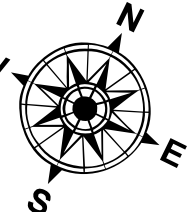
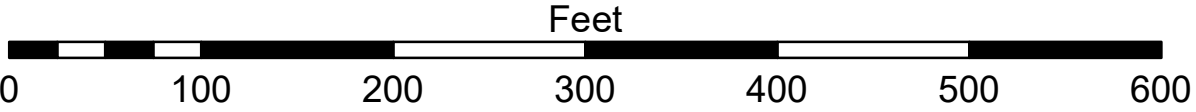


- LEGEND**
- Cable Submarine
 - Cable Overhead
 - Placement Area
 - ⚓ Beacon, General
 - - - Contour Lines
 - ▭ Channel Limits

- 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: THE SOUNDINGS INDICATED HEREON ARE GENERALIZED DEPTHS AND ARE NOT REPRESENTATIVE OF THE FULL DATASET. THE SOUNDINGS REPRESENT THE MINIMUM DEPTH FOUND WITHIN THE 10 FOOT BY 10 FOOT AREA CENTERED ON THE TEXT. DERIVED FROM A 1 FOOT BY 1 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 NOTICES TO NAVIGATION INTERESTS.

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

ALL SOUNDINGS ARE REFERENCED TO I.G.L.D. 1985 ELEVATION 577.5 FT. ABOVE MEAN SEA LEVEL AT RIMOUSKI, QUEBEC.

PROJECT DEPTHS FOR MUSKEGON HARBOR INCLUDE: 29', 28' AND 27'

VERTICAL WATER LEVEL READING WERE TAKEN FROM A FIXED GAGE MARK LONG THE SHEET STEEL WALL IN THE CG BASIN NEAR CROSS SECTION 00+50E

POSITIONING: APPLANIX POS M/V
CORRECTIONS: MARINESTAR GNSS G2+
SONAR: RESONIC 2024 MULTIBEAM ECHOSOUNDER
SOFTWARE: HYPACK 2021
VESSEL: LAUNCH 3058

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:	Ploited By:	
Approved:	Checked By:	
Chief, Survey Section		
Chief, Technical Services		

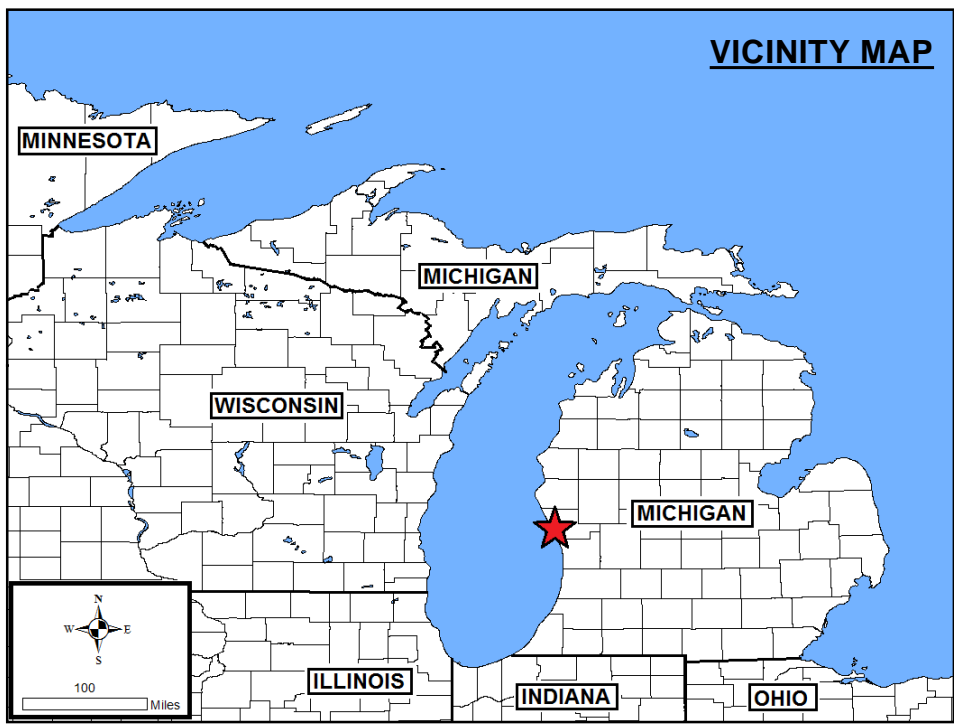
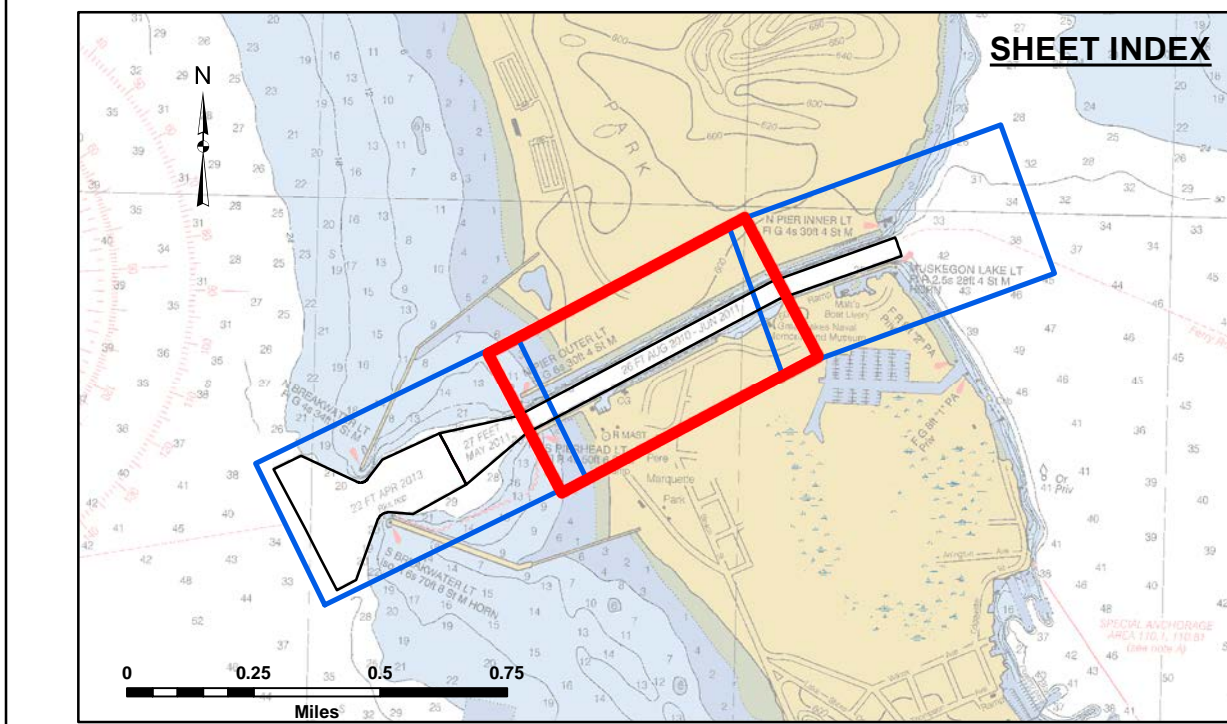
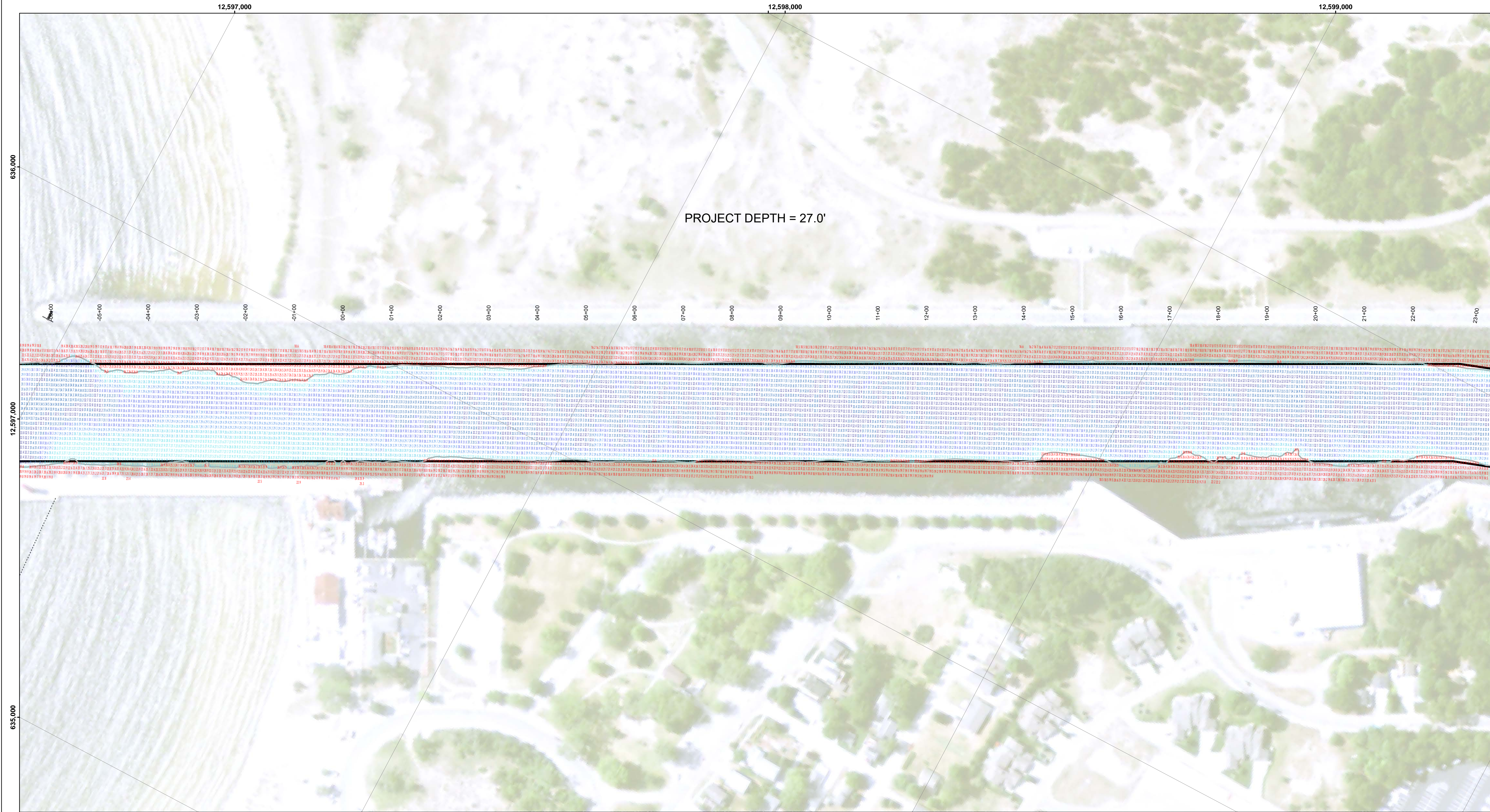
Muskegon Harbor, MI
Muskegon Harbor
MU_01_MSK_20230321_CS
21 March 2023

Sheet
Reference
Number
1 of 3

Revision Number:
4.2-20230321

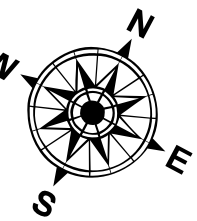
US Army Corps of Engineers
District: CELRE

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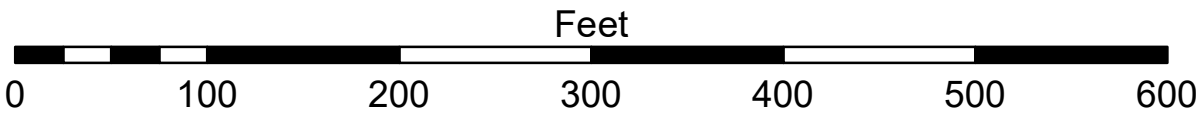


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2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS

ALL COORDINATES ARE IN U.S. SURVEY FEET.



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

Muskegon Harbor, MI
Muskegon Harbor
MU_01_MSK_20230321_CS
21 March 2023

Sheet Reference Number
2 of 3

Revision Number:
4.2-20240120

