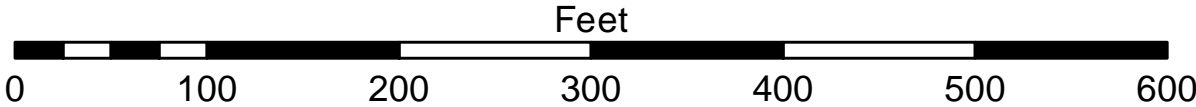


- LEGEND**
- ..... Cable Submarine
  - - Cable Overhead
  - Placement Area
  - └ Beacon, General
  - Contour Lines
  - ▭ Channel Limits

- 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



**NOTES:**

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

ST CLAIR SHORES, MI (#9034052)

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

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



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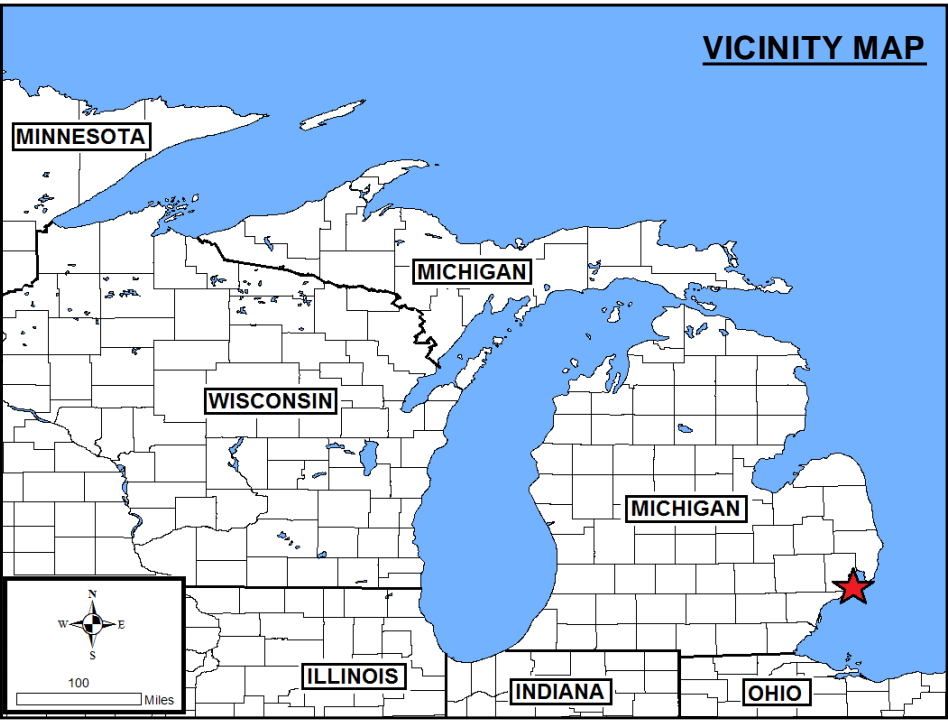
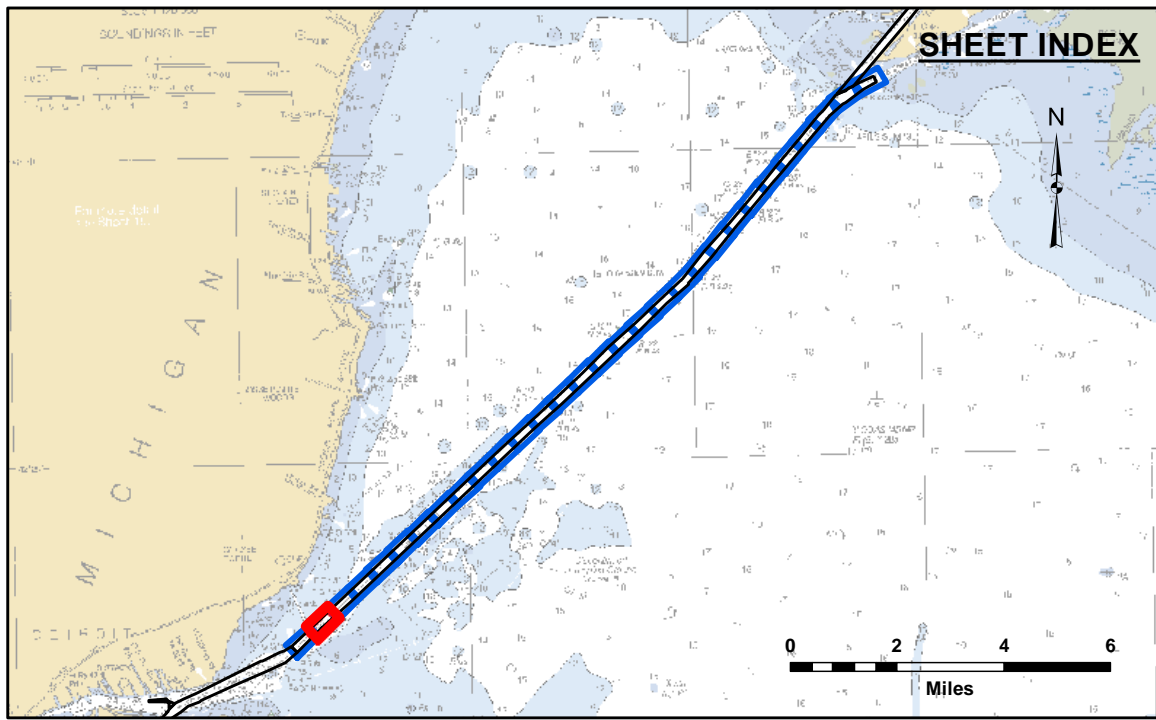
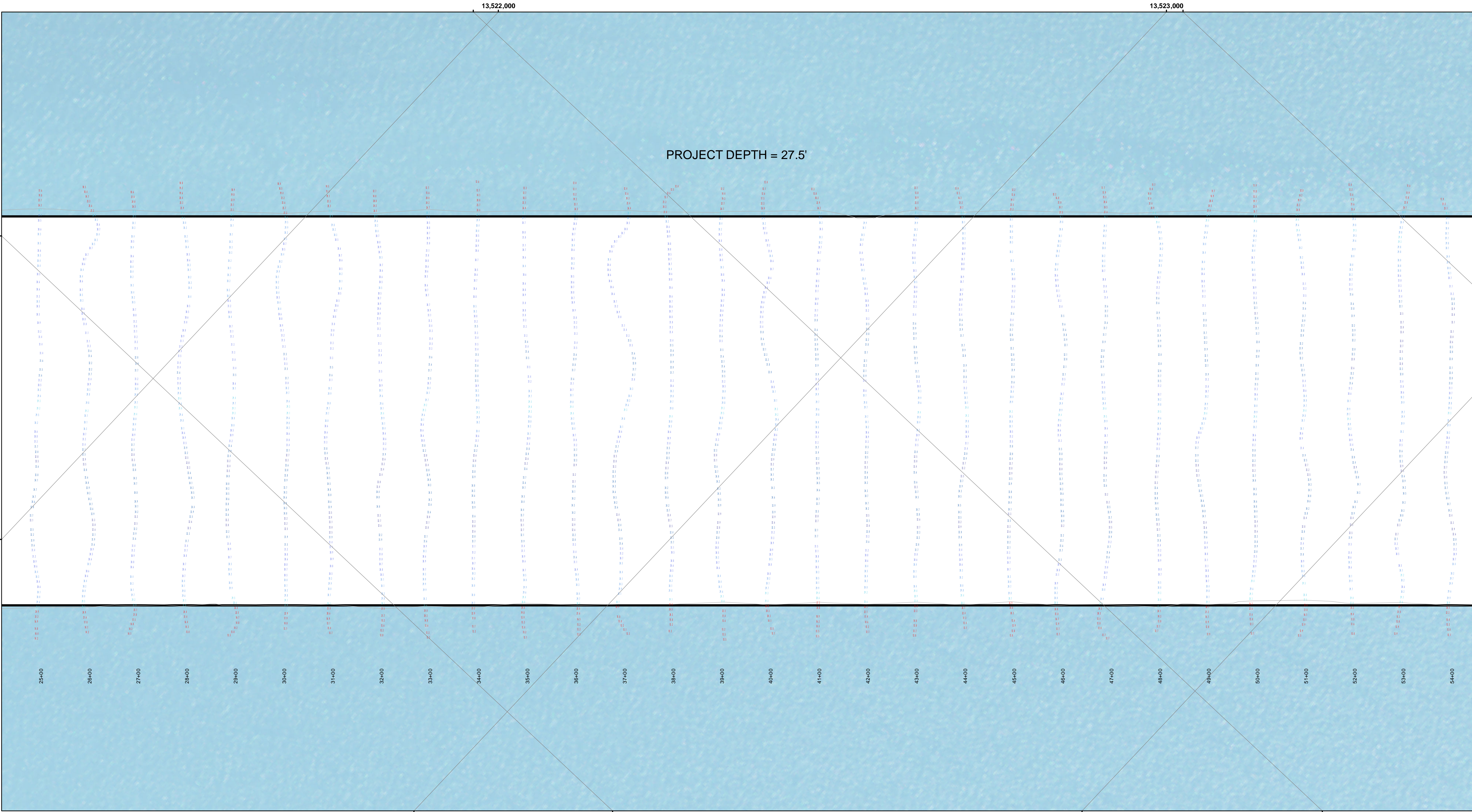
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Submitted:	Surveyed By:
	Plotted By:
	Checked By:
Recommended:	
Approved:	

Channels in Lake St. Clair, MI  
Channels of Lake St Clair  
CL\_01\_LSC\_20221027\_CS  
27 October 2022

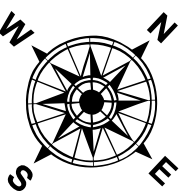
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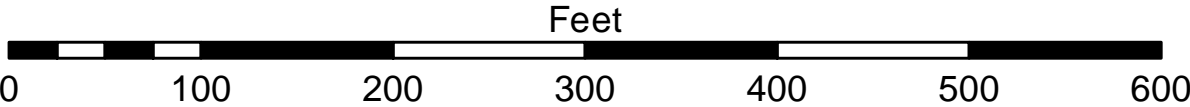


- LEGEND**
- ..... Cable Submarine
  - - Cable Overhead
  - Placement Area
  - Beacon, General
  - Contour Lines
  - Channel\_Limits

- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
  - PROJECT DEPTH
  - PROJECT DEPTH +1'
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MOTION COMPENSATION: APPLANIX POS-MV4  
SONAR: RESONANC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)  
SOFTWARE: HYPACK

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS  
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**U.S. ARMY CORPS OF ENGINEERS  
DETROIT DISTRICT**

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

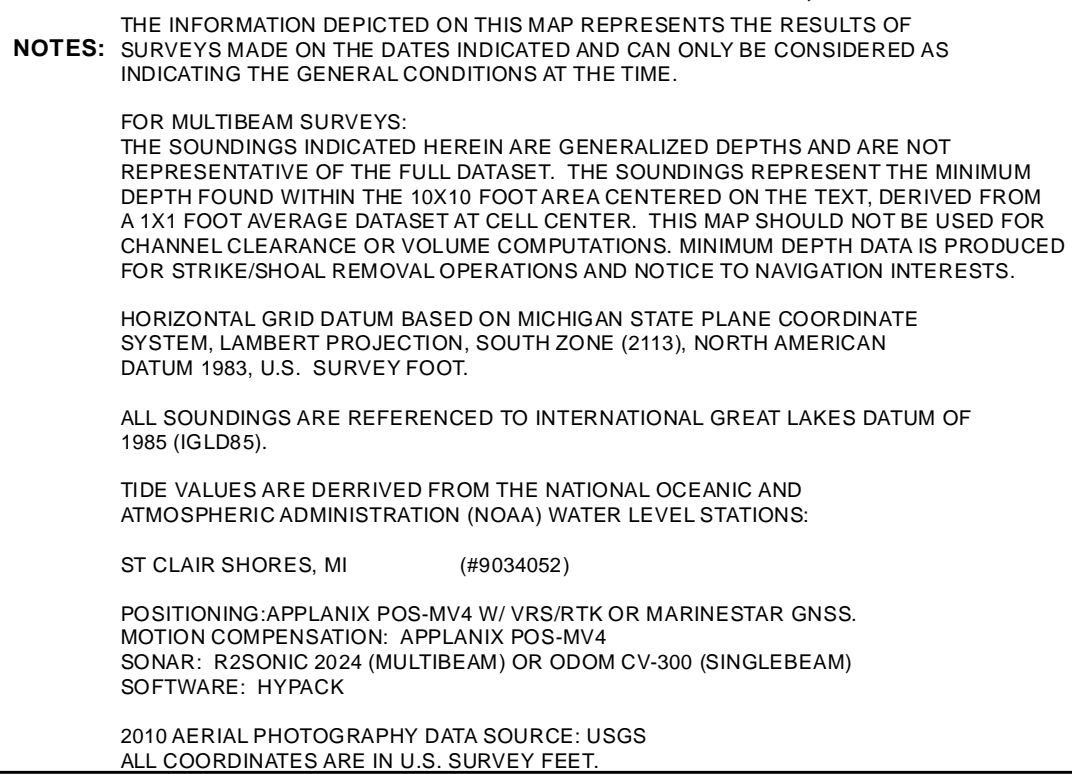
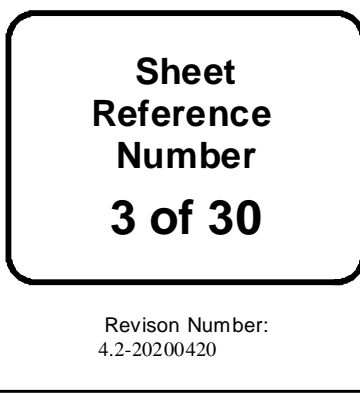
Chief, Survey Section  
Chief, Technical Services

**Channels in Lake St. Clair, MI**  
**Channels of Lake St Clair**  
**CL\_01\_LSC\_20221027\_CS**  
**27 October 2022**

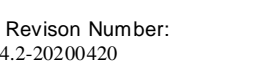
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Revision Number:  
4.2-2022060430

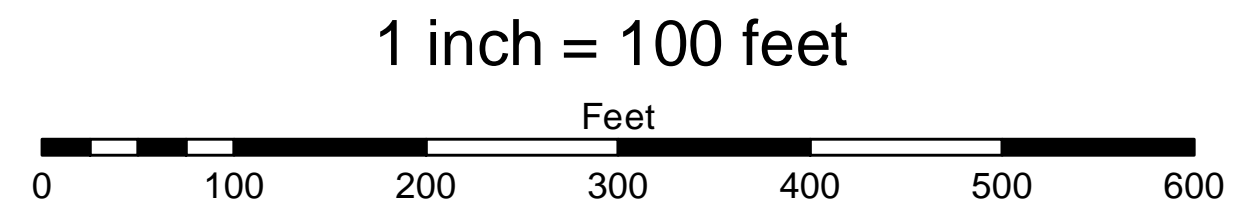
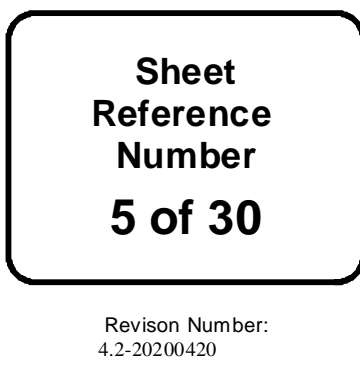












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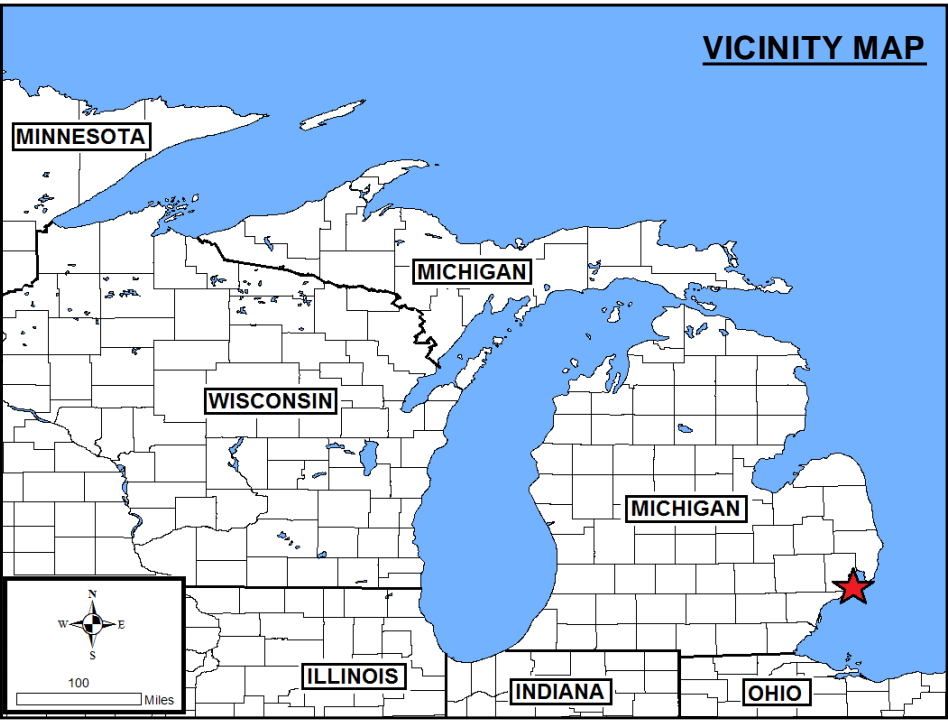
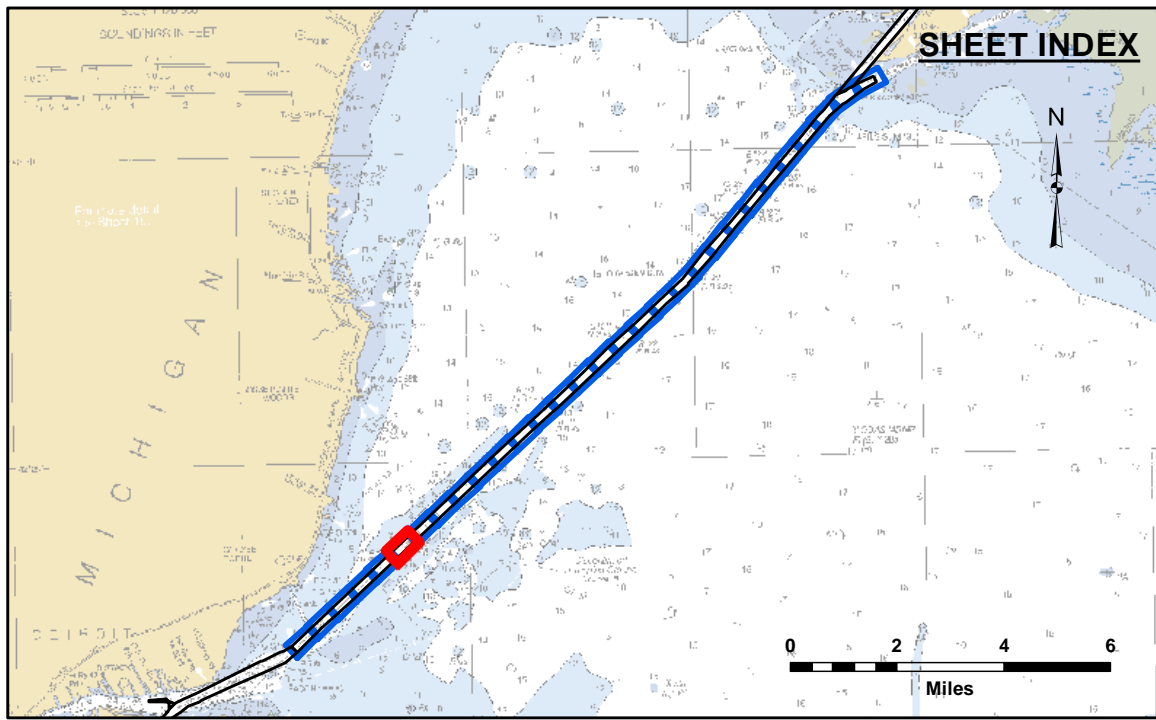
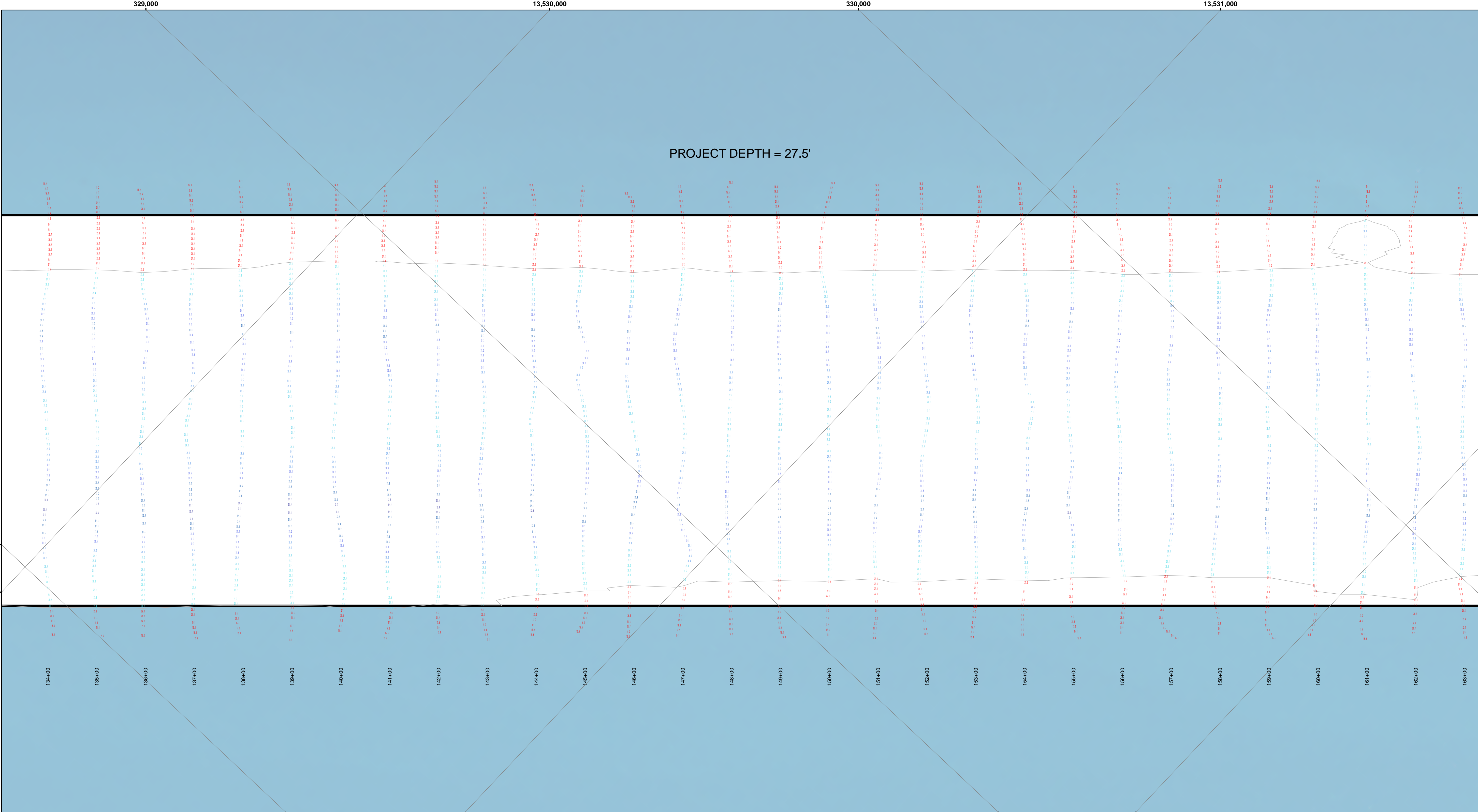
TIDE VALUES ARE DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) WATER LEVEL STATIONS:

ST CLAIR SHORES, MI (#0934052)

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SONAR: R2SONIC 224 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)  
SOFTWARE: HYPACK

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



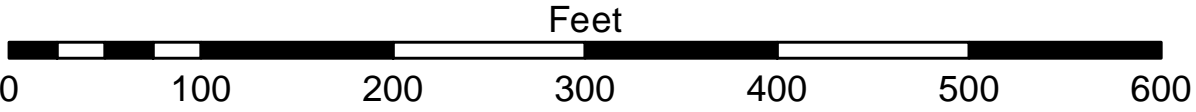


- LEGEND**
- Cable Submarine
  - - - Cable Overhead
  - ▭ Placement Area
  - ⊥ Beacon, General
  - Contour Lines
  - ▭ Channel\_Limits

- 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



**NOTES:**

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ST CLAIR SHORES, MI (#9034052)

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

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS  
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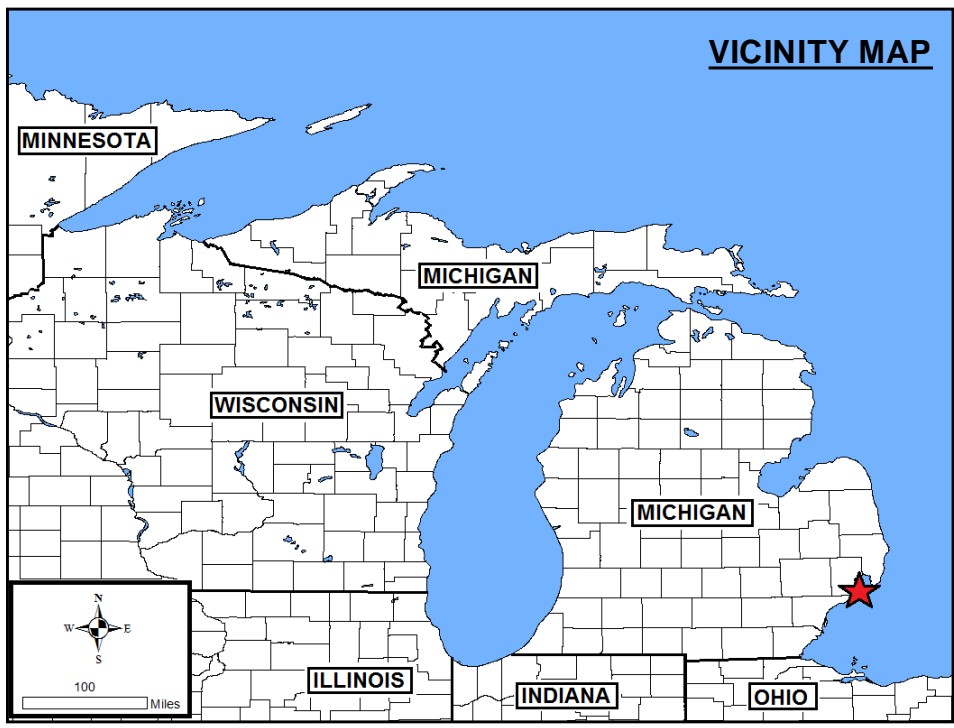
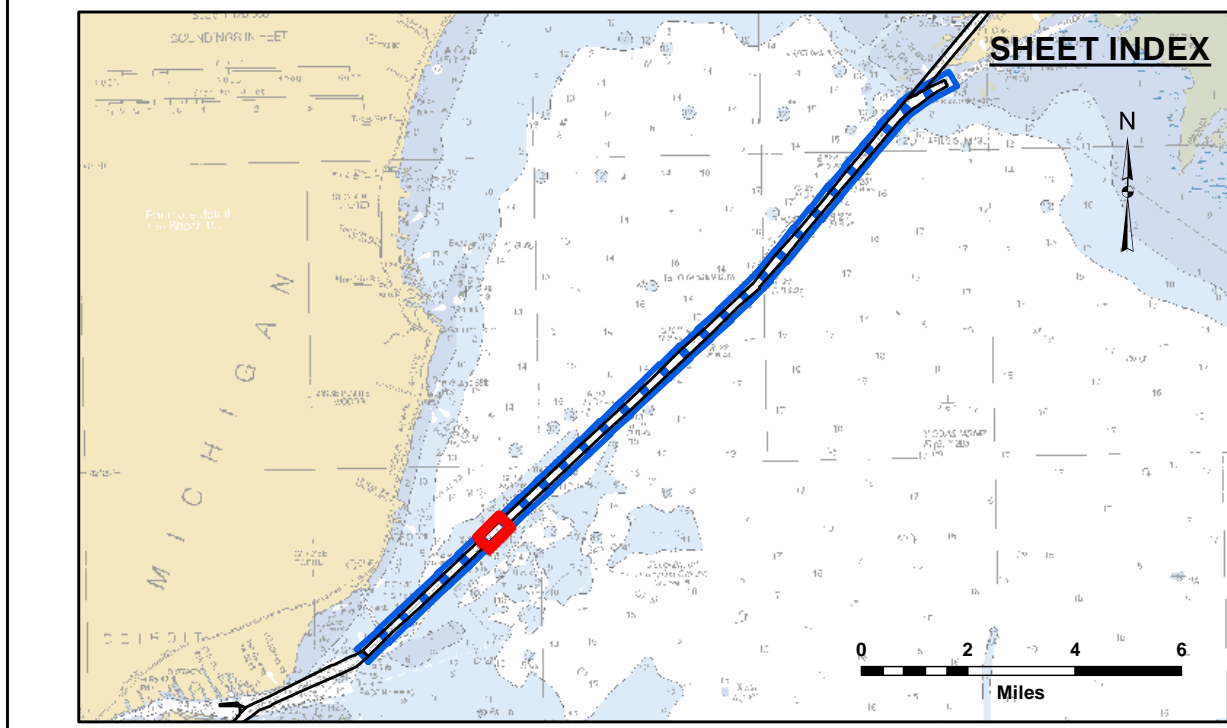
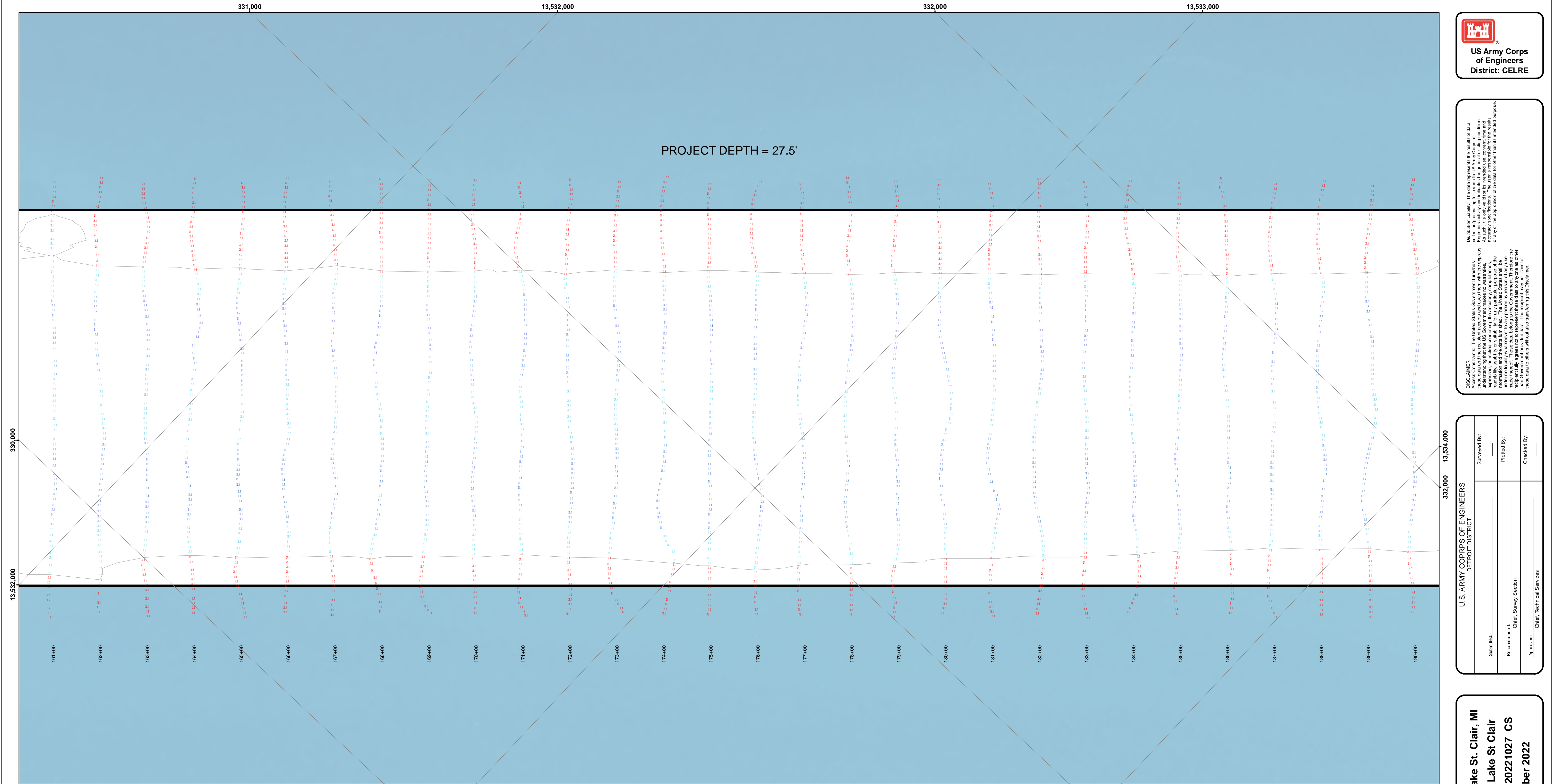
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Submitted:	Surveyed By:	Checked By:		
			Plotted By:	
				Chief, Survey Section

Channels in Lake St. Clair, MI  
Channels of Lake St Clair  
CL\_01\_LSC\_20221027\_CS  
27 October 2022





**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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ST CLAIR SHORES, MI (#9034052)

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SOFTWARE: HYPACK

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

Channels in Lake St. Clair, MI  
Channels of Lake St Clair  
CL\_01\_LSC\_20221027\_CS  
27 October 2022

Sheet  
Reference  
Number  
7 of 30

Revision Number:  
4.2 2022/04/20

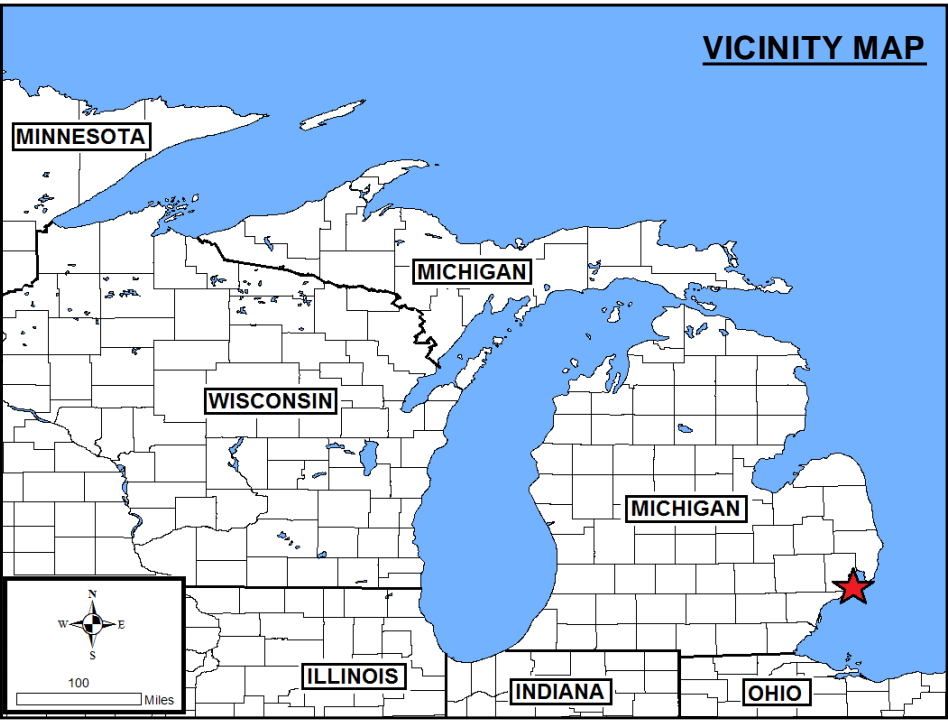
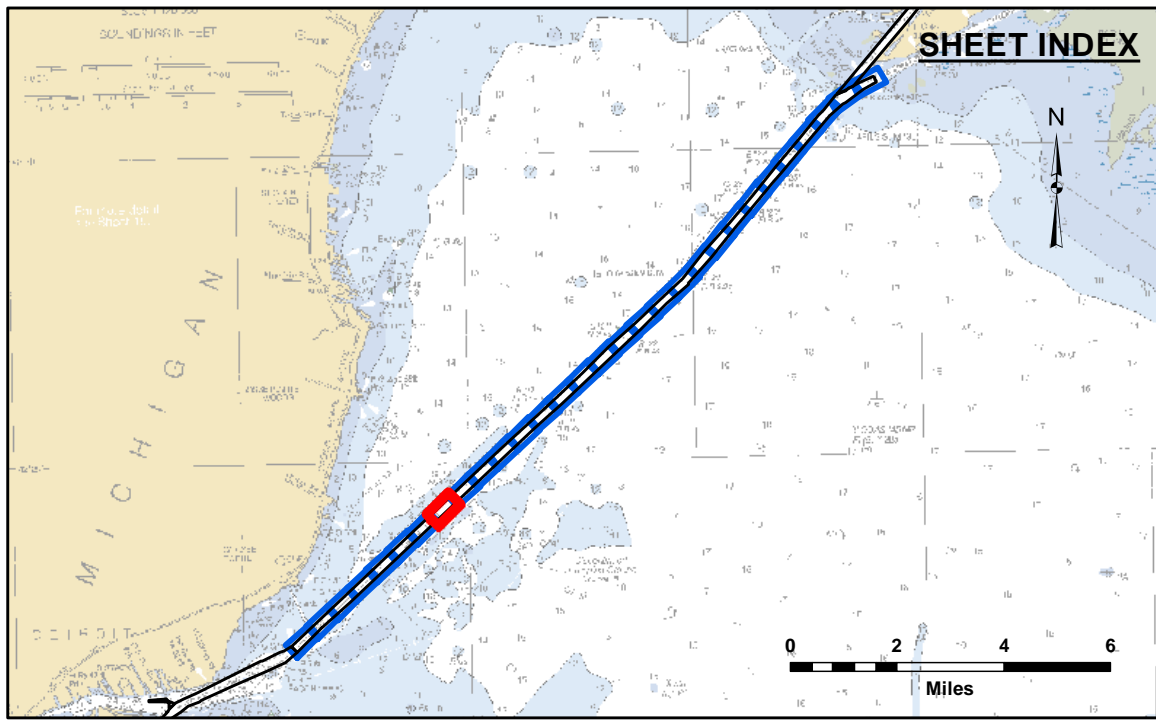
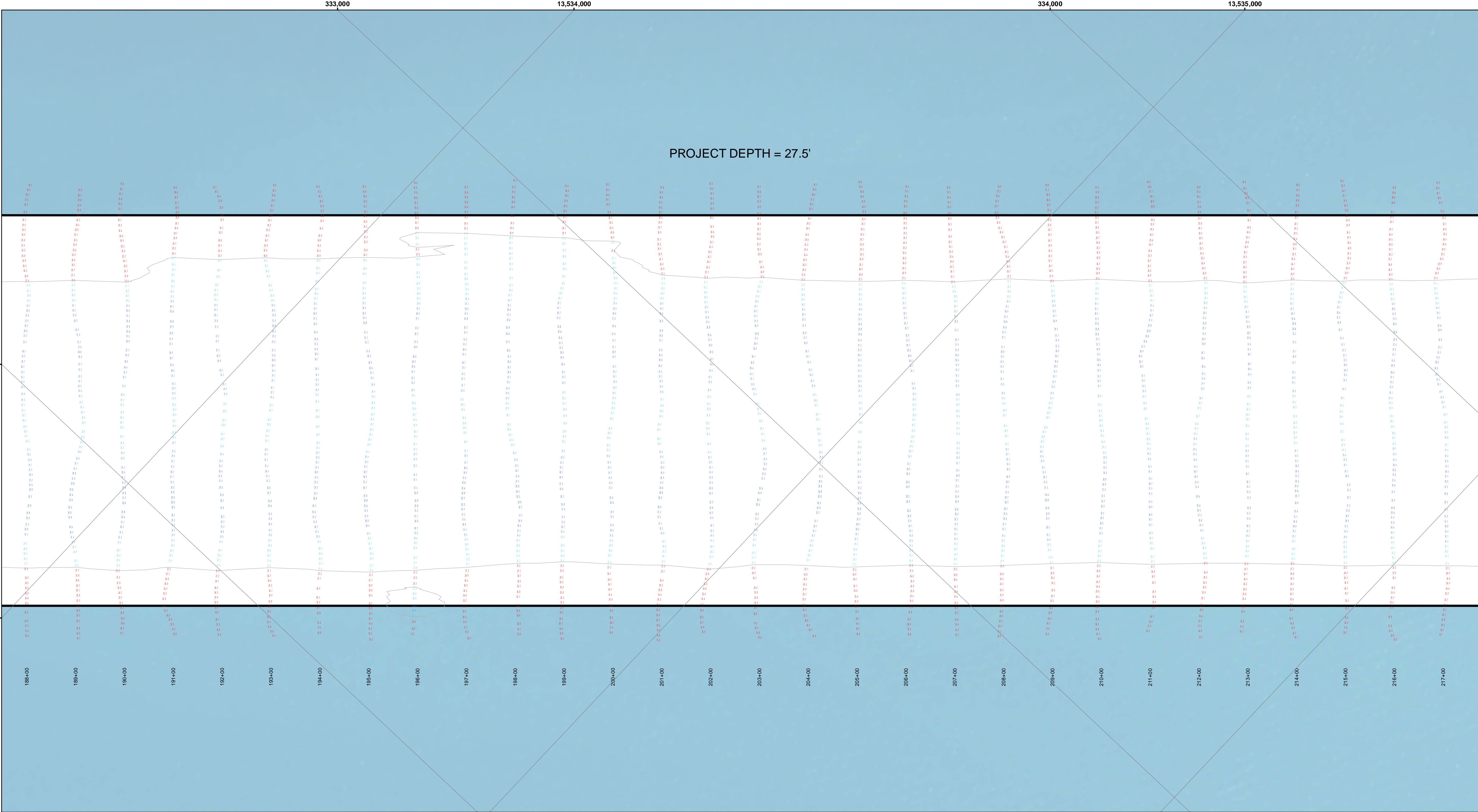
**US Army Corps  
of Engineers**  
District: CELRE

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		Checked By:	
		Plotted By:	
		Recommended: Chief, Survey Section	



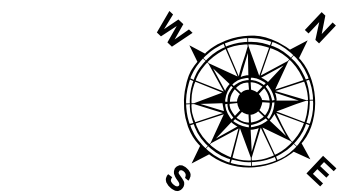


**LEGEND**

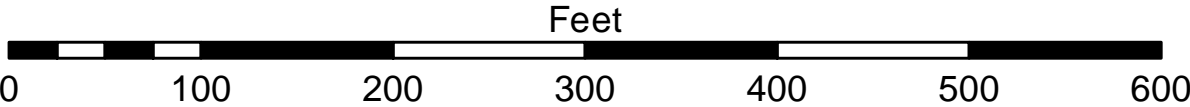
- Cable Submarine
- - - Cable Overhead
- Placement Area
- ⊥ Beacon, General
- Contour Lines
- ▭ Channel\_Limits

**SOUNDING LEGEND**

- LESS THAN PROJECT DEPTH
- PROJECT DEPTH
- PROJECT DEPTH +1'
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SONAR: RSSONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)  
SOFTWARE: HYPACK

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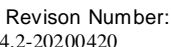
U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	
Submitted:	Surveyed By:
Recommended: Chief, Survey Section	Plotted By:
Approved:	Checked By:

**Channels in Lake St. Clair, MI**  
**Channels of Lake St Clair**  
**CL\_01\_LSC\_20221027\_CS**  
**27 October 2022**

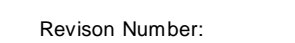
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Reference  
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Revision Number:  
4.2-202204030

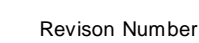




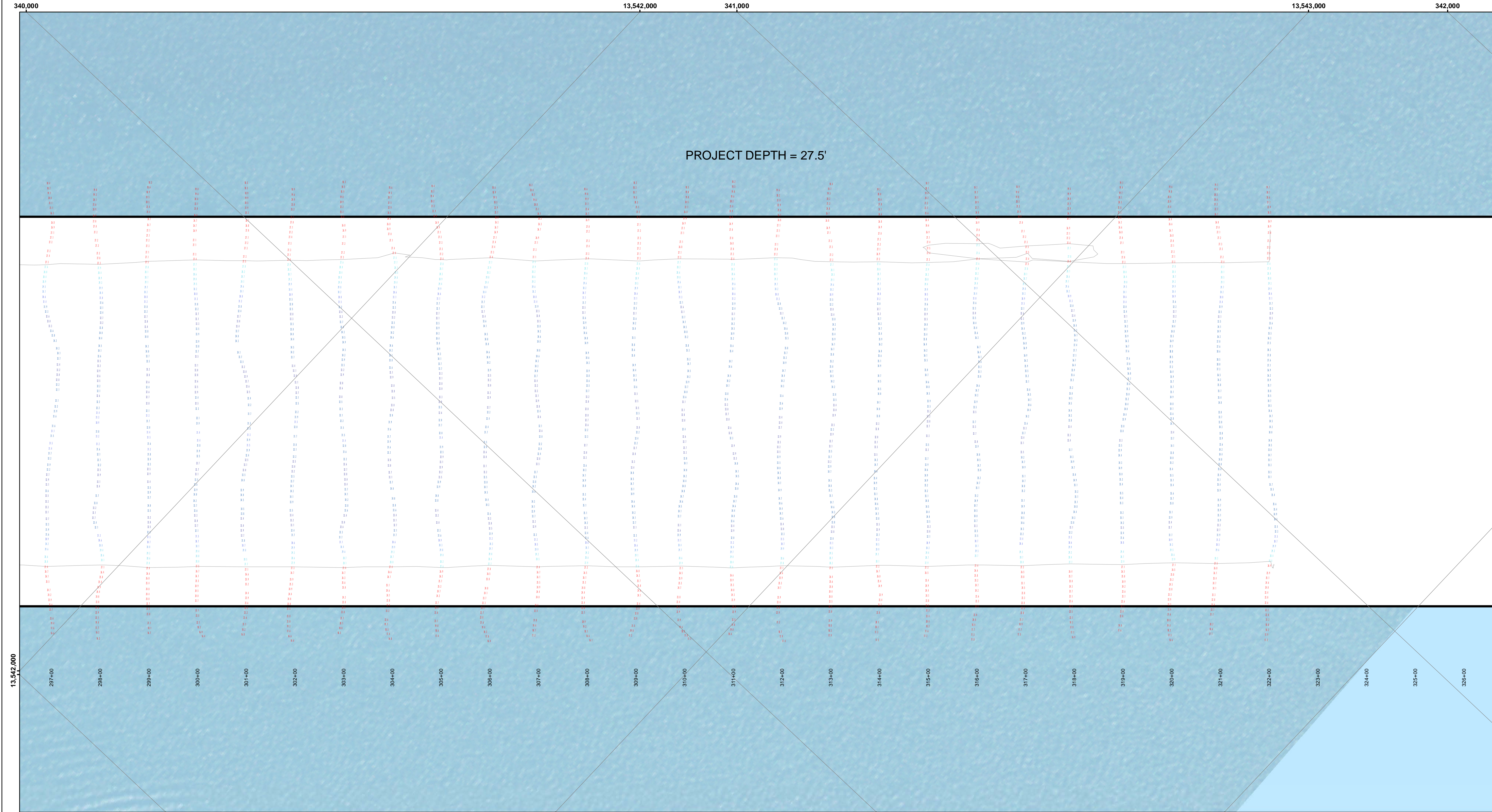












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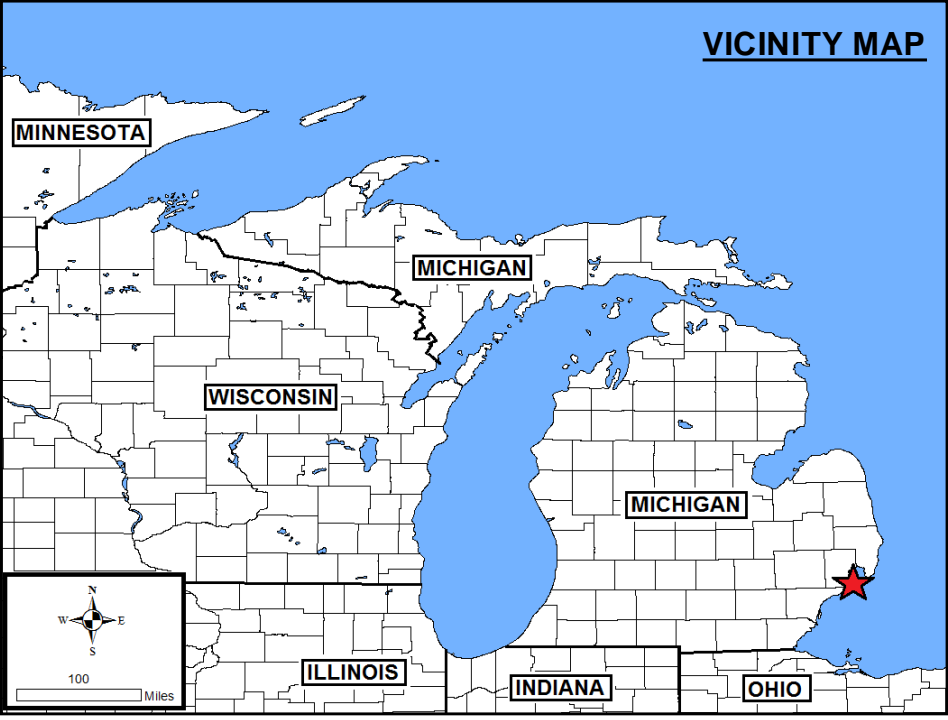
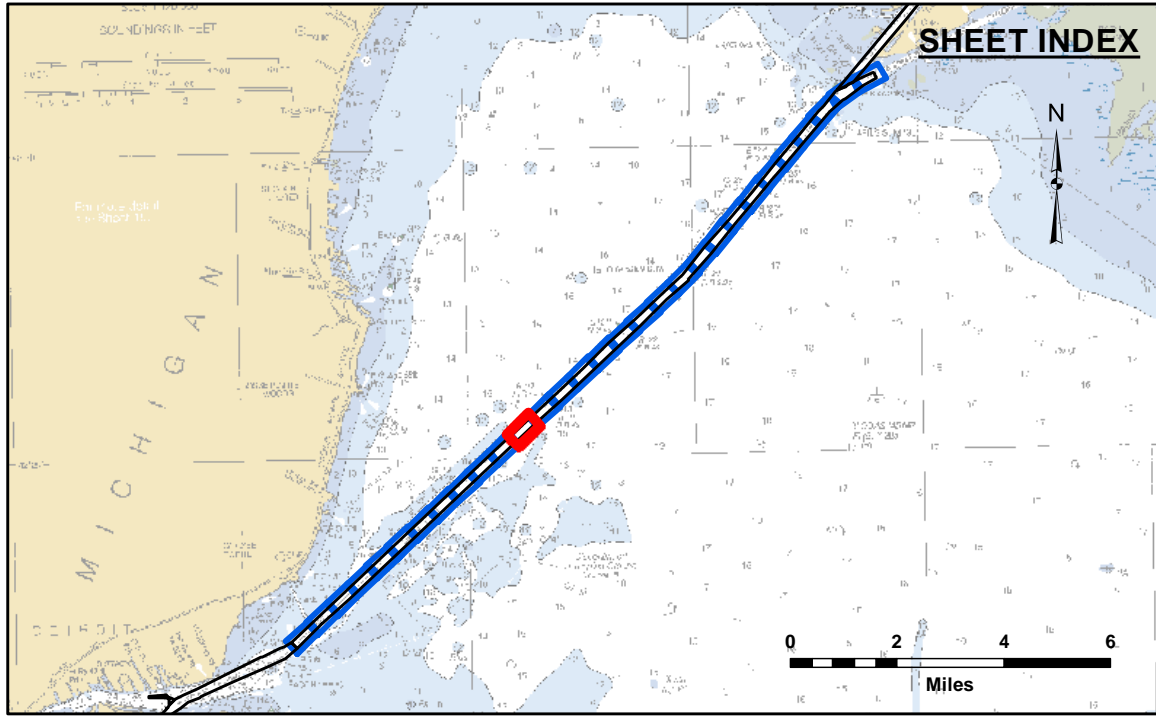
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	Submitted:	Surveyed By:
	Recommended:	Plotted By:
	Chief, Survey Section	Checked By:
	Approved:	Chief, Technical Services

**Channels in Lake St. Clair, MI**  
**Channels of Lake St Clair**  
**CL\_01\_LSC\_20221027\_CS**  
**27 October 2022**

**Sheet Reference Number**  
**12 of 30**

Revision Number:  
4.2-2022060420

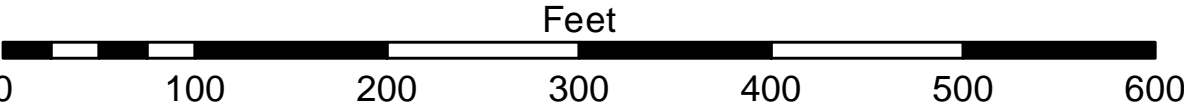


- LEGEND**
- ..... Cable Submarine
  - - Cable Overhead
  - Placement Area
  - Beacon, General
  - Contour Lines
  - Channel\_Limits

- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
  - PROJECT DEPTH
  - PROJECT DEPTH +1'
  - PROJECT DEPTH +2'
  - PROJECT DEPTH +3'
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HORIZONTAL GRID DATUM BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983, U.S. SURVEY FOOT.

ALL SOUNDINGS ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM OF 1985 (IGLD85).

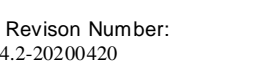
TIDE VALUES ARE DERRIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) WATER LEVEL STATIONS.

ST CLAIR SHORES, MI (#9034052)

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

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

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

ST CLAIR SHORES, MI (#0304052)

POSITIONING: APPLINX POS-MV4 W/ VR5/RTX OR MARINESTAR GNS5.  
MOTION COMPENSATION: APPLINX POS-MV4  
SONAR: RESONIC 2024 (MULTIBEAM) OR ODOM CV-300 (SINGLEBEAM)  
SOFTWARE: HYPACK

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



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U.S. ARMY CORPS OF ENGINEERS

Surveyed By:

Plotted By:

Checked By:

## Channels in Lake St Clair MI

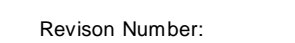
## Channels of Lake St Clair

01\_LSC\_20220920  
20 September 2022

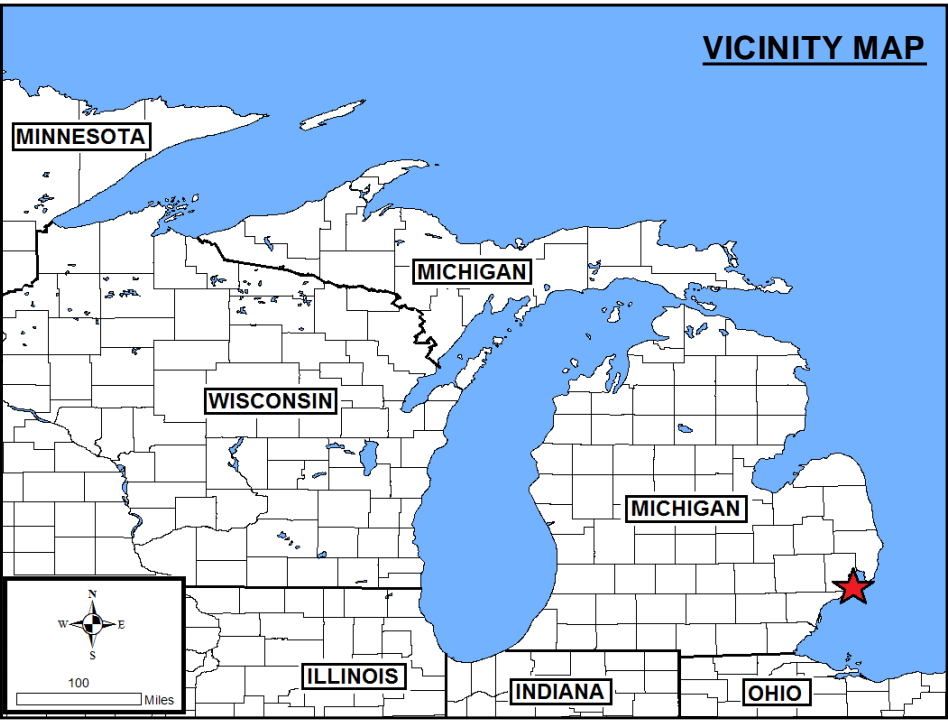
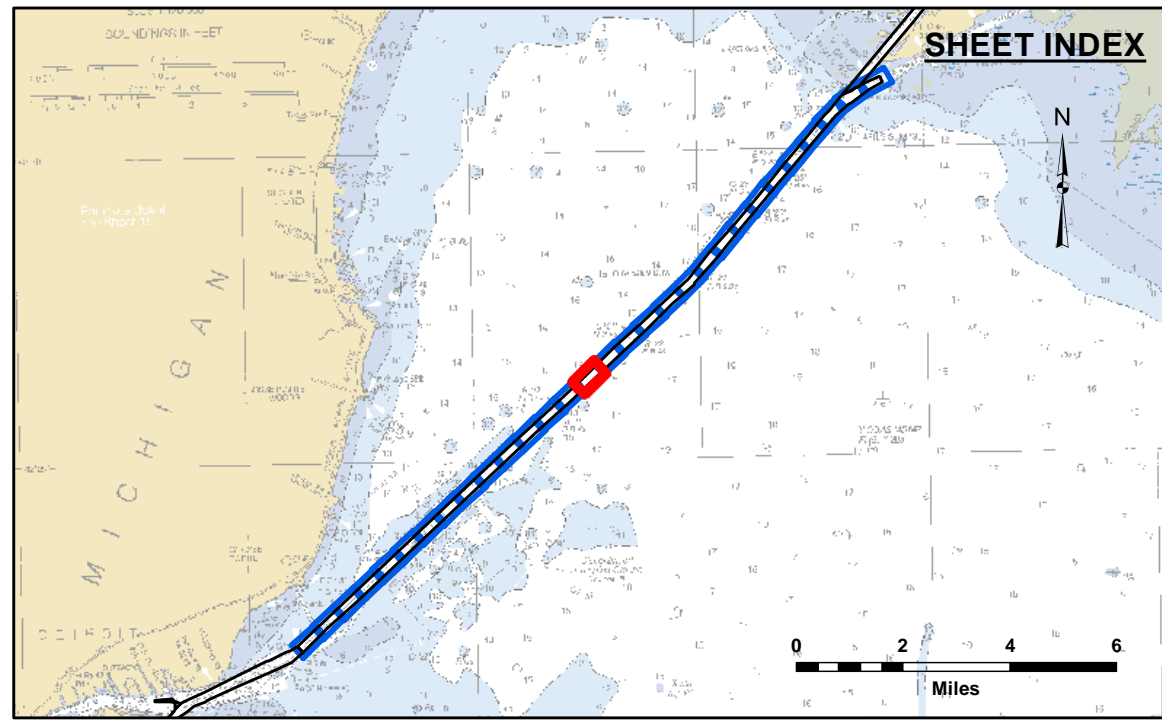
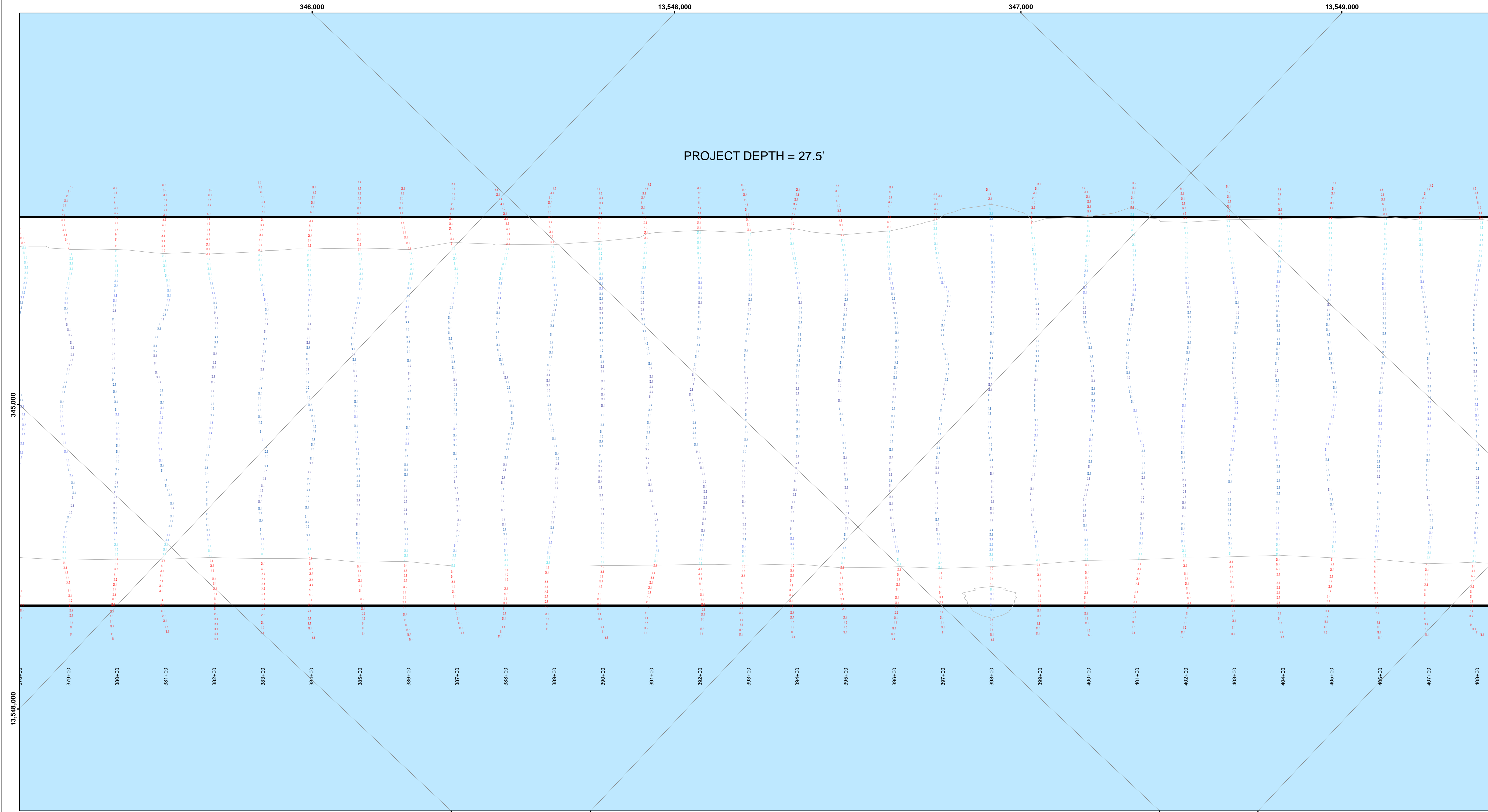
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Revision Number  
4.2-20200420









**LEGEND**

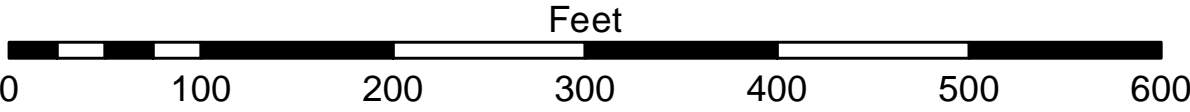
- ..... Cable Submarine
- - Cable Overhead
- Placement Area
- └ Beacon, General
- Contour Lines
- ▭ Channel\_Limits

**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



**NOTES:**

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ST CLAIR SHORES, MI (#9034052)

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

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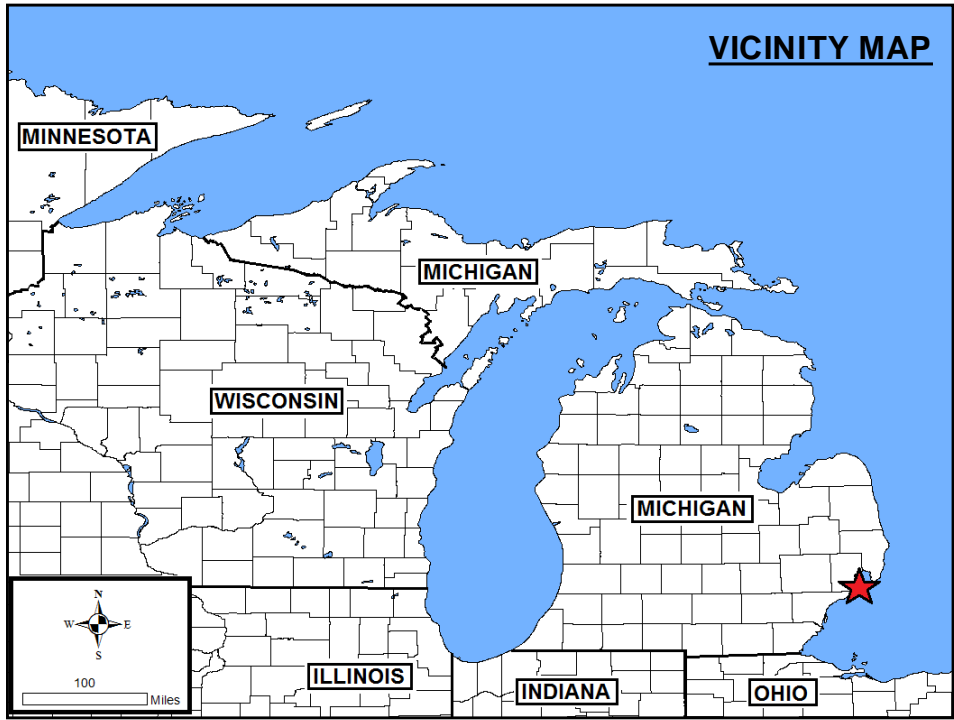
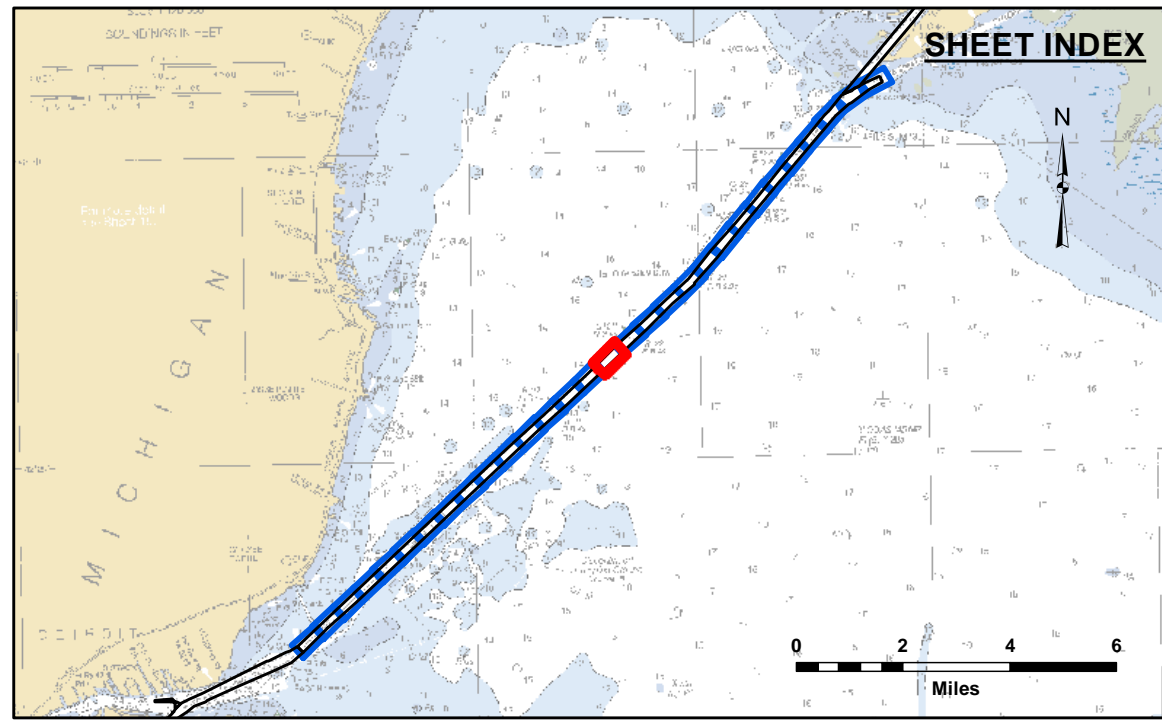
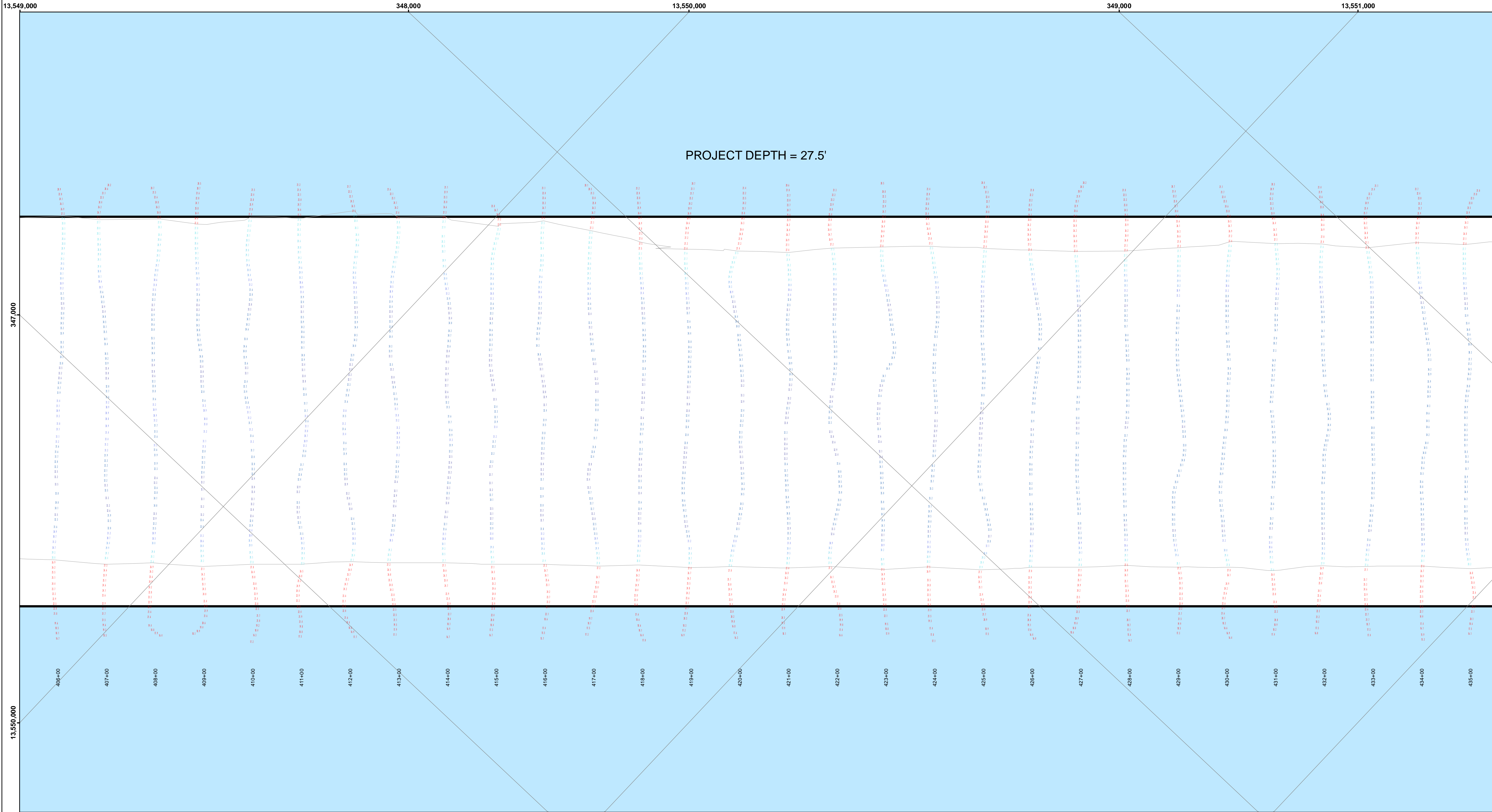
Submitted:	Surveyed By:
Recommended: Chief, Survey Section	Plotted By:
Approved: Chief, Technical Services	Checked By:

**Channels in Lake St. Clair, MI**  
**Channels of Lake St Clair**  
**CL\_01\_LSC\_20220920\_CS**  
**20 September 2022**

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Number**  
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Revision Number:  
4.2-2022060420





**LEGEND**

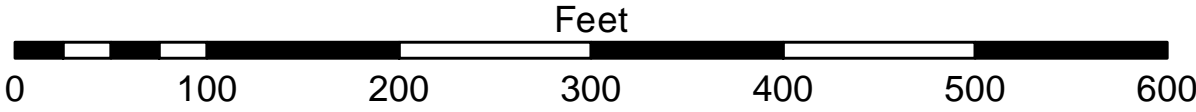
- ..... Cable Submarine
- - Cable Overhead
- Placement Area
- ⊥ Beacon, General
- Contour Lines
- ▭ Channel Limits

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

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS  
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**US Army Corps  
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District: CELRE

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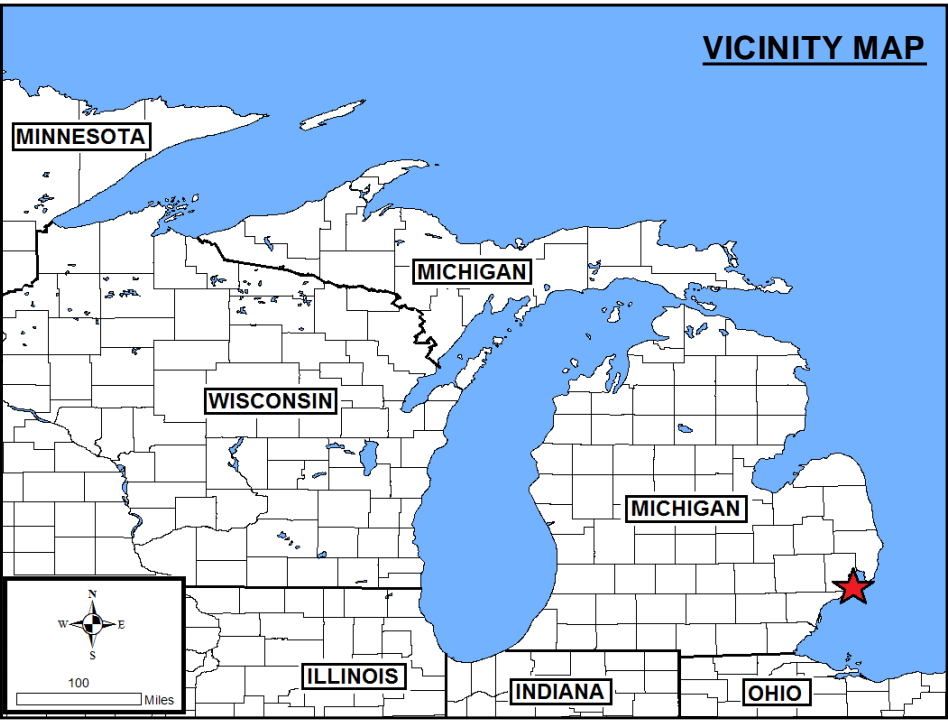
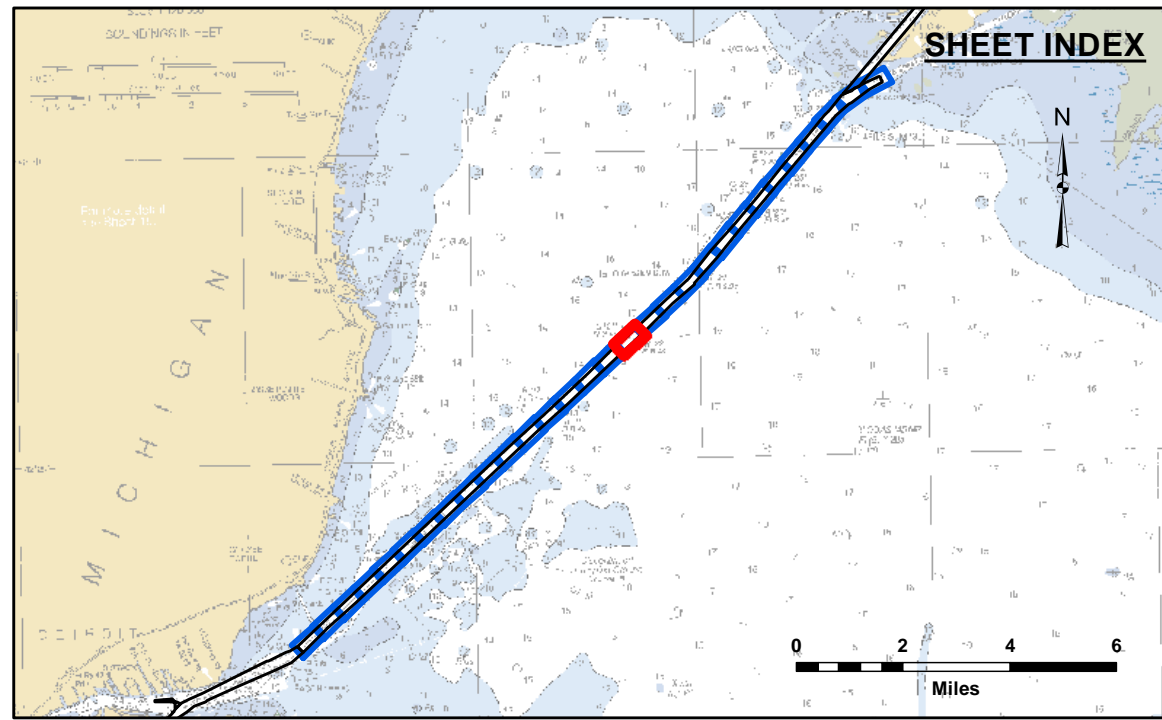
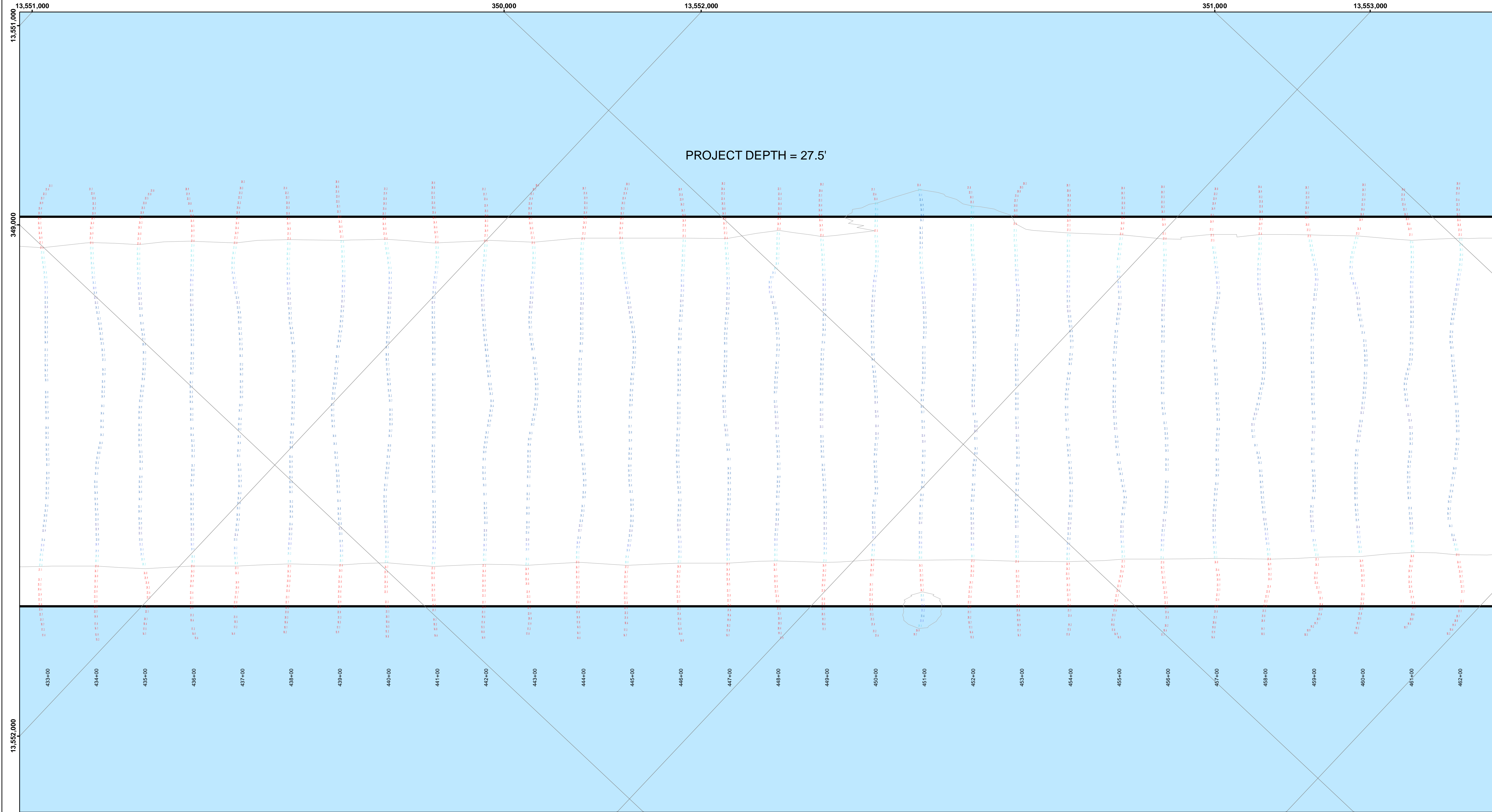
U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	Surveyed By: _____
	Plotted By: _____
	Checked By: _____
	Submitted: _____
Recommended: Chief, Survey Section	
Approved: Chief, Technical Services	

**Channels in Lake St. Clair, MI**  
**Channels of Lake St Clair**  
**CL\_01\_LSC\_20220920\_CS**  
**20 September 2022**

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**16 of 30**

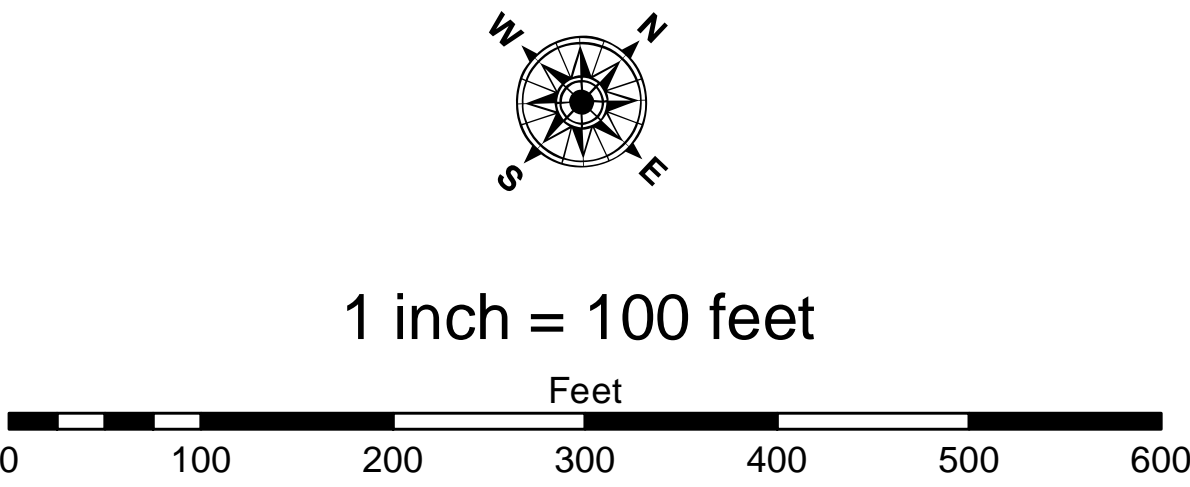
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4.2-2022060420





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

SOUNDING LEGEND	
Red	LESS THAN PROJECT DEPTH
Light Blue	PROJECT DEPTH
Medium Blue	PROJECT DEPTH +1'
Dark Blue	PROJECT DEPTH +2'
Very Dark Blue	PROJECT DEPTH +3'
Black	PROJECT DEPTH +4'
Dark Grey	PROJECT DEPTH +5'



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

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

Channels in Lake St. Clair, MI  
Channels of Lake St Clair  
CL\_01\_LSC\_20220920\_CS  
20 September 2022

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Reference  
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17 of 30

Revision Number:  
4.2-2023060430



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



