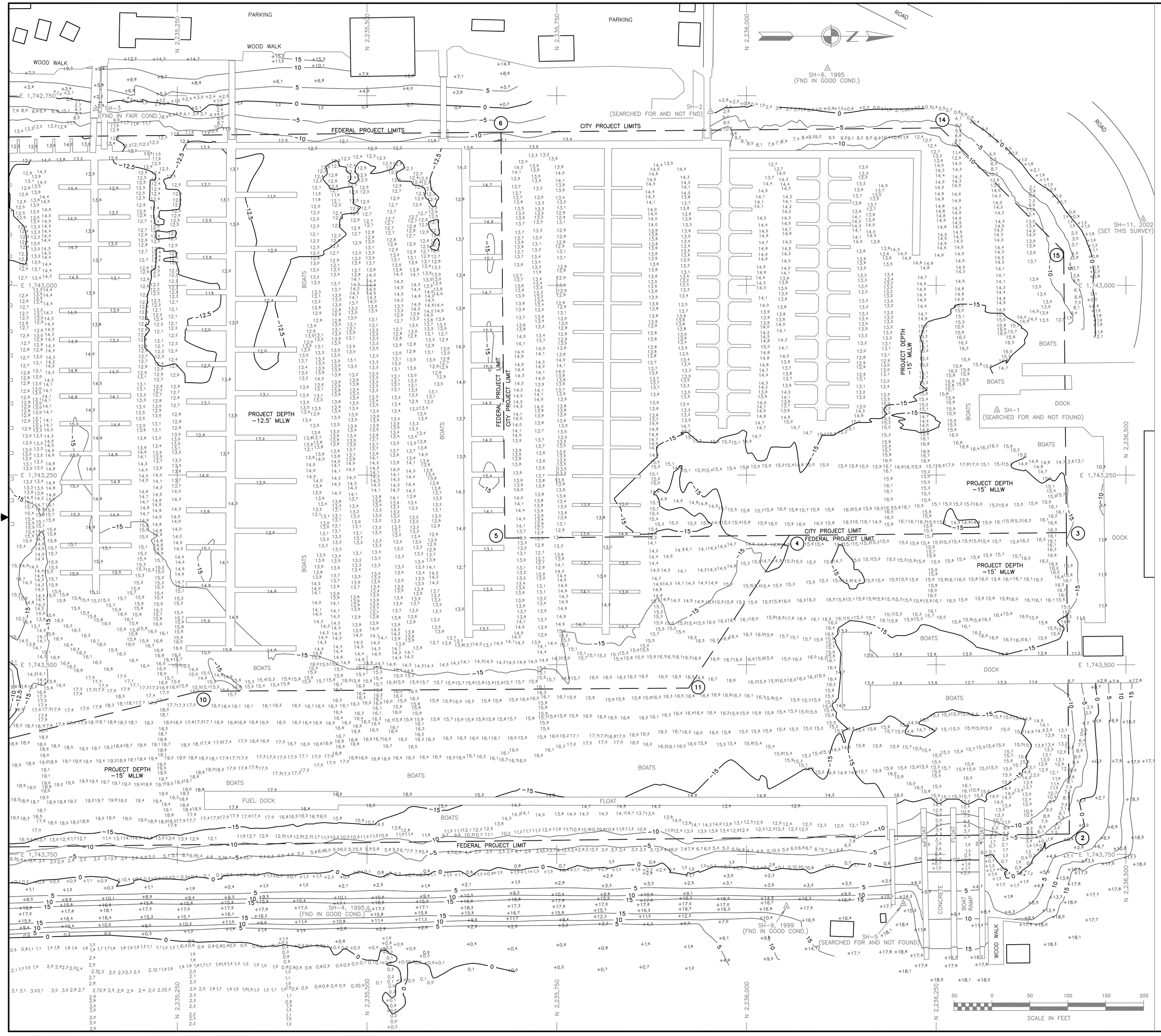
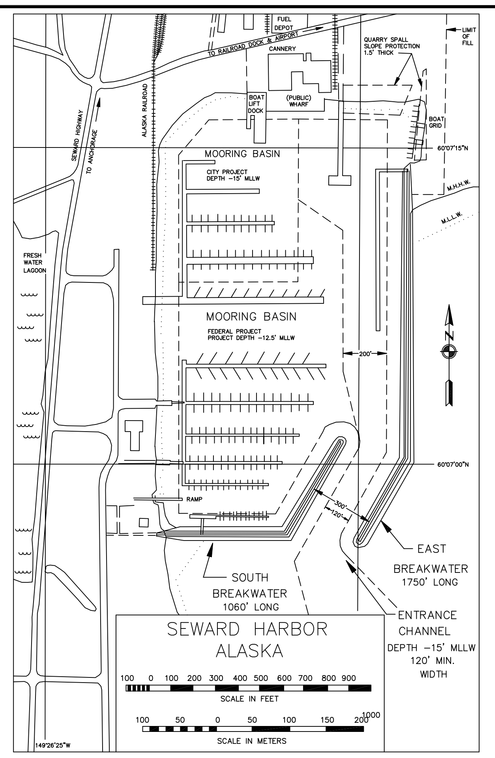
CORPS OF ENGINEERS

U. S. ARMY





NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83, IN U.S. SURVEY FEET, HOLDING USACE SBC "BJ-2" AS N 2,234,955.97, E 1,743,521.86 AND USACE SBC "LP-9 1965" AS N 2,234,534.04, E 1,743,621.86.
2. VERTICAL CONTROL IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0'), HOLDING USCGS TIDAL SBMC "NO 22 1966" AS 24.78'. VERTICAL DATUM IS BASED ON NOAA/NOS TIDAL BENCH MARK LIST "ALASKA 945 5090 – SEWARD, RESURRECTION BAY", DATED 7/6/2001.
3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
4. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
5. HYDROGRAPHIC DATA ACQUISITION WAS CONDUCTED ON MAY 5 THROUGH 6, 2002. SOUNDINGS WERE OBTAINED WITH A ROSS 950 SURVEYOR/SMART SOUNDER, 200kHz, 3° BEAM WIDTH, SINGLE–BEAM TRANSDUCER. POSITIONING WAS PROVIDED BY A TRIMBLE AG122 DGPS RECEIVER/ANTENNA OPERATING IN DGPS MODE ON CORRECTIONS BROADCAST FROM A TRIMBLE 4000SSE LOCAL BASE STATION SET AT DOMED BC "SH–9 1999". DEPTHS WERE CORRECTED FOR TIDE USING DATA FROM AN ENDECO TYPE 1029 WATER LEVEL RECORDER SET BY TERRA SURVEYS, LLC. NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK INTEGRATED SOFTWARE. HORIZONTAL CONTROL WAS SURVEYED UTILIZING REAL TIME KINEMATIC GPS TECHNIQUES. VERTICAL CONTROL WAS SURVEYED USING OPTICAL INSTRUMENTS AND DIFFERENTIAL LEVELING TECHNIQUES.

VOLUME COMPUTATIONS

Project Depth –12.5' MLLW		Project Depth –15' MLLW	
VOLUME AVAILABLE TO PROJECT DEPTH(–12.5' MLLW)	842 (yds^3)	VOLUME AVAILABLE TO PROJECT DEPTH(–15' MLLW)	8,265 (yds^3)
VOLUME AVAILABLE BETWEEN PROJECT DEPTH AND OVERDEPTH (–13.5' MLLW)	1,985 (yds^3)	VOLUME AVAILABLE BETWEEN PROJECT DEPTH AND OVERDEPTH (–16' MLLW)	4,387 (yds^3)
VOLUME AVAILABLE ALONG SIDE SLOPES (3:1; H:V)	861 (yds^3)	VOLUME AVAILABLE ALONG SIDE SLOPES (3:1; H:V)	10,699 (yds^3)
TOTAL	3,688 (yds^3)	TOTAL	23,351 (yds^3)

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
BJ–2	2,234,955.97	1,743,521.86	16.50	USACE SBC IN ROCK
LP–8 1965	2,234,892.45	1,743,831.61	16.34	USACE SBC IN ROCK
LP–9 1965	2,234,534.04	1,743,621.86	19.01	USACE SBC IN ROCK
SH–1	2,236,330.31	1,743,164.45	17.88	(SEARCHED FOR AND NOT FOUND)
SH–2	2,235,952.75	1,742,771.00	18.32	(SEARCHED FOR AND NOT FOUND)
SH–3	2,235,142.54	1,742,767.23	18.50	PK NAIL IN RAMP
SH–4 1995	2,235,501.77	1,743,822.95	16.93	3 1/4" DOMED BC IN ROCK
SH–5 1995	2,236,206.76	1,743,814.93	–	(SEARCHED FOR AND NOT FOUND)
SH–6 1995	2,236,107.00	1,742,714.21	16.43	3 1/4" ALCAP ON ALROD
SH–7 1995	2,234,548.70	1,743,253.68	17.46	2" ALCAP IN ROCK
SH–8 1999	2,234,556.68	1,742,936.42	17.41	3 1/4" DOMED BC IN CONCRETE
SH–9 1999	2,236,052.97	1,743,818.33	16.33	3 1/4" DOMED BC IN ROCK
SH–10 2002	2,234,666.58	1,742,594.16	17.10	3 1/4" DOMED BC IN CONCRETE
SH–11 2002	2,236,522.74	1,742,912.85	18.80	3 1/4" DOMED BC IN ASPHALT

PROJECT LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	2,234,916.4	1,743,741.5	8	2,234,641.1	1,743,241.2
2	2,236,425.5	1,743,723.1	9	2,234,432.7	1,743,330.3
3	2,236,421.6	1,743,325.9	10	2,235,278.7	1,743,535.0
4	2,236,056.7	1,743,329.5	11	2,235,923.6	1,743,530.8
5	2,235,681.7	1,743,333.1	12	2,234,167.9	1,743,811.2
6	2,235,676.5	1,742,798.2	13	2,233,988.9	1,743,453.2
7	2,234,636.6	1,742,808.3	14	2,236,255.6	1,742,792.6
			15	2,236,418.0	1,742,955.3

NAVIGATION AIDS

DESCRIPTION	USCG No.	NORTHING	EASTING
SEWARD BOAT HARBOR LIGHT 1	26015	2,233,863.0	1,743,589.1
SEWARD EAST BREAKWATER LIGHT 2	26020	2,234,539.1	1,743,624.8
SEWARD WEST BREAKWATER LIGHT 3	26025	2,234,556.3	1,743,303.0

CONTRACT NO. DACW85–01–D–0001

CONTRACTOR TERRA SURVEYS, LLC

CITY PALMER STATE ALASKA

ALASKA DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

SURVEYED: DJB/SGB

DRAWN: DJB

CHECKED: KDW

SUBMITTED:

SEWARD, ALASKA
SEWARD HARBOR
PROJECT CONDITION SURVEY
MAY 5–6, 2002

RECOMMENDED:

PROJECT MANAGER

APPROVED:

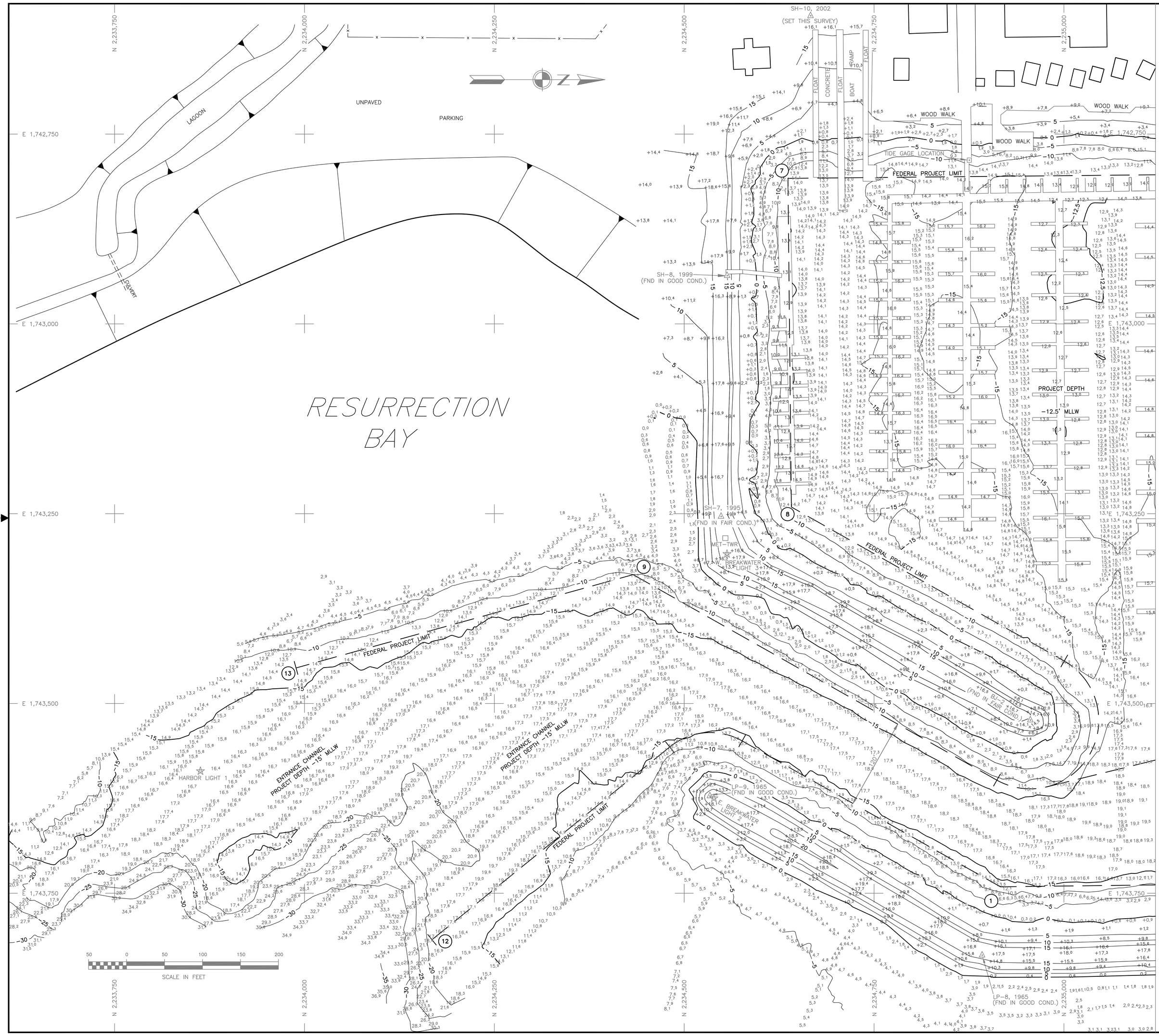
CHIEF OPERATIONS–READINESS BRANCH

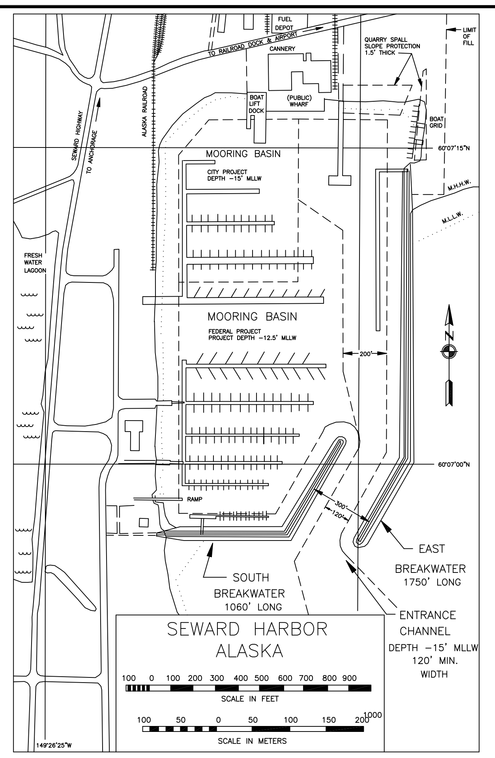
DATE:

SURVEY NO. 1958–02

SCALE: 1" = 50'

SHEET 1 OF 2





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MAY 5–6, 2002

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DATE:

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SHEET 2 OF 2