Oblique Deliverables QA/QC Reporting

Product: Oblique Imagery

Report of Horizontal and Vertical Accuracy Testing: Pictometry Airborne Oblique Imagery for the Los Angeles Region Imagery Acquisition Consortium 6 (LAR-IAC6)

References: a. *ASPRS Positional Accuracy Standards for Digital Geospatial Data*, V1.0, Nov, 2014

b. Quality Plan for Los Angeles Region Imagery Acquisition Consortium 6 (LARIAC 6), Version 1.0

LAR-IAC6's digital oblique images, produced by Eagleview, were tested in accordance with the Acceptance Criteria. The "georeferenced ground positions of higher accuracy," referred to generically as "QA/QC checkpoints," were provided by LAR-IAC with additional checkpoints surveyed by Dewberry in 2014. A total of 141 checkpoints were used in the accuracy assessment. The final breakdown of points used for each view is listed in the table below. Each QA/QC checkpoint is a ground point feature that is well-defined and photo-identifiable on the oblique images from which California State Plane Zone V coordinates were measured by Dewberry. Dewberry determined the Δx and Δy differences in Eastings (x-coordinates) and Northings (y-coordinates) between the ground-surveyed QA/QC checkpoints and their coordinates extracted from the oblique images. Additionally, Dewberry reviewed the errors in elevations, Δz. For each checkpoint Dewberry averaged the errors in the Eastings, Northings, and Elevations for all views that were visible; for many, the average resulted from four views, but some points were obscured by buildings trees, cars, etc., so the average resulted from the mean of three, two, and (in a few cases) only one view. Dewberry then computed the root-mean-square-error (RMSE) statistics, including $RMSE_x$, $RMSE_y$, and $RMSE_r$. $RMSE_r$ is the radial statistic which equals the square root of $[RMSE_x^2 + RMSE_y^2]$. The NSSDA absolute accuracy statistic ($Accuracy_r$) is computed as $RMSE_r$ x 1.7308. Finally, $Accuracy_z$ is computed as $RMSE_z$ x 1.9600 in order to report the tested vertical accuracy at the 95% confidence level as required by Reference a.

Oblique Deliverables QA/QC Reporting

Pictometry Airborne Oblique Imagery	Accuracy Statistics	North View (Feet)	South View (Feet)	East View (Feet)	West View (Feet)	Statistics of from All 4 Views
Number of Points Visible on 141 Usable Targets		135	129	133	137	134
Horizontal Accuracy	RMSEx	0.94	1.26	1.53	1.41	1.31
	RMSEy	1.20	1.32	1.41	1.43	1.35
	RMSEr	1.52	1.83	2.08	2.01	1.88
	Accuracyr	2.63	3.16	3.60	3.49	3.25
Vertical Accuracy	RMSEz	0.59	0.60	0.63	0.58	0.60
	Accuracyz	1.16	1.18	1.24	1.14	1.18

The data set was tested to meet ASPRS Positional Accuracy Standards for Digital Geospatial Data (2014). Actual positional accuracy of the oblique images was found to be as follows:

Accuracy of clearly defined surveyed targets measured on Pictometry north-view images only:

North-view coordinates tested 2.63 ft horizontal accuracy at 95% confidence level

North-view coordinates tested 1.16 ft vertical accuracy at 95% confidence level

Accuracy of clearly defined surveyed targets measured on Pictometry south-view images only:

South-view coordinates tested 3.16 ft horizontal accuracy at 95% confidence level

South -view coordinates tested 1.18 ft vertical accuracy at 95% confidence level

Accuracy of clearly defined surveyed targets measured on Pictometry east-view images only:

East-view coordinates tested 3.60 ft horizontal accuracy at 95% confidence level

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Oblique Deliverables QA/QC Reporting

East -view coordinates tested 1.24 ft vertical accuracy at 95% confidence level

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Accuracy of clearly defined surveyed targets measured on Pictometry west-view images only:

West-view coordinates tested 3.49 ft horizontal accuracy at 95% confidence level

West -view coordinates tested 1.14 ft vertical accuracy at 95% confidence level

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Accuracy of clearly defined surveyed targets measured on Pictometry 4-view images with coordinates averaged from all views in which targets were visible and could be measured:

All-view coordinates tested 3.25 ft horizontal accuracy at 95% confidence level

All -view coordinates tested 1.18 ft vertical accuracy at 95% confidence level

I, Raymond A. Miller, CP (ASPRS #1645), do hereby certify that I have reviewed the tabulations stated above on August 12, 2021.

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ASPRS Certified Photogrammetrist No. 1645

Dewberry