

## C. VERTICAL AND HORIZONTAL CONTROL

Refer to the Horizontal and Vertical Control Report for a detailed description of the horizontal and vertical control used during this survey. Refer to Appendix IV for specific times and dates of relevant tide data. A summary of horizontal and vertical control used for the survey follows.

### C.1 VERTICAL CONTROL

Vertical control for this survey was based on MLLW at the National Water Level Observation Network (NWLON) stations at San Juan, PR (9755371), Lameshur Bay, VI (9751381), and Charlotte Amalie, VI (9751639), as well as subordinate stations at Ruy Point, VI (9751768), Water Bay, VI (9751583), and Leinster Point, VI (9751309).

The San Juan station (9755371) served as datum control for this project. Data collected at the San Juan station was used to conduct a MLLW datum transfer to the three tertiary gauges installed by JOA. This station was not used for the reduction of soundings. The Lameshur Bay station (9751381) was used for preliminary and final reduction of depth soundings and was used to derive preliminary and final tidal zoning for the project area. The subordinate stations at Ruy Point (9751768), Water Bay (9751583), and Leinster Point (9751309) were established in late 2010 by JOA and were used for preliminary and final reduction of depth soundings. The Charlotte Amalie station (9751639) was used for the preliminary reduction of depth soundings only. All tide stations recorded continuously during data collection periods and were used for the duration of the survey. Station details are as follows:

Gauge	Location	NAD83	
		Latitude (N)	Longitude (W)
9755371	San Juan, PR	18° 27.5'	066° 06.9'
9751381	Lameshur Bay, USVI	18° 19.0'	064° 43.4'
9751639	Charlotte Amalie, USVI	18° 20.1'	064° 55.2'
9751768	Ruy Point, USVI	18° 22.3'	064° 57.8'
9751583	Water Bay, USVI	18° 20.9'	064° 51.8'
9751309	Leinster Point, USVI	18° 22.1'	064° 43.2'