

VOLUME COMPUTATIONS		
AREA A: ENTRANCE CHANNEL	MLLW=0	CU. YD.
AVAILABLE TO PROJECT DEPTH (PD)	-12.0	40
AVAILABLE TO MAX PAY DEPTH (MP)	-13.0	75
AVAILABLE SIDE SLOPES (SS) AT 3:1 (H:V) & 25' WIDE	VARIES	259
AREA B: FEDERAL BASIN		
AVAILABLE TO PD	-12.0	0
AVAILABLE TO MP	-13.0	0
AVAILABLE SS AT 3:1 (H:V) & 25' WIDE	VARIES	0
TOTAL MAXIMUM VOLUME AVAILABLE (MP + SS)		334

PROJECT LIMITS		
CORNER#	NORTHING	EASTING
1	1,990,655.44	1,320,665.85
2	1,990,630.97	1,320,719.72
3	1,990,475.56	1,321,061.90
4	1,990,283.63	1,321,302.98
5	1,989,963.55	1,321,026.05
6	1,990,113.51	1,320,876.01
7	1,990,534.45	1,320,675.88
8	1,990,564.66	1,320,606.63

PROJECT LIMITS		
CORNER#	NORTHING	EASTING
9	1,990,447.22	1,320,333.60
10	1,990,502.34	1,320,309.89
11	1,992,302.21	1,319,862.36
12	1,991,832.20	1,319,860.50
13	1,991,298.31	1,320,230.66
14	1,991,127.38	1,319,984.12
15	1,991,738.91	1,319,560.13
16	1,992,303.39	1,319,562.36



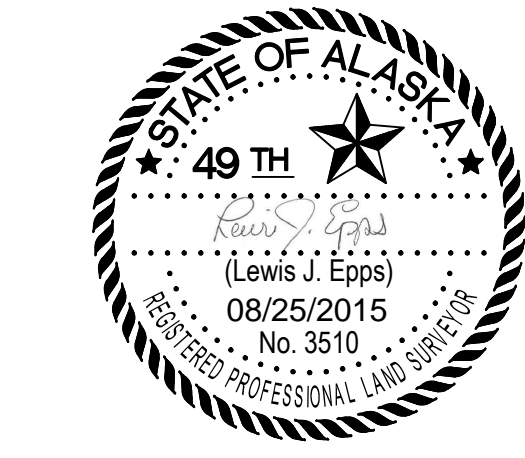
NOTES

- PRIMARY PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 2003.00, IN US SURVEY FEET BASED ON A FULLY CONSTRAINED STATIC GPS NETWORK HOLDING THE PUBLISHED NAD83 2003.00 EPOCH VALUES OF NGS CORS STATIONS: "ILLUMINAPAK 2008 CORS ARP" (AB22 - PID DL6678), "SLOPEMNTN_AK 2007 CORS ARP" (AC47 - PID DL7668) AND "SHUYAKISSPAK 2008 CORS ARP" (AC39 - PID DL7665).
- LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83, IN US SURVEY FEET HOLDING DOMED BC "SH-1 1997" AS N 1,990,007.30, E 1,321,628.31.
- VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW=0.0), BASED ON THE NOAA/NOA'S TIDAL BENCH MARK LIST "345 5500 SELDOVIA, COOK INLET, ALASKA" PUBLISHED 06/02/2014. THIS TIDAL DATUM IS BASED ON THE 2007-2011 TIDAL EPOCH AND IS REFERENCED BY HOLDING NOAA/NOA'S TIDAL BENCH MARK "345 5500 B" (VMH1311) AS 36.96.
- VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD83 (GEOID 12B) ELEVATIONS HOLDING NOAA/USACE TIDAL BENCHMARK "PM-2 1967" (PID BBD42/VMH1305) AS 24.59'.
- SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- BATHYMETRY WAS COLLECTED MAY 30, 2015. SOUNDINGS WERE COLLECTED USING AN R2SONIC 2022 MULTIBEAM ECHOSOUNDER OPERATING AT 200 KHZ. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN AML BASE X SOUND VELOCITY PROBE. POSITION AND VESSEL ORIENTATION WERE MEASURED USING AN APPLIX POSMA 200 V4 SYSTEM. DATA WAS COLLECTED AND PROCESSED USING QINSY 8.1 SOFTWARE. HORIZONTAL CONTROL WAS SURVEYED USING RTK GNSS EQUIPMENT AND TECHNIQUES. VERTICAL CONTROL WAS SURVEYED USING 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 BASED ON 12 FEET BINNED SHOAL-BIASED SOUNDINGS. VOLUME SOUNDINGS ARE BINNED AT 3 FEET AND ARE MEAN VALUE SOUNDINGS.

SURVEY CONTROL DATA				
STATION	NORTHING	EASTING	MLLW	DESCRIPTION
HERSH 2000	1,991,108.36	1,321,511.89	42.82	3" DOMED STAMPED BRASS CAP
IYO 2000	1,991,107.02	1,320,909.51	62.09	2" FLAT ALUMINIUM STAMPED CAP
LIGHT 1965	1,990,669.92	1,320,458.88	27.45	3.5" USACE DOMED BRASS CAP
NFS-1442-1 1988	1,989,901.00	1,320,831.45	26.97	3.5" USACE DOMED BRASS CAP
PM-2 1967	1,990,886.91	1,320,690.54	29.84	3.5" USACE DOMED BRASS CAP
PM-3 1967	1,990,473.59	1,320,621.09	24.04	3.5" USACE DOMED BRASS CAP
SEL-4	1,992,069.44	1,320,447.95	29.09	3.5" USACE DOMED BRASS CAP
SH-1 1997	1,990,007.30	1,321,629.31	28.85	3" USACE DOMED BRASS CAP
SH-2 1997	1,991,667.21	1,320,124.09	29.69	3" DOMED STAMPED BRASS CAP
SH-3 2003	1,990,730.70	1,320,500.94	29.38	3" DOMED STAMPED BRASS CAP
SH-4 2003	1,990,453.39	1,321,371.78	29.94	3" DOMED STAMPED BRASS CAP
SH-5 2006	1,990,685.60	1,321,157.57	29.32	3" DOMED STAMPED BRASS CAP
WATCH 1956	1,992,238.98	1,320,070.90		3.5" USACE DOMED BRASS CAP

NAVIGATION AIDS			
USCG NO.	NORTHING	EASTING	DESCRIPTION
26165	1,992,243	1,320,046	LIGHT 3
26170 (1)	1,991,664	1,320,106	SELDOVIA DOCK LIGHTS (2) (NORTH)
26170 (2)	1,991,498	1,320,229	SELDOVIA DOCK LIGHTS (2) (SOUTH)
26170 (3)	1,991,498	1,320,235	SELDOVIA DOCK LIGHT POLE (SOUTH)
26170 (4)	1,991,663	1,320,120	SELDOVIA DOCK LIGHT POLE (NORTH)
26175	1,991,458	1,319,317	BUOY 4
26180	1,990,669	1,320,458	SELDOVIA BREAKWATER LIGHT 5

OBSTRUCTION DATA			
ID	NORTHING	EASTING	APPROX SIZE (FEET)
OBST-1	1,990,149.7	1,320,905.2	-12.4 9 X 9 X 1.0
OBST-2	1,990,559.0	1,320,608.7	-14.6 5 X 4 X 2.0



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

David R. Neff C.H. (275)

US Army Corps of Engineers
ALASKA DISTRICT

CONTRACT NO. W11H814-14-0013.0017

CONTRACTOR: ETIEM, INC.

CITY: SAN RAFAEL STATE: CALIFORNIA

Drawn: MICHAEL E. NEFF

Approved: THOMAS A. BLAIN

Scale: 1" = 50'

NO.	DESCRIPTION	DATE
1	ISSUED FOR CONSTRUCTION	08/25/2015
2	REVISION	
3	REVISION	
4	REVISION	
5	REVISION	
6	REVISION	
7	REVISION	
8	REVISION	
9	REVISION	
10	REVISION	
11	REVISION	
12	REVISION	
13	REVISION	
14	REVISION	
15	REVISION	
16	REVISION	
17	REVISION	
18	REVISION	
19	REVISION	
20	REVISION	

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
JBER, ALASKA 99506-0888

6 Tirrell Ave., Ste 100
San Rafael, CA 94901

8/25/2015

FILE NAME: 082515
SCALE: 1" = 50'

DATE: 08/25/2015

SELDOVIA, ALASKA

SELDOVIA HARBOR AND CHANNEL

PROJECT CONDITION SURVEY

MAY 28 - JUNE 02, 2015

SHEET IDENTIFICATION

2-SEL-92-07-13

Sheet 1 of 4



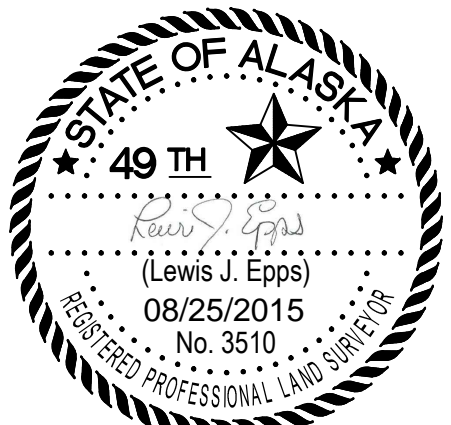
NOTES

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- LOCAL PROJECT HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83, IN US SURVEY FEET HOLDINGS DOMEED BC "SH-1" 1997 AS IN N, 1,990,307.00, E, 1,132,1629.31.
- VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW+0.0) BASED ON THE NOAANOS DATUM. BENCH MARK "VNM1311" 2006 NOS CROSS STATIONS: "ILIMMAHAPKA 2006 CORS ARP" (A892) - PID D4.676, "SLOPEMNT_2K 2007-2011 DATUM EPOCH AND IS REFERENCED BY HOLDING NOAANOS DATUM BENCH MARK "345 5600 B" (VNM1311) AS 36.39.
- VERTICAL TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM ARE BASED ON PUBLISHED NAVD83 (GEOID 128) ELEVATIONS HOLDING NOAAS/USACE DATUM BENCHMARK "PM-2 1967" (PID BB0C4ZVIM1305) AS 24.59.
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UNDER THE OVERSIGHT OF AN ACSM/THOSOA
CERTIFIED HYDROGRAPHER

David R. Neff C.H. (275)

CONTRACT NO. <u>W91K8-14-D-0013 /0017</u>	
CONTRACTOR <u>ETAC INC.</u>	
CITY <u>SAN RAFAEL</u>	STATE <u>CALIFORNIA</u>
Recommended: <u>MICHAEL E. MUELLER</u> PRIME CONTRACTOR	Approved: <u>THOMAS A. SLOAN</u> CHIEF GEOMATICS SECTION
Date: <u>08/25/2015</u>	

[illegible]

	U.S. ARMY CORPS OF ENGINEERS ALASKA DISTRICT P.O. BOX 6888 JBER, ALASKA 99506-8888		ORDERED BY: KIM W. GLENN TNSA/ENG		DATE: 02/25/2015 WP#: 87348
	APPROVED BY: Thomas A. Baur, Civil Geomatics Section		CONTRACT NO: WJH-14-00013.0017		DATE: 02/11/15
eT Inc. Inc. 6371 N. Seward Hwy. 100 San Rafael, CA 94901		SCALE: 1"=20' (AS SHOWN) PLOT DATE: 02/11/15		FILE NAME: ANS E (02/14/15) V01.DWG	

