CORPS OF ENGINEERS

U. S. ARMY

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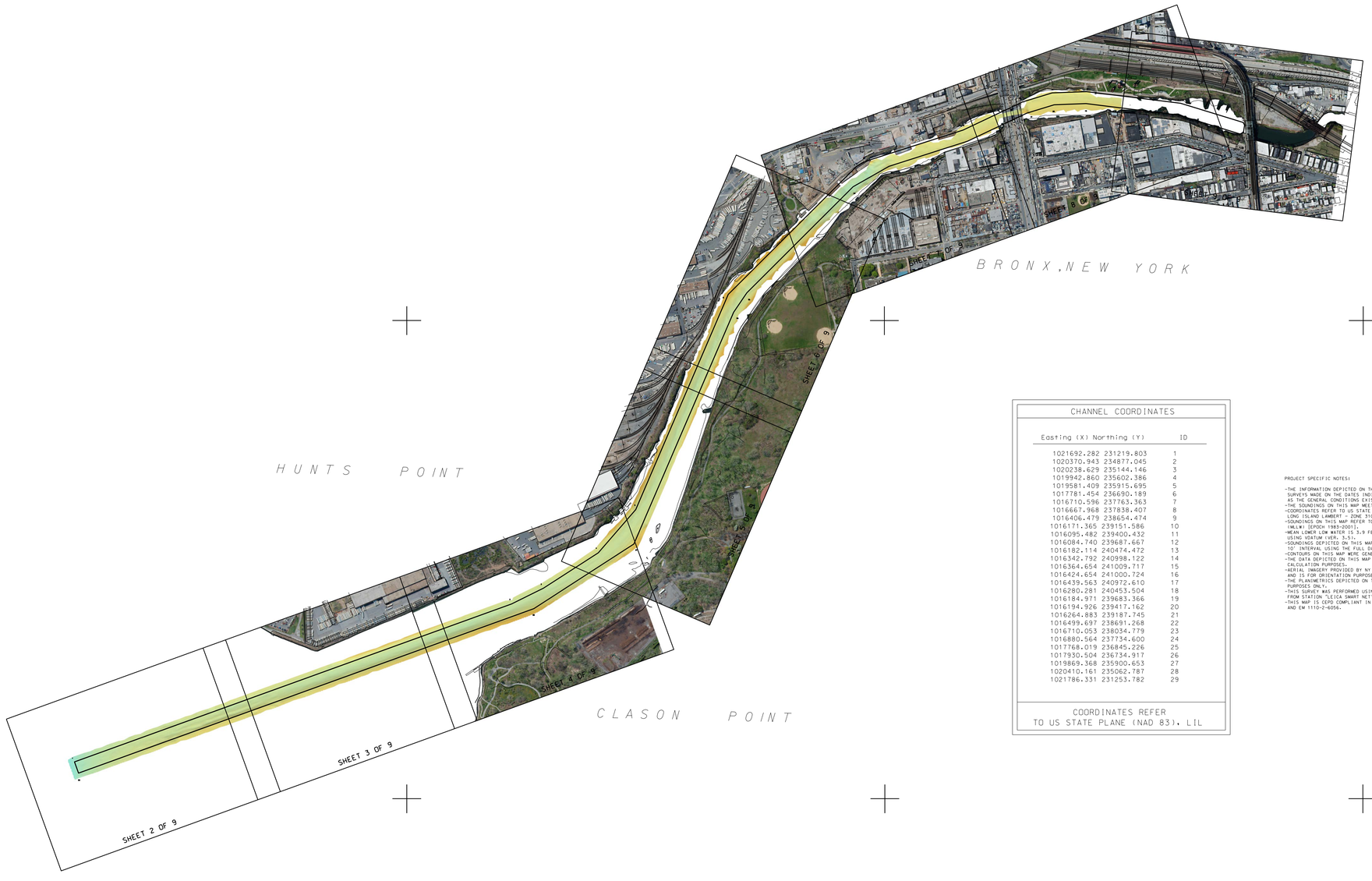
E 1,014,000 | E 1,018,000 | E 1,022,000



CHANNEL COORDINATES

Easting (X)	Northing (Y)	ID
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1020370.943	234877.045	2
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1019942.860	235602.386	4
1019581.409	235915.695	5
1017781.454	236690.189	6
1016710.596	237763.363	7
1016667.968	237838.407	8
1016406.479	238654.474	9
1016171.365	239151.586	10
1016095.482	239400.432	11
1016084.740	239687.667	12
1016182.114	240474.472	13
1016342.792	240998.122	14
1016364.654	241009.717	15
1016424.654	241000.724	16
1016439.563	240972.610	17
1016280.281	240453.504	18
1016184.971	239683.366	19
1016194.926	239417.162	20
1016264.883	239187.745	21
1016499.697	238691.268	22
1016710.053	238034.779	23
1016880.564	237734.600	24
1017768.019	236845.226	25
1017930.504	236734.917	26
1019869.368	235900.653	27
1020410.161	235062.787	28
1021786.331	231253.782	29

COORDINATES REFER
TO US STATE PLANE (NAD 83), LIL

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, LONG ISLAND ZONE, ZONE 3104. 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 3.9 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 3.5).
-SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' INTERVAL USING THE FULL DATA SET.
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-THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
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-THE PLANIMETRICS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
-THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "LEICA SMART NET".
-THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

LOCAL CONTROL DATA
BENCHMARK: RIVERSIDE HEADWALL ELEVATION: 6.72' (NAVD88)

NSRS BENCHMARK
BENCHMARK: W 340 (PID: KU1003) ELEVATION: 20.10' (NAVD88)

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

BH/CA	PR	
JE	MP	

DATES OF SURVEY: 17-18 DECEMBER 2019

FILE NO.: 4887
REQUEST NO.: 4887/N3

SCALE: ONE INCH = 400 FEET

FIELD BOOKS:

APPROVED: M. APPELD — FIELD CARTOGRAPHER
APPROVED: M. FORTE — CIVIL ENGINEERING TECHNICIAN
APPROVED: D. CLARKE — CHIEF CARTOGRAPHER
APPROVED: J. MRAZ — DEPUTY CHIEF OF SURVEY
DATE: 9 JANUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

BRONX RIVER
NEW YORK
CONDITION SURVEY

VH–101

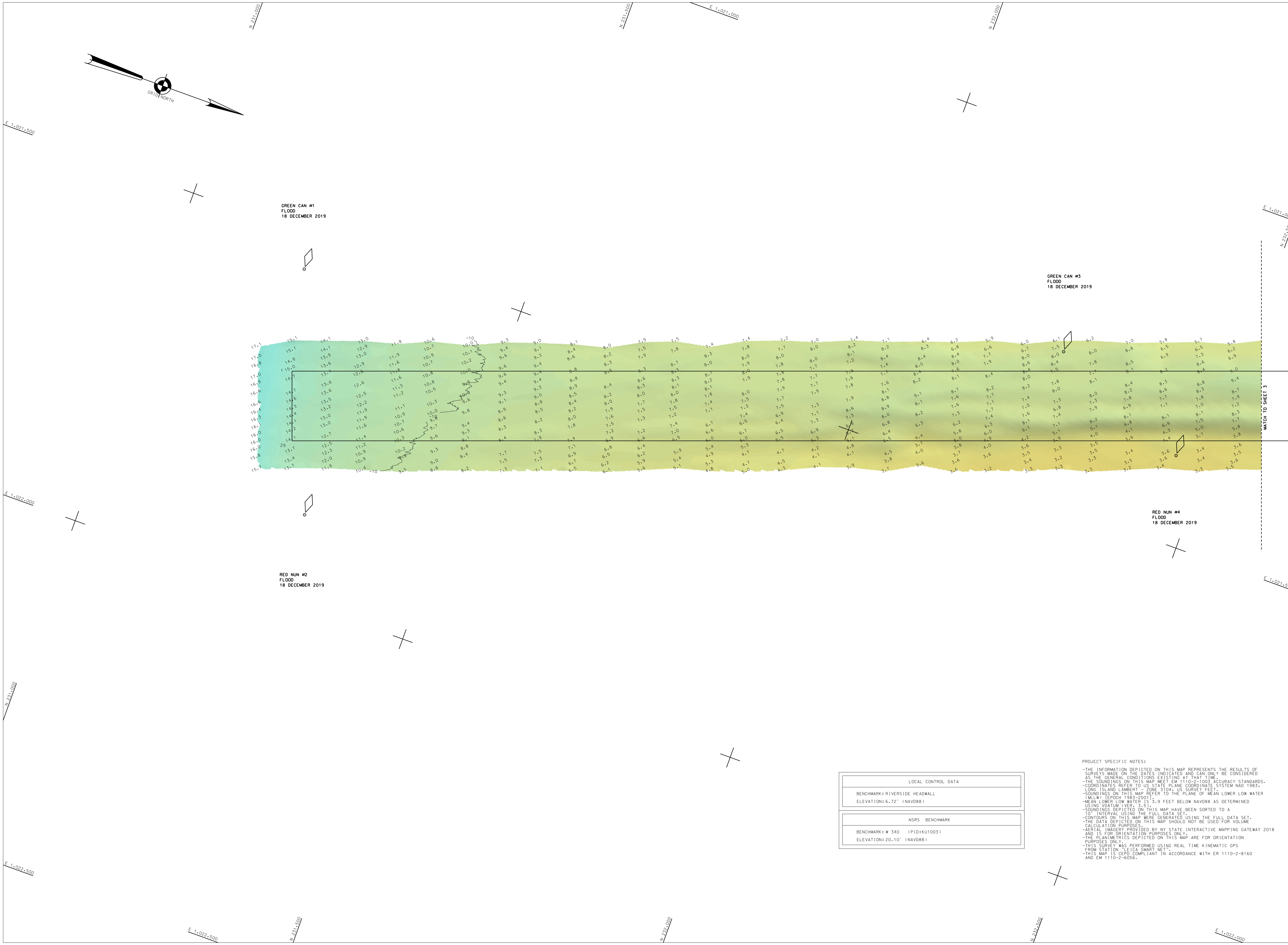
SHEET 1 OF 9

REQ NO.:4887/N3

CORPS OF ENGINEERS

U. S. ARMY

US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT



BH/CA	PR
JE	MP

DATES OF SURVEY:
17-18 DECEMBER 2019

FILE NO.: 4887
REQUEST NO.: 4887/N3

SCALE:
ONE INCH = 50 FEET

FIELD BOOKS:

APPROVED: M. APPELD — FIELD CARTOGRAPHER
APPROVED: M. FORTE — CIVIL ENGINEERING TECHNICIAN
APPROVED: D. CLARKE — LEAD CARTOGRAPHER
APPROVED: J. MRAZ — DEPUTY CHIEF OF SURVEY
DATE: 9 JANUARY 2020

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: RIVERSIDE HEADWALL ELEVATION: 6.72' (NAVD88)

NSRS BENCHMARK
BENCHMARK: W 340 (PID:KU1003) ELEVATION: 20.10' (NAVD88)

PROJECT SPECIFIC NOTES:

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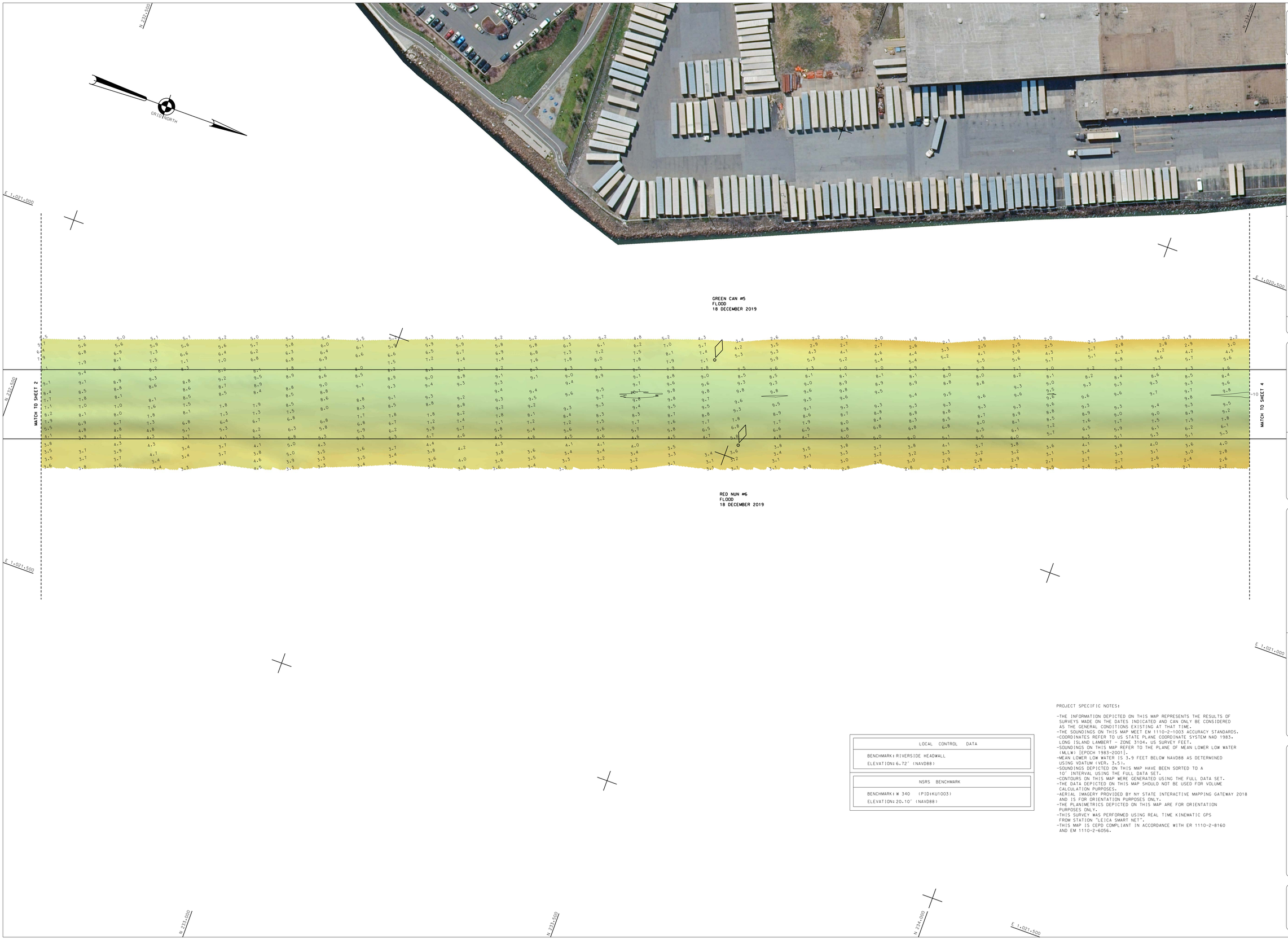
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

BRONX RIVER
NEW YORK
CONDITION SURVEY

VH-102

REQ.NO.: 4887/N3



LOCAL CONTROL DATA
BENCHMARK: RIVERSIDE HEADWALL
ELEVATION: 6.72' (NAVD88)

NSRS BENCHMARK
BENCHMARK: W 340 (PID:KU1003)
ELEVATION: 20.10' (NAVD88)

PROJECT SPECIFIC NOTES:

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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

BH/CA PR
JE MP

DATES OF SURVEY:
17-18 DECEMBER 2019

FILE NO.: 4887
REQUEST NO.: 4887/N3

SCALE:
ONE INCH = 50 FEET

FIELD BOOKS:

APPROVED: M. APPELO
FIELD CARTOGRAPHER
APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN
APPROVED: D. CLARKE
LEAD CARTOGRAPHER
APPROVED: J. MRAZ
DEPUTY CHIEF OF SURVEY
DATE: 9 JANUARY 2020

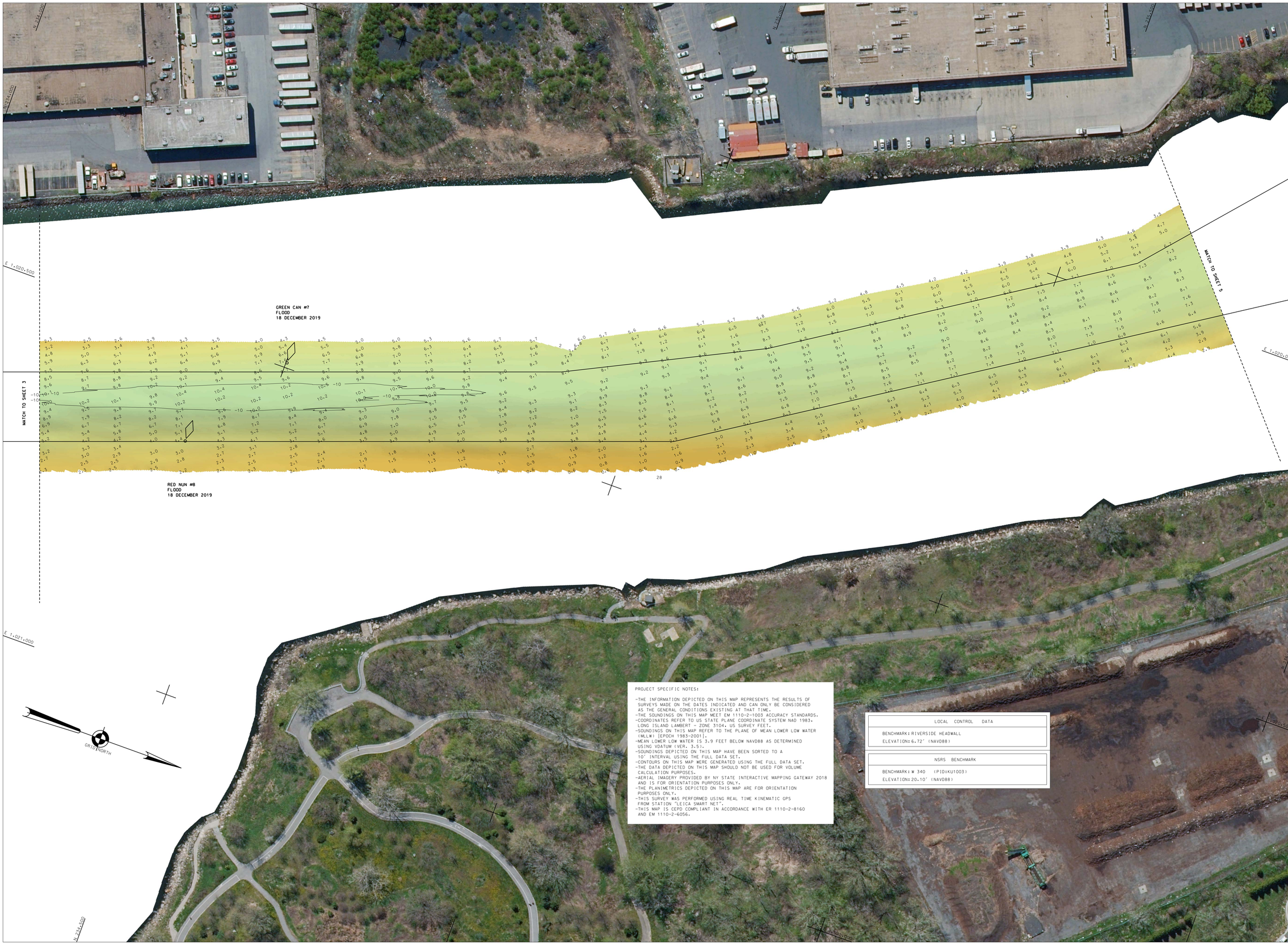
DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

BRONX RIVER
NEW YORK
CONDITION SURVEY

VH-103

SHEET 3 OF 9



PROJECT SPECIFIC NOTES:

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LOCAL CONTROL DATA
BENCHMARK: RIVERSIDE HEADWALL
ELEVATION: 6.72' (NAVD88)

NSRS BENCHMARK
BENCHMARK: W 340 (PID:KU1003)
ELEVATION: 20.10' (NAVD88)

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

BY/CA	PR	
	JE	MP

DATES OF SURVEY:
17-18 DECEMBER 2019

FILE NO.: 4887
REQUEST NO.: 4887/N3

SCALE:
ONE INCH = 50 FEET

FIELD BOOKS:

APPROVED: M. APPELD — FIELD CARTOGRAPHER
APPROVED: M. FORTE — CIVIL ENGINEERING TECHNICIAN
APPROVED: D. CLARKE — CADD CARTOGRAPHER
APPROVED: J. MRAZ — DEPUTY CHIEF OF SURVEY
DATE: 9 JANUARY 2020

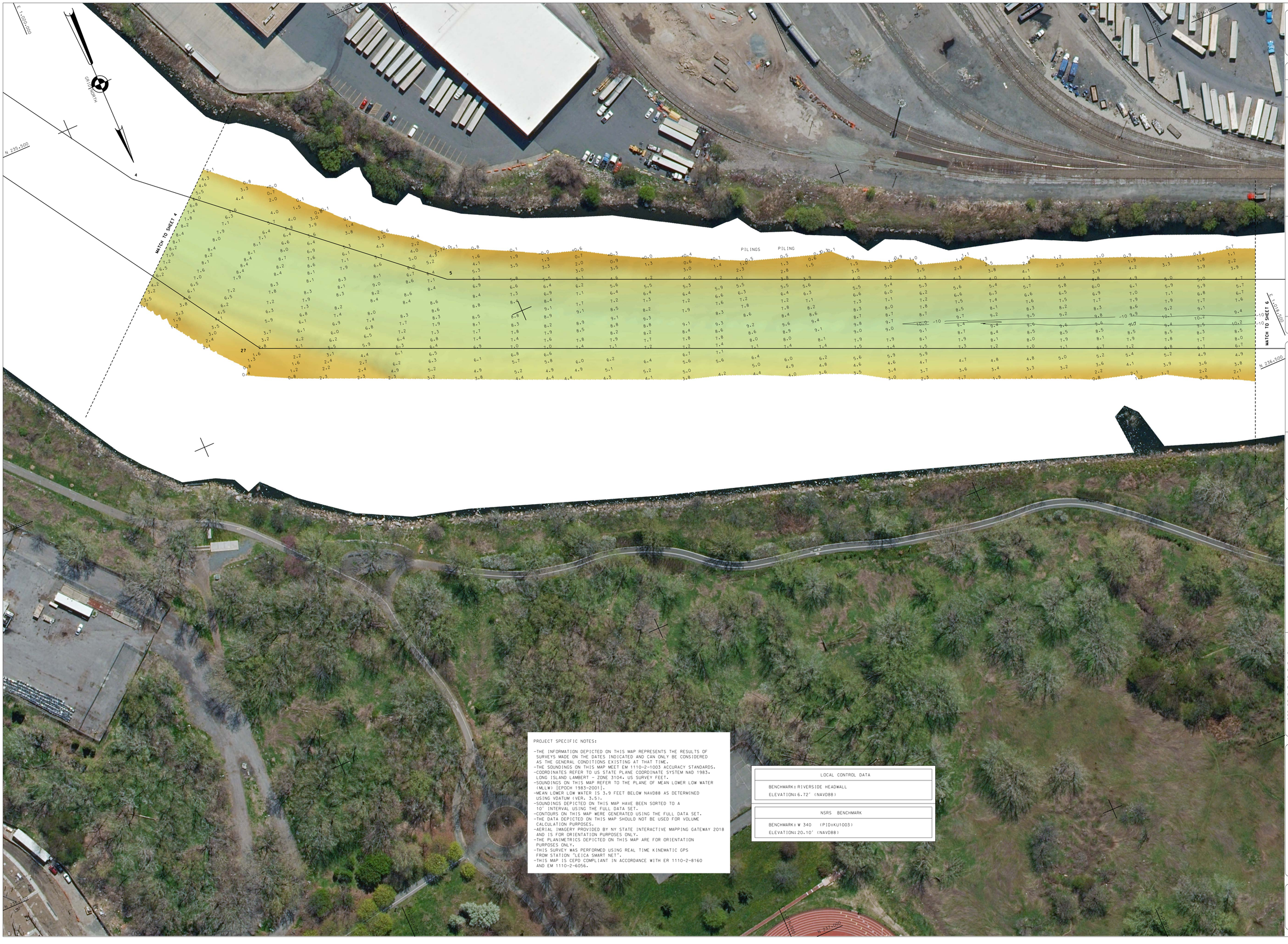
DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

BRONX RIVER
NEW YORK
CONDITION SURVEY

VH-104

SHEET 4 OF 9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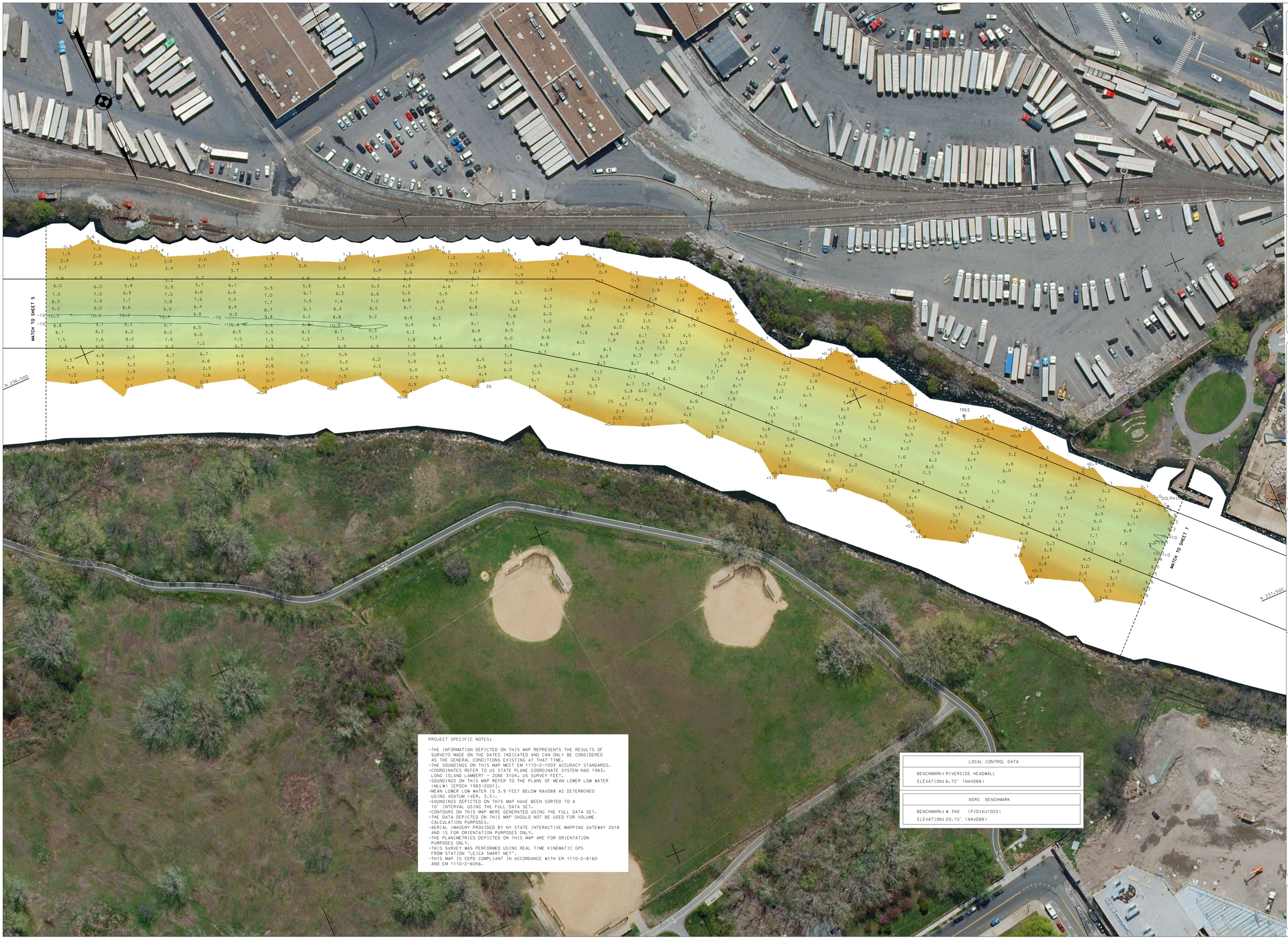


PROJECT SPECIFIC NOTES:

- 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. LONG ISLAND LAMBERT - ZONE 3104. 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 3.9 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 3.5).
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' INTERVAL USING THE FULL DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE FULL DATA SET.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- AERIAL IMAGERY PROVIDED BY NY STATE INTERACTIVE MAPPING GATEWAY 2018 AND IS FOR ORIENTATION PURPOSES ONLY.
- THE PLANIMETRICS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
- THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "LEICA SMART NET".
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

LOCAL CONTROL DATA
BENCHMARK: RIVERSIDE HEADWALL
ELEVATION: 6.72' (NAVD88)

NSRS BENCHMARK	
BENCHMARK: W 340	(PID:KU1003)
ELEVATION: 20.10' (NAVD88)	

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

BY/CA	JE	MP

DATES OF SURVEY: 17-18 DECEMBER 2019

FILE NO.: 4887
REQUEST NO.: 4887/N3

SCALE: ONE INCH = 50 FEET

FIELD BOOKS:

APPROVED: M. APPELO — FIELD CARTOGRAPHER
APPROVED: M. FORTE — CIVIL ENGINEERING TECHNICIAN
APPROVED: D. CLARKE — LEAD CARTOGRAPHER
APPROVED: J. MRAZ — BRANCH CHIEF OF SURVEY
DATE: 9 JANUARY 2020

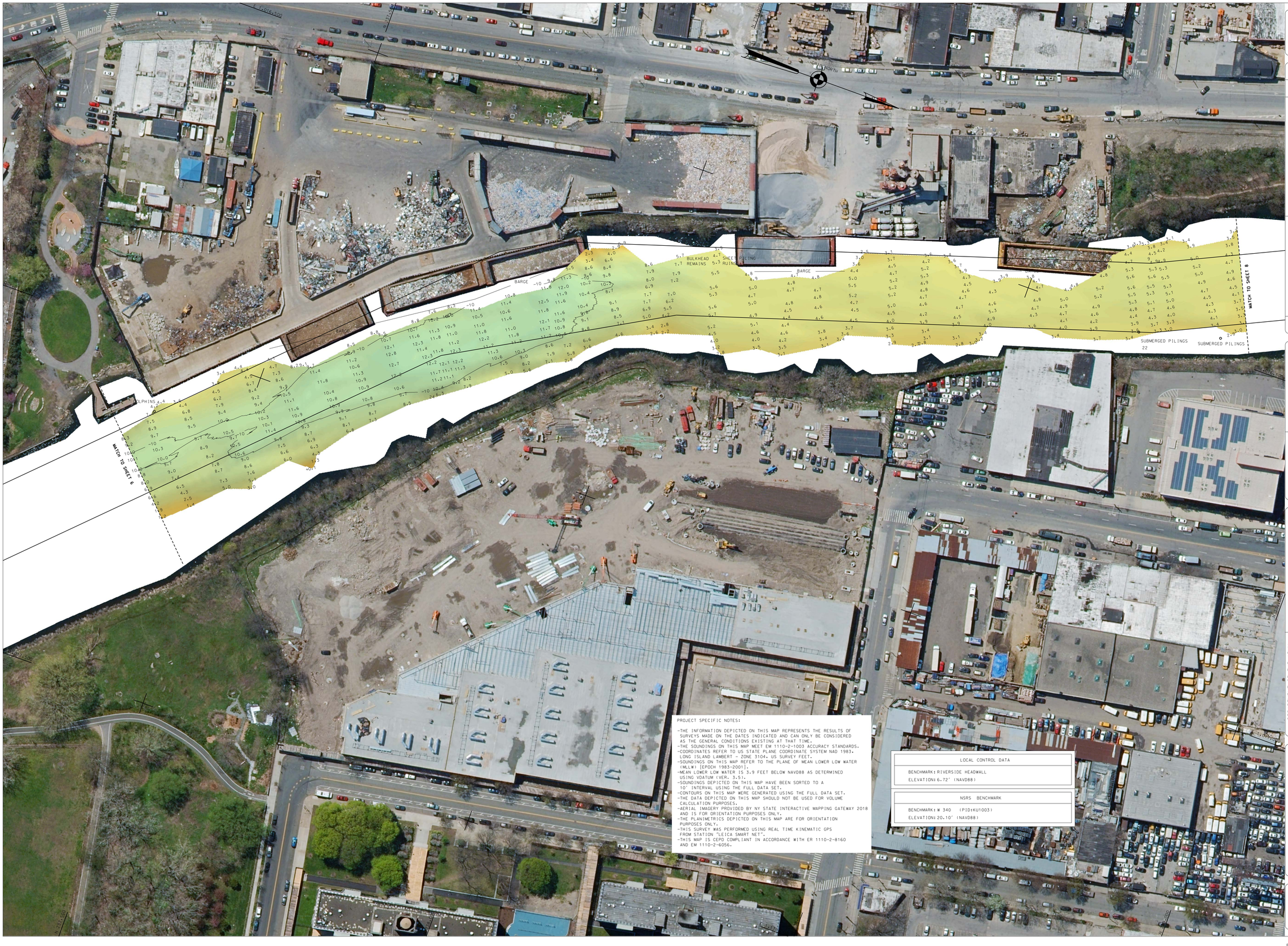
DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

BRONX RIVER
NEW YORK
CONDITION SURVEY

VH-106

SHEET 6 OF 9



PROJECT SPECIFIC NOTES:

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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: RIVERSIDE HEADWALL ELEVATION: 6.72' (NAVD88)

NSRS BENCHMARK
BENCHMARK: W 340 (PID:KU1003) ELEVATION: 20.10' (NAVD88)

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

	BY/CA	PR
	JE	MP

DATES OF SURVEY:
17-18 DECEMBER 2019

SCALE:
ONE INCH = 50 FEET

FILE NO.: 4887
REQUEST NO.: 4887/N3

FIELD BOOKS:

APPROVED: M. APPELD — FIELD CARTOGRAPHER
APPROVED: M. FORTE — CIVIL ENGINEERING TECHNICIAN
APPROVED: D. CLARKE — CHIEF CARTOGRAPHER
APPROVED: J. MRAZ — BRANCH CHIEF OF SURVEY
DATE: 8 JANUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

BRONX RIVER
NEW YORK
CONDITON SURVEY

VH-107

SHEET 7 OF 9

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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- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983. LONG ISLAND LAMBERT - ZONE 3104. US SURVEY FEET.
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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: RIVERSIDE HEADWALL
ELEVATION: 6.72' (NAVD88)

NSRS BENCHMARK
BENCHMARK: W 340 (PID:KU1003)
ELEVATION: 20.10' (NAVD88)

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

BY/CA: PR
JE: MP

DATES OF SURVEY:
17-18 DECEMBER 2019

FILE NO.: 4887
REQUEST NO.: 4887/N3

SCALE:
ONE INCH = 50 FEET

FIELD BOOKS:

APPROVED: M. APPELO
CHIEF CARTOGRAPHER

APPROVED: M. FORTE
CHIEF ENGINEERING TECHNICIAN

APPROVED: D. CLARKE
CHIEF CARTOGRAPHER

APPROVED: J. MRAZ
SURVEY CHIEF OF PARTY

DATE: 9 JANUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

BRONX RIVER
NEW YORK
CONDITION SURVEY

VH–108

SHEET 8 OF 9

PROJECT SPECIFIC NOTES:

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LOCAL CONTROL DATA
BENCHMARK: RIVERSIDE HEADWALL
ELEVATION: 6.72' (NAVD88)

NSRS BENCHMARK
BENCHMARK: W 340 (PID:KU1003)
ELEVATION: 20.10' (NAVD88)

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

BH/CA	PR	
JE	MP	

DATES OF SURVEY: 17-18 DECEMBER 2019

FILE NO: 4887
REQUEST NO: 14887/N3

SCALE: ONE INCH = 50 FEET

FIELD BOOKS:

APPROVED: M. APPELO — FIELD CARTOGRAPHER
APPROVED: M. FORTE — CIVIL ENGINEERING TECHNICIAN
APPROVED: D. CLARKE — CADD CARTOGRAPHER
APPROVED: J. MRAZ — DEPUTY CHIEF OF SURVEY
DATE: 9 JANUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

BRONX RIVER
NEW YORK
CONDITION SURVEY

VH–109

SHEET 9 OF 9