

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. 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) station at Sitka, AK (9451600).

Station details are as follows:

Gauge	Location	NAD83	
		Latitude (N)	Longitude (W)
9451600	Sitka Sound Seafood Dock	57° 03.1'	135° 20.5'

C.2 ZONING

Tide zones that cover the extent of the survey were derived from tide zone coordinates supplied by NOAA. Each of these tide zones use time and range correctors relative to the Sitka tide station. These are as follows:

Tide Zone	GS Identifier	Time Corrector	Range Corrector	Reference Station
PAC296	TA1	-6 minutes	x1.04	9451600
SA227	TA2	-12 minutes	x1.06	9451600
SA250	TA3	-12 minutes	x1.03	9451600
SA267	TA4	-12 minutes	x1.03	9451600
SA250A	TA5	-12 minutes	x1.02	9451600

For final tide application, the time and range correctors were applied to the smoothed tidal data provided by JOA. Soundings were then reduced to MLLW using these corrected tides. An analysis of depth benchmark and crossline comparisons, and overlaps of the mainlines of sounding concluded that final tide zoning was adequate.

The derived value for the difference between MLLW and MHW at the Sitka tide gauge is 2.79m. From the final zoning, a range factor of 1.03 and 1.04 was applicable for Sheet A, resulting in a MHW value of 2.887m.