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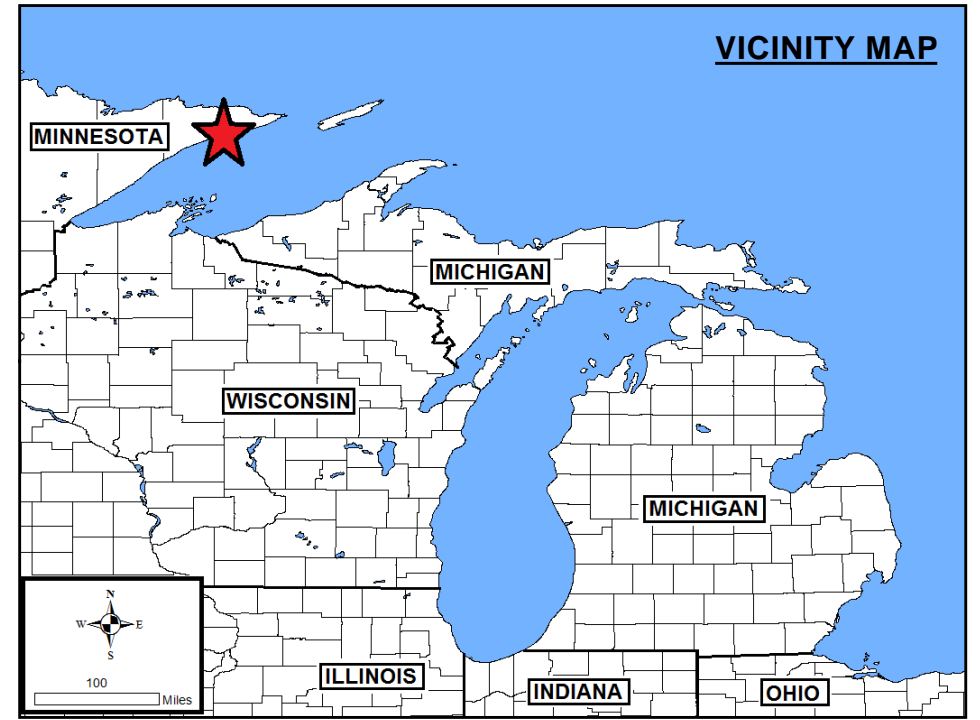
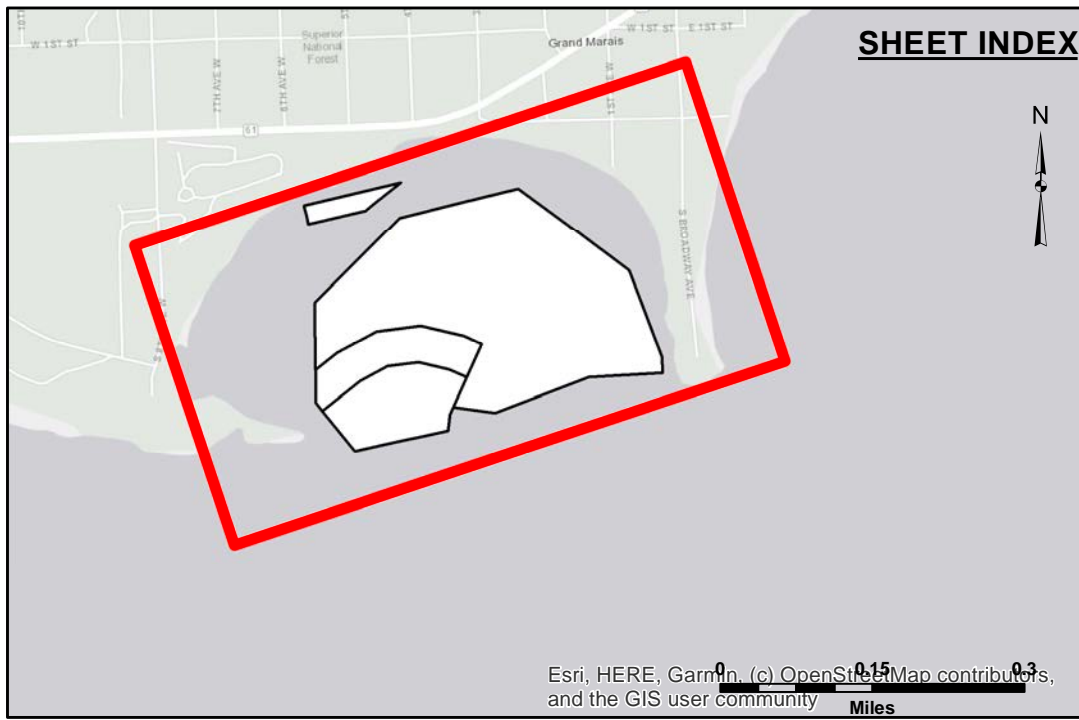
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
Submitted:	Surveyed By:	
Recommended:	Plotted By:	
Approved:	Chief, Survey Section	
	Chief, Technical Services	

**GRAND MARAIS HARBOR, MN**  
Grand Marais Harbor  
GD\_01\_MAS\_20220825\_CS  
25 August 2022

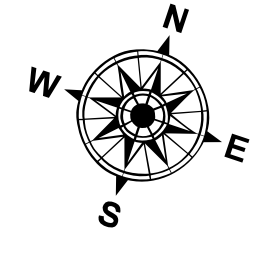


**LEGEND**

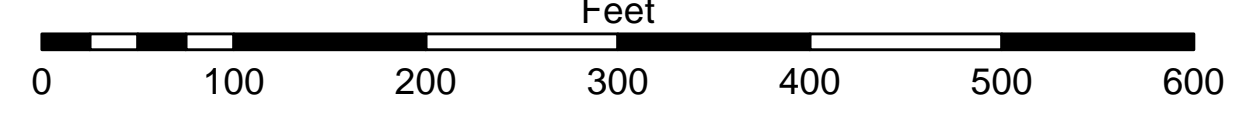
- ..... Cable Submarine
- - - Cable Overhead
- Placement Area
- Contour Lines
- ▭ Channel Limits

**SOUNDING LEGEND**

- LESS THAN PROJECT DEPTH
- PROJECT DEPTH
- PROJECT DEPTH +1'
- PROJECT DEPTH +2'
- PROJECT DEPTH +3'
- PROJECT DEPTH +4'
- PROJECT DEPTH +5'



1 inch = 100 feet



- NOTES:**
- 1) THE INFORMATION DEPICTED ON THIS CHART REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS PRESENT AT THAT TIME.
  - 2) SOUNDING DEPTHS ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM 1985 (IGLD 85) LOW WATER DATUM ELEVATION 601.1 FEET ABOVE MEAN WATER LEVEL AT RIMOUSKI QUEBEC. WATER LEVEL READINGS WERE OBTAINED WITH RTK GPS VALUES THAT HAVE BEEN VERIFIED TO MATCH AN AUTOMATED NOAA GAGE LOCATED AT GRAND MARAIS, MINNESOTA (8999090). DEPTHS ARE MEASURED USING A ROSS LABORATORIES MODEL 825C PORTABLE SURVEY SOUNDER.
  - 3) HORIZONTAL POSITIONING IS DETERMINED USING REAL TIME KINEMATIC (RTK) GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) CORRECTIONS FROM A BASE STATION LOCATED AT USACE CONTROL POINT 614, A CHISELED "X" ON THE EAST END OF A STEEL SHEET PILE WALL ALONG THE NORTH SIDE OF THE BOAT RAMP. THE GPS RECEIVER IS MANUFACTURED BY TRIMBLE, MODELS SPA751 AND R10.
  - 4) THE GRID COORDINATE SYSTEM IS MINNESOTA STATE PLANE, NORTH ZONE (2201), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.
  - 5) PROJECT DEPTHS FOR THIS AREA ARE 6', 16', 18' & 20'.

Sheet Reference Number  
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