

2.13.1 Report on Positional Accuracy Validation

The USGS LiDAR Base Specification Version 1.0 states that: "Before classification of and development of derivative products from the point cloud, verification of the vertical accuracy of the point cloud, absolute and relative, is required. The Fundamental Vertical Accuracy (absolute) is to be assessed in clear, open areas as described in the section called Vertical Accuracy above. Swath-to-swath and within swath accuracies (relative) are to be documented. A detailed report of this validation process is a required deliverable."

The purpose of this section is to compare the fundamental vertical accuracy of the LiDAR swath data and the tiled data measured against surveyed ground check points. The reason for this comparison is to ensure that inappropriate steps were not taken after the filtering process to "warp" the LiDAR data to control/check points. The control check statistics of each dataset should look very similar, with only constant offsets as differences or variations due to the filtering process.

This reports only the Fundamental Vertical Accuracy (FVA)

E:\Pope_Hardin_Counties\QAQC_final\2_13\Report_PositionalAccuracy.csv

Vertical Units: US Survey Feet (/Meter)

	Boresighted Data	Classified Data
Control Points	20	20
Points with Coverage	20	20
Points With Required Accuracy	20	20
Percent of Points With Required Accuracy	100.000%	100.000%
Average Z Error	0.140/0.043	0.091/0.028
Maximum Z Error	0.520/0.158	0.365/0.111
Median Z Error	0.103/0.031	0.107/0.033
Minimum Z Error	-0.187/-0.057	-0.308/-0.094
NSSDA Vertical Accuracy at the 95 confidence level	0.432/0.132	0.336/0.102
Standard Deviation (sigma) of Z for Sample	0.175/0.053	0.149/0.045
RMSE of Z for Sample	0.220/0.067	0.171/0.052
FGDC/NSSDA/FEMA Contour Interval	0.800/0.244	0.600/0.183
ASPRS Contour Interval	0.700/0.213	0.600/0.183
NMAS Contour Interval	0.800/0.244	0.600/0.183