

C.1 Vertical Control

The vertical datum for this project is Mean Lower Low Water.

ERS Methods Used:

ERS via VDATUM

Ellipsoid to Chart Datum Separation File:

OPR-B396-NRB-17_xyNAD83-MLLW_geoid12b.csar

A separation model was provided by NOAA's Navigation Response Branch.

C.2 Horizontal Control

The horizontal datum for this project is North American Datum of 1983 (NAD83).

The projection used for this project is UTM Zone 18N.

The following PPK methods were used for horizontal control:

Smart Base

Single Base

Vessel kinematic data (POS files) were post-processed with Applanix POSPac software using Smart Base and Single Base processing methods. SBET and RMS data was applied to all survey lines. All SBETs were exported in NAD83 and applied to lines.

The following CORS Stations were used for horizontal control:

HVCR Site ID	Base Station ID
NYVH	NYVH
LAMT	LAMT
RVDI	RVDI
NYNB	NYNB
NYLC	NYLC
NYMD	NYMD
NYQN	NYQN
CTDA	CTDA
NYBP	NYBP

Table 12: CORS Base Stations

While the NYSNet spatial reference network was utilized with vessels S5401 and S3002, S3007 was unable to reliably connect to this network to accept real time corrections and so it used the Wide Area Augmentation System (WAAS) for real time corrections instead. In addition, no records had been made by previous survey parties that detailed the effectiveness of the NYSNet corrections in use for vessels S5401 and S3002. Therefore, for sake of consistency, it was decided to create SBET files for all days of acquisition.

WAAS was used for real time corrections due to difficulties with connecting to the RTK network.

The following WAAS Stations were used for horizontal control:

DGPS Stations

Table 13: FAA WAAS Stations

C.3 Additional Horizontal or Vertical Control Issues