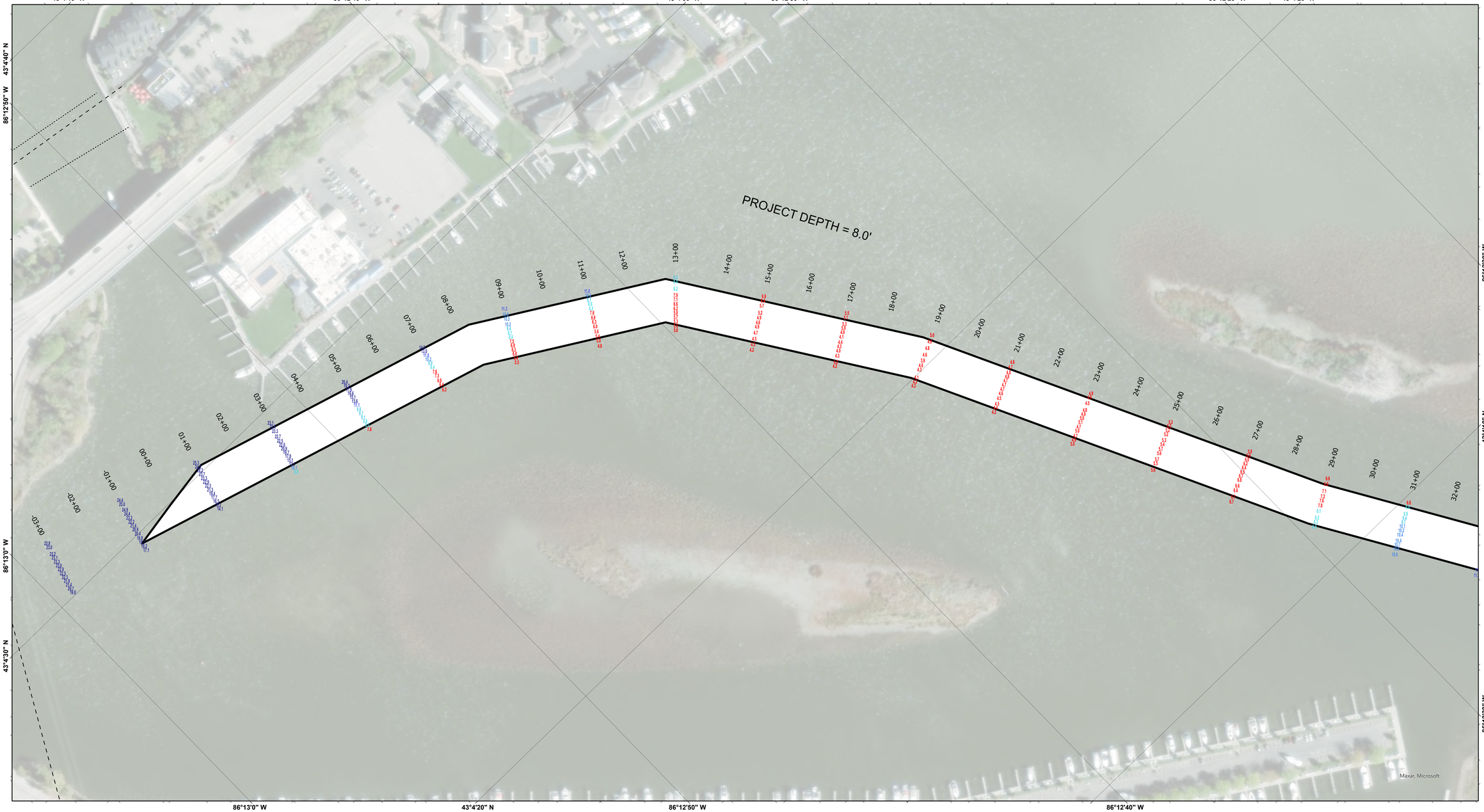
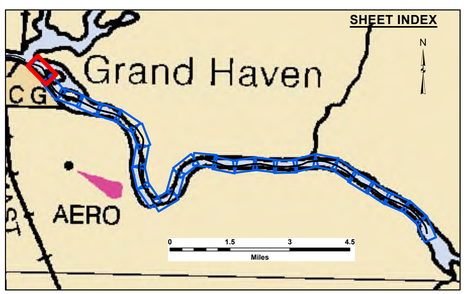
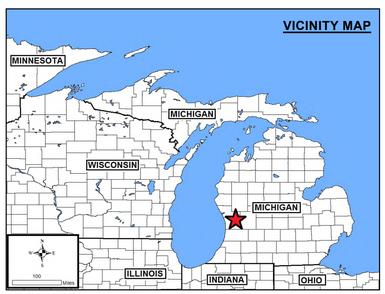


SHEET INDEX



VICINITY MAP



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 = 115 feet

Feet

0 110 220 330 440 550 660

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CVI00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and is valid only under those conditions. As such, it is only valid for its intended use, content, time and extent as indicated in the source documentation. The user assumes all risk for any use of the data and for any reliance thereon. The United States shall be held harmless for any improper or incorrect use of the data and/or any decision made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data produced by the Government. The recipient shall not transfer these data to others without also transferring this Disclaimer.

DISCLAIMER
Access Constraints: The United States Government furnishes these data and information with the understanding that it is not guaranteed to be accurate, complete, timely, or suitable for any purpose. The United States Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, timeliness, or suitability of any portion of this information and the data furnished. The United States shall be held harmless for any improper or incorrect use of the data and/or any decision made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data produced by the Government. The recipient shall not transfer these data to others without also transferring this Disclaimer.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

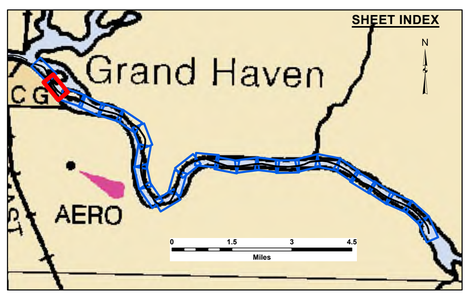
Surveyed By:	____
Plotted By:	____
Checked By:	____
Submitted:	____
Recommended: Chief, Survey Section	____
Approved: Chief, Technical Services	____

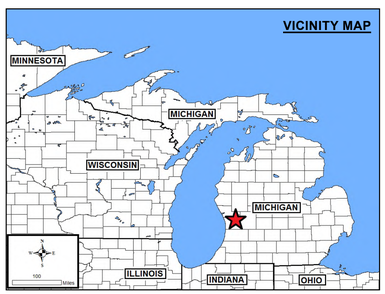
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
1 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N E S W

1 inch = 100 feet

Feet

0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CVI00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and is valid only under those conditions. As such, it is only valid for its intended use, content, time and extent as indicated by the originator. The United States is not liable for any of the application of the data for other than its intended purpose.

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication "as is" and disclaims any express understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information. In no event will the United States be liable for any damages resulting from the use of the information and the data furnished. The United States shall be under no obligation to update any of the information or data so made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than government data. The recipient shall not transfer these data to others without also transferring this Disclaimer.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

Submitted: Surveyed By:

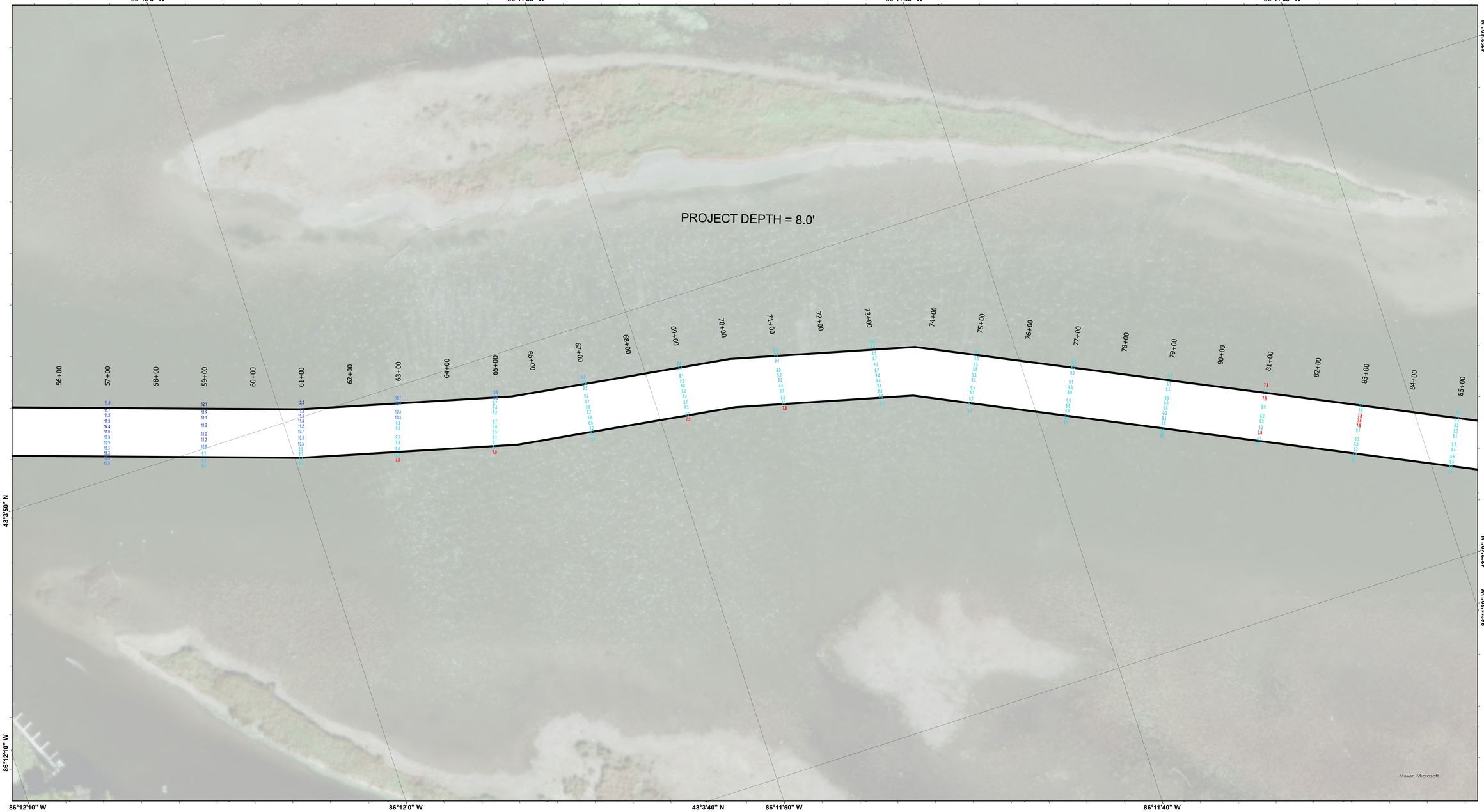
Recommended: Chief, Survey Section Plotted By:

Approved: Chief, Technical Services Checked By:

Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
2 of 26

Revision Number:
5.25.07.03-5.25.07.03



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'

N E S W

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV100 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes these data and information on an "as is" basis. The recipient's use of the data and information is at the recipient's own risk. The United States Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of these data and information. The United States Government shall not be liable for any damages, including special, indirect, incidental, or consequential damages, arising out of or resulting from the recipient's use of these data and information. The recipient fully agrees not to represent these data to anyone as other than data provided by the United States Government. The recipient shall not release these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers mission and was collected under specific conditions. As such, it is only valid for its intended use, content, time and accuracy requirements. The US Army Corps of Engineers assumes no liability for the misuse, misinterpretation, or unauthorized application of any of the application of the data for other than its intended purpose.

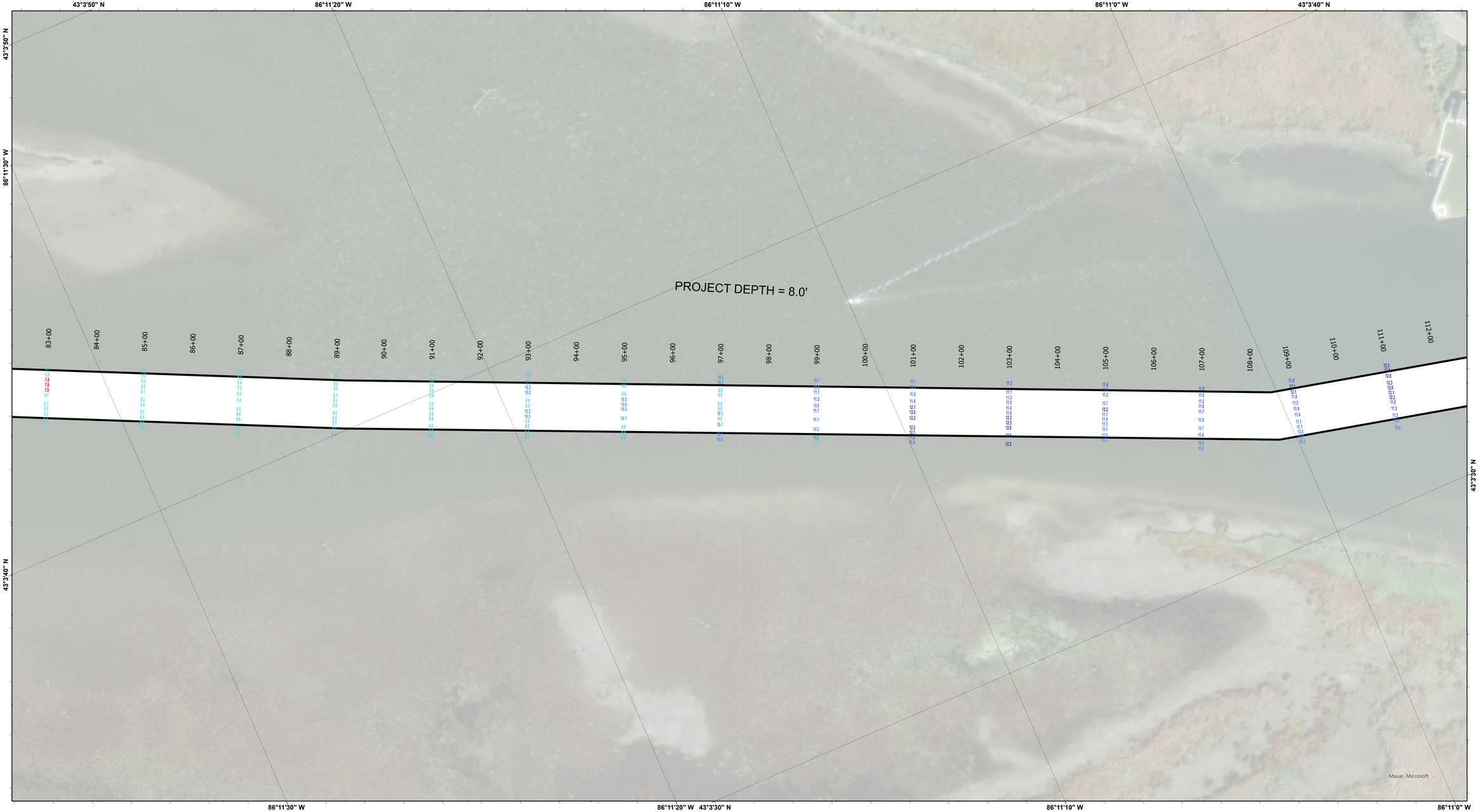
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

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

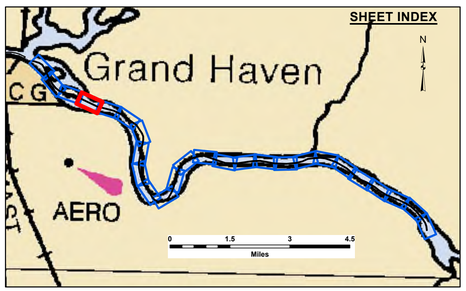
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
3 of 26

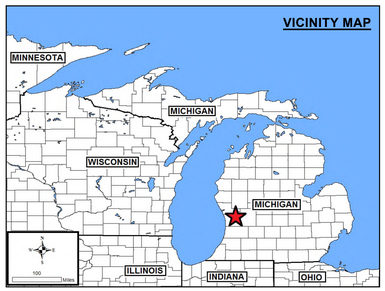
Revision Number:
5.25.07.03-5.25.07.03



SHEET INDEX



VICINITY MAP



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

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CVI00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers survey and is valid only for the stated conditions. As such, it is only valid for its intended use, content, time and environment at the time of collection. The United States shall be held harmless for any reuse, modification, or misinterpretation of the data for other than its intended purpose.

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication "as is" and makes no express understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information. In no event will the United States be liable for any damages resulting from misuse of the information and the data furnished. The United States shall be held harmless for any reuse, modification, or misinterpretation of the data furnished. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data produced by the Government. The recipient shall not transfer these data to others without also transferring this Disclaimer.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

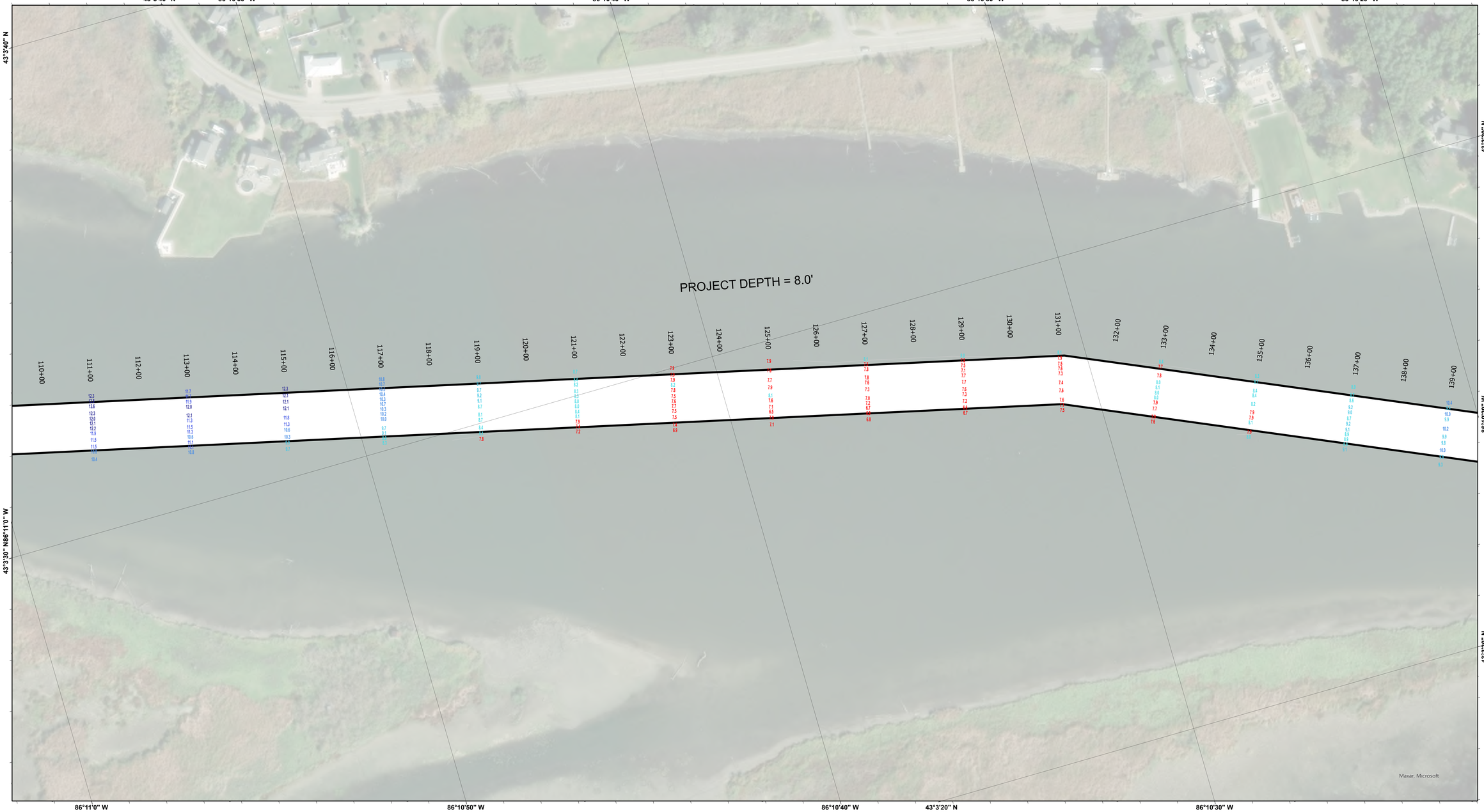
Surveyed By: ____
Plotted By: ____
Checked By: ____

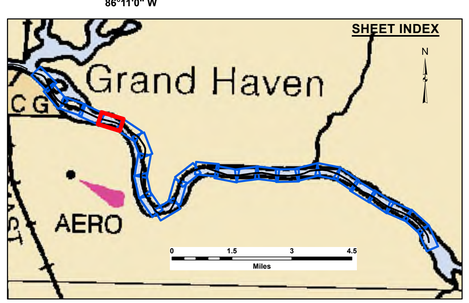
Submitted: ____
Recommended: Chief, Survey Section
Approved: Chief, Technical Services

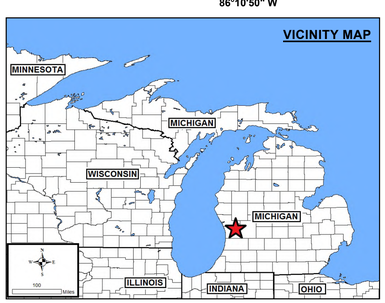
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
4 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N E S W

1 inch = 100 feet

Feet

0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV/00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes this map/data/report/publication "as is" without express or implied warranty and makes no representation with respect to understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data received from the Government. The user shall not release these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and is applicable to those conditions. As such, it is only valid for its intended use, content, time and extent as indicated by the originator. Use or interpretation of any of the application of the data for other than its intended purpose.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

Surveyed By: ____
Plotted By: ____
Checked By: ____

Submitted: ____
Recommended: Chief, Survey Section
Approved: Chief, Technical Services

Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
5 of 26

Revision Number:
5.25.07.03-5.25.07.03



US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and was collected under project conditions. As such, it is only valid for its intended use, content, time and project conditions. Any use or application of the data for other than its intended purpose, or any of the application of re-data is for other than its intended purpose.

DISCLAIMER
Access Constraints: The United States Government furnishes these data and information with the understanding that it is understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of these data and information for any purpose. The information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data received from the Government. The user shall not release these data to others without also transferring this Disclaimer.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

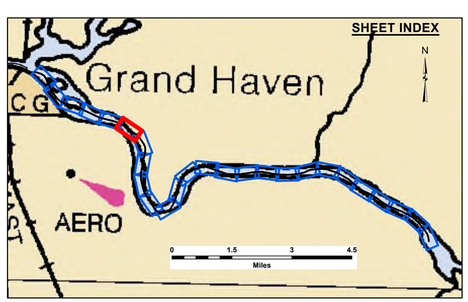
Surveyed By: ____
Plotted By: ____
Checked By: ____
Submitted: ____
Recommended: Chief, Survey Section ____
Approved: Chief, Technical Services ____

Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

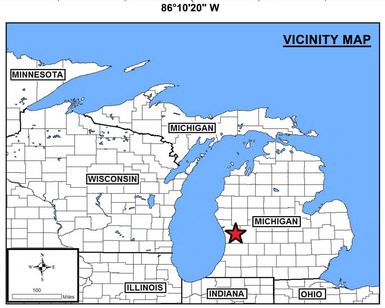
Sheet Reference Number
6 of 26

Revision Number:
5.25.07.03-5.25.07.03

SHEET INDEX



VICINITY MAP



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'

N E S W

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

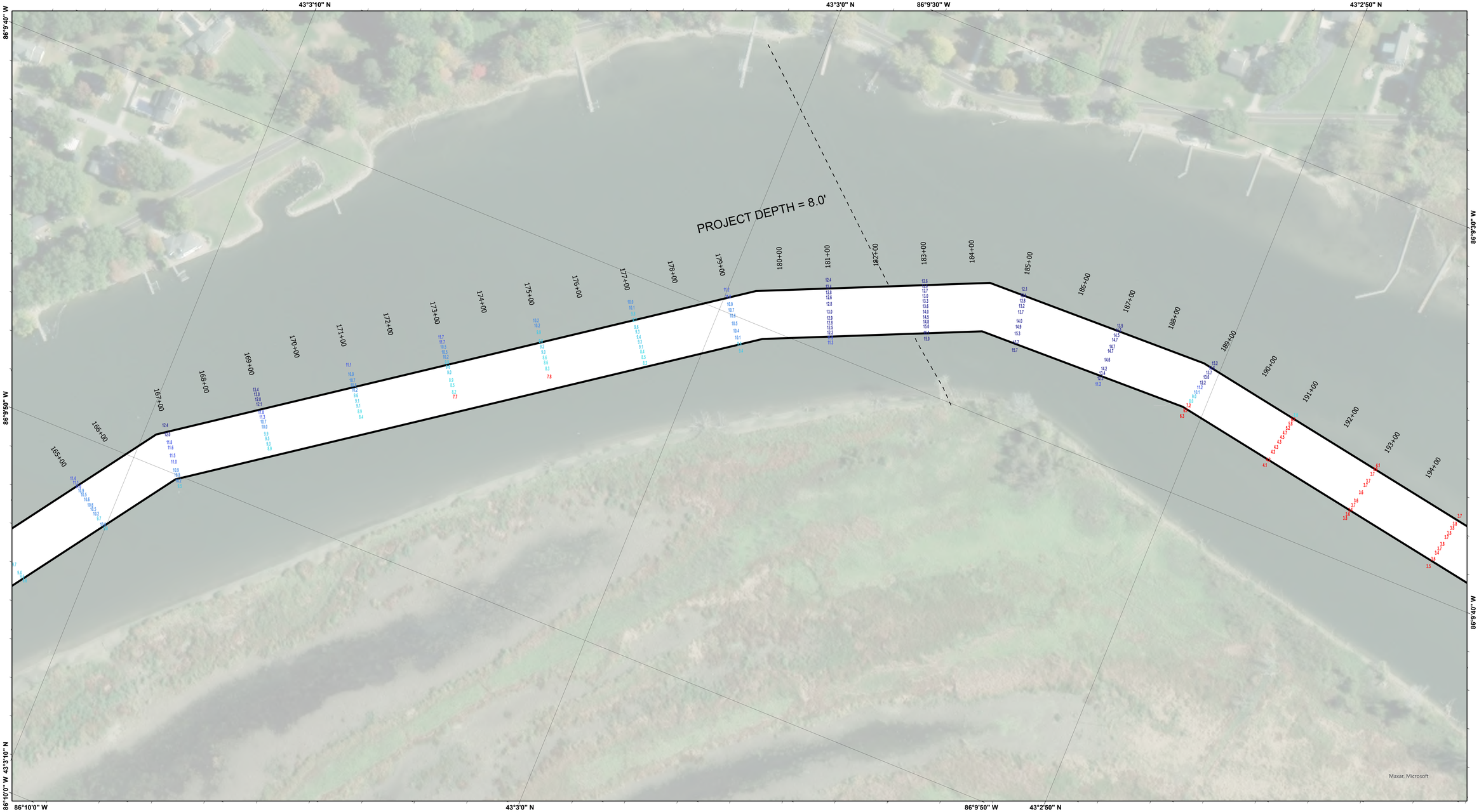
2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

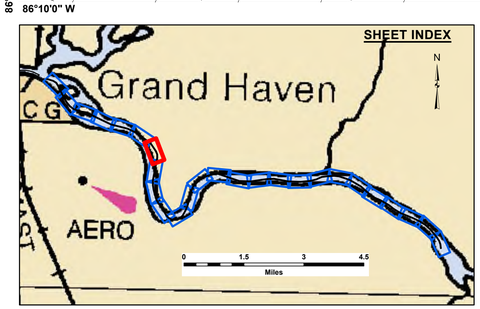
3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

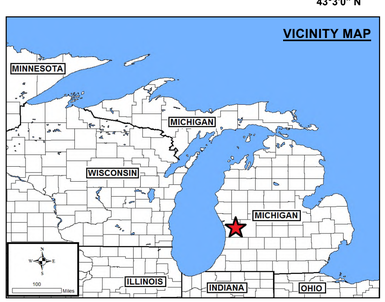
4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV100 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT







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

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV100 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers mission and was collected under those conditions. As such, it is only valid for its intended use, content, time and environment. The Government assumes no liability for the use of any of the application of the data for other than its intended purpose.

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication/data "as is" without express or implied warranty of any kind, including any warranty of understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information. Neither the US Government nor any of its employees make any warranty of the information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data received from the Government. The recipient shall not transfer these data to others without also transferring this Disclaimer.

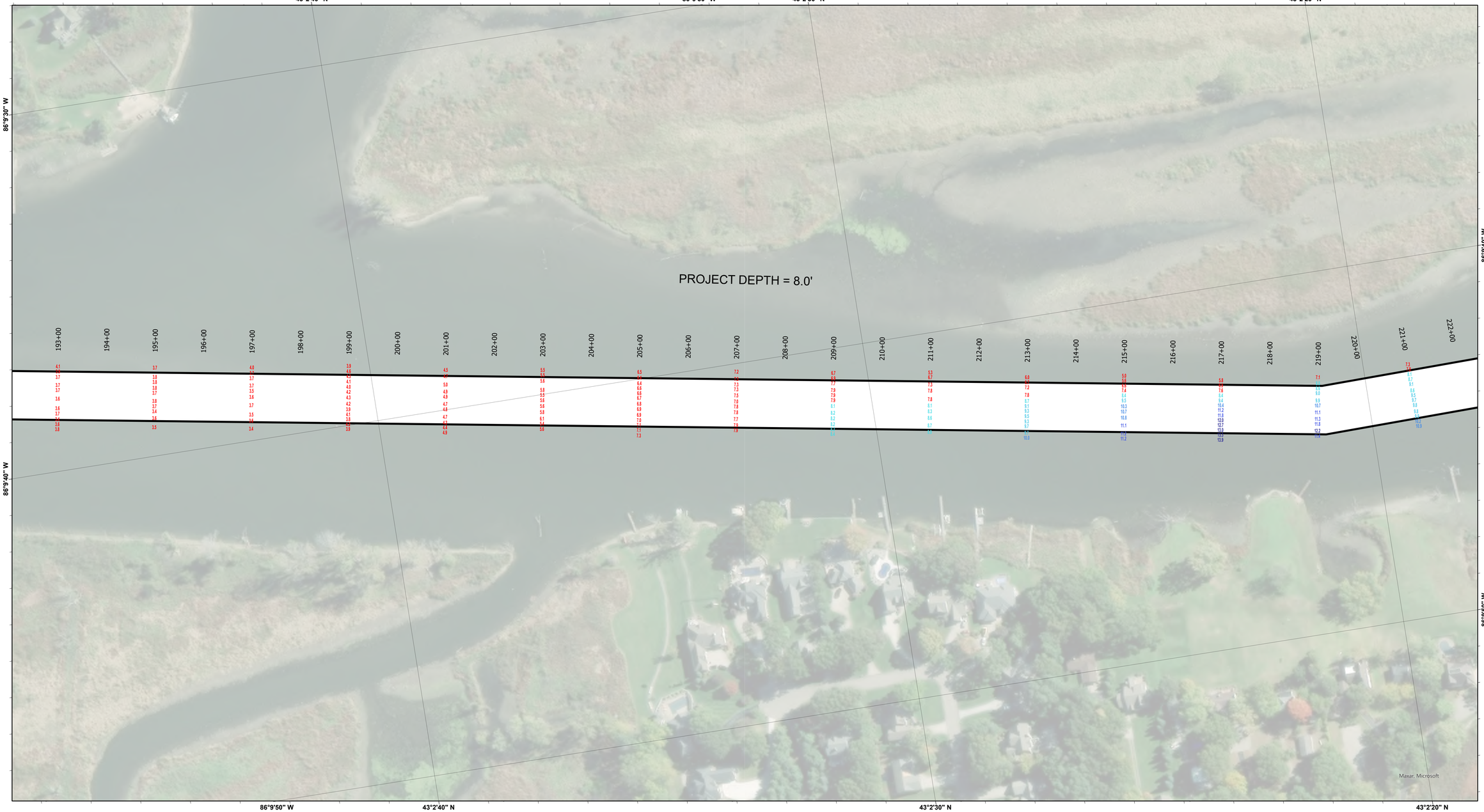
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

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

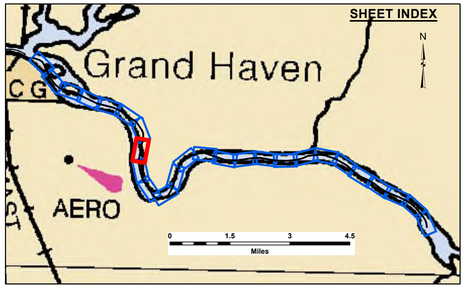
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
7 of 26

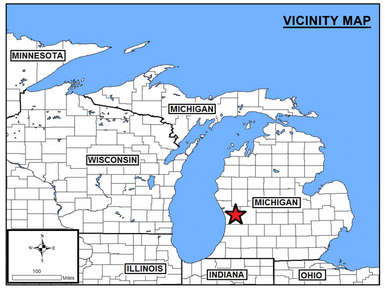
Revision Number:
5.25.07.03-5.25.07.03



SHEET INDEX



VICINITY MAP



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

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV/00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes this data without warranty of any kind whatsoever, express or implied, concerning the accuracy, completeness, understanding that the US Government makes no warranties, reliability, usability, or suitability for any particular purpose of the information and the data furnished. The United States shall be held harmless from any liability resulting from any use of the data made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than Government data. The recipient shall not transfer these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and was collected under those conditions. As such, it is only valid for its intended use, content, time and project area. The US Government shall not be liable for any use or application of the data for other than its intended purpose.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

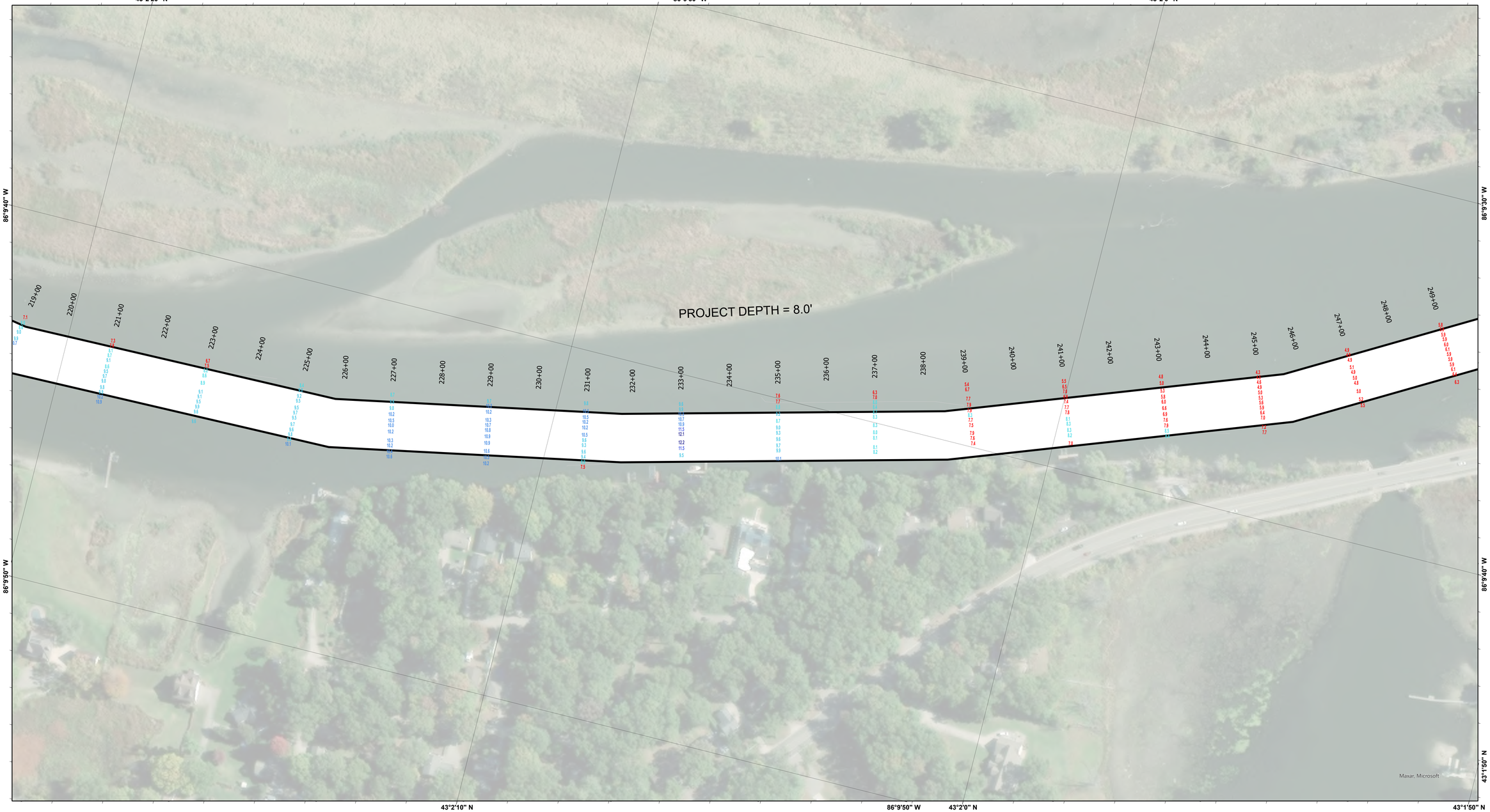
Surveyed By: ____
Plotted By: ____
Checked By: ____

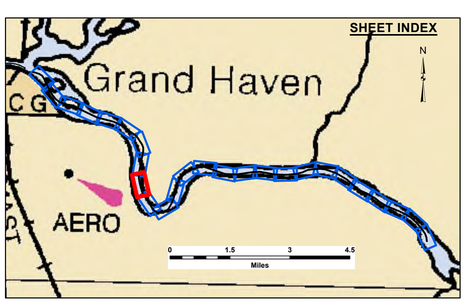
Submitted: _____
Recommended: Chief, Survey Section
Approved: Chief, Technical Services

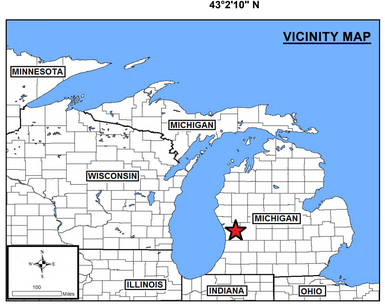
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
8 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N E S W

1 inch = 100 feet

Feet

0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CVI00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers mission and was collected under specific conditions. As such, it is only valid for its intended use, content, time and conditions at which it was collected. The user assumes the entire risk of any of the application of the data for other than its intended purpose.

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication/data "as is" without warranty of any express understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information. In no event will the information and the data furnished. The United States shall be liable for any damages that result from any errors or omissions in the made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than Government data. The recipient agrees to hold harmless the these data to others without also transferring this Disclaimer.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

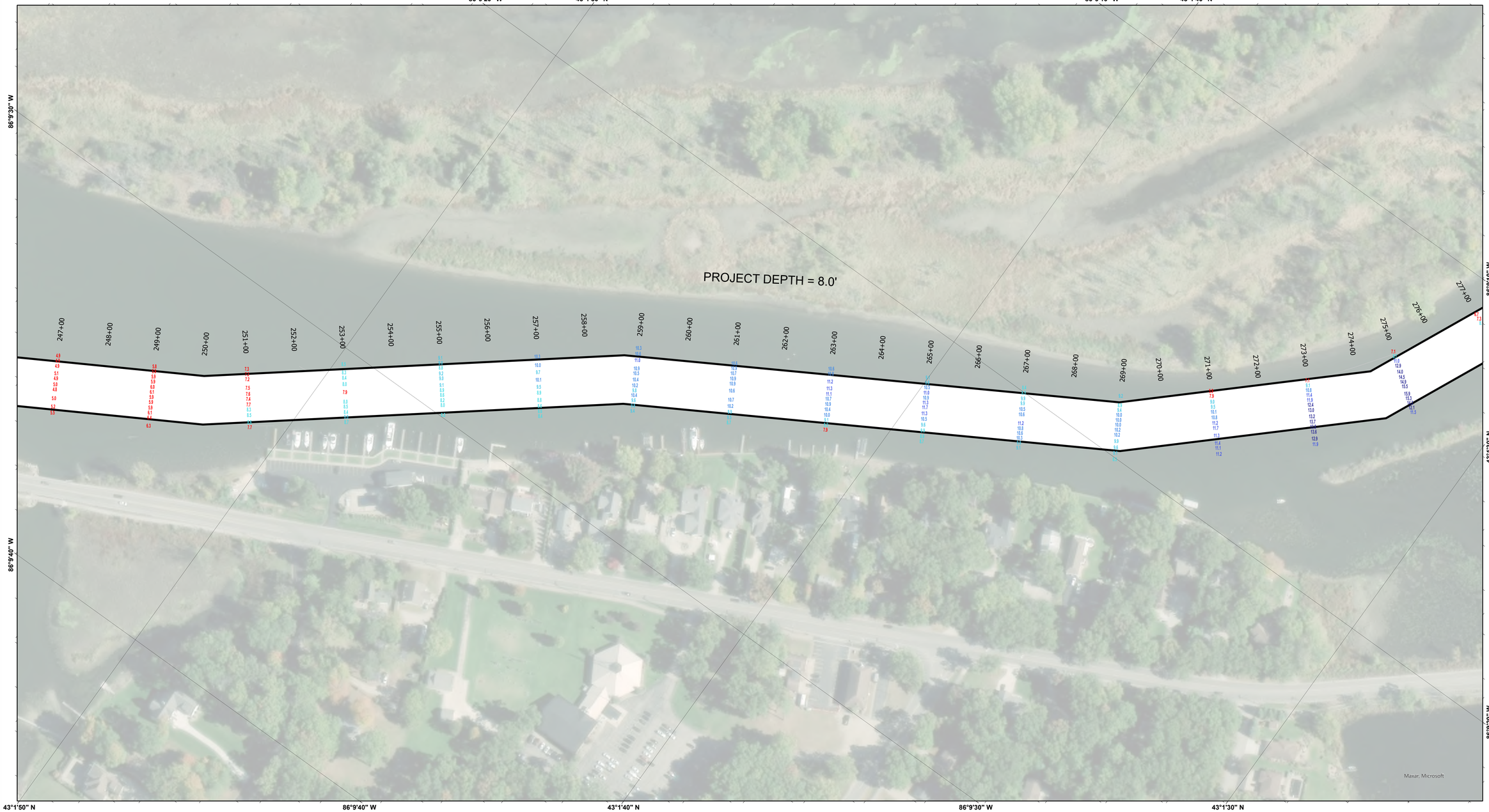
Surveyed By: ____
Plotted By: ____
Checked By: ____

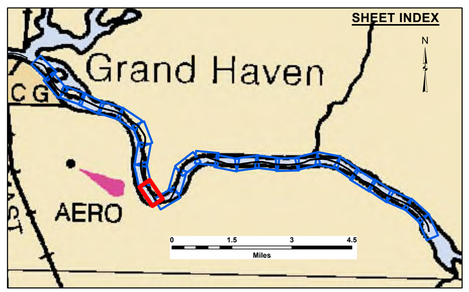
Submitted: ____
Recommended: Chief, Survey Section
Approved: Chief, Technical Services

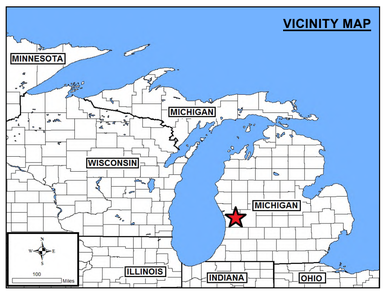
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
9 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N E S W

1 inch = 100 feet

Feet

0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CVI00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and was valid only for the stated conditions. As such, it is only valid for its intended use, content, time and environmental conditions at the time of survey. The USACE makes no warranty, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information for any other purpose. The information and the data furnished. The United States shall be released from all liability whatsoever resulting from any use of the data made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data produced by the USACE and will not release these data to others without also transferring this Disclaimer.

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication "as is" without express or implied warranty of any kind, including any warranty of understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information for any other purpose. The information and the data furnished. The United States shall be released from all liability whatsoever resulting from any use of the data made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data produced by the USACE and will not release these data to others without also transferring this Disclaimer.

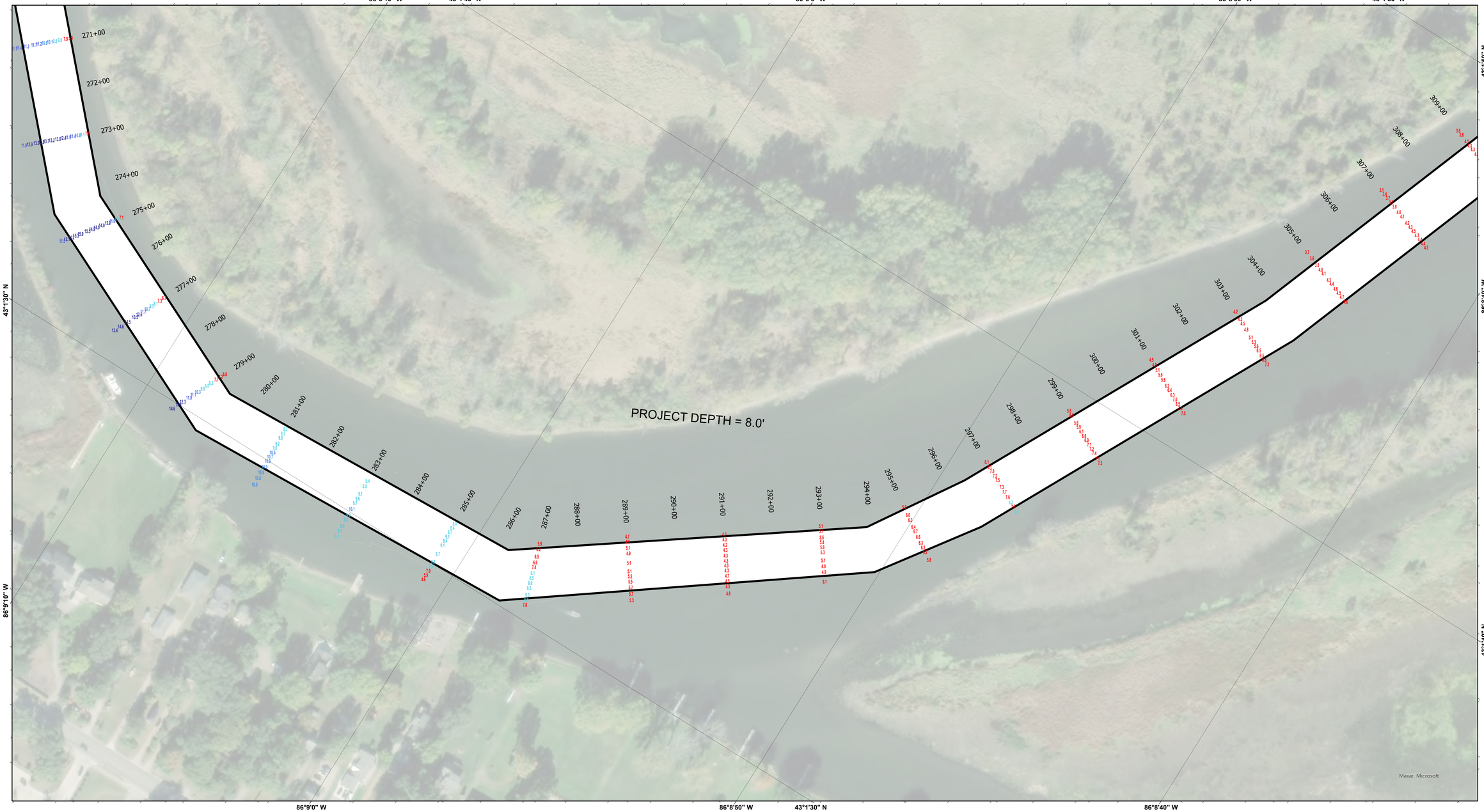
U.S. ARMY COPRPS OF ENGINEERS
DETROIT DISTRICT

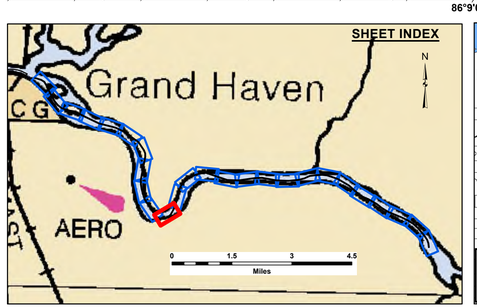
Submitted:	Surveyed By:	Plotted By:	Checked By:
Recommended: Chief, Survey Section			
Approved: Chief, Technical Services			

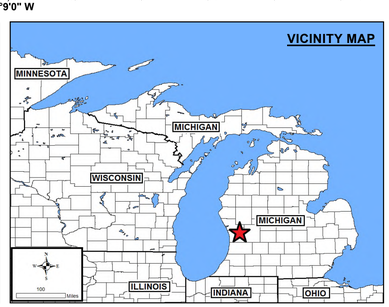
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
10 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N W E S

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CVI00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes this map/data/report and all related graphics and digital files without warranty or any express or implied concerning the accuracy, completeness, understanding that the US Government makes no warranties, merchantability or fitness for a particular purpose or use. In no event will the United States be liable for any damages resulting from the use of the information and the data furnished. The United States shall be indemnified, defended and held harmless by the recipient for any and all claims arising from the use of the information and the data furnished by the recipient. The recipient fully agrees not to represent these data to anyone as other than data compiled by the U.S. Government. Therefore the recipient shall not transfer these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and was collected under project conditions. As such, it is only valid for its intended use, content, time and extent as indicated in the original project documentation. The US Army Corps of Engineers is not liable for the misuse or modification of any of the application of the data for other than its intended purpose.

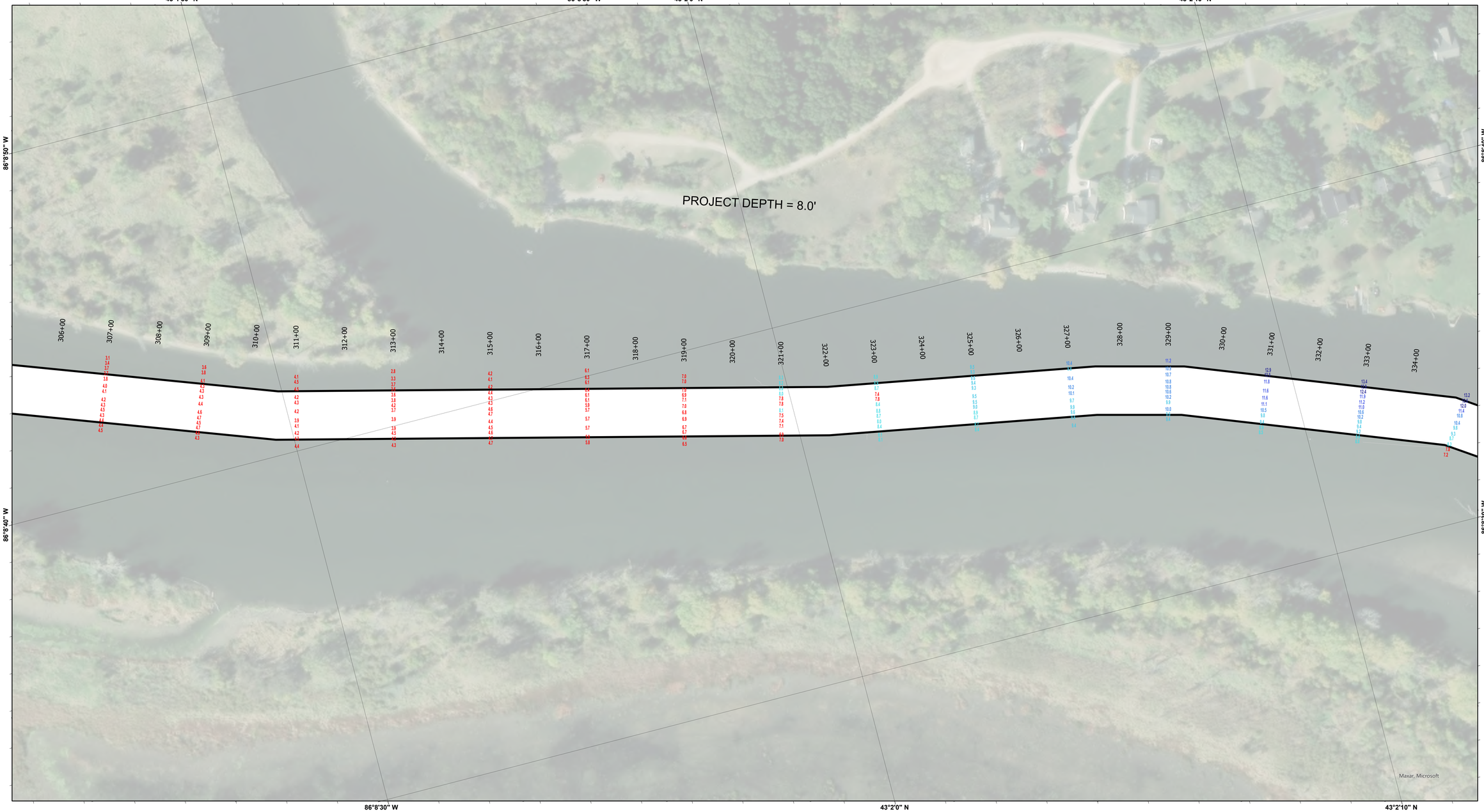
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

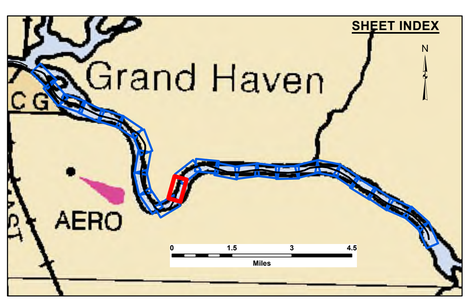
Surveyed By:
Plotted By:
Checked By:
Submitted:
Recommended: Chief, Survey Section
Approved: Chief, Technical Services

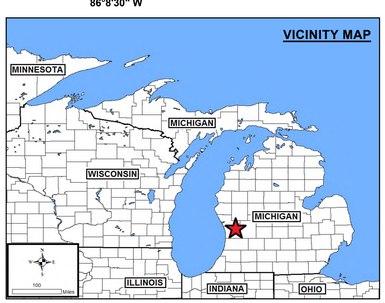
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
11 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N W E S

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CVI00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and was collected under project conditions. As such, it is only valid for its intended use, content, time and conditions as originally compiled. The US Government accepts no liability for any of the application of the data for other than its intended purpose.

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication/data without warranty, express or implied, and assumes no liability for the accuracy, content, currency, completeness, or suitability for any particular purpose of the information and the data furnished. The United States shall be under no obligation to update any information or data provided or made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data received from the Government. The recipient shall not transfer these data to others without also transferring this Disclaimer.

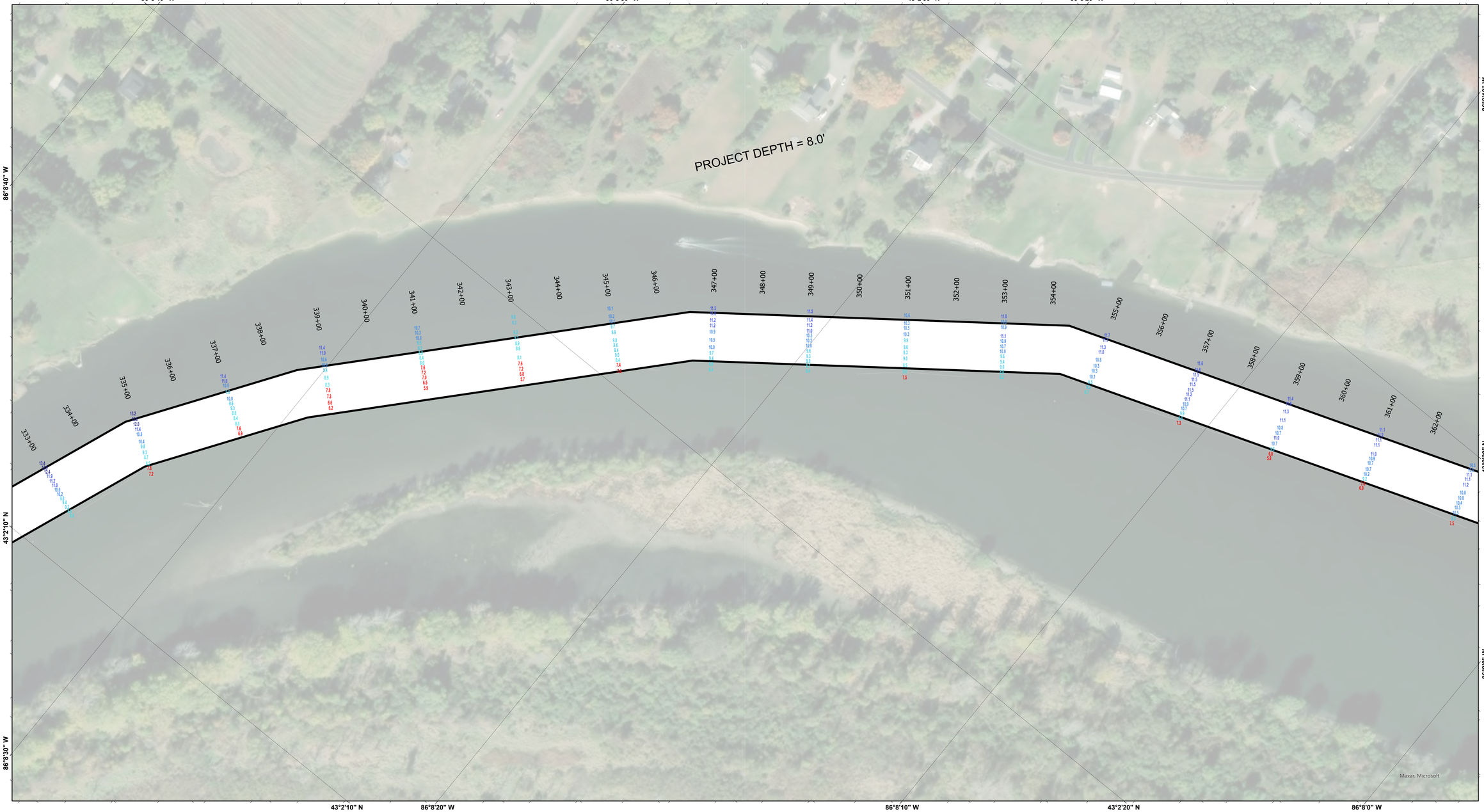
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

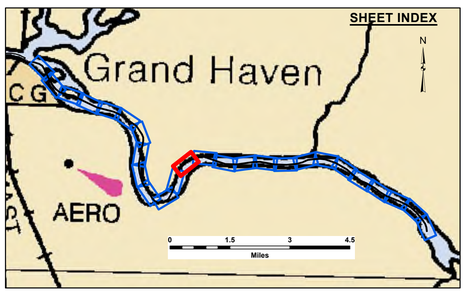
Surveyed By: ____
Plotted By: ____
Checked By: ____
Submitted: ____
Recommended: Chief, Survey Section
Approved: Chief, Technical Services

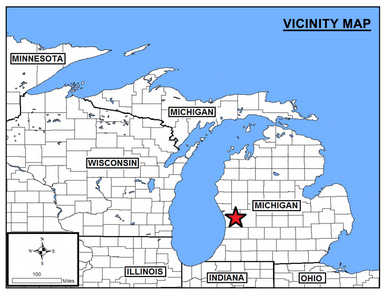
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
12 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N W E S

1 inch = 100 feet

Feet

0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV100 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication/data and related products "as is" without warranty of any kind, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of the information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made of the information and the data furnished. The United States does not warrant that the information and the data furnished will be free from privately owned rights. Use of these data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than Government data. The recipient agrees to hold the United States harmless from any claim arising from the use of these data or from their transfer to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and was collected under project conditions. As such, it is only valid for its intended use, content, time and project conditions. The US Army Corps of Engineers assumes no liability of any of the application of the data for other than its intended purpose.

U.S. ARMY CORRPS OF ENGINEERS
DETROIT DISTRICT

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

Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
13 of 26

Revision Number:
5.25.07.03-5.25.07.03

86°8'0" W 86°7'50" W 86°7'40" W 86°7'30" W

43°2'30" N

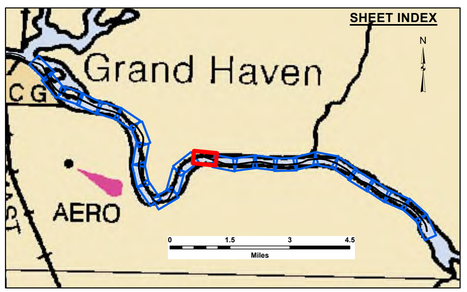
PROJECT DEPTH = 8.0'

361+00 362+00 363+00 364+00 365+00 366+00 367+00 368+00 369+00 370+00 371+00 372+00 373+00 374+00 375+00 376+00 377+00 378+00 379+00 380+00 381+00 382+00 383+00 384+00 385+00 386+00 387+00 388+00 389+00 390+00

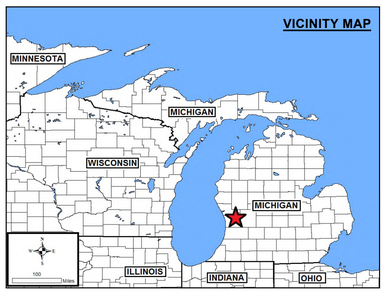
Maxar, Microsoft

86°8'0" W 86°7'50" W 86°7'40" W 86°7'30" W

SHEET INDEX



VICINITY MAP



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'

N W E S

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV/00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes this map/data/report/publication "as is" without express or implied warranty and makes no warranties, understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information. Neither the US Government nor any of its employees make any warranty of the information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data received from the Government. The Government reserves these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers mission project and reflects survey conditions. As such, it is only valid for its intended use, content, time and conditions at survey completion. The US Government accepts no liability for any of the application of the data for other than its intended purpose.

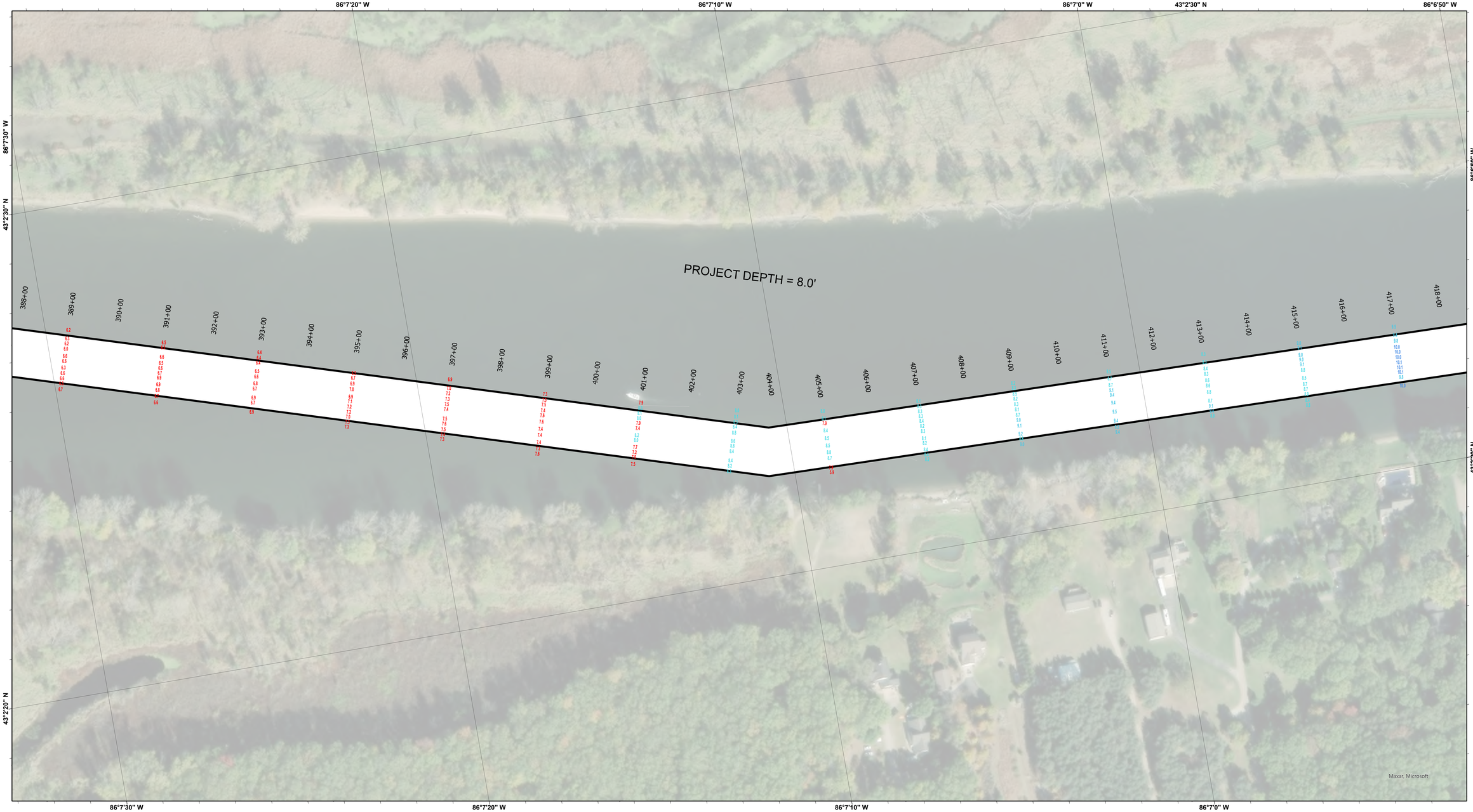
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

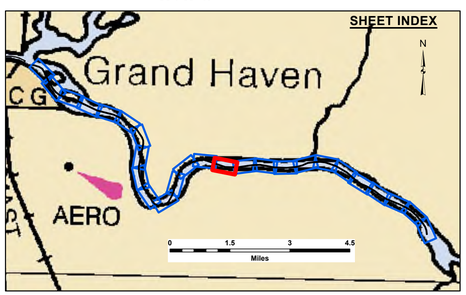
Surveyed By:	Plotted By:	Checked By:
Submitted:	Recommended: Chief, Survey Section	Approved: Chief, Technical Services

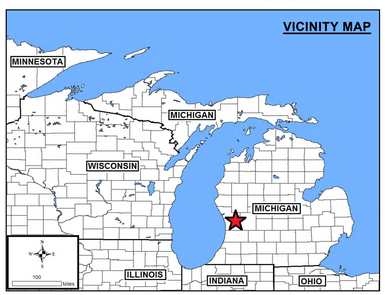
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
14 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N
W E
S

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CVI00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers purpose and is valid only under stated conditions. As such, it is only valid for its intended use, content, time and accuracy. Any use or reliance on the data by anyone for any of any of the application of the data for other than its intended purpose.

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication/data "as is" without express or implied warranty of any kind, including any warranty of understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information. The entire risk as to the information and the data furnished. The United States shall be under no liability for any special, indirect or consequential damages made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than government data. The recipient agrees to hold harmless these data to others without also transferring this Disclaimer.

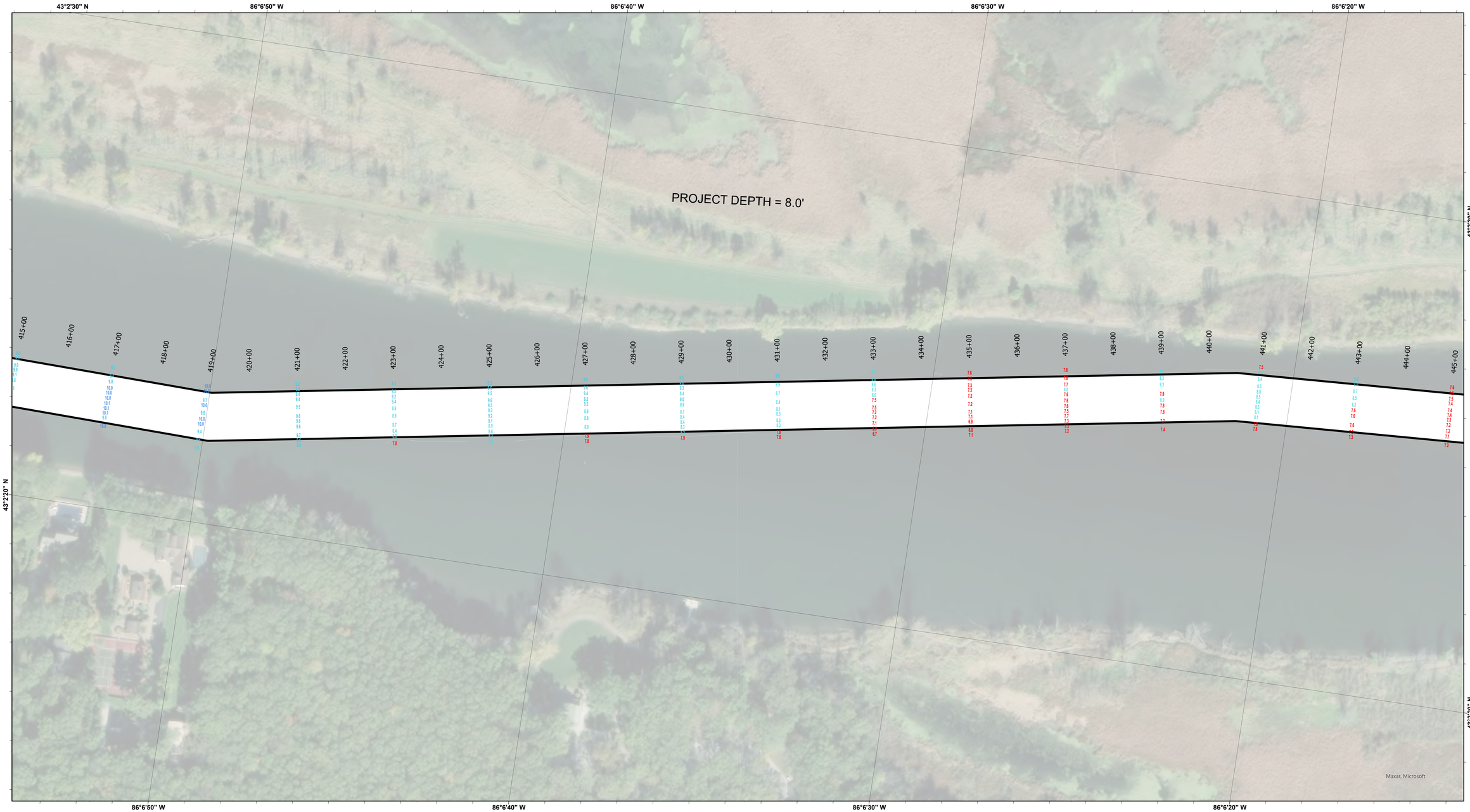
U.S. ARMY CORPPS OF ENGINEERS
DETROIT DISTRICT

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

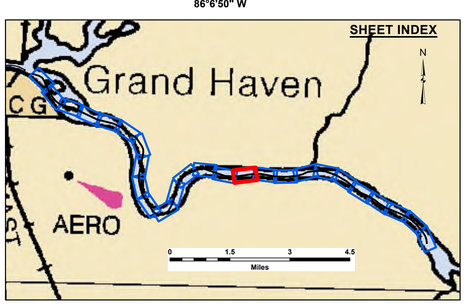
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
15 of 26

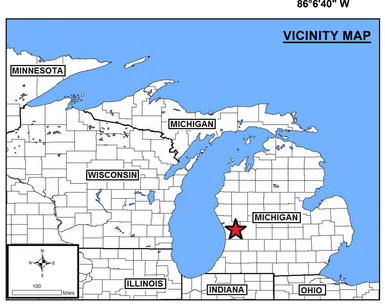
Revision Number:
5.25.07.03-5.25.07.03



SHEET INDEX



VICINITY MAP



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'

N
W E
S

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV100 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes these data and information on an "as is" basis. The recipient's understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of these data and information. Neither the US Government nor any of its employees shall be liable for any damages incurred as the result of any decision made or action taken on the basis of these data and information. The United States shall be indemnified from any claims arising from the use of these data by the recipient. The recipient fully agrees not to represent these data to anyone as other than US Government data. The recipient shall not release these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers mission project and may not be suitable for other conditions. As such, it is only valid for its intended use, content, time and conditions existing during the specific survey. The US Army Corps of Engineers assumes no liability for any misinterpretation of the data or any of the application of the data for other than its intended purpose.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

Surveyed By:	Plotted By:	Checked By:
____	____	____

Submitted: _____

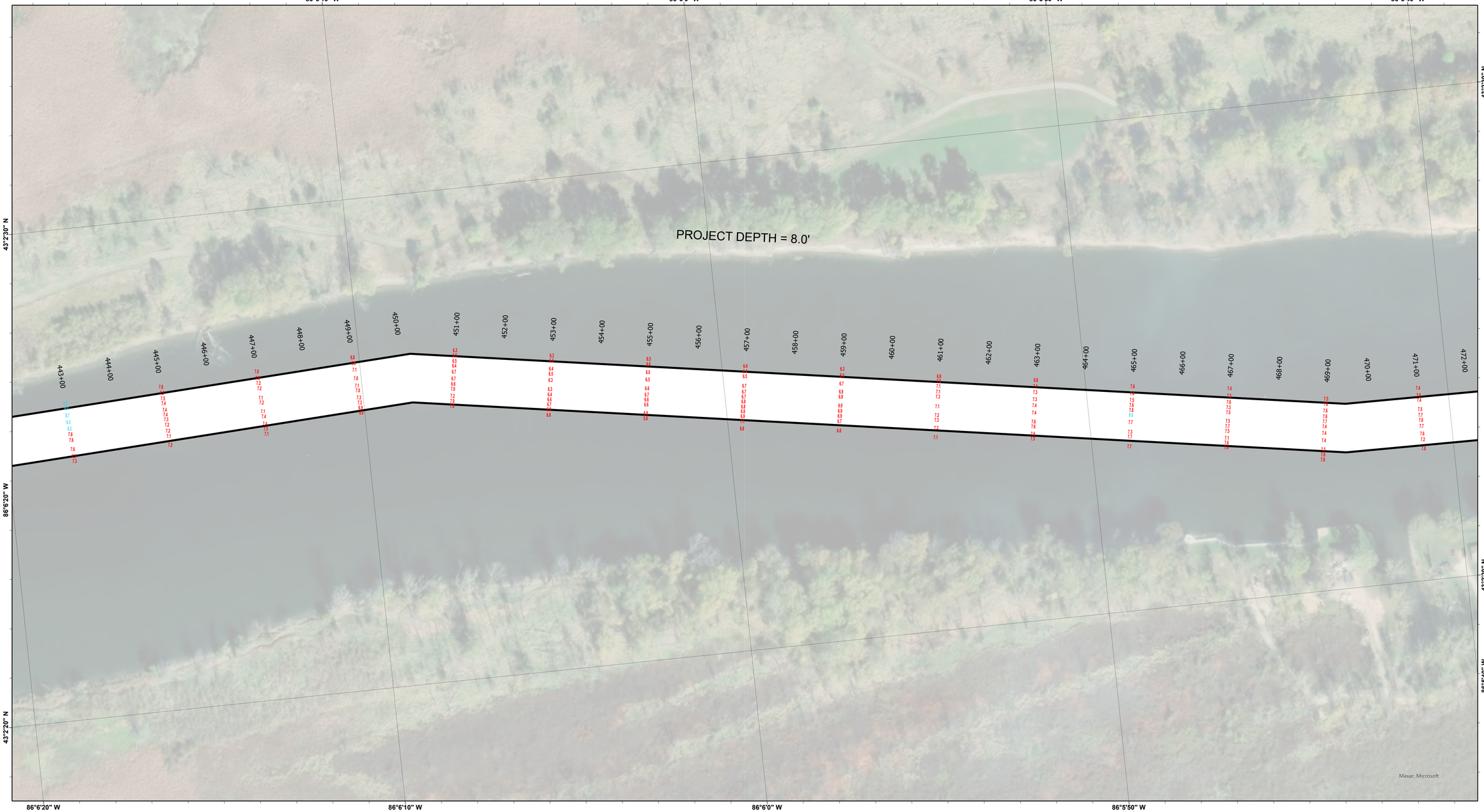
Recommended: Chief, Survey Section _____

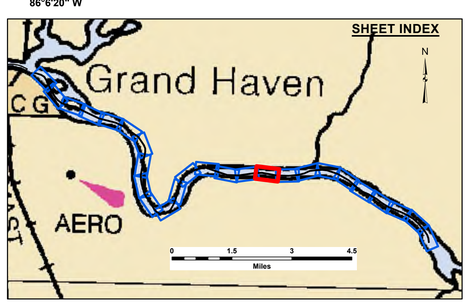
Approved: Chief, Technical Services _____

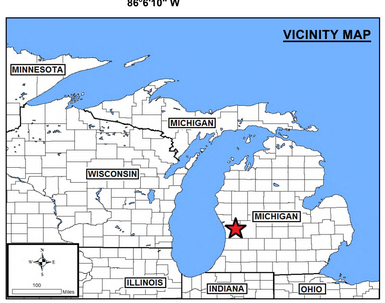
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
16 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N
W E
S

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV/00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes this map and the data contained therein "as is" without express understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this map and the data furnished. The information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data furnished by the Government. The recipient shall not transfer these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and is valid only under the stated conditions. As such, it is only valid for its intended use, content, time and accuracy. Any use or reuse of the data for purposes other than its intended purpose, or any modification of the data for other than its intended purpose, or any of the application of the data for other than its intended purpose.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

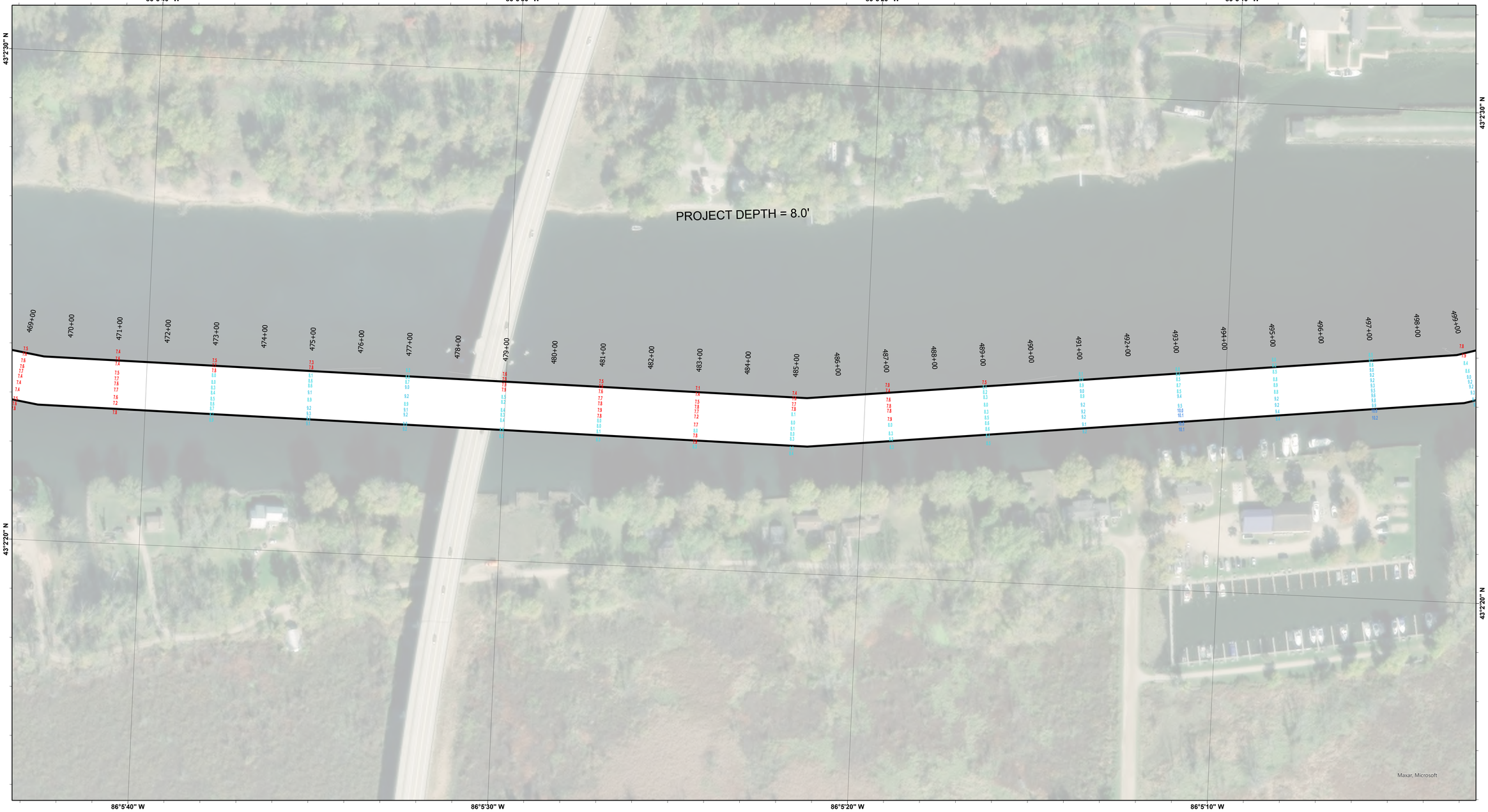
Surveyed By: ____
Plotted By: ____
Checked By: ____

Submitted: ____
Recommended: Chief, Survey Section
Approved: Chief, Technical Services

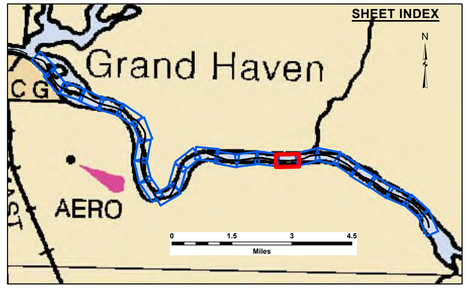
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
17 of 26

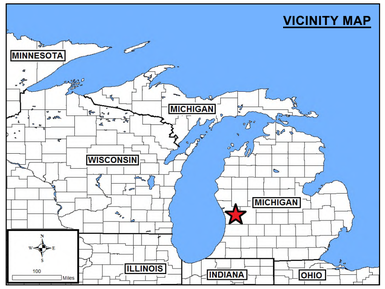
Revision Number:
5.25.07.03-5.25.07.03



SHEET INDEX



VICINITY MAP



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'

N
W E
S

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV/00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and was collected under specific conditions. As such, it is only valid for its intended use, content, time and environmental conditions at the time of collection. The data is not valid for any other use or application and the US Government assumes no liability for any reuse of the data or for any consequences of any of the application of the data for other than its intended purpose.

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication and data "as is" and makes no express or implied warranties with respect to this information and data. The user understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information and data. The user understands that the information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than government data. The recipient agrees to hold harmless the United States for all damages, claims, or liabilities that may arise from the use of these data or from any alteration of these data by others without also transferring this Disclaimer.

U.S. ARMY COPRPS OF ENGINEERS
DETROIT DISTRICT

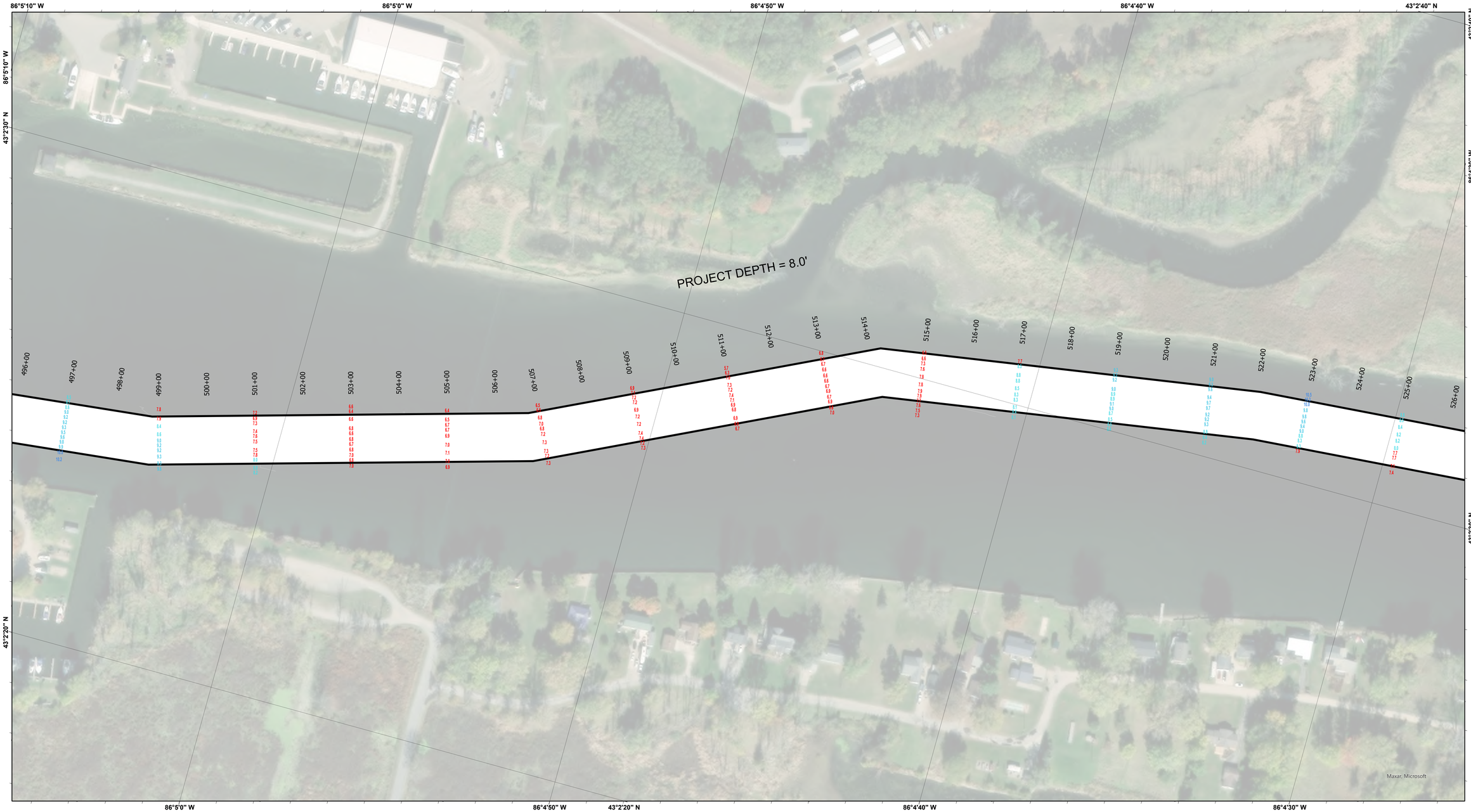
Surveyed By: ____
Plotted By: ____
Checked By: ____

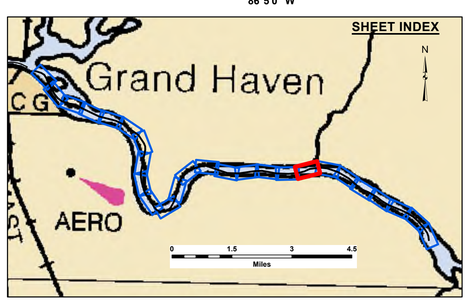
Submitted: ____
Recommended: Chief, Survey Section
Approved: Chief, Technical Services

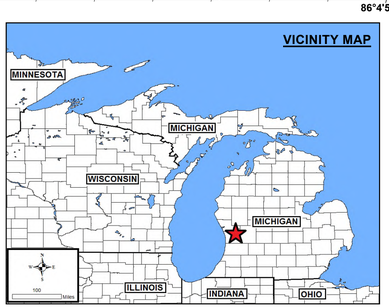
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
18 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N
W E
S

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CVI00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes these data and information on an "as is" basis. The recipient's understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of these data and information. Neither the US Government nor any of its employees shall be liable for any damages, including lost profits, lost savings or other incidental or consequential damages, arising out of the recipient's use of the information and the data furnished. The United States shall be indemnified, defended and held harmless by the recipient for any and all liabilities, costs and damages arising out of the recipient's use of these data. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than government data. The recipient shall not release these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and was valid only for the conditions. As such, it is only valid for its intended use, content, time and conditions at which it was collected. The US Army Corps of Engineers assumes no liability for the misuse or misinterpretation of any of the application of the data for other than its intended purpose.

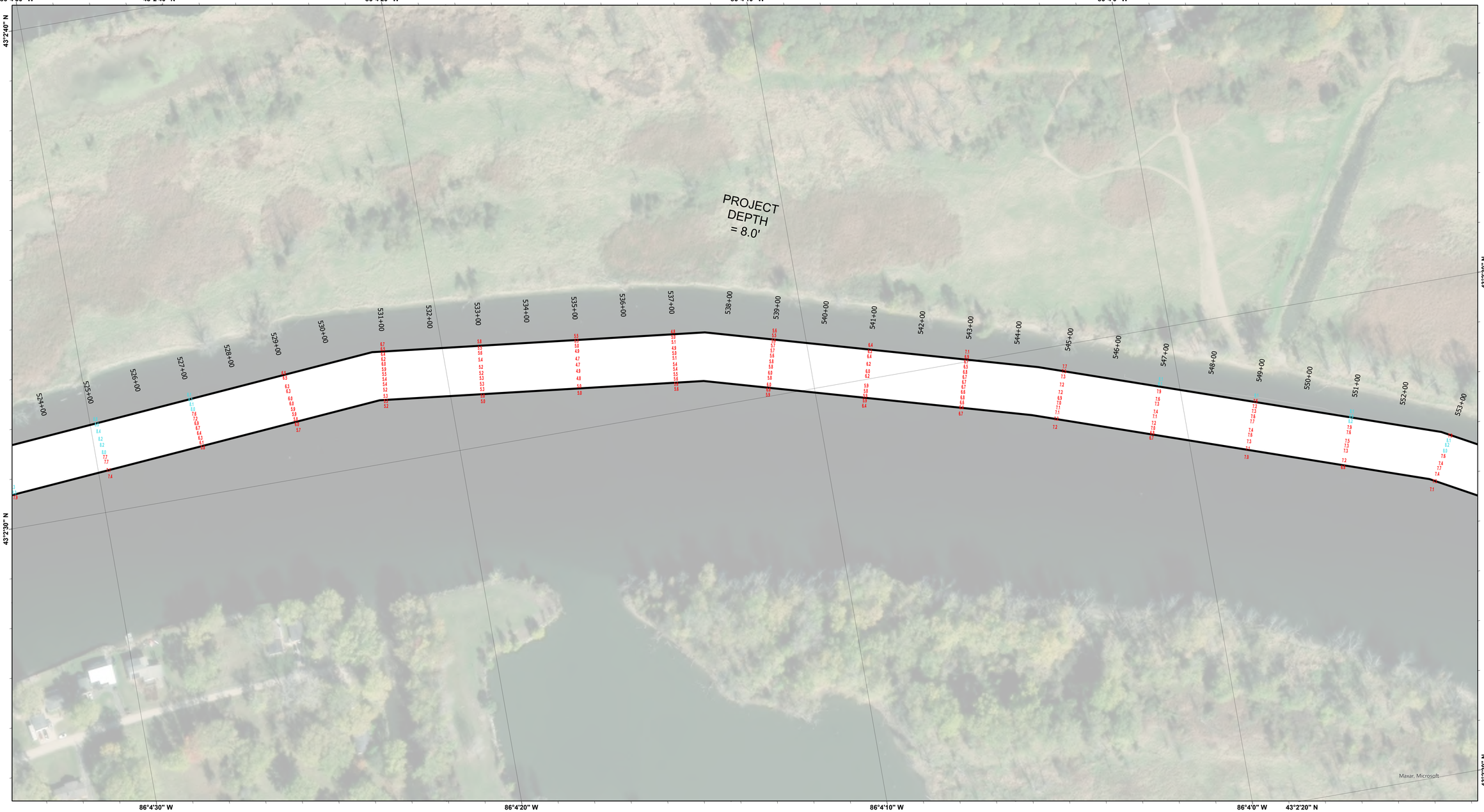
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

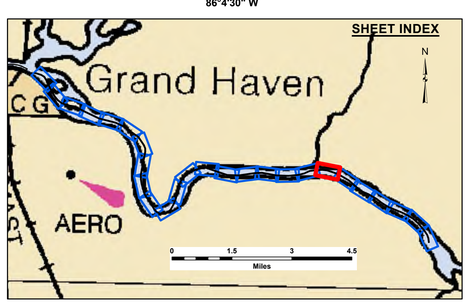
Surveyed By:	____
Plotted By:	____
Checked By:	____
Submitted:	____
Recommended: Chief, Survey Section	____
Approved: Chief, Technical Services	____

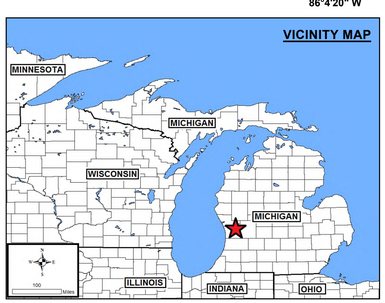
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
19 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N
W E
S

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV/00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers purpose and is valid only for the stated conditions. As such, it is only valid for its intended use, content, time and extent as indicated by the originator. Use of this data for any of any of the application of the data for other than its intended purpose.

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication/data in good faith that it represents the understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information. In no event will the United States be liable for any damages whatsoever arising from its use. The information and the data furnished. The United States shall be under no obligation to update any information or data so furnished. The recipient fully agrees not to represent these data to anyone as other than data furnished by the US Government. Therefore the recipient agrees to indemnify the US Government and to hold these data to others without also transferring this Disclaimer.

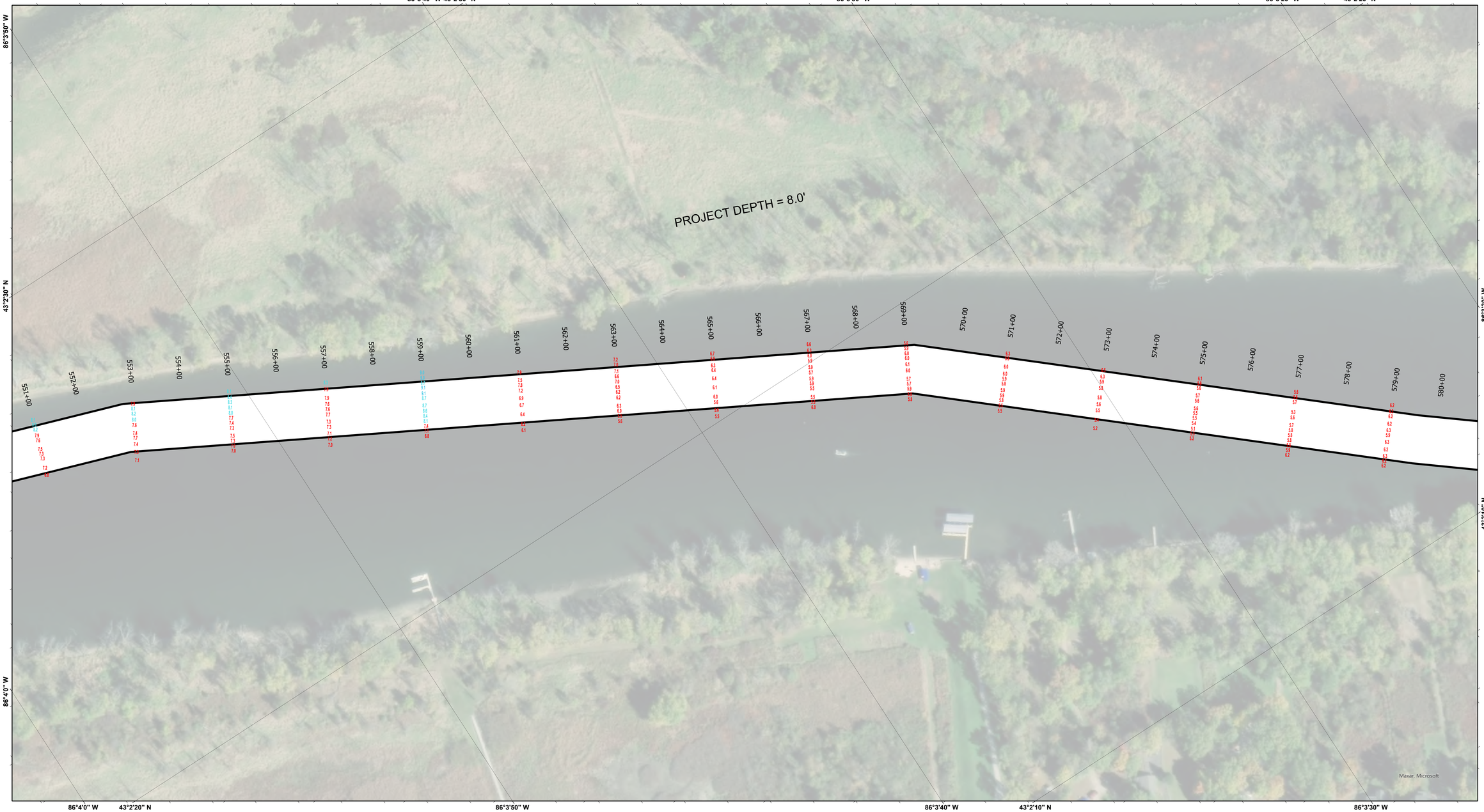
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

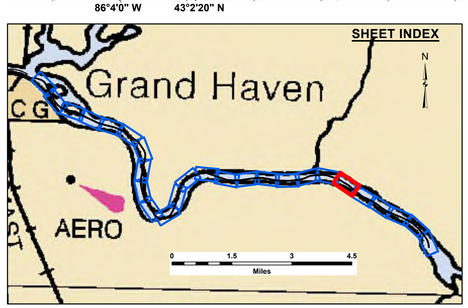
Surveyed By: ____
Plotted By: ____
Checked By: ____
Submitted: ____
Recommended: Chief, Survey Section
Approved: Chief, Technical Services

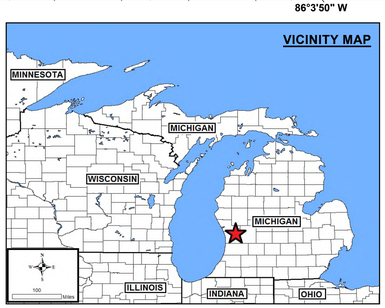
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
20 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N E S W

1 inch = 100 feet

Feet

0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV100 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and reflects survey and environmental conditions. As such, it is only valid for its intended use, content, time and environmental conditions at the time of survey. The Government assumes no liability for any of the application of the data for other than its intended purpose.

DISCLAIMER
Access Constraints: The United States Government furnishes these data and information with the understanding that it does not express, implied concerning the accuracy, completeness, reliability, suitability or utility of these data and information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than Government data. The recipient shall not transfer these data to others without also transferring this Disclaimer.

U.S. ARMY COPRPS OF ENGINEERS
DETROIT DISTRICT

Surveyed By: ____

Plotted By: ____

Checked By: ____

Submitted: ____

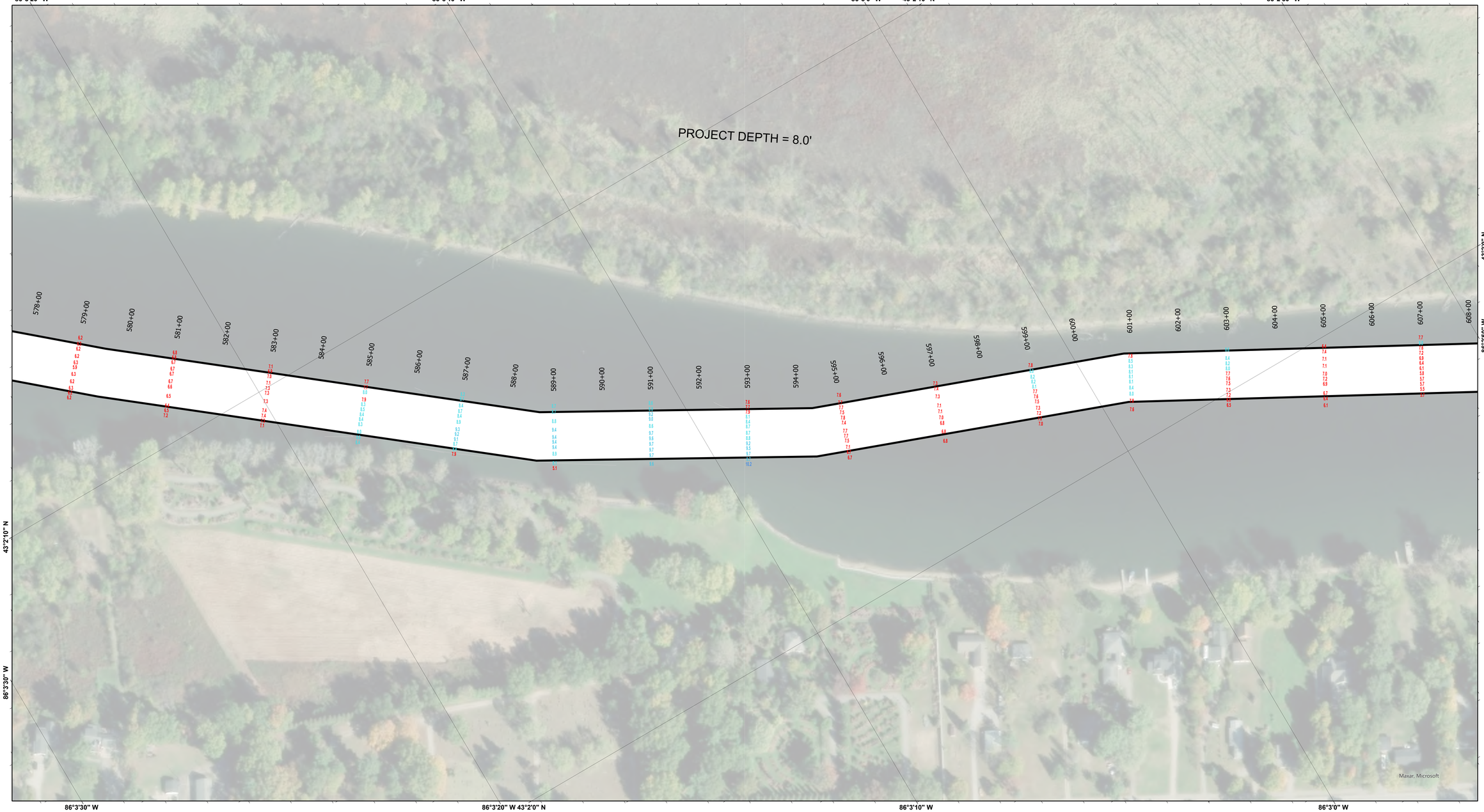
Recommended: Chief, Survey Section ____

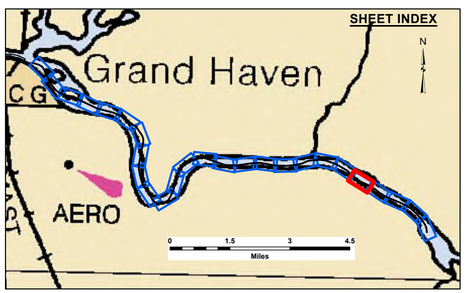
Approved: Chief, Technical Services ____

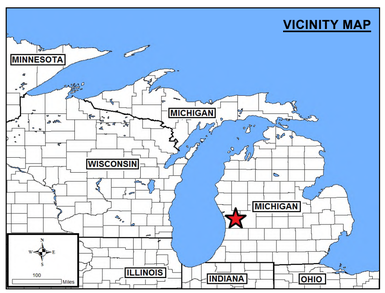
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
21 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N E S W

1 inch = 100 feet

Feet

0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV100 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes this data/information/product/service "as is" without express or implied warranty regarding its fitness for any particular purpose. The user understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this data/information/product/service and neither the information and the data furnished. The United States shall be liable for any deficiencies, losses, or injuries incurred by the user in connection with this data/information/product/service or any decision made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than government data. The recipient shall not transfer these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and is valid only under those conditions. As such, it is only valid for its intended use, content, time and extent as indicated by the originator. The originator does not warrant the use, adequacy, or correctness of the data for other than its intended purpose, of any of the application of the data for other than its intended purpose.

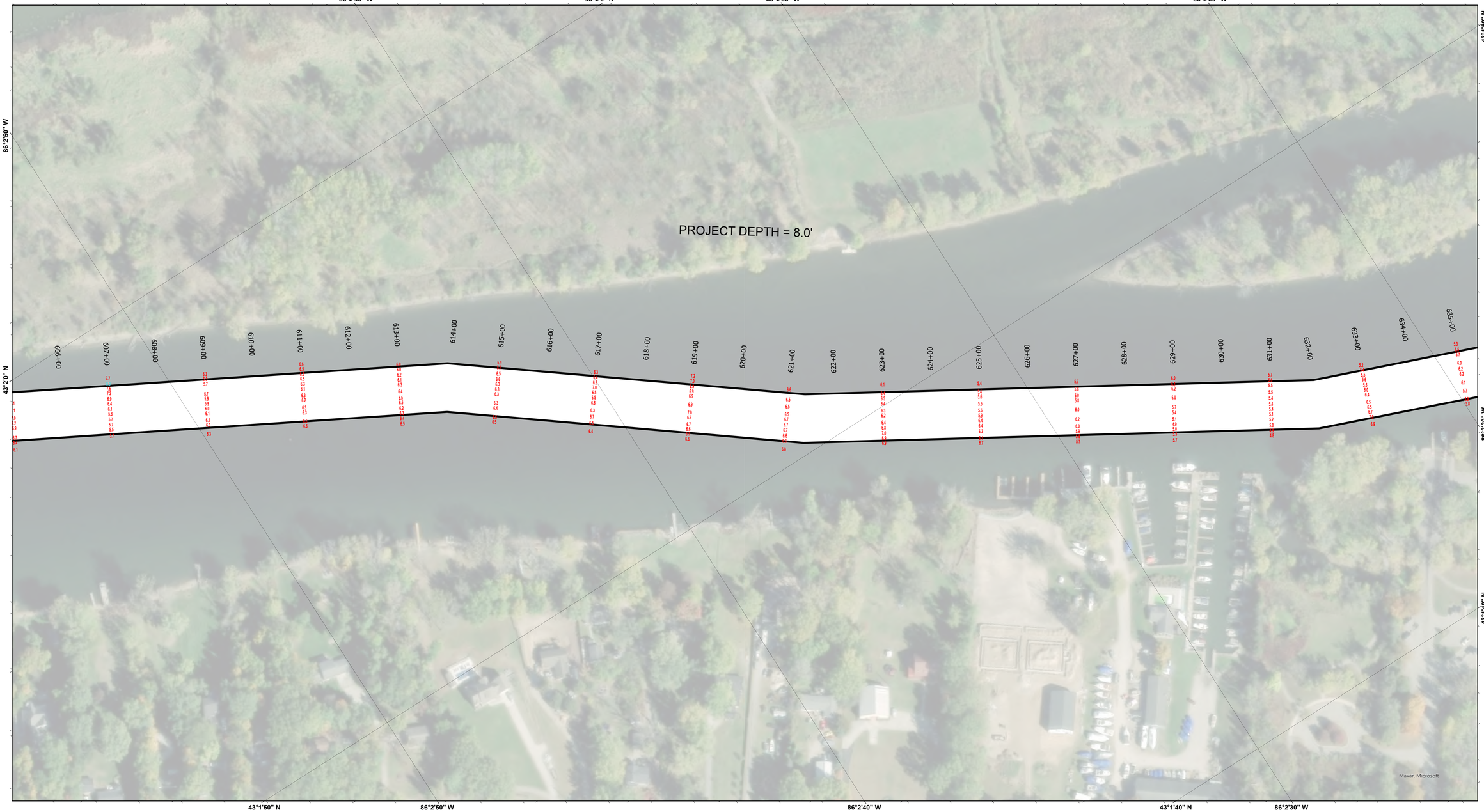
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

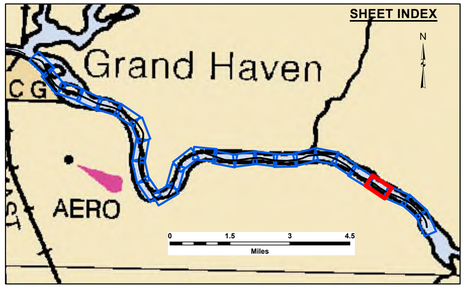
Surveyed By:	____
Plotted By:	____
Checked By:	____
Submitted:	____
Recommended:	Chief, Survey Section
Approved:	Chief, Technical Services

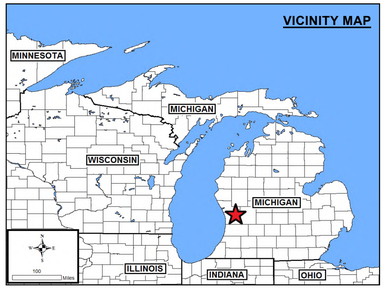
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
22 of 26

Revision Number:
5.25.07.03-5.25.07.03







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

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV/00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and was collected under project conditions. As such, it is only valid for its intended use, content, time and environment. The United States Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information for any other purpose. The information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data collected by the US Government. The recipient shall not transfer these data to others without also transferring this Disclaimer.

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication "as is" without warranty of any express understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of this information for any other purpose.

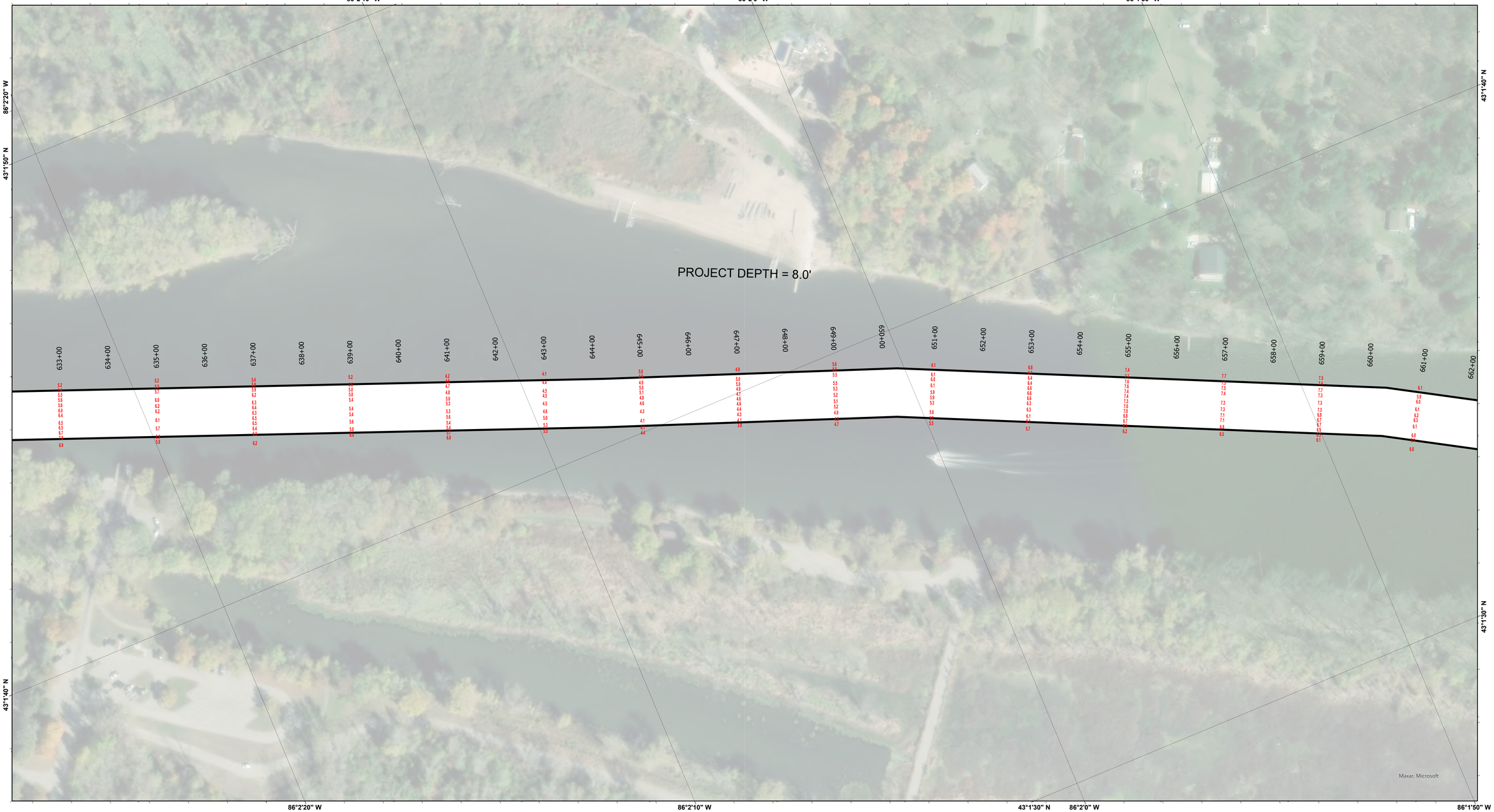
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

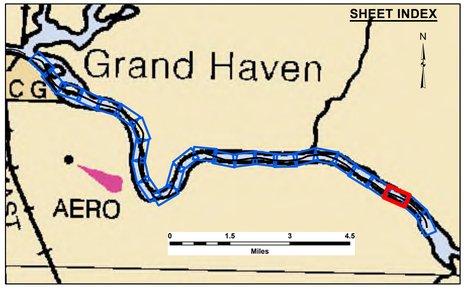
Surveyed By:	
Plotted By:	
Checked By:	
Submitted:	
Recommended: Chief, Survey Section	
Approved: Chief, Technical Services	

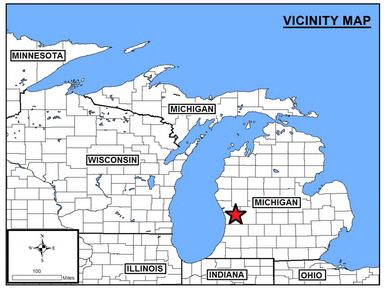
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
23 of 26

Revision Number:
5.25.07.03-5.25.07.03







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

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV/00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes this map/data and associated materials "as is" and makes no express or implied warranty concerning the accuracy, completeness, understanding that the US Government makes no warranties, express or implied concerning the accuracy, completeness, reliability, currentness, or suitability for any particular purpose of the information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than data received from the Government. The recipient shall not transfer these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project and is valid only under those conditions. As such, it is only valid for its intended use, content, time and extent as indicated by the originator. Data is provided "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for determining fitness for use lies entirely with the recipient. The recipient is responsible for applying the necessary disclaimers and for ensuring that data are not used in a manner that misrepresents its content or limitations. The originator will not be liable for damages resulting from misuse or misinterpretation of the data or for damages resulting from any changes or modifications to the data. The originator is not obligated to provide corrections, updates, or notifications of changes to the data. The originator is not liable for damages resulting from the use of any of the application of the data for other than its intended purpose.

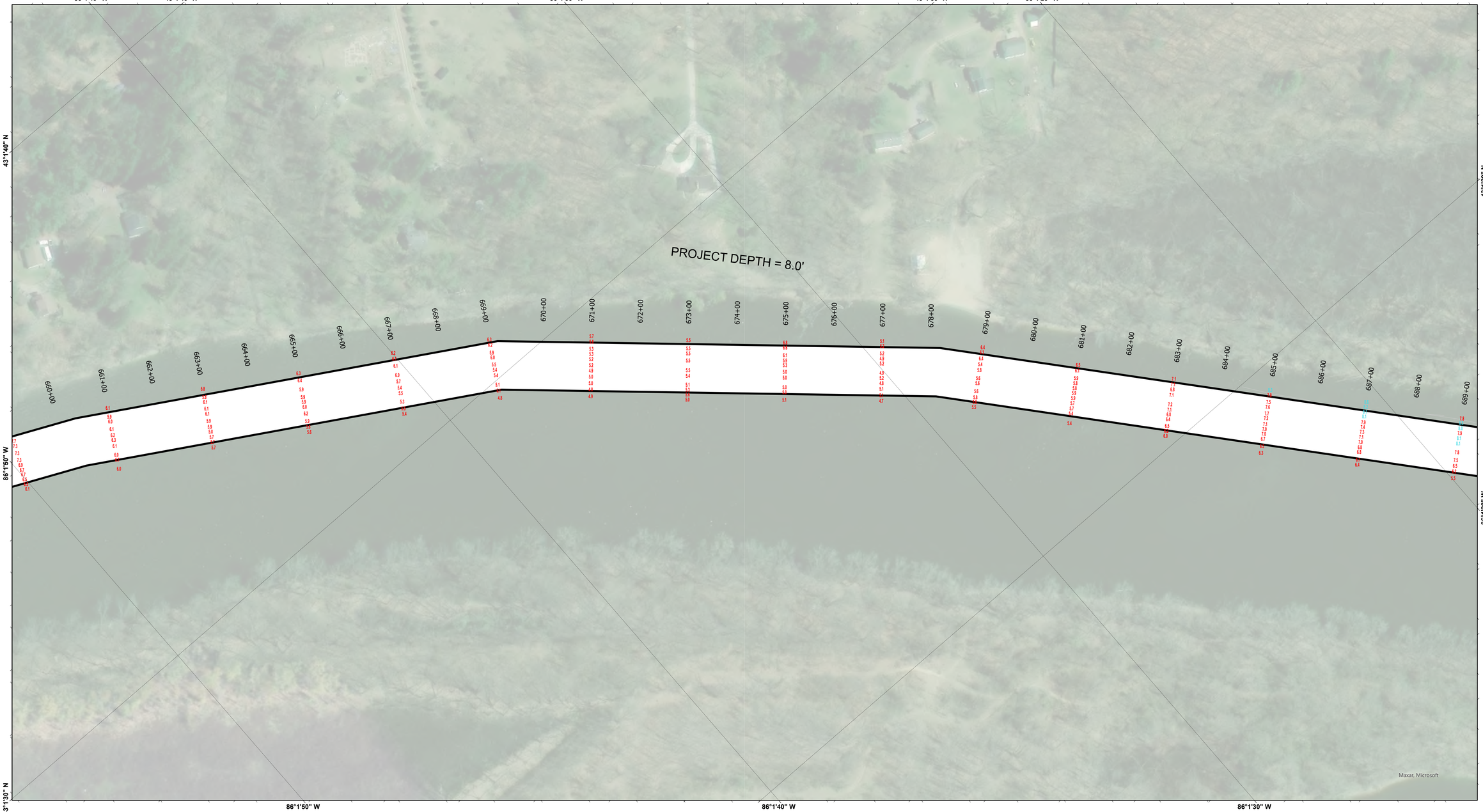
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

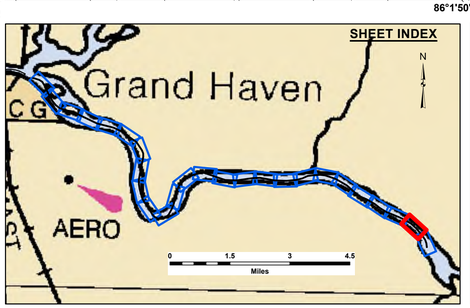
Surveyed By:	
Plotted By:	
Checked By:	
Submitted:	
Recommended: Chief, Survey Section	
Approved: Chief, Technical Services	

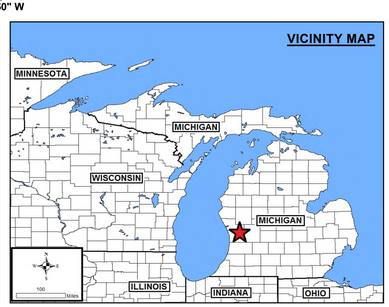
Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
24 of 26

Revision Number:
5.25.07.03-5.25.07.03







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'

N E S W

1 inch = 100 feet

Feet
0 100 200 300 400 500 600

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CV100 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

DISCLAIMER
Access Constraints: The United States Government furnishes these data and information on an "as is" basis. The recipient's understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, reliability, or suitability of these data and information. Neither the US Government nor any of its employees make any warranty of any kind, including and without limitation, the implied warranties of merchantability and fitness for a particular purpose. The US Government shall be under no liability whatsoever resulting from any use of the data or information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than government data. The recipient shall not release or give these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers mission and was collected under specific conditions. As such, it is only valid for its intended use, content, time and conditions as originally compiled. The US Army Corps of Engineers assumes no responsibility for any use of the data or for any of the application of the data for other than its intended purpose.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

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

Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
25 of 26

Revision Number:
5.25.07.03-5.25.07.03

86°1'10" W 43°1'20" N 43°1'10" N 86°1'0" W 43°1'0" N

PROJECT DEPTH = 8.0'

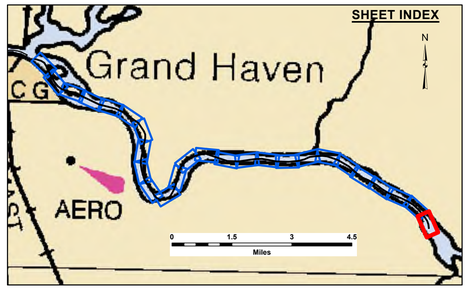
687+00 688+00 689+00 690+00 691+00 692+00 693+00 694+00 695+00 696+00 697+00 698+00 699+00 700+00 701+00 702+00 703+00 704+00 705+00 706+00 707+00

86°1'20" W 43°1'20" N 86°1'10" W 43°0'50" N

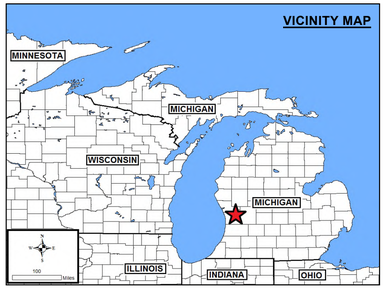
86°1'30" W 43°1'10" N 43°1'0" N 86°1'20" W 43°0'50" N

Maxar, Microsoft

SHEET INDEX



VICINITY MAP



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

NOTES:

1) 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 EXISTING AT THAT TIME.

2) THE GRID SHOWN REFERENCES LATITUDE/LONGITUDE DISPLAYED AS DEGREES, MINUTES, SECONDS IN 10 SECOND INCREMENTS. THE SURVEY DATA REPRESENTED HEREIN ARE PROJECTED TO THE MICHIGAN STATE PLANE, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US SURVEY FOOT.

3) HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

4) VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN, MI.

5) POSITIONING METHOD: TRIMBLE DGPS W/WAAS CORRECTIONS
EQUIPMENT: ODOM CVI00 SINGLE BEAM ECHOSOUNDER
SURVEY DATE, STA. -03+00 to 449+00: 2025AUG26
SURVEY DATE, STA. 451+00 to 707+00: 2025AUG27
SOFTWARE: HYPACK 2022
VESSEL: LAUNCH 3064

IMAGERY SOURCED FROM: MAXAR, MICROSOFT

US Army Corps of Engineers
District: CELRE

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers purpose and is valid only under stated conditions. As such, it is only valid for its intended use, content, time and conditions of collection/processing. The US Government shall not be liable for any use, misuse, or reliance on the content of this data or any of the application of the data for other than its intended purpose.

DISCLAIMER
Access Constraints: The United States Government furnishes this map/chart/publication "as is" without warranty of any kind, express or implied, concerning the accuracy, completeness, understanding that the US Government makes no warranties, merchantability, or suitability for any particular purpose. The entire risk as to the quality and performance of the information and the data furnished. The United States shall be under no liability for any special, consequential, or incidental damages made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than US Government data without also transferring this Disclaimer.

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT

Surveyed By: ____
Plotted By: ____
Checked By: ____

Submitted: ____
Recommended: Chief, Survey Section
Approved: Chief, Technical Services

Grand River, MI
Grand River
GR_01_AND_20250827_XC
27 August 2025

Sheet Reference Number
26 of 26

Revision Number:
5.25.07.03-5.25.07.03