

**LEGEND**

- ..... Cable Submarine
- - Cable Overhead
- Placement Area
- └ Beacon, General
- Contour Lines
- ▭ Channel Limits

**SOUNDING LEGEND**

- LESS THAN PROJECT DEPTH
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1 inch = 100 feet

Feet

0 100 200 300 400 500 600

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EQUIPMENT: ODOM CV 100 SINGLE BEAM SOUNDER  
SOFTWARE: HYPACK  
VESSEL: 3064

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District: CELRE

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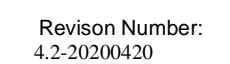
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Approved:	Chief, Technical Services		

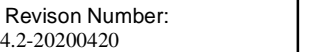
**Grand River, MI**  
**Grand River**  
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**07 November 2023**

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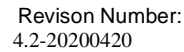




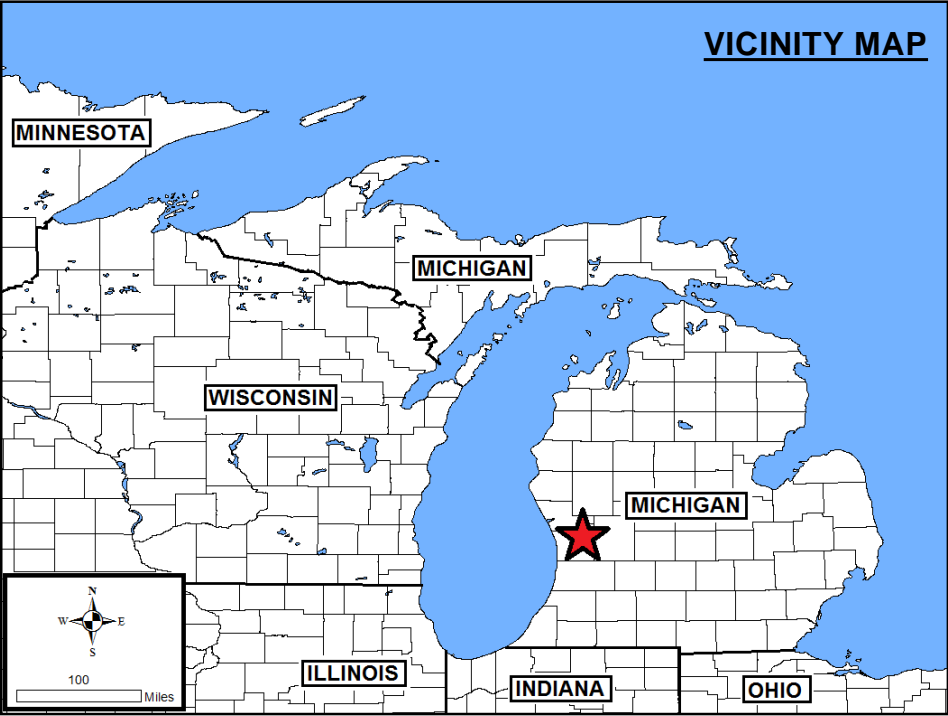
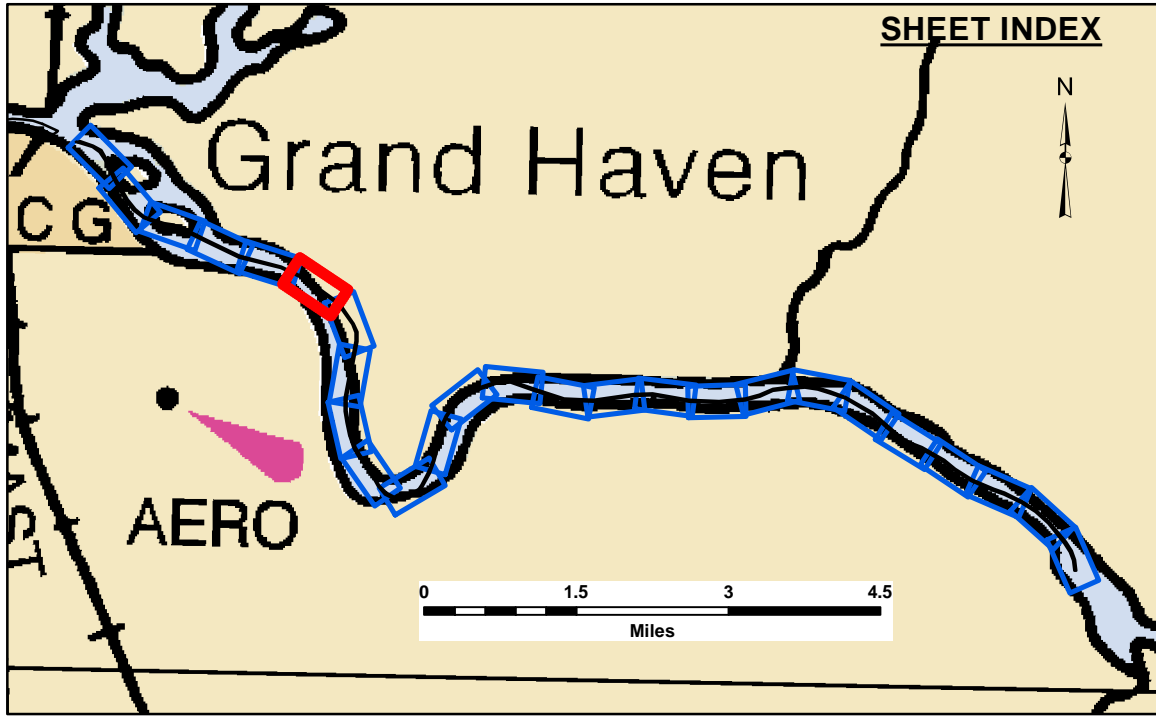
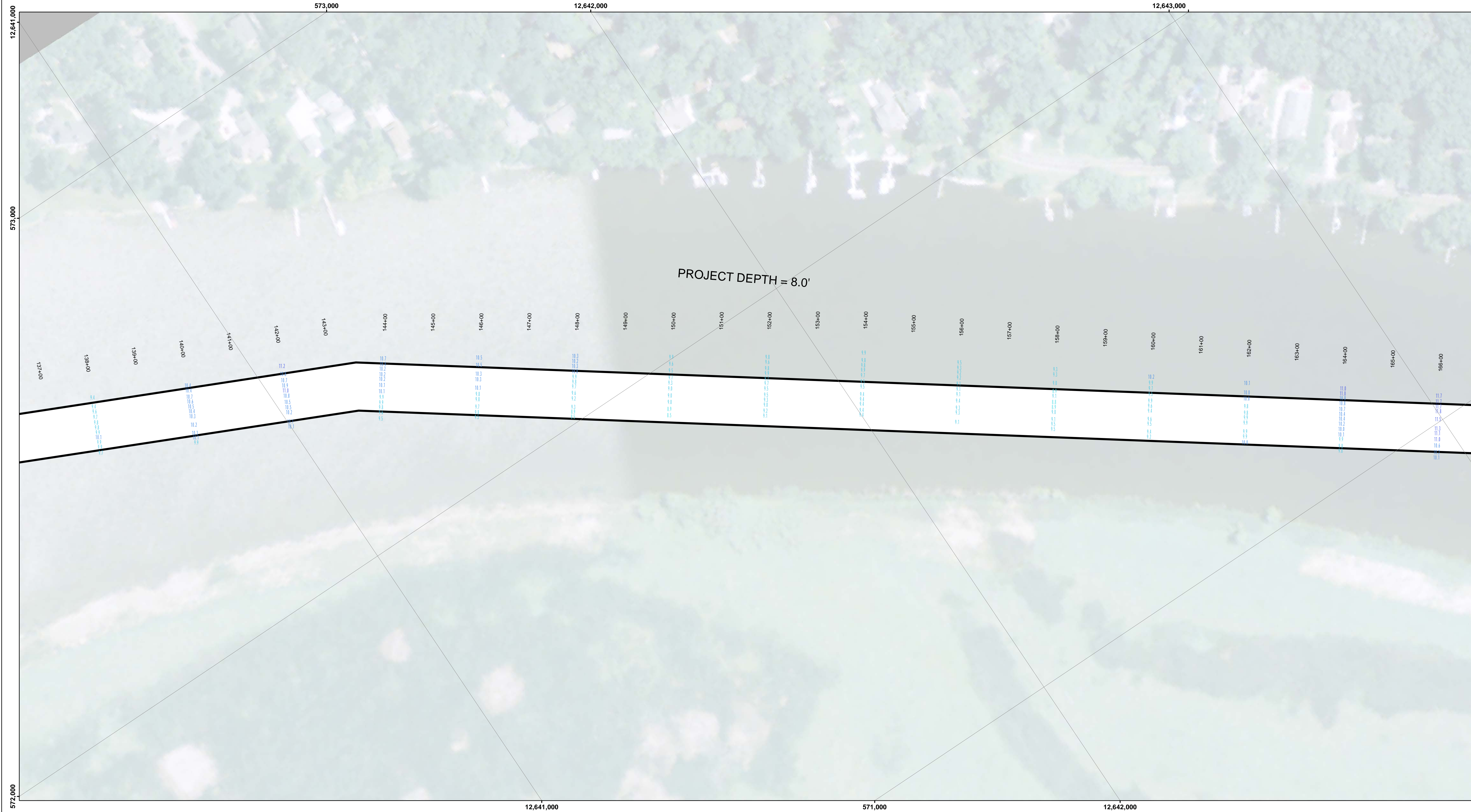












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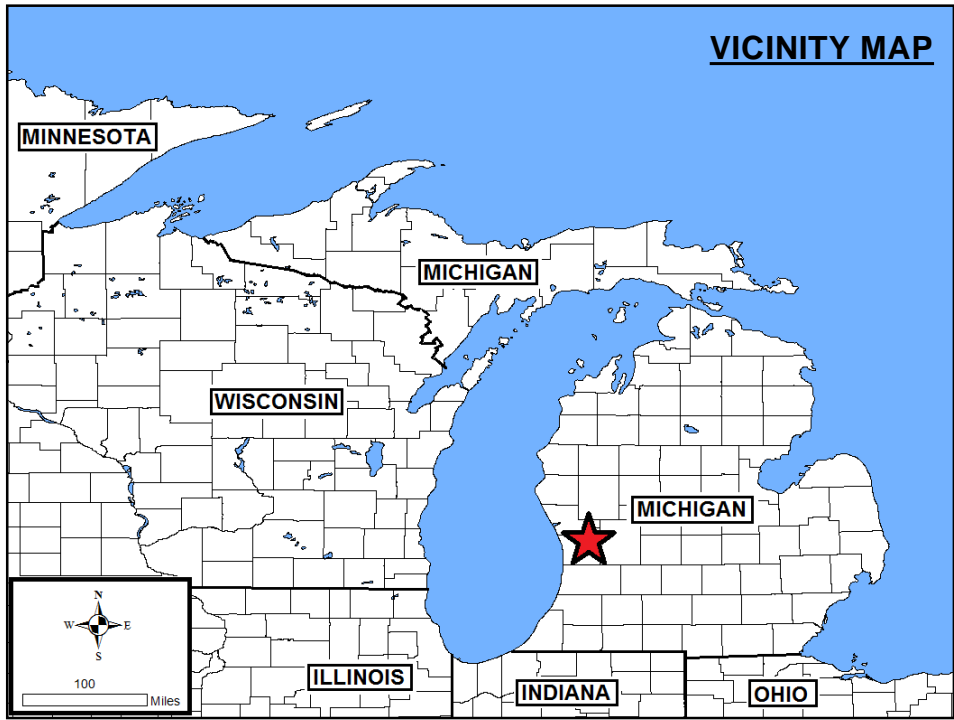
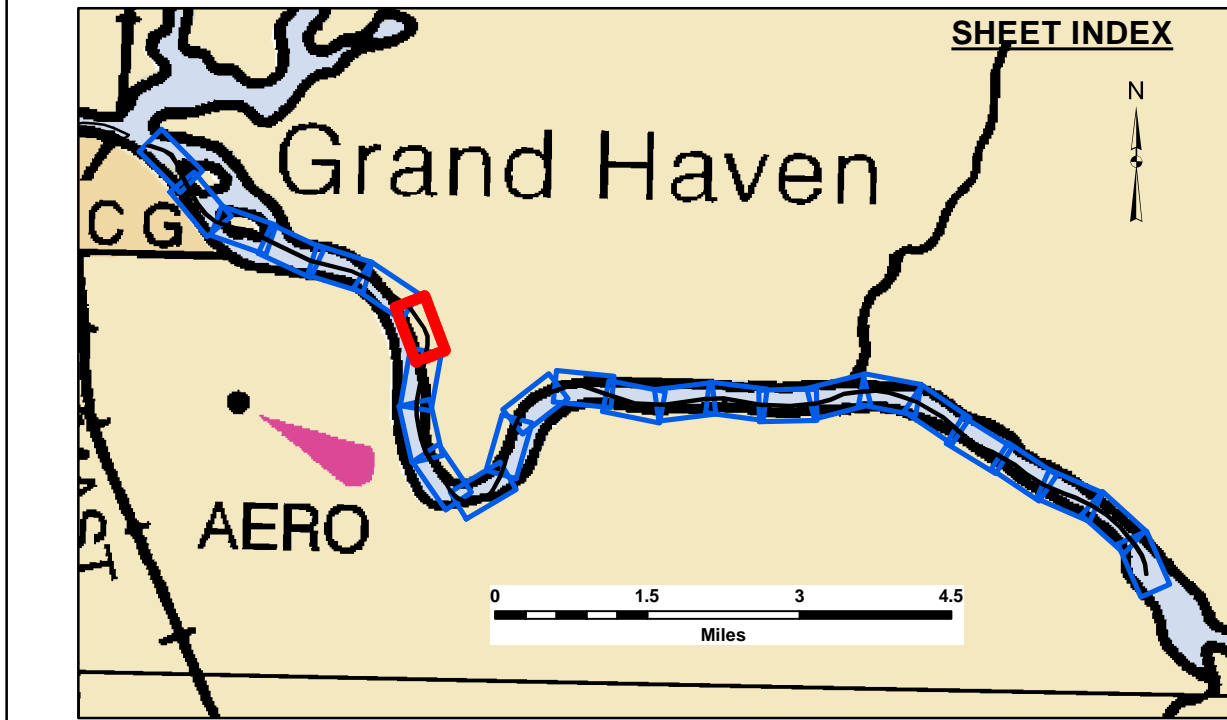
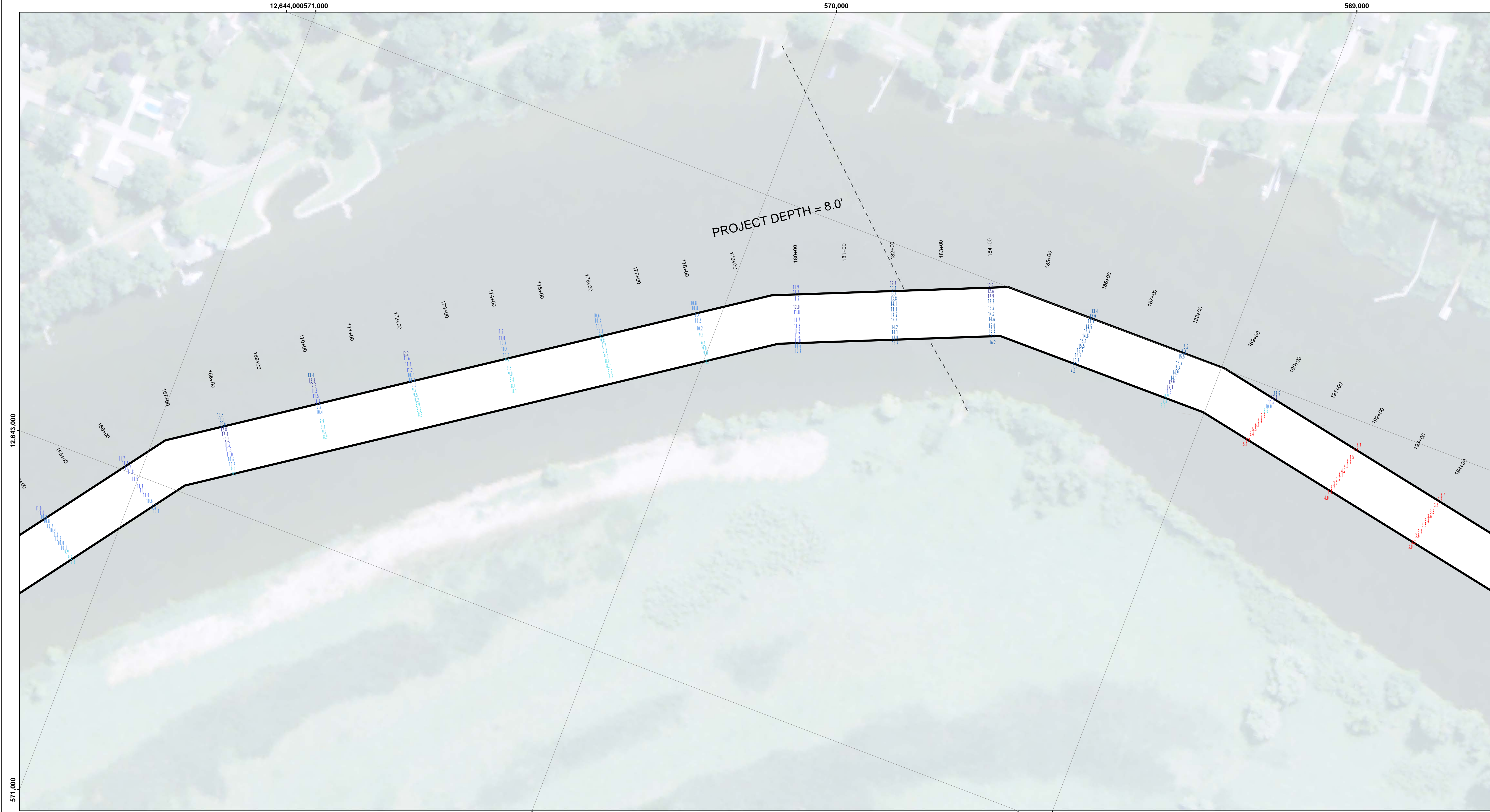
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**Grand River, MI**  
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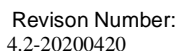
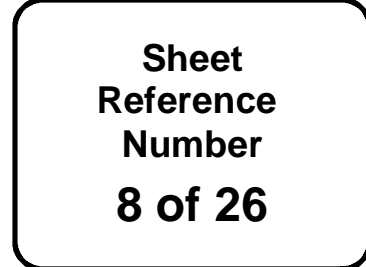
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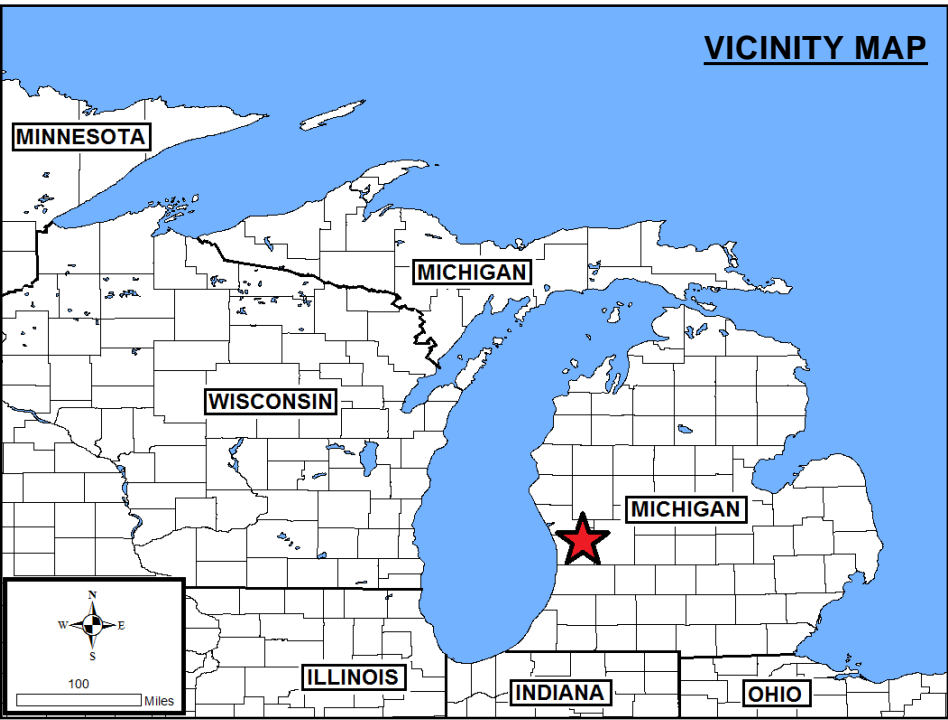
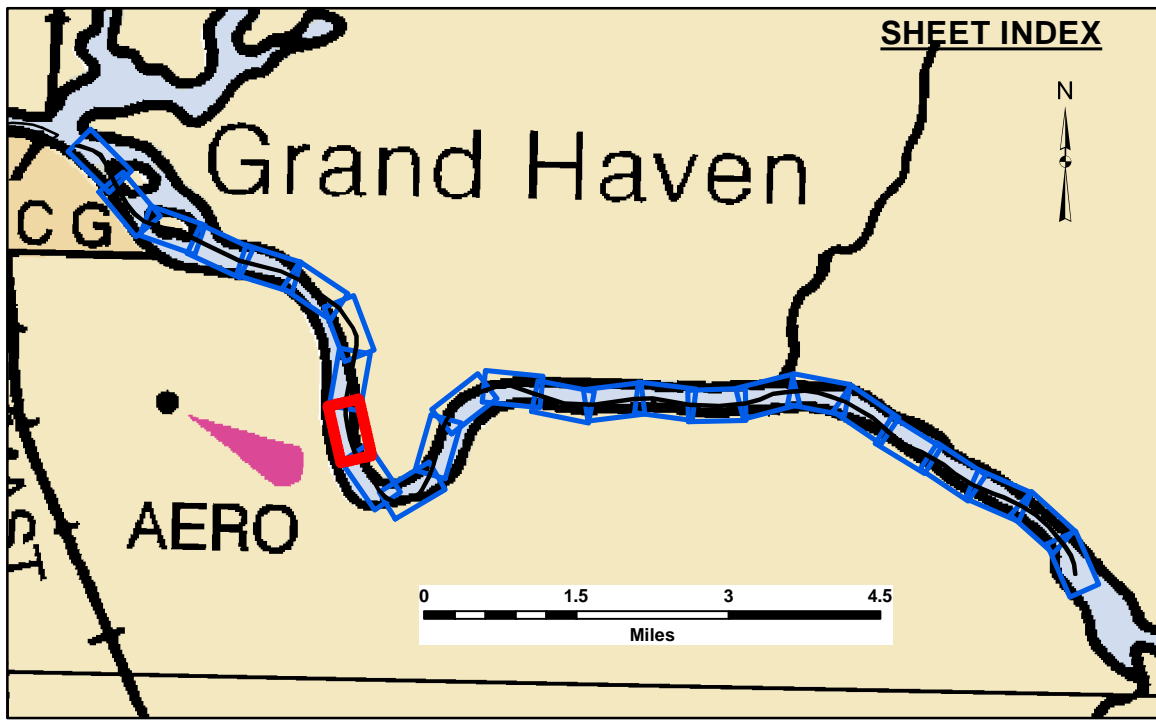
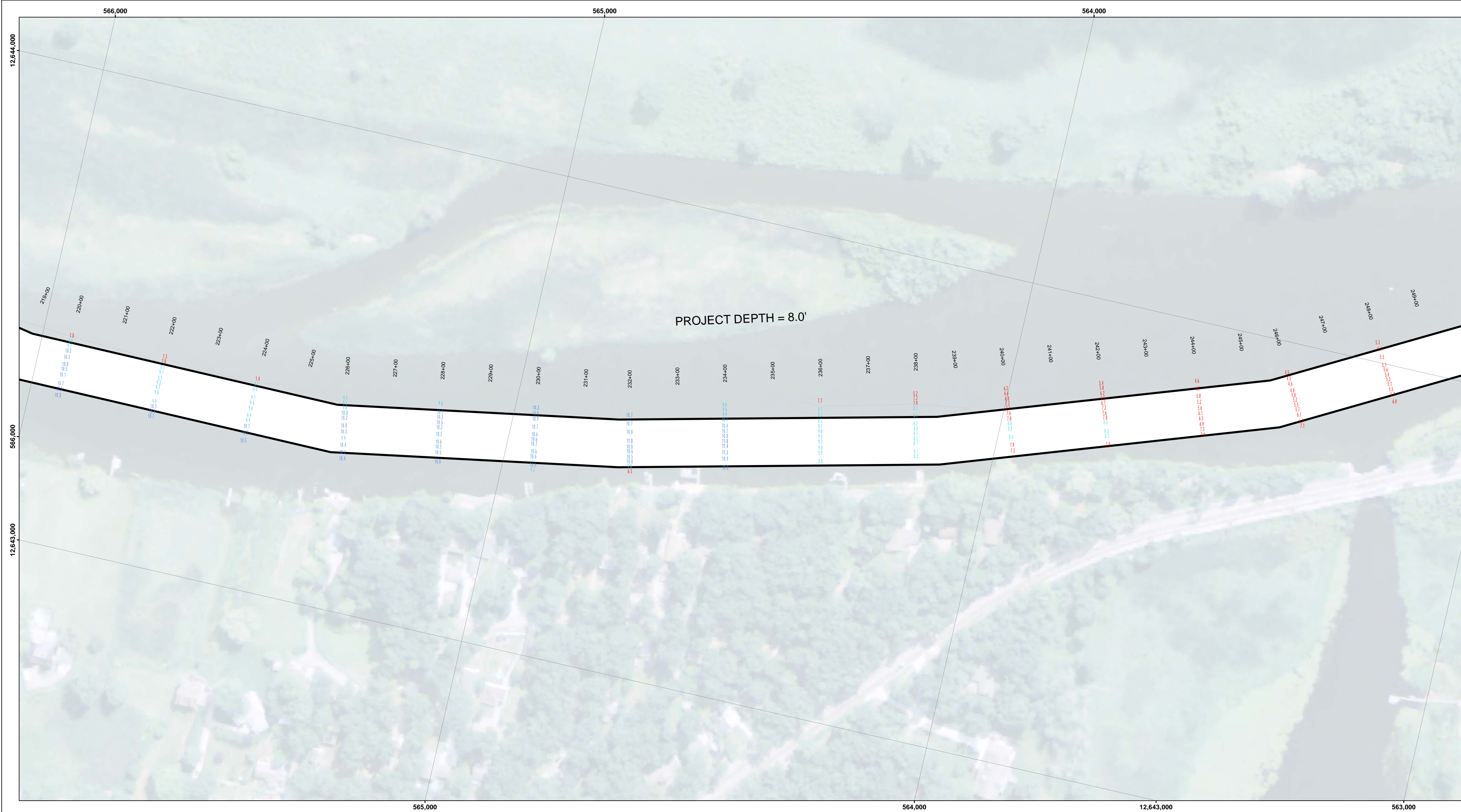
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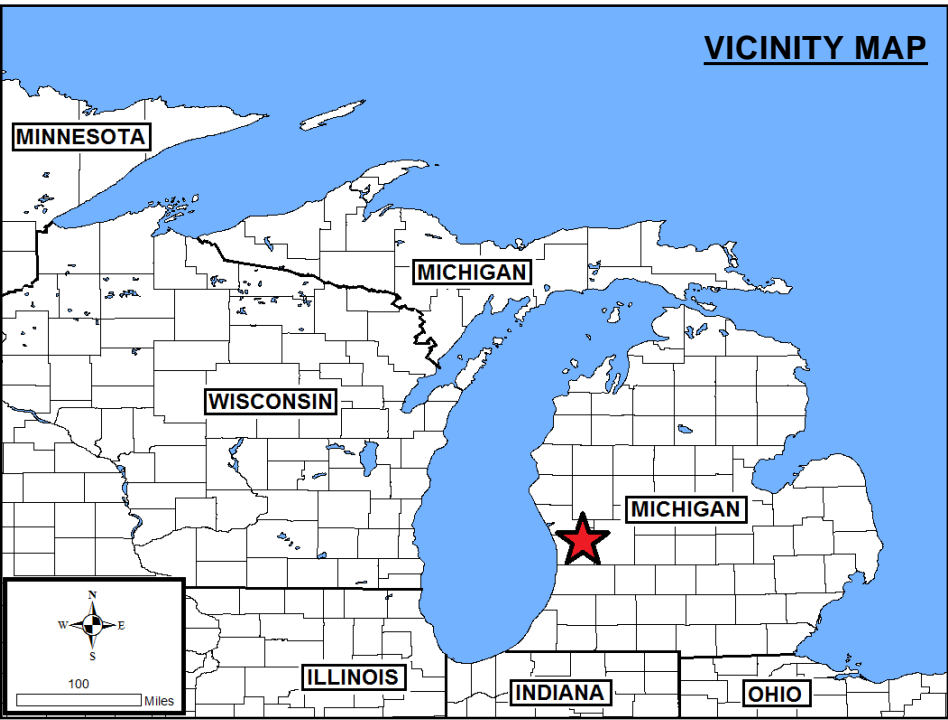
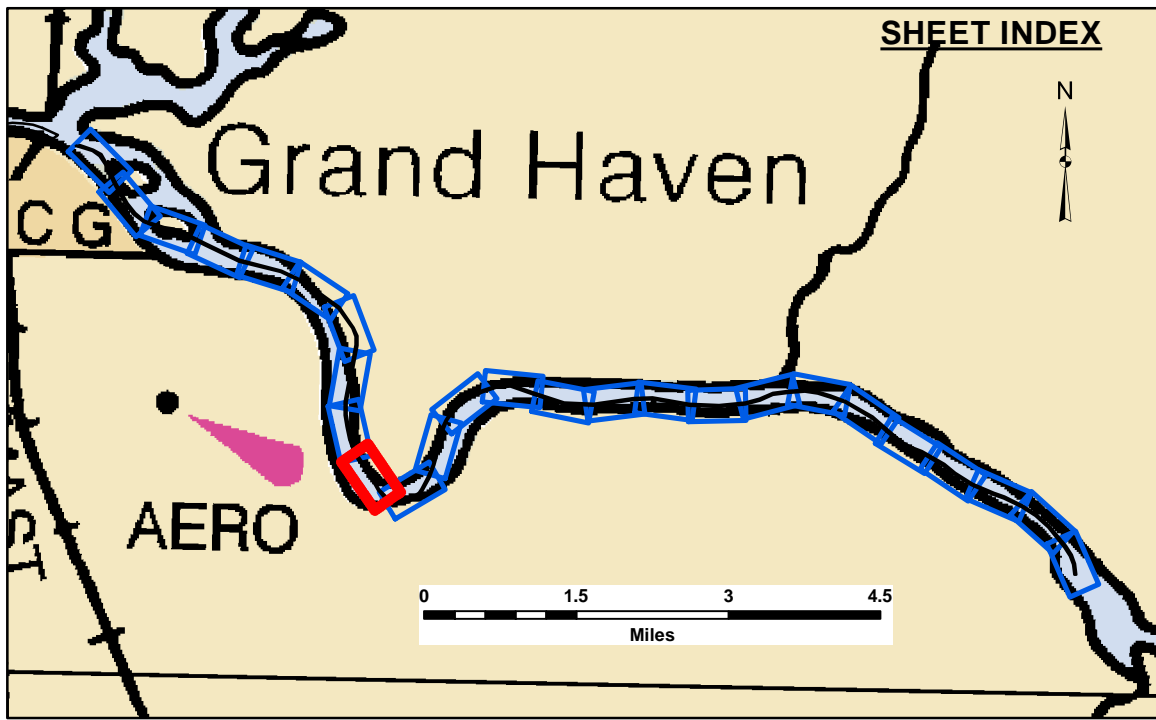
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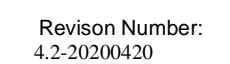
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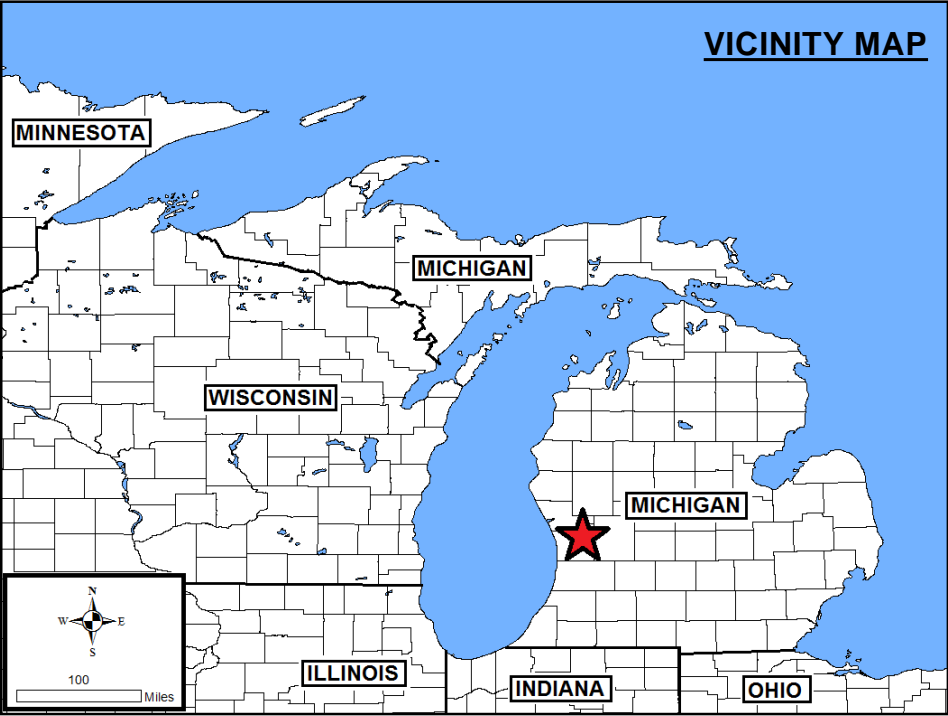
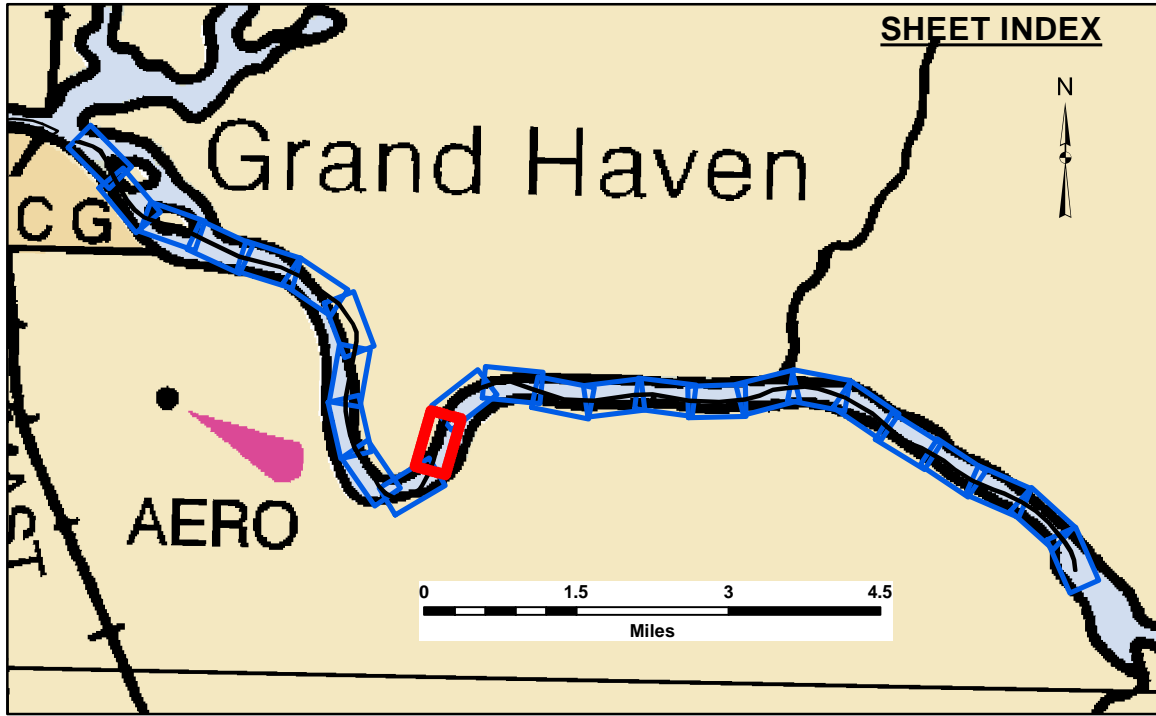
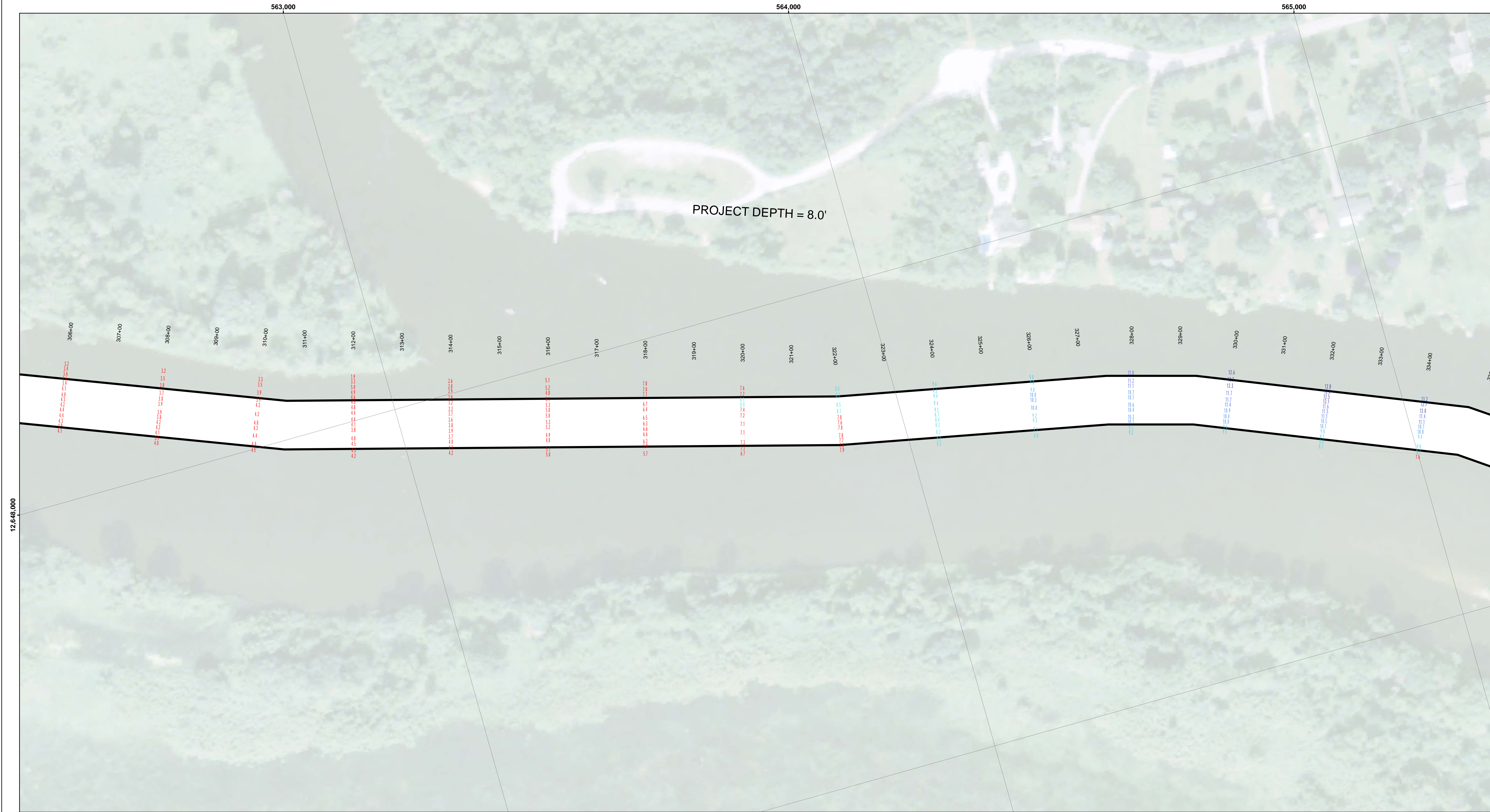
**Grand River, MI**  
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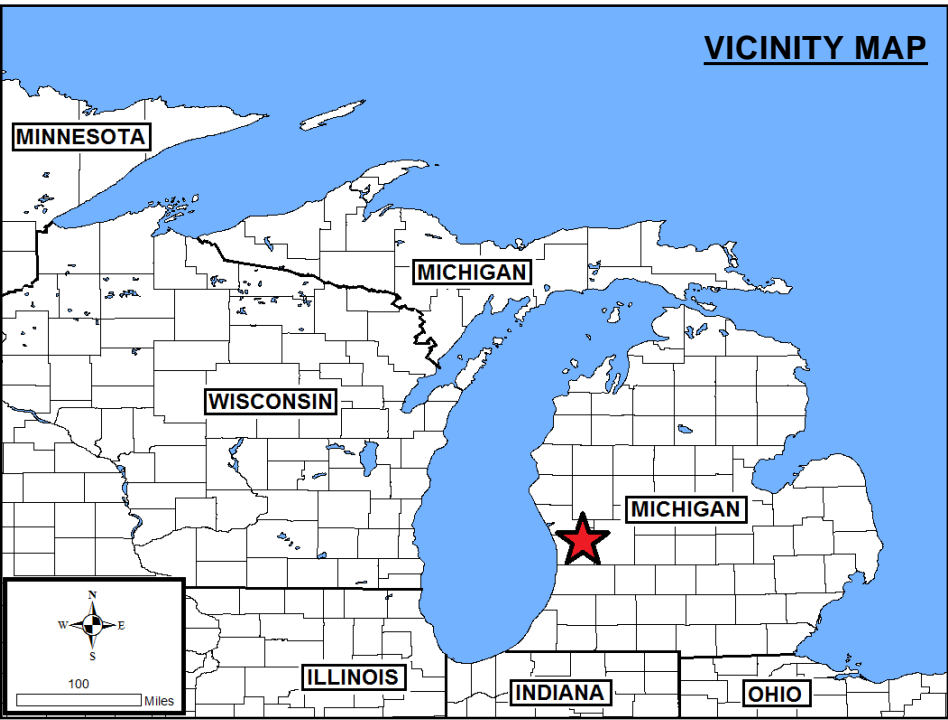
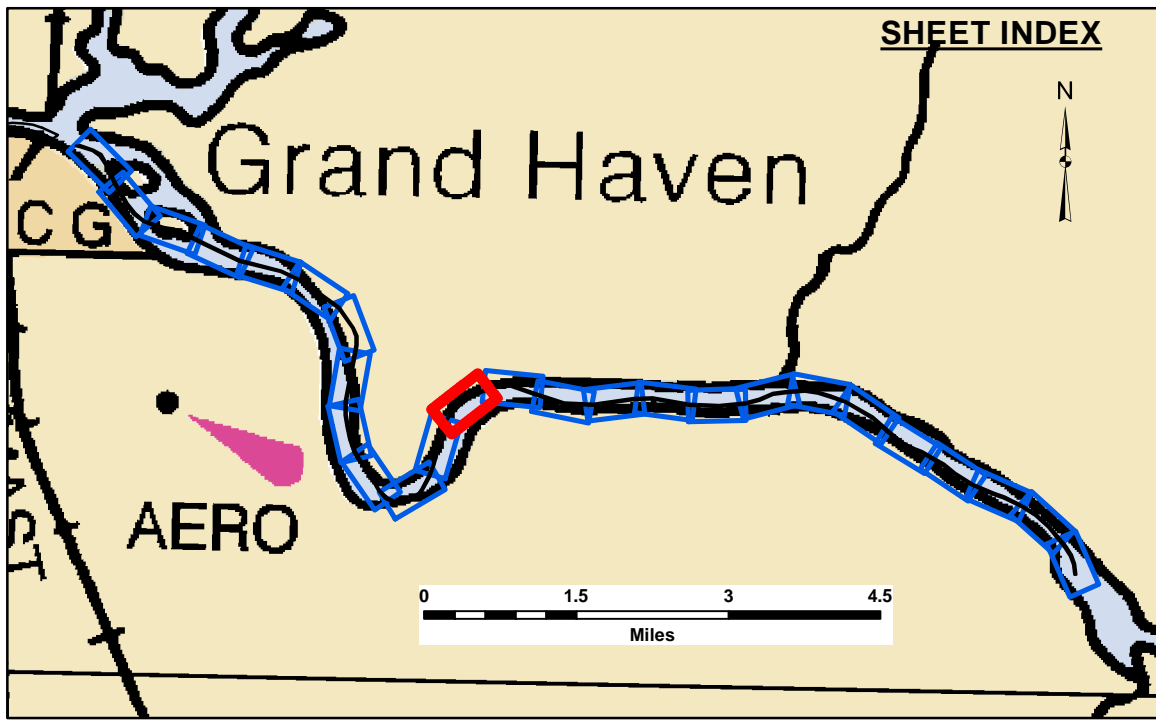
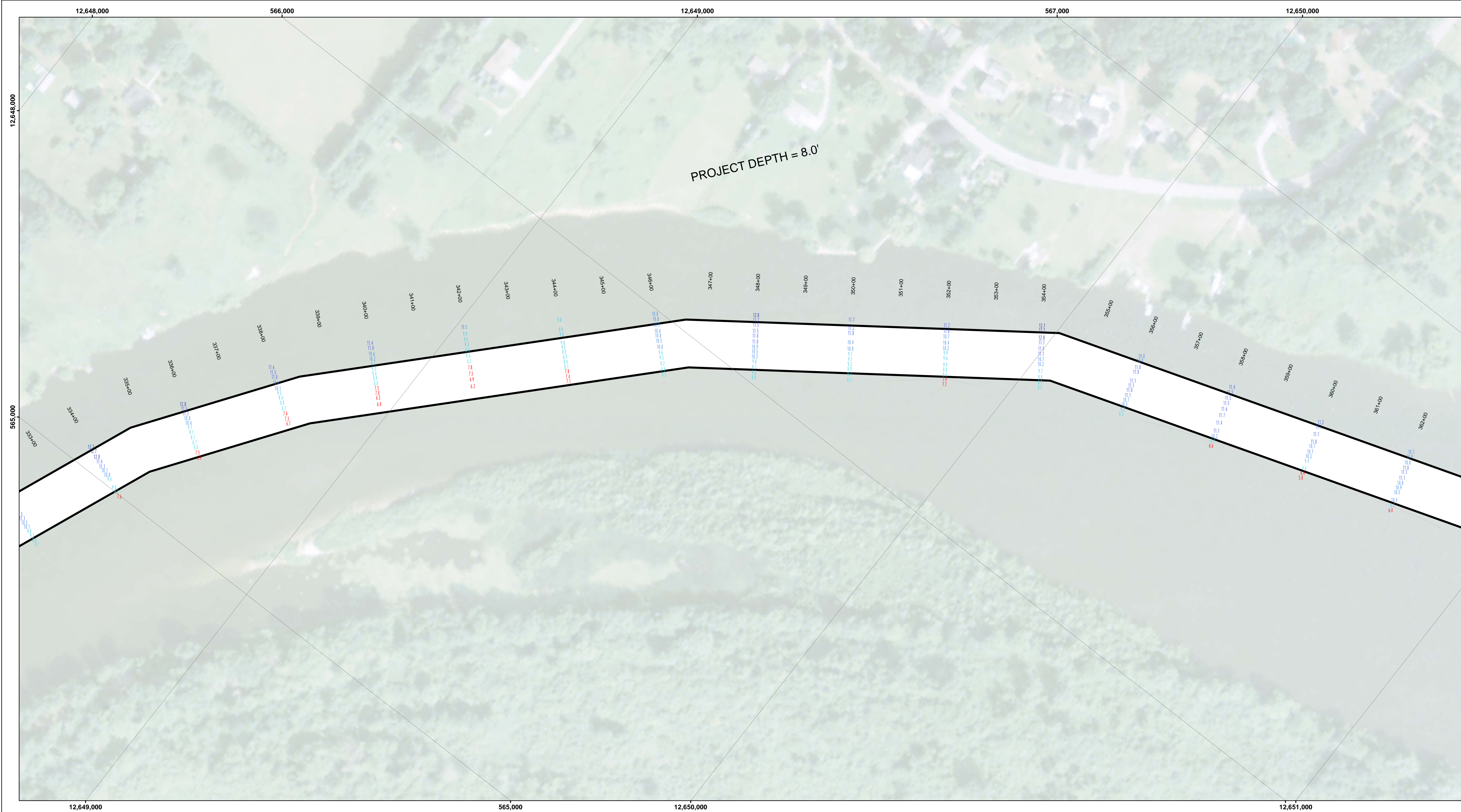
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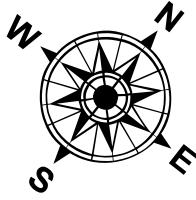


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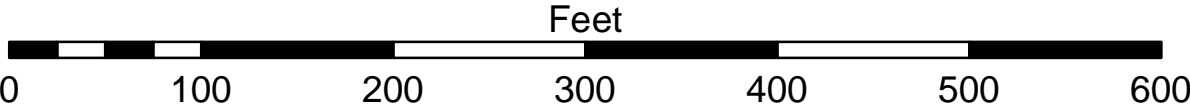
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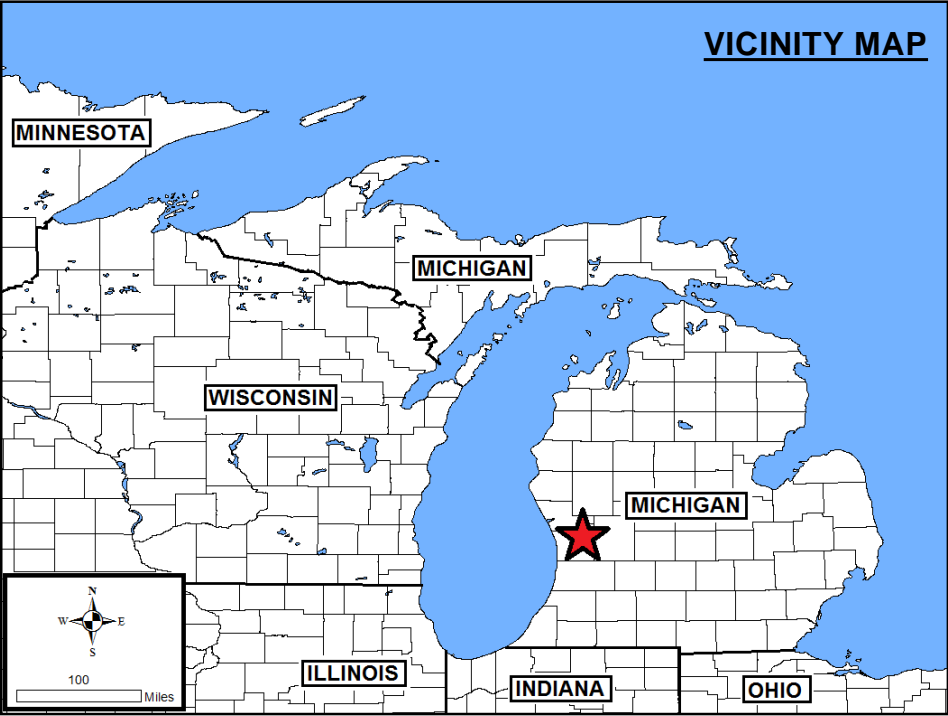
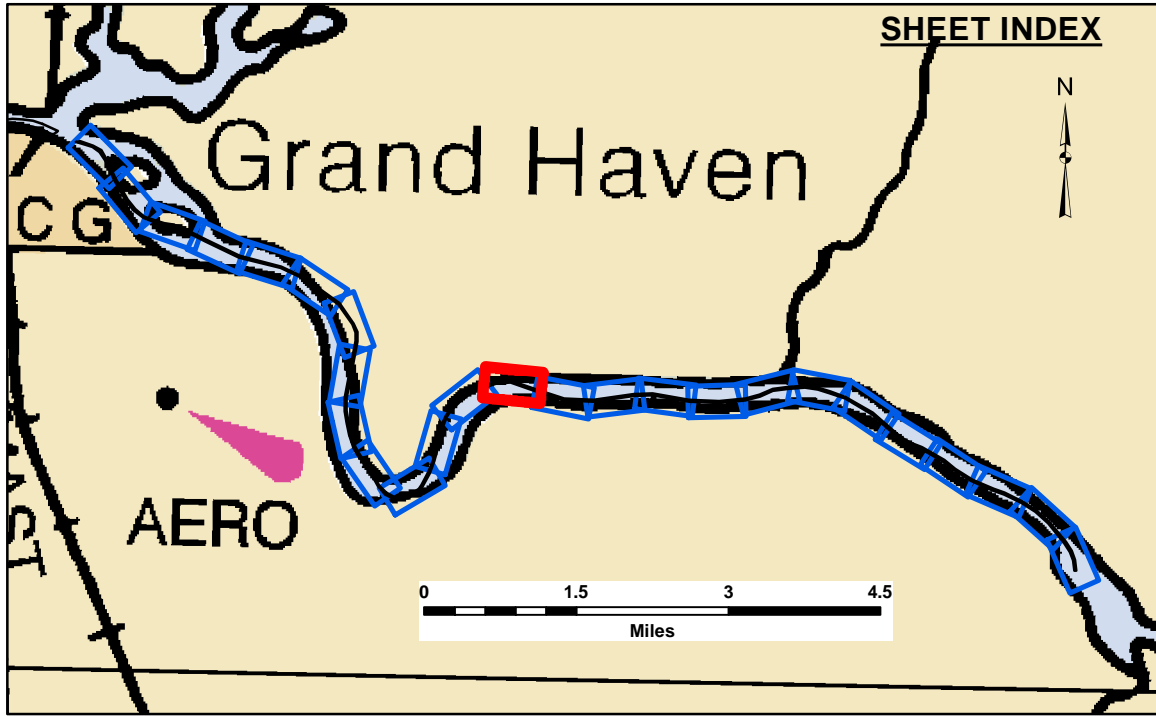
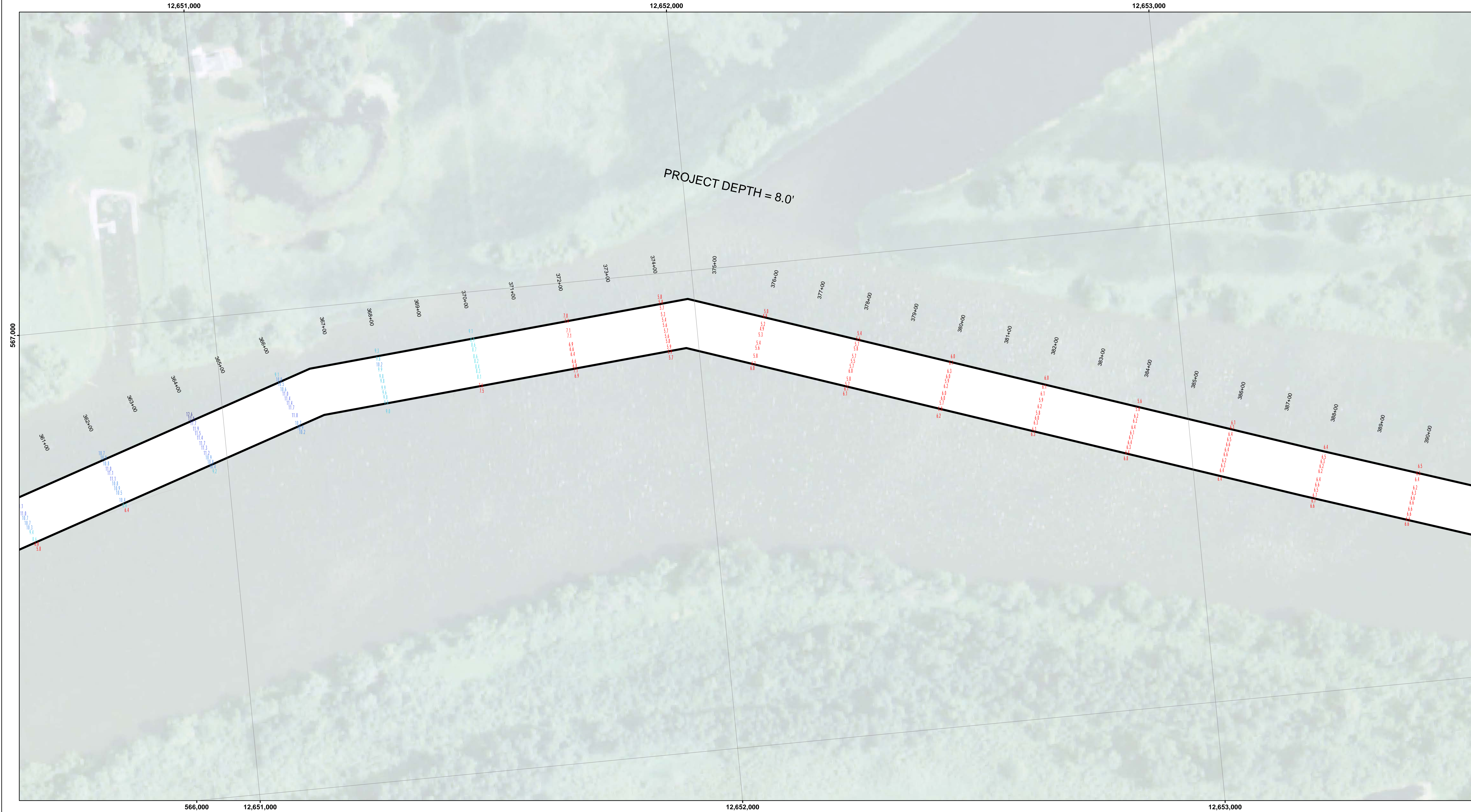
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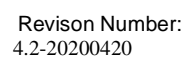
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Approved:	Chief, Survey Section	
	Chief, Technical Services	

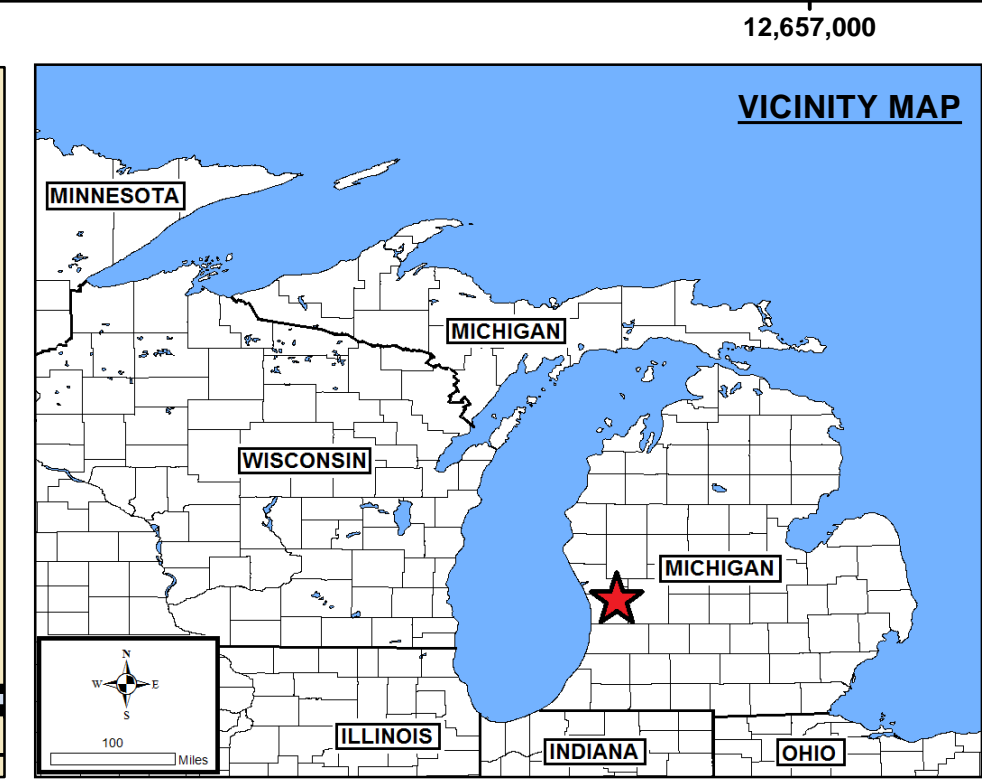
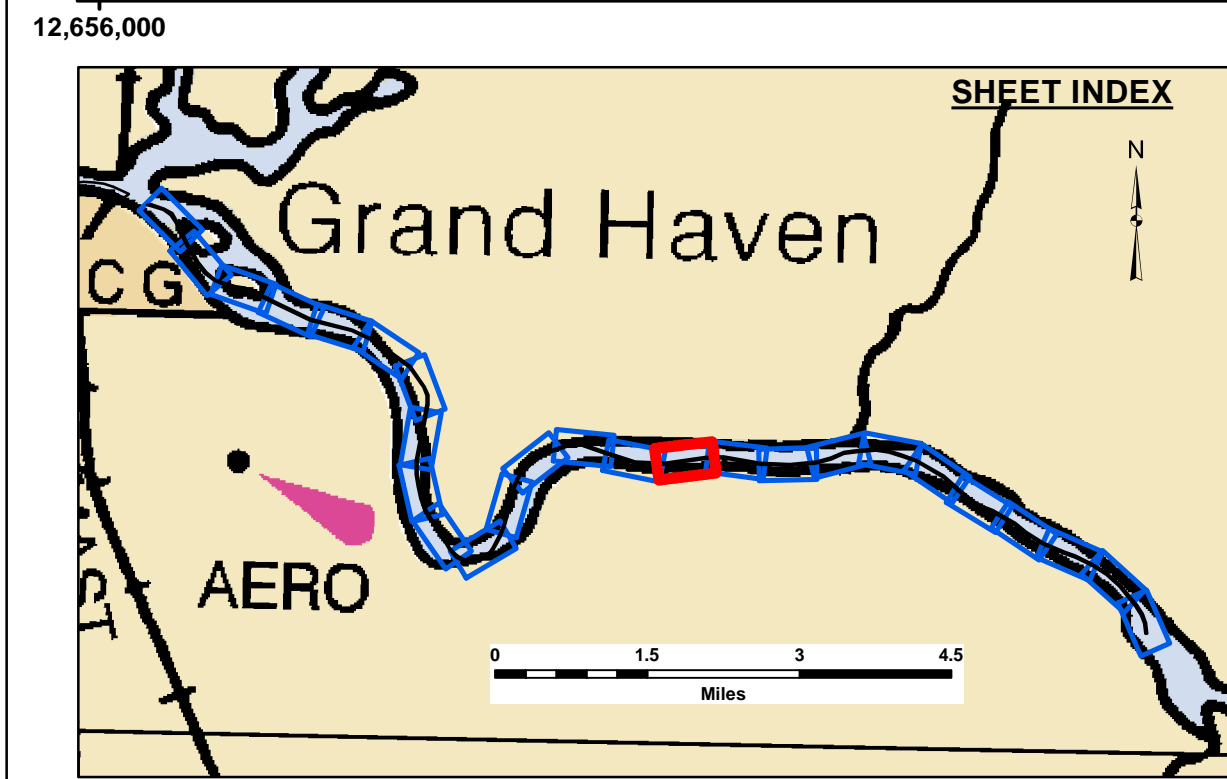
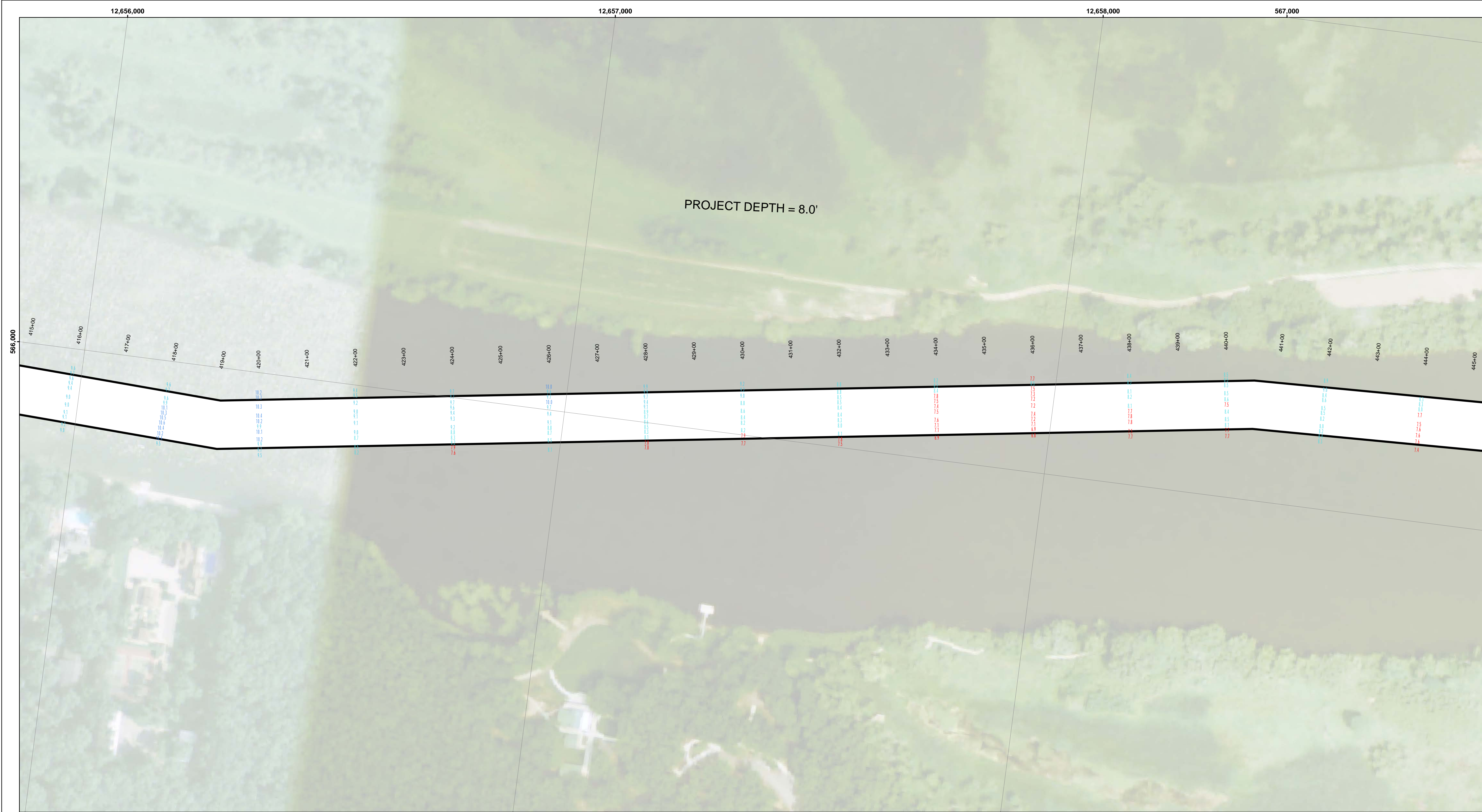
**Grand River, MI**  
**Grand River**  
**GR\_01\_AND\_20231107\_CS**  
**07 November 2023**

**Sheet  
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Number**  
**14 of 26**









**LEGEND**

- ..... Cable Submarine
- - Cable Overhead
- Placement Area
- └ 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'

1 inch = 100 feet

Feet

0 100 200 300 400 500 600

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  - 5) POSITIONING METHOD: TRIMBLE DGPS WVAAS CORRECTIONS  
EQUIPMENT: ODOM CV 100 SINGLE BEAM SOUNDER  
SOFTWARE: HYPACK  
VESSEL: 3064

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District: CELRE

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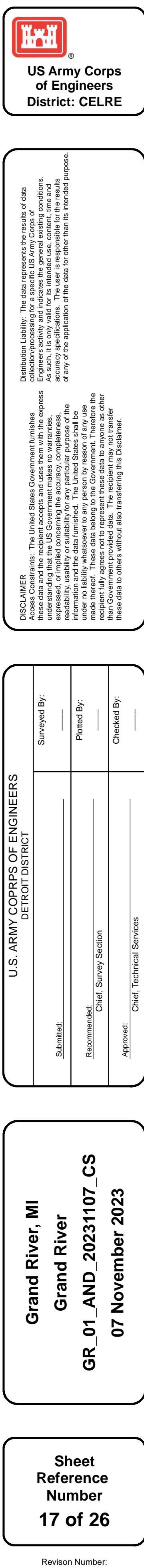
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Submitted: _____	Surveyed By: _____
Recommended: _____	Plotted By: _____
Approved: _____	Checked By: _____

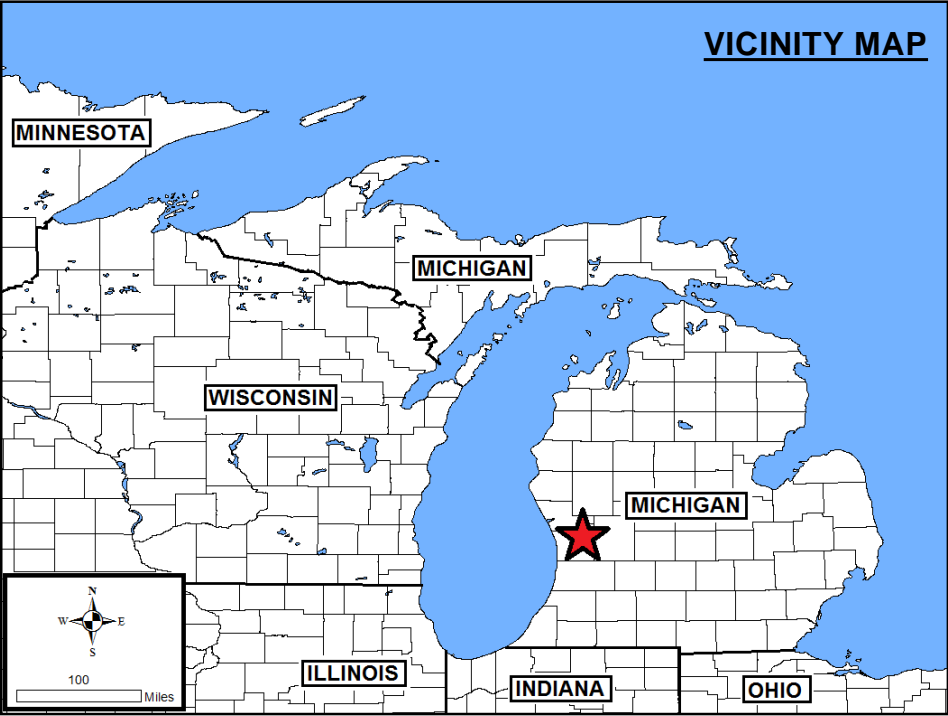
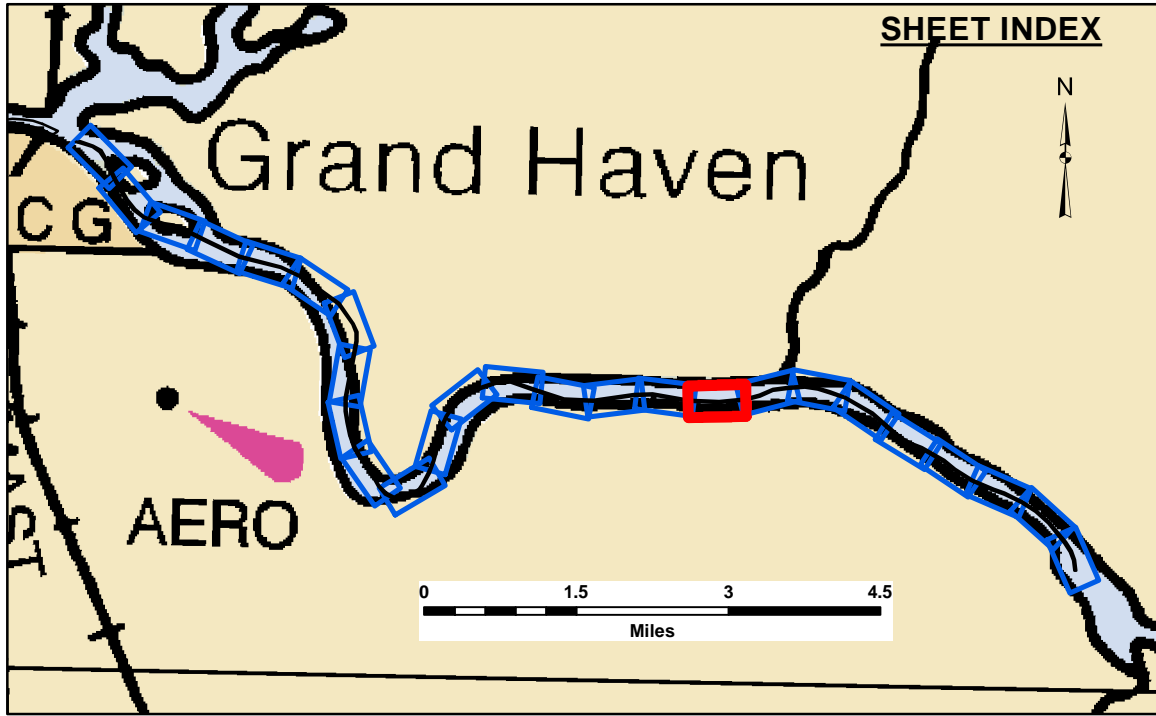
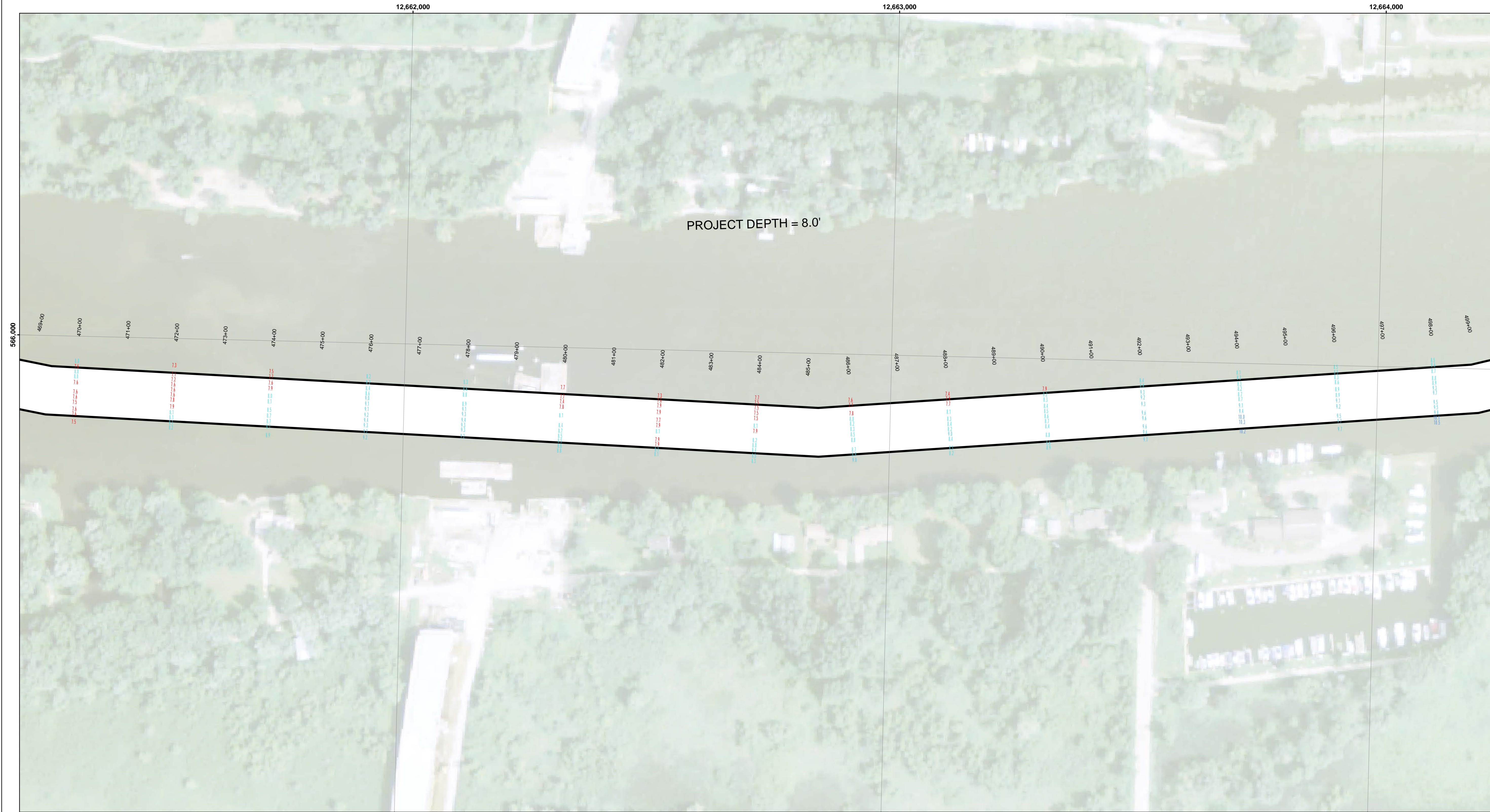
**Grand River, MI**  
**Grand River**  
**GR\_01\_AND\_20231107\_CS**  
**07 November 2023**

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Reference  
Number**  
**16 of 26**









**LEGEND**

- ..... Cable Submarine
- - Cable Overhead
- Placement Area
- └ 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'

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Feet

0 100 200 300 400 500 600

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

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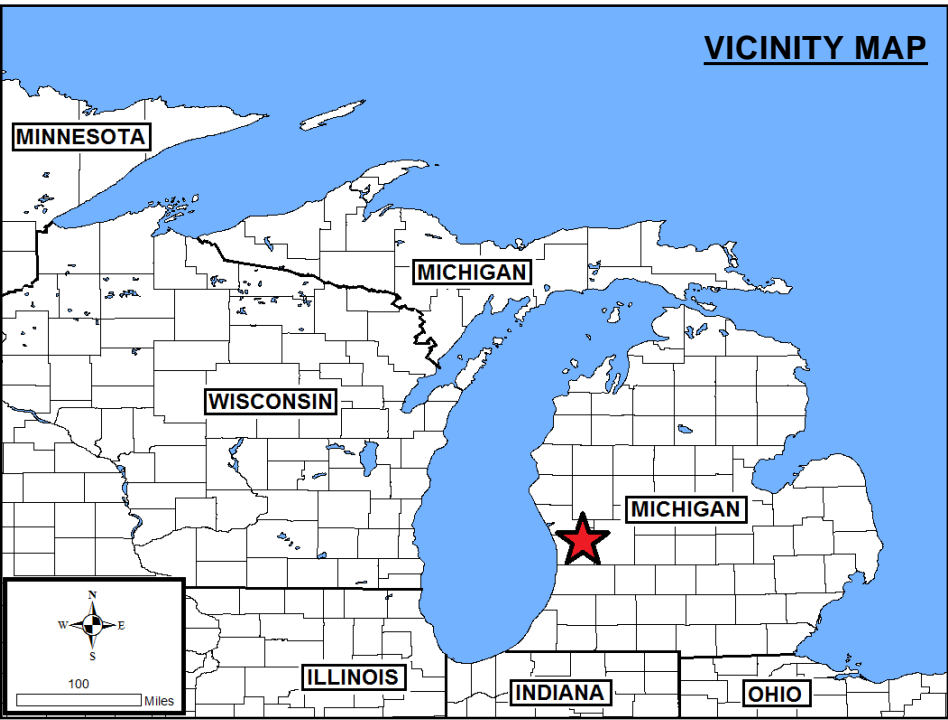
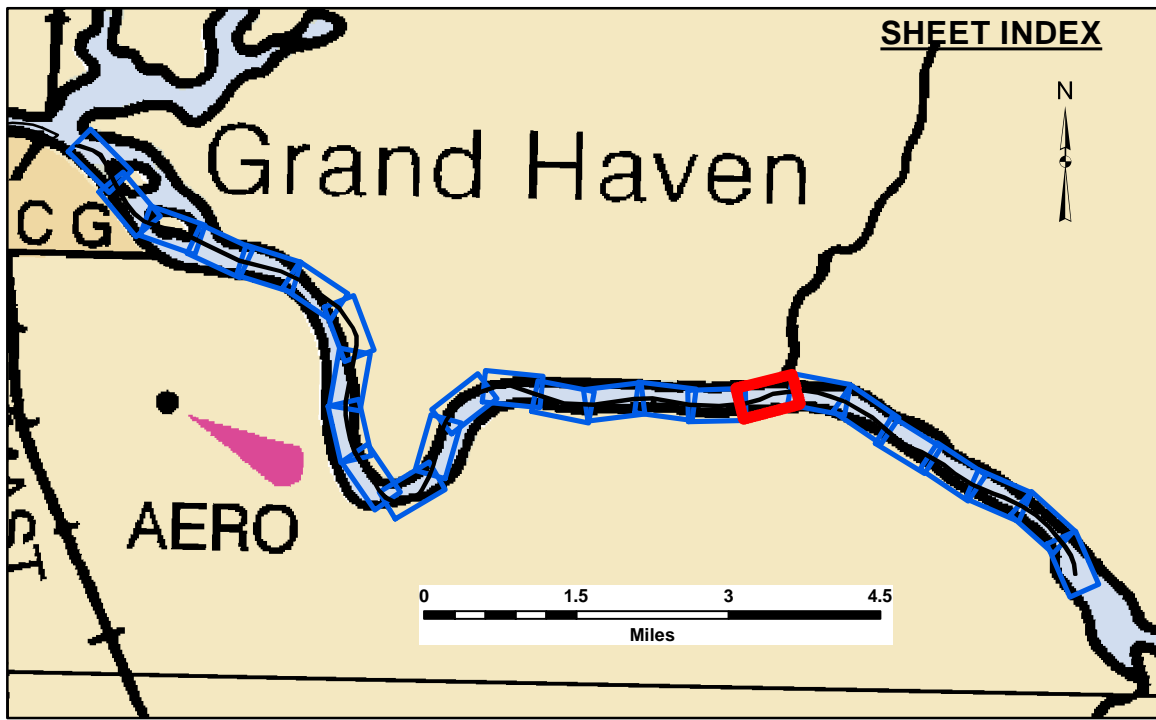
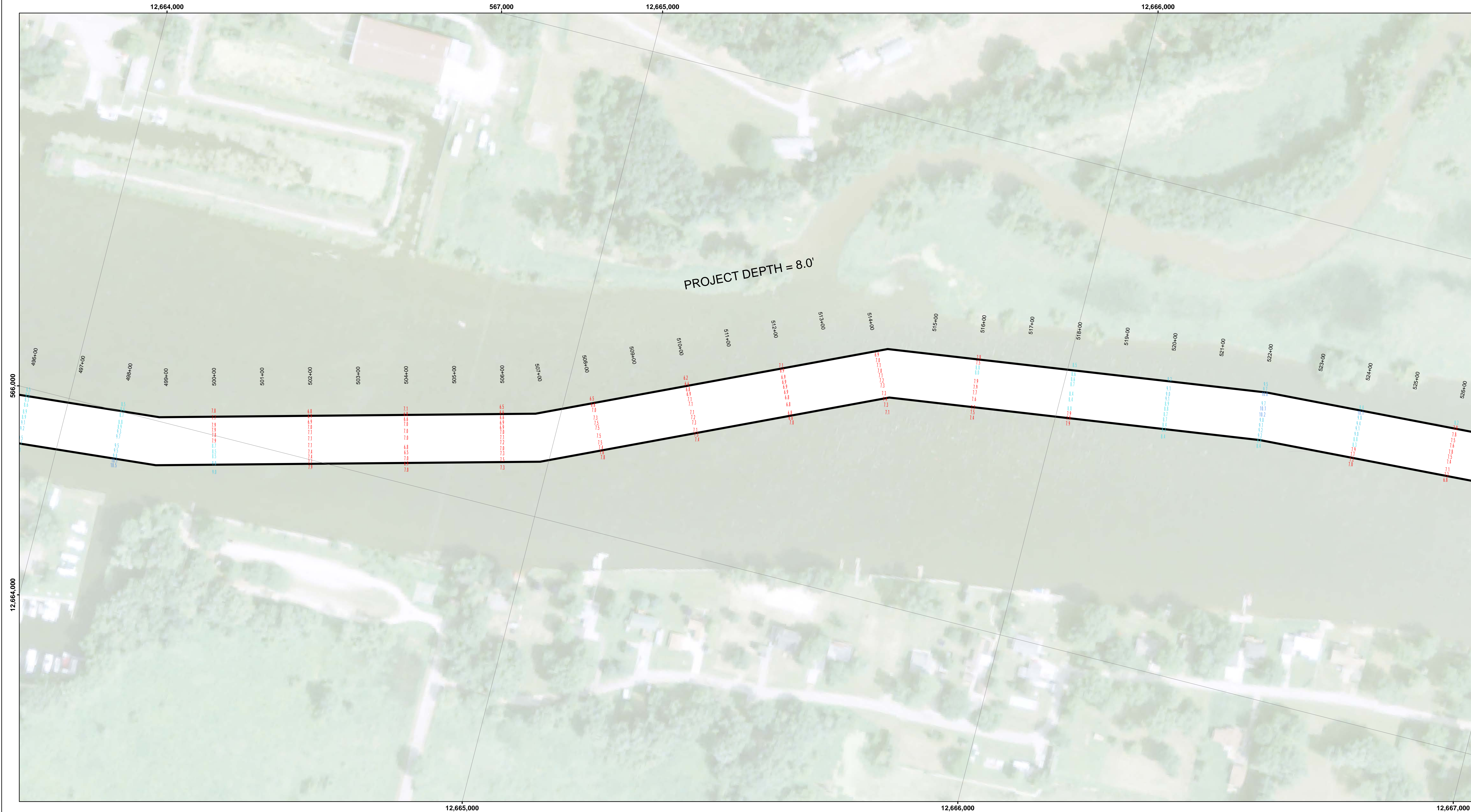
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Recommended:	Plotted By:
Approved:	Checked By:

**Grand River, MI**  
**Grand River**  
**GR\_01\_AND\_20231107\_CS**  
**07 November 2023**

**Sheet**  
**Reference**  
**Number**  
**18 of 26**





**LEGEND**

- ..... Cable Submarine
- - Cable Overhead
- Placement Area
- └ 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'

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Feet

0 100 200 300 400 500 600

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IMAGERY SOURCED FROM: 2014 MICHIGAN NAIP IMAGERY

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

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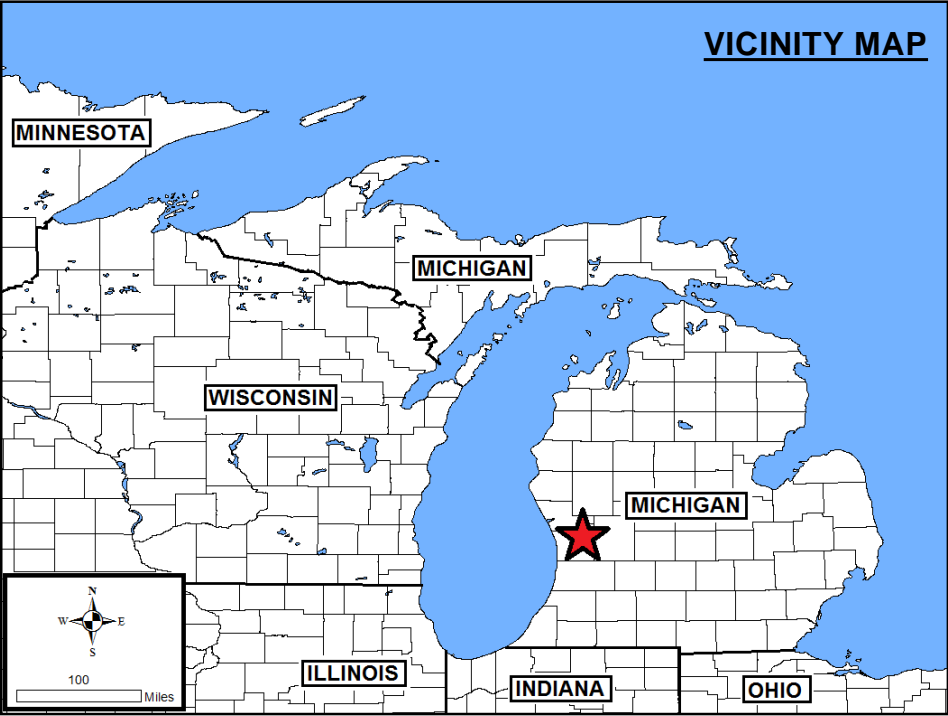
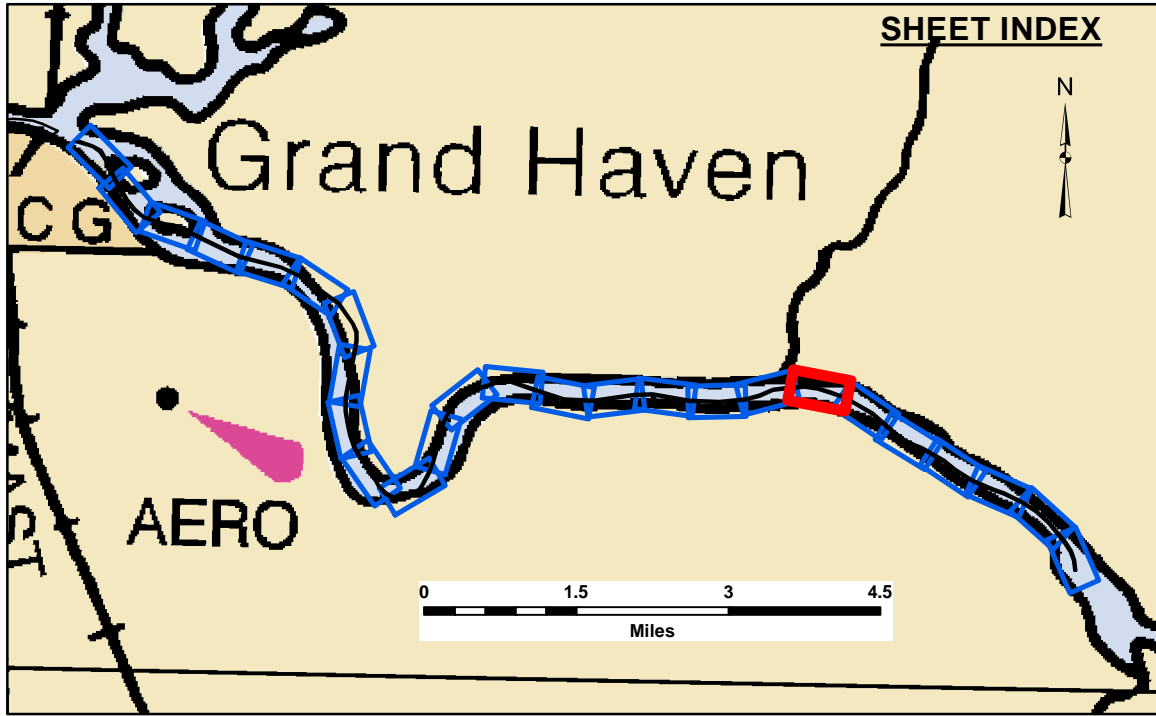
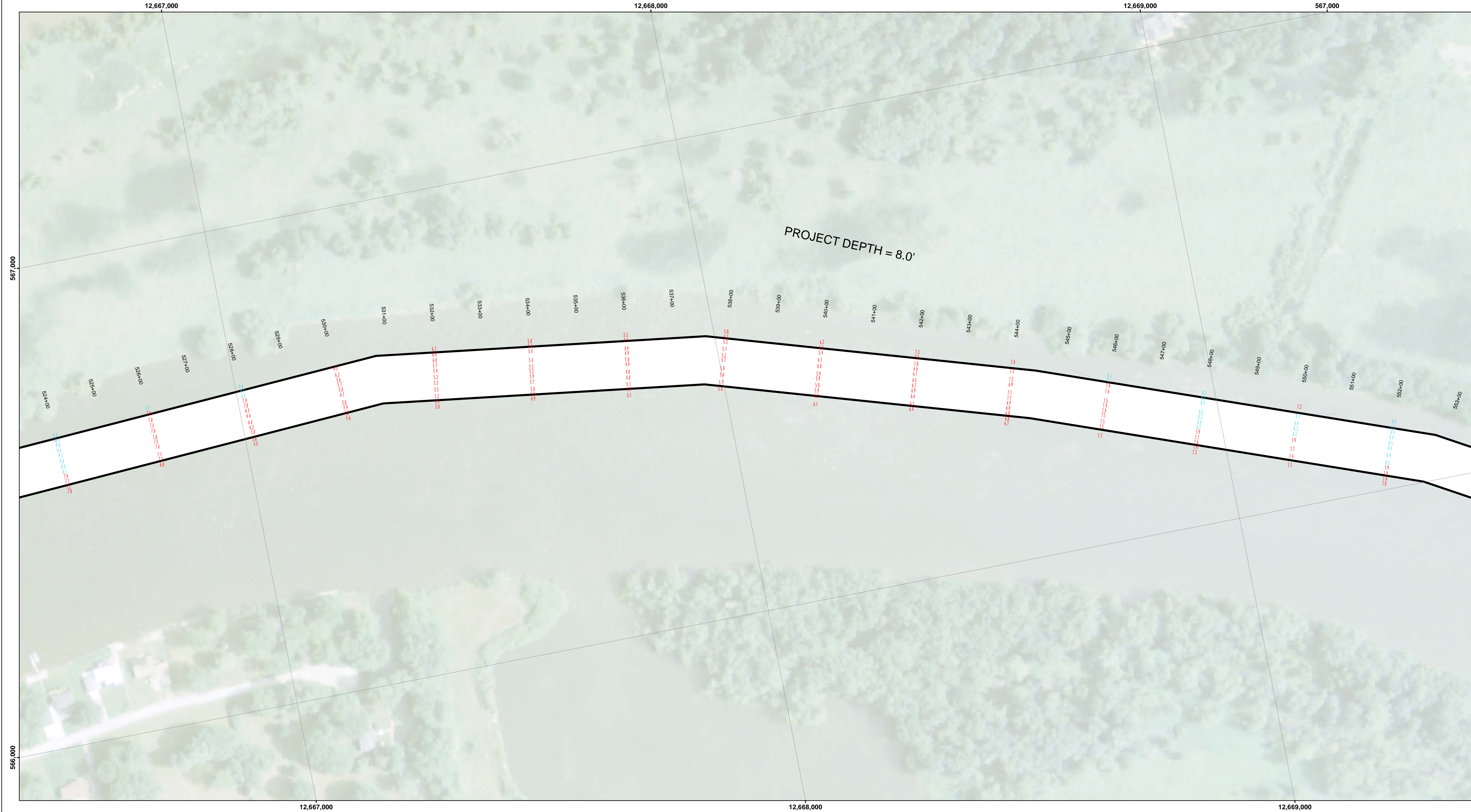
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Submitted:	Surveyed By:	
Recommended:	Plotted By:	
Approved:	Chief, Technical Services	

**Grand River, MI**  
**Grand River**  
**GR\_01\_AND\_20231107\_CS**  
**07 November 2023**

**Sheet**  
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**LEGEND**

- ..... Cable Submarine
- - Cable Overhead
- Placement Area
- └ Beacon, General
- Contour Lines
- ▭ Channel Limits

**SOUNDING LEGEND**

- LESS THAN PROJECT DEPTH
- PROJECT DEPTH
- PROJECT DEPTH +1'
- PROJECT DEPTH +2'
- PROJECT DEPTH +3'
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0 100 200 300 400 500 600

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EQUIPMENT: ODOM CV 100 SINGLE BEAM SOUNDER  
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VESSEL: 3064

IMAGERY SOURCED FROM: 2014 MICHIGAN NAIP IMAGERY

  
**US Army Corps  
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District: CELRE

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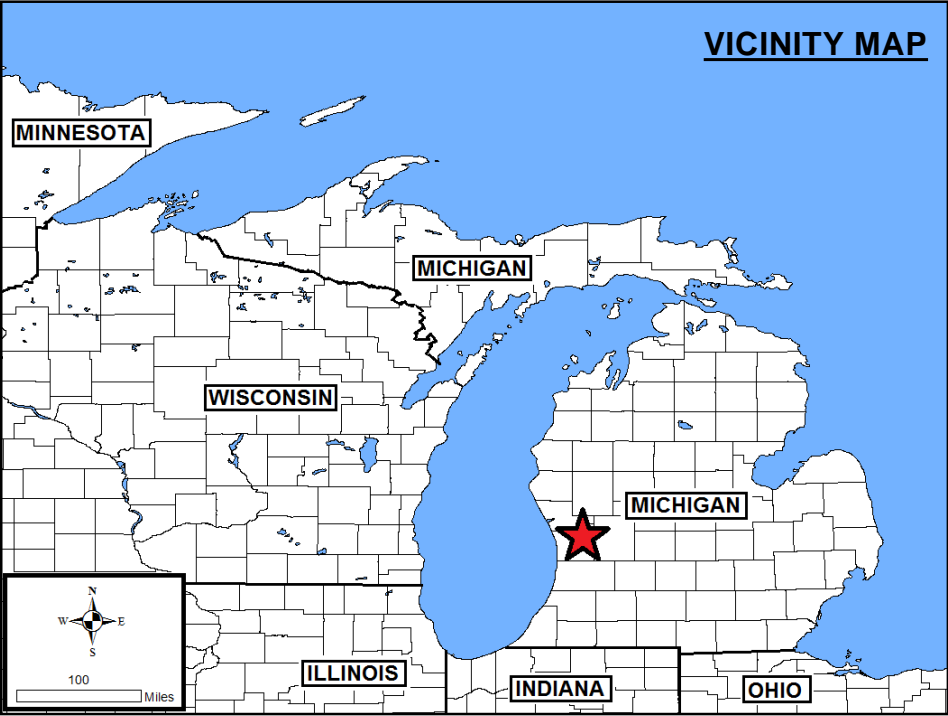
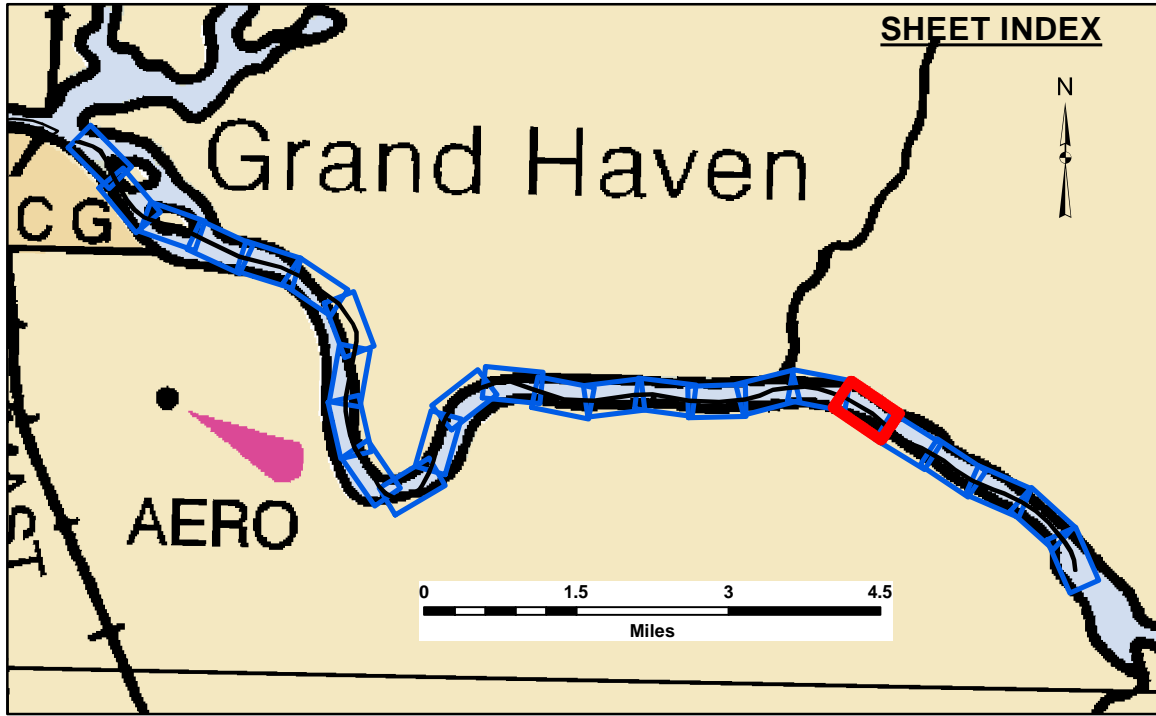
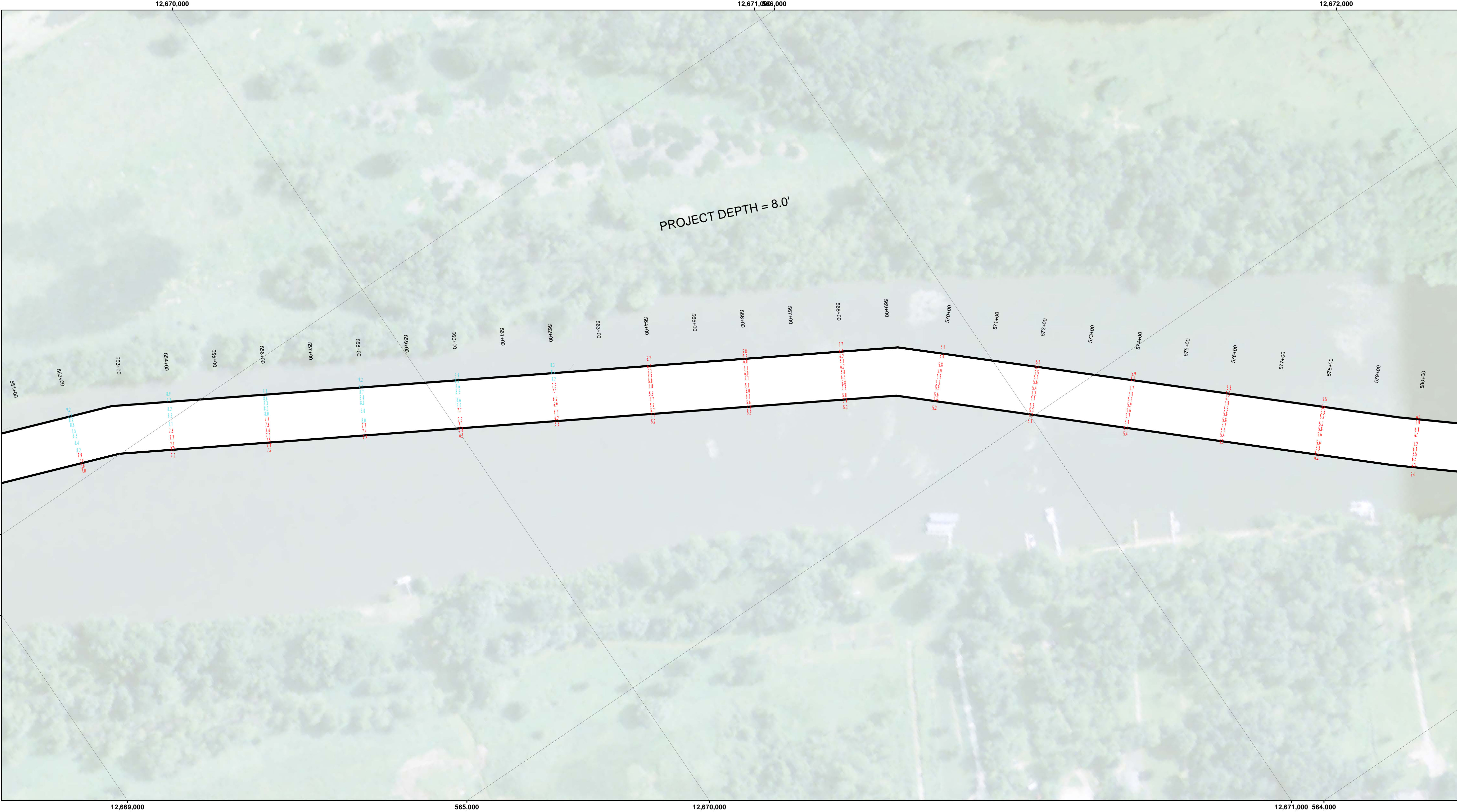
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Approved By: _____	Checked By: _____

**Grand River, MI**  
**Grand River**  
**GR\_01\_AND\_20231107\_CS**  
**07 November 2023**

**Sheet  
Reference  
Number**  
**20 of 26**



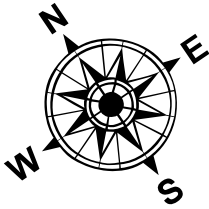


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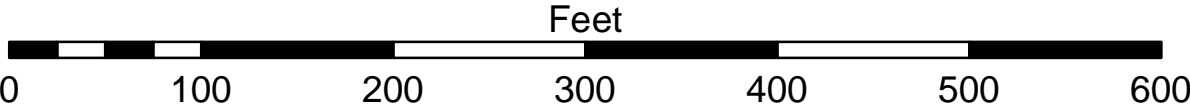
- ..... Cable Submarine
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- Placement Area
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- Contour Lines
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**SOUNDING LEGEND**

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**US Army Corps  
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District: CELRE

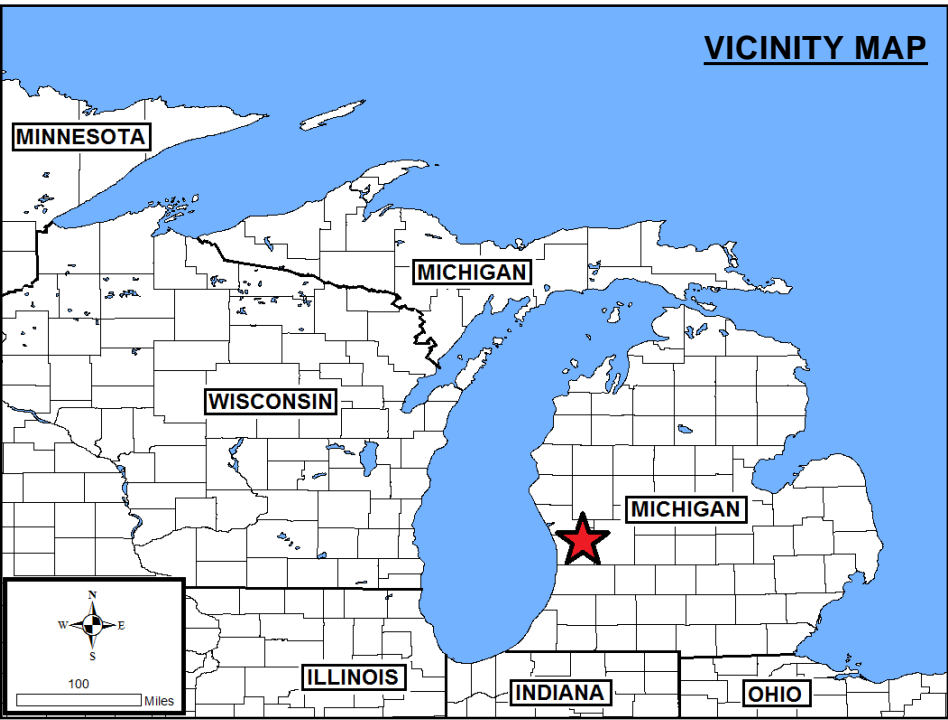
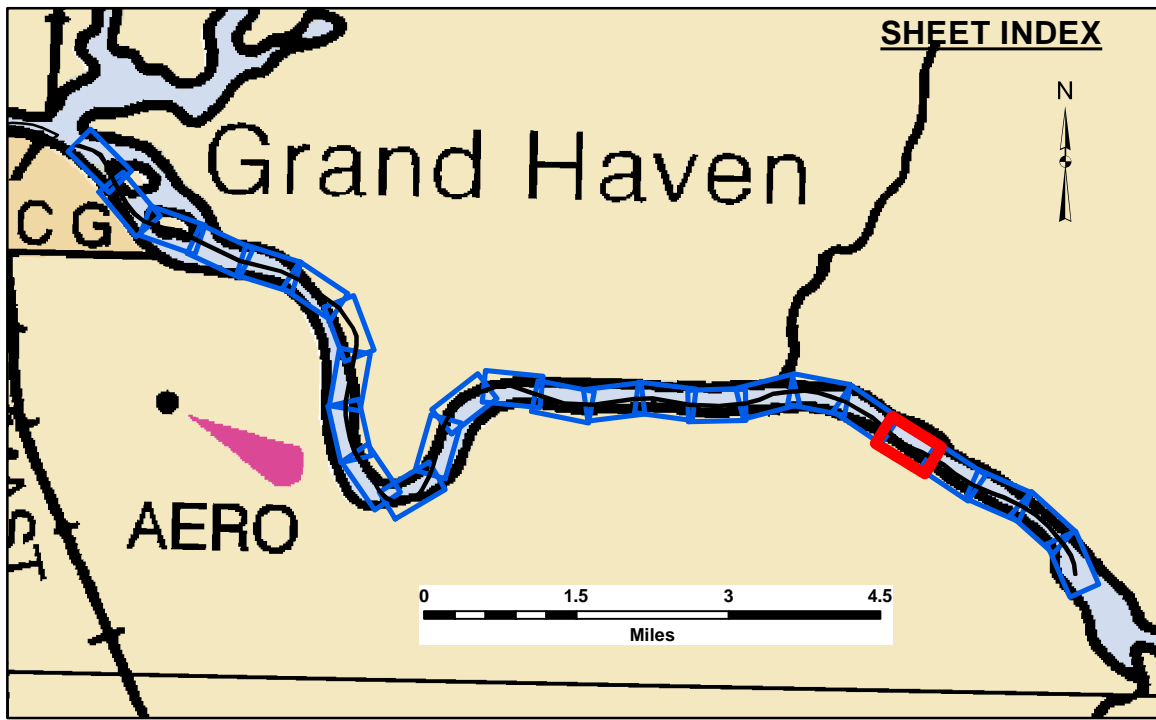
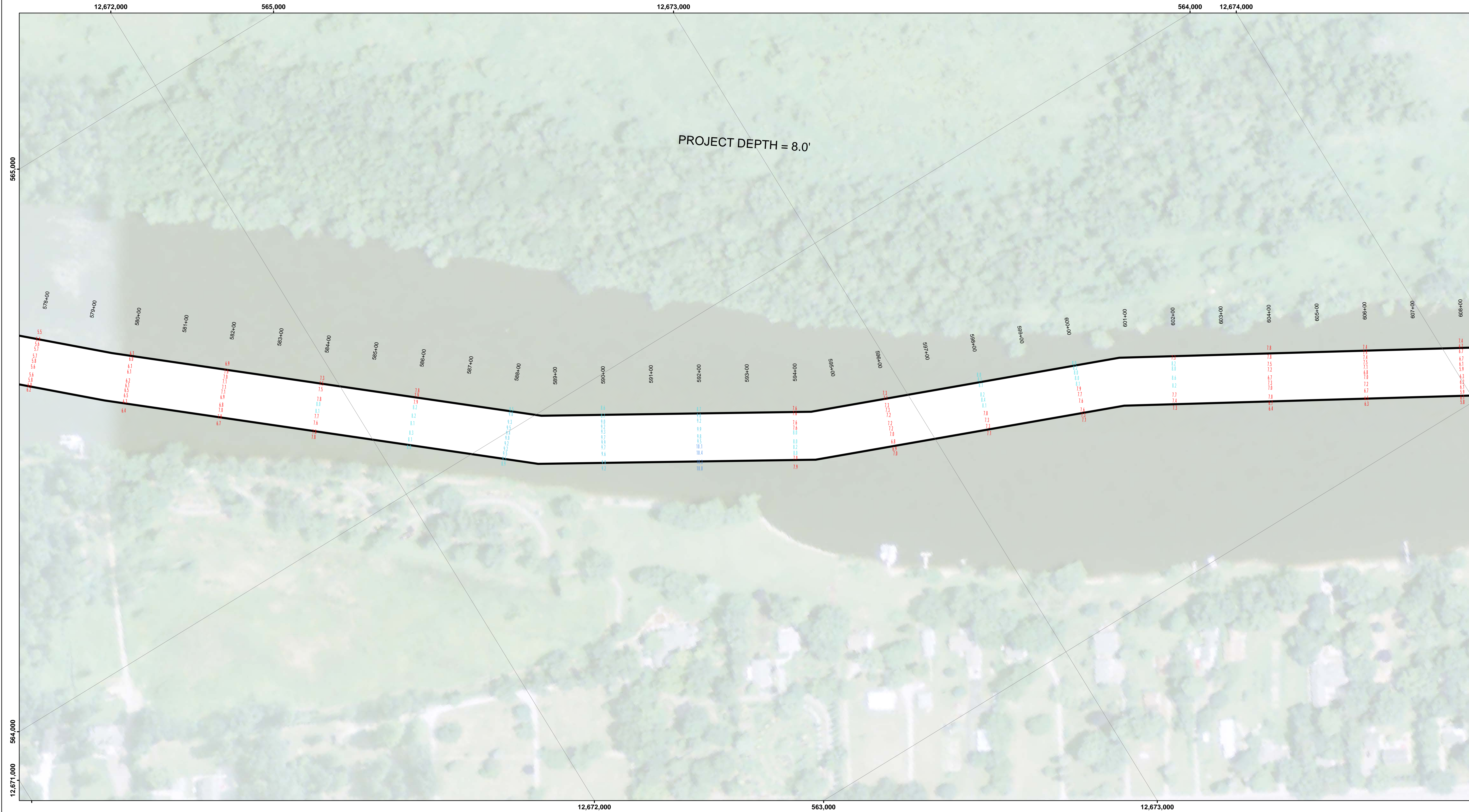
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**Grand River, MI**  
**Grand River**  
**GR\_01\_AND\_20231107\_CS**  
**07 November 2023**

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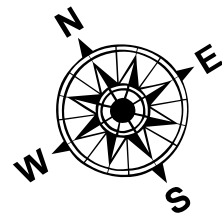


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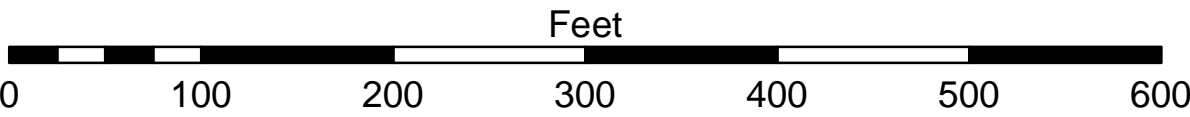
- ..... Cable Submarine
- - Cable Overhead
- Placement Area
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- Contour Lines
- ▭ Channel Limits

**SOUNDING LEGEND**

- LESS THAN PROJECT DEPTH
- PROJECT DEPTH
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District: CELRE

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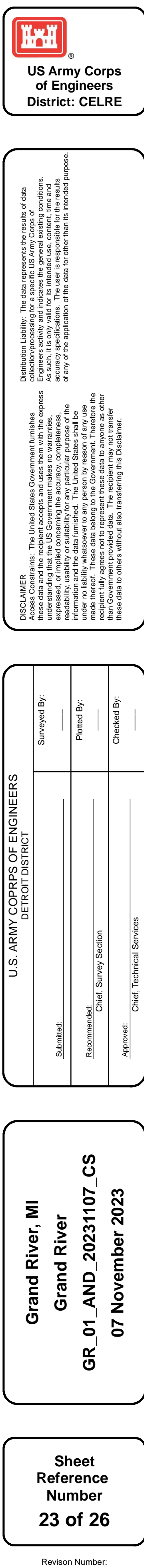
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Recommended:	_____	Plotted By:	_____
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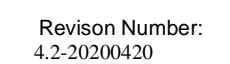
**Grand River, MI**  
**Grand River**  
**GR\_01\_AND\_20231107\_CS**  
**07 November 2023**

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Reference  
Number**  
**22 of 26**

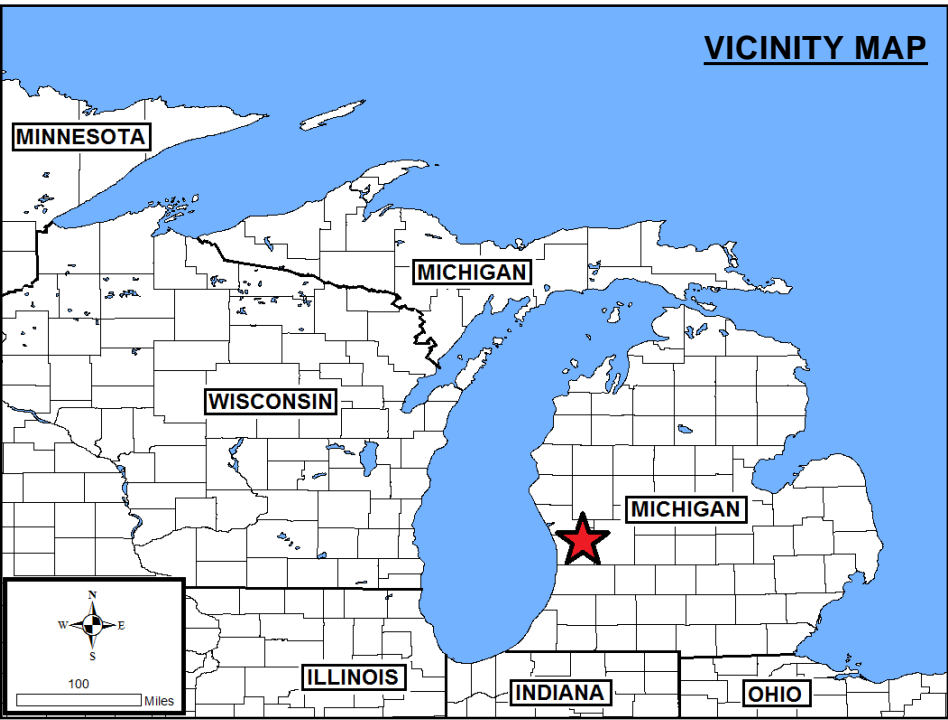
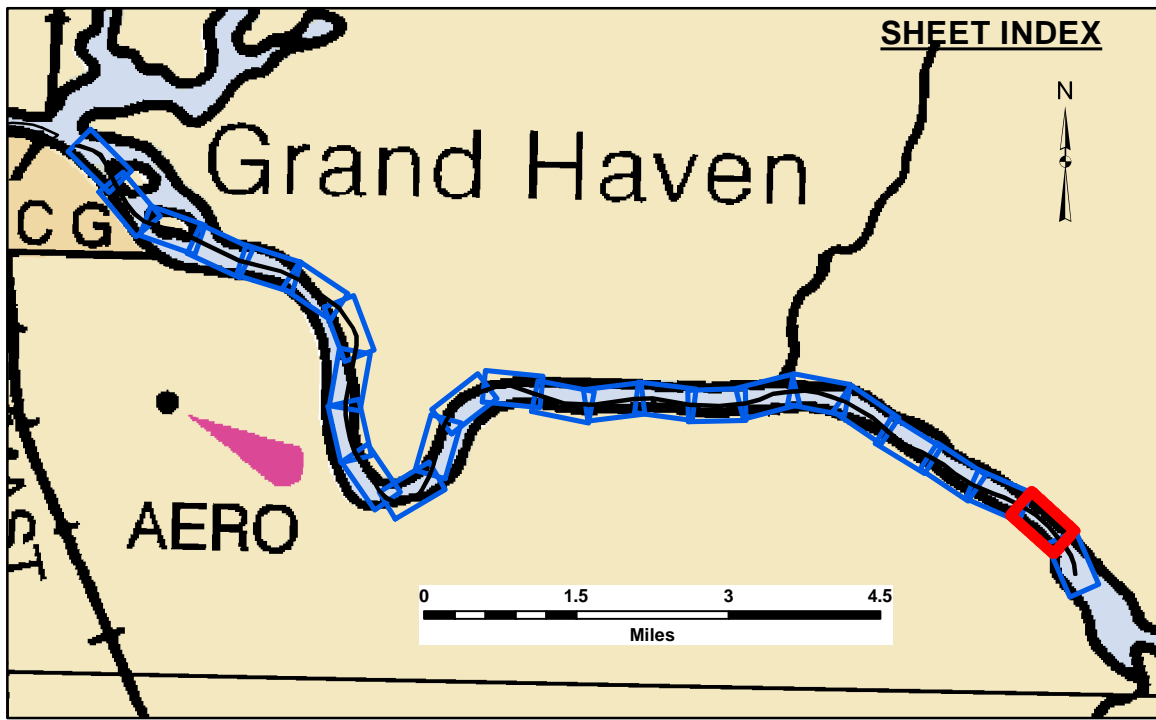
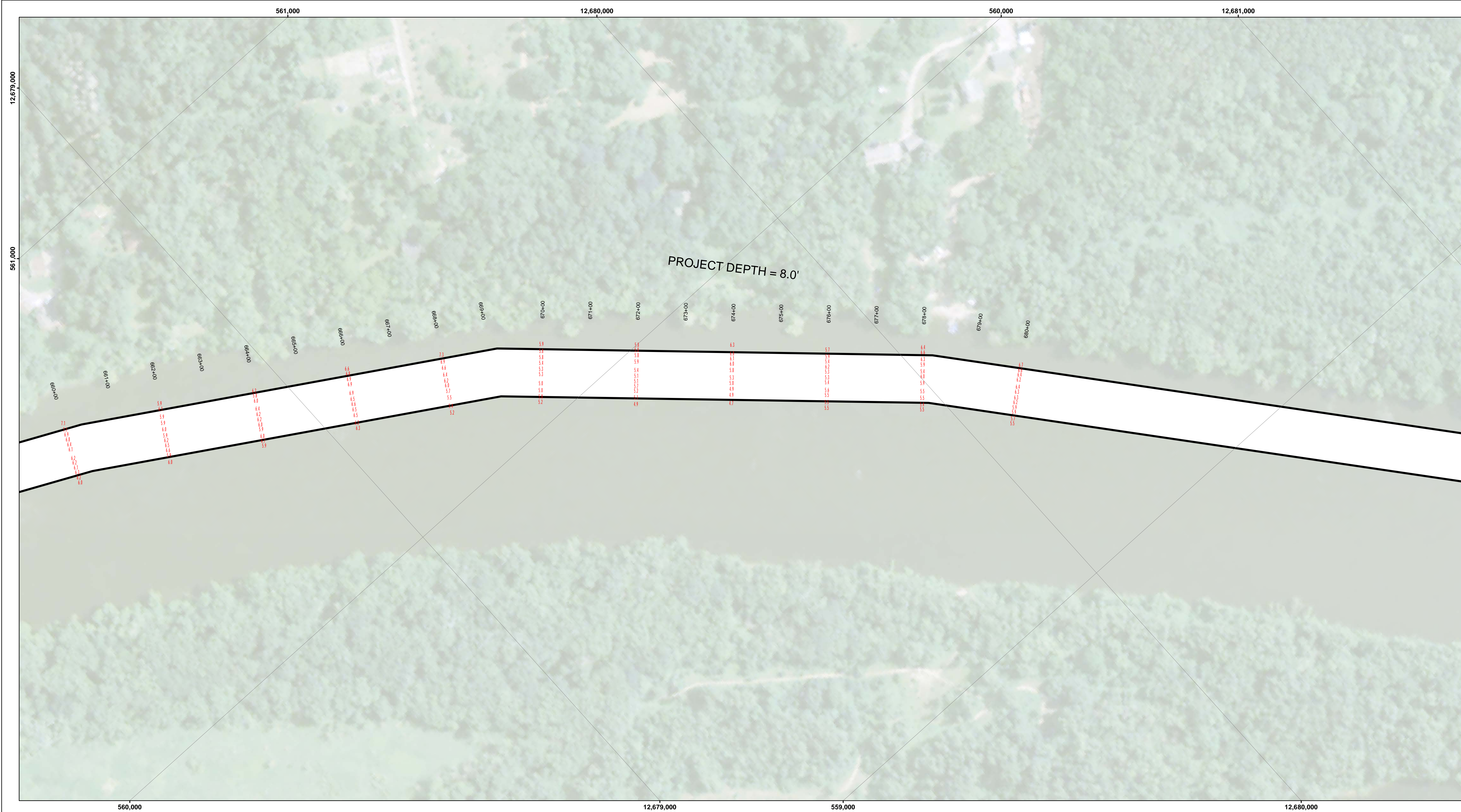












**LEGEND**

- ..... Cable Submarine
- - Cable Overhead
- Placement Area
- └ Beacon, General
- Contour Lines
- ▭ Channel Limits

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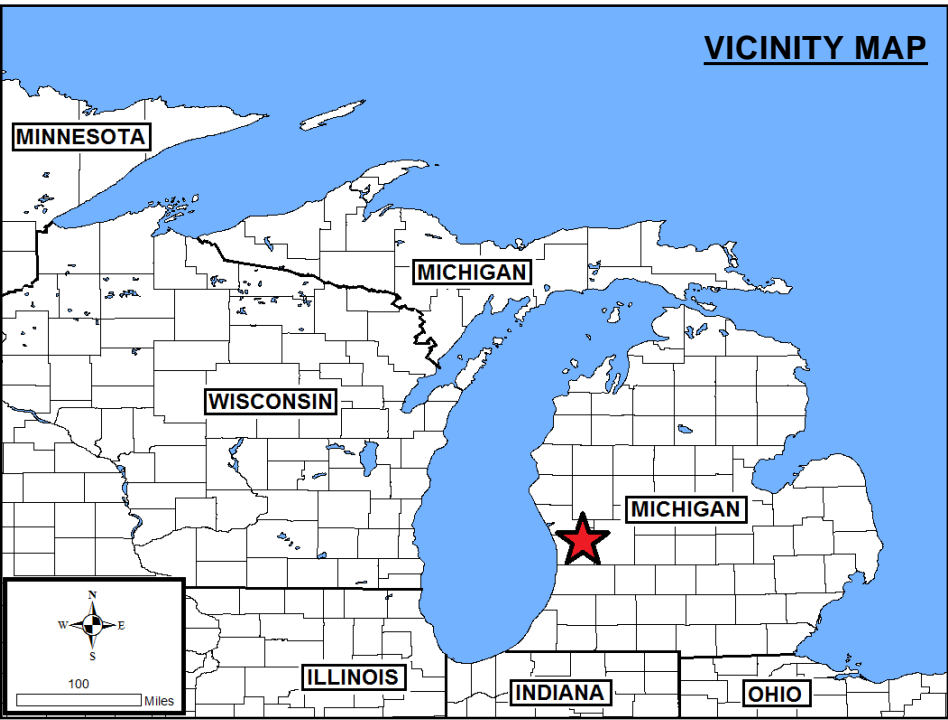
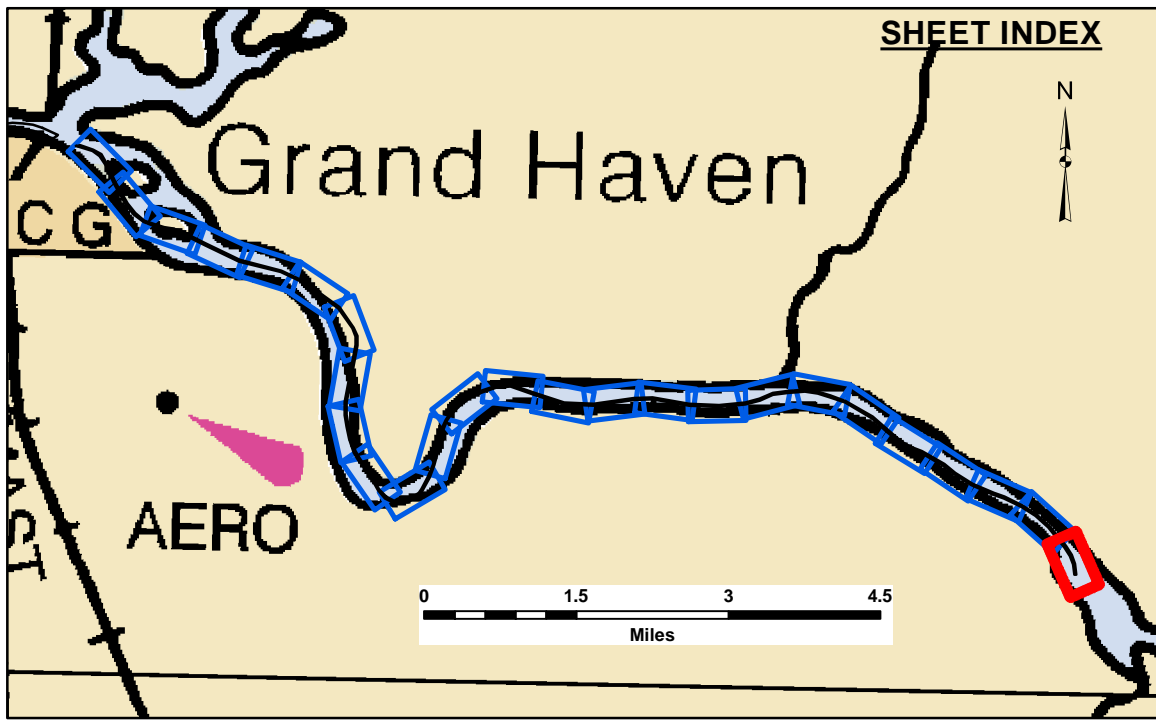
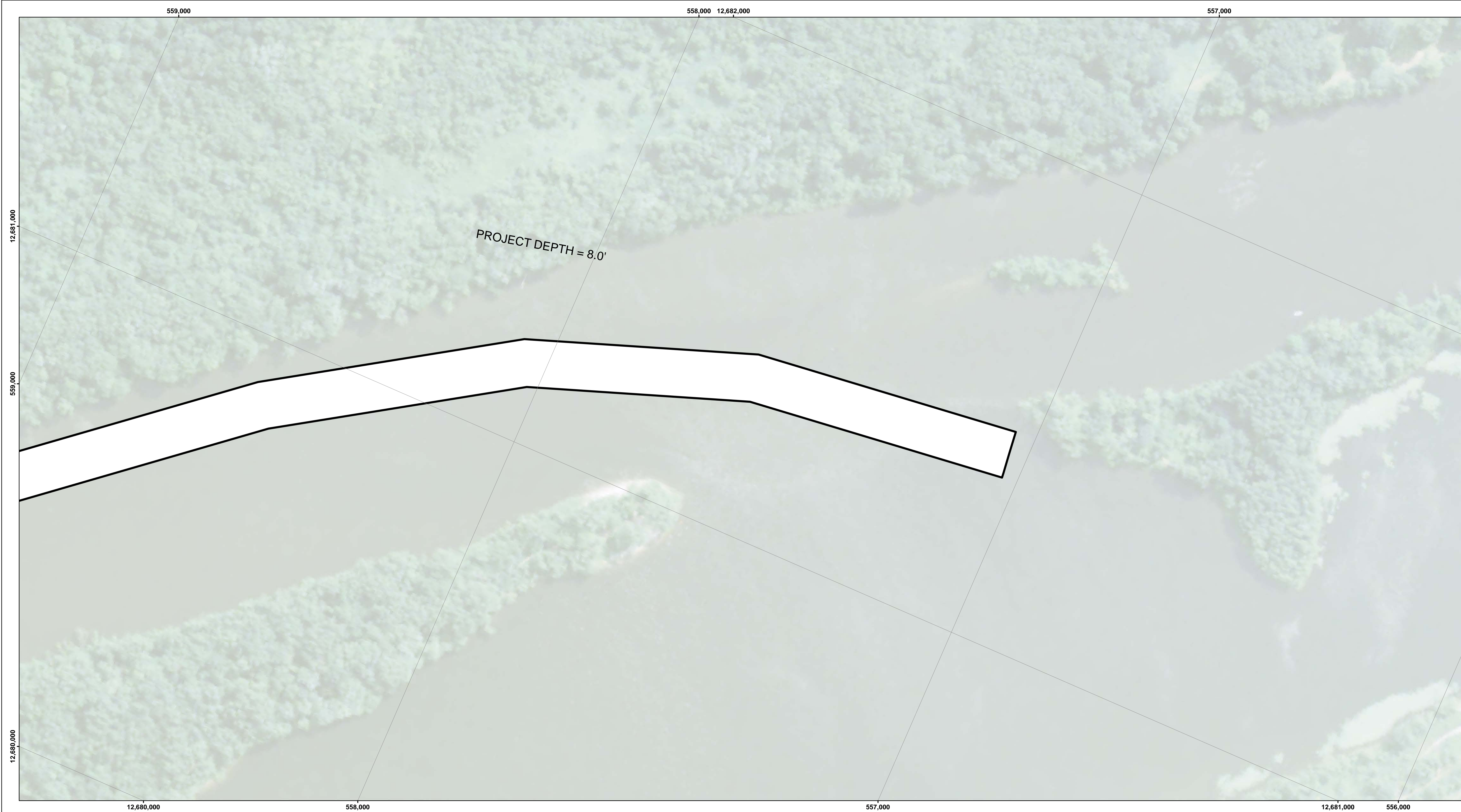
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	
Submitted: _____	Surveyed By: _____
Recommended: _____	Plotted By: _____
Approved: _____	Checked By: _____

**Grand River, MI**  
**Grand River**  
**GR\_01\_AND\_20231107\_CS**  
**07 November 2023**

**Sheet  
Reference  
Number**  
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**LEGEND**

- ..... Cable Submarine
- Cable Overhead
- Placement Area
- └ Beacon, General
- Contour Lines
- ▭ Channel Limits

**SOUNDING LEGEND**

- LESS THAN PROJECT DEPTH
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- NOTES:**
- 1) THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
  - 2) ALL SOUNDINGS ARE IN FEET AND ARE REFERENCED TO LOW WATER DATUM ELEVATION AS SHOWN ABOVE MEAN SEA LEVEL I.G.L.D. 1985.
  - 3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.
  - 4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN.
  - 5) POSITIONING METHOD: TRIMBLE DGPS WVAAS CORRECTIONS  
EQUIPMENT: ODOM CV 100 SINGLE BEAM SOUNDER  
SOFTWARE: HYPACK  
VESSEL: 3064

IMAGERY SOURCED FROM: 2014 MICHIGAN NAIP IMAGERY

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

**DISCLAIMER:** The data represented on this map is the result of data collected for a specific purpose and is not intended for use for any other purpose. The user is responsible for the results of any application of the data for other than its intended purpose. The United States Government makes no warranty, expressed or implied, concerning the accuracy, completeness, or reliability of the data for any particular purpose of the user. The user is responsible for the results of any use of the data for any purpose other than that for which it was provided. The user is responsible for the results of any use of the data for any purpose other than that for which it was provided. The user is responsible for the results of any use of the data for any purpose other than that for which it was provided.

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

**Grand River, MI**  
**Grand River**  
**GR\_01\_AND\_20231107\_CS**  
**07 November 2023**

**Sheet  
Reference  
Number**  
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