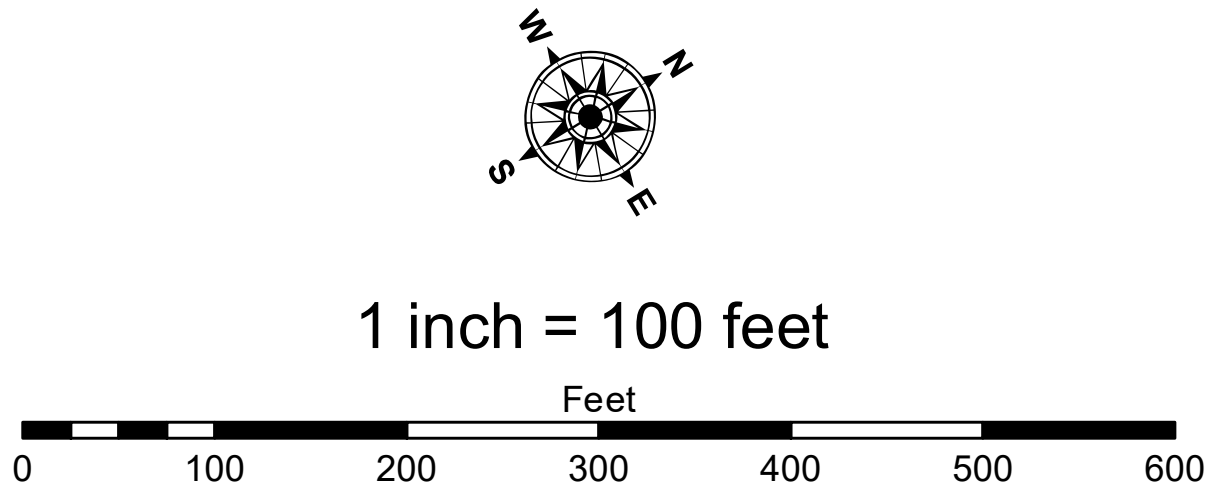


- LEGEND**
- Cable Submarine
 - - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel Limits

- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
 - PROJECT DEPTH
 - PROJECT DEPTH +1'
 - PROJECT DEPTH +2'
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 - 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.

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

ALL SOUNDINGS ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM OF 1985 (IGLD85). L.W.D. AS INDICATED. PROJECT DEPTHS FOR THIS RIVER RANGE FROM 27.1' TO 30.0'

TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)
WATER LEVEL STATIONS:
ST CLAIR SHORES (#9034052)
ALGONAC, MI (#9014070)
ST CLAIR POLICE, MI (#9014080)
BLACK RIVER, MI (#9014090)
DRY DOCK, MI (#9014087)
DUNN PAPER, MI (#9014096)

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



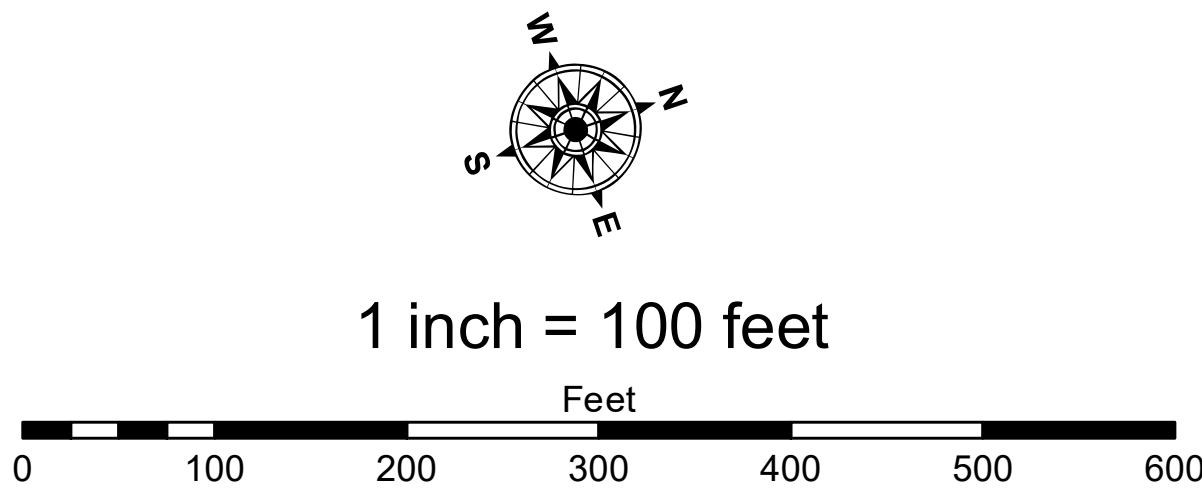
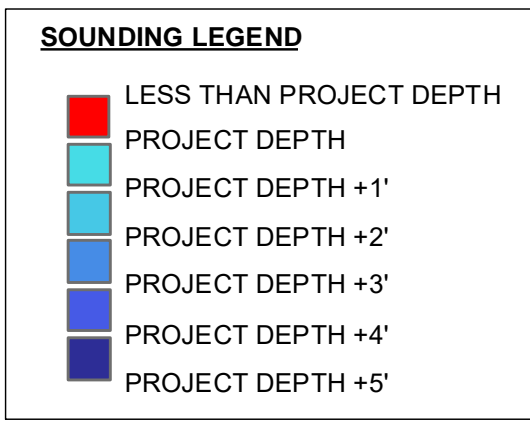
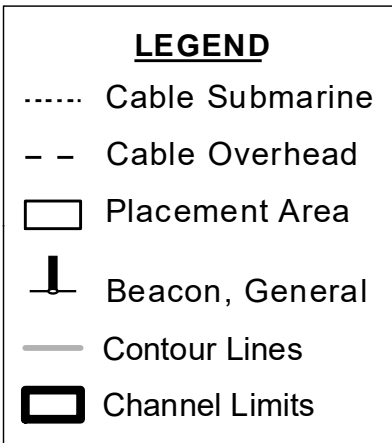
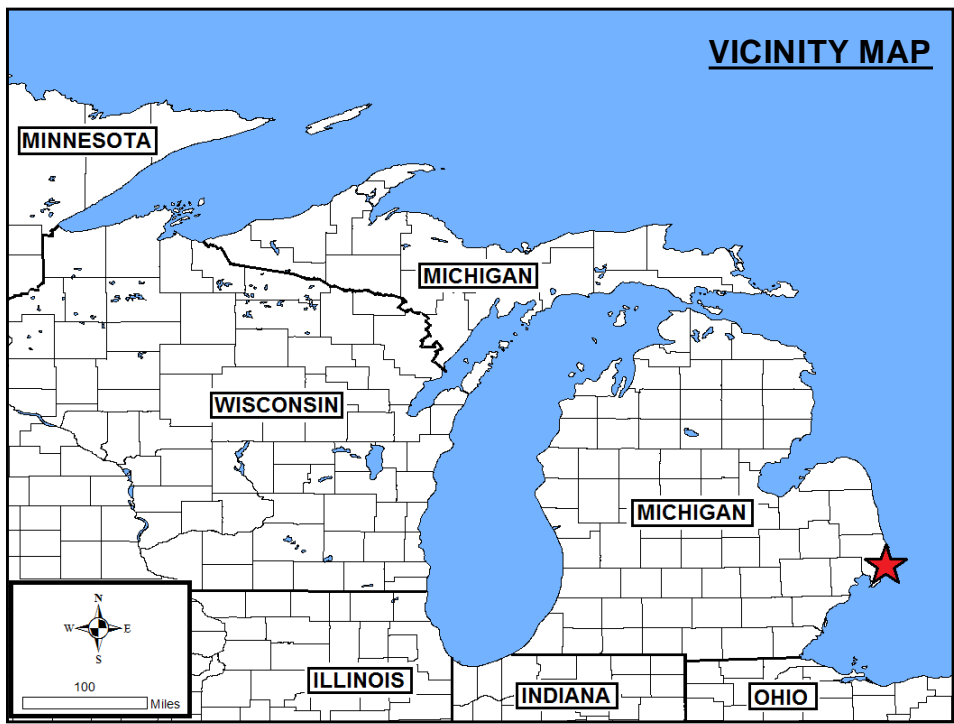
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	Submitted:	Surveyed By:
	Recommended by: Chief, Survey Section	Plotted By:
	Approved:	Checked By:

St. Clair River, MI
St. Clair River
CR_01_SCR_20200814_CS
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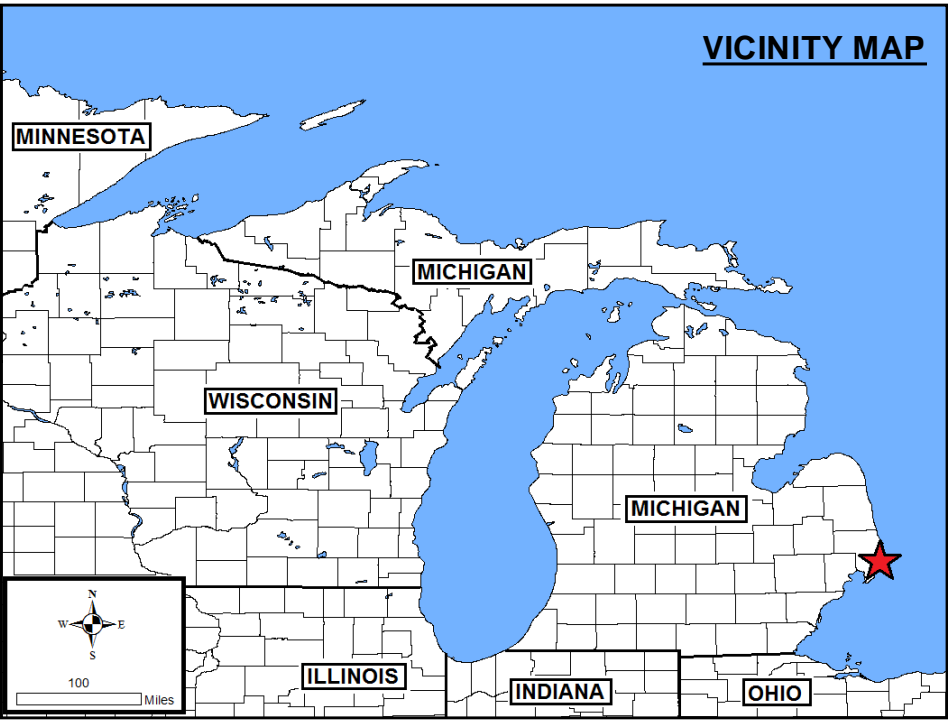
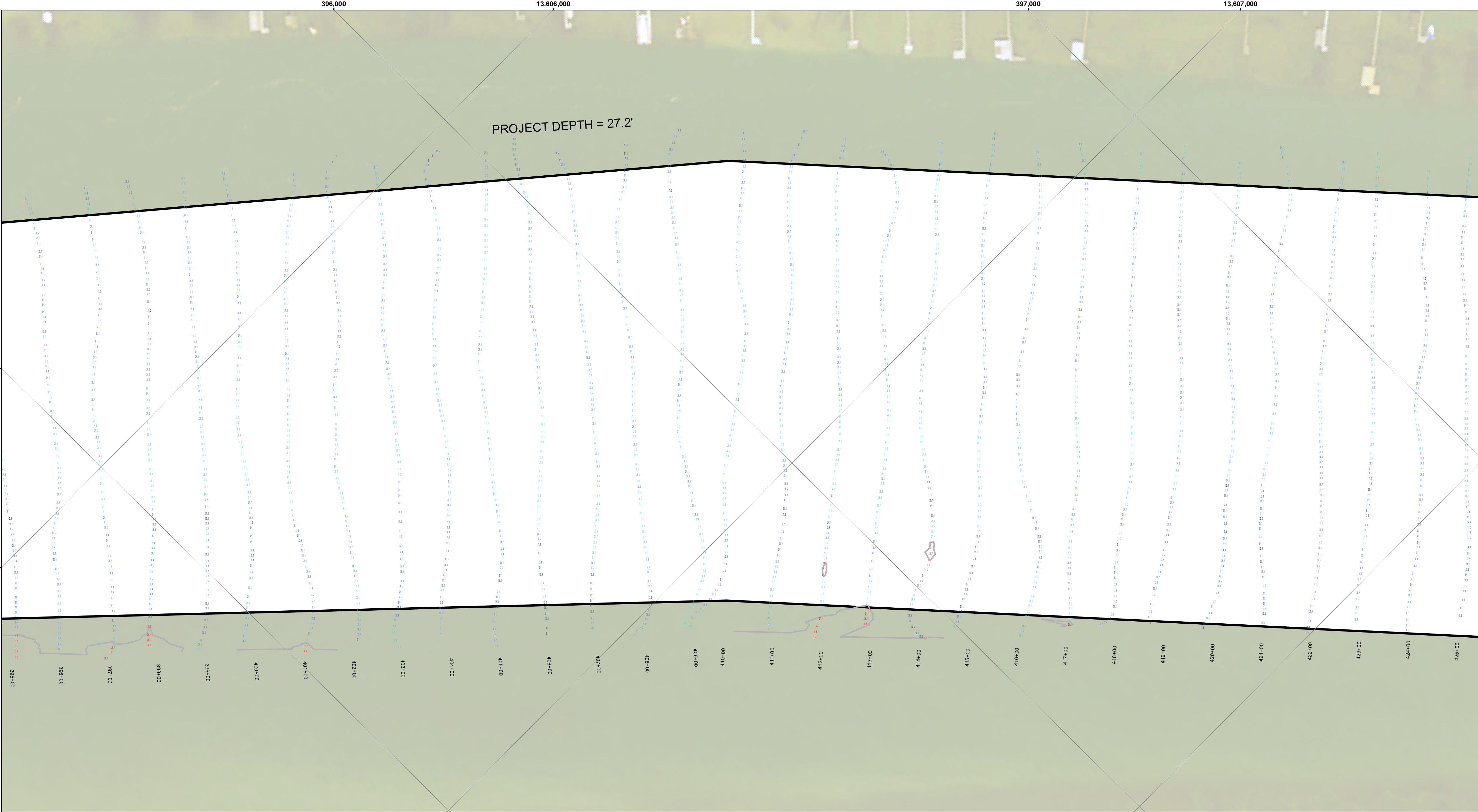


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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	Submitted By:	Surveyed By:
	Recommended By:	Plotted By:
	Chief, Survey Section	
	Checked By:	

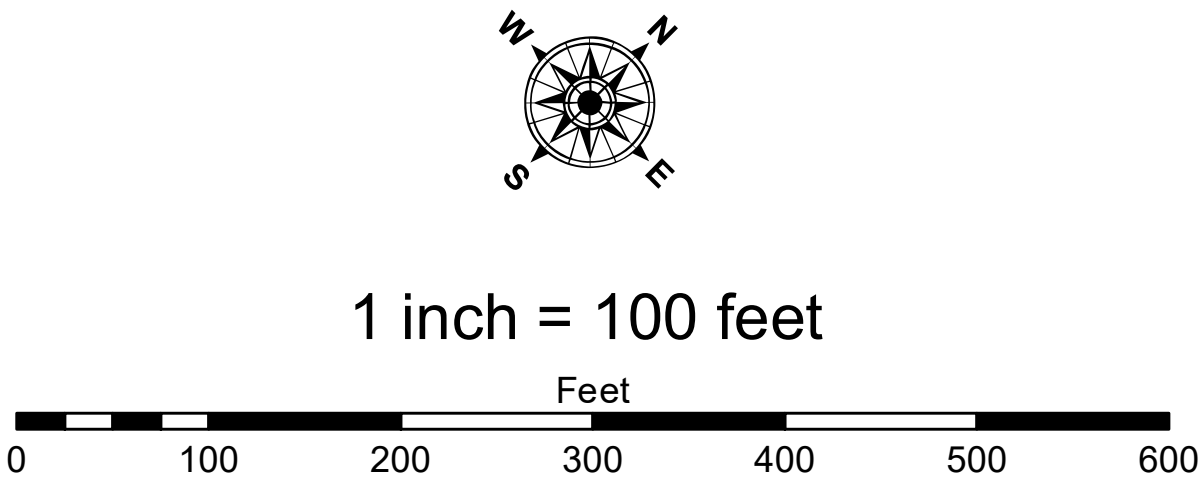
St. Clair River, MI
St Clair River
CR_01_SCR_20200814_CS
14 August 2020

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Revision 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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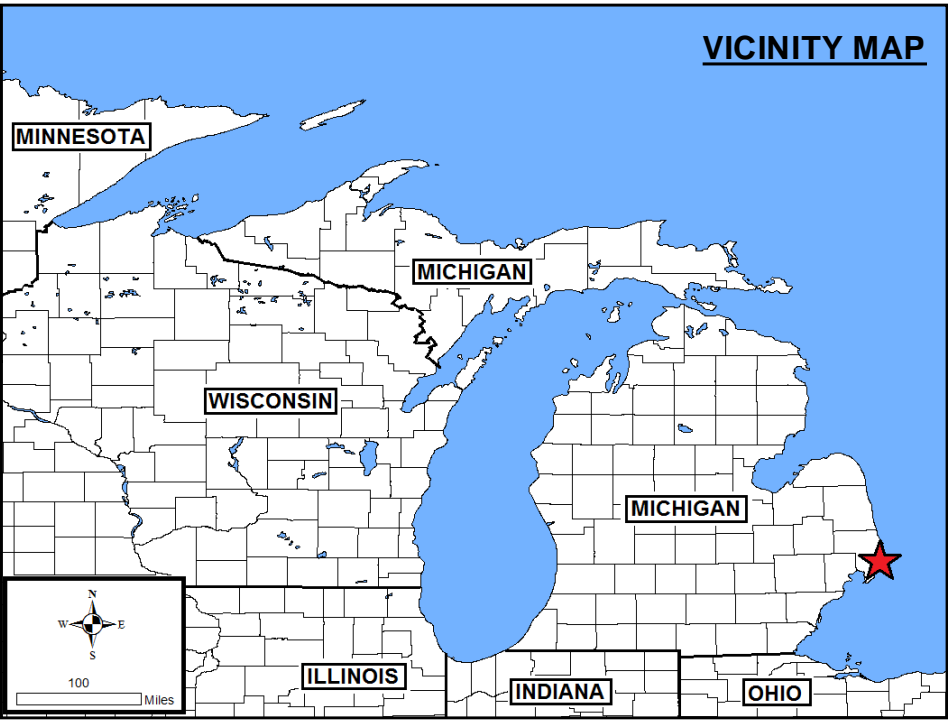
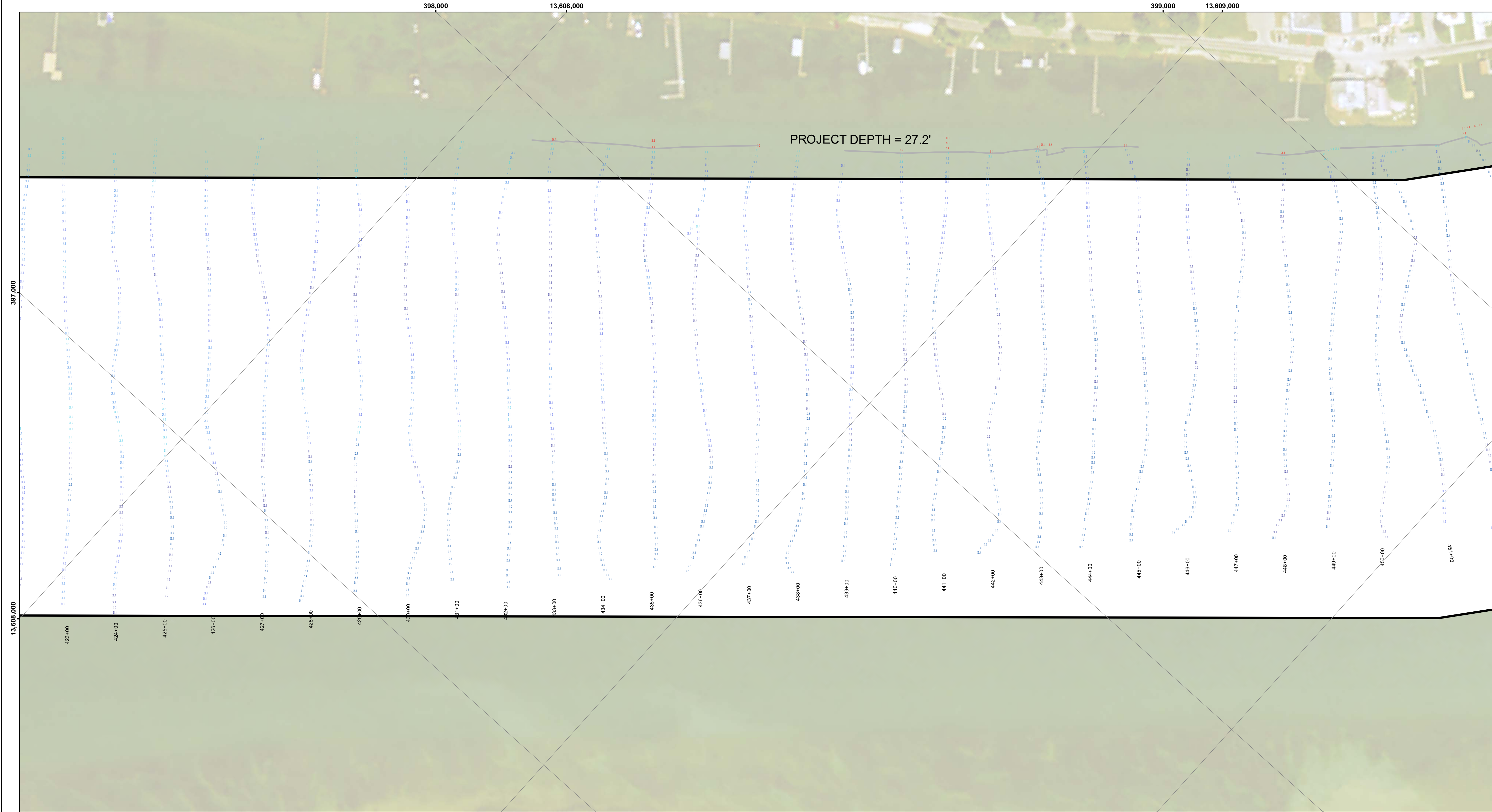
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Submitted:	Surveyed By:
	Plotted By:
	Checked By:
	Chief, Technical Services

St. Clair River, MI
St Clair River
CR_01_SCR_20200814_CS
14 August 2020

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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'

1 inch = 100 feet

Feet

0 100 200 300 400 500 600

North arrow pointing up.

NOTES:

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MOTION COMPENSATION: APPLANIX POS-MV4
SONAR: R2SONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
SOFTWARE: HYPACK

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WATER LEVEL STATIONS:
ST CLAIR SHORES (#9034052)
ALGONAC, MI (#9014070)
ST CLAIR POLICE, MI (#9014080)
BLACK RIVER, MI (#9014090)
DRY DOCK, MI (#9014087)
DUNN PAPER, MI (#9014096)

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


US Army Corps of Engineers
District: CELRE

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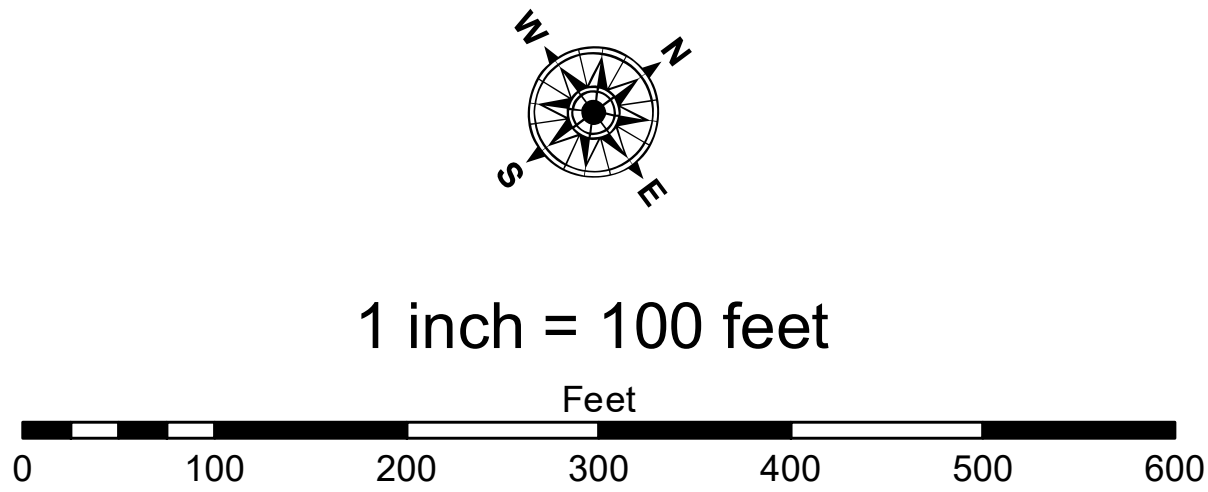
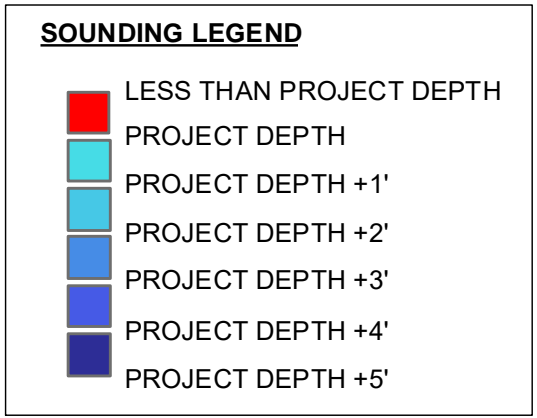
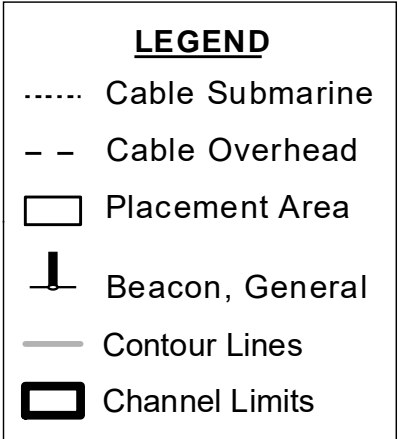
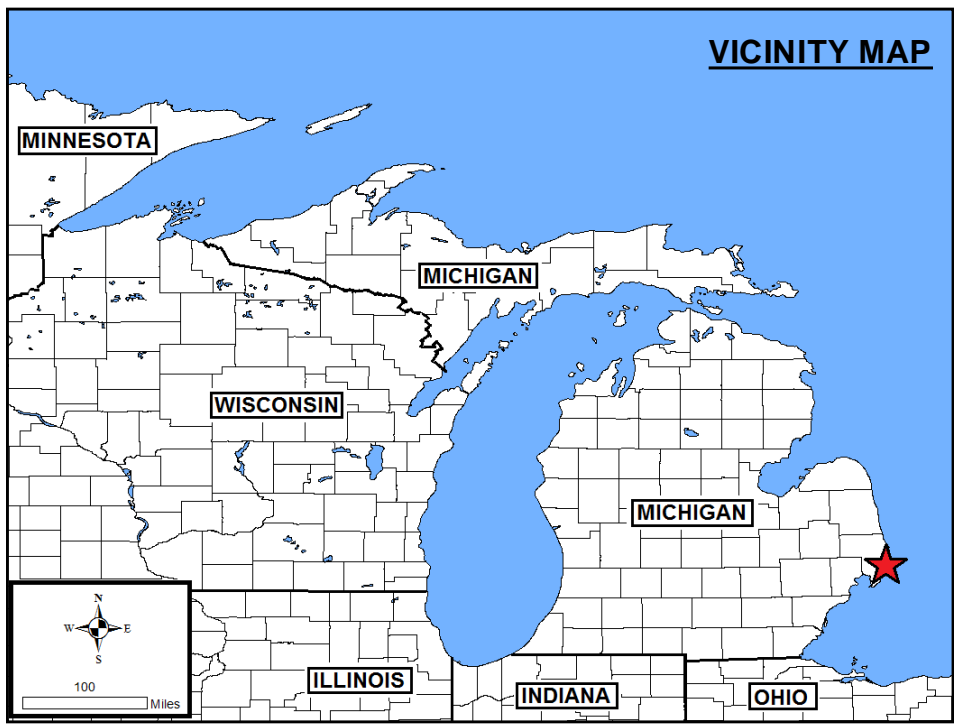
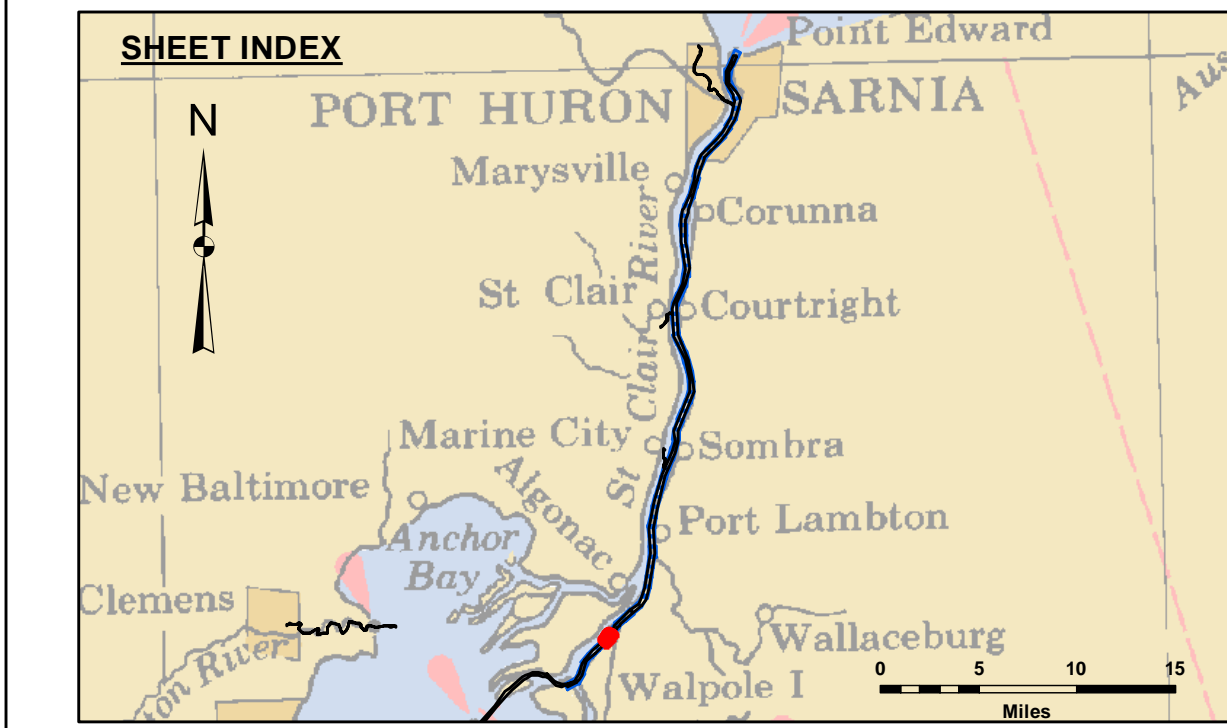
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Submitted By: _____	U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	
	Surveyed By: _____	
	Plotted By: _____	
Recommended By: Chief, Survey Section		
Approved By: Chief, Technical Services		

St. Clair River, MI
St Clair River
CR_01_SCR_20200814_CS
14 August 2020

Sheet Reference Number
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Revision Number:
4.1-20191105



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.

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MOTION COMPENSATION: APPLANIX POS-MV4
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SOFTWARE: HYPACK

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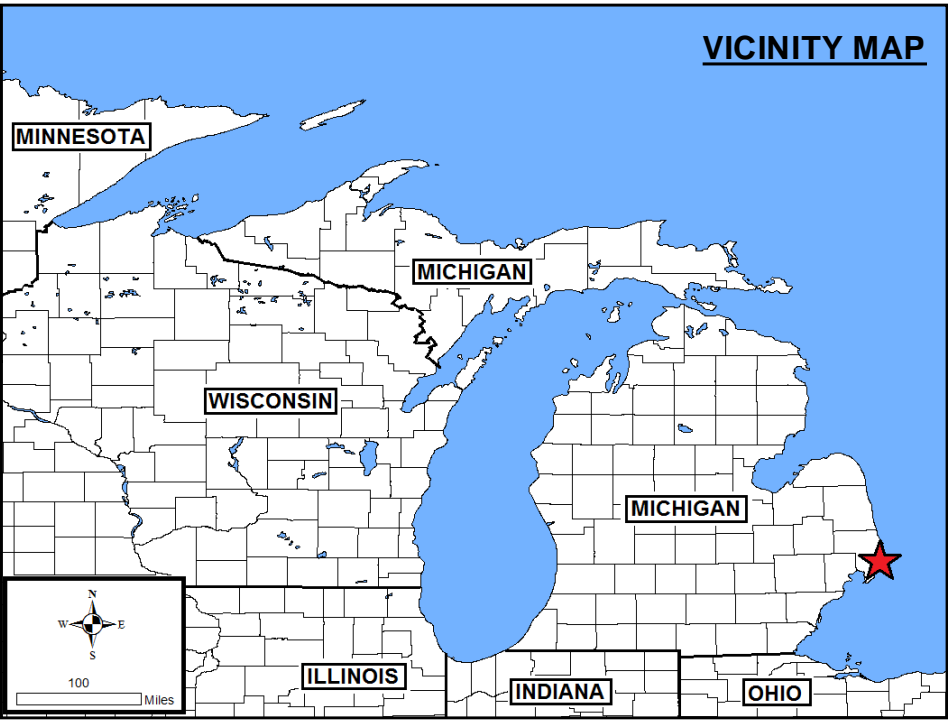
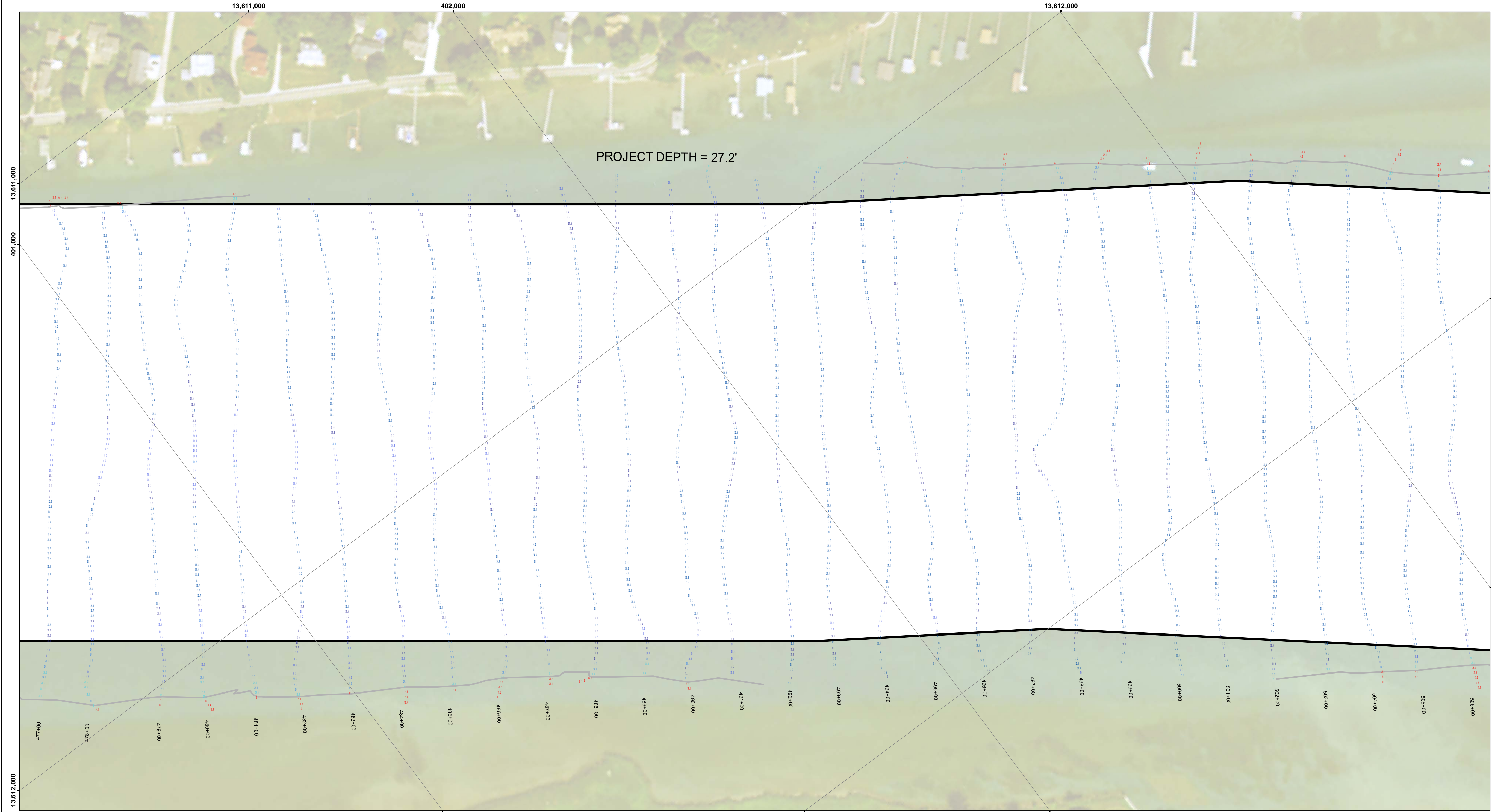
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Submitted:	Surveyed By:
Recommended:	Plotted By:
Approved:	Checked By:

St. Clair River, MI
St. Clair River
CR_01_SCR_20200814_CS
14 August 2020

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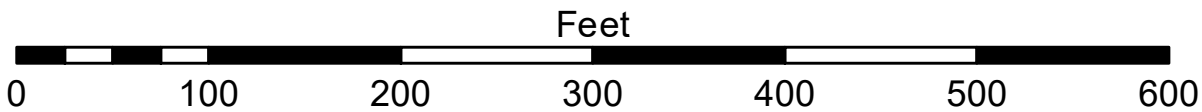


- LEGEND**
- Cable Submarine
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1 inch = 100 feet



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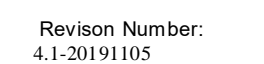
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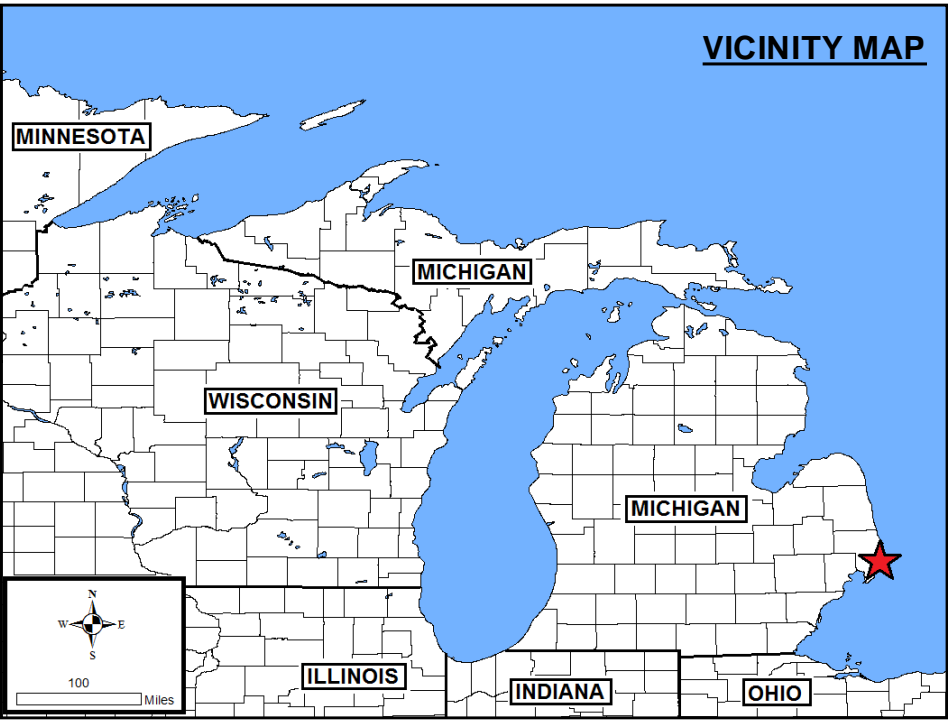
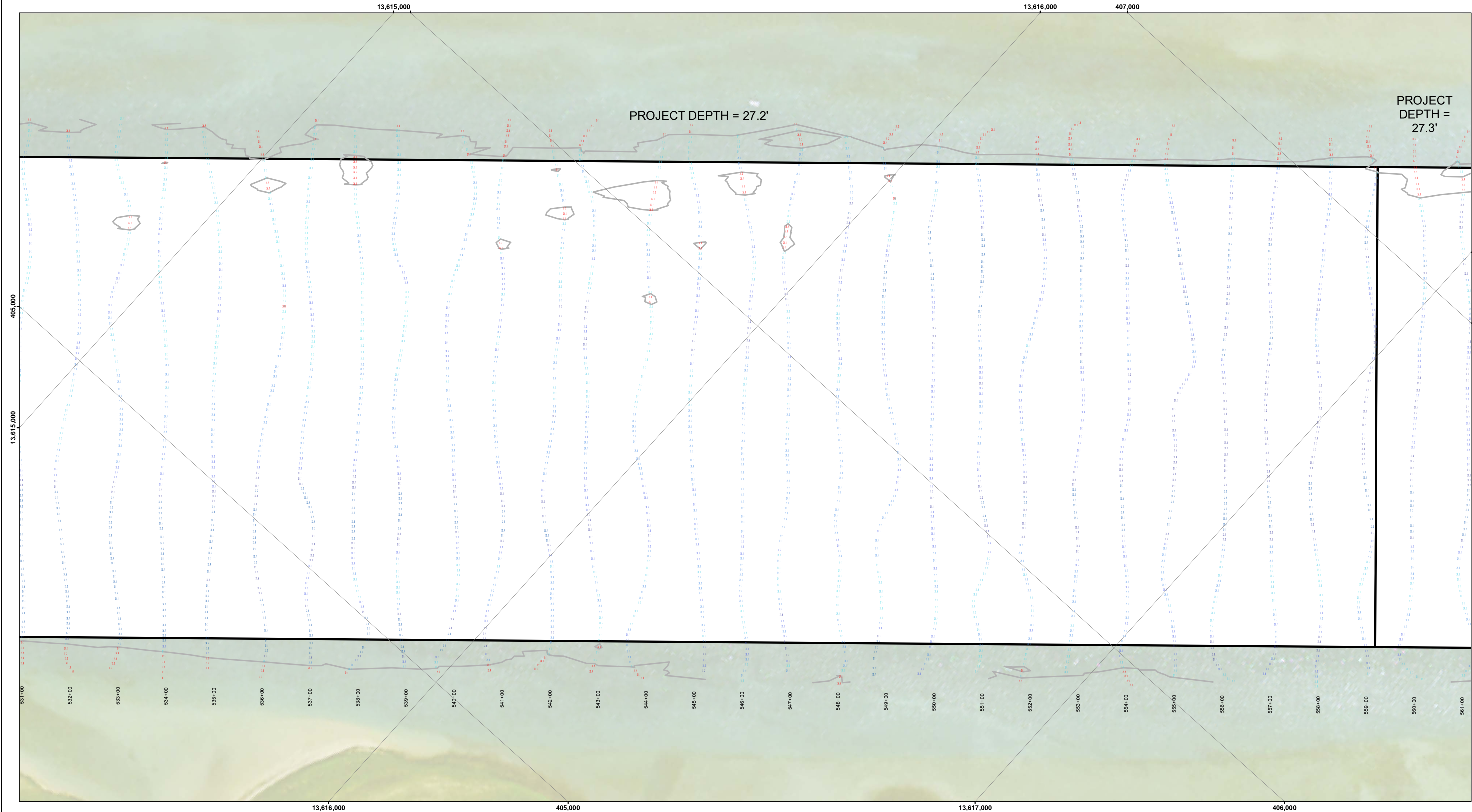
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	Submitted:	Surveyed By:
	Recommended by:	Plotted By:
	Chief, Survey Section	Checked By:
	Approved:	Chief, Technical Services

St. Clair River, MI
St. Clair River
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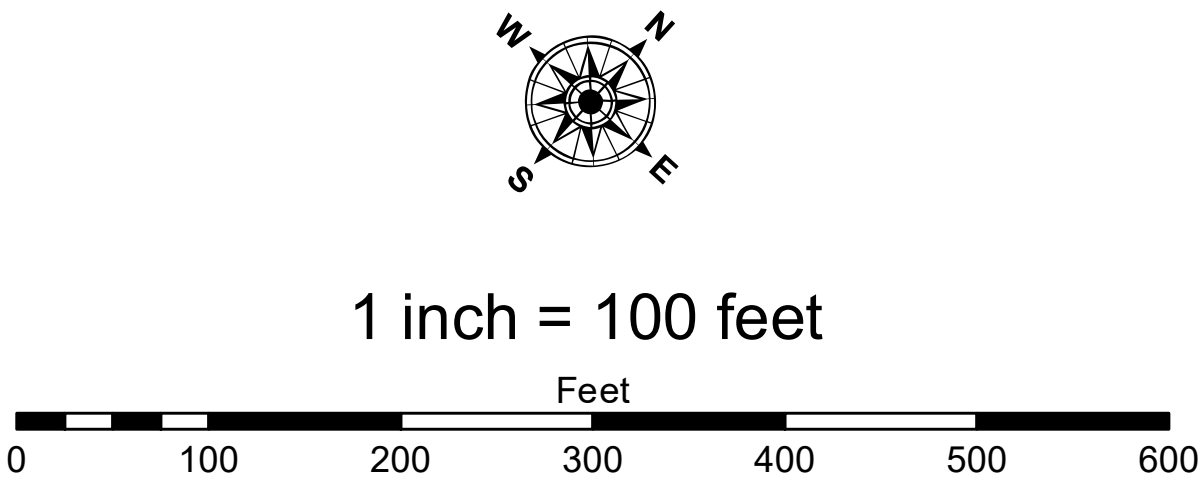
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- LEGEND**
- Cable Submarine
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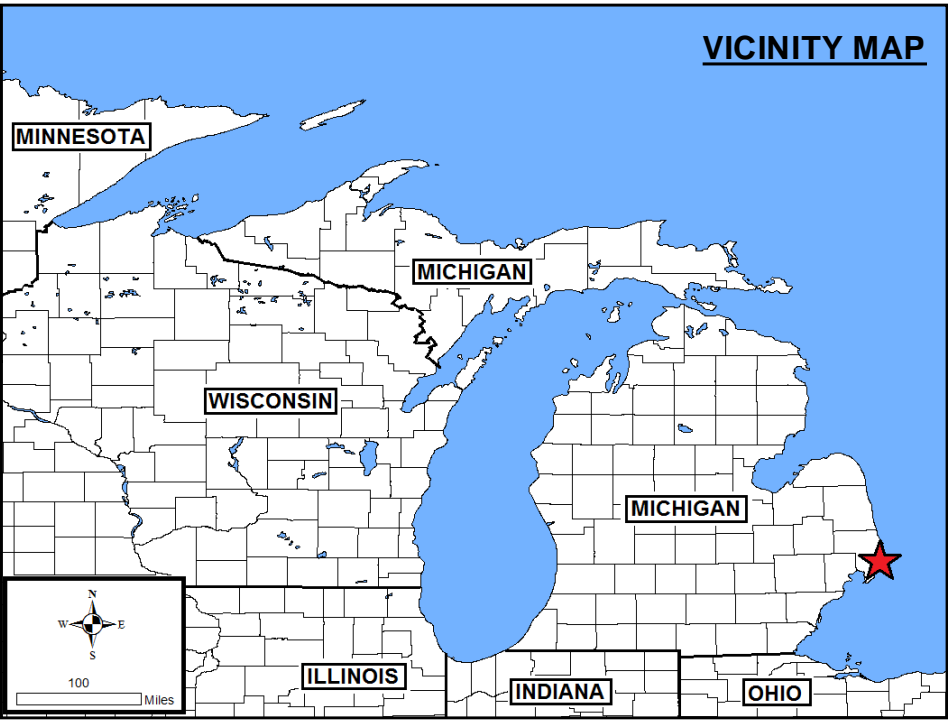
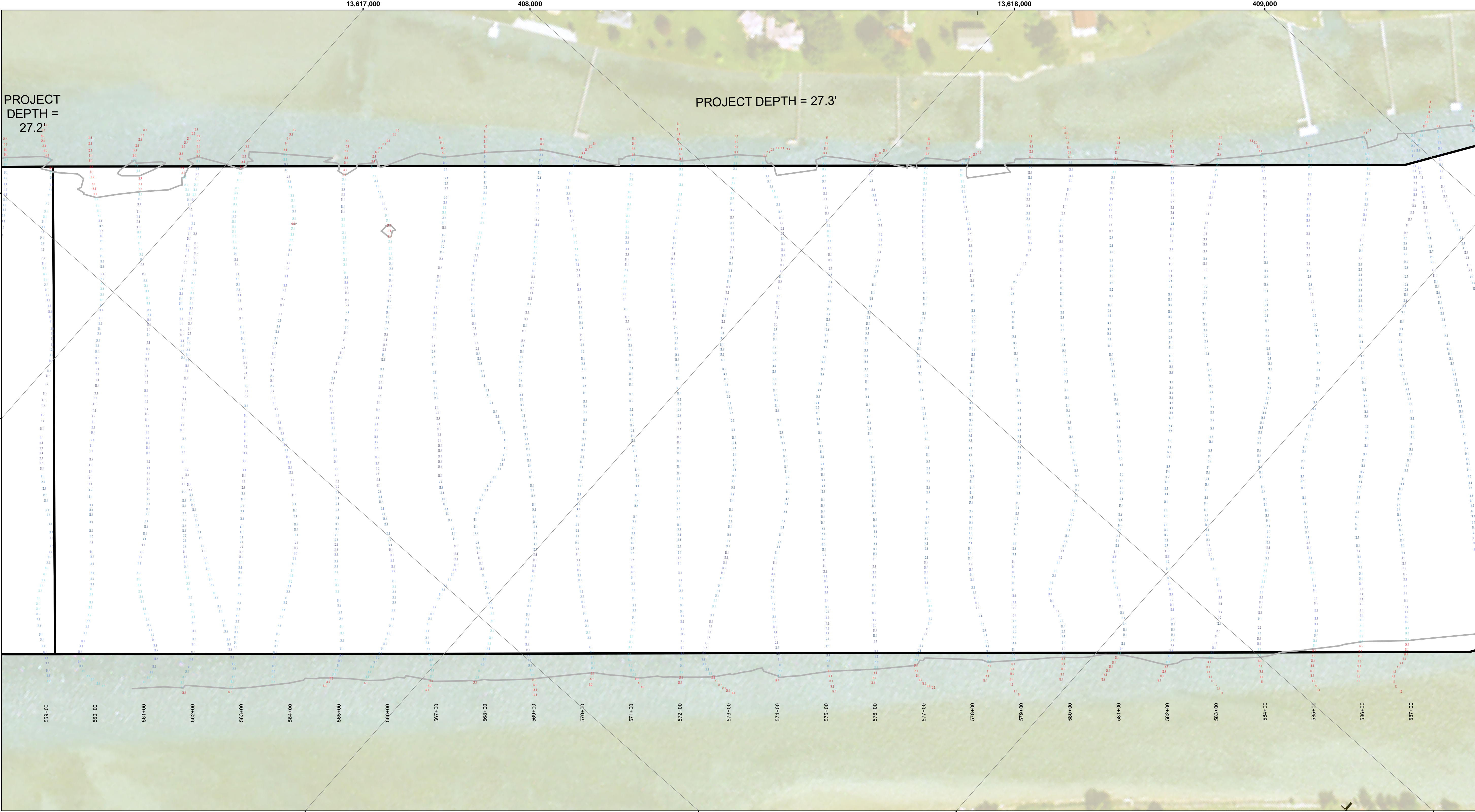
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Submitted:	Surveyed By:	
	Plotted By:	
	Checked By:	
Recommended:	Chief, Survey Section	
Approved:	Chief, Technical Services	

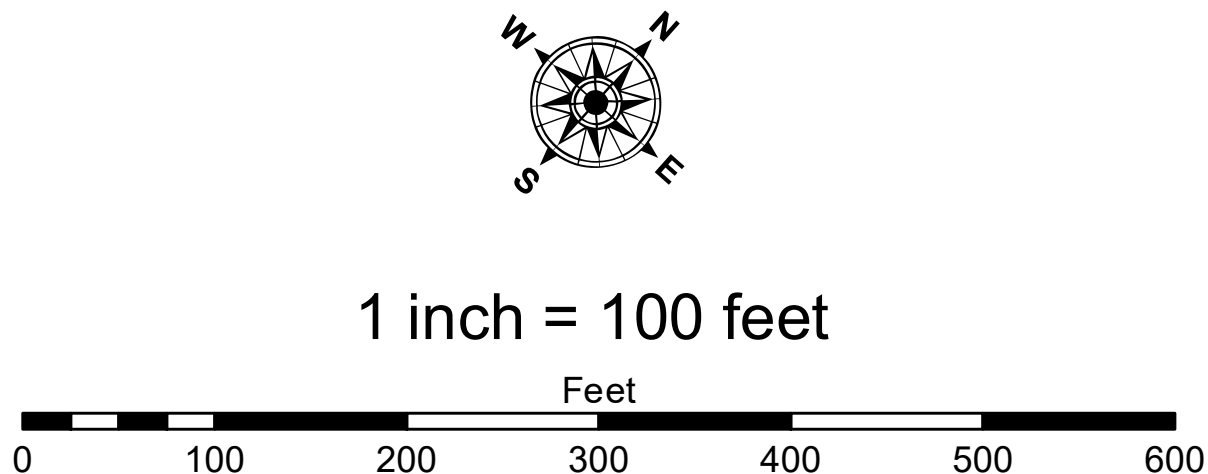
St. Clair River, MI
St Clair River
CR_01_SCR_20200814_CS
14 August 2020

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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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NOTES:

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MOTION COMPENSATION: APPLANIX POS-MV4
SONAR: R2SONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
SOFTWARE: HYPACK

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WATER LEVEL STATIONS:
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TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

US Army Corps of Engineers
District: CELRE

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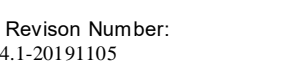
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Approved:	Checked By:

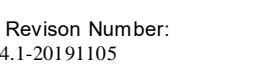
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

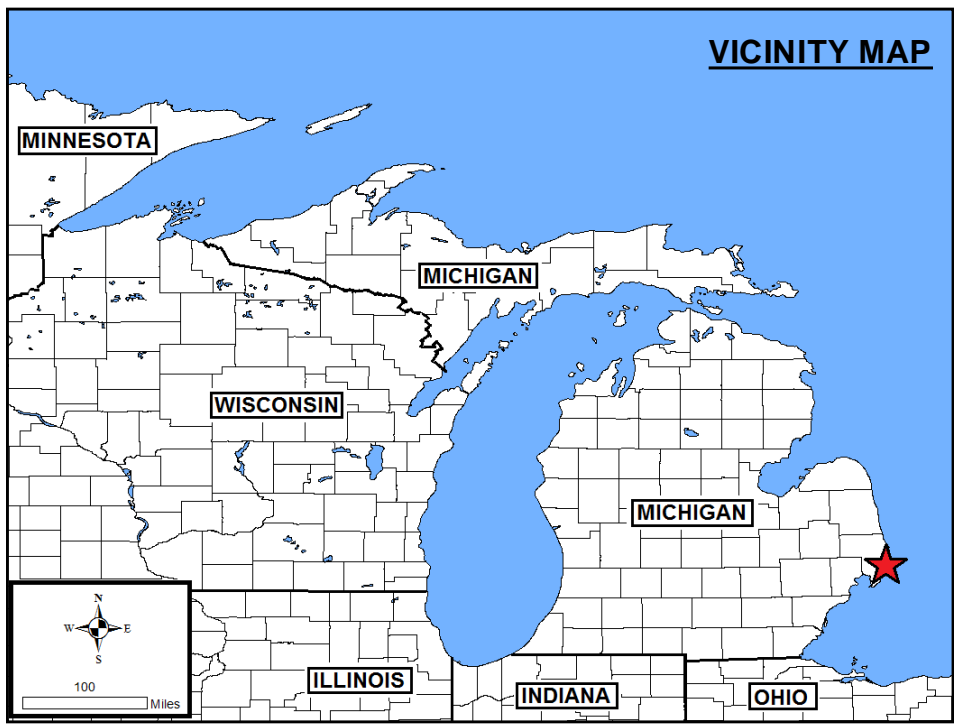
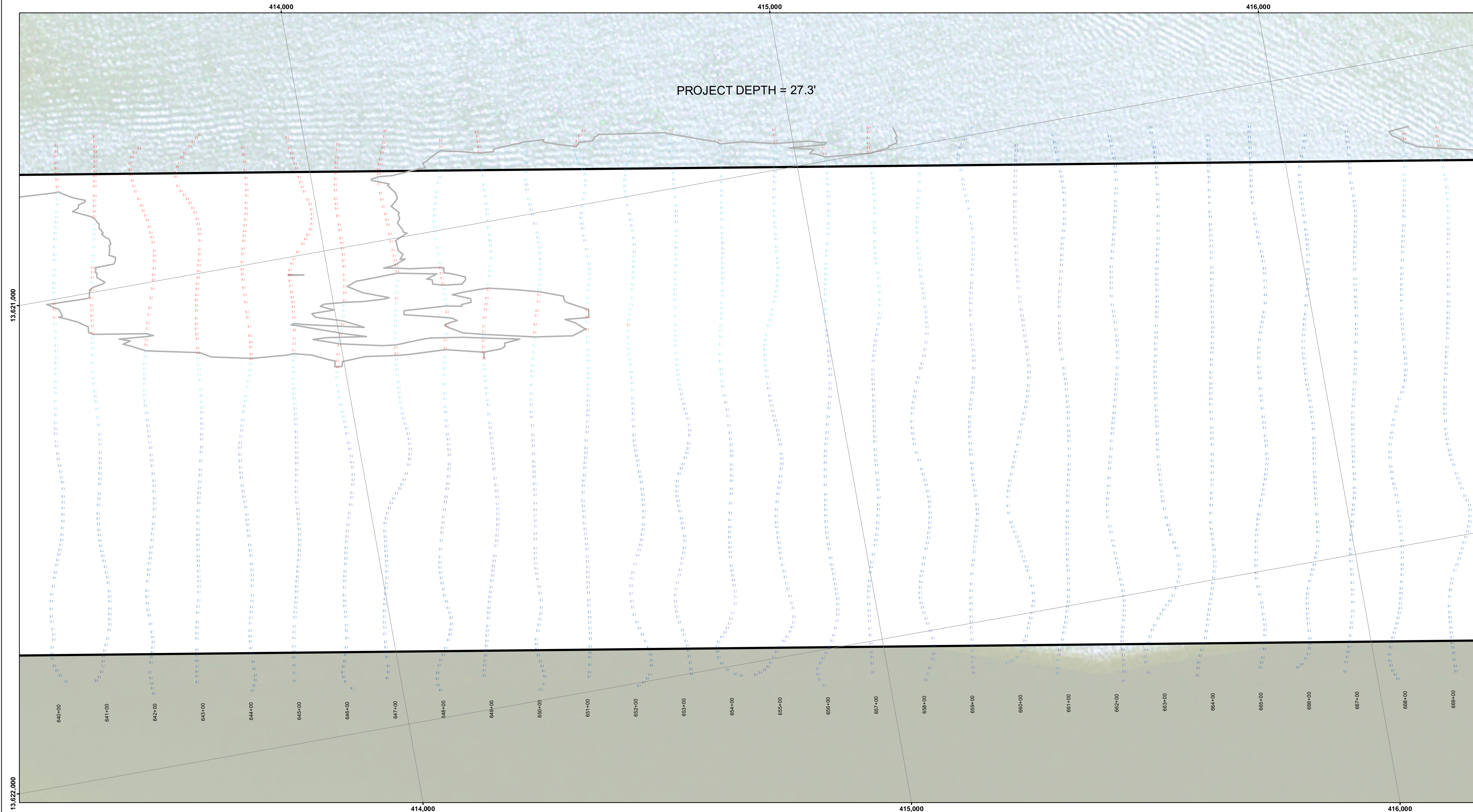
St. Clair River, MI
St Clair River
CR_01_SCR_20200814_CS
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Revision Number:
4.1-20191105





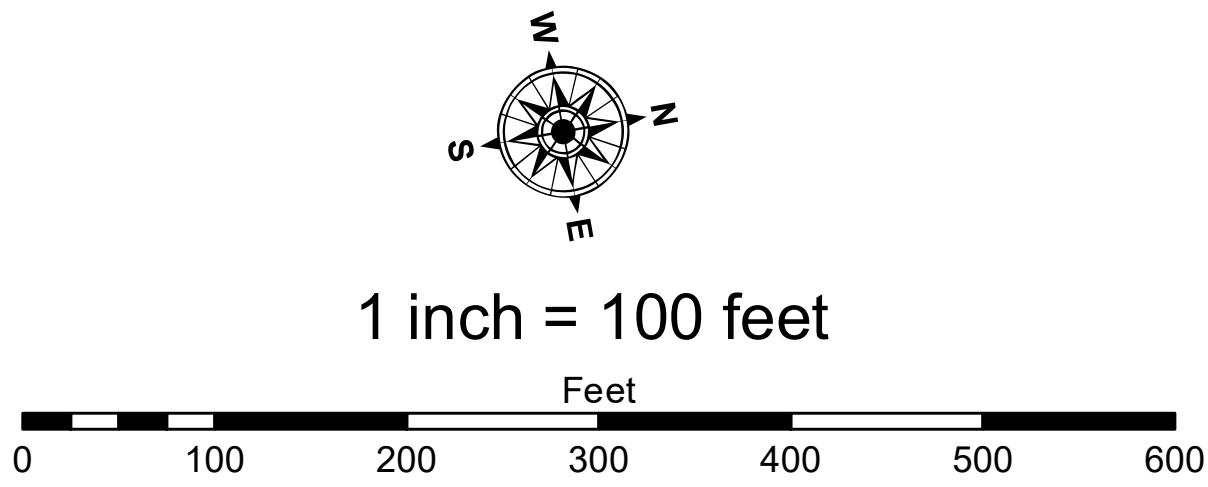


LEGEND

- Cable Submarine
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SOUNDING LEGEND

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**US Army Corps
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District: CELRE

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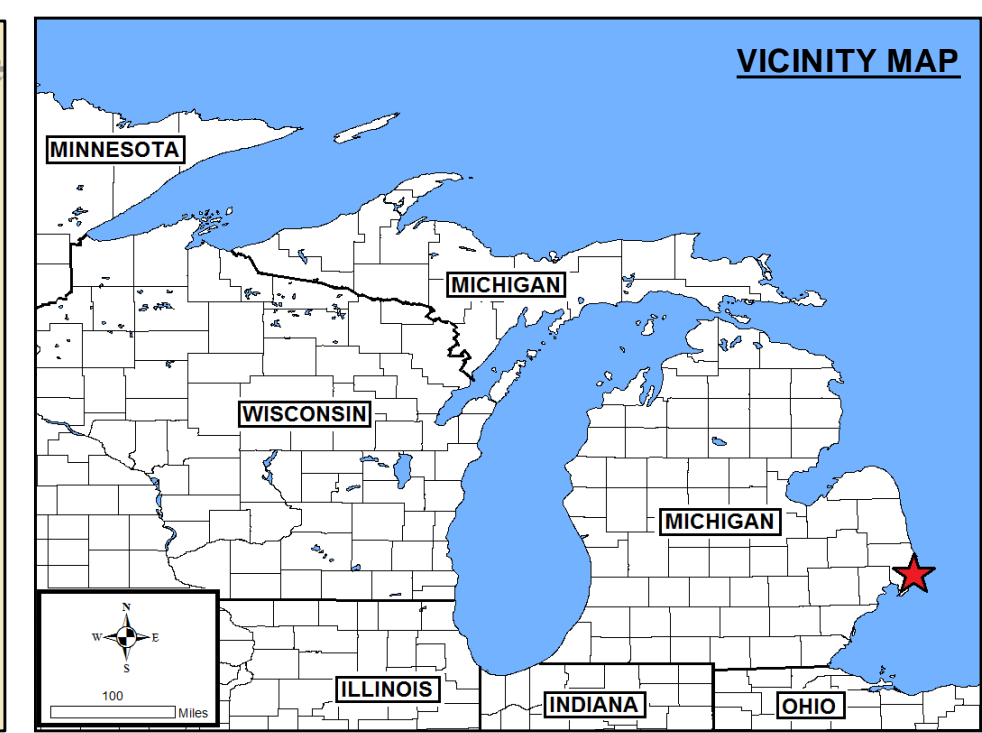
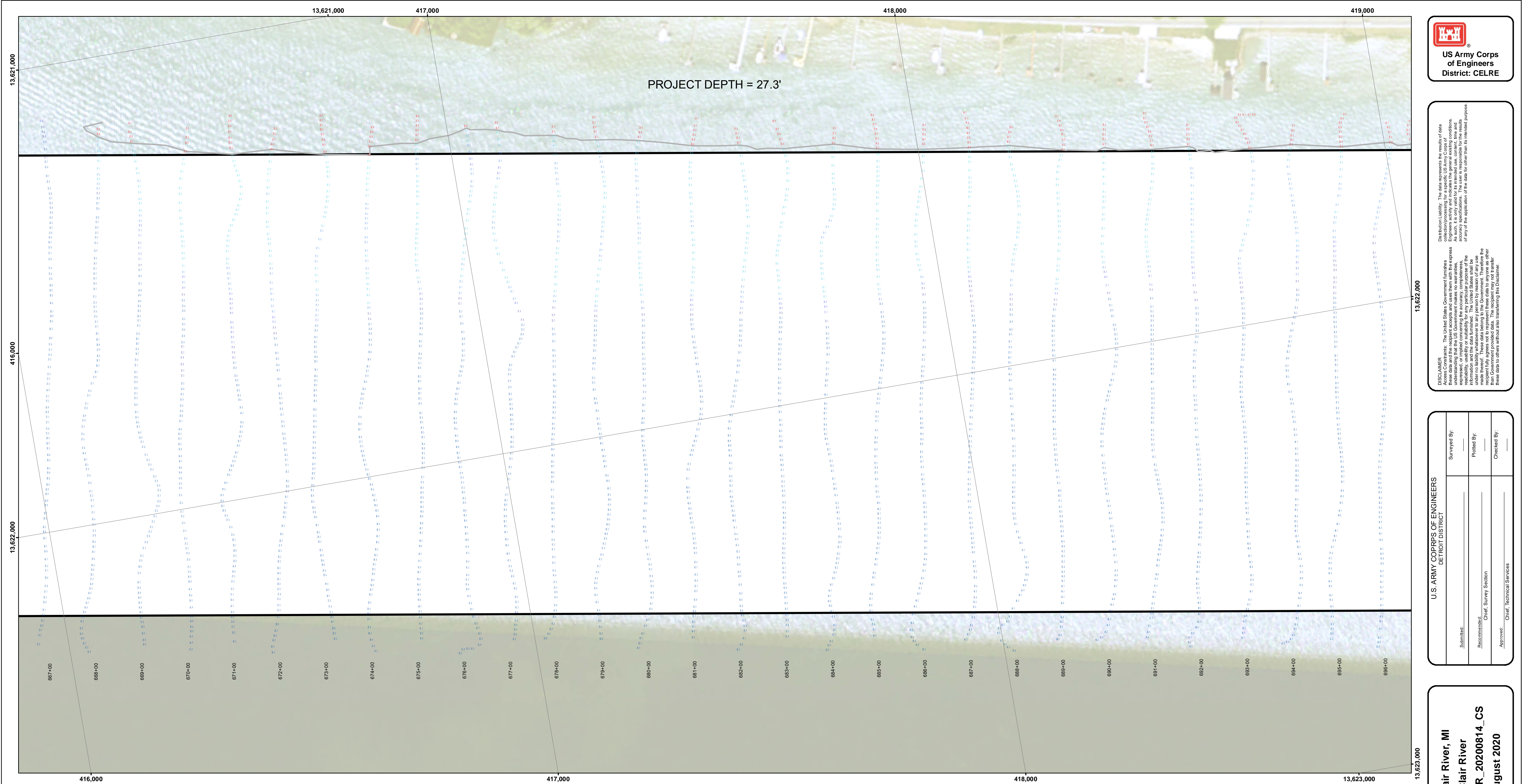
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	
Submitted _____	Surveyed By: _____
Recommended: _____ Chief, Survey Section	Plotted By: _____
Approved: _____	Checked By: _____
Chief, Technical Services	

St. Clair River, MI
St Clair River
CR_01_SCR_20200814_CS
14 August 2020

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Number**
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Revision Number:
4.1-20191105



LEGEND

- Cable Submarine
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1 inch = 100 feet

Feet

0 100 200 300 400 500 600

North arrow pointing up.

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US Army Corps of Engineers
District: CELRE

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DETROIT DISTRICT

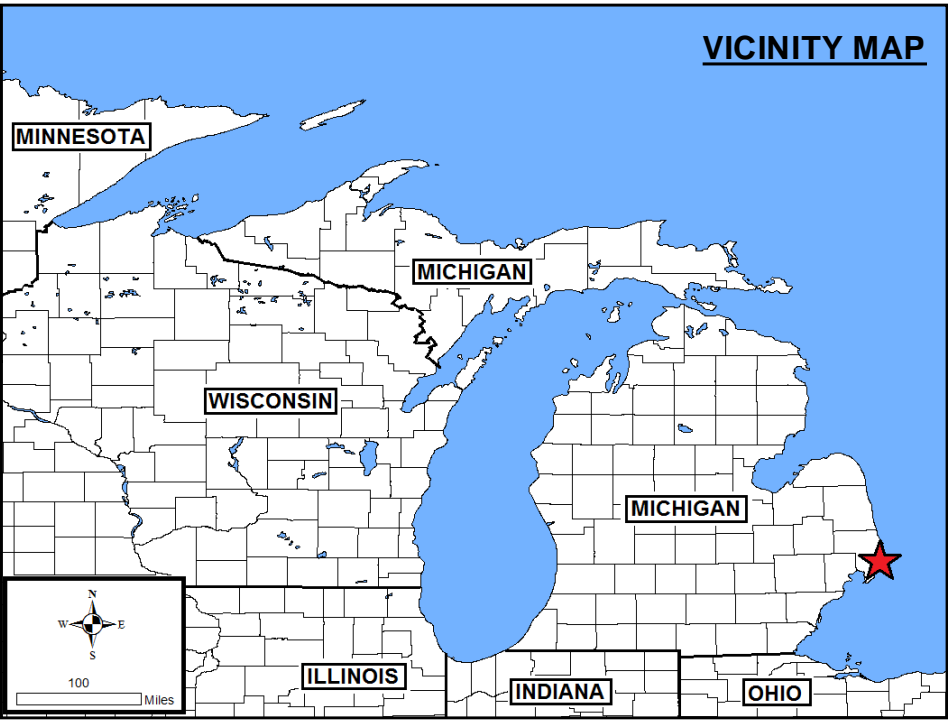
Submitted:	Surveyed By:
Recommended:	Plotted By:
Approved:	Checked By:

Chief, Survey Section
Chief, Technical Services

St. Clair River, MI
St Clair River
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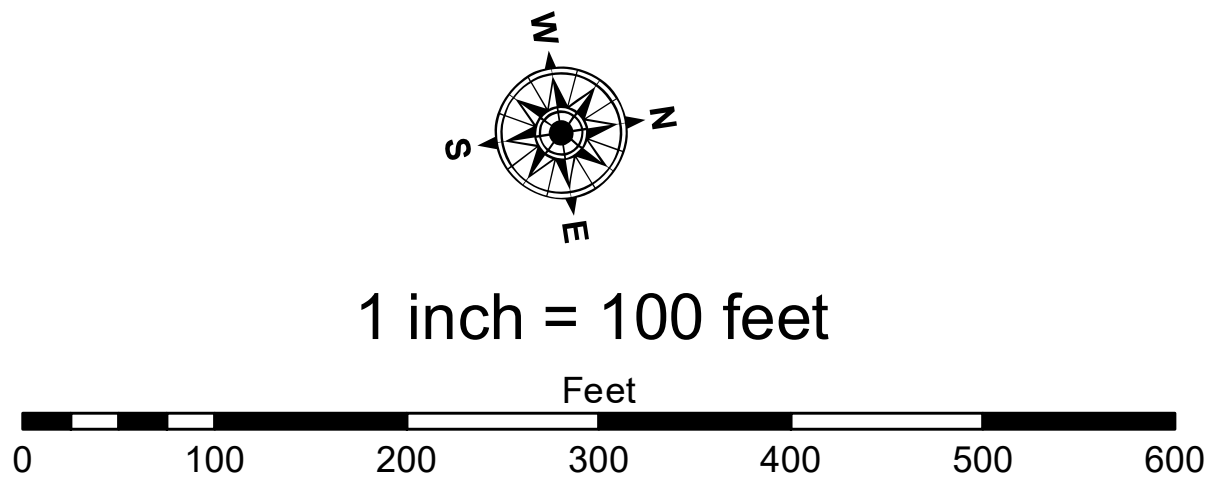
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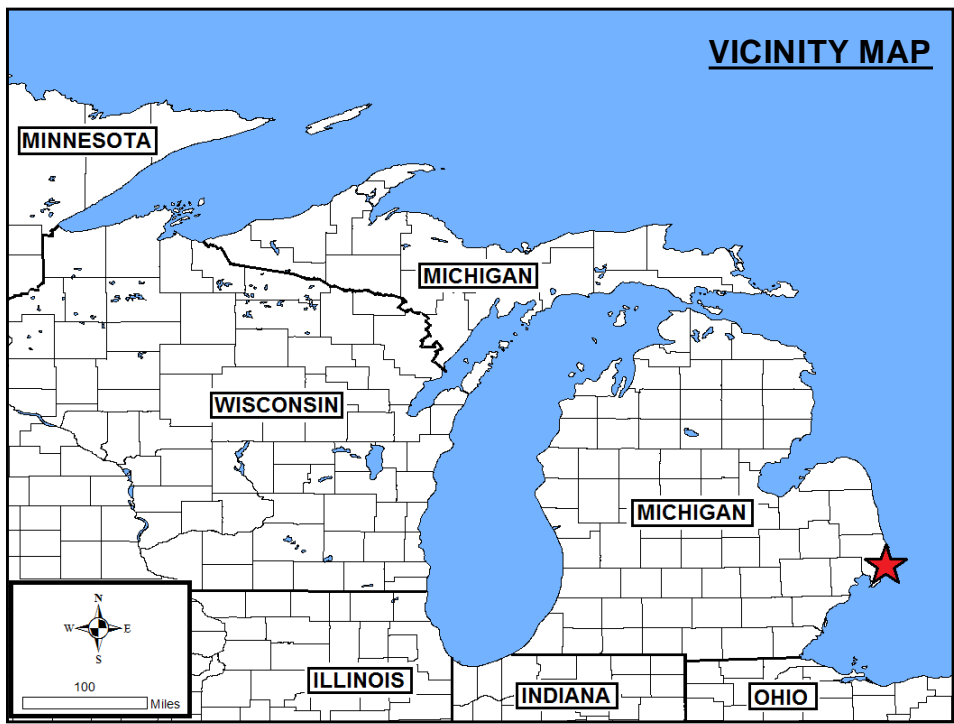
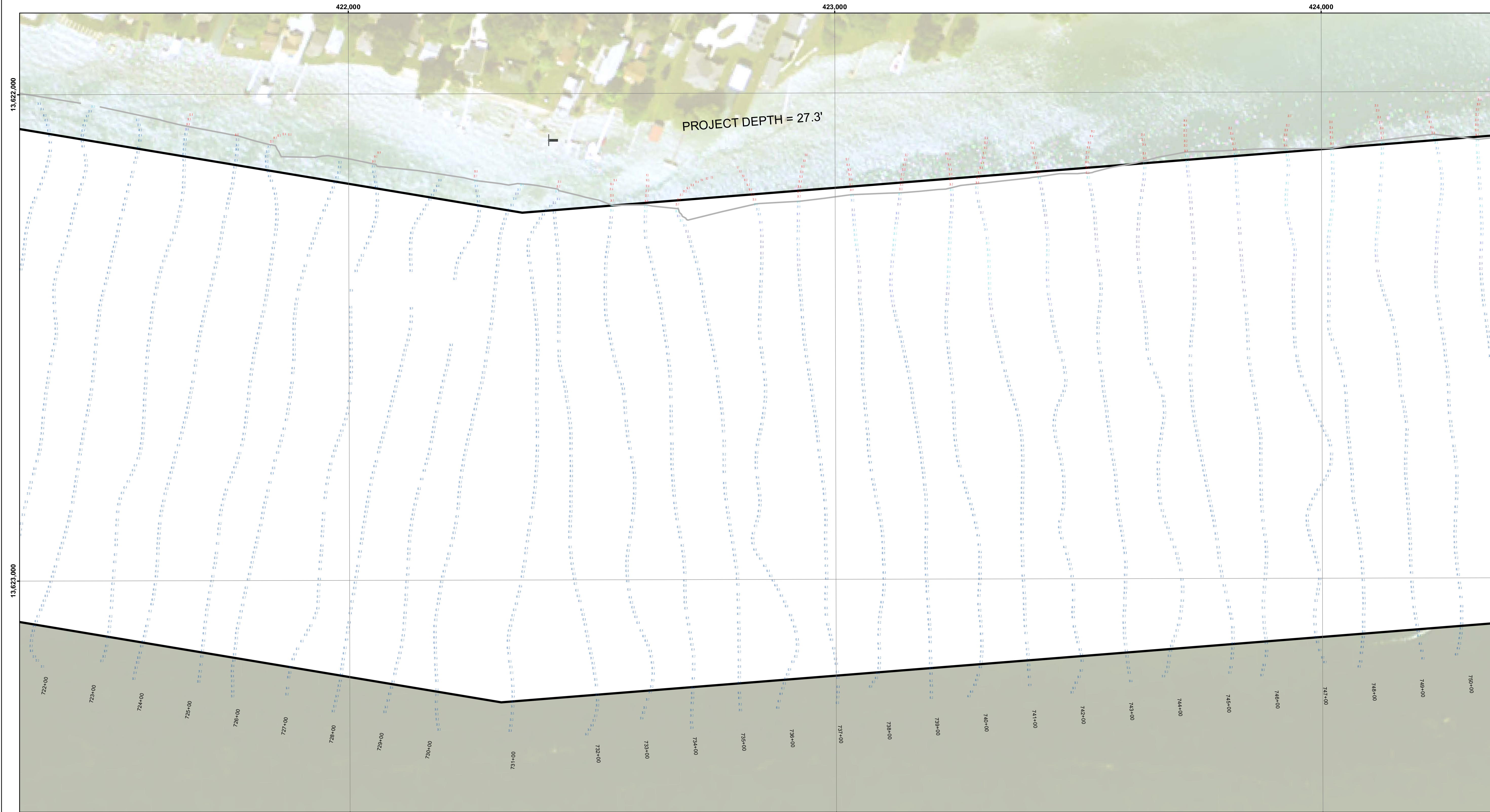
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Submitted:	Surveyed By:	
	Plotted By:	
Recommended:	Chief, Survey Section	Checked By:
Approved:	Chief, Technical Services	

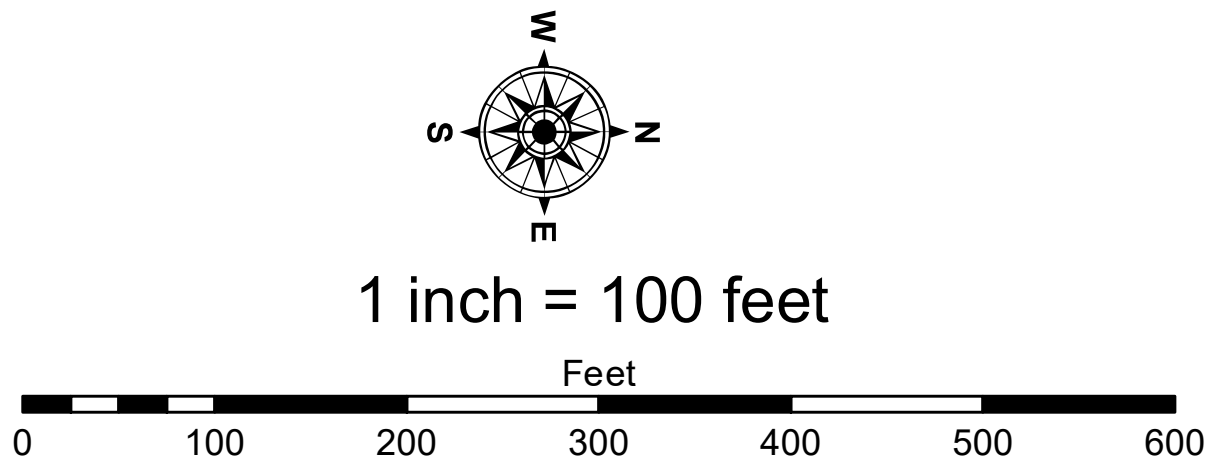
St. Clair River, MI
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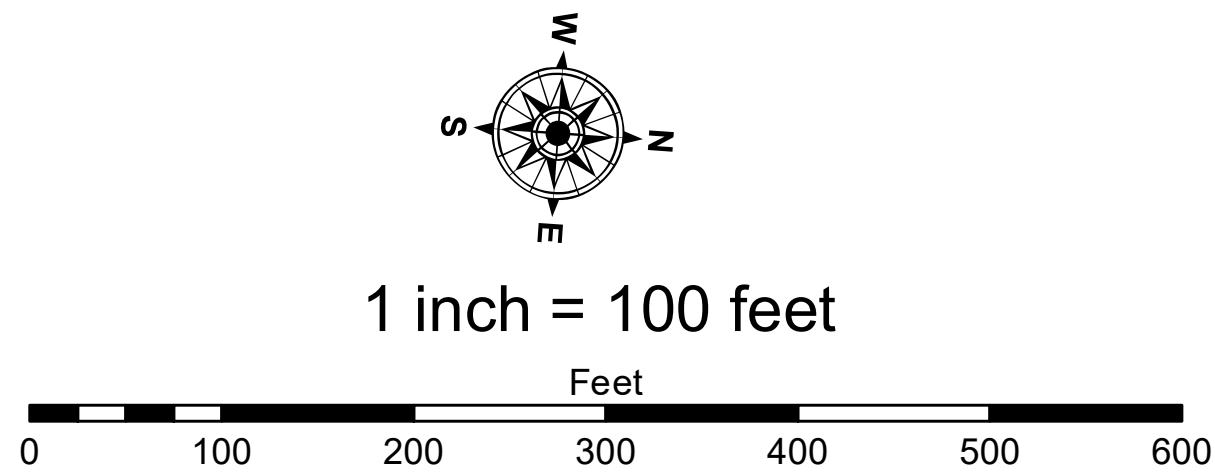
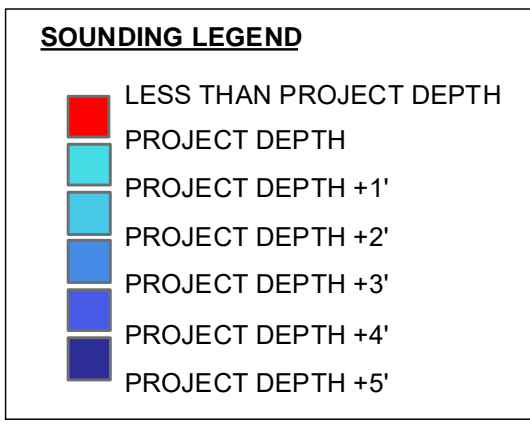
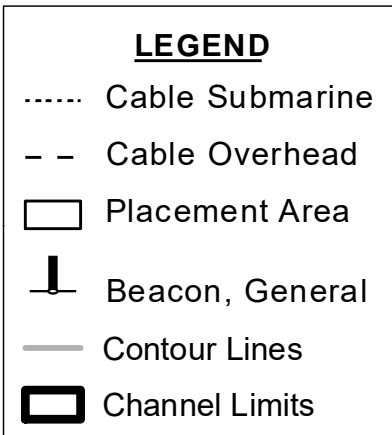
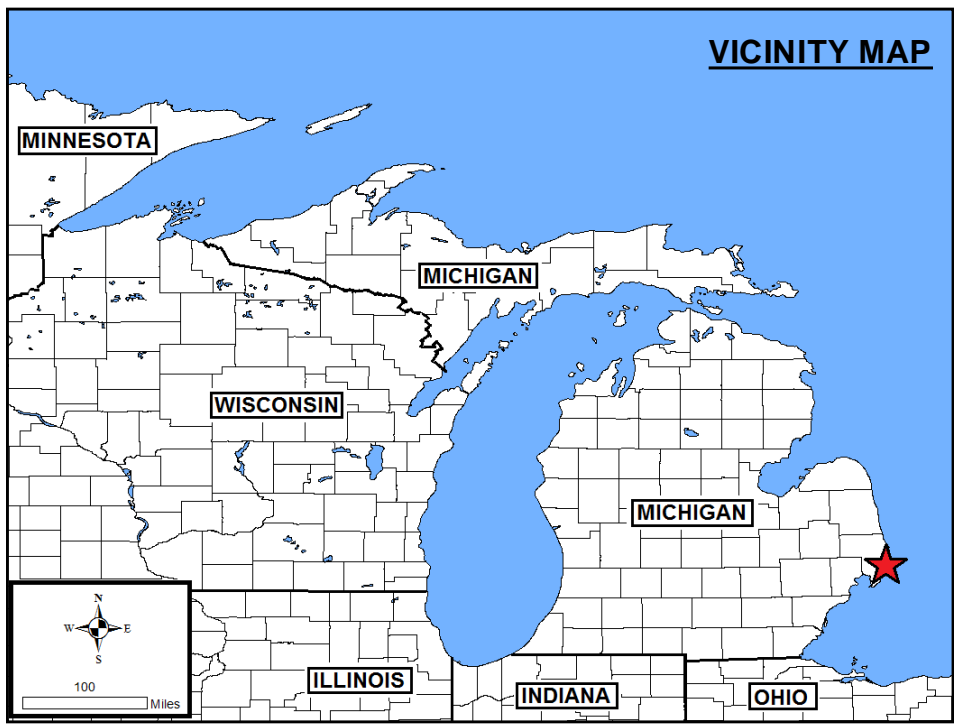
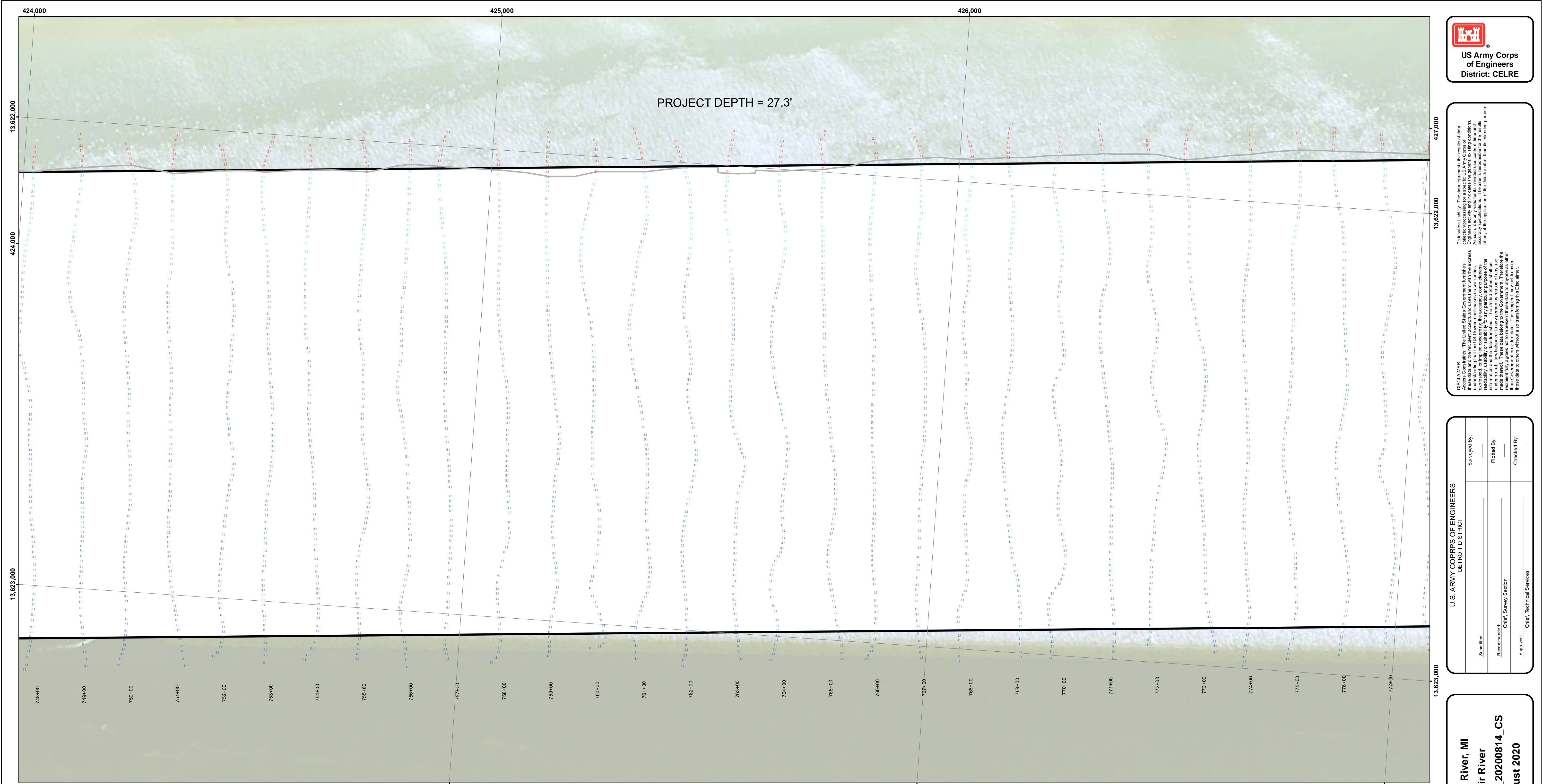
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
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Approved:	Checked By:	
Chief, Survey Section		
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St. Clair River, MI
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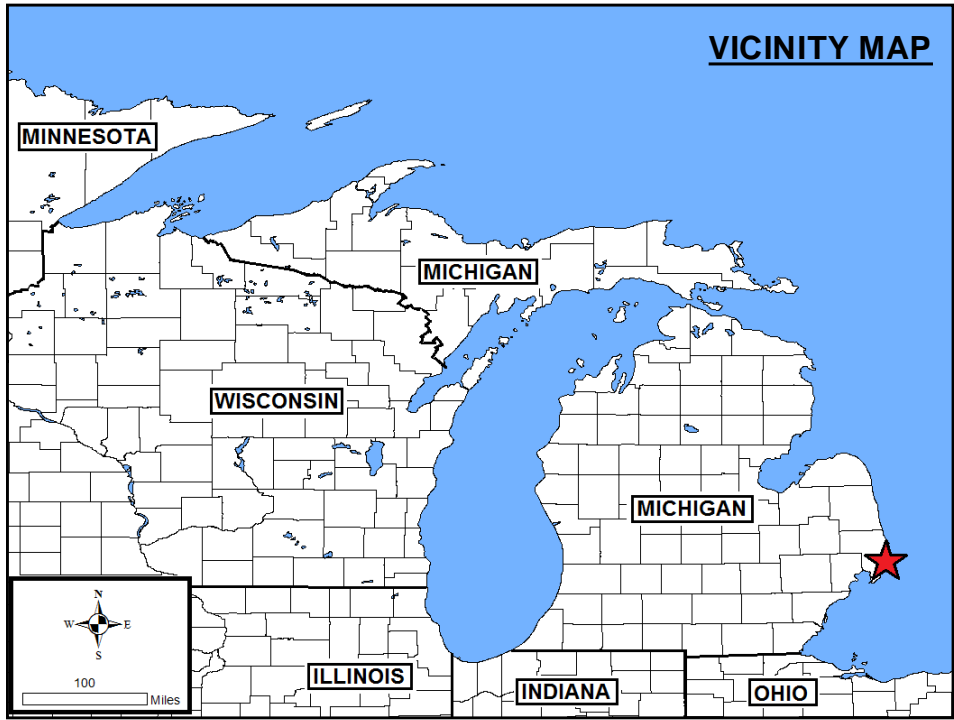
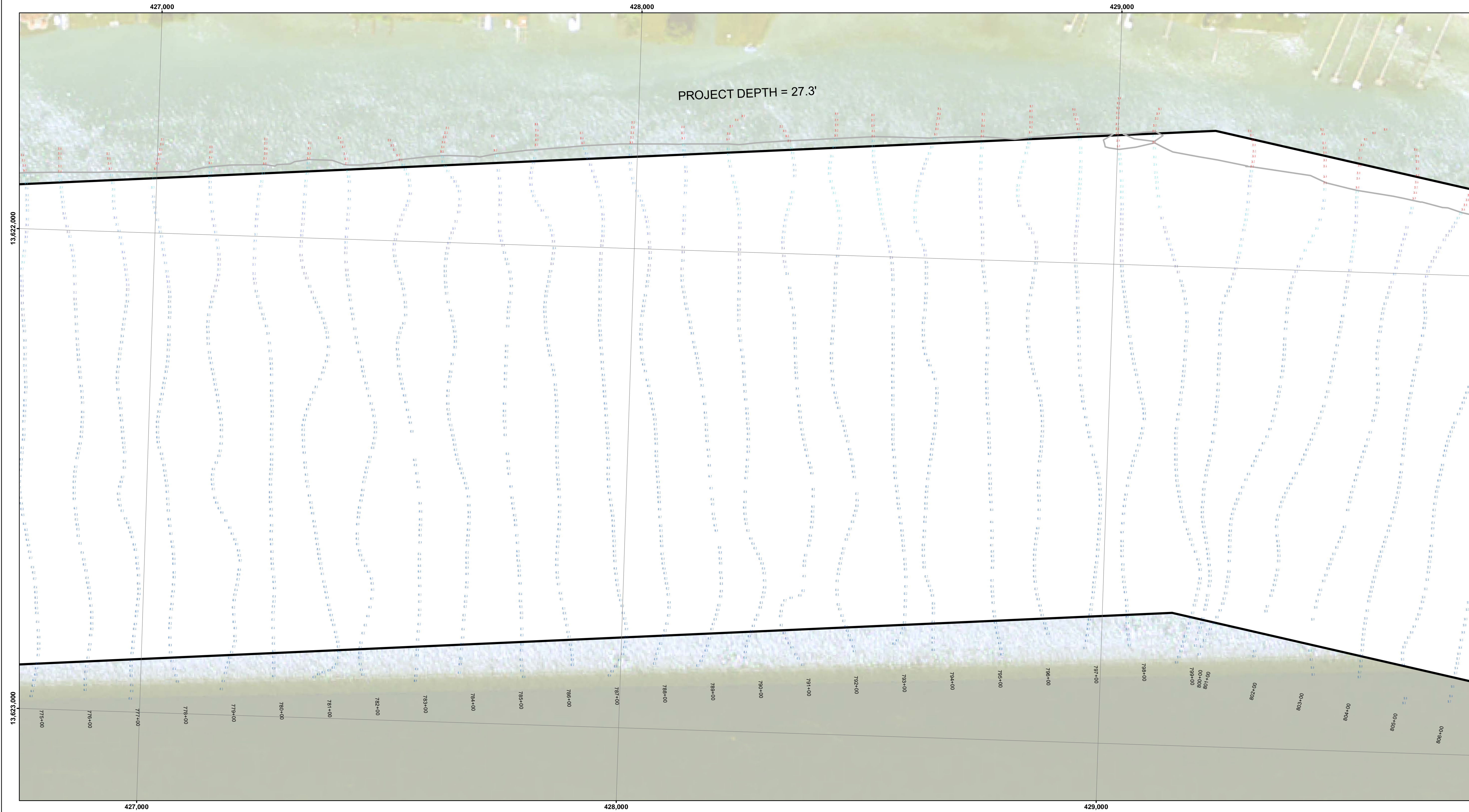


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Submitted:	Surveyed By:
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	Checked By:
U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	

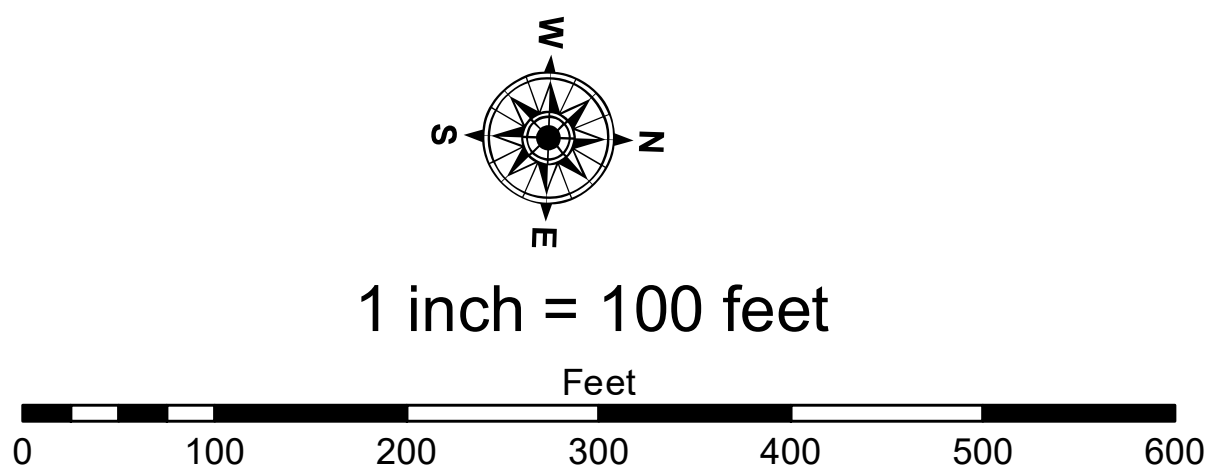
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HORIZONTAL GRID DATUM BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983, U.S. SURVEY FOOT.

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

ALL SOUNDINGS ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM OF 1985 (IGLD85). L.W.D. AS INDICATED. PROJECT DEPTHS FOR THIS RIVER RANGE FROM 27.1' TO 30.0'

TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) WATER LEVEL STATIONS:
ST CLAIR SHORES (#9034052)
ALGONAC, MI (#9014070)
ST CLAIR POLICE, MI (#9014080)
BLACK RIVER, MI (#9014090)
DRY DOCK, MI (#9014087)
DUNN PAPER, MI (#9014096)

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



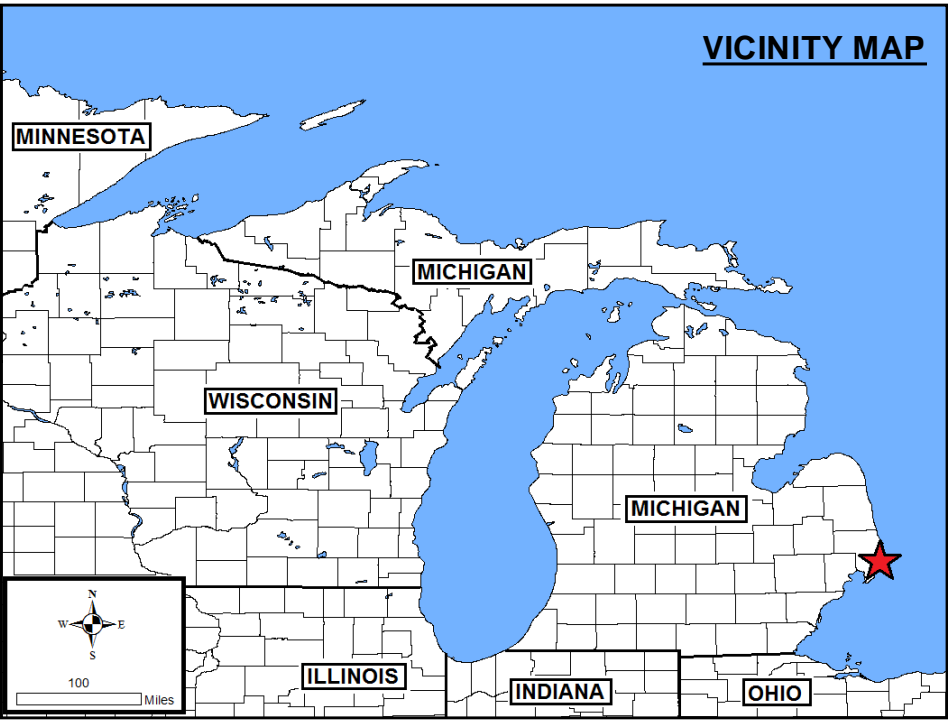
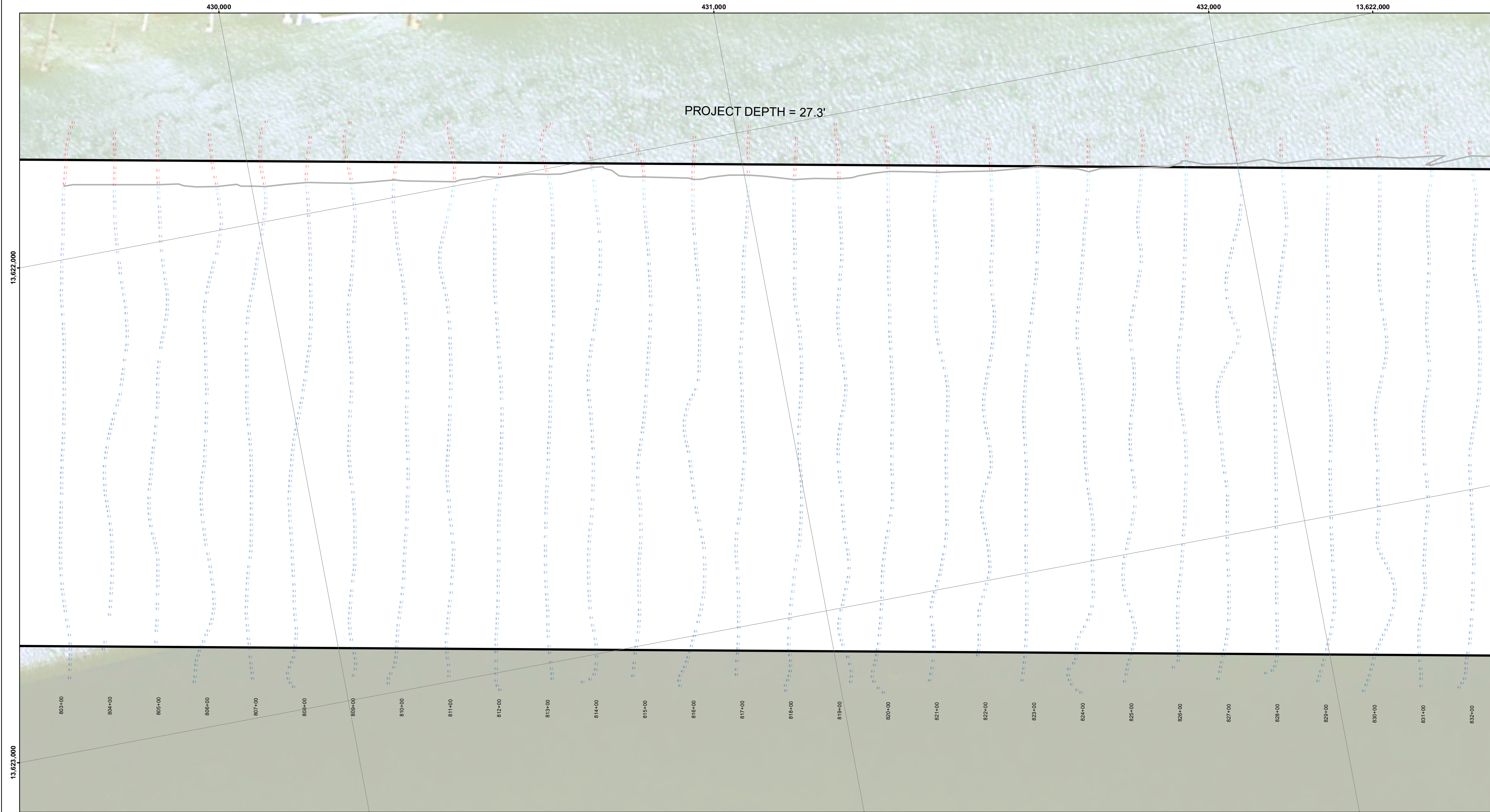
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	Recommended:	Plotted By:
	Chief, Survey Section	Checked By:
	Approved:	Chief, Technical Services

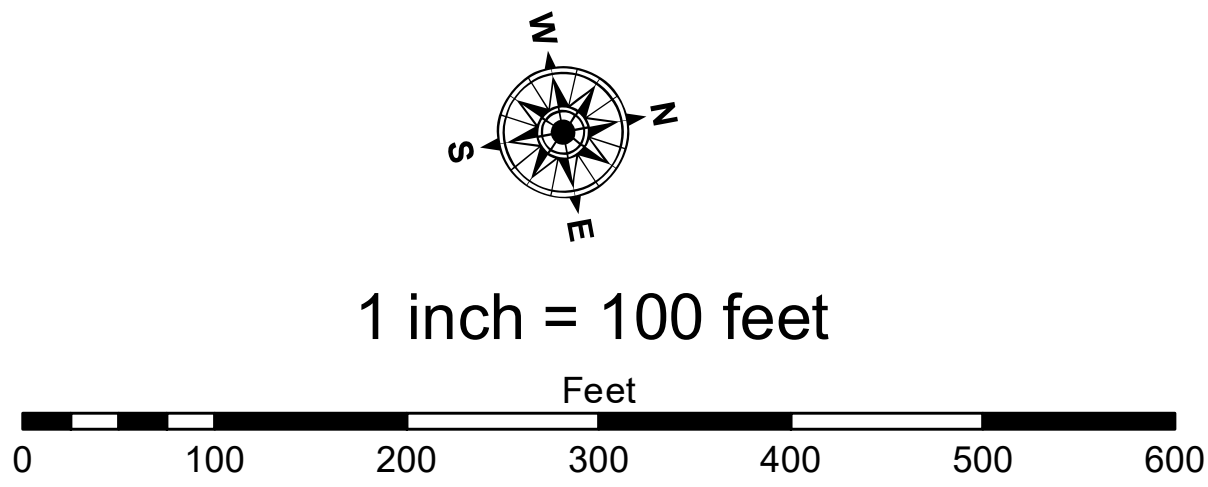
St. Clair River, MI
St Clair River
CR_01_SCR_20200814_CS
14 August 2020

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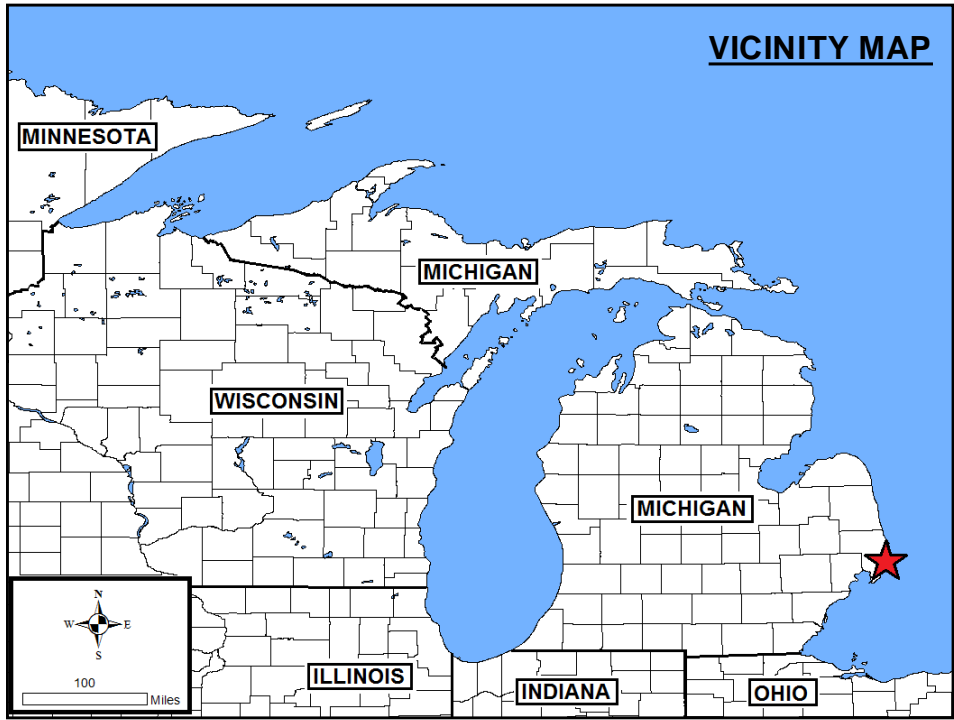
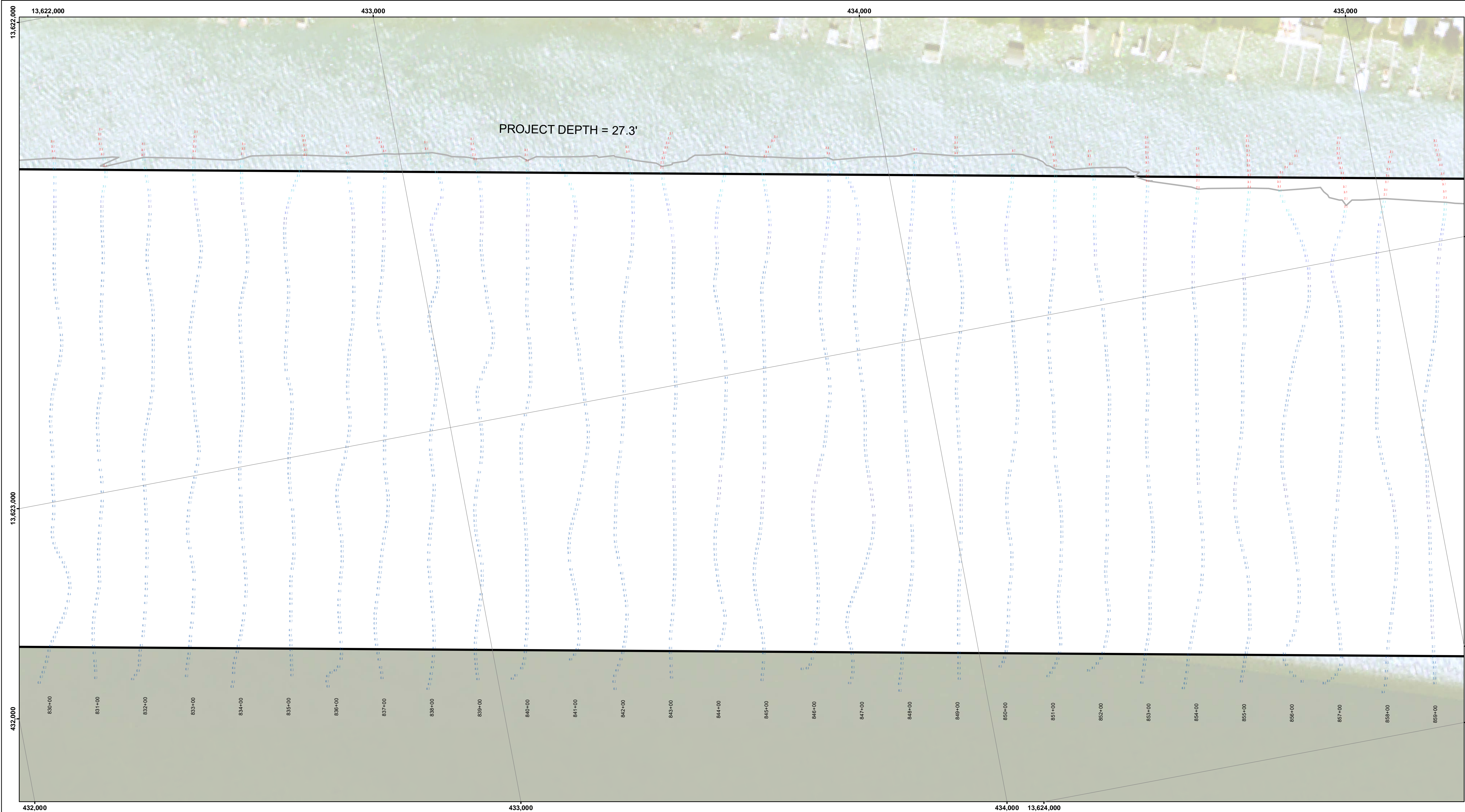
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Submitted:	Surveyed By:	Plotted By:	Checked By:
Recommended:	Chief, Survey Section		
Approved:	Chief, Technical Services		

St. Clair River, MI
St Clair River
CR_01_SCR_20200806_CS
06 August 2020

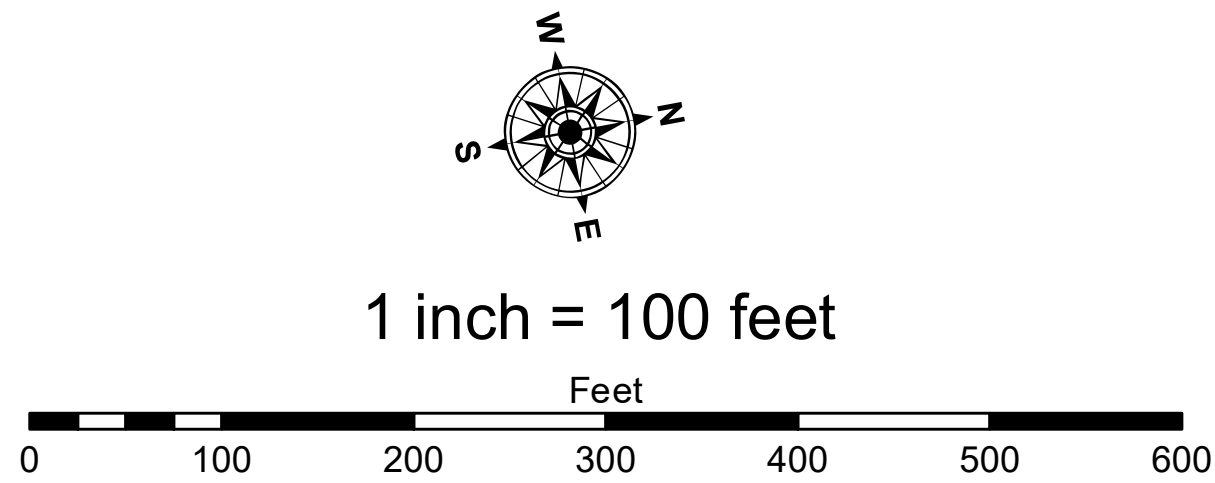
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Revision Number:
 4.1-20191105



- LEGEND**
- Cable Submarine
 - - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel Limits

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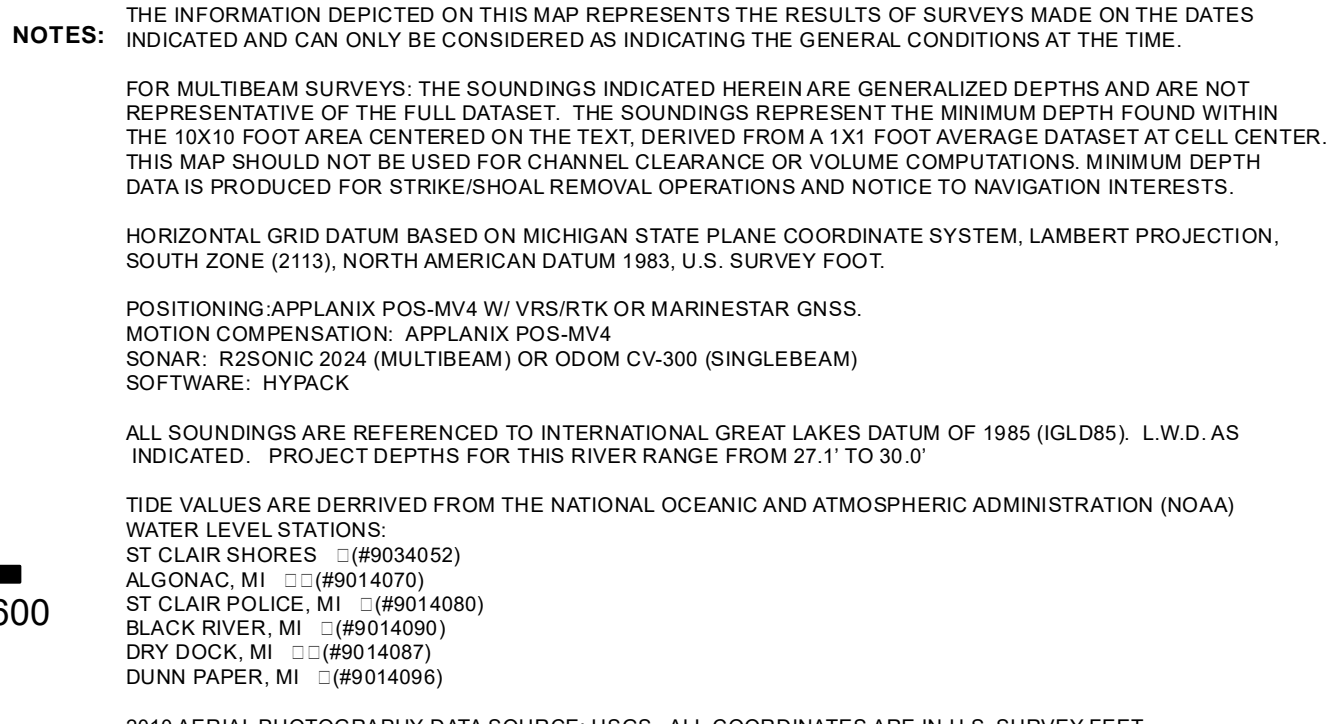
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06 August 2020

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U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

Surveyed By:

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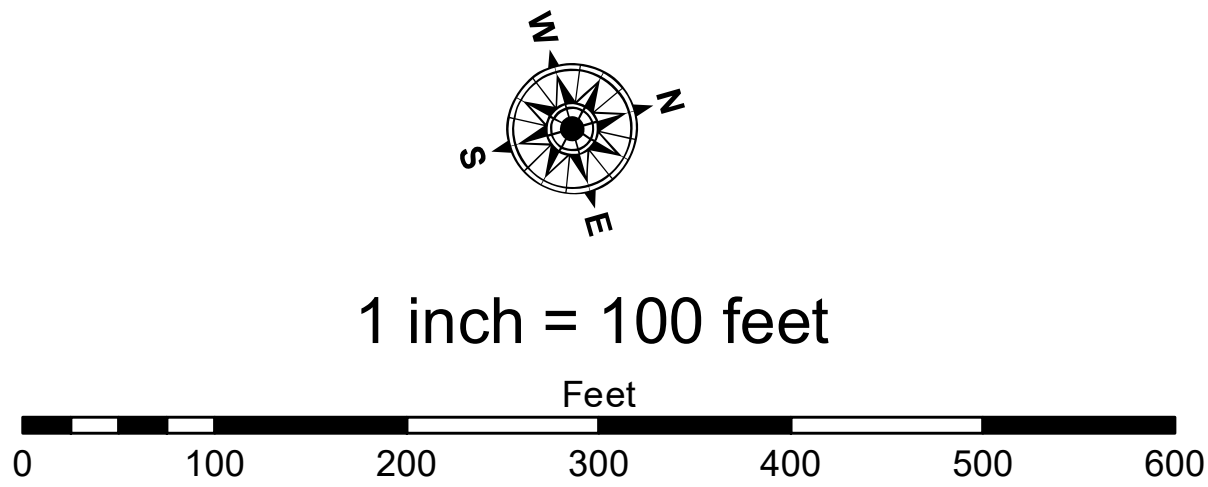
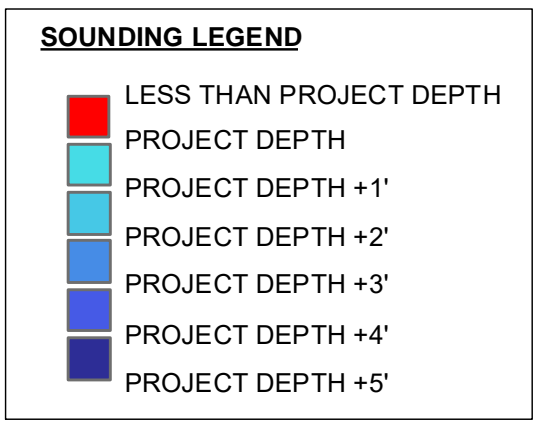
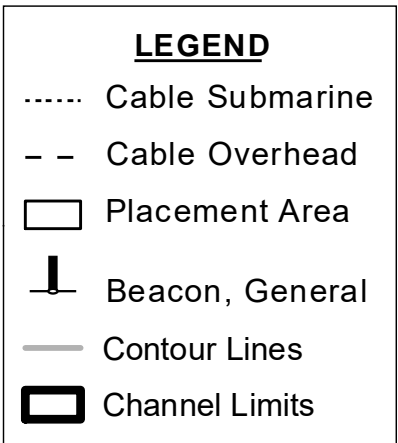
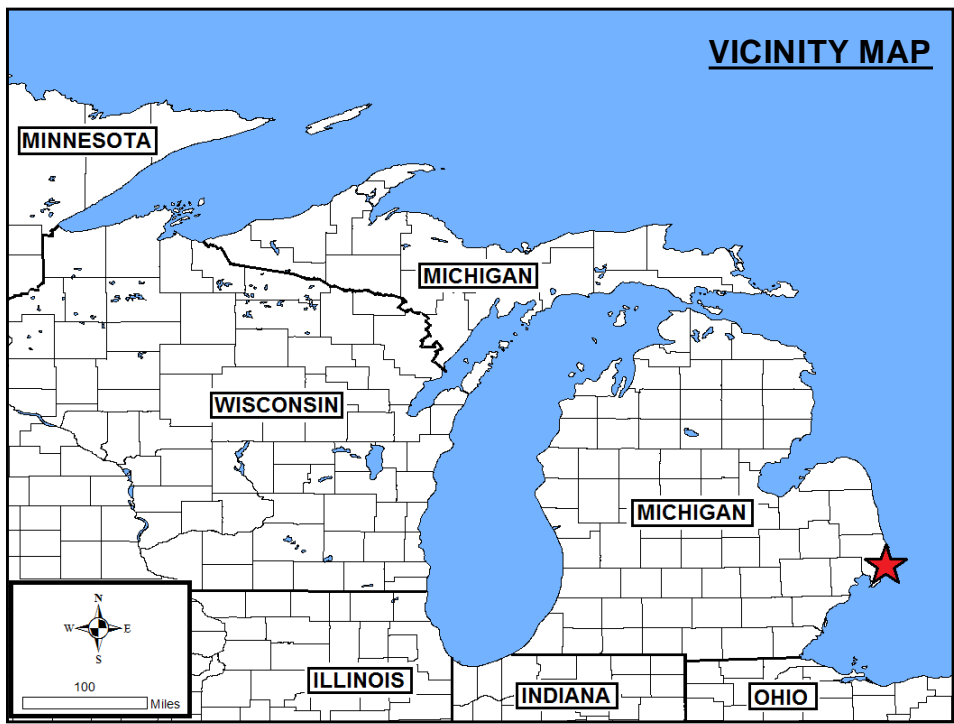
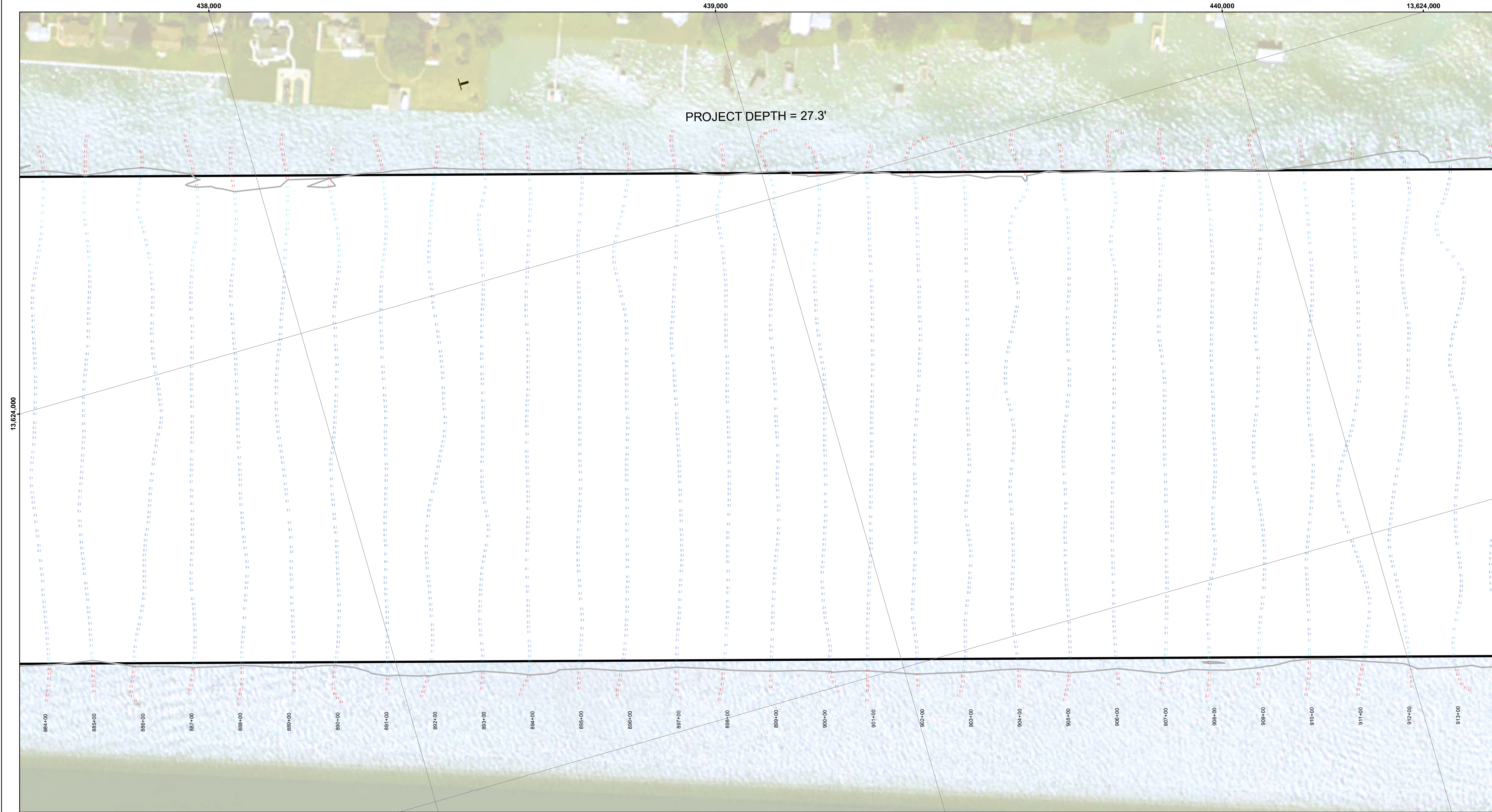
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St. Clair River, MI

St Clair River

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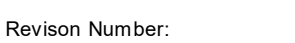
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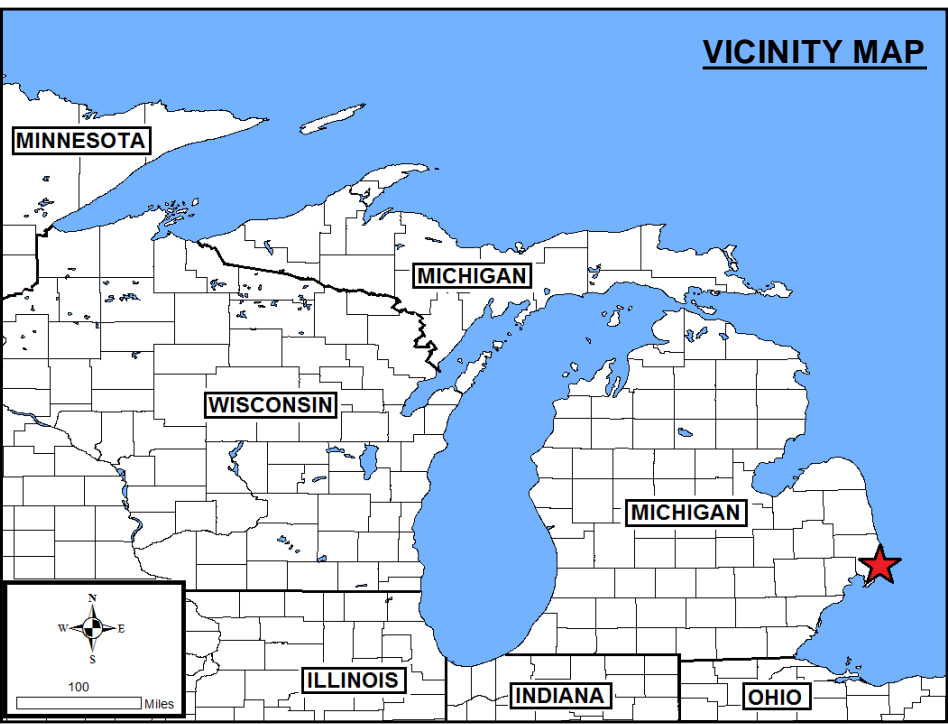
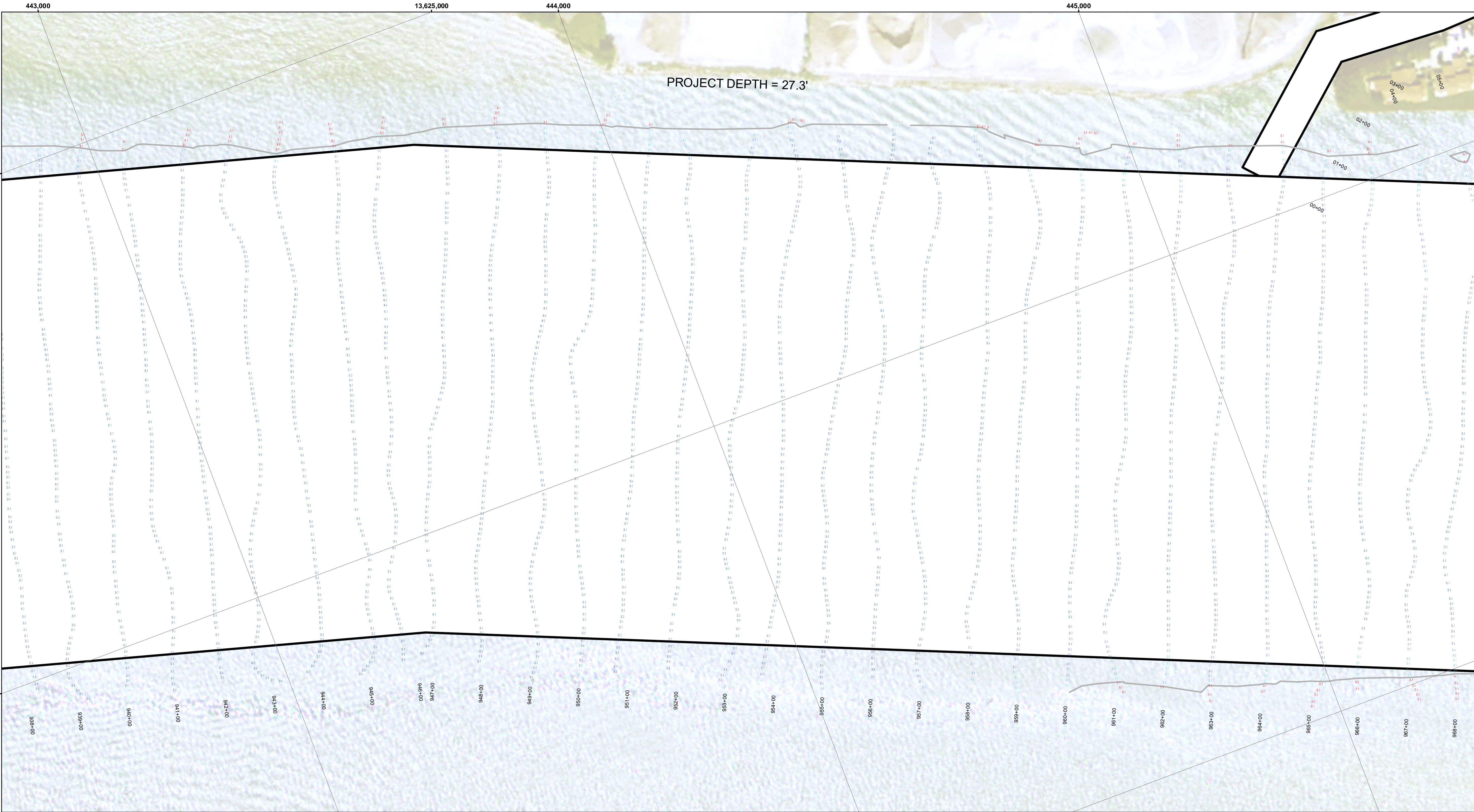
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St. Clair River, MI	CR_01_SCR_20200806_CS	06 August 2020
St. Clair River		

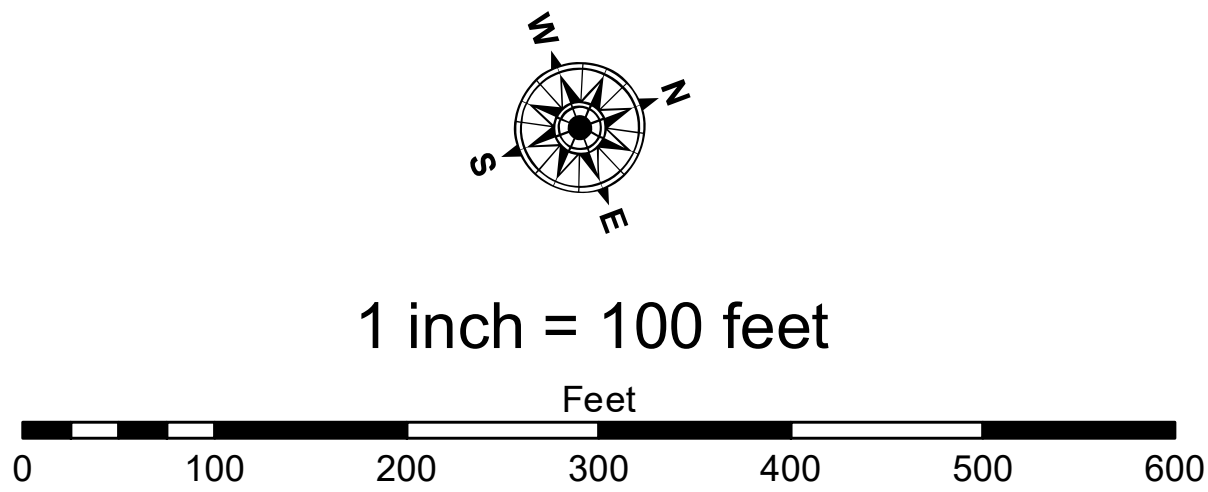
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- LEGEND**
- Cable Submarine
 - - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel Limits

- SOUNDING LEGEND**
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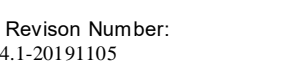
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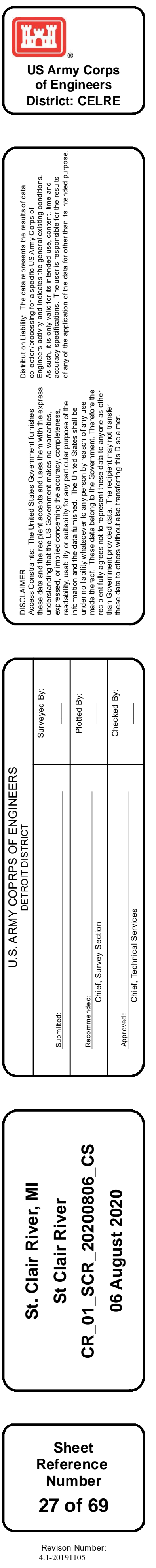
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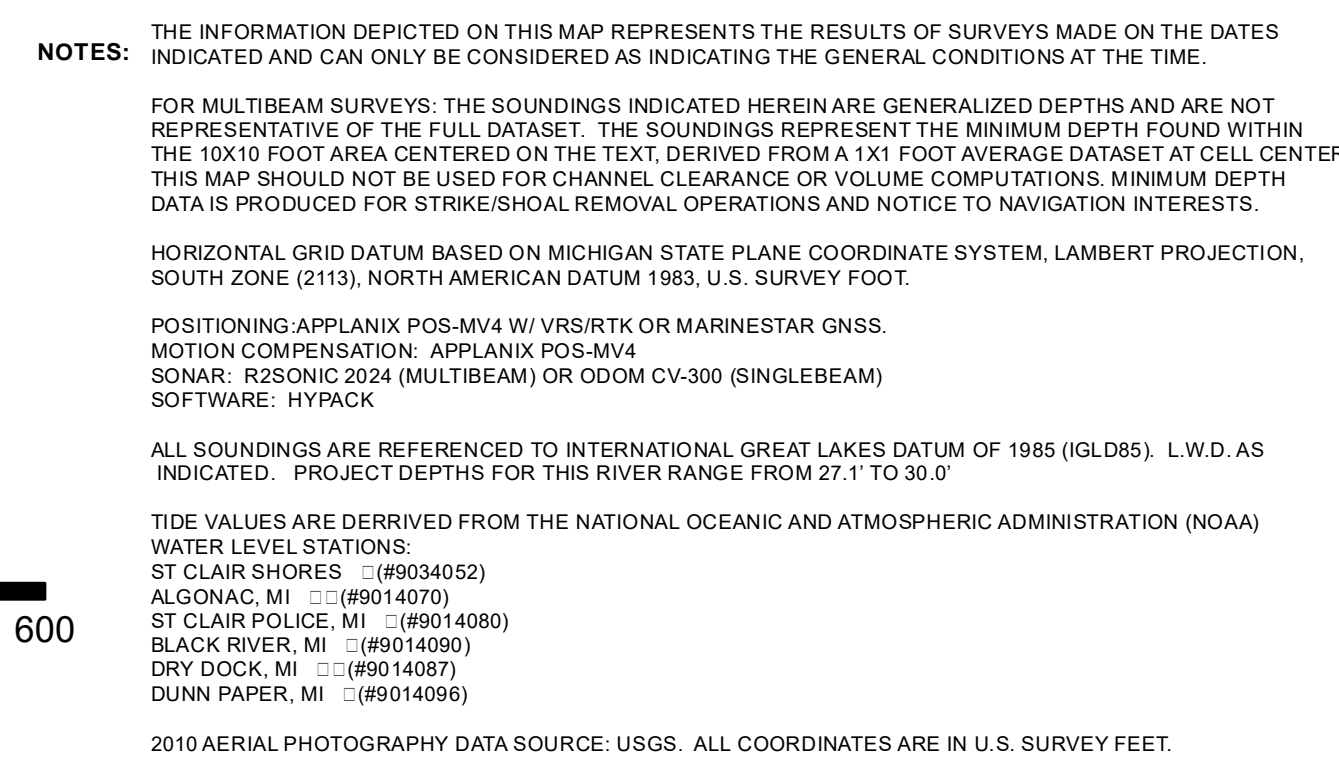
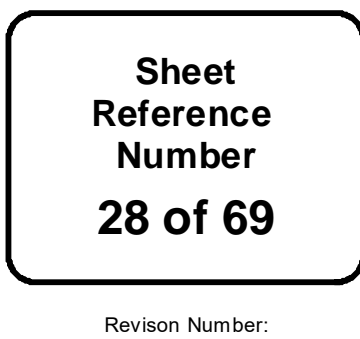
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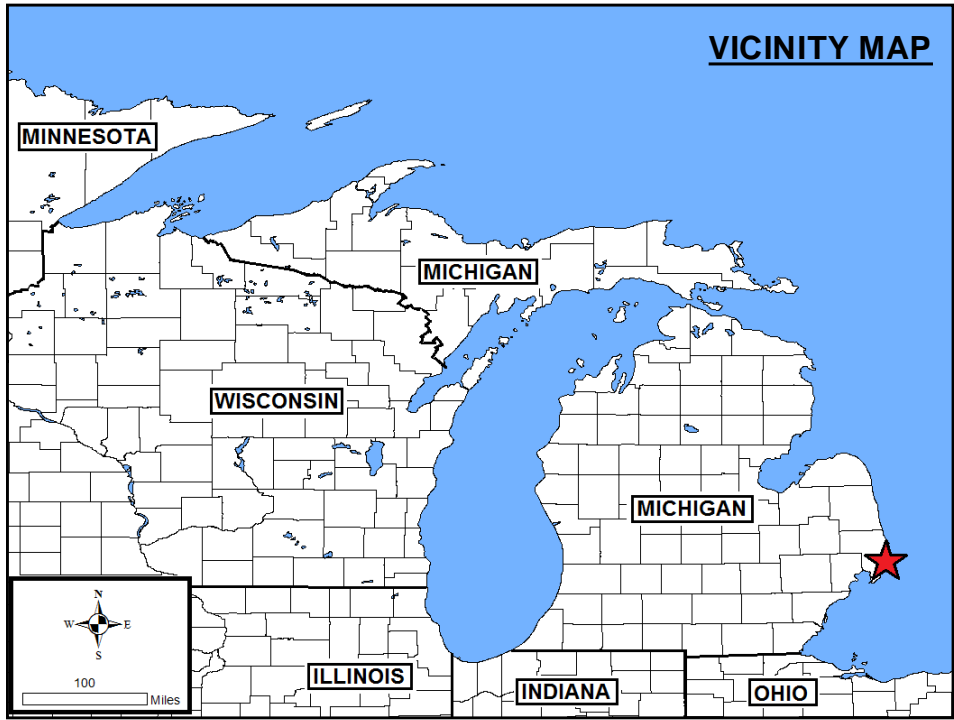
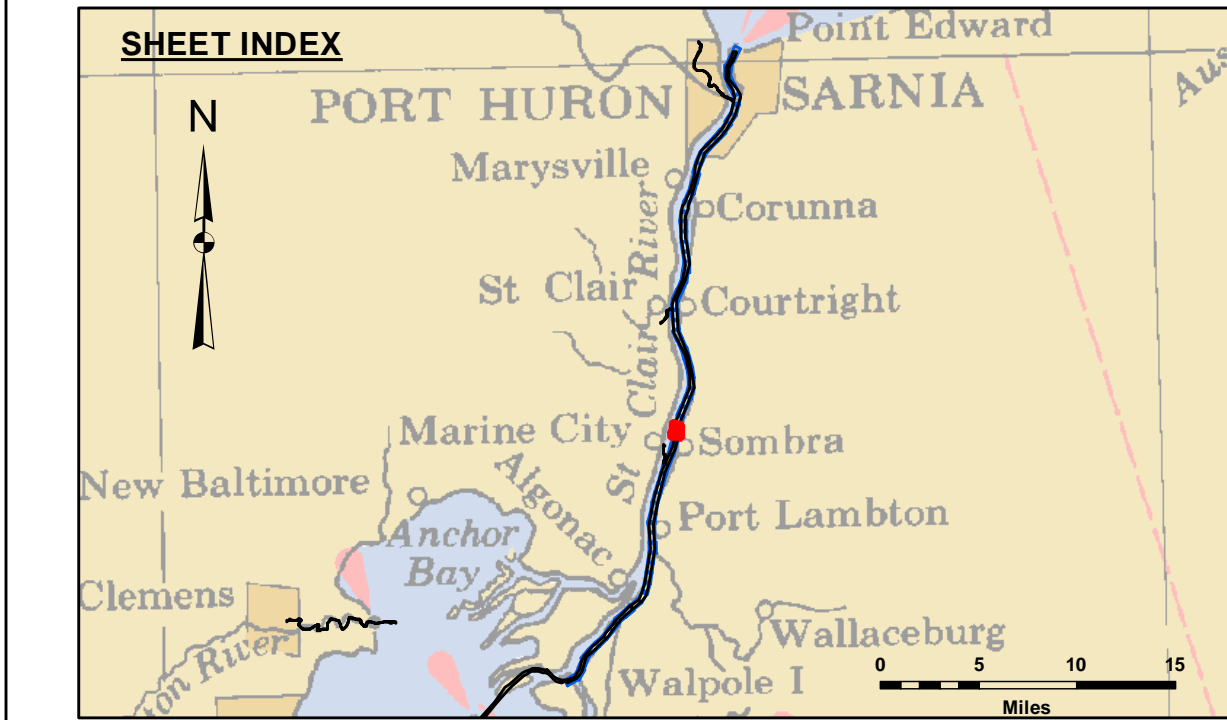
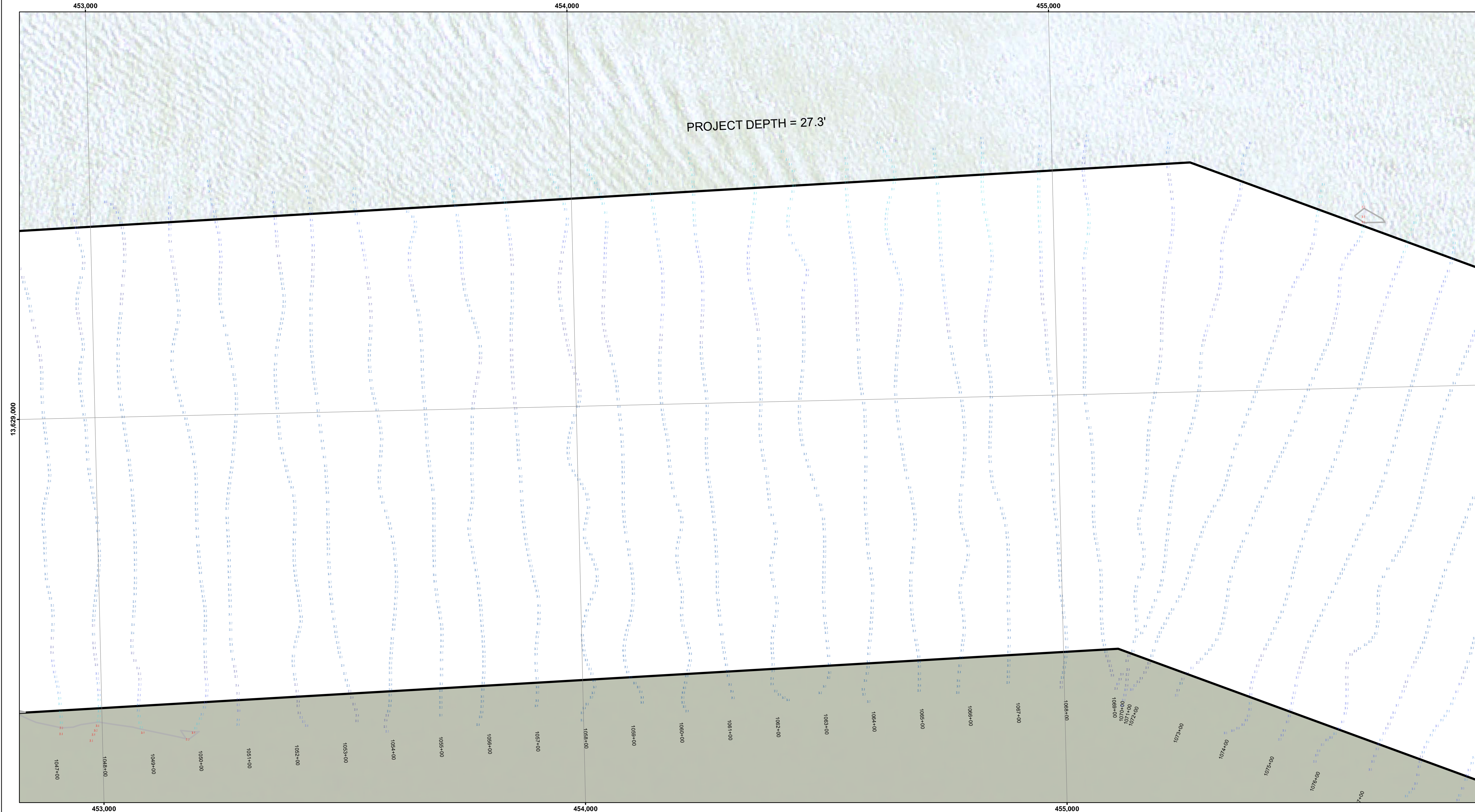
St. Clair River, MI
St Clair River
CR_01_SCR_20200806_CS
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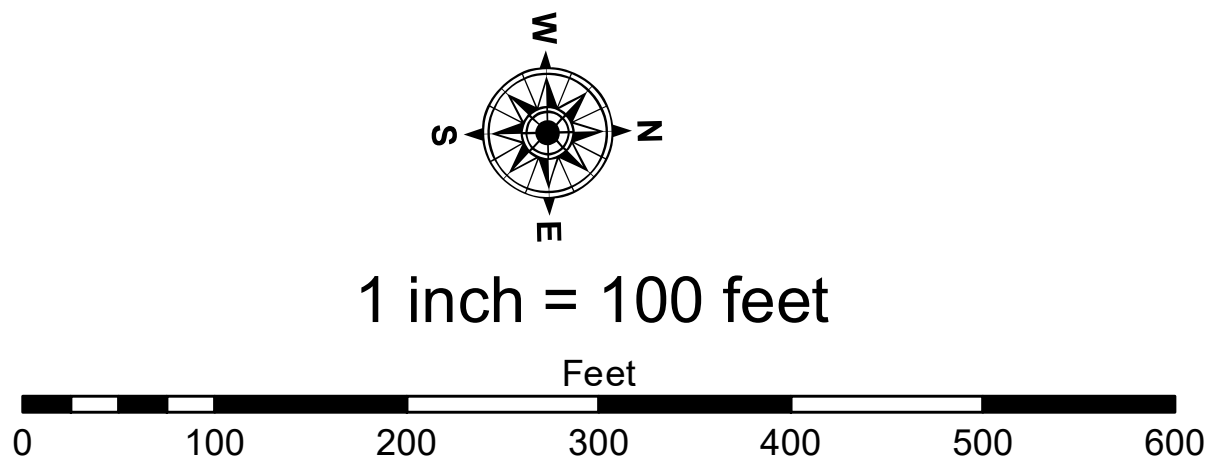






- LEGEND**
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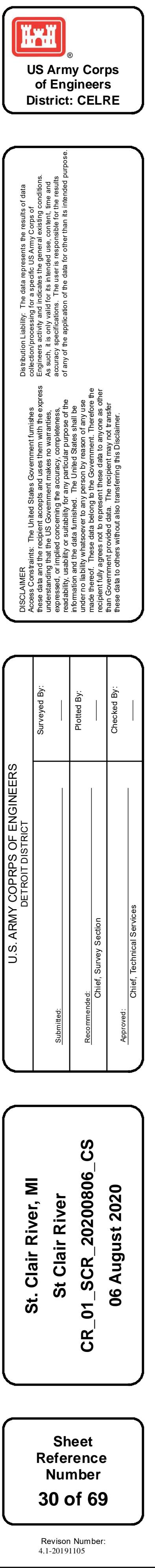
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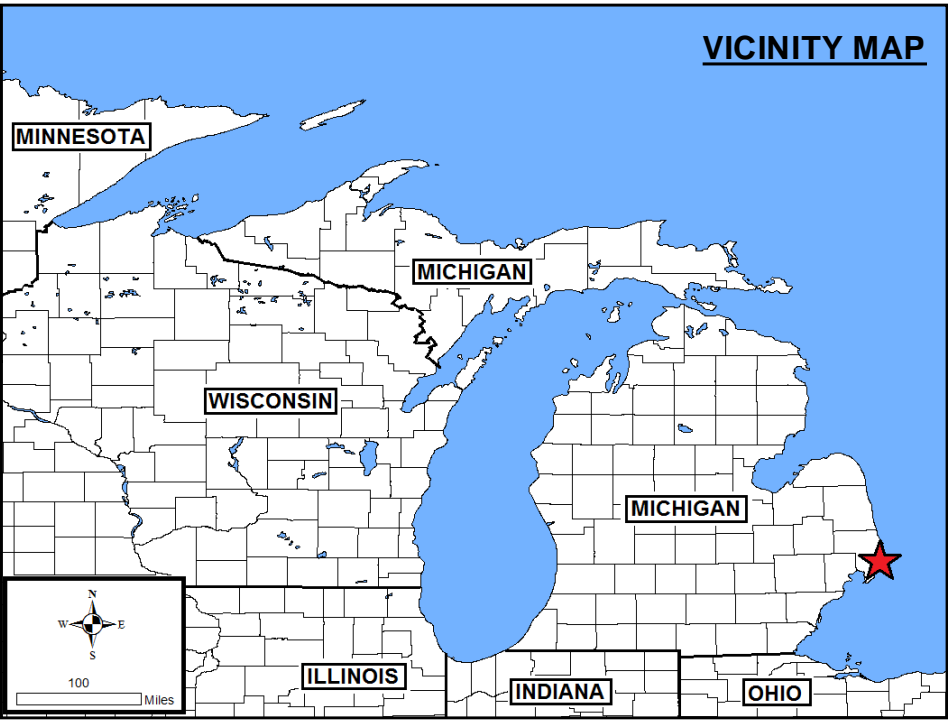
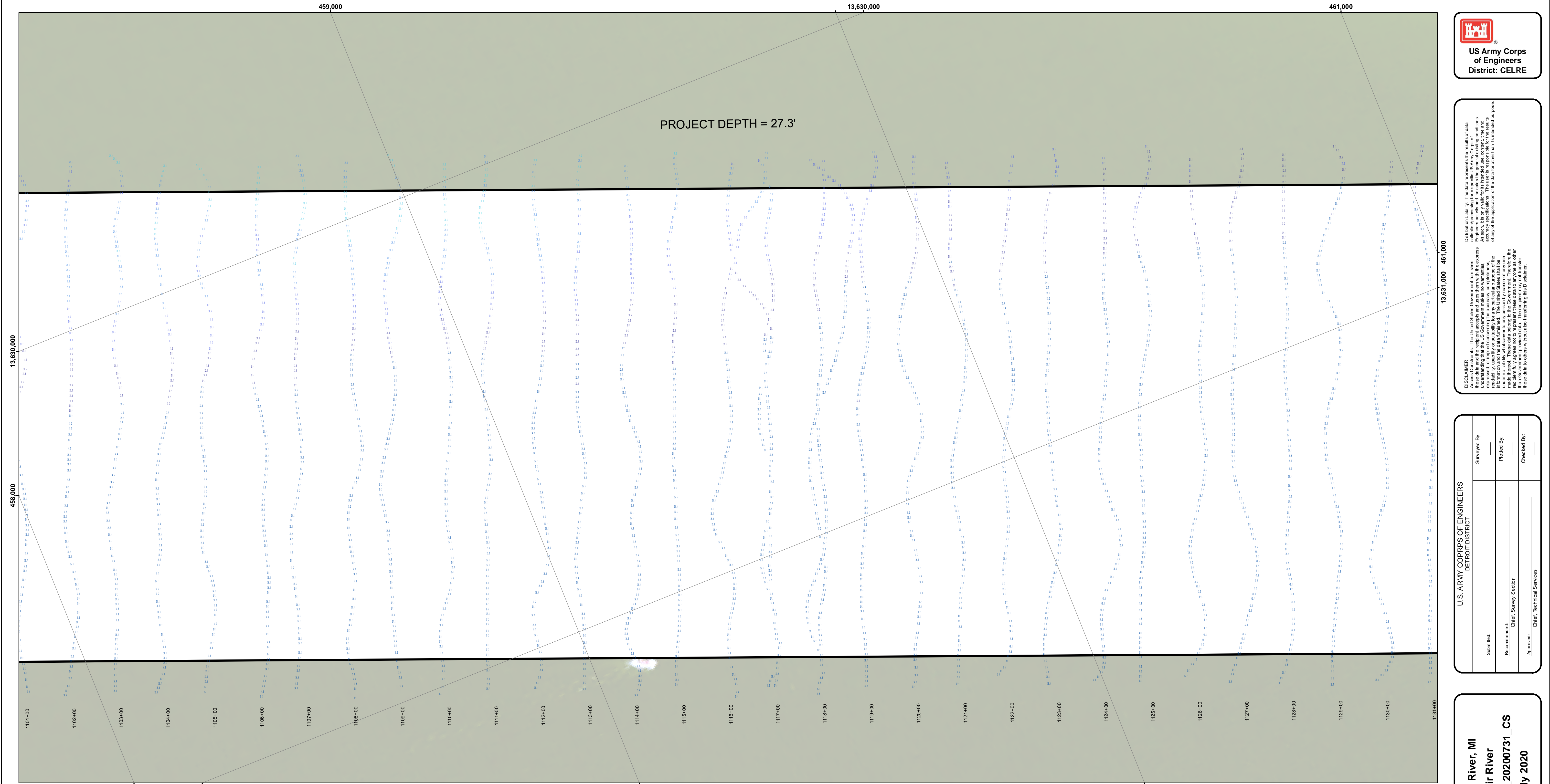
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	Recommended:	Plotted By:
	Approved:	Checked By:

St. Clair River, MI
St Clair River
CR_01_SCR_20200806_CS
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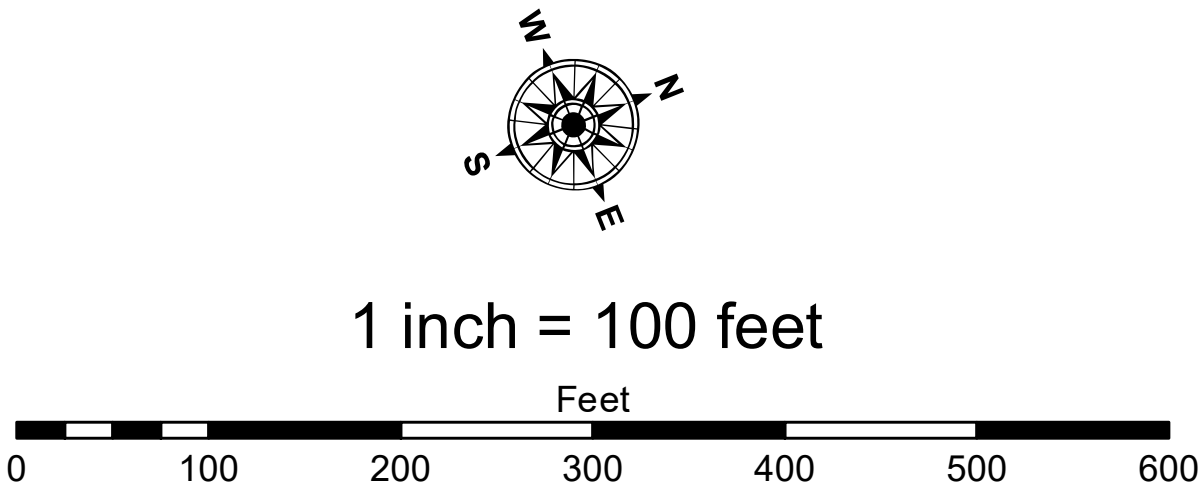
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- LEGEND**
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SOFTWARE: HYPACK

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TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) WATER LEVEL STATIONS:
ST CLAIR SHORES, MI (#9034052)
ALGONAC, MI (#9014070)
ST CLAIR POLICE, MI (#9014080)
BLACK RIVER, MI (#9014090)
DRY DOCK, MI (#9014087)
DUNN PAPER, MI (#9014096)

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



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APPROVALS:

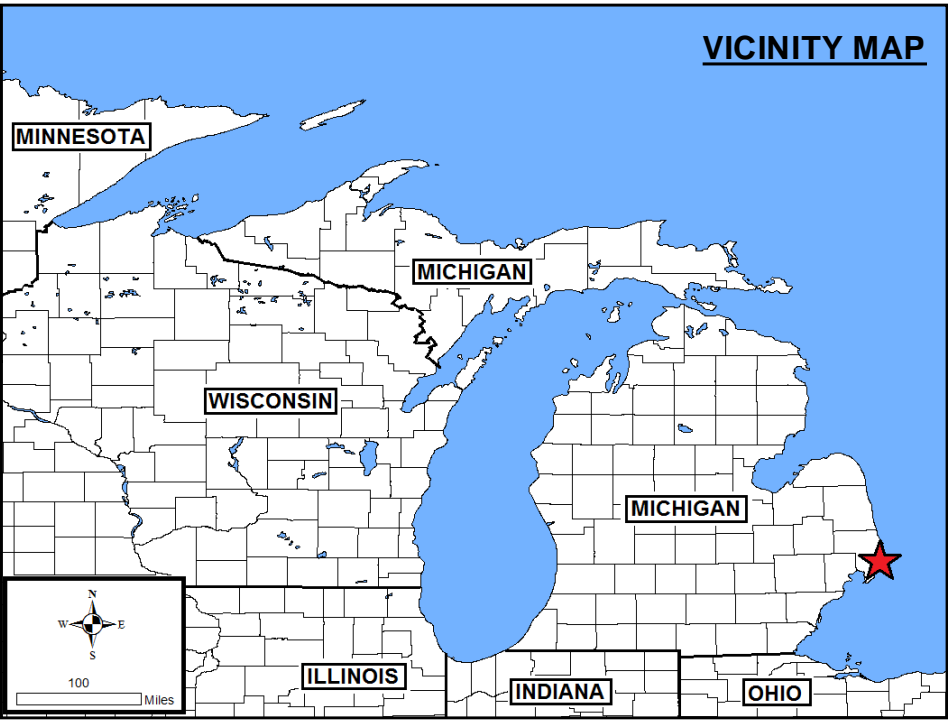
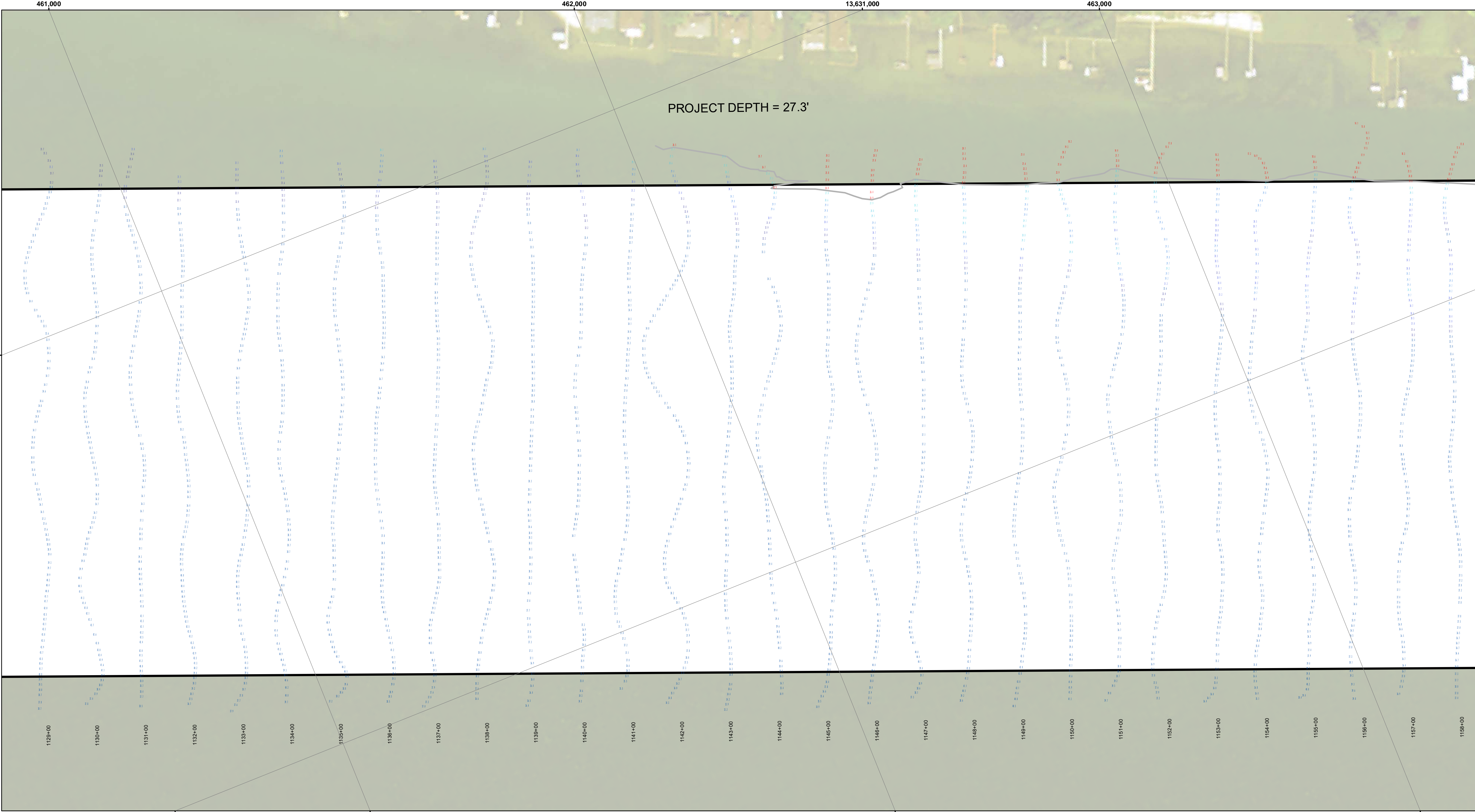
Surveyed By:	Plotted By:	Checked By:
Submitted:	Recommended:	Approved:
Chief, Technical Services		

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

St. Clair River, MI
St. Clair River
CR_01_SCR_20200731_CS
31 July 2020

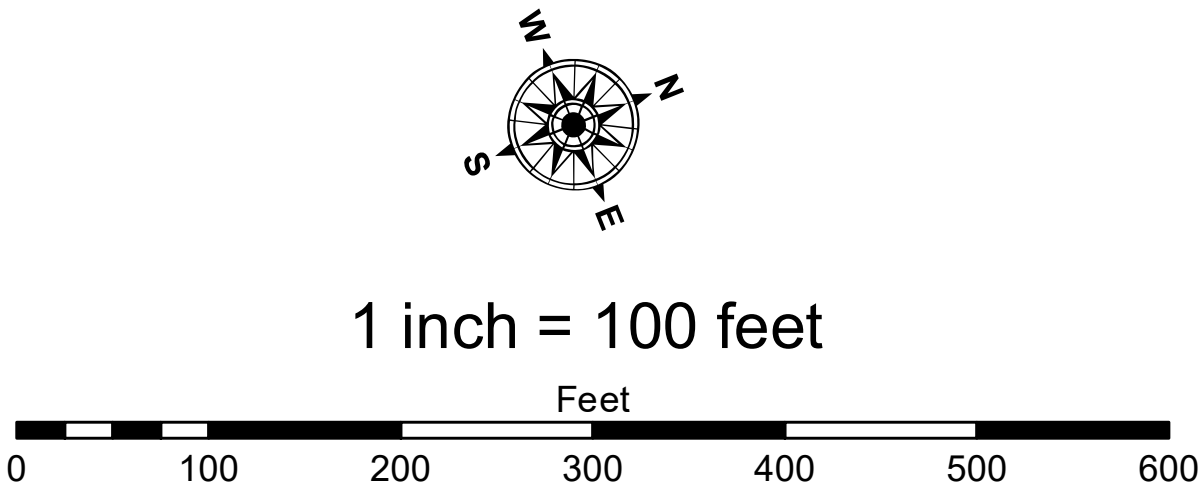
Sheet Reference Number
31 of 69

Revision Number:
4.1-20191105



- 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:

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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.

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

ALL SOUNDINGS ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM OF 1985 (IGLD85). L.W.D. AS INDICATED. PROJECT DEPTHS FOR THIS RIVER RANGE FROM 27.1' TO 30.0'

WATER LEVEL STATIONS:
ST CLAIR SHORES (19034052)
ALGONAC, MI (19014070)
ST CLAIR POLICE, MI (19014080)
BLACK RIVER, MI (19014090)
DRY DOCK, MI (19014087)
DUNN PAPER, MI (19014096)

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



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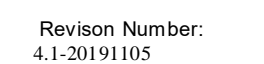
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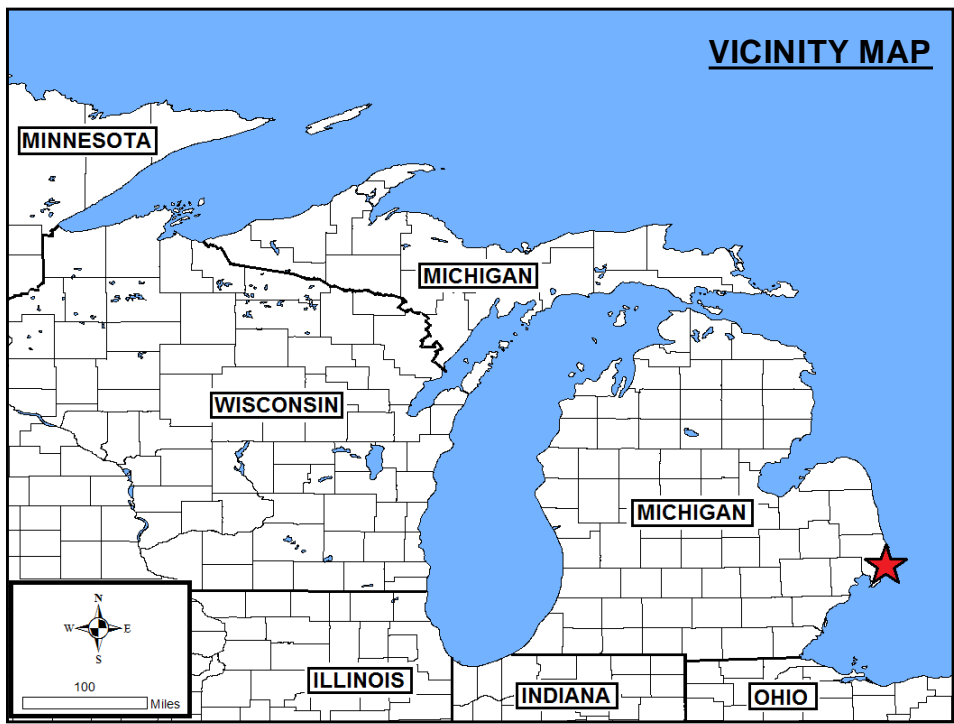
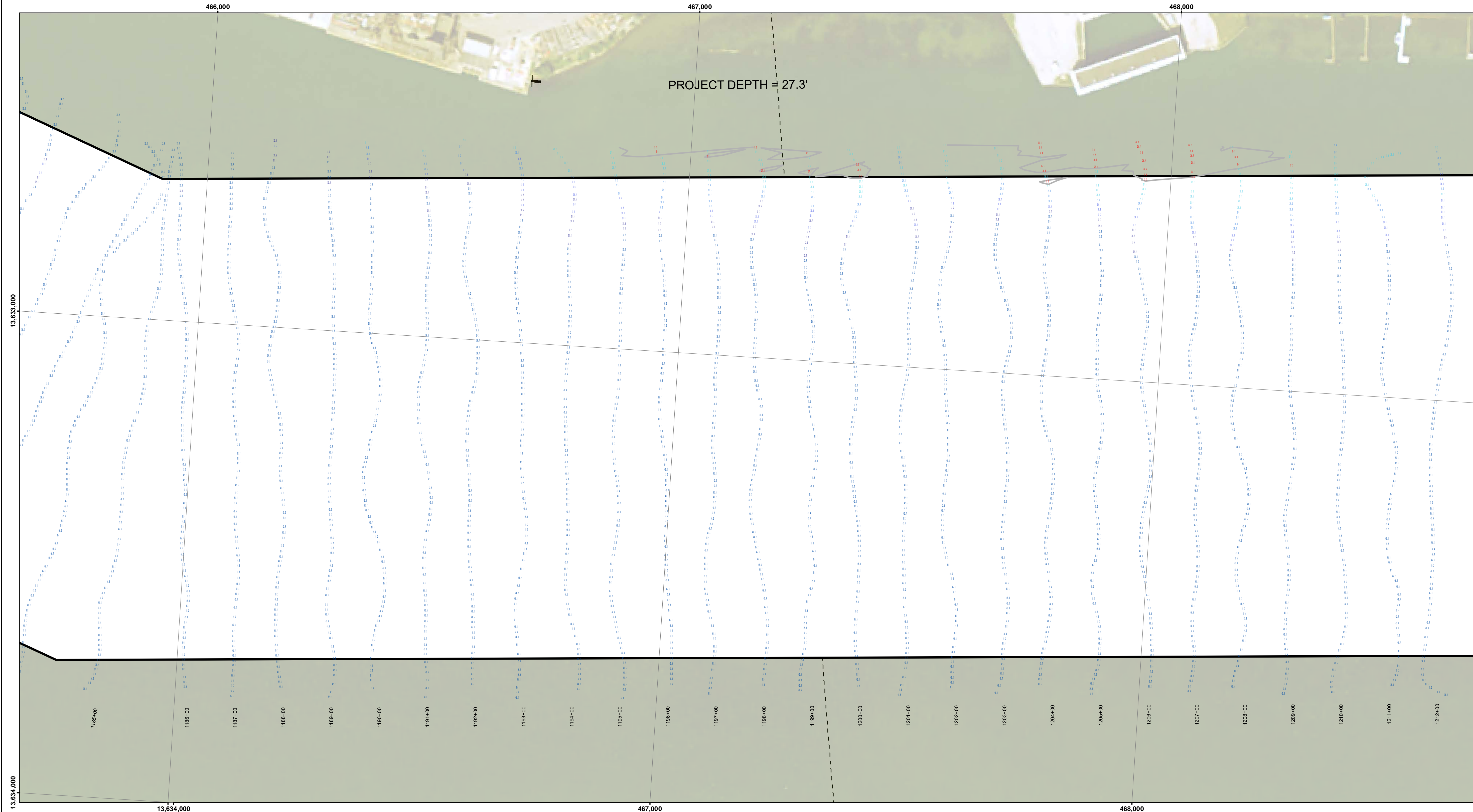
Submitted:	U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
	Surveyed By:		
	Plotted By:		
	Checked By:		

St. Clair River, MI
St Clair River
CR_01_SCR_20200731_CS
31 July 2020

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Reference
Number
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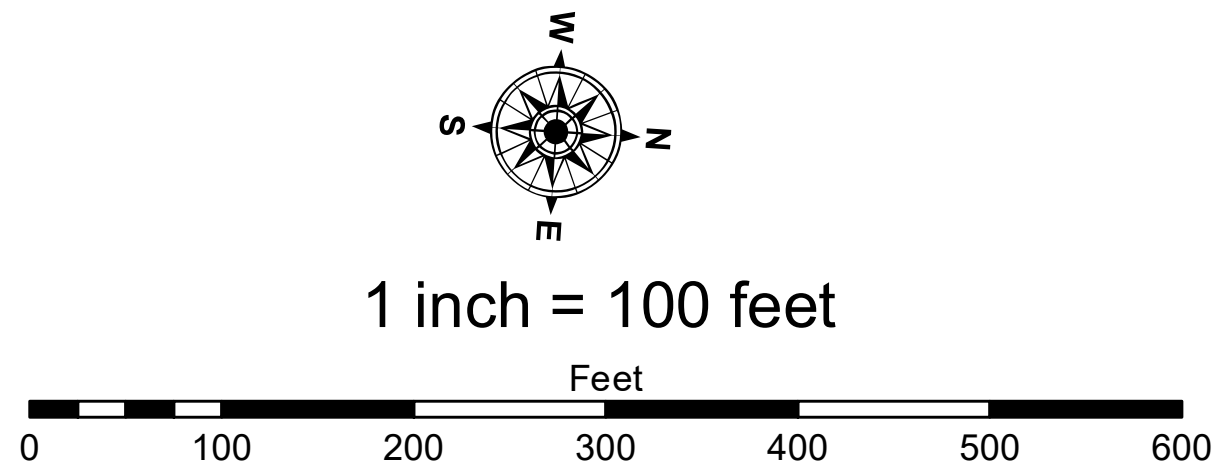
Revision Number:
4.1-20191105





- LEGEND**
- Cable Submarine
 - - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel Limits

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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

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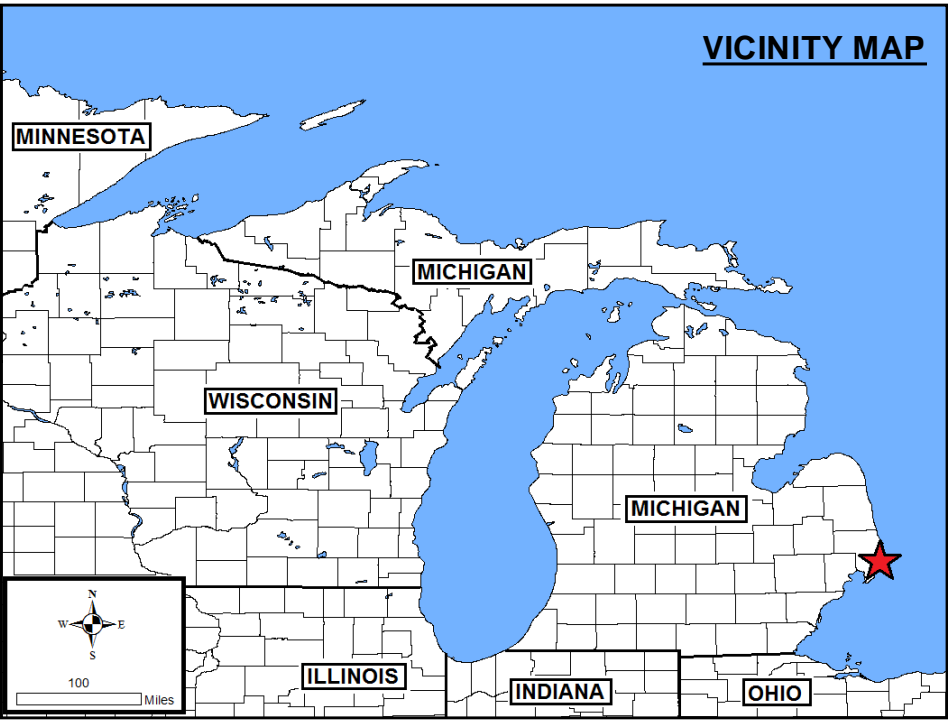
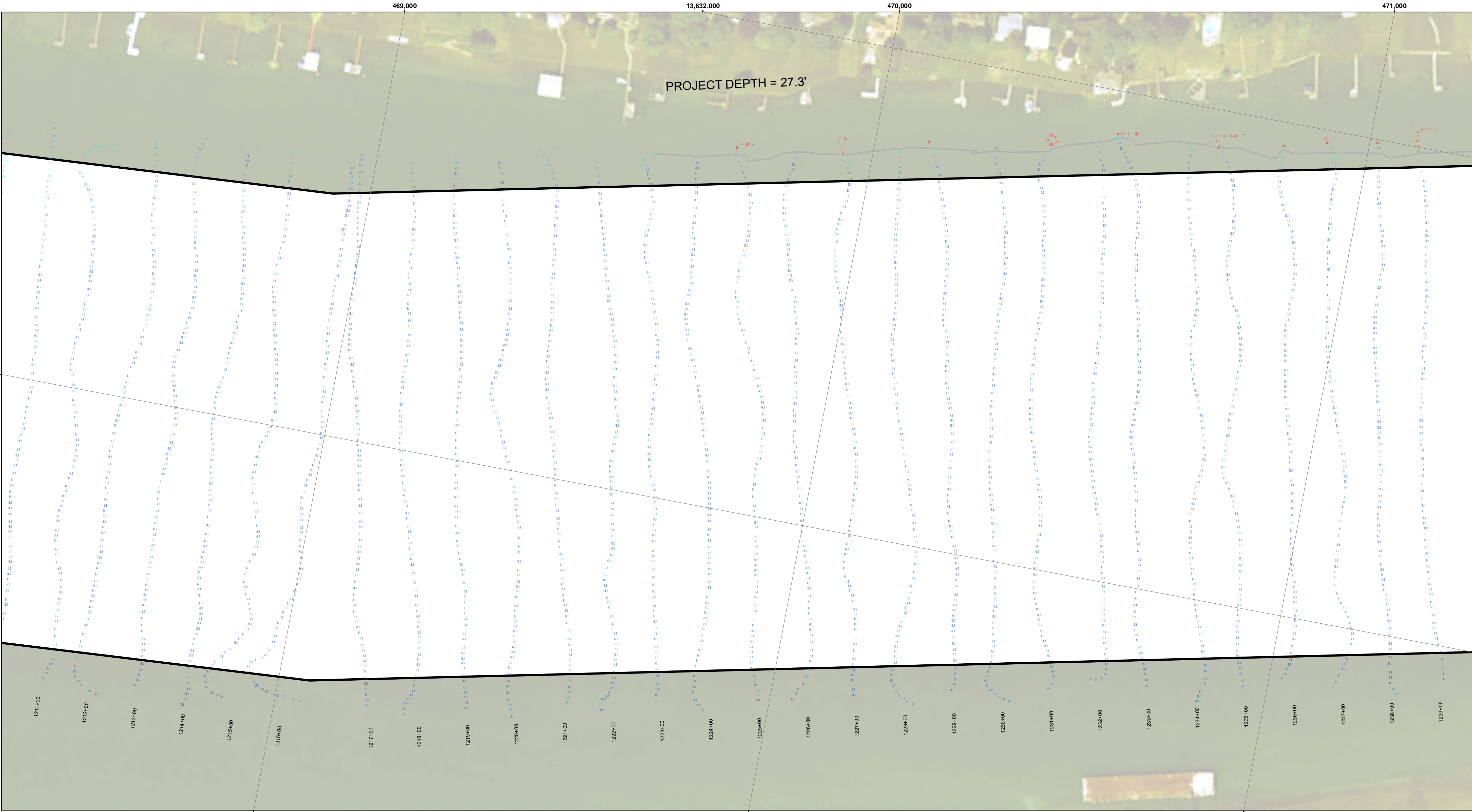
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Submitted:	Surveyed By:	
	Plotted By:	
Recommended:	Checked By:	
Chief, Survey Section	Chief, Technical Services	

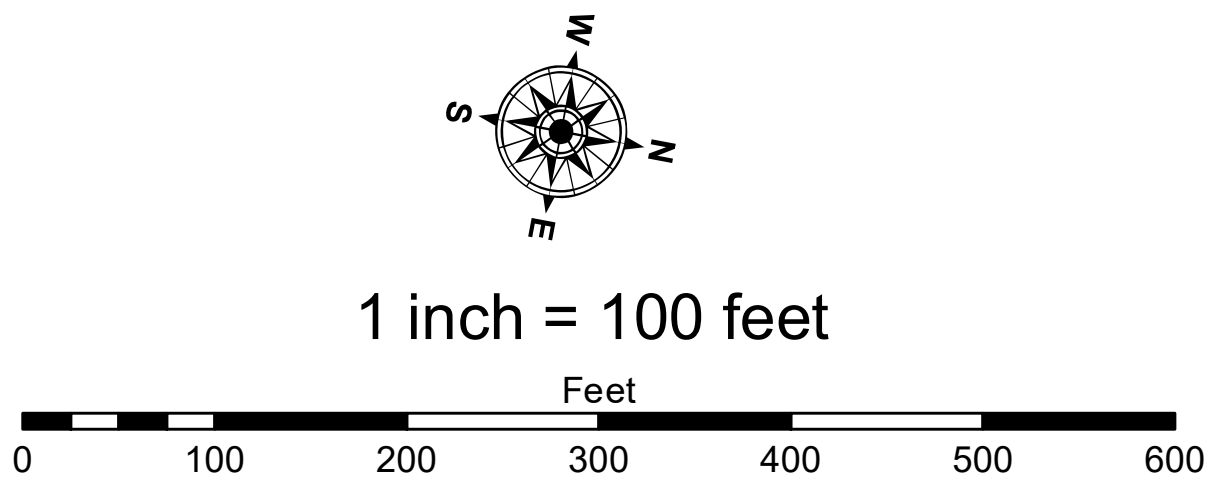
St. Clair River, MI
St Clair River
CR_01_SCR_20200731_CS
31 July 2020

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Number
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- LEGEND**
- Cable Submarine
 - - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel Limits

- SOUNDING LEGEND**
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MOTION COMPENSATION: APPLANIX POS-MV4
SONAR: R2SONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
SOFTWARE: HYPACK

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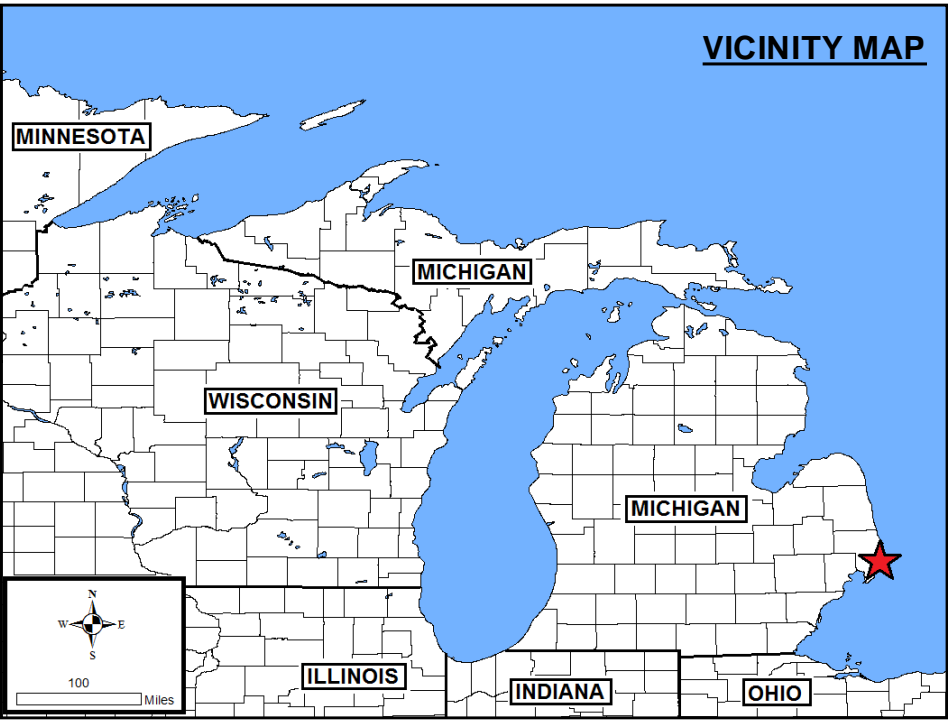
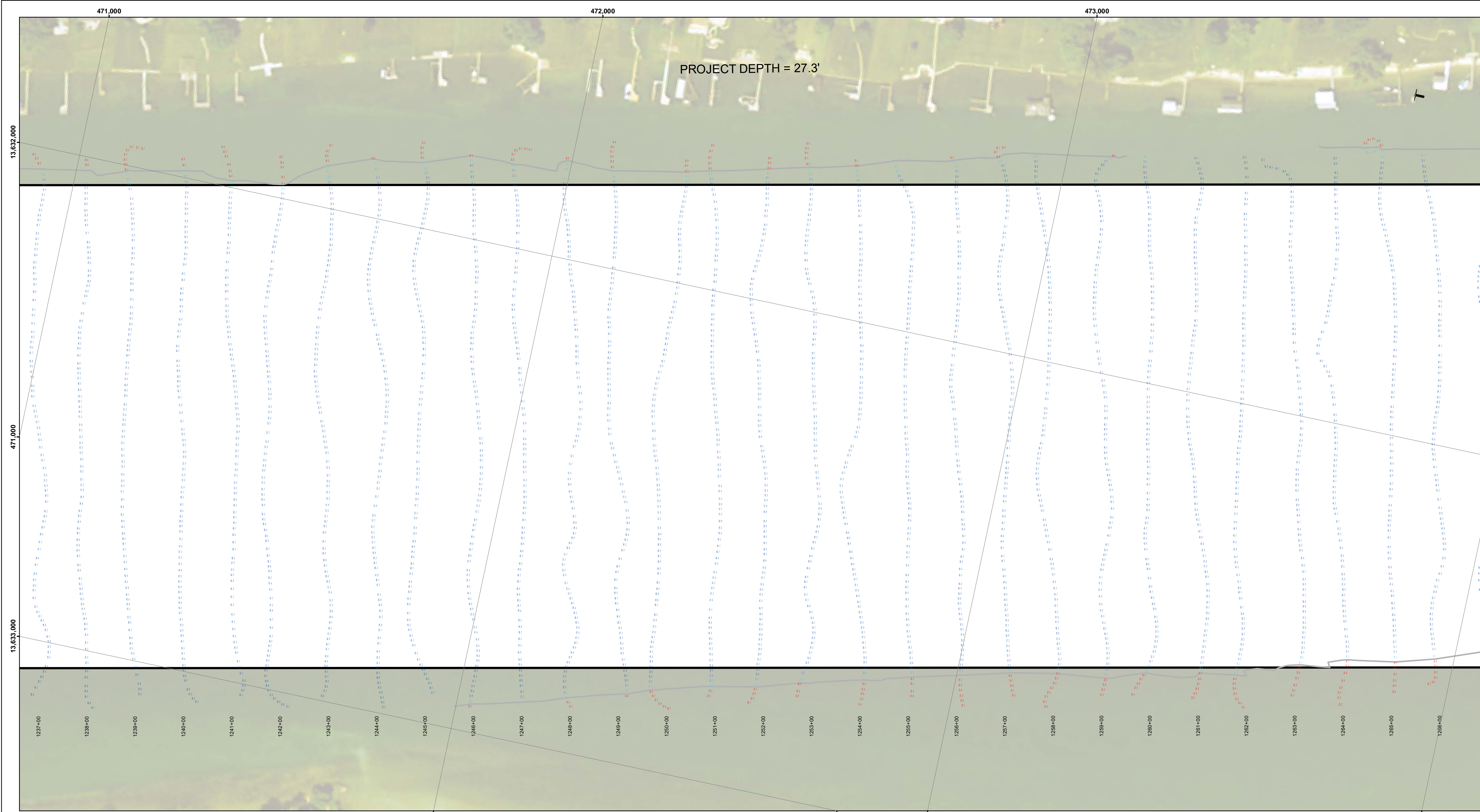


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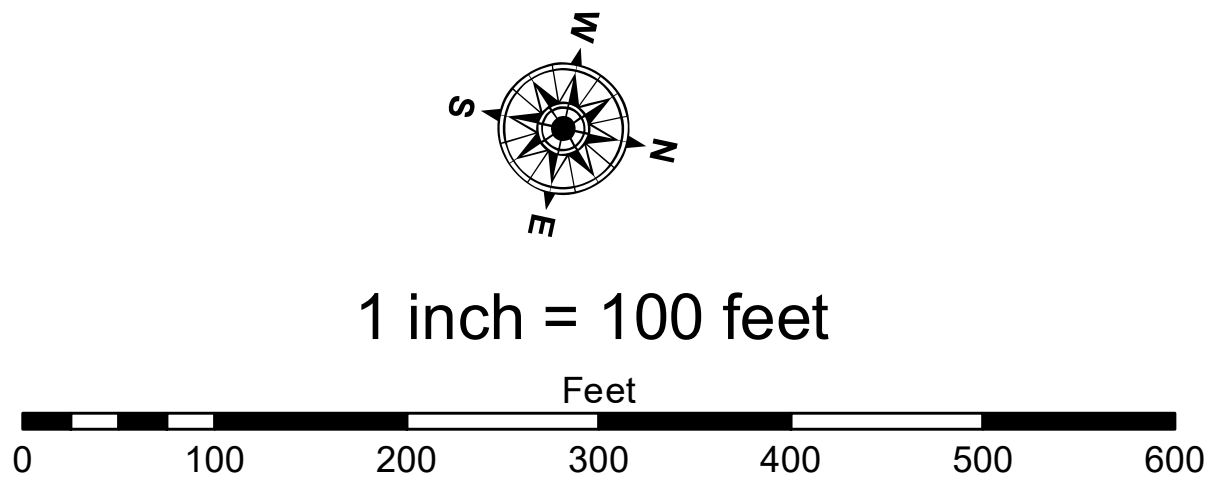
U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	Surveyed By:
	Plotted By:
	Checked By:
	Submitted:
St. Clair River, MI St Clair River CR_01_SCR_20200731_CS 31 July 2020	Recommended: Chief, Survey Section
	Approved: Chief, Technical Services

Sheet Reference Number
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- LEGEND**
- Cable Submarine
 - - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel Limits

- SOUNDING LEGEND**
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Submitted: _____

Recommended: Chief, Survey Section

Approved: Chief, Technical Services

Surveyed By: _____

Plotted By: _____

Checked By: _____

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

St. Clair River, MI
St. Clair River
CR_01_SCR_20200731_CS
31 July 2020

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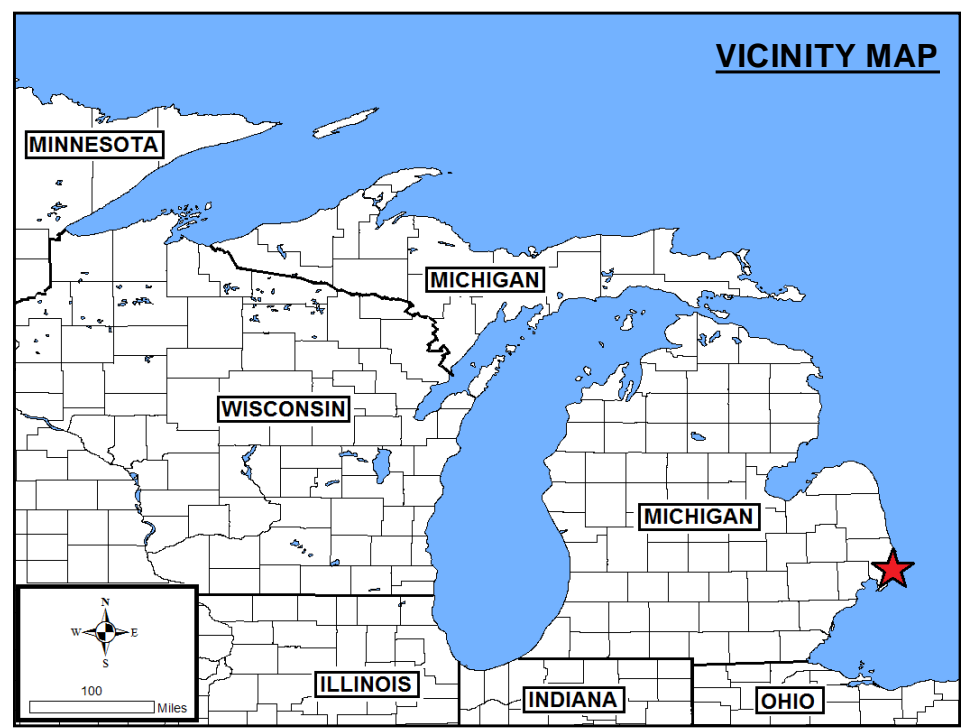
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Submitted: _____	Surveyed By: _____
Recommended: Chief, Survey Section _____	Plotted By: _____
Approved: Chief, Technical Services _____	Checked By: _____

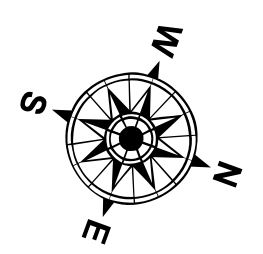
St. Clair River, MI
St Clair River
CR_01_SCR_20200731_CS
31 July 2020

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Reference
Number
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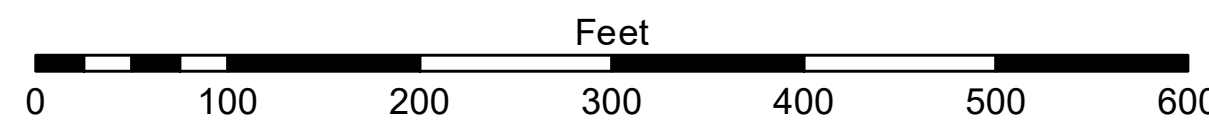
Revision Number:
4.1-20191105

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

- SOUNDING LEGEND**
- | | |
|---|-------------------------|
|  | LESS THAN PROJECT DEPTH |
|  | PROJECT DEPTH |
|  | PROJECT DEPTH +1' |
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1 inch = 100 feet



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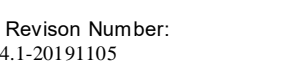
HORIZONTAL GRID DATUM BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983, U.S. SURVEY FOOT.

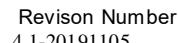
POSITIONING: APPLANIX POS-MV4 W/ VRS/RTK OR MARINESTAR GNSS.
MOTION COMPENSATION: APPLANIX POS-MV4
SONAR: R2SONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
SOFTWARE: HYPACK

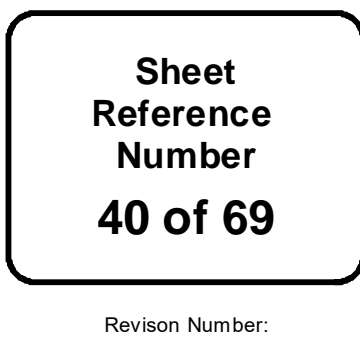
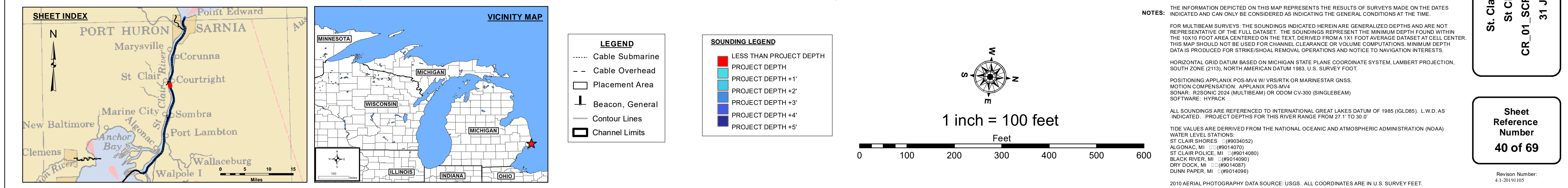
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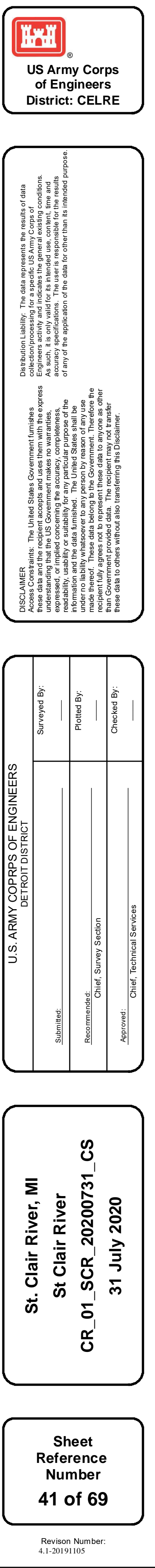
TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)
WATER LEVEL STATIONS:
ST CLAIR SHOES □(#9034052)
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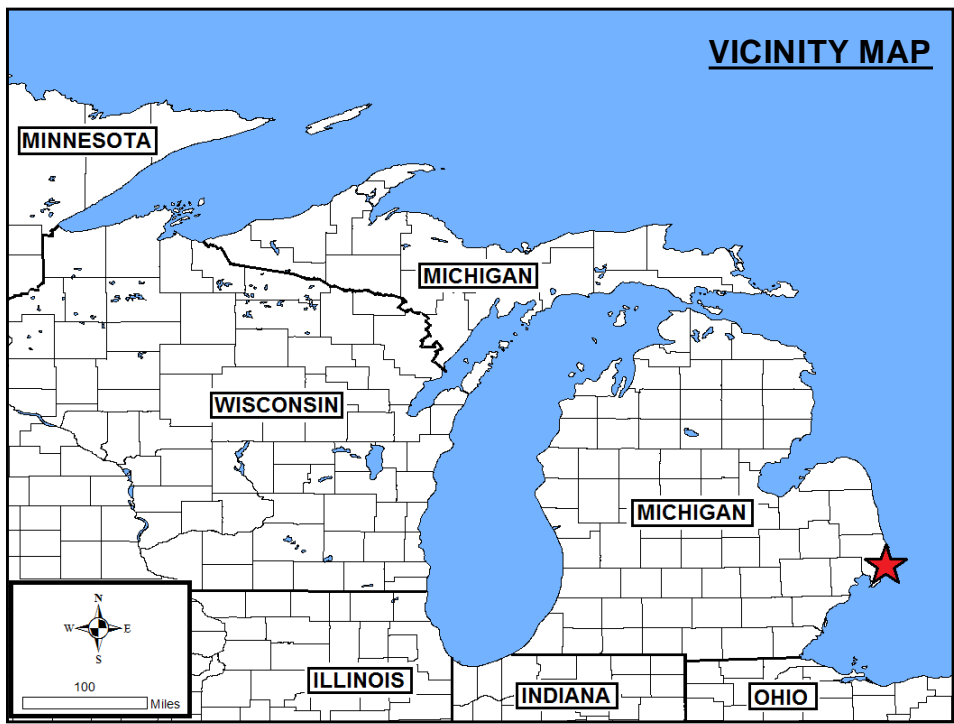
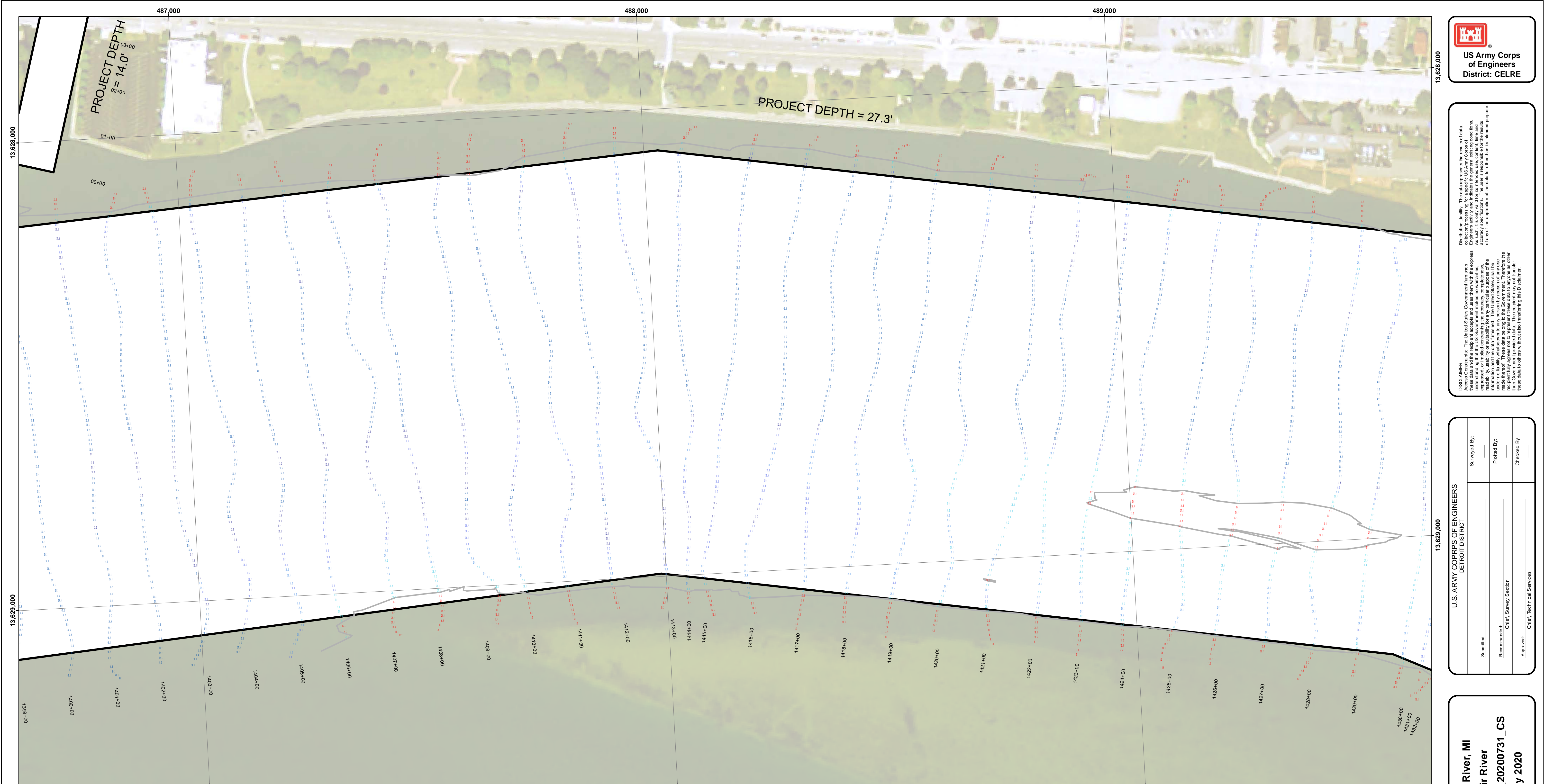
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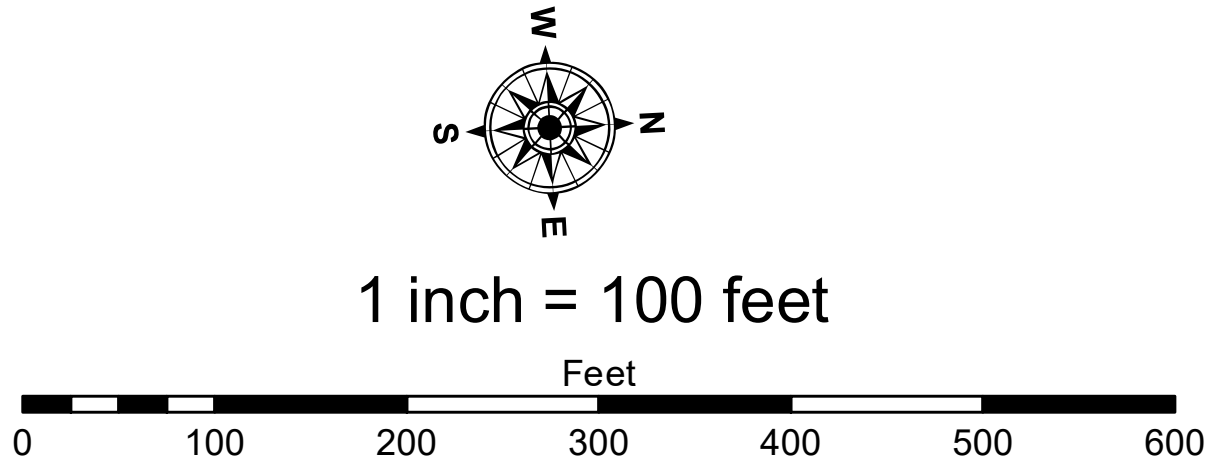






- LEGEND**
- Cable Submarine
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- LESS THAN PROJECT DEPTH
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DUNN PAPER, MI (#9014096)

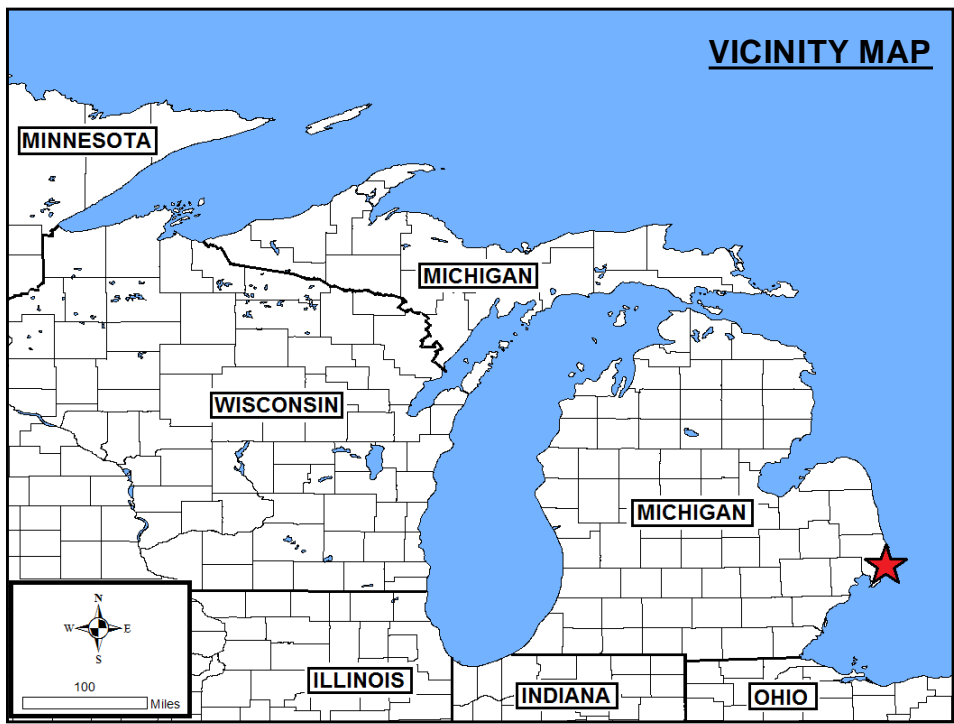
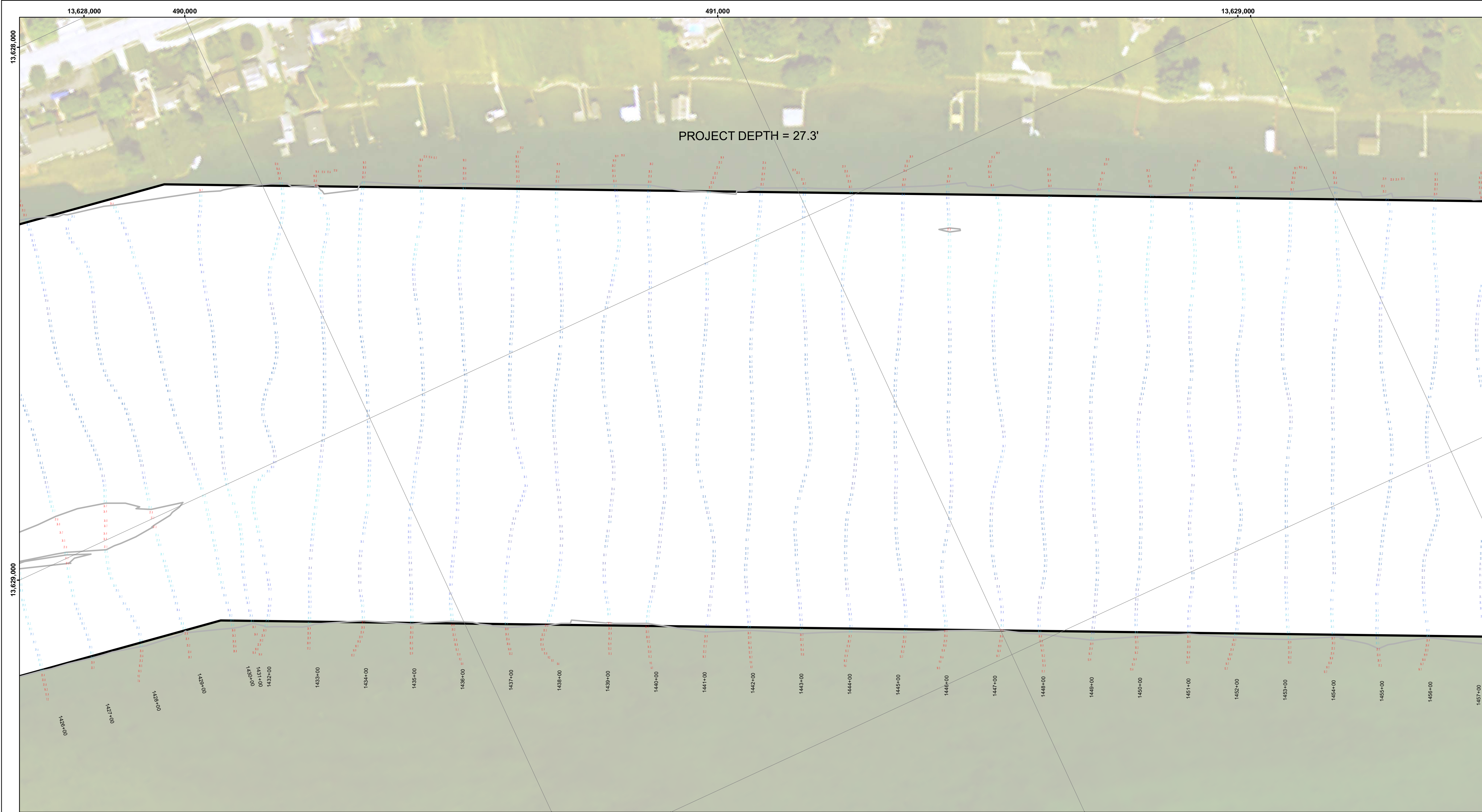
2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS. ALL COORDINATES ARE IN U.S. SURVEY FEET.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

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

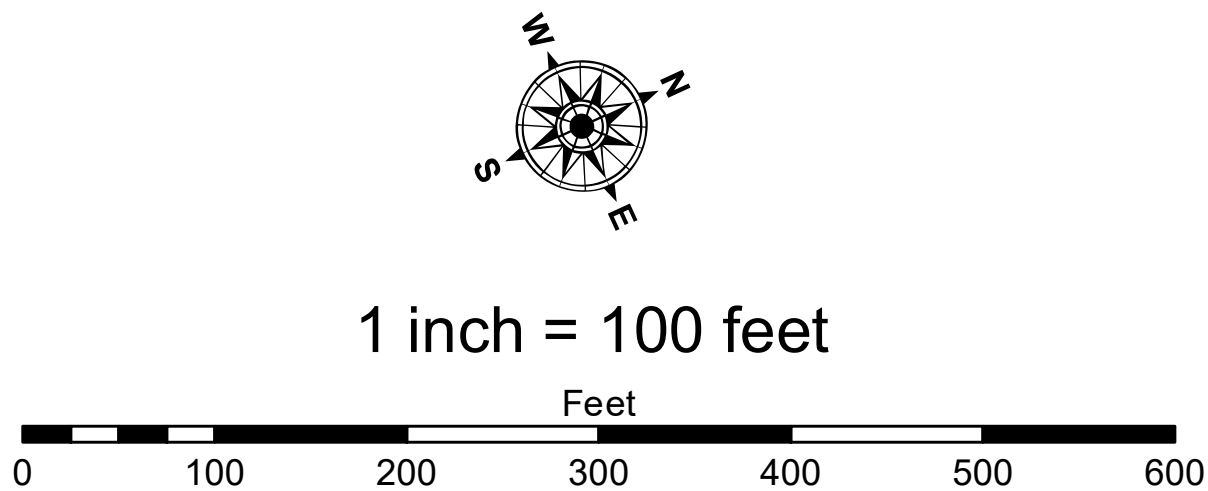
St. Clair River, MI
St. Clair River
CR_01_SCR_20200731_CS
31 July 2020

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

ALL SOUNDINGS ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM OF 1985 (IGLD85). L.W.D. AS INDICATED. PROJECT DEPTHS FOR THIS RIVER RANGE FROM 27.1' TO 30.0'

WATER LEVEL STATIONS:
ST CLAIR SHORES (9034052)
ALGONAC, MI (9014070)
ST CLAIR POLICE, MI (9014080)
BLACK RIVER, MI (9014090)
DRY DOCK, MI (9014087)
DUNN PAPER, MI (9014096)

TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

St. Clair River, MI
St Clair River
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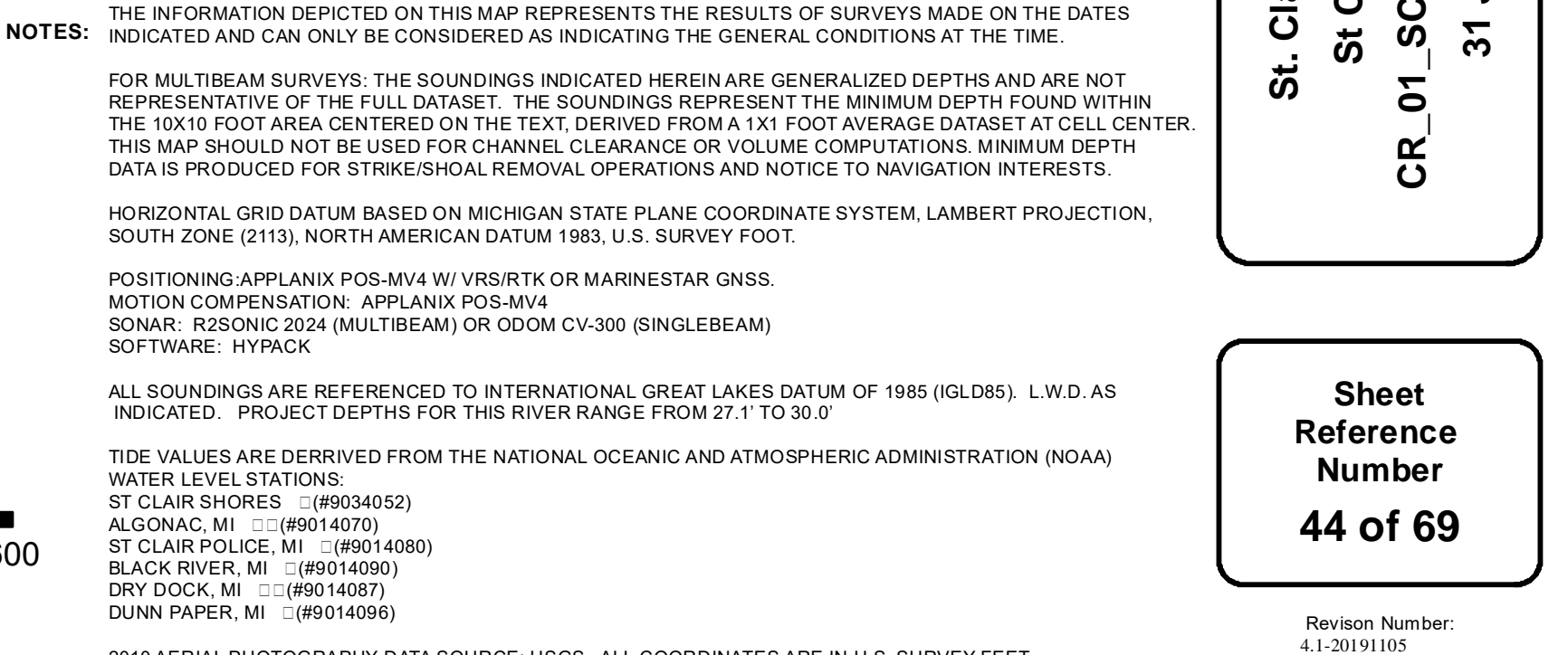
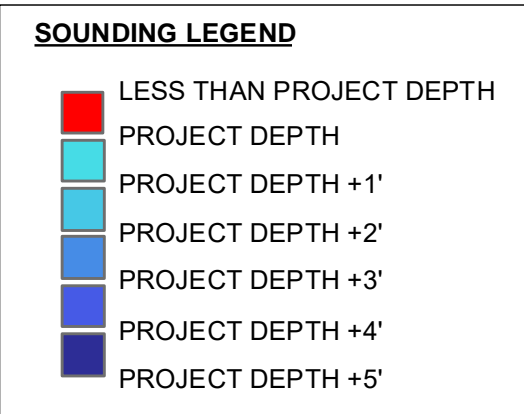
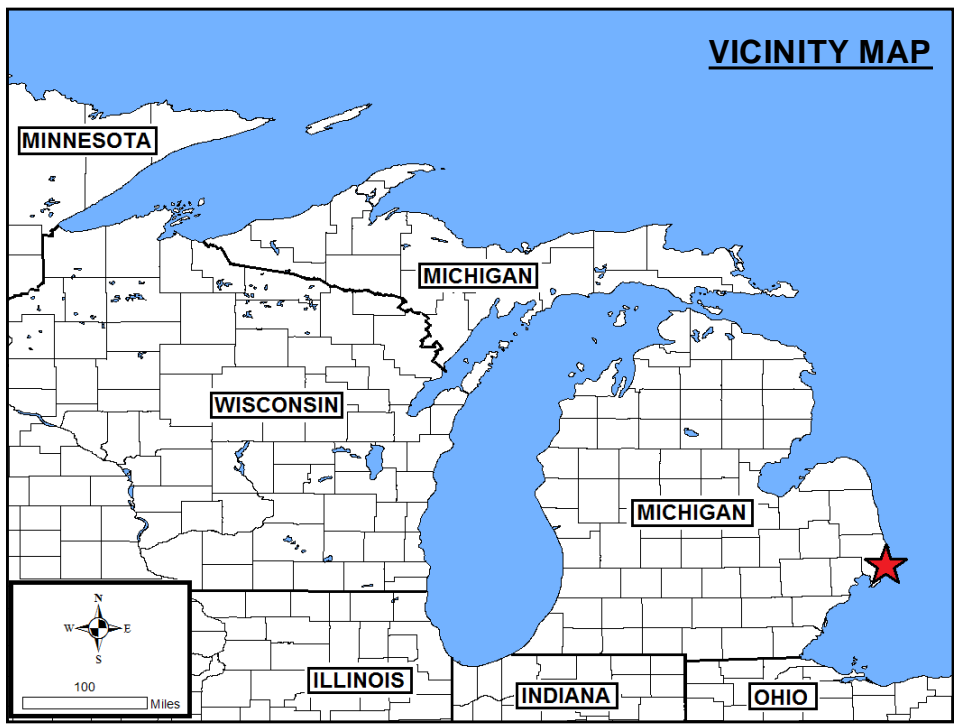
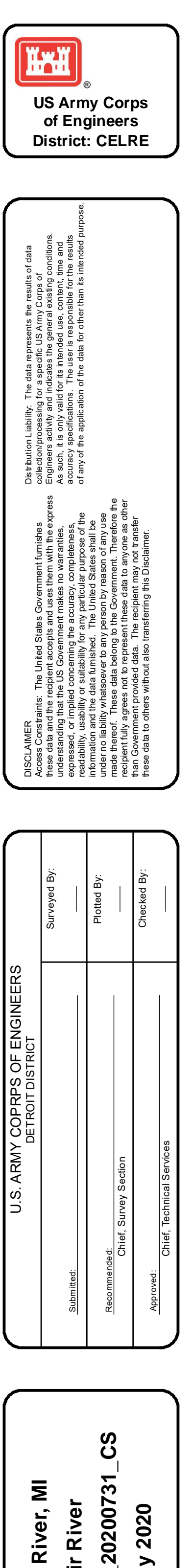
Submitted:	Surveyed By:	Filled By:	Checked By:	

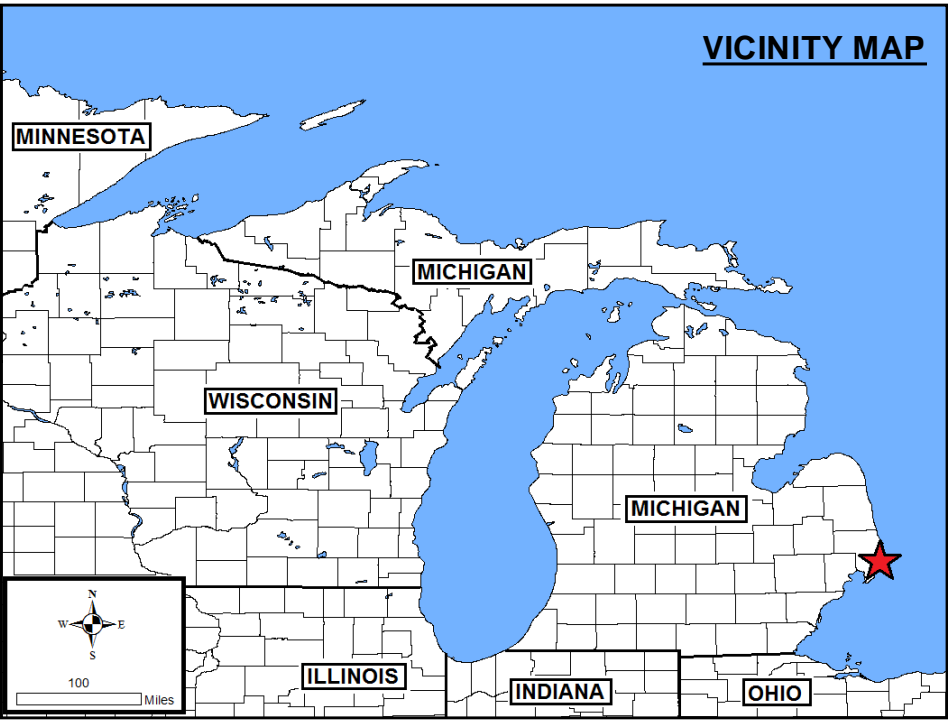
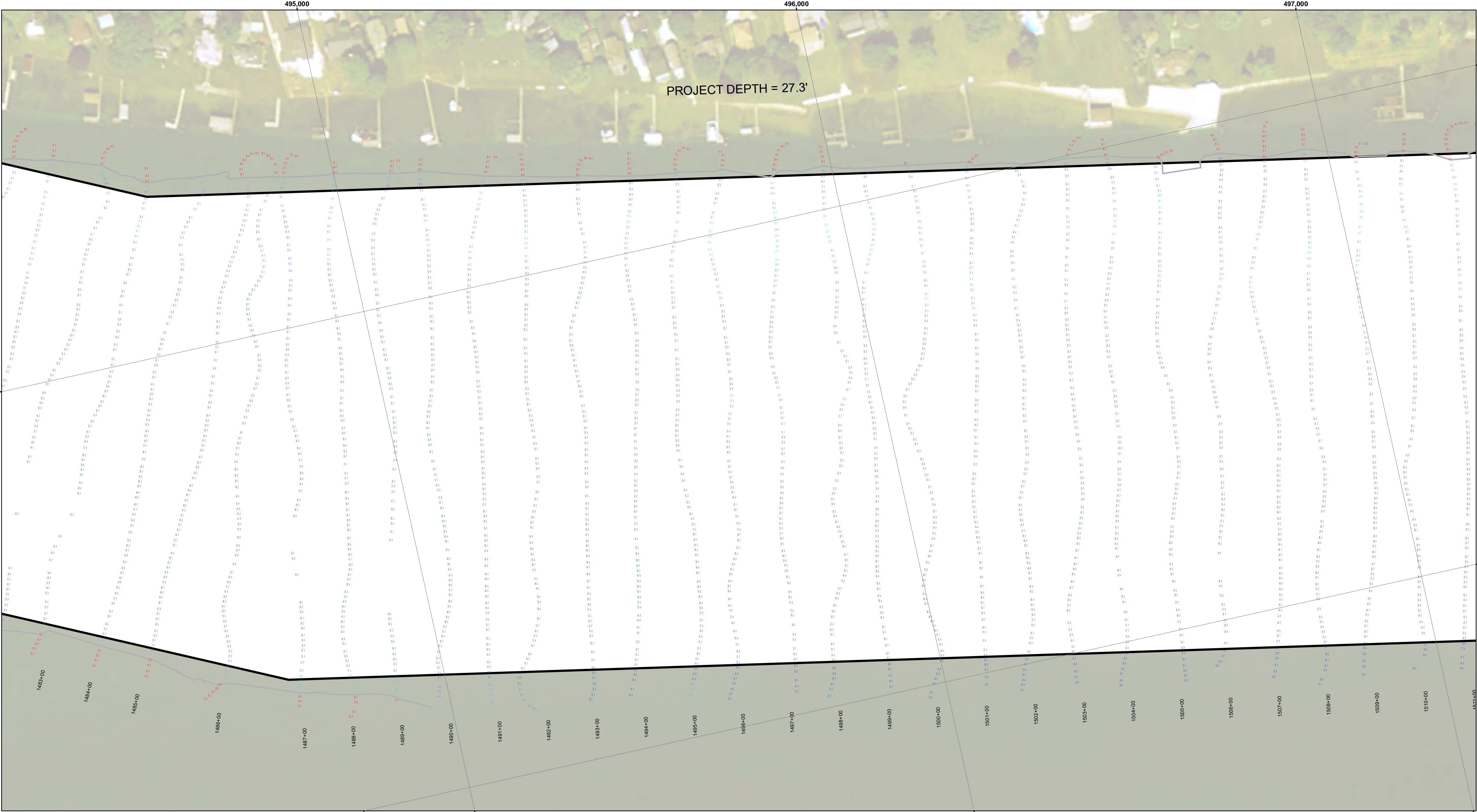
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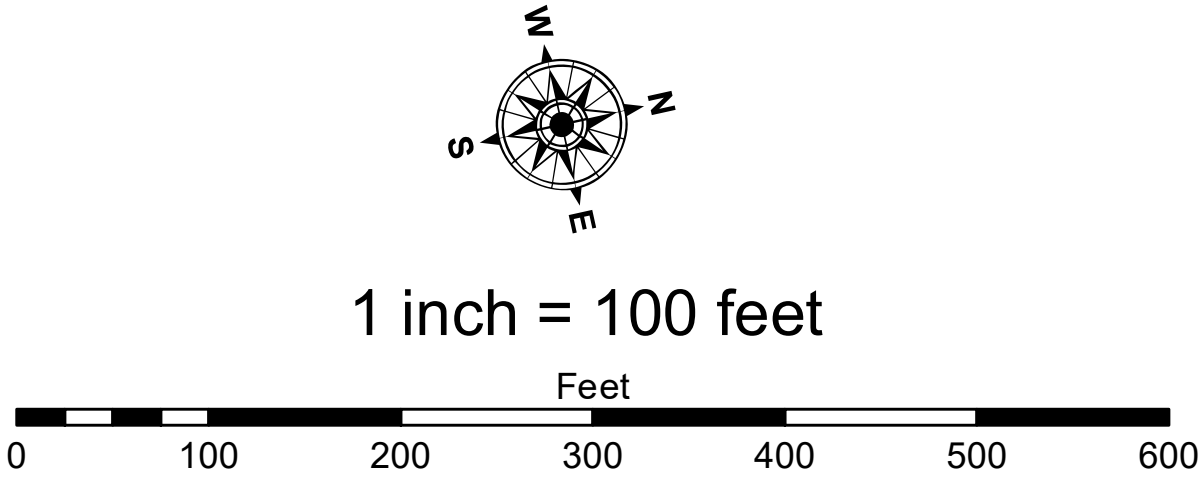






- LEGEND**
- Cable Submarine
 - - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel Limits

- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
 - PROJECT DEPTH
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 MOTION COMPENSATION: APPLANIX POS-MV4
 SONAR: R2SONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
 SOFTWARE: HYPACK

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 ST CLAIR SHORES (#9034052)
 ALGONAC, MI (#9014070)
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 BLACK RIVER, MI (#9014090)
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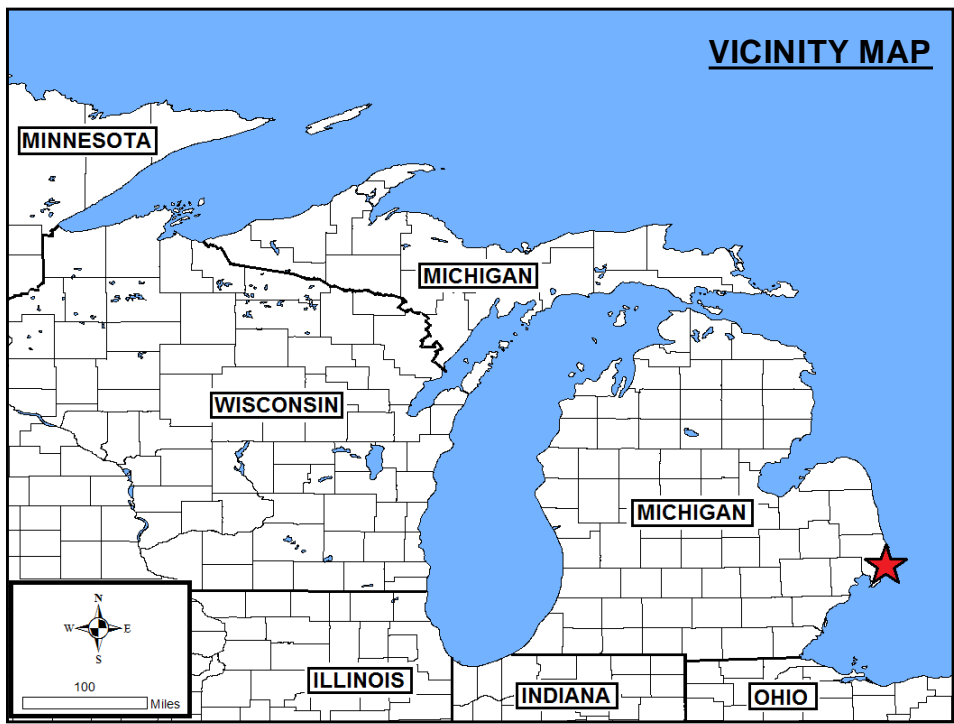
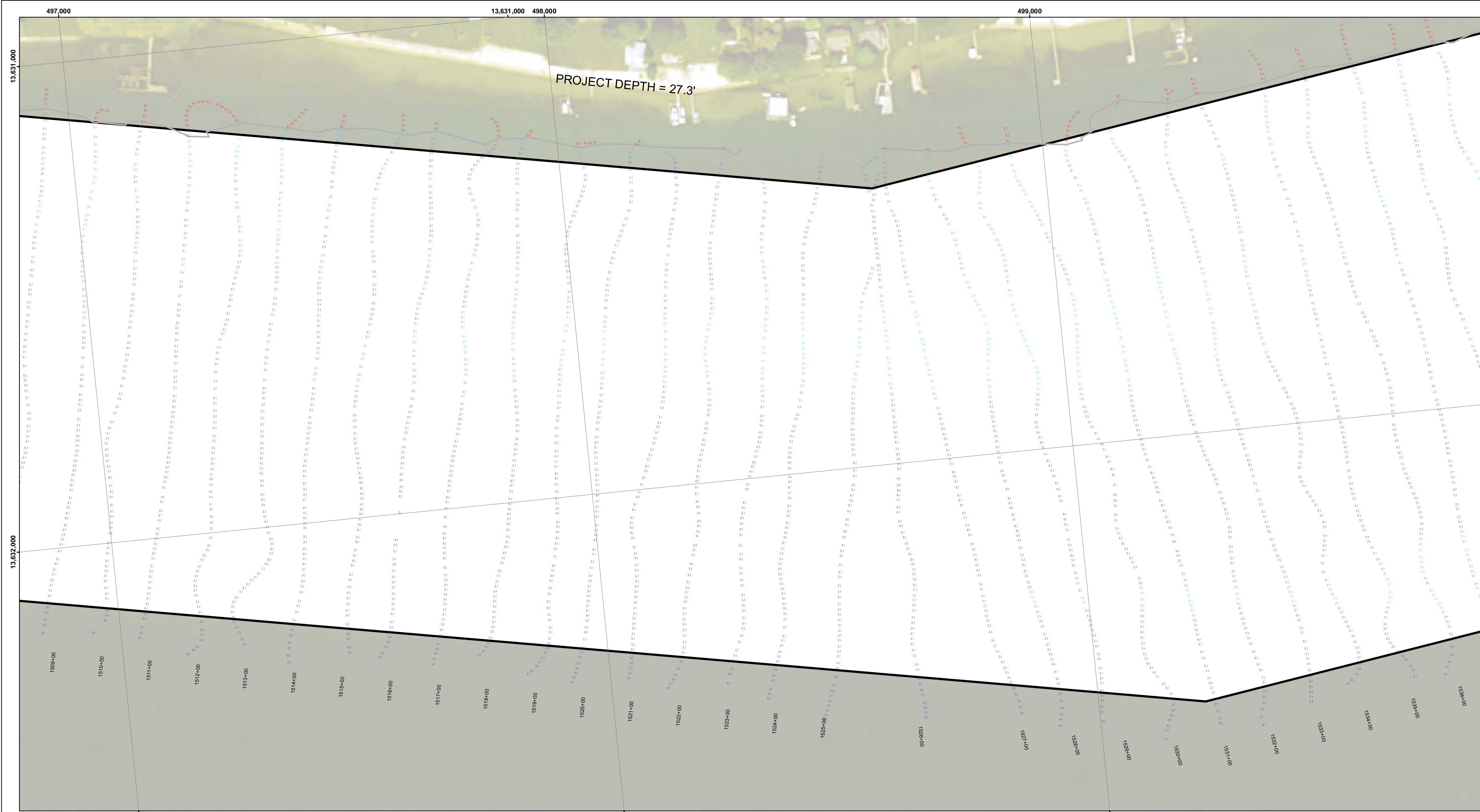
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Recommended:	Plotted By:
Approved:	Checked By:

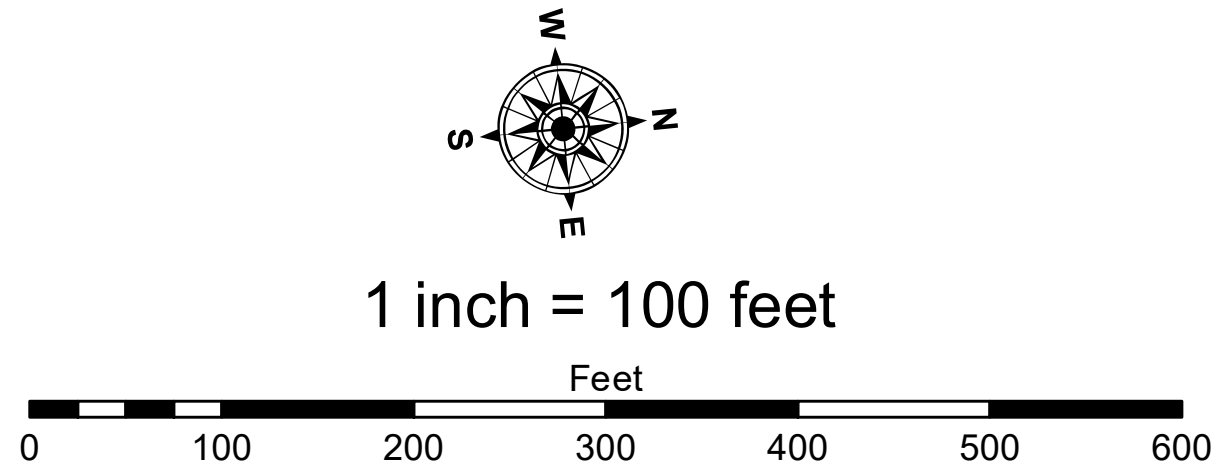
St. Clair River, MI
St Clair River
CR_01_SCR_20200731_CS
31 July 2020

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- LEGEND**
- Cable Submarine
 - - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
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 - ▭ Channel Limits

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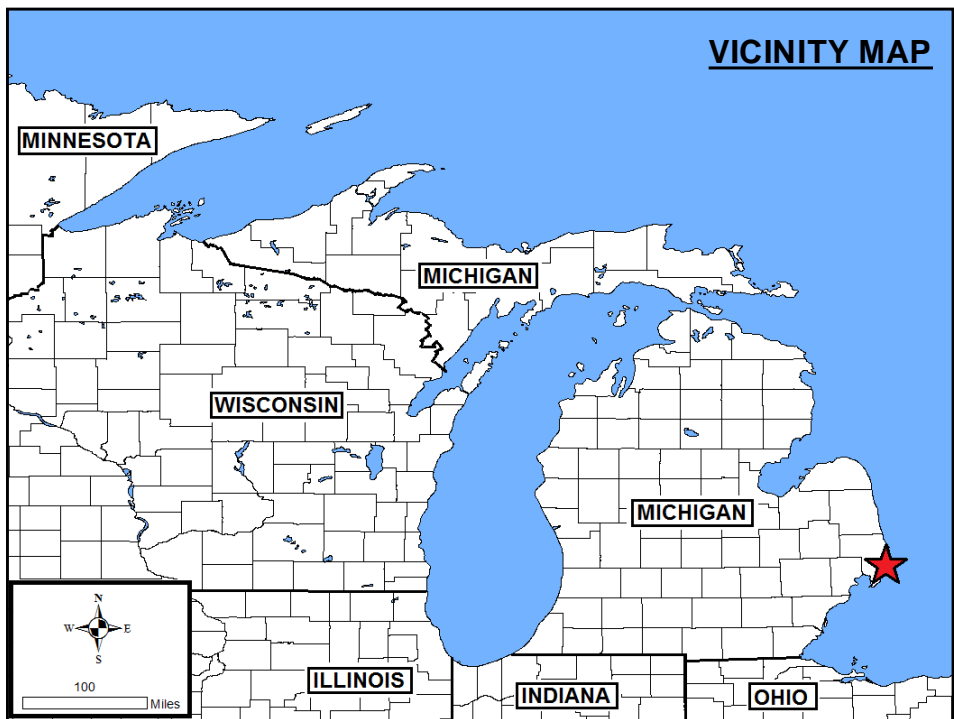
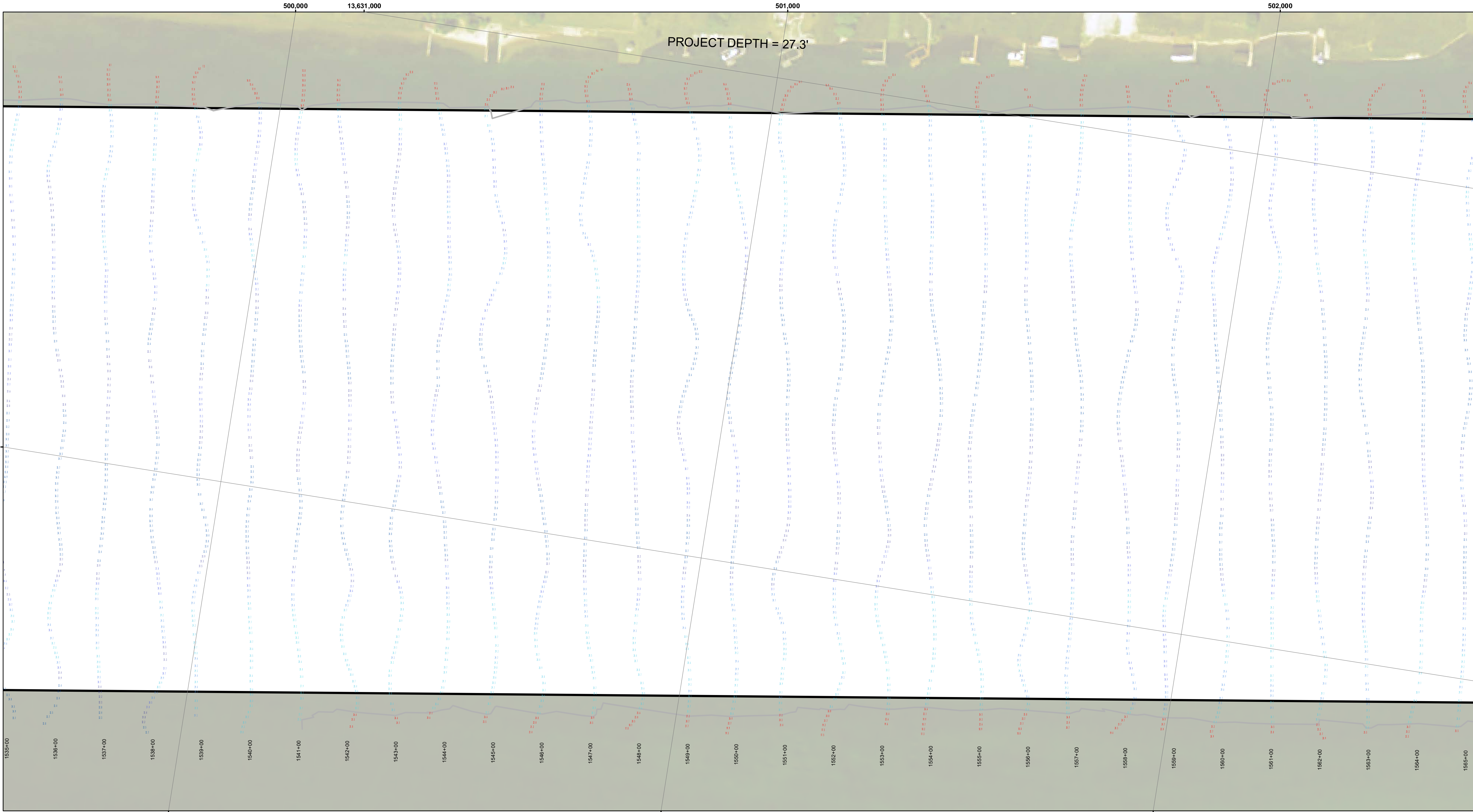
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Submitted:	Surveyed By:
	Plotted By:
	Checked By:

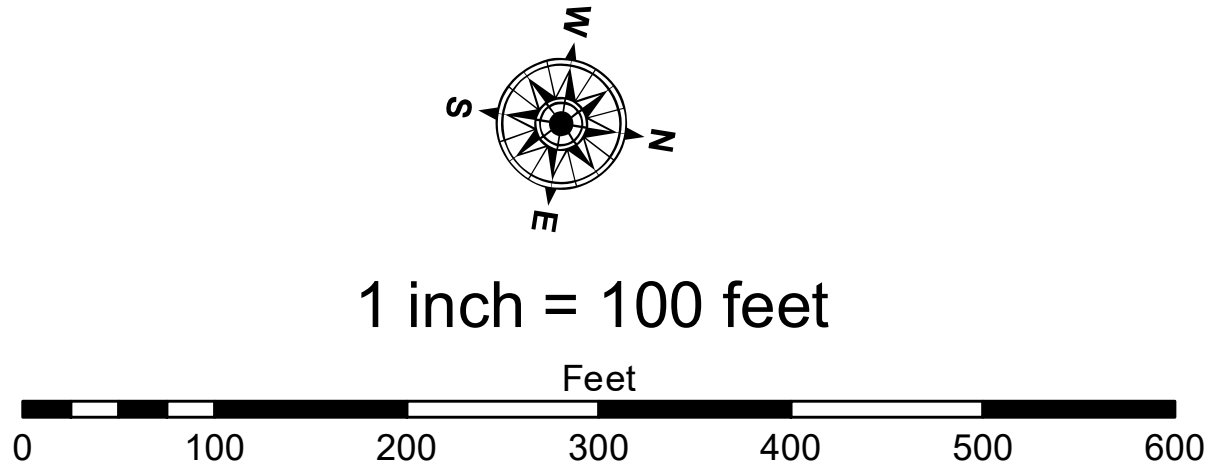
St. Clair River, MI
St Clair River
CR_01_SCR_20200731_CS
31 July 2020

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

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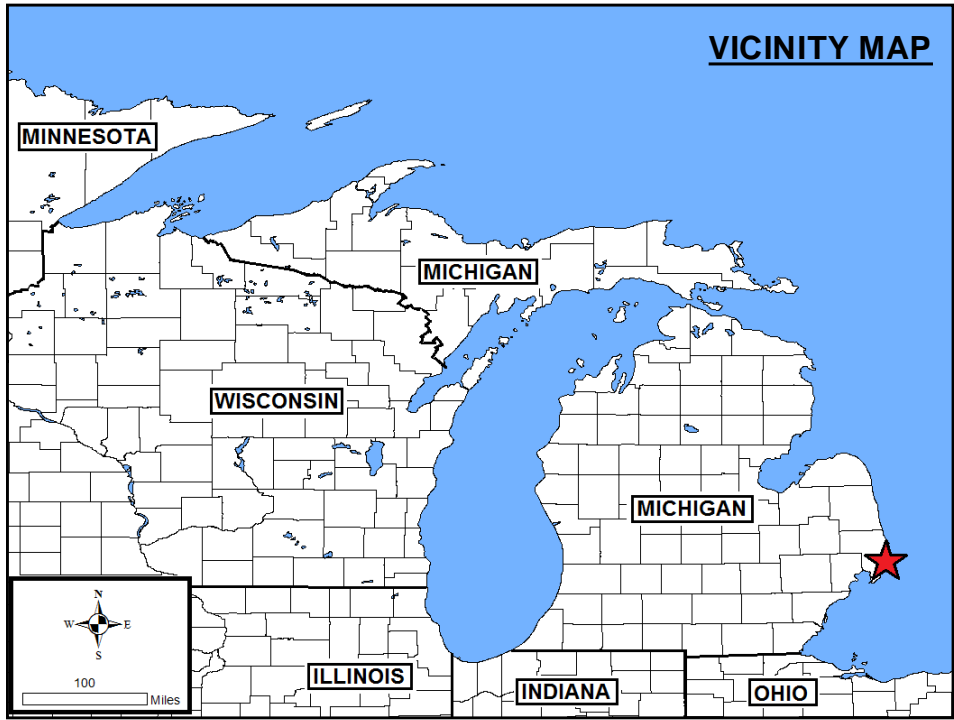
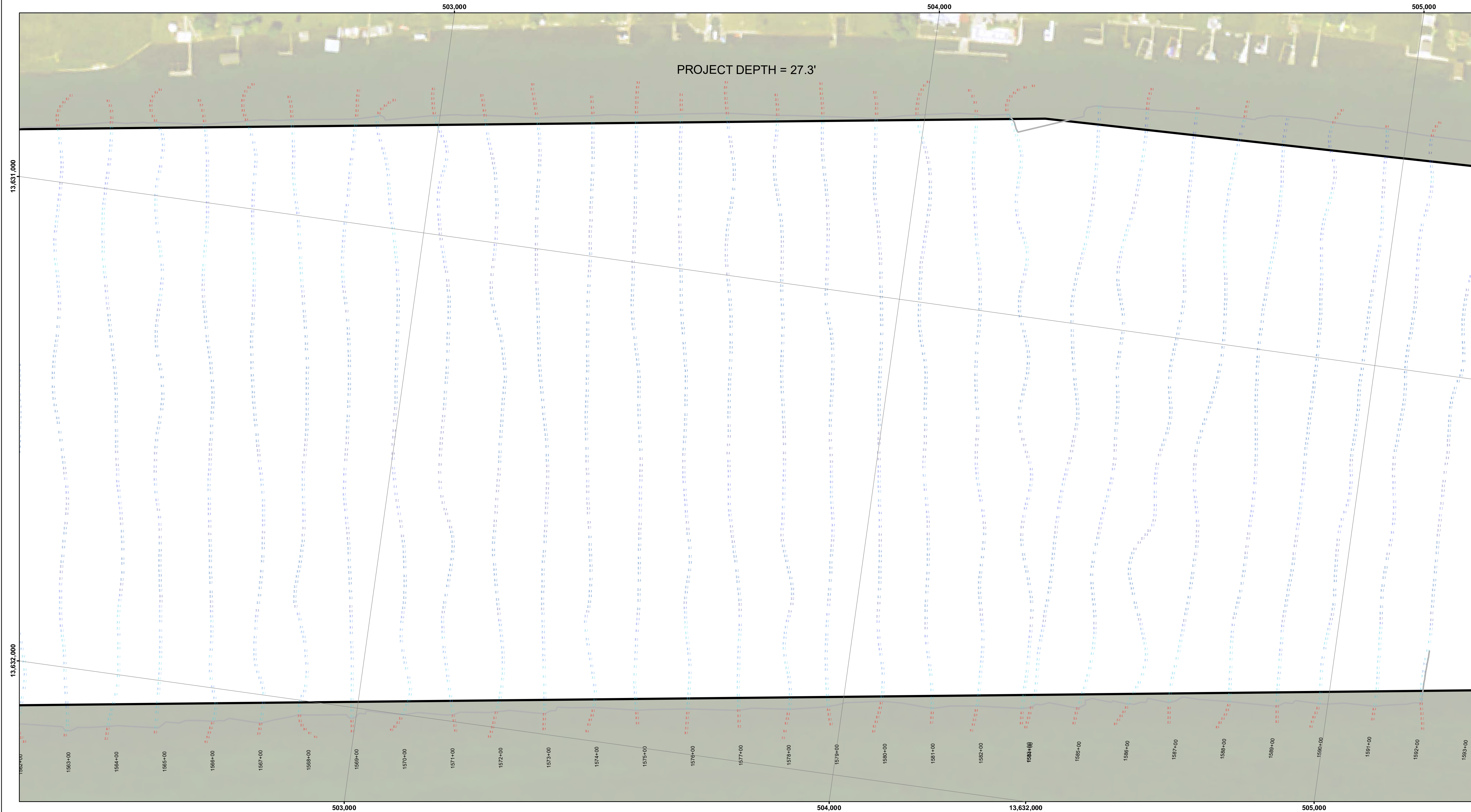
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT			
Submitted:	Surveyed By:	Filled By:	Checked By:
Recommended:	Chief, Survey Section		
Approved:	Chief, Technical Services		

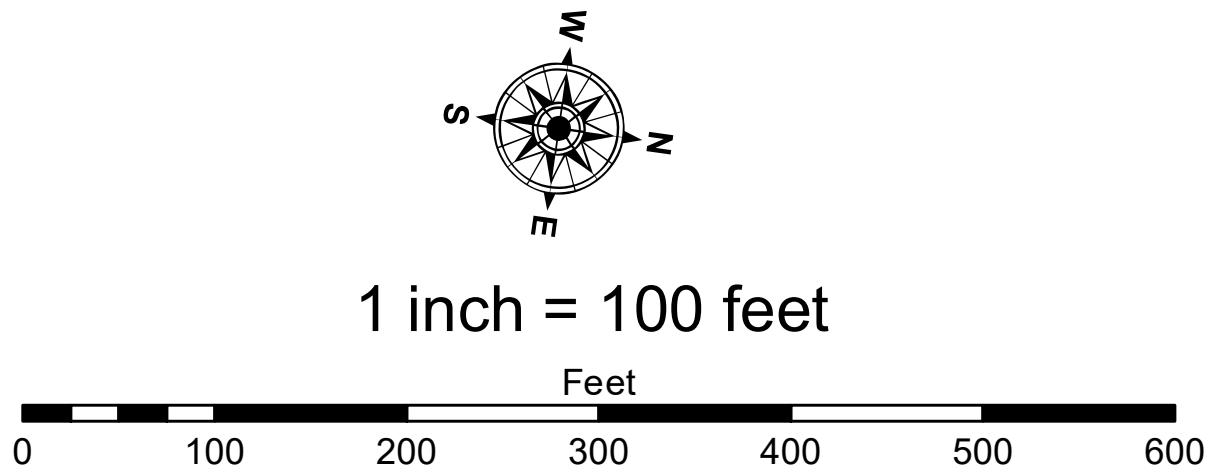
St. Clair River, MI
St. Clair River
CR_01_SCR_20200731_CS
31 July 2020

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Reference
Number
47 of 69



- LEGEND**
- Cable Submarine
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- SOUNDING LEGEND**
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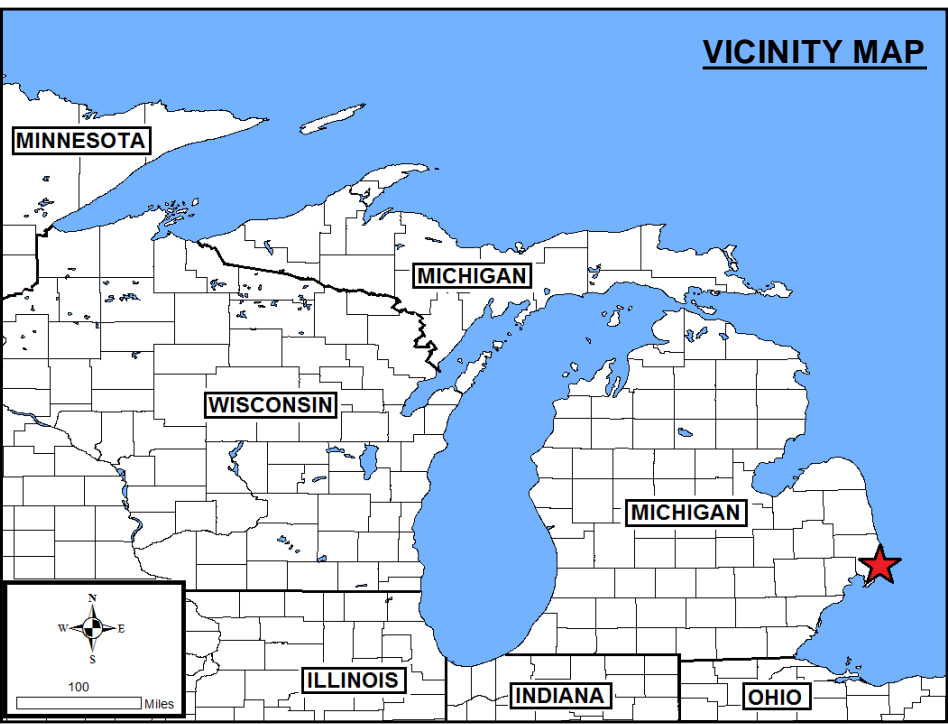
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	Submitted:	Surveyed By:
	Recommended:	Plotted By:
	Chief, Survey Section	
	Approved:	Chief, Technical Services

St. Clair River, MI
St. Clair River
CR_01_SCR_20200731_CS
31 July 2020

Sheet
Reference
Number
48 of 69



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

North arrow pointing up.

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U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

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

St. Clair River, MI
St Clair River
CR_01_SCR_20200724_CS
24 July 2020

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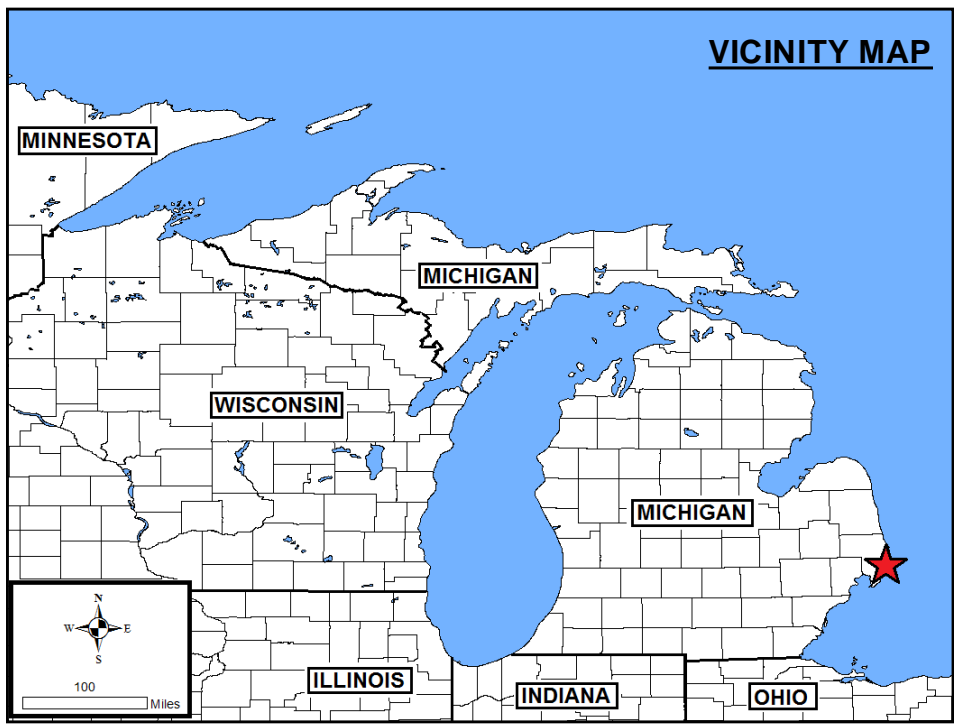
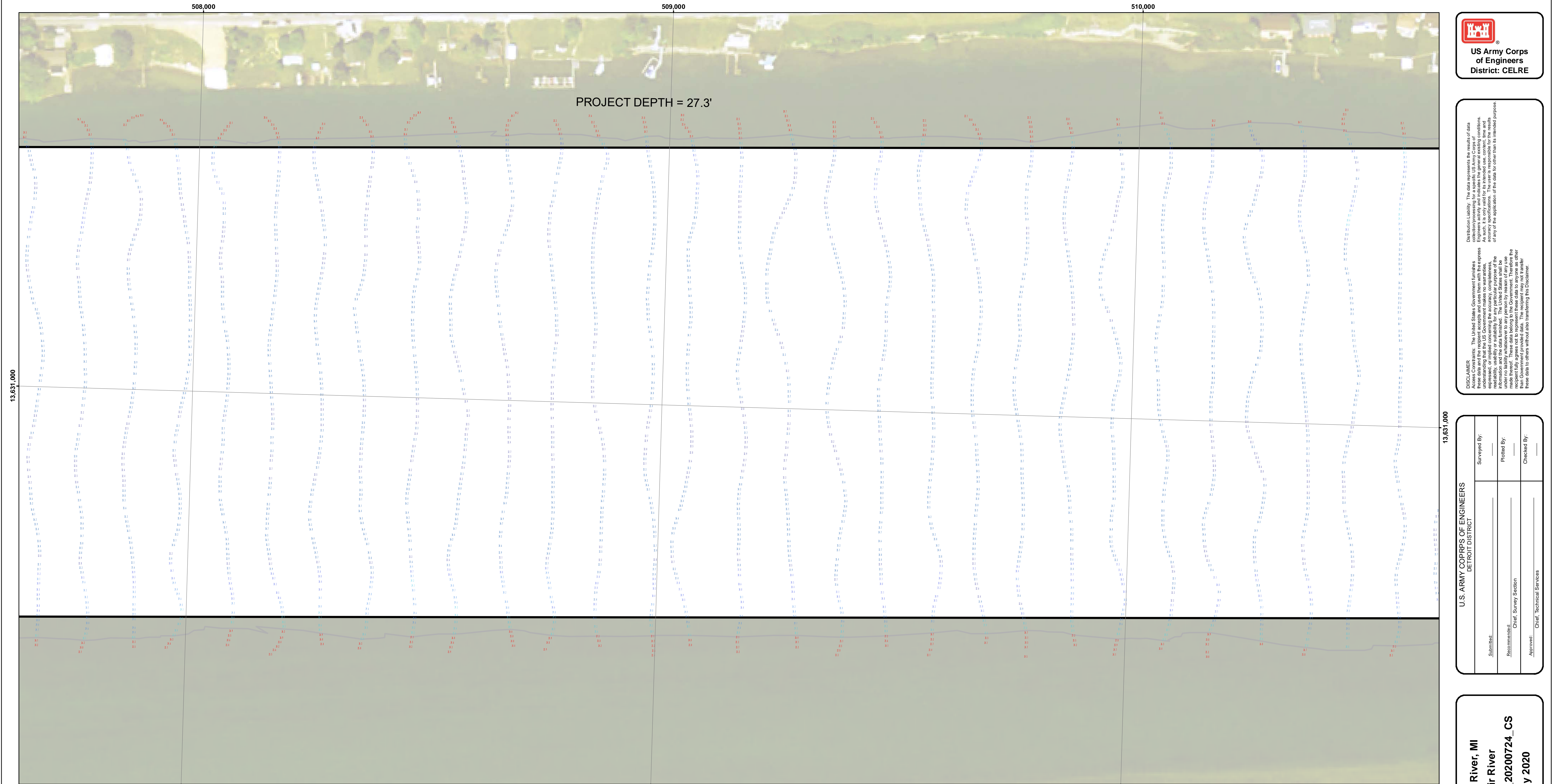
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US Army Corps
of Engineers
District: CELRE

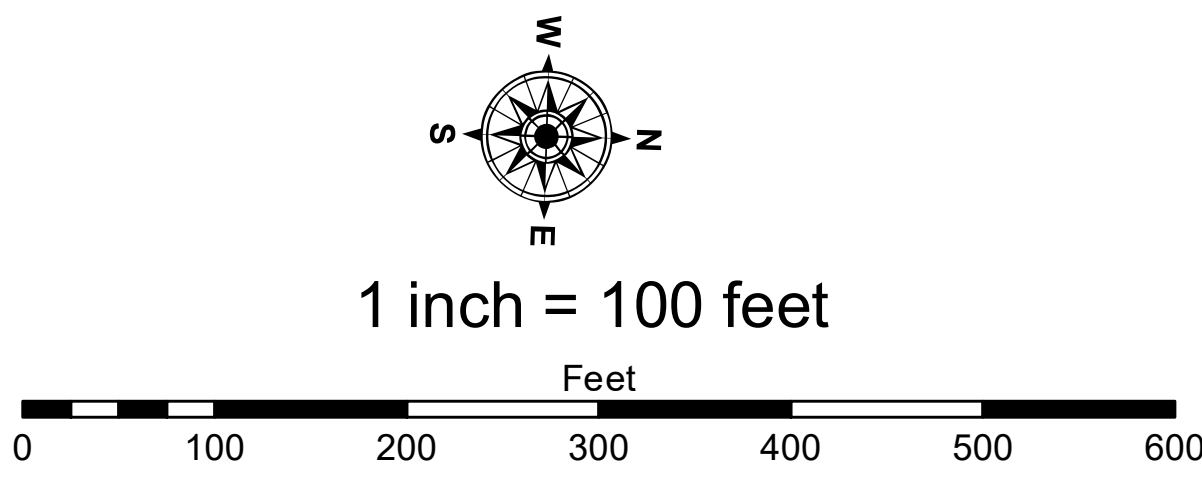
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HORIZONTAL GRID DATUM BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983, U.S. SURVEY FOOT.

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

ALL SOUNDINGS ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM OF 1985 (IGLD85). L.W.D. AS INDICATED. PROJECT DEPTHS FOR THIS RIVER RANGE FROM 27.1' TO 30.0'

TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) WATER LEVEL STATIONS:
ST CLAIR SHORES (#9034052)
ALGONAC, MI (#9014070)
ST CLAIR POLICE, MI (#9014080)
BLACK RIVER, MI (#9014090)
DRY DOCK, MI (#9014087)
DUNN PAPER, MI (#9014096)

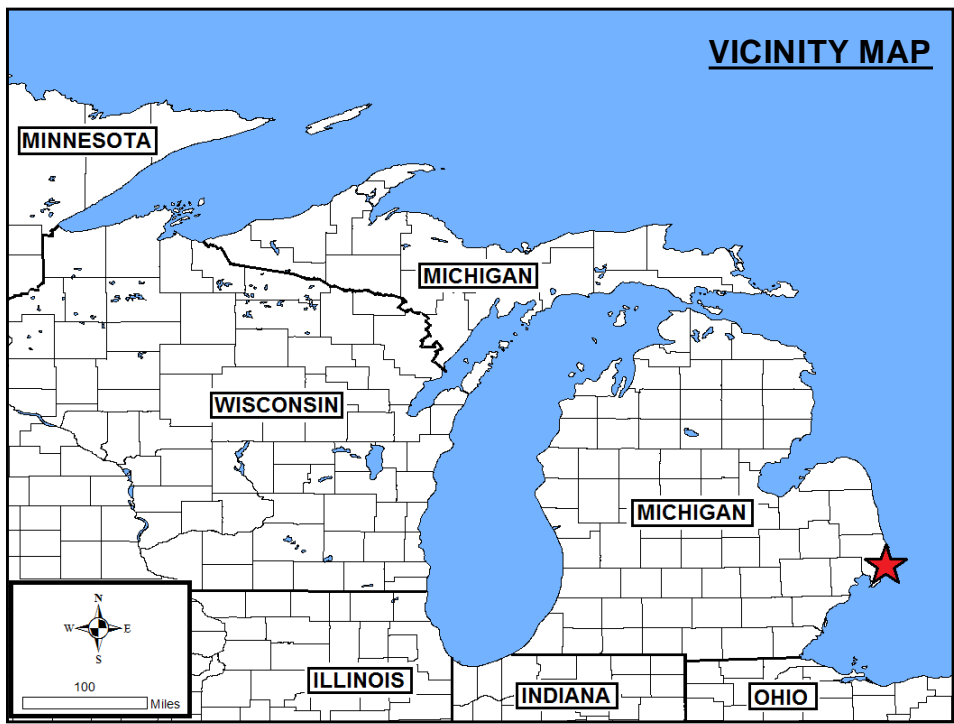
2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS. ALL COORDINATES ARE IN U.S. SURVEY FEET.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

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

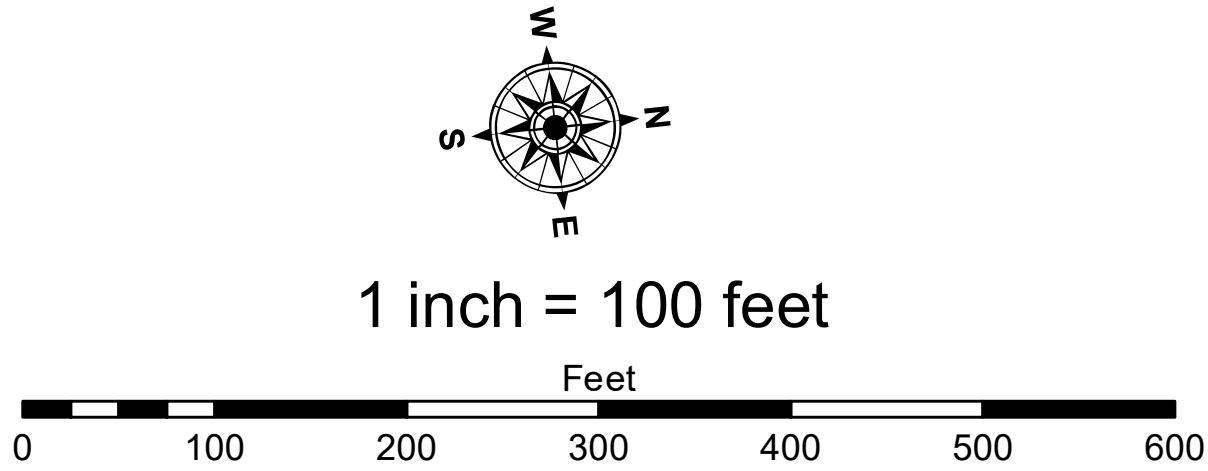
St. Clair River, MI
St Clair River
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- LEGEND**
- Cable Submarine
 - - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel Limits

- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
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SONAR: R2SONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
SOFTWARE: HYPACK

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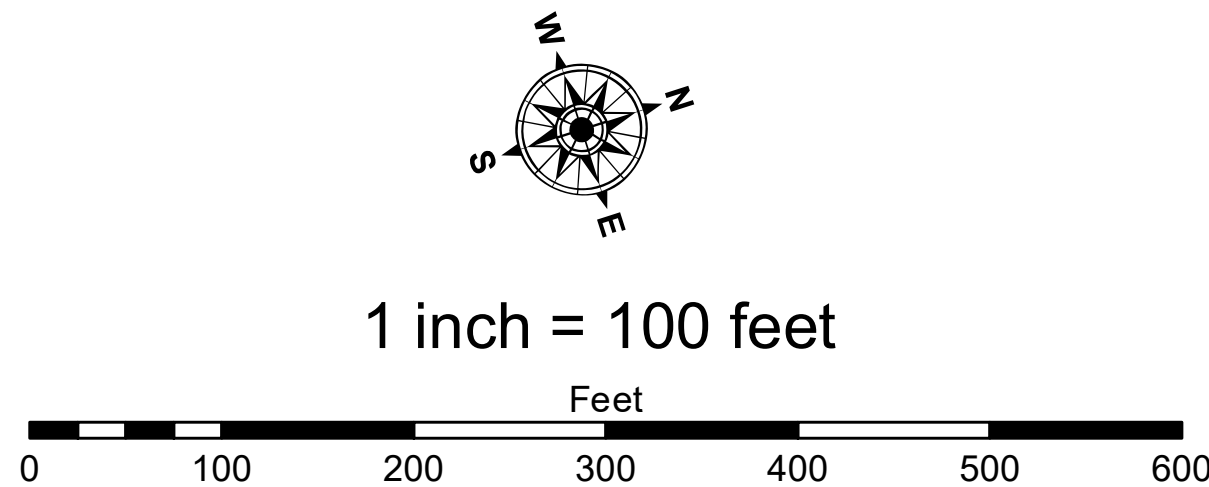
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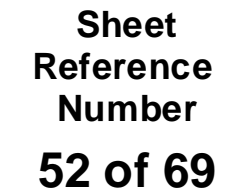
U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	Surveyed By:
	Plotted By:
	Checked By:
	Submitted:

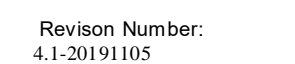
St. Clair River, MI
St. Clair River
CR_01_SCR_20200724_CS
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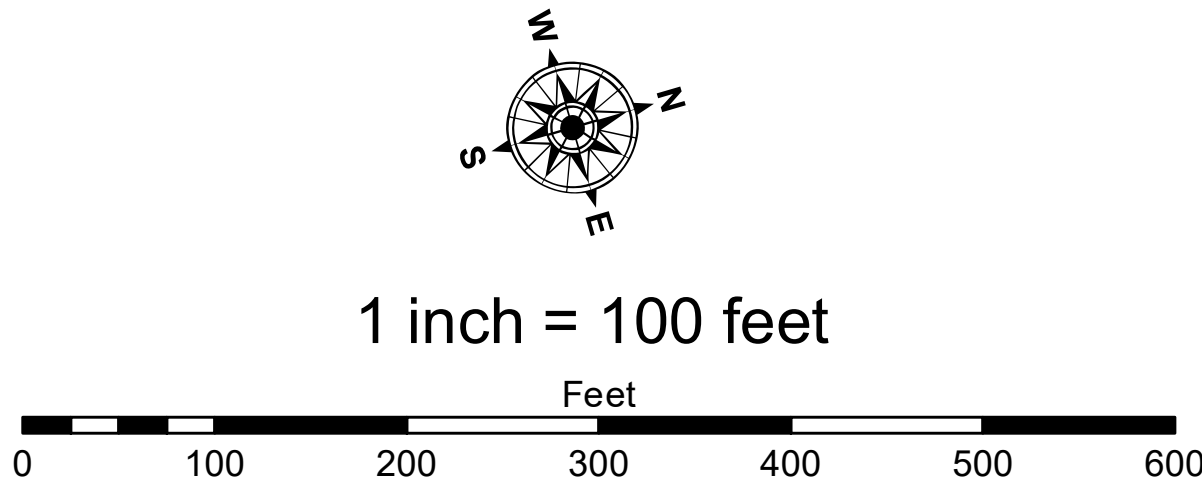
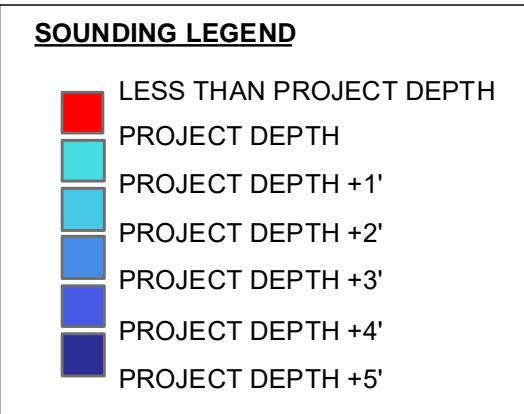
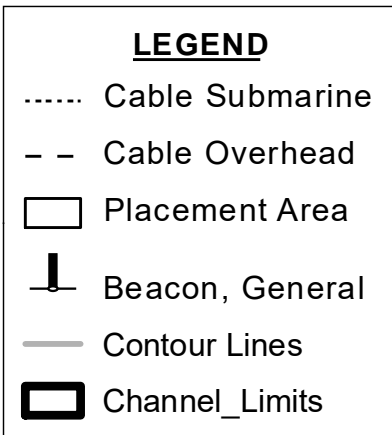
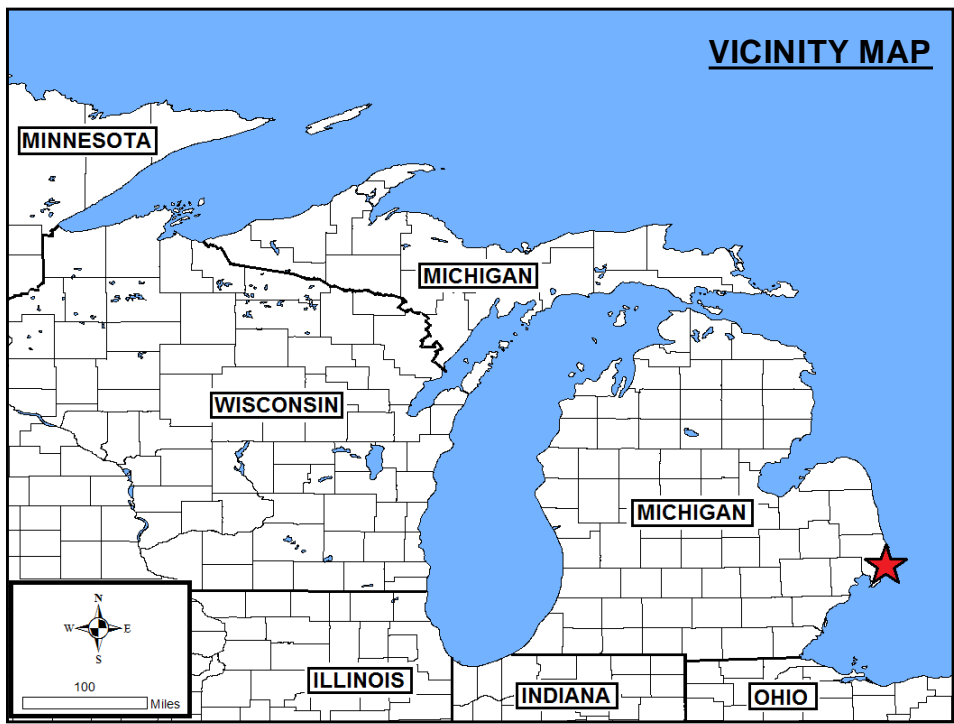
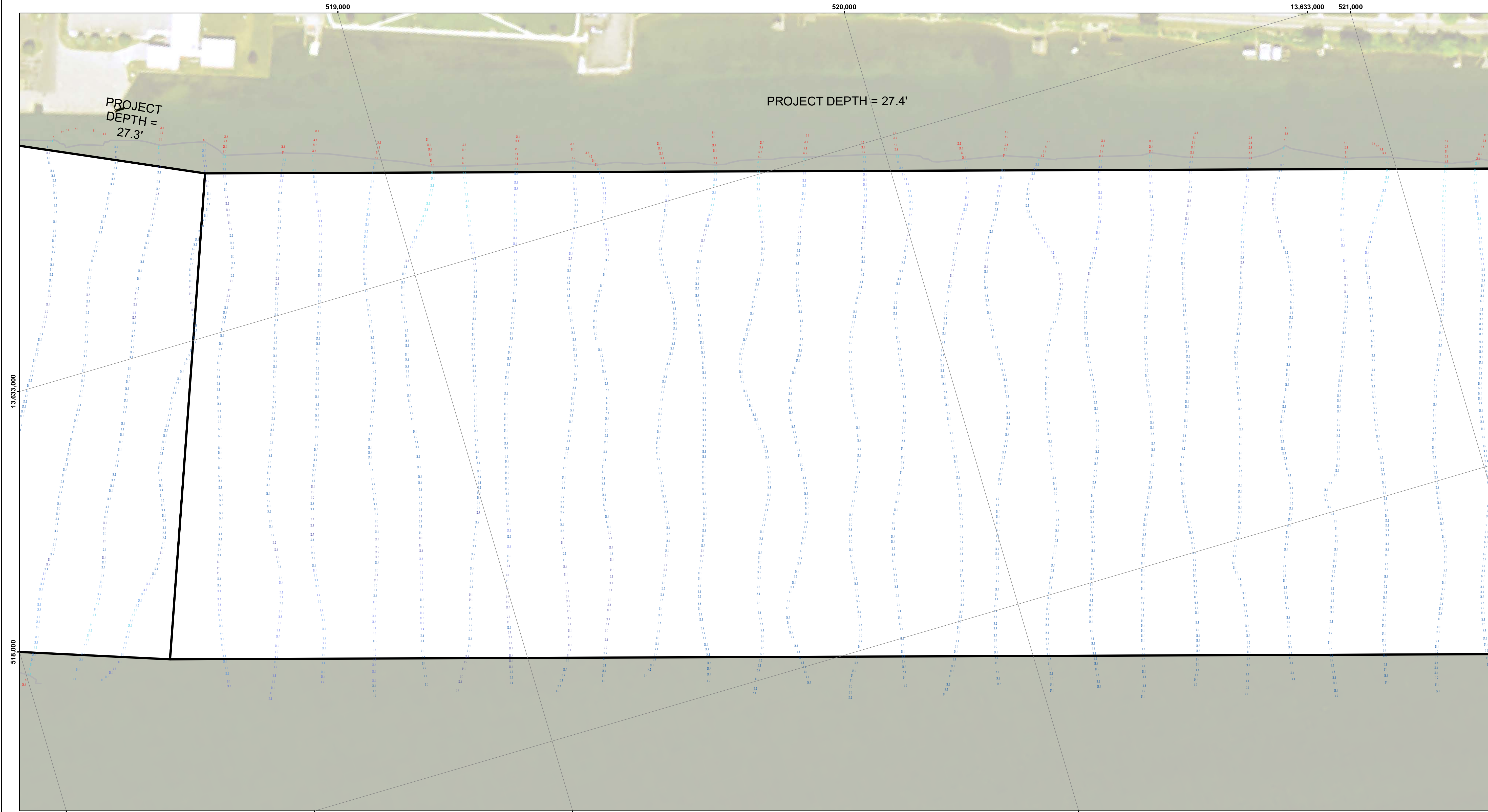
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SONAR: R2SONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
SOFTWARE: HYPACK

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ST CLAIR POLICE, MI (#9014080)
BLACK RIVER, MI (#9014090)
DRY DOCK, MI (#9014087)
DUNN PAPER, MI (#9014096)

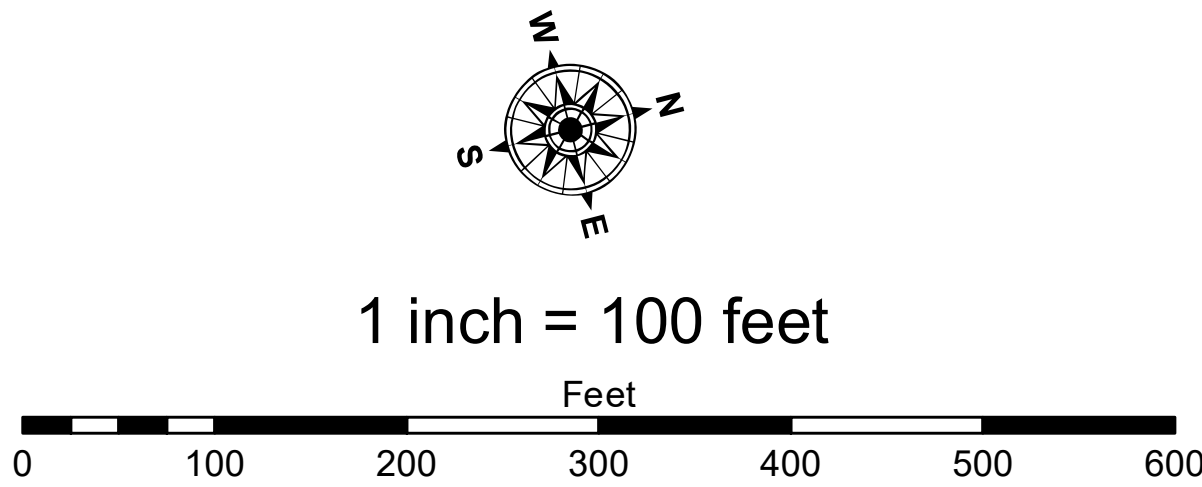
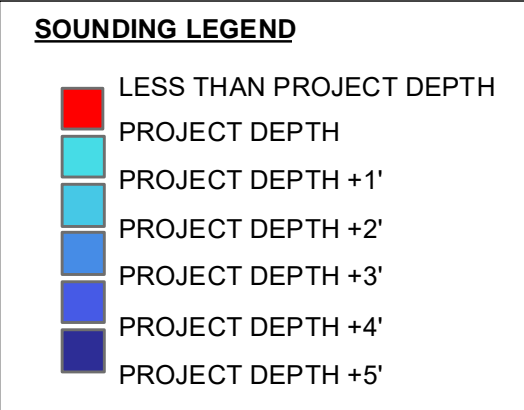
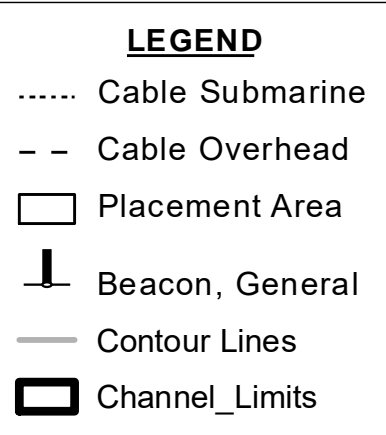
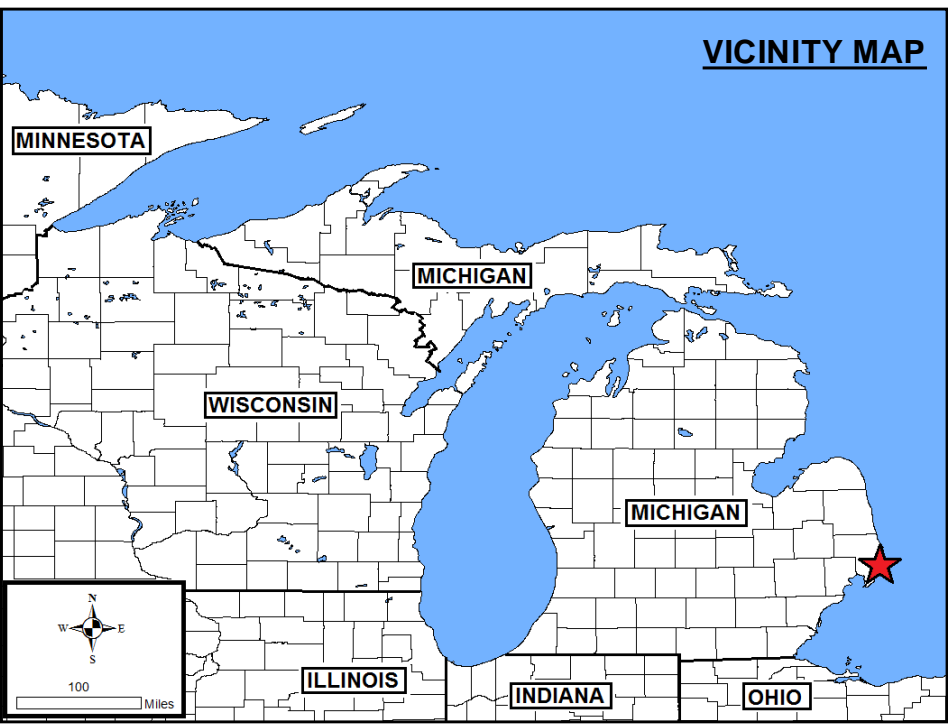
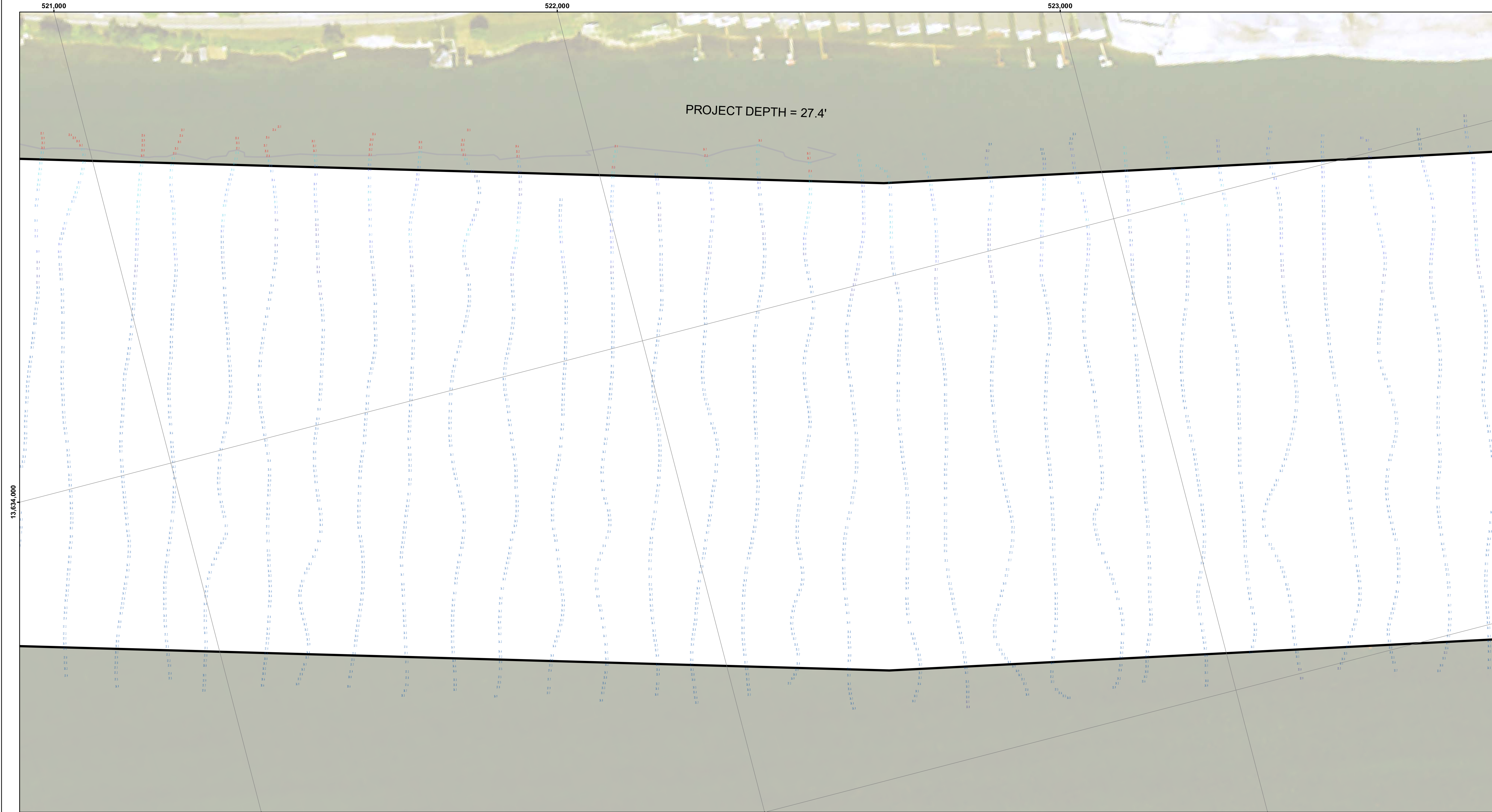
2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS. ALL COORDINATES ARE IN U.S. SURVEY FEET.

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

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

St. Clair River, MI
St Clair River
CR_01_SCR_20200724_CS
24 July 2020

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SOFTWARE: HYPACK

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ALGONAC, MI (19#014070)
ST CLAIR POLICE, MI (19#014080)
BLACK RIVER, MI (19#014090)
DRY DOCK, MI (19#014087)
DUNN PAPER, MI (19#014096)

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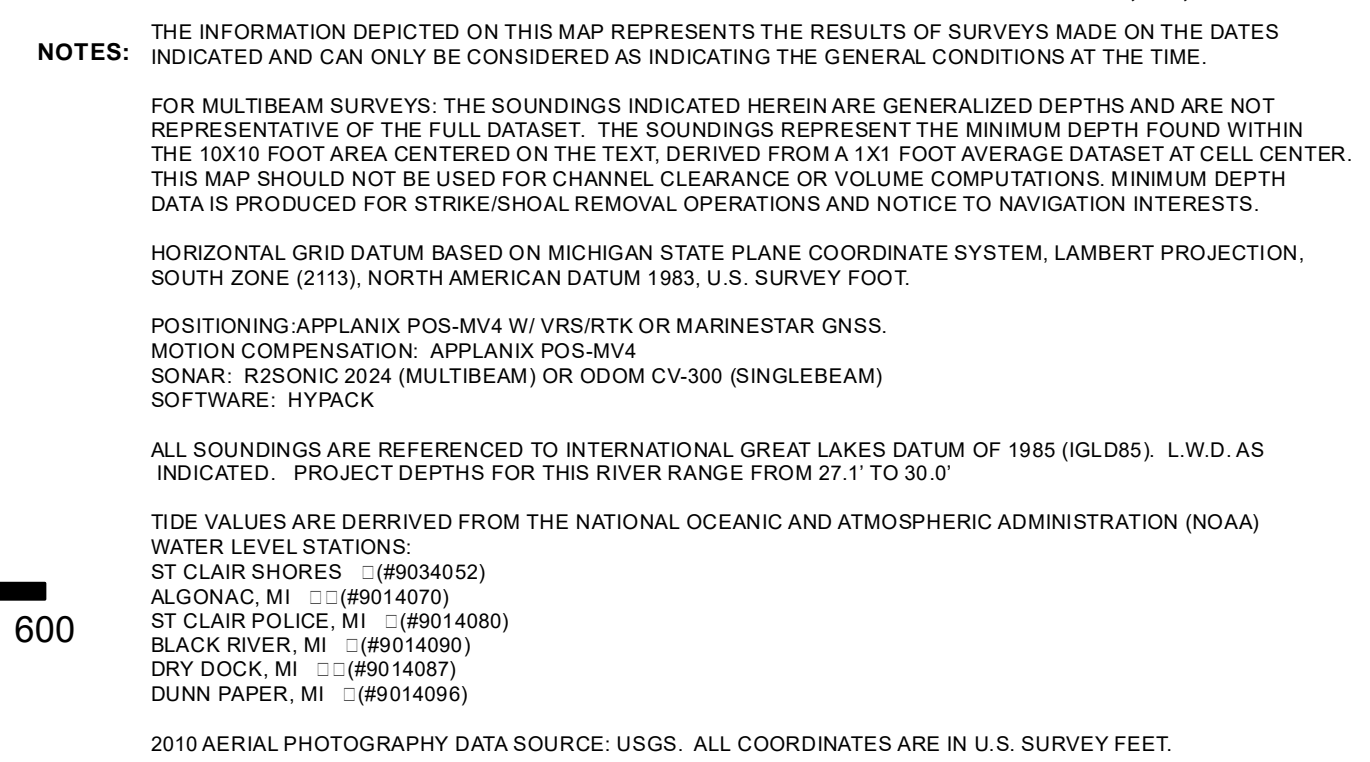
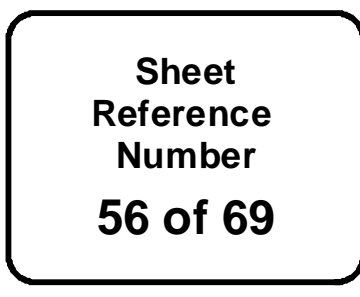
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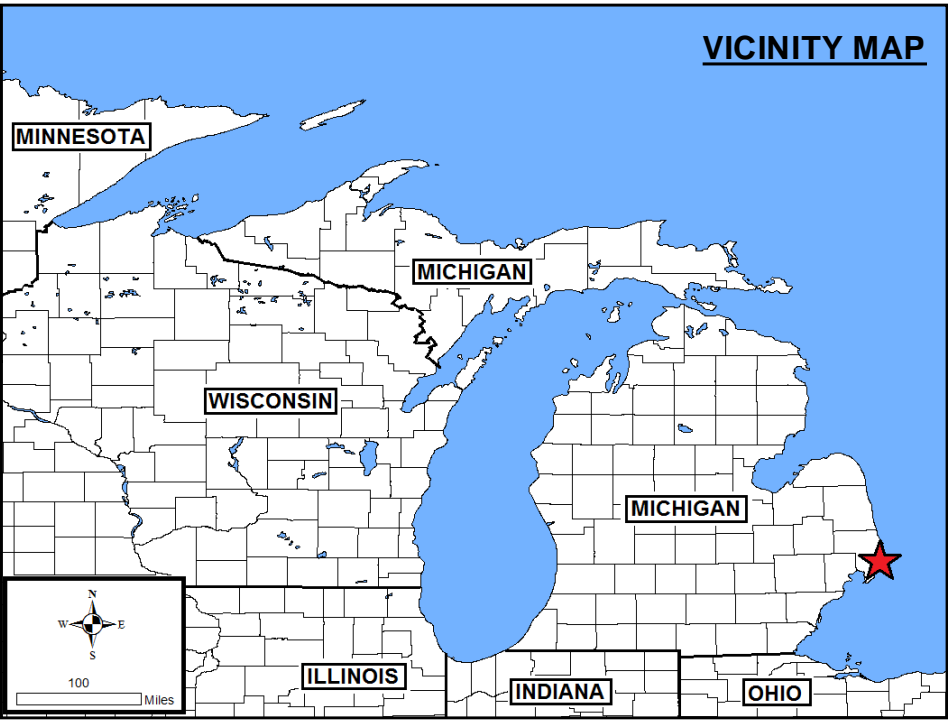
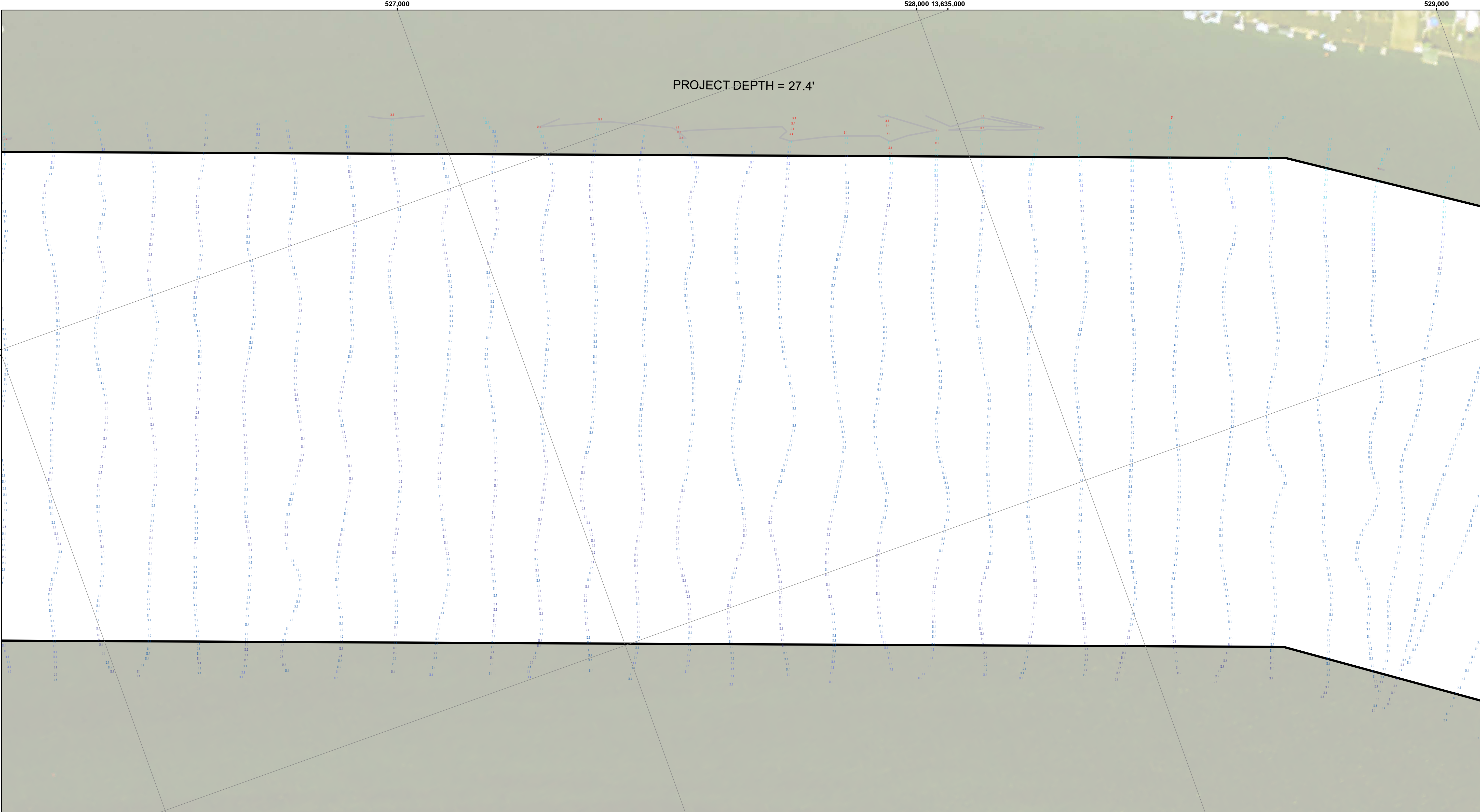
Submitted:	Surveyed By:
	Plotted By:
	Checked By:

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

St. Clair River, MI
St. Clair River
CR_01_SCR_20200724_CS
24 July 2020

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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'

1 inch = 100 feet

Feet

0 100 200 300 400 500 600

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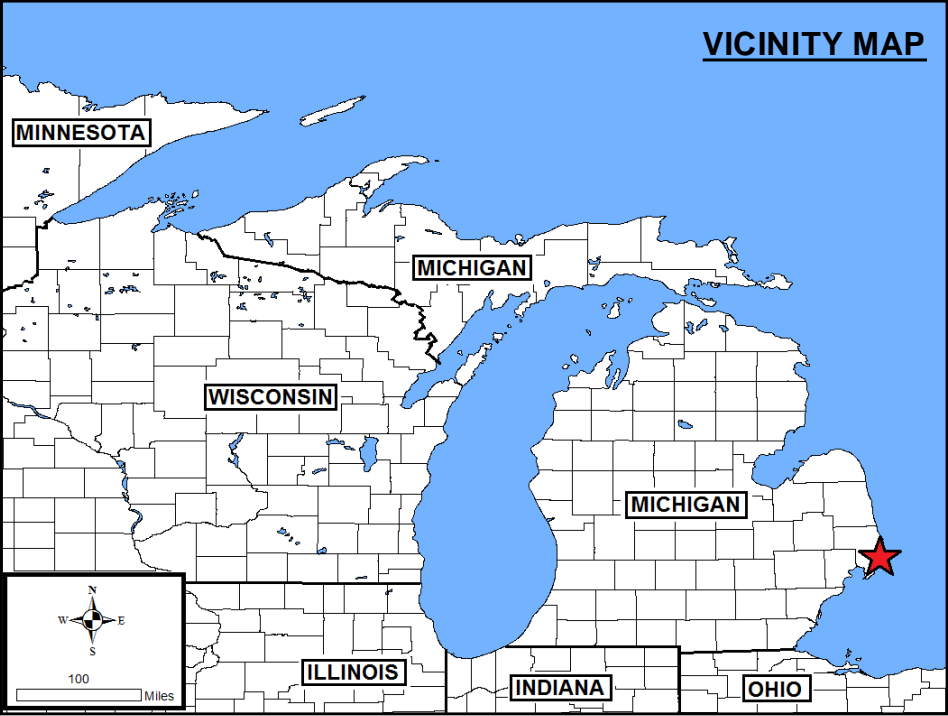
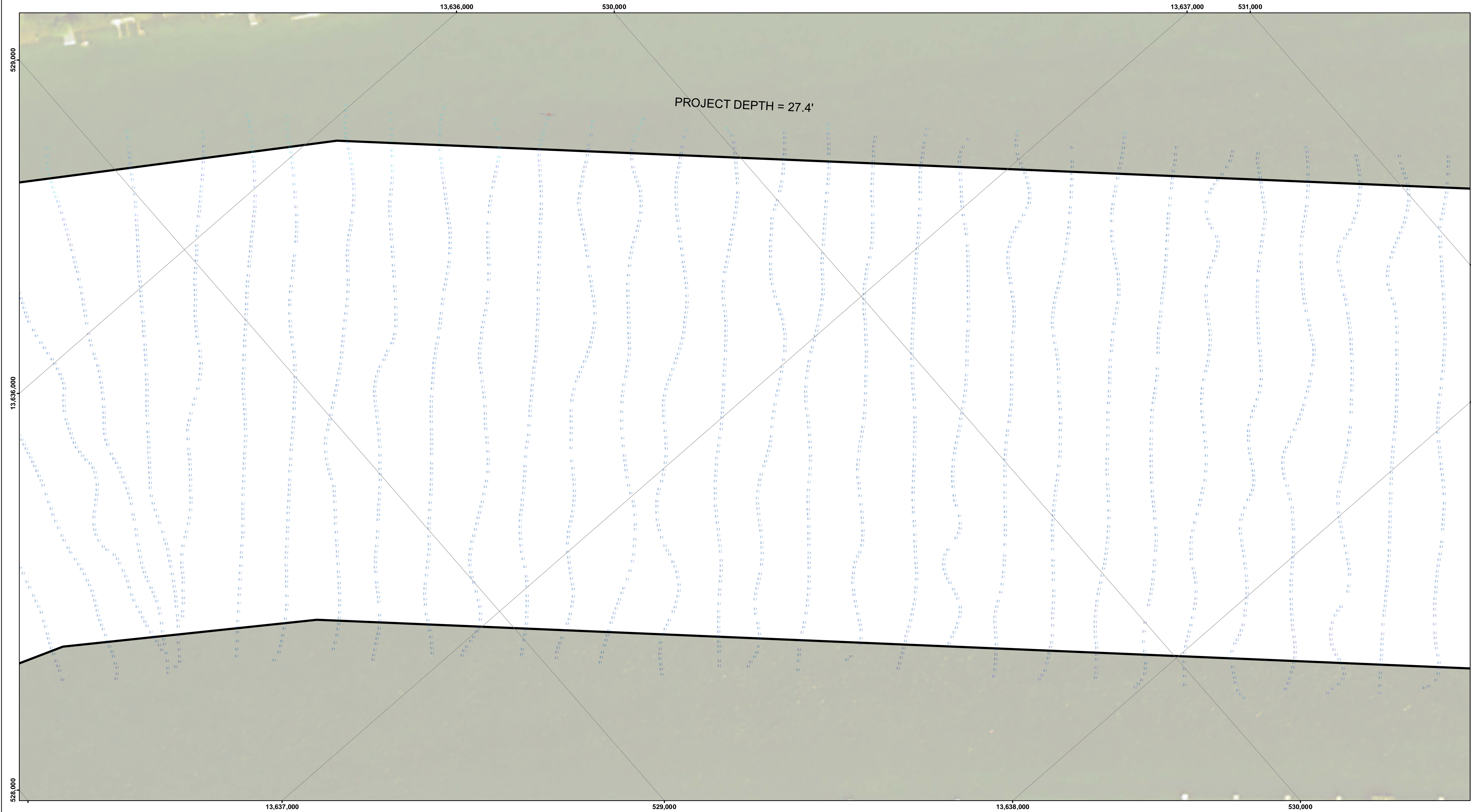


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Submitted:	Reviewed By:	Chief, Survey Section	Checked By:	Chief, Technical Services

St. Clair River, MI
St Clair River
CR_01_SCR_20200724_CS
24 July 2020

Sheet Reference Number
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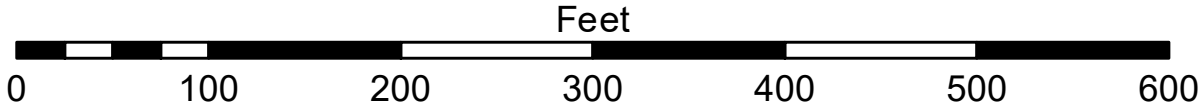


- LEGEND**
- Cable Submarine
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 - Placement Area
 - Beacon, General
 - Contour Lines
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- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
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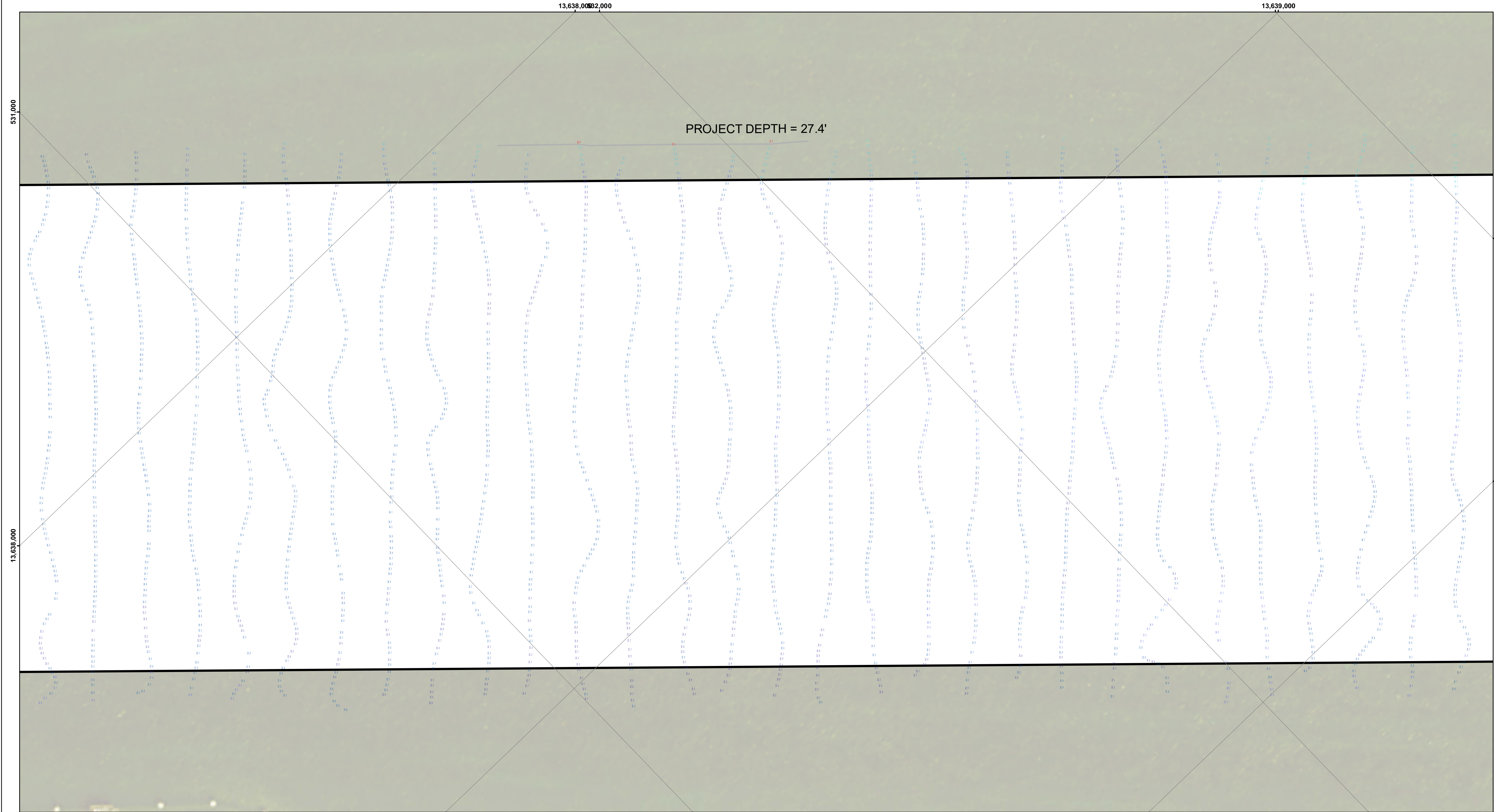
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Submitted:	Surveyed By:	Folled By:	Checked By:

St. Clair River, MI
St Clair River
CR_01_SCR_20200724_CS
24 July 2020

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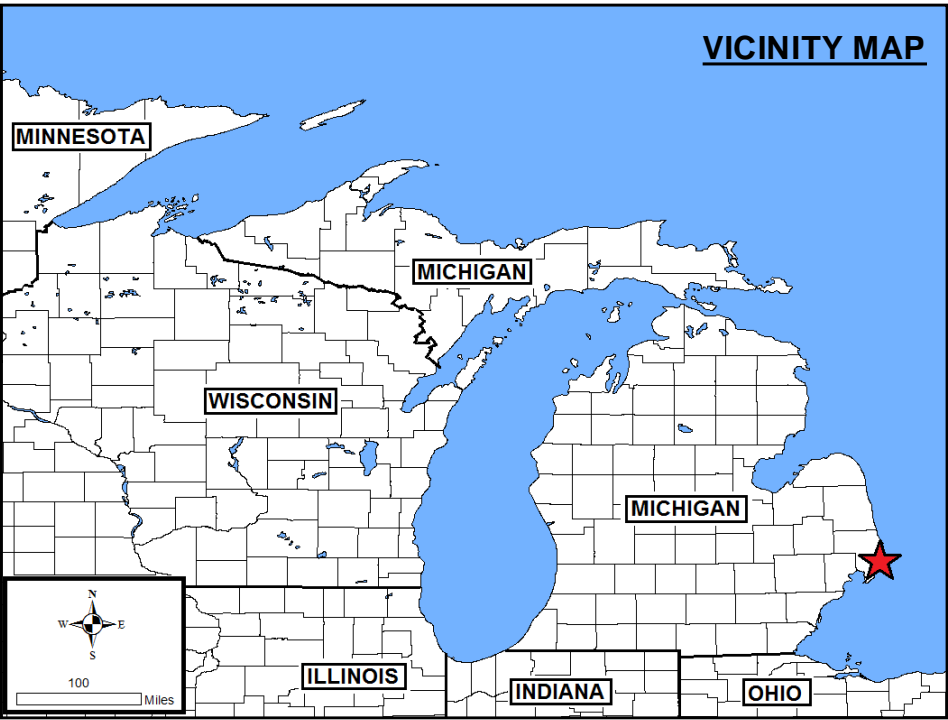
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Submitted:	U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
	Surveyed By:		
	Plotted By:		
	Checked By:		
Recommended:	Chief, Survey Section		
Approved:	Chief, Technical Services		

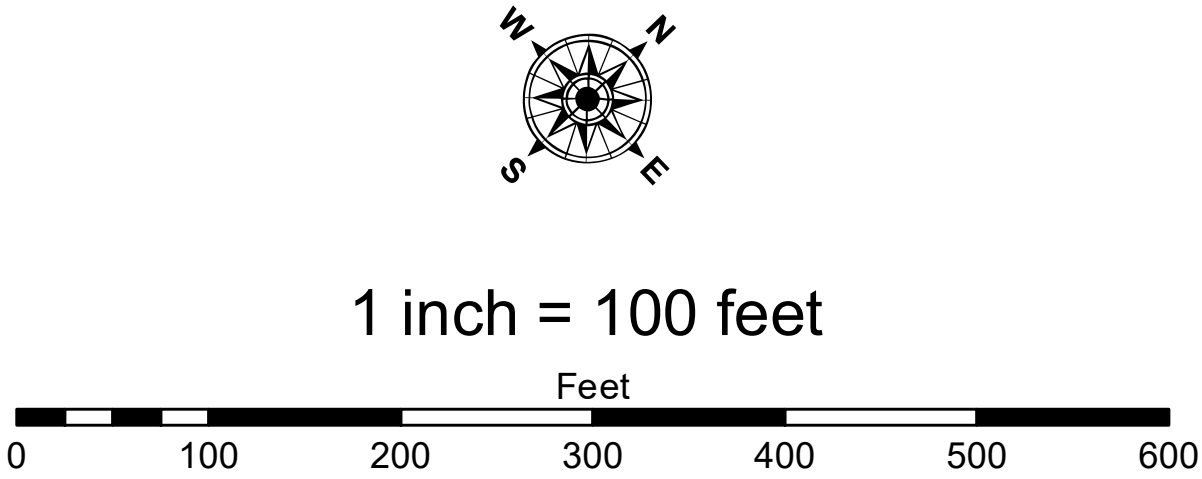
St. Clair River, MI
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CR_01_SCR_20200724_CS
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- LEGEND**
- Cable Submarine
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- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
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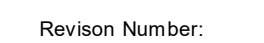
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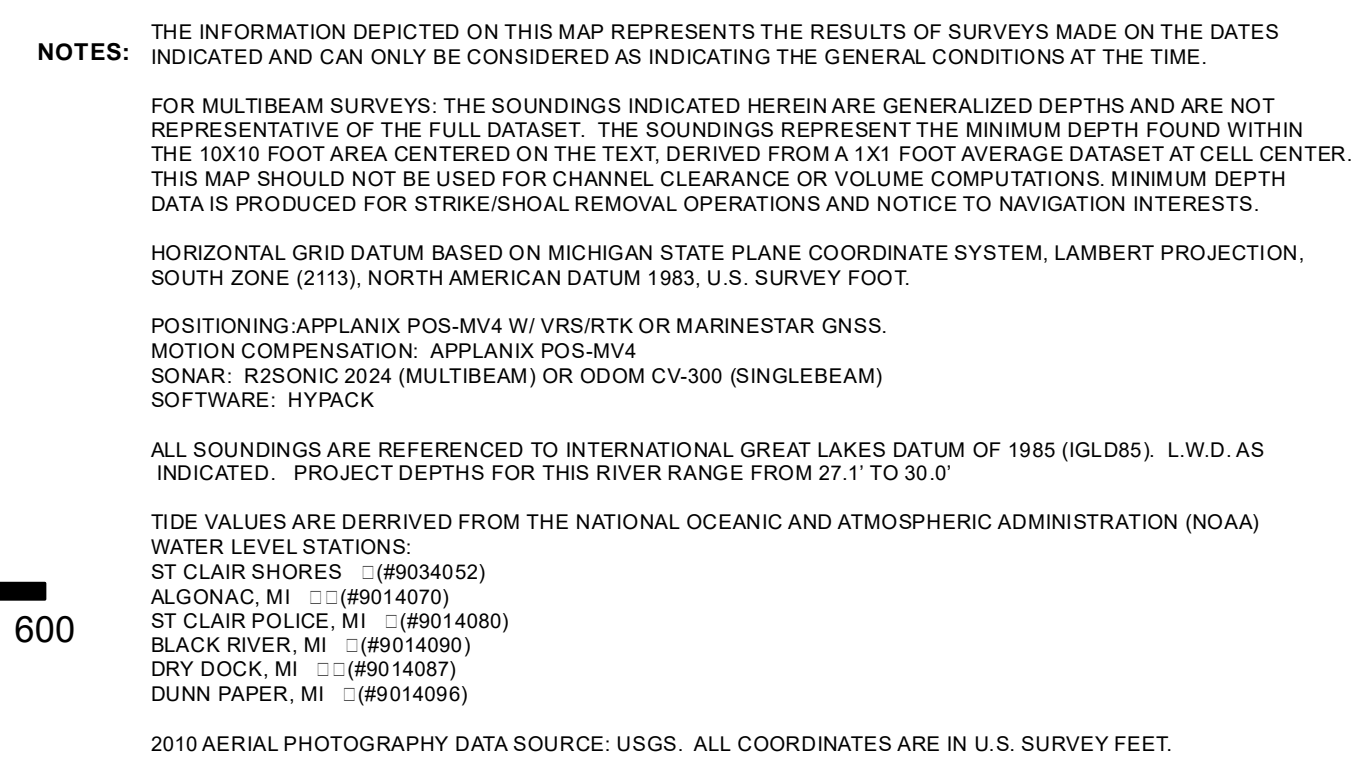
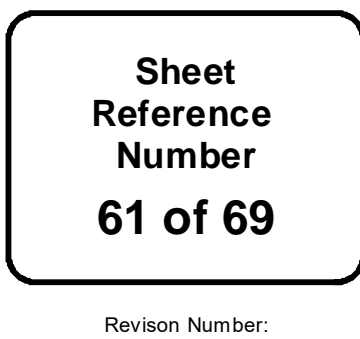
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SONAR: R2SONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
SOFTWARE: HYPACK

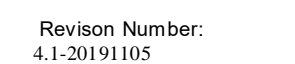
ALL SOUNDINGS ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM OF 1985 (IGLD85). L.W.D. AS INDICATED. PROJECT DEPTHS FOR THIS RIVER RANGE FROM 27.1' TO 30.0'

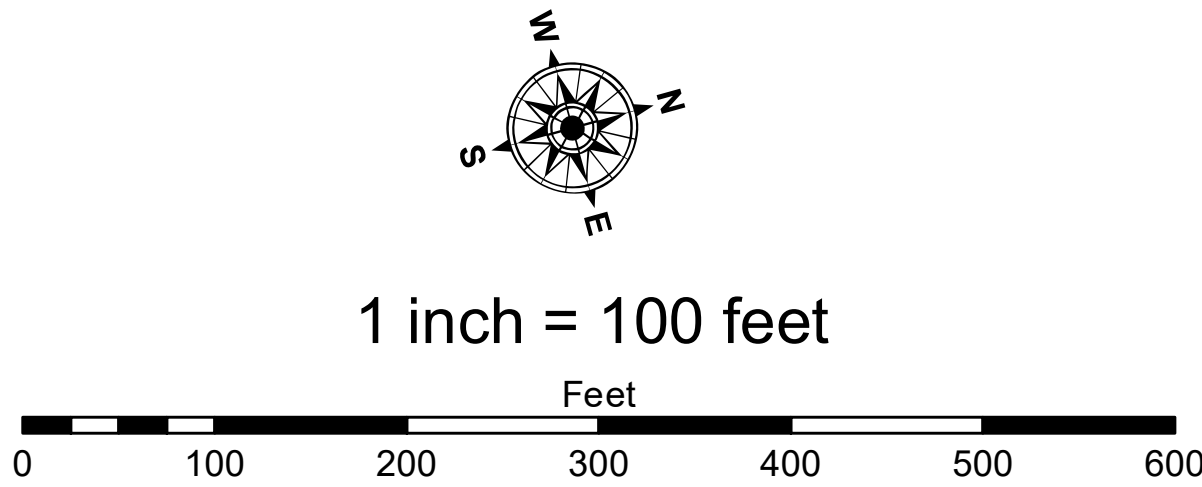
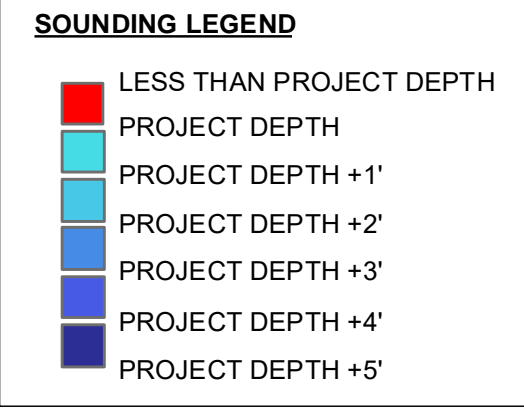
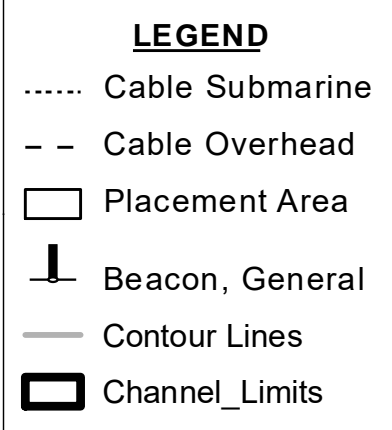
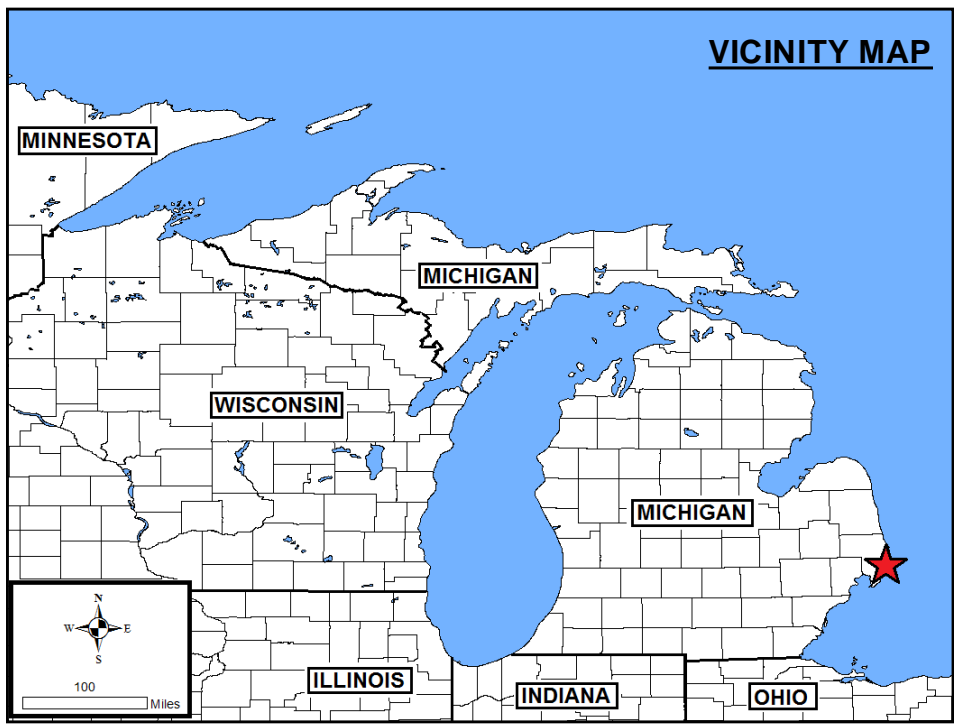
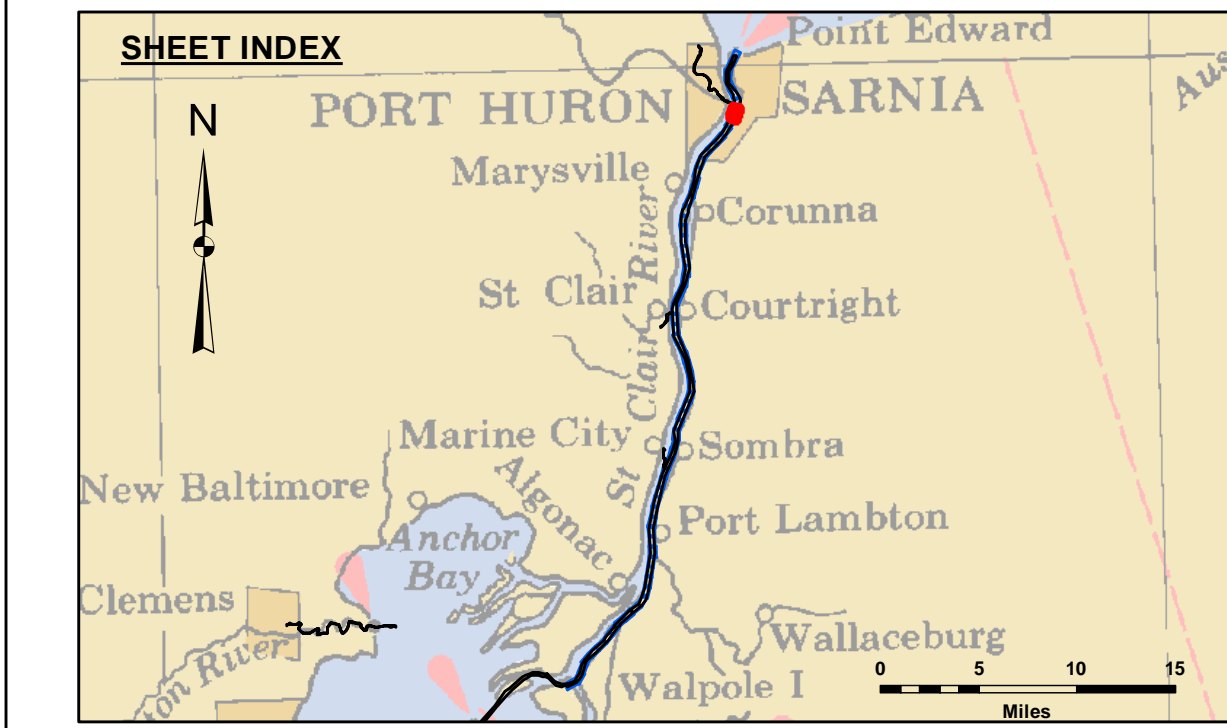
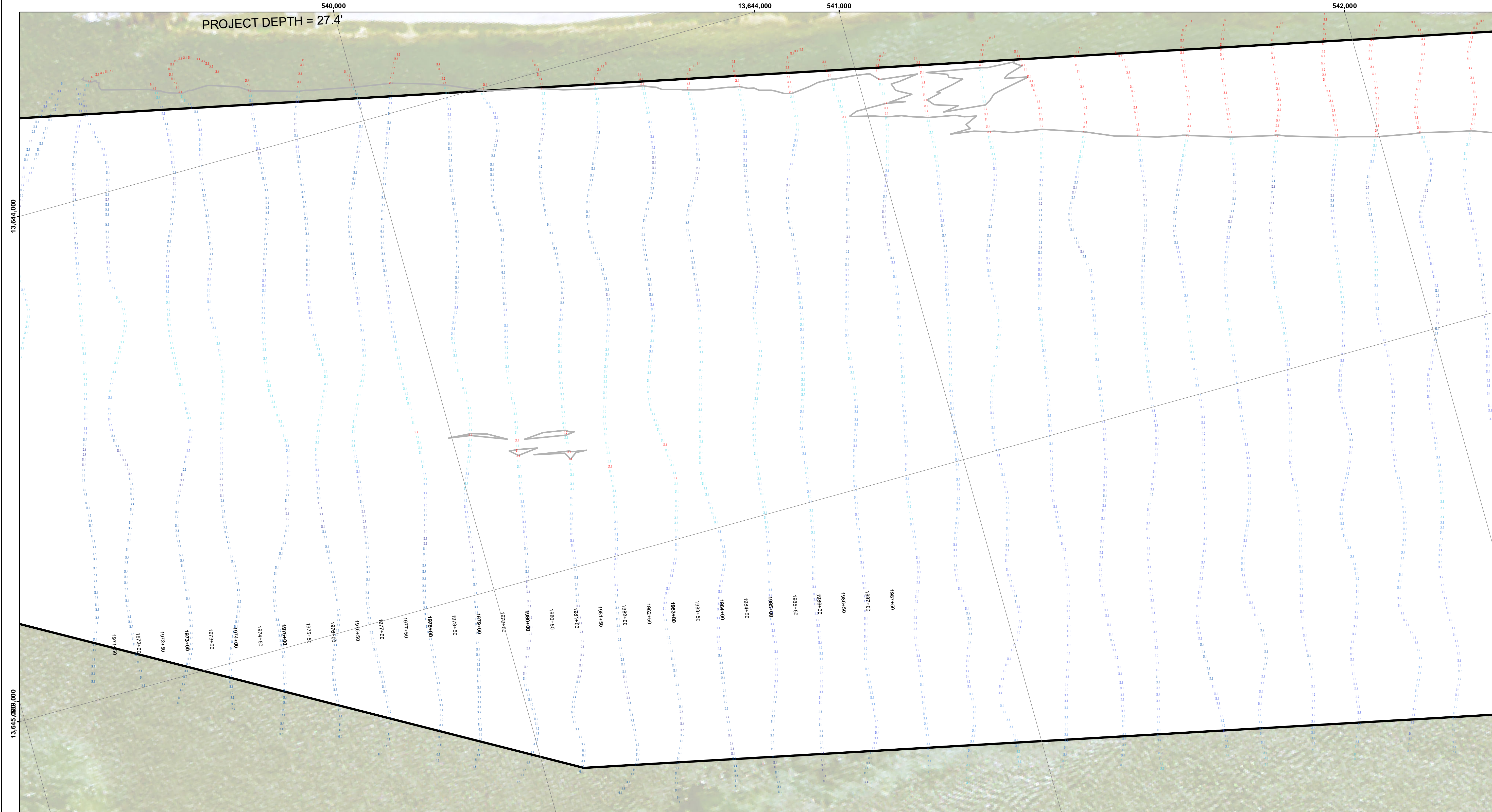
TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) WATER LEVEL STATIONS:
ST CLAIR SHORES, MI (#9034052)
ALGONAC, MI (#9014070)
ST CLAIR POLICE, MI (#9014080)
BLACK RIVER, MI (#9014090)
DRY DOCK, MI (#9014087)
DUNN PAPER, MI (#9014096)

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









NOTES:

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HORIZONTAL GRID DATUM BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983, U.S. SURVEY FOOT.

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

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TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

WATER LEVEL STATIONS:
ST CLAIR SHORES (#9034052)
ALGONAC, MI (#9014070)
ST CLAIR POLICE, MI (#9014080)
BLACK RIVER, MI (#9014090)
DRY DOCK, MI (#9014087)
DUNN PAPER, MI (#9014096)

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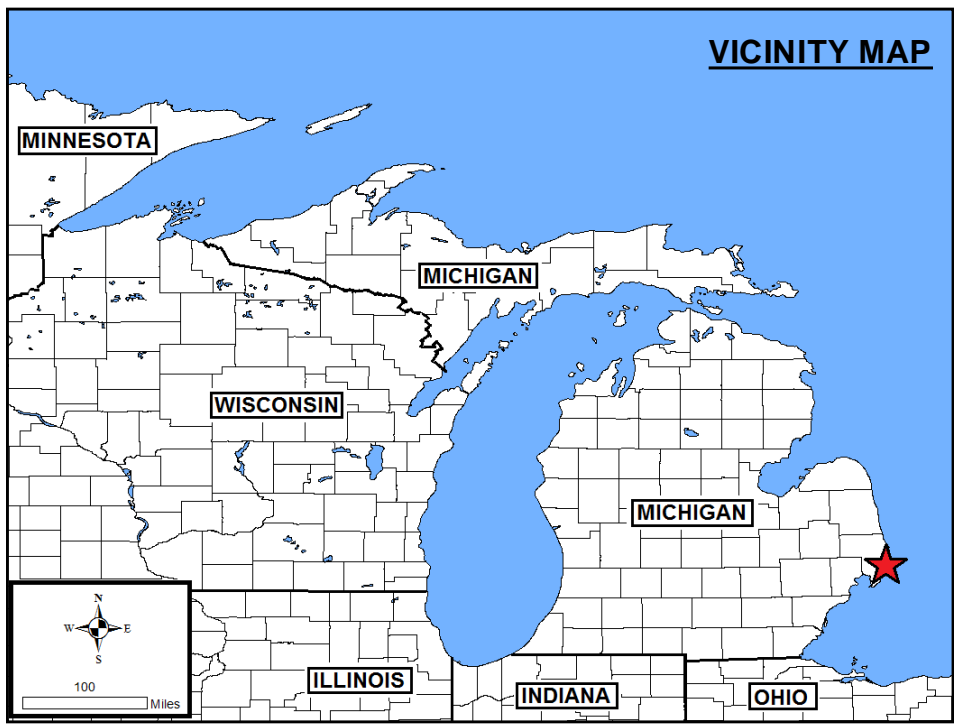
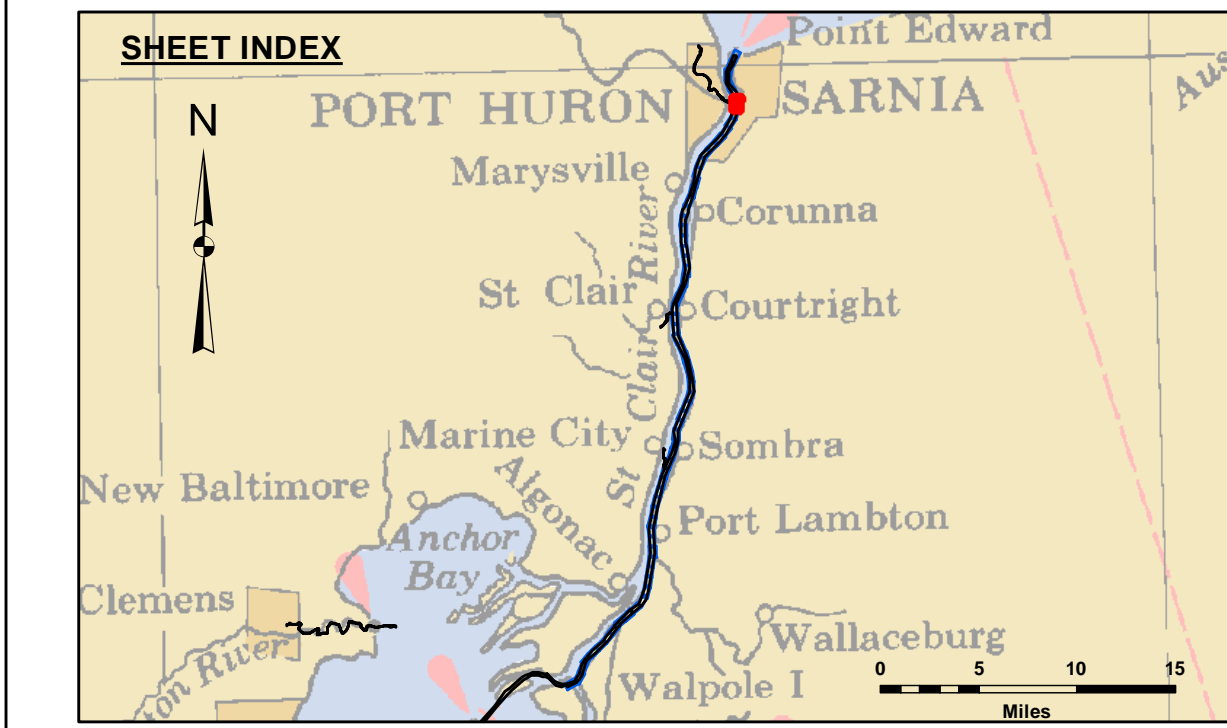
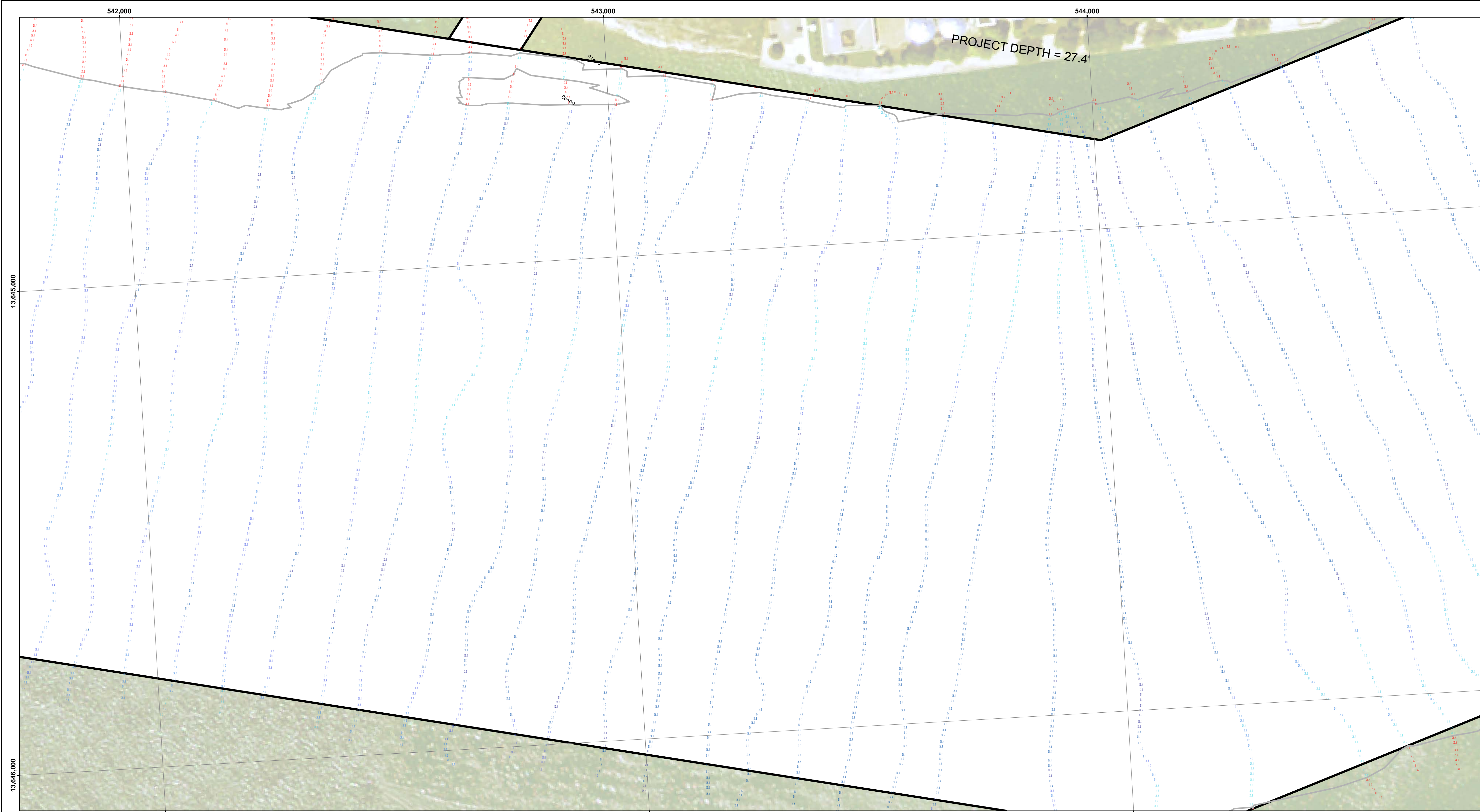
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Submitted:	Surveyed By:
	Plotted By:
	Recommended:
	Checked By:

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DETROIT DISTRICT

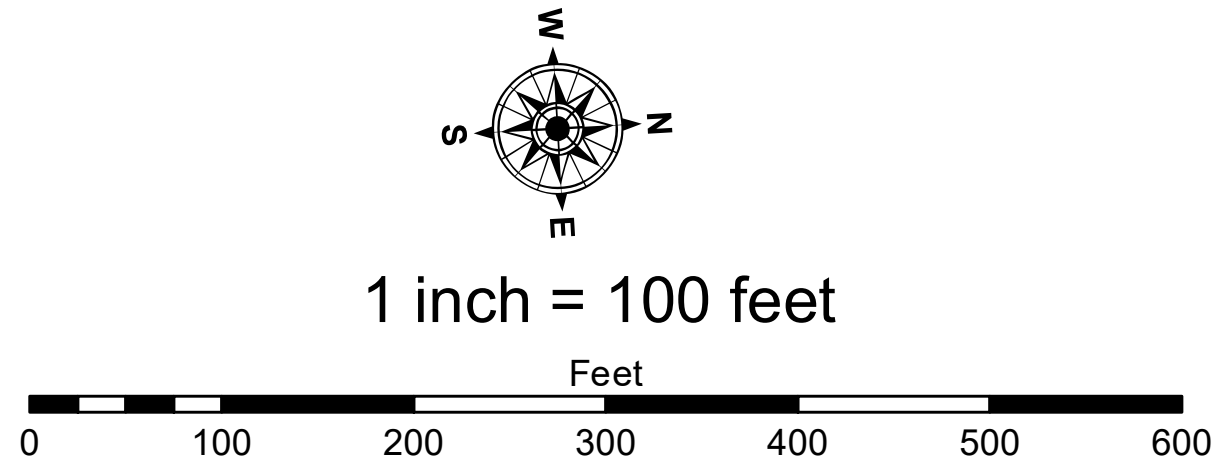
St. Clair River, MI
St. Clair River
CR_01_SCR_20200724_CS
24 July 2020

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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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HORIZONTAL GRID DATUM BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983, U.S. SURVEY FOOT.

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

ALL SOUNDINGS ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM OF 1985 (IGLD85). L.W.D. AS INDICATED. PROJECT DEPTHS FOR THIS RIVER RANGE FROM 27.1' TO 30.0'

TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

WATER LEVEL STATIONS:
ST CLAIR SHORES (19034052)
ALGONAC, MI (19014070)
ST CLAIR POLICE, MI (19014080)
BLACK RIVER, MI (19014090)
DRY DOCK, MI (19014087)
DUNN PAPER, MI (19014096)

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

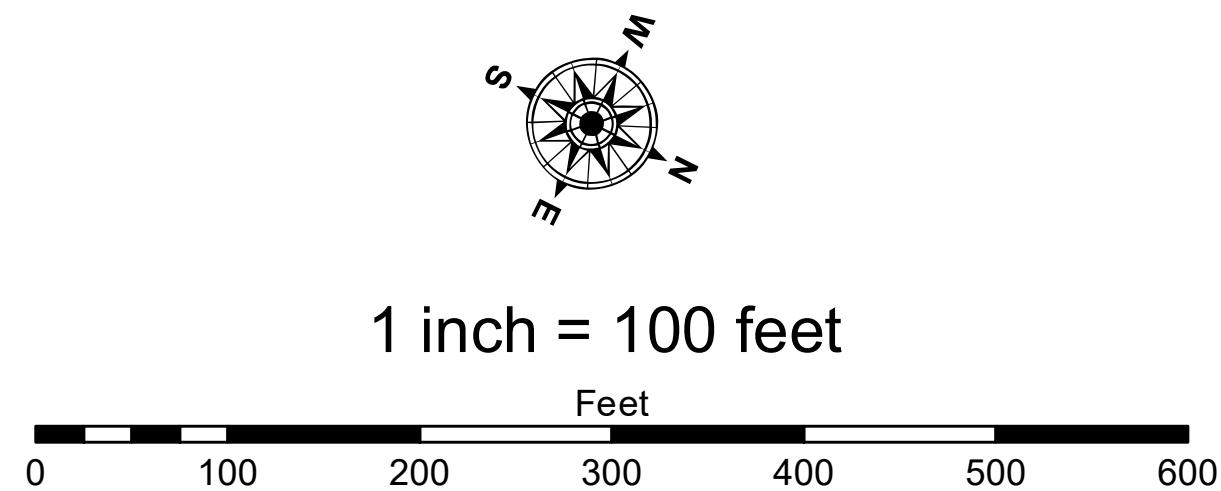


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Submitted:	Surveyed By:
Recommended:	Plotted By:
Approved:	Checked By:

St. Clair River, MI
St Clair River
CR_01_SCR_20200724_CS
24 July 2020

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NOTES: INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THE TIME.

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POSITIONING: APPLANIX POS-MV4 W/ VRS/RTK OR MARINESTAR GNSS.
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SONAR: RZSONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)
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ST CLAIR SHORES (196034052)
ALCONAC, MI □ (89014070)
ST CLAIR POLICE, MI □ (89014080)
BLACK RIVER, MI □ (89014090)
DEER DOCK, MI □ (89014087)
DUNN PAPER, MI □ (89014096)



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DETROIT DISTRICT

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Surveyed by:

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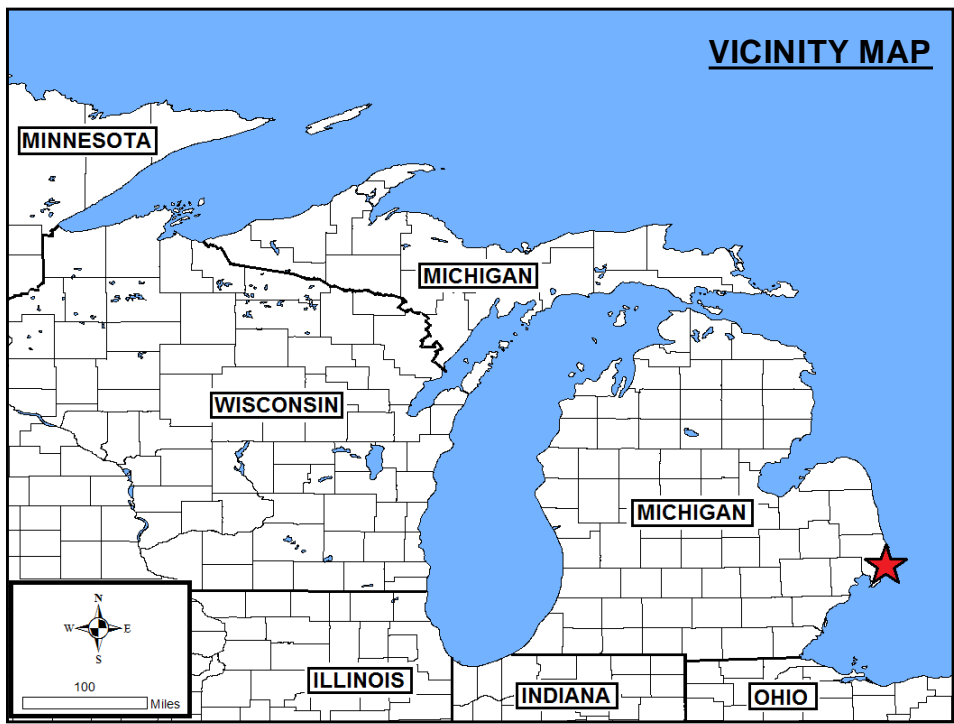
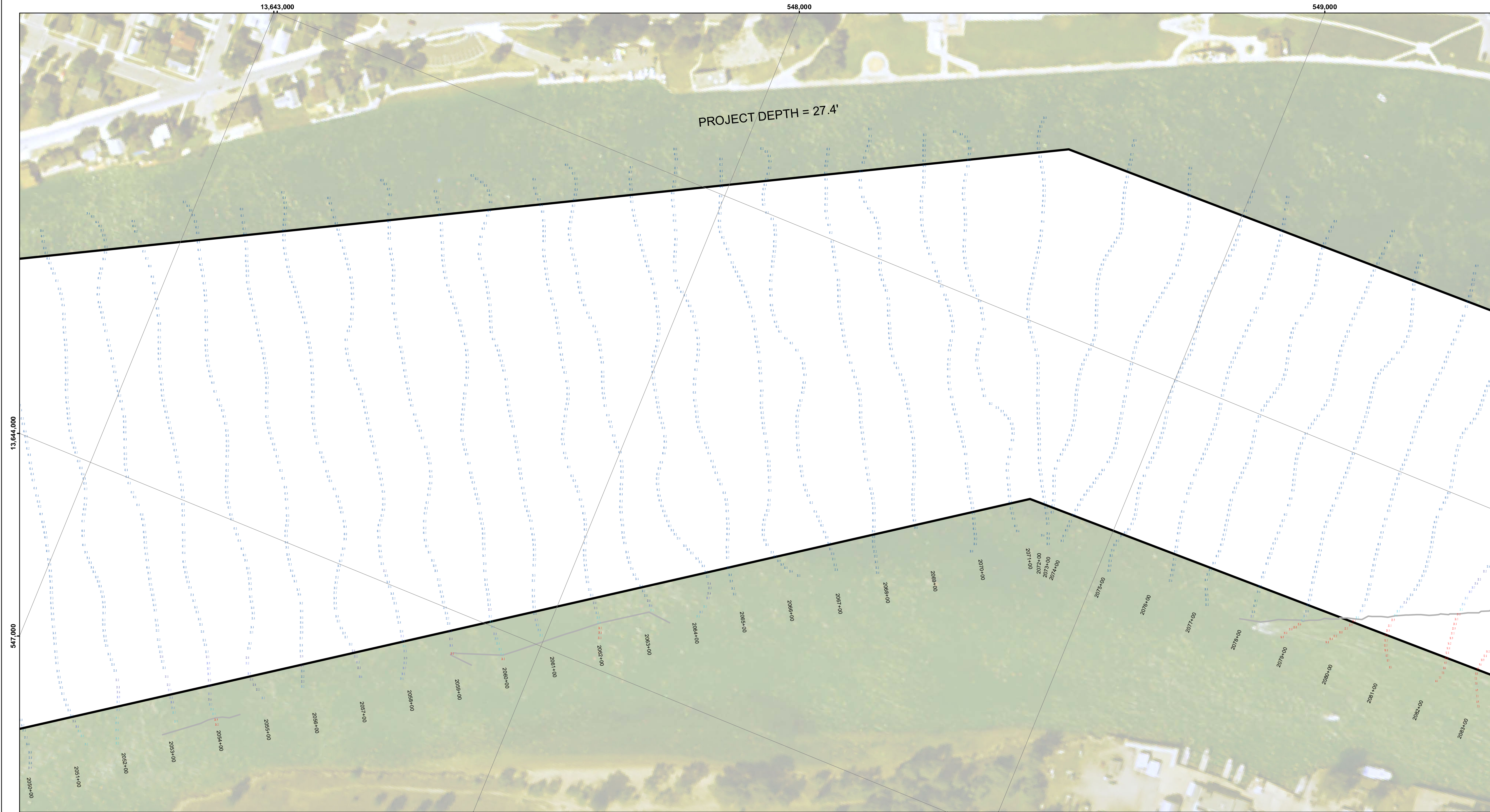
St. Clair River, MI

St Clair River

CR_01_SCR_20200819_CS

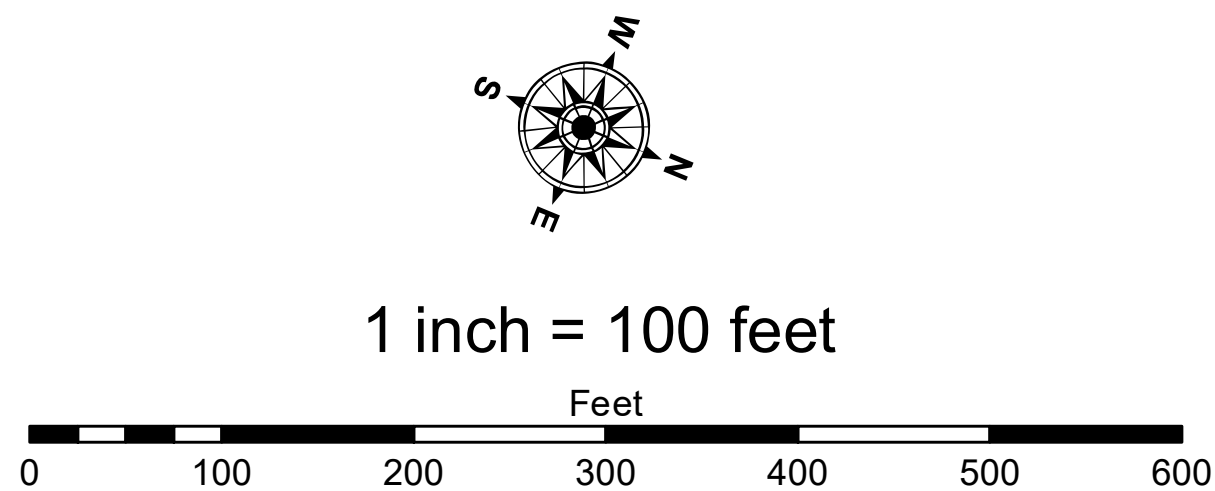
19 August 2020

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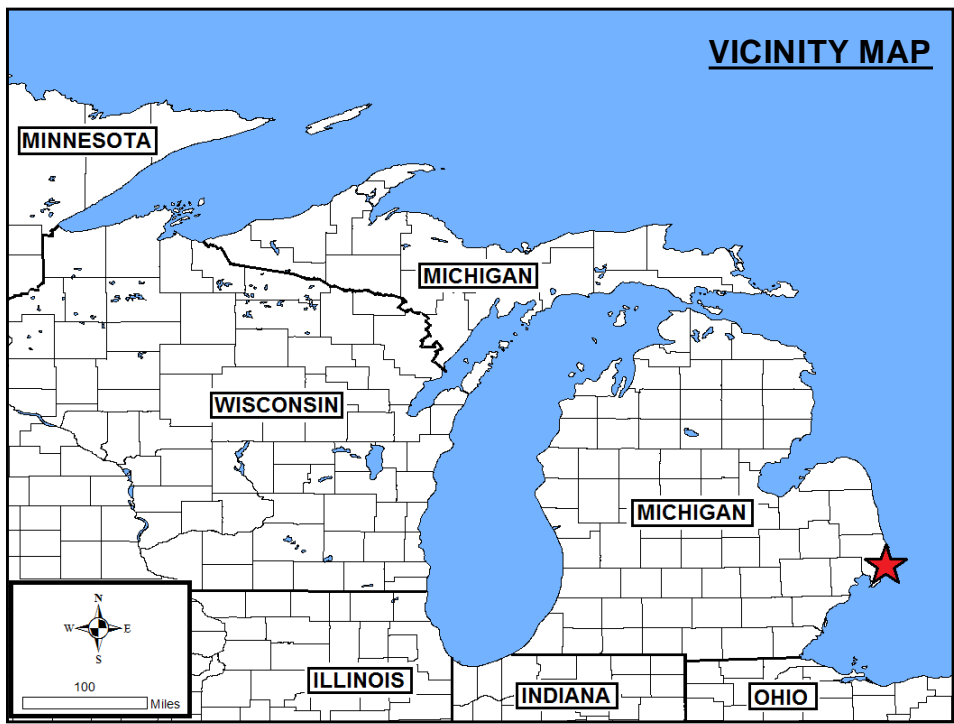
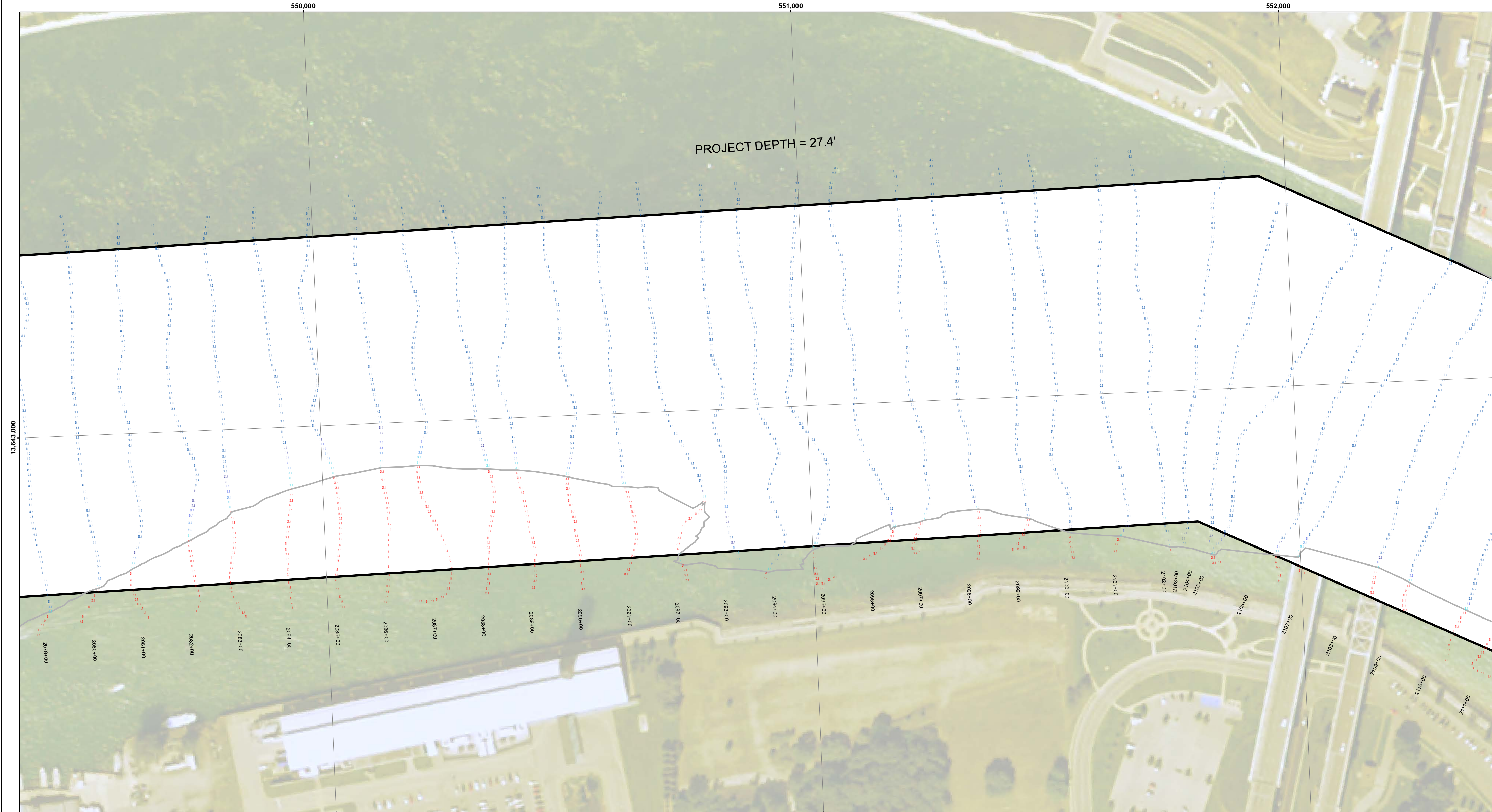
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT			
Submitted:	Surveyed By:	Plotted By:	Checked By:
Recommended:	Chief, Survey Section		
Approved:	Chief, Technical Services		

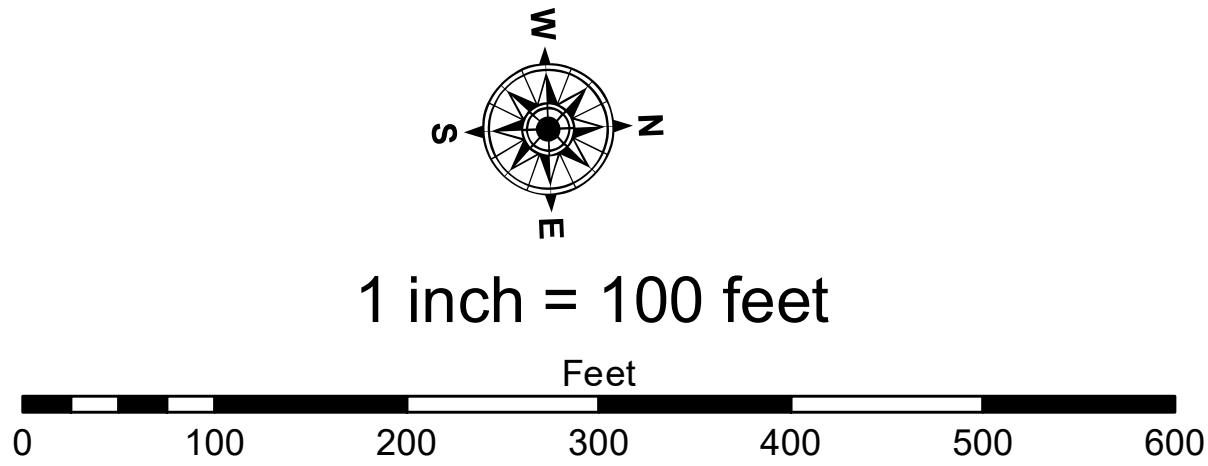
St. Clair River, MI
St Clair River
CR_01_SCR_20200819_CS
19 August 2020

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- LEGEND**
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- SOUNDING LEGEND**
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Submitted:	Surveyed By:	Plotted By:	Checked By:	

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