Accuracy

Horizontal Accuracy

The horizontal accuracy will ultimately be 1/3000th the flying height of the aircraft at the time of survey. Please see the table below for typical flying heights in relation to vertical accuracy and spot spacing.

Vertical Accuracy Conversion Table

Airborne 1 Resolution	Typical Flying Altitude	FEMA Contour Interval	Typical Combined LiDAR Spot Spacing	NSSDA Accuracy 95% Confidence	NSSDA RMSE (68% CL)	NMAS - VMAS 90% Confidence
High Resolution	3000'	1.0' (30cm)	3.3' (1.00m)	0.6' (18.3cm)	0.3' (9.2cm)	0.5' (15.2cm)
Standard	4500'	2.0' (60cm)	4.5' (1.37m)	1.2' (36.6cm)	0.6' (18.5cm)	1.0' (30.5cm)
Low Resolution	6500'	3.3' (1.0m)	6.5' (1.83m)	1.9' (60.0cm)	1.0' (30.0cm)	1.6' (50.0cm)

Standard Resolution – Vertical accuracy of 95% at 1.2' (36cm) and 90% at 1.0' (30cm), horizontal accuracy of 1.5' (46cm), 1 sigma. This meets or exceeds FEMA guidelines for 2' c.i. mapping.

High Resolution – Vertical accuracy of 95% at 0.6' (<18.5cm) and 90% at 0.5' (15cm), horizontal accuracy of 1.0' (30cm), 1 sigma.

The final delivered product will include a statement, in the QA/QC report, that 95% of tested discreet points fall within a certain accuracy, per the NSSDA specifications.

As stated by the manufacturer, and verified by periodic system calibrations, our airborne laser terrain data is designed to meet or exceed the stated accuracies under your chosen option in "Services and Costs", unless otherwise stated for specific projects.

The accuracy is defined and derived from ground checks on flat open, smooth surfaces as defined in the attached Exhibit 'A' under "Quality Control and Accuracy". This level of accuracy is not stated for areas of dense vegetation or sudden breaks. The accuracy will degrade in areas of vegetation and steep slopes, and/or if impacted by artifacts and/or sudden breaks.

Any gridding or interpolation of the raw data will naturally diminish the accuracy of the terrain representation.

Deliverables

- Raw binary GPS and laser range files with supporting information.
- Unclassified ASCII point cloud.
- Classified Bare Earth Ground (stripped of over 90% of veg/features) and Extracted Features (vegetation, structures) ASCII files in UTM projection.
- Classified Bare Earth Ground (stripped of over 90% of veg/features) and Extracted Features (vegetation, structures) ASCII files in customer preferred projection and file size. QAQC report.

Coordinate Systems: All LiDAR point files provided by Airborne 1 will be in the NAD 83 Datum for horizontal and the NAVD 88 Datum for vertical, unless otherwise requested by the client. Any scale, rotation, or translation of the LiDAR data points into other systems is an additional cost item.

File Sizes: All data files will be 500MB or less unless otherwise requested by the client. File splitting, tiling or dividing files into flight lines can be priced separately as an additional cost item. Your deliverables will also include a 100' wide strip of data beyond the project limits at no additional cost.