CORPS OF ENGINEERS

U. S. ARMY



US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

PR	CM.JHS
MP	CM.JHS

DATES OF SURVEY:
10,12,13,18,20,26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

SCALE:
ONE INCH = 1500 FEET

FIELD BOOKS:
N/A

APPROVED: N. VITOLO	CHIEF, SURVEY BRANCH
APPROVED: M. FORTE	CHIEF, ENGINEERING TECHNICIAN
APPROVED: P. BHASKAR	CHIEF, HYDROGRAPHIC SURVEYS
APPROVED: J. MIRAZ	BRANCH CHIEF OF SURVEYS
DATE: 7 FEBRUARY 2022	

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

LOCAL CONTROL DATA
BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: B5 (PID: KV0006)
ELEVATION: 63.49' NAVD88

PROJECT SPECIFIC NOTES:

-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.
-COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983, NEW JERSEY MERCATOR - ZONE 2900, US SURVEY FEET.
-SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
-MEAN LOWER LOW WATER IS 3.0-3.3 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 4.3).
-SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' x 3' MEDIAN CELL, SORTED TO A 30' INTERVAL.
-CONTOURS ON THIS MAP WERE GENERATED USING THE 3 x 3 DATA SET.
-THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
-AERIAL IMAGERY PROVIDED BY NJGIN WAREHOUSE (2018) AND IS FOR ORIENTATION PURPOSES ONLY.
-THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "BM VETERAN RESET 2020, CAVEN POINT, ELIZ PARK VAULT, NYDOT".
-THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-101

SHEET 1 OF 22

U. S. ARMY

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PR	CM.JHS
MP	CM.JHS

DATES OF SURVEY: 10.12.13.18.20.26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

SCALE: ONE INCH = 100 FEET

FIELD BOOKS: N/A

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

APPROVED: N. VITOLO
FIELD CARTOGRAPHER

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADUR
LEAD CARTOGRAPHER

APPROVED: J. MAZ
DEPUTY CHIEF OF SURVEYS

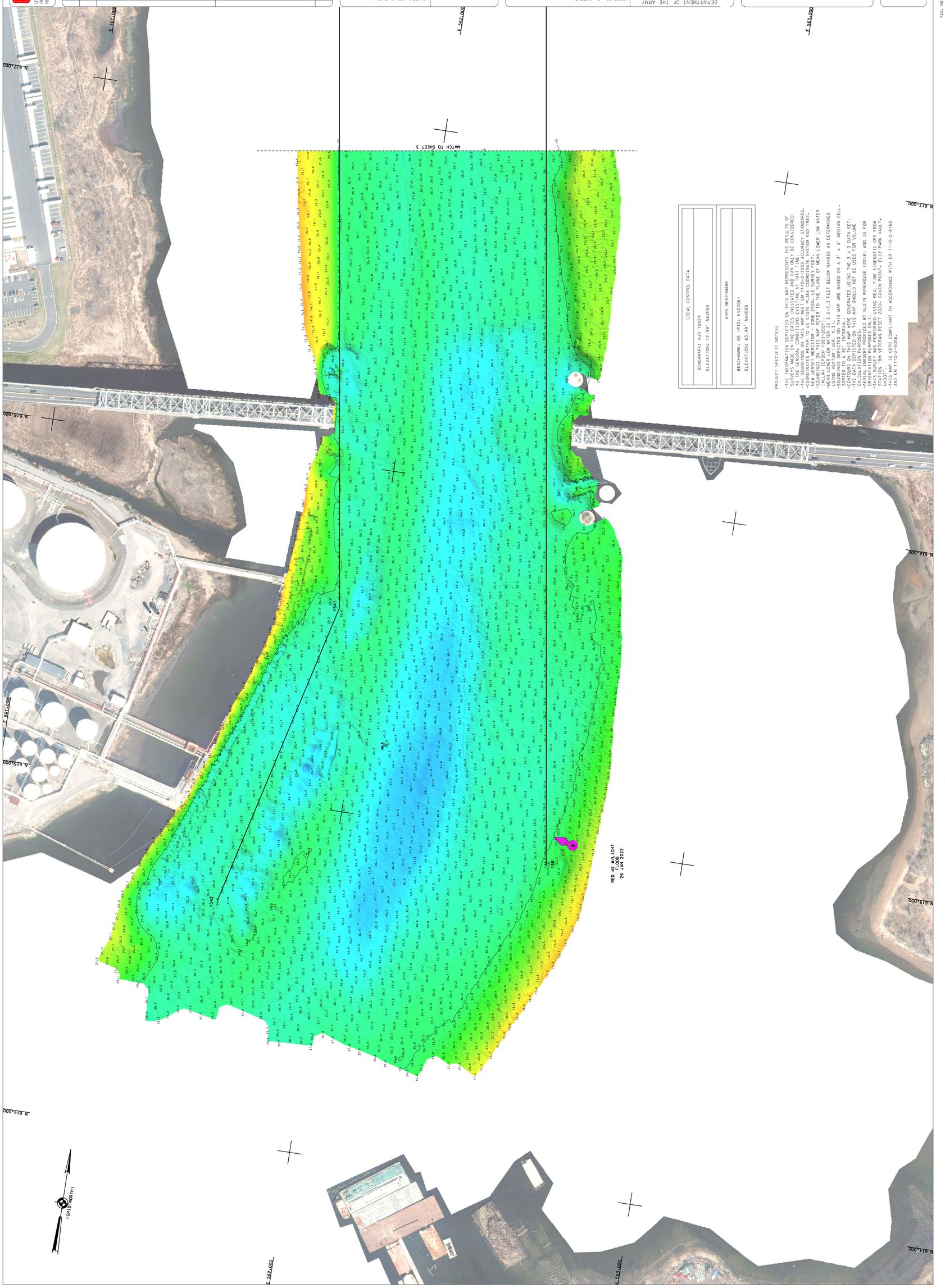
DATE: 7 FEBRUARY 2022

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-102

SHEET 2 OF 22

REQ. NO./FILE NO.: 5129/N1/N3/N4



LOCAL CONTROL DATA

BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK

BENCHMARK: B5 (PID: KV0006)
ELEVATION: 63.49' NAVD88

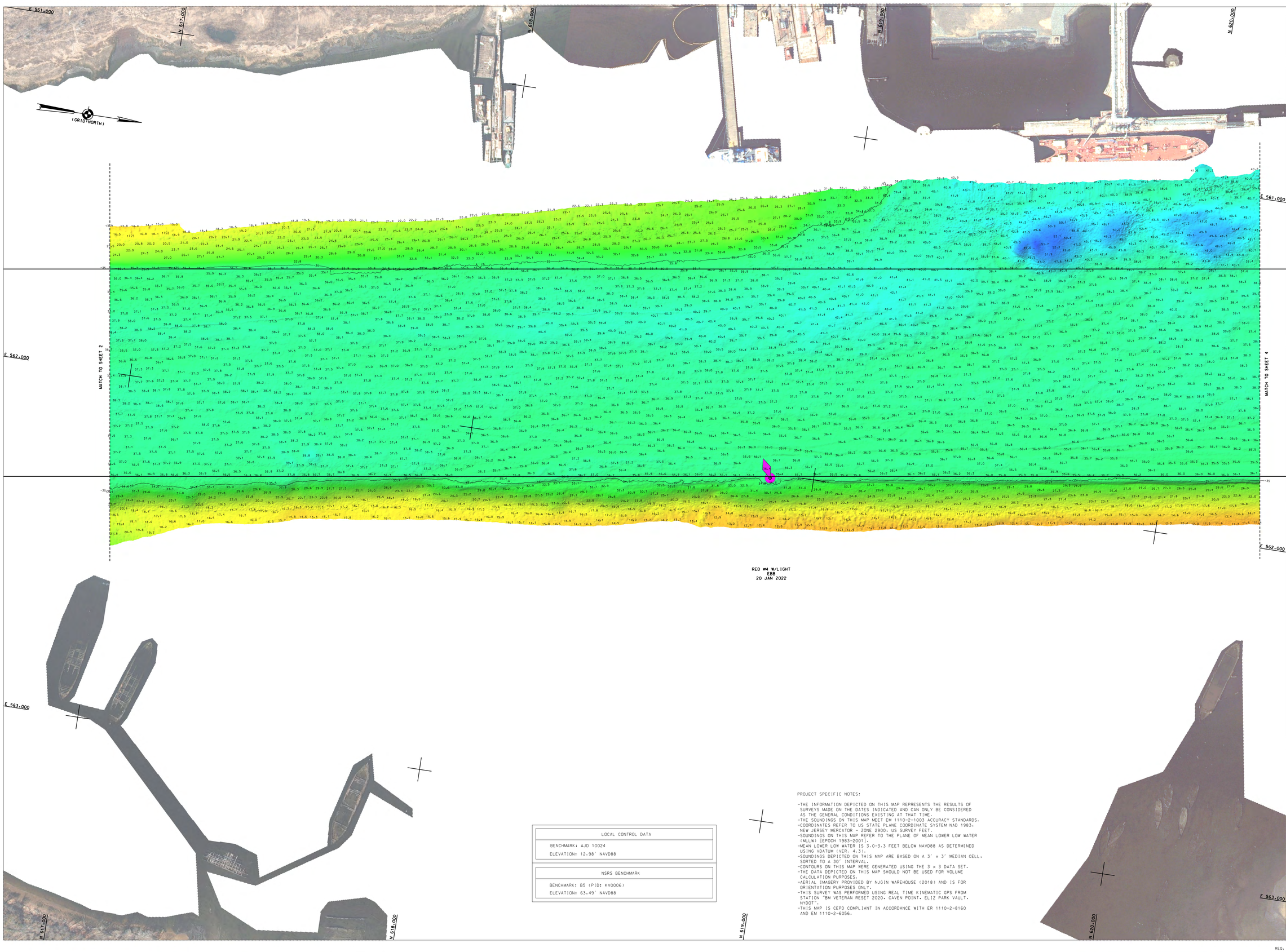
PROJECT SPECIFIC NOTES:

-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.
-COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983, NEW JERSEY MERCATOR - ZONE 2900, US SURVEY FEET.
-SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) (EPOCH 1983-2001).
-MEAN LOWER LOW WATER IS 3.0-3.3 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 4.3).
-SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' x 3' MEDIAN CELL, SORTED TO A 30' INTERVAL.
-CONTOURS ON THIS MAP WERE GENERATED USING THE 3 x 3 DATA SET.
-THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
-AERIAL IMAGERY PROVIDED BY NJGIN WAREHOUSE (2018) AND IS FOR ORIENTATION PURPOSES ONLY.
-THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION 8M VETERAN RESET 2020, CAVEN POINT, ELIZ PARK VAULT, NYDOT.
-THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

CORPS OF ENGINEERS

CORPS OF ENGINEERS

U. S. ARMY



US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	CM.JHS
MP	CM.JHS

DATES OF SURVEY:
10.12.13.18.20.26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

APPROVED: N. VITOLO
FIELD CARTOGRAPHER

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADUR
LEAD CARTOGRAPHER

APPROVED: J. MRAZ
DEPUTY CHIEF OF SURVEYS

DATE: 7 FEBRUARY 2022

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-103

SHEET 3 OF 22

LOCAL CONTROL DATA
BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: B5 (PID: KV0006)
ELEVATION: 63.49' NAVD88

PROJECT SPECIFIC NOTES:

- 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.
- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983, NEW JERSEY MERCATOR - ZONE 2900, US SURVEY FEET.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 3.0-3.3 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 4.3).
- SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' x 3' MEDIAN CELL, SORTED TO A 30' INTERVAL.
- CONTOURS ON THIS MAP WERE GENERATED USING THE 3 x 3 DATA SET.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- AERIAL IMAGERY PROVIDED BY NJGIN WAREHOUSE (2018) AND IS FOR ORIENTATION PURPOSES ONLY.
- THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "BM VETERAN RESET 2020, CAVEN POINT, ELIZ PARK VAULT, NYDOT".
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

REQ. NO./FILE NO.: 5129/N1/N3/N4

REG. NO./FILE NO.: 5129/N3/N4

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-104
SHEET 4 OF 22

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-HS

APPROVED: N. VITOLO
CHIEF, OPERATIONS DIVISION

APPROVED: M. FORTE
CHIEF, ENGINEERING TECHNICIAN

APPROVED: E. BHARGAVA
CHIEF, SURVEY SECTION

APPROVED: A. HRAZ
ACTING CHIEF OF SURVEYS

DATE: FEBRUARY 2022

SCALE: ONE INCH = 100 FEET

FIELD BOOKS:
N/A

DATES OF SURVEY:
10-12,13-18,20-26 JAN 2022

REG. NO./FILE NO.: 5129/N1/N2/N4

DR	CM/HS
MP	CM/HS

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

U. S. ARMY

CORPS OF ENGINEERS

PROJECT SPECIFIC NOTES:

-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.
NEW JERSEY MERCATOR - ZONE 2900. US SURVEY FEET.
COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983.
-SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
-MEAN LOWER LOW WATER IS 3.0-3.3 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 4.3).
SORTED TO A 20' INTERVAL.
-SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' x 3' MEDIAN CELL.
-CONTOURS ON THIS MAP WERE GENERATED USING THE 3 x 3 DATA SET.
-THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
-AERIAL IMAGERY PROVIDED BY NJGIN WARENDUSE (2018) AND IS FOR ORIENTATION PURPOSES ONLY.
-THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "BM VETERAN RESET 2020. CAEN POINT. ELIZ PARK VAULT. NYDOT".
-THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

LOCAL CONTROL DATA

BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK

BENCHMARK: BS (PID: KV0006)
ELEVATION: 63.49' NAVD88

RED NUN #8
EB
18 JAN 2022

RED #6 W/LIGHT
EB
20 JAN 2022

GREEN #5 W/LIGHT
EB
20 JAN 2022

MATCH TO SHEET 5

MATCH TO SHEET 3

(GRID NORTH)

N 621,000
N 620,000
E 562,000
E 561,000
E 560,000

REG. NO./FILE NO.: 5129/N1/N2/N4

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-105
SHEET 5 OF 22

PROJECT SPECIFIC NOTES:
-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.
NEW JERSEY MECATOR - ZONE 2900. US SURVEY FEET.
-COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983.
-SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
-MEAN LOWER LOW WATER IS 3.0-3.3 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 4.3).
SORTED TO A 20' INTERVAL.
-SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' x 3' NEDIAN CELL.
-CONTOURS ON THIS MAP WERE GENERATED USING THE 3 x 3 DATA SET.
CALCULATION PURPOSES.
-AERIAL IMAGERY PROVIDED BY VULCAN WAREHOUSE (2018) AND IS FOR
-THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME
ORIENTATION PURPOSES ONLY.
-THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "BH VETERAN RESET 2020. CAVEN POINT, ELIZ PARK VAULT, NYDOT".
-THIS MAP IS CERD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

LOCAL CONTROL DATA

BENCHMARK: AJD 1002W
ELEVATION: 12.98', NAVD88

NSRS BENCHMARK

BENCHMARK: BS (PID: KV0006)
ELEVATION: 63.49', NAVD88

RED #12 W/LIGHT
E&B
18 JAN 2022

RED #10 W/LIGHT
E&B
18 JAN 2022

GREEN #11 W/LIGHT
E&B
18 JAN 2022

17A

16A

MATCH TO SHEET 6

MATCH TO SHEET 4

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REQ. NO./FILE NO.: 5129/N1/N3/N4

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-106

SHEET 6 OF 22

PROJECT SPECIFIC NOTES:

-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.
-COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983.
-SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
-MEAN LOWER LOW WATER IS 3.0-3.3 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 4.3).
-SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' × 3' MEDIAN CELL.
SORTED TO A 30' INTERVAL.
-THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CONTOURS ON THIS MAP WERE GENERATED USING THE 3 × 3 DATA SET.

ORIENTATION PURPOSES ONLY.
AERIAL IMAGERY PROVIDED BY NJDIN WAREHOUSE (2018) AND IS FOR CALCULATION PURPOSES.
-THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "BM VEIEAN RESET 2020, CAVEN POINT, ELIZ PARR VAULT, NVDOT".
-THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

LOCAL CONTROL DATA
BENCHMARK: AJD 1002 ELEVATION: 12.98', NAVD88
NSRS BENCHMARK
BENCHMARK: BS (PID: KV0006) ELEVATION: 63.49', NAVD88

RED DAY MARKER #14 W/LIGHT

GREEN #13 W/LIGHT
EBB
18 JAN 2022

MATCH TO SHEET 7

MATCH TO SHEET 5

18R

17R

18B

N 628,000
E 560,000
N 624,000
E 564,000
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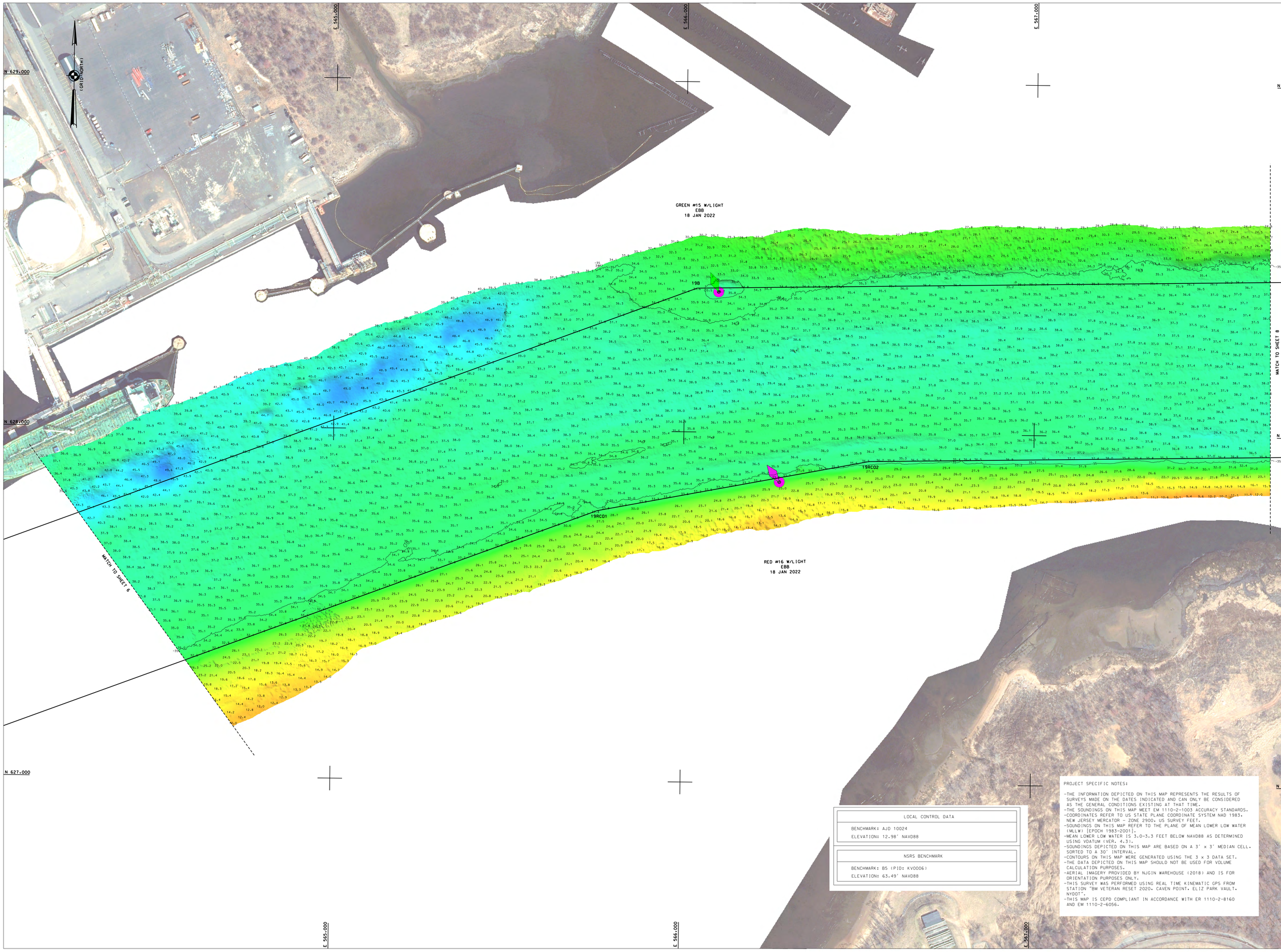
CORPS OF ENGINEERS

U. S. ARMY



US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

	PR	WP
	CM.JHS	CM.JHS

DATES OF SURVEY:
10/12,13,18,20,26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

SCALE:
ONE INCH = TOO FEET

FIELD BOOKS:
N/A

APPROVED: N. VITOLO
CHIEF, SURVEY BRANCH

APPROVED: M. FORTE
CHIEF, ENGINEERING TECHNICIAN

APPROVED: P. BRADLEY
CHIEF, HYDROGRAPHIC SURVEY UNIT

APPROVED: J. MBAZ
CHIEF, GROUP OF SURVEYS

DATE: 1 FEBRUARY 2022

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-107

SHEET 7 OF 22

LOCAL CONTROL DATA
BENCHMARK: AJD 10024 ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: B5 (PID: KV0006) ELEVATION: 63.49' NAVD88

PROJECT SPECIFIC NOTES:

-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.
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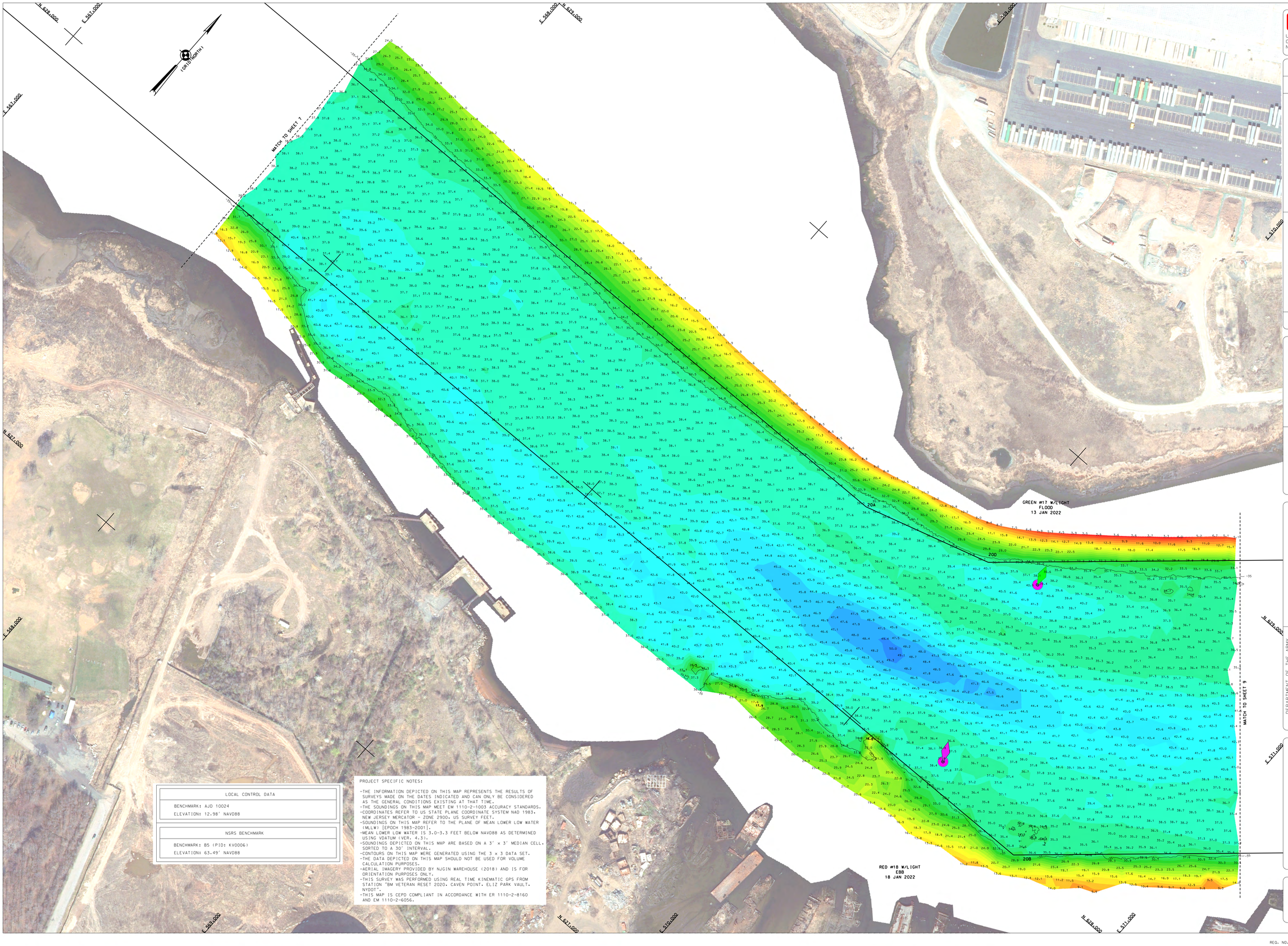
-AERIAL IMAGERY PROVIDED BY NJGIN WAREHOUSE (2018) AND IS FOR ORIENTATION PURPOSES ONLY.
-THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION 'BM VETERAN RESET 2020. CAVEN POINT, ELIZ PARK VAULT. NYDOT'.
-THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

REQ. NO./FILE NO.: 5129/N1/N3/N4



LOCAL CONTROL DATA
BENCHMARK: AJD 10024 ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: B5 (PID: KV0006) ELEVATION: 63.49' NAVD88

PROJECT SPECIFIC NOTES:

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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	CM,JHS
MP	CM,JHS

DATES OF SURVEY:
10.12.13.18.20.26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

APPROVED: N. VITOLO
FIELD CARTOGRAPHER

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADUR
LEAD CARTOGRAPHER

APPROVED: J. MRAZ
DEPUTY CHIEF OF SURVEYS

DATE: 7 FEB 2022

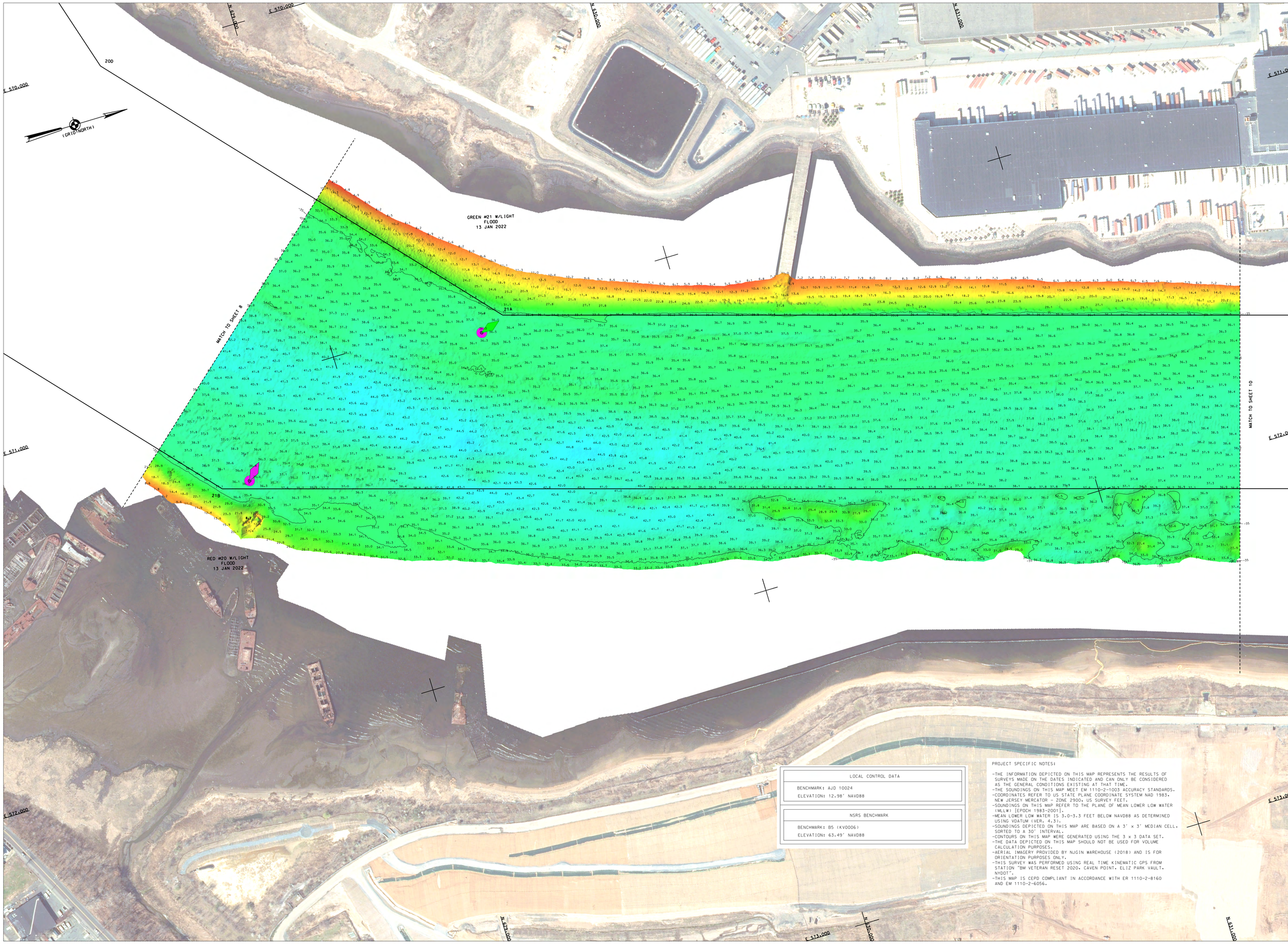
DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-108

SHEET 8 OF 22



LOCAL CONTROL DATA
BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: B5 (KV0006)
ELEVATION: 63.49' NAVD88

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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	CM,JHS
MP	CM,JHS

DATES OF SURVEY: 10,12,13,18,20,26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

SCALE: ONE INCH = 100 FEET

FIELD BOOKS: N/A

APPROVED: N. VITOLO, FIELD CARTOGRAPHER
APPROVED: M. FORTE, CIVIL ENGINEERING TECHNICIAN
APPROVED: P. BHADUR, LEAD CARTOGRAPHER
APPROVED: J. MRAZ, DEPUTY CHIEF OF SURVEYS
DATE: 7 FEBRUARY 2022

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-109

SHEET 9 OF 22

U. S. ARMY

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PR	CM.JHS
MP	CM.JHS

DATES OF SURVEY: 10.12.13,18.20.26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

SCALE: ONE INCH = 100 FEET

FIELD BOOKS: N/A

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

APPROVED: N. VITOLO
FIELD CARTOGRAPHER

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADUR
LEAD CARTOGRAPHER

APPROVED: J. MRAZ
ASSIST CHIEF OF SURVEYS

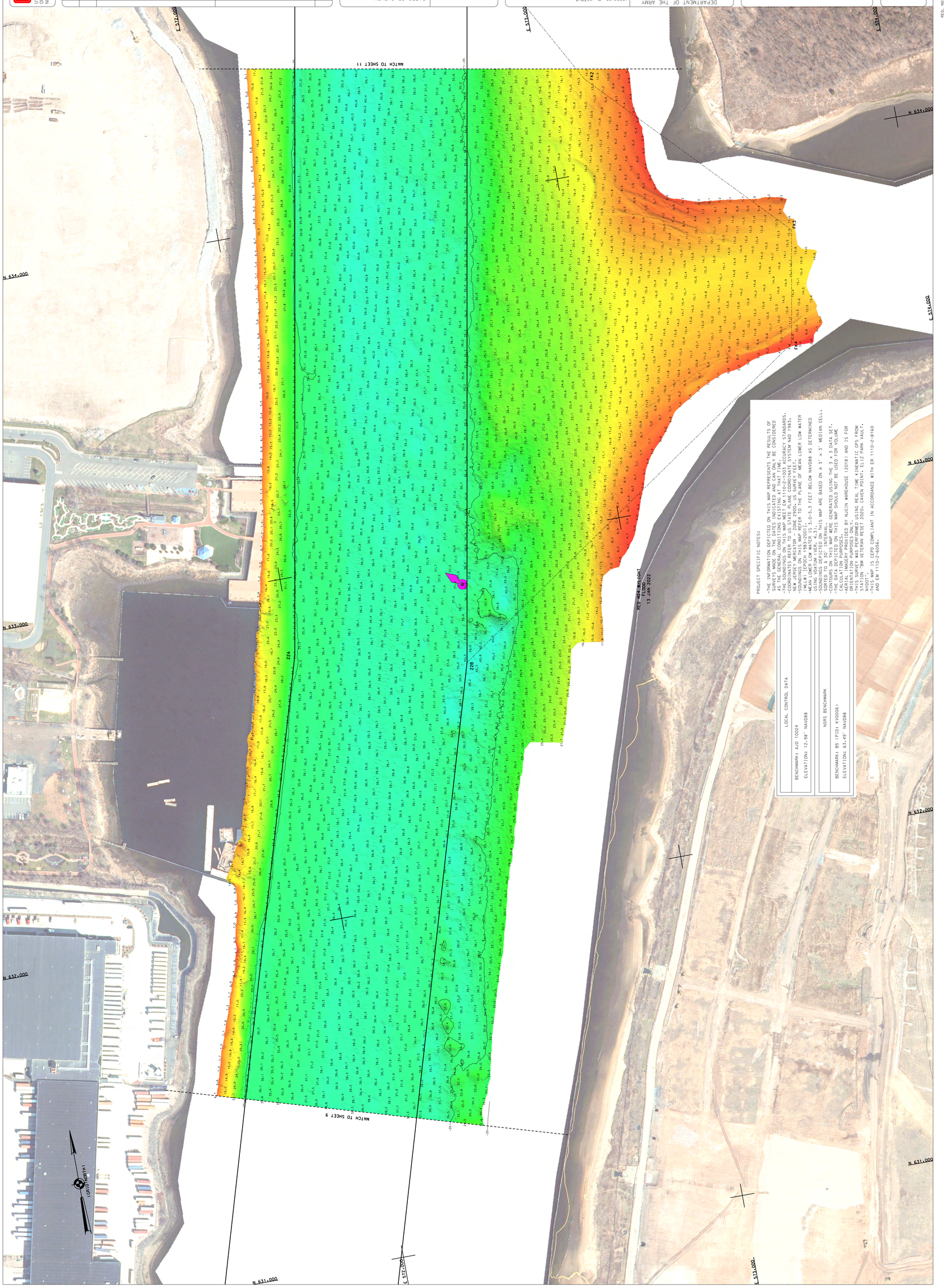
DATE: 7 FEBRUARY 2022

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-110

SHEET 10 OF 22

REQ. NO./FILE NO.: 5129/N1/N3/N4



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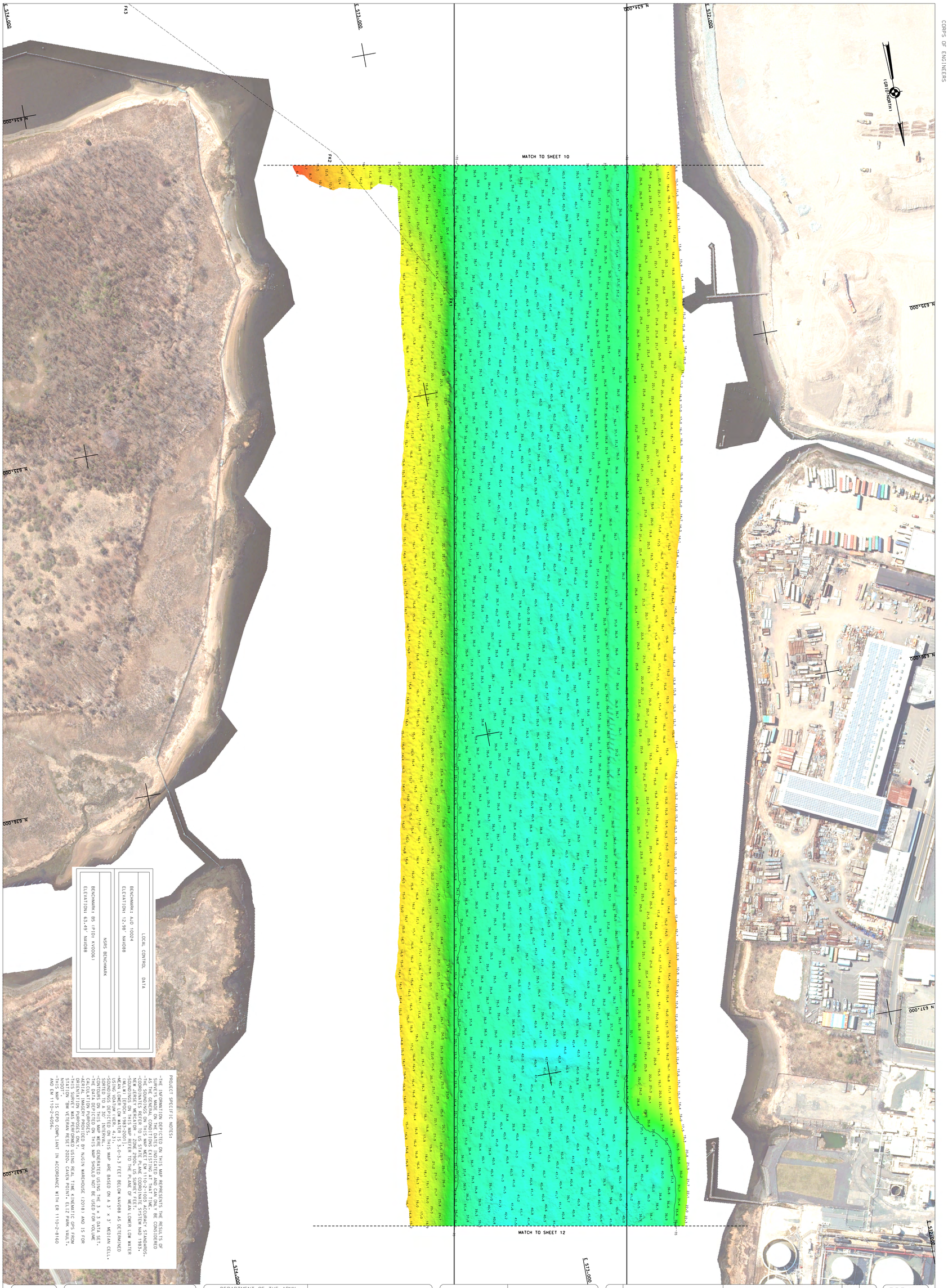
LOCAL CONTROL DATA

BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK

BENCHMARK: B5 (PID: KV0006)
ELEVATION: 63.49' NAVD88

CORPS OF ENGINEERS



LOCAL CONTROL DATA

BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK

BENCHMARK: B5 (PID: KV0006)
ELEVATION: 63.49' NAVD88

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CORPS OF ENGINEERS

U. S. ARMY

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PR	CM,JHS
MP	CM,JHS

SCALE: ONE INCH = 100 FEET

FIELD BOOKS: N/A

DATES OF SURVEY: 10,12,13,18,20,26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

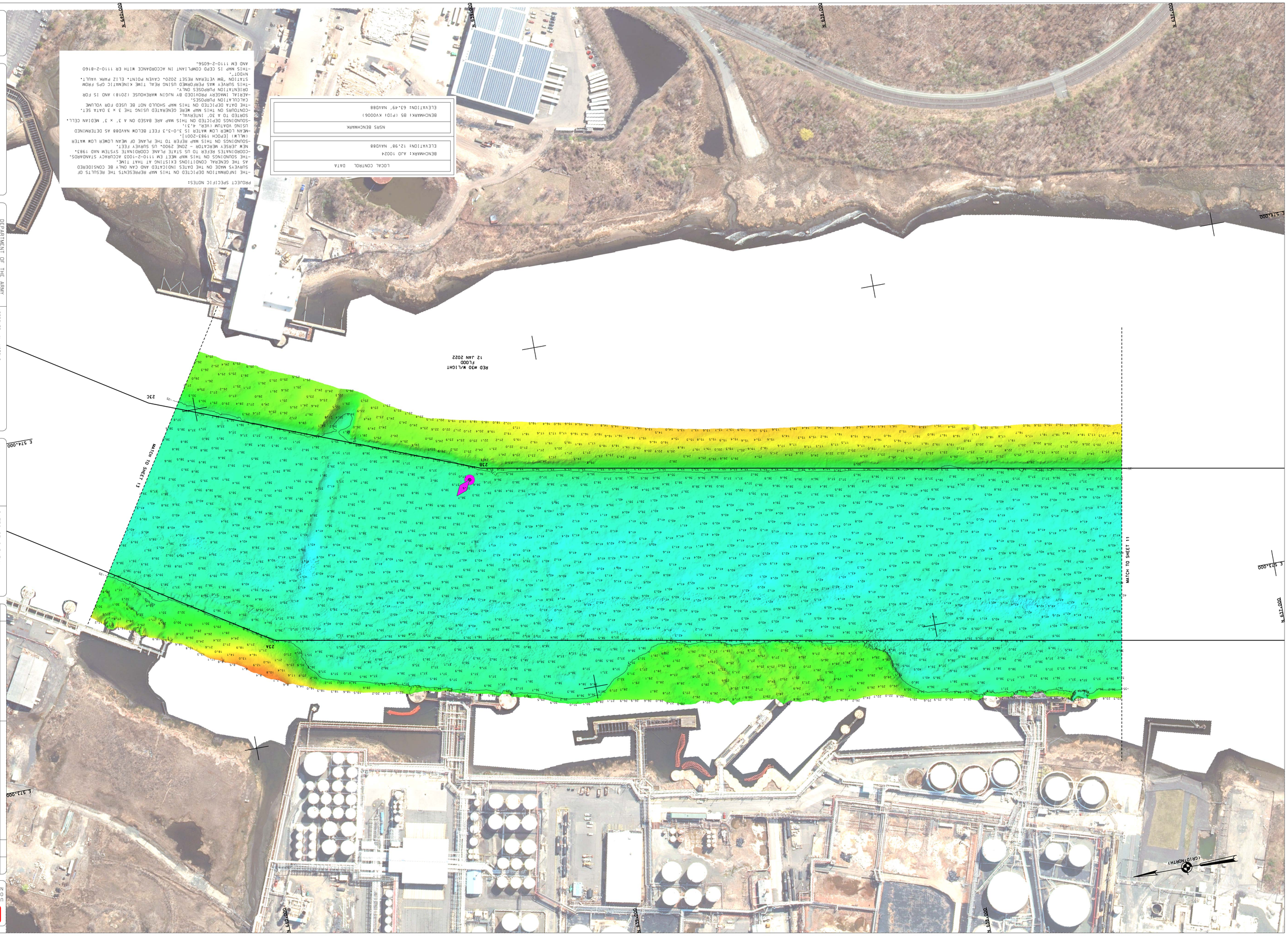
APPROVED: N. VITOLO — FIELD CARTOGRAPHER
APPROVED: M. FORTE — CIVIL ENGINEERING TECHNICIAN
APPROVED: P. BHADUR — LEAD CARTOGRAPHER
APPROVED: J. MRAZ — DEPUTY CHIEF OF SURVEYS
DATE: 7 FEBRUARY 2022

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL

CONDITION SURVEY

VH-111
SHEET 11 OF 22

REQ. NO./FILE NO.: 5129/N1/N3/N4



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LOCAL CONTROL DATA
BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: BS (PID: KV0006)
ELEVATION: 63.49' NAVD88

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

APPROVED: N. VITOLO
FIELD CARTOGRAPHER
APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN
APPROVED: P. BHADUR
LEAD CARTOGRAPHER
APPROVED: J. MRAZ
DEPUTY CHIEF OF SURVEYS
DATE: 7 FEBRUARY 2022

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

DATES OF SURVEY:
10.12.13.18.20.26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

PR	CM.JHS
MP	CM.JHS

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

U. S. ARMY

CORPS OF ENGINEERS

REQ. NO./FILE NO.: 5129/N1/N3/N4

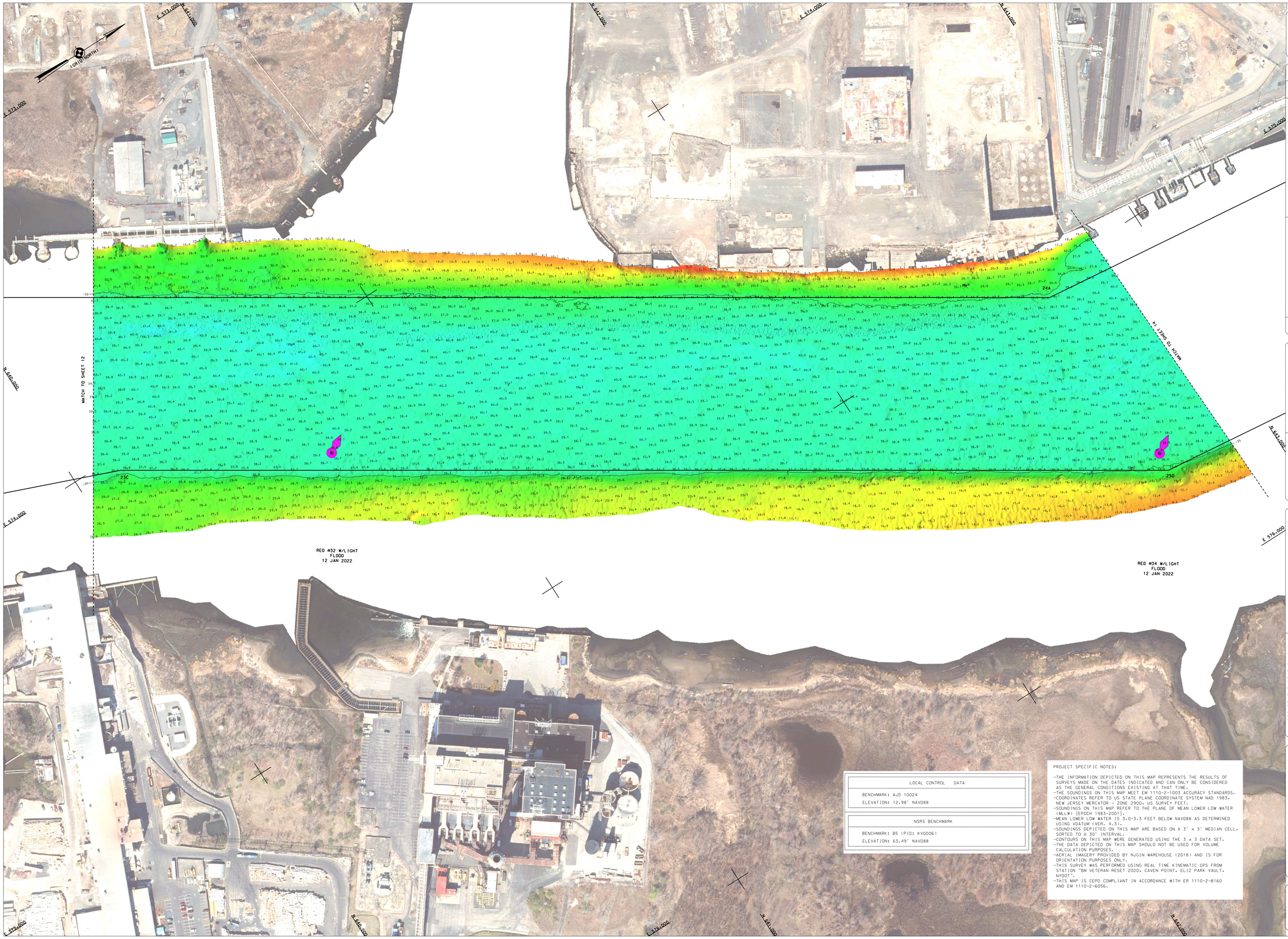
NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-112

SHEET 12 OF 22

CORPS OF ENGINEERS

U. S. ARMY



LOCAL CONTROL DATA
BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: B5 (PID: KV0006)
ELEVATION: 63.49' NAVD88

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US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

PR CM+JHS
MP CM+JHS

DATES OF SURVEY:
10,12,13,18,20,26 JAN 2022

REG. NO./FILE NO.: 5129/N1/N3/N4

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

APPROVED: Ms. VITOLO
CHIEF, SURVEY BRANCH

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHASIN
CHIEF, OPERATIONS DIVISION

APPROVED: J. MRAZ
CHIEF, SURVEY SECTION

DATE: 7 FEBRUARY 2022

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OPS

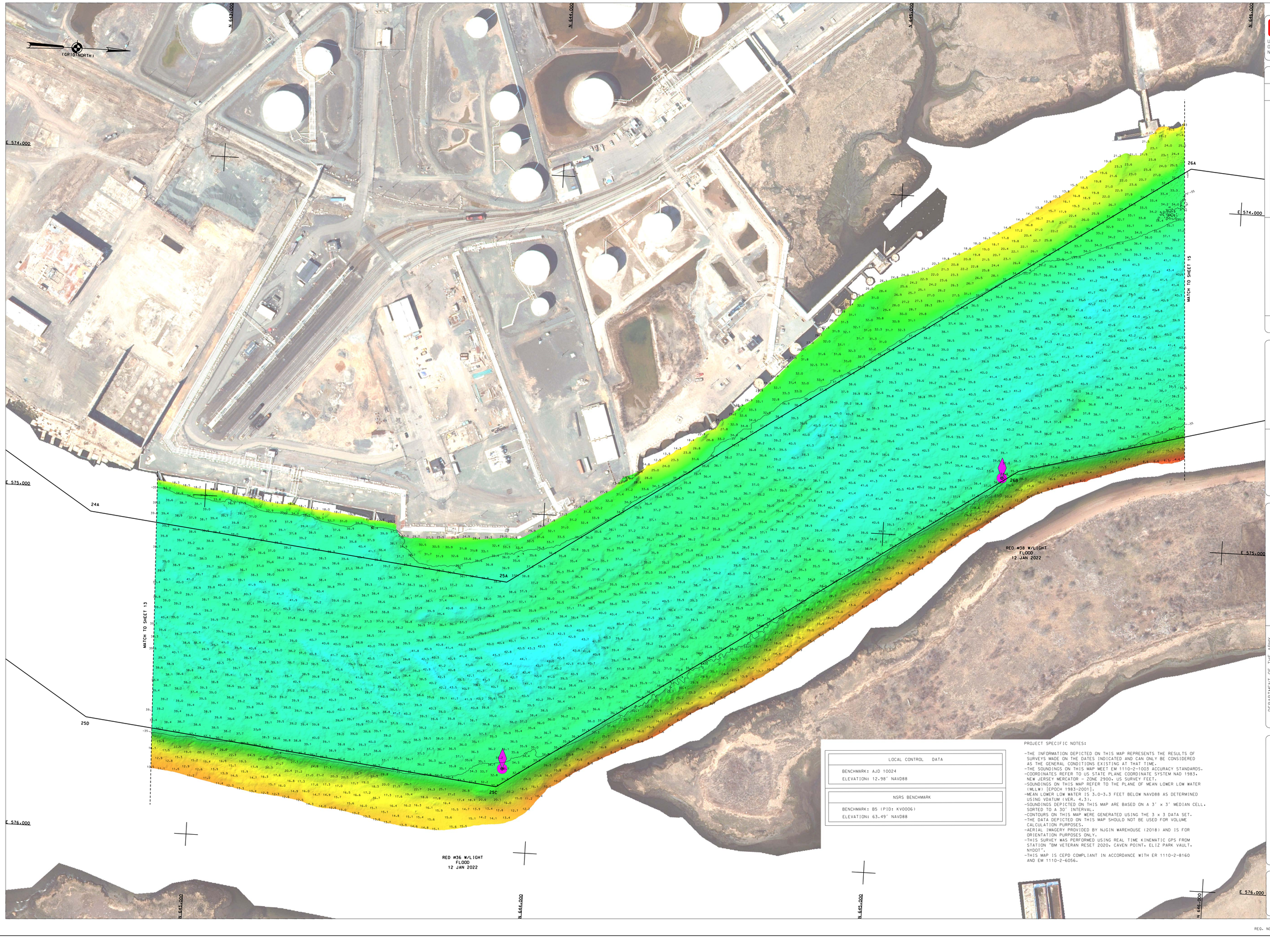
NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-113

SHEET 13 OF 22

CORPS OF ENGINEERS

U. S. ARMY



US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

PR	CM.JHS
MP	CM.JHS

DATES OF SURVEY*:
10,12,13,18,20,26 JAN 2022

RED. NO./FILE NO.: 5129/N1/N3/N4

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

APPROVED: N. VITOLO
CHIEF, SURVEY CONTROL SECTION

APPROVED: M. FORTE
CHIEF, ENGINEERING DIVISION

APPROVED: P. BHADURI
CHIEF, OPERATIONS DIVISION

APPROVED: J. MRAZ
CHIEF, SURVEY BRANCH

DATE: 1 FEBRUARY 2022

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

LOCAL CONTROL DATA
BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: B5 (PID: KV0006)
ELEVATION: 63.49' NAVD88

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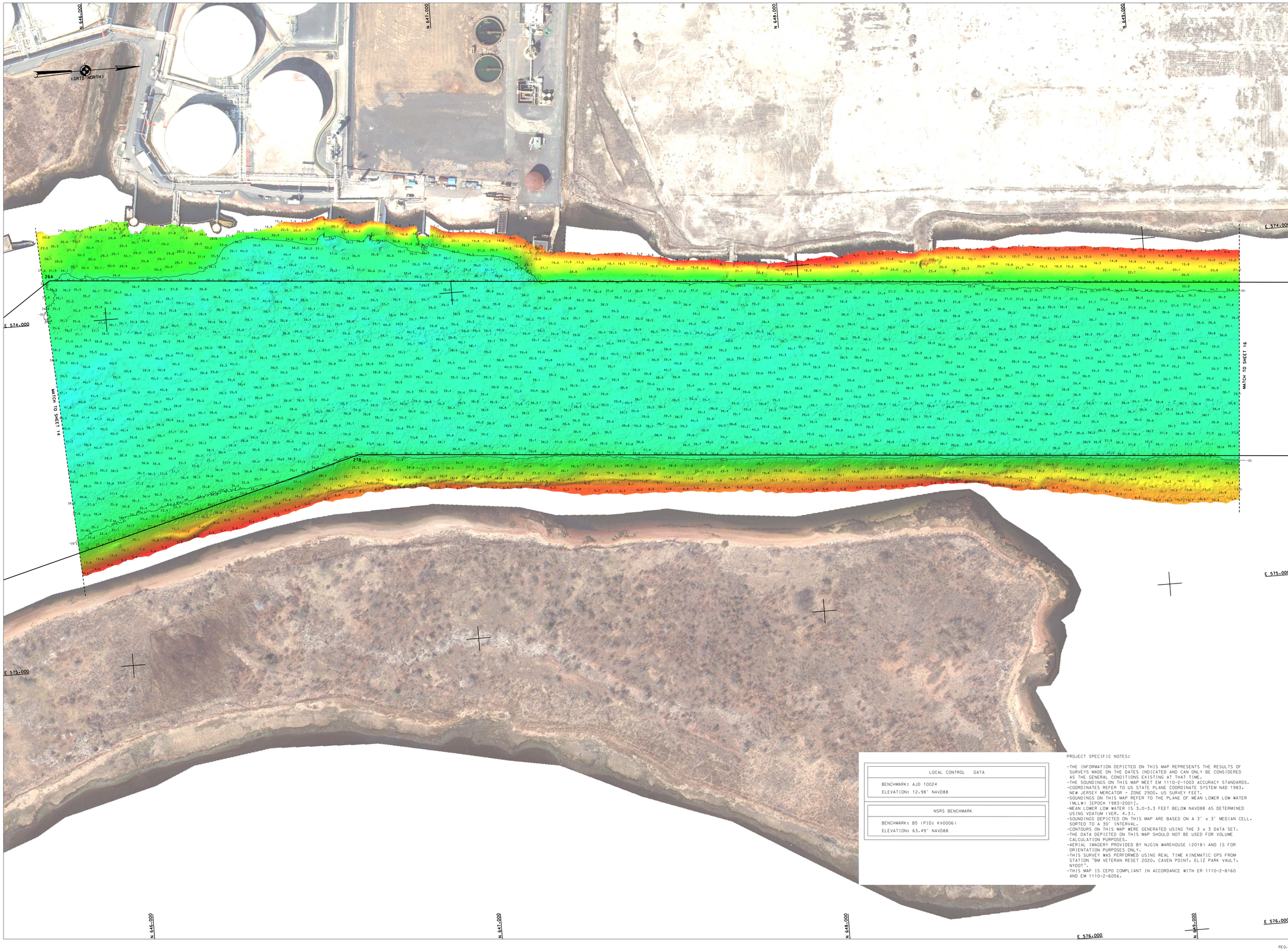
NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-114

SHEET 14 OF 22



LOCAL CONTROL DATA
BENCHMARK: AJD 10024 ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: B5 (PID: KV0006) ELEVATION: 63.49' NAVD88

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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	CM,JHS
MP	CM,JHS

DATES OF SURVEY:
10,12,13,18,20,26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

APPROVED: N. VITOLO
FIELD CARTOGRAPHER

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADUR
LEAD CARTOGRAPHER

APPROVED: J. MRAZ
DEPUTY CHIEF OF SURVEYS

DATE: 7 FEBRUARY 2022

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL

CONDITION SURVEY

VH-115

SHEET 15 OF 22

REQ. NO./FILE NO.: 5129/N1/N3/N4

REG. NO./FILE NO.: 5129/NY/NJ/N4

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

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

OPERATIONS DIVISION
SURVEY SECTION
GENERAL OPS

APPROVED: N. VITOLO
CHIEF, SURVEY SECTION

APPROVED: M. FORTE
CHIEF, ENGINEERING TECHNICIAN

APPROVED: E. BHABOO
CHIEF, SURVEY BRANCH

APPROVED: J. MIRAZ
CHIEF, OPS DIVISION

DATE: 1 FEBRUARY 2022

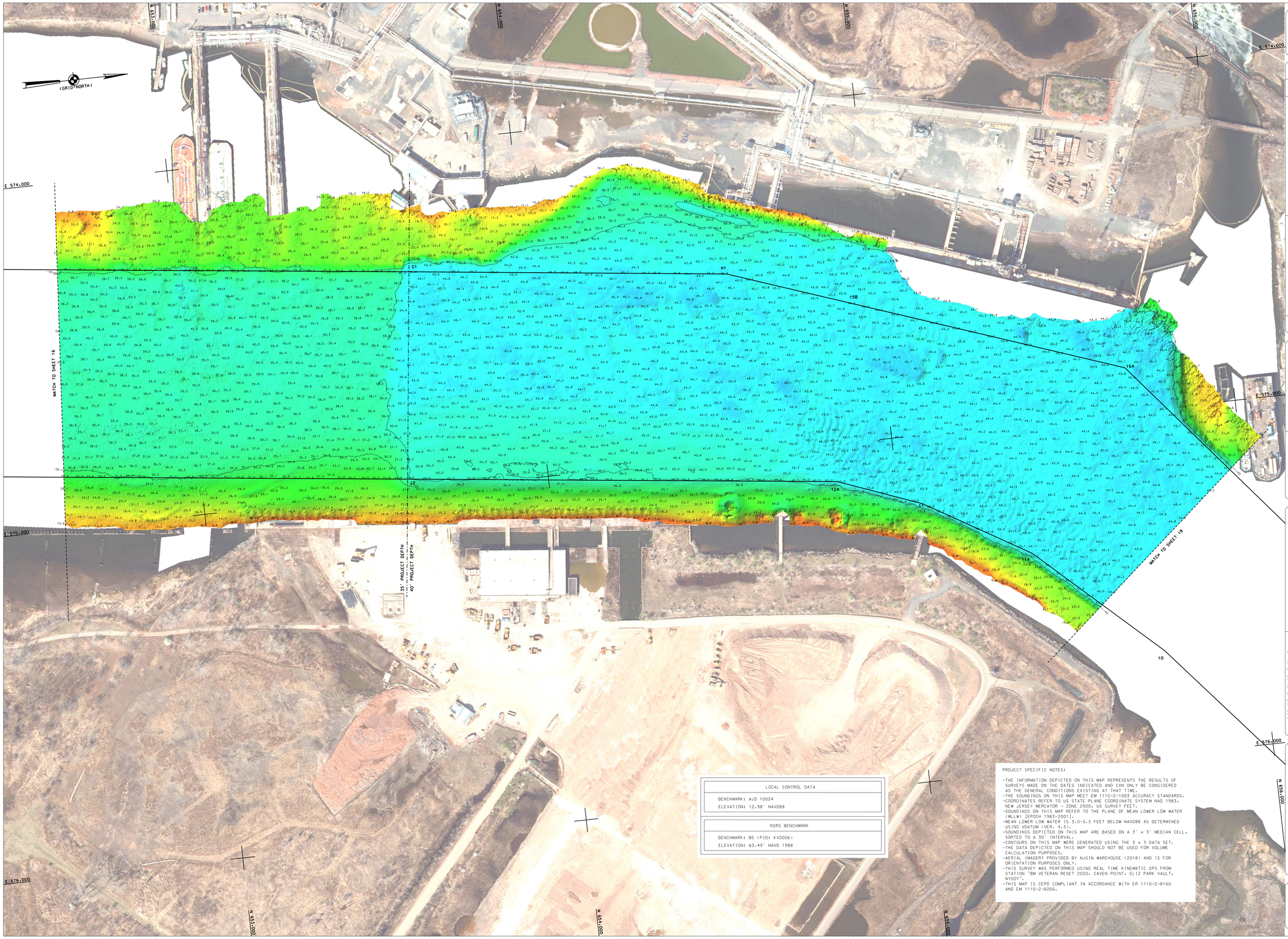
SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

DATES OF SURVEY:
10, 12, 13, 18, 20, 26 JAN 2022

REG. NO./FILE NOS.: 5129/NY/NJ/N4

| DR | PPB | | |



US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

PR	CM+JHS	
MP	CM+JHS	

DATES OF SURVEY:
10-12,13,18,20,26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

LOCAL CONTROL DATA
BENCHMARK: AJD 10024 ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: B5 (PID: KV0006) ELEVATION: 63.49' NAVD 1988

PROJECT SPECIFIC NOTES:

-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.
-COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983, NEW JERSEY MERCATOR - ZONE 2900. US SURVEY FEET.
-SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
-MEAN LOWER LOW WATER IS 3.0-3.3 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 4.3).
-SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' x 3' MEDIAN CELL. SORTED TO A 30' INTERVAL.
-CONTOURS ON THIS MAP WERE GENERATED USING THE 3 x 3 DATA SET.
-THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
-AERIAL IMAGERY PROVIDED BY NJGIN WAREHOUSE (2018) AND IS FOR ORIENTATION PURPOSES ONLY.
-THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "BM VETERAN RESET 2020, CAVEN POINT, ELIZ PARK VAULT, NYDOT".
-THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

APPROVED: D. WEBB
CHIEF, SURVEY BRANCH

APPROVED: M. FORTE
CHIEF, ENGINEERING DIVISION

APPROVED: P. BHAGIA
CHIEF, OPERATIONS DIVISION

APPROVED: J. MRAZ
BRANCH CHIEF OF SURVEYS

DATE: 1 FEBRUARY 2022

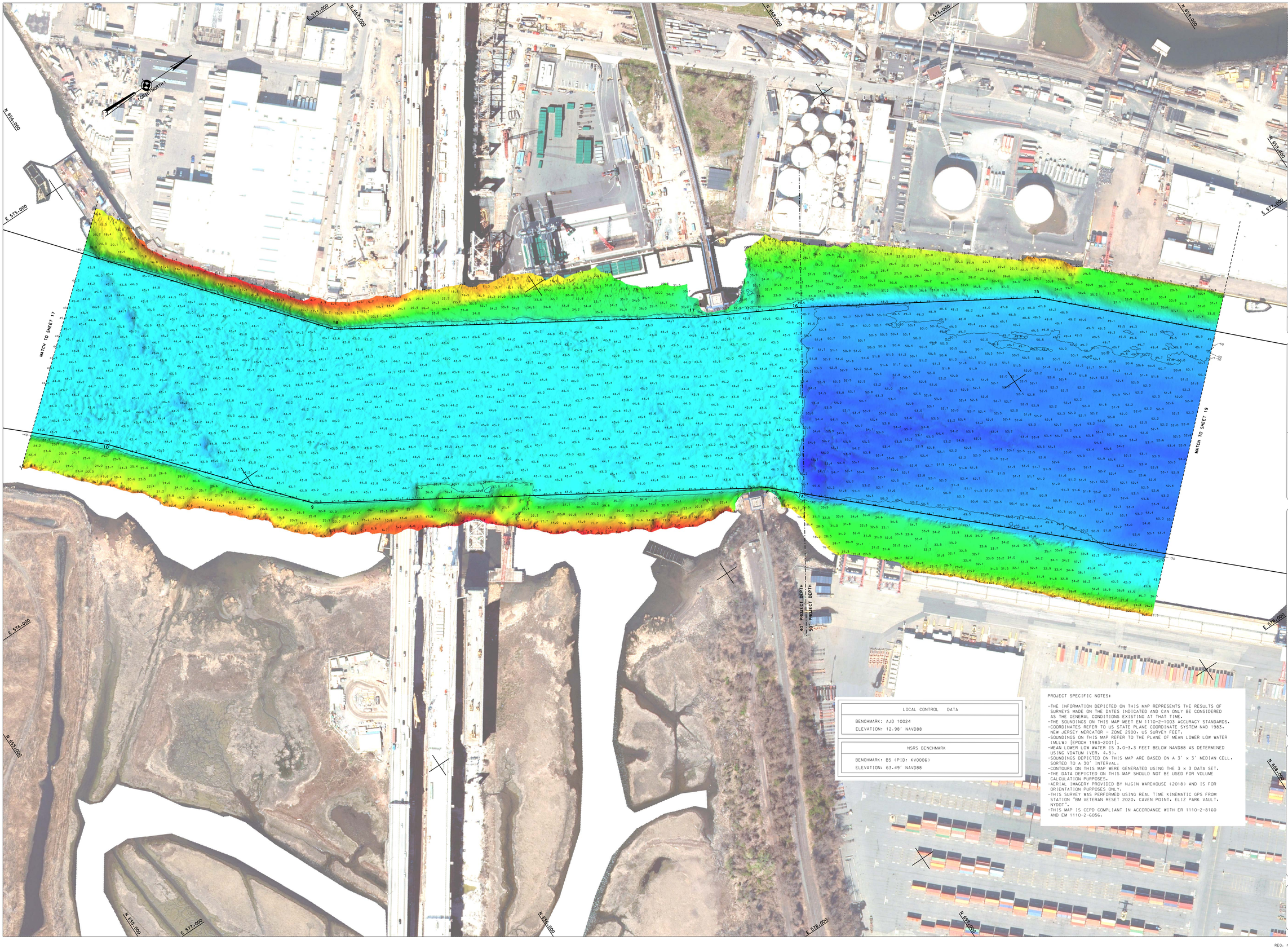
DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OPS

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-117

SHEET 17 OF 22



LOCAL CONTROL DATA
BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: B5 (PID: KV0006)
ELEVATION: 63.49' NAVD88

PROJECT SPECIFIC NOTES:

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US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PR	CM.JHS
MP	CM.JHS

DATES OF SURVEY: 10.12.13.18.20.26 JAN 2022

REQ. NO./FILE NO.: 5129/N1/N3/N4

SCALE: ONE INCH = 100 FEET

FIELD BOOKS: N/A

APPROVED: N. VITOLO — FIELD CARTOGRAPHER

APPROVED: M. FORTE — CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADUR — LEAD CARTOGRAPHER

APPROVED: J. MRAZ — DEPUTY CHIEF OF SURVEYS

DATE: 7 FEBRUARY 2022

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-118

SHEET 18 OF 22

U. S. ARMY

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PR	CM/JHS
MP	CM/JHS

DATES OF SURVEY: 10.12.13.18.20.26 JAN 2022

SCALE: ONE INCH = 100 FEET

FIELD BOOKS: N/A

REQ. NO./FILE NO.: 5129/N1/N3/N4

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

APPROVED: N. VITOLO
FIELD CARTOGRAPHER

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

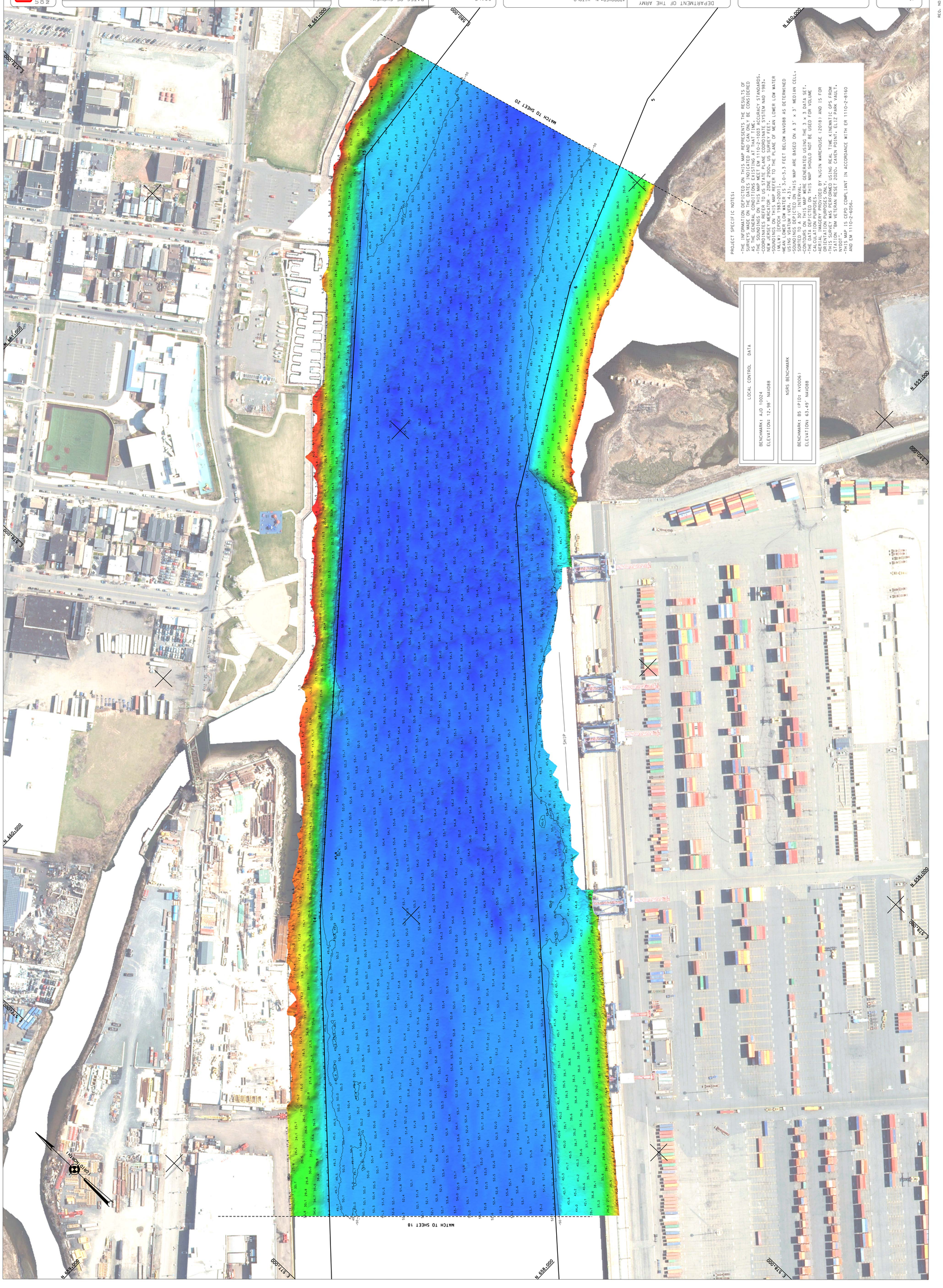
APPROVED: P. BHADUR
LEAD CARTOGRAPHER

APPROVED: J. MRAZ
DEPUTY CHIEF OF SURVEY

DATE: 7 FEBRUARY 2022

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

VH-119
SHEET 19 OF 22



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LOCAL CONTROL DATA

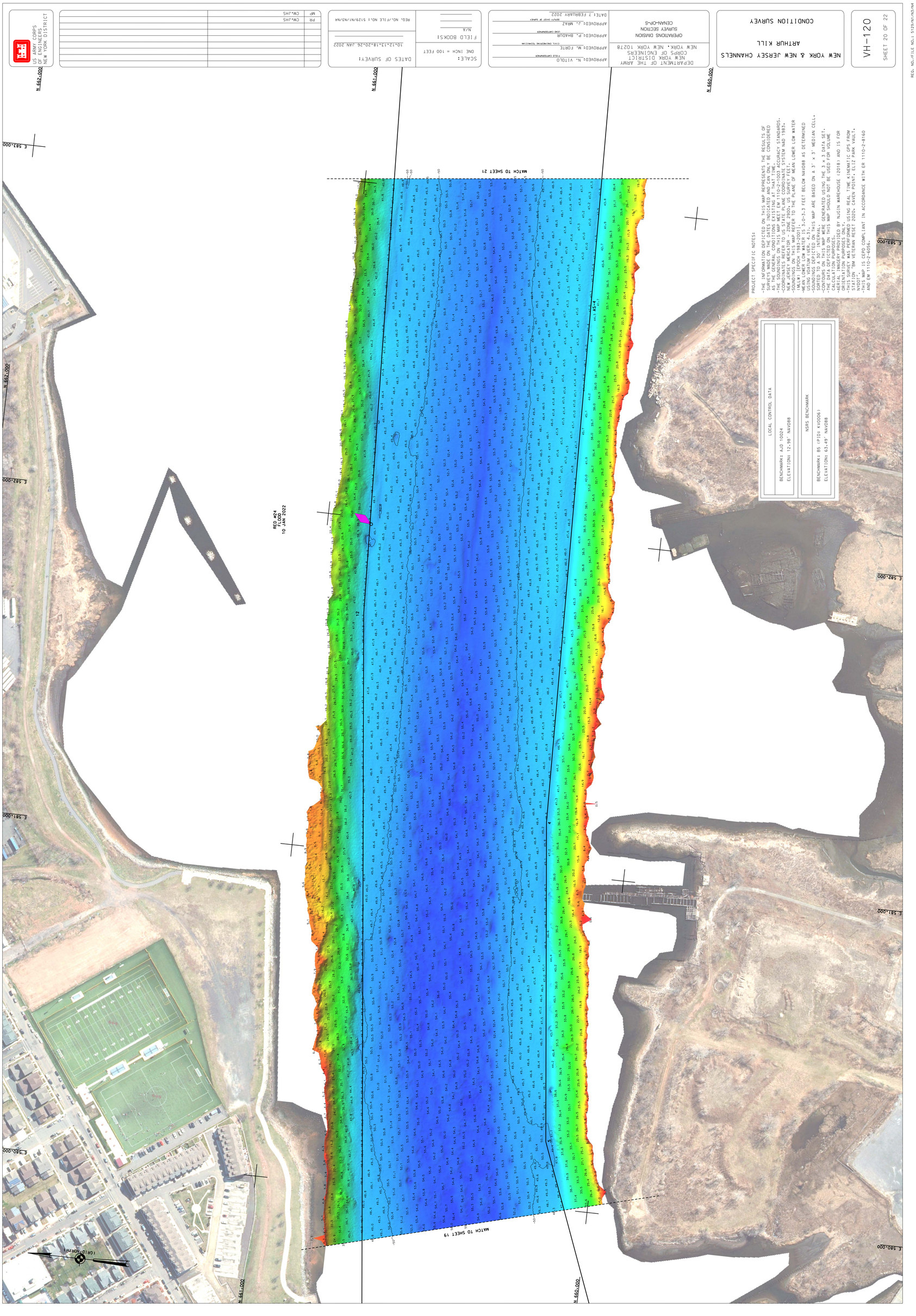
BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK

BENCHMARK: B5 (PID: KV0006)
ELEVATION: 63.49' NAVD88

REQ. NO./FILE NO.: 5129/N1/N3/N4

CORPS OF ENGINEERS



U. S. ARMY
US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT
PR CM.JHS
MP CM.JHS
DATES OF SURVEY: 10.12.13.18.20.26 JAN 2022
REG. NO./FILE NO.: 5129/N1/N3/N4
SCALE: ONE INCH = 100 FEET
FIELD BOOKS: N/A
DEPARTMENT OF THE ARMY NEW YORK DISTRICT CORPS OF ENGINEERS NEW YORK, NEW YORK 10278
OPERATIONS DIVISION SURVEY SECTION CENAN-OP-S
APPROVED: N. VITOLO
APPROVED: M. FORTE
APPROVED: P. BHADUR
APPROVED: J. MRAZ
DATE: 7 FEBRUARY 2022
NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY
VH-120
SHEET 20 OF 22
REG. NO./FILE NO.: 5129/N1/N3/N4
PROJECT SPECIFIC NOTES:
-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.
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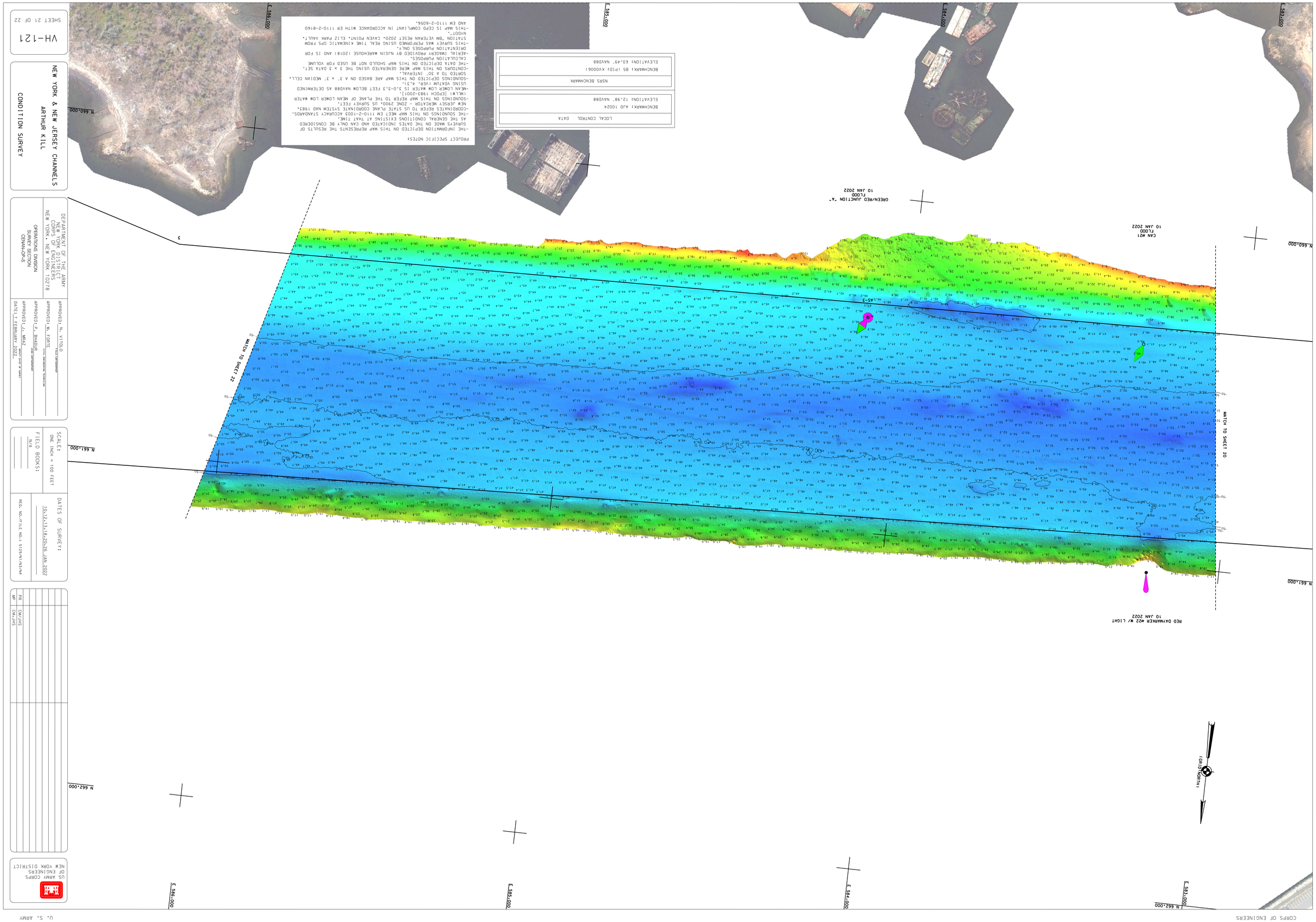
-THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.
LOCAL CONTROL DATA
BENCHMARK: AJD 10024
ELEVATION: 12.98' NAVD88
NSRS BENCHMARK
BENCHMARK: B5 (PID: KV0006)
ELEVATION: 63.49' NAVD88
MATCH TO SHEET 21
MATCH TO SHEET 19
RED #24 FLOOD 10 JAN 2022
N 661,000
N 660,000
N 662,000
E 583,000
E 582,000
E 581,000
E 580,000
(GRID NORTH)
CORPS OF ENGINEERS



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LOCAL CONTROL DATA

BENCHMARK: AJD 1002A	
ELEVATION: 12.98' NAVD88	
NSRS BENCHMARK	
BENCHMARK: BS (PID: KV0006)	
ELEVATION: 63.49' NAVD88	

NEW YORK & NEW JERSEY CHANNELS
ARTHUR KILL
CONDITION SURVEY

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

APPROVED: N. VITOLO
FIELD CARTOGRAPHER
APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN
APPROVED: P. BHAUR
LEAD CARTOGRAPHER
APPROVED: J. MRAZ
SURVEY CHIEF OF SURVEY
DATE: 7 FEBRUARY 2022

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

DATES OF SURVEY:
10.12.13.18.20.26 JAN 2022

REG. NO./FILE NO.: 5129/N1/N3/N4

PR	CM/JHS
MP	CM/JHS

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

VH-121
SHEET 21 OF 22

REG. NO./FILE NO.: 5129/N1/N3/N4

U. S. ARMY

CORPS OF ENGINEERS

REG. NO./FILE NO.: 5129/N1/N3/N4

U. S. ARMY

CORPS OF ENGINEERS

NEW YORK & NEW JERSEY CHANNELS

ARTHUR KILL

CONDITION SURVEY

SHEET 22 OF 22

VH-122

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-HS

APPROVED: J. MIAZ
CHIEF, SURVEY SECTION

APPROVED: P. BHARDWAJ
CHIEF, OPERATIONS DIVISION

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: N. VITOLO
FIELD SURVEYOR

DATE: 7 FEBRUARY 2022

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

REG. NO./FILE NOS.: 5129/N1/N3/N4

DATES OF SURVEY:
10,12,13,18,20,26 JAN 2022

SUR.	CAV. UHS
CAV.	
PIR	
MP	

U.S. ARMY
CORPS OF ENGINEERS
NEW YORK DISTRICT

PROJECT SPECIFIC NOTES:

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- SORTED TO A 30' INTERVAL.
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- SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' x 3' MEDIAN CELL.
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- THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "BAY VETERAN RESET 2020. CAREN POINT. ELIZ PARK VAULT. NDOT".
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

LOCAL CONTROL DATA
BENCHMARK: AJD 1002#
ELEVATION: 12.98' NAVD88

NSRS BENCHMARK
BENCHMARK: BS (PID: KV0006)
ELEVATION: 63.49' NAVD88

