



VOLUME COMPUTATIONS		
AREA A: DILLINGHAM HARBOR	MLLW=0	CU. YD.
REMOVED TO PROJECT DEPTH (PD)	0.0	69.591
REMOVED TO MAX PAY DEPTH (MP)	-2.0	84.302
REMOVED SIDE SLOPES (SS) AT 8:1 (H:V)	VARIES	13.033
TOTAL VOLUME REMOVED (MP+SS)		97.335
OVERDREDGE VOLUME WITHIN HARBOR BASIN		2.315



- NOTES**
1. PRIMARY PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 6, NAD83 (2011), IN US SURVEY FEET BASED ON NGS PUBLISHED VALUES, HOLDING USC&GS STATION "DILLINGHAM 1947" (PID UV7691) AS N 1,849,383.08', E 1,551,809.45' AND USC&GS AZIMUTH MARK "DILLINGHAM AZ MK 1947" (PID UV7690) AS N 1,841,347.21', E 1,553,844.91'.
 2. LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 6, NAD83 (2011), IN US SURVEY FEET HOLDING USACE DOMED BC "1277-3 1984" AS N 1,840,427.98', E 1,550,887.60'.
 3. VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW=0.0'), BASED ON THE NOAA/NOS TIDAL BENCH MARK LIST: "946 5374, SNAG POINT, DILLINGHAM, ALASKA" PUBLISHED 04/29/2013. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING NOAA/NOS TIDAL BENCH MARK "5374 B 2007" (VMH18354) AS 60.45'.
 4. VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD83 (GEOID 12B) ELEVATIONS HOLDING NOAA BENCHMARK "946 5374 B 2007" (PID BBBF17VMH18352) AS 18.46'.
 5. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
 6. BATHYMETRY WAS COLLECTED MAY 31 & JUNE 1, 2019. SOUNDINGS WERE COLLECTED USING AN CESSSCOPE ECHO SOUNDER OPERATING AT 200 KHZ. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN AML BASE X2 SOUND VELOCITY PROBE. POSITION AND TIDES WERE PROVIDED IN REAL TIME USING A TRIMBLE R9 RTK GPS RECEIVER OPERATING ON KINEMATICS CORRECTIONS BROADCAST FROM A TRIMBLE R8 RTK BASE RECEIVER SET AT CONTROL STATION "1277-3". DATA WAS COLLECTED AND PROCESSED USING HYDRAPACK 2019 INTEGRATED SOFTWARE. HORIZONTAL AND VERTICAL CONTROL WAS VERIFIED DURING THE PRE SURVEY.
 7. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
 8. MAP SOUNDINGS, CONTOURS, COLOR RELIEF, AND VOLUME COMPUTATIONS ARE BASED ON A 10 FOOT SORT.

SURVEY CONTROL DATA					
STATION	NORTHING	EASTING	MLLW	DESCRIPTION	
1277-1 1984	1,841,622.39	1,550,745.71	32.11	3.25 INCH USACE SBC	
1277-2 1984	1,840,494.00	1,550,879.74	30.86	3.25 INCH USACE SBC	
1277-3 1984	1,840,427.98	1,550,887.60	30.21	3.25 INCH USACE SBC	
5374 A 2007			25.62	NOAA/NOS TIDAL BM	
5374 B 2007			24.87	NOAA/NOS TIDAL BM	
DILL 1998	1,840,505.33	1,550,874.26	29.80	3.25 INCH FLAT ALCAP	
DILLINGHAM 1947	1,849,383.08	1,551,809.45		3.5 INCH USCGS SBC	
DILLINGHAM AZ MK	1,841,347.21	1,553,844.91		2 INCH USCGS IRON PIPE	
PICKEL 1998	1,841,509.51	1,550,437.81	28.82	3.25 INCH FLAT ALCAP	
WDS-2 2001	1,841,419.33	1,549,910.66	22.77	3.25 INCH DOMED ALCAP	

DREDGE LIMITS		
CORNER#	NORTHING	EASTING
DL-1	1,840,656.89	1,550,430.66
DL-2	1,840,645.10	1,550,447.69
DL-3	1,840,669.87	1,550,654.63
DL-4	1,841,364.89	1,550,571.44
DL-5	1,841,318.54	1,550,184.21

DREDGE LIMITS		
CORNER#	NORTHING	EASTING
DL-6	1,840,930.19	1,550,305.22
DL-7	1,840,662.40	1,550,337.15
DL-8	1,840,535.05	1,550,329.96
DL-9	1,840,531.77	1,550,369.82
DL-10	1,840,653.73	1,550,376.57

DREDGE LIMITS		
CORNER#	NORTHING	EASTING
DL-11	1,840,377.05	1,550,402.65
DL-12	1,840,377.05	1,550,363.75

SURVEY LIMITS		
CORNER#	NORTHING	EASTING
SL-1	1,840,423.95	1,550,449.36
SL-2	1,840,458.17	1,550,413.54
SL-3	1,840,564.87	1,550,408.42
SL-4	1,840,610.25	1,550,787.66
SL-5	1,841,437.06	1,550,688.69
SL-6	1,841,461.80	1,550,593.75
SL-7	1,841,405.12	1,550,578.98
SL-8	1,841,432.20	1,550,396.29
SL-9	1,841,432.01	1,550,133.89

SURVEY LIMITS		
CORNER#	NORTHING	EASTING
SL-10	1,841,362.83	1,550,065.66
SL-11	1,840,909.22	1,550,207.01
SL-12	1,840,362.44	1,550,272.21
SL-13	1,840,166.00	1,550,359.57
SL-14	1,839,293.60	1,550,359.57
SL-15	1,839,293.60	1,551,455.40
SL-16	1,840,166.00	1,551,455.40
SL-17	1,840,166.00	1,550,808.47

DISPOSAL LIMITS		
CORNER#	NORTHING	EASTING
DS-1	1,839,502.58	1,551,238.87
DS-2	1,839,739.66	1,551,159.55
DS-3	1,839,644.47	1,550,875.05
DS-4	1,839,407.39	1,550,954.38



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

Cory S. Hughes

CORY S. HUGHES C.H. (245)

US Army Corps of Engineers
ALASKA DISTRICT

CONTRACT NO. W01H617-C-0005

CONTRACTOR: ALASKA MARINE EDUCATION

CITY AND/OR POINT: STATE: ALASKA

APPROVED: DATE:

RECOMMENDED: DATE:

DATE: 05/31/2019

BY: JACOB

DESCRIPTION: POST DREDGE SURVEY

DATE: 05/31/2019

BY: JACOB

DESCRIPTION: POST DREDGE SURVEY

DATE: 05/31/2019

BY: JACOB

DESCRIPTION: POST DREDGE SURVEY

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
JBER, ALASKA 99506-0988

DESIGNED BY: DATE: 05/31/2019

DRAWN BY: DATE: 05/31/2019

CHECKED BY: DATE: 05/31/2019

APPROVED BY: DATE: 05/31/2019

FILE NAME: D:\ALASKA\PROJECTS\2019\05\01\20190501.DWG

SCALE: 1" = 100'

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DILLINGHAM, ALASKA
DILLINGHAM HARBOR
POST DREDGE SURVEY
MAY 31 & JUNE 1, 2019

SHEET IDENTIFICATION

5-DIL-92-07-49

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