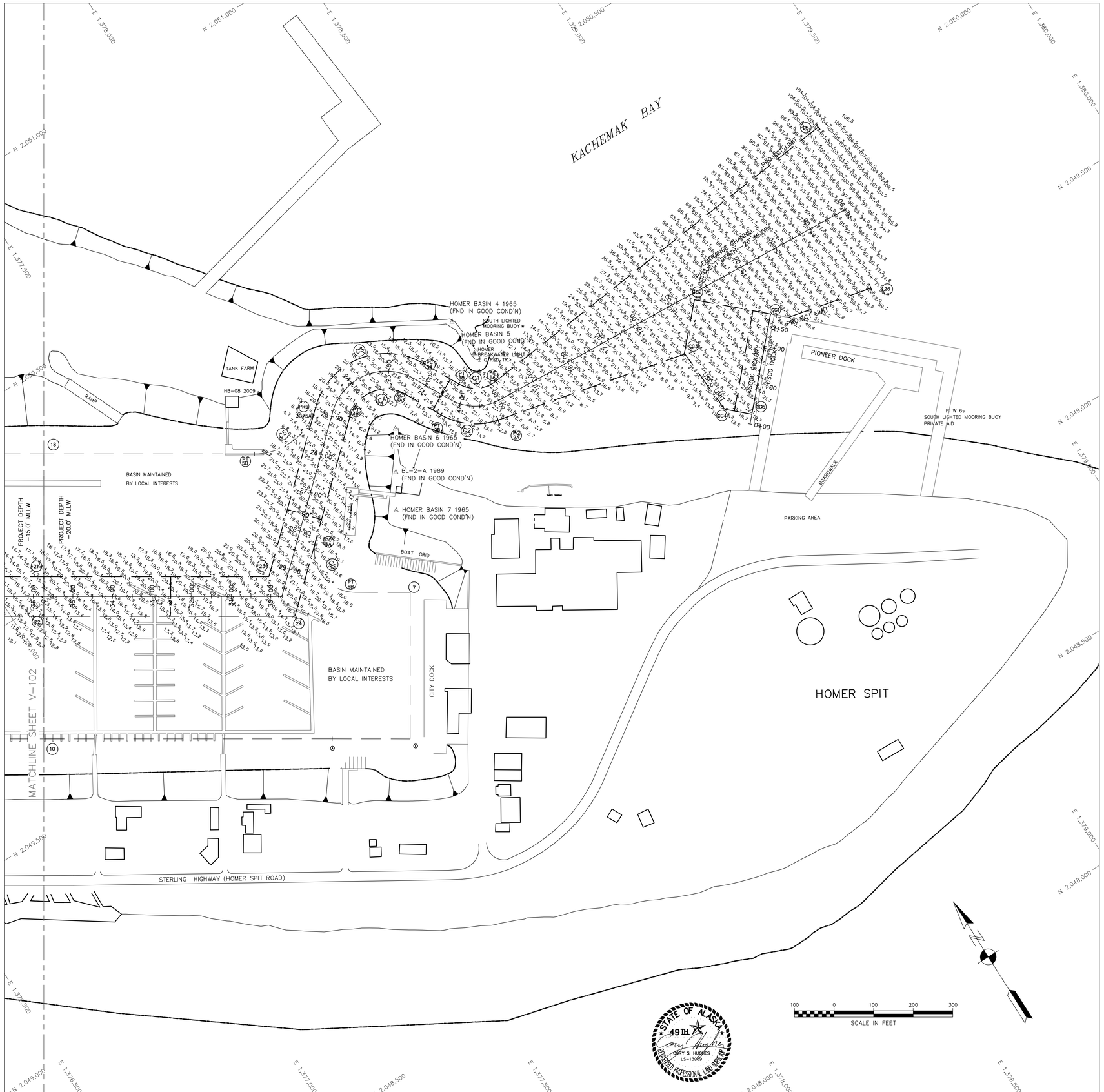
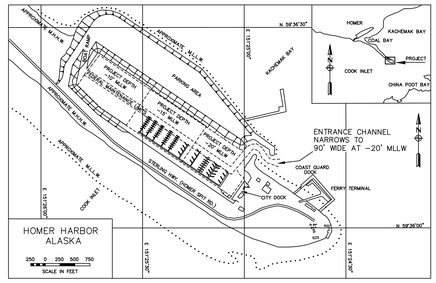
CORPS OF ENGINEERS





NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, IN FEET, NAD 83, HOLDING USACE SBC "HOMER BASIN 7" AS N 2,049,712.22, E 1,377,964.36 AND USACE SBC "BL-2-A" AS N 2,049,793.81, E 1,378,015.52.
2. VERTICAL CONTROL IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0'), HOLDING SBC "HOMER BASIN 7" AT 31.46'',
3. SOUNDINGS ARE IN FEET AND ARE NEGATIVE UNLESS OTHERWISE INDICATED.
4. THIS DRAWING IS INDICATIVE OF CONDITIONS AT THE TIME OF SURVEY.
5. THIS PRE DREDGE SURVEY WAS CONDUCTED ON SEPTEMBER 14 & 25, 2012 BY HUGHES AND ASSOCIATES, WASILLA, AK. SOUNDINGS WERE COLLECTED USING AN ODOM ES3-M MULTIBEAM ECHO SOUNDER WITH 240 BEAMS AT 0.75 DEGREE SPACING. SPEED OF SOUND WAS DETERMINED USING AN ODOM DIGIBAR PRO AND AN ODOM DIGIBAR V AT THE SOUNDER HEAD. POSITIONING, HEADING, AND TIDES WERE PROVIDED IN REAL TIME USING A TRIMBLE 461 GPS RECEIVER OPERATING ON KINEMATIC CORRECTORS BROADCAST FROM A TRIMBLE 5700 RTK BASE RECEIVER SET AT CONTROL STATION, "HOMER BASIN 7". VESSEL NAVIGATION, DATA COLLECTION AND PROCESSING WERE PERFORMED USING HYPACK 2012 INTEGRATED SOFTWARE.
6. THE CONTROL VALUES SHOWN ON THIS PLAT WERE VERIFIED PRIOR TO THE PRE DREDGE SURVEY AND HELD AS PUBLISHED.
7. THERE WERE NO NEW PERMANENT CONTROL MONUMENTS SET DURING THIS SURVEY.

CONTROL DATA

STATION	NORTHING	EASTING	MLLW	NAVD88	DESCRIPTION
BL-2-A 1989	2,049,793.81	1,378,015.52	32.49'	27.66'	3-1/4" USACE SBC "SURVEY MARK"
HOMER BASIN 4 1965	2,050,038.11	1,378,340.09	31.28'	26.45'	3-1/4" USACE SBC "SURVEY MARK"
HOMER BASIN 5 1965	2,049,940.32	1,378,344.30	30.87'	26.04'	4" USACE SBC "TRAVERSE STATION"
HOMER BASIN 6 1965	2,049,887.28	1,378,073.96	31.21'	26.38'	3-1/4" USACE SBC "SURVEY MARK"
HOMER BASIN 7 1965	2,049,712.22	1,377,964.36	31.46'	26.63'	3-1/4" USACE SBC "SURVEY MARK"
AUDREY	2,051,507.88	1,375,406.60	33.31'	28.48'	1-1/2" ALUMINUM CAP
BOLL 1996	2,050,682.88	1,375,195.75	35.48'	30.65'	3-1/4" FLAT BRASS CAP
HB-08 2009	2,050,150.78	1,377,830.73	31.92'	27.09'	3-1/4" DOMED ALUMINUM CAP
HB-09 2009	2,051,199.61	1,375,120.24	32.01'	27.18'	3-1/4" DOMED ALUMINUM CAP
C 103 1965	--	--	26.95'	22.12'	3-1/4" USCGS SBC "BENCH MARK"
BM NO 6 1965	--	--	27.28'	22.45'	3-1/4" USCGS SBC "BENCH MARK"

☆ NAVIGATION AIDS ☆

USCG NO.	DESCRIPTION	NORTHING	EASTING
26210	HOMER BREAKWATER LIGHT 2	2,049,940.1	1,378,350.7
26216	SOUTH LIGHTED MOORING BUOY	2,049,932.5	1,378,484.4

PROJECT LIMITS – HOMER SMALL BOAT HARBOR

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
PC-1A	2,049,852.14	1,378,351.33	13	2,050,893.93	1,375,219.67
PT-1B	2,049,896.45	1,378,269.64	14	2,051,074.98	1,375,335.41
PC-2A	2,049,766.26	1,378,304.02	15	2,051,159.30	1,375,389.23
PT-2B	2,049,855.01	1,378,189.75	16	2,051,420.46	1,375,556.10
PC-3A	2,049,989.06	1,378,221.58	17	2,050,887.56	1,376,390.12
PRC-3B/5A	2,050,041.53	1,377,932.63	18	2,050,312.15	1,377,290.69
PT-5B	2,050,025.58	1,377,739.19	19	2,050,626.40	1,376,223.25
PC-6A	2,049,758.41	1,377,752.69	20	2,050,542.13	1,376,169.40
PT-6B	2,049,593.40	1,377,766.24	21	2,050,050.99	1,377,123.83
7	2,049,519.03	1,377,882.50	22	2,049,966.75	1,377,070.00
8	2,049,207.15	1,377,683.23	23	2,049,744.77	1,377,603.08
9	2,049,313.35	1,377,517.38	24	2,049,625.13	1,377,604.67
10	2,049,705.59	1,376,903.13	25	2,049,954.10	1,379,383.98
11	2,050,281.01	1,376,002.56	26	2,049,539.77	1,379,277.46
12	2,050,544.76	1,375,589.76			

CURVE DATA – HOMER SMALL BOAT HARBOR

CURVE NO.	RADIUS	ARC LENGTH	DELTA ANGLE	TANGENT
1	82.86'	98.65'	68-13-09	56.12'
2	172.86'	149.28'	49-28-56	79.66'
3	185.62'	338.80'	104-34-53	240.08'
4	95.62'	174.53'	104-34-53	123.67'
5	160.19'	208.50'	74-34-41	121.98'
6	104.07'	191.43'	105-23-29	136.59'

PROJECT LIMITS – USCG BERTH (USCGC "HICKORY")

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
CG1	2,049,621.31	1,379,028.43	CG4	2,049,481.24	1,378,801.20
CG2	2,049,755.11	1,378,885.74	CG5	2,049,443.37	1,378,852.25
CG3	2,049,654.76	1,378,791.65			

VOLUME COMPUTATIONS

-20 MLLW AREA VOLUMES (STATION 10+00 to 28+12.22)	
VOLUME REMOVED TO PROJECT DEPTH (-20')	1,026 cu. yds.
VOLUME REMOVED BETWEEN PROJECT DEPTH (-20') AND MAX PAY LINE (-21')	829 cu. yds.
VOLUME REMOVED ON SIDE SLOPES	2,807 cu. yds.
TOTAL VOLUME REMOVED (WITHIN PROJECT LIMTS)	4,662 cu. yds.
TOTAL VOLUME OVERDREDGE (BEYOND PROJECT LIMTS)	4,970 cu. yds.
-15 MLLW AREA VOLUMES (STATION 35+73.60 to 46+42.31)	
VOLUME REMOVED TO PROJECT DEPTH (-15')	4,592 cu. yds.
VOLUME REMOVED BETWEEN PROJECT DEPTH (-15') AND MAX PAY LINE (-16')	3,527 cu. yds.
VOLUME REMOVED ON SIDE SLOPES	494 cu. yds.
TOTAL VOLUME REMOVED (WITHIN PROJECT LIMTS)	8,613 cu. yds.
TOTAL VOLUME OVERDREDGE (BEYOND PROJECT LIMTS)	6,084 cu. yds.
COAST GUARD DOCK AREA VOLUMES	
VOLUME REMOVED TO PROJECT DEPTH (-22)	156 cu. yds.
VOLUME REMOVED BETWEEN PROJECT DEPTH (-22) AND MAX PAY LINE (-23)	12 cu. yds.
VOLUME REMOVED TO PROJECT DEPTH (-26)	432 cu. yds.
VOLUME REMOVED BETWEEN PROJECT DEPTH (-26) AND MAX PAY LINE (-27)	38 cu. yds.
VOLUME REMOVED ON SIDE SLOPES	1,259 cu. yds.
VOLUME REMOVED BETWEEN PD SIDE SLOPES AND MPL SIDE SLOPES	59 cu. yds.
TOTAL VOLUME REMOVED (WITHIN PROJECT LIMTS)	1,956 cu. yds.
TOTAL VOLUME OVERDREDGE (BEYOND PROJECT LIMTS)	2,017 cu. yds.

STATE OF ALASKA 49TH
CORY S. HUGHES
LS-13069
REGISTERED PROFESSIONAL LAND SURVEYOR

SURVEY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-11-R-0040
CONTRACTOR ALASKA MARINE EXCAVATION
CITY ANCHOR POINT STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date

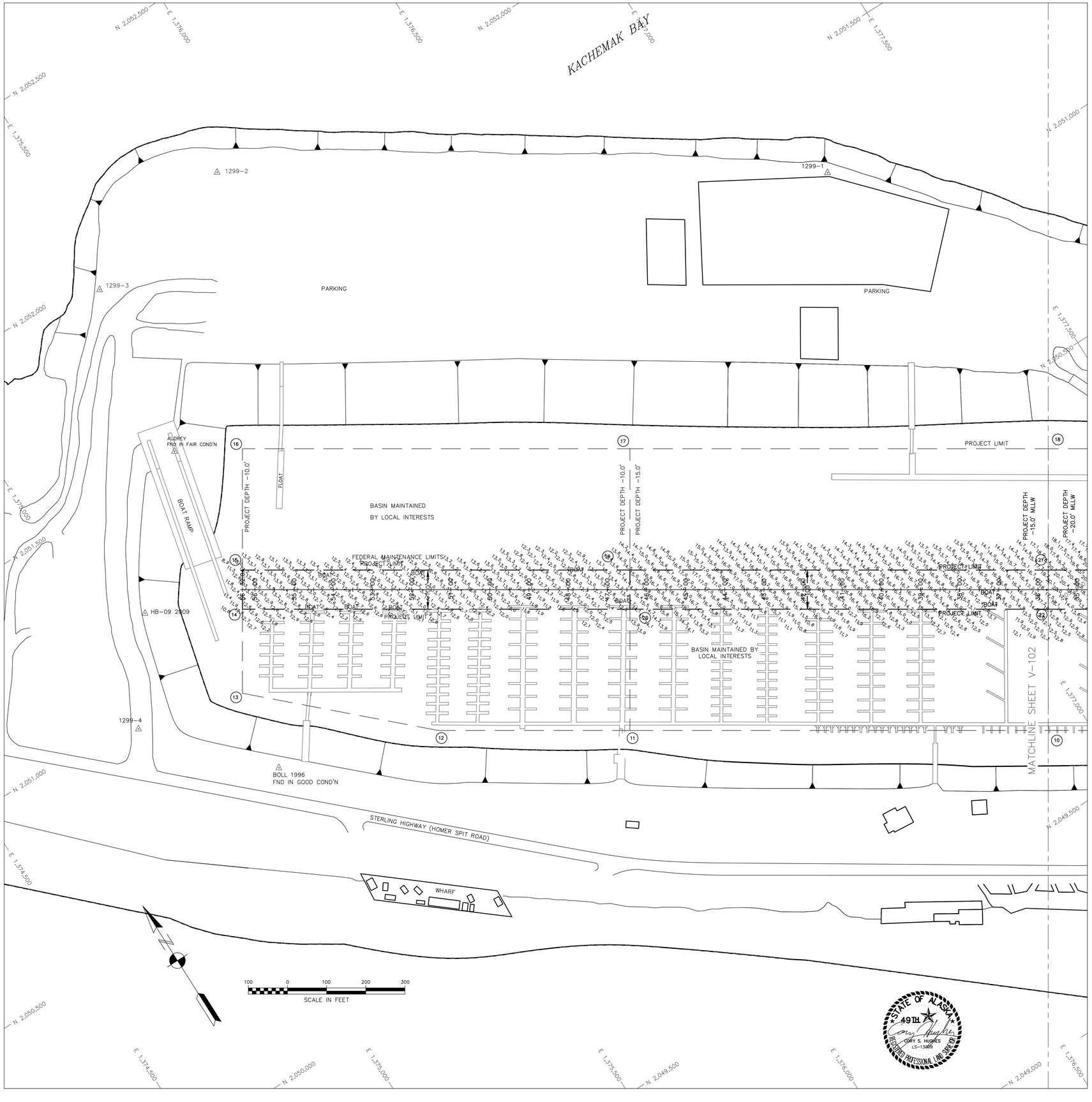
Surveyed: HUGHES AND ASSOCIATES
Drawn: CSH
Reviewed: JSH
Chief:
Submitted:
Chief:
Date: 10/30/12
Dwg Scale: 1" = 100'
Plot Scale:
Section
File:
Drawing #:
Branch
3048-12

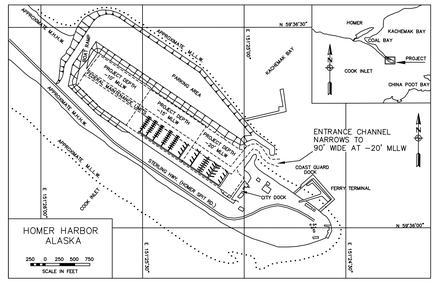
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

HOMER, ALASKA
HOMER HARBOR
POST DREDGE SURVEY
SEPTEMBER 14 & 25, 2012

Reference number:
V-101
Sheet 1 of 10

CORPS OF ENGINEERS





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2. VERTICAL CONTROL IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0'), HOLDING SBC "HOMER BASIN 7" AT 31.46".
3. SOUNDINGS ARE IN FEET AND ARE NEGATIVE UNLESS OTHERWISE INDICATED.
4. THIS DRAWING IS INDICATIVE OF CONDITIONS AT THE TIME OF SURVEY.
5. THIS PRE DREDGE SURVEY WAS CONDUCTED ON SEPTEMBER 14 & 25, 2012 BY HUGHES AND ASSOCIATES, WASILLA, AK. SOUNDINGS WERE COLLECTED USING AN ODOM ES3–M MULTIBEAM ECHO SOUNDER WITH 240 BEAMS AT 0.75 DEGREE SPACING. SPEED OF SOUND WAS DETERMINED USING AN ODOM DIGBAR PRO AND AN ODOM DIGBAR V AT THE SOUNDER HEAD. POSITIONING, HEADING, AND TIDES WERE PROVIDED IN REAL TIME USING A TRIMBLE 461 GPS RECEIVER OPERATING ON KINEMATIC CORRECTORS BROADCAST FROM A TRIMBLE 5700 RTK BASE RECEIVER SET AT CONTROL STATION, "HOMER BASIN 7". VESSEL NAVIGATION, DATA COLLECTION AND PROCESSING WERE PERFORMED USING HYPACK 2012 INTEGRATED SOFTWARE.
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STATE OF ALASKA 49TH CORY S. HUGHES LS–13089 REGISTERED PROFESSIONAL LAND SURVEYOR

SURVEY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB–11–R–0040
CONTRACTOR ALASKA MARINE EXCAVATION
CITY ANCHOR POINT STATE ALASKA
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym.	Action	Description	Date

Surveyed: HUGHES AND ASSOCIATES
Drawn: CSH Reviewed: JSH
Chief: Section:
Submitted: File:
Chief: Branch: Drawing #:
Date: 10/30/12
Dwg Scale: 1" = 100'
Plot Scale:

3048–12

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

HOMER, ALASKA
HOMER HARBOR
POST DREDGE SURVEY
SEPTEMBER 14 & 25, 2012

Reference number:
V–102
Sheet 2 of 10