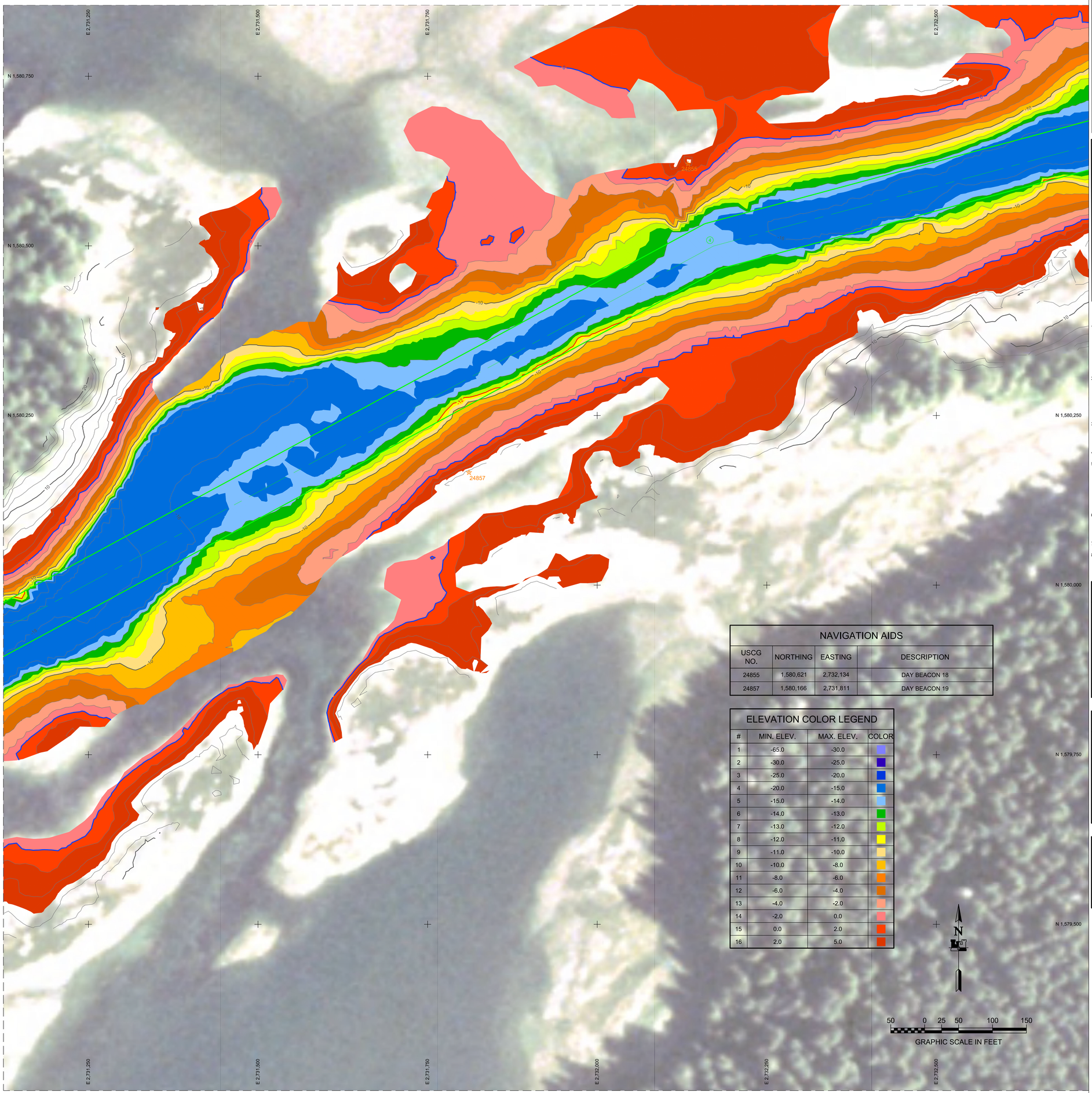

NOTES

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   LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83, IN US SURVEY FEET HOLDING "945 0998 TIDAL 3" AS N 1,581,007.620', E 2,737,111.435', "945 0987 BM 1" AS N 1,575,471.975', E 2,727,634.500', AND "945 0997 LYN" AS N 1,581,415.916', E 2,754,466.054'.

2. VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW=0.0 FT), BASED ON THE NOAA/NOS TIDAL BENCH MARK LISTS: "945 0987 SHAKAN STRAIT (NORTHEAST END), AK" PUBLISHED 04/26/2011, "945 0997 EL CAPITAN PASSAGE, ALASKA" PUBLISHED 07/14/2014, AND "945 0998 DRY PASS, EL CAPITAN PASSAGE, AK" PUBLISHED 07/14/2014. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED TO A TILTED-PLANE MLLW DATUM HOLDING NOAA/NOS TIDAL BENCH MARKS: "945 0987 BM 1" (VM#14026) AS 14.43 FT., "945 0997 LYN" (VM#20876) AS 10.59 FT., AND "945 0998 TIDAL 3" (VM#20878) AS 13.56 FT.

3. VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD88 (GEOID 12B) ELEVATIONS HOLDING NOAA/USACE TIDAL BENCHMARKS: "945 0987 BM1" (VM#14026) AS 12.94 FT, "945 0997 LYN" (PID BBCV41/VM#20876) AS 9.43 FT, AND "945 0998 TIDAL 3" (PID BBCV62/VM#20878) AS 12.07 FT.

4. SOUNDINGS ARE IN US SURVEY FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.

5. BATHYMETRY WAS COLLECTED MARCH 31 AND APRIL 1. SOUNDINGS WERE COLLECTED USING AN R2SONIC 2024 MULTIBEAM ECHOSOUNDER OPERATING AT 200KHZ. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN AML BASE X SOUND VELOCITY PROBE. POSITIONING AND VESSEL ORIENTATION WERE MEASURED USING AN APPLANIX POSMV OCEANMASTER V5 SYSTEM RECEIVING RTK CORRECTIONS FROM A TRIMBLE SPS855 GPS RECEIVER SET AT CONTROL STATION "TIDAL 3". SURVEY DATA WAS COLLECTED AND PROCESSED USING QINSY 8.1 SOFTWARE. HORIZONTAL CONTROL WAS SURVEYED USING STATIC GNSS EQUIPMENT AND TECHNIQUES. VERTICAL CONTROL WAS SURVEYED USING STATIC GNSS EQUIPMENT AND DIFFERENTIAL LEVELING.

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NAVIGATION AIDS

USCG NO.	NORTHING	EASTING	DESCRIPTION
24855	1,580,621	2,732,134	DAY BEACON 18
24857	1,580,166	2,731,811	DAY BEACON 19

ELEVATION COLOR LEGEND

#	MIN. ELEV.	MAX. ELEV.	COLOR
1	-65.0	-30.0	
2	-30.0	-25.0	
3	-25.0	-20.0	
4	-20.0	-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	-8.0	
11	-8.0	-6.0	
12	-6.0	-4.0	
13	-4.0	-2.0	
14	-2.0	0.0	
15	0.0	2.0	
16	2.0	5.0	

SURVEY CONTROL DATA

STATION	NORTHING	EASTING	MLLW	DESCRIPTION
0987 BM 1	1,575,471.98	2,727,634.50	14.43	3.5" USCS DOMED BC
BETSY 1996	1,580,869.08	2,732,943.94	14.72	DOMED SBC
LYN	1,581,415.92	2,754,466.05	10.59	3.5" USACE DOMED BC
PTC	1,580,391.15	2,741,998.01	12.27	1" PIPE WITH TACK
RICK	1,578,763.46	2,729,012.51	14.34	3" DOMED SBC
TIDAL 3	1,581,007.62	2,737,111.44	13.56	3.5" USCS DOMED BC

PROJECT CENTERLINE

CORNER#	NORTHING	EASTING
1	1,577,302.17	2,727,990.18
2	1,577,760.13	2,728,747.65
3	1,579,124.63	2,729,625.06
4	1,580,499.83	2,732,171.49
5	1,580,712.58	2,732,965.17
6	1,581,798.91	2,734,585.78

PROJECT CENTERLINE

CORNER#	NORTHING	EASTING
7	1,582,013.12	2,735,743.96
8	1,580,909.56	2,739,084.66
9	1,580,502.23	2,740,770.21
10	1,579,579.97	2,742,779.60
11	1,579,407.64	2,744,265.08

VOLUME COMPUTATIONS

AREA A: CHANNEL	MLLW=0	CU. YD.
AVAILABLE TO PROJECT DEPTH (PD)	-12.0	2,371
AVAILABLE TO MAX PAY DEPTH (MP)	-13.0	4,949
AVAILABLE SIDE SLOPES (SS) AT 3:1 (H:V) & 25' WIDE	VARIES	10,592
TOTAL MAXIMUM VOLUME AVAILABLE (MP + SS)		15,541

STATE OF ALASKA 49TH GREGORY W. GIBSON No. LS14824 REGISTERED PROFESSIONAL LAND SURVEYOR

THIS HYDROGRAPHIC SURVEY WAS COMPLETED UNDER THE OVERSIGHT OF AN ACSM/THSOA CERTIFIED HYDROGRAPHER

David R. Neff C.H. (275)

US Army Corps of Engineers
ALASKA DISTRICT

CONTRACT NO. W912DB-14-D-0013/0039
CONTRACTOR ETRAC, INC.
STATE ALASKA
CITY WASILLA
DISTRICT ALASKA
Approved by: THOMAS A. SLOAN, CHIEF GEOMATICS SECTION
Date: 08/12/2017
MICHAEL E. MUELLER, PRIME CONTRACTOR

REVISION	DATE	DESCRIPTION	BY	APPVD

REVISION	DATE	DESCRIPTION	BY	APPVD

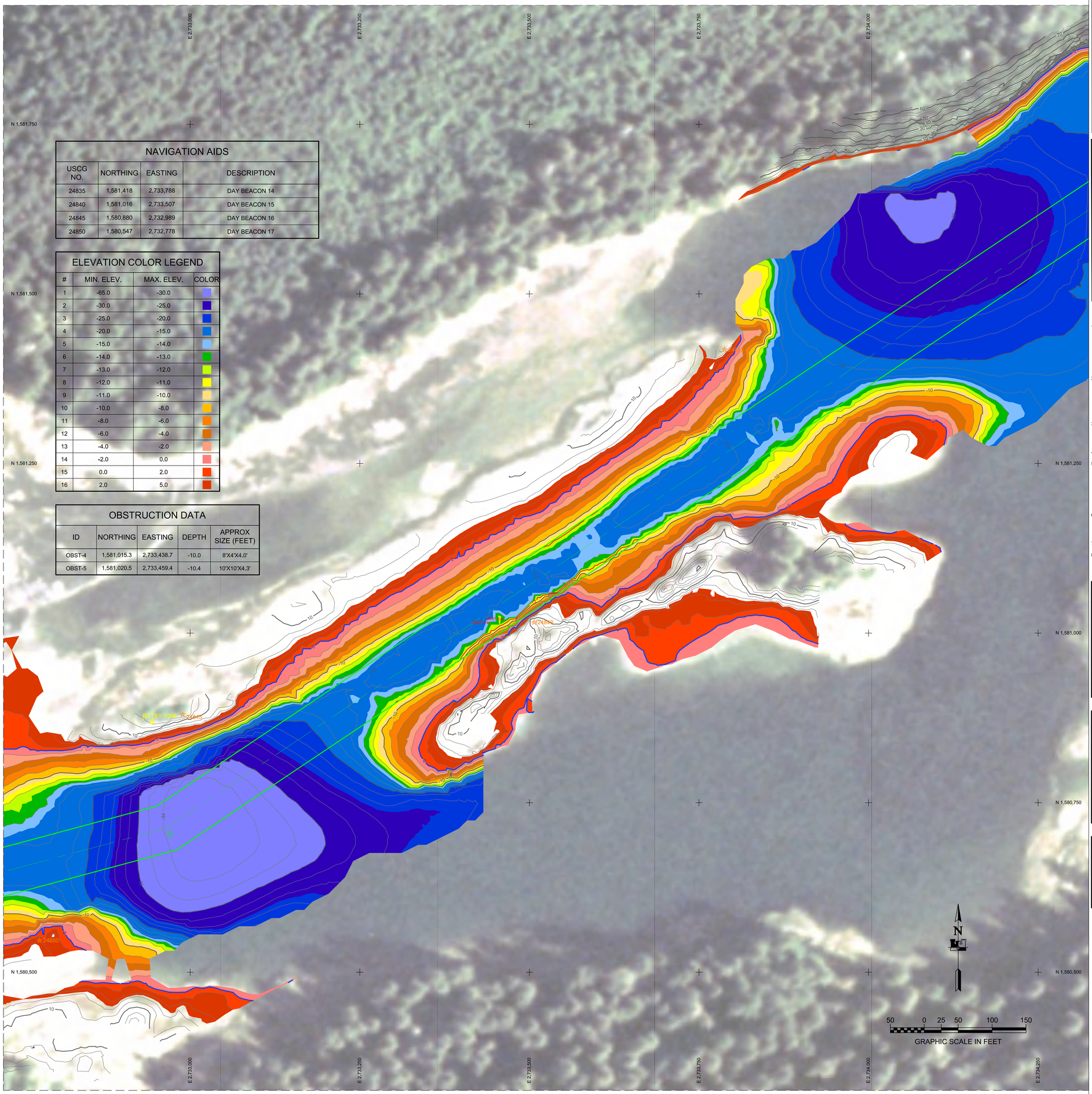
SURVEYED BY: Various, eTrac, Inc.
DRAWN BY: RD
Approved by: SHA
CHECKED BY: FA/DEN/JJ/BG/GVG
Chief Geomatics Section
DATE: 12 - 31 - 2017
LAT: 57.2791
LIPC: 57.2791
CONTRACT NO. W911KB-14-D-0013/0039
PLOT DATE: 08/12/2017
SCALE: 1" = 50'
TIDE: MLLW
FILE NAME: 57279-1_VOL1_B1.DWG
JOB NO. 0917

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
P.O. BOX 6898
JBER, ALASKA 99506-0898

eTrac, Inc.
617 S. Knik-Goose Bay Rd. Suite C
Wasilla, AK 99654

DRY PASS, ALASKA
DRY PASS CHANNEL
PROJECT CONDITION SURVEY
MARCH 29 - APRIL 01, 2017

SHEET IDENTIFICATION
1-DRP-92-07-02
Sheet 16 of 24



NAVIGATION AIDS

USCG NO.	NORTHING	EASTING	DESCRIPTION
24835	1,581,418	2,733,788	DAY BEACON 14
24840	1,581,016	2,733,507	DAY BEACON 15
24845	1,580,880	2,732,989	DAY BEACON 16
24850	1,580,547	2,732,778	DAY BEACON 17

ELEVATION COLOR LEGEND

#	MIN. ELEV.	MAX. ELEV.	COLOR
1	-65.0	-30.0	
2	-30.0	-25.0	
3	-25.0	-20.0	
4	-20.0	-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	-8.0	
11	-8.0	-6.0	
12	-6.0	-4.0	
13	-4.0	-2.0	
14	-2.0	0.0	
15	0.0	2.0	
16	2.0	5.0	

OBSTRUCTION DATA

ID	NORTHING	EASTING	DEPTH	APPROX SIZE (FEET)
OBST-4	1,581,015.3	2,733,438.7	-10.0	8'X4'X4.0'
OBST-5	1,581,020.5	2,733,459.4	-10.4	10'X10'X4.3'

NOTES

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THIS HYDROGRAPHIC SURVEY WAS COMPLETED UNDER THE OVERSIGHT OF AN ACSM/THSOA CERTIFIED HYDROGRAPHER

David R. Neff C.H. (275)

US Army Corps of Engineers
ALASKA DISTRICT

CONTRACT NO. W912HB-14-D-0013/0039
CONTRACTOR ETRAC INC.
CITY PRINCE OF WALES STATE ALASKA
DATE 09/13/2017
PROJECT MANAGER MICHAEL E. MUELLER
PRIME CONTRACTOR
CHIEF GEOMATICS SECTION THOMAS A. SLOAN

REVISION	DATE	DESCRIPTION	BY	APPROV

REVISION	DATE	DESCRIPTION	BY	APPROV

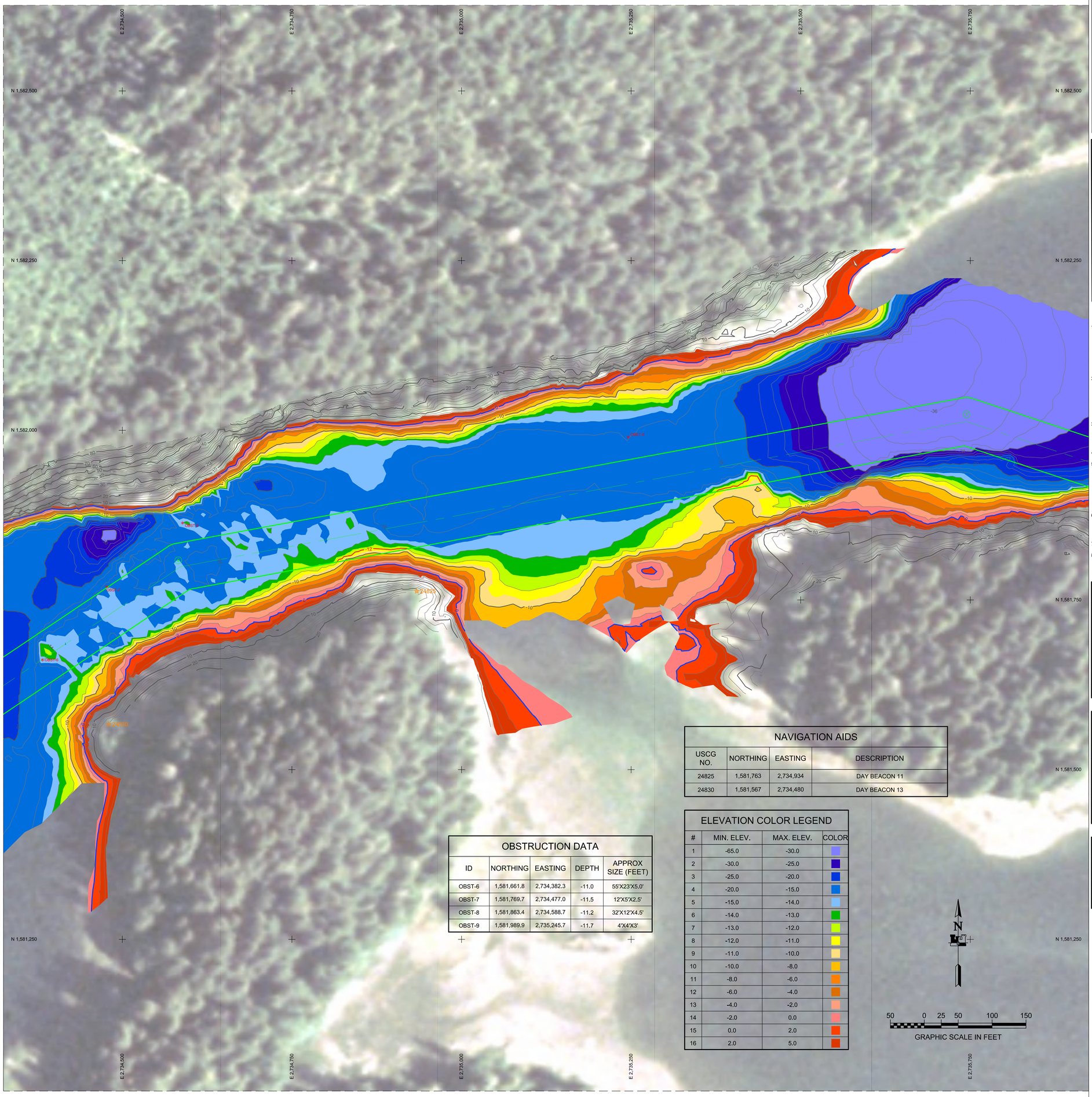
DATE: 13 Sep 2017
UPC: 07291
DWG NO. W911KB-14-D-0013/0039
SURVEYED BY: Gregory A. Gibson
DRAWN BY: RG
CHECKED BY: TASENKU.BIG.DWG
JOB NO. 2017
PROMULGATED BY: Thomas A. Sloan, Chief Geomatics Section
PLOT DATE: 09/12/2017
SCALE: 1" = 50'
FILE NAME: 07291 - VPR1.R1.DWG
SHEET SIZE: ANSI E

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
P.O. BOX 6898
JBER, ALASKA 99506-0898

eTrac, Inc.
617 S. Knik-Goose Bay Rd. Suite C
Wasilla AK 99654

DRY PASS, ALASKA
DRY PASS CHANNEL
PROJECT CONDITION SURVEY
MARCH 29 - APRIL 01, 2017

SHEET IDENTIFICATION
1-DRP-92-07-02
Sheet 17 of 24



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11	1,579,407.64	2,744,265.08

NAVIGATION AIDS

USCG NO.	NORTHING	EASTING	DESCRIPTION
24825	1,581,763	2,734,934	DAY BEACON 11
24830	1,581,567	2,734,480	DAY BEACON 13

OBSTRUCTION DATA

ID	NORTHING	EASTING	DEPTH	APPROX SIZE (FEET)
OBST-6	1,581,661.8	2,734,382.3	-11.0	55'X23'X5.0'
OBST-7	1,581,769.7	2,734,477.0	-11.5	12'X5'X2.5'
OBST-8	1,581,863.4	2,734,588.7	-11.2	32'X12'X4.5'
OBST-9	1,581,989.9	2,735,245.7	-11.7	4'X4'X3'

ELEVATION COLOR LEGEND

#	MIN. ELEV.	MAX. ELEV.	COLOR
1	-65.0	-30.0	
2	-30.0	-25.0	
3	-25.0	-20.0	
4	-20.0	-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	-8.0	
11	-8.0	-6.0	
12	-6.0	-4.0	
13	-4.0	-2.0	
14	-2.0	0.0	
15	0.0	2.0	
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VOLUME COMPUTATIONS

AREA A: CHANNEL	MLLW=0	CU. YD.
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SURVEY MANAGER MICHAEL E. MUELLER PRIME CONTRACTOR
Project Manager THOMAS A. SLOAN CHIEF GEOMATICS SECTION
Date 08/12/2017

REVISION	DATE	DESCRIPTION	BY	APPVD
REVISION	DATE	DESCRIPTION	BY	APPVD

DATE: 12 June 2017
UPC: 072791
CHECKED BY: TASREHJ-BSCVWD
DRAWN BY: RG
SURVEYED BY: Phillips & Carlson
PLOTTED BY: Richard A. Stahr, Chief Geomatics Section
PROJECT NO.: V0311-05-11-0201/0009
JOB NO.: 0917
SCALE: 1" = 50'
PLOT DATE: 08/12/2017
SIZE: ANSI E
FILE NAME: 072791- V0311_R1.DWG

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
P.O. BOX 6898
JBER, ALASKA 99506-0898

eTrac, Inc.
617 S. Kirk-Goose Bay Rd. Suite C
Wasilla, AK 99654

DRY PASS, ALASKA
DRY PASS CHANNEL
PROJECT CONDITION SURVEY
MARCH 29 - APRIL 01, 2017

SHEET IDENTIFICATION
1-DRP-92-07-02
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