

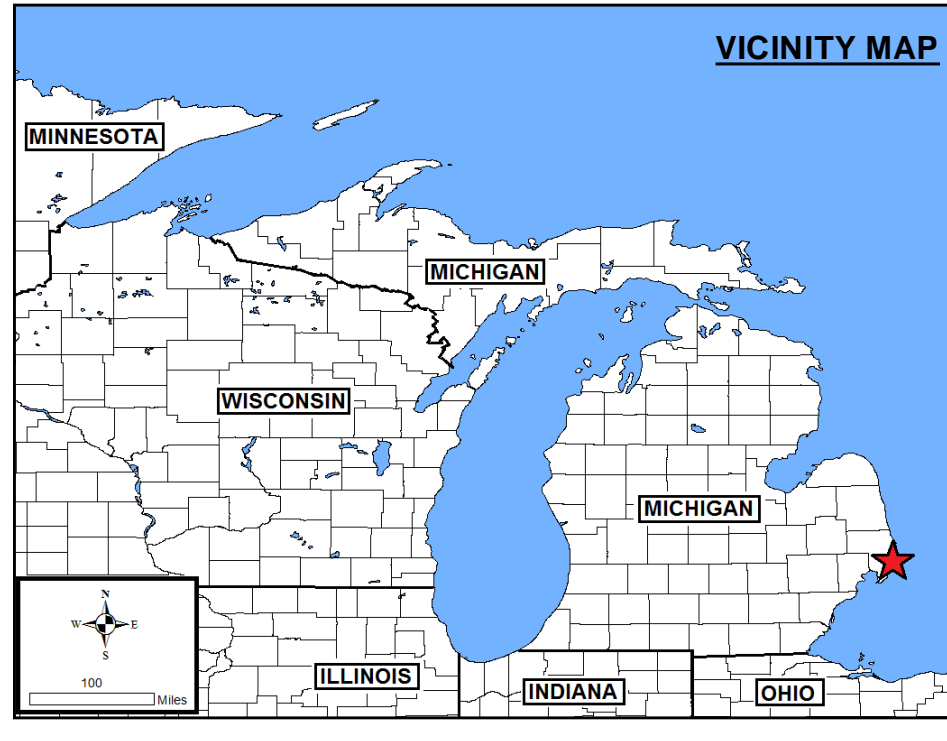
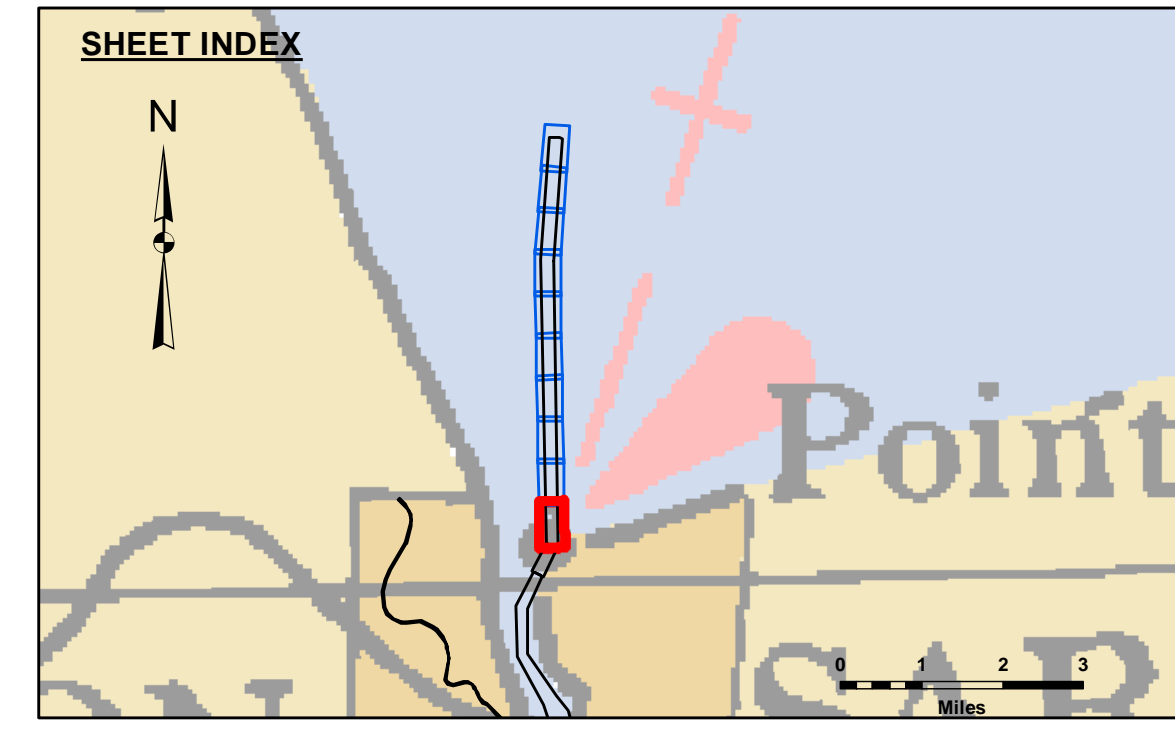
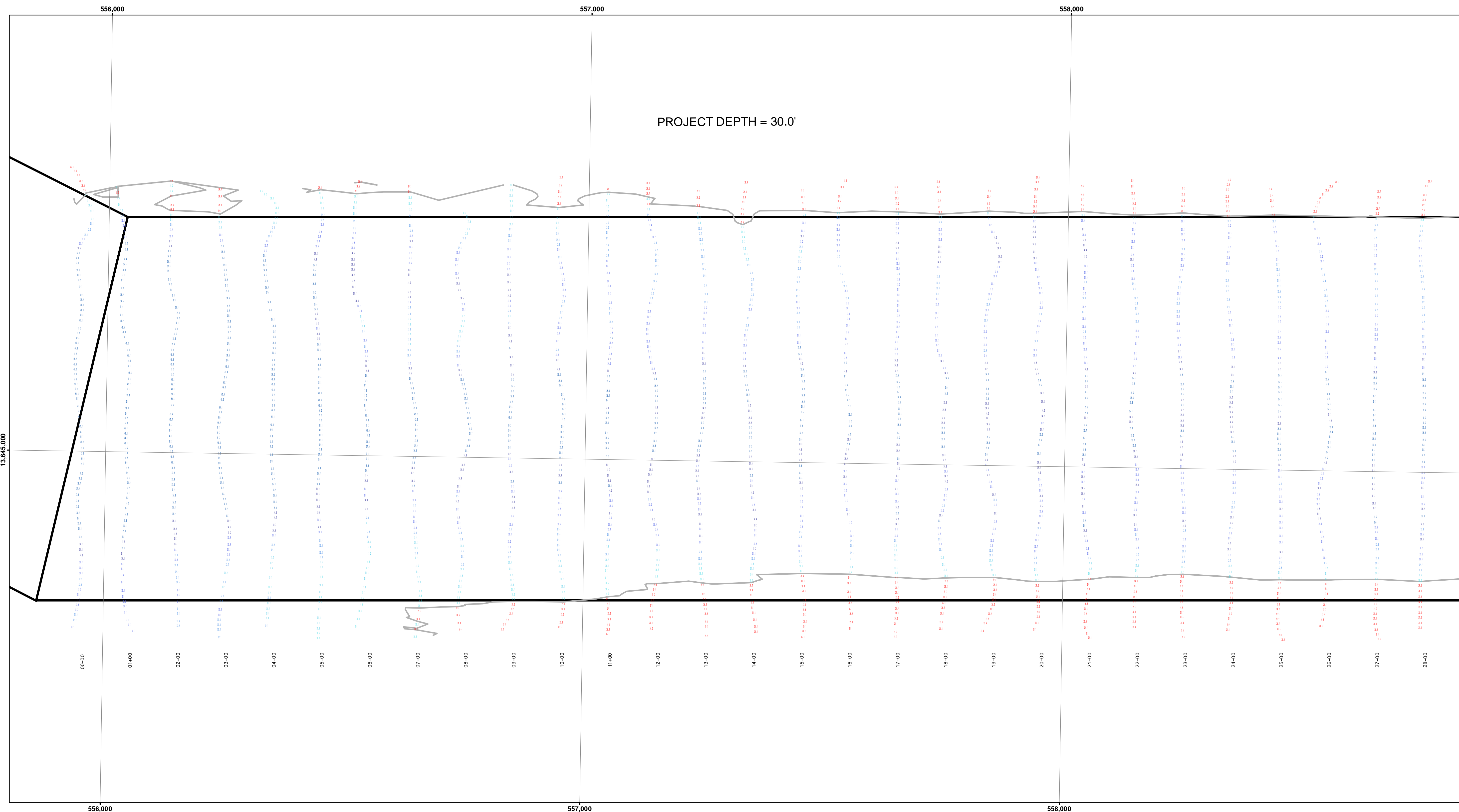


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Approval table with fields: Submitted, Recommended (Chief, Survey Station), Approved (Chief, Technical Services), Surveyed By, Plotted By, Checked By.

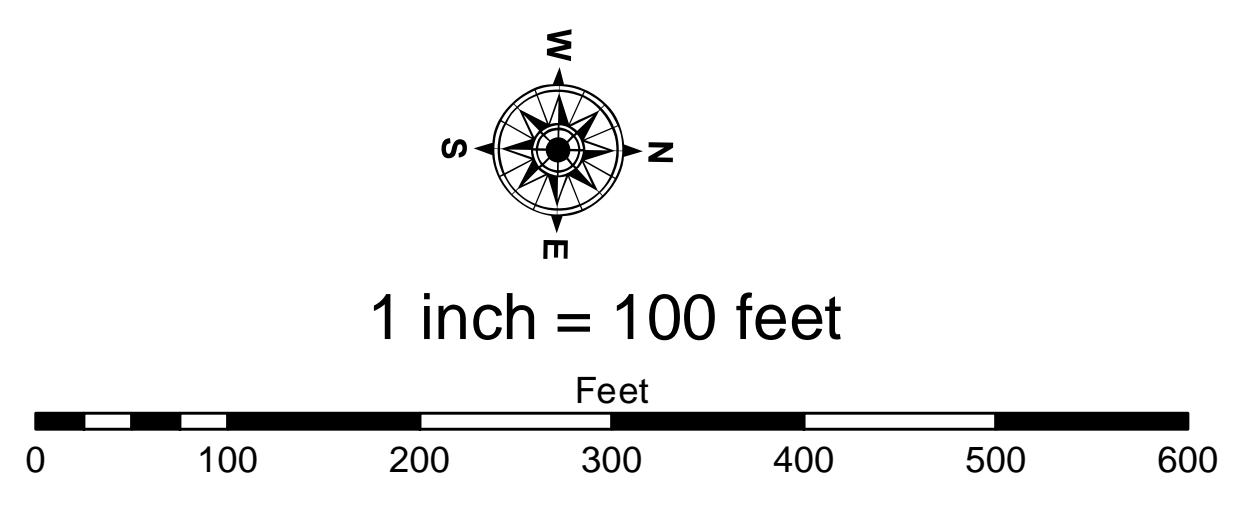
LAKE HURON, MI Point Edwards Range PE_01_RNG_20210519_CS 19 May 2021

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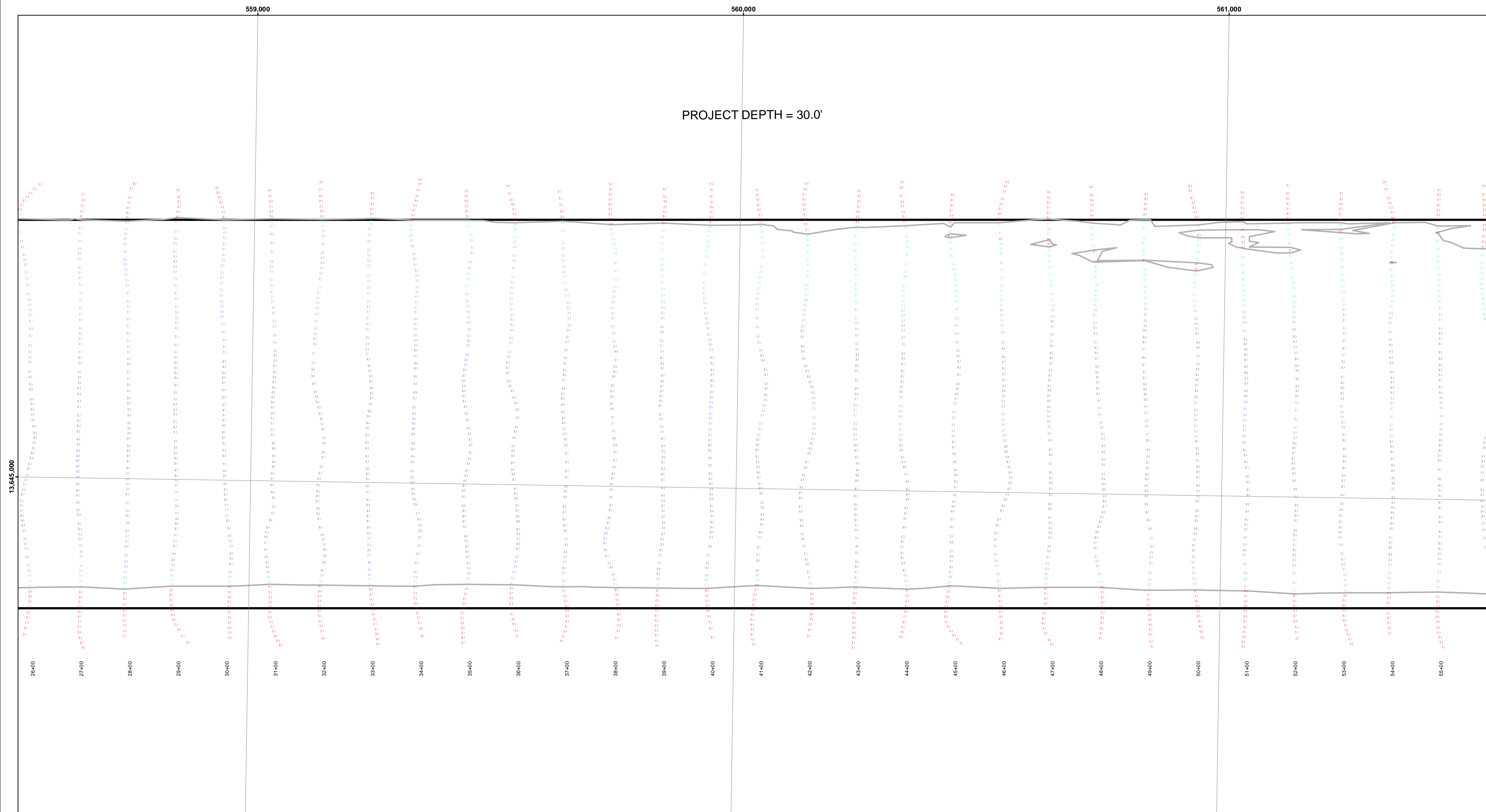


- LEGEND: Cable Submarine, Cable Overhead, Placement Area, Beacon, General, Contour Lines, Channel Limits

- SOUNDING LEGEND: LESS THAN PROJECT DEPTH, PROJECT DEPTH, PROJECT DEPTH +1', PROJECT DEPTH +2', PROJECT DEPTH +3', PROJECT DEPTH +4', PROJECT DEPTH +5'



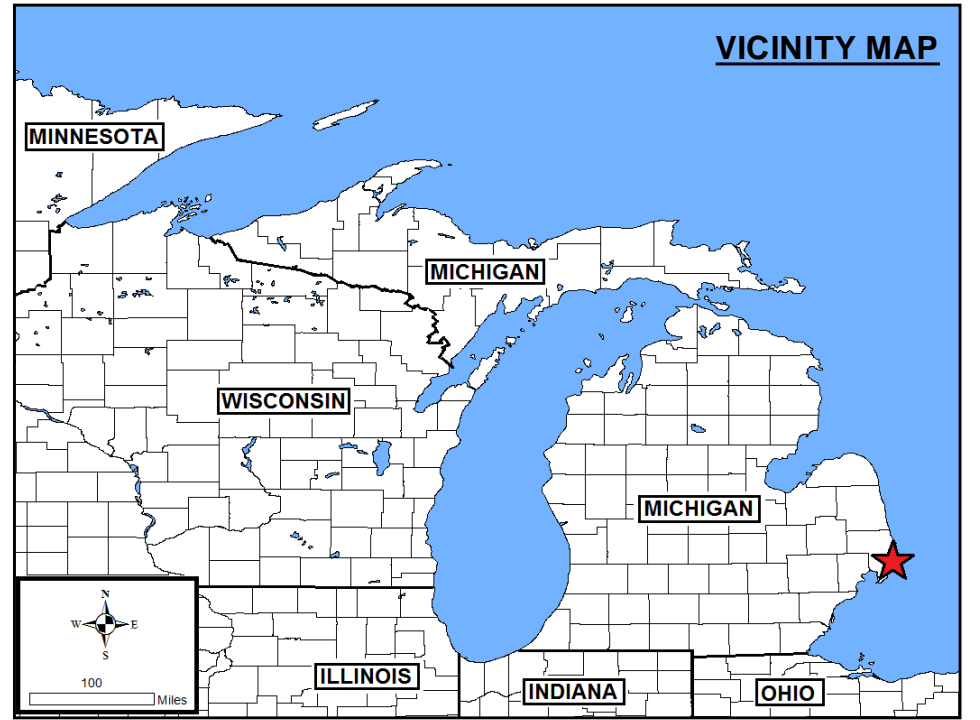
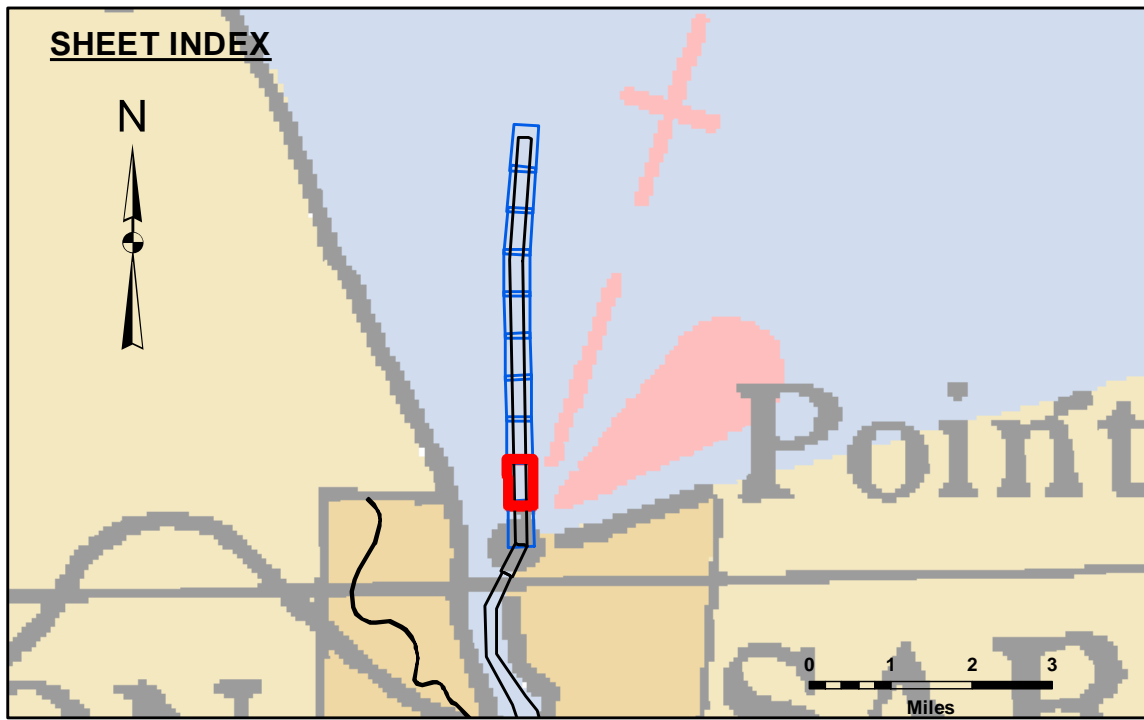
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Submitted:	Surveyed By:
Recommended:	Plotted By:
Approved:	Checked By:

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DETROIT DISTRICT

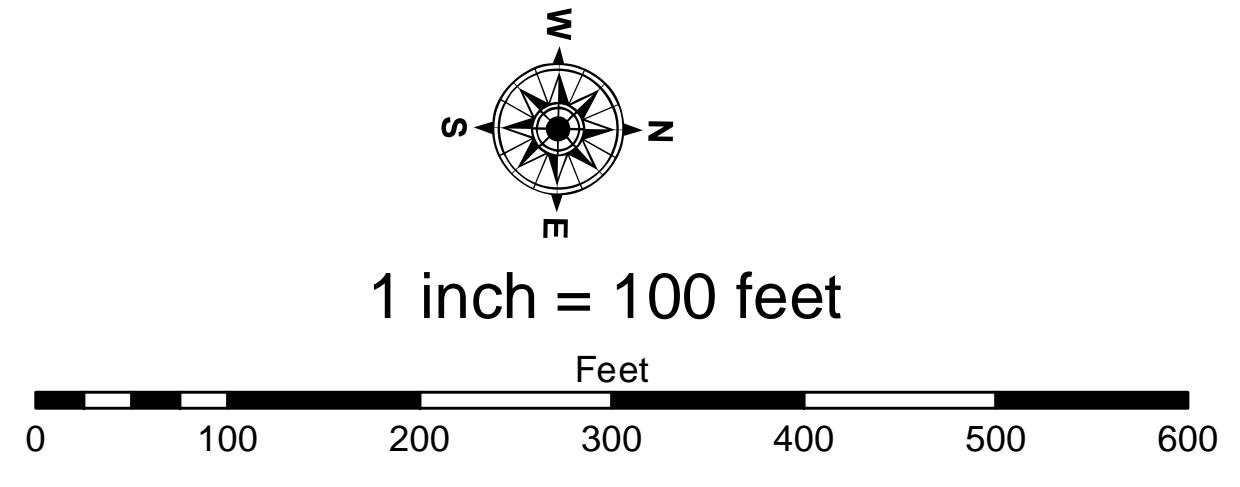


LEGEND

- 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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FORT GRATIOT, MI (#9014098)
LAKEPORT, MI (#9075002)

POSITIONING: APPLANIX POS-MV4 W/ VRS/RTK OR MARINESTAR GNSS.
MOTION COMPENSATION: APPLANIX POS-MV4
SONAR: R2SONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
SOFTWARE: HYPACK

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS
ALL COORDINATES ARE IN U.S. SURVEY FEET.

LAKE HURON, MI
Point Edwards Range
PE_01_RNG_20210519_CS
19 May 2021

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562,000

563,000

564,000

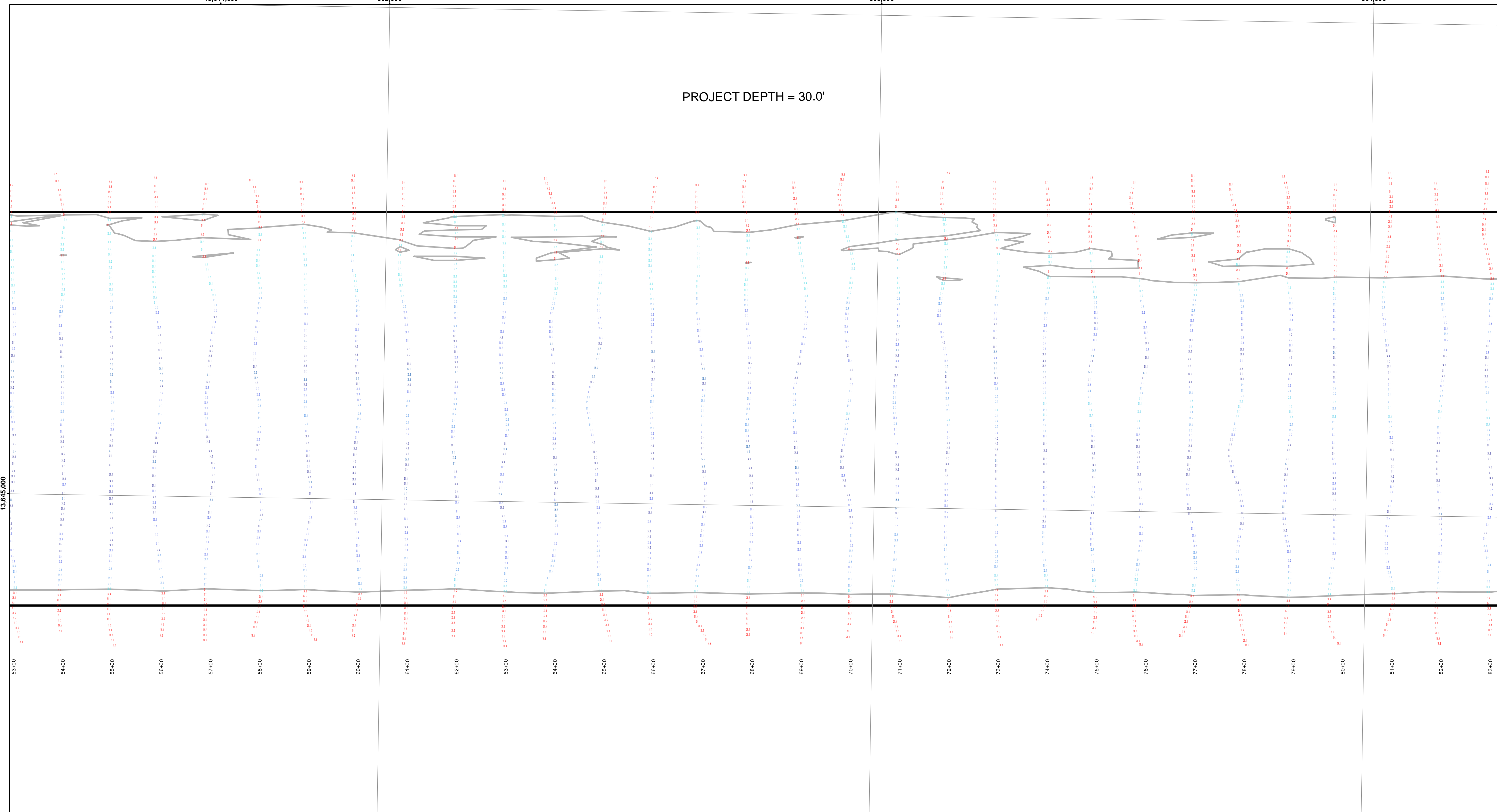
13,644,000



PROJECT DEPTH = 30.0'

13,645,000

13,645,000

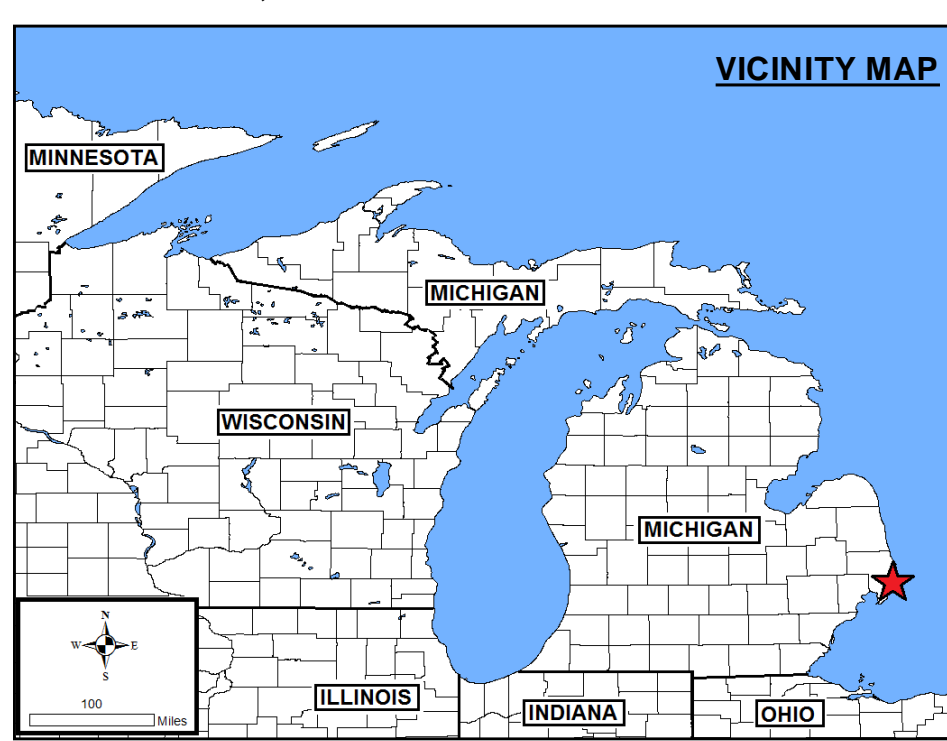
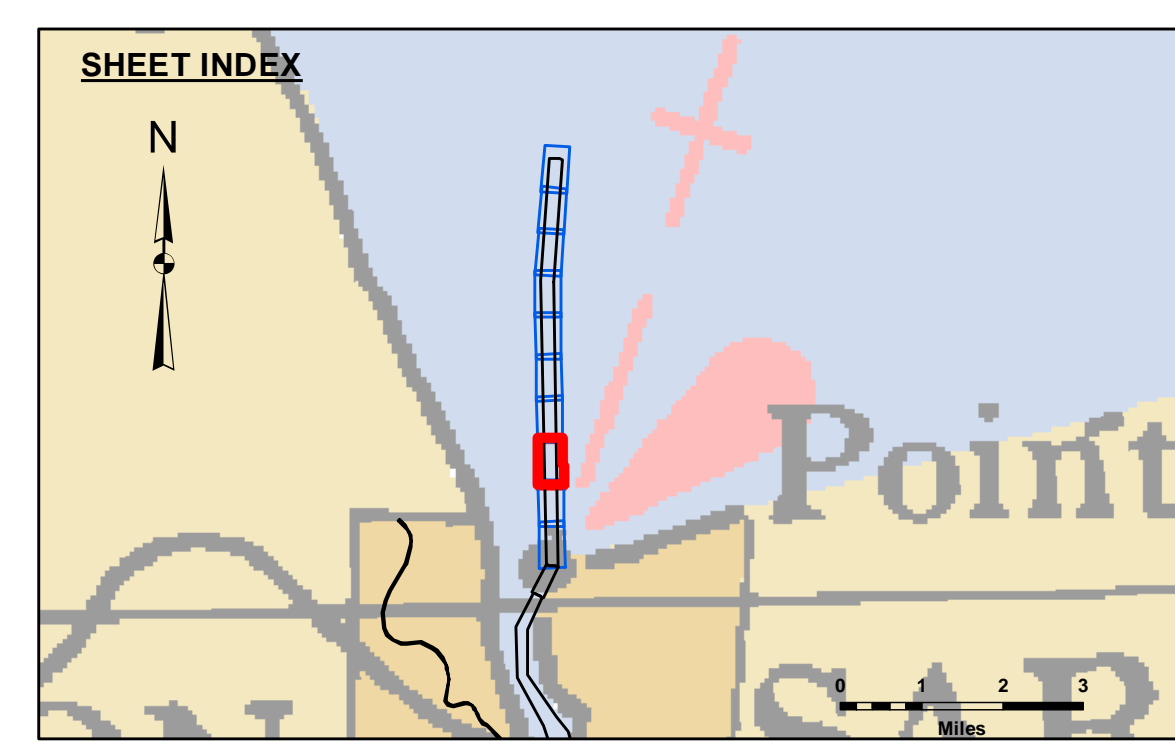


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Recommended:	Plotted By:
Approved:	Checked By:

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DETROIT DISTRICT

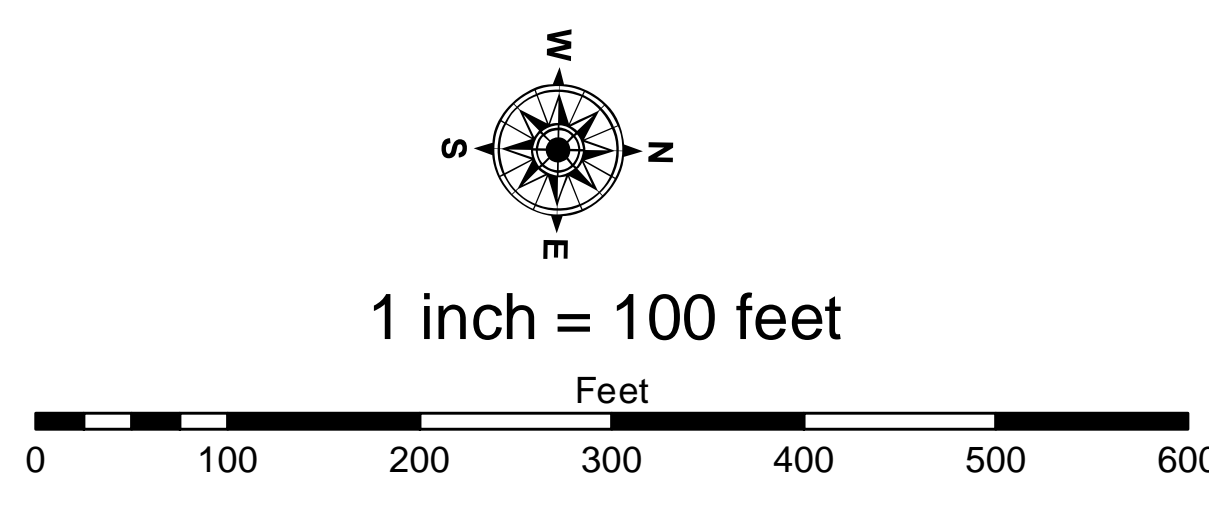


LEGEND

- 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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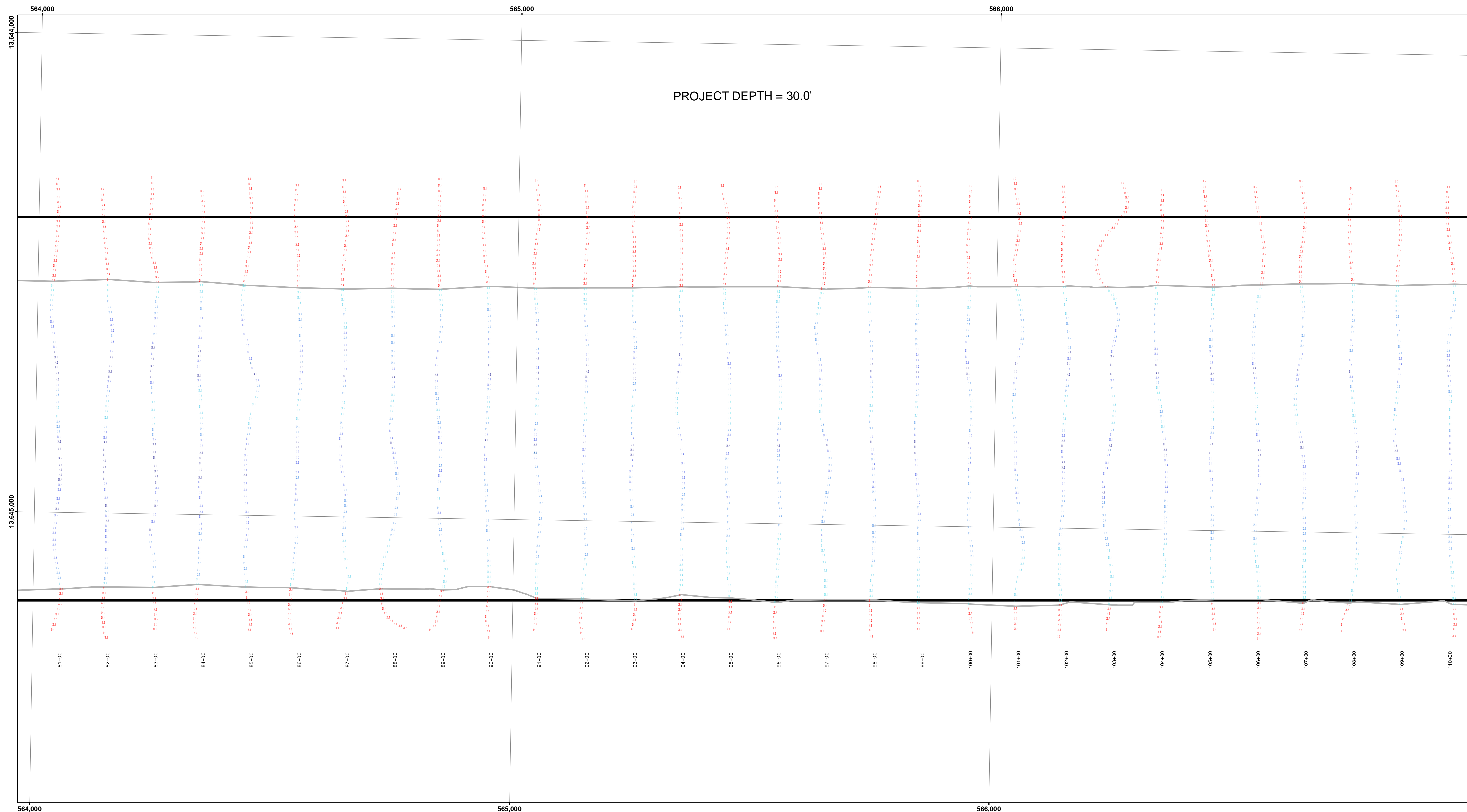
FORT GRATIOT, MI (#9014098)
LAKEPORT, MI (#9075002)

POSITIONING: APPLANIX POS-MV4 W/ VRS/RTK OR MARINESTAR GNSS.
MOTION COMPENSATION: APPLANIX POS-MV4
SONAR: R2SONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
SOFTWARE: HYPACK

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS
ALL COORDINATES ARE IN U.S. SURVEY FEET.

LAKE HURON, MI
Point Edwards Range
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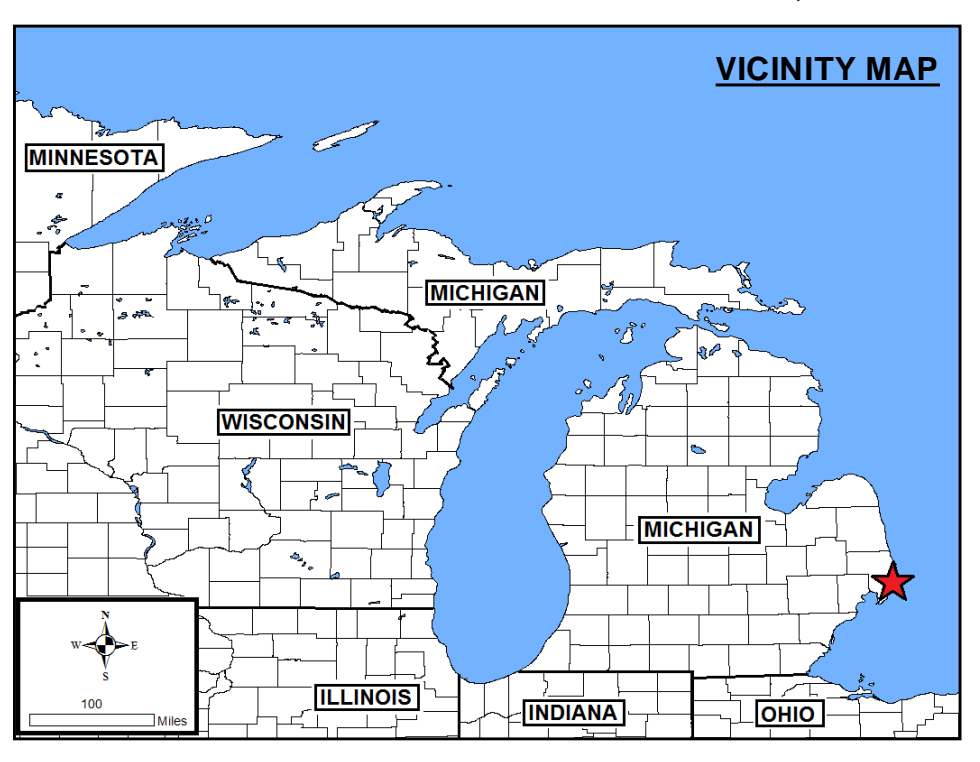
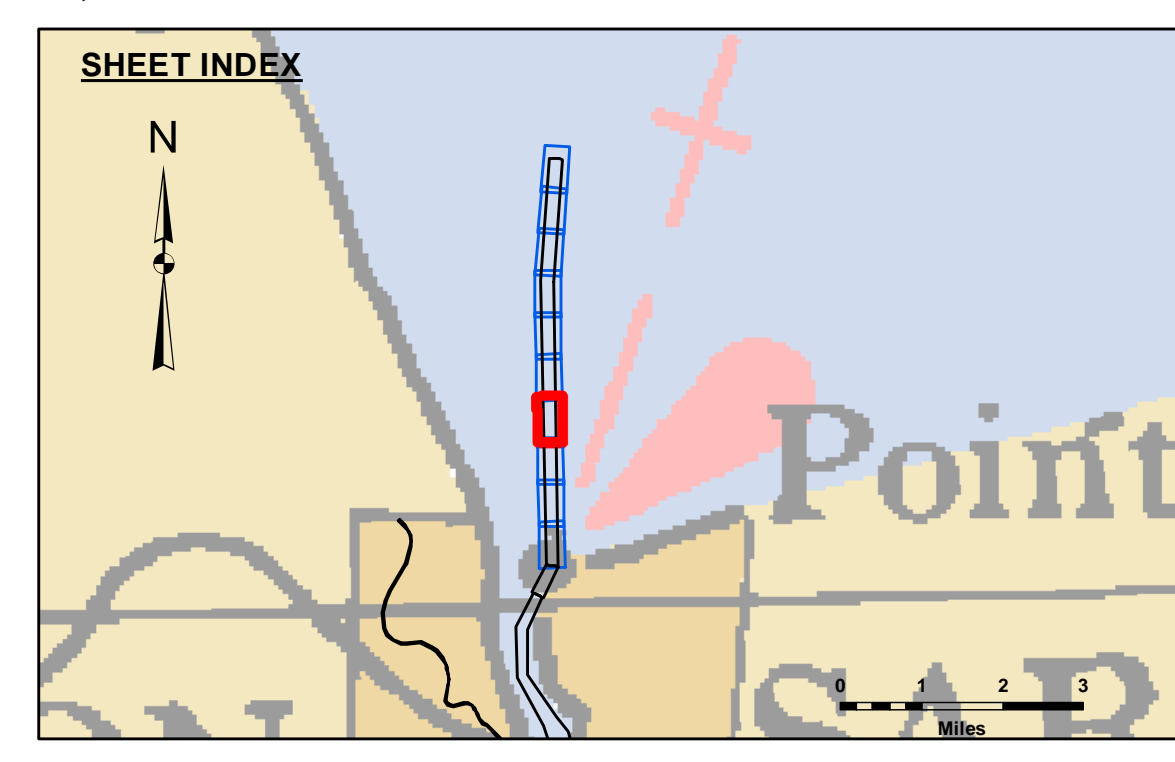
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Submitted:	Surveyed By:
Recommended:	Plotted By:
Approved:	Checked By:

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

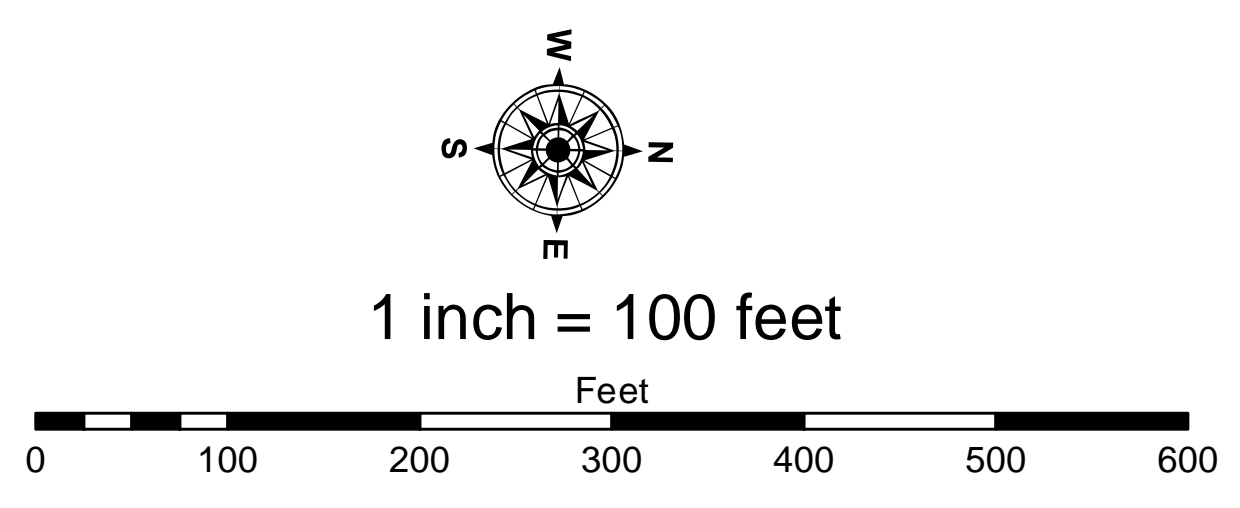
LAKE HURON, MI
Point Edwards Range
PE_01_RNG_20210519_CS
19 May 2021

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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'
 - PROJECT DEPTH +4'
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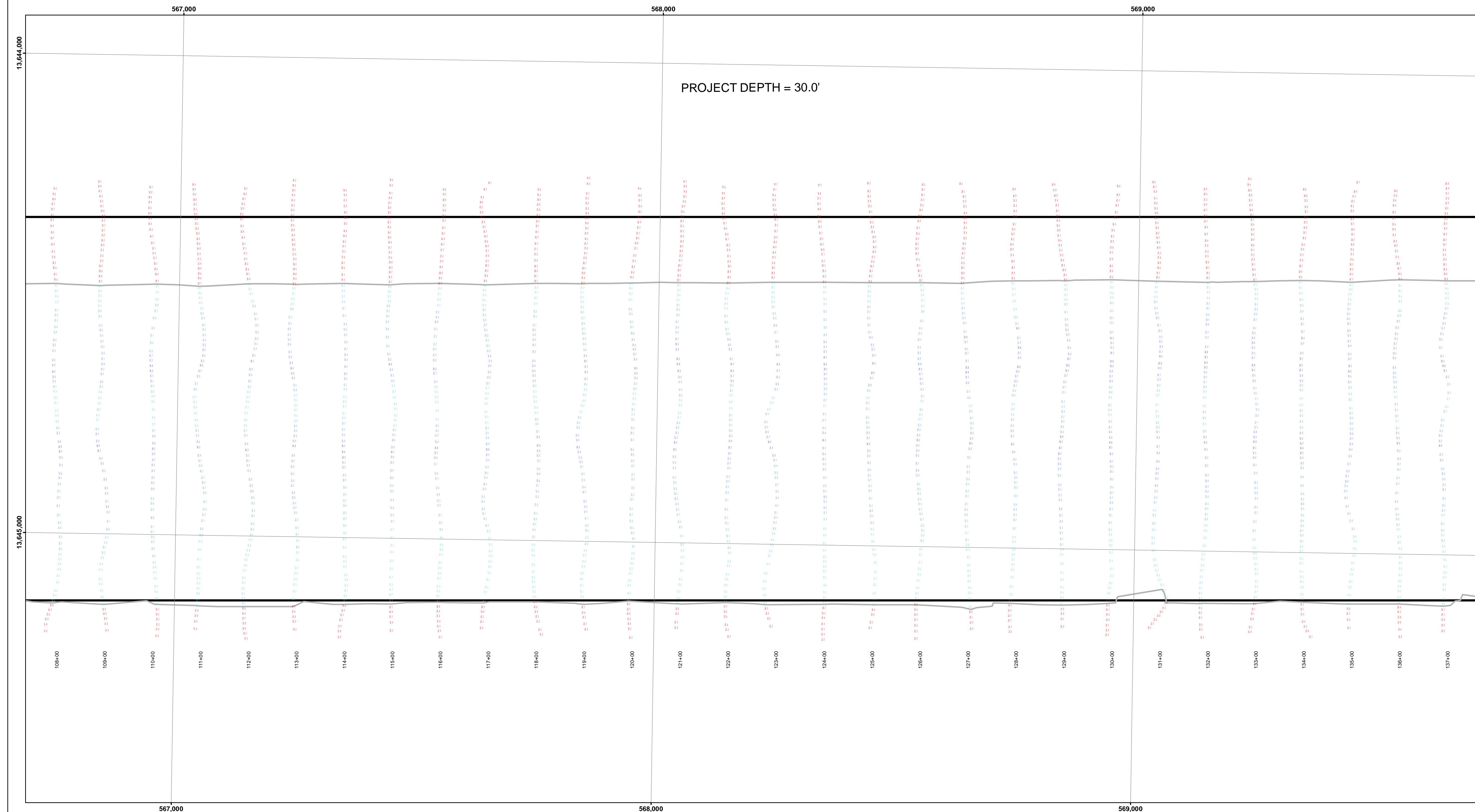
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FORT GRATIOT, MI (#901498)
LAKEPORT, MI (#9075002)

POSITIONING: APPLANIX POS-MV4 W/ VRS/RTK OR MARINESTAR GNSS.
MOTION COMPENSATION: APPLANIX POS-MV4
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SOFTWARE: HYPACK

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U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

Submitted: _____

Recommended: Chief, Survey Section

Approved: Chief, Technical Services

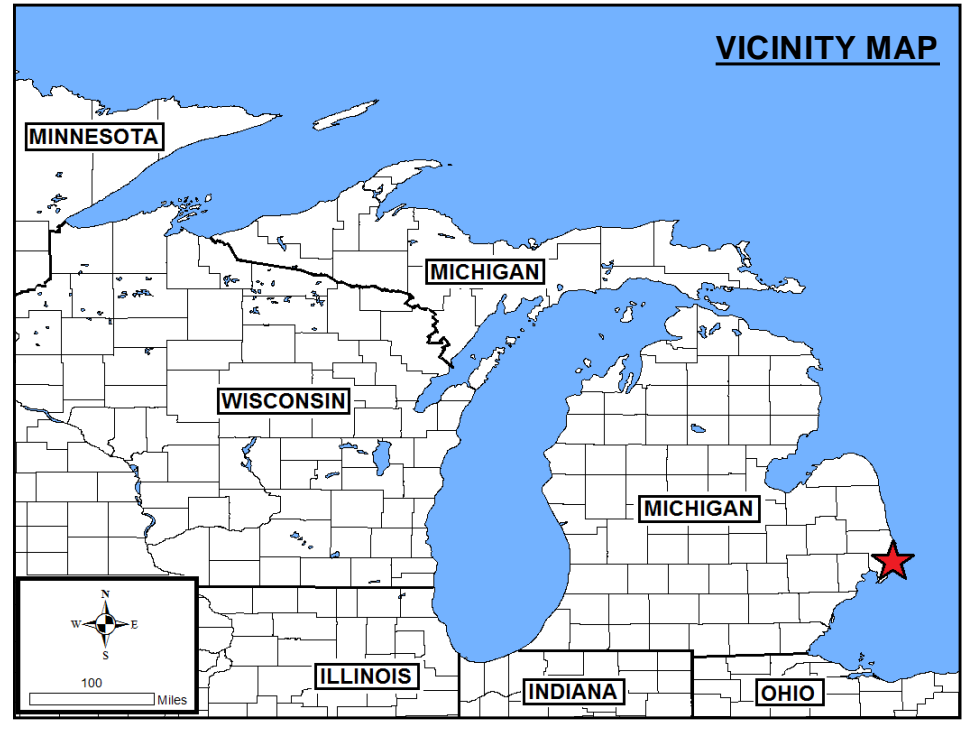
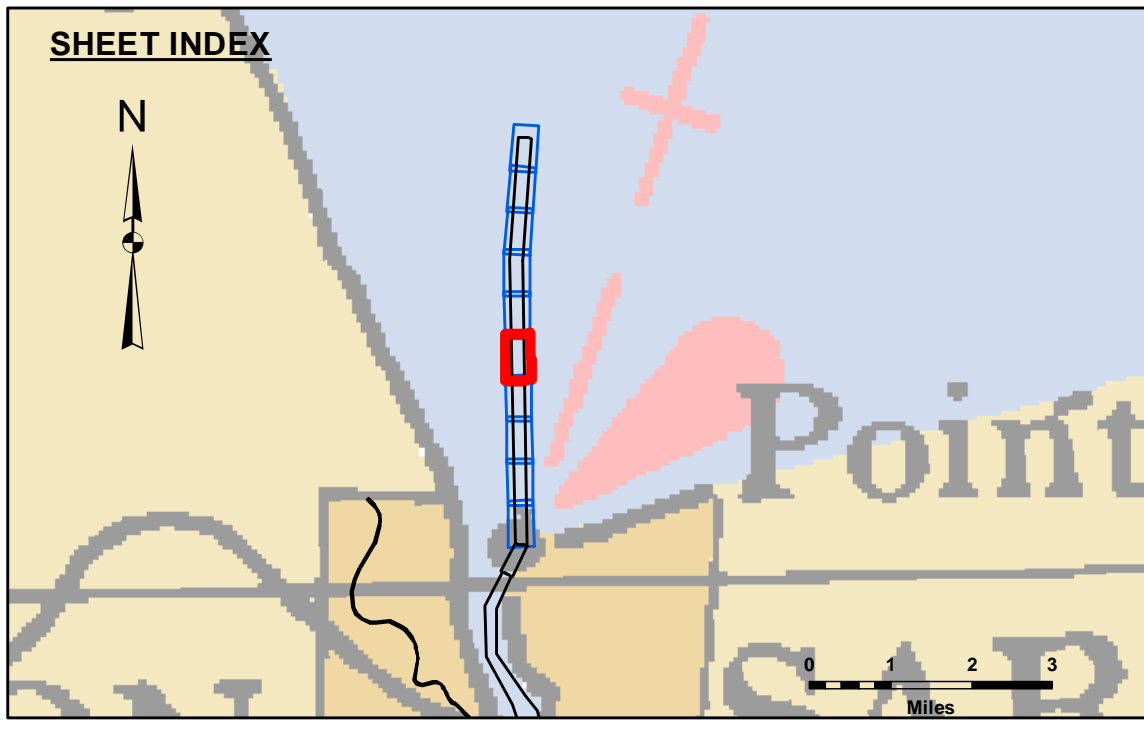
Surveyed By: _____

Plotted By: _____

Checked By: _____

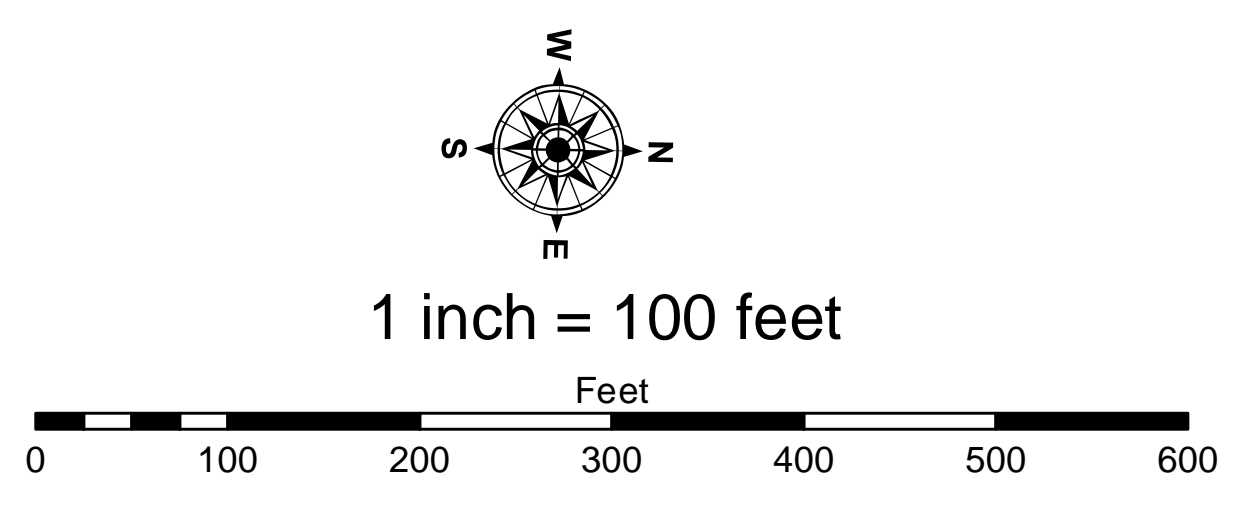
LAKE HURON, MI
Point Edwards Range
PE_01_RNG_20210519_CS
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- LEGEND**
- Cable Submarine
 - - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel Limits

- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
 - PROJECT DEPTH
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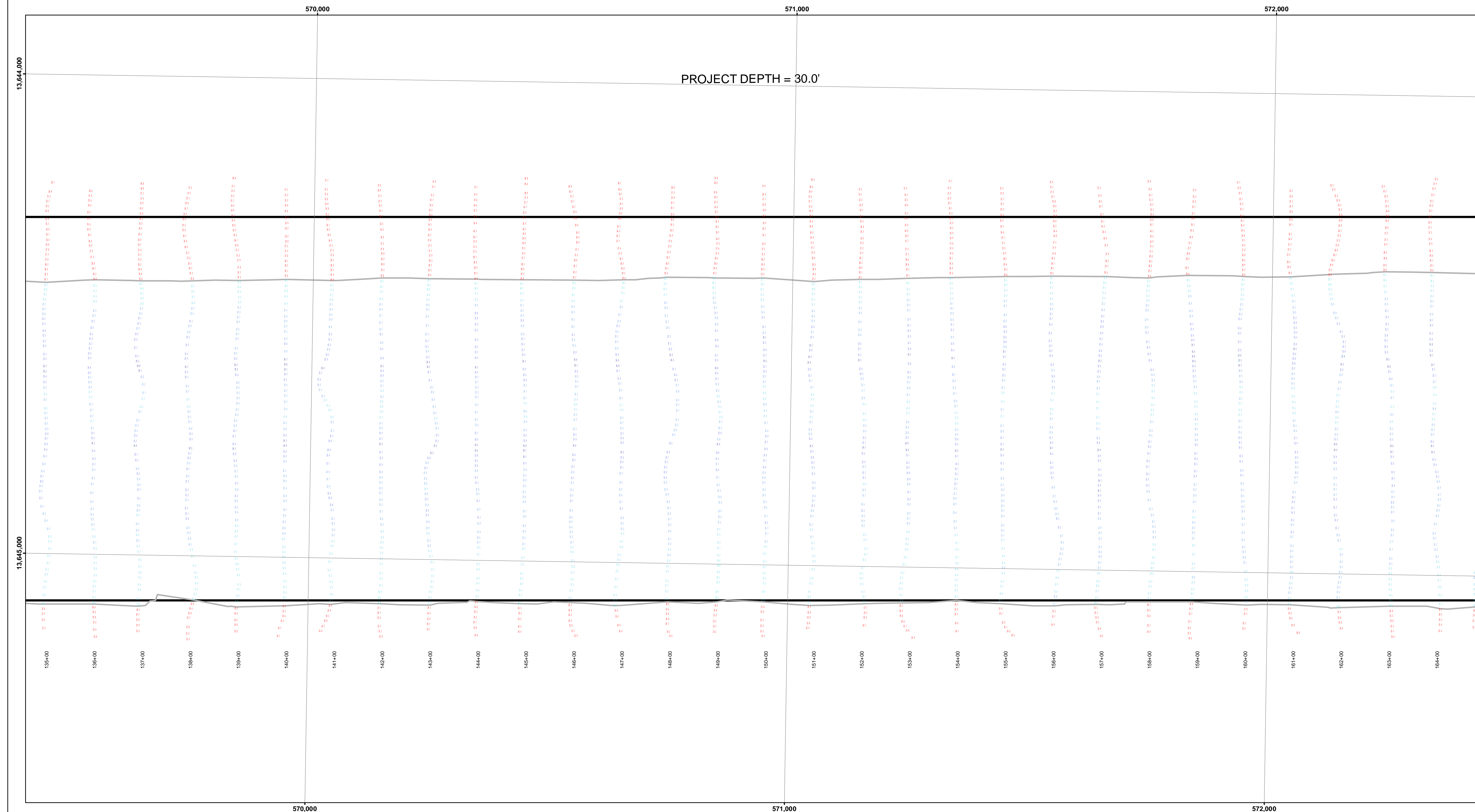
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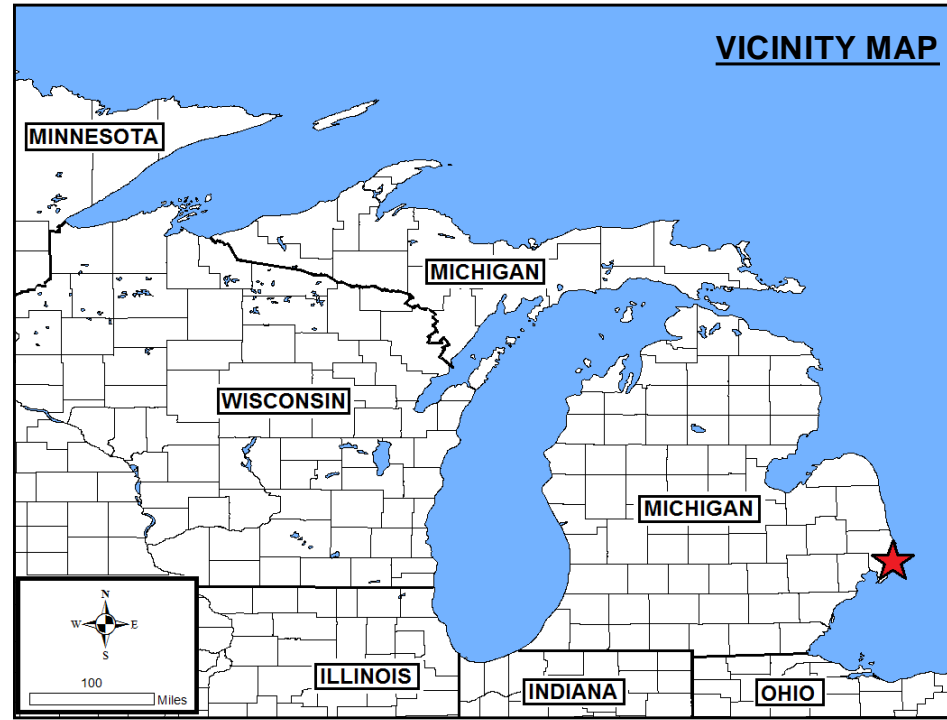
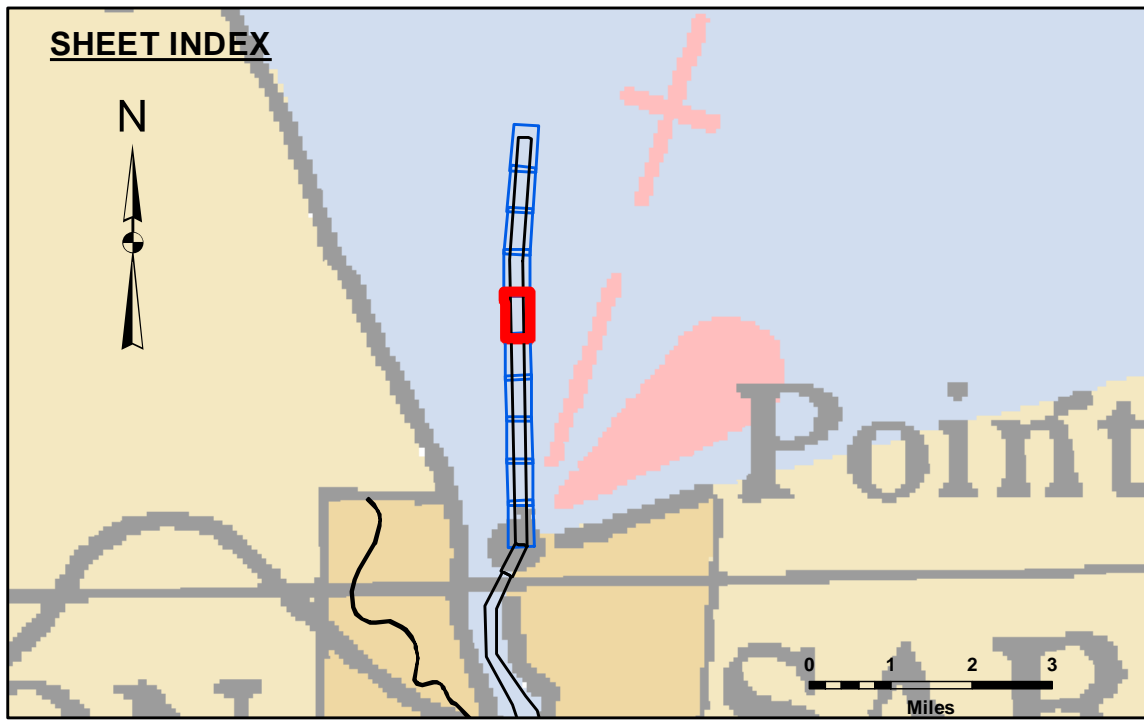


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Submitted By:	Surveyed By:
Recommended By: Chief, Survey Section	Plotted By:
Approved By: Chief, Technical Services	Checked By:

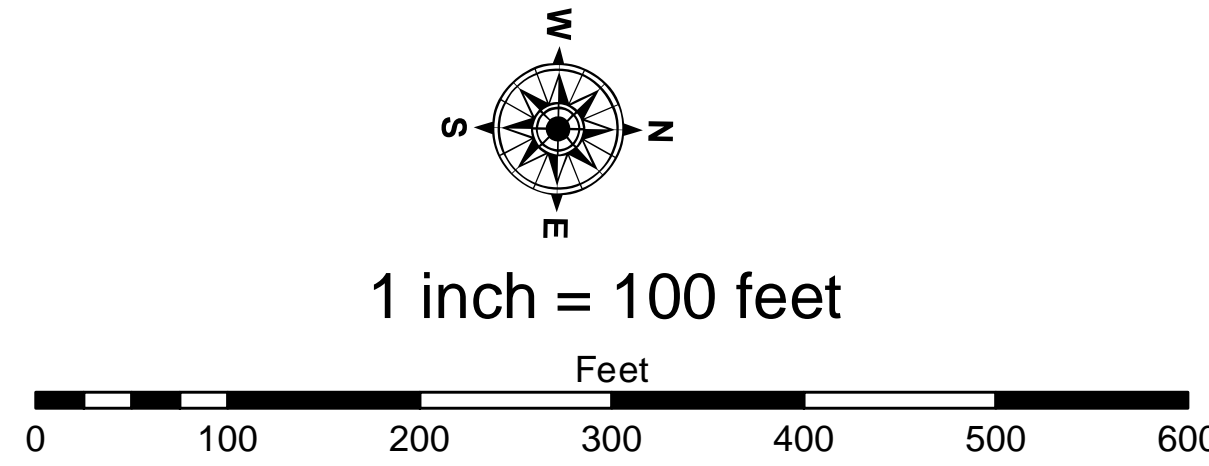
LAKE HURON, MI
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6 of 10



- LEGEND**
- Cable Submarine
 - - - Cable Overhead
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 - ▭ Channel Limits

- SOUNDING LEGEND**
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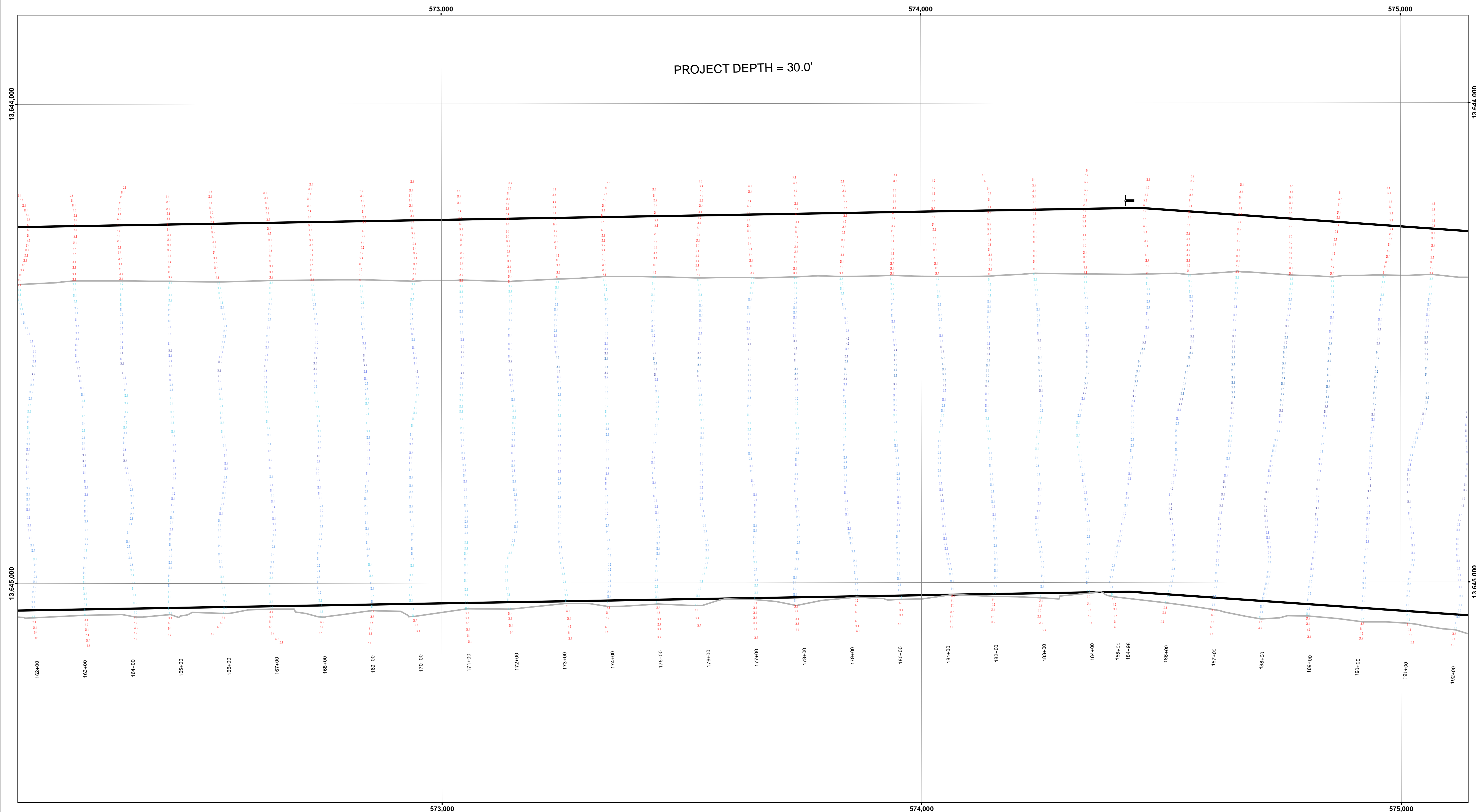
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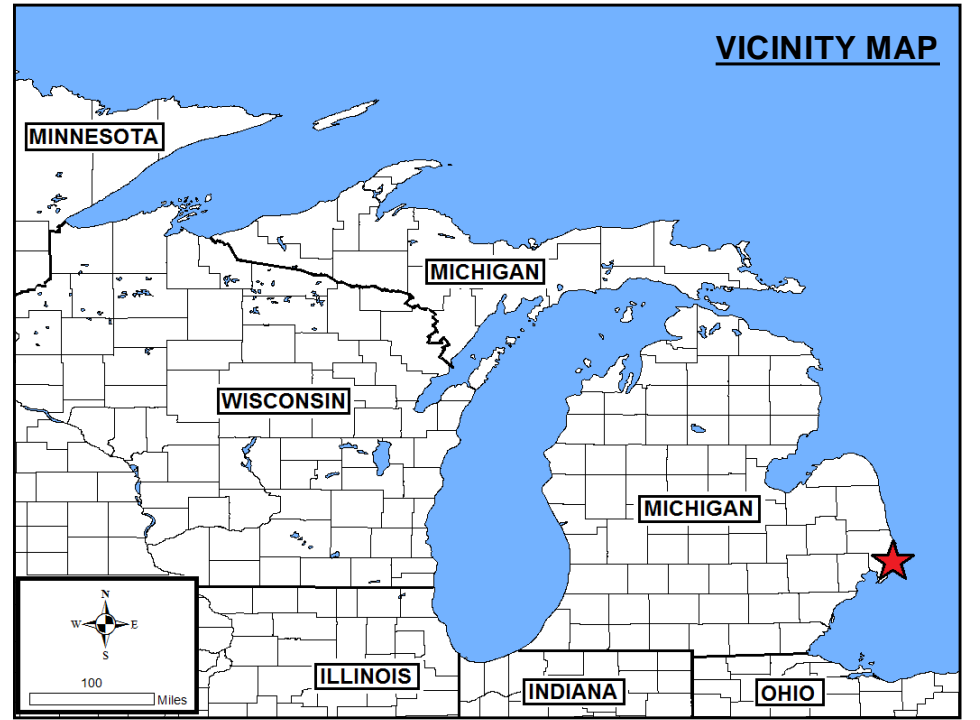
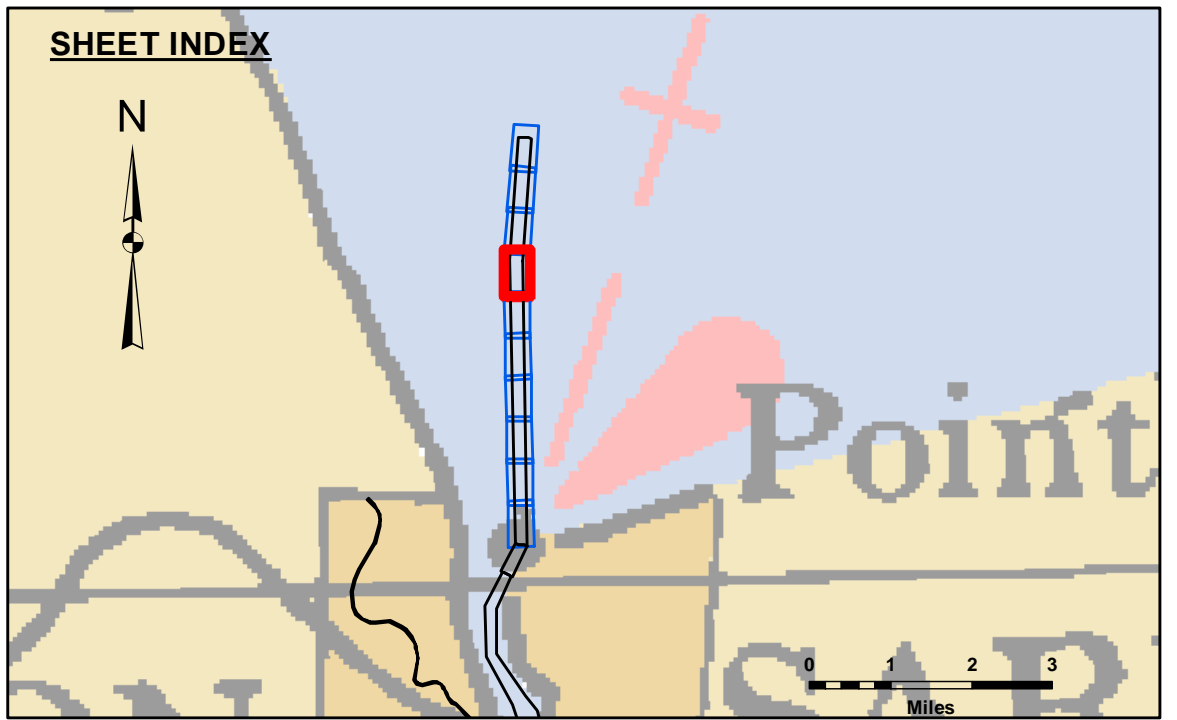


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U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

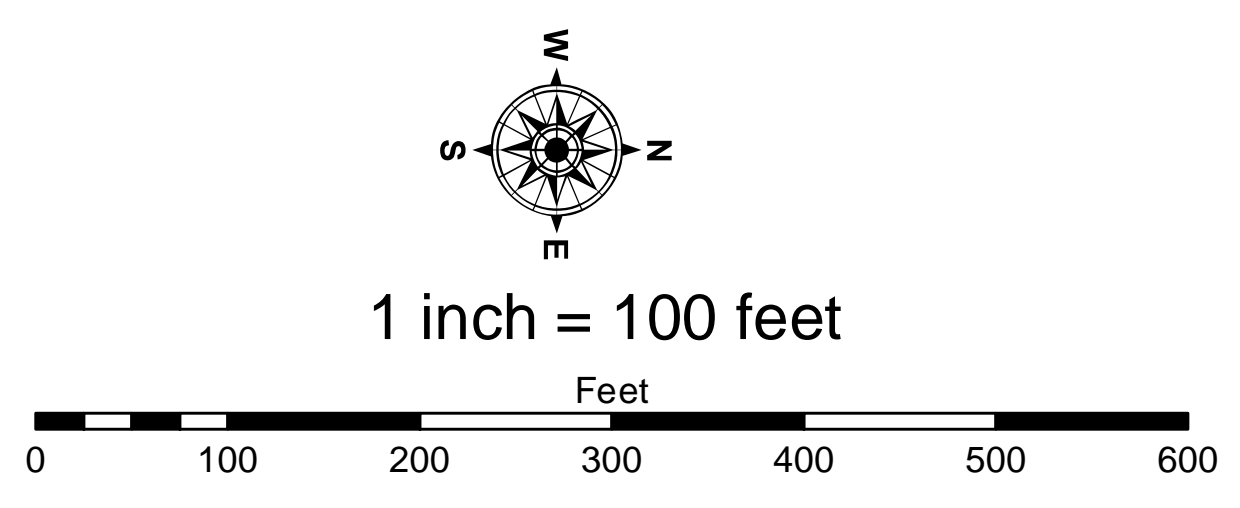


LEGEND

- Cable Submarine
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SOUNDING LEGEND

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SONAR: R2SONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
SOFTWARE: HYPACK

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS
ALL COORDINATES ARE IN U.S. SURVEY FEET.

LAKE HURON, MI
Point Edwards Range
PE_01_RNG_20210519_CS
19 May 2021

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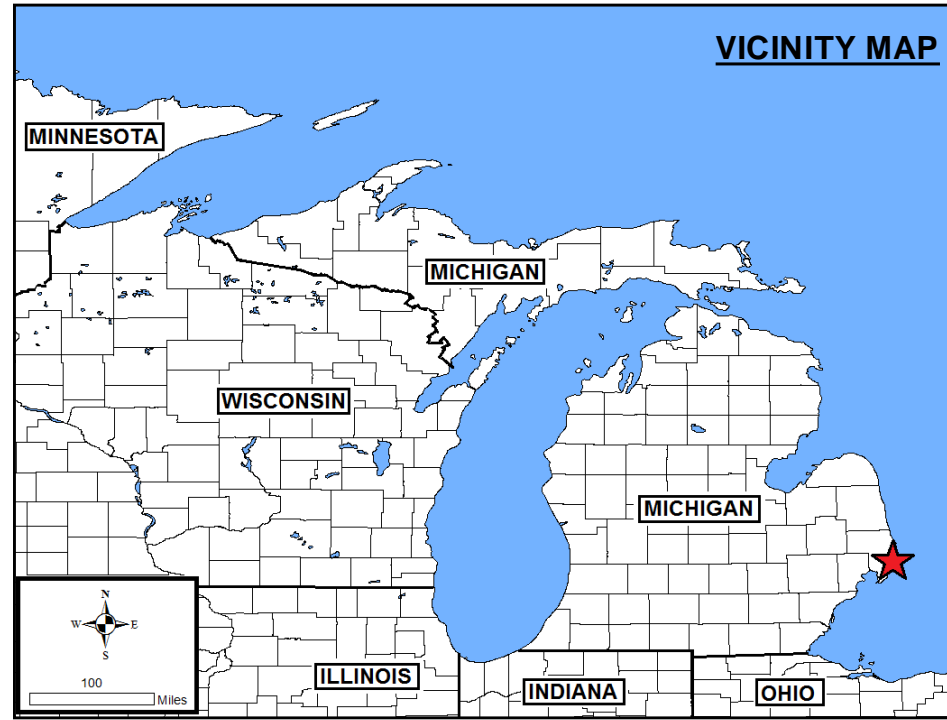
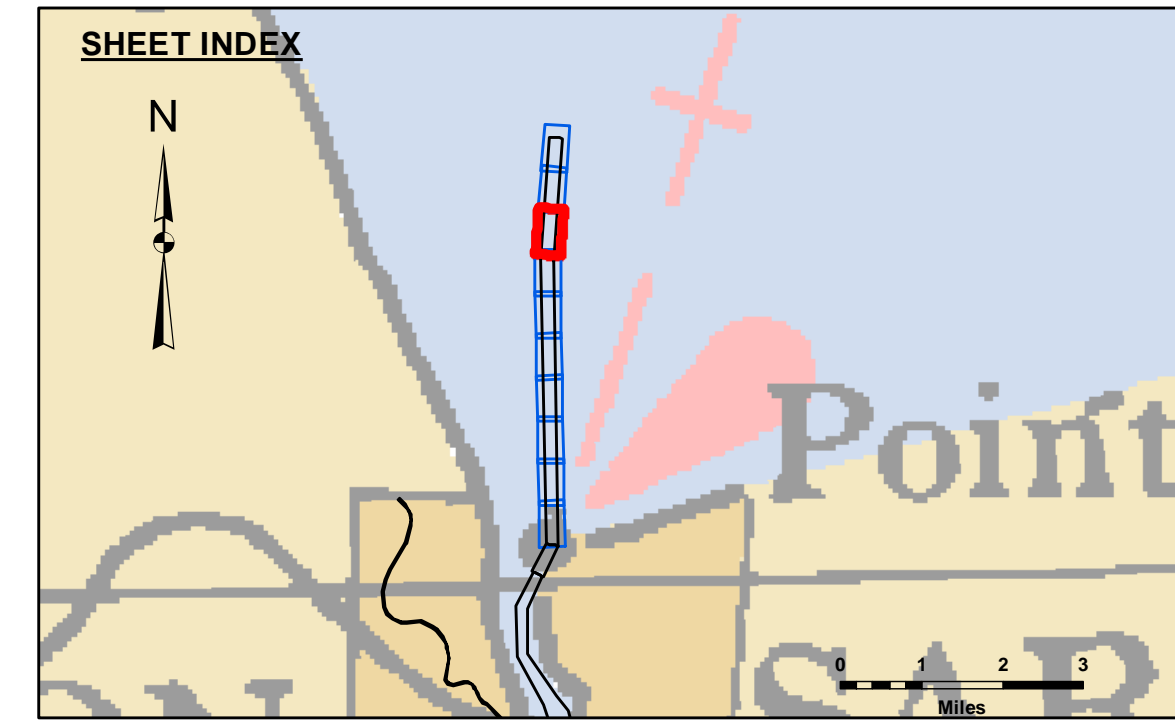
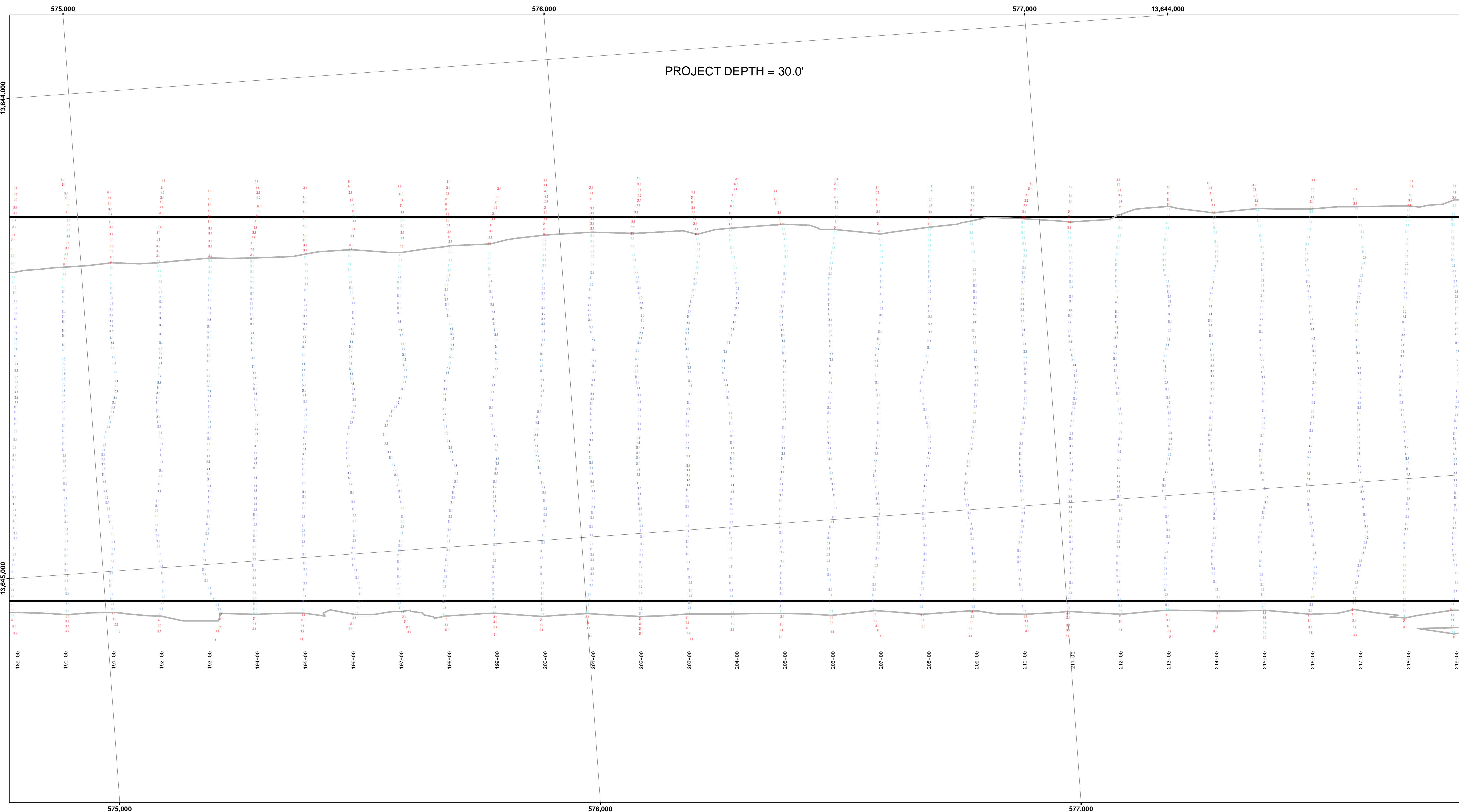
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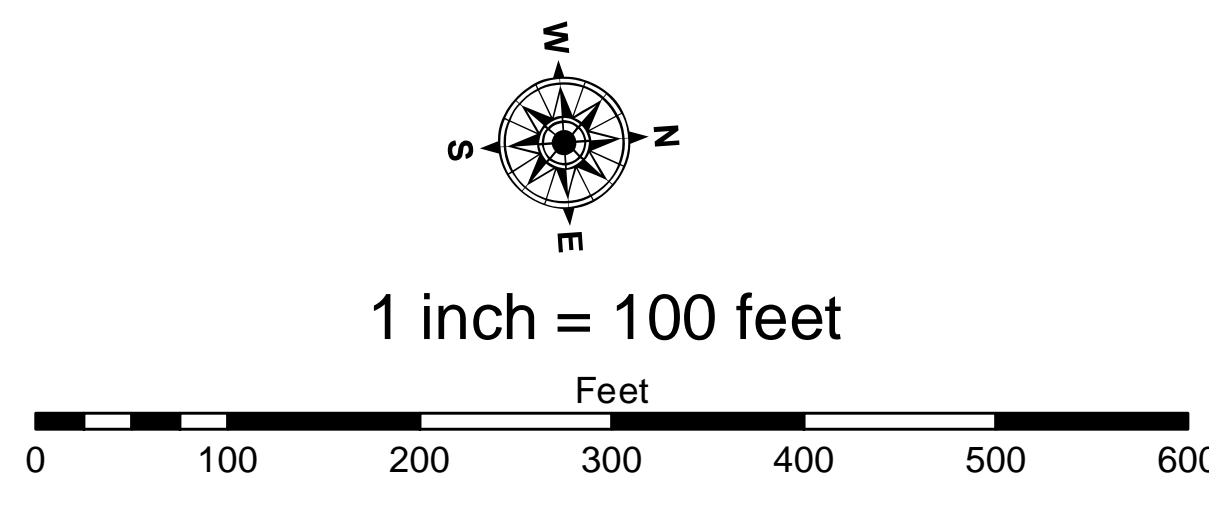
Submitted: _____
Recommended: Chief, Survey Section
Approved: _____
Surveyed By: _____
Plotted By: _____
Checked By: _____

Sheet Reference Number
8 of 10



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'



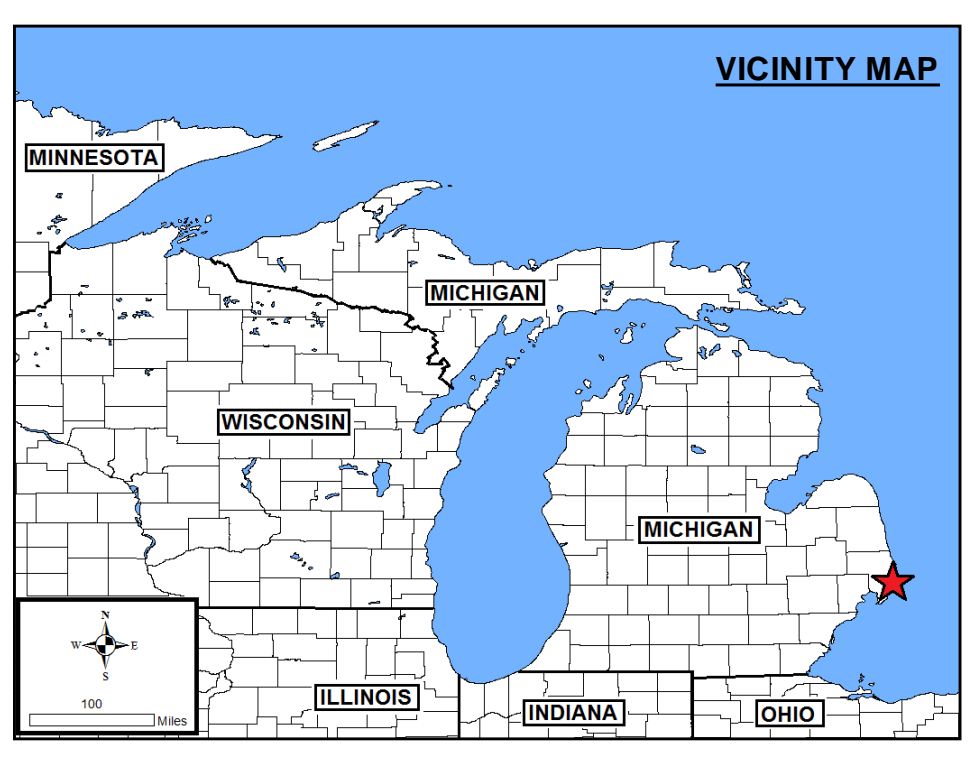
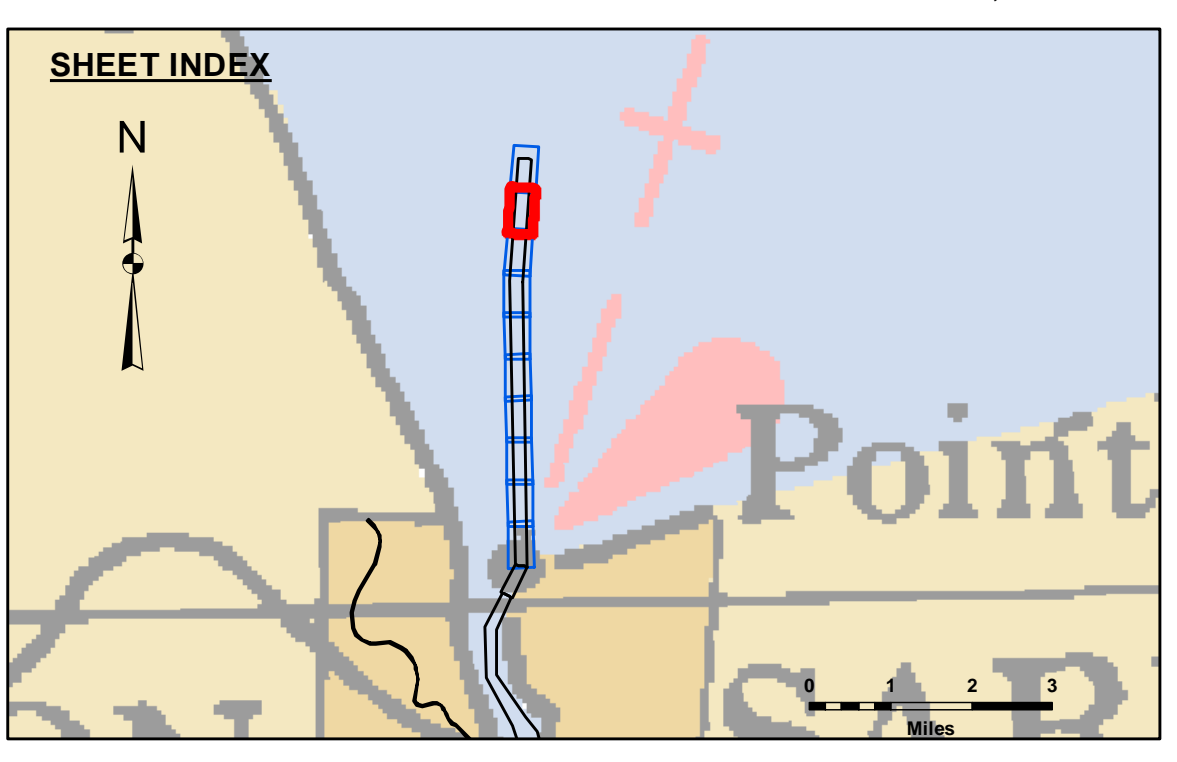
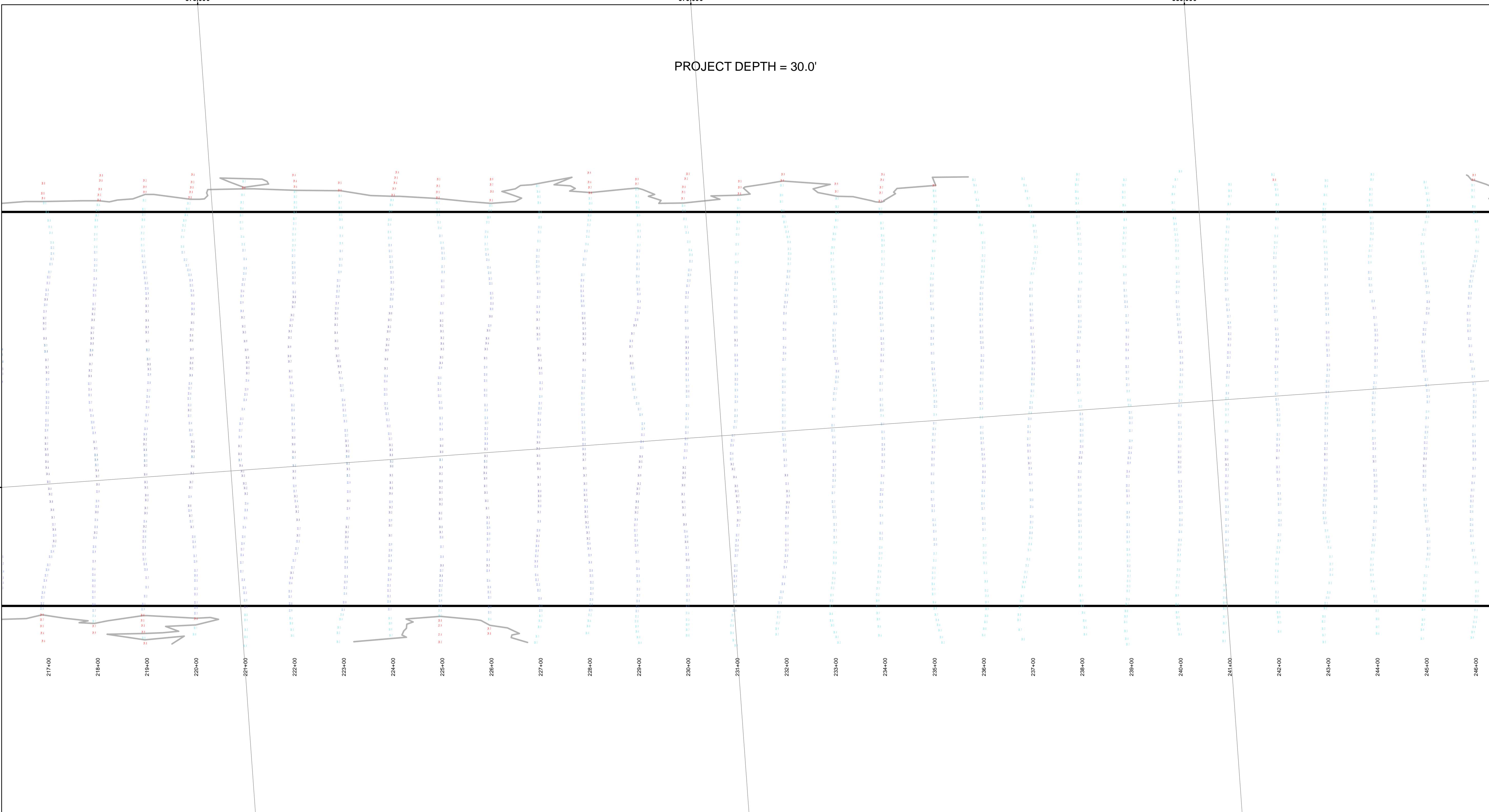
NOTES: THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THE TIME.
FOR MULTIBEAM SURVEYS: THE SOUNDINGS INDICATED HEREIN ARE GENERALIZED DEPTHS AND ARE NOT REPRESENTATIVE OF THE FULL DATASET. THE SOUNDINGS REPRESENT THE MINIMUM DEPTH FOUND WITHIN THE 10X10 FOOT AREA CENTERED ON THE TEXT. DERIVED FROM A 1X1 FOOT AVERAGE DATASET AT CELL CENTER. THIS MAP 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.
HORIZONTAL GRID DATUM BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983, U.S. SURVEY FOOT.
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TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) WATER LEVEL STATIONS:
FORT GRATIOT, MI (#9014098)
LAKEPORT, MI (#9075002)
POSITIONING: APPLANIX POS-MV4 W/ VRS/RTK OR MARINESTAR GNSS.
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SOFTWARE: HYPACK
2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS
ALL COORDINATES ARE IN U.S. SURVEY FEET.

578,000 579,000 580,000

PROJECT DEPTH = 30.0'

13,645,000

13,645,000



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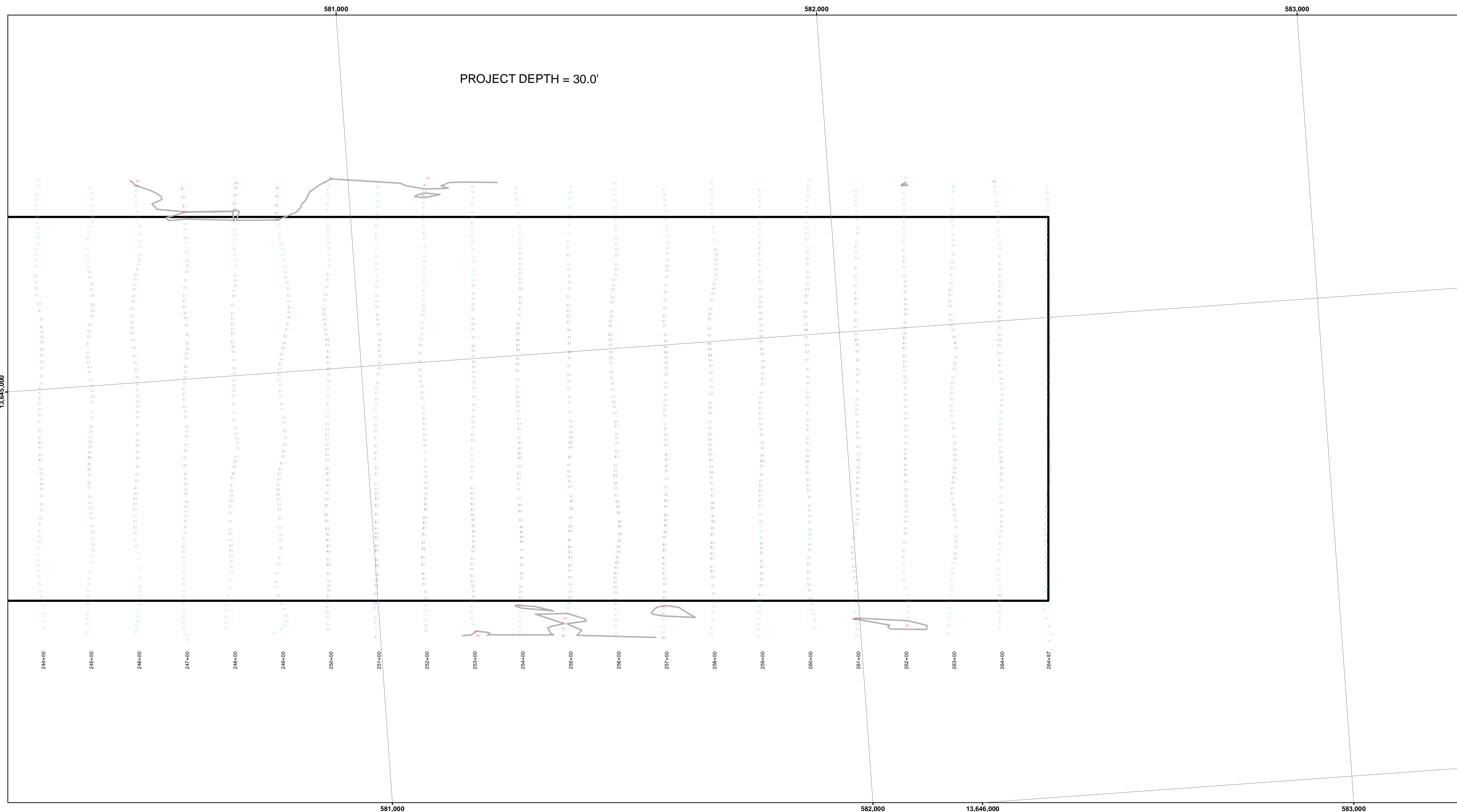
Submitted By:	Surveyed By:
Recommended By:	Plotted By:
Approved By:	Checked By:

Chief, Survey Section
Chief, Technical Services

LAKE HURON, MI
Point Edwards Range
PE_01_RNG_20210519_CS
19 May 2021

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Revision Number:
4.2-30210519-20

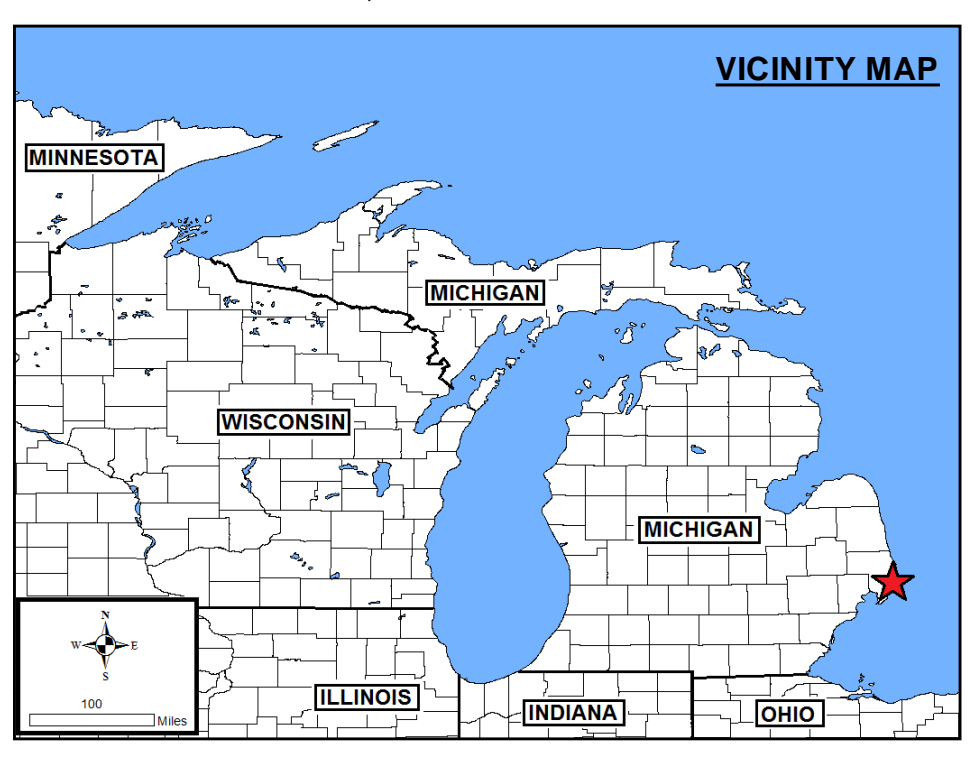
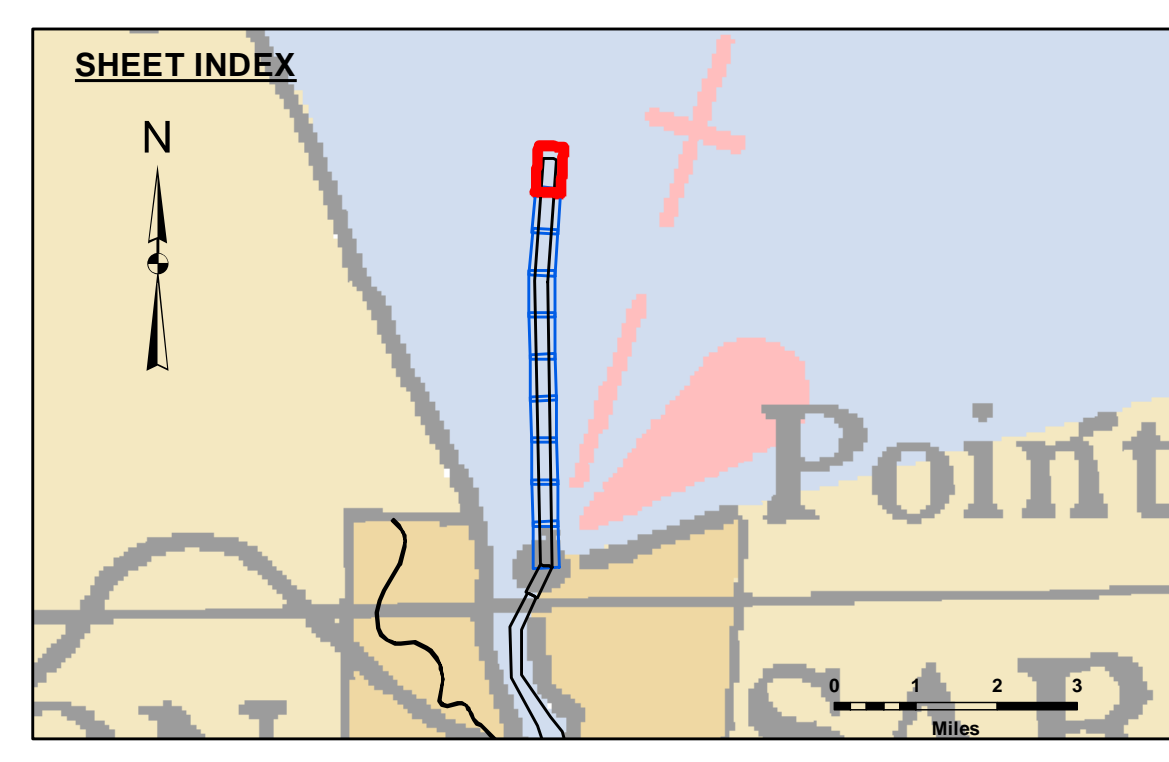


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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
Submitted:	Surveyed By:	
Recommended:	Plotted By:	
Approved:	Chief, Survey Section	
	Chief, Technical Services	

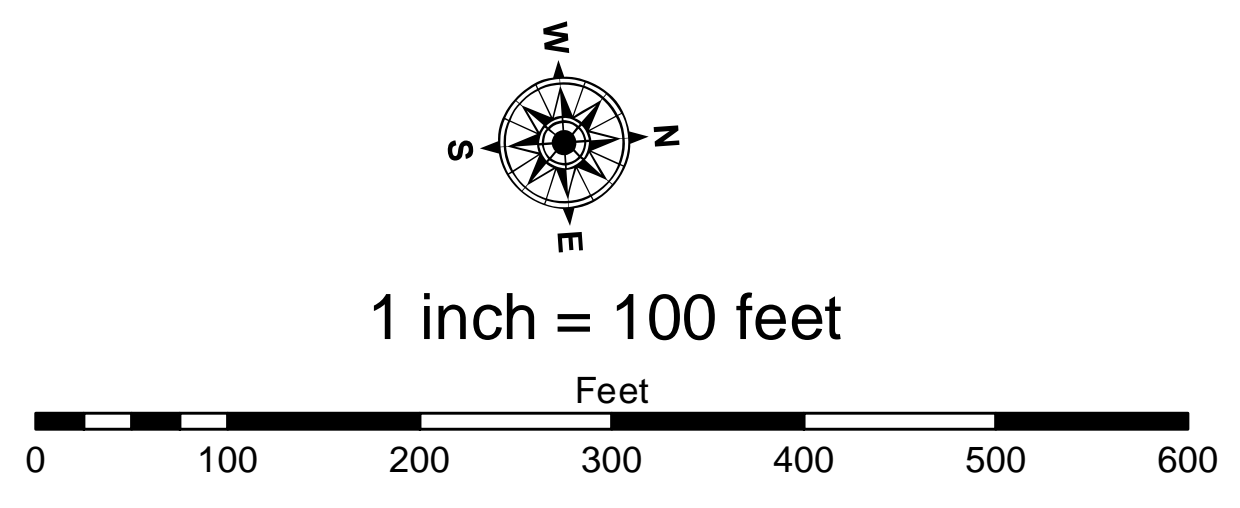
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- LEGEND**
- Cable Submarine
 - - - Cable Overhead
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- SOUNDING LEGEND**
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