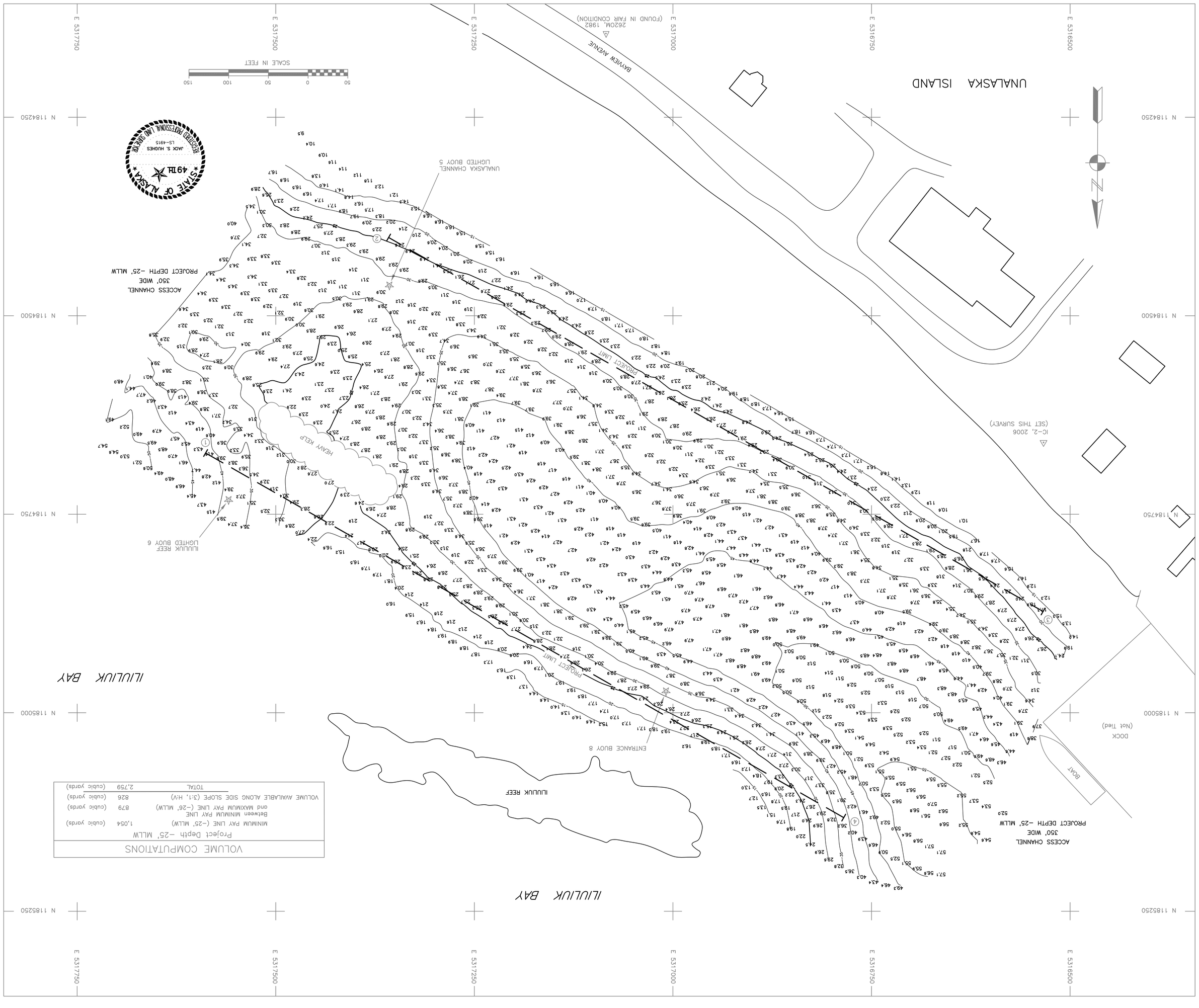


NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 10, NAD83, IN US SURVEY FEET, HOLDING DONED BC "NO. 19 1973" AS N 1,183,699.56, E 5,317,915.56 AND NOS SBC "2620M, 1982" AS N 1,184,144.50, E 5,317,084.36.
2. VERTICAL CONTROL IS IN FEET, REFERING TO MEAN LOWER LOW WATER (MLLW=0.0'), HOLDING USCGS SBC "NO. 19 1973" AS 16.42' ABOVE MLLW AS SHOWN IN NOAA/NOS TIDAL BENCHMARK LIST 9462620, UNALASKA, DUTCH HARBOR, ALASKA, PUBLISHED 04/21/03.
3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
4. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
5. SOUNDING OPERATIONS WERE CONDUCTED ON JULY 12, 2006 USING AN INNERSPACE 448 DEPTH SOUNDER WITH A 200KHZ, 3 DEGREE BEAM-WIDTH, SINGLE-BEAM TRANSDUCER. POSITIONING WAS PROVIDED USING A TRIMBLE 5700 RECEIVER OPERATING ON RTK CORRECTIONS BROADCAST FROM A TRIMBLE 5700 BASE STATION SET AT DONED BC "HH-1 1998". NAVIGATION, DATA COLLECTION AND DATA PROCESSING WERE PERFORMED USING HYPACK MAX INTEGRATED SOFTWARE. TIDE CORRECTIONS WERE PROVIDED BY TRIMBLE 5700 RTK GPS RECEIVER AND CHECKED THROUGH CONVENTIONAL METHODS.
6. VERTICAL CONTROL WAS SURVEYED JULY 11, 2006 USING OPTICAL INSTRUMENTS AND USING BOTH STATIC AND REAL-TIME-KINEMATIC GPS EQUIPMENT AND TECHNIQUES. ALL DIFFERENTIAL LEVELING TECHNIQUES, HORIZONTAL CONTROL WAS SURVEYED JULY 12-13, 2006 BREAKWATERS, BASINS, AND SURROUNDING AREAS WERE SURVEYED USING A TRIMBLE 5700 RTK SURVEY ROVER.

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
GRAVE RESET	1,183,516.91	5,320,228.11	59.05'	USCGS SBC (TRI STA)
NO. 19, 1973	1,183,699.56	5,317,915.56	16.42'	USCGS SBC (BENCH MARK)
2620M, 1982	1,184,144.50	5,317,084.36	10.97'	NOS SBC
2620N, 1990	----	----	11.81'	NOS SBC
*IC-2, 2006	1,184,559.59	5,316,533.47	7.44'	SET 3.25" DOMED BC IN ROCK
IC-1, 2002	1,185,584.85	5,316,776.95	14.63'	3.25" DOMED BC
*IC-3, 2006	1,183,334.88	5,319,086.46	16.02'	SET 3.25" DOMED BC IN CONC.

NOTE: MONUMENTS WITH AN ASTERISK (*) WERE SET THIS SURVEY.

PROJECT LIMITS

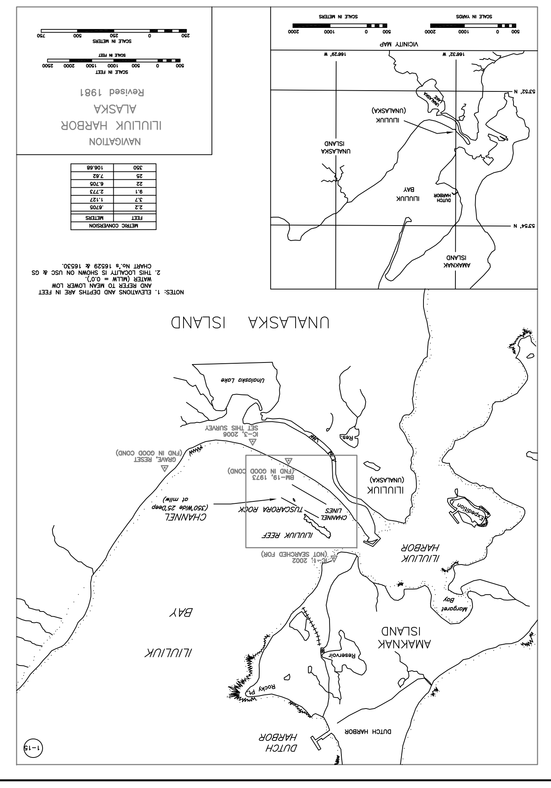
CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	1,184,872.87	5,317,588.33	3	1,184,872.40	5,316,534.03
2	1,184,401.44	5,317,357.95	4	1,185,132.08	5,316,784.98

NAVIGATION AIDS

DESCRIPTION	USCG NO.	NORTHING	EASTING
UNALASKA CHANNEL LIGHTED BUOY 5 (FL GREEN)	27470	1,184,481	5,317,357
ILIULIUK REEF LIGHTED BUOY 6 (FL RED)	27475	1,184,722	5,317,559
ENTRANCE BUOY 8 (RED NUN)	27480	1,184,973	5,317,009

VOLUME COMPUTATIONS

Project Depth -25', MLLW	
MINIMUM PAY LINE (-25', MLLW)	1,054 (cubic yards)
Between MINIMUM PAY LINE and MAXIMUM PAY LINE (-26', MLLW)	879 (cubic yards)
VOLUME AVAILABLE ALONG SIDE SLOPE (3:1, H:V)	826 (cubic yards)
TOTAL	2,759 (cubic yards)



SURVEYED:	DUTCH HARBOR, ALASKA
CSH	ILIULIUK ACCESS CHANNEL
DRAWN: REH	CONDITION SURVEY
CHECKED: JSH	JULY 11-13, 2006
SUBMITTED:	
REVISION 1	
RECOMMENDED:	APPROVED: DATE:
PROJECT MANAGER	CHIEF OPERATIONS-REAMES BRANCH
SURVEY NO. 2341-06	SCALE: 1" = 50'
	SHEET 1 OF 1

CONTRACTOR HUGHES & ASSOCIATES CONTRACT NO. W911KB-04-D-0007
CITY WASILLA STATE AK

ALASKA DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

U. S. ARMY

CORPS OF ENGINEERS