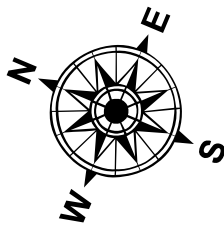


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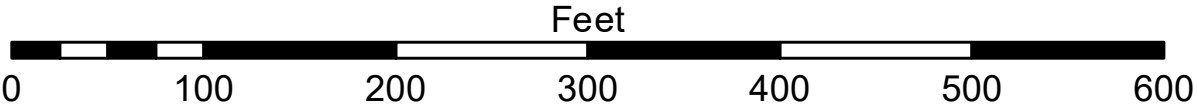
- ..... Cable Submarine
- - Cable Overhead
- Channel\_Limits
- Contour Lines

**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



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  6. IMAGERY SOURCED FROM: ESRI & 2014 NAIP IMAGERY

**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221025\_CS**  
**25 October 2022**

**Sheet**  
**Reference**  
**Number**  
**1 of 37**

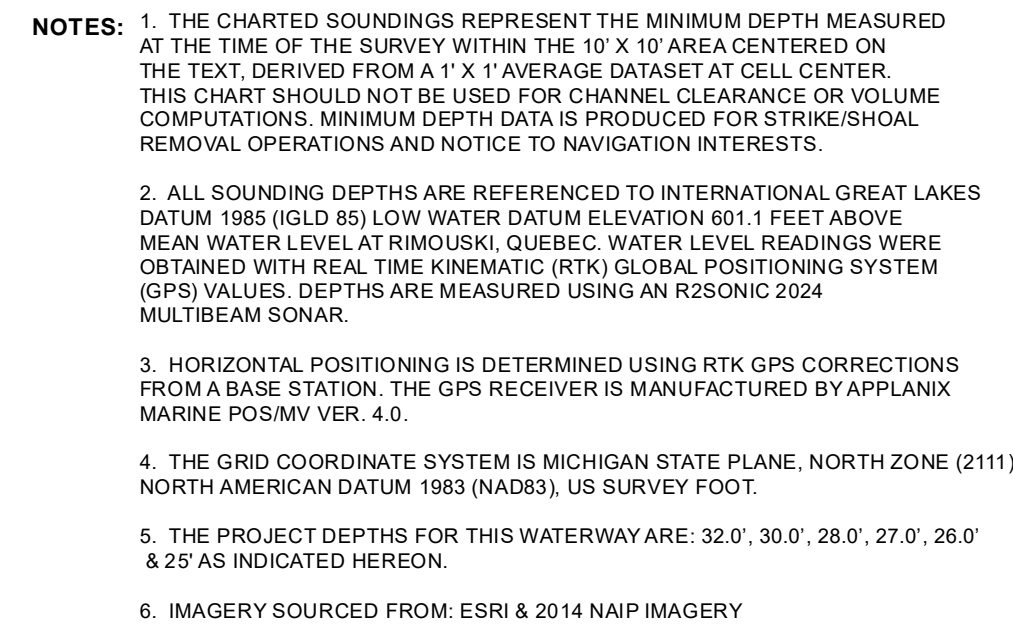
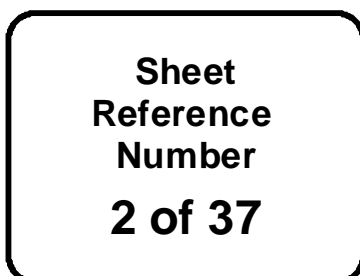
  
**US Army Corps  
of Engineers**  
**District: CELRE**

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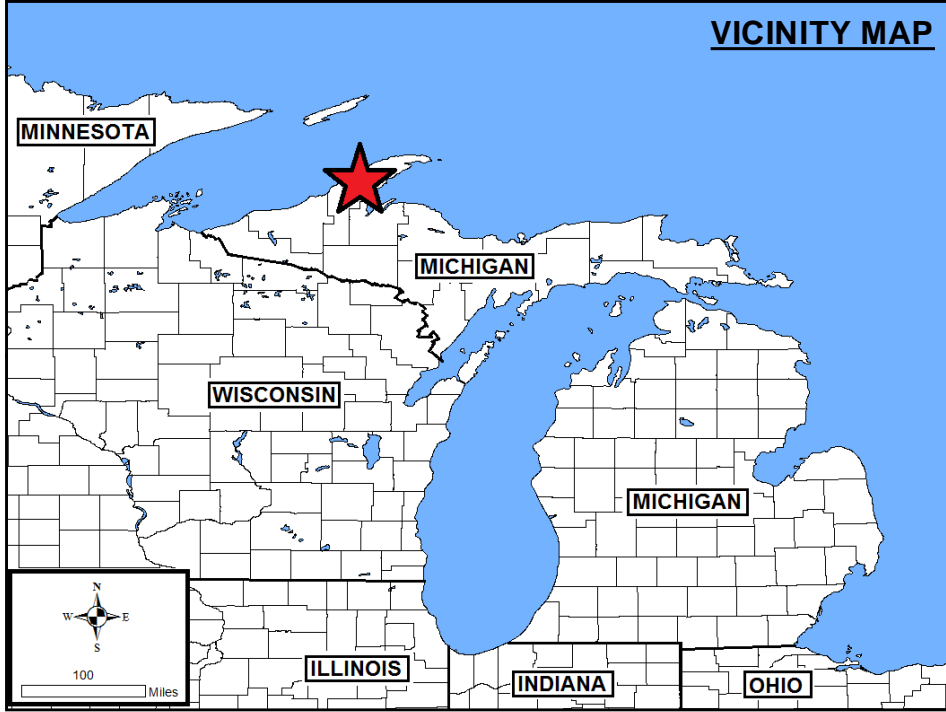
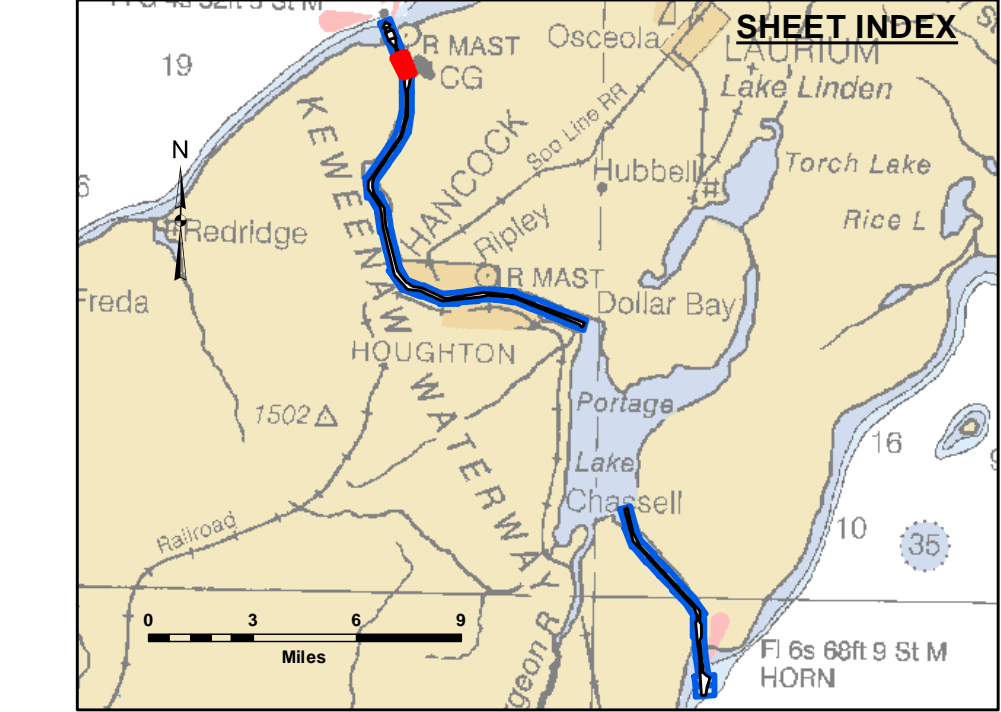
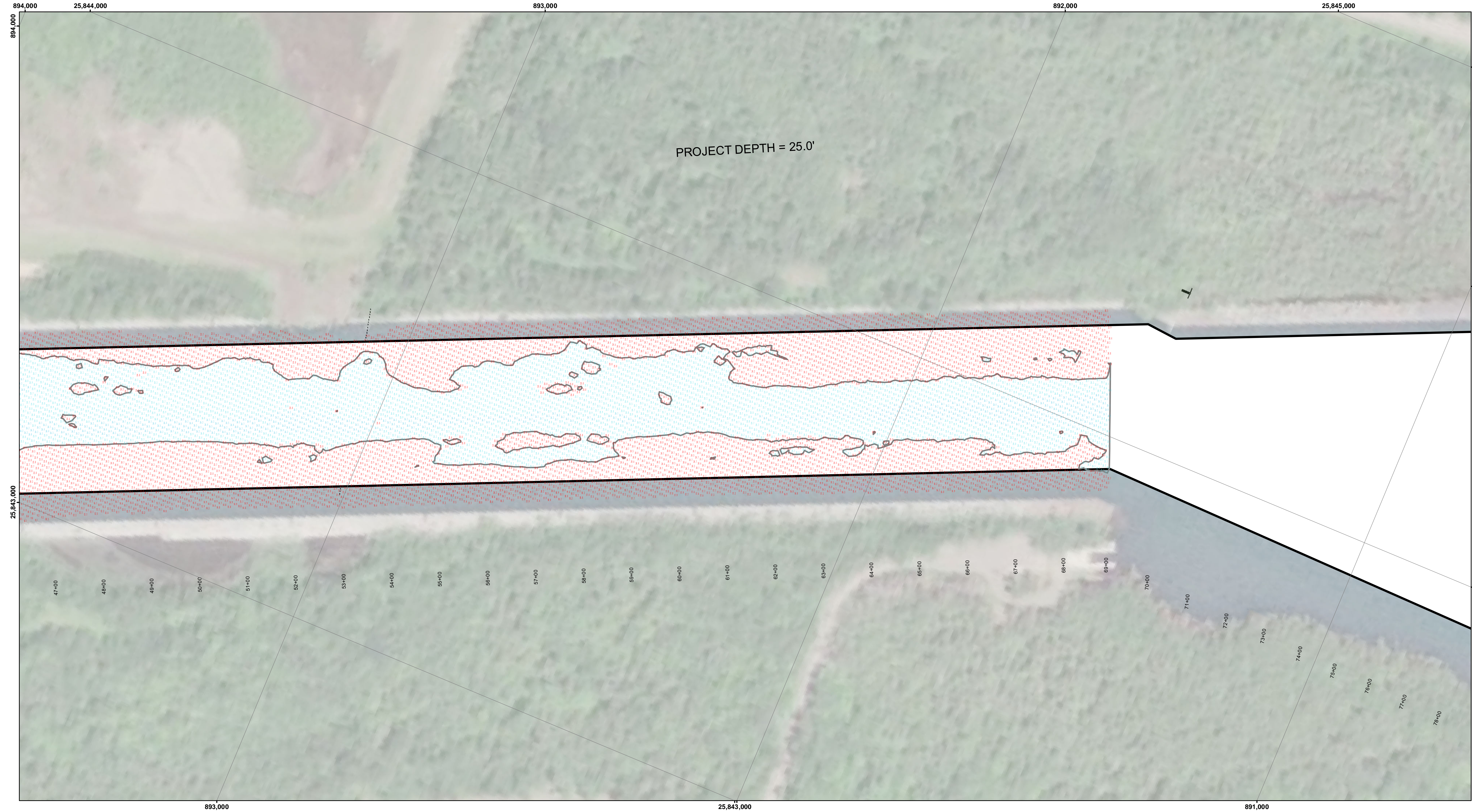
**ACCESS LIMITS:** The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that the data is not to be used for any other purpose, expressed, or implied concerning the accuracy, completeness, readability, usability or suitability for any particular purpose of the recipient. The data is not to be used for any other purpose, expressed, or implied concerning the accuracy, completeness, readability, usability or suitability for any particular purpose of the recipient. These data belong to the Government. The recipient may not transfer these data to others without also transferring the Disclaimer.

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







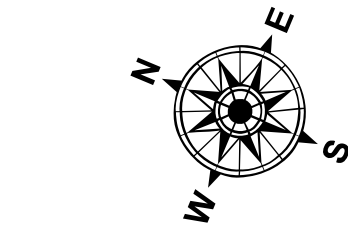


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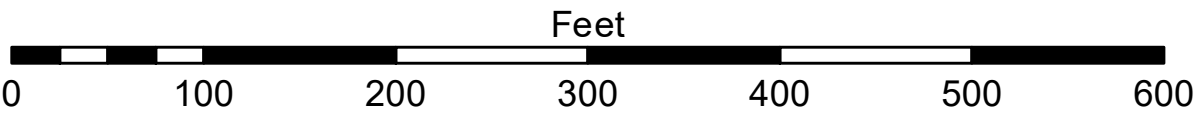
- ..... Cable Submarine
- - Cable Overhead
- Channel\_Limits
- Contour Lines

**SOUNDING LEGEND**

- LESS THAN PROJECT DEPTH
- PROJECT DEPTH
- PROJECT DEPTH +1'
- PROJECT DEPTH +2'
- PROJECT DEPTH +3'
- PROJECT DEPTH +4'
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**US Army Corps  
of Engineers**  
District: CELRE

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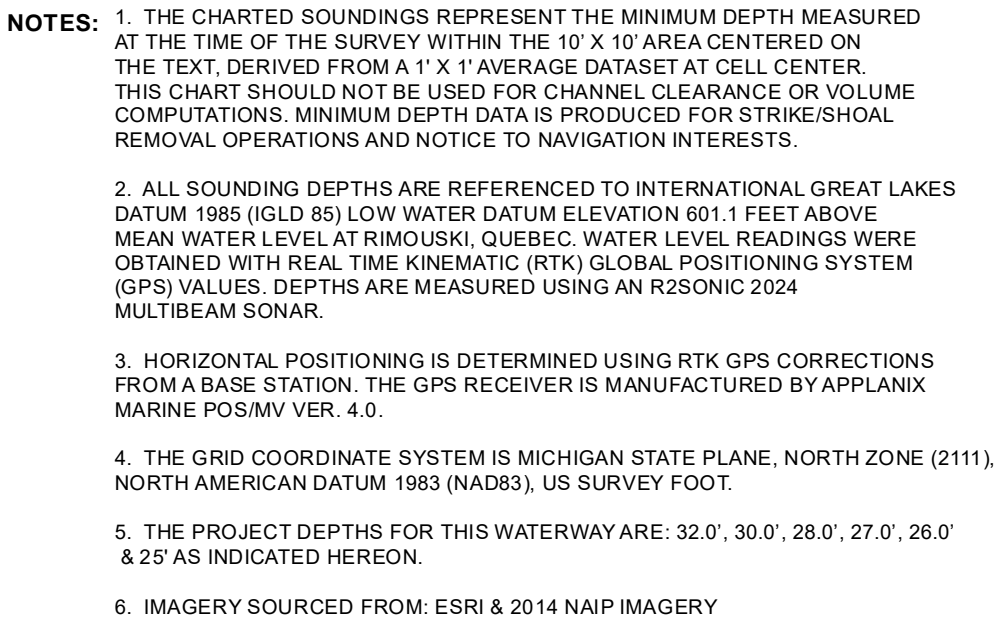
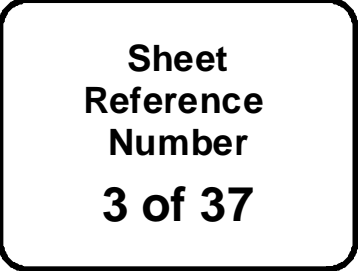
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
Submitted:	Surveyed By:	
Recommended:	Plotted By:	
Approved:	Checked By:	

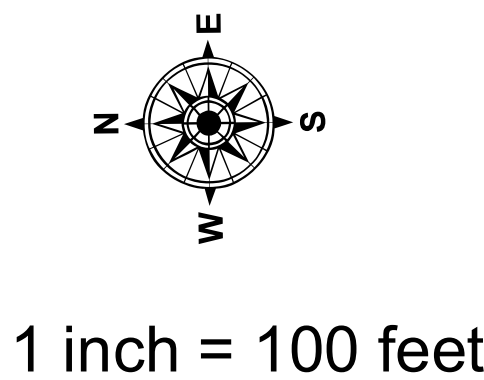
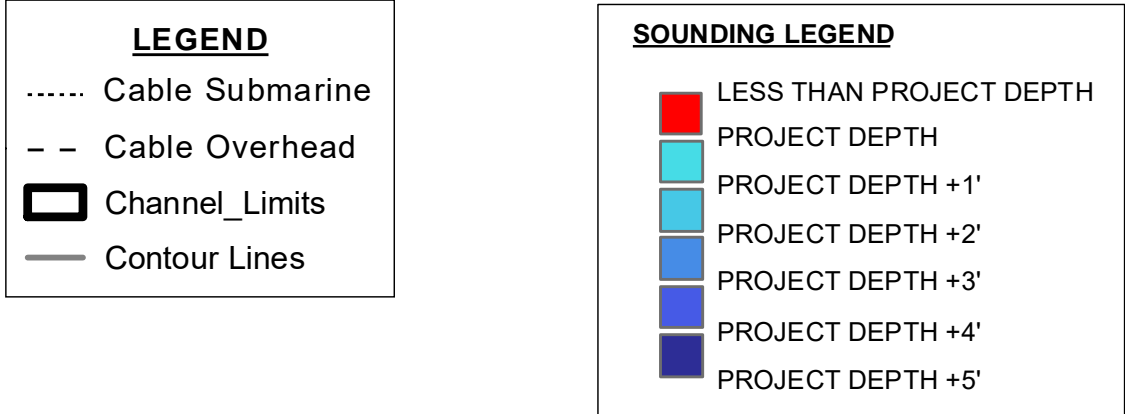
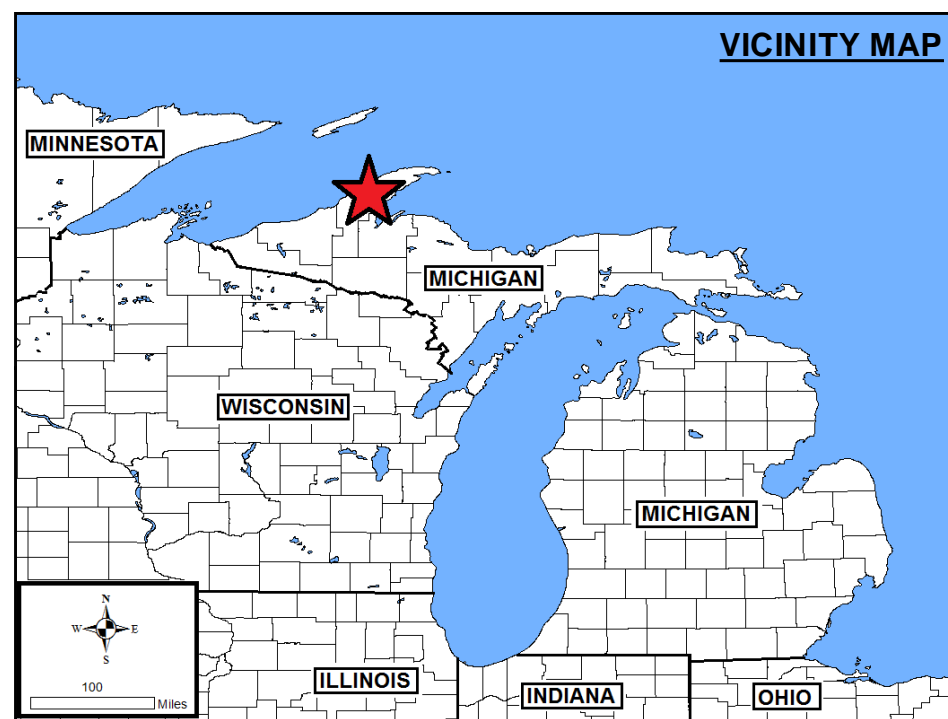
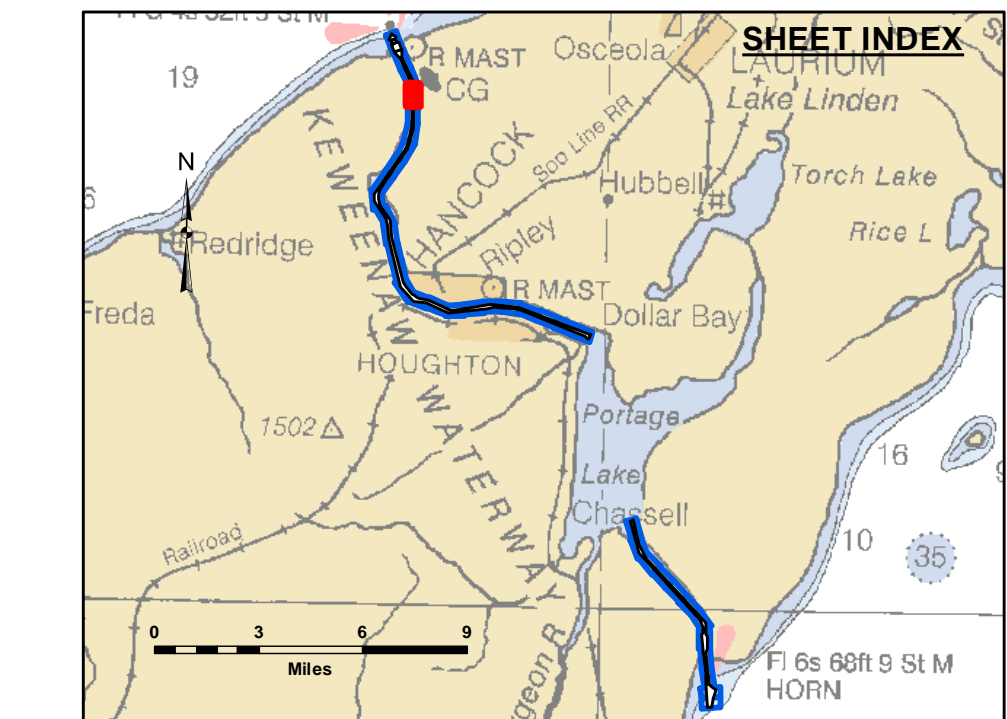
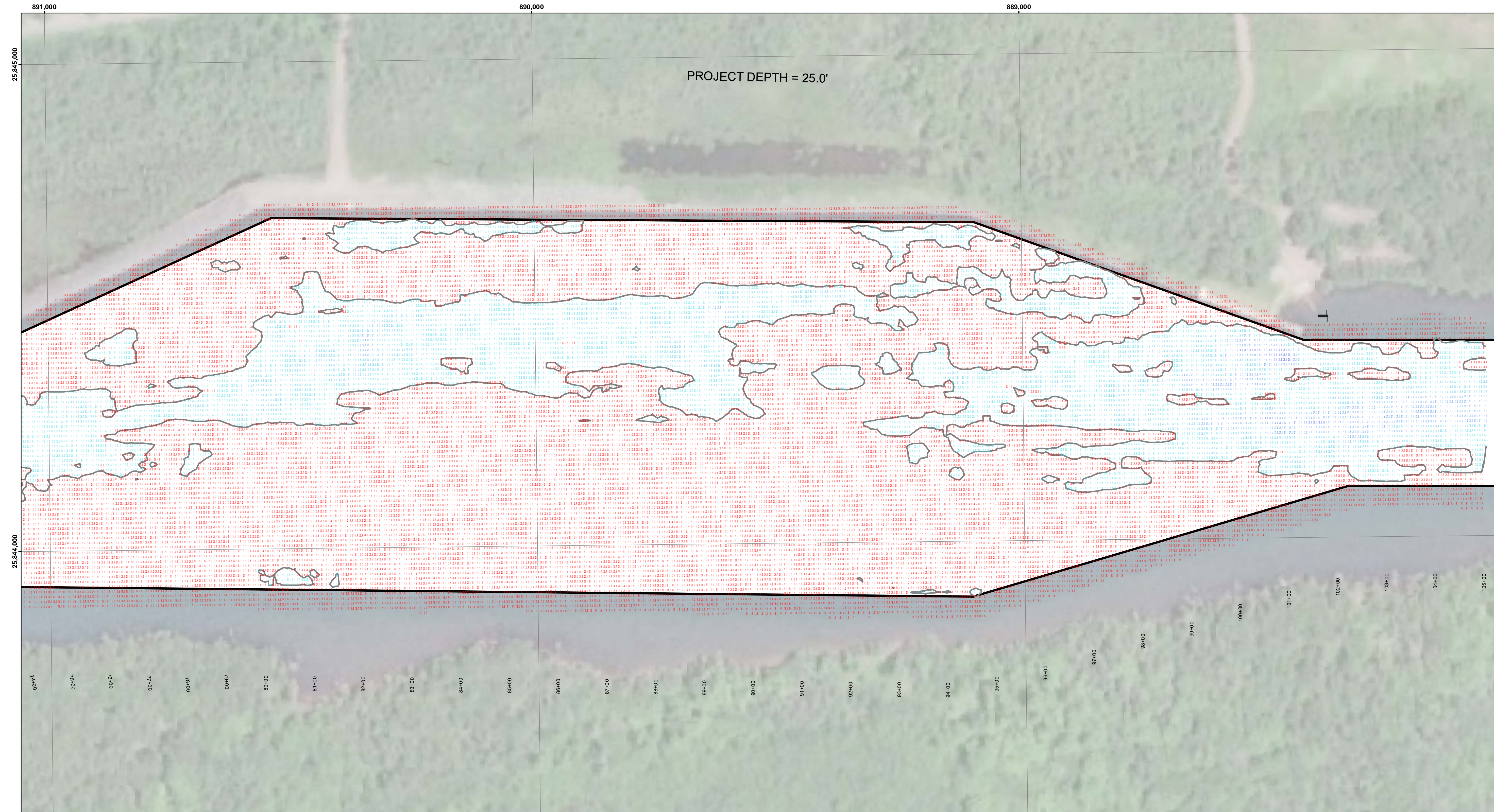
**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221025\_CS**  
**25 October 2022**

**Sheet  
Reference  
Number**  
**3 of 37**









- NOTES:**
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  6. IMAGERY SOURCED FROM: ESRI & 2014 NAIP IMAGERY

Keweenaw Waterway, MI  
Keweenaw Waterway  
KW\_01\_NAW\_20221014\_CS  
14 October 2022

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Reference  
Number  
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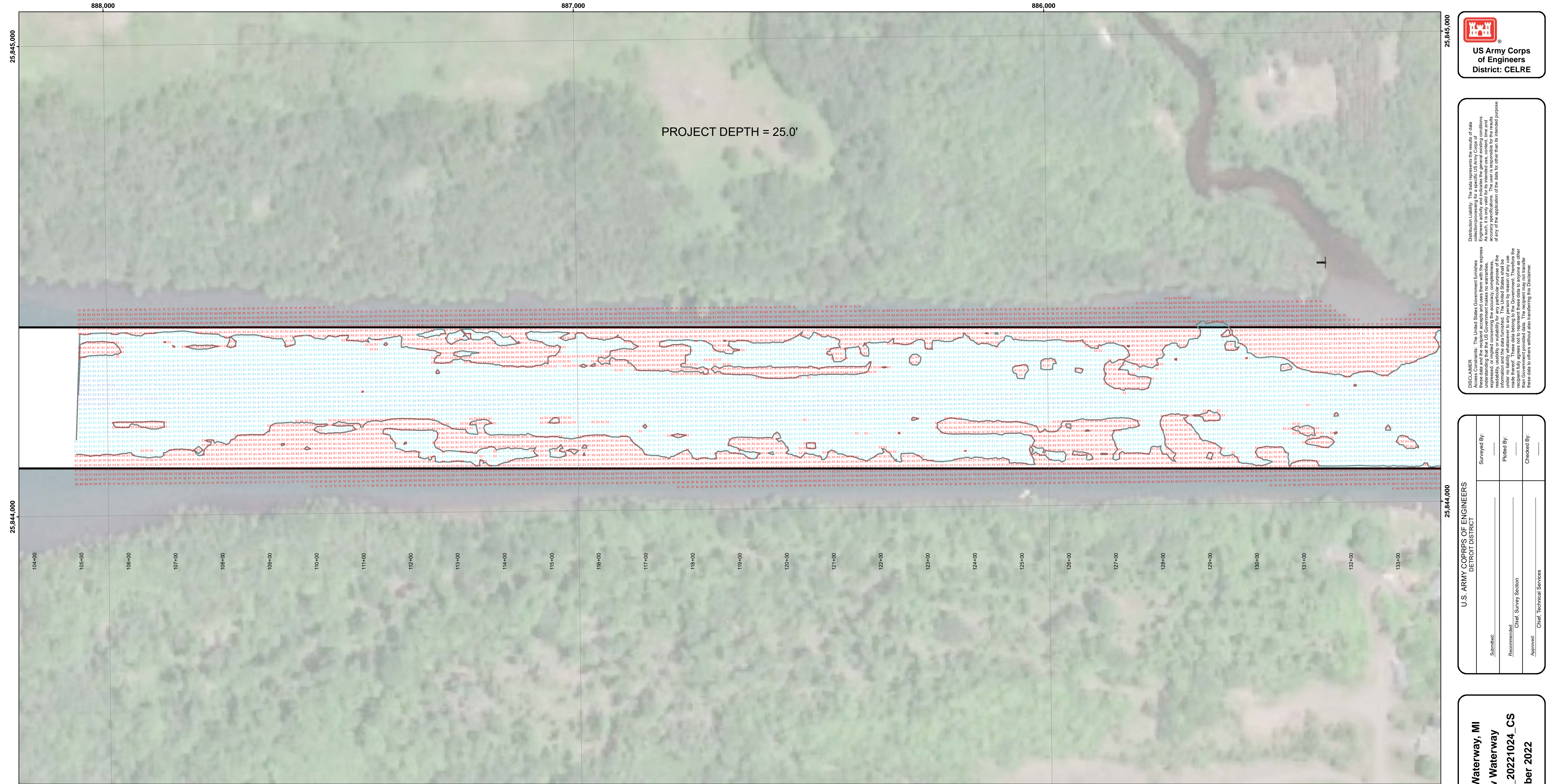


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Surveyed By:  
Plotted By:  
Checked By:  
Submitted:  
Recommended: Chief, Survey Section  
Approved: Chief, Technical Services





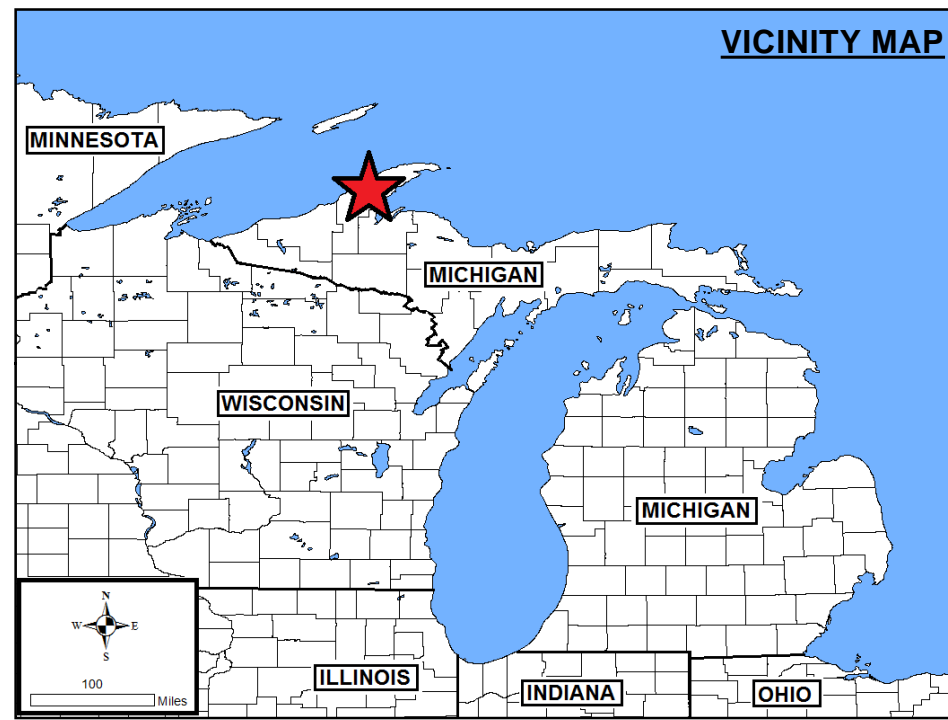
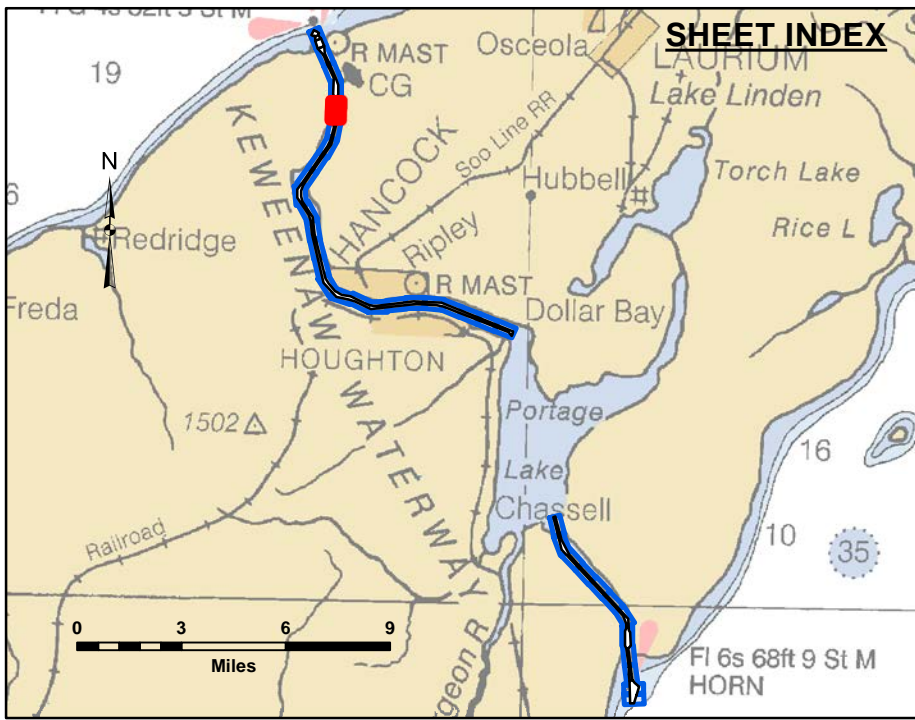
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Submitted:	Reviewed By:
Recommended:	Chief, Survey Section
Approved:	Chief, Technical Services

Keweenaw Waterway, MI  
Keweenaw Waterway  
KW\_01\_NAW\_20221024\_CS  
24 October 2022

Sheet  
Reference  
Number  
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Revision Number:  
4.2-20200120

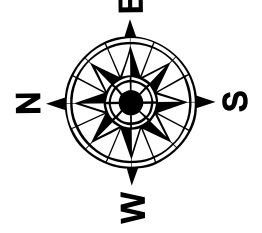


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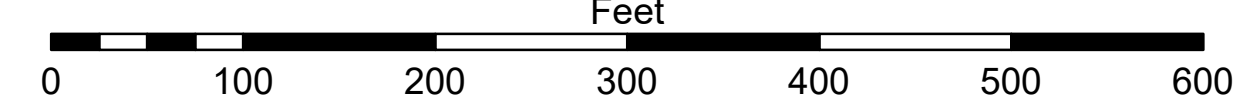
- ..... Cable Submarine
- Cable Overhead
- Channel Limits
- Contour Lines

**SOUNDING LEGEND**

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



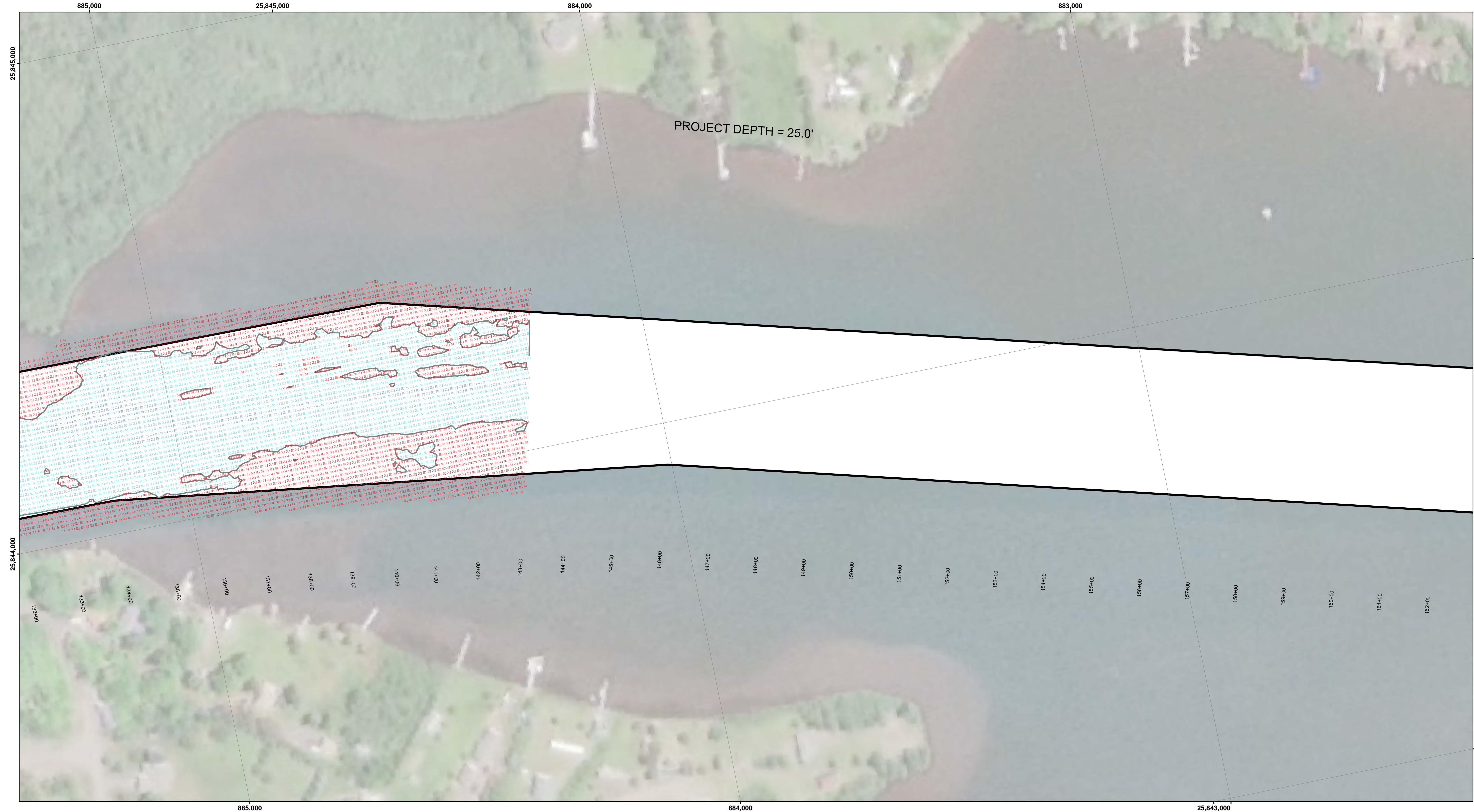
1 inch = 100 feet



**NOTES:**

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6. IMAGERY SOURCED FROM: ESRI & 2014 NAIP IMAGERY







**US Army Corps  
of Engineers**  
District: CELRE

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

**Keweenaw Waterway, MI**

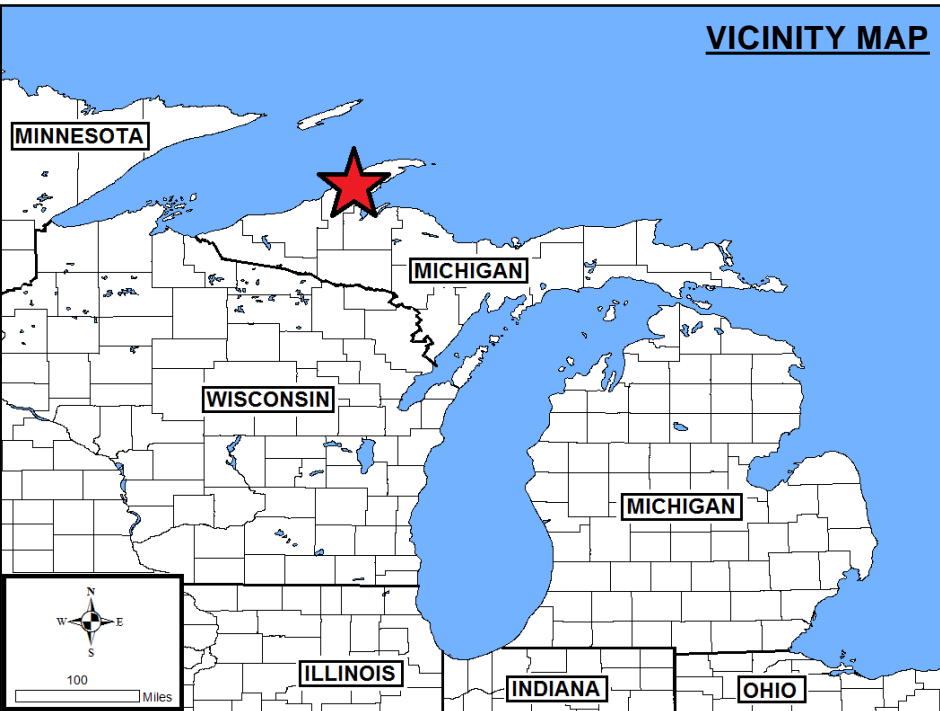
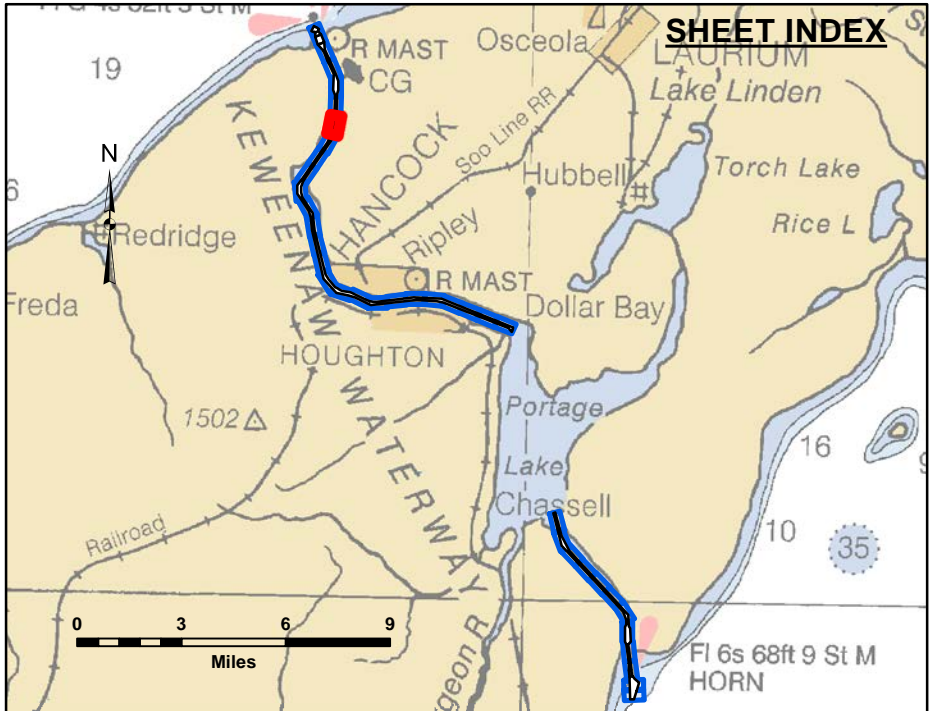
**Keweenaw Waterway**

**KW\_01\_NAW\_20221024\_CS**

**24 October 2022**

**Sheet  
Reference  
Number**

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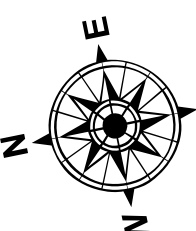


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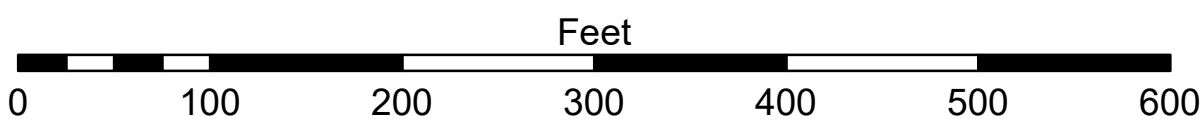
- ..... Cable Submarine
- Cable Overhead
- Channel\_Limits
- Contour Lines

**SOUNDING LEGEND**

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

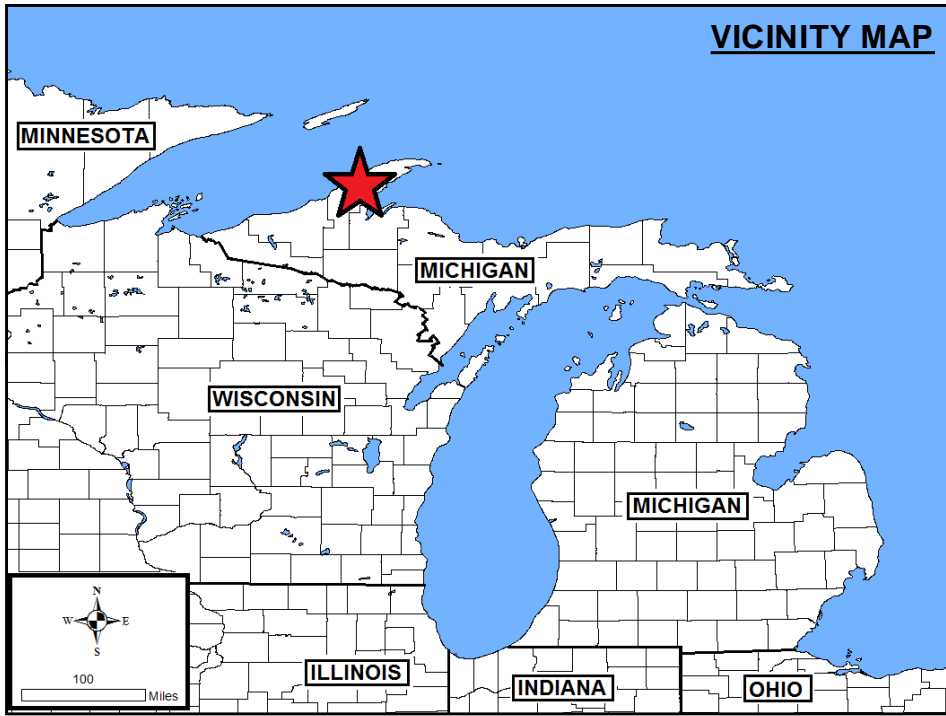
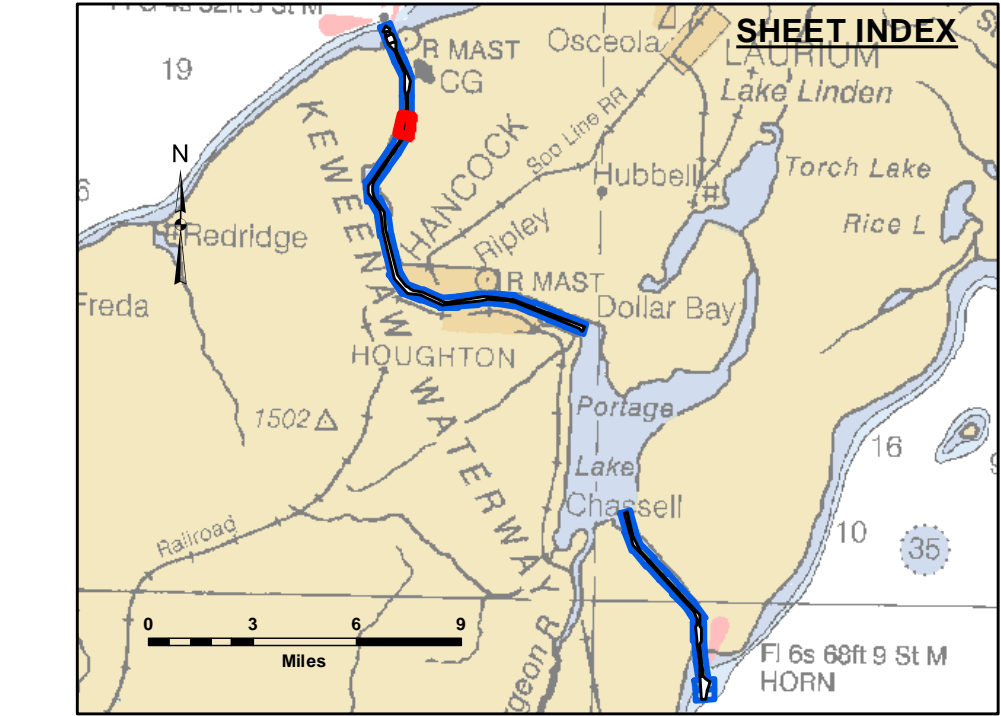


1 inch = 100 feet



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**LEGEND**

- ..... Cable Submarine
- Cable Overhead
- Channel\_Limits
- Contour Lines

**SOUNDING LEGEND**

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- PROJECT DEPTH +5'

1 inch = 100 feet

A compass rose showing North (N), South (S), East (E), and West (W). Below it is a scale bar in feet, ranging from 0 to 600 feet with increments of 100 feet.

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**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221026\_CS**  
**26 October 2022**

**Sheet**  
**Reference**  
**Number**  
**6 of 37**

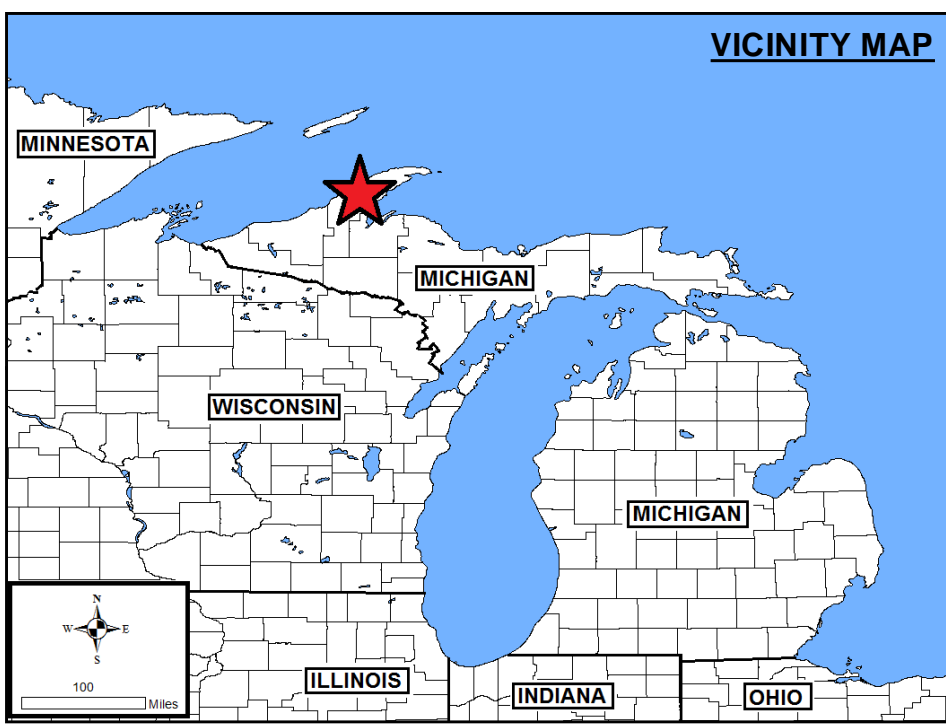
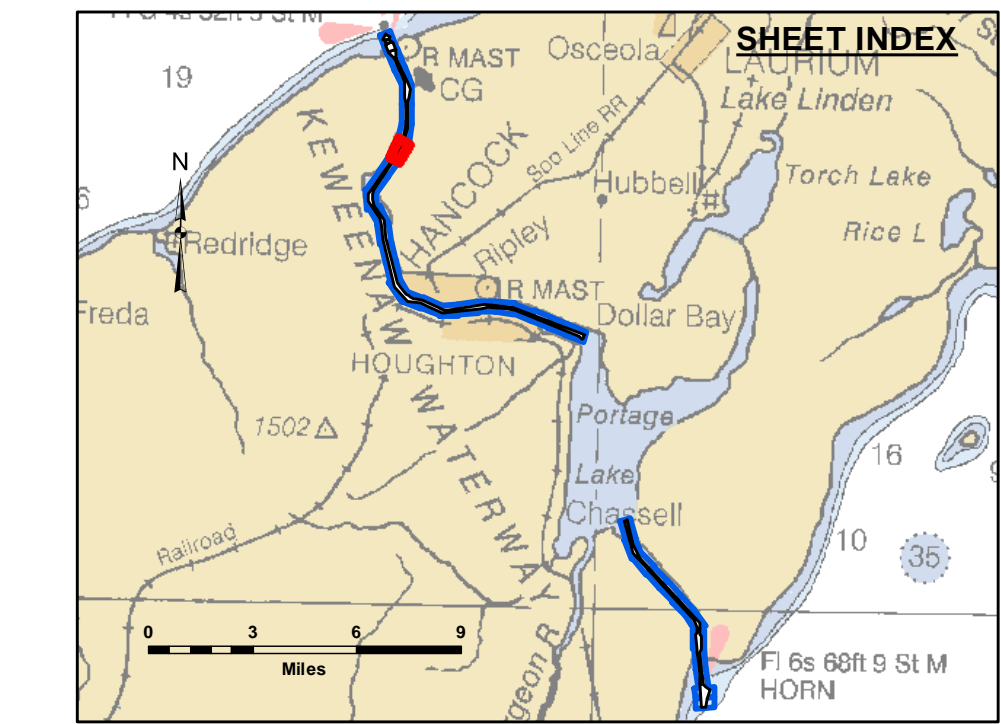
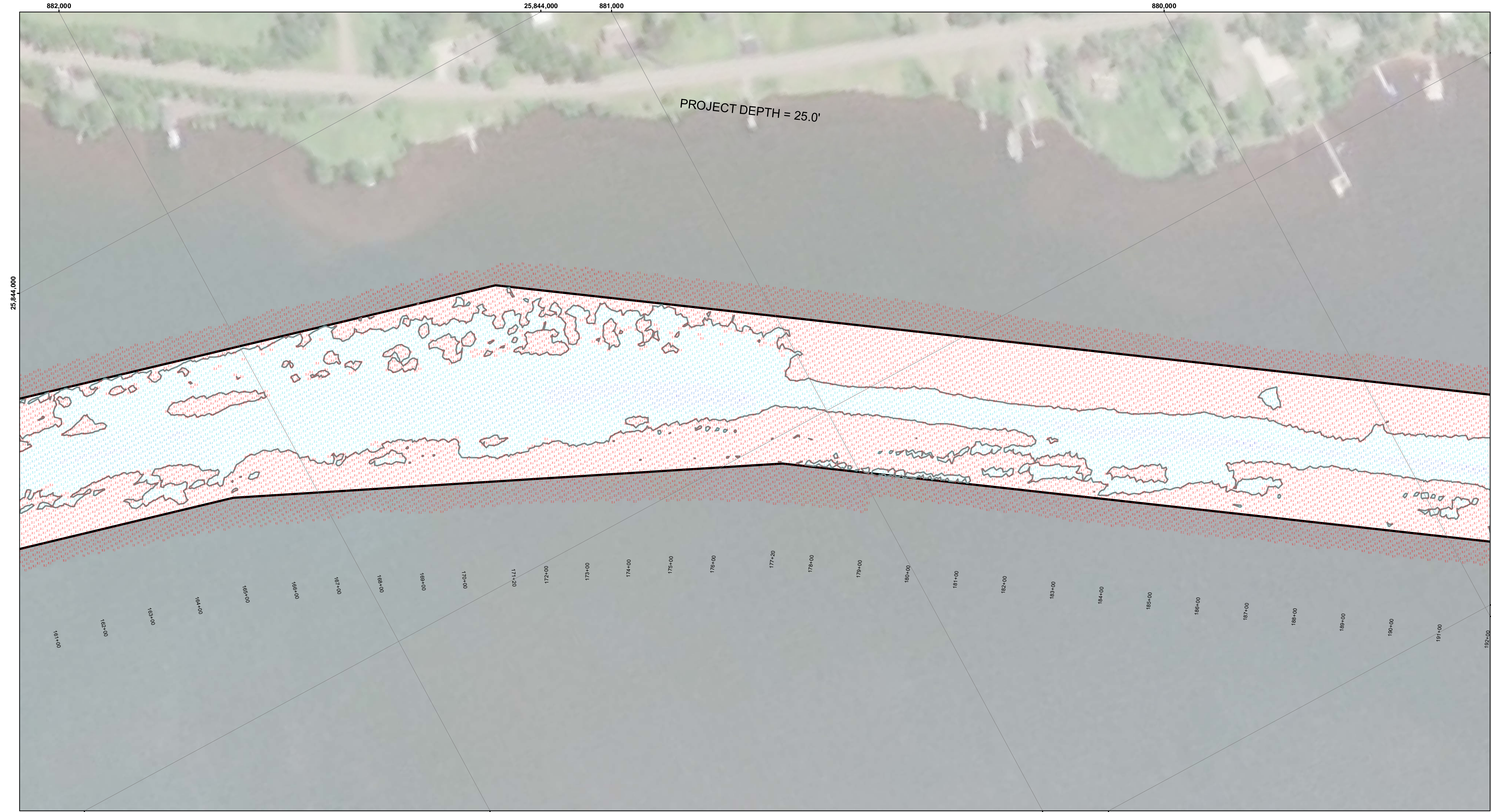
**US Army Corps  
of Engineers**  
**District: CELRE**

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



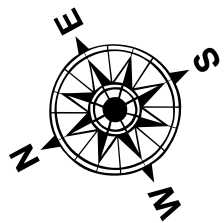


**LEGEND**

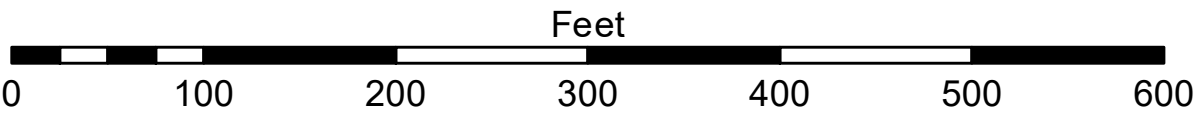
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- - Cable Overhead
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- Contour Lines

**SOUNDING LEGEND**

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  6. IMAGERY SOURCED FROM: ESRI & 2014 NAIP IMAGERY

  
**US Army Corps  
of Engineers**  
District: CELRE

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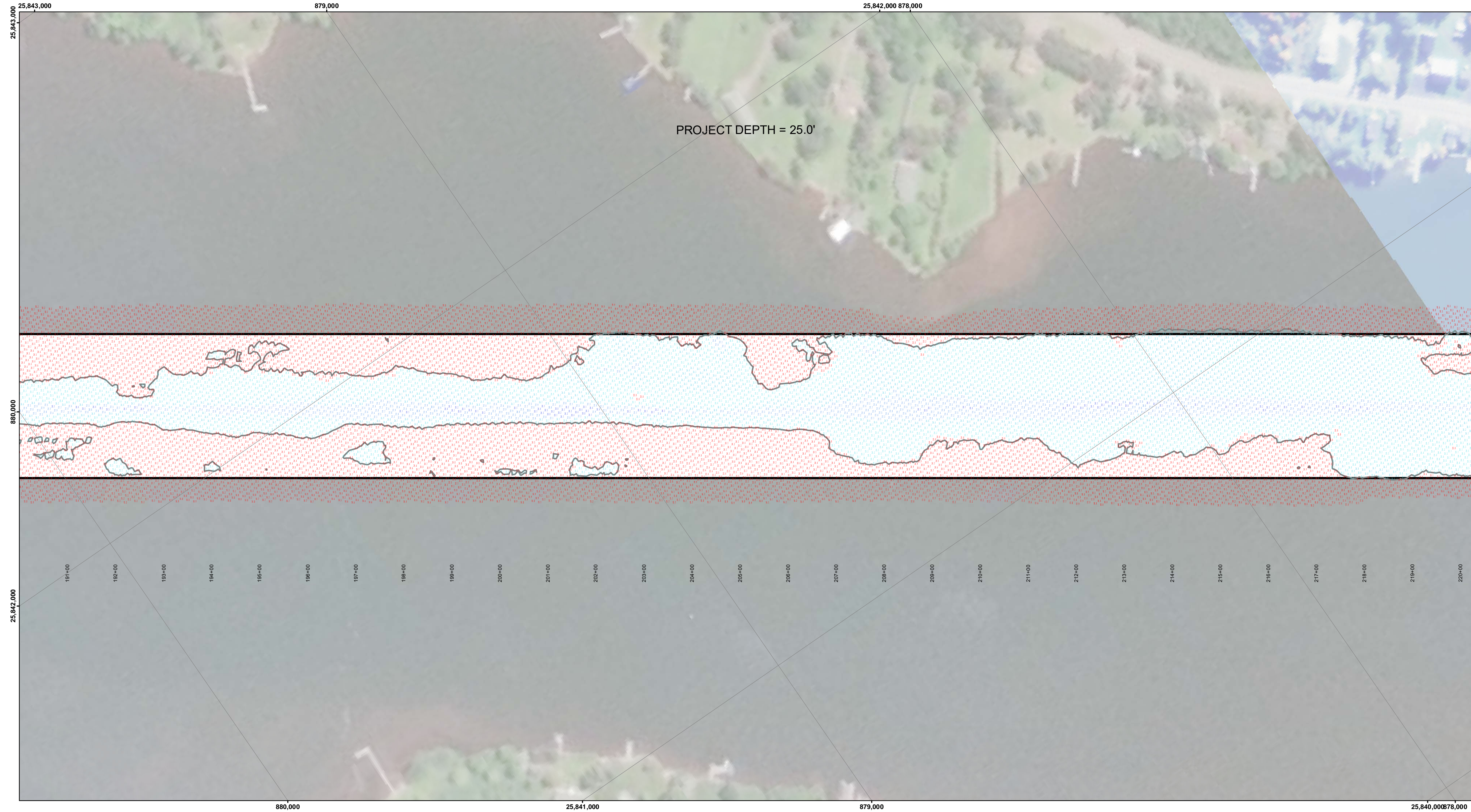
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
Submitted:	Surveyed By:	
Recommended:	Plotted By:	
Approved:	Checked By:	

**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221026\_CS**  
**26 October 2022**

**Sheet  
Reference  
Number**  
**7 of 37**

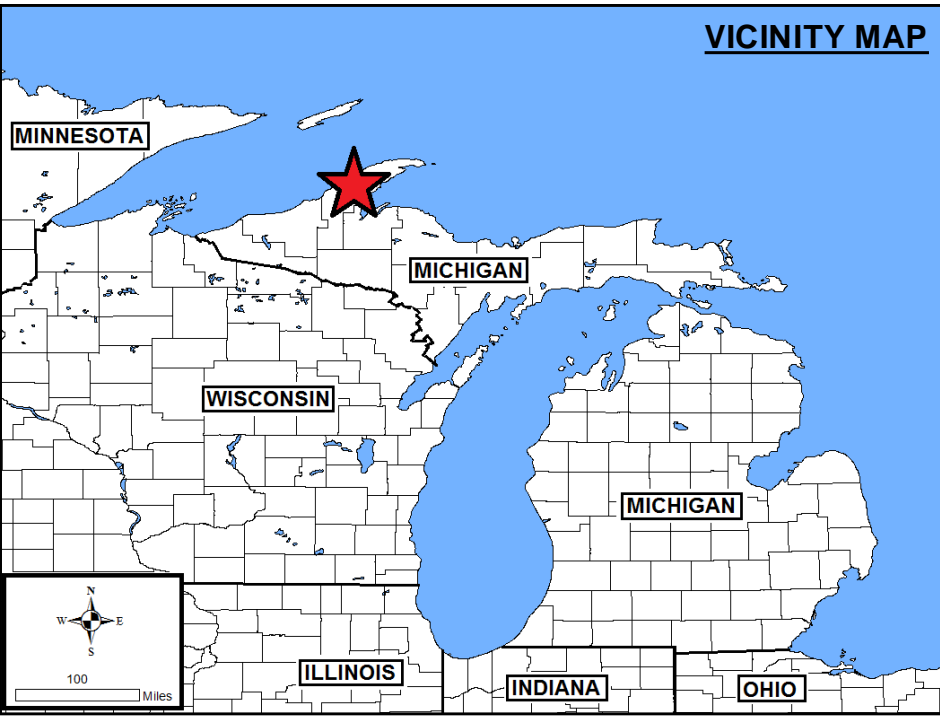
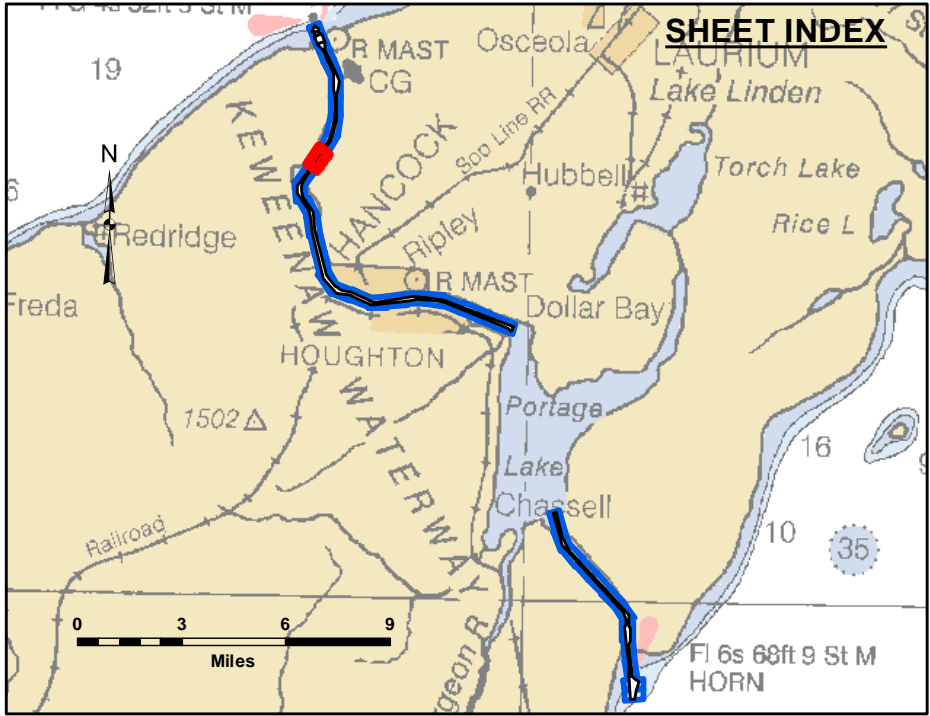




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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
Submitted:	Surveyed By: _____	
Recommended:	Plotted By: _____	
Approved:	Checked By: _____	

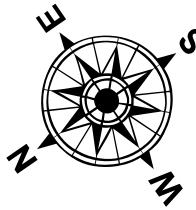


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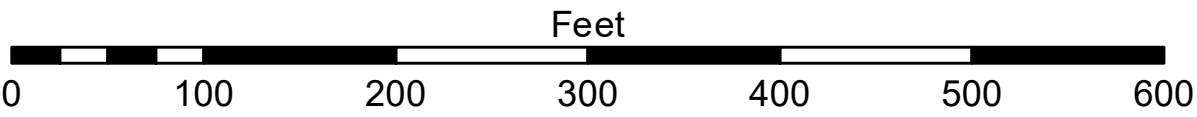
- ..... Cable Submarine
- - Cable Overhead
- Channel\_Limits
- Contour Lines

**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

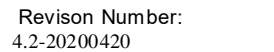


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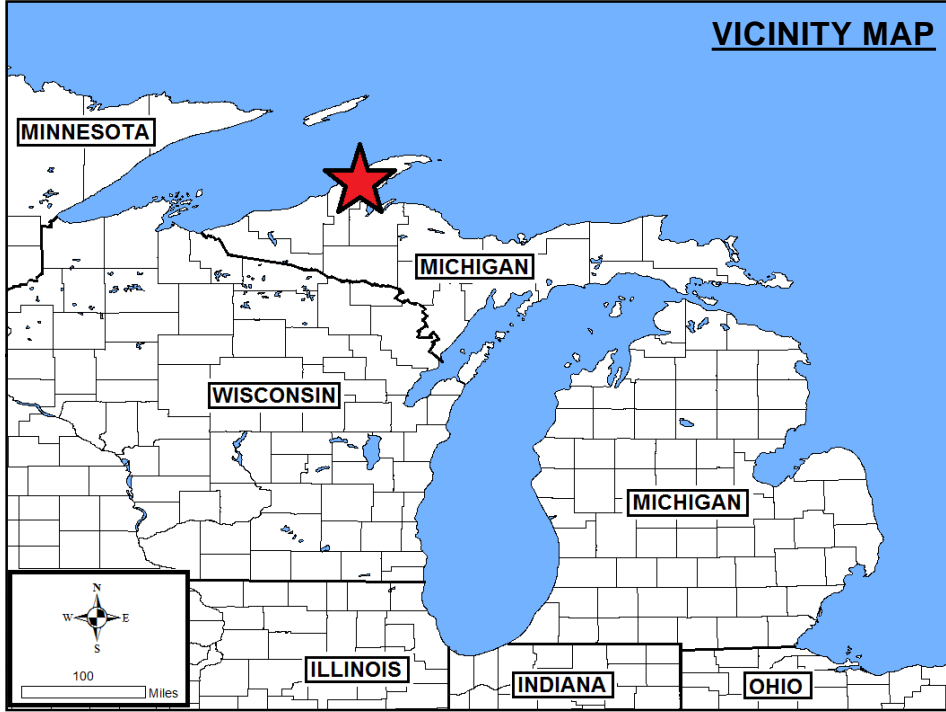
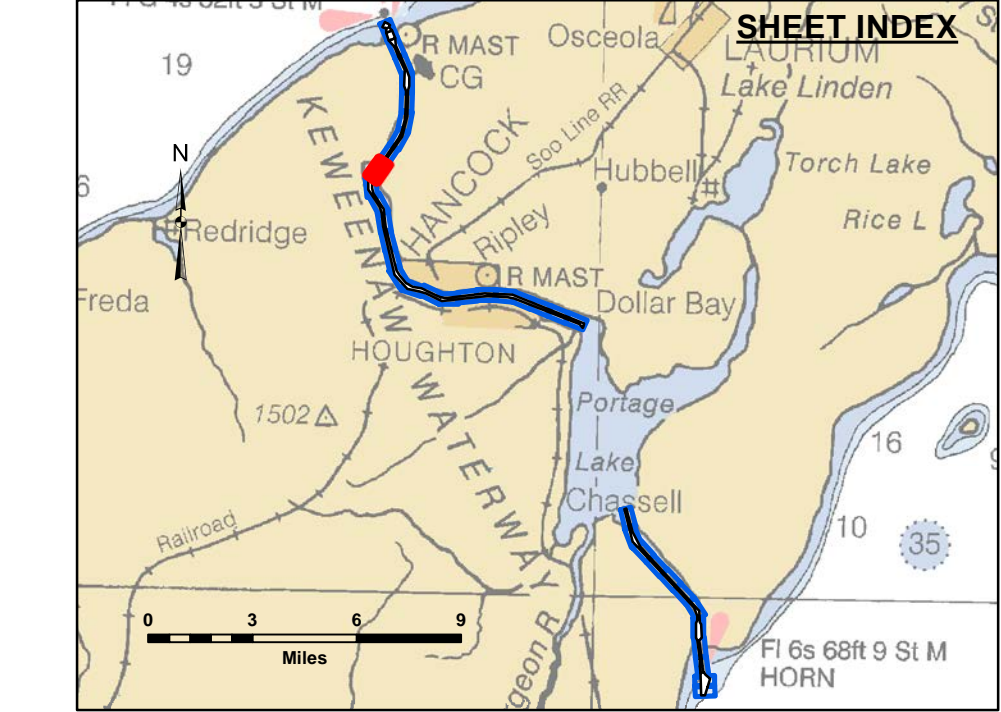
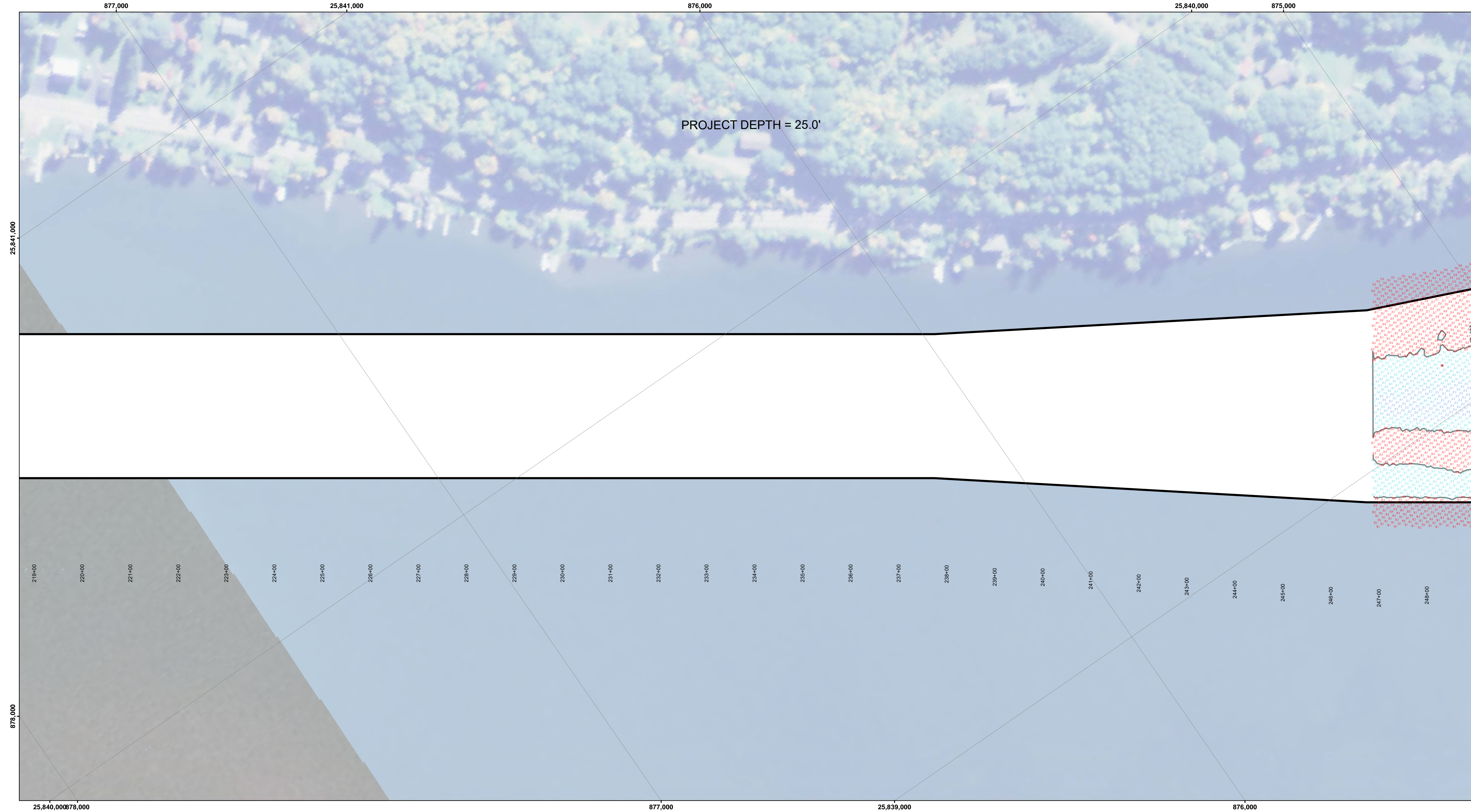
**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221026\_CS**  
**26 October 2022**

**Sheet Reference Number**  
**8 of 37**







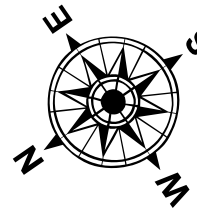


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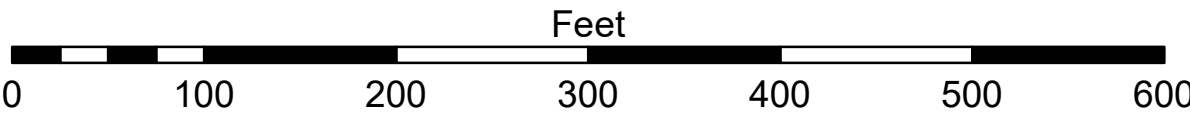
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**SOUNDING LEGEND**

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**US Army Corps  
of Engineers**  
District: CELRE

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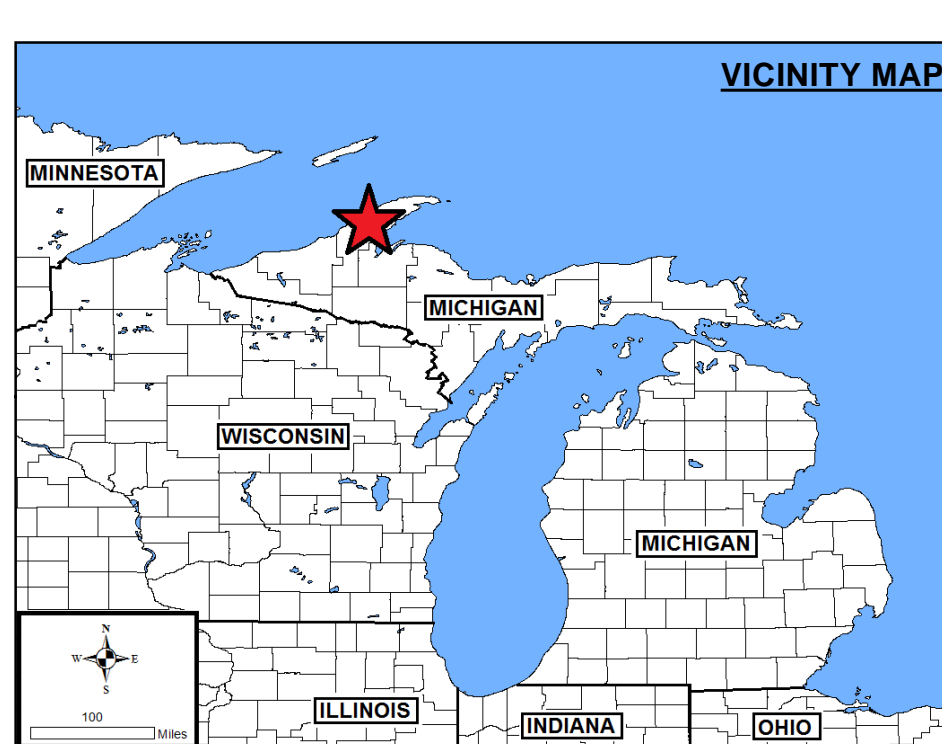
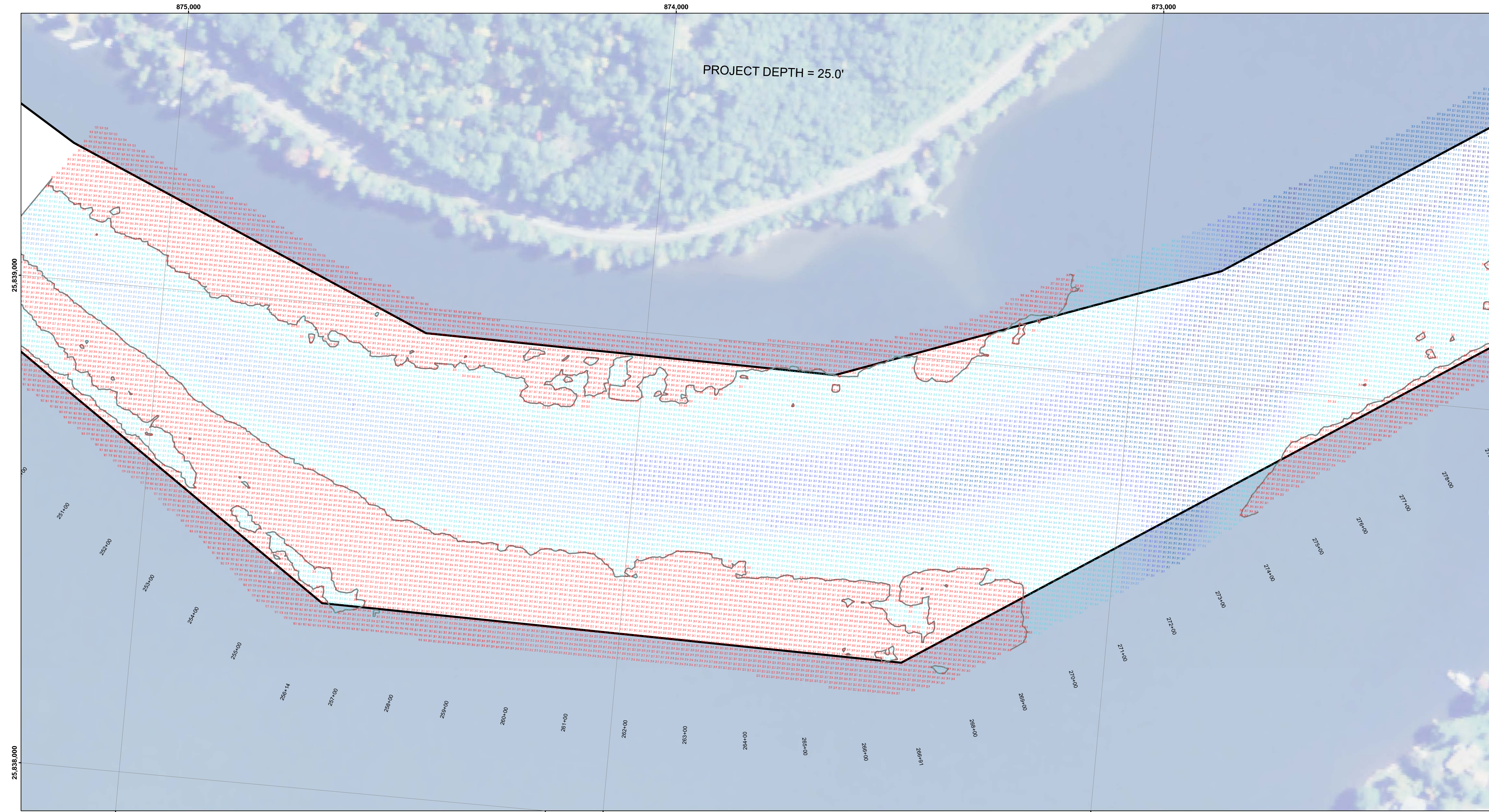
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	
Submitted By: _____	Surveyed By: _____
Recommended By: _____	Plotted By: _____
Approved By: _____	Checked By: _____

**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221027\_CS**  
**27 October 2022**

**Sheet  
Reference  
Number  
9 of 37**

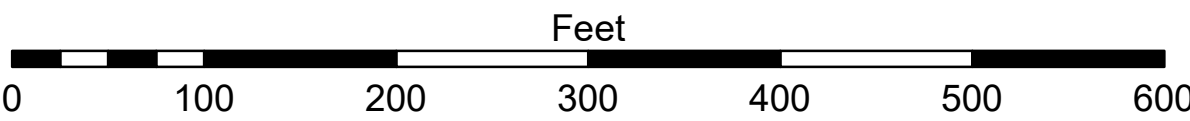




- LEGEND**
- ..... Cable Submarine
  - - - Cable Overhead
  - ▭ Channel Limits
  - Contour Lines

- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
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Keweenaw Waterway, MI  
Keweenaw Waterway  
KW\_01\_NAW\_20221027\_CS  
27 October 2022

Sheet  
Reference  
Number  
10 of 37

Revision Number:  
4.2-20200301

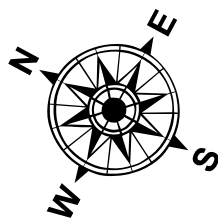
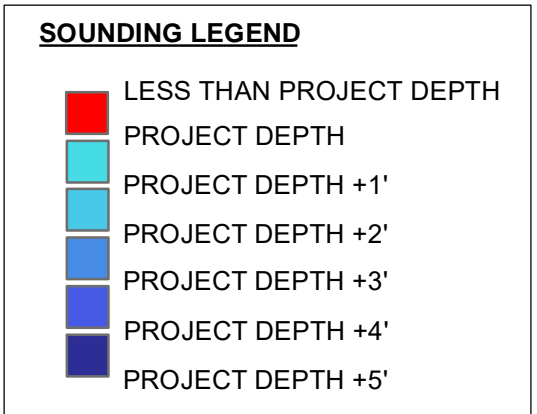
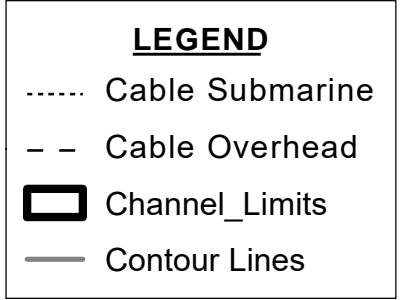
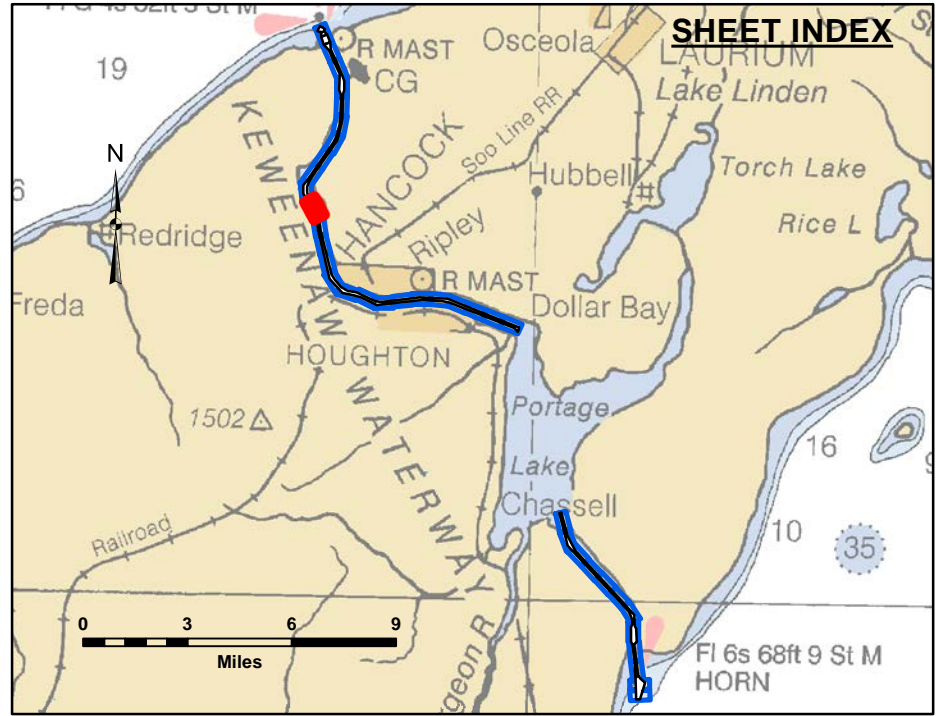
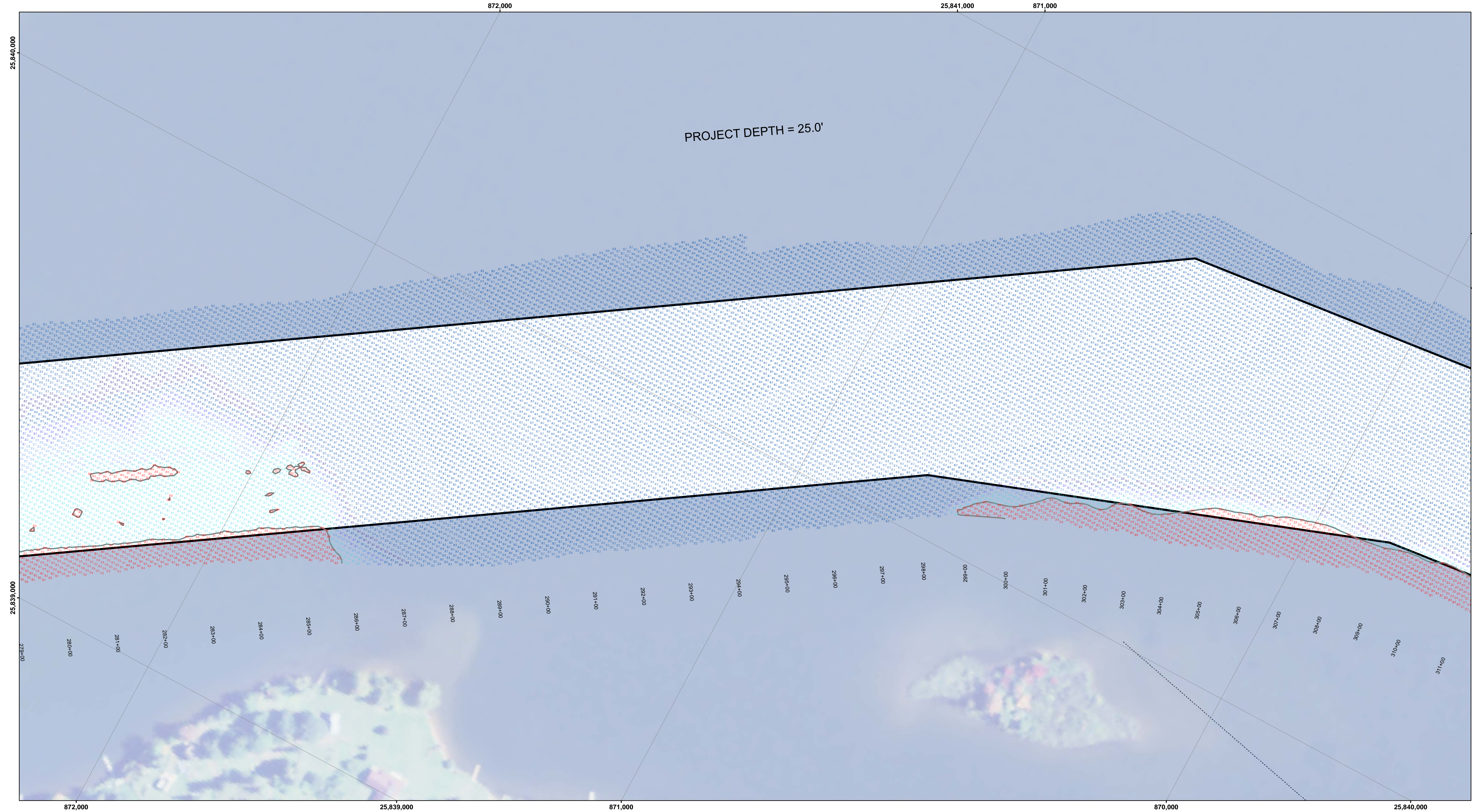


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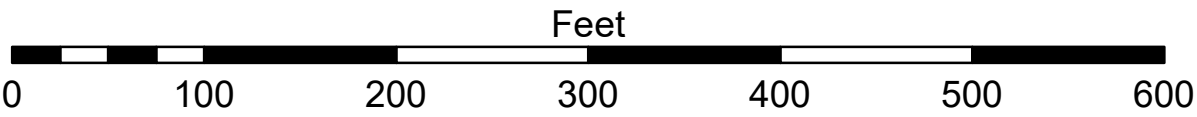
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Surveyed By: \_\_\_\_\_  
Plotted By: \_\_\_\_\_  
Checked By: \_\_\_\_\_  
Submitted: \_\_\_\_\_  
Recommended: \_\_\_\_\_  
Approved: \_\_\_\_\_  
Chief, Survey Section  
Chief, Technical Services





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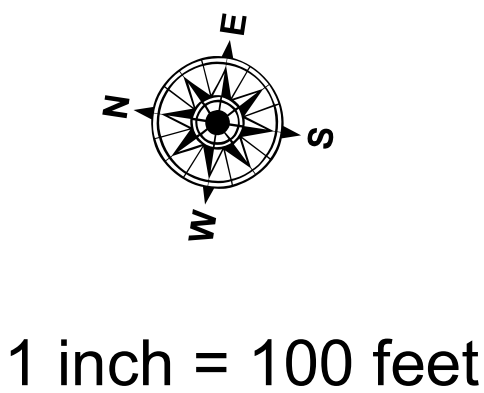
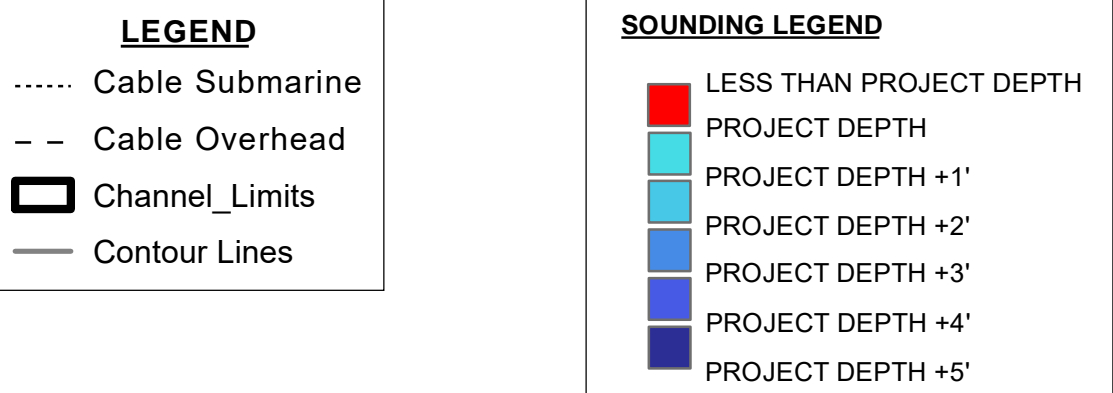
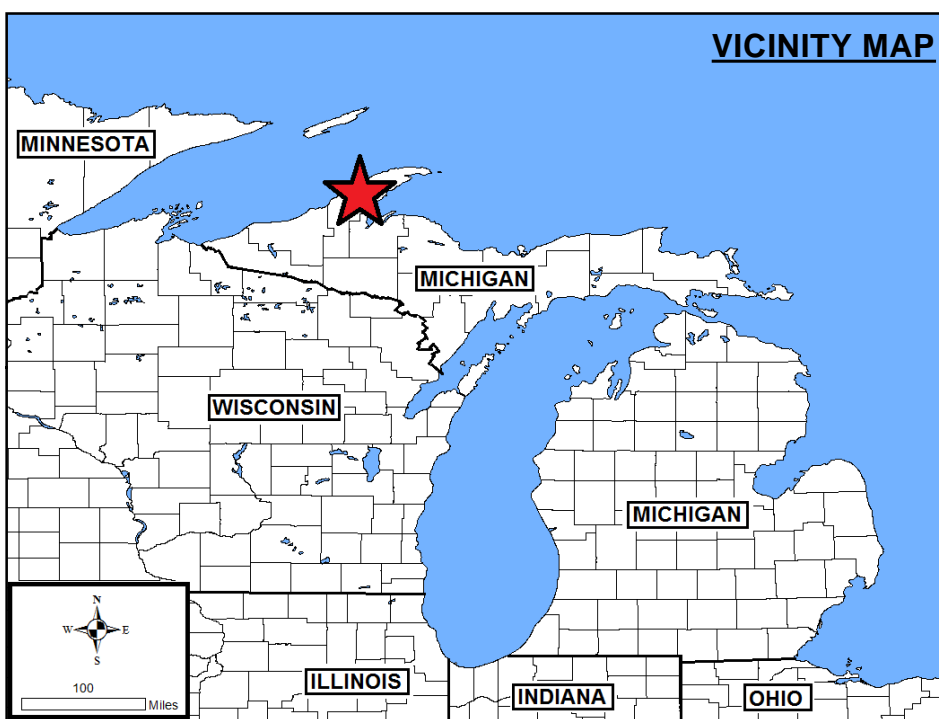
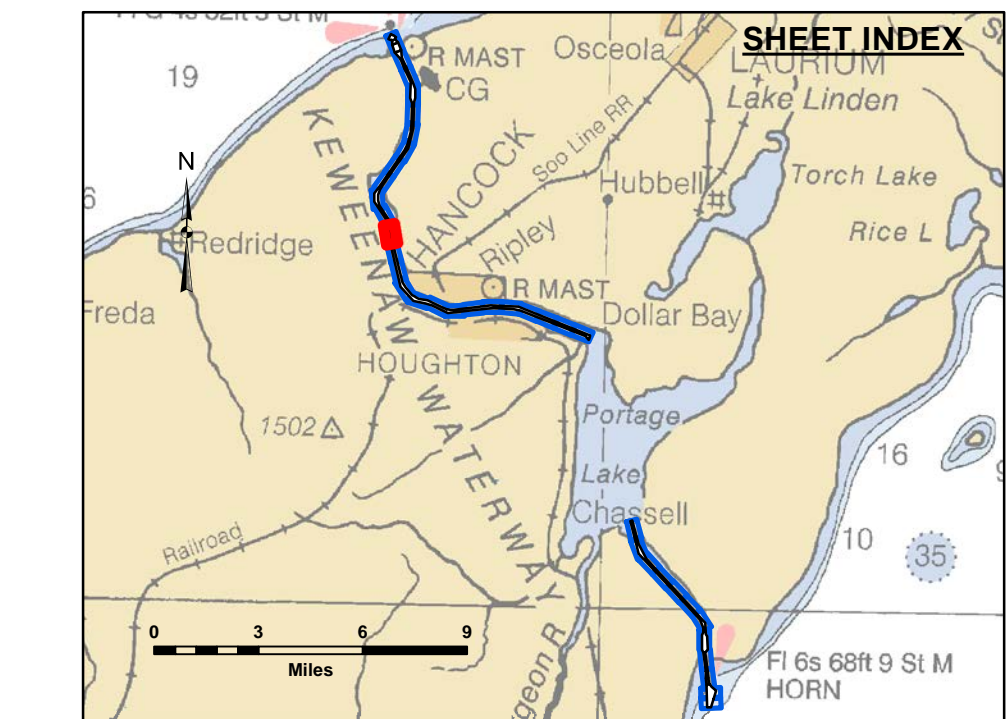
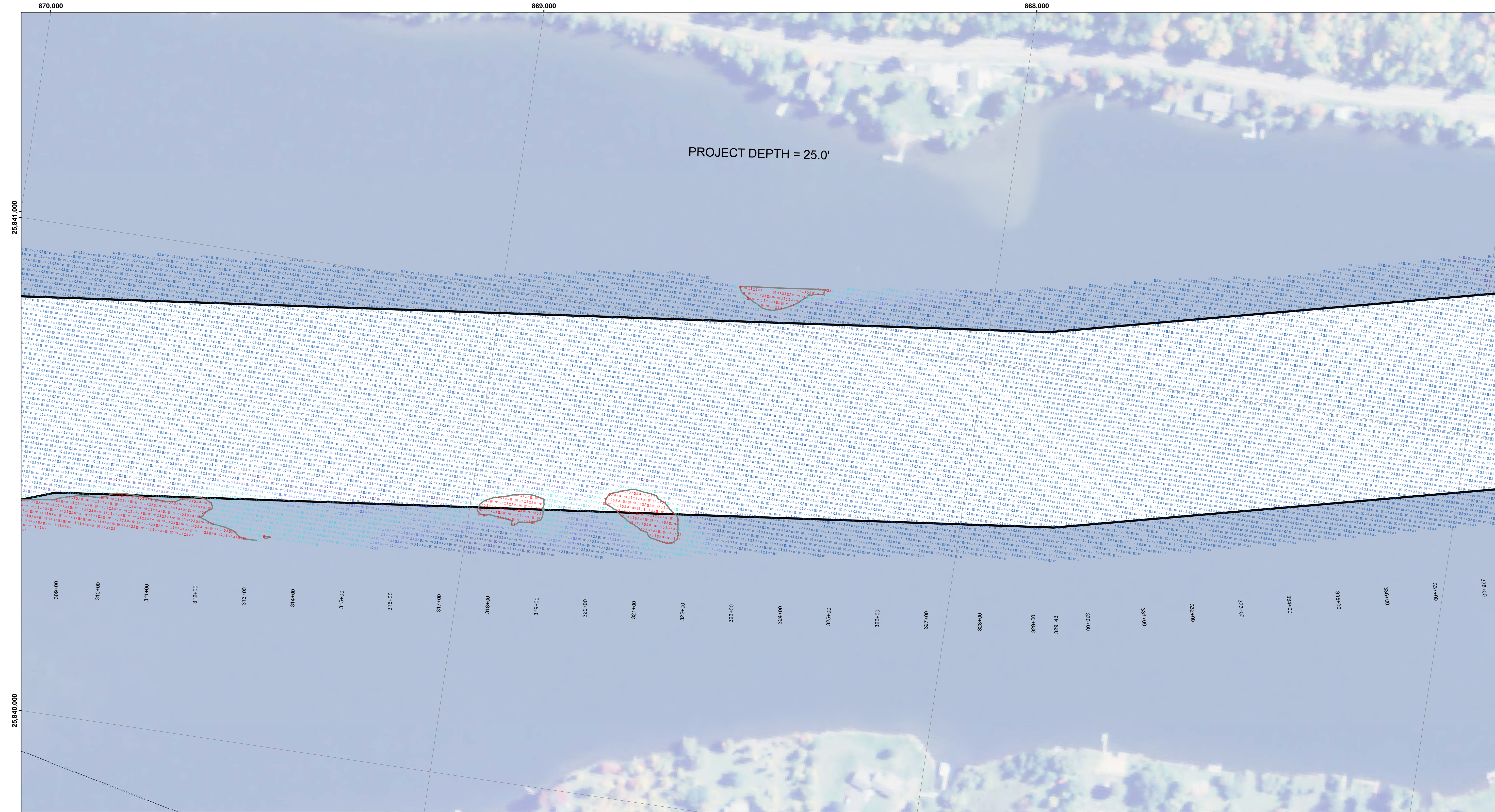
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
Submitted:	Surveyed By:	
Recommended:	Plotted By:	
Approved:	Chief, Survey Section	
	Chief, Technical Services	

**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221027\_CS**  
**27 October 2022**

**Sheet**  
**Reference**  
**Number**  
**11 of 37**





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Keweenaw Waterway, MI  
Keweenaw Waterway  
KW\_01\_NAW\_20221027\_CS  
27 October 2022

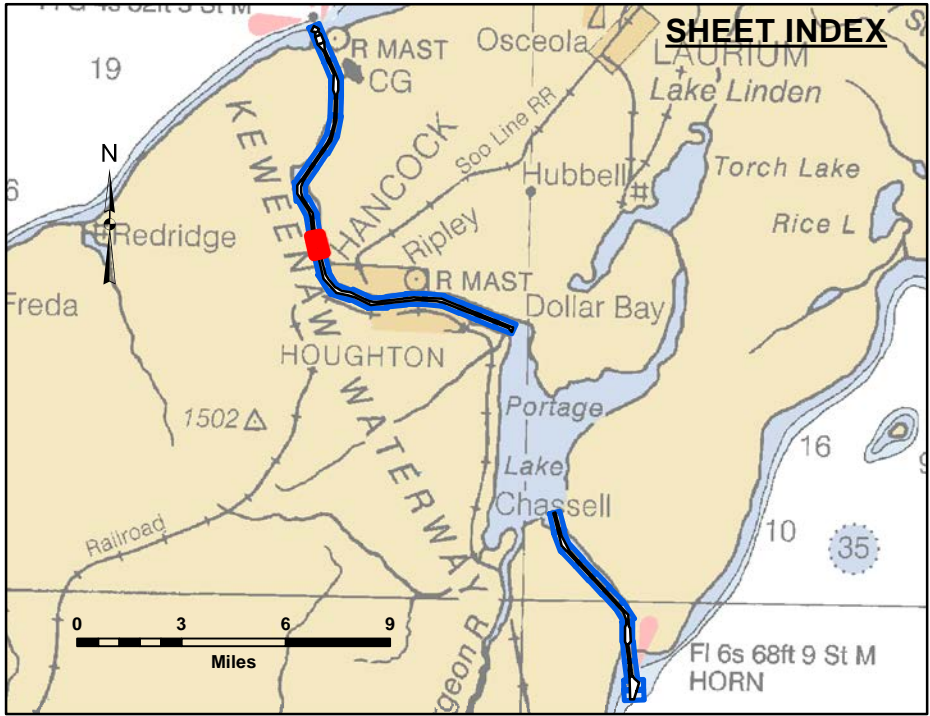
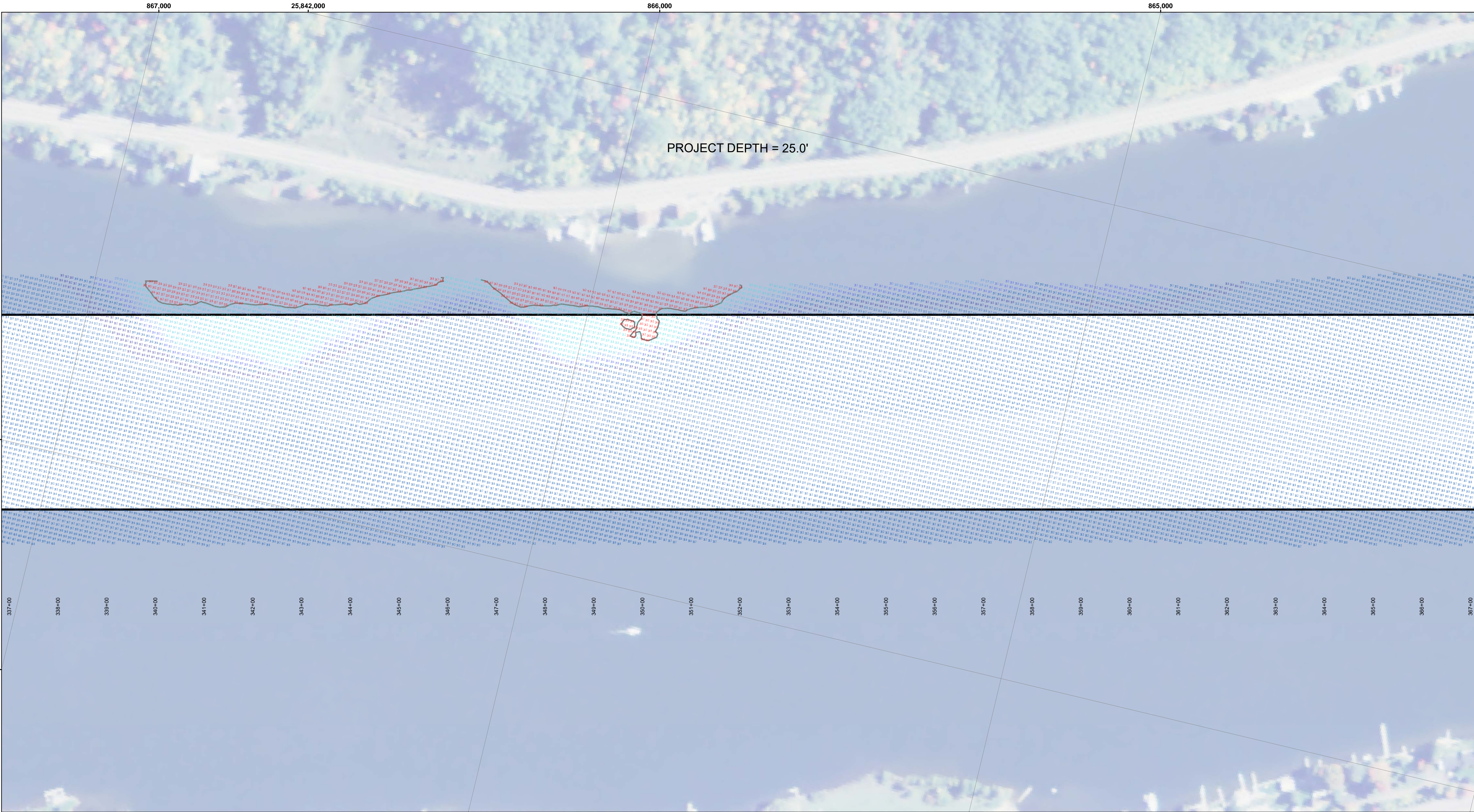
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U.S. ARMY CORPS OF ENGINEERS  
DETROIT DISTRICT  
Surveyed By:  
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Checked By:  
Submitted:  
Recommended:  
Approved:





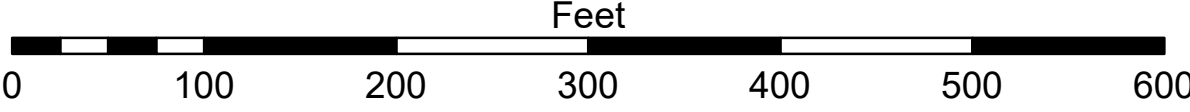
**LEGEND**

- ..... Cable Submarine
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**US Army Corps of Engineers**  
District: CELRE

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**U.S. ARMY CORPS OF ENGINEERS**  
DETROIT DISTRICT

**Submitted:** \_\_\_\_\_

**Recommended:** \_\_\_\_\_

**Approved:** \_\_\_\_\_

**Surveyed By:** \_\_\_\_\_

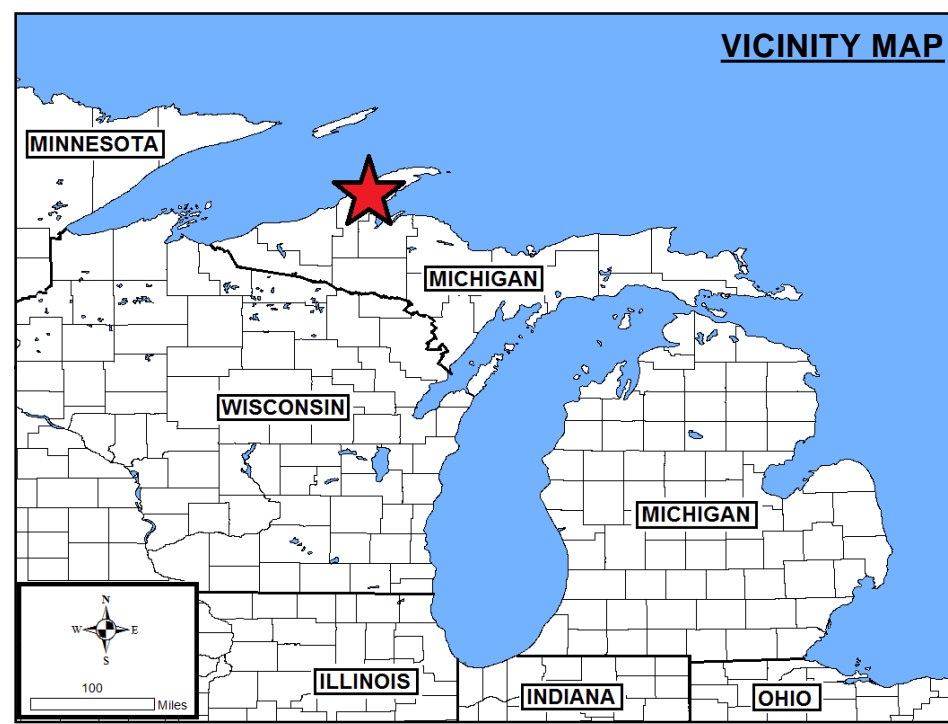
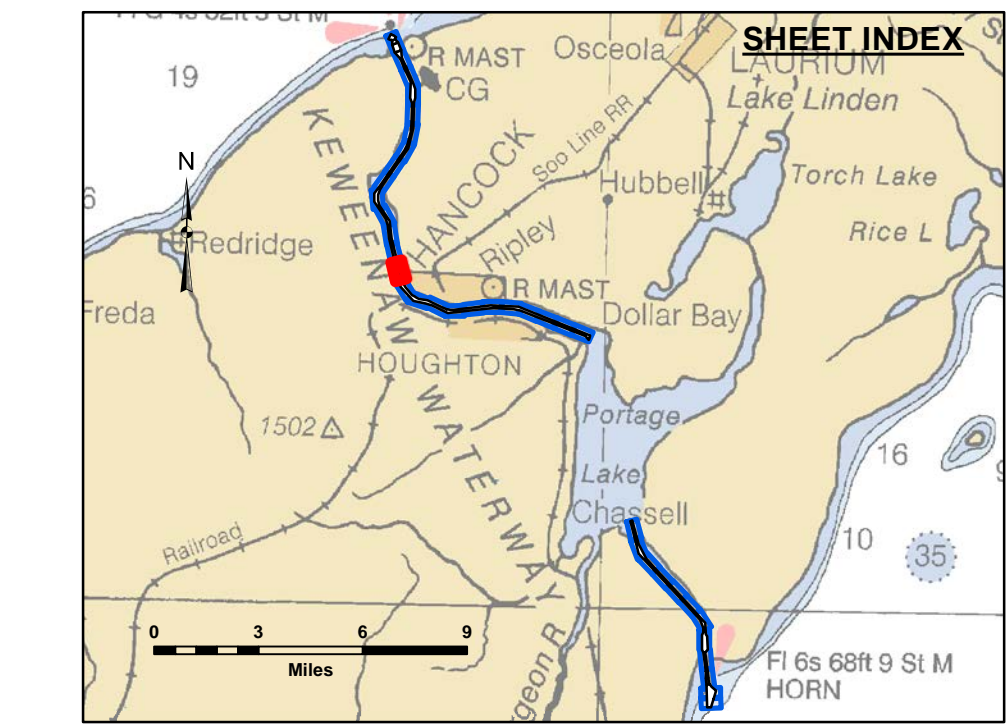
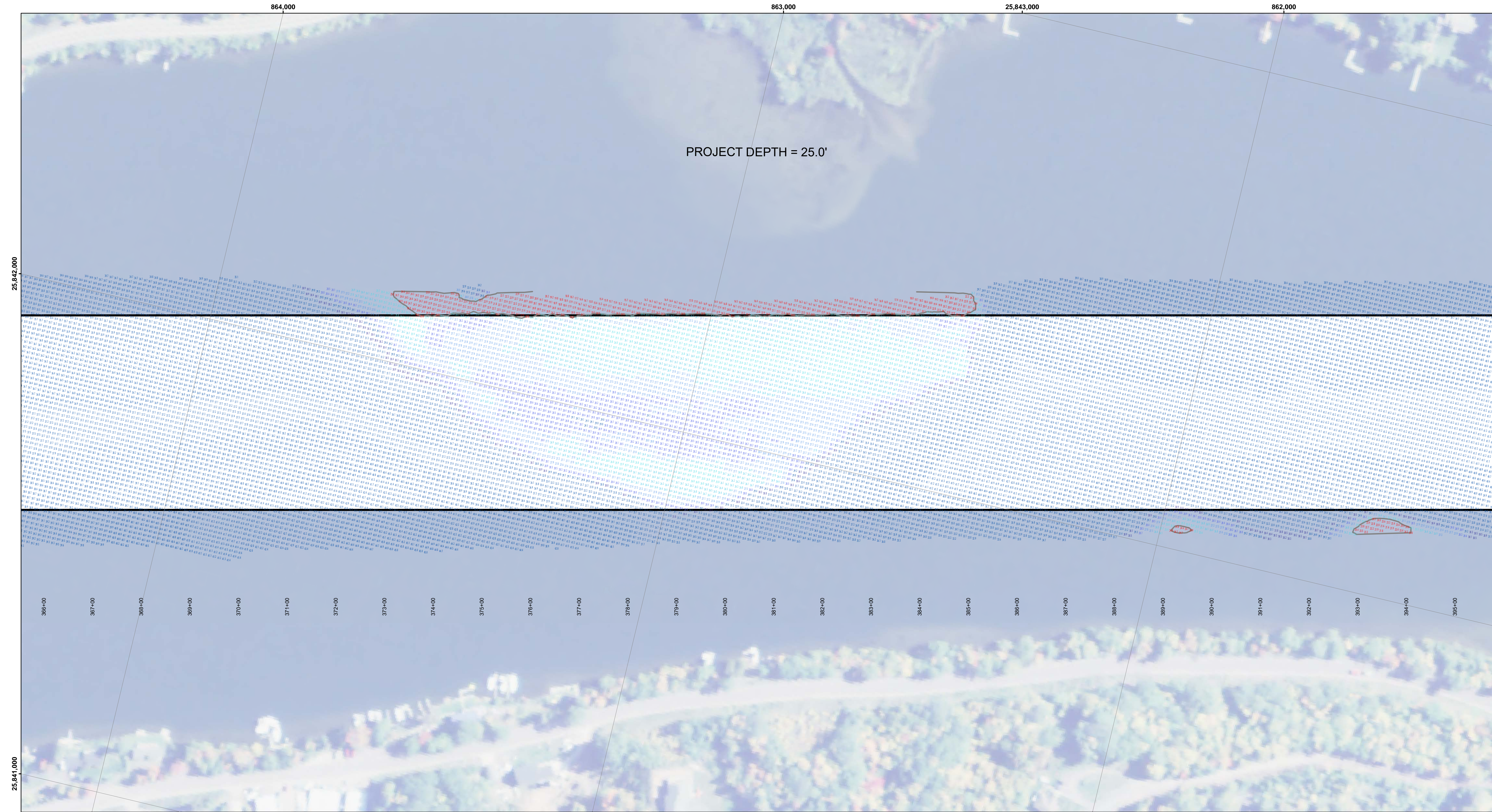
**Plotted By:** \_\_\_\_\_

**Checked By:** \_\_\_\_\_

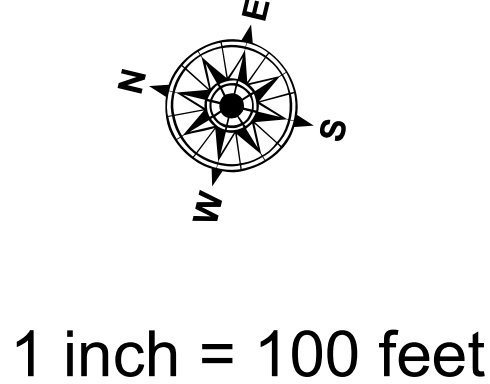
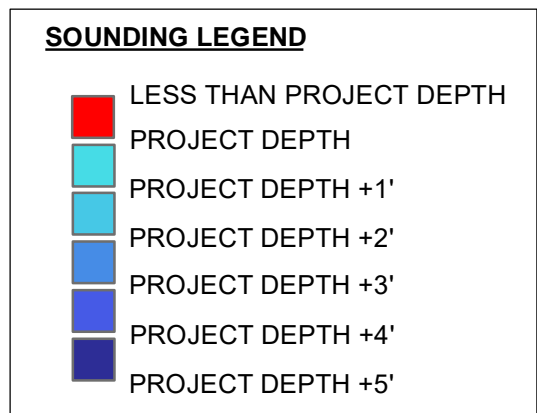
**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221027\_CS**  
**27 October 2022**

**Sheet Reference Number**  
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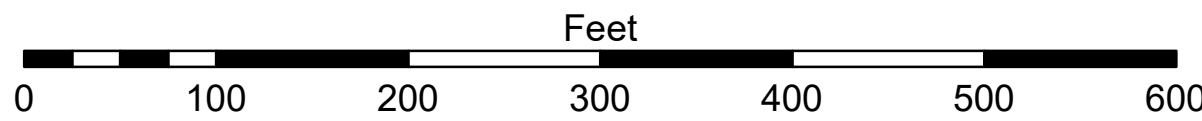




- LEGEND**
- ..... Cable Submarine
  - Cable Overhead
  - Channel\_Limits
  - Contour Lines



1 inch = 100 feet



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  6. IMAGERY SOURCED FROM: ESRI & 2014 NAIP IMAGERY

Keweenaw Waterway, MI  
Keweenaw Waterway  
KW\_01\_NAW\_20221027\_CS  
27 October 2022

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Reference  
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**U.S. ARMY CORPS OF ENGINEERS**  
DETROIT DISTRICT

Submitted: \_\_\_\_\_

Recommended: \_\_\_\_\_

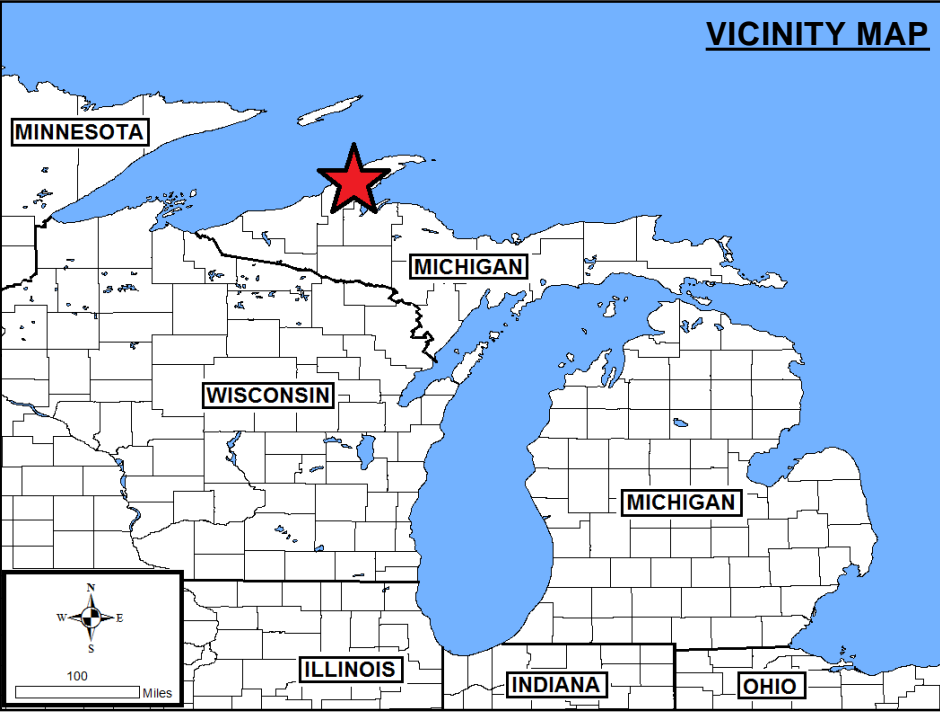
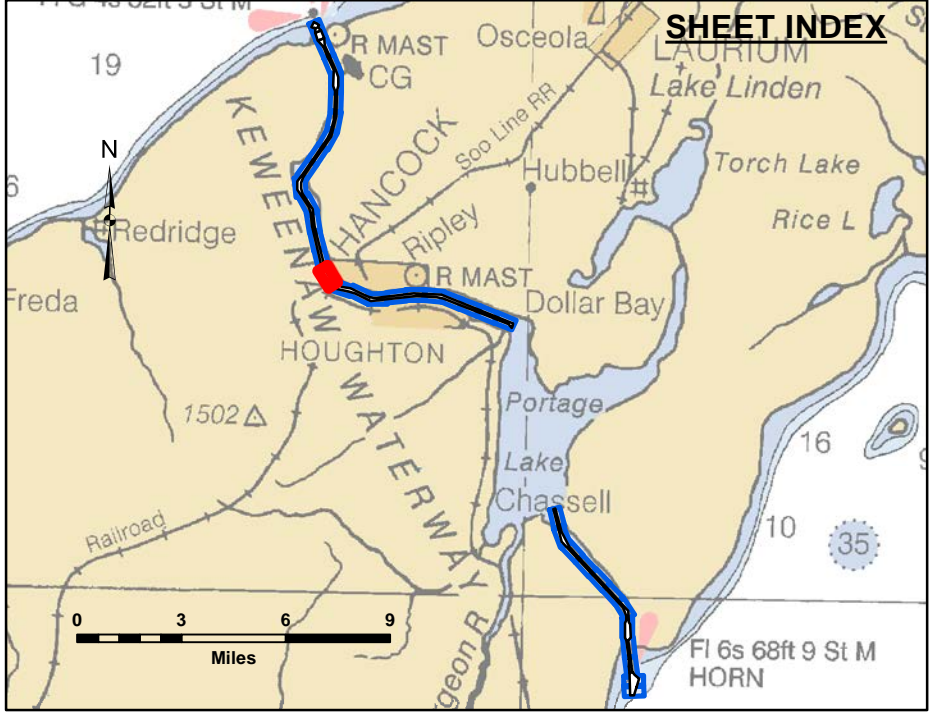
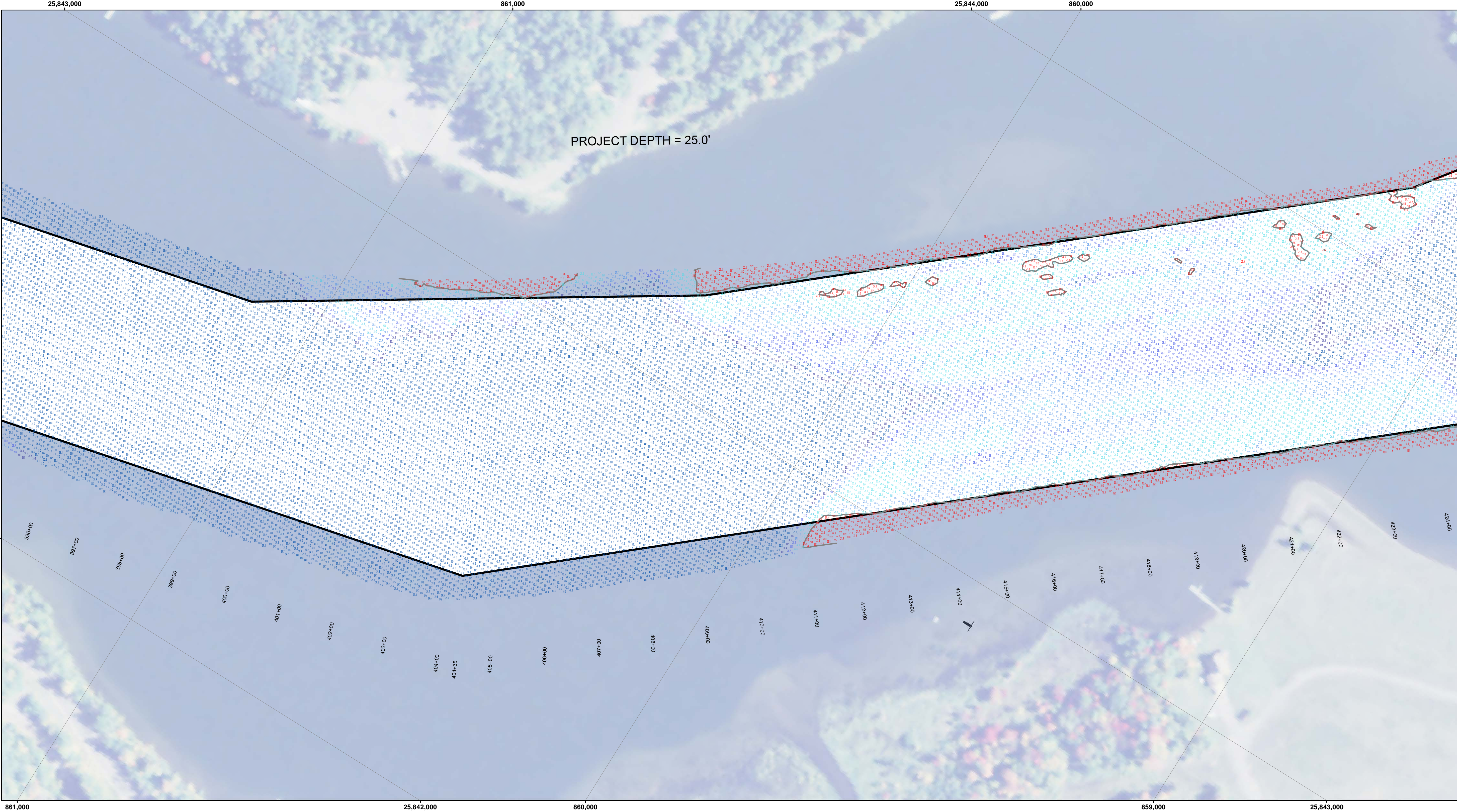
Approved: \_\_\_\_\_

Surveyed By: \_\_\_\_\_

Plotted By: \_\_\_\_\_

Checked By: \_\_\_\_\_





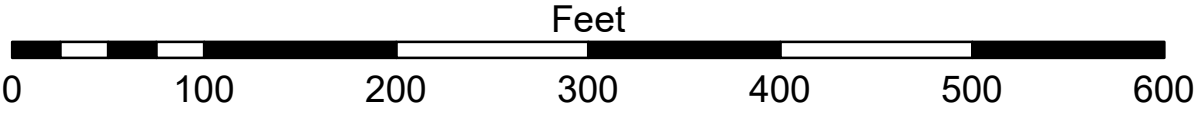
**LEGEND**

- ..... Cable Submarine
- - Cable Overhead
- Channel\_Limits
- Contour Lines

**SOUNDING LEGEND**

- LESS THAN PROJECT DEPTH
- PROJECT DEPTH
- PROJECT DEPTH +1'
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**US Army Corps  
of Engineers**  
District: CELRE

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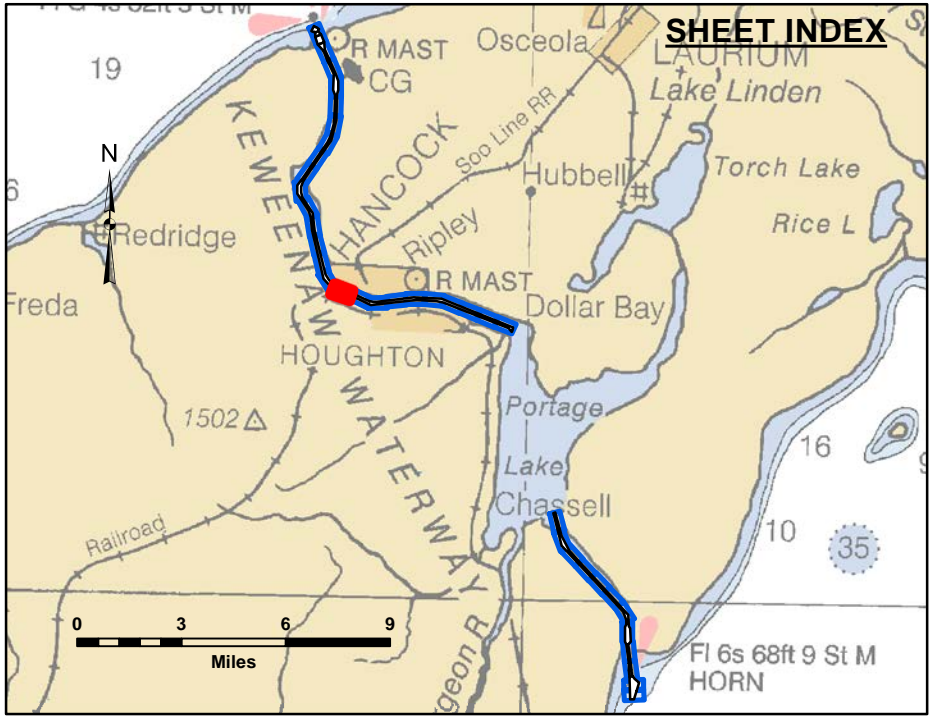
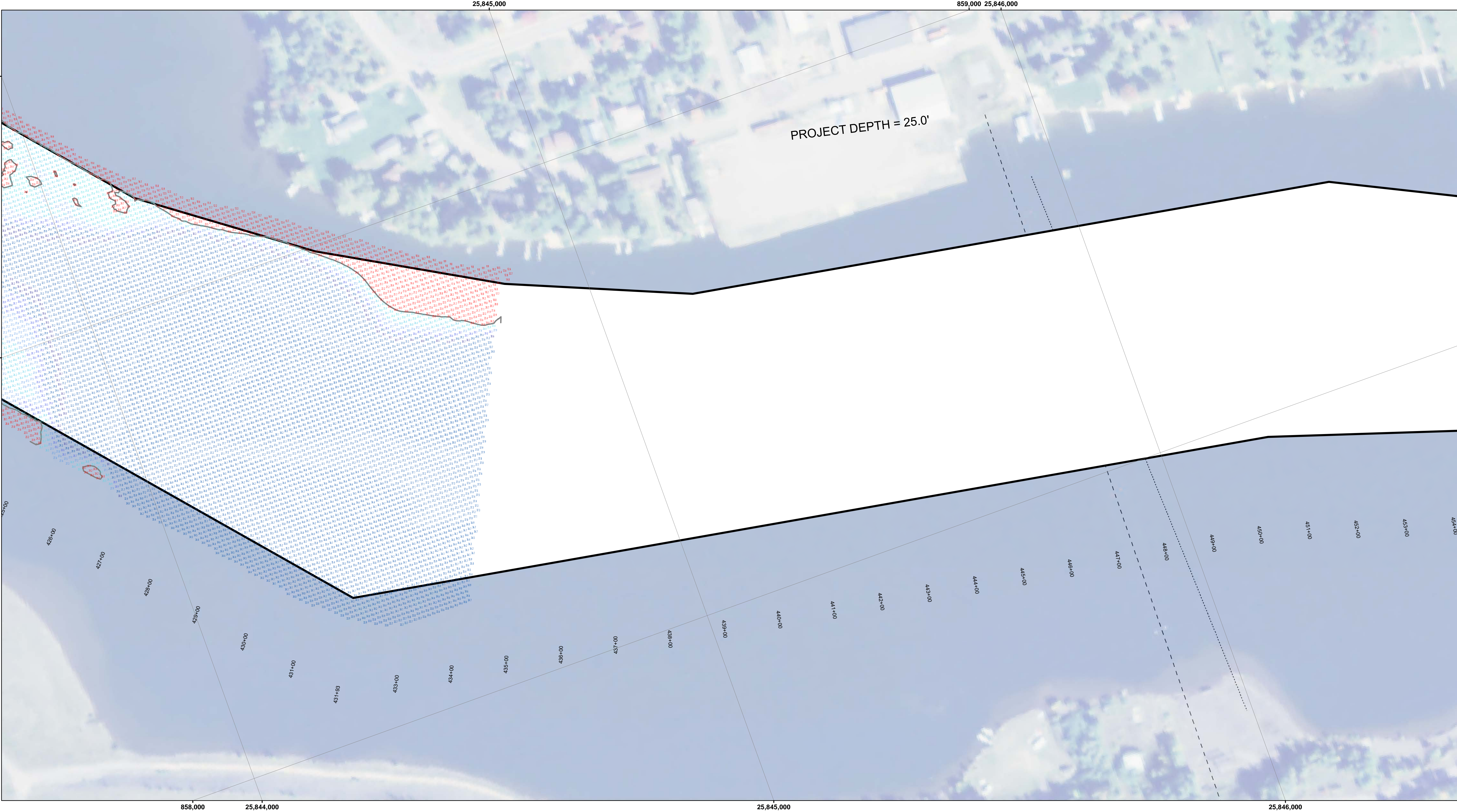
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
Submitted:	Surveyed By:	
Recommended:	Plotted By:	
Approved:	Checked By:	

**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221027\_CS**  
**27 October 2022**

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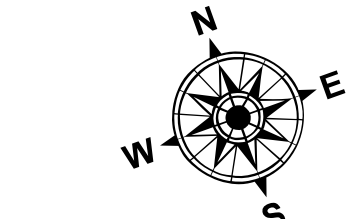


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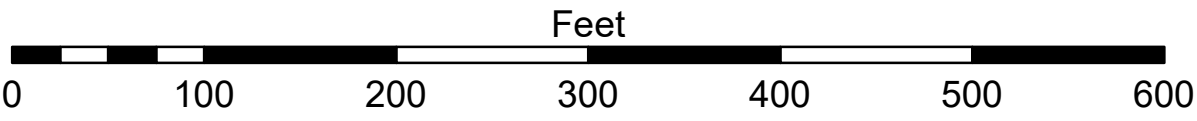
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**SOUNDING LEGEND**

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**US Army Corps  
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District: CELRE

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Approved: \_\_\_\_\_  
Chief, Technical Services

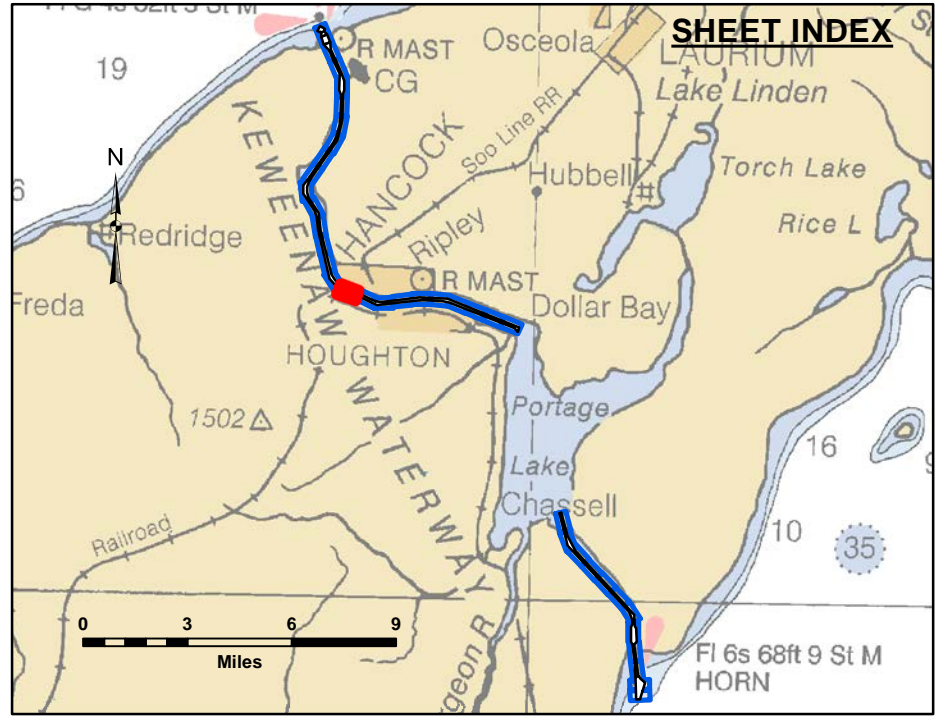
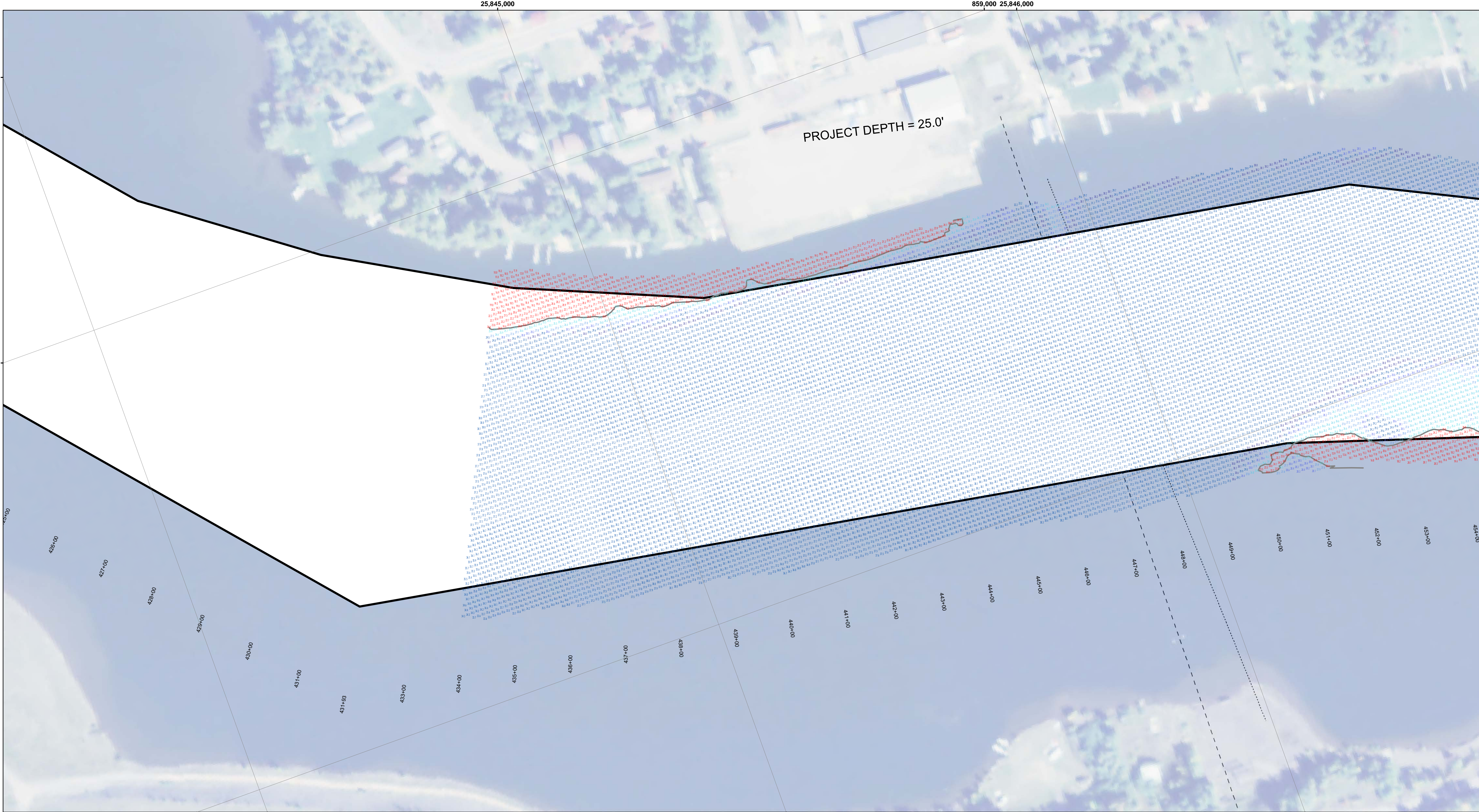
**U.S. ARMY CORPS OF ENGINEERS  
DETROIT DISTRICT**

Submitted:	Surveyed By:
Recommended:	Plotted By:
Approved:	Checked By:

**Keweenaw Waterway, MI  
Keweenaw Waterway  
KW\_01\_NAW\_20221027\_CS  
27 October 2022**

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Number  
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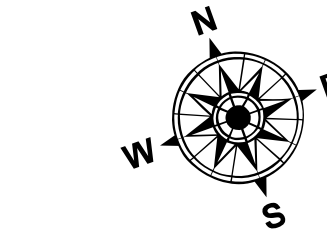


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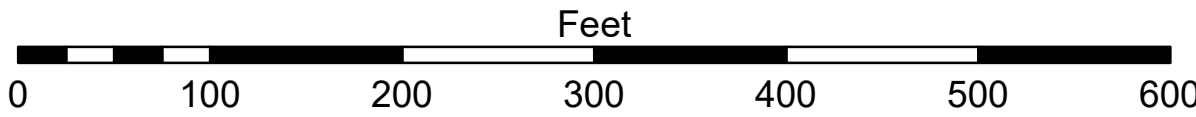
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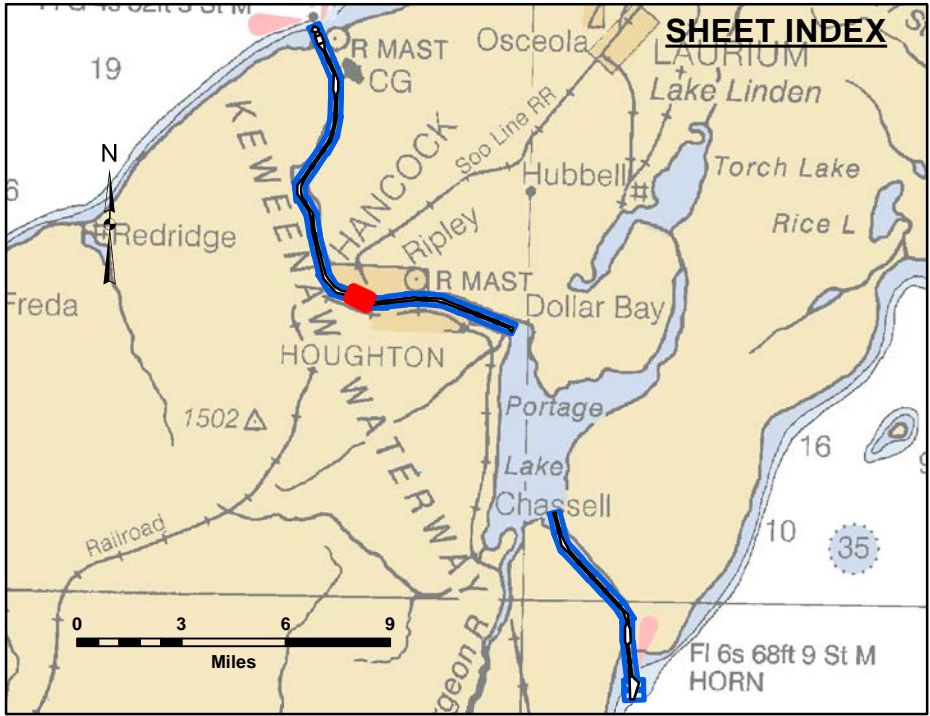
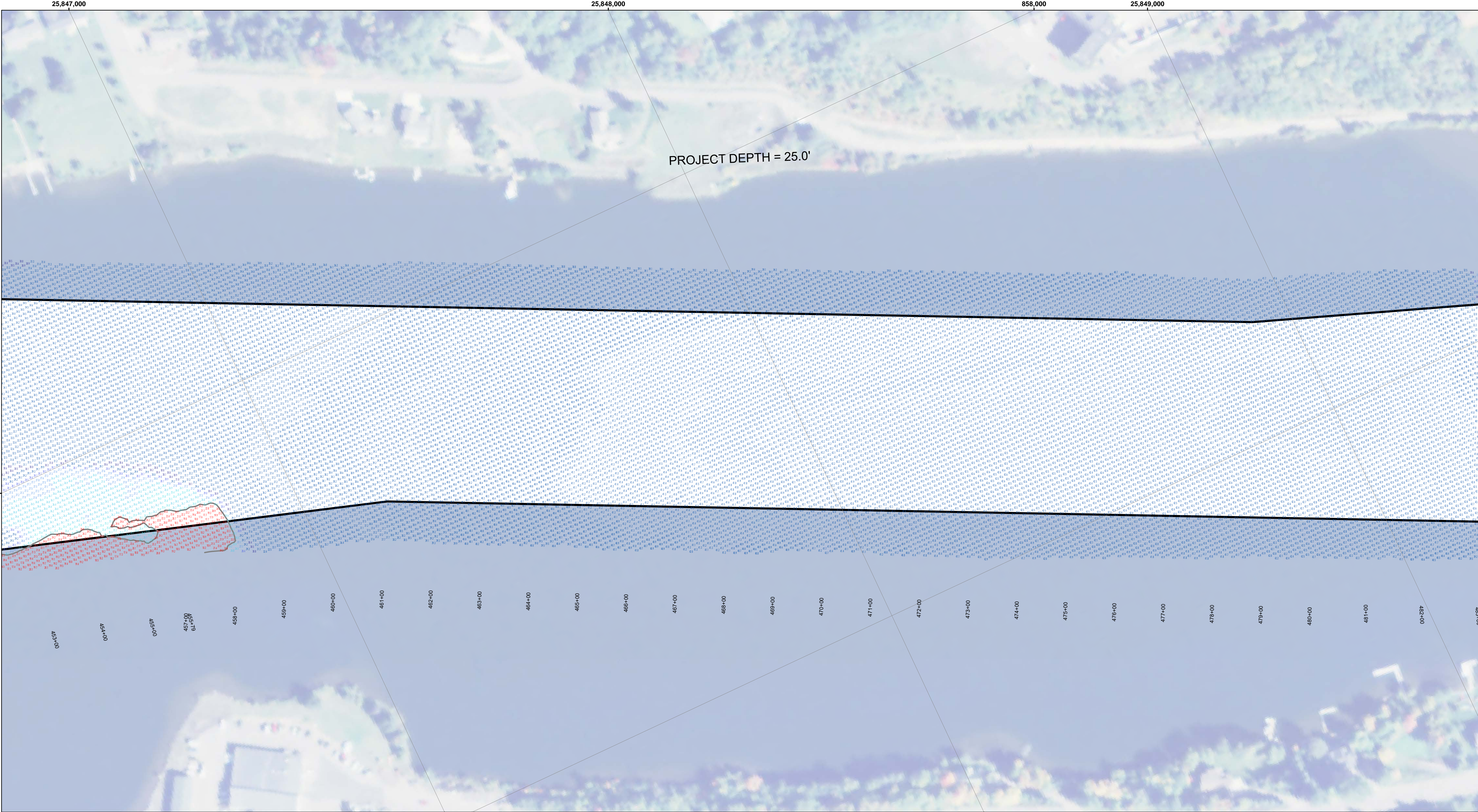
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	Submitted:	Surveyed By:
	Recommended: Chief, Survey Section	Plotted By:
	Approved: Chief, Technical Services	Checked By:

**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221018\_CS**  
**18 October 2022**

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Reference  
Number  
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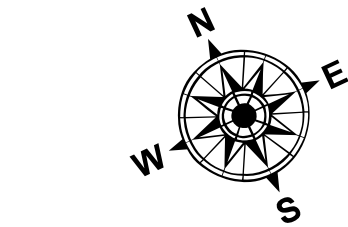


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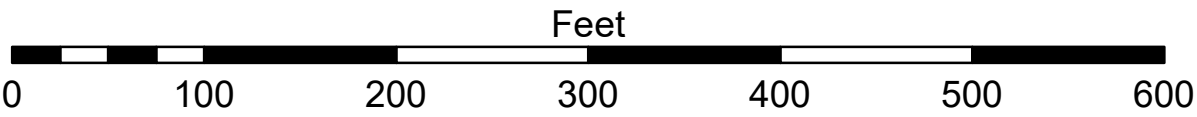
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**US Army Corps  
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District: CELRE

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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	

**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221018\_CS**  
**18 October 2022**

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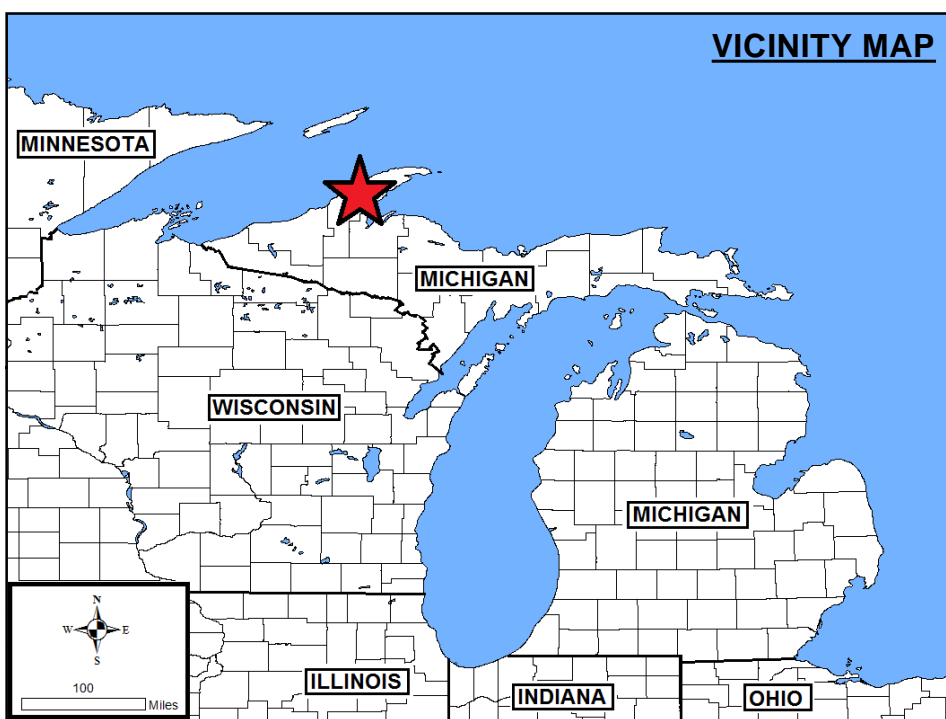
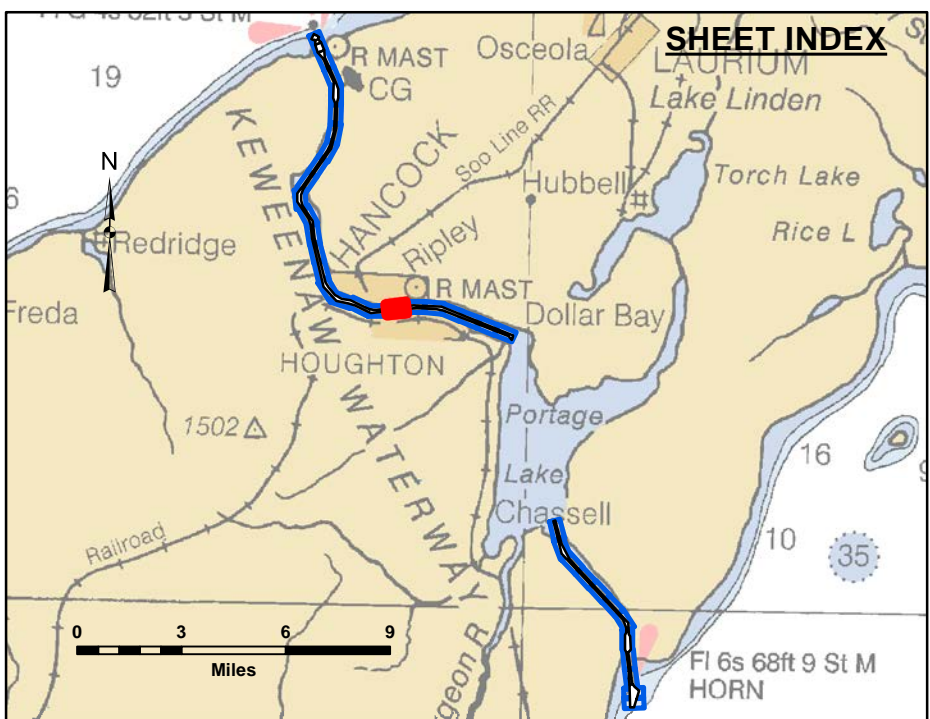
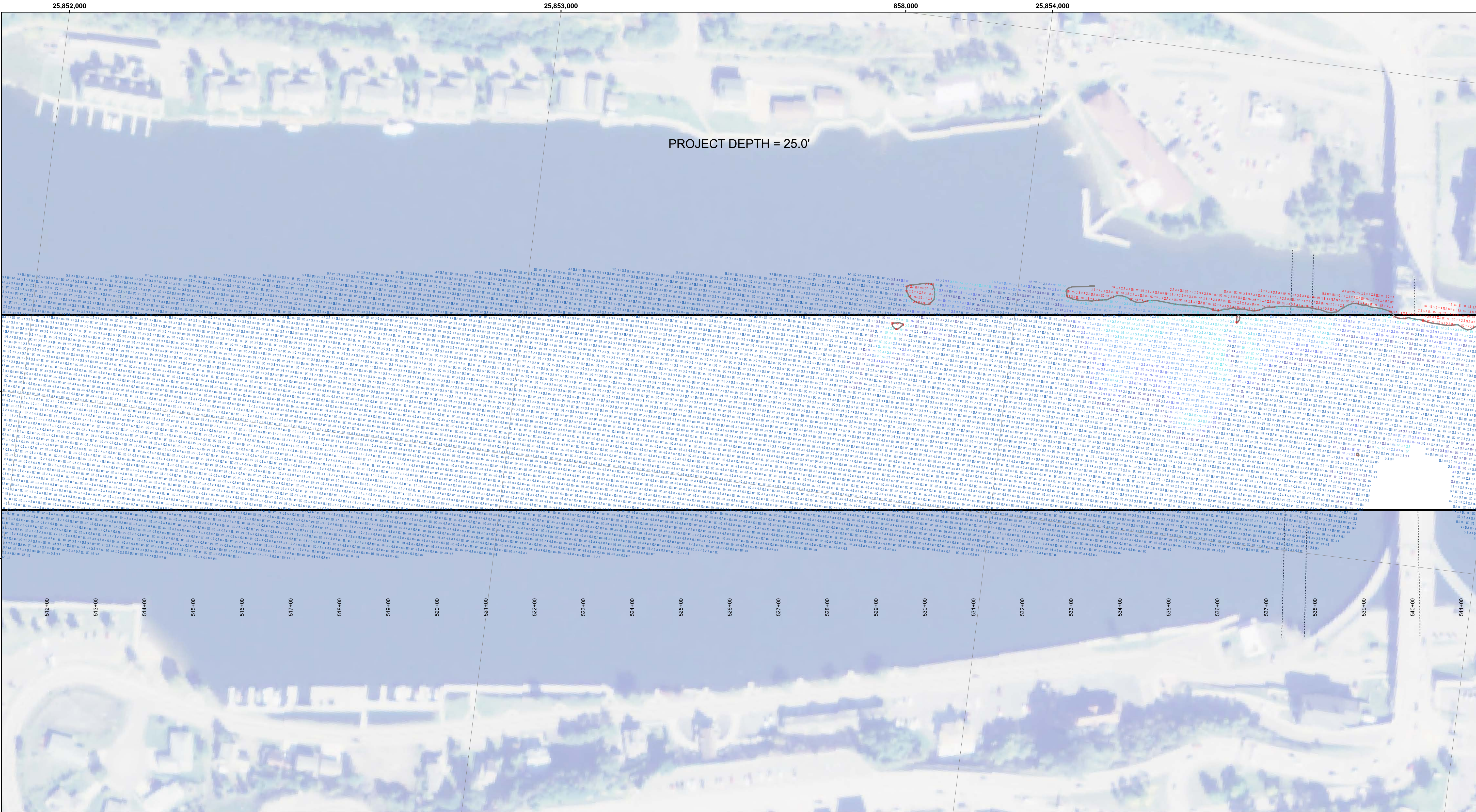


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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	
Submitted: _____	Surveyed By: _____
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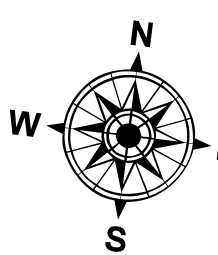
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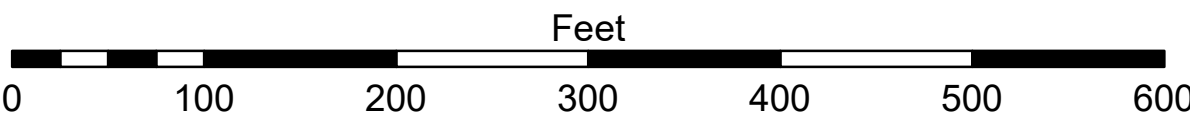


- LEGEND**
- ..... Cable Submarine
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  - Contour Lines

- SOUNDING LEGEND**
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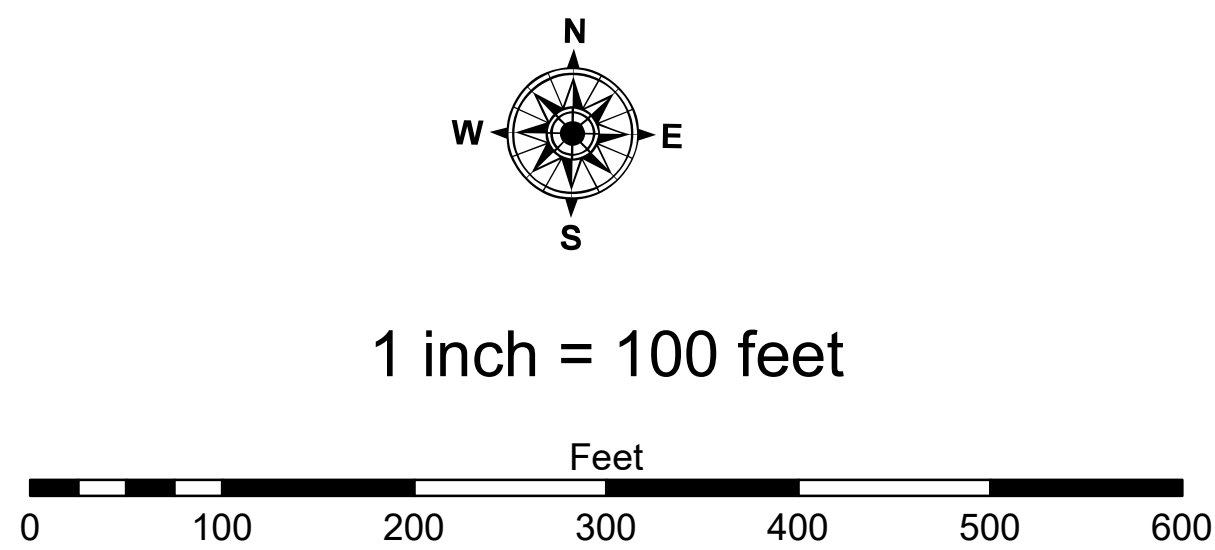
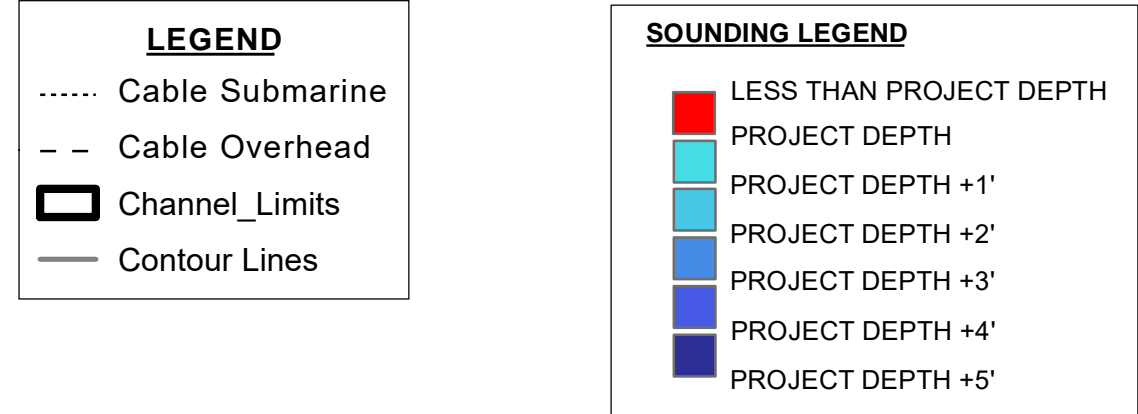
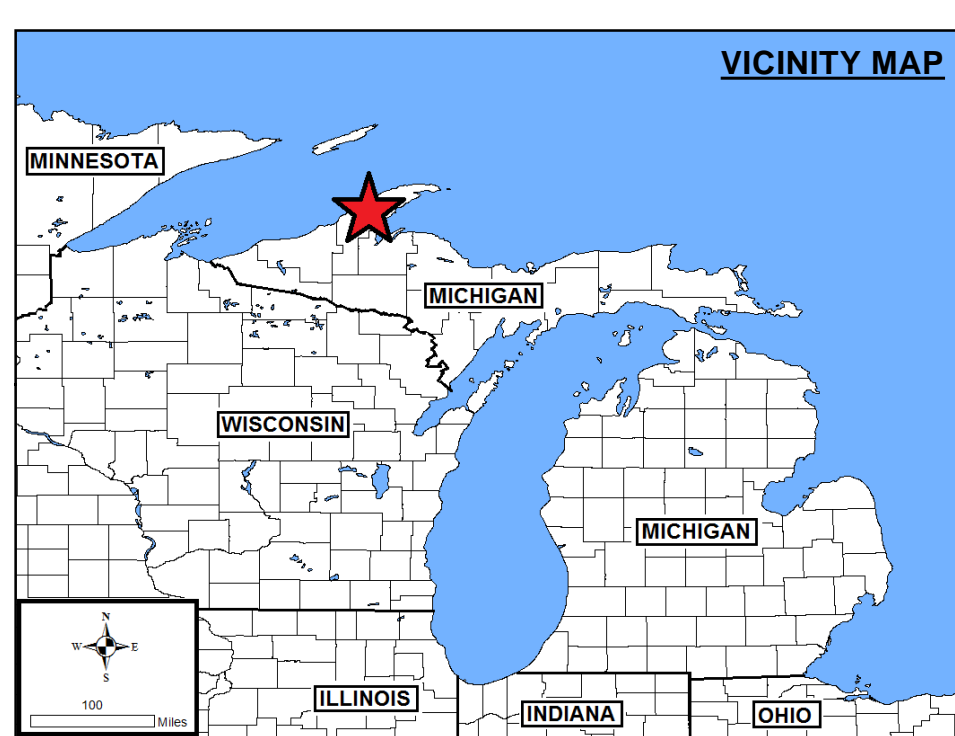
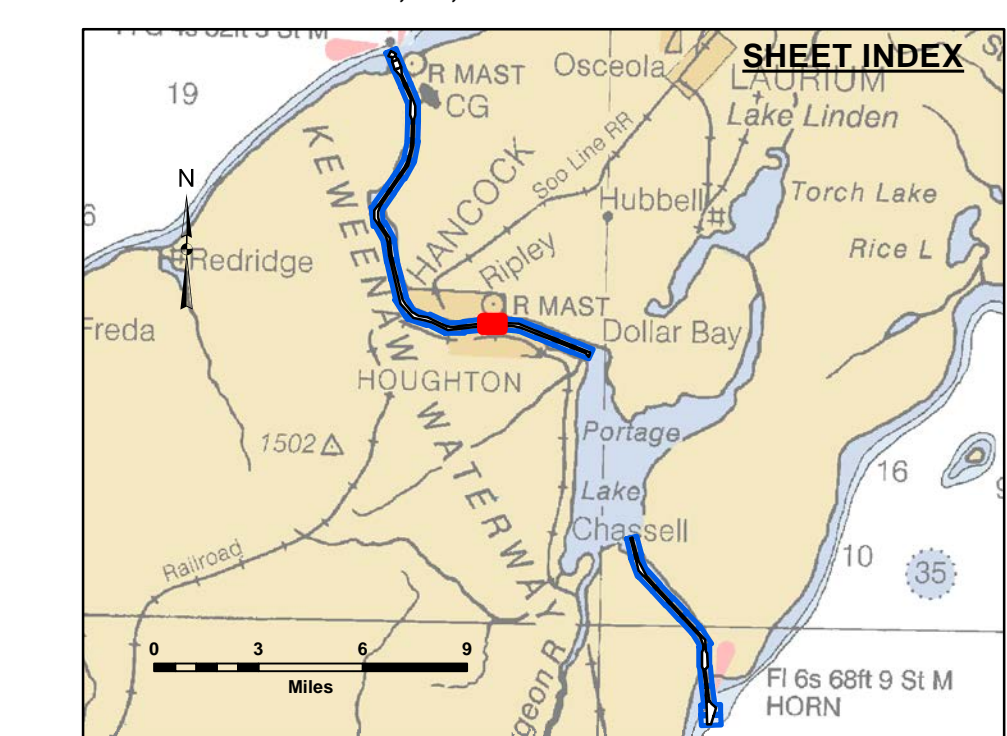
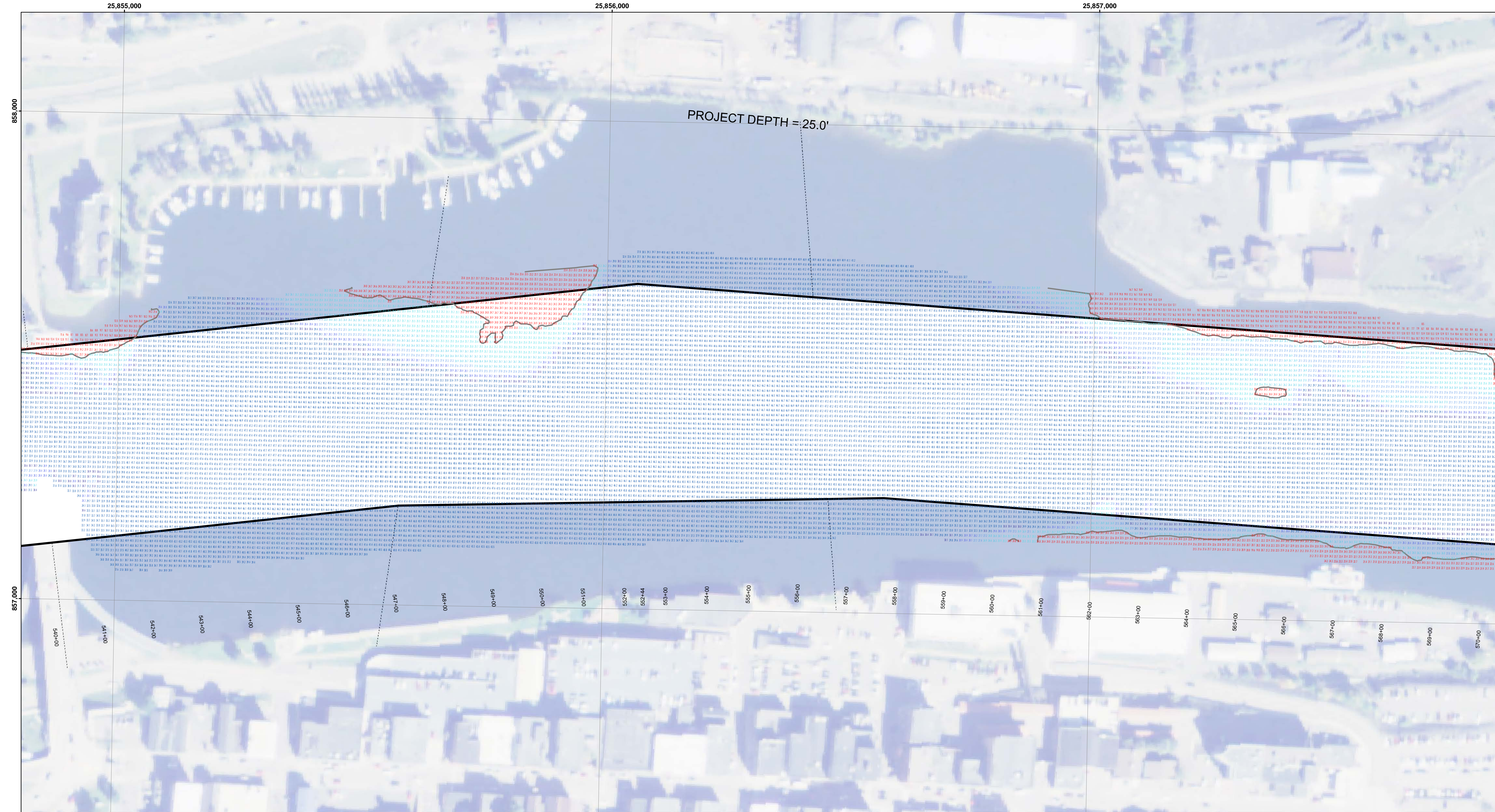


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Keweenaw Waterway, MI  
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KW\_01\_NAW\_20221018\_CS  
18 October 2022

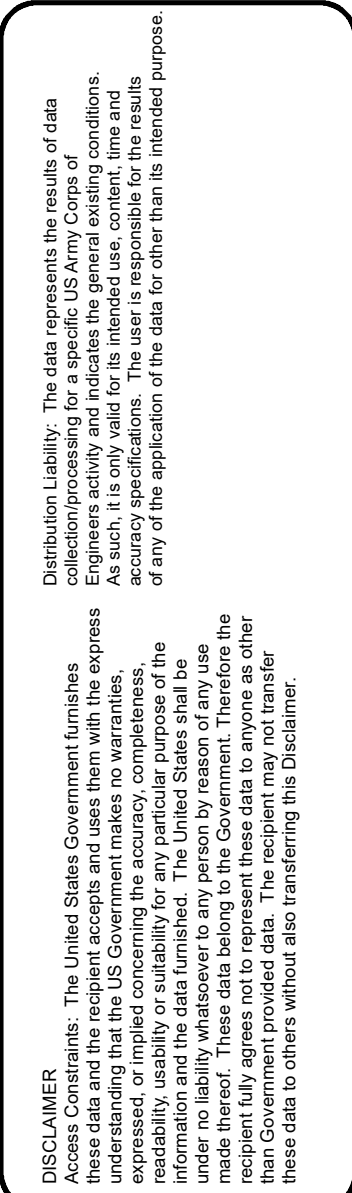
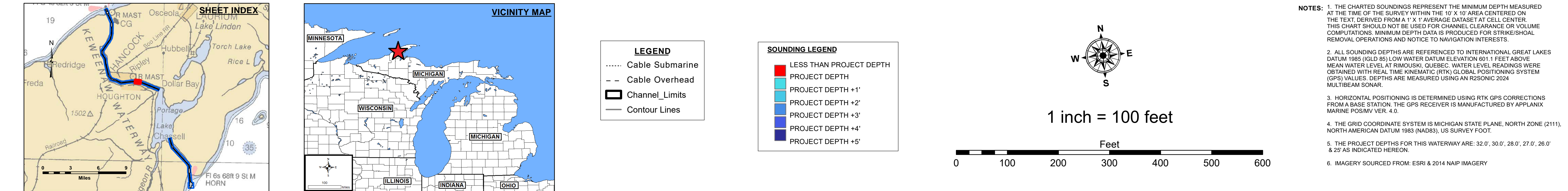
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Recommended: \_\_\_\_\_  
Approved: \_\_\_\_\_  
Chief, Survey Section  
Chief, Technical Services



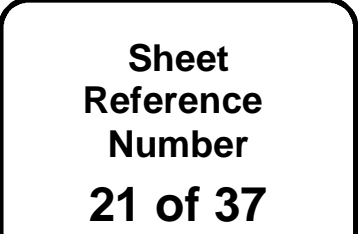
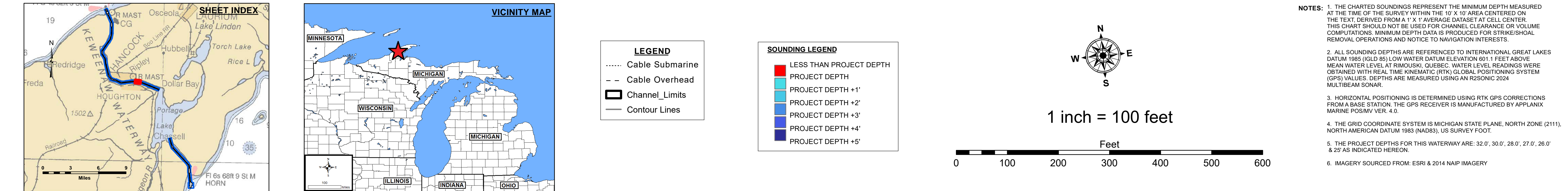


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Submitted: _____	Surveyed By: _____
Recommended: _____ Chief, Survey Section	Plotted By: _____
Approved: _____ Chief, Technical Services	Checked By: _____

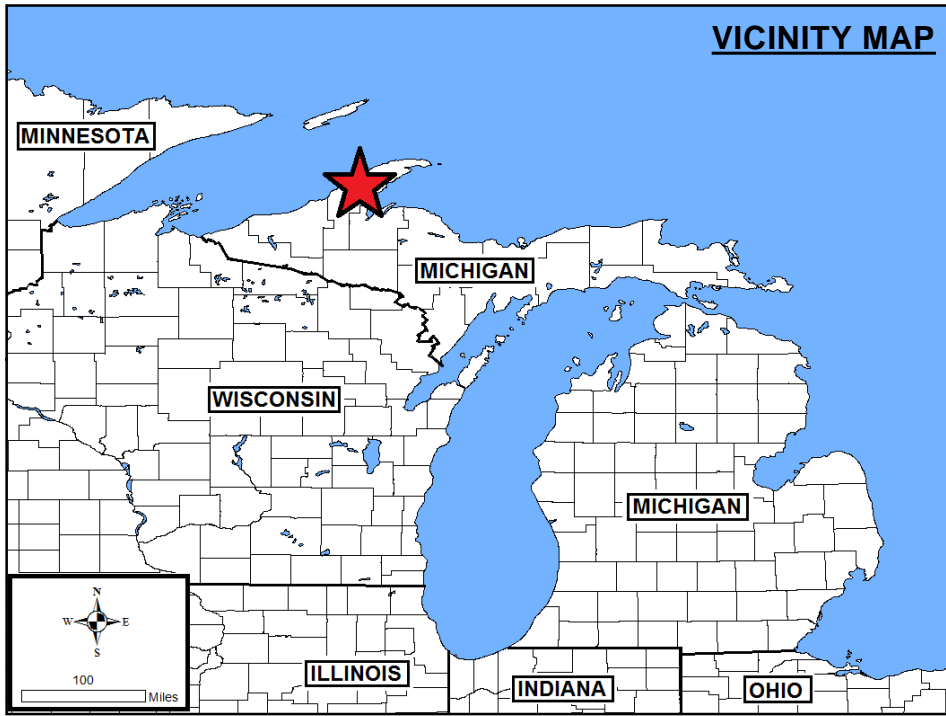
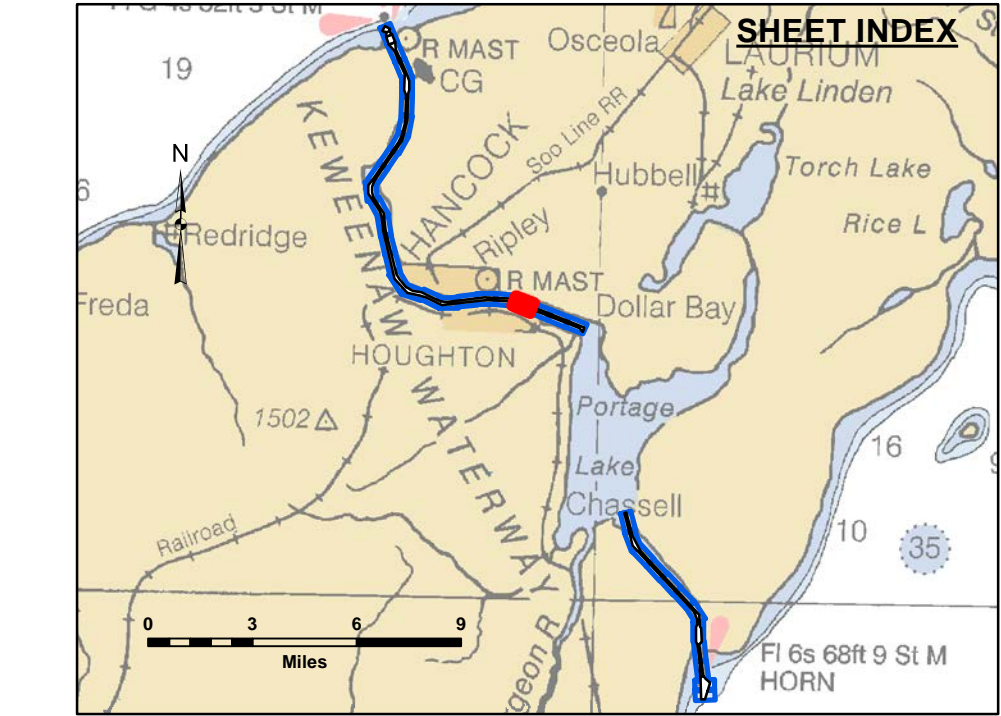
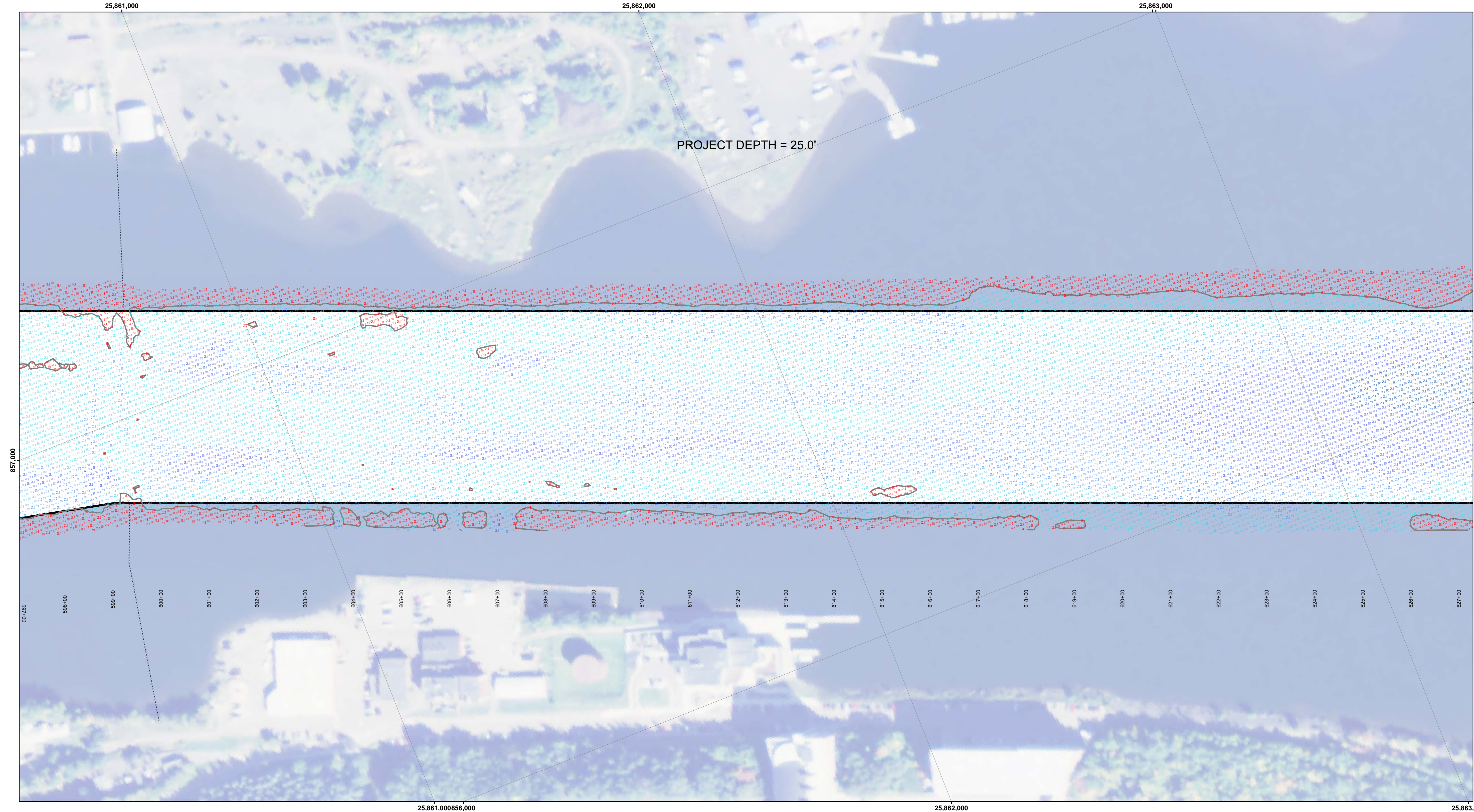
**Keweenaw Waterway, MI  
Keweenaw Waterway  
KW\_01\_NAW\_20221018\_CS  
18 October 2022**

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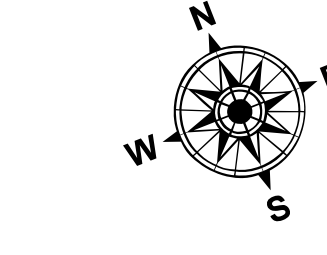


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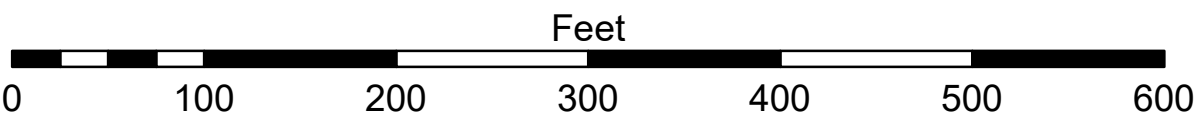
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- - - Cable Overhead
- Channel\_Limits
- Contour Lines

**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 CHARTED SOUNDINGS REPRESENT THE MINIMUM DEPTH MEASURED AT THE TIME OF THE SURVEY WITHIN THE 10 X 10 AREA CENTERED ON THE TEXT. DERIVED FROM A 1" X 1" AVERAGE DATASET AT CELL CENTER. THIS CHART SHOULD NOT BE USED FOR CHANNEL CLEARANCE OR VOLUME COMPUTATIONS. MINIMUM DEPTH DATA IS PRODUCED FOR STRIKE/SOAL REMOVAL OPERATIONS AND NOTICE TO NAVIGATION INTERESTS.
  2. ALL 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 REAL TIME KINEMATIC (RTK) GLOBAL POSITIONING SYSTEM (GPS) VALUES. DEPTHS ARE MEASURED USING AN R2SONIC 2024 MULTIBEAM SONAR.
  3. HORIZONTAL POSITIONING IS DETERMINED USING RTK GPS CORRECTIONS FROM A BASE STATION. THE GPS RECEIVER IS MANUFACTURED BY APPLANIX MARINE POSMV VER. 4.0.
  4. THE GRID COORDINATE SYSTEM IS MICHIGAN STATE PLANE, NORTH ZONE (2111), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.
  5. THE PROJECT DEPTHS FOR THIS WATERWAY ARE: 32.0', 30.0', 28.0', 27.0', 26.0' & 25' AS INDICATED HEREON.
  6. IMAGERY SOURCED FROM: ESRI & 2014 NAIP IMAGERY

  
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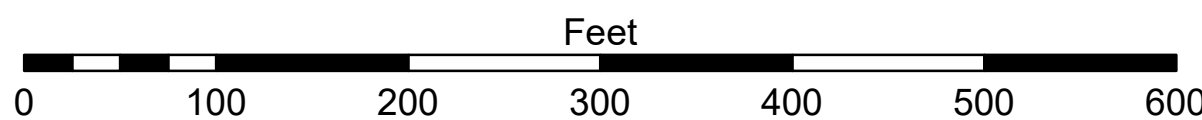
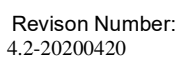
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Submitted:	Surveyed By: _____
Recommended:	Plotted By: _____
Approved:	Chief, Survey Section
	Checked By: _____
	Chief, Technical Services

**Keweenaw Waterway, MI**  
**Keweenaw Waterway**  
**KW\_01\_NAW\_20221019\_CS**  
**19 October 2022**

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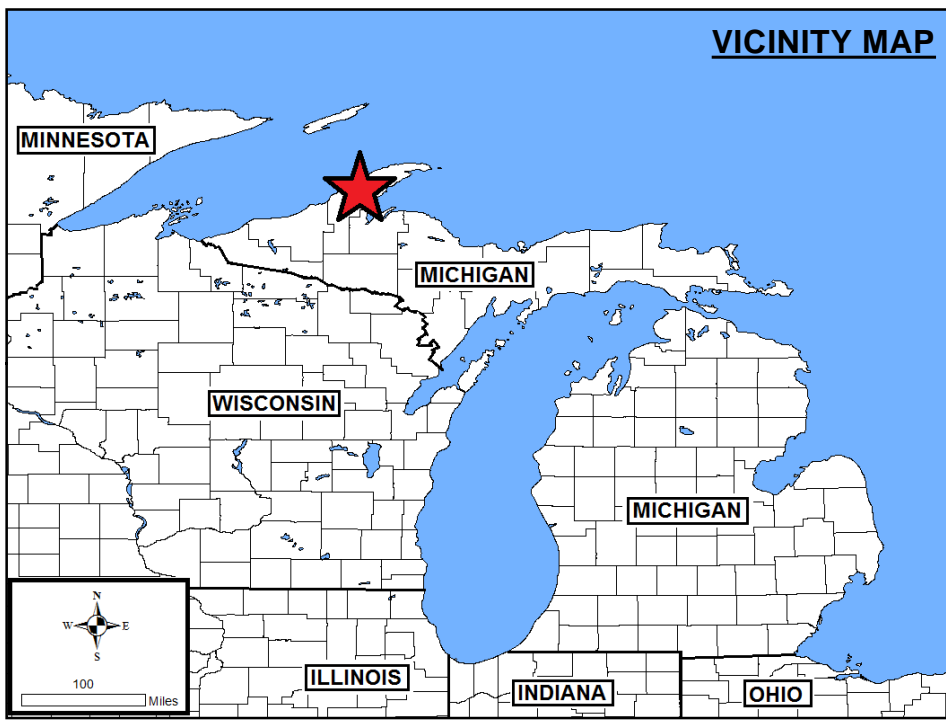
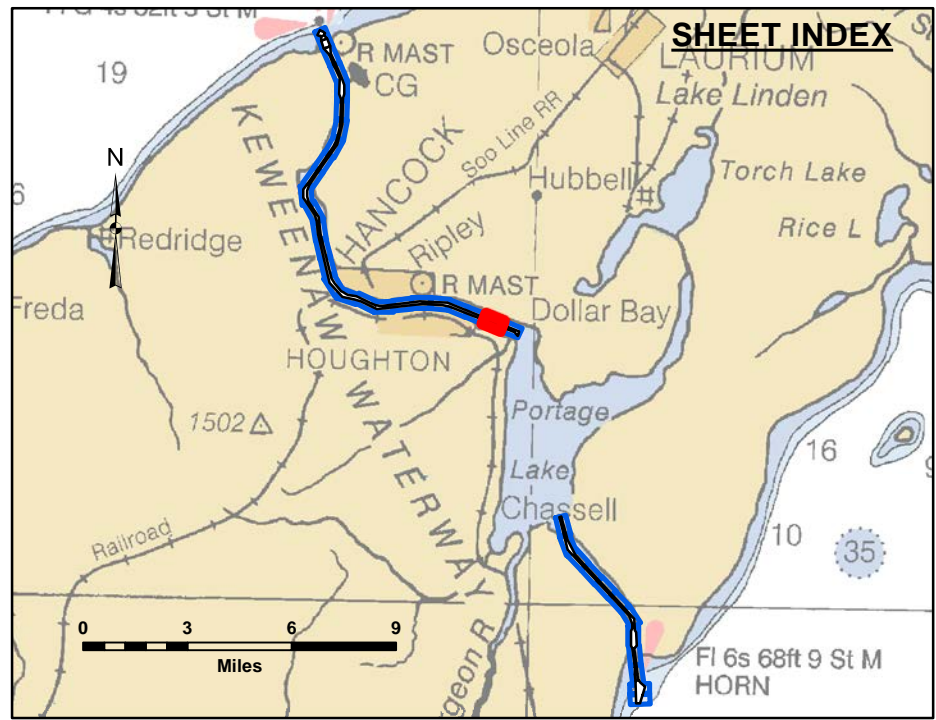
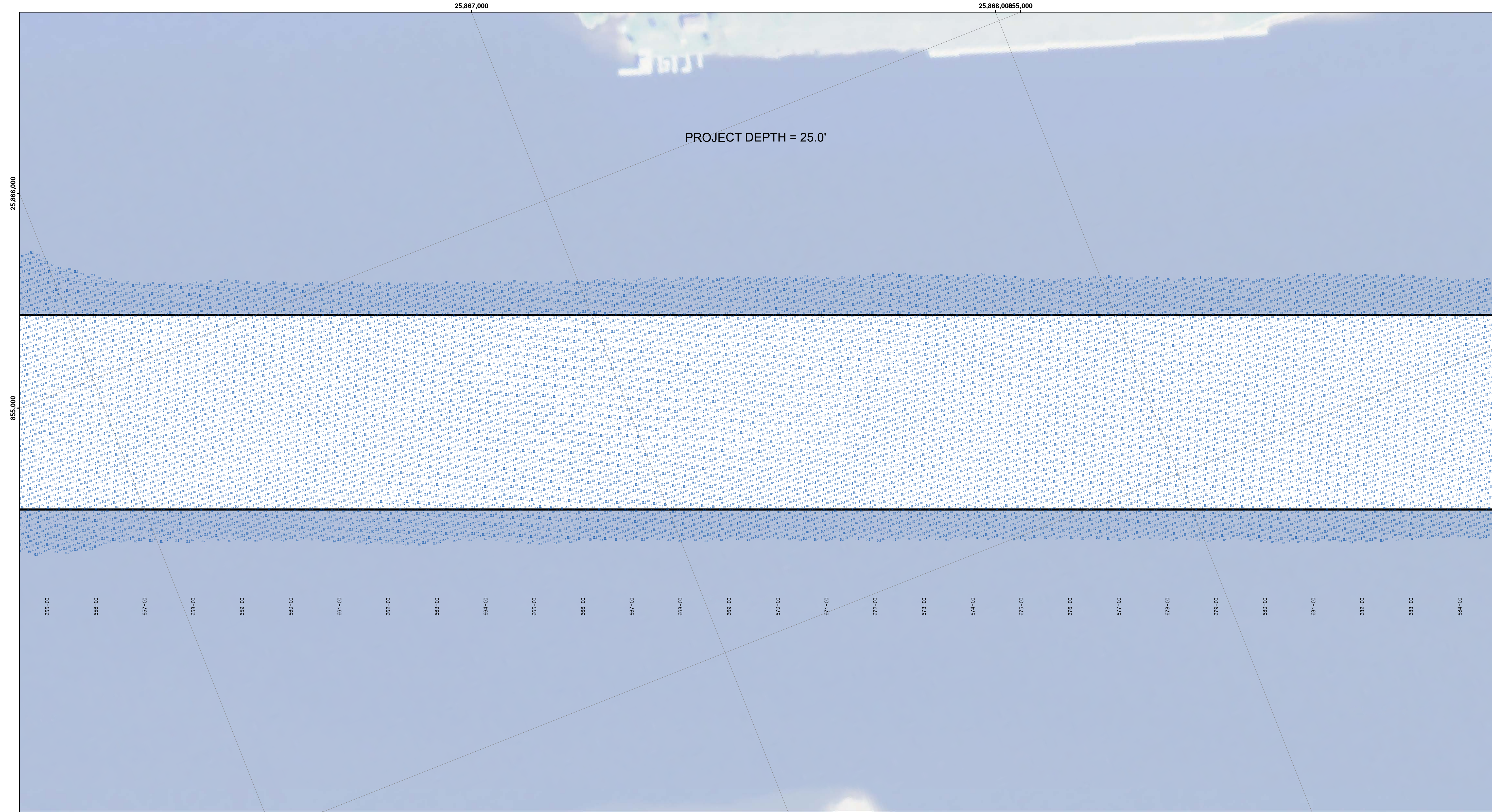




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6. IMAGERY SOURCED FROM: ESRI & 2014 NAIP IMAGERY



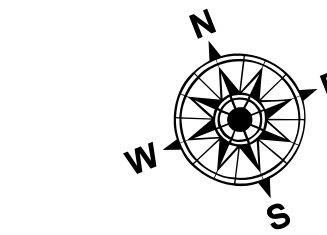


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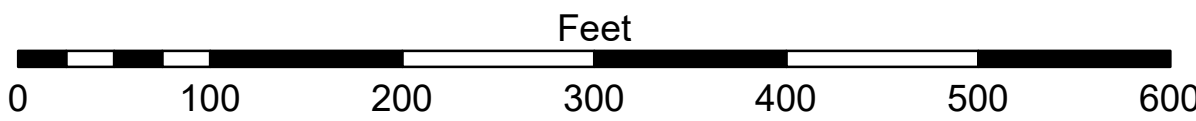
- ..... Cable Submarine
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- Channel\_Limits
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**US Army Corps  
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District: CELRE

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**U.S. ARMY CORPS OF ENGINEERS  
DETROIT DISTRICT**

Submitted:	Surveyed By:
Recommended: Chief, Survey Section	Plotted By:
Approved: Chief, Technical Services	Checked By:

**Keweenaw Waterway, MI  
Keweenaw Waterway  
KW\_01\_NAW\_20221019\_CS  
19 October 2022**

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