

NOTES

- HORIZONTAL CONTROL IS ALASKA STATE PLANE ZONE 1, IN FEET, NORTH AMERICAN DATUM OF 1983, HOLDING USGCS SFC BREAKWATER 1959 AS N 2785.326 19 E 2377149.612 AND BS SH-B 1998 AS N 2785.095 81 E 2376107.623.
- VERTICAL CONTROL IS IN FEET BASED ON MEAN LOWER LOW WATER (MLW = 0.0), HOLDING BS SH-B 1998 AS 28.09 ABOVE MEAN WATER.
- SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- THE PROJECT PROVIDES FOR A FEDERALLY MAINTAINED ENTRANCE CHANNEL AND BASIN AREA OF ONE ACRE WITH A PROJECT DEPTH OF -8' MLW NEAR THE NORTHWEST CORNER OF THE PROJECT AREA AND -5' MLW NEAR THE NORTHERN END, AND -5' MLW FOR THE REMAINING 700 FT.
- BATHYMETRY WAS COLLECTED JUNE 21-24, 2004. SOUNDINGS WERE COLLECTED USING AN 'INTEKSPACE 448' SOUNDING WITH A '3' SINGLE BEAM TRANSDUCER, SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN ODOM DOBBY PRO PROJECT DEPTH, POSITIONING AND KESSEL ATTITUDE WERE MEASURED USING A TRIMBLE 5700 RTK SYSTEM AND A TSS MOTION REFERENCE UNIT. RTK CORRECTIONS WERE COLLECTED AND FIELD PROCESSED USING 'HYPOK WAX VERSION 02.12A' SOFTWARE. THE ELEVATIONS WERE MEASURED USING A TRIMBLE 5700 RTK SYSTEM AND VERTICAL CONTROL WAS VERIFIED THROUGH CONVENTIONAL DIFFERENTIAL SURVEY TECHNIQUES.
- THIS SURVEY INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.

CONTROL DATA

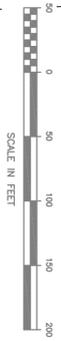
STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
BREAKWATER 1959	2,785,301.27	2,377,646.72	28.05	USGCS SFC
BREAKWATER BM 1	2,785,326.19	2,377,624.86	27.60	USGCS SFC IN NW AD BASE
FERRY	2,785,496.49	2,377,441.29	27.27	5/8" X 2 1/2" REBAR
SH-A 1996	2,785,972.51	2,376,444.99	28.05	1" X 4" CONCRETE
SH-B 1998	2,785,095.81	2,378,076.23	28.69	3.5" RC IN CONCRETE
SH-C 2000	2,785,920.03	2,378,478.22	28.01	3.25" DBC IN CONC. RAMP
SH-D 2000	2,785,509.76	2,377,443.34	27.26	3.25" DBC IN ASPHALT
TOTAL BM 8 1959			34.19	3.5" SFC IN GRANITE BOULDER

PROJECT LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	2,785,326.94	2,377,786.00	6	2,785,329.94	2,377,439.19
2	2,785,494.61	2,377,962.37	7	2,785,996.81	2,377,476.63
3	2,785,095.81	2,377,732.27	8	2,785,414.33	2,377,585.69
4	2,785,095.81	2,377,732.27	9	2,785,414.33	2,377,585.69
5	2,785,509.68	2,377,596.21			

NAVIGATION AIDS

DESCRIPTION	USCGC No.	NORTHING	EASTING
SKAGWAY BREAKWATER LIGHT 2	23935	2,785,326.5	2,377,621.7



CONTRACT NO. **W91KH04-D-0007**
 CONTRACTOR **HUGHES AND ASSOCIATES** STATE **ALASKA**
 CITY **FAIRER**

ALASKA DISTRICT
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

SKAGWAY, ALASKA
 SKAGWAY HARBOR
 JUNE 24, 2004
 PROJECT CONDITION SURVEY

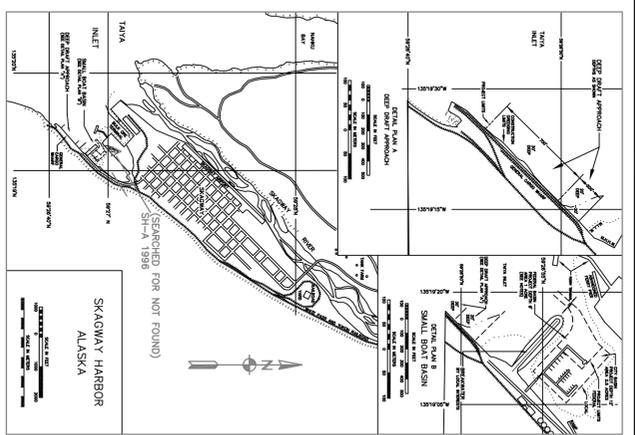
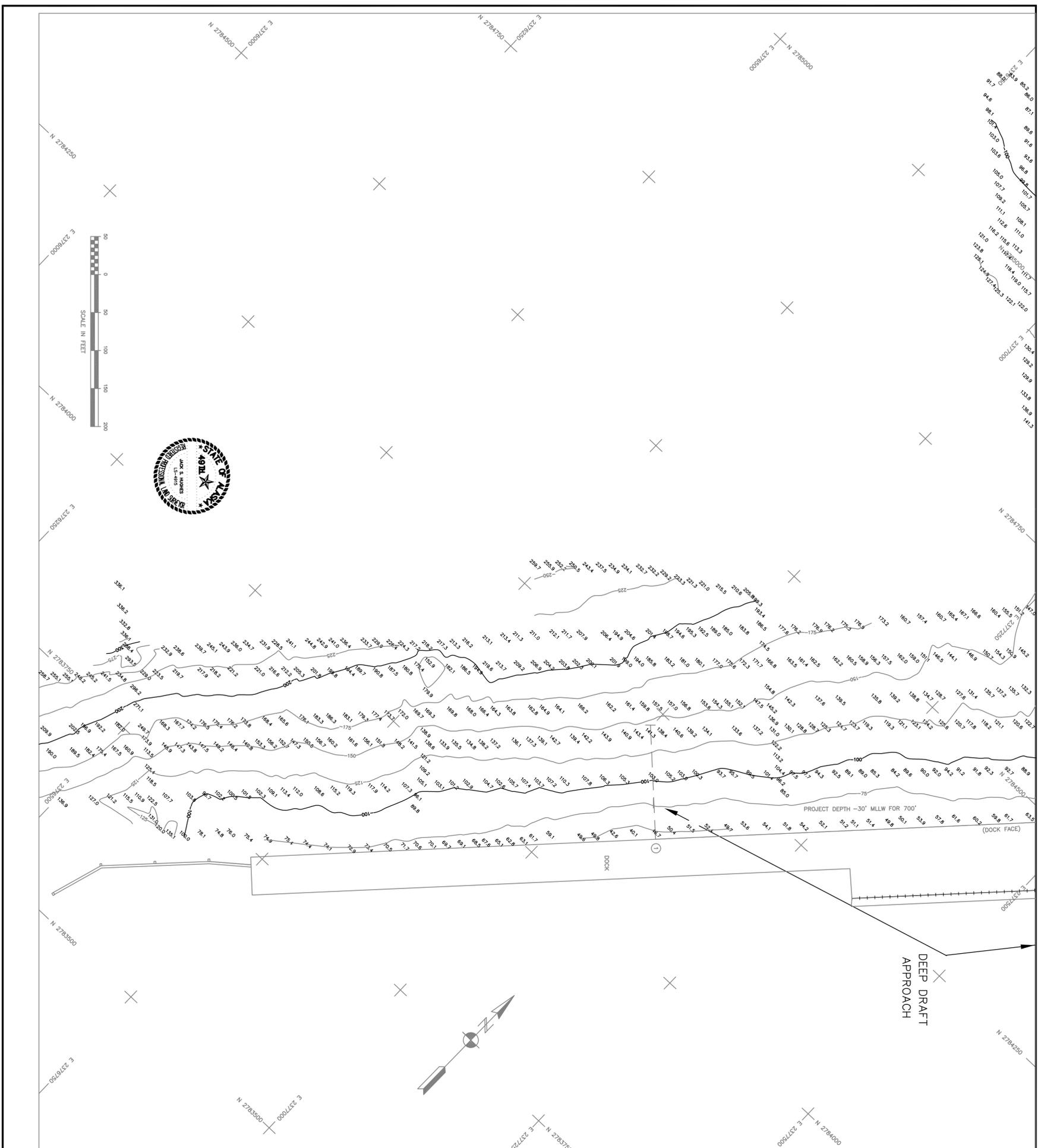
APPROVED: _____ DATE: _____

RECOMMENDED: _____

PROJECT NUMBER: _____

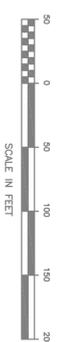
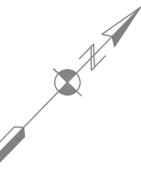
SURVEY NO. **2152-04** SCALE: **1" = 50'**

SHEET **1** OF **3**



NOTES

- HORIZONTAL CONTROL IS ALASKA STATE PLANE ZONE 1, IN FEET, NORTH AMERICAN DATUM 1983. THE POINTS SHOWN ON THIS MAP ARE THE POINTS USED TO ESTABLISH THE PROJECT DEPTHS OF -20' MLLW FOR 200 FT. AT THE NORTHERN END, AND -50' MLLW FOR THE REMAINING 700 FT.
- VERTICAL CONTROL IS IN FEET BASED ON MEAN LOWER LOW WATER (MLLW = 0.0'). HOLDING BC SH-B 1989 AS 28.69' ABOVE MLLW WATER.
- SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- THE PROJECT PROVIDES FOR A FEDERALLY MAINTAINED ENTRANCE CHANNEL AND BASIN TO THE DEEP DRAFT APPROACH. THE PROJECT DEPTHS OF -20' MLLW FOR 200 FT. AT THE NORTHERN END, AND -50' MLLW FOR THE REMAINING 700 FT.
- BATHYMETRY WAS COLLECTED JUNE 21-24, 2004. SOUNDINGS WERE COLLECTED USING AN 'INTEGRATED' 4MBT SOUNDER WITH A 3" SMOKE BEAM TRANSDUCER, SOUND VELOCITY PROBE, AND VERIFIED WITH A BAR CHECK AT 10' INTERVALS TO FIND PROJECT DEPTH. POSITIONING AND VESSEL ATTITUDE WERE MEASURED USING A TRIMBLE PROBECASTER. THE DATA WAS COLLECTED USING SHIP-B 1989. THE DATA WAS COLLECTED AND FIELD PROCESSED USING 'HYPACK' MAX VERSION 02.124 SOFTWARE. THE DATA WAS VERIFIED THROUGH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES.
- THIS SURVEY INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.



CONTROL DATA		DESCRIPTION	
STATION	NORTHING	EASTING	ELEV.
BREAKWATER 1959	2,785,301.27	2,377,646.72	26.05
BREAKWATER R#1	2,785,335.19	2,377,654.86	27.60
BERRY	2,785,485.49	2,377,441.59	27.27
SH-A-1986	2,785,485.49	2,377,441.59	28.69
SH-B-1986	2,785,095.81	2,378,076.23	28.69
SH-C-2000	2,785,920.03	2,378,478.22	25.01
SH-D-2000	2,785,509.78	2,377,443.34	27.26
DOCK	2,785,509.78	2,377,443.34	25.01

PROJECT LIMITS		CORNER	
CORNER	NORTHING	EASTING	NORTHING
1	2,785,325.94	2,377,786.00	2,785,329.94
2	2,785,484.61	2,377,442.37	2,785,288.81
3	2,785,626.38	2,377,727.27	2,785,401.33
4	2,785,509.89	2,377,598.21	2,785,509.89

NAVIGATION AIDS		USCG No.	
DESCRIPTION	USCG No.	NORTHING	EASTING
SKAGWAY BREAKWATER LIGHT 2	23935	2,785,326.5	2,377,621.7

CONTRACTOR: HUGHES AND ASSOCIATES		CONTRACT NO.: W811684-D-0007	
CITY: PALMER		STATE: ALASKA	
SURRENDERED: CSH/REH			
DRAWN: CSH/REH			
CHECKED: CSH/REH			
SUBMITTED: JSH			
RECOMMENDED: _____			
APPROVED: _____			
PROJECT: SKAGWAY, ALASKA		DATE: _____	
SURVEY NO.: 2152-04		SHEET 3 OF 3	