UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: September 11, 1997

HYDROGRAPHIC BRANCH: Pacific

HYDROGRAPHIC PROJECT: OPR-O328-RA

HYDROGRAPHIC SHEET: H-10735

LOCALITY: Northern Stephens Passage, AK. (Sheet H)

TIME PERIOD: April 3 - April 27, 1997

TIDE STATION USED: 945-2184 Oliver Inlet, AK.
Lat. 58° 06.5'N Lon. 134° 18.6'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 2.648 meters

TIDE STATION USED: 945-2249 Young Bay, AK.
Lat. 58° 11.0'N Lon. 134° 35.2'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.690 meters

REMARKS: RECOMMENDED ZONING

Use zone(s) identified as: SEA4B, SEA4C & SEA4D
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.

Note 2:
Juneau, AK was used as control for datum determination for all subordinate tide stations for this survey. Relative sea level trends show that the areas of Juneau Alaska are undergoing continual uplift. The relative sea level trend observed at Juneau for the time period 1950 through 1993 is -0.0114 m/yr. with a standard error of 0.0005 m/yr. As a result of high rate of sea level change, the 1960 to 1978 Tidal Epoch value of Mean Lower Low Water (MLLW) used as chart datum and reference datum for NOS tidal predictions does not reflect present conditions. The data are under review to determine an updated value of MLLW. An interim value was computed for Juneau, based on the series of data from 1989 to 1991 and controlled by the 1960-1978 Epoch datums at Ketchikan which is more stable. The provided values adjust the chart datum to a more realistic level and in a direction that is more conservative for navigation purposes.

Note 3:
The shoal areas of Oliver Inlet, the zone identified as "SEA4C", exhibit different tidal characteristics than areas north of it in Stephens Passage. The effects of drastically changing bathymetry followed by extremely shoal areas, result in extreme phase lags during the falling tide combined with a reduced tide range.
The characteristics are assumed to be uniform within the entire zone, although this cannot be proven without additional tide stations. The mean tide range (Mn) at Oliver Inlet was computed to be 2.594 meters. The range at Young Bay is significantly higher at 4.207 meters. Only water level data from Oliver Inlet (945-2184) should be used to reduce soundings in zone "SEA4C" to MLLW.

CHIEF, TIDAL ANALYSIS BRANCH

Final tide zone node point locations for OPR O328-RA-97,
Sheet H-10735 (H).

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 SEA4B			
-134.563302 58.193104	945-2249	0	0.99
-134.544003 58.174283			
-134.355095 58.139807			
-134.300514 58.139749			
-134.269583 58.196589			
-134.49203 58.251071			
-134.510592 58.219749			
-134.563302 58.193104			
Zone SEA4C			
-134.355095 58.139807	945-2184	0	1.00
-134.300514 58.139749			
-134.272032 58.10242			
-134.311938 58.098954			
-134.323554 58.105589			
-134.355095 58.139807			
Zone SEA4D			
-134.15 58.207113	945-2249	0	0.98
-134.215162 58.212147	945-2210	0	0.98
-134.269583 58.196589			
-134.300514 58.139749			
-134.183573 58.155284			
-134.15 58.207113			