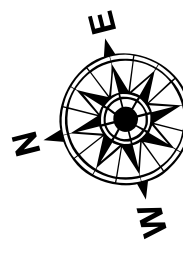
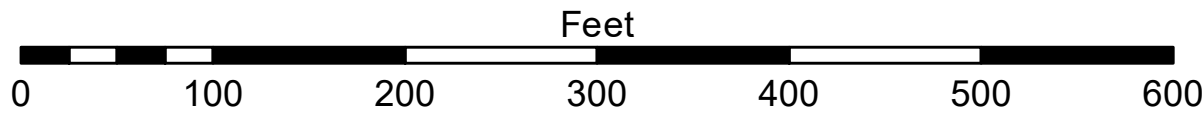


- LEGEND**
- ..... Cable Submarine
  - - - Cable Overhead
  - Channel\_Limits
  - Beacon, General
  - Contour Lines
  - Channel\_Limits

- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
  - PROJECT DEPTH
  - PROJECT DEPTH +1'
  - PROJECT DEPTH +2'
  - PROJECT DEPTH +3'
  - PROJECT DEPTH +4'
  - PROJECT DEPTH +5'
  - PROJECT DEPTH +6'



1 inch = 100 feet



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PROJECT DEPTHS: 30.0' 29.5' and 28.0' FOR MAIN CHANNEL.  
18.0' TURNING BASIN (AS NOTED)

POSITION SYSTEM: Applanix POSMV  
CORRECTIONS: MARINESTAR GNSS G2  
SOUNDER: RSONIC 2024  
SOFTWARE: HYDRACK 2018  
VESSEL: LAUNCH 3058

WATER LEVEL ELEVATIONS OBTAINED DURING THE SURVEY WERE FROM THE NOAA GAGE STATION.

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS



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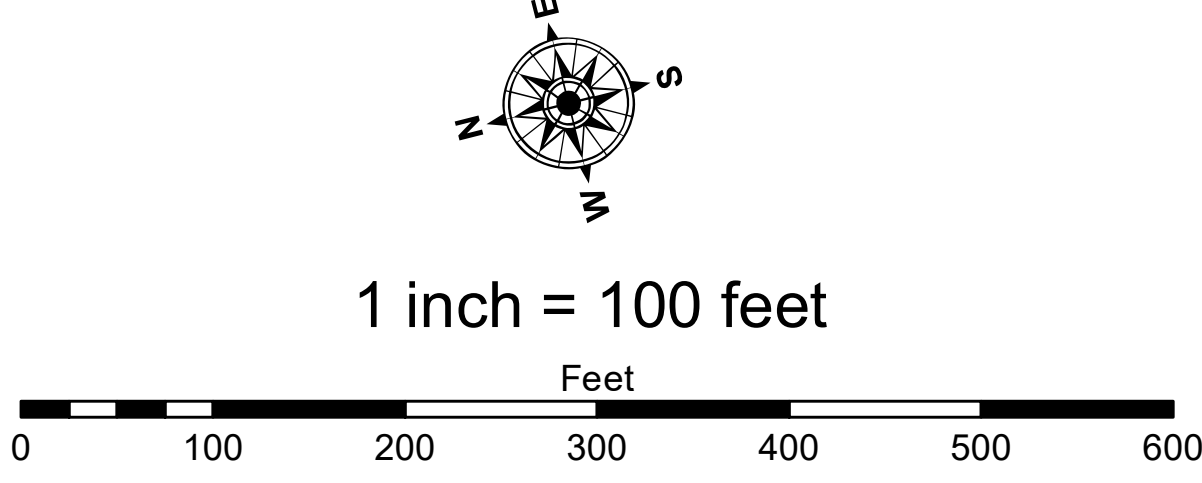
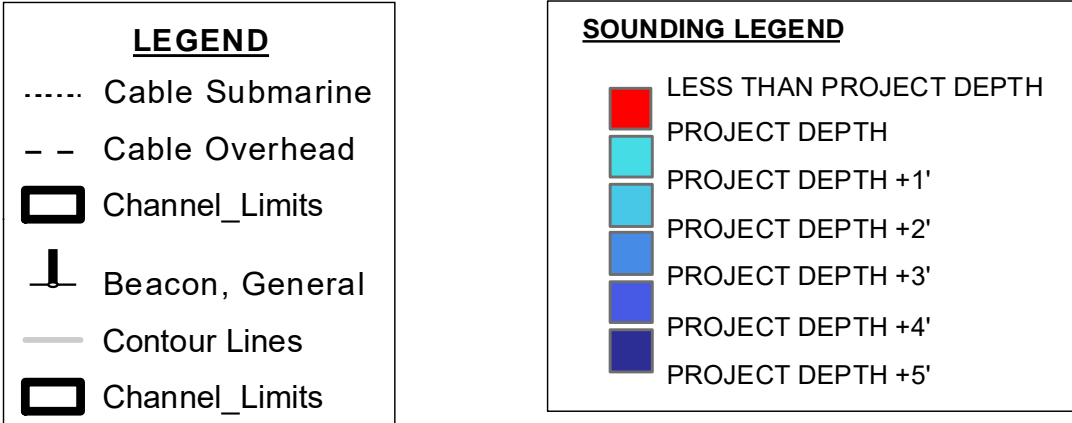
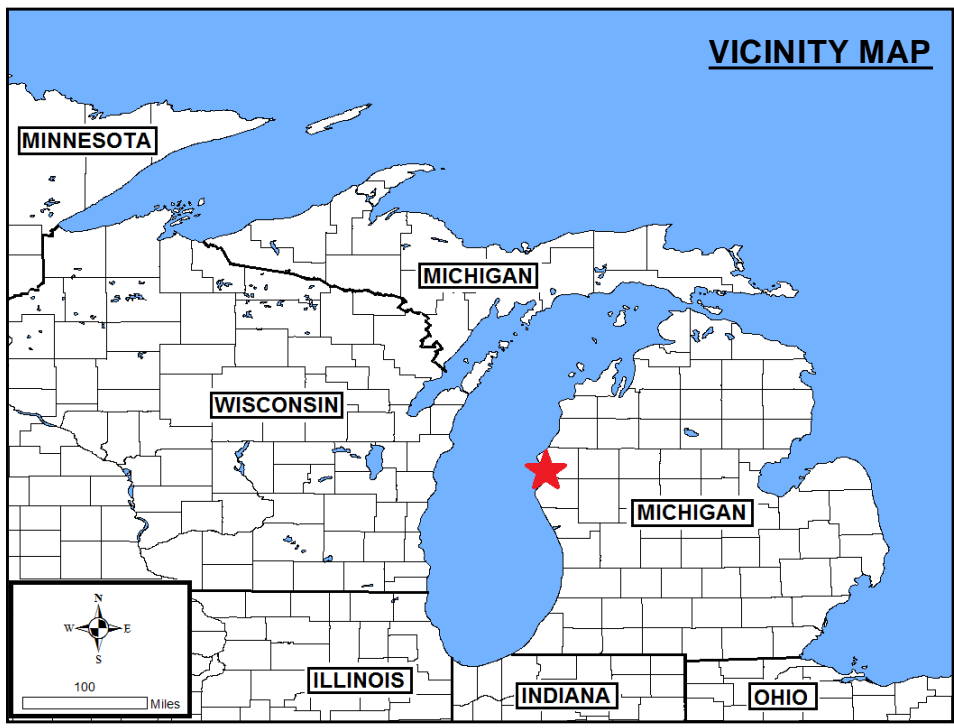
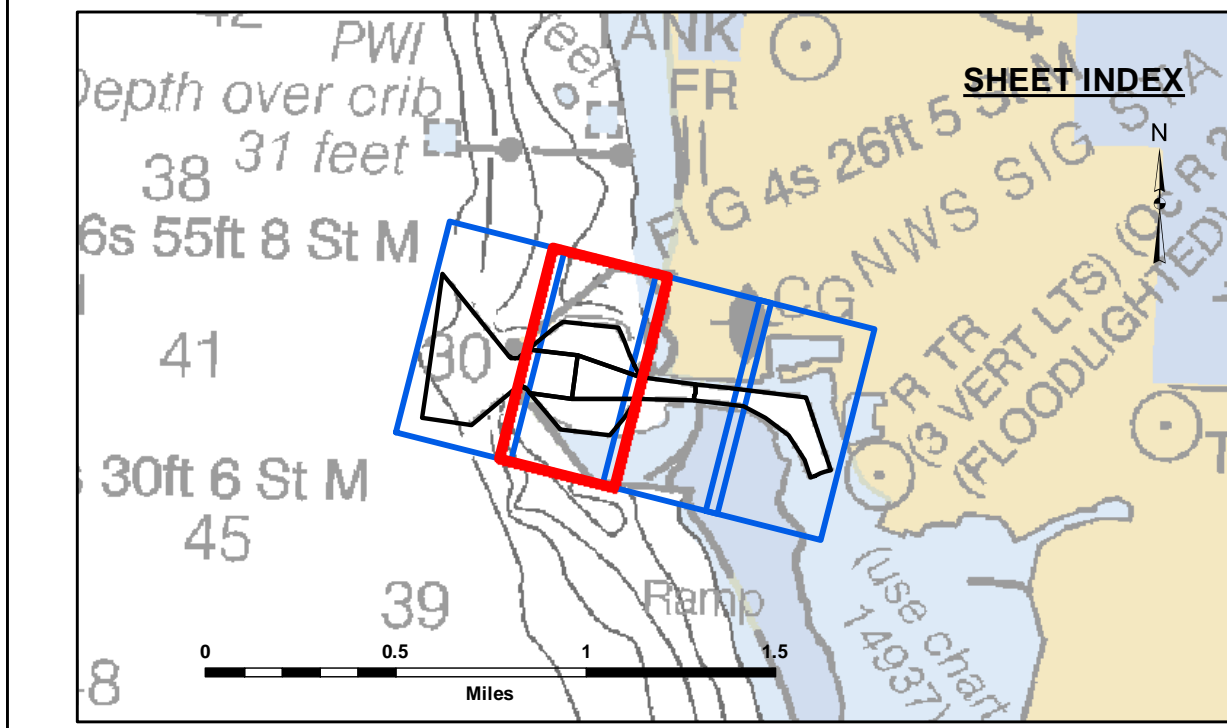
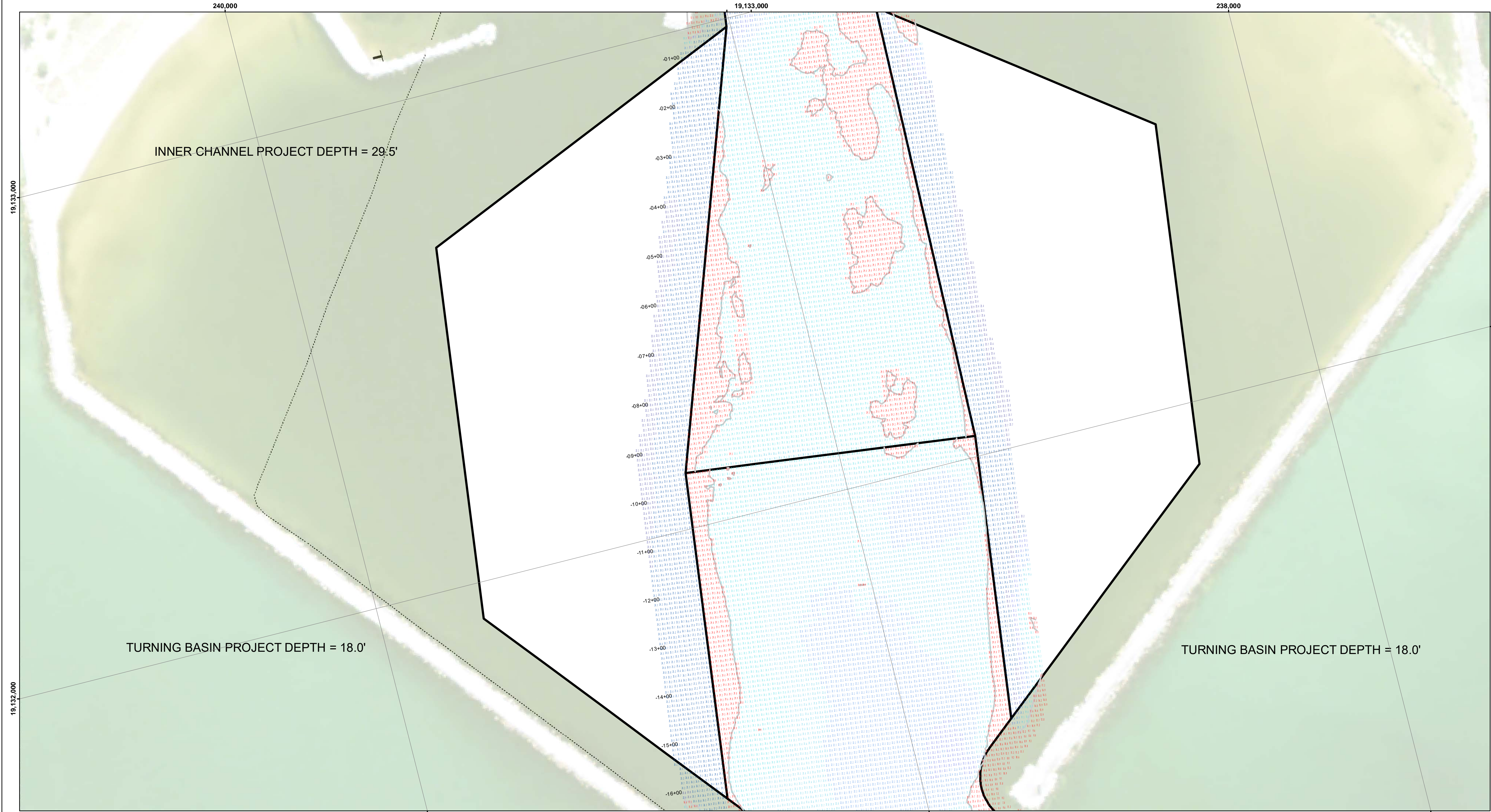
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**Surveyed By:**  
**Plotted By:**  
**Checked By:**  
**Sanitized:**  
**Recommended:**  
**Approved:**

**LUDINGTON HARBOR, MI**  
**Ludington Harbor**  
**LU\_01\_LUD\_20210722\_CS**  
**22 July 2021**

**Sheet Reference Number**  
**1 of 4**





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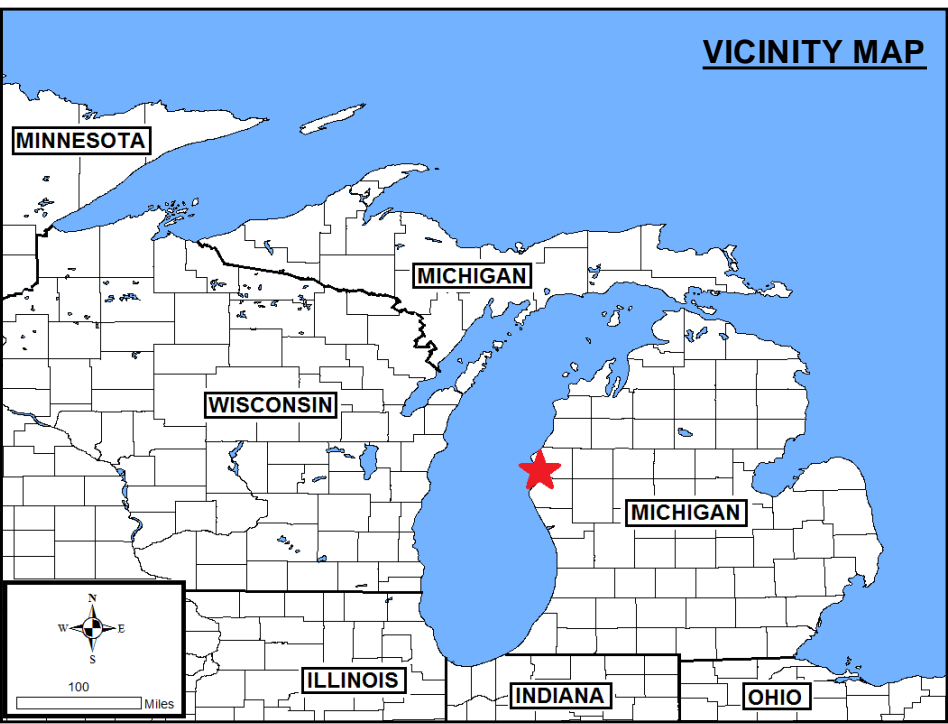
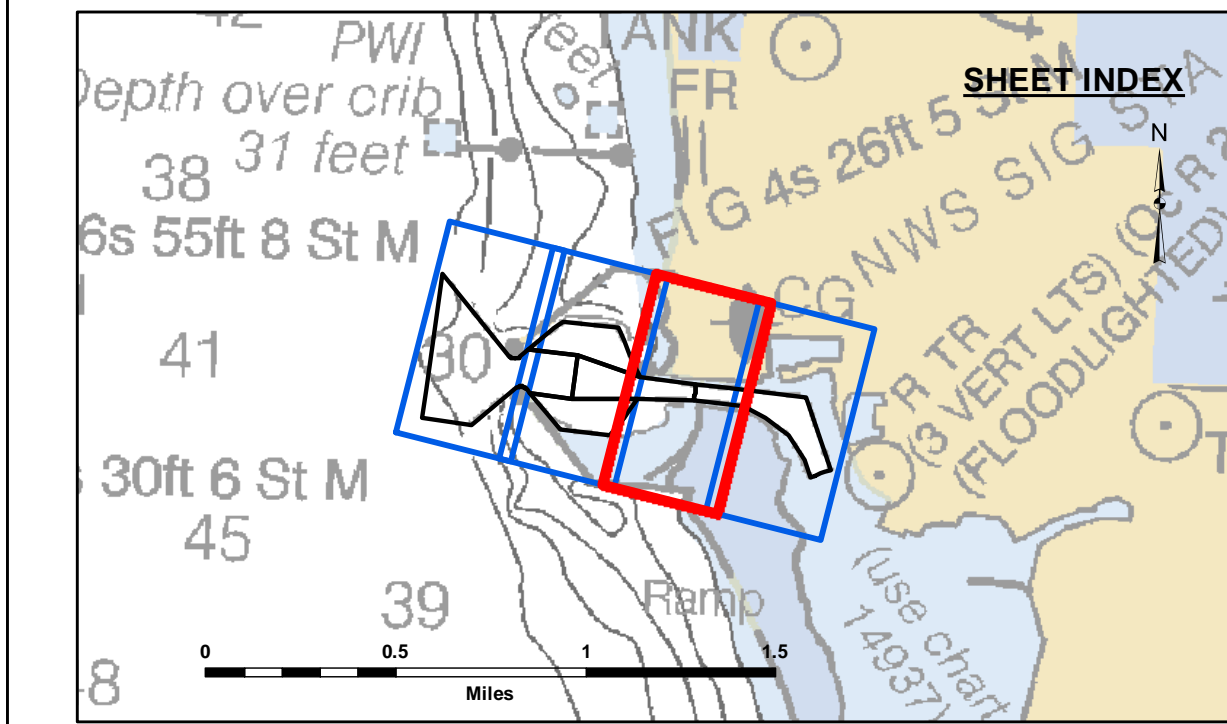
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Submitted:	Surveyed By:
Recommended:	Plotted By:
Approved:	Checked By:
Chief, Survey Section	
Chief, Technical Services	

LUDINGTON HARBOR, MI  
Ludington Harbor  
LU\_01\_LUD\_20210722\_CS  
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Reference  
Number  
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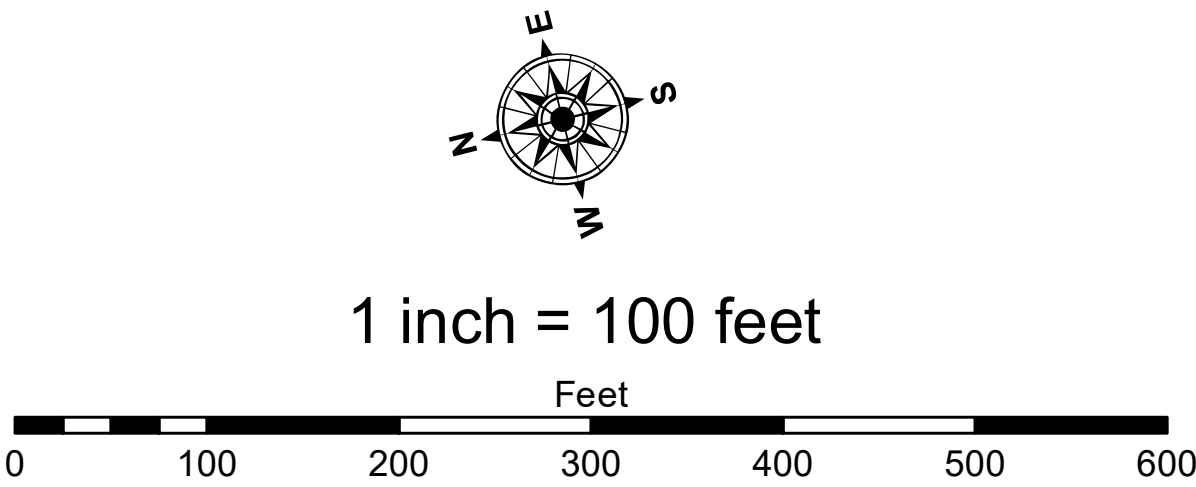


**LEGEND**

- Cable Submarine
- - - Cable Overhead
- Channel\_Limits
- Beacon, General
- Contour Lines
- Channel\_Limits

**SOUNDING LEGEND**

- LESS THAN PROJECT DEPTH
- PROJECT DEPTH
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VESSEL: LAUNCH 3058

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Ludington Harbor  
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22 July 2021

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Reference  
Number  
3 of 4

Revision Number:  
4.2-2021061420

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

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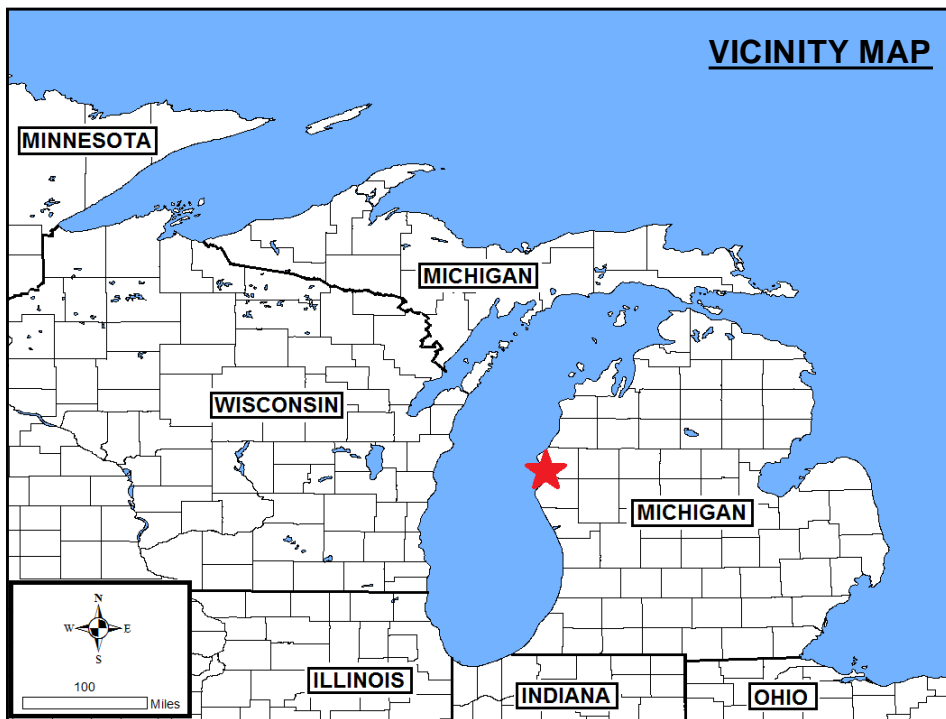
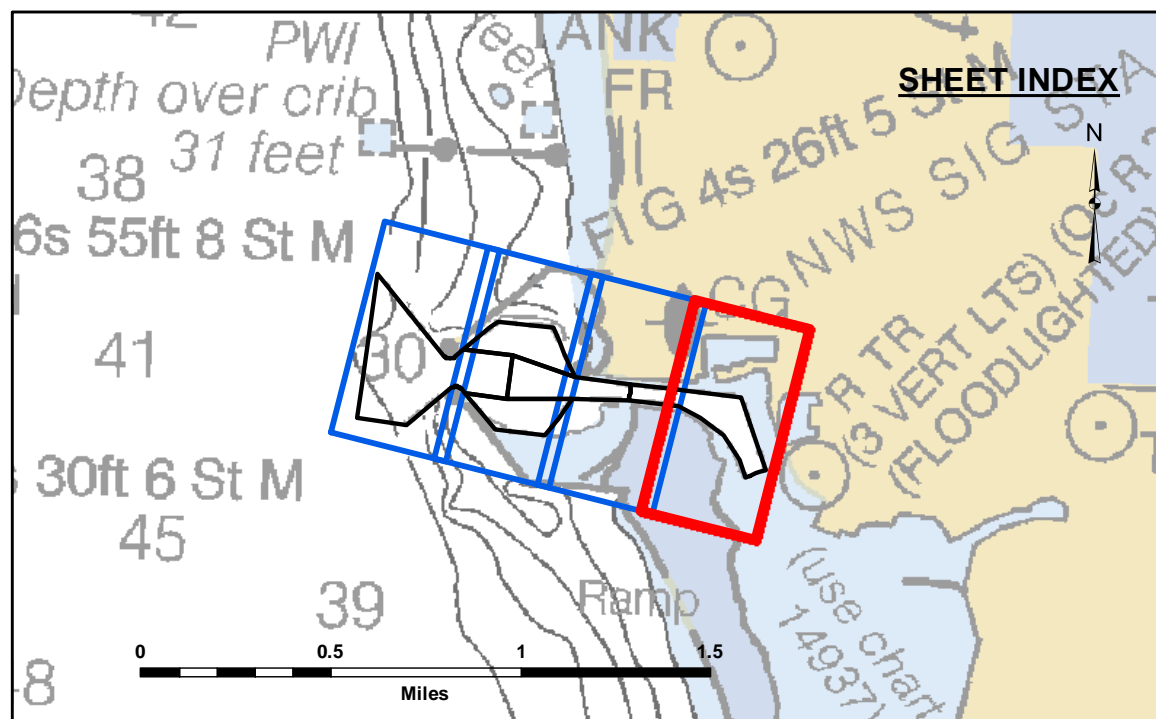
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
Submitted:	Surveyed By:	
Recommended:	Plotted By:	
Approved:	Checked By:	

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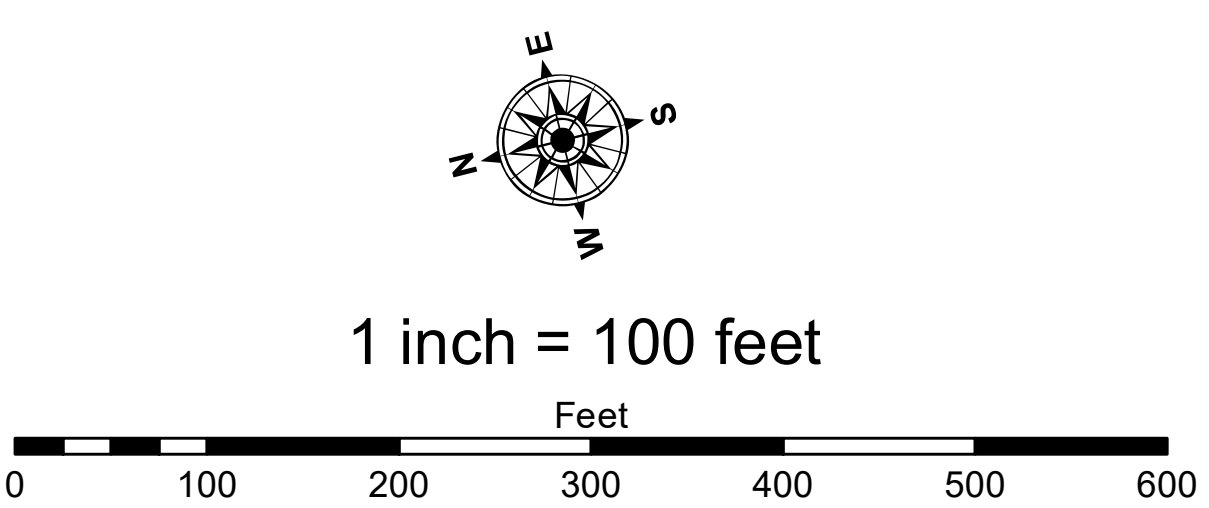
**Sheet Reference Number**  
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- LEGEND**

  - Cable Submarine
  - - - Cable Overhead
  - Channel\_Limits
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  - Channel\_Limits
- SOUNDING LEGEND**

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