H11051

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. RA-10-06-01

Registry No. H-11051

LOCALITY

State Alaska

General Locality Zimovia Strait

Sublocality Village Islands and Vicinity

2001

CHIEF OF PARTY
CDR D. R. Herlihy, NOAA

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DATE

NOAA FORM 77-28 (11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H11051

INSTRUCTIONS The hydrographic sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the office.

FIELD NO.
RA-10-06-01

State: Alaska

General Locality: Zimovia Strait

Sublocality: Village Islands and Vicinity

Scale: 1:10,000

Date of Survey: 4/8/01 - 5/1/01

Instructions Date: 3/23/2001

Project No.: OPR-O327-RA-01

Vessel: NOAA Ship RAINIER launches 2121, 2122, 2125, 2126, 2127

Chief of Party: CDR D. R. Herlihy, NOAA

Surveyed by: RAINIER Personnel

Soundings taken by echo sounder: Knudsen 320M, Reson SeaBat 8101

Graphic record scaled by: RAINIER Personnel

Graphic record checked by: RAINIER Personnel

Evaluation by: R. Davies

Automated plot by: HP Designjet 1050C

Verification by: R. Davies

Soundings in: Fathoms and tenths at MLLW

REMARKS: Time in UTC. UTM Projection Zone 8

Revisions and annotations appearing as endnotes were generated during office processing.

All separates are filed with the hydrographic data.

As a result, page numbering may be interrupted or non-sequential

Descriptive Report to Accompany Hydrographic Survey H11051

Project OPR-O327-RA-01
Northern Clarence Strait and Zimovia Strait, Alaska
Scale 1:10,000
April-May 2001
NOAA Ship RAINIER
Chief of Party: Commander Daniel R. Herlihy, NOAA

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-O327-RA-01, dated March 23, 2001, and the Draft Standing Project Instructions dated April 6, 1998. The purpose of this project is to provide contemporary hydrography with full bottom multibeam coverage in Northern Clarence Strait and Zimovia Strait, Alaska. The project addresses inadequate chart data and responds to requests from the Seventeenth U.S. Coast Guard District, Southeast Alaska Pilots Association, and the Alaska Coastwise Pilots Association for contemporary hydrography in the vicinity of Zimovia Strait. Zimovia Strait is a connecting corridor for cruise ships and other commercial shipping traffic in Southeast Alaska and serves as an alternate route for vessel thoroughfare through Snow Passage.

The survey area is located in Zimovia Strait in the vicinity of Village Islands, AK. The survey's northern limit is latitude 56°14'08.1"N and the southern limit is latitude 56°10'12.5"N. The survey's western limit is longitude 132°21'15.35"W and the eastern limit is longitude 132°11'03.07"W.

Data acquisition was conducted from April 8 to May 1, 2001 (DN 98 to 121).

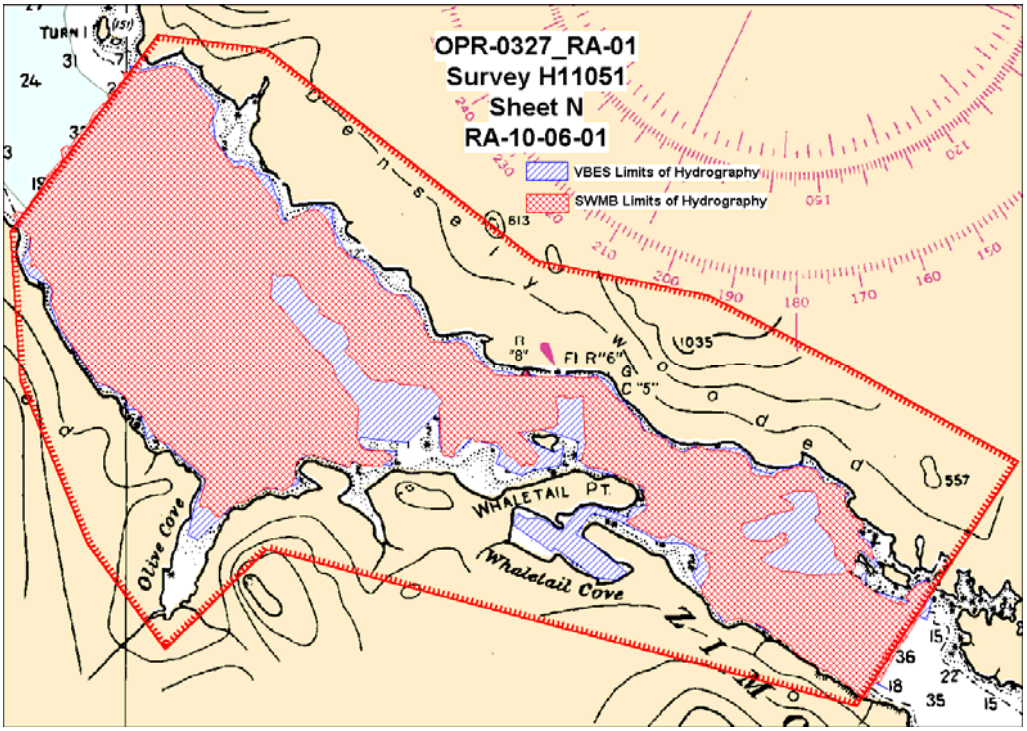


Figure 1. H11051 Survey Limits.

B. DATA ACQUISITION AND PROCESSING

A complete description of data acquisition and processing systems, survey vessels, quality control procedures, and data processing methods, can be found in the *OPR-O327-RA-01 Data Acquisition and Processing Report* [1] submitted under separate cover. Items specific to this survey and any deviations from the aforementioned report are discussed in the following sections.

B1. Equipment and Vessels

Data were acquired by RAINIER's survey launches (vessel numbers 2121, 2122, 2125, 2126, and 2127). Vessels 2121 and 2126 were used to acquire shallow-water multibeam (SWMB) soundings and sound velocity profiles. Vessels 2122 and 2125 were used to acquire vertical-beam echo soundings (VBES) and detached positions (DPs) for shoreline verification. Vessel 2125 was also used to collect bottom samples. Vessel 2127 was used to acquire detached positions (DPs) for shoreline verification. No unusual vessel configurations or problems were encountered during this survey.[2]

B2. Quality Control

Crosslines

Vertical Beam Echo Sounder (VBES) crosslines totaled 14.9 nautical miles, comprising 17.2% of mainscheme hydrography. Crosslines generally agreed within 1-2 meters of mainscheme hydrography.

Shallow-Water Multibeam (SWMB) crosslines totaled 15.8 nautical miles, comprising 5.66% of SWMB hydrography. The Quality Control Report (CARIS HIPS) for the checkline file averaged 98.113%, with a depth tolerance factor of 0.013 which conforms to International Hydrographic Organization Order 1 specifications detailed in Special Publication S-44, Edition 4, as well as NOS Hydrographic Surveys Specifications and Deliverables Manual. See Appendix V for the detailed report. [3]

Junctions

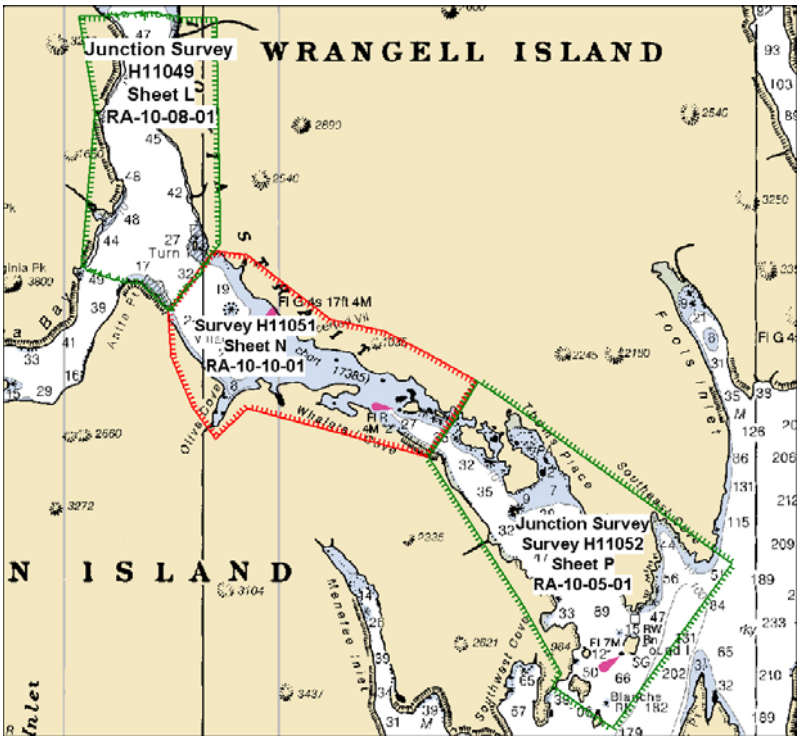
The following contemporary surveys junction with H11051: [4]

Registry #	Scale	Date	Junction side
H11049	1:10,000	2001	North
H11052	1:10,000	2001	Southeast

Survey H11049 junctions well with this survey, with differences generally less than one fathom. [5]

Survey H11052 junctions well with this survey, with differences generally less than one fathom. [6]

Final comparisons will be made at the Pacific Hydrographic Branch (PHB) after the application of smooth tides.[7]



H11051 Junction Surveys.

Data Quality Factors

During data cleaning in HDCS subset mode, errors in the preliminary tidal zoning scheme were apparent. This made subset cleaning difficult, due to numerous vertical shifts of approximately 0.3 meters in the data. These errors were apparent both for predicted tides and observed water level data from the operating primary station at Ketchikan, AK (945-0460). HDCS sounding data was not zone corrected. Tide errors observed with this survey are within the allowable error budget (between 0.2m and 0.45m) for tides and water levels, as specified in NOS Hydrographic Surveys Specifications and Deliverables Manual section 4.1.6. The Hydrographer expects these shifts to be resolved upon application of smooth tides. [8]

No other unusual conditions were encountered during the survey, which affected the expected accuracy and quality of survey data.[9]

B3. Data Reduction

HDCS sounding data, both SWMB and VBES, were reduced to mean lower-low water (MLLW) using unverified observed tides from station Ketchikan (945-0460), adjusted using a height ratio corrector of 1.1 and a time corrector of 12 minutes. These data were used in creating the tide corrector file "SheetN_Observed.tid." which was applied in CARIS. Detached position (DP) data were reduced to mean lower-low water (MLLW) using unverified observed tides from station Ketchikan (945-0460). These data were used in creating HPS tide table 99, which was utilized in HPTools to apply zoned tide correctors to the detached positions.

All other data reduction procedures for survey H11051 conform to those detailed in the *OPR-O327-RA-01 Data Acquisition and Processing Report.*

C. VERTICAL AND HORIZONTAL CONTROL

A complete description of vertical and horizontal control for survey H11051 can be found in the *OPR-O327-RA-01 Horizontal and Vertical Control Report* [10] submitted under separate cover. A summary of horizontal and vertical control for this survey follows.

Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83). Differential GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard beacons at Annette Island (323 kHz), and Point Gustavus (288 kHz), were utilized during this survey. Launch-to-launch DGPS performance checks were performed weekly in accordance with Section 3.2 of the FPM. Copies of the performance checks are included in the *OPR-O327-RA-01 Horizontal and Vertical Control Report.*

Vertical Control

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) primary tide station at Ketchikan, AK (945-0460) will serve as control for datum determination and as the primary source for water level reducers for survey H11051. RAINIER personnel installed Sutron 8210 “bubbler” tide gauges at the following subordinate stations in accordance with Project Instructions:

Station Name	Station Number	Type of Gauge	Date of Installation	Date of Removal
Entance to Zimovia Strait	945-0970	30-day	April 6, 2001	May 12, 2001
Village Rock	945-1037	30-day	April 6, 2001	May 16, 2001
Wrangell Harbor	945-1204	30-day	April 7, 2001	May 16, 2001

The station at Village Rock (945-1037) was occupied in lieu of the station at Olive Cove (945-1015) as required by the Letter Instructions, after consultation with N/OPS1. The new station was occupied after several unsuccessful attempts to contact the property owner at Olive Cove.

The Pacific Hydrographic Branch will apply final approved (smooth) tides to the survey data during final processing.[11] A request for delivery of final approved (smooth) tides for survey H11051 was forwarded to N/OPS1 on May 7, 2001 in accordance with FPM 4.8.[12]

D. RESULTS AND RECOMMENDATIONS

D.1 Automated Wreck and Obstruction Information System (AWOIS) Investigations

No AWOIS items were located within the limits of H11051. [13]

D.2 Chart Comparison

Survey H11051 was compared with chart 17382 (14th Ed.; April 26, 1997, 1:80,000) and chart 17385 (13th Ed., July 24th 1993, 1:80,000 and inset 1:20,000). [14]

Chart 17382 [15]

Depths from survey H11051 were generally one to two fathoms shoaler than depths on chart 17382. These differences are most notable in the vicinity of the Village Islands. In many instances, this survey found shoaler soundings between charted soundings even though agreement at the position of the charted depths was good. This can likely be attributed to increased bottom coverage using SWMB.

Chart 17385 inset

Depths from survey H11051 were generally two fathoms shoaler than depths on chart inset 17385. In some instances greater differences did occur, with survey soundings being several fathoms shoaler than charted soundings. These differences are most notable in the area southeast of Village Island and in the area east of Whaletail Point. This can likely be attributed to increased bottom coverage using SWMB. [16] Significant differences to these trends are addressed below.

In the vicinity of a charted 7 1/2-fathom sounding at 56°12’50.90”N, 132°17’38.45”W (667,808.302E, 6,233,207.525N), the present survey revealed depths of 10 to 12 fathoms, although shoaler soundings were recorded to the north near Village Rock. This area was covered by 100% SWMB. [17]

In the vicinity of a charted 9-fathom sounding at 56°11’54.06”N, 132°18’08.02”W (667,367.858E, 6,231,430.975N), the present survey revealed depths of 12 to 13 fathoms. This area was covered by 100% SWMB. In addition, the 10-fathom curve was found to be approximately 140 meters south of its charted position. The Hydrographer recommends the 10-fathom curve be revised to reflect current hydrography. [18]

In the vicinity of a charted 6 1/2-fathom sounding at 56°11’55.65”N, 132°15’48.89”W (669,762.862E, 6,231,574.638N), the present survey revealed depths of 9 to 11 fathoms. This area was covered by 100% SWMB.[19]

In the vicinity of a charted 23-fathom sounding at 56°11’29.49”N, 132°13’39.95” W (672,016.739E, 6,230,855.016N), and the present survey revealed depths of 15 to 17 fathoms. This area was covered by 100% SWMB.[20]

Chart 17385

Depths from survey H11051 were generally one to two fathoms shoaler than depths on chart 17385. In many instances, this survey found shoaler soundings between charted soundings even though agreement at the position of the charted depths was good. This can likely be attributed to increased bottom coverage using SWMB. This area was covered by 100% SWMB. [21]

Final sounding comparisons will be made at the Pacific Hydrographic Branch after the application of smooth tides.[22]

D.3 Shoreline

Method of Shoreline Verification

N/NGS3 supplied photogrammetric shoreline data in vector format as Cartographic Feature Files (CFF) from project AK-9702D. The CFF vector shoreline data were converted for use in Hypack for field verification and were used as the primary shoreline source. In the area of Zimovia Strait (project AK-9702D), approximate low water features and a very limited portion of mean high water shoreline were included in the CFF. The remainder of the high water line (HWL) and high water features were digitized by RAINIER personnel from the largest scale chart. In addition, features shown on the current editions of charts 17382 and 17385, which were not depicted on any shoreline source document, were digitized in MapInfo by RAINIER personnel and displayed in Hypack for field verification. In instances in which charted features were digitized, RAINIER personnel attempted to identify the source of the feature by reviewing prior surveys, although in many instances the quality of the prior surveys images was poor and RAINIER was unable to register them in MapInfo.

Shoreline verification was conducted near predicted low water in accordance with the Standing Project Instructions and FPM 6.1 and 6.2. For this survey the general limit of safe navigation of a survey launch was five to fifty meters offshore of the apparent mean lower-water line. Water depths along this limit of safe navigation were approximately four meters at Mean Lower-Low Water (MLLW). Features inshore of this limit unreachable by survey launch are depicted on the Detached Position and Bottom Sample Plot [23]as the Hydrographer's approximate representation of the shoreline.

Detached positions (DPs) taken during shoreline verification were recorded in Hypack and on DP forms, and processed in HPS and Pydro. These indicate revisions to features, and features not found on the CFF, T-Sheet, or chart. In addition, annotations describing shoreline were recorded on hard copy plots of digital shoreline. DP forms are included in Section I of the *Separates to be Included with Survey Data.*[24] A detailed Detached Position and Bottom Sample plot, in both paper copy and MapInfo format, is provided showing all detached positions and bottom samples with notes relating to each feature. The updated shoreline and features are also depicted on the final sounding plot.[25]

The features found during this survey generally matched those of the source and charted shoreline. The CFF shoreline was found to be very accurate in its depiction of low and high water features, requiring little revision. In many cases the MLLW line on the CFF was found to actually be reefs or ledges, and the changes are reflected on the DP and BS Plots. [26]

The Pacific Hydrographic Branch will complete a further review of shoreline data upon receipt of the complete Cartographic Feature Files (CFF) data set.[27]

Source Shoreline Changes and New Features

Two new ledges were located during the survey at positions 56°13'56.84"N, 132°19'00.97"W (666287.3E, 6235181.4N) and 56°13'54.67"N, 132°18'57.91"W (666287.3E, 6235181.4N) respectively (positions 20069 and 20070). These ledges were surrounded by gravel beach and not connected to the apparent mean high water shoreline. [28]

A series of mud flats located at 56°13'39.89"N, 132°18'45.39"W (666,596.448E, 6,234,676.387N) are subject to continual shifting. The approximate mean lower-low water (MLLW) line is depicted on the Detached Position and Bottom Sample plot. The Hydrographer recommends revising the charted MLLW to an approximate MLLW as depicted on the Detached Position and Bottom Sample plot.[29]

A new floating pier extending from shore to position 56°11'43.43"N, 132°19'28.30"W (666010.2E, 6231053.8N) was positioned during the survey (position 70029). [30]

A new foul area was delineated south of Village Islands (56°12'15.24"N, 132°17'32.71"W; 667,950.464E, 6,232,109.379N). The foul limit is based upon detached positions 70019, 70021, 70024 and the general limit of safe navigation determined during shoreline verification. Several charted (17385) rocks and CFF rocks were located in this new foul area. Individual rocks located in this foul limit were not verified due to the shoal nature of the area. The Hydrographer recommends retaining the charted and CFF rocks located in this foul area, and charting the foul area as depicted on the Detached Position and Bottom Sample Plot.[31]

A new foul area was delineated south of Village Islands (56°11'53.86"N, 132°16'57.61"W; 668,581.141E, 6,231,472.463N). The foul limit is based upon detached positions 70035-70039, 70041, 50198, and the general limit of safe navigation determined during shoreline verification. The area is foul with rocks. Limited single beam hydrography (100 meter line spacing) was conducted within the foul area. Numerous rocks located inside the foul area were not positioned due to the shoal nature of the area. The Hydrographer recommends charting the foul area as depicted on the Detached Position and Bottom Sample Plot.[32]

The CFF rock at 56°12'05.09"N, 132°16'35.66"W (668,945.581E, 6,231,834.442N) was not found after conducting a 5-minute visual search. Water visibility in this area was clear to the bottom with a depth ranging from 1.5 to 4.0 meters in the area. The Hydrographer recommends removal of the CFF rock. A new rock was located 34 meters to the southeast at 56°12'04.75"N, 132°16'33.80"W (668978.0E, 6231825.3N) (position 50891). The Hydrographer recommends that the new rock be charted as depicted on the Detached Position and Bottom Sample Plot, and does not recommend charting the CFF rock.[33]

A new foul area was delineated south of Button Island (56°11'53.92"N, 132°15'04.54"W; 670,529.050E, 6,231,551.590N). The foul limit is based upon detached positions 20135, 20140, 20150, 51052, 20208, 20209, 20210, 20214, 50974 and the general limit of safe navigation determined during shoreline verification. This area is foul with rocks. Limited single beam (100 meter line spacing) was conducted within the foul area. Several new rocks were located during the survey (positions 51052, 51053, 50976). The Hydrographer recommends charting the foul area as depicted on the Detached Position and Bottom Sample Plot. [34]

A new foul area, centered on position (56°11'13.38"N, 132°11'51.17"W (673,911.40E, 6,230,433.105N), was delineated by detached positions 27109-27111. The area is foul with rocks. [35]

A new area of eelgrass was located during the survey at 56°11'44.92"N, 132°17'28.40"W (668,061.546E, 6,230,175.296N). The Hydrographer recommends charting the new eelgrass area as depicted on the Detached Position and Bottom Sample Plot. [36]

The CFF rock at 56°11'44.16"N, 132°15'07.85"W (670,484.054E, 6,231,247.698N) was unable to be verified due to the shoal nature of the surrounding area. The Hydrographer recommends charting the rock based on the CFF. [37]

Charted Features

The charted (17385) floating pier at 56°11'12.79"N, 132°12'44.57"W (672,991.9E, 6,230,377.4N) was disproved after conducting a 5-minute visual search (position 51849). The area was also covered by 100% multibeam coverage. A new pier was positioned approximately 100 meters to the southeast. Three

piles anchor the pier at its present location. The extents of the pier are defined by detached positions 27100 and 51850, at 56°11'10.80"N, 132°12'39.57"W (673080.6E, 6230319.3N) and 56°11'10.95"N, 132°12'38.35"W (673101.4E, 6230325.0N) respectively. The Hydrographer recommends removal of the existing charted pier and charting a new pier as depicted on the Detached Position and Bottom Sample Plot.[38]

The charted islet (17385 inset) north of the Village Islands at 56°12'46.85"N, 132°18'07.28"W (667,316.718E, 6,233,062.890N) is apparently larger than charted. Complete CFF high water shoreline was not available at time of survey. The limited CFF high water shoreline data which was available at the time of survey, agreed well during field verification. The Hydrographer recommends the Pacific Hydrographic Branch upon receipt of the complete CFF data set replace the charted high water line with the CFF high water line.[39]

The CFF rock at 56°12'19.54"N, 132°17'42.21"W (667788.2E, 6232241.5N) (position 70022) is the high point of a charted islet (17385). The height of the islet based on observed tides was estimated to be –8.8 meters. The Hydrographer recommends charting the islet based on CFF high water line once available.[40]

The charted (17385) islet located at 56°12'21.52"N, 132°17'45.37"W (667725.5E, 6232297.8N) (position 70023) is the new extent of a CFF reef. The height of the islet based on observed tides was estimated to be –5.8 meters. The Hydrographer recommends retaining the charted islet and charting the new extent of the reef based on CFF low water line and positions 70022-70024 and 50794 taken during this survey.[41]

The charted (17385) islet located at 56°12'22.33"N, 132°17'51.74"W (667616.9E, 6232308.2N) is a high point of a CFF ledge. The height of the islet (position 70025) based on observed tides was estimated to be –2.9 meters. The Hydrographer recommends removal of the charted islet, and charting it as a high point of the ledge, based upon the survey height and final approved tides.[42]

The charted (17385) islet / CFF rock is a high point of a CFF ledge located at 56°12'49.86"N, 132°18'22.61"W (667051.6E, 6233150.8N; position 70028). The Hydrographer recommends charting the islet and surrounding ledge based upon position 70028, the final CFF high water line, and final approved tides.[43]

The charted (17385) rock at 56°10'57.98"N, 132°19'29.81"W (666,026.033E, 6,229,642.935N) was unable to be verified due to the shoal nature of the surrounding area. The Hydrographer recommends retaining it as charted.[44]

The charted (17385) islet at 56°13'54.44"N, 132°18'33.74"W (666,779.438E, 6,235,133.871N) was unable to be verified due to the shoal nature of the surrounding area. The Hydrographer recommends retaining it as charted.[45]

The charted (17385) islet north of Whaletail point is larger than charted. Complete CFF high water shoreline was not available at time of survey. The approximate new extents of the islet are delineated by detached positions 20132 and 20134 (56°11'45.78"N, 132°15'53.90"W; 669688.7E, 6231266.2N) and (56°11'44.47"N, 132°15'52.19"W; 669719.7E, 6231226.8N) respectively. The Hydrographer recommends the Pacific Hydrographic Branch upon receipt of the complete CFF data set replace the charted high water line with the CFF high water line.[46]

Based on current hydrography the charted (17385) islet at the north end of Whaletail cove (56°11'11.34" N, 132°15'15.72"W; 670,388.875E, 6,230,288.044N) is more accurately portrayed by chart 17385 than the 1:20,000 inset located on the same chart. The Hydrographer recommends the Pacific Hydrographic

Branch upon receipt of the complete CFF data set replace the charted high water line with the CFF high water line.[47]

The charted (17385) Midchannel Rock located at 56°12'10.36"N, 132°16'16.76"W (669,264.7E, 6,232,010.02N) was found to be correctly positioned. Detached position 51051 marking Midchannel Rock day beacon also serves to mark the position of Midchannel rock. The Hydrographer recommends retaining it as charted. [48]

Recommendations

The Hydrographer recommends that the shoreline as depicted on the Detached Position and Bottom Sample plot and Final Field Sheet supersede and complement shoreline information compiled on the CFF and charts as noted. These revisions are recorded in the MapInfo digital files named "H11051_Shoreline" and "H11051_ShorelineUpdates". In addition, field notes made by the Hydrographer, including verification of source features and descriptions of shoreline classification, are submitted in the digital MapInfo file "H11051_ShorelineNotes."[49]

D.4 Dangers to Navigation

Forty-four dangers to navigation were found and reported to the Pacific Hydrographic Branch for verification and final submission to the Seventeenth Coast Guard District on July 27, 2001. A copy of the preliminary Danger to Navigation Report is included in the report. [50]A copy of the final report will be inserted by PHB following verification and submission to the U.S Coast Guard.[51]

D.5 Aids to Navigation

Survey H11051 included 11 aids to navigation (ATONs). All ATONs located within the survey limits were found to be correctly charted and to serve their intended purpose. One discrepancy was found with the USCG Light List.

Village Island Rock SG "15" Day beacon (USCG Light List 22605) was found to be on a single pile, not on a post on concrete pier as described in the USCG Light List.

Detached positions were taken on each ATON for check purposes only. No GPS static surveys were conducted for Survey H11051.[52]

D.6 Miscellaneous

Bottom samples were collected and are depicted on the Detached Position and Bottom Sample Plot.[53]

E. APPROVAL

As Chief of Party, I have ensured that standard field surveying and processing procedures were followed in producing this examination in accordance with the Hydrographic Manual, Fourth Edition; the Hydrographic Survey Guidelines; the Field Procedures Manual, and the NOS Hydrographic Surveys Specifications and Deliverables, as updated for 2001.

The digital data and supporting records have been reviewed by me, are considered complete and adequate for charting purposes, and are approved. All records are forwarded for final review and processing to N/CS34, Pacific Hydrographic Branch.

Survey H11051 is complete and adequate to supersede charted soundings and features in their common areas. [54] No additional work is required for this survey.[55]

Listed below are supplemental reports submitted separately, which contain additional information relevant to this survey:

Title	Date Sent	Office
Data Acquisition and Processing Report for OPR-O327-RA-01	July 30, 2001	N/CS34
Horizontal and Vertical Control Report for OPR-O327-RA-01	July 30, 2001	N/CS34
Tides and Water Levels Package for OPR-O327-RA-01	July 2, 2001	N/OPS1
Coast Pilot Report for OPR-O327-RA-01	TBD [56]	N/CS26

Approved and Forwarded: Daniel R. Herlihy

Daniel R. Herlihy
Commander, NOAA
Commanding Officer

In addition, the following individuals were also responsible for overseeing data acquisition and processing of this survey:

Survey Sheet Manager: E. J. Van Den Ameele for

Sean Rooney
Senior Survey Technician

Field Operations Officer: E. J. Van Den Ameele

Edward J. Van Den Ameele
Lieutenant, NOAA

Revisions Compiled During Office processing and Certification.

[1] Filed with the project records.
[2] Concur
[3] Filed with the hydrographic data.
[4] The junction with survey H11052 was completed during office processing. A "Joins" note is shown on the smooth sheet in the junction area. The junction with survey H11049 was not completed as this survey was previously processed. An adequate junction was affected with the present survey using a copy. Soundings and depth curves are in satisfactory agreement within the common area. An "Adjoins" note is shown on the smooth sheet. A few soundings from the two junction surveys have been transferred within the common areas of the present survey to better delineate the bottom configuration.
[5] Concur
[6] Concur
[7] Concur, results of the comparison after applications of approved tides are considered good.
[8] No apparent tide error was observed after smooth tides were applied to the survey data.
[9] Concur
[10] Filed with the project records.
[11] The smooth sheet is plotted with final approved tides based on letter dated August 31.
[12] Filed with the hydrographic records.
[13] Concur
[14] Survey H11051 was compared with chart 17385, 15th Edition, dated Feb. 1, 2005.
[15] Survey H11051 was not compared during office processing with Chart 17382 because the complete survey falls within chart 17385 and inset.
[16] Concur
[17] Concur, chart this area based on the present survey information.
[18] Concur, chart soundings and curves from the present survey.
[19] Chart soundings according to the present survey.
[20] Chart soundings according to the present survey.
[21] Concur
[22] With the application of smooth tides, no changes to the comparison were noticed. This survey is adequate to supersede all charted soundings within the common area, except where noted in this report.
[23] Filed with the hydrographic records.
[24] Filed with the hydrographic records.
[25] Filed with the hydrographic records.
[26] Shoreline verification conducted by the hydrographer and portrayed on the detached position plot has been analyzed during office processing and shown on the smooth sheet as warranted. A few minor revisions to the CFF shoreline have been shown in dashed red on the smooth sheet.
[27] See endnote 26
[28] Concur, due to scale of the chart, 1:80,000, the ledges should be charted as two individual rocks.
[29] The CFF photogrammetric shoreline was used as the source of the MHWL and MLLW. They are drawn on the smooth sheet and supplemented by the hydrographer. It is recommended to chart MLLW as shown on the smooth sheet.
[30] Chart pier as positioned by the hydrographer.
[31] Concur, chart this area based on the present survey information.
[32] Concur, chart this area based on the present survey information.
[33] Concur, chart according to the smooth sheet
[34] Concur, chart according to the smooth sheet.
[35] Due to the scale of the chart 17385, 1:18,000, the foul limit line and reef could not be shown. Chart several rocks in the area.
[36] It is recommended that a *Grs* note be charted at the survey position.
[37] Concur
[38] Concur, chart according to the smooth sheet.
[39] The current edition of chart 17385(inset) has the CFF shoreline applied. Retain island as charted.
[40] The current edition of chart 17385(inset) has the CFF shoreline applied. Retain island as charted.

[41] Concur, the current edition of chart 17385(inset) has the CFF shoreline applied. Retain island and ledge as charted
[42] Concur, chart ledge as portayed on the smooth sheet. The corrected height, with approved tides applied is 9 feet above MLLW.
[43] Concur, the current edition of chart 17385(inset) has the CFF shoreline applied. Retain island and ledge as charted.
[44] Concur, the evaluator could not identify an authoritative source to transfer to the smooth sheet.
[45] Concur, the evaluator could not identify an authoritative source to transfer to the smooth sheet.
[46] Do not concur, chart according to this survey, see smooth sheet for approximate MHWL change. This change is drawn in dashed red on the smooth sheet.
[47] The CFF shoreline has been applied to the current edition of chart 17385. It is recommended that the MHWL be retained as charted except were the hydrographer recommends a change or where the CFF shoreline does not support the charted shoreline. In these areas the charted MHWL should be retained.
[48] Concur, the evaluator recommends that MCD use the latest information to chart aids to navigation.
[49] Shoreline verification conducted by the hydrographer and portrayed on the detached position plot has been analyzed during office processing and shown on the smooth sheet as warranted.
[50] Not attached, the danger to navigation letter submitted by the field was reviewed at the Pacific Hydrographic Branch and 32 dangers were forwarded to the U.S. Coast Guard and is attached.
[51] Two additional dangers and one resubmitted from the original danger letter were reported during office processing. See attached copies.
[52] The evaluator recommends that MCD use the latest information to chart aids to navigation.
[53] Concur, Bottom characteristics have been shown on the smooth sheet as positioned by the present survey.
[54] Except where mentioned in the report
[55] Concur
[56] Dated 12/03/01

REPORT OF DANGERS TO NAVIGATION

Hydrographic Survey Registry Number: H11051

Survey Title: State: Alaska
Locality: Zimovia Strait
Sub-locality: Village Islands and Vicinity

Project Number: OPR-O327-RA-01

Survey Dates: April - May 2001

Depths are reduced to Mean Lower Low Water using observed tides. Positions are based on the NAD83 horizontal datum.

CHARTS AFFECTED:

CHART	EDITION	DATE	SCALE
17382	14th	April 26, 1997	1:80,000
17385	13th	July 24, 1993	1:80,000

DANGERS:

ITEM	DEPTH (FM)	LATITUDE	LONGITUDE
Sounding	0	56°11'51.524"N	132°17'17.940"W
Sounding	0½	56°12'08.332"N	132°16'00.600"W
Sounding	0½	56°12'02.986"N	132°16'27.833"W
Sounding	0¾	56°12'08.163"N	132°16'36.797"W
Sounding	1½	56°12'12.731"N	132°16'19.566"W
Sounding	1¾	56°11'40.950"N	132°13'49.061"W
Sounding	1¾	56°12'13.278"N	132°17'42.100"W
Sounding	2¼	56°12'54.971"N	132°17'40.817"W
Sounding	2½	56°12'04.584"N	132°15'50.786"W
Sounding	2¾	56°12'02.722"N	132°15'34.945"W
Sounding	3¼	56°12'05.222"N	132°15'18.489"W
Sounding	3¼	56°10'57.644"N	132°13'18.517"W
Sounding	4¼	56°12'26.446"N	132°18'07.901"W
Sounding	4½	56°12'24.795"N	132°17'24.642"W
Sounding	4½	56°11'17.369"N	132°13'43.973"W
Sounding	4½	56°11'34.895"N	132°14'19.111"W
Sounding	4½	56°12'03.343"N	132°16'14.285"W
Sounding	4½	56°11'43.812"N	132°13'59.412"W
Sounding	4¾	56°11'18.007"N	132°13'55.012"W
Sounding	4¾	56°11'09.214"N	132°12'56.786"W
Sounding	4¾	56°12'20.942"N	132°16'42.578"W
Sounding	5¼	56°12'50.233"N	132°17'29.101"W
Sounding	5¼	56°11'46.150"N	132°14'45.702"W
Sounding	5¾	56°12'16.281"N	132°18'05.667"W
Sounding	6¼	56°11'34.434"N	132°13'14.543"W
Sounding	7¾	56°12'05.143"N	132°17'48.910"W
Sounding	8¼	56°12'01.297"N	132°19'37.505"W
Sounding	8¼	56°13'19.451"N	132°18'51.577"W
Sounding	8¼	56°11'46.217"N	132°14'23.140"W
Sounding	8½	56°11'39.771"N	132°14'21.299"W
Sounding	9¼	56°10'46.112"N	132°11'55.510"W

REPORT OF DANGERS TO NAVIGATION

Sounding	9¾	56°10'25.802"N	132°11'49.199"W

Click here to view chartlet No. 1

Click here to view chartlet No. 2

Click here to view chartlet No. 3

COMMENTS:

Questions concerning this report should be directed to the Pacific Hydrographic Branch (N/CS34) at (206) 526-6836.

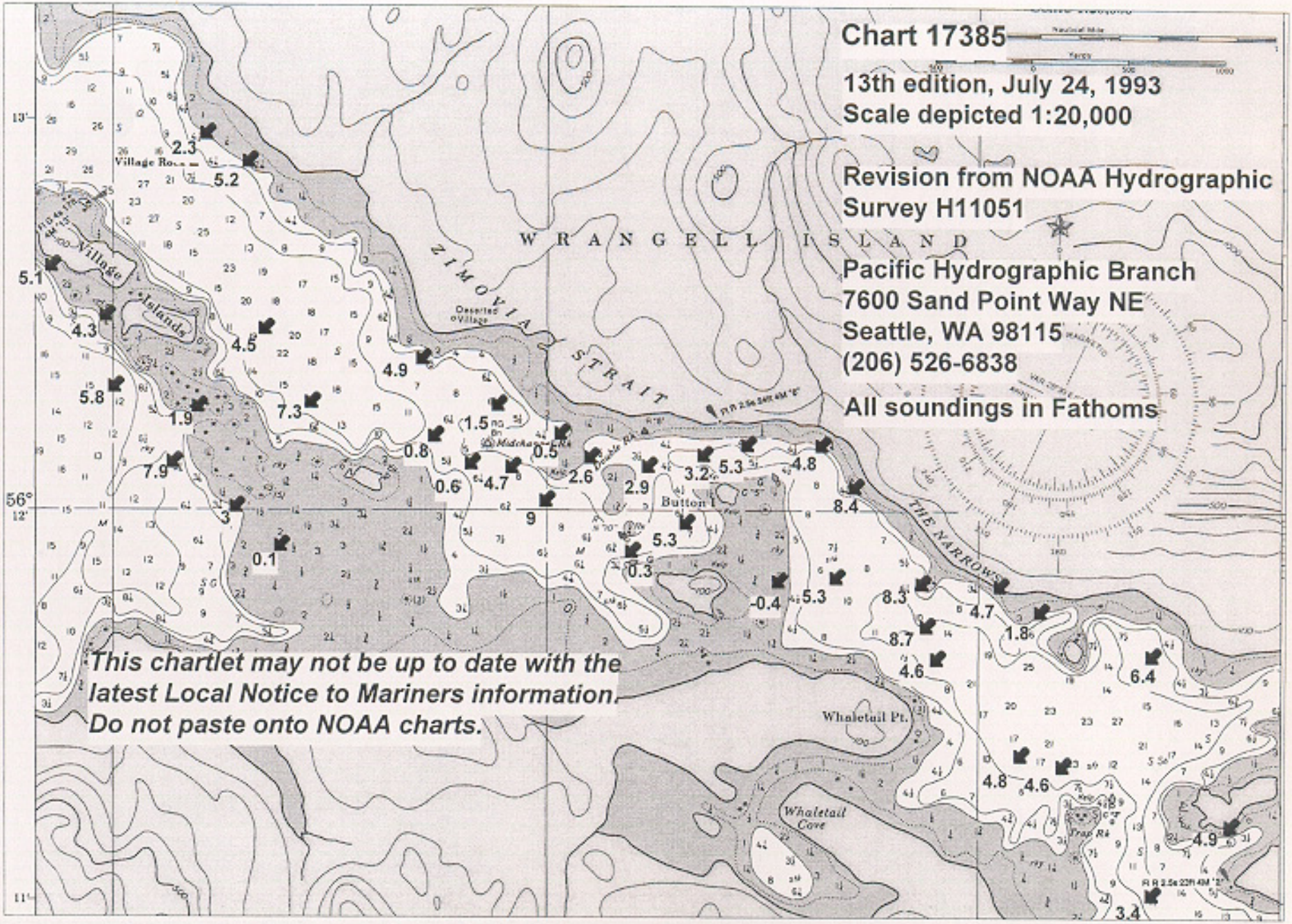


Chart 17385
13th edition, July 24, 1993
Scale depicted 1:20,000
Revision from NOAA Hydrographic Survey H11051
Pacific Hydrographic Branch
7600 Sand Point Way NE
Seattle, WA 98115
(206) 526-6838
All soundings in Fathoms
WRANGELL ISLAND
ZIMOVIA STRAIT
Village Islands
Deserted Village
Button I.
THE NARROWS
Whaletail Pt.
Whaletail Cove
56°
This chartlet may not be up to date with the latest Local Notice to Mariners information. Do not paste onto NOAA charts.

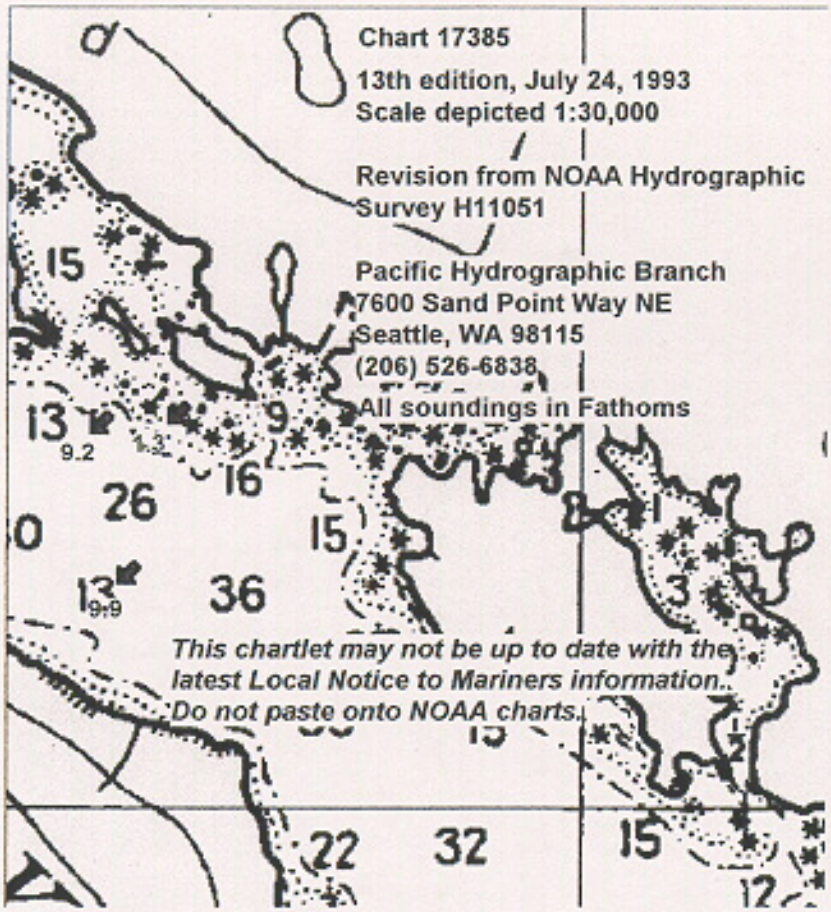


Chart 17385
13th edition, July 24, 1993
Scale depicted 1:30,000
Revision from NOAA Hydrographic Survey H11051
Pacific Hydrographic Branch
7600 Sand Point Way NE
Seattle, WA 98115
(206) 526-6838
All soundings in Fathoms
This chartlet may not be up to date with the latest Local Notice to Mariners information. Do not paste onto NOAA charts.
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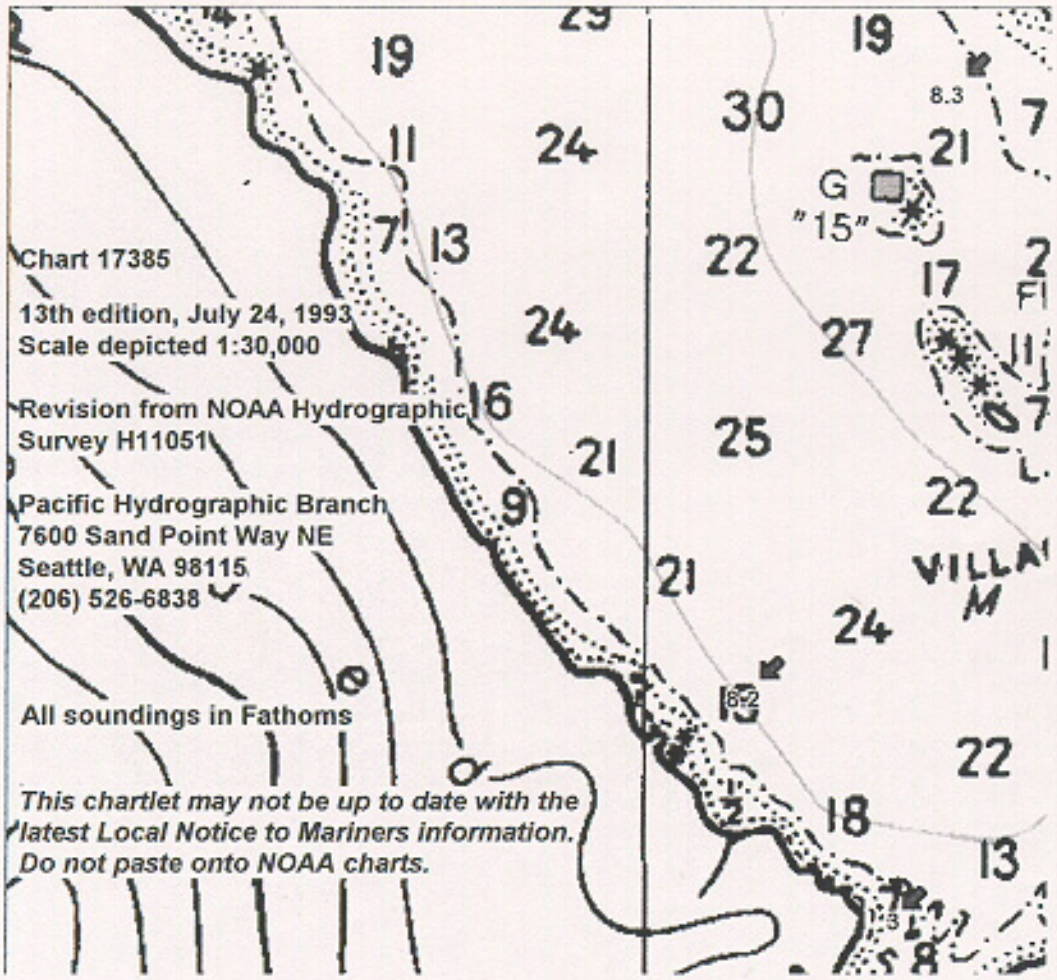
Chart 17385
13th edition, July 24, 1993
Scale depicted 1:30,000
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Seattle, WA 98115
(206) 526-6838
All soundings in Fathoms
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Do not paste onto NOAA charts.
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Hydrographic Survey Registry Number: H11051

Survey Title: State: Alaska
Locality: Zimovia Strait
Sub-locality:Village Islands and Vicintiy

Project Number: OPR-O327-RA-01

Survey Dates: April to May 2001

Depths are reduced to Mean Lower Low Water using verified tides. Positions are based on the NAD83 horizontal datum.

CHARTS AFFECTED:

Chart	Scale	Edition	Date
17385	1:80,000	15th	Feb.1, 2005

DANGERS:

Feature	Depth(fms)	Latitude	Longitude
Sounding	½	56°12'08.33"N	132°16'00.60"W
Sounding	3	56°11'32.48"N	132°19'03.00"W
Sounding	5	56°12'34.57"N	132°18'22.66"W

COMMENTS:

DTONs were found during office processing of H11051. The ½ sounding is resubmitted from the original DTON letter.

Questions concerning this report should be directed to the Chief, Pacific Hydrographic Branch at *(206) 526-6835.*

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: August 31, 2001

HYDROGRAPHIC BRANCH: Pacific
HYDROGRAPHIC PROJECT: OPR-O327-RA-2001
HYDROGRAPHIC SHEET: H11051

LOCALITY: Zimovia Strait, AK
TIME PERIOD: April 8 - May 1, 2001

TIDE STATION USED: 945-1037 Village Rock, AK
Lat. 56° 13.2'N Lon. 132° 17.8'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.650 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: SA123 & SA124.

Refer to attachments for zoning information.

Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time.

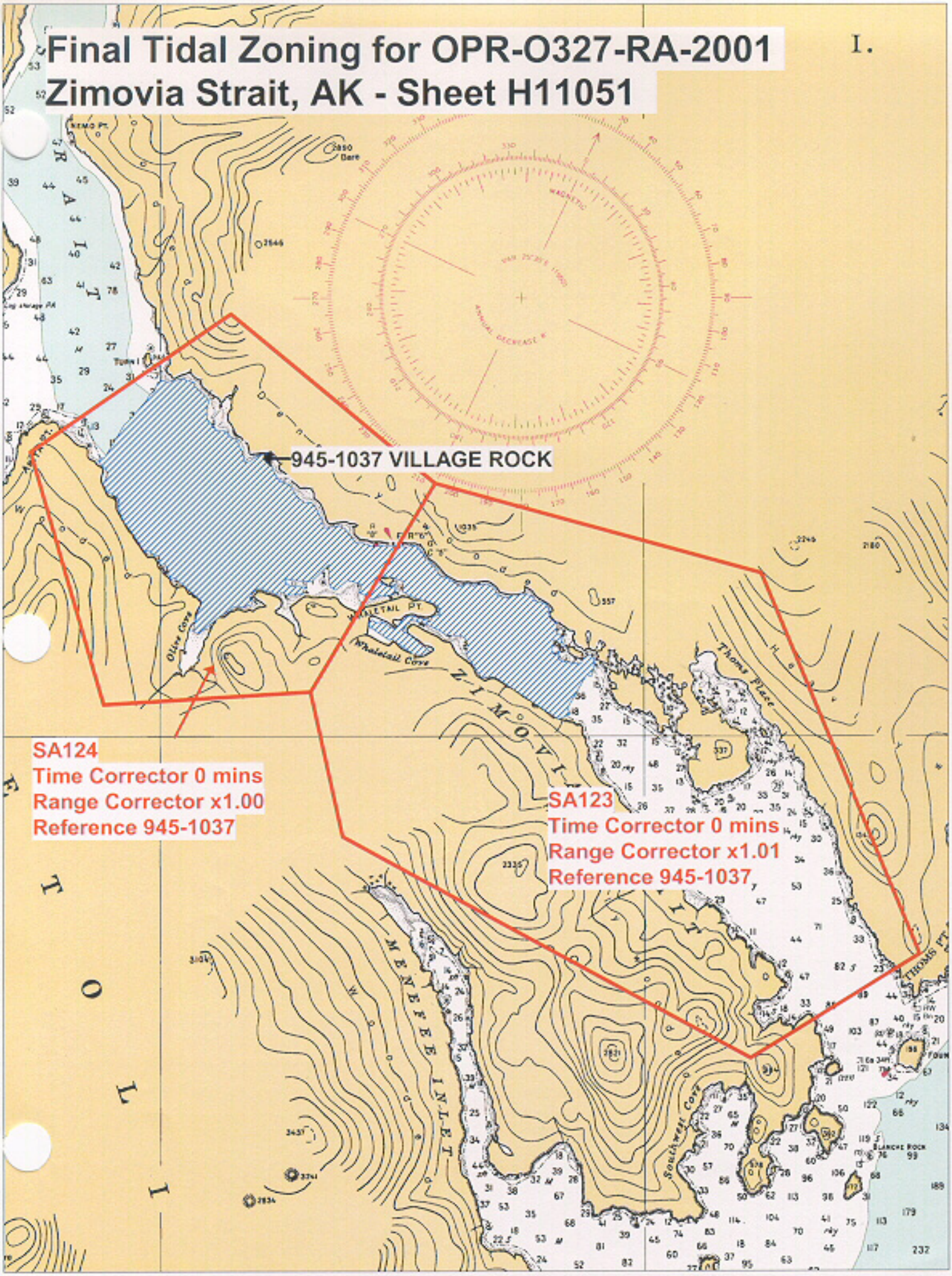
For ----------
CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

Final tide zone node point locations for OPR-O327-RA-2001,
Sheet H11051.

Format: Longitude in decimal degrees (negative value denotes Longitude West),
Latitude in decimal degrees
Tide Station (in recommended order of use)
Average Time Correction (in minutes)
Range Correction

	Tide Station Order	AVG Time Correction	Range Correction
Zone SA123 -132.072059 56.124445 -132.126604 56.198078 -132.238539 56.215427 -132.281579 56.175165 -132.270577 56.147212 -132.130529 56.104343 -132.072059 56.124445	945-1037	0	1.01
Zone SA124 -132.238539 56.215427 -132.30884 56.248083 -132.37803 56.221639 -132.352654 56.172776 -132.281579 56.175165 -132.238539 56.215427	945-1037	0	1.00

Final Tidal Zoning for OPR-O327-RA-2001
Zimovia Strait, AK - Sheet H11051



APPROVAL SHEET
H11051

Initial Approvals:

The survey and associated records have been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The survey records and digital data comply with NOS requirements except where noted in the Descriptive Report and are adequate to supersede prior surveys and nautical charts in the common area.

Bruce A. Olmstead Date: 11/16/2005

Bruce Olmstead
Cartographic Team
Pacific Hydrographic Branch

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Descriptive Report.

CDR/NOAA Date: 21 Nov. 2005

Donald W. Haines
CDR, NOAA
Chief, Pacific Hydrographic Branch

Corey Allen
AWOIS and SURF Check Complete
2005.12.02 11:24:38 -05'00'

NOAA FORM 75-96
(10-83)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-11051

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
17385	10/5/05	Russ Davies	Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via Full application of soundings, curves and features from the smooth sheet Drawing No.
17385 (inset)	10/5/05	Russ Davies	Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via Full application of soundings, curves and features from the smooth sheet Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
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			Full Part Before After Marine Center Approval Signed Via Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.