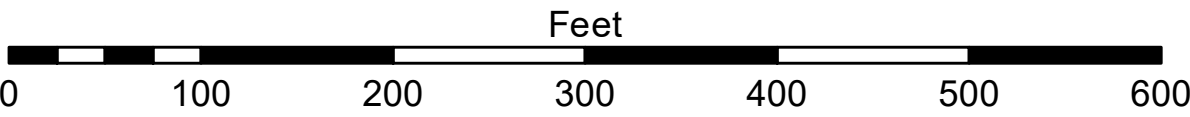


- LEGEND**
- Cable Submarine
 - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel_Limits

- 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/SHOAL REMOVAL OPERATIONS AND NOTICES TO NAVIGATION INTERESTS.

THE SOUNDINGS DEPICTED HEREIN ARE EXPRESSED IN U.S. SURVEY FEET AND TENTHS THEREOF AND ARE REFERENCED TO THE FOLLOWING DATUMS:

HORIZONTAL: MICHIGAN STATE PLANE COORDINATE SYSTEM, MICHIGAN SOUTH ZONE #2113, NORTH AMERICAN DATUM (NAD) OF 1983, U.S. SURVEY FEET

VERTICAL: INTERNATIONAL GREAT LAKES DATUM (IGLD) OF 1985. THE LOW WATER DATUM FOR THE ROUGE RIVER IS 571.2'.

PROJECT DEPTHS FOR THE ROUGE RIVER INCLUDE: 17', 18', 21' AND 25'

TOP OF 5 FOOT GAGE BOARD LOCATED AT THE JEFFERSON AVE BRIDGE WAS USED TO DETERMINE THE WATER LEVEL.

THE SURVEY WAS CONDUCTED USING THE U.S.A.C.E. SURVEY VESSEL(S) WHEELER AND/OR LAUNCH 3053, EMPLOYING THE FOLLOWING COMPONENTS:

POSITIONING: APPLANX POS-M/V

CORRECTIONS: VRSRTK OR MARINESTAR GNSS

SONAR: R2SONIC 2024 (MULTI-BEAM), CV-300 (SINGLE-BEAM)

SOFTWARE: HYPACK



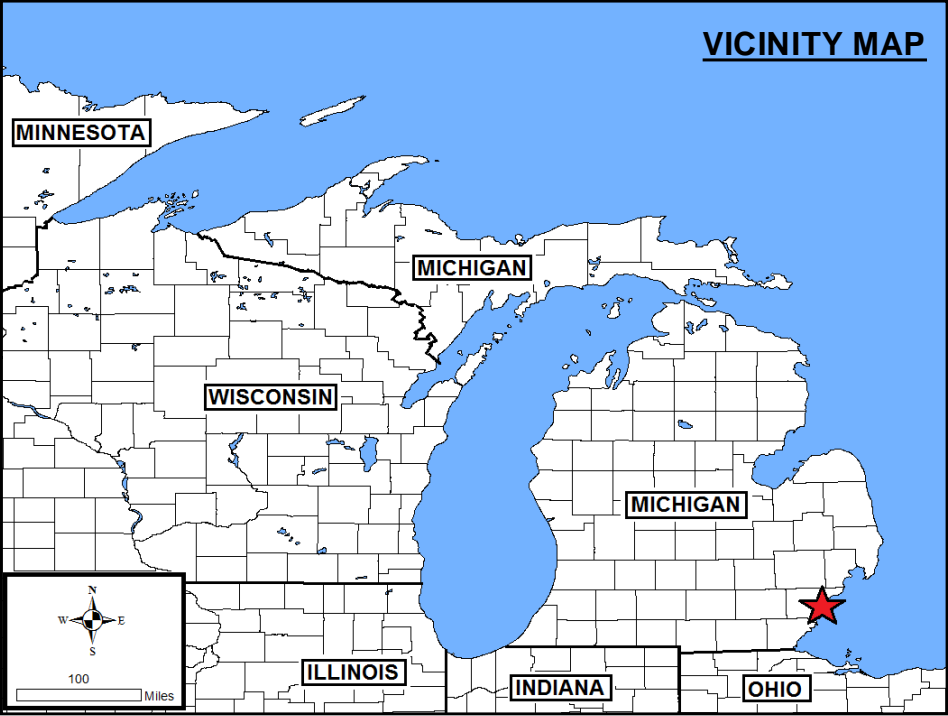
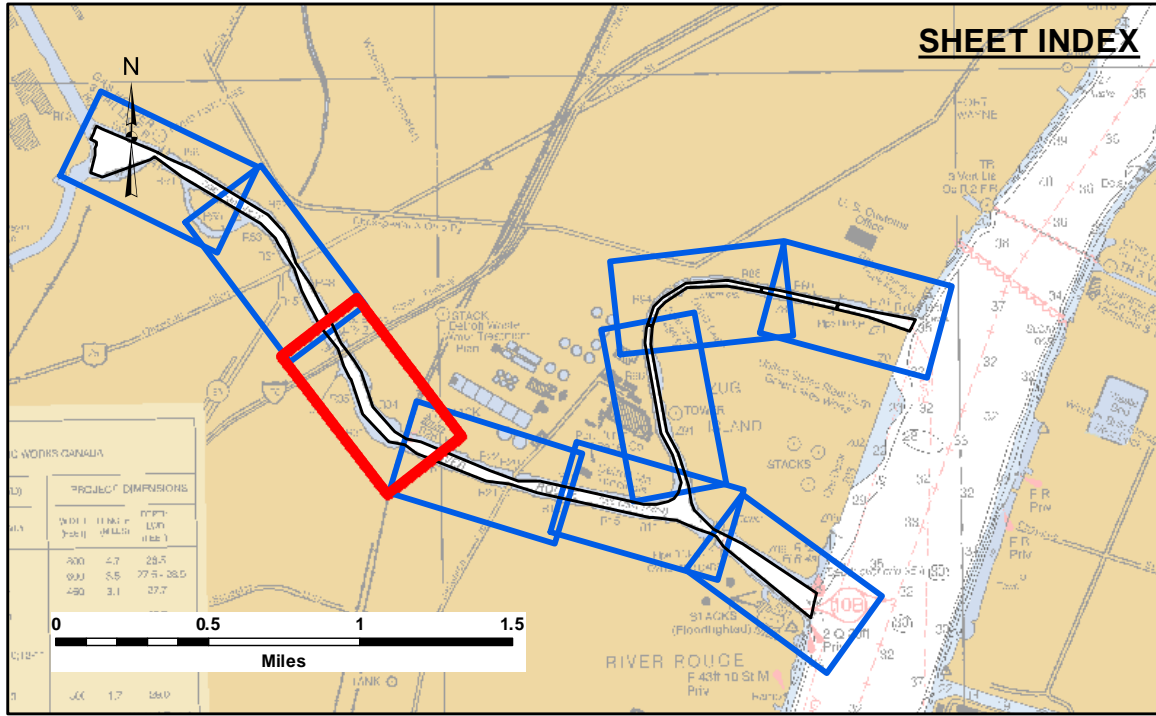
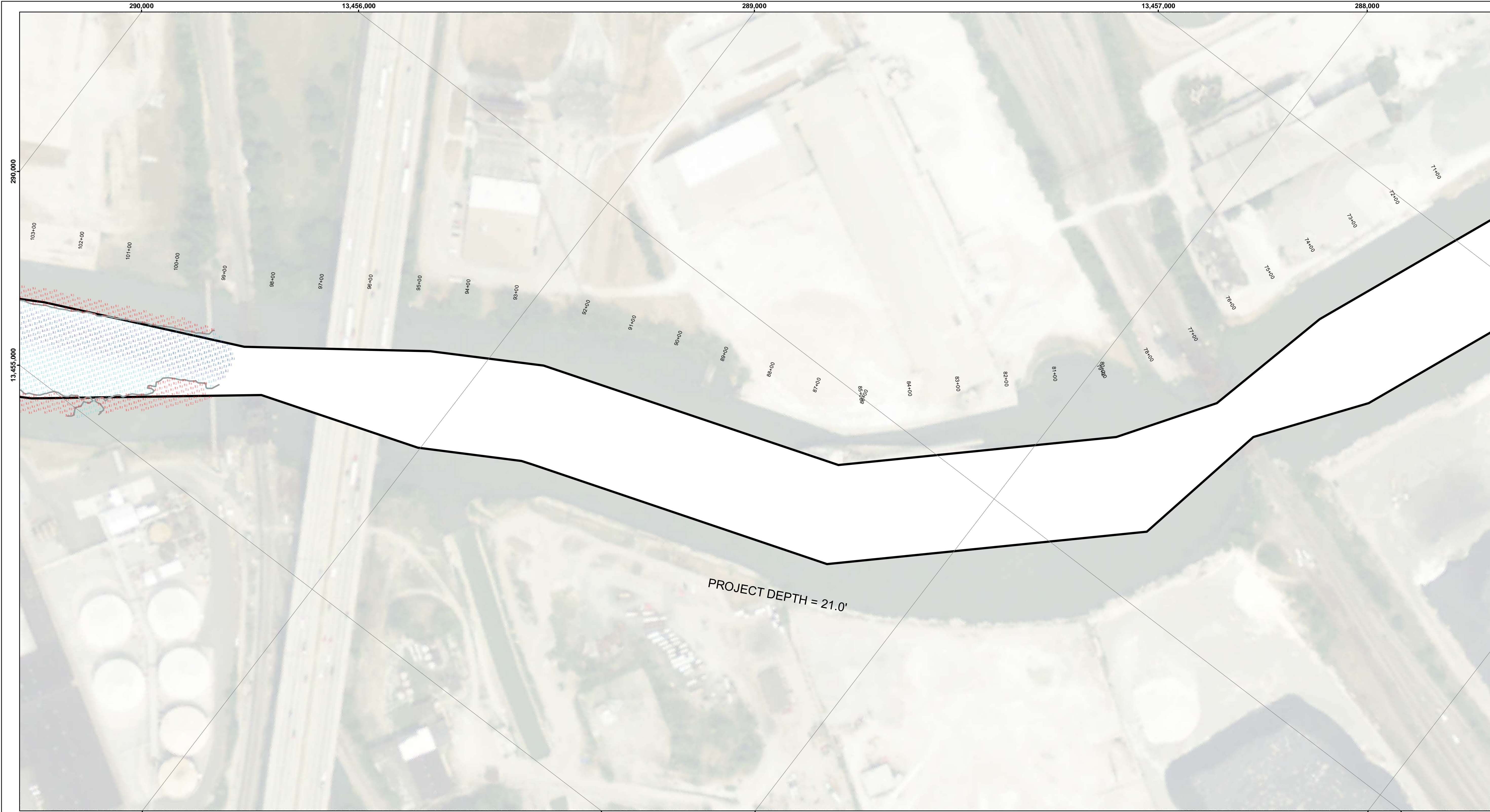
DISCLAIMER: The data represents the results of data collection and is not intended for use in any other manner. Engineers actively and indicates the general existing conditions. The user is responsible for the results and accuracy of the data for other than its intended purpose of any of the application of the data for other than its intended purpose.

ACCESS CONSTRAINTS: The United States Government (unlike these data and the recipient accepts and uses them with the express understanding that the data is not to be used for any other purpose, expressed, or implied concerning the accuracy, completeness, readability, usability or suitability for any particular purpose of the recipient. These data are provided to the recipient for use under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. The recipient may not transfer these data to others without transferring the Disclaimer.

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

River Rouge, MI
Rouge River
RR_01_ROU_20210817_AD
17 August 2021

Sheet
Reference
Number
2 of 9



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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- PROJECT DEPTH +2'
- PROJECT DEPTH +3'
- PROJECT DEPTH +4'
- PROJECT DEPTH +5'

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Feet

0 100 200 300 400 500 600

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CORRECTIONS: VRSRTX OR MARINESTAR GNSS

SONAR: R2SONIC 2024 (MULTI-BEAM), CV-300 (SINGLE-BEAM)

SOFTWARE: HYPACK


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

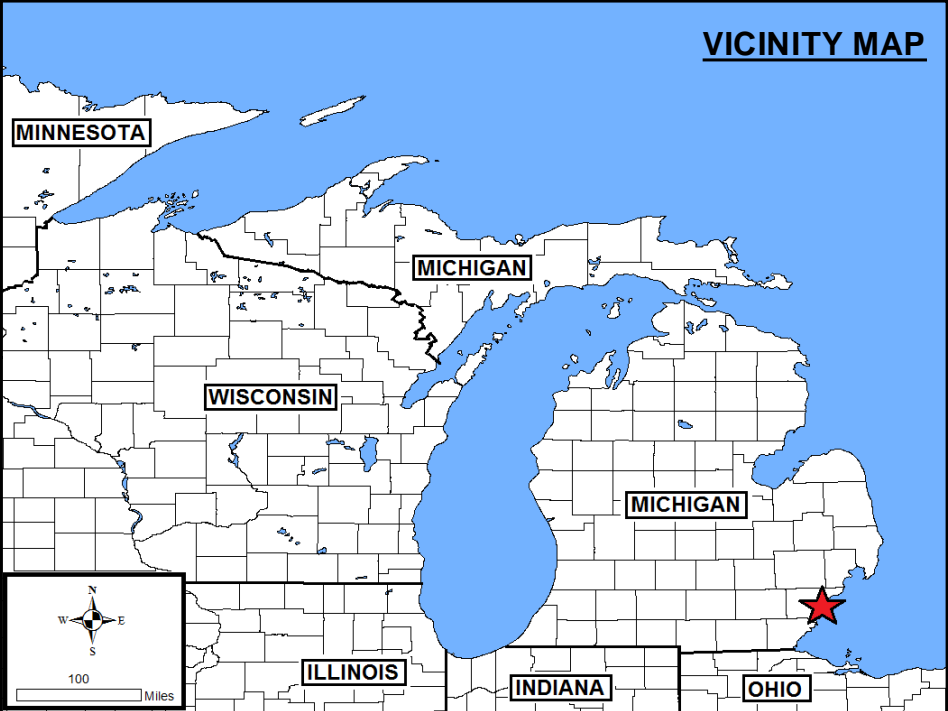
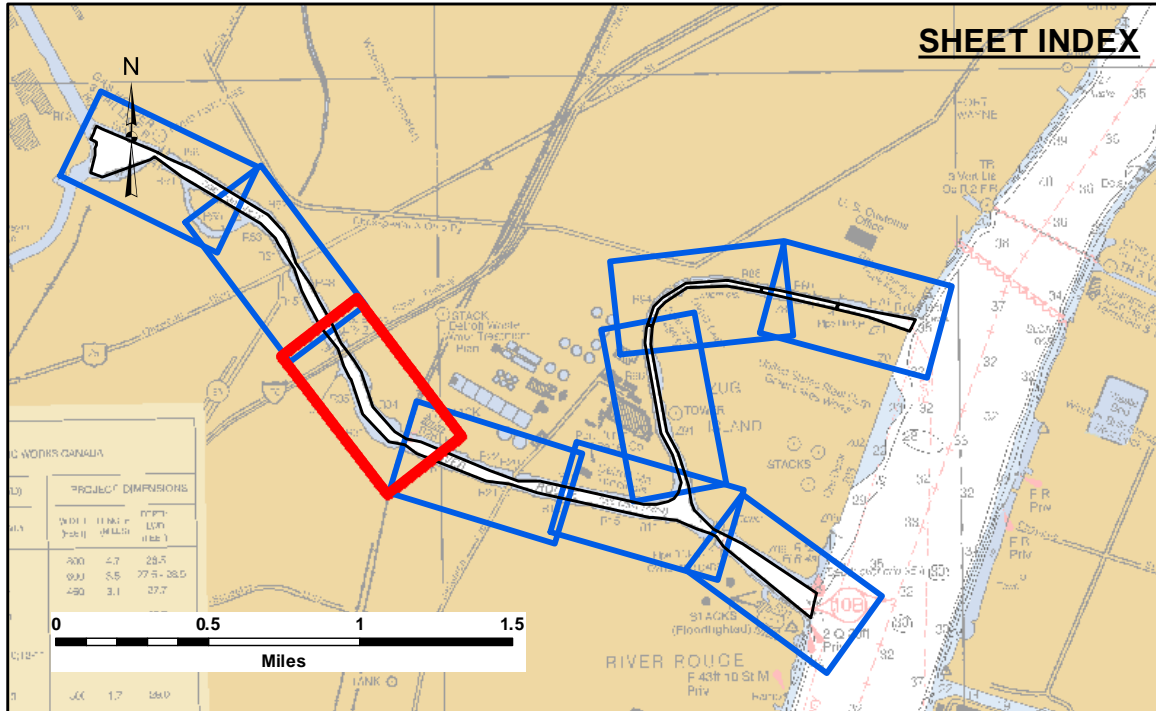
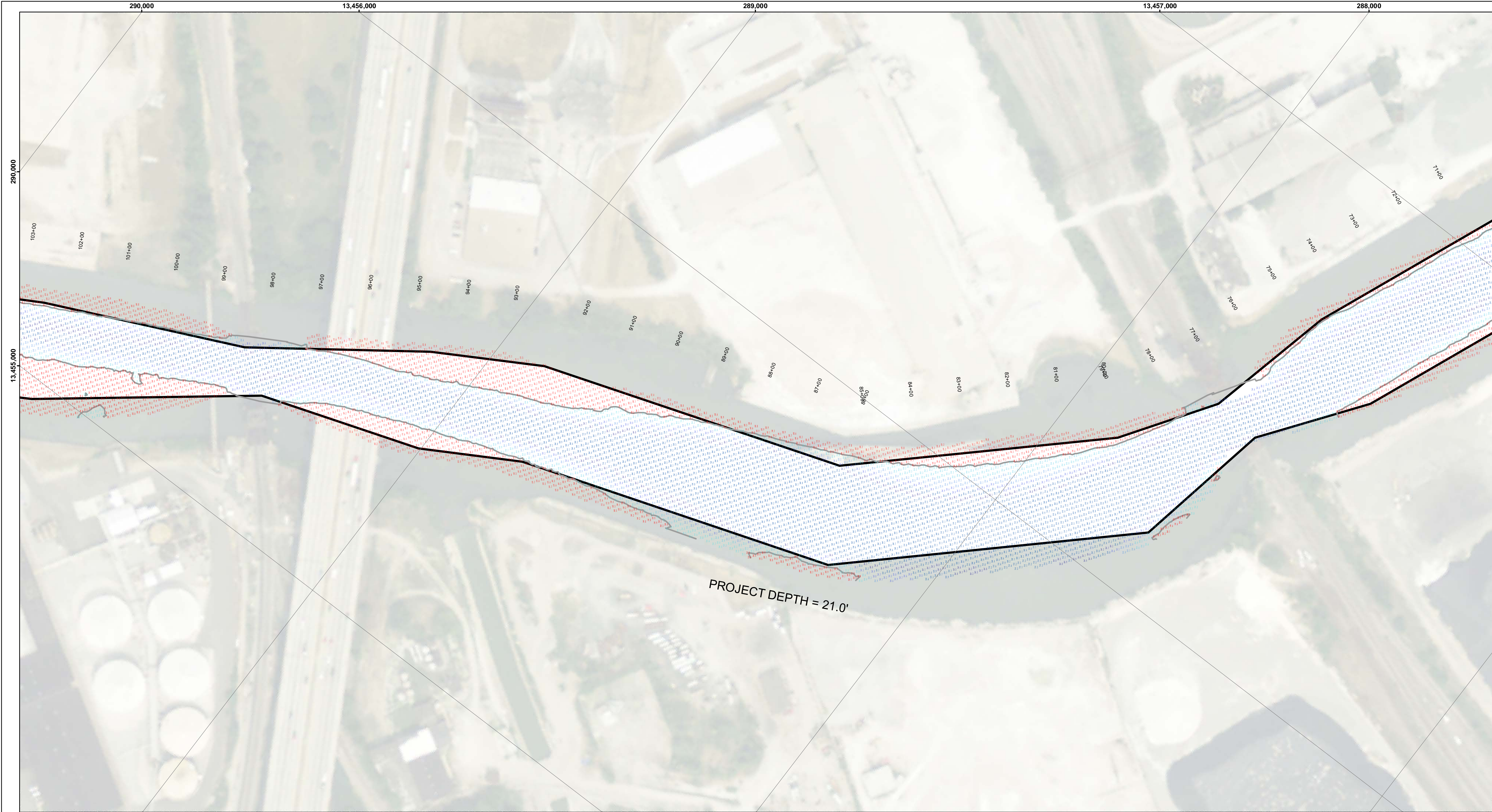
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT		
Submitted:	Surveyed By:	
Recommended:	Plotted By:	
Approved:	Checked By:	

River Rouge, MI
Rouge River
RR_01_ROU_20210817_AD
17 August 2021

**Sheet
Reference
Number**
3 of 9

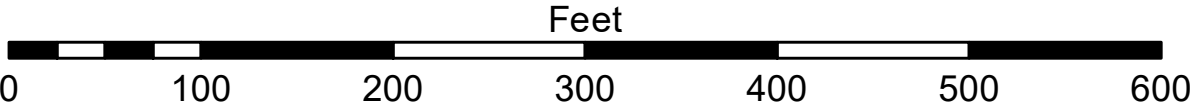


- LEGEND**
- Cable Submarine
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 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel_Limits

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CORRECTIONS: VRSRTK OR MARINESTAR GNSS

SONAR: R2SONIC 2024 (MULTI-BEAM), CV-300 (SINGLE-BEAM)

SOFTWARE: HYPACK



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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	

River Rouge, MI

Rouge River

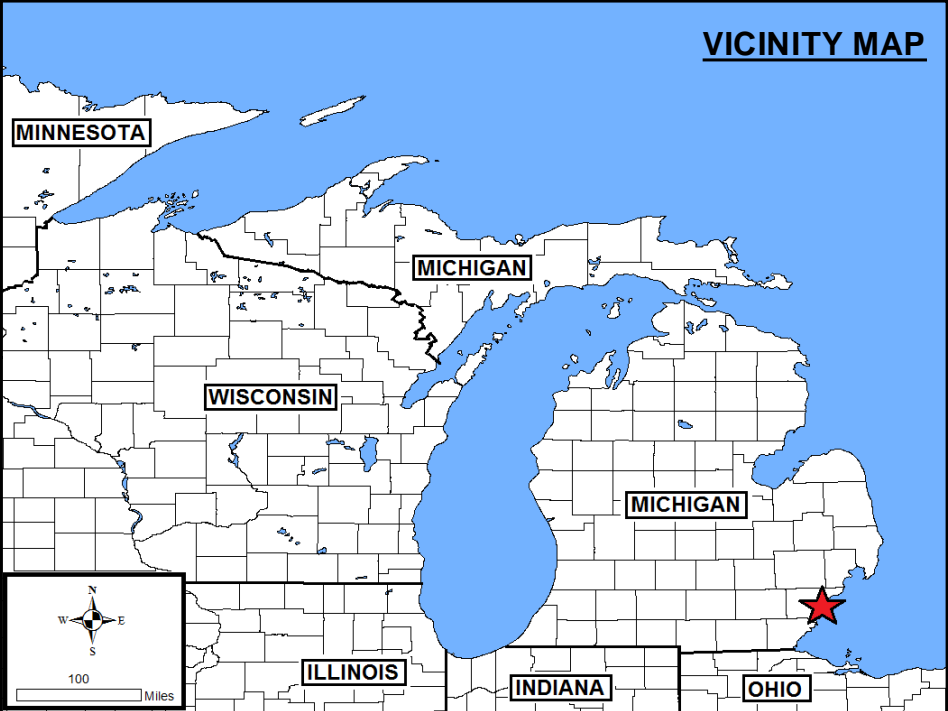
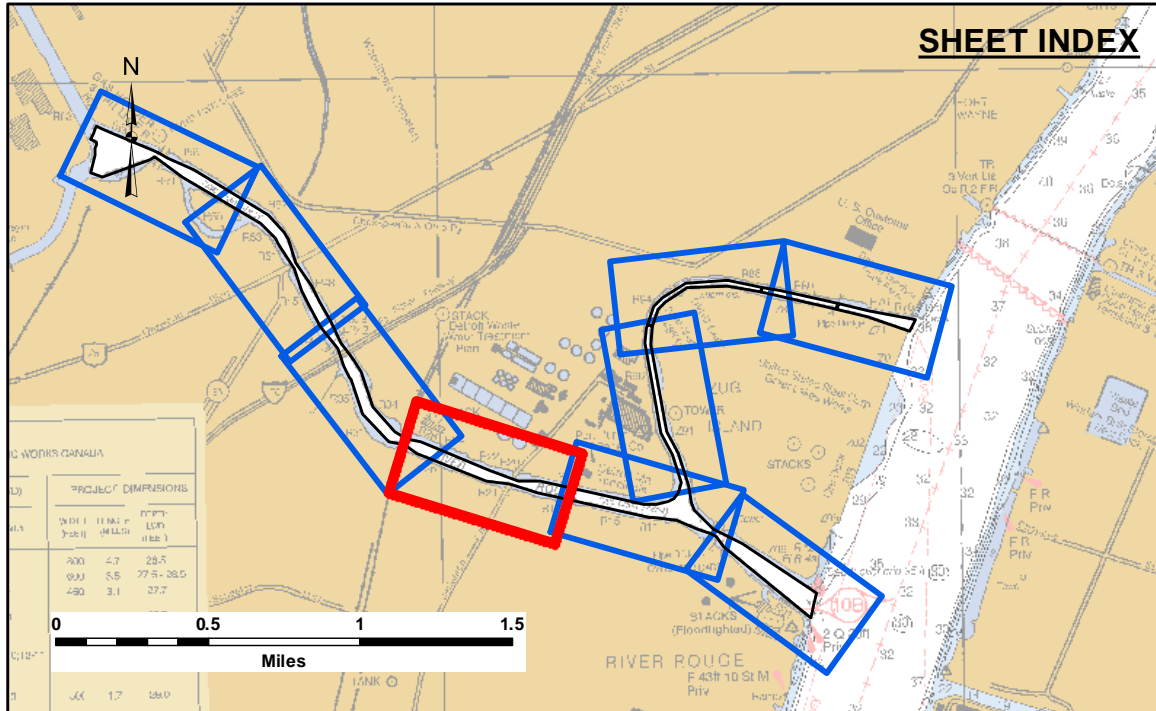
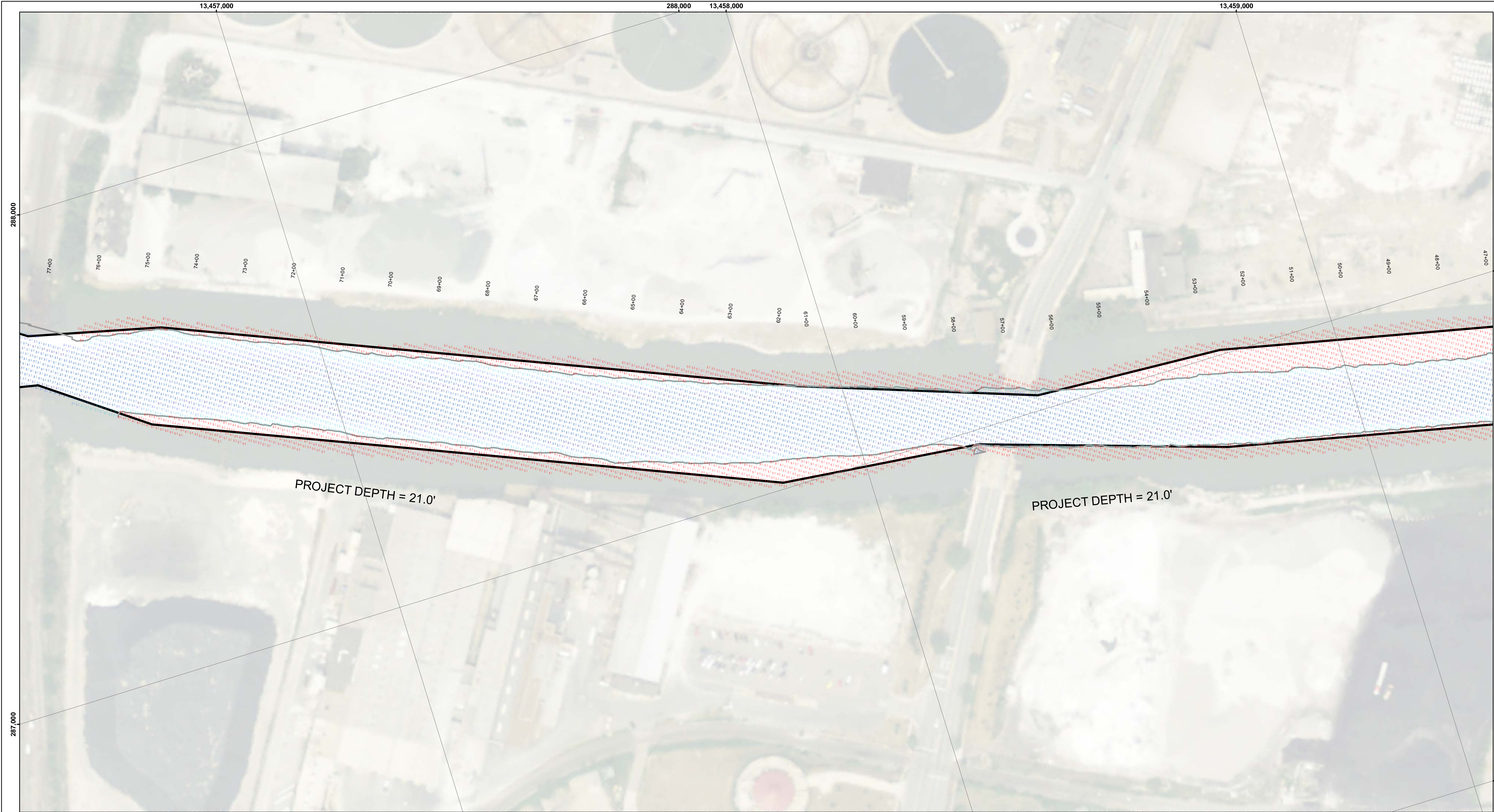
RR_01_ROU_20210713_BD

13 July 2021

Sheet Reference Number

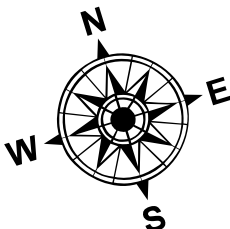
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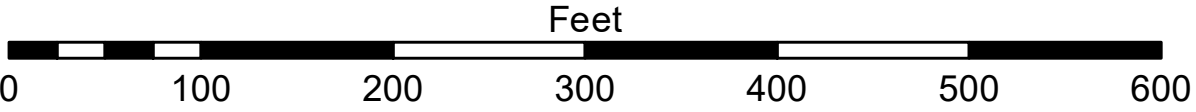


- LEGEND**
- Cable Submarine
 - - Cable Overhead
 - Placement Area
 - ┆ Beacon, General
 - Contour Lines
 - ▭ Channel_Limits

- SOUNDING LEGEND**
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POSITIONING: APPL ANX POS-M/V

CORRECTIONS: VRSRTK OR MARINESTAR GNSS

SONAR: R2SONIC 2024 (MULTI-BEAM), CV-300 (SINGLE-BEAM)

SOFTWARE: HYPACK



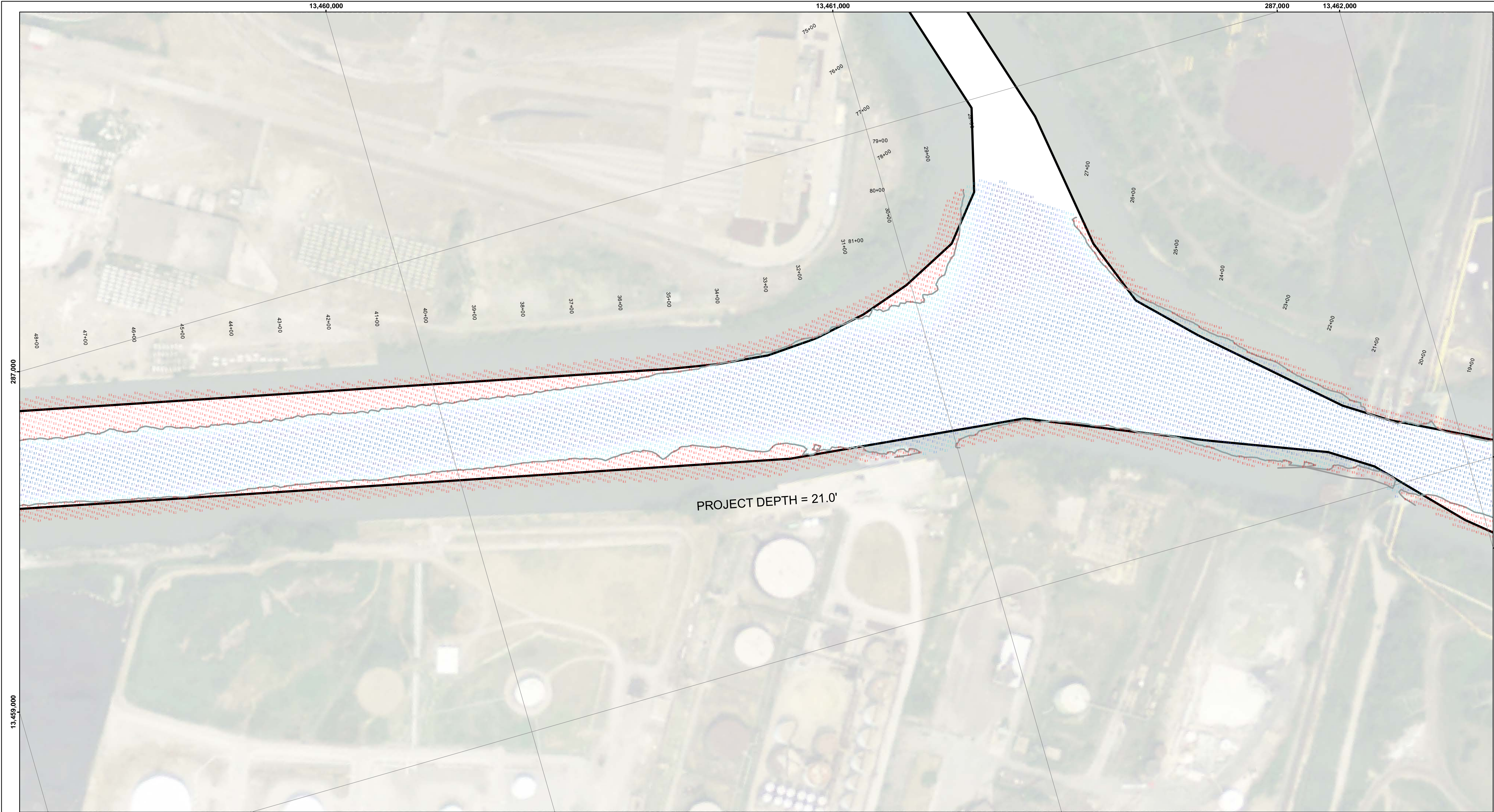
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ACCESS RESTRICTIONS: The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that the data are not to be used for any purpose other than that for which they were collected, and that the data are not to be used for any purpose other than that for which they were collected.

Submitted:	Surveyed By:
	Plotted By:
	Checked By:

River Rouge, MI
Rouge River
RR_01_ROU_20210713_BD
13 July 2021

Sheet
Reference
Number
4 of 9



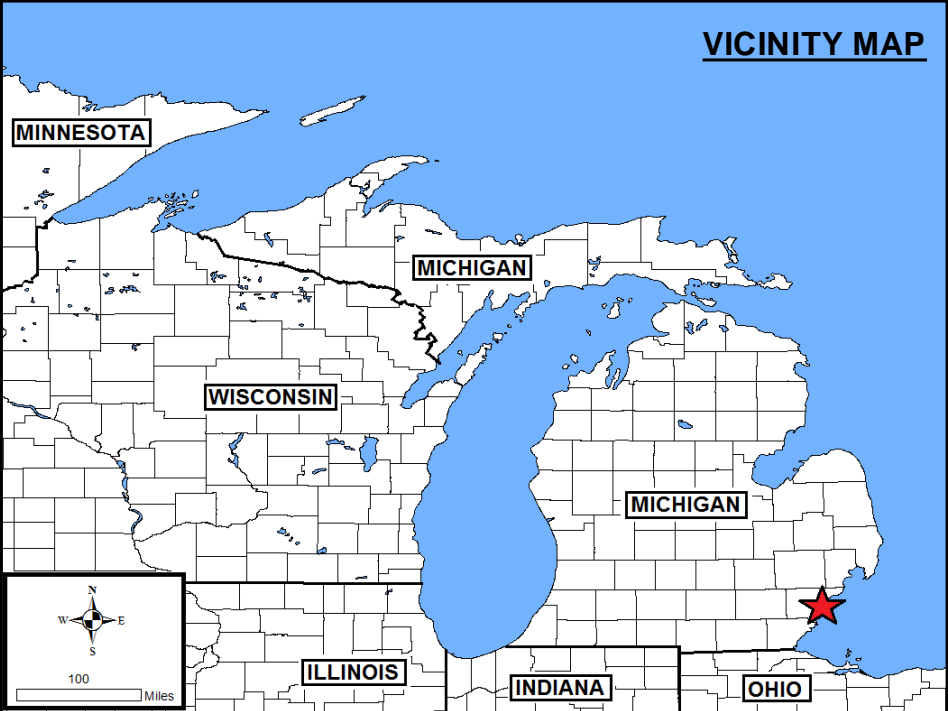
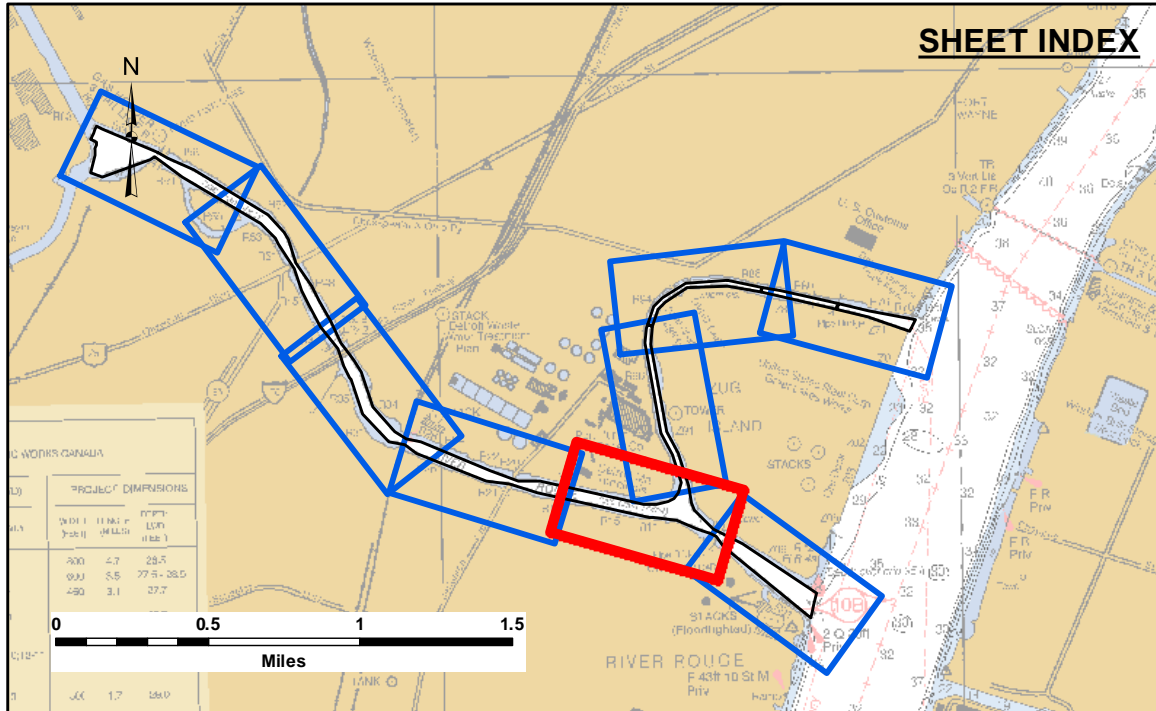
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Submitted:	Surveyed By:
	Plotted By:
	Checked By:
U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	

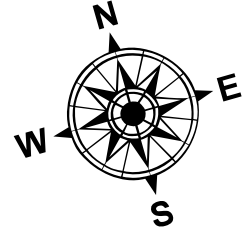
River Rouge, MI
Rouge River
RR_01_ROU_20210713_BD
13 July 2021

Sheet
Reference
Number
5 of 9

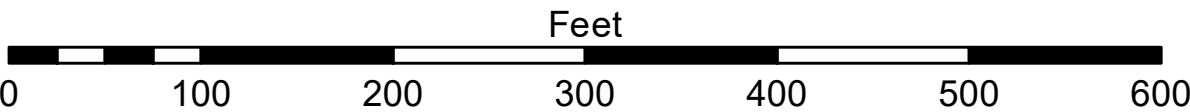


- LEGEND**
- Cable Submarine
 - - Cable Overhead
 - Placement Area
 - ⊥ Beacon, General
 - Contour Lines
 - ▭ Channel_Limits

- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
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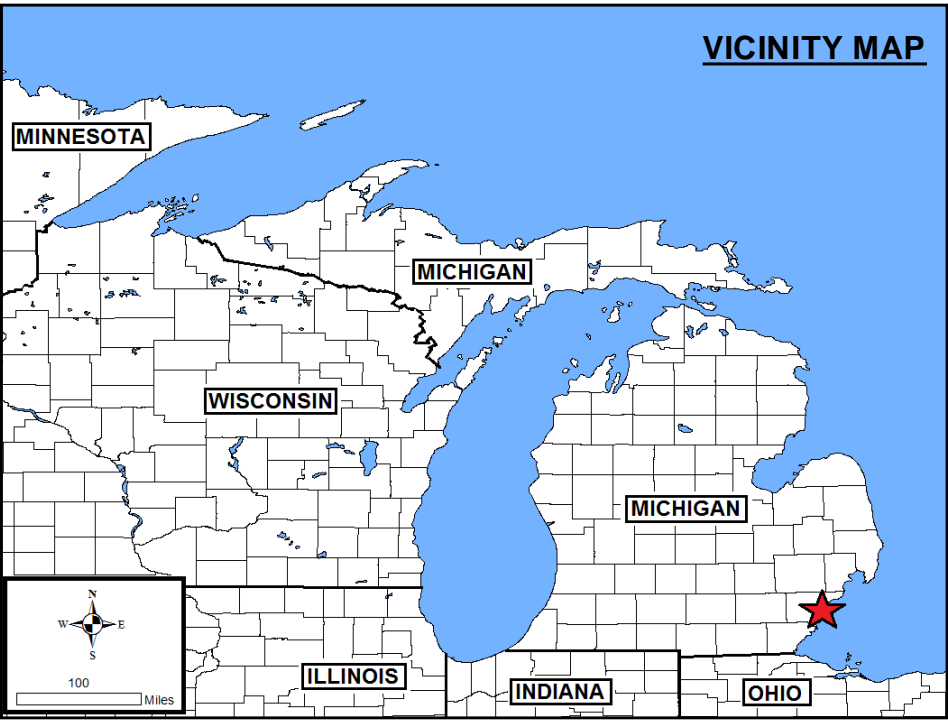
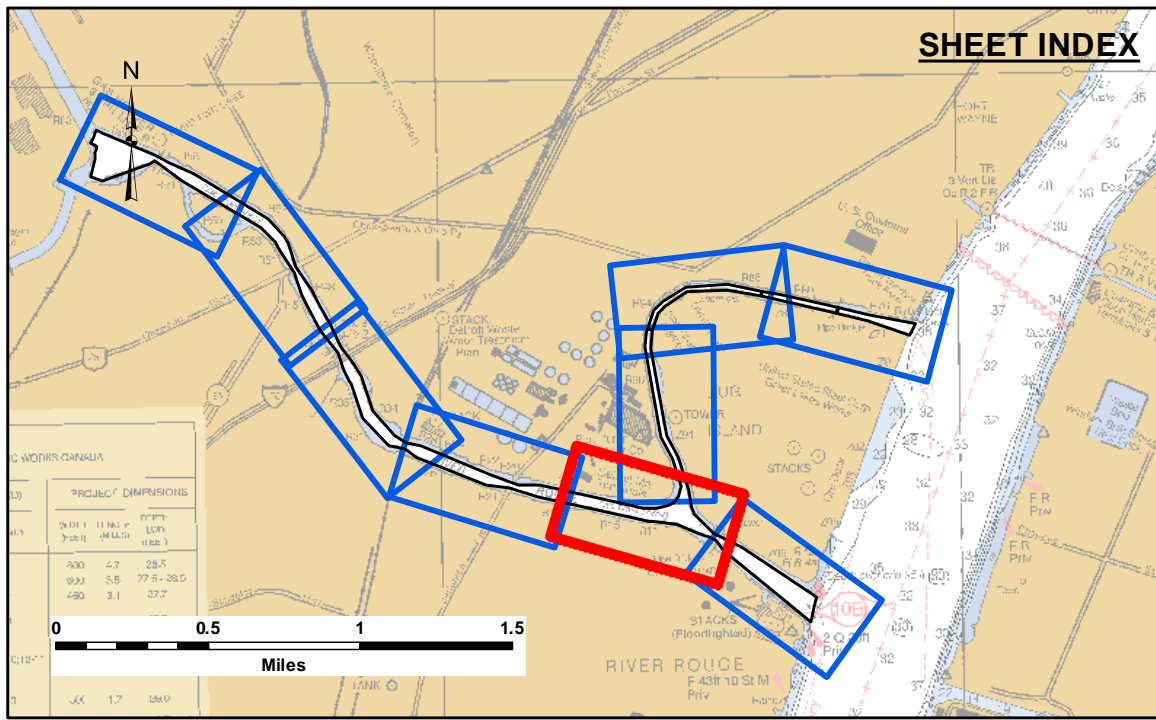
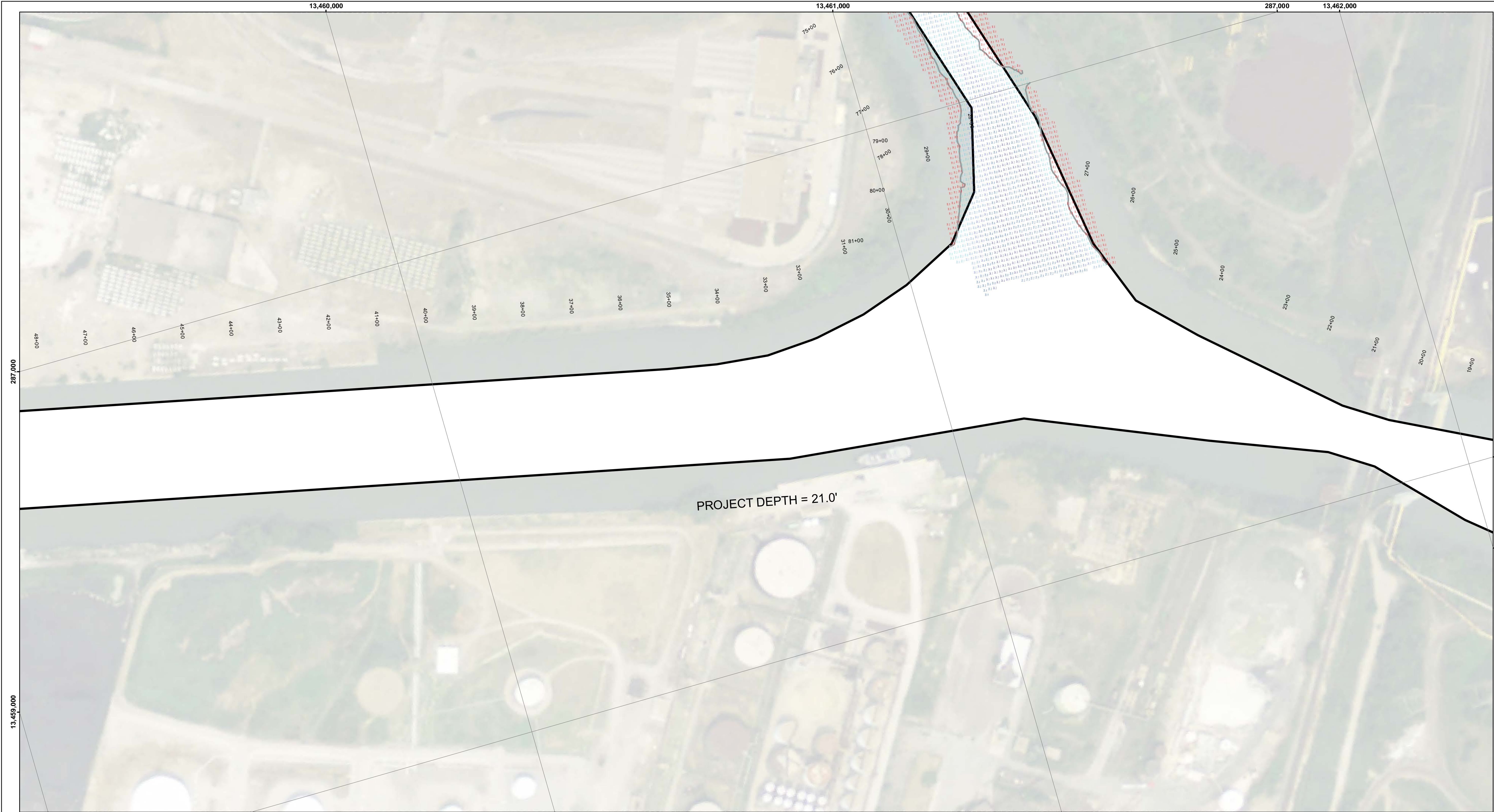
THE SURVEY WAS CONDUCTED USING THE U.S.A.C.E. SURVEY VESSEL(S) WHEELER AND/OR LAUNCH 3053, EMPLOYING THE FOLLOWING COMPONENTS:

POSITIONING: APPLANIX POS-M/V

CORRECTIONS: VRSRTK OR MARINESTAR GNSS

SONAR: R2SONIC 2024 (MULTI-BEAM), CV-300 (SINGLE-BEAM)

SOFTWARE: HYPACK



LEGEND

- Cable Submarine
- - Cable Overhead
- Placement Area
- ┆ Beacon, General
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Feet

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POSITIONING: APPLANIX POS-MV
CORRECTIONS: VRS/RTK OR MARINESTAR GNSS
SONAR: R2SONIC 2024 MULTIBEAM
SOFTWARE: HYPACK


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

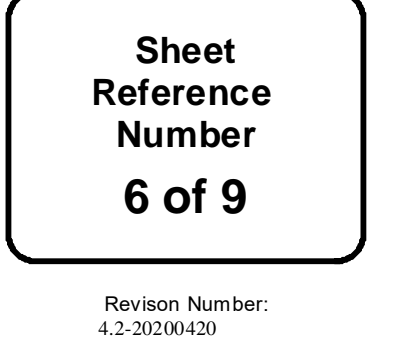
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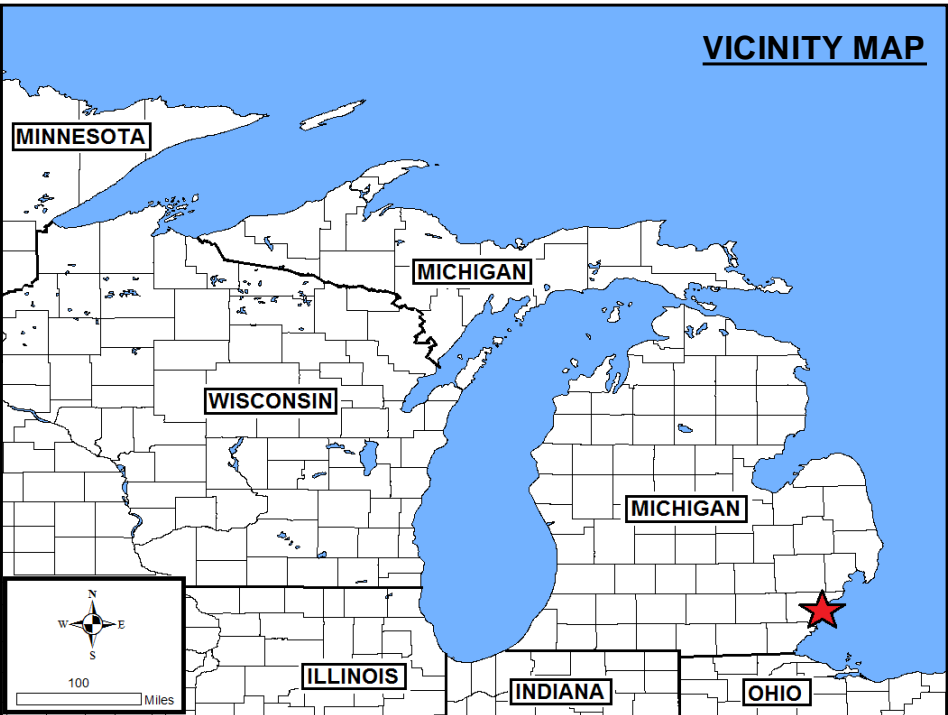
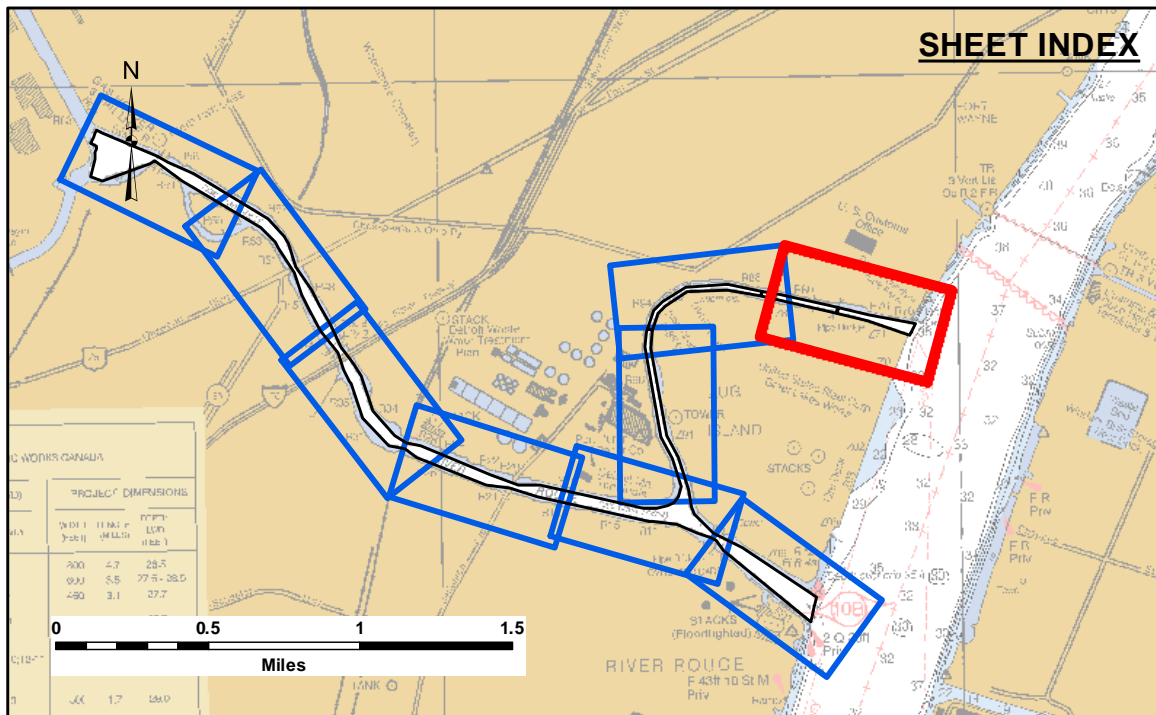
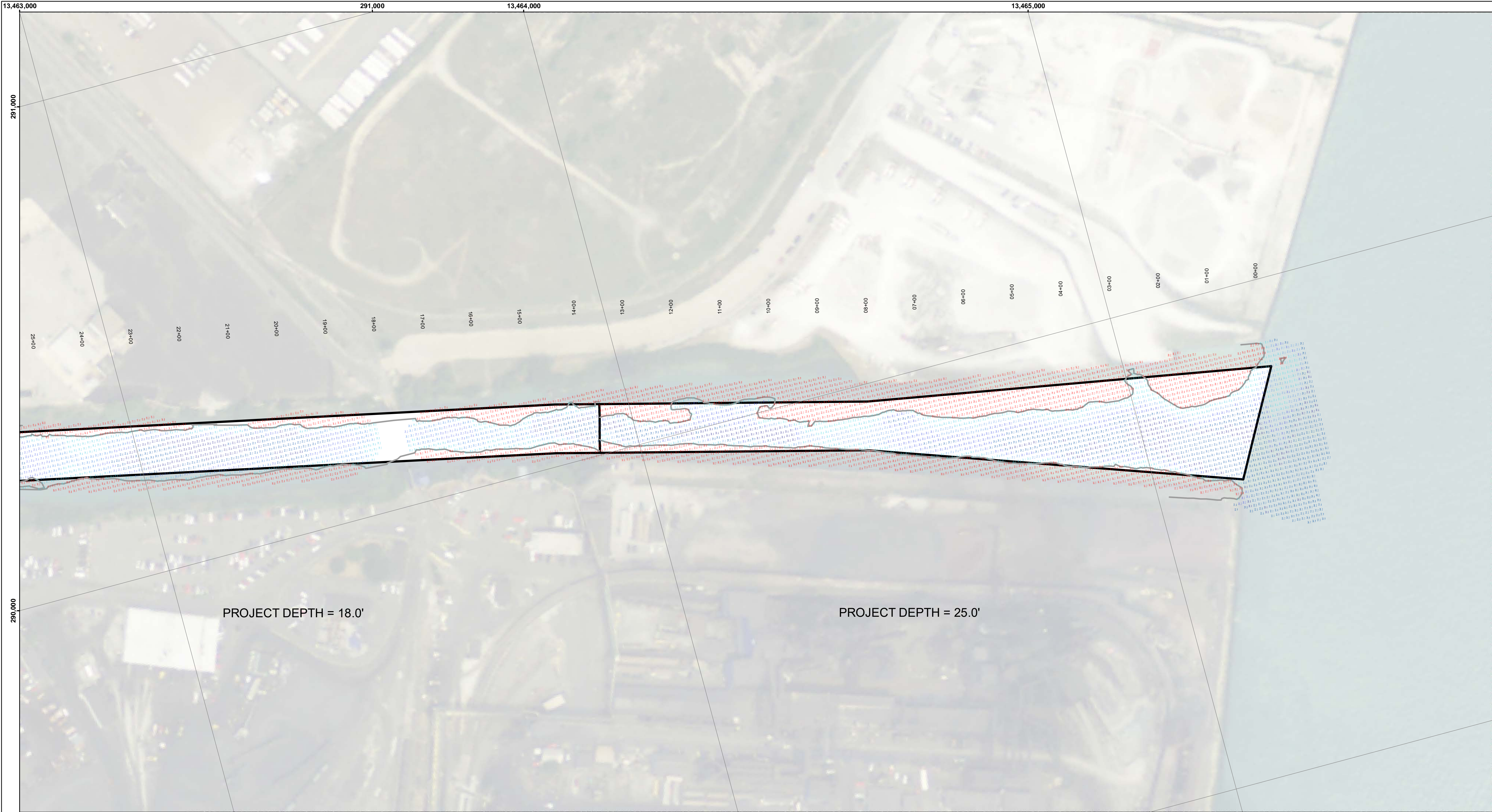
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	
Submitted: _____	Surveyed By: _____
Recommended: _____	Plotted By: _____
Approved: _____	Checked By: _____

River Rouge, MI
Rouge River
RR_01_ROU_20210426_CS
26 April 2021

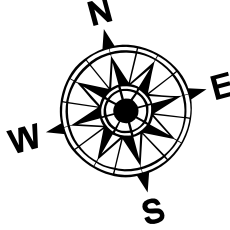
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Reference
Number**
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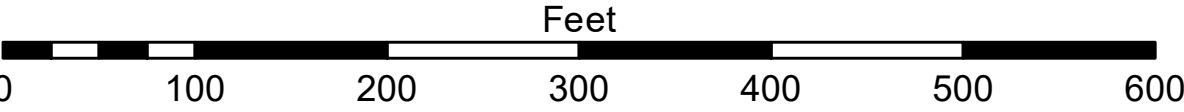


- LEGEND**
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CORRECTIONS: VRSRTK OR MARINESTAR GNSS
SONAR: R2SONIC 2024 MULTIBEAM
SOFTWARE: HYPACK



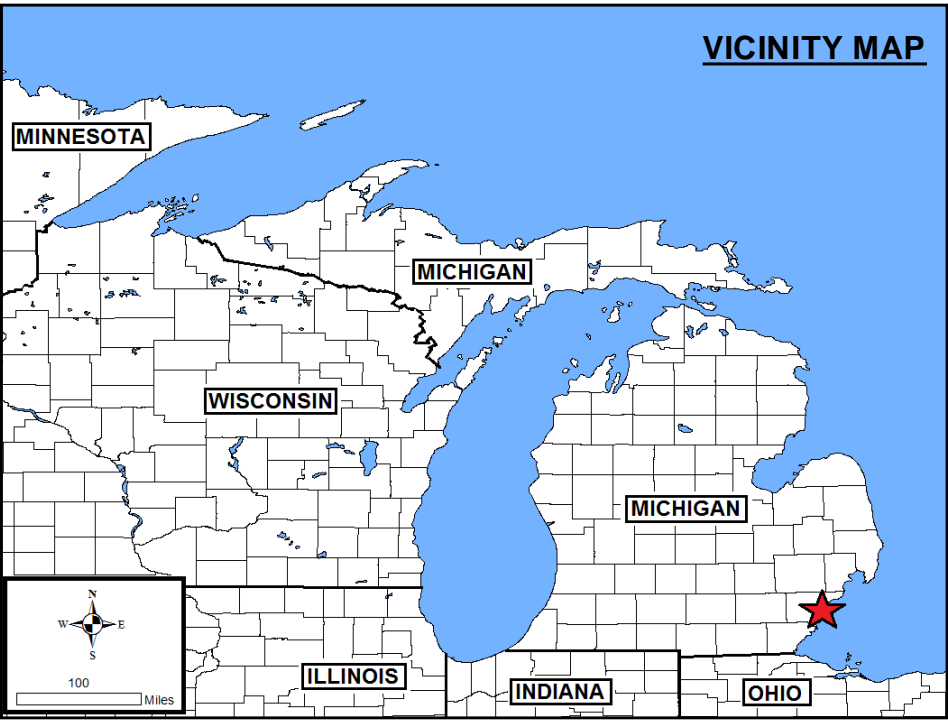
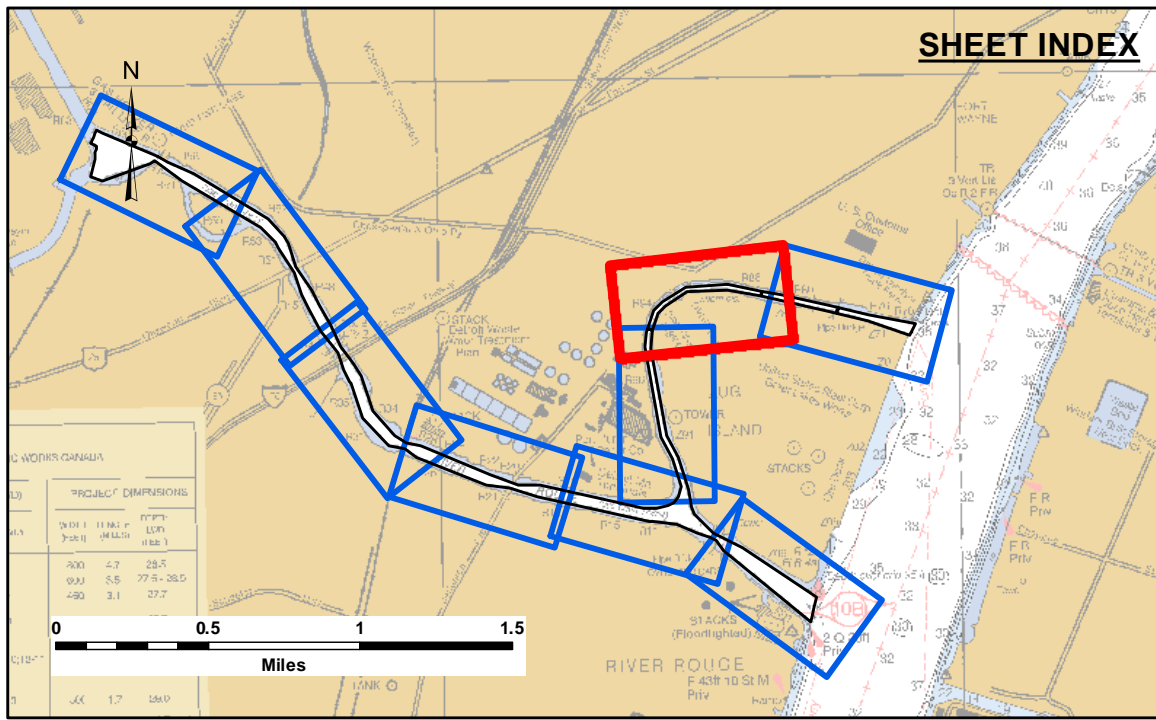
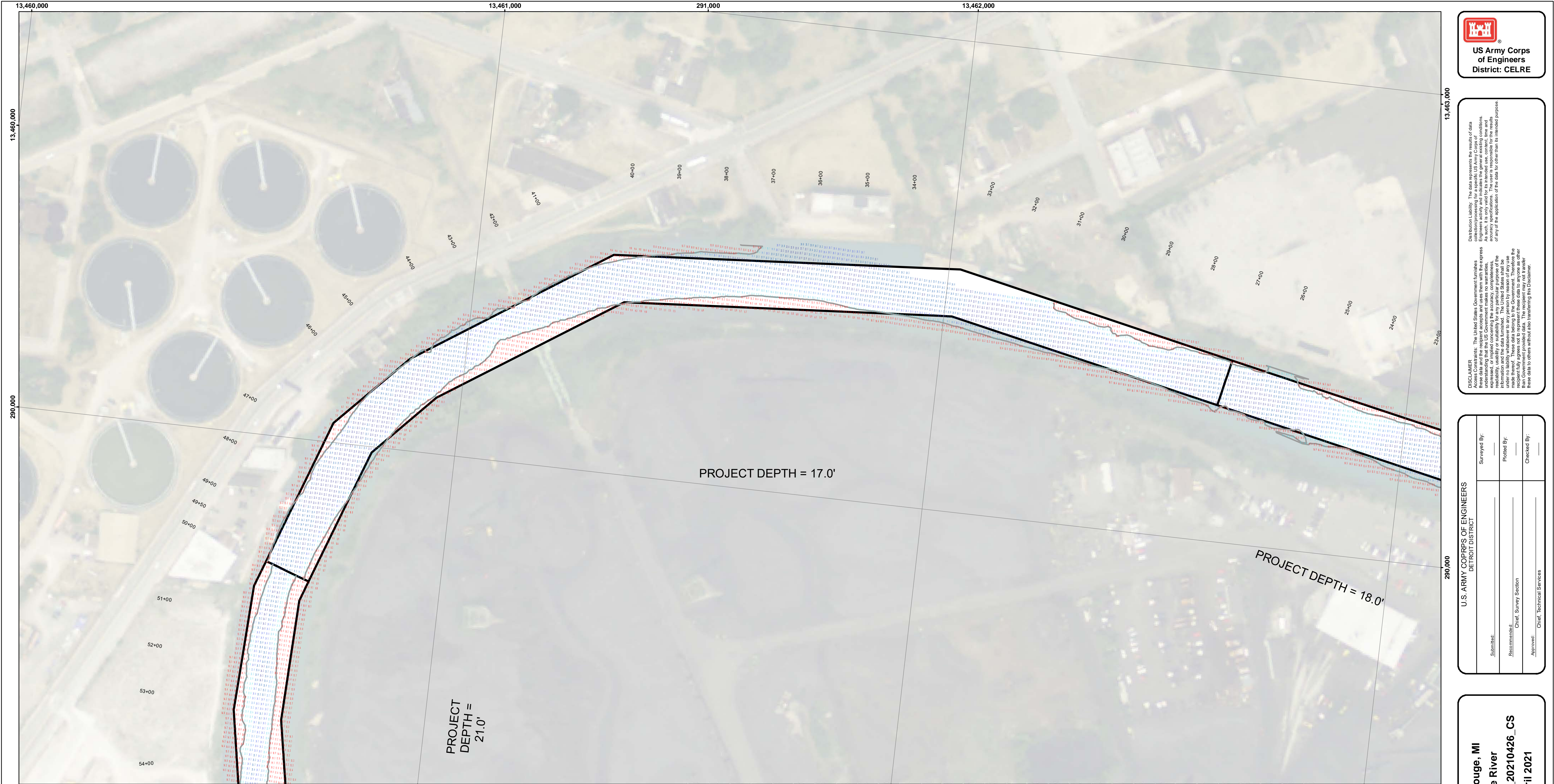
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Submitted:	Surveyed By:
Recommended:	Plotted By:
Approved:	Checked By:

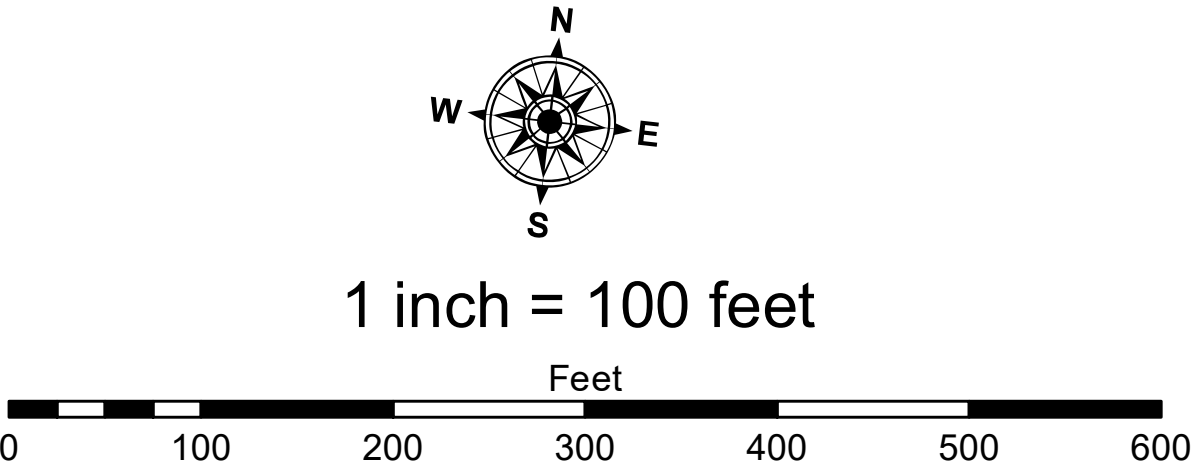
River Rouge, MI
Rouge River
RR_01_ROU_20210426_CS
26 April 2021

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

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



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.

THE SOUNDINGS DEPICTED HEREIN ARE EXPRESSED IN U.S. SURVEY FEET AND TENTHS THEREOF AND ARE REFERENCED TO THE FOLLOWING DATUMS:

HORIZONTAL: MICHIGAN STATE PLANE COORDINATE SYSTEM, MICHIGAN SOUTH ZONE #2113, NORTH AMERICAN DATUM (NAD) OF 1983, U.S. SURVEY FEET

VERTICAL: INTERNATIONAL GREAT LAKES DATUM (IGLD) OF 1985. THE LOW WATER DATUM FOR THE ROUGE RIVER IS 571.2'.

PROJECT DEPTHS FOR THE ROUGE RIVER INCLUDE: 17', 18', 21' AND 25'

TOP OF 5 FOOT GAGE BOARD LOCATED AT THE JEFFERSON AVE BRIDGE WAS USED TO DETERMINE THE WATER LEVEL.

THE SURVEY WAS CONDUCTED USING THE U.S.A.C.E. SURVEY VESSEL WHEELER, EMPLOYING THE FOLLOWING COMPONENTS:

POSITIONING: APPLANIX POS-MV
CORRECTIONS: VRS/RTK OR MARINESTAR GNSS
SONAR: R2SONIC 2024 MULTIBEAM
SOFTWARE: HYPACK



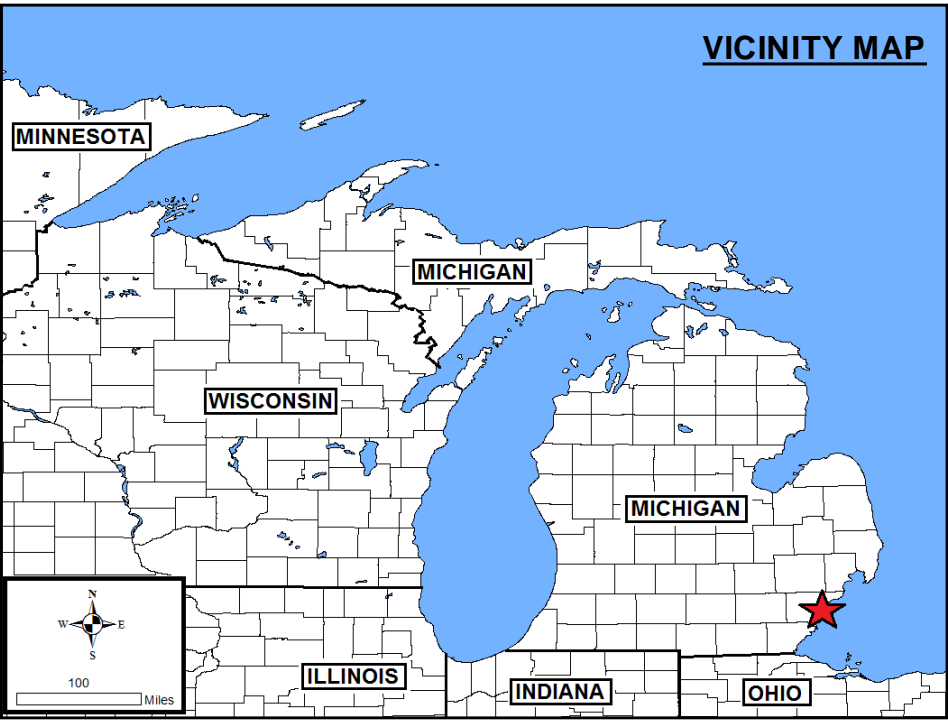
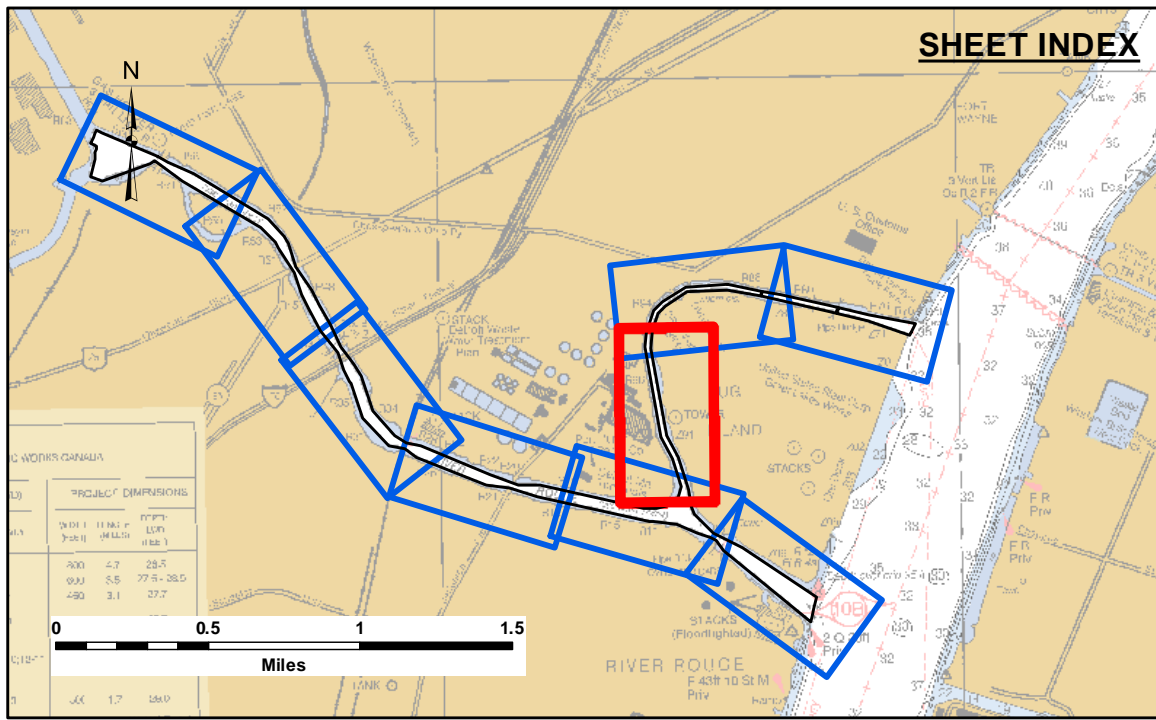
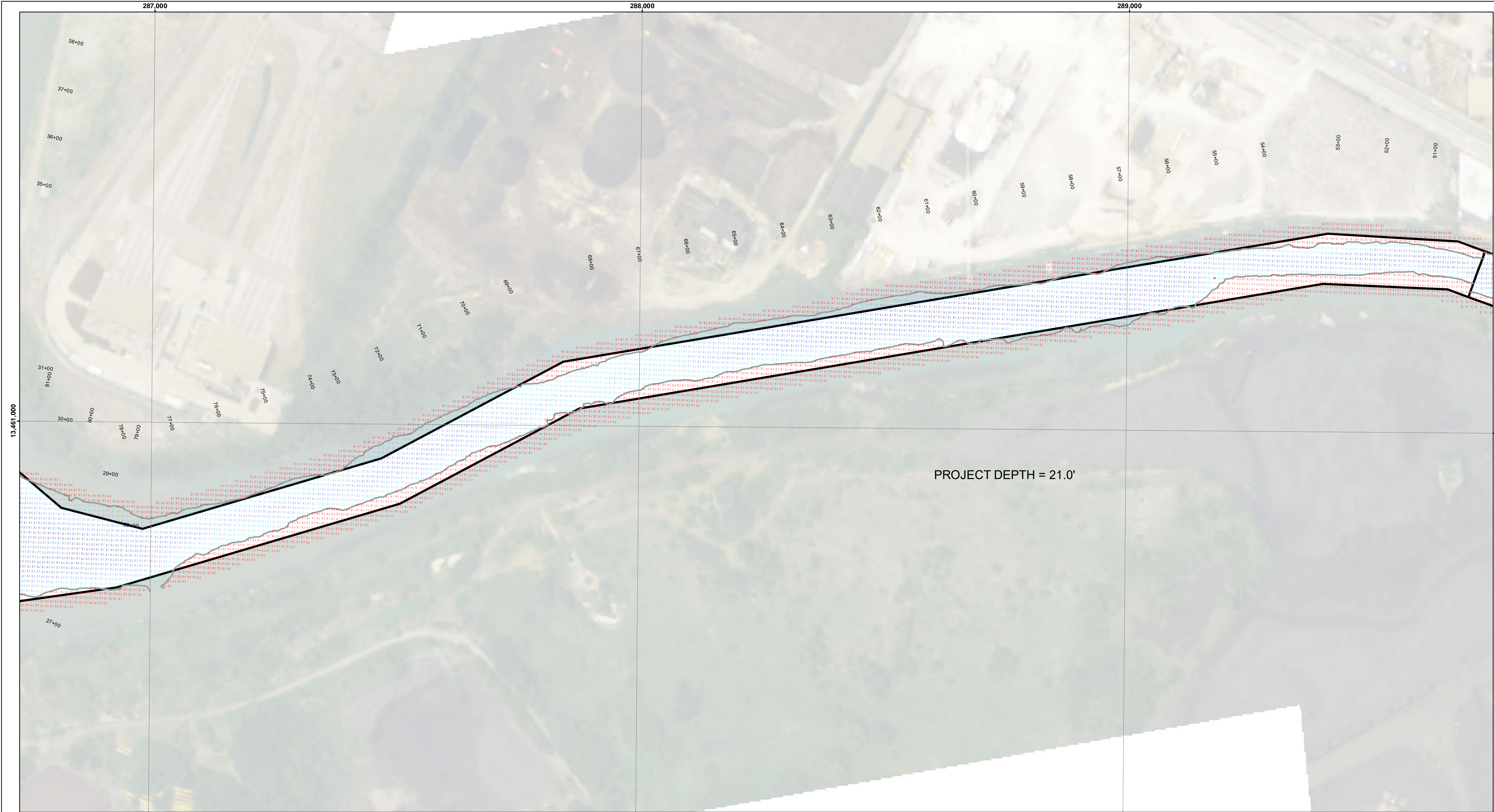
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT			
Submitted:	Surveyed By:	Plotted By:	Checked By:
Recommended:	Chief, Survey Section		
Approved:	Chief, Technical Services		

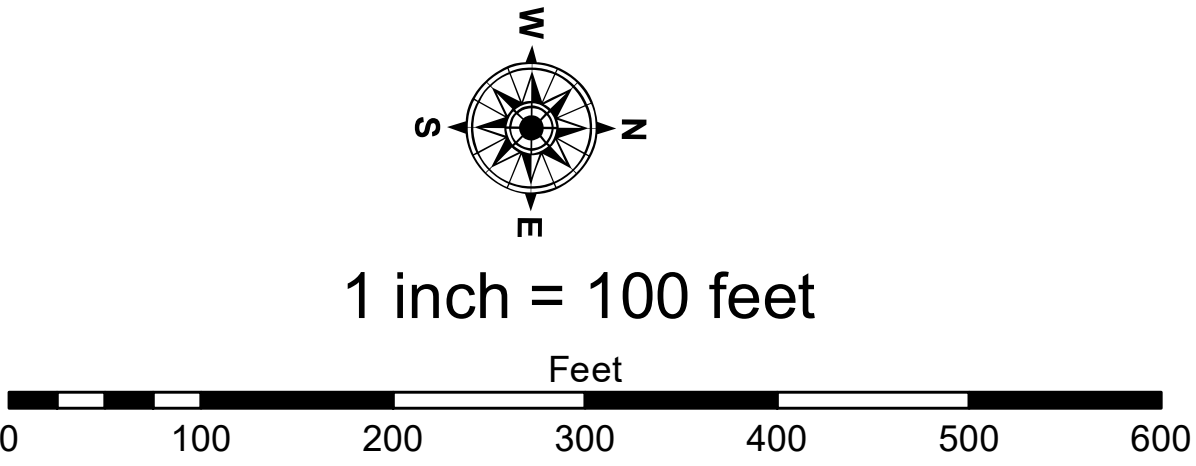
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U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT	Submitted:	Surveyed By:
	Recommended:	Plotted By:
	Approved:	Checked By:
	Chief, Survey Section	Chief, Technical Services

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