ELEVATED DATA | GROUNDED TRUTH

Project Verification Report

Example · Routine project verification, 5 independent checkpoints
Data from Job 26-230, flown November 18, 2026

This is an example. It shows the verification report delivered with a mapping project that carries an accuracy requirement. The numbers are real: the 5 ground control points (GCPs) and 5 of the 33 checkpoints from job 26-230, chosen by position only (the checkpoint nearest the middle of each quadrant of the site, plus the one nearest the site center). A 5-checkpoint verification is a routine project check. It is not a formal ASPRS accuracy assessment, which uses at least 30 checkpoints.

HORIZONTAL RMSE, 5 CHECKPOINTS

0.08 ft

2.3 cm · agreed target: 0.16 ft · within target

VERTICAL RMSE, BARE GROUND, 5 CHECKPOINTS

0.11 ft

3.4 cm · agreed target: 0.20 ft · within target



Agreed target	RMSE of 0.16 ft horizontal and 0.20 ft vertical on bare ground. Example values; the target is agreed before the flight
Coordinates	NAD83(2011) WISCRS Dane County and NAVD88 (GEOID18), US survey feet
Ground survey	Network RTK GNSS (WISCORS), checked on a published NGS mark
Points	5 GCPs built the map; 5 checkpoints were withheld from model adjustment
What was checked	The delivered orthomosaic (horizontal) and digital surface model (vertical)
Largest error	Horizontal 0.11 ft at CP09; vertical +0.23 ft at CP32

Checkpoint Residuals

Point	Easting (ft)	Northing (ft)	Elevation (ft)	East error (ft)	North error (ft)	Horizontal error (ft)	Vertical error (ft)
CP09	719786.60	523763.35	779.93	-0.109	+0.023	0.111	-0.035
CP21	720581.24	523243.76	776.96	+0.005	-0.027	0.028	-0.019
CP27	720502.24	523772.62	792.75	-0.004	+0.059	0.059	-0.095
CP32	719740.83	523421.42	775.59	+0.008	-0.097	0.097	+0.227
CP34	720029.55	523568.10	776.46	-0.052	+0.012	0.053	-0.035
RMSE				**0.054**	**0.053**	**0.076**	**0.113**

Error is the map position minus the surveyed position. Horizontal RMSE is √(RMSE east² + RMSE north²). The agreed target applies to the RMSE of the set, not to each point. Checkpoint survey uncertainty is not added to a routine verification result. This table is also delivered as a CSV file for GIS or a spreadsheet.

How Results Are Reported

- Every checkpoint surveyed is listed. None is removed for a large error; a point is left out only for a documented physical cause, such as a disturbed target.
- A result over the agreed target is reported the same way and marked “over target.” The residuals and any known cause are provided, and corrective action or acceptance is discussed with the client before the data is used for the specified purpose.
- A project can also set a limit on the largest individual checkpoint error. CP32 in this example shows why that can matter alongside the RMSE.
- With 5 checkpoints, the RMSE is a spot check on the project site. A formal ASPRS accuracy assessment, where required, is planned before the flight. The full 33-checkpoint results for this data set, including an unresolved elevation check on an NGS mark, are in the Positional Accuracy Report for job 26-230.