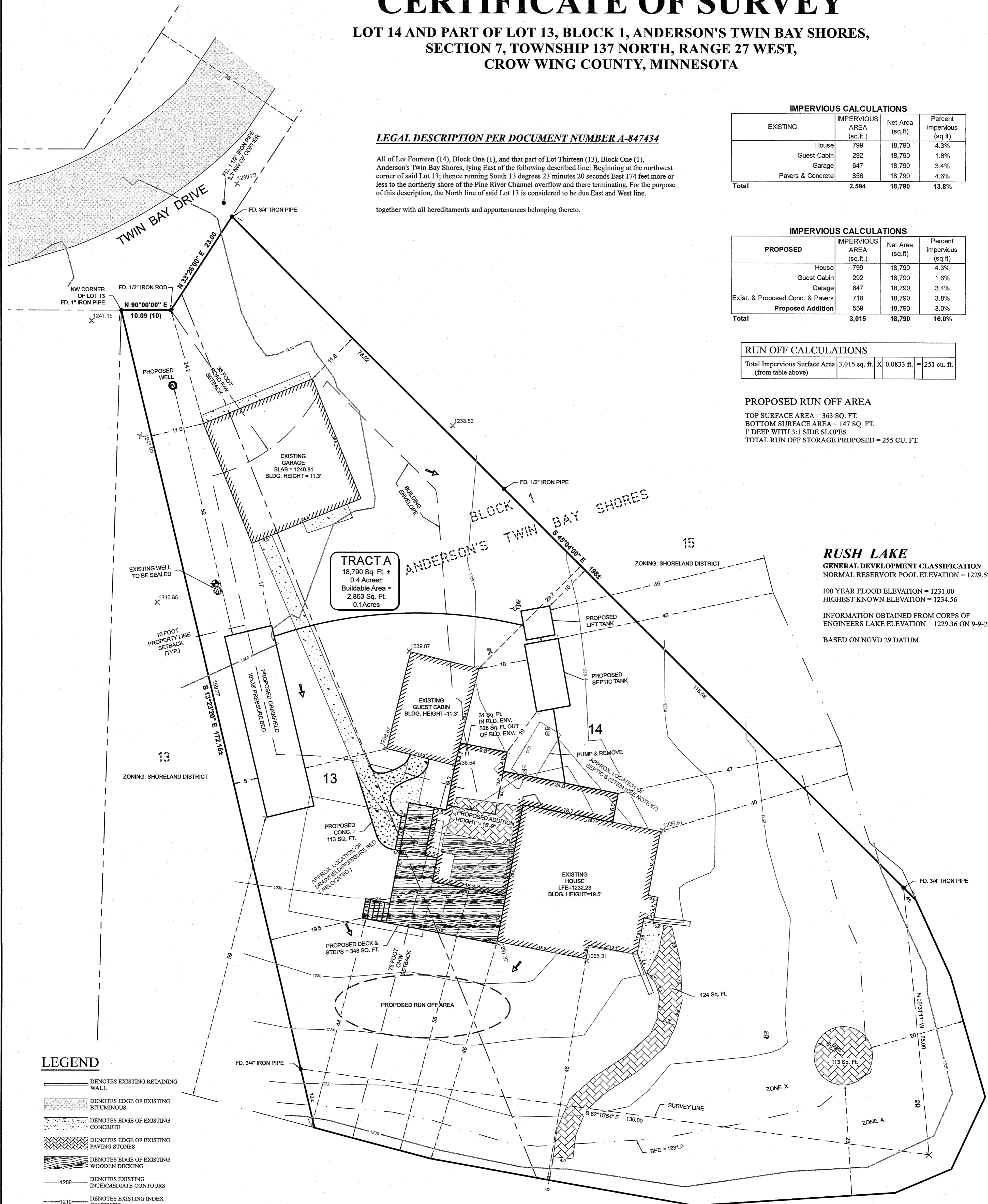
RUSH LAKE

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 = 1229.36 ON 9-9-2019

BASED ON NGVD 29 DATUM



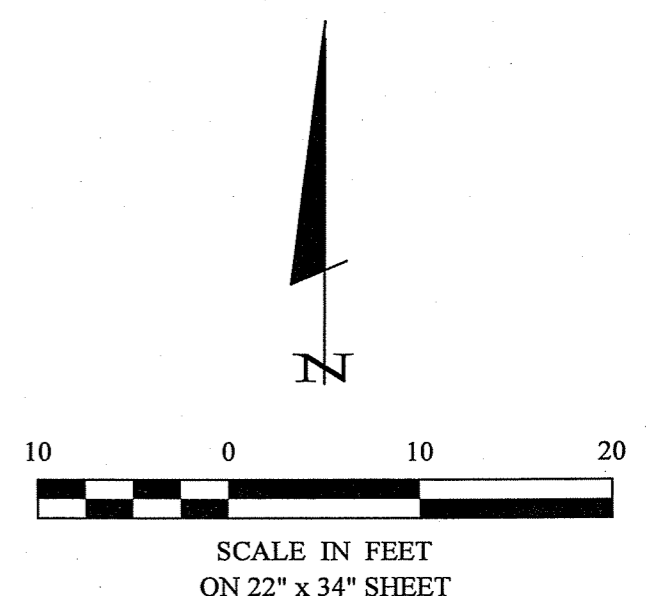
LEGEND

- DENOTES EXISTING RETAINING WALL
- DENOTES EDGE OF EXISTING BITUMINOUS
- DENOTES EDGE OF EXISTING CONCRETE
- DENOTES EDGE OF EXISTING PAVING STONES
- DENOTES EDGE OF EXISTING WOODEN DECKING
- DENOTES EXISTING INTERMEDIATE CONTOURS
- DENOTES EXISTING INDEX CONTOURS
- DENOTES SPOT ELEVATION (EXISTING GRADE)
- DENOTES EXISTING UTILITY POLE
- ⊖ DENOTES EXISTING ELECTRIC METER
- ⊕ DENOTES EXISTING ELECTRIC OUTLET
- ⊙ DENOTES EXISTING WELL
- ⊖ DENOTES EXISTING HOSE BIB
- ⊙ DENOTES EXISTING SEPTIC VENT, SEPTIC CLEANOUT, & SEPTIC TANK LID
- ⊙ DENOTES EXISTING SEPTIC LIFT STATION
- × DENOTES CALCULATED POSITION
- ⊕ BENCHMARK: HIGH POINT OF WELL
ELEV. = 1241.06
- DENOTES MONUMENT FOUND

NOTES:

- Contour interval as shown = 2 foot. Based on NGVD 29 datum. Contours shown have been obtained using standard survey topographic methodologies. Field located on 9-9-2019.
- Zoning for subject tract = "Shoreland District".
- There are no bluffs within surveyed property.
- 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.
- Parcel ID of subject parcel: 14070613.
- The property address of subject parcel: 37241 Twin Bay Drive.
- Approximate location of septic system per sketch prepared by Martin Joyce Septic Service, LLC.
- Approximate location of proposed septic system per sketch prepared by Martin Joyce Septic Service, LLC.
- No wetlands were found on April 17, 2020 at the site per Ben Meister, Meister Environmental, LLC. MN Certified Wetland Delineator #1031.

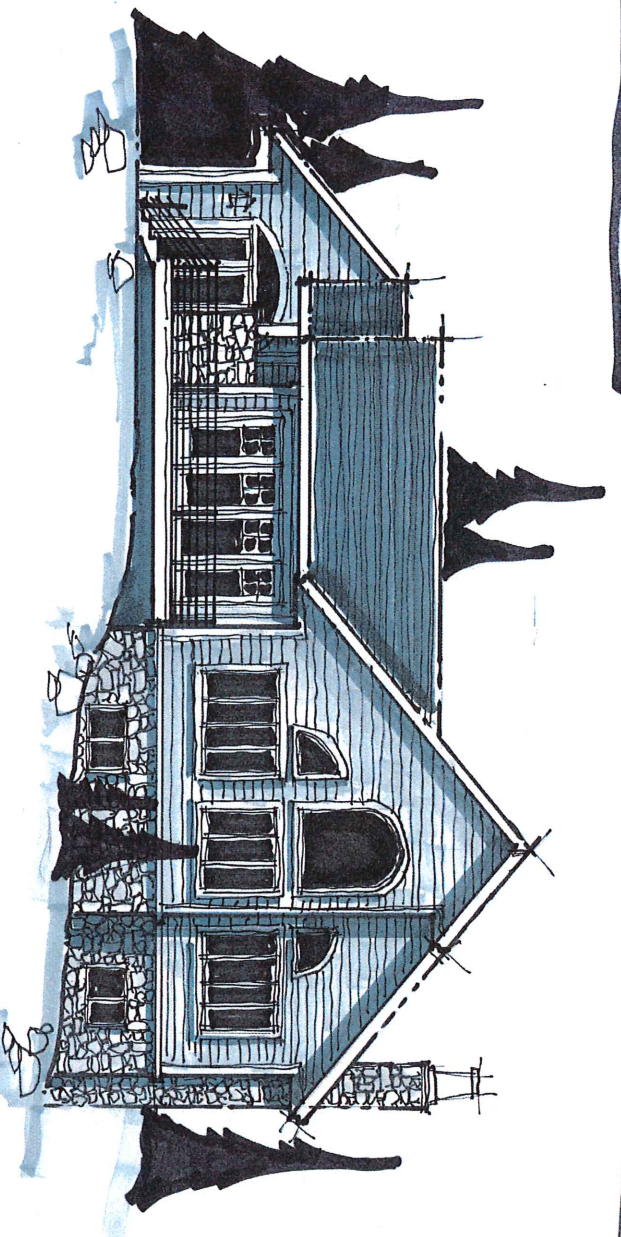
ORIENTATION OF THIS BEARING SYSTEM IS BASED ON THE NORTH LINE OF LOT 13 TO HAVE AN ASSIGNED BEARING OF N 90°00'00" E.



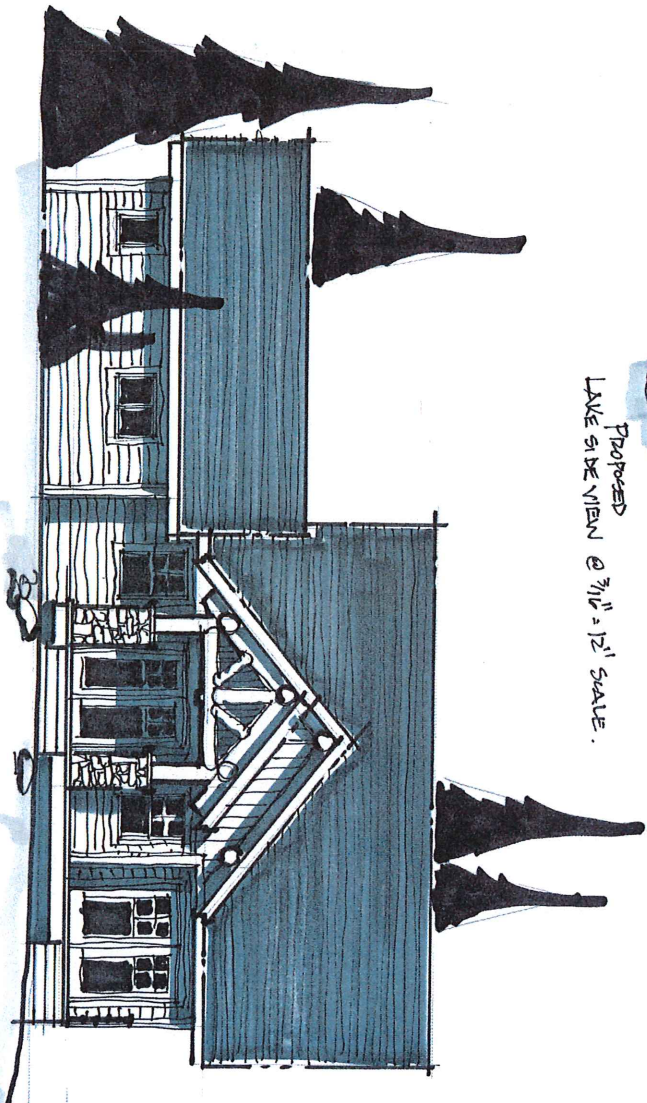
CERTIFICATE OF SURVEY	PROJECT MANAGER:	PROJECT No.:	DATE:	REVISIONS		I HEREBY CERTIFY THAT THIS SURVEY, PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.
	CMH	19223-1	5-11-2020	DATE	DESCRIPTION	
Robert Eng 7894 Ithaca Lane North Maple Grove, MN 55311	CHECKED BY:	FILE NAME:	SCALE:	5-11-2020	Revised per City Comments	RJF
	CMH	C19223.dwg	HORZ. 1"=10'	5-19-2020	Revised dim. of tanks to take	RJF
	DRAWN BY:	FIELD BOOK:	VERT. NONE			
	RJF	BOOK 454 PG. 44				
						Cynthia M. Hidde CYNTHIA M. HIDDE PLS#44881 DATE 5-19-2020 LIC. NO. 44881



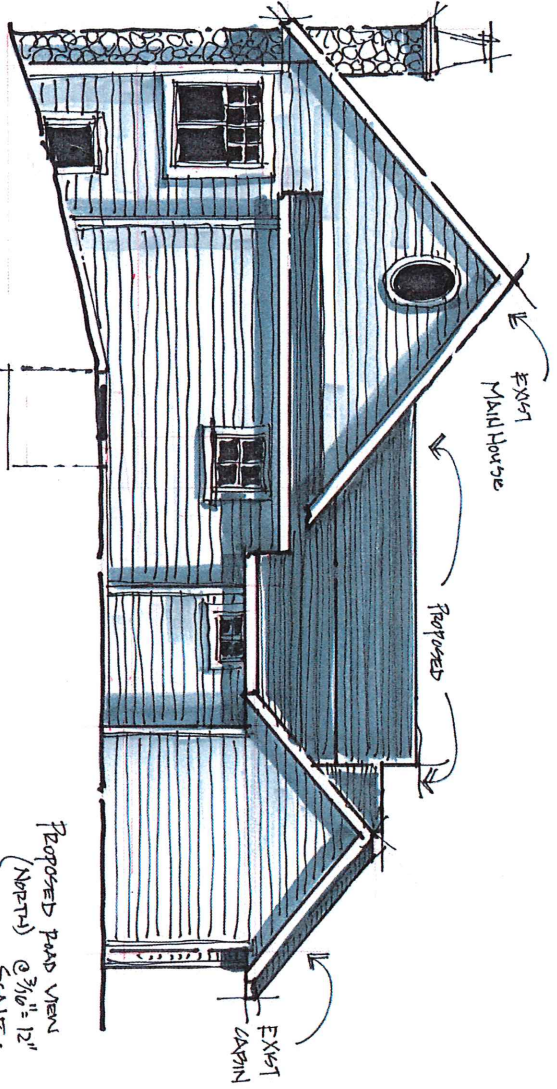
30206 Rasmussen Road
Suite 1
P. O. Box 874
Pequot Lakes, MN 56472
218-568-4940
www.stonemarksurveying.com



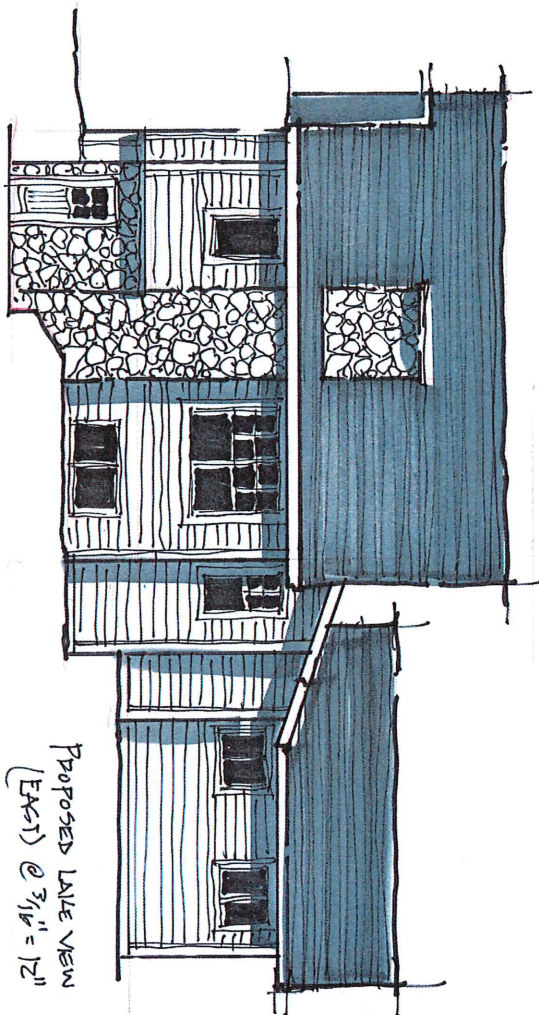
PROPOSED
LAKE SIDE VIEW @ 3/16" = 12' SCALE.



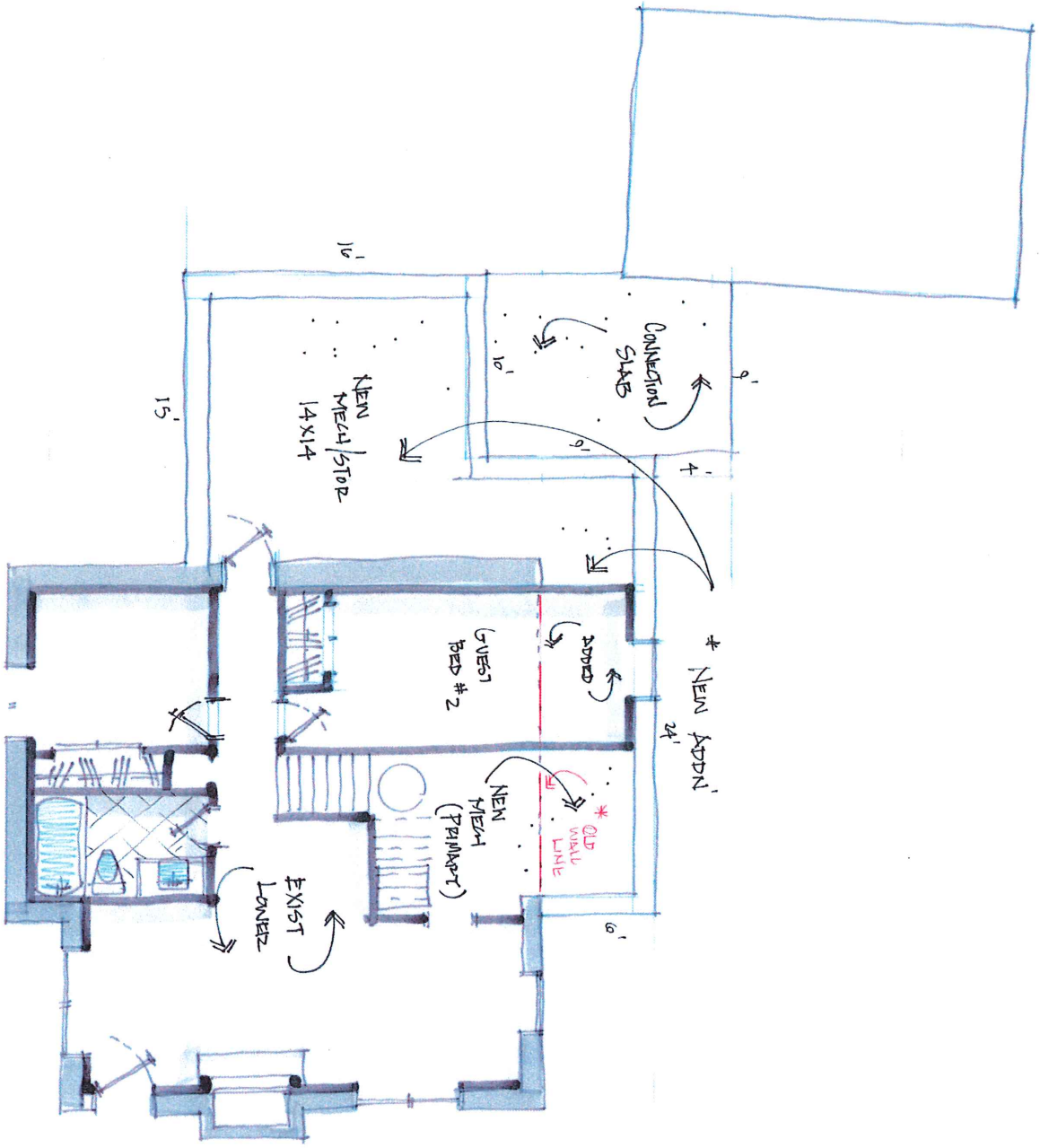
PROPOSED EXTERIOR VIEW @ 3/16" = 12' SCALE.



PROPOSED PAID VIEW
(NORTH)
@ 3/16" = 12"
SCALE.



PROPOSED LAKE VIEW
(EAST) @ 3/16" = 12"



PROPOSED LANIER
 FLOOR @ 1/4" = 12"
 EXIST # 659
 ADDED FINISHED # 32
 ADDED UNFINISHED # 326

Bethany Soderlund

From: Greg Kossan <kossan@brainerd.net>
Sent: Monday, May 18, 2020 8:24 PM
To: Bethany Soderlund
Subject: Re: Eng Septic Design

Hi Bethany, Eng design is approved assuming that variances of DF to lake from 75 Ft to 60 ft, DF to property line 10 ft to 5 ft, DF to cabin 20 ft to 10 ft, and tanks to lake 75 ft to 45 ft. the paper work for the variances was not included.
Greg Kossan

New Outlook Express and Windows Live Mail replacement - get it here:
<http://www.oeclassic.com/>

----- Original Message -----

From: Bethany Soderlund <Bethany.Soderlund@crowwing.us>
To: 'kossan@brainerd.net' <kossan@brainerd.net>
Sent: 5/18/2020 2:55:15 PM
Subject: Eng Septic Design

Greg,

See attached septic design for Robert Eng.

Thank you,

Bethany Soderlund
Environmental Services Specialist

Land Services Department
322 Laurel Street, Suite 15
Brainerd, MN 56401
Office: (218) 824-1010
Direct (218) 824-1024
www.crowwing.us

Excellent Customer service is our top priority. Please let me know if I was helpful!

[Land Services Customer Survey](#)

The County of Crow Wing does NOT perform legal or abstracting services, nor do we certify to any search results. Any information provided is for courtesy/reference purposes only and does NOT carry any warranties, including fitness for particular use. This email message, including any attachments, is for the sole use of the intended recipients and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by email and destroy all copies of the original message.

Crow Wing County Trench/Pressure Bed Design

Property Owner: Robert & Barbara Eng

Date: 4/17/2020

Mailing Address: 7894 Ithaca Lane N

City: Maple Grove

State: MN

Zip: 55311

Home Phone Number: Eric Carder

Cell: 218-820-4060

Site Address: 37241 Twin Bay Dr

City: Crosslake

State: MN

Zip: 56442

Driving directions if no address issued:

COUNTY HAS VOIDED THEIR APPROVAL UNTIL AFTER THE VARIANCE HEARING PER EMAIL 5-26-2020 - on file

APPROVED VOID APPROVAL
By Greg Kossan at 8:54 am, May 19, 2020

Legal Description: All of Lot 14 Block 1 Anderson's Twin Bay Shores

Sec: 7 Twp: 137 Range: 27 Twp Name: Crosslake

Parcel Number: 14070613

Lake/ River: Whitefish

Lake/River Classification: GD

Flow Data

Number of Bedrooms: 3

Dwelling Classification: I

System Type: I

GPD: 450

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

Wells

Deep Well: Proposed and Existing

Shallow Well: None

Wells to be sealed (if applicable)? Existing deep well.

Setbacks

Tank(s) to: Well +50

House 10

Property Line 10

Drainfield to: Well 50

House 10

Property Line 5

Sewer Line to well: +50

Air Test: No

w/ Variance

Additional System Notes and Information: NEW SSTS

Need variances approved for the system to fit.

Designer Name: Martin Joyce

License Number: 2129

Address:

City:

State:

Zip:

Home Phone Number:

Cell: 218-820-2621

E-Mail Address: joycem@brainerd.net

I hereby certify that I have completed this work in accordance with all applicable requirements.

Designer Signature: 

Date: 4/17/2020

Crow Wing County Trench/Pressure Bed Design

Property Owner: Robert & Barbara Eng

Date: 4/17/2020

Designer's Initials:

Tank Sizing

- A. Septic Tank Capacity: 2250 Gallons
 Tank Type: 2 Compartments Filter: Yes
 Garbage Disposal/Basement Lift Station: Disposal and Lift
- B. Pump Tank Capacity: 500 Gallons (7080.2100)
 a. Alarm Type: Electric

Septic Tank Capacity		
Bedrooms	Minimum	GD/BL
5 or less	1,500	2,250
6 or 7	2,000	3,000
8 or 9	2,500	3,750

Soils

- C. Depth to Restricting Layer: 6ft.
 D. Native SSF: .83
 (Perc. Rate [Optional] MPI)

Enter GPD next to the type of system

Rock Trenches

- E. 6 in. Trench Depth $GPD \times D = 0.0sq. ft.$ Cubic Yards of Rock: 0 yds³
 F. 12 in. Trench Depth $GPD \times D \times .8 = 0.0sq. ft.$ Cubic Yards of Rock: 0 yds³
 G. 18 in. Trench Depth $GPD \times D \times .66 = 0.0sq. ft.$ Cubic Yards of Rock: 0 yds³
 H. 24 in. Trench Depth $GPD \times D \times .6 = 0.0sq. ft.$ Cubic Yards of Rock: 0 yds³
 I. Divide (E-H) by Trench Width for lineal feet: $0.0 \div =$


Chamber Trenches

- J. Brand: Dimensions of one chamber (L x W): ft. x ft.
 K. 6-11 in. Chamber Depth $GPD \times D = 0.0sq. ft.$
 L. 12 in. Chamber Depth $GPD \times D \times .8 = 0.0sq. ft.$
 M. Select from (K-L) if installing Chamber Trenches: 0.0
 N. Divide (M) by Trench Width for lineal feet: $0.0 \div 0 =$ Lineal Feet
 O. Total Chambers Needed (**Round Up**): Chambers

Seepage/Pressure Beds

- P. Seepage Bed $GPD \times D \times 1.5 = 0.0sq. ft.$
 a. Bed Dimensions ft. x ft.
 b. Cubic Yards of Rock Bed Length x Bed Width x Rock Depth ft. $\div 27 = 0 yds^3$
- Q. Pressure Bed $450 GPD \times D = 373.5sq. ft.$
 a. Bed Dimensions 10ft. x 38ft.
 b. Cubic Yards of Rock Bed Length x Bed Width x Rock Depth $1ft. \div 27 = 14 yds^3$

Additional System Notes and Information:

 NEED VARIANCES FOR DF TO LAKE, DF TO SIDEYARD, DF TO CABIN, AND TANKS TO LAKE.

Crow Wing County Trench/Pressure Bed Design

Property Owner: Robert & Barbara Eng
Date: 4/17/2020

Designer's Initials:

Determine Pump Capacity

1) Gravity Distribution Pump Capacity Range: 10 - 45 GPM

*Skip to Pump Head Requirements if pumping to gravity

2) Pressure Distribution:

- a) Number of laterals: 3
- b) Lateral Size: 1.5in.
- c) Perforation spacing: 3ft.
- d) Check Table 4 to see the maximum number of perforations per lateral.

3) Lateral Length (choose):

- a) End manifold: rock bed length: 38 - 2 ft. = 36ft.
- b) Center manifold: rock bed length /2: - 1 ft. = -1ft.
- c) Choose 3a or 3b: 36ft.

4) Total Perforation Determination:

- a) (3c): 36ft. ÷ (2c): 3ft. + 1 = 13 Perforations / Lateral
- b) (4a): $13 \times (2a): 3 = 39$ Total Number of Perforations
- c) Select perforation discharge from Table 1 = .74 GPM/Perf.
- d) (4b): $39 \times (4c): 0.74 \text{ GPM/Perf.} = 29.4 \text{ GPM}$

PUMP HEAD REQUIREMENTS

5) Elevation difference:

- a) Elevation difference between pump and point of discharge 8ft.
- b) If pumping to a pressure distribution system, (5a) + 5 = 13ft.
- c) Choose 5a if pumping to gravity or 5b for pressure: 13ft.

6) Friction loss:

- a) Select a value from Table 2: 1.55ft. / 100 ft. of pipe
- b) Pipe length to drainfield: 60ft. \times 1.25 = 75ft.
- c) (6a): $1.55 \times (6b): 75 \div 100 = 1.16$ Total Friction Loss

7) Drainback:

- a) Actual Pipe length 60ft. \times .17 gal/ft. (Table 3) = 10.2 gal

8) (5c): 13ft. + (6c): 1.16ft. = 14.16 Total Head Required

9) Minimum Pump Size 29.4 GPM (4d) & 14ft. of dynamic head (8)

Ft. of Head	7/32" Perf	1/4" Perf
1.0	0.56	0.74
2.0	0.80	1.04

Use 1.0 for single homes, 2.0 for everything else

Flow (GPM)	1.5"	2"	3"
20	2.47	0.73	0.11
25	3.73	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

Pipe Diameter	Gal/Ft.
1.25 in.	0.078
1.5 in.	0.11
2.0 in.	0.17

Perf. Spacing	1.25" Pipe	1.5" Pipe	2" Pipe
2.5 ft.	14	18	28
3 ft.	13	17	26
3.3 ft.	12	16	25
4 ft.	11	15	23
5 ft.	10	14	22

Crow Wing County Trench/Pressure Bed Design

Property Owner: Robert & Barbara Eng

Date: 4/17/2020

Designer's Initials:

Please record the depths of all horizons, redoximorphic features, restricting layers, and saturated soils. Include all chroma and hue values.

#1 Proposed Site

Depth (in.)	Texture	Color
0-6	Sandy Loam	10YR 3/2
6-18	Loamy Sand	10YR 4/4
18-72	Sand	10YR 5/4

#1 Alternate Site

Depth (in.)	Texture	Color

#2 Proposed Site

Depth (in.)	Texture	Color

#2 Alternate Site

Depth (in.)	Texture	Color

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

Description of Soil Treatment Areas

	Proposed Site		Alternate Site	
	Proposed #1	Proposed #2	Alternate #1	Alternate #2
Disturbed Areas?	No			
Compacted Areas?	No			
Flooding Potential?	No			
Run on Potential?	No			
Limiting Layer Depth	Proposed #1 72"	Proposed #2	Alternate #1	Alternate #2
Slope % and Direction	1% South			
Landscape Position	Flat			
Vegetation Types	Lawn/Pines			
Soil Texture	Sand			
Soil Sizing Factor	0.83		Select One	

Martin Joyce Septic Service, LLC

27604 County Road 3, Merrifield, MN 56465

Septic System Management Plan

Property Owner:	Robert & Barbara Eng	Phone:		Date:	4/17/2020
Mailing Address:	7894 Ithaca Lane N	City:	Maple Grove	Zip:	55311
Site Address:	37241 Twin Bay Dr	City:	Crosslake	Zip:	56442

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 service provider.

System Designer: check every _____ months
Local Government: check every _____ months
State Requirement: check every 36 months

My system needs to be checked
every 36 months

Homeowner Management Tasks (performed monthly unless otherwise stated)

Leaks - Check (look,listen) for leaks in toilets and dripping faucets. Repair leaks promptly

Surfacing sewage - Regularly check for wet or spongy soil around your soil treatment area.

Effluent filter - Inspect and clean twice a year or more

Alarms - Alarm signal when there is a problem: contact Service Provider any time an alarm signals

Event counter or water meter - Monitor your average daily water use (if it applies)

Professional Management Tasks

Check and clean the in-tank effluent filter

Check the sludge/scum layer levels in all septic tanks

Recommend if tank should be pumped

Pump all compartments of septic tank at least every 36 months

Check inlet and outlet baffles

Clean drainfield laterals (if it applies)

Check the drain field effluent levels in the rock layer

Check the pump and alarm system functions (if it applies)

Check wiring for corrosion and function (if it applies)

Check dissolved oxygen and effluent temperature in tank

Provide home owner with list of results and any action to be taken

Replacement system for this residence, a secondary site has not been identified.

" 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: _____

Designer Signature:  _____ Date: _____

Permitting Authority Signature: _____ Date: _____

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]

D78B--Graycalm-Grayling-Meehan complex, 1 to 8 percent slopes

Graycalm

Extent: 15 to 50 percent of the unit
Landform(s): rises on outwash plains
Slope gradient: 2 to 8 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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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

Meehan

Extent: 23 to 35 percent of the unit
Landform(s): rises on outwash plains
Slope gradient: 1 to 3 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer): .10
Land capability, nonirrigated: 4w
Hydric soil: no
Hydrologic group: A/D
Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	Loamy sand	rapid	0.71 to 0.85 in	3.5 to 7.3
Bw -- 7 to 28 in	Sand	very rapid	1.25 to 2.30 in	3.5 to 6.5
C -- 28 to 79 in	Coarse sand	very rapid	1.02 to 3.56 in	3.5 to 7.3

60f9

Map Unit Description (MN)

Crow Wing County, Minnesota

D78B--Graycalm-Grayling-Meehan complex, 1 to 8 percent slopes

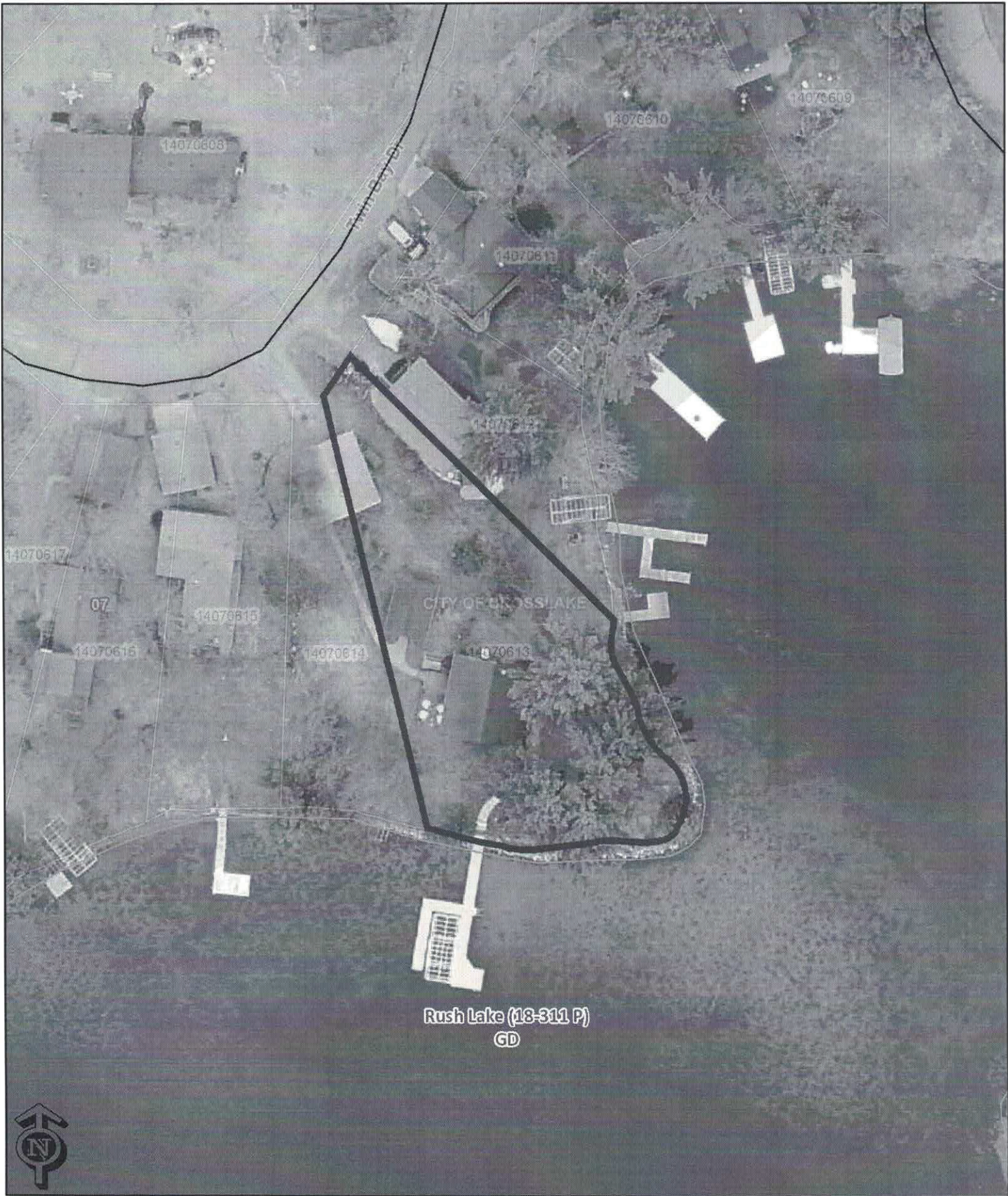
Grayling

Extent: 25 to 40 percent of the unit
 Landform(s): rises on outwash plains
 Slope gradient: 2 to 8 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.



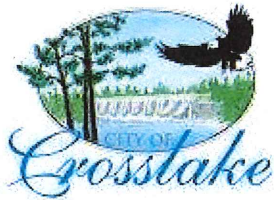
Rush Lake (18-311 P)
GD

These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Date: 5/12/2020 Time: 10:33:17 AM



8 of 9



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: 621737

Permit Number: 2010039V

Property Owner(s): Robert^w + Barbara J Eng

Mailing Address: 7894 Ithaca Lane N
Maple Grove, MN 55311

Site Address: 37241 Twin Bay Drive, Crosslake, MN 56442

Phone Number: 612-554-7000

E-Mail Address: asaPConsult@yahoo.com

Parcel Number(s): 14070613

Legal Description: Anderson's Twin Bay
Shores
Block one

Sec 7 Twp 137 Rge 26 27 28

Lake/River Name: W. to Ash Rush

Do you own land adjacent to this parcel(s)? ___ Yes ✓ No

If yes list Parcel Number(s) _____

Authorized Agent: Eric Carder

Agent Address: 13872 Shoter Road Crosslake, MN 56442

Agent Phone Number: 218-692-1070

<u>Variations</u>	
(Check applicable requests)	
<input checked="" type="checkbox"/>	Lake/River Setback
<input type="checkbox"/>	Road Right-of-Way Setback
<input type="checkbox"/>	Bluff Setback
<input type="checkbox"/>	Side Yard Setback
<input type="checkbox"/>	Wetland Setback
<input checked="" type="checkbox"/>	Septic Tank Setback
<input checked="" type="checkbox"/>	Septic Drainfield Setback
<input type="checkbox"/>	Impervious Coverage
<input type="checkbox"/>	Accessory Structure
<input type="checkbox"/>	Building Height
<input type="checkbox"/>	Patio Size
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____

Signature of Property Owner(s) See next page Date _____

Signature of Authorized Agent(s) [Signature] Date 5/18/2020

- All applications must be accompanied by a signed Certificate of Survey
- Fee \$500 for Residential and Commercial Payable to "City of Crosslake"
- 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 [Signature] Date 11 MAY 2020 Land Use District SD

Lake Class 6D Septic: Compliance _____ SSTS Design _____ 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: THE SUBMISSION ENCOMPASSES A PROJECT THAT MEETS OUR NEEDS WITH THE LEAST IMPACT TO THE SITE POSSIBLE.
Defer to the Planning Commission/Board of Adjustment

2. Is the Variance consistent with the Comprehensive Plan?

Yes No

Why: WE ARE NOT FAMILIAR WITH YOUR COMPREHENSIVE PLAN
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: THE EXISTING CABIN IS JUST TOO SMALL FOR REASONABLE FAMILY GATHERING USE. WE JUST NEED A FEW MINOR IMPROVEMENTS TO BE ABLE TO ENJOY SPENDING LONGER DURATIONS OF TIME IN CROSSLAKE.

4. Will the issuance of a Variance maintain the essential character of the locality?

Yes No

Why: OUR AREA IS FILLED WITH CABINS VERY SIMILAR IF NOT LARGER THAN WHAT WE ARE PROPOSING. WE HAVE SOUGHT OUT THE HELP OF PROFESSIONALS TO HELP US INSURE WE ARE BUILDING SOMETHING THAT LOOKS NICE AND FITS WITH OUR SURROUNDINGS.

5. Is the need for a Variance due to circumstances unique to the property and not created by the property owner?

Yes No

Why: AT SOME POINT, THE EXISTING CABIN WAS ALLOWED TO BE BUILT TOO CLOSE TO THE WATER BEFORE OUR OWNERSHIP. THIS HAS CREATED A NON-CONFORMING STATUS WITH THE PASSAGE OF TIME. THIS MEANS ANY IMPROVEMENTS WE WISH TO MAKE ARE REQUIRING A VARIANCE.

6. Does the need for a Variance involve more than economic considerations?

Yes No

Why: WE HAVE A LOT THAT SIMPLY ISN'T LARGE ENOUGH FOR REASONABLE USE IN ANY SCENARIO.



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: