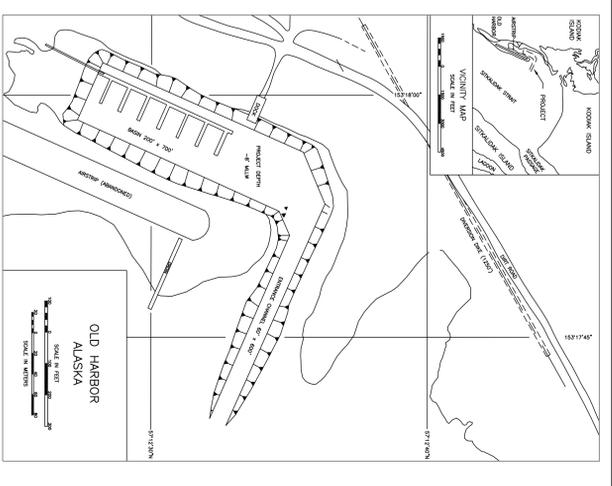


VOLUME COMPUTATIONS

Project Depth - 8' MLLW	739 (cubic yards)
MINIMUM PAY LINE (-8' MLLW)	794 (cubic yards)
Between MINIMUM PAY LINE and MAXIMUM PAY LINE (-9' MLLW)	794 (cubic yards)
VOLUME AVAILABLE ALONG SIDE SLOPE (3:1, HV)	2,133 (cubic yards)
TOTAL	3,666 (cubic yards)



NOTES

- HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 5, NAD83, IN US SURVEY FEET. HADING USAGE SBE -09-3° AS N 11721735.6, E 117004787 AND 1444-2, 1987) AS N 117165981, E 1178195861.
- VERTICAL CONTROL IS IN FEET BASED ON MEAN LOWER LOW WATER (MLLW) = 0.07'. HADING 1444-2° AT 12/75°.
- SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- THE EXISTING PROJECT CONSISTS OF OLD HARBOR AND THE SURROUNDING BASIN LOCATED IN OLD HARBOR, ALASKA.
- BATHYMETRY WAS COLLECTED JUNE 10-12, 2005. SOUNDINGS WERE COLLECTED USING A REDUNANT SOUNDER WITH A 30" SINGLE BEAM TRANSDUCER, SOUND VELOCITY THROUGH PROBE, AND VERIFIED WITH A MANUAL BAR CHECK AT 5' INTERVALS TO PROJECT DEPTH. THE WATER COLUMN WAS DETERMINED WITH AN ODM DIGIBAR PRO SOUND VELOCITY PROBE, AND VERIFIED WITH A MANUAL BAR CHECK AT 5' INTERVALS TO PROJECT DEPTH. SYSTEM AND TSS MOTION REFERENCE UNIT. RTK CORRECTIONS WERE BROADCAST FROM A LOCAL BASE STATION (OCCUPYING 1444-2°) DATA WAS COLLECTED AND FIELD PROGRESSED A TRIMBLE 5700 RTK SYSTEM AND VERIFIED THROUGH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES.
- THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY
- ALL SOUNDINGS REPRESENTED WITHIN AREA 'A' WERE RECORDED IN JUNE OF 2002 BY 1989A SURVEYS.

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
1444-2, 1987	1171639.81	1778858.61	12.75	USACE SMC
1444-3, 1987	1171614.66	1779015.87	9.73	USACE SMC
1444-4, 1987	1172415.47	1779173.19	10.53	USACE SMC
1444-6, 1987	1171858.34	1779049.97	13.32	USACE SMC
1444-7, 1987	1172615.15	1778667.25	11.24	DOMED BC
OH-1, 1988	1173107.16	1779136.53	11.08	DOMED AC
OH-2, 1988	1172173.56	1779047.87	13.10	DOMED BC
OH-3, 2002	1172055.08	1778923.93	11.82	DOMED BC
OH-4, 2002	1172055.08	1778923.93	11.82	DOMED BC
OH-5, 2005	1171835.94	1778609.63	9.25	SET 3.5" DOMED BC SET IN ROCK
OH-6, 2005	1171448.68	1778307.56	15.91	SET 3.5" DOMED BC SET IN ROCK

PROJECT LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	1172510.71	1778602.45	2	1172921.48	1778621.80
2	1172430.83	1778635.73	3	1172682.52	1778832.64
3	1172616.11	1779216.12	4	1172276.77	1779111.86
4	1172584.03	1779136.58	5	1171942.05	1778857.38

NAVIGATION AIDS

DESCRIPTION	USCG NO.	NORTHING	EASTING
DAY BEACON 1 GREEN SG ON PILE	26879	1172325.80	1779802.83
DAY BEACON 2 RED TR ON PILE	26880	1172394.99	1779848.43
DAY BEACON 3 GREEN SG ON PILE	26885	1172396.67	1779204.07
DAY BEACON 4 RED TR ON PILE	26890	1172142.23	1779114.87

CONTRACTOR: HUGHES & ASSOCIATES
 PALMER STATE AK
 ALASKA DISTRICT
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

PROJECT: OLD HARBOR, ALASKA
 SMALL BOAT BASIN
 PROJECT CONDITION SURVEY
 JUNE 10-12, 2005

SURVEY NO. 2253-05
 SCALE 1" = 50'
 SHEET 1 OF 1