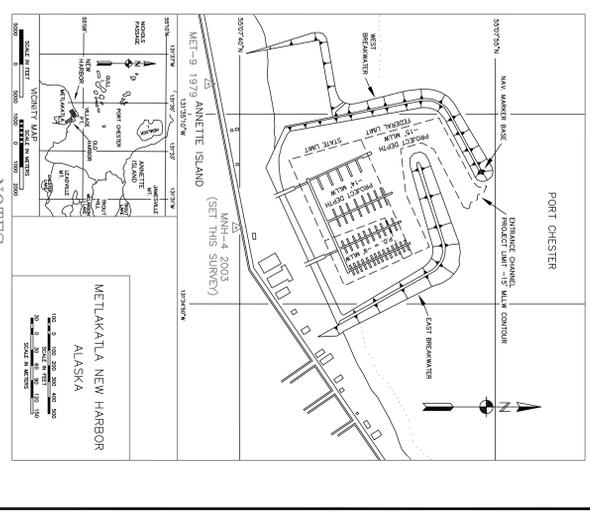


VOLUME COMPUTATIONS

MINIMUM PAY LINE	Project Depth -15' MLW	CUBIC YARDS
22065	1,210,752.8	3,121,448.2
22070	1,210,616.0	3,121,576.9
22075	1,210,498.8	3,121,332.7
22080	1,210,347.4	3,121,285.5
TOTAL		3196

NAVIGATION AIDS

USCG No.	DESCRIPTION	NORTHING	EASTING
22065	METLAKATLA BOAT HARBOR LIGHT 2	1,210,752.8	3,121,448.2
22070	METLAKATLA INNER HARBOR DAYBEACON 3	1,210,616.0	3,121,576.9
22075	METLAKATLA INNER HARBOR DAYBEACON 5	1,210,498.8	3,121,332.7
22080	METLAKATLA INNER HARBOR DAYBEACON 7	1,210,347.4	3,121,285.5



NOTES

- HORIZONTAL CONTROL IS ALASKA STATE PLANE ZONE 1, NAD83(CORSS98). IN US SURVEY FEET, BASED ON A STABLE GPS NETWORK HOLDING THE NS EPOCH 2003.00 CORE L1 PHASE CENTER VALUES FIXED FOR LEVEL ISLAND 1* (NSG PID 44431), TOROKA ISLAND 1* TRANSFORMED INTO THE NS EPOCH 2003.00 DATUM HOLDING USACE SBC 'S' END W BW 1981* AS N 1,210,018.52, E 3,121,198.33 AND USACE SBC 'S' END E BW 1981* AS N 1,210,070.03, E 3,122,251.63 (SEE NOTE 6 BELOW).
- VERTICAL CONTROL IS MEAN-LOWER-LOW-WATER DATUM. IN US SURVEY FEET (MLW=0.0') HOLDING NOAA/US TIDE BENCH MARKS BENCH MARK 13 1969* AS 20.08' AND BENCH MARK 945-0314) SOUTHWEST ALASKA - 25, METLAKATLA PORT CHESTER, ANNETTE ISLAND*, PUBLISHED 3/23/71.
- SOUNDINGS ARE IN US SURVEY FEET AND ARE MINUS UNLESS INDICATED OTHERWISE.
- THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
- SURVEY DATA ACQUISITION WAS PERFORMED APRIL 2-8, 2003. SOUNDINGS WERE COLLECTED USING AN OCEAN HORIZONTAL PRECISION DEPTH SOUNDER WITH A ZONAL AND ORBITAL BIAS-212I DOPS RECEIVER OPERATING ON RTCM CORRECTIONS BROADCAST FROM A TRIMBLE 6000 SSE RECEIVER SET AT USACE SBC 'S' END W BW 1981* NAVIGATION DATA SOFTWARE. SOUNDINGS WERE CORRECTED FOR TIDE USING WATER LEVEL DATA COLLECTED WITH AN ENGEDO TIDE 1029 WATER LEVEL RECORDER SET BY TERBA SURVEYS, LLC FOR A COMBINATION OF STATIC AND REAL-TIME-KINEMATIC GPS TECHNIQUES. VERTICAL CONTROL WAS SURVEYED USING OPTICAL INSTRUMENTS AND DIFFERENTIAL LEVELING TECHNIQUES USING OPTICAL INSTRUMENTS AND CONVENTIONAL HAND SURVEYING TECHNIQUES.
- CONTROL MONUMENTS OF RECORD WHICH WERE NOT SURVEYED ARE DENOTED IN THE DRAWING WITH A TRIANGLE AND A NUMBER IN CIRCLES. CONTROL MONUMENTS OF PROJECT LIMITS AND ASSOCIATED VALUES WERE CONVERTED FROM NAD83(CORSS98) TO NAD83(CORSS98) USING A FIXED-SCALE, LEAST SQUARES TRANSFORMATION WITHIN TRIMBLE GEODASICS OFFICE (V1.60).

PROJECT LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	1,209,724.73	3,121,434.37	5C	1,210,669.71	3,121,662.47
2	1,210,097.67	3,122,057.41	6	1,210,535.76	3,121,155.46
3	1,210,512.69	3,121,845.45	7	1,210,141.75	3,121,315.41
4A	1,210,353.72	3,121,528.44	8	1,210,427.69	3,121,888.44
4B	1,210,339.74	3,121,335.43	9	1,210,396.69	3,121,803.44
5A	1,210,207.74	3,121,133.43	10	1,209,985.69	3,121,852.40
5B	1,210,207.74	3,121,133.43	11	1,209,985.69	3,121,852.40
PI 2	1,210,998.73	3,121,494.47	12	1,210,992.72	3,121,524.48

CONTROL DATA

STATION	NORTHING	EASTING	ELV.	DESCRIPTION
*MET-2 1979	1,209,916.64	3,122,411.36	24.81	USACE SBC
MET-8 1979	1,209,602.53	3,121,897.39	28.01	USACE SBC
*MET-9 1979	1,209,444.57	3,121,323.31	30.23	USACE SBC
S END E BW 1981	1,210,070.03	3,122,251.63	22.63	USACE SBC
PC E BW 1981	1,210,521.00	3,121,992.61	23.12	USACE SBC
PT E BW 1981	1,210,489.72	3,121,811.01	23.13	USACE SBC
S END W BW 1981	1,210,018.52	3,121,198.33	23.31	USACE SBC
PC W BW 1981	1,210,434.94	3,121,102.12	23.55	USACE SBC
S END W BW 1981	1,210,989.93	3,121,454.14	21.28	USACE SBC
PT W BW 1981	1,210,979.47	3,121,178.87	23.23	USACE SBC
MNH-2 1999	1,209,725.76	3,121,814.81	21.10	USACE DOWED BC
MNH-3 2003	1,209,725.76	3,121,797.66	22.39	USACE DOWED BC
MNH-4 2003	1,209,552.51	3,121,778.63	28.45	USACE DOWED BC

CONTRACTOR: TERBA SURVEYS, LLC
 CONTRACT NO.: DASHES-01-D-0001
 CITY: FAIRBANKS, ALASKA

ALASKA DISTRICT
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

METLAKATLA, ALASKA
 METLAKATLA NEW HARBOR
 PROJECT CONDITION SURVEY
 APRIL 2-8, 2003

APPROVED: _____ DATE: _____
 CHECKED: _____
 SURVEYED: _____
 DRAWN: _____
 SURVEYED: _____

SCALE: 1" = 50'
 SHEET 1 OF 1

SURVEY NO. 2035-03