

C2. Vertical Control

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) primary water level station at Windmill Point, Virginia (863-6580) served as control for datum determination. A subordinate water level station was installed at the Rappahannock Range Front Light, Virginia (863-2837) and served as the primary source for water level reducers in zones SCB95, SCB87, SCB78 AND SCB77 for survey H11503. The water level station at Windmill Point, Virginia (863-6580) served as the primary source for water level reducers in zones SCB98 and SCB94 for survey H11503.

Water level data was reduced to MLLW using water level files from the station at Windmill Point and the station at the Rappahannock Front Range Light. All raw pressure observations from the Rappahannock Front Range Light station were corrected for water density to determine “true” water levels. Outliers were then removed from the data set by smoothing with a two hour third degree polynomial. Daily high and low readings were then picked from the data set and

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compared to verified high and low readings from the station at Windmill Point. From these comparisons Monthly Means were then computed. The Rappahannock Front Range Light station datum (adjusted to MLLW) was then applied to the smoothed water level file.