



NOTES

- PRIMARY PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83, (2011), IN US SURVEY FEET BASED ON A FULLY CONSTRAINED STATIC GPS NETWORK HOLDING THE PUBLISHED NAD83 2011 EPOCH VALUES OF NOS CORN STATIONS: "JUN1 TIDAL GPS" (PID A14908) AS N 2,362,232.94, E 2,541,120.78; "JNU C" (PID A14906) AS N 2,382,651.51, E 2,511,618.99.
- LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83 (2011), IN US SURVEY FEET HOLDING "JA-1 RESET 1989" (PID BBS28) AS N 2,363,834.84, E 2,538,657.82.
- VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW=0.0 FT), BASED ON THE NOAA/NOIS TIDAL BENCH MARK LIST "9452210 JUNEAU, GASTINEAU CHANNEL, STEPHENS PASS, ALASKA", PUBLISHED 05/02/2014. THIS TIDAL DATUM IS BASED ON THE 2007-2011 TIDAL EPOCH AND IS REFERENCED BY HOLDING NOAA/NOIS TIDAL BENCH MARK "2210 C 1982" (VMB1196) AS 29.96 FT.
- VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON AN OPUS SOLUTION IN NAVD83 (GEOID 128) ELEVATIONS HOLDING PRIMARY PROJECT HORIZONTAL CONTROL POINT "JA-1 RESET 1989" (PID BBS28) AS 20.89 FT.
- SOUNDINGS ARE IN US SURVEY FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- BATHYMETRY WAS COLLECTED JUNE 6, 2017. SOUNDINGS WERE COLLECTED USING AN "NORBIT-WBMS" SOUNDING WITH A 400KHZ 1" MULTIBEAM TRANSDUCER. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN SONTEK CASTAWAY SOUND VELOCITY PROBE, AND VERIFIED WITH A MANUAL BAR CHECK AT 5' INCREMENTS TO PROJECT DEPTH. POSITIONING AND VESSEL ATTITUDE WERE MEASURED USING A "TRIMBLE R10 RTK" SYSTEM AN APPLIX WAVEMASTER II GNSS/INERTIAL NAVIGATION SYSTEM. RTK CORRECTIONS WERE BROADCAST FROM A LOCAL BASE STATION OCCUPYING "JA-1 RESET 1989" DATA WAS COLLECTED AND FIELD PROCESSED USING "HYPAACK 2017" SOFTWARE. TIDE ELEVATIONS WERE MEASURED USING A "TRIMBLE R10 RTK" SYSTEM AND VERIFIED THROUGH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES.
- THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
- MAP SOUNDINGS ARE BINNED AT 24 FEET AND ARE SHOAL BIASED. CONTOURS ARE BINNED AT 12 FEET AND ARE SHOAL BIASED. VOLUME SOUNDINGS ARE BINNED AT 3 FEET AND ARE MEAN-VALUE.

SURVEY CONTROL DATA

STATION	NORTHING	EASTING	MLLW	DESCRIPTION
HH-C 1999	2,363,204.25	2,539,899.93	26.56	USACE 3-1/4 IN. DBC
HH-D 1999	2,363,491.41	2,538,849.86	26.80	USACE 3-1/4 IN. DBC
HH-E USACE	2,362,496.69	2,539,491.35	24.10	USACE 3-1/4 IN. DBC
HH-H 2005	2,362,958.59	2,540,005.38	29.03	3-1/2 IN. DBC IN CONCRETE
JA-1 RESET 1989	2,363,834.84	2,538,657.82	24.41	USACE SBC
JH-1 1972	2,362,671.49	2,539,630.95	29.75	USACE SBC
JUNEAU TIDAL GPS	2,362,230.50	2,541,118.12	29.36	3-1/4 IN. NOS DBC

PROJECT LIMITS

CORNER#	NORTHING	EASTING
1	2,362,974.70	2,539,881.60
2	2,363,727.70	2,539,377.60
3	2,363,454.70	2,538,970.60
4	2,362,952.70	2,539,306.60
5	2,362,861.70	2,539,179.60
6	2,362,603.70	2,539,364.60

VOLUME COMPUTATIONS

AREA A: INNER BASIN	MLLW=0	CU, YD.
AVAILABLE TO PROJECT DEPTH (PD)	-12.0	11,765
AVAILABLE TO MAX PAY DEPTH (MP)	-13.0	20,853
AVAILABLE SIDE SLOPES (SS) AT 3:1 (H-V) & 25' WIDE	VARIES	5,567
TOTAL MAXIMUM VOLUME AVAILABLE (MP)		26,420

NAVIGATION AIDS

USCG NO.	NORTHING	EASTING	DESCRIPTION
23705	2,362,957	2,539,203	HARRIS HARBOR LIGHT H



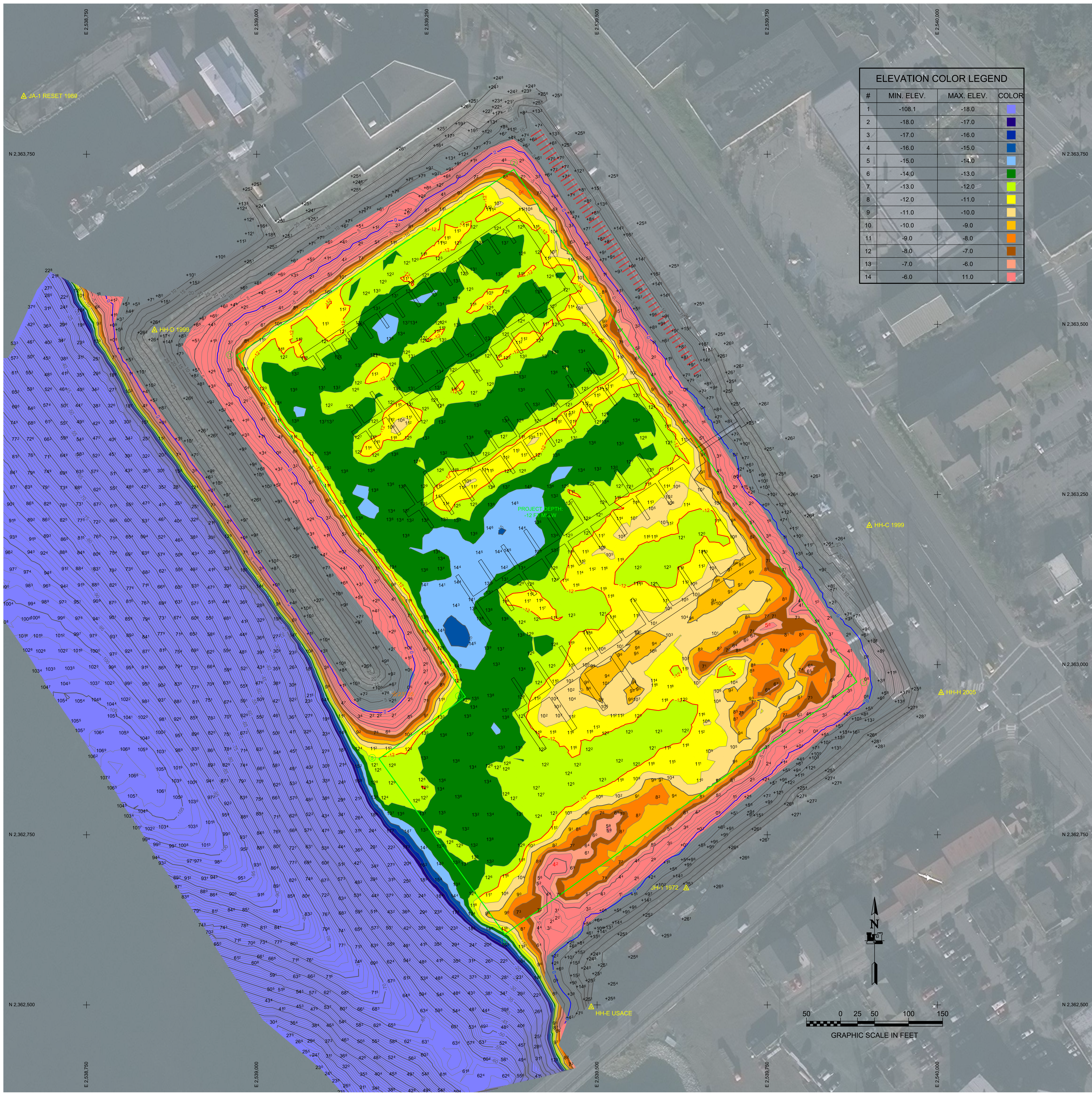
CONTRACT NO. _____
CONTRACTOR USACE Buffalo District
CITY Buffalo
STATE Alaska
APPROVED BY _____
DATE _____
DESIGNED BY _____
DATE _____
CHECKED BY _____
DATE _____

DATE: 20 September 2017
SURVEYED BY: USACE Buffalo District
DESIGNED BY: JBC
CHECKED BY: JBC
APPROVED BY: JBC
SCALE: 1" = 50'
FILE NAME: 092917-HARRIS-HARBOR-21.DWG
JOB NO.: 037
CONTRACT NO.: _____
SHEET NO.: _____
DATE: _____
DESCRIPTION: _____
BY: _____
DATE: _____

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
JBC
USACE Buffalo District
1776 Niagara Street
Buffalo, NY 14207

JUNEAU, ALASKA
HARRIS HARBOR
PROJECT CONDITION SURVEY
JUNE 1, 2017

SHEET IDENTIFICATION
1-JUN-92-07-17
Sheet 1 of 2



ELEVATION COLOR LEGEND			
#	MIN. ELEV.	MAX. ELEV.	COLOR
1	-108.1	-18.0	
2	-18.0	-17.0	
3	-17.0	-16.0	
4	-16.0	-15.0	
5	-15.0	-14.0	
6	-14.0	-13.0	
7	-13.0	-12.0	
8	-12.0	-11.0	
9	-11.0	-10.0	
10	-10.0	-9.0	
11	-9.0	-8.0	
12	-8.0	-7.0	
13	-7.0	-6.0	
14	-6.0	11.0	



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US Army Corps of Engineers
ALASKA DISTRICT

CONTRACT NO. _____
CONTRACTOR USACE Buffalo District
CITY Buffalo
STATE Alaska
APPROVED BY _____
DESIGNED BY _____
CHECKED BY _____
DATE 10/20/2017

DATE 20 September 2017
SURVEYED BY USACE Buffalo District
PLANNED BY USACE Buffalo District
APPROVED BY USACE Buffalo District
SCALE 1" = 50'
FILE NAME 092917-HARRIS-HARBOR-TIDAL-GPS

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
JBER, ALASKA 99506-0608
USACE Buffalo District
1776 Niagara Street
Buffalo, NY 14207

JUNEAU, ALASKA
HARRIS HARBOR
PROJECT CONDITION SURVEY
JUNE 1, 2017

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Sheet 2 of 2