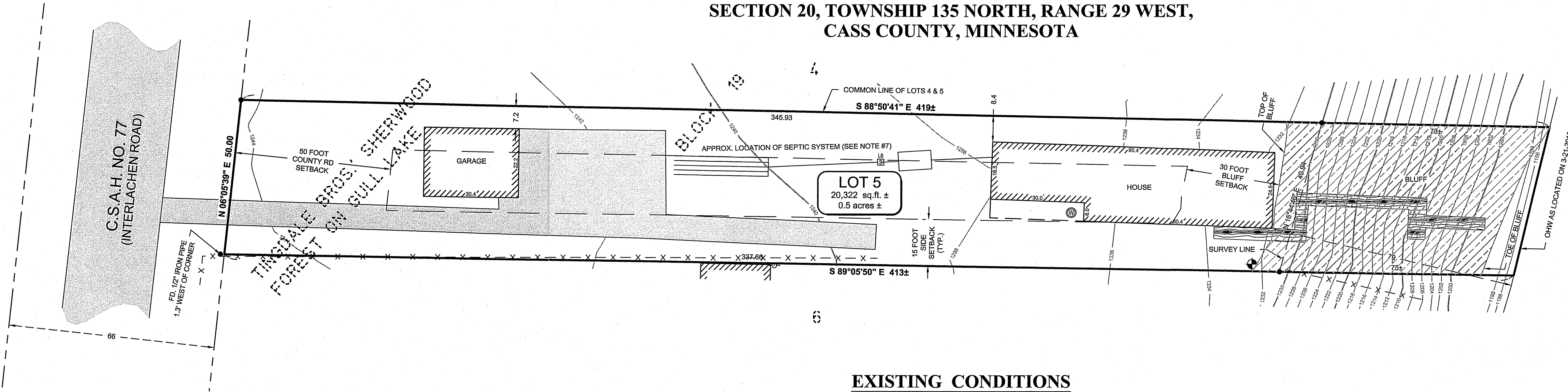
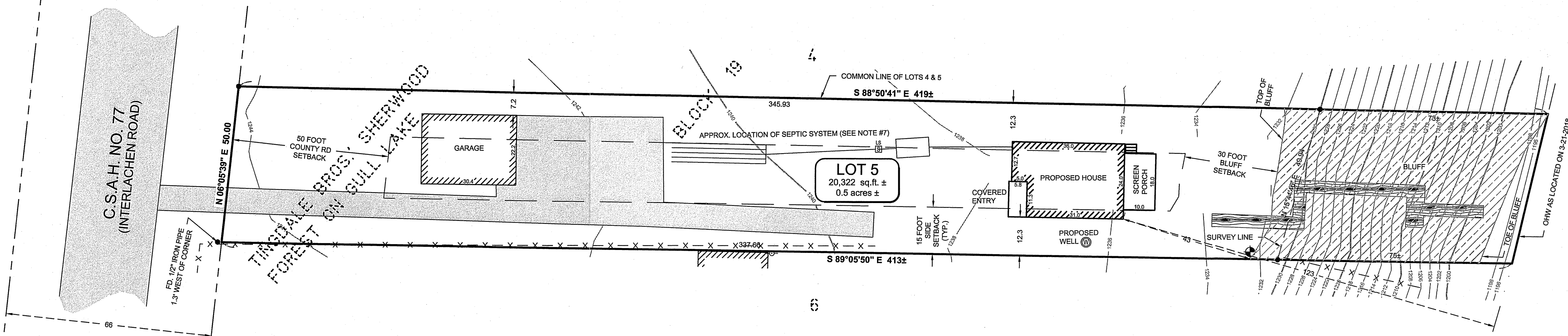


# CERTIFICATE OF SURVEY

LOT 5, BLOCK 19, TINGDALE BROS' SHERWOOD FOREST ON GULL LAKE,  
SECTION 20, TOWNSHIP 135 NORTH, RANGE 29 WEST,  
CASS COUNTY, MINNESOTA



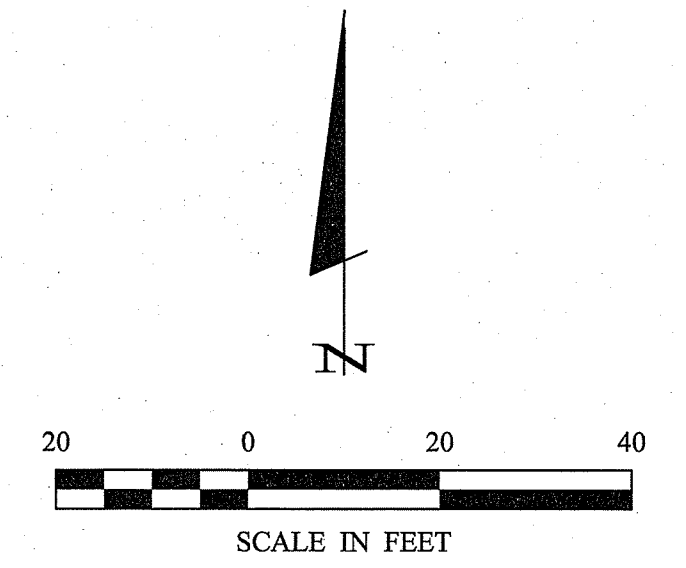
**EXISTING CONDITIONS**



**PROPOSED CONDITIONS**

### LEGEND

- x - x - DENOTES EXISTING FENCE LINE
- [Hatched Area] DENOTES EDGE OF EXISTING BITUMINOUS
- [Hatched Area] DENOTES EDGE OF EXISTING WOODEN DECKING
- [Hatched Area] DENOTES BLUFF AREA
- 1200- DENOTES EXISTING INTERMEDIATE CONTOURS
- 1210- DENOTES EXISTING INDEX CONTOURS
- DENOTES EXISTING UTILITY POLE
- ⊙ DENOTES EXISTING WELL
- ⊕ DENOTES EXISTING SEPTIC LIFT STATION
- ⊕ DENOTES MONUMENT FOUND
- ⊕ DENOTES BENCHMARK: SET 3/8" REBAR IN NE FACE OF A CLUMP OF 4, 8" CEDARS. ELEV. = 1234.57



ORIENTATION OF THIS BEARING SYSTEM IS BASED ON THE COMMON LINE OF LOTS 4 & 5, TO HAVE AN ASSUMED BEARING OF S 88°50'41" E.

### 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 3-21-2018.
- Zoning for subject tract = "Residential-Medium Density (R-2)".
- There are no wet lands within surveyed property.
- Parcel ID of subject parcel: 90-437-1915.
- The property address of subject parcel: 8646 Interlachen Rd.
- There was a snow depth of 10"± when survey crew collected topographic data. Therefore, some physical features covered by snow may not have been identified. Only visible topographic features, improvements, and utilities were located. Site verification in spring when the snow cover is gone is recommended.
- Approximate location of existing well and septic system per sketch provided by client.
- USDA Web Soil Survey indicates soil in the subject property area to be classified as Graycalm loamy sand, 1 to 8 percent slopes (126B) and Mahtomedi loamy sand, 15 to 40 percent slopes (454E).

### IMPERVIOUS CALCULATIONS

PROPOSED	IMPERVIOUS AREA (sq.ft.)	Net Area (sq.ft.)	Percent Impervious (sq.ft.)
Proposed House, Entry & Porch	1,064	20,322	5.2%
Garage	675	20,322	3.3%
Decks	443	20,322	2.2%
Bituminous	2,926	20,322	14.4%
<b>Total</b>	<b>5,108</b>	<b>20,322</b>	<b>25.1%</b>

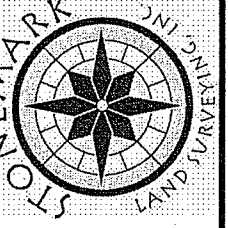
### IMPERVIOUS CALCULATIONS

EXISTING	IMPERVIOUS AREA (sq.ft.)	Net Area (sq.ft.)	Percent Impervious (sq.ft.)
House & Overhang	2,248	20,322	11.1%
Garage	675	20,322	3.3%
Decks	443	20,322	2.2%
Bituminous	2,926	20,322	14.4%
<b>Total</b>	<b>6,292</b>	<b>20,322</b>	<b>31.0%</b>

### GULL LAKE

GENERAL DEVELOPMENT CLASSIFICATION  
NORMAL RESERVOIR POOL ELEVATION = 1194.00  
HIGHEST KNOWN ELEVATION = 1195.44  
BENCHMARK: CORPS OF ENGINEERS GAUGE AT GULL LAKE DAM 0.00 GAUGE = 1188.14 ELEVATION  
LAKE ELEVATION = 1193.5 ON 3-21-2018

30206 Rasmussen Road  
Suite 1  
P. O. Box 874  
Pequot Lakes, MN 56472  
218-568-4040  
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. Hildebrandt  
DATE: 4-20-18 LIC. NO. 44881

REVISIONS  
DATE: 4-20-2018  
SCALE: 1"=20'  
HORZ: 1"=20'  
VERT: NONE

PROJECT No.: 18057  
FILE NAME: C:\18057.dwg  
FIELD BOOK: BOOK 445 PG. 45

PROJECT MANAGER: CMH  
CHECKED BY: CMH  
DRAWN BY: RJF

CERTIFICATE OF SURVEY  
BERGREN PROPERTY  
Lands End Development  
13817 County Road 36  
Crosslake, MN 56442

1 OF 1