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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: June 10, 1999

HYDROGRAPHIC BRANCH: Atlantic

HYDROGRAPHIC PROJECT: OPR-G301-AHP
HYDROGRAPHIC SHEET: H-10857

LOCALITY: Charleston, SC - Copper River
Goose Creek to Red Bank Landing

TIME PERIOD: January 7, 1999 - February 16, 1999

TIDE STATION USED: 866-5530 Charleston, SC
Lat. 32° 46.9'N Lon. 79° 55.5'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.664 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: CH5, CH6, CH7, CH8, CH11 & CH13

Refer to attachments for zoning information.

Note 1: A subordinate tide gauge was required at either General Dynamics (866-4022) or Army Depot (866-4662) to provide tide reducers for areas of the Cooper River where river influences may preclude provision of tide reducers, within required accuracy standards, by applying zoning correctors to the data from the control station at Charleston (866-5530). During the period hydrography was conducted for this sheet, however, the gauge at General Dynamics had already been removed and the gauge at Army Depot had not yet been installed. Therefore, tide reducers are provided for this sheet (H-10857) based on data from the Charleston control station with appropriate zoning correctors. Considering the possibility of the inadequacy of these data for the area covered on this sheet, they are considered preliminary, contingent upon the verification of survey adequacy.

Error estimates of the data using zoning correctors applied to Charleston were made by comparing zoned data with observed data from Army Depot for a six month period in 1987. This analysis shows that the estimated error contribution to the total survey error budget using the tidal zoning methodology is 0.37m (95% confidence level). Given the relatively shallow depths, this error may be problematic. Due to this uncertainty, it was recommended that subsequent reconnaissance hydrography be conducted after re-installation of the Army Depot gauge. The two surveys, one using direct observations from Army Depot and one using tidal zoning off of Charleston, should be compared to provide a general assessment of whether the soundings corrected with tidal zoning match those corrected using direct observations. This assessment would provide quantitative adequacy levels only for the survey area of the reconnaissance survey, however, the results could be used to provide qualitative adequacy levels for the entire survey. The comparison results, along with the error analysis of the zoning methodology provided above, should then be used in a final error budget analysis for the survey area in question.

Note 2: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time.

Thomas W. Meier 6/10/99

CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

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TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: November 10, 1999

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-G301-AHP
HYDROGRAPHIC SHEET: H-10857

LOCALITY: Charleston, SC - Cooper River
Goose Creek to Red Bank Landing

TIME PERIOD: June 7, 1999

TIDE STATION USED: 866-4662 Army Depot, SC
Lat. 32° 54.6'N Lon. 79° 57.0'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.722 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: CH32 & CH38.

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: For this survey, zoning correctors for Sheet H-10857 have been provided referencing Army Depot (866-4662). Error analyses using tide data recently collected at Army Depot show that zoning correctors referencing Charleston (866-5530), provided for the previous survey of Sheet H-10857 (January 7, 1999 through February 16, 1999), fall within the accepted error budget for Hydrographic surveying. See Note 1 on the Tide Note dated June 10, 1999 for Sheet H-10857.

Thomas N. Moss 11/10/99

CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION