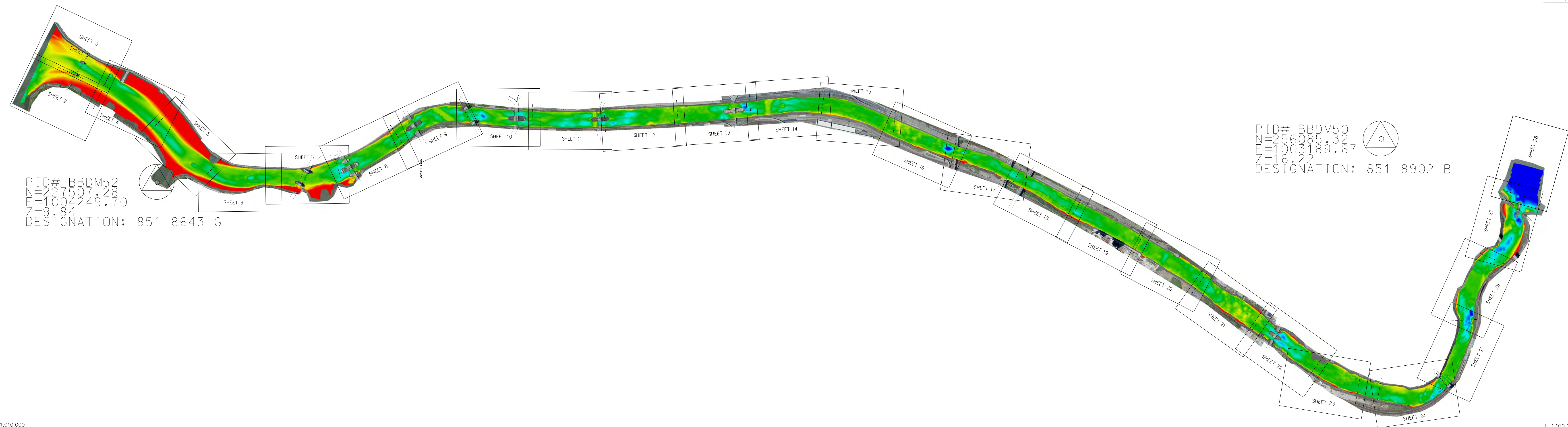


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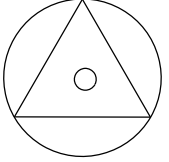
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E 1,000,000

E 1,010,000

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DESIGNATION: 851 8643 G

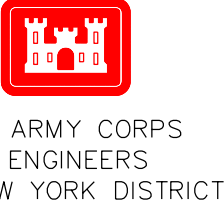
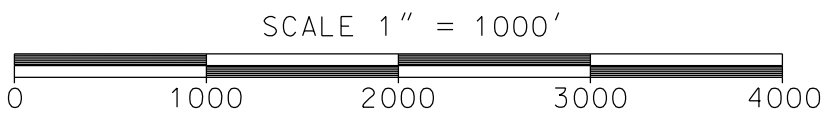
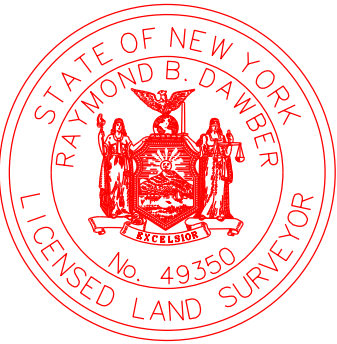
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DESIGNATION: 851 8902 B



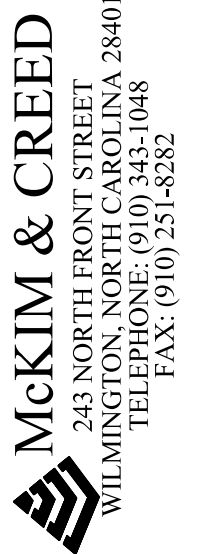
NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# BBDM52	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227,507.28	1,004,249.70
STAMPED: 8643 G 2014			

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8902 B	PID# BBDM50	NORTHING	EASTING
ELEVATION: 16.22' NAVD 88		256,085.32	1,003,189.67
STAMPED: 8902 B 2014			

- PROJECT SPECIFIC NOTES:
- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 5104 LONG ISLAND IN US SURVEY FEET.
 - THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
 - THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
 - SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
 - MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
 - SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
 - CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS 15' AND 18'.
 - THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
 - THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
 - THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
 - THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
 - THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHOSOUNDER: SINGLE BEAM ODOM CVM 200KHZ
NAVIGATION SYSTEMS: SBO EX INDX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CAST WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR S SOUND VELOCITY PROBE.
 - THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME, BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
 - UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
 - THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
 - REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND/OR COPYRIGHT HOLDER IS OBTAINED.
 - A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.



US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT



McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, DE 19801
TEL: (302) 441-1100
FAX: (302) 441-8382

DATES OF SURVEY:
MAY 12-19, 2020

SCALE:
ONE INCH = 1000 FEET
FIELD BOOKS:

APPROVED: RAYMOND B. DAMBER
DATE: JUNE 18, 2020
APPROVED: R. SMITH
DATE: JUNE 18, 2020
APPROVED: D. CLARE
DATE: JUNE 18, 2020
APPROVED: J. A. [Name]
DATE: JUNE 18, 2020


DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278
OPERATIONS DIVISION
SURVEY SECTION
CENAH-OP-S

HARLEM RIVER
NEW YORK
CONDITION SURVEY

VH-101
SHEET 1 OF 28



ARMY CORPS
ENGINEERS
NEW YORK DISTRICT

[illegible]

MICKIM & CLINE
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 2840
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282

DATE OF SURVEY MAY 12-19, 2020	RECD NO./FILE NO.: 4919
FIELD BOOKS: _____ _____ _____	

FIELD CARTOGRAPHIC TECHNICIAN

APPROVED: R. SMITH
PROJECT MANAGER

APPROVED: P. BHADUR
LEAD CARTOGRAPHER

APPROVED: J. MRAZ

DATE: JUNE 18, 2020
DEPUTY CHIEF OF SURVEY

NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

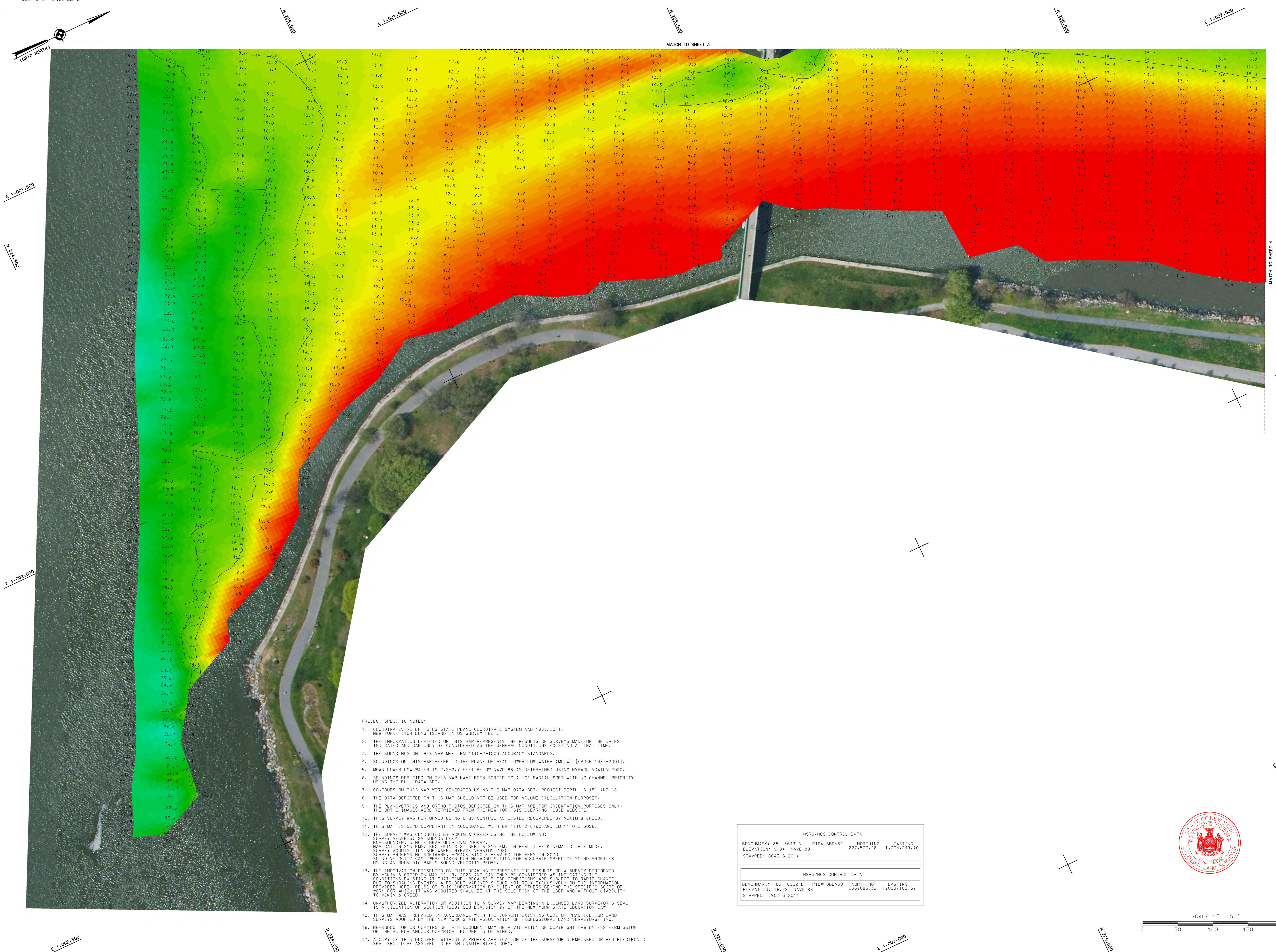
OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

HARLEM RIVER
NEW YORK
CONDITION SURVEY

VH-102

SHEET 2 OF 28

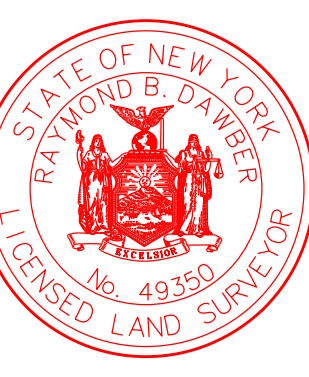
NO./FILE NO.: 4919



1. COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD83 1983-2011, NEW YORK - 1801 TOWN 15L AND IN US SURVEY FEET.
2. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
3. THE SOUNDINGS ON THIS MAP MEET EN 1110-2-1003 ACQUISITION STANDARDS.
4. SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
5. MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NBAD 88 AS DETERMINED USING HYPACK VDATUM 2020.
6. SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
7. CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS 15' AND 16'.
8. THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
9. THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. ORTHO PHOTOS WERE ACQUIRED FROM THE NEW YORK STATE CLEARING HOUSE.
10. THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
11. THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EN 1110-2-6056.
12. THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SONAR DEEP ECHOSOUNDER; SINGLE BEAM ODOM CVK 200KZ;
POSITIONING SYSTEM: GARMIN 22 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE;
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020;
DATA PROCESSING SOFTWARE: HYPACK SINGLE BEAM, REAL TIME VERSION 2020;
SOUND WAVELENGTH CAST WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES
AND SOUND DENSITY PROFILES.
13. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME. GENERAL CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SMALL-SCALE EVENTS. A PRECURRENT WARNING SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO MCKIM & CREED.
14. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL OR A VIOLATION OF ANY OF THE ABOVE CONDITIONS IS A VIOLATION OF PROFESSIONAL STANDARDS.
15. THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
16. REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND/OR COPYRIGHT HOLDER IS OBTAINED.
17. A COPY OF THIS DOCUMENT WITHOUT A PROFESSIONAL IDENTIFICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SIGNATURE SHALL BE ASSUMED TO BE UNAUTHORIZED.

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	P10# BBDM52	NORTHING 227,507.28	EASTING 1,004,249.74
ELEVATION: 9.84' NAVD 88			
STAMPED: 8643 G 2014			

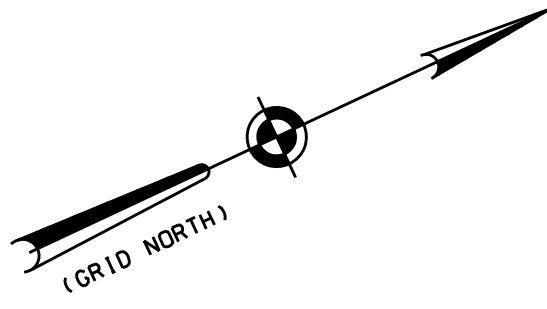
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BENCHMARK: 851 8902 B	P10# BBDM50	NORTHING 256,085.32	EASTING 1,003,189.67
ELEVATION: 16.22' NAVD 88			
STAMPED: 8902 B 2014			



SCALE 1" = 50'

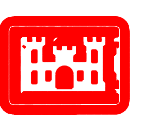
A horizontal scale bar with a black and white alternating pattern. It is marked with numbers 0, 50, 100, 150, and 200 at regular intervals.

N 229.500



E 1,000,500

N 229.500

SCALE 1" = 50'
0 50 100 150 200US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

E 1,001,000

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# BBDMS2	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227,507.28	1,004,249.70
STAMPED: 8643 G 2014			

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8902 B	PID# BBDMS0	NORTHING	EASTING
ELEVATION: 16.22' NAVD 88		256,085.32	1,003,189.67
STAMPED: 8902 B 2014			



McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, DE 19801
TEL: (302) 426-1000
FAX: (302) 426-1001

DATES OF SURVEY:
MAY 12-19, 2020

SCALE:
ONE INCH = 50 FEET

APPROVED: JARED JARRET
PROJECT MANAGER
APPROVED: R. SMITH
PROJECT ENGINEER
APPROVED: P. BLADIER
SURVEYOR
APPROVED: J. MEAZ
DEPUTY SURVEYOR
DATE: JUNE 18, 2020

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEY SECTION
CEMAN-CP-S

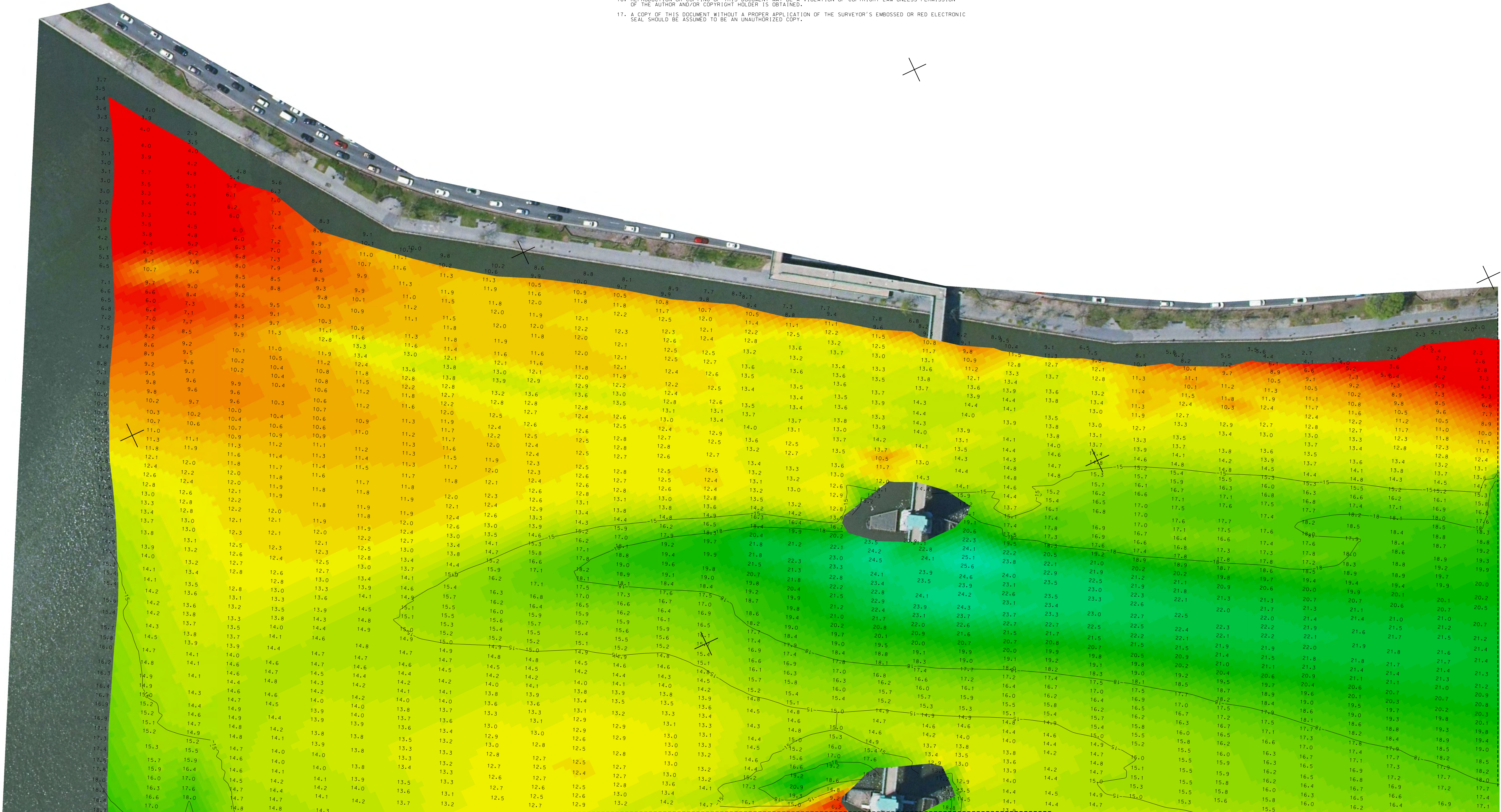
HARLEM RIVER
NEW YORK
CONDITION SURVEY

VH-103
SHEET 3 OF 28

REQ NO./FILE NO.: 4919

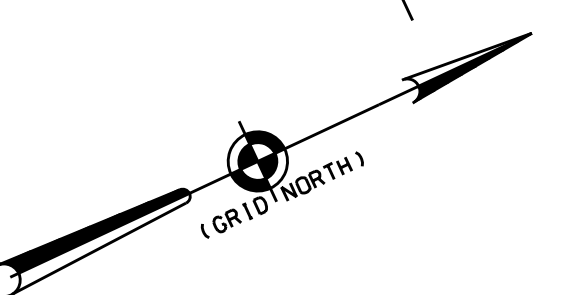
PROJECT SPECIFIC NOTES:

- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW). [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK DATUM 2020.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS 15' AND 18'.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
- THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHO/SOUNDER: SINGLE BEAM ECHOSOUNDING SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
NAVIGATION SYSTEMS: SBC EKINIX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY DATA WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR S SOUND VELOCITY PROBE.
- THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE FOR THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
- UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
- THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
- REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND/OR COPYRIGHT HOLDER IS OBTAINED.
- A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.





ARMY CORPS
ENGINEERS
NEW YORK DISTRICT

[illegible]

McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282

MAY 12-19, 2022

ONE INCH = 50 FEET

APPROVED: R. SMITH
FIELD CARTOGRAPHIC TECHNICIAN

NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

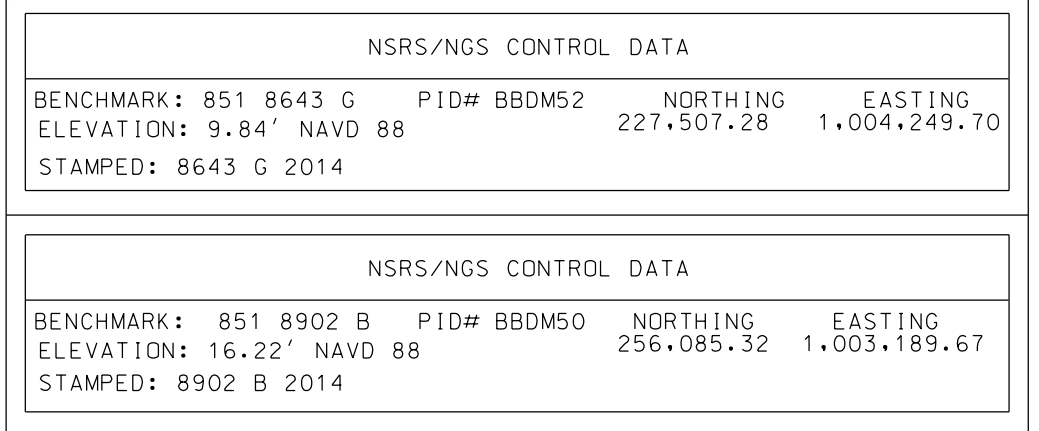
HARLEM RIVER
NEW YORK

ARLEM RIVER
NEW YORK

VH-104

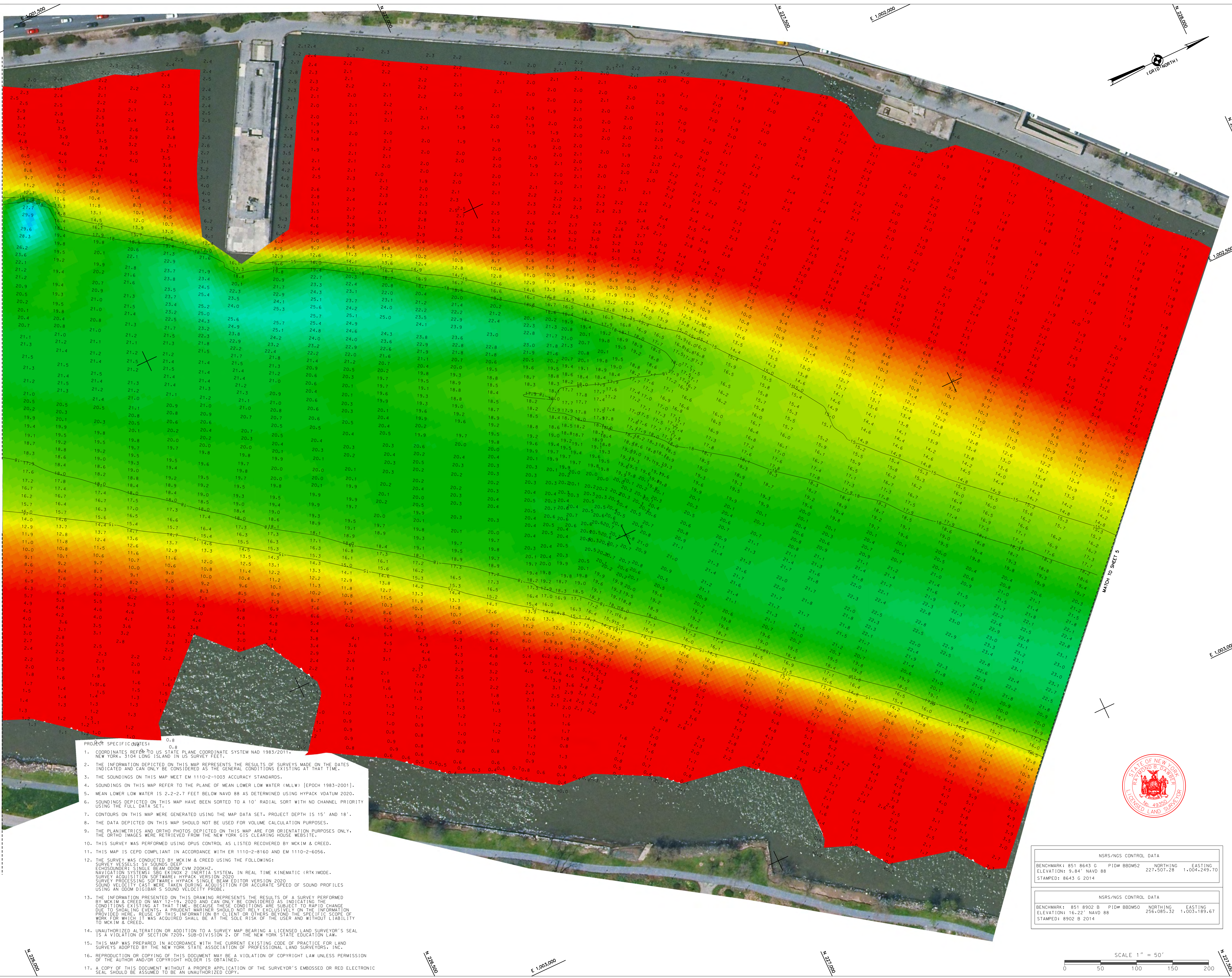
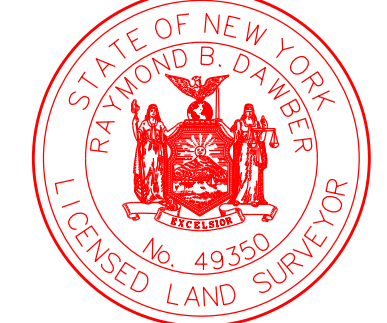
SHEET 4 OF 28

NO./FILE NO.: 491

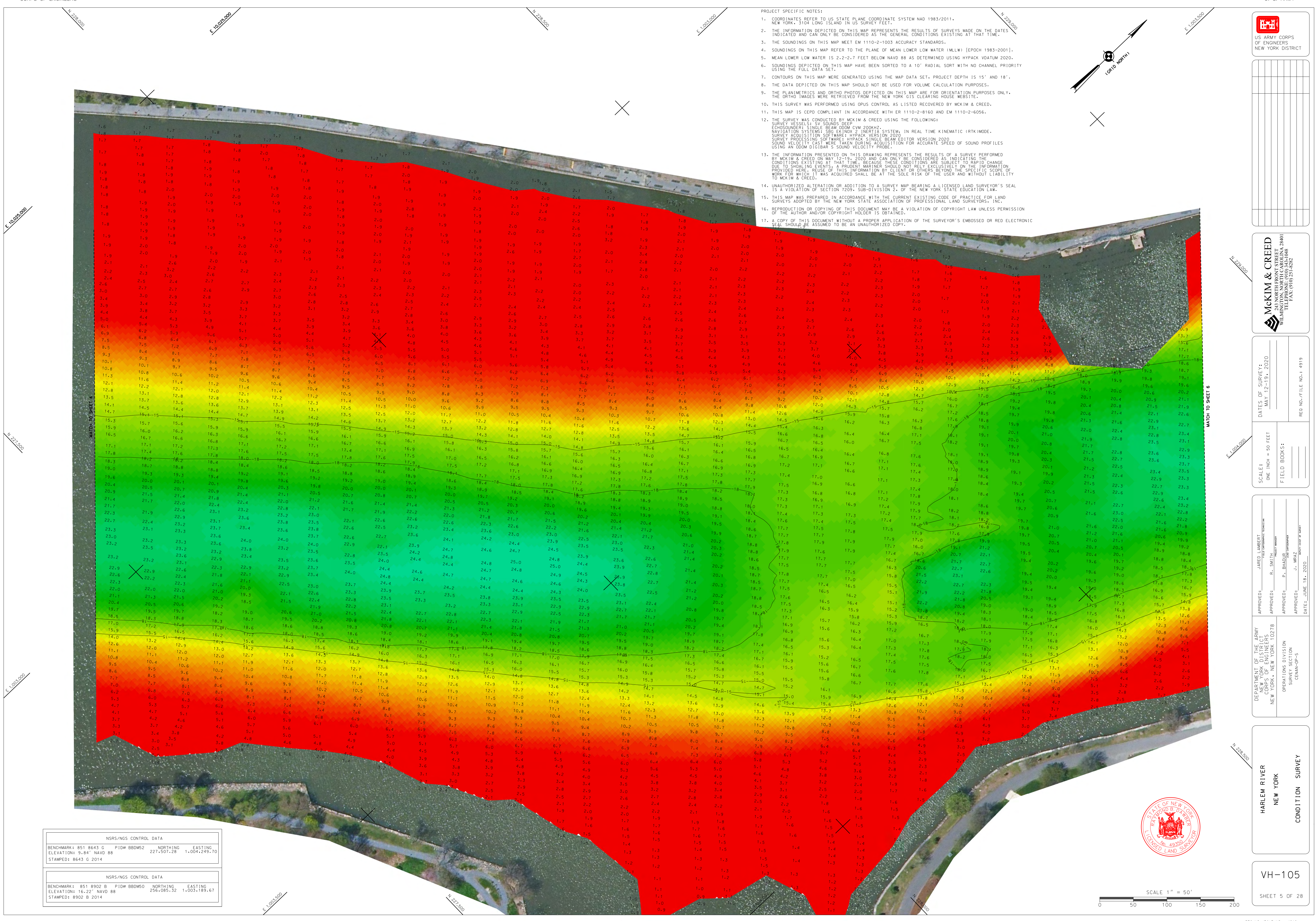


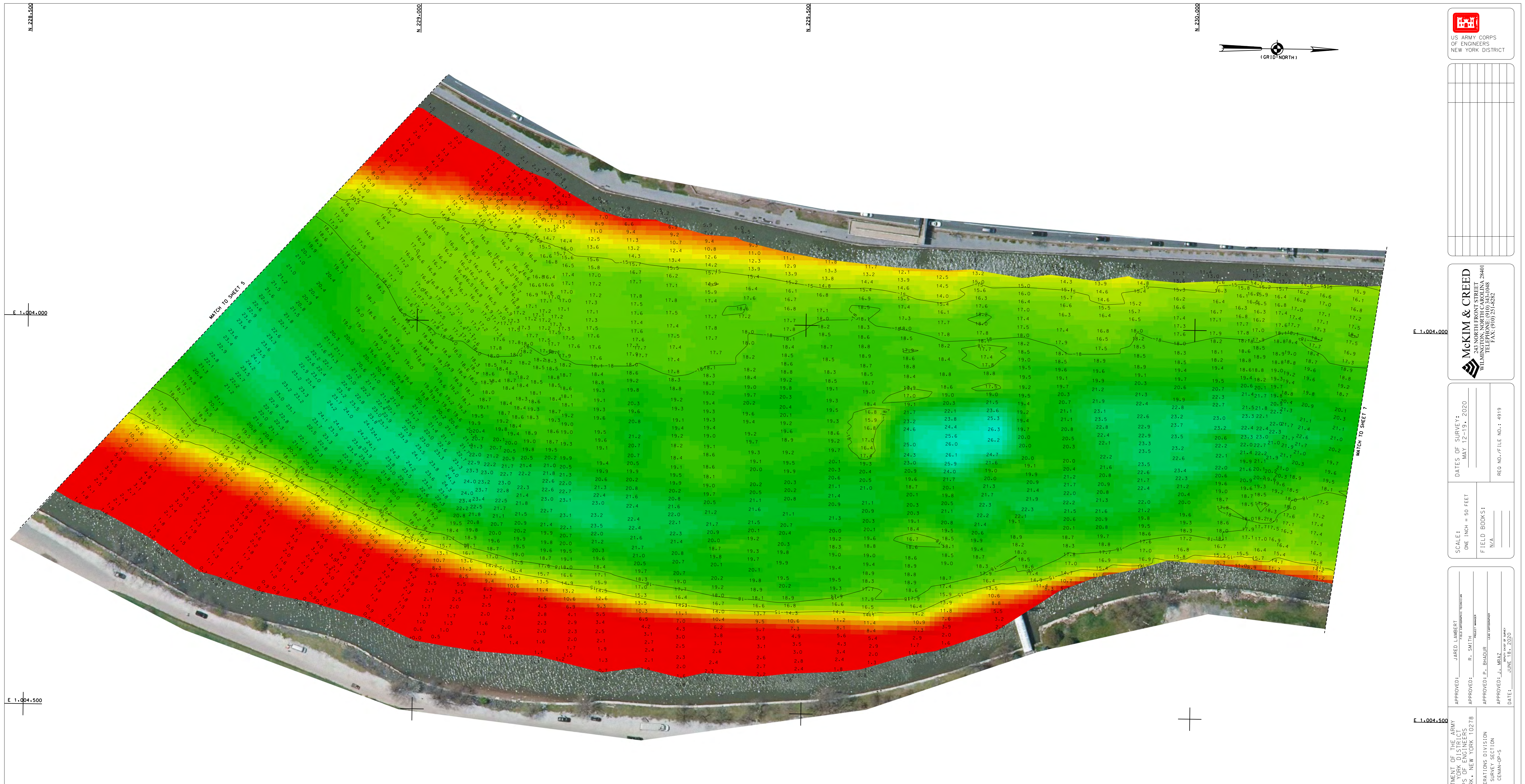
SCALE 1" = 50'

A horizontal scale bar with a black and white alternating pattern. It is marked with numbers 0, 50, 100, 150, and 200 at regular intervals.



- PROJ. SPECIFIC NOTES: 0.8
1. COORDINATES RELATIVE TO US LAND PLAN COORDINATE SYSTEM NAD 1983/2011, NEW YORK - STATE LONG ISLAND IN US SURVEY FEET.
 2. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
 3. THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
 4. SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
 5. MEAN LOWER LOW WATER IS 2-2.2, 7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
 6. SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FLAT DATA SET.
 7. CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET, PROJECT DEPTH IS 15' AND 18'.
 8. THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
 9. THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
 10. THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIN & CREED.
 11. THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
 12. THE SURVEY WAS CONDUCTED BY MCKIN & CREED USING THE FOLLOWING:
SURVEY RECEIVERS: 59 SOUNDING DEEP ECHOSOUNDER; SINGLE BEAM ODOM CVM 2200KZ;
INERTIA SYSTEMS INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CAST MEASUREMENT DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR S SOUND VELOCITY PROBE.
 13. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED ON MEAN LOWER LOW WATER ON 12-19-20 AND CAN BE USED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME, BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE AND ARE SUBJECT TO THE DETERMINATION OF THE USER. THE USER SHOULD BE AWARE THAT BEYOND THE PROVISIONS PROVIDED HERE, REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF THE PROJECT FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIN & CREED.
 14. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209B, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
 15. THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
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 17. A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.





PROJECT SPECIFIC NOTES:

- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET, PROJECT DEPTH IS 15' AND 18'.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
- THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHOSOUNDER: SINGLE BEAM ODOM CVM 200KHZ
NAVIGATION SYSTEMS: SBO EXINON 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY: CAST WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR S SOUND VELOCITY PROBE.
- THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
- UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
- THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
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- A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.

NR/S/NGS CONTROL DATA

BENCHMARK: 851 8643 G	PID# BDDM52	NORTHING	EASTING
		227,507.28	1,004,249.70
STAMPED: 8643 G 2014			

NR/S/NGS CONTROL DATA

BENCHMARK: 851 8902 B	PID# BDDM50	NORTHING	EASTING
		256,085.32	1,003,189.67
STAMPED: 8902 B 2014			

STATE OF NEW YORK
JARED LAMBERT
LICENSED LAND SURVEYOR
NO. 49350

HARLEM RIVER
NEW YORK
CONDITION SURVEY

VH-106
SHEET 6 OF 28

SCALE 1" = 50'

REG NO./FILE NO.: 4919

E 1.003.500

E 1.003.500

E 1.004.000

E 1.004.000

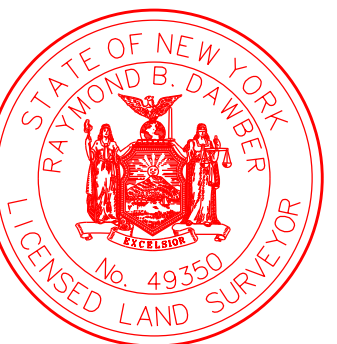
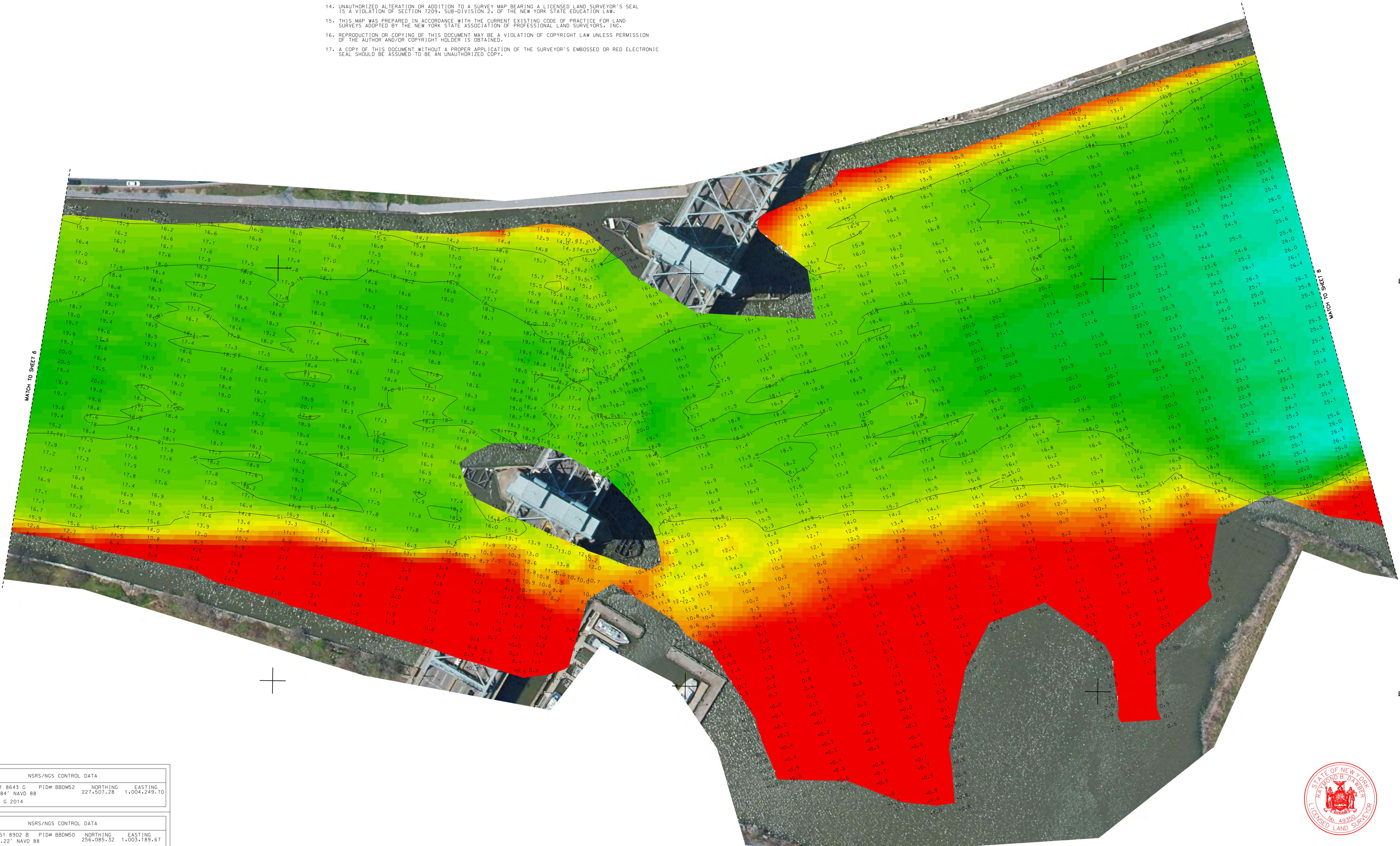
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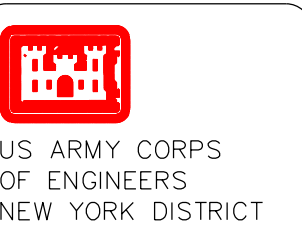
NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 D	PID# BDDM52	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227,507.28	1,004,249.70
STAMPED: 8643 D 2014			

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8902 B	PID# BDDM50	NORTHING	EASTING
ELEVATION: 16.22' NAVD 88		256,085.32	1,003,189.67
STAMPED: 8902 B 2014			

- PROJECT SPECIFIC NOTES:
- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
 - THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
 - THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
 - SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
 - MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
 - SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET. N
 - CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS 15' AND 18'.
 - THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
 - THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
 - THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
 - THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
 - THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHOLOGERS: SINGLE BEAM ODOM CVM 200KHZ
NAVIGATION SYSTEMS: SBC EXINOX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CAST WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR'S SOUND VELOCITY PROBE.
 - THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
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 - A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.



SCALE 1" = 50'



MCKIM & CREED
245 NORTH FRONT STREET
WILMINGTON, DE 19801
TEL: (302) 426-1000
FAX: (302) 426-1001

DATES OF SURVEY:
MAY 12-19, 2020

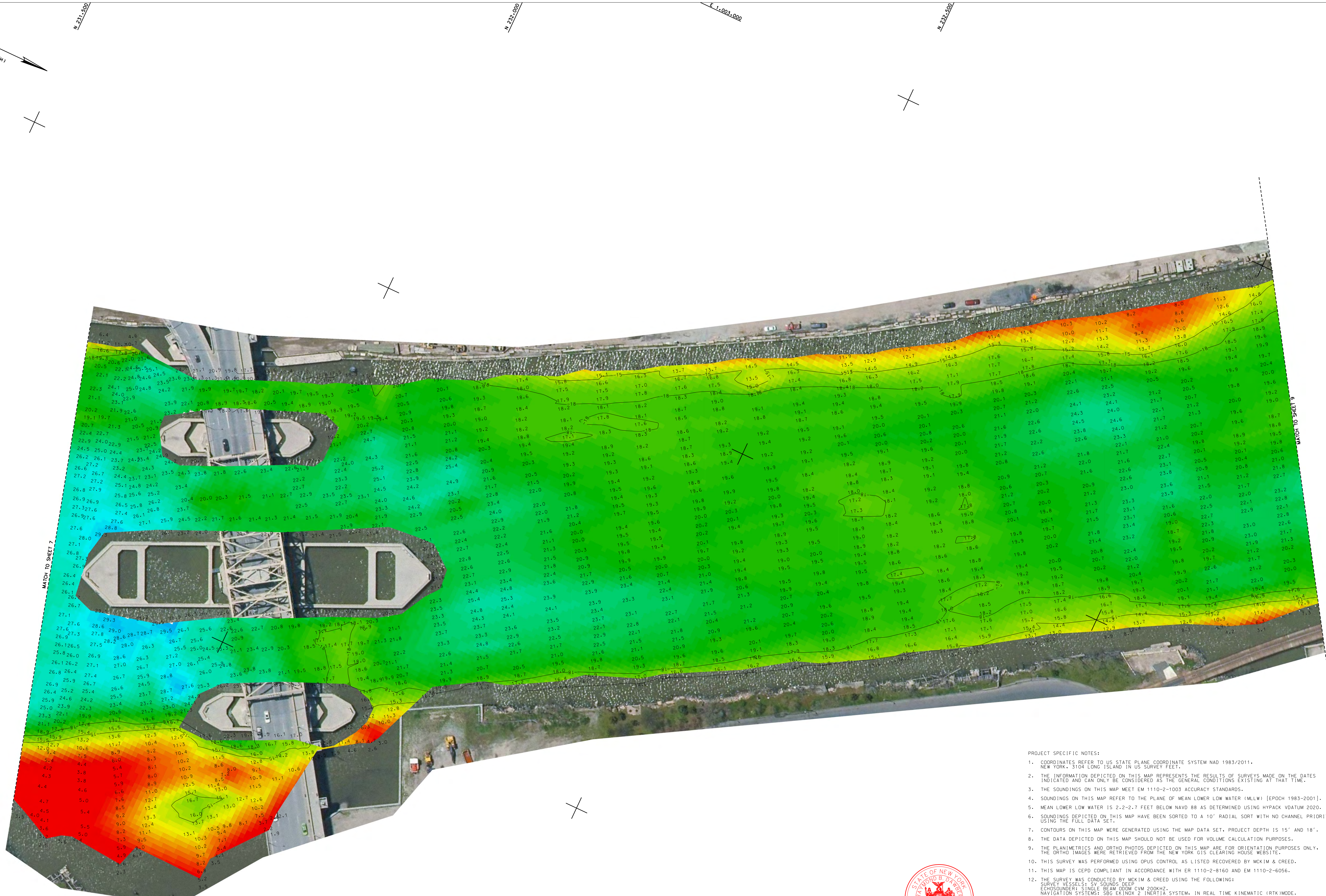
SCALE:
ONE INCH = 50 FEET

APPROVED: JARED AMBERT
PROJECT MANAGER
APPROVED: R. SMITH
APPROVED: P. BHADUR
DATE: JUNE 18, 2020

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278
OPERATIONS DIVISION
SURVEY SECTION
CENNA-OP-5

HARLEM RIVER
NEW YORK
CONDITION SURVEY

VH-107
SHEET 7 OF 28

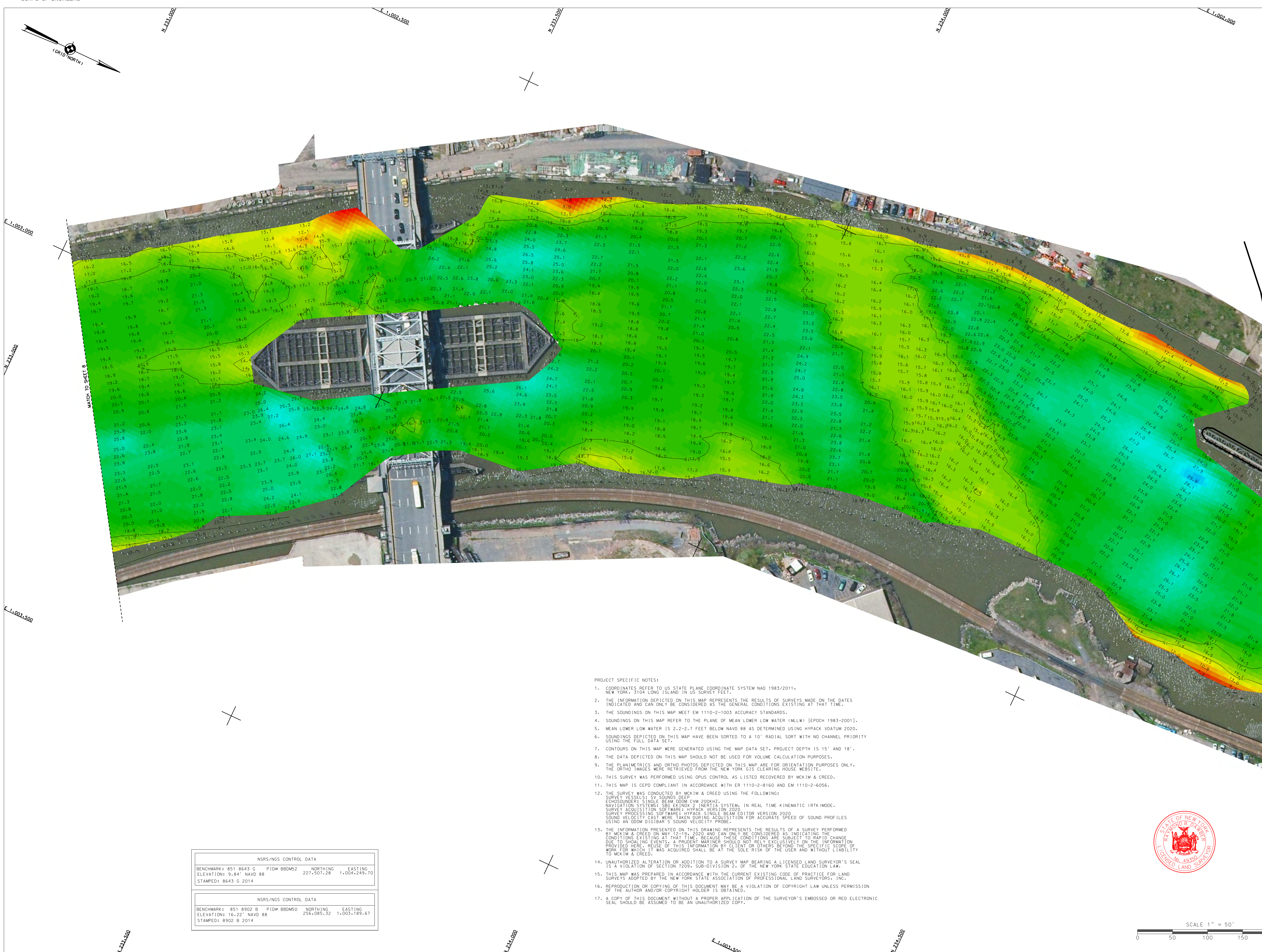


US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICTMcKIM & CREED
245 NORTH FRONT STREET
WILMINGTON, DE 19801
TEL: (302) 441-0000
FAX: (302) 441-8282DATES OF SURVEY:
MAY 12-19, 2020SCALE:
ONE INCH = 50 FEETFIELD BOOKS:
N/AAPPROVED: JAMES L. JARRETT
REGISTERED PROFESSIONAL SURVEYORAPPROVED: B. SMITH
REGISTERED PROFESSIONAL SURVEYORAPPROVED: P. BHADOUR
REGISTERED PROFESSIONAL SURVEYORAPPROVED: J. MEAZ
REGISTERED PROFESSIONAL SURVEYOR

VH-109

SHEET 9 OF 28

REQ NO./FILE NO.: 4919



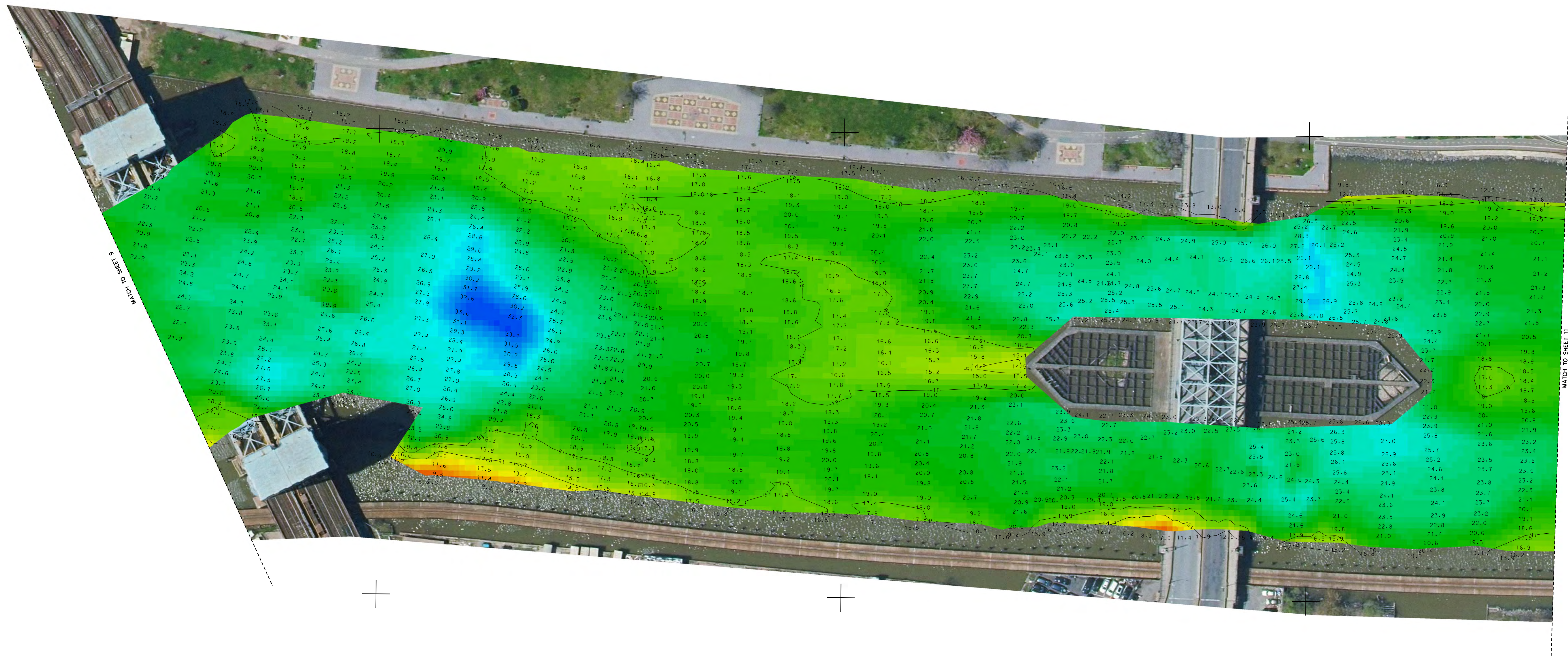
PROJECT SPECIFIC NOTES:

- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET, PROJECT DEPTH IS 15' AND 18'.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
- THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
- THIS MAP IS CEED COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHO SOUNDER: SIMULA BEAM ODOM CVM 200KHZ
NAVIGATION SYSTEMS: SBO EXINNOX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY DATA WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGITAL 5 SOUND VELOCITY PROBE.
- THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
- UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 1205, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
- THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
- REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND/OR COPYRIGHT HOLDER IS OBTAINED.
- A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# BBDM52	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227,507.28	1,004,249.70
STAMPED: 8643 G 2014			

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8902 B	PID# BBDM50	NORTHING	EASTING
ELEVATION: 16.22' NAVD 88		256,085.32	1,003,189.67
STAMPED: 8902 B 2014			

SCALE 1" = 50'
0 50 100 150 200

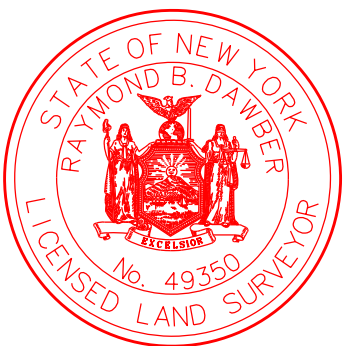


PROJECT SPECIFIC NOTES:

1. COORDINATES REFERENCE TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
2. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
3. THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
4. SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
5. MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VAD020. 2020.
6. SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED BY A 10' RADIAL SORT WITH NO CHANNEL PRIORITY.
7. THE FULL DATA SET IS AVAILABLE UPON REQUEST.
8. CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS '15' AND '18'.
9. THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
10. THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE DERIVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
11. THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
12. THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
13. THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDNS DEED
ECHO SOUNDERS: SINGLE BEAM EDOIM CM 200KHZ
NAVIGATION SYSTEMS: SBC EKINIX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK/MODE).
POSITIONING SYSTEM: REAL TIME KINEMATIC (RTK/MODE) VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CAST WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES
USING AN OCEAN DISTRIBUION & SOUND VELOCITY PROBE.
14. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS THAT EXISTED AT THAT TIME. THE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION HEREIN. HEREIN, THE INFORMATION IS PROVIDED BY CLIENT FOR THE SCOPE OF THE SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
15. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 1209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
16. THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
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18. A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.


NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# B80M52	NORTHING 227,507.28	EASTING 1,004,243.70
ELEVATION: 9.84 NAVD 88			
STAMPED: 8643 G 2014			

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8902 B	PID# B80M50	NORTHING 256,085.32	EASTING 1,003,189.67
ELEVATION: 15.22 NAVD 88			
STAMPED: 8902 B 2014			



SCALE 1" = 50'

A horizontal scale bar with tick marks at 0, 50, 100, 150, and 200 feet. The bar is divided into four equal segments, each representing 50 feet.



US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282

SCALE: ONE INCH = 50 FEET	DATES OF SURVEY: MAY 12-19, 20
FIELD BOOKS: N/A	REQ NO./FILE NO.: 491

APPROVED:	JARED LAMBERT
	FIELD SUPERVISOR/TECHNICAL
APPROVED:	R. SMITH
	PROJECT MANAGER
APPROVED:	P. BHADUR
	LEAD CONTRACTOR
APPROVED:	J. MRAZ
	DEPUTY CHIEF OF SURVEY

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

HARLEM RIVER
NEW YORK
CONDITION SURV

VH-110

SHEET 10 OF 28

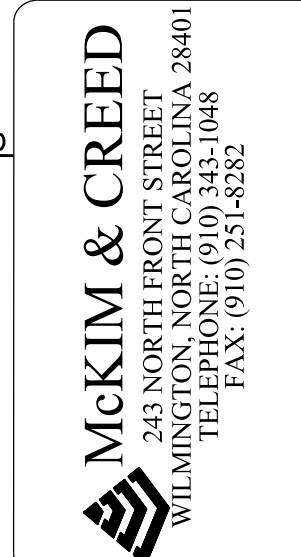
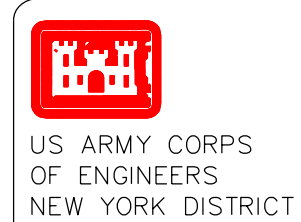


N 236+500

N 237+000

N 237+500

N 238+000



SCALE: ONE INCH = 50 FEET
FIELD BOOKS: N/A
DATES OF SURVEY: MAY 12-19, 2020
REG. NO./FILE NO.: 4919

APPROVED: JAMES L. ARNETT, DISTRICT ENGINEER, NEW YORK DISTRICT
APPROVED: P. SMITH, PROJECT MANAGER
APPROVED: P. BHADOUR, SURVEY SUPERVISOR
DATE: JUNE 18, 2020

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278
OPERATIONS DIVISION
SURVEY SECTION
CENAH-DP-5

HARLEM RIVER
NEW YORK
CONDITION SURVEY

VH-111
SHEET 11 OF 28

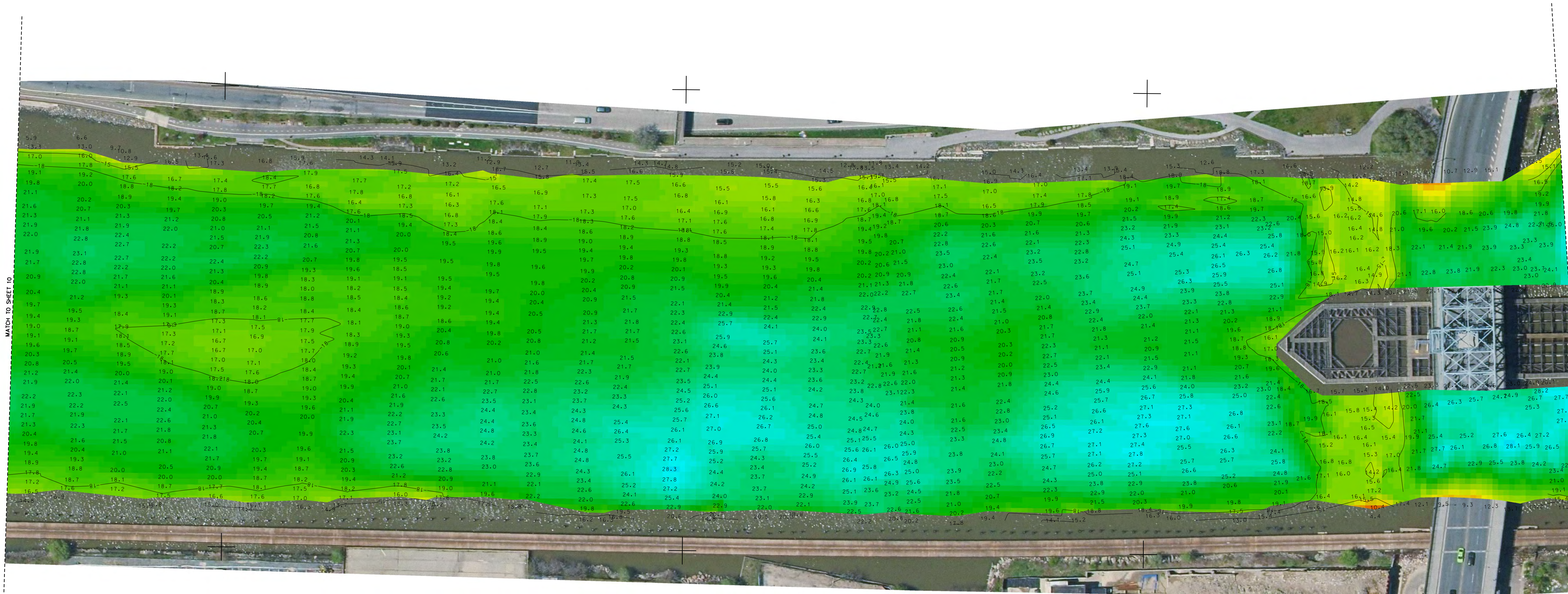
REQ NO./FILE NO.: 4919

E 1,002,500

E 1,002,500

E 1,003,000

E 1,003,000



PROJECT SPECIFIC NOTES:

- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET, PROJECT DEPTH IS 15' AND 18'.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY, THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
- THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP ECHO/SOUNDBERG SINGLE BEAM ECHODOP CVM 200KHZ.
NAVIGATION SYSTEMS: SBC EKINIX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020.
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020.
SOUND VELOCITY DATA WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR S SOUND VELOCITY PROBE.
- THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME, BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
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NSRS/NGS CONTROL DATA
BENCHMARK: 851 8643 G PID# BBDM52 NORTHING EASTING
ELEVATION: 9.84' NAVD 88 227,507.28 1,004,249.70
STAMPED: 8643 G 2014

NSRS/NGS CONTROL DATA
BENCHMARK: 851 8902 B PID# BBDM50 NORTHING EASTING
ELEVATION: 16.22' NAVD 88 256,085.32 1,003,189.67
STAMPED: 8902 B 2014

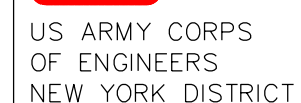
N 236+500

N 237+000

N 237+500

N 238+000

SCALE 1" = 50'
0 50 100 150 200



McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048

DATES OF SURVEY:
MAYT 12-19, 2020

SCALE:
ONE INCH = 50 FEET

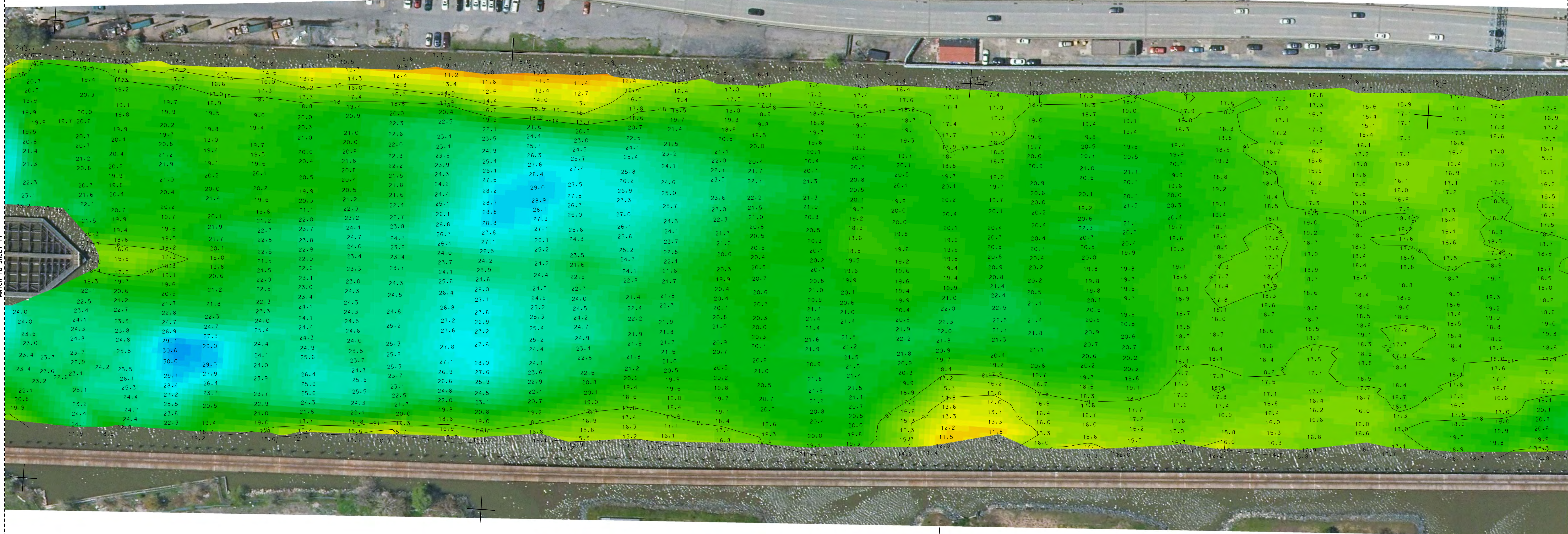
APPROVED: JARED LAMBERT
FIELD CARTOGRAPHIC TECHNICIAN

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
CORPS OF ENGINEERS

HARLEM RIVER

VH-112

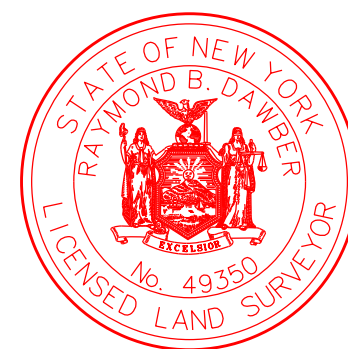
SHEET 12 OF 28




PROJECT SPECIFIC NOTES:

- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011,
NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES
INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EMM 1110-2-1003 ACCURACY STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VAD020. 2000.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY
USING THE FULL RANGE OF SOUNDS.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS 15' AND 18'.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK STATE GIS WEBSITE.
- THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHOSOUNDER: SINGLE BEAM ODOM CVM 2000W
NAVIGATION ON SYSTEMS: SBO ERINEX 2 INERTIA SYSTEM. IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYBACK VERSION 2020
DATA PROCESSING SOFTWARE: HYBACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CAST: DATA WERE TAKEN DURING ACQUISITION FOR ACCURATE SOUND OF SOUND PROFILES
USING AN ODOM DTD 1000 VELOCITY PROBE
- THE INFORMATION PRESENTED IN THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED
BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE
CONDITIONS EXISTING AT THAT TIME. THE PRECAUTIONS AND CONDITIONS ARE SUBJECT TO RAPID CHANGE
DUE TO SHALING EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION
PROVIDED HERE. REUSE OF INFORMATION BY CLIENTS OR OTHERS BEYOND THE SPECIFIC SCOPE OF THE
SURVEY FOR WHICH IT WAS ACQUIRED SHALL DIVIDE THE USER OF THE USER AND WITHOUT LIABILITY
TO MCKIM & CREED.
- UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL
OR VIOLATION OF ANY PROVISIONS OF ARTICLE 27 OF THE NEW YORK STATE EDUCATION LAW.
- THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND
SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
- REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION
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- A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC
SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.

NRSR/NGS CONTROL DATA			
BENCHMARK: 851 8643 C	PID# BBDW52	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227.507.28	1.004.249.70
STAMPED: 8643 C 2014			



SCALE 1" = 50'



A horizontal scale bar with alternating black and white segments. It is marked with the numbers 0, 50, 100, 150, and 200 at regular intervals.



N 240.000

E 1.002.000

N 240.500

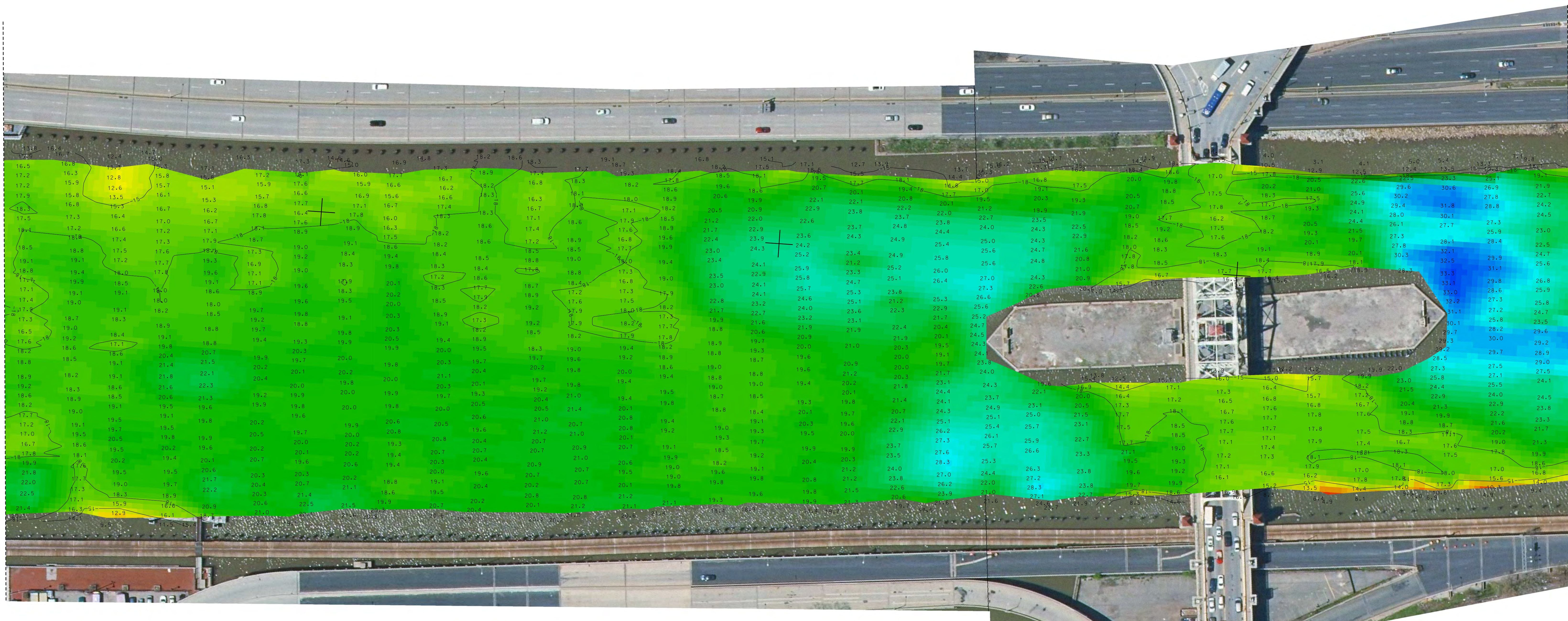
N 241.000

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

E 1.002.000

McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, DE 19801
TEL: 302.426.1234
FAX: 302.426.1235DATES OF SURVEY:
MAY 12-19, 2020
REG NO./FILE NO.: 4919SCALE:
ONE INCH = 50 FEET
FIELD BOOKS:
N/AAPPROVED: JARED LAMBERT
APPROVED: R. SMITH
APPROVED: P. BHADRE
APPROVED: J. MPFZ
DATE: JUNE 18, 2020DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278
OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-5HARLEM RIVER
NEW YORK
CONDITION SURVEYVH-113
SHEET 13 OF 28

REQ NO./FILE NO.: 4919



E 1.002.500

E 1.002.500

E 1.003.000

E 1.003.000

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# BDM52	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227,507.28	1,004,249.70
STAMPED: 8643 G 2014			

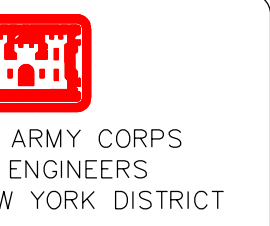
NSRS/NGS CONTROL DATA			
BENCHMARKS: 851 8902 B	PID# BDM50	NORTHING	EASTING
ELEVATION: 16.22' NAVD 88		256,085.32	1,003,189.67
STAMPED: 8902 B 2014			

PROJECT SPECIFIC NOTES:

- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK DATUM 2020.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS 15' AND 18'.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
- THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHOSOUNDER: SINGLE BEAM ECHOSOUNDER CVM 200KHZ
NAVIGATION SYSTEMS: SBC EXINOX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CAST WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR S SOUND VELOCITY PROBE.
- THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHEDDING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY ANY OTHER PARTY BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
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SCALE 1" = 50'



MCKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, DE 19801
TEL: (302) 441-3300
FAX: (302) 441-3332

DATES OF SURVEY:
MAY 12-19, 2020
RED NO./FILE NO.: 4919

SCALE:
ONE INCH = 50 FEET
FIELD BOOKS:
N/A

APPROVED: JARED LAMBERT
PROJECT MANAGER
APPROVED: R. SMITH
TITLE: CHARTERED
APPROVED: J. MEZ
DATE: JUNE 18, 2020
DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278
OPERATIONS DIVISION
SURVEY SECTION
CENNA-OP-5

APPROVED: J. MEZ
DATE: JUNE 18, 2020

**HARLEM RIVER
NEW YORK
CONDITION SURVEY**

VH-114
SHEET 14 OF 28

E 1:002.000

N 241.500

N 242.000

N 242.500

N 243.000

E 1:002.000

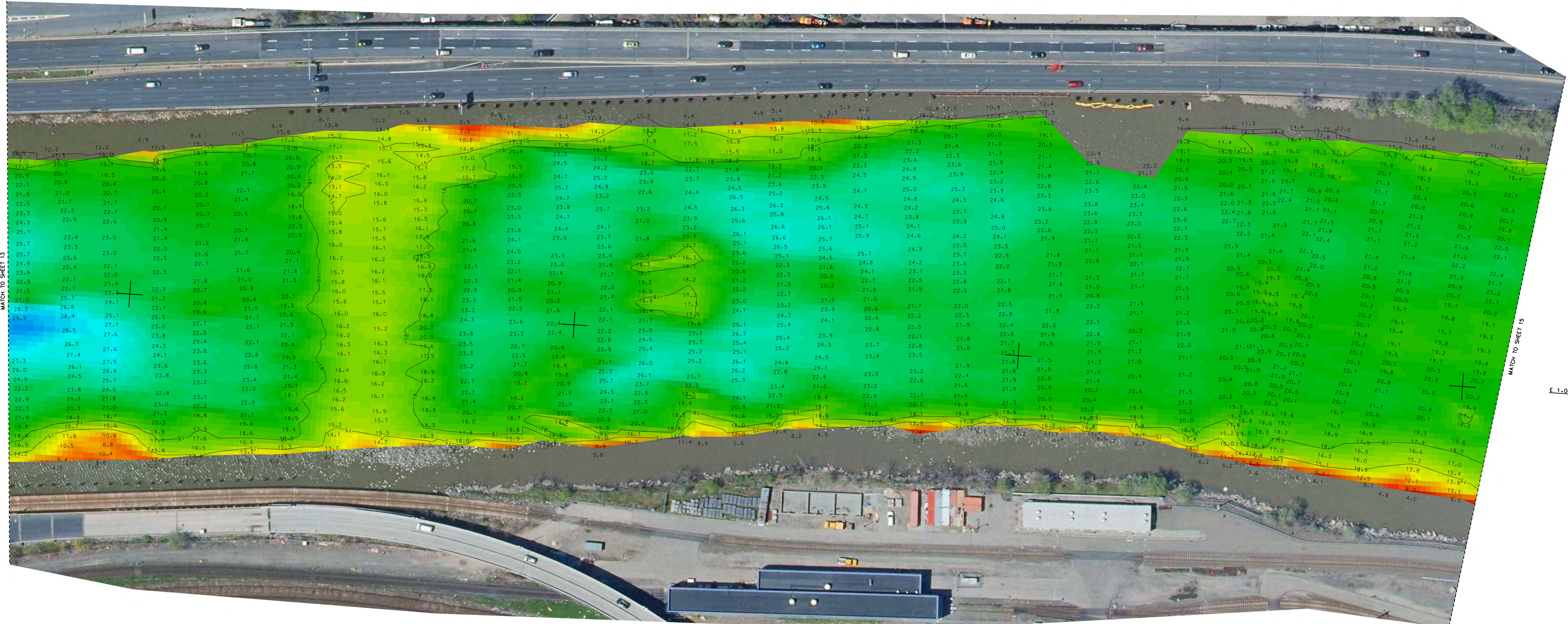
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E 1:003.000

E 1:002.500

E 1:003.000

(GRID NORTH)

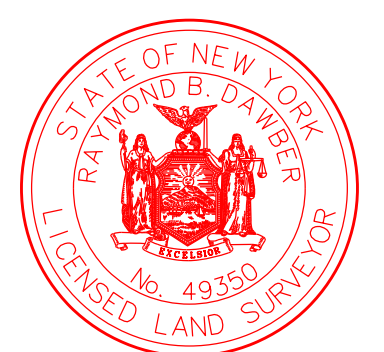
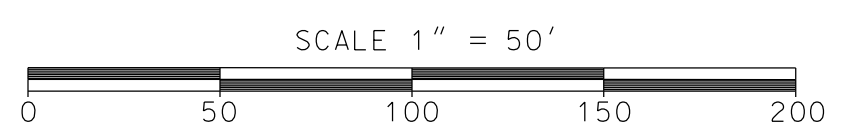


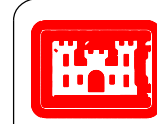
NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# B8DMS2	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227.507.28	1,004,249.70
STAMPED: 8643 G 2014			

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8902 B	PID# B8DMS0	NORTHING	EASTING
ELEVATION: 16.22' NAVD 88		256,085.32	1,003,189.67
STAMPED: 8902 B 2014			

PROJECT SPECIFIC NOTES:

- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VOATUM 2020.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET, PROJECT DEPTH IS 15' AND 18'.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
- THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHOLOGERS: SINGLE BEAM ODOM CVM 200KHZ
NAVIGATION SYSTEMS: SBC EXINOX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CAST WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR S SOUND VELOCITY PROBE.
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US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICTMcKIM & CREED
245 NORTH FRONT STREET
WILMINGTON, DE 19801
TEL: (302) 441-0000
FAX: (302) 441-0000DATES OF SURVEY:
MAY 12-19, 2020SCALE:
ONE INCH = 50 FEETFIELD BOOKS:
N/AAPPROVED: JARED LAMBERT
PROJECT MANAGERAPPROVED: R. SMITH
DATE: JUNE 18, 2020DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278OPERATIONS DIVISION
SURVEY SECTION
CENNA-OP-5HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-115

SHEET 15 OF 28

REQ NO./FILE NO.: 4919



N 243.500

E 1,002.000

N 244.000

N 244.500

E 1,002.000

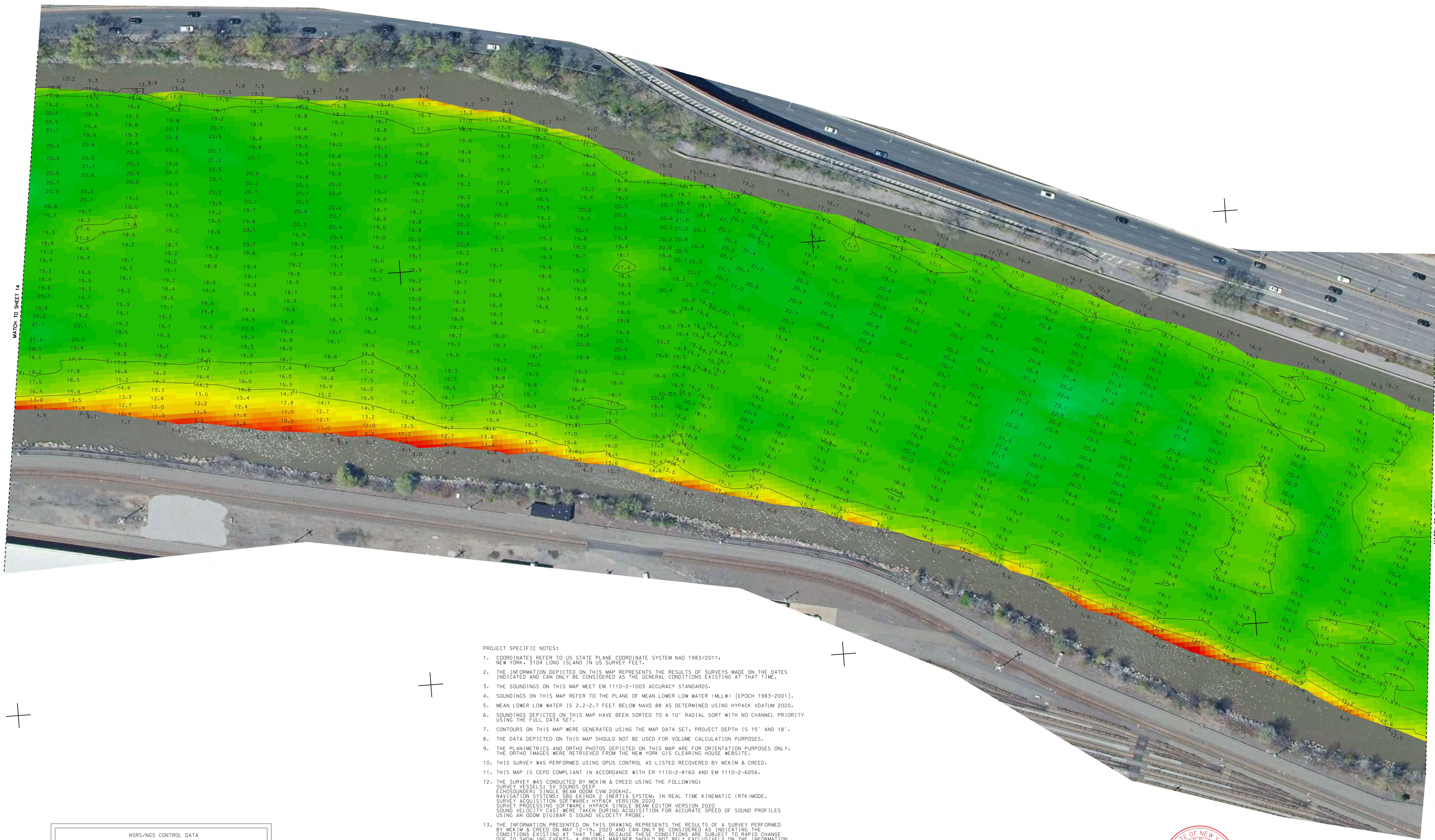
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E 1,002.500

E 1,002.500

E 1,003.000

E 1,003.000

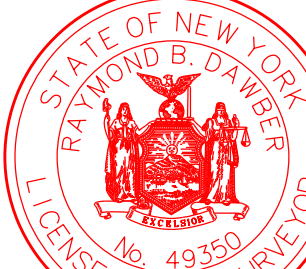


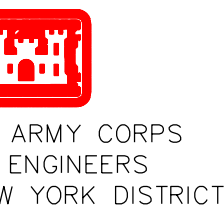
PROJECT SPECIFIC NOTES:

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- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
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- THE ORTHO IMAGES ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
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- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHOLOGICAL: SINGLE BEAM DDM CVM 200KHZ
NAVIGATION SYSTEMS: SBC EXINEX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CAST WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN DDM DIGIBAR S SOUND VELOCITY PROBE.
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NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 B	PID# BDM52	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227,507.28	1,004,249.70
STAMPED: 8643 G 2014			

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8902 B	PID# BDM50	NORTHING	EASTING
ELEVATION: 16.22' NAVD 88		256,085.32	1,003,189.67
STAMPED: 8902 B 2014			

SCALE 1" = 50'
0 50 100 150 200



US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

McKIM & CREED
245 NORTH FRONT STREET
WILMINGTON, MA 01890
TEL: (508) 653-1234
FAX: (508) 251-8282

DATES OF SURVEY:
MAY 12-19, 2020

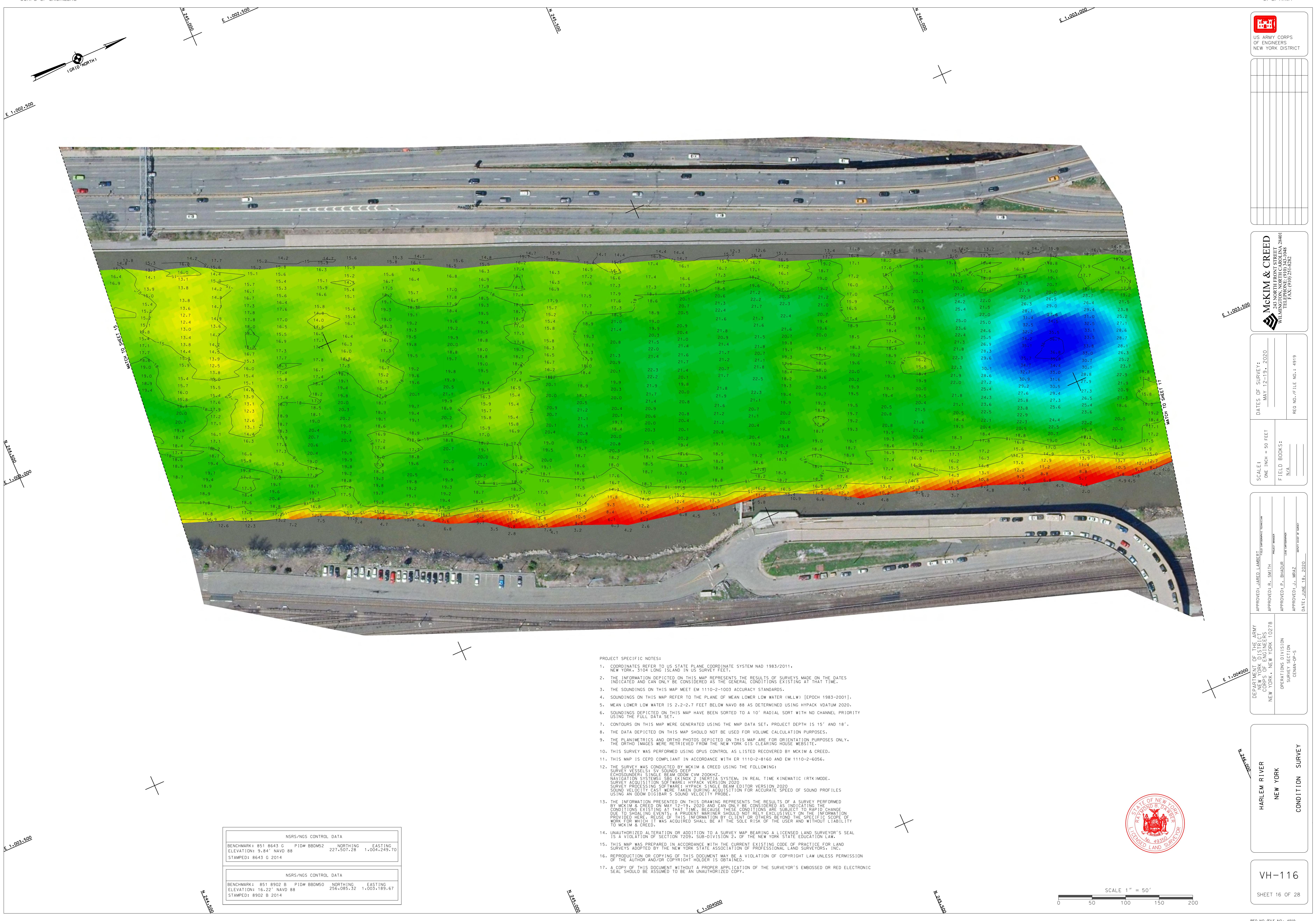
SCALE:
ONE INCH = 50 FEET

APPROVED: JARED LAMBERT
PROJECT MANAGER
APPROVED: R. SMITH
APPROVED: P. BHADUR
APPROVED: J. MRAZ
DATE: JUNE 18, 2020

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278

HARLEM RIVER
NEW YORK

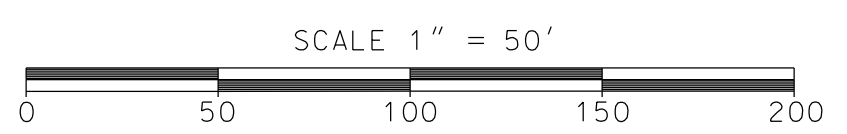
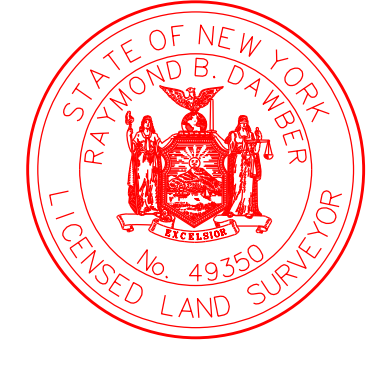
VH-116
SHEET 16 OF 28



- PROJECT SPECIFIC NOTES:
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 - THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH EM 1110-2-8160 AND EM 1110-2-6056.
 - THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHOSOUNDER: SINGLE BEAM ECHOSOUNDING SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
NAVIGATION SYSTEMS: SBC EXINNOX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CASTS WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR S SOUND VELOCITY PROBE.
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NRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# BDOM52	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227,507.28	1,004,249.70
STAMPED: 8643 G 2014			

NRS/NGS CONTROL DATA			
BENCHMARK: 851 8902 B	PID# BDOM50	NORTHING	EASTING
ELEVATION: 16.22' NAVD 88		256,085.32	1,003,189.67
STAMPED: 8902 B 2014			





US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

[illegible]

McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401

RESULTS OF SURVEY:

REQ NO./FILE NO.: 4919

SCALE:

FIELD BOOKS:

APPROVED: JARED LAMBERT

APPROVED: R. SMITH
FIELD CARTOGRAPHIC TECHNOLOGIAN

APPROVED: P. BHADUR

APPROVED: J. MRAZ

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT

CORPUS OF ENGINEERS
NEW YORK NEW YORK 10278

OPERATIONS DIVISION

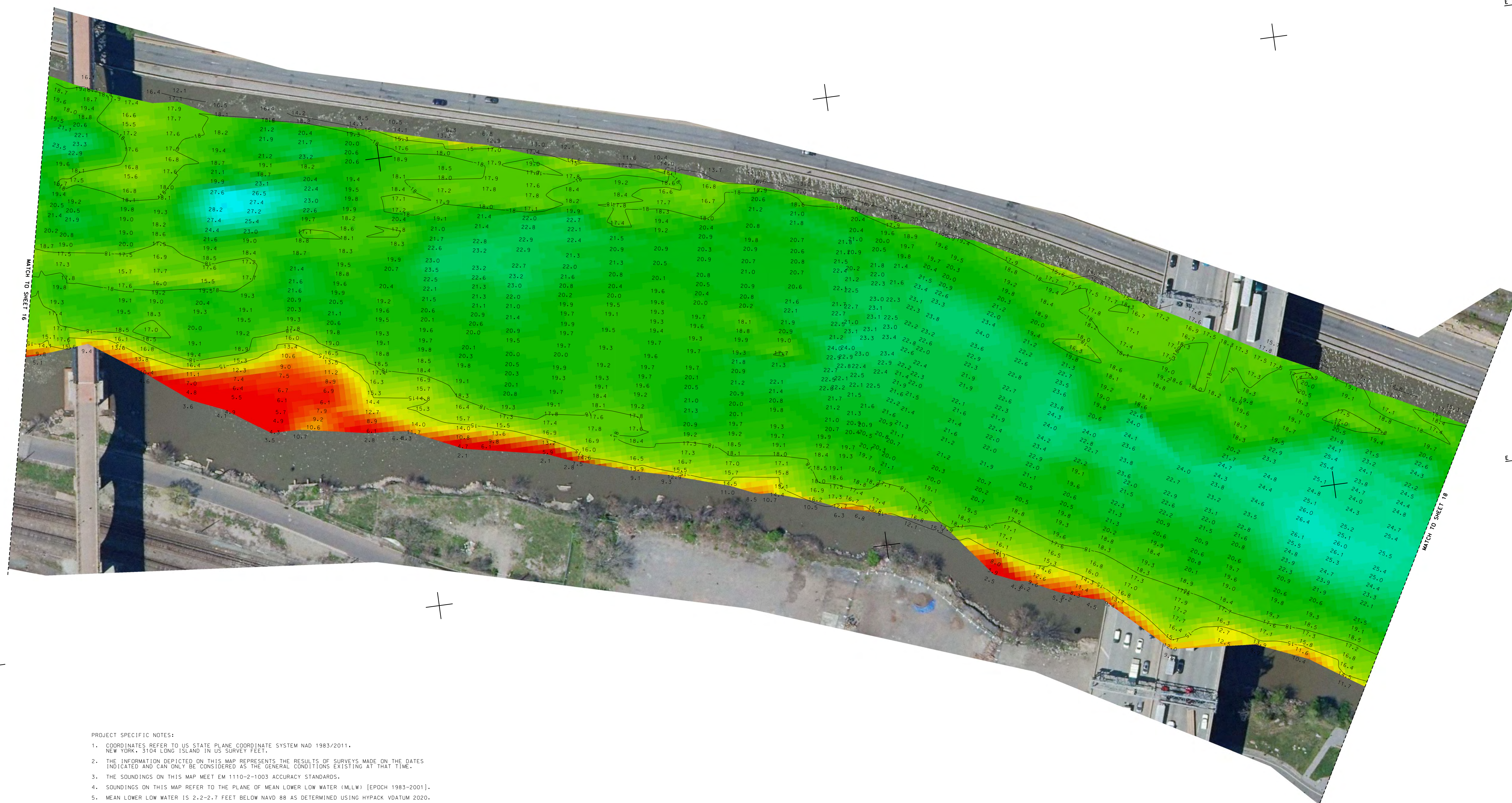
SURVEY SECTION
CENAN-OP-S

HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-117

REQ NO /FILE NO: 491




1. COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
2. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
3. THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
4. SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPDCH 1983-2001].
5. MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
6. SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
7. CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECTION DEPTH IS 15' AND 18'.
8. THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
9. THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
10. THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MKM & CREED.
11. THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
12. THE SURVEY WAS CONDUCTED BY MKM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECOSOUNDER: SINGLE BEAM EDOIM CVN 200KHZ
NAVIGATION SYSTEMS: SBC EKINIX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY POSITIONING: SBC EDOIM CVN 200KHZ
SURVEY PROCESSING SOFTWARE: HYPSACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY DATA WAS TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR S SOUND VELOCITY PROBE.
13. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MKM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HEREIN, BUT SHOULD TAKE ADDITIONAL MEASURES OR OTHERS BEFORE THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MKM & CREED.
14. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
15. THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
16. REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND/OR PUBLISHER IS OBTAINED.
17. A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.

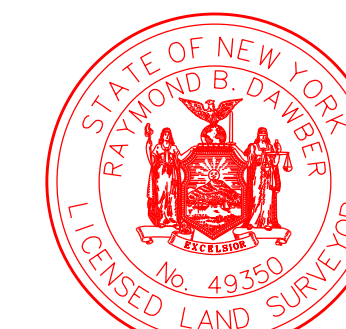
NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# BBDM52	NORTHING 227.507.26	EASTING 1,004,249.71
ELEVATION: 9.84' NAVD 88			
STAMPED: 8643 G 2014			

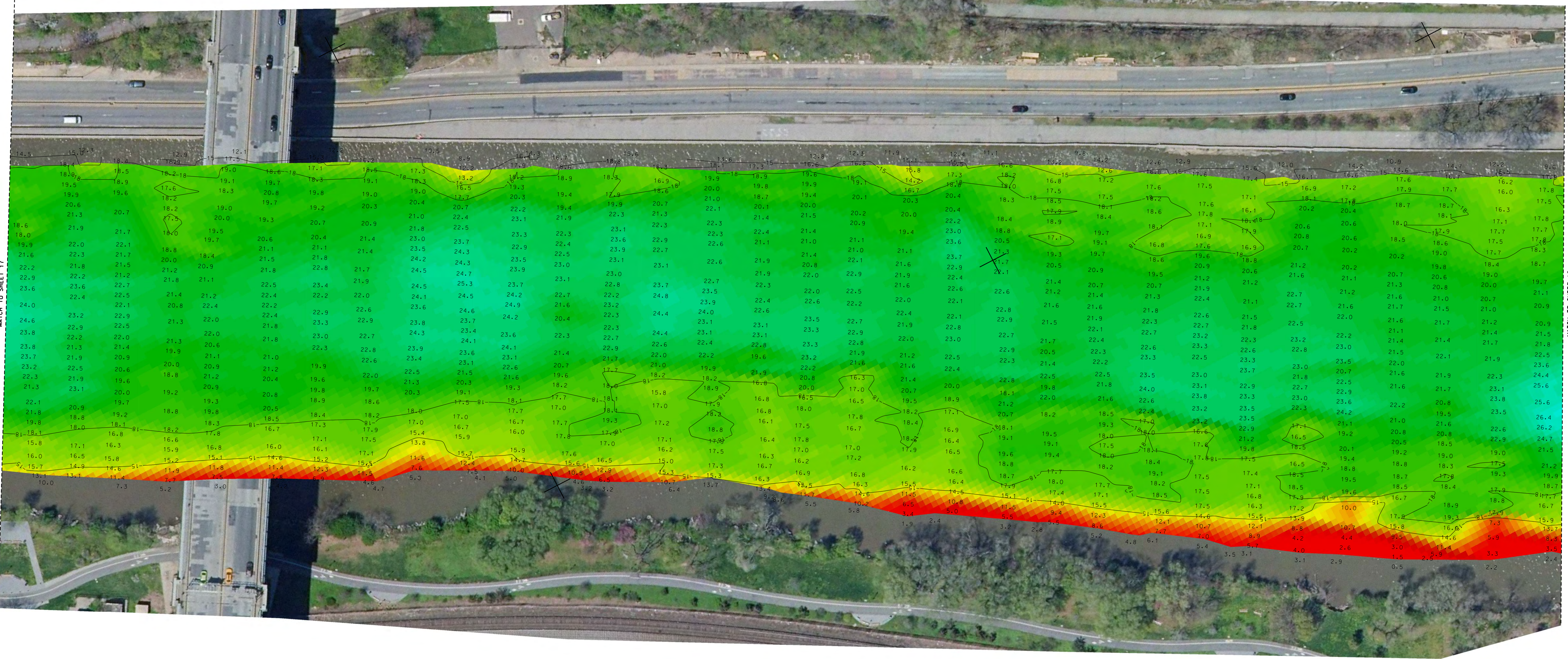
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BENCHMARK: 851 8902 B	PID# BBDM50	NORTHING 256.089.32	EASTING 1,003,189.67
ELEVATION: 16.22' NAVD 88			
STAMPED: 8902 B 2014			

SCALE 1" = 50'



A horizontal scale bar with tick marks at 0, 50, 100, 150, and 200 feet. The bar is divided into four equal segments of 50 feet each.

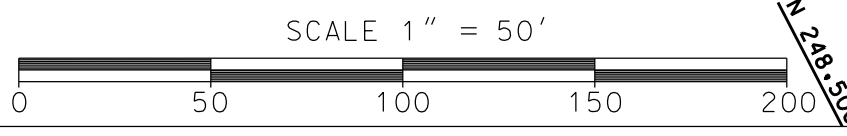


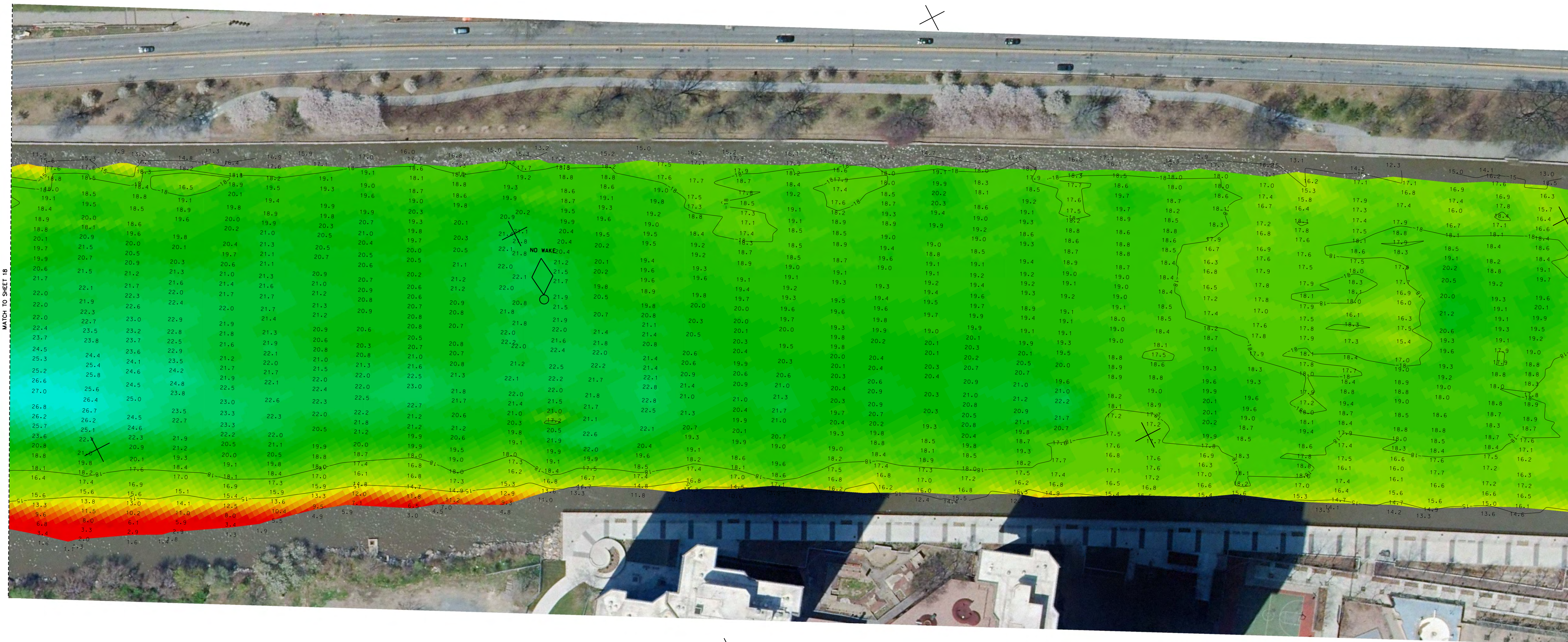


- PROJECT SPECIFIC NOTES:
- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
 - THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
 - THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
 - SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
 - MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
 - SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
 - CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET, PROJECT DEPTH IS 15' AND 18'.
 - THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
 - THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
 - THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
 - THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
 - THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHO/SOUNDER: SINGLE BEAM ODOM CVM 2000K2
NAVIGATION SYSTEMS: SBC EXINIX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CASTS WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR S SOUND VELOCITY PROBE.
 - THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
 - UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 1209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
 - THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
 - REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND/OR COPYRIGHT HOLDER IS OBTAINED.
 - A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# BBDMS2	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227,507.28	1,004,249.70
STAMPED: 8643 G 2014			

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8902 B	PID# BBDMS0	NORTHING	EASTING
ELEVATION: 16.22' NAVD 88		256,085.32	1,003,189.67
STAMPED: 8902 B 2014			





PROJECT SPECIFIC NOTES:

- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS 15' AND 18'.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
- THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHO/SOUNDERS: SINGLE BEAM ECHOSOUNDING SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
NAVIGATION SYSTEMS: SBC EX10V 2 INERTIA SYSTEM.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CAST WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAT S SOUND VELOCITY PROBE.
- THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
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NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# BDDMS2	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227,507.28	1,004,245.70
STAMPED: 8643 G 2014			

NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8902 B	PID# BDDMS0	NORTHING	EASTING
ELEVATION: 16.22' NAVD 88		256,085.32	1,003,189.67
STAMPED: 8902 B 2014			

SCALE 1" = 50'
0 50 100 150 200

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICTMCKIM & CREED
245 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TEL: (910) 251-8282
FAX: (910) 251-8282DATES OF SURVEY:
MAY 12-19, 2020SCALE:
ONE INCH = 50 FEETFIELD BOOKS:
N/AAPPROVED: JARED LAMBERT
PROJECT MANAGERAPPROVED: R. SMITH
PROJECT MANAGERAPPROVED: P. BHADUR
FIELD SUPERVISORAPPROVED: J. MEEZ
CHIEF OF PARTY

DATE: JUNE 18, 2020

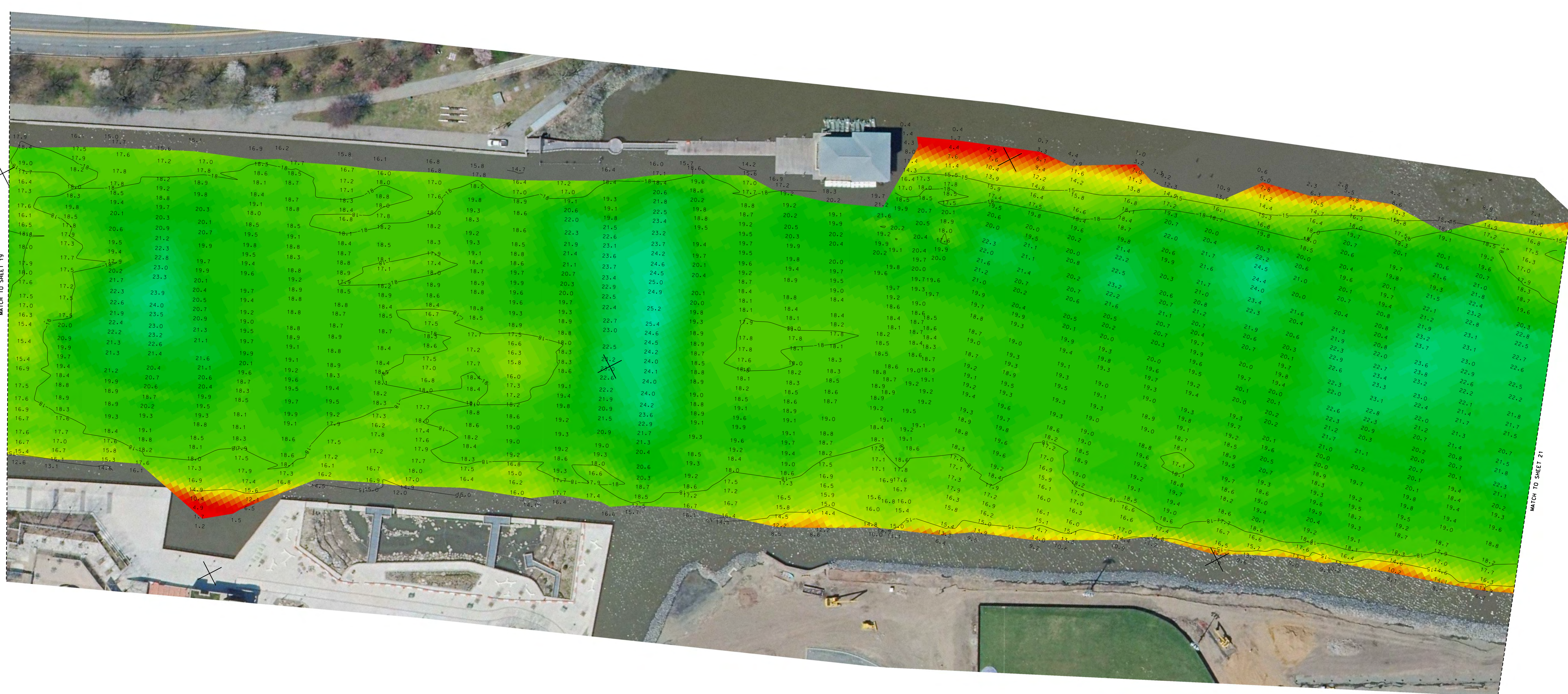
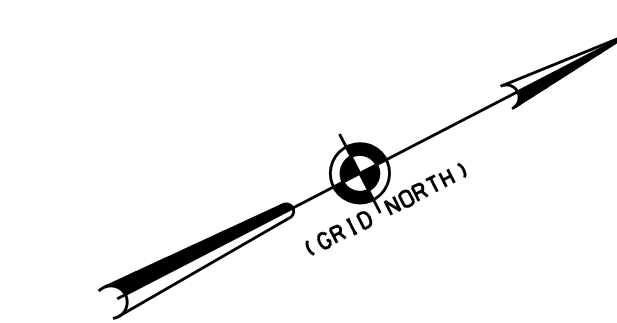
DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278OPERATIONS DIVISION
SURVEY SECTION
CENM-OP-5HARLEM RIVER
NEW YORK

CONDITION SURVEY

VH-120

SHEET 20 OF 28

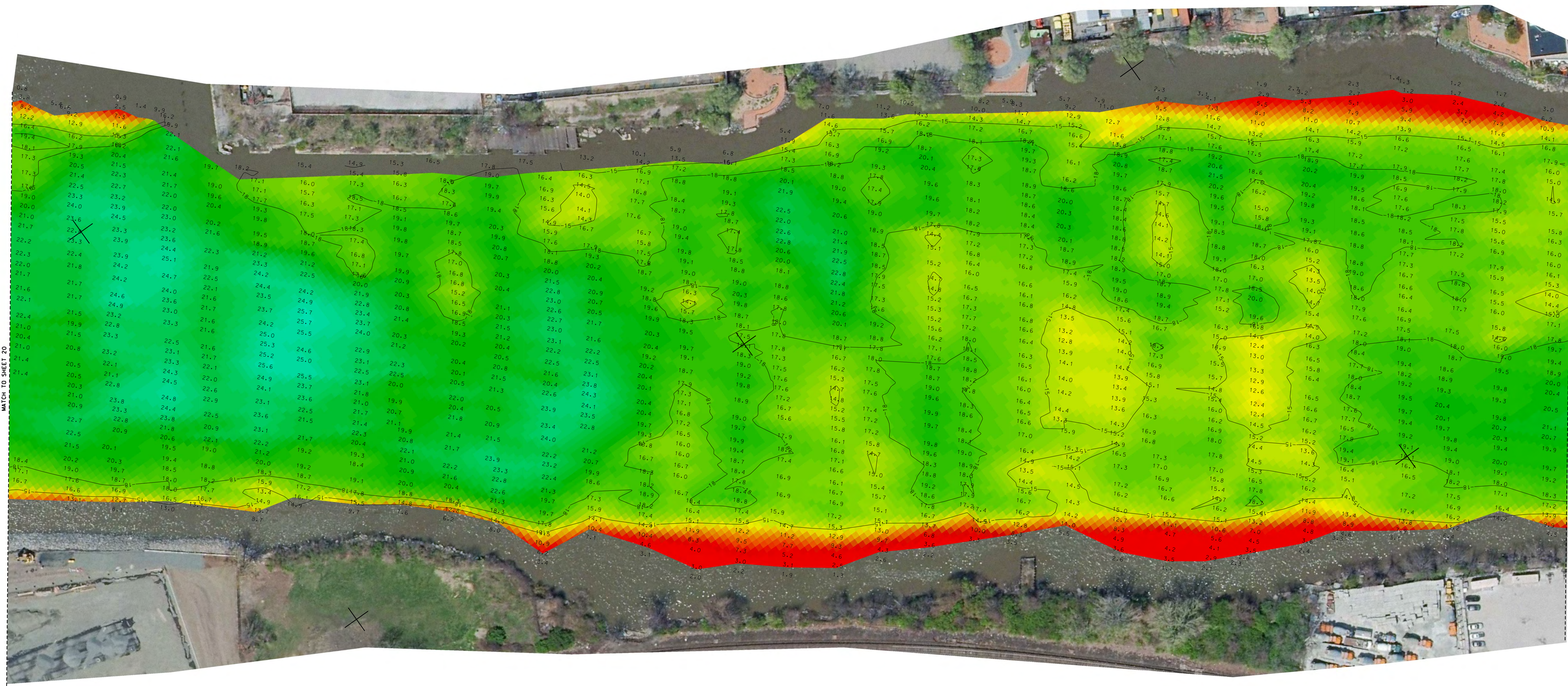
REQ NO./FILE NO.: 4919



PROJECT SPECIFIC NOTES:

- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK 3104 LONG ISLAND IN US SURVEY FEET.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS 15' AND 18'.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
- THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHOSOUNDER: SINGLE BEAM ECHOSOUNDER CVM 200KHZ
NAVIGATION SYSTEMS: SBC EKINIX 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CASTS WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR S SOUND VELOCITY PROBE.
- THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME, BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOULDER EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
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- A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.

NSRS/NGS CONTROL DATA
BENCHMARK: 851 8643 G PID# BDDM52 NORTHING EASTING
ELEVATION: 9.84' NAVD 88 227,507.28 1,004,249.70
STAMPED: 8643 G 2014NSRS/NGS CONTROL DATA
BENCHMARK: 851 8902 B PID# BDDM50 NORTHING EASTING
ELEVATION: 16.22' NAVD 88 256,085.32 1,003,189.67
STAMPED: 8902 B 2014SCALE 1" = 50'
0 50 100 150 200



PROJECT SPECIFIC NOTES:

- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS 15' AND 18'.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
- THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSEL: SV SOUNDS DEEP
ECHO/SOUNDER: SINGLE BEAM ECHOSOUNDING SYSTEM CVM 200KHZ
NAVIGATION SYSTEMS: SBC EXINOV 2 INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CAST WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ECHOSOUNDING S SOUND VELOCITY PROBE.
- THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
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NSRS/NGS CONTROL DATA
BENCHMARK: 851 8643 G PID# BDDMS2 NORTHING EASTING
ELEVATION: 9.84' NAVD 88 227,507.28 1,004,249.70
STAMPED: 8643 G 2014

NSRS/NGS CONTROL DATA
BENCHMARK: 851 8902 B PID# BDDMS0 NORTHING EASTING
ELEVATION: 16.22' NAVD 88 256,085.32 1,003,189.67
STAMPED: 8902 B 2014

SCALE 1" = 50'

0 50 100 150 200



ARMY CORPS
ENGINEERS
NEW YORK DISTRICT

[illegible]

243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 2840
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282

100-11001

APPROVED: R. SMITH

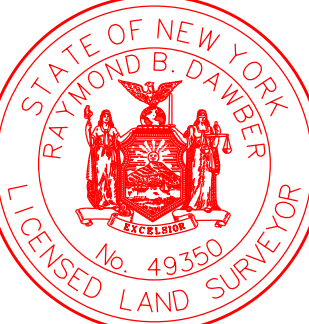
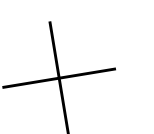
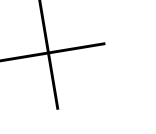
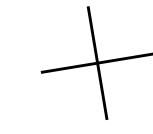
NEW YORK • NEW YORK 10278

NEW YORK

H-123

ET 23 OF 28

NO./FILE NO.: 4915



E 1.008.500

€ 1,009,000

1.009.000

1.009.500

MATCH TO SHE

MATCH TO SHEET 2

PROJECT SPECIFIC NOTES:

1. COORDINATES REFER TO STATE PLANE COORDINATE SYSTEM NAD 1983/2011,
2. NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
3. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES
4. INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
5. THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
6. SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
7. MEAN LOWER LOW WATER IS 2-2.2-7 FEET BELOW NAVD 88 AS DETERMINED USING HYPAACK VDATUM 2020.
8. SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY
9. USING THE DATA ON THIS MAP.
10. CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET, PROJECT DEPTH IS 15' AND 18',
11. THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
12. THE PLANNIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY,
13. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
14. THIS SURVEY WAS PERFORMED USING OPUS CONTROL, AS LISTED RECOVERED BY MCKIM & CREED.
15. THIS MAP IS CEPO COMPLIANT IN ACCORDANCE WITH ER 1110-2-860 AND EM 1110-2-6056.
16. THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
17. SURVEY VESSELS: SV SOUNDS DEEP
18. ECHOSOUNDER: SINGLE BEAM ODOM CVM 200KHZ
19. NAVIGATION SYSTEMS: SWG KINKIN Z INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTKIMODE),
20. POSITIONING SYSTEM: THE SOFTWARE HYPAACK VERSION 2020
21. SURVEY PROCESSING SOFTWARE: HYPAACK SINGLE BEAM EDITOR VERSION 2020
22. SOUNDING DEPTH: THE SOFTWARE HYPAACK ADDITION FOR ACCURATE SPEED OF SOUND PROFILES
23. USING AN ODOM DIGIBAR S SOUND VELOCITY PROB
24. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED
25. BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE
26. CONDITIONS EXISTING AT THE TIME OF THE SURVEY. THE CONDITIONS ARE SUBJECT TO RAPID CHANGE
27. DUE TO SHOALING EVENTS, A PRESENT WARNER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION
28. ON THIS MAP. THE INFORMATION ON THIS MAP IS NOT TO BE USED FOR ANY OTHER PURPOSES
29. FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY
30. MCKIM & CREED
31. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL
32. IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
33. THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND
34. SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
35. REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION
36. IS AUTHORIZED BY THE AUTHOR.
37. A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC
38. SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.



ARMY CORPS
ENGINEERS
NEW YORK DISTRICT

[illegible]

MCKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 2840
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282

[illegible]

FIELD BOOKS:

APPROVED: R. SMITH
PROJECT MANAGER

APPROVED: P. BHADUR
LEAD CARTOGRAPHER

APPROVED: J. MRAZ
DEPUTY CHIEF OF SURVEY

DATE: JUNE 18, 2020

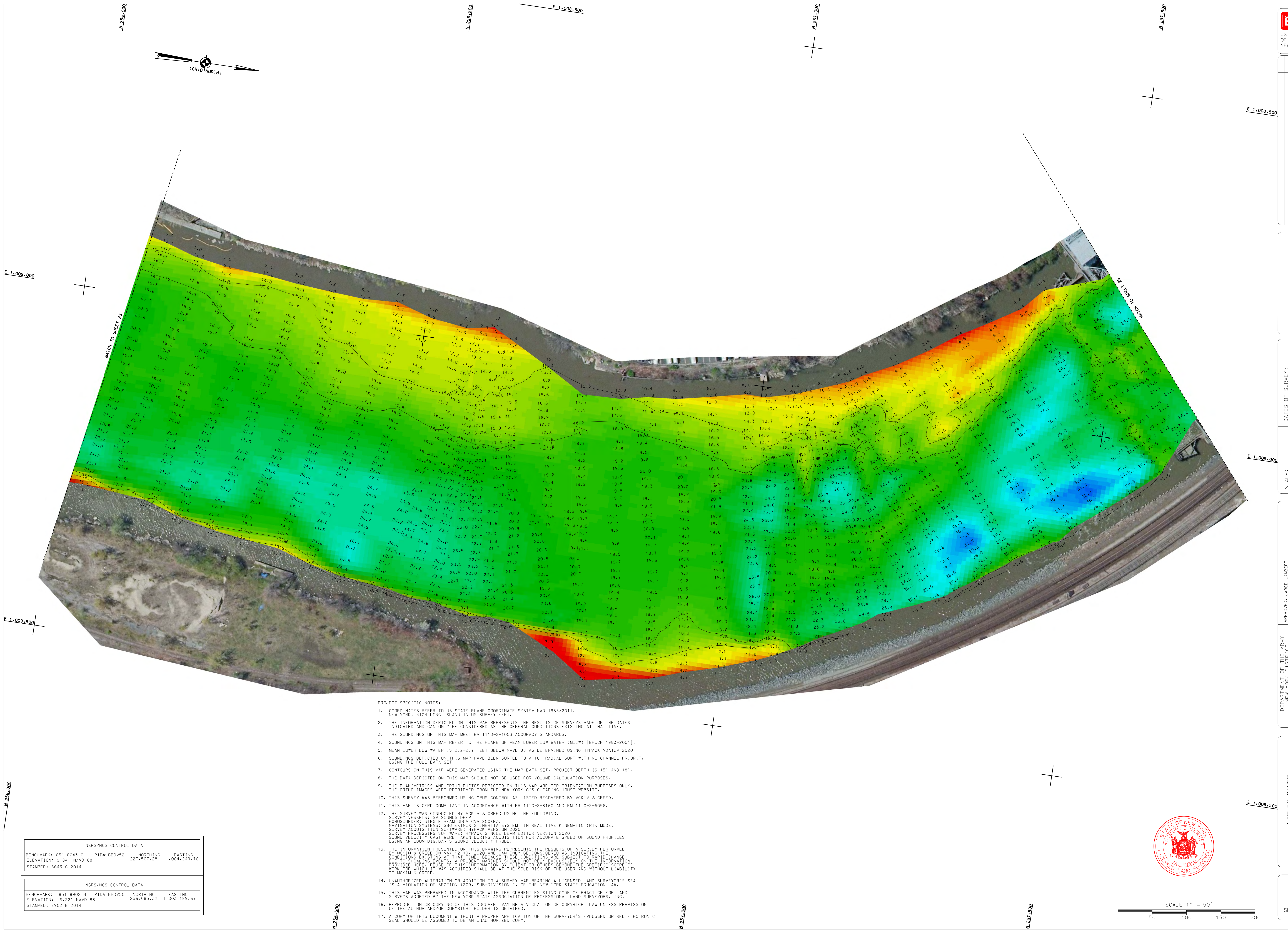
NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

NEW YORK
CONDITION SURVEY


H-124

NO./FILE NO.: 4919





ARMY CORPS
ENGINEERS
NEW YORK DISTRICT

[illegible]

McKINN & CRELL
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282

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APPROVED: R. SMITH

DATE: JUNE 18, 2020

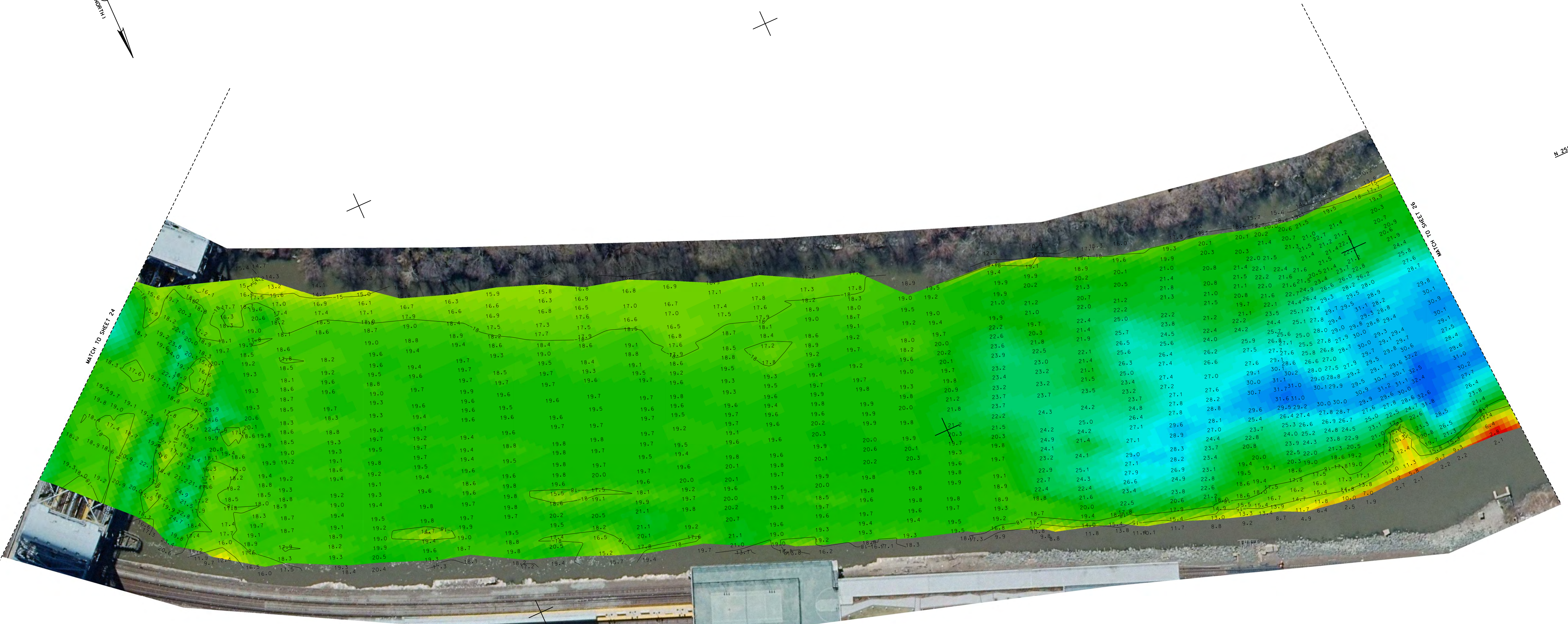
NEW YORK, NEW YORK 10278

NEW YORK

H-125

ET 25 OF 28

NO. /FILE NO: 4919

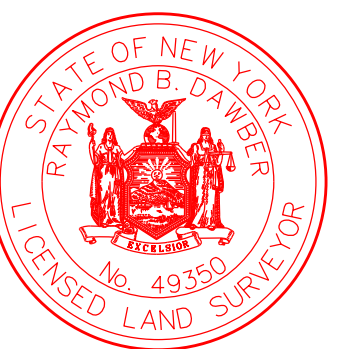


PROJECT SPECIFIC NOTES:

1. COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 83/2011.
NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
2. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES
INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
3. THE SOUNDINGS ON THIS MAP MEET EN 1110-2-1003 ACCURACY STANDARDS.
4. SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPCHD 1983-2001].
MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY
USING THE FULL DATA SET.
5. CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS 15' AND 18'.
THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
6. THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
ORTHO IMAGES WERE OBTAINED FROM THE NEW YORK STATE GIS CLEARLY MARKED EMBLEM.
7. THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
10. THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EN 1110-2-6056.
12. THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
CHUNKERS: SINGLE BEAM CHUNK CVM 2000KX
NAVIGATION SYSTEMS: SBC EKNIX 2 INERTIA SYSTEM, REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SYSTEM 2020
SOUND VELOCITY CASTS WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES
USING AN ODOM DIVE WITH A SOUND VELOCITY PROBE.
13. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED
BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE
CONDITIONS THAT EXISTED AT THE TIME OF THE SURVEY. THERE IS NO GUARANTEE OF RAPID CHANGE
DUE TO SHALING EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION
PRESENTED HEREIN FOR NAVIGATION PURPOSES. THE USER SHALL BE RESPONSIBLE FOR THE USE OF
WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY
TO MCKIM & CREED.
14. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL
OR A VIOLATION OF SECTION 707, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
15. THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND
SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
16. REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION
OF THE AUTHOR AND/OR COPYRIGHT HOLDER HAS BEEN OBTAINED.
17. A COPY OF THIS DOCUMENT WITHIN A PROPER APPLICATION OF THE SURVEYOR'S EMOSSOD OR RED ELECTRONIC
SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.

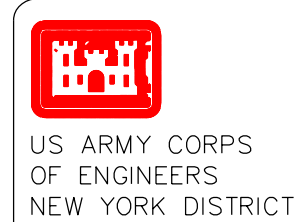
NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# 88DM52	NORTHING	EASTING
ELEVATION: 9.84' NAVD 88		227,507.28	1,004,249.70
STAMPED: 8643 G 2014			

NSRS/NGS CONTROL DATA			
BENCHMARK:	851 8902 B	PID# 8BDM50	NORTHING
ELEVATION:	16.22' NAVD 88		EASTING
STAMPED:	8902 B 2014	256,085.32	1,003,189.67



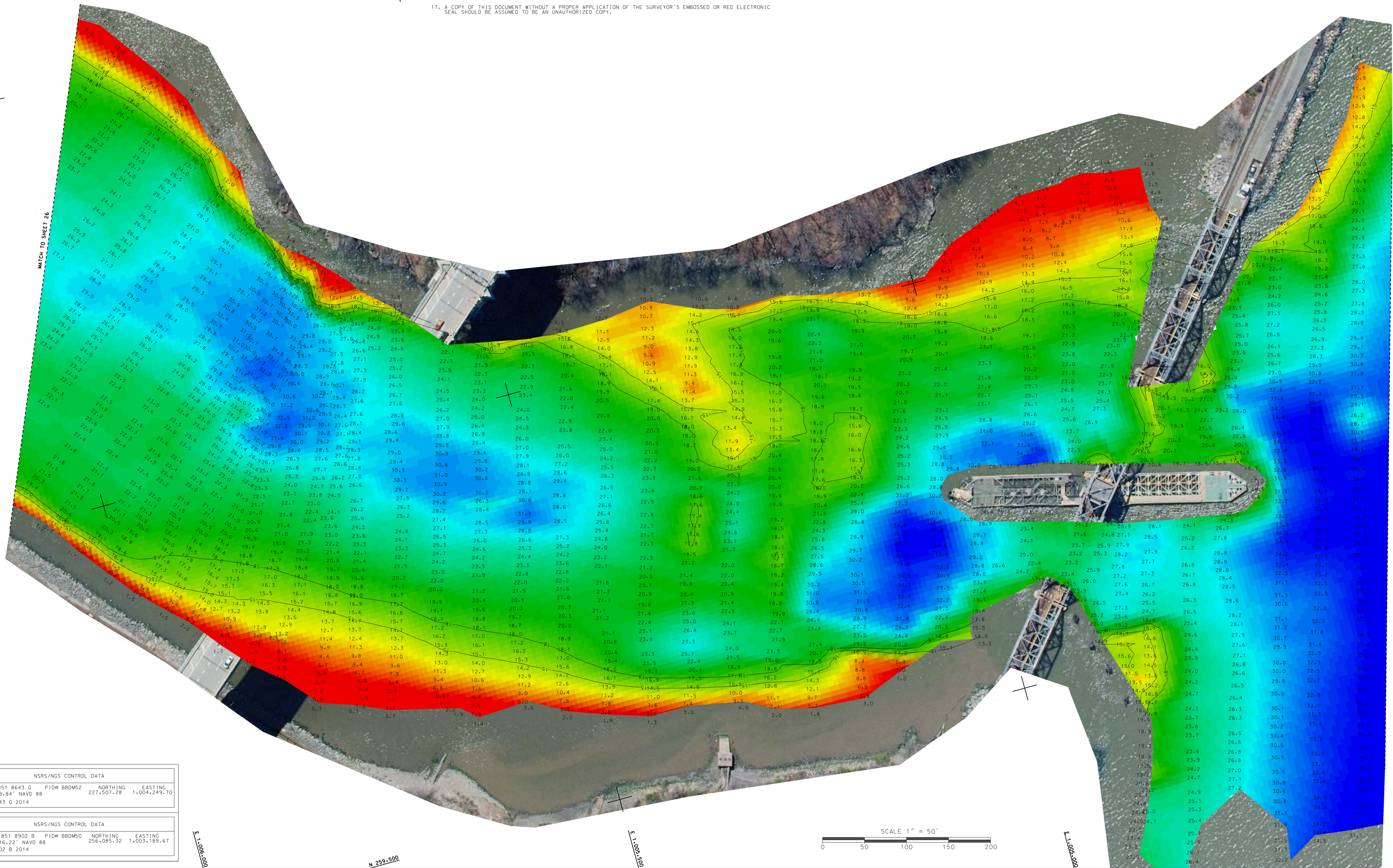
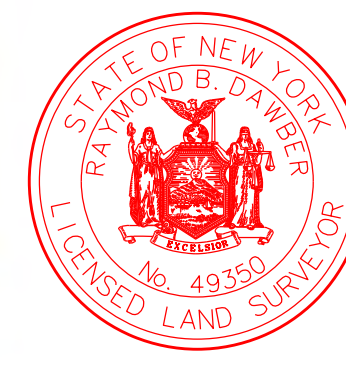
SCALE 1" = 50'

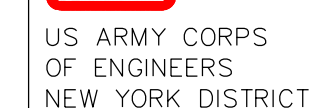
A horizontal scale bar with a black and white alternating pattern. It is divided into four equal segments, each labeled with the number 50. The total length represents 200 feet.

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT**McKIM & CREED**
245 NORTH FRONT STREET
WILMINGTON, DE 19801
TEL: (302) 441-0000
FAX: (302) 441-8382DATES OF SURVEY:
MAY 12-19, 2020SCALE:
ONE INCH = 50 FEET
FIELD BOOKS:
N/AAPPROVED: JARED LAMBLE, CHIEF OF DISTRICT
APPROVED: R. SMITH, PROJECT MANAGER
APPROVED: P. BHADURI, CHIEF OF SURVEY SECTION
APPROVED: J. MRAZ, CHIEF OF DISTRICT
DATE: JUNE 18, 2020DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
NEW YORK, NEW YORK 10278
OPERATIONS DIVISION
SURVEY SECTION
CENNA-OP-5HARLEM RIVER
NEW YORK
CONDITION SURVEYVH-127
SHEET 27 OF 28

PROJECT SPECIFIC NOTES:

- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011, NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY USING THE FULL DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET. PROJECT DEPTH IS 15' AND 18'.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY. THE ORTHO IMAGES WERE RETRIEVED FROM THE NEW YORK GIS CLEARING HOUSE WEBSITE.
- THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECOVERED BY MCKIM & CREED.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
- THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSELS: SV SOUNDS DEEP
ECHOSOUNDERS: SINGLE BEAM ECHOSOUNDER CVM 200KHZ
NAVIGATION SYSTEMS: SBC EKKO 2, INERTIA SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SURVEY PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CAST WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES USING AN ODOM DIGIBAR'S SOUND VELOCITY PROBE.
- THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO MCKIM & CREED.
- UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
- THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
- REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND/OR COPYRIGHT HOLDER IS OBTAINED.
- A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.

NSRS/NGS CONTROL DATA
BENCHMARK: 851 8643 G P1DW BDM52 NORTHING EASTING
ELEVATION: 9.84' NAVD 88 227,507.28 1,004,249.70
STAMPED: 8643 G 2014NSRS/NGS CONTROL DATA
BENCHMARK: 851 8902 B P1DW BDM50 NORTHING EASTING
ELEVATION: 16.22' NAVD 88 256,085.32 1,003,189.67
STAMPED: 8902 B 2014

[illegible]

McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048

DATES OF SURVEY: _____
 MAY 12-19, 2020

 REC NO./FILE NO.: _____

SCALE:
ONE INCH = 50 FEET

FIELD BOOKS:
N/A

APPROVED: JARED LAMBERT	LEAD CARTOGRAPHIC TECHNICIAN
APPROVED: R. SMITH	PROJECT MANAGER
APPROVED: P. BHADUR	LEAD CARTOGRAPHER
APPROVED: J. MFAZ	

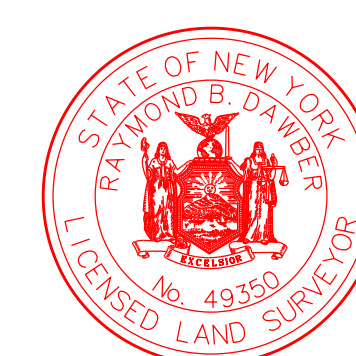
DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

HARLEM RIVER
NEW YORK

VH-128

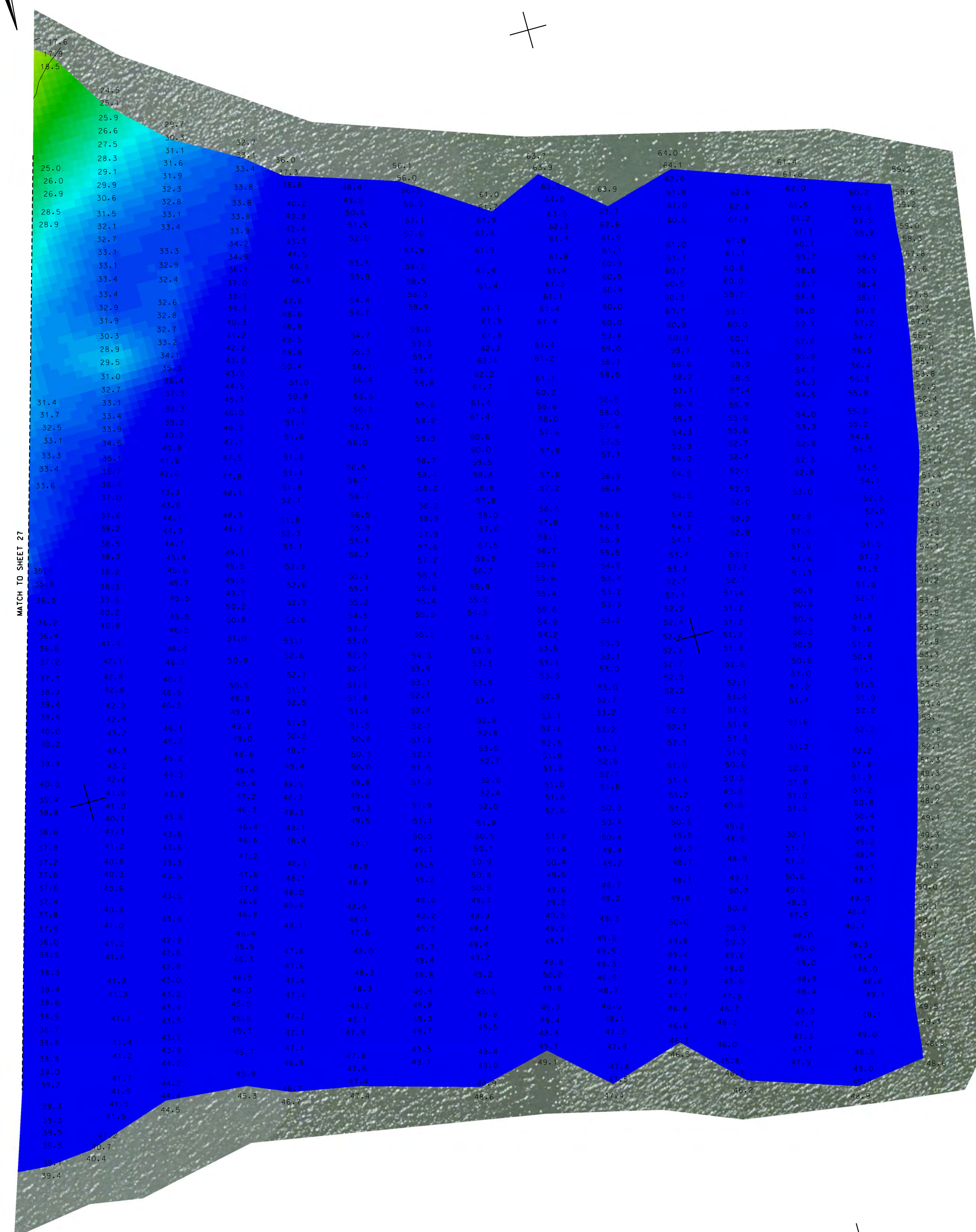
SHEET 28 OF 2



SCALE 1" = 50'



REF. NO. / FILE NO.:



NSRS/NGS CONTROL DATA			
BENCHMARK: 851 8643 G	PID# BDM52	NORTHING 227,507.28	EASTING 1,004,249.70
ELEVATION: 9.84' NAVD 88			
STAMPED: 8643 G 2014			

PROJECT SPECIFIC NOTES:

1. COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983/2011.
NEW YORK, 3104 LONG ISLAND IN US SURVEY FEET.
2. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES
INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
3. THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
4. SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
5. MEAN LOWER LOW WATER IS 2.2-2.7 FEET BELOW NAVD 88 AS DETERMINED USING HYPACK VDATUM 2020.
6. SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' RADIAL SORT WITH NO CHANNEL PRIORITY
USING THE FULL DATA SET.
7. CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET, PROJECT DEPTH IS 15' AND 18'.
8. THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
9. THE PLANIMETRICS AND ORTHO PHOTOS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
THE ORTHO IMAGES WERE OBTAINED FROM THE NEW YORK USGS CLASSIC HOUSE WEBSITE.
10. THIS SURVEY WAS PERFORMED USING OPUS CONTROL AS LISTED RECEIVED BY MCKIM & CREED.
11. THIS MAP IS CEPO COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND ER 1110-2-6056.
12. THE SURVEY WAS CONDUCTED BY MCKIM & CREED USING THE FOLLOWING:
SURVEY VESSEL: SV SOUNDING DEEP
ECHOSOUNDER: SINGLE BEAM HYDROM VCM 2000K
POSITIONING SYSTEM: GPS WITH AN INERTIAL SYSTEM, IN REAL TIME KINEMATIC (RTK) MODE.
SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2020
SOUNDING PROCESSING SOFTWARE: HYPACK SINGLE BEAM EDITOR VERSION 2020
SOUND VELOCITY CASTS WERE TAKEN DURING ACQUISITION FOR ACCURATE SPEED OF SOUND PROFILES
AND AN ODOM OF 1000 FEET WERE TAKEN FOR VELOCITY PROFILE.
13. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED
BY MCKIM & CREED ON MAY 12-19, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE
CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE
DUE TO SHALING, THE INFORMATION PROVIDED HEREIN SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION
PROVIDED HERE. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF
WORK FOR WHICH IT WAS ACQUIRED SHOULD BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY
TO MCKIM & CREED.
14. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL
OR SIGNATURE IS A VIOLATION OF PROFESSIONAL STANDARDS.
15. THIS MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND
SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC.
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OF THE AUTHOR AND/OR COPYRIGHT HOLDER IS OBTAINED.
17. A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED ELECTRONIC
SEAL SHOULD BE ASSUMED TO BE A VIOLATION OF PROFESSIONAL STANDARDS.

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