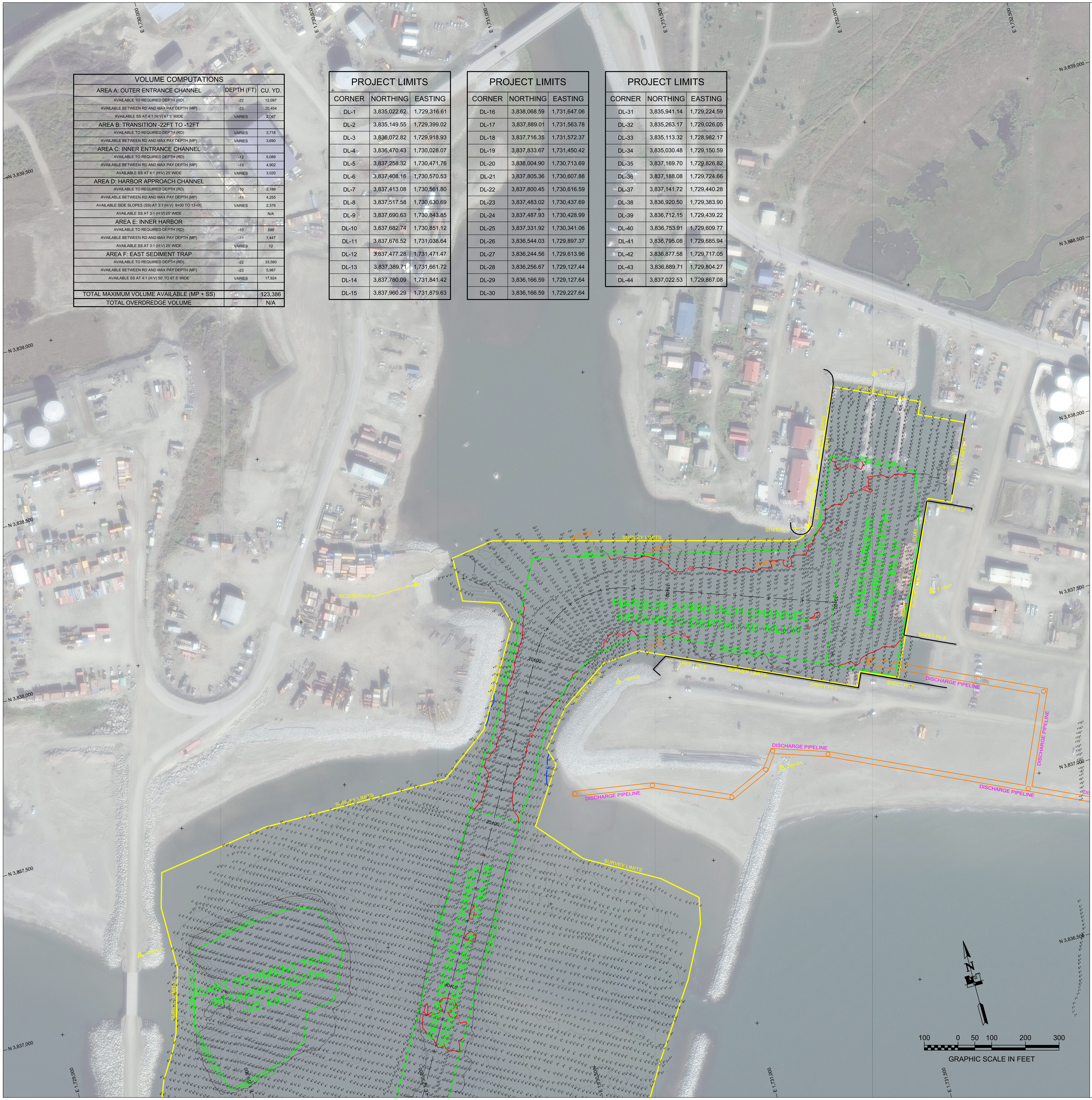
E 1,730,000
E 1,730,500
E 1,731,000
E 1,731,500
E 1,732,000
E 1,732,500
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E 1,729,500
N 3,839,500
N 3,839,000
N 3,838,500
N 3,838,000
N 3,837,500
N 3,837,000
N 3,836,500
SURVEY LIMITS
DREDGE LIMITS
SHEET PILE
SHEET
BOAT
BOOTSTRAP
KMJV-1
NH-02
NH-03
NH-04
PUMP
DISCHARGE PIPELINE
27968
27969
27970
27971
10+00
15+00
20+00
25+00
30+00
HARBOR APPROACH CHANNEL REQUIRED DEPTH: -10' MLLW
INNER HARBOR REQUIRED DEPTH: -10' MLLW
INNER ENTRANCE CHANNEL REQUIRED DEPTH: -12' MLLW
EAST SEDIMENT TRAP REQUIRED DEPTH: -22' MLLW
N
100 0 50 100 200 300
GRAPHIC SCALE IN FEET

VOLUME COMPUTATIONS

AREA A: OUTER ENTRANCE CHANNEL	DEPTH (FT)	CU. YD.
AVAILABLE TO REQUIRED DEPTH (RD)	-22	12,097
AVAILABLE BETWEEN RD AND MAX PAY DEPTH (MP)	-23	20,454
AVAILABLE SS AT 4:1 (H:V) 67.5' WIDE	VARIES	2,067
AREA B: TRANSITION -22FT TO -12FT		
AVAILABLE TO REQUIRED DEPTH (RD)	VARIES	3,718
AVAILABLE BETWEEN RD AND MAX PAY DEPTH (MP)	VARIES	3,690
AREA C: INNER ENTRANCE CHANNEL		
AVAILABLE TO REQUIRED DEPTH (RD)	-12	5,089
AVAILABLE BETWEEN RD AND MAX PAY DEPTH (MP)	-13	4,902
AVAILABLE SS AT 4:1 (H:V) 25' WIDE	VARIES	3,020
AREA D: HARBOR APPROACH CHANNEL		
AVAILABLE TO REQUIRED DEPTH (RD)	-10	2,189
AVAILABLE BETWEEN RD AND MAX PAY DEPTH (MP)	-11	4,255
AVAILABLE SIDE SLOPES (SS) AT 3:1 (H:V) 9+00 TO 13+00	VARIES	2,376
AVAILABLE SS AT 3:1 (H:V) 25' WIDE		N/A
AREA E: INNER HARBOR		
AVAILABLE TO REQUIRED DEPTH (RD)	-10	599
AVAILABLE BETWEEN RD AND MAX PAY DEPTH (MP)	-11	1,447
AVAILABLE SS AT 3:1 (H:V) 25' WIDE	VARIES	12
AREA F: EAST SEDIMENT TRAP		
AVAILABLE TO REQUIRED DEPTH (RD)	-22	33,560
AVAILABLE BETWEEN RD AND MAX PAY DEPTH (MP)	-23	5,987
AVAILABLE SS AT 4:1 (H:V) 50' TO 67.5' WIDE	VARIES	17,924
TOTAL MAXIMUM VOLUME AVAILABLE (MP + SS)		123,386
TOTAL OVERDREDGE VOLUME		N/A

PROJECT LIMITS

CORNER	NORTHING	EASTING
DL-1	3,835,022.62	1,729,316.61
DL-2	3,835,149.55	1,729,399.02
DL-3	3,836,072.82	1,729,918.93
DL-4	3,836,470.43	1,730,028.07
DL-5	3,837,258.32	1,730,471.76
DL-6	3,837,408.16	1,730,570.53
DL-7	3,837,413.08	1,730,561.80
DL-8	3,837,517.58	1,730,630.69
DL-9	3,837,690.63	1,730,843.85
DL-10	3,837,682.74	1,730,851.12
DL-11	3,837,676.52	1,731,038.64
DL-12	3,837,477.28	1,731,471.47
DL-13	3,837,389.71	1,731,661.72
DL-14	3,837,780.09	1,731,841.42
DL-15	3,837,960.29	1,731,879.63

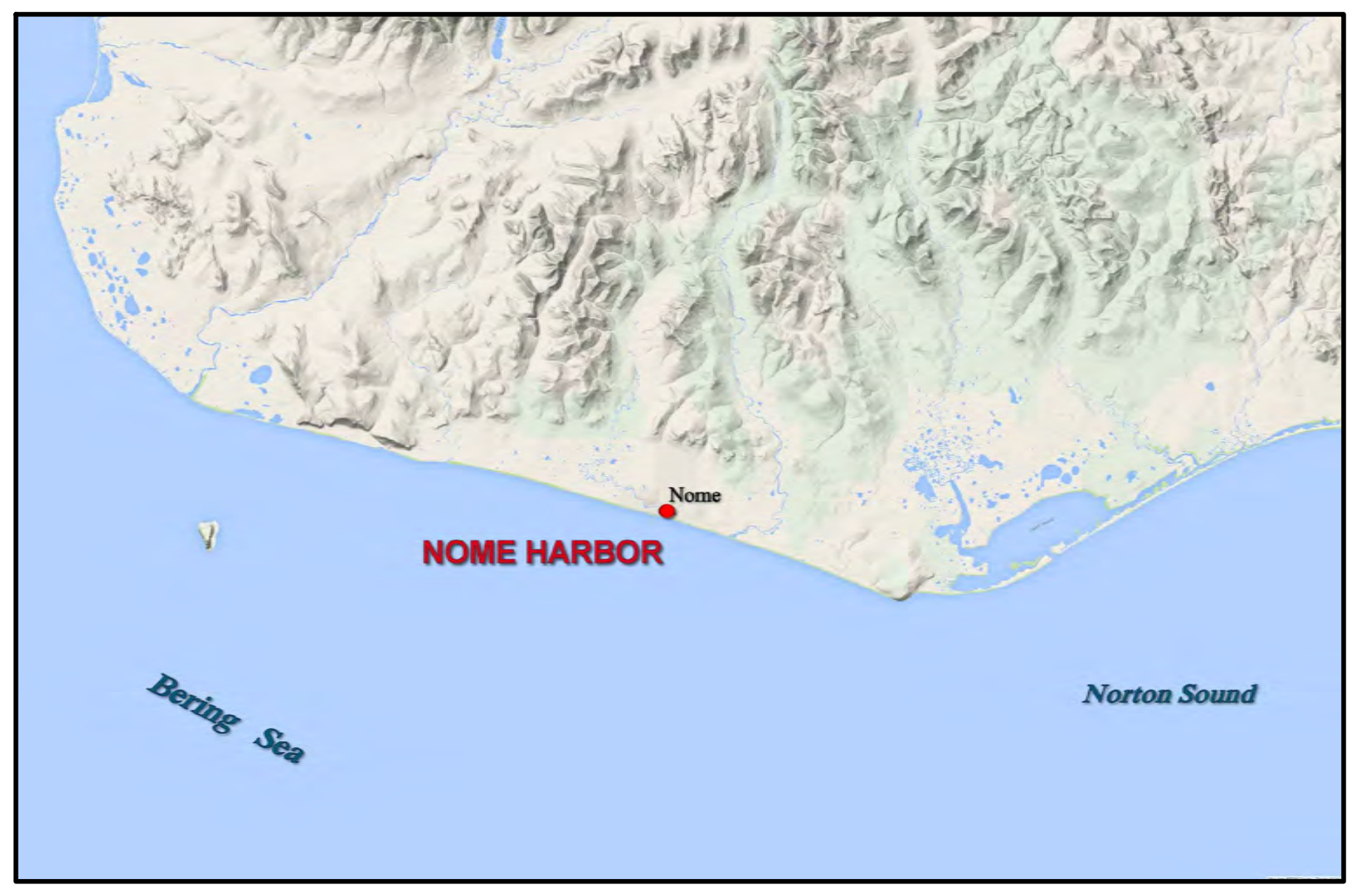
PROJECT LIMITS

CORNER	NORTHING	EASTING
DL-16	3,838,068.59	1,731,647.06
DL-17	3,837,889.01	1,731,563.78
DL-18	3,837,716.35	1,731,572.37
DL-19	3,837,833.67	1,731,450.42
DL-20	3,838,004.90	1,730,713.69
DL-21	3,837,805.36	1,730,607.88
DL-22	3,837,800.45	1,730,616.59
DL-23	3,837,483.02	1,730,437.69
DL-24	3,837,487.93	1,730,428.99
DL-25	3,837,331.92	1,730,341.06
DL-26	3,836,544.03	1,729,897.37
DL-27	3,836,244.56	1,729,613.96
DL-28	3,836,256.67	1,729,127.44
DL-29	3,836,166.59	1,729,127.64
DL-30	3,836,166.59	1,729,227.64

PROJECT LIMITS

CORNER	NORTHING	EASTING
DL-31	3,835,941.14	1,729,224.59
DL-32	3,835,263.17	1,729,026.05
DL-33	3,835,113.32	1,728,982.17
DL-34	3,835,030.48	1,729,150.59
DL-35	3,837,169.70	1,729,826.82
DL-36	3,837,188.08	1,729,724.66
DL-37	3,837,141.72	1,729,440.28
DL-38	3,836,920.50	1,729,383.90
DL-39	3,836,712.15	1,729,439.22
DL-40	3,836,753.91	1,729,609.77
DL-41	3,836,795.08	1,729,685.94
DL-42	3,836,877.58	1,729,717.05
DL-43	3,836,889.71	1,729,804.27
DL-44	3,837,022.53	1,729,867.08

Chuckchi Sea
Barrow
Arctic Ocean
Nome
NOME HARBOR
Fairbanks
Bering Sea
Anchorage
Attu
Bristol Bay
Gulf of Alaska
Juneau
Dutch Harbor


Nome
NOME HARBOR
Bering Sea
Norton Sound

NOTES

1. PRIMARY PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 8, NAD83 (NSRS2007), IN U.S. FEET. BASIS OF COORDINATES IS NATIONAL GEODETIC SURVEY (NGS) CONTROL STATION "OME A" (PID DF3651), AS N 3,841,096.47' AND E 1,728,070.64' AND "OME B" (PID DF3652), AS N 3,842,264.55' AND E 1,729,661.41'. MONUMENTS ARE SECONDARY AIRPORT CONTROL STATIONS (SACS) AT NOME AIRPORT, ALASKA.

   LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 8, NAD83 (NSRS2007), IN U.S. SURVEY FEET HOLDING "KMJV-1" HAVING A VALUE OF N 3,837,168.87' AND E 1,729,283.15' .
2. VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW +0.0'), BASED ON THE NOAA/NOS TIDAL BENCHMARK LIST: "946 8756, NOME NORTON SOUND, ALASKA" PUBLISHED 10/05/2017. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING NOAA/USCGS TIDAL BENCHMARK "946 8756 H" (VM#12155/PID#BBFB37) AS 12.18 FT.
3. VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD88 (GEOID 12B) ELEVATIONS HOLDING NOAA/USCGS TIDAL BENCHMARK "946 8756 H" (VM#12155/PID#BBFB37) AS 14.82 FT.
4. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
5. BATHYMETRY WAS COLLECTED MAY 29 & 30, 2018. SOUNDINGS WERE COLLECTED USING A CEESCOPE ECHO SOUNDER OPERATING AT 200 KHZ. SOUND VELOCITY THOUGH THE WATER COLUMN WAS DETERMINED WITH AN AML BASE X2 SOUND VELOCITY PROBE. POSITION AND TIDES WERE PROVIDED IN REAL TIME USING A TRIMBLE R8 RTK GPS RECEIVER OPERATING ON KINEMATICS CORRECTIONS BROADCAST FROM A TRIMBLE R8 RTK BASE RECEIVER SET AT CONTROL STATION, "KMJV-1". DATA WAS COLLECTED AND PROCESSED USING HYPACK 2018 INTEGRATED SOFTWARE. HORIZONTAL CONTROL WAS SURVEYED USING RTK GNSS EQUIPMENT AND TECHNIQUES. VERTICAL CONTROL WAS SURVEYED USING DIFFERENTIAL LEVELING TECHNIQUES.
6. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
7. MAP SOUNDINGS ARE SORTED AT 10 FEET AND ARE SHOAL-BIASED. CONTOURS ARE SORTED AT 10 FEET AND SHOAL-BIASED SOUNDINGS. VOLUME SOUNDINGS ARE SORTED AT 10 FEET AND SHOAL-BIASED.

SURVEY CONTROL DATA

STATION	NORTHING	EASTING	MLLW	DESCRIPTION
39+71	3,834,957.98	1,729,422.33		BRASS CAP
53+68	3,834,888.51	1,728,762.20		BRASS CAP
BOOTSTRAP	3,838,021.15	1,730,359.97	6.70	BRASS CAP
CELL	3,835,965.94	1,729,122.26		ALUMINUM MON
DINGO	3,836,890.97	1,732,407.19	19.34	BRASS CAP
KMJV-1	3,837,168.87	1,729,283.15	16.44	BRASS CAP
NH-02	3,838,272.50	1,731,835.01	12.45	BRASS CAP
NH-03	3,837,585.34	1,730,864.94	13.87	BRASS CAP
NH-04	3,837,212.71	1,731,266.48	15.30	BRASS CAP
OME A	3,841,096.47	1,728,070.64		BRASS CAP
OME B	3,842,264.55	1,729,661.41		BRASS CAP
PUMP	3,837,605.19	1,731,831.48	9.18	BRASS CAP
SHEET	3,837,882.85	1,731,533.69	11.70	DESTROYED

NAVIGATION AIDS

USCG NO.	NORTHING	EASTING	DESCRIPTION
27962	3,834,922	1,729,388	ENTRANCE LIGHT 2
27963	3,834,844	1,728,782	ENTRANCE LIGHT 1
27964	3,836,250	1,729,618	BUOY 1
27965	3,836,070	1,729,925	BUOY 2
27966	3,836,541	1,729,900	BUOY 3
27967	3,836,470	1,730,030	BUOY 4
27968	3,838,033	1,730,848	BUOY 5
27969	3,837,935	1,731,111	BUOY 7
27970	3,837,678	1,731,012	BUOY 8
27971	3,837,805	1,731,401	BUOY 9

STATE OF ALASKA
49TH
CORY S. HUGHES
LS-13009
REGISTERED PROFESSIONAL LAND SURVEYOR

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

Cory Hughes

CORY S. HUGHES C.H. (245)

US Army Corps
of Engineers ®
ALASKA DISTRICT

CONTRACT NO. W911KB18C0003
CONTRACTOR ALASKA MARINE EXCAVATION
CITY ANCHOR POINT STATE ALASKA
Recommended: PRIME CONTRACTOR
Approved: CHIEF GEOMATICS SECTION
Date:

REVISION	DATE	DESCRIPTION	BY	APPVD

REVISION	DATE	DESCRIPTION	BY	APPVD

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

HUGHES & ASSOCIATES
2970 COTTLE LOOP
WASILLA, AK 99654

SURVEYED BY: CSH & DCA		DATE: 30 July 2018
DRAWN BY: DCA	CHECKED BY: CSH	UPC: NOM013
APPROVED BY: Geomatics Section (CEPOA-EC-G-GE)		CONTRACT NO.: W911KB18C0003
SCALE: 1" = 100'	PLOT DATE: 07/30/2018	JOB NO.:
SIZE: ANSI E	FILE NAME: 2018 NOME PRE DREDGE_20180529.DWG	

NOME, ALASKA
2018 HARBOR MAINTENANCE DREDGING
PRE-DREDGE SURVEY
MAY 29 - 31, 2018

SHEET IDENTIFICATION

6-NOM-92-07-58

Sheet 1 of 5