ArcGIS® Drone2Map™ Advanced

Project Summary

Project Name	SubdivisionProgress
Processed On	10/13/23, 12:48 PM
Camera Model	DJI FC6310
Images	40 out of 40 images calibrated
Project Area	0.046 km2 / 4.611 ha / 0.018 sq. mi. / 11.393 acres
Ground Resolution	0.016 (m)
Processing Time	18m:43s

Adjust Images

Summary

Number of Tie Points	242,511
Number of Solution Points	91,091
RMSE of Reprojection Error / Sigma Naught (Pixel)	0.312 / 0.473
Ground Control Points RMSE (m)	0.010, 0.008, 0.010
Initial Processing Time	26m:36s

### Processing Options

Initial Image Scale	1/4 (Quarter image size)
Refine Adjustment Scale	No
Matching Neighborhood	Small (Optimized)

Internal Camera Parameters

DJI FC6310 8.8mm 5472x3648
fce2cad41cecb6c96a989f90a2ca86d4

Focal Length	Principal Point X	Principal Point Y	K1	K2	K3	P1	P2
8.800	0.078	-0.069	1.107e-005	-1.130e-006	1.478e-008	-9.880e-005	1.652e-004

Tie Points Per Image
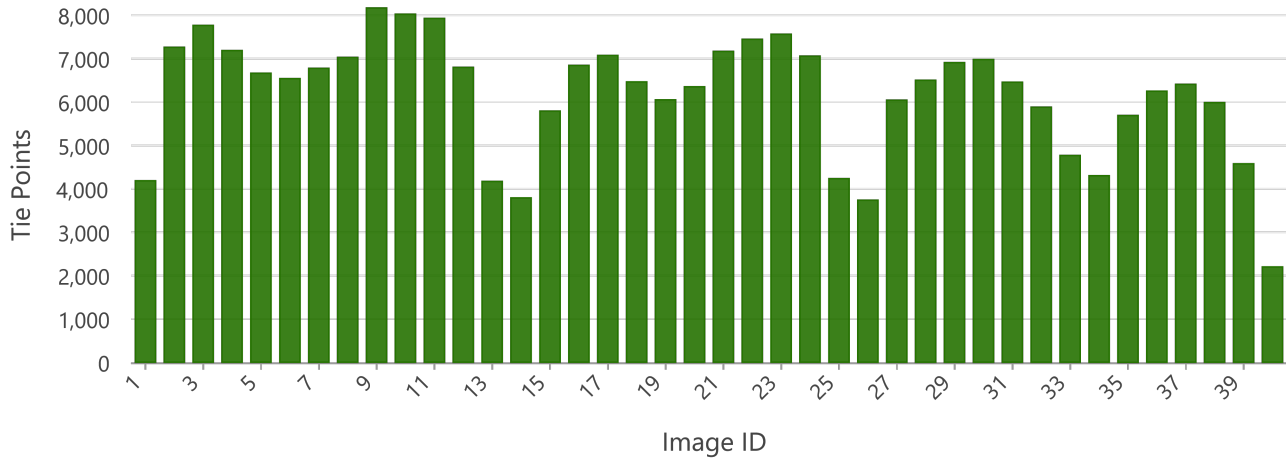
Min	2,136
Max	8,051
Median	6,355
Mean	6,062
Total	242,511

The total number of tie points that were detected in each image during the Adjust Images step. Images with low tie point counts may indicate problematic areas, such as areas with poor image quality, insufficient image overlap, or homogenous image textures.

Tie Point Reprojection Error
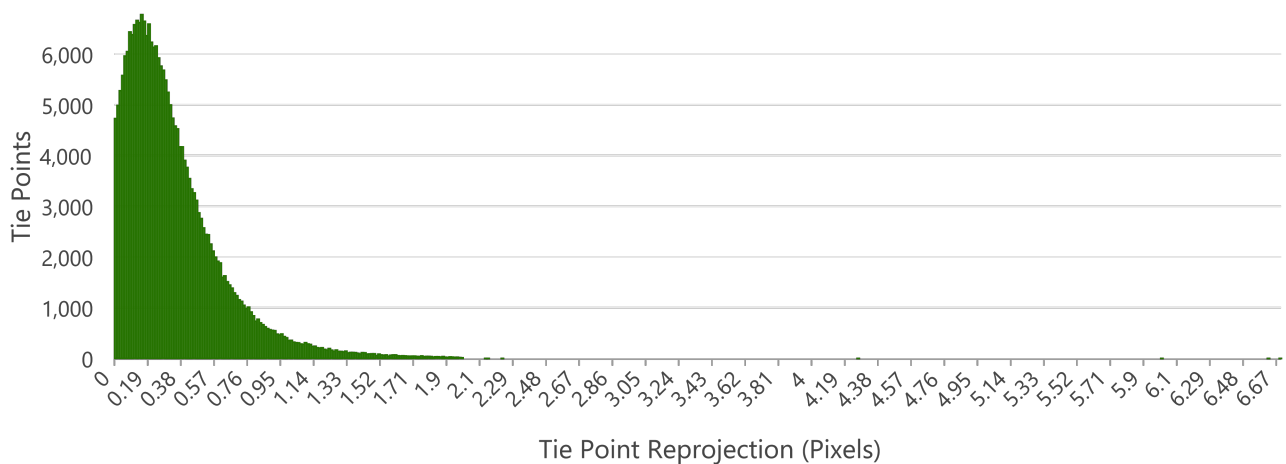
Min	0.000
Max	6.694

Median	0.272
Mean	0.340
RMSE	0.312

The distribution of the tie point reprojection errors across all adjusted images. The root mean square error (RMSE) of the reprojection error can be used to assess the overall quality of the Adjust Images processing step. Generally, an RMSE value closer to zero indicates a higher quality adjustment.

Standard Deviation of Exterior Orientation

|	X (m)	Y (m)	Z (m)	Omega (degrees)	Phi (degrees)	Kappa (degrees)
Min	0.034	0.040	0.108	0.013	0.012	0.003
Max	0.051	0.055	0.115	0.039	0.037	0.009

Adjusted Image Positions
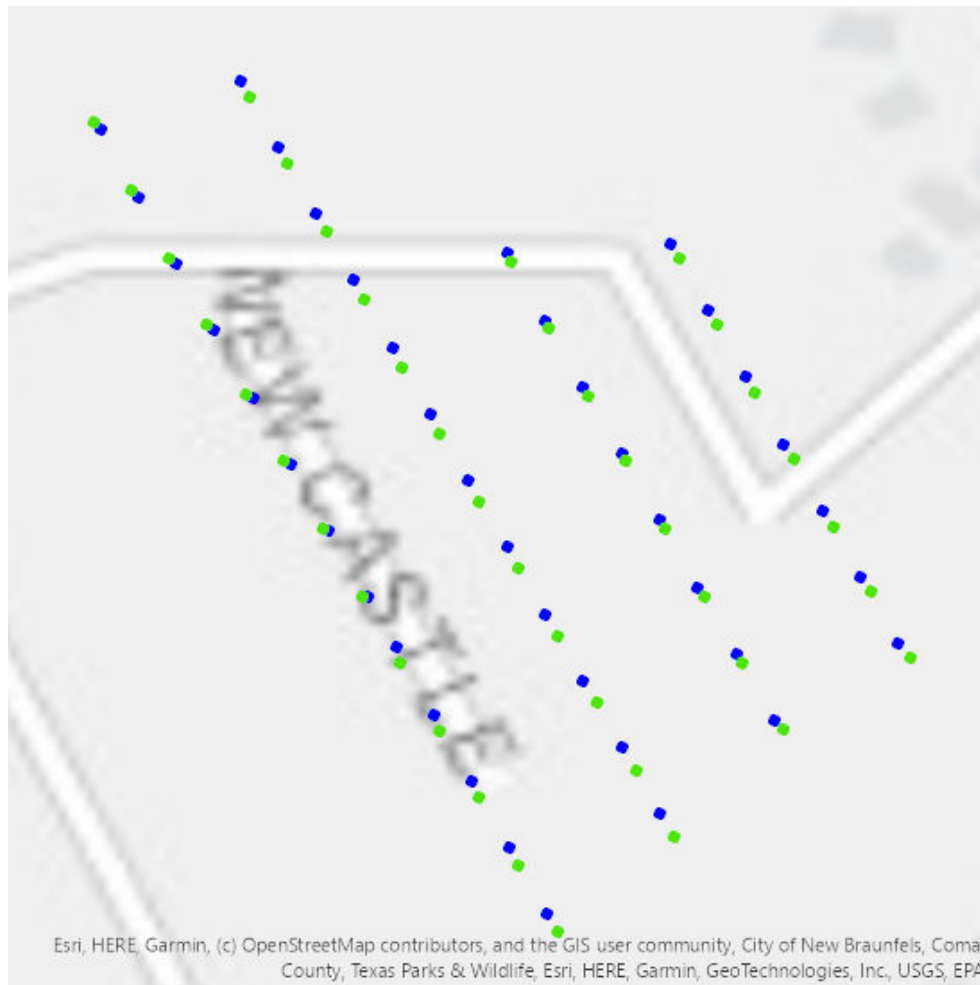
The initial image locations (blue points) and their adjusted positions (green points) after processing.

Image Overlap

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, City of New Braunfels, Comal County, Texas Parks & Wildlife, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA

1	2	3	4	5	6+

The amount of overlap between image projections after processing. Areas with high overlap produce the most accurate results. Avoid placing control points in areas of low overlap, as this could affect their accuracy.

Cross Matches
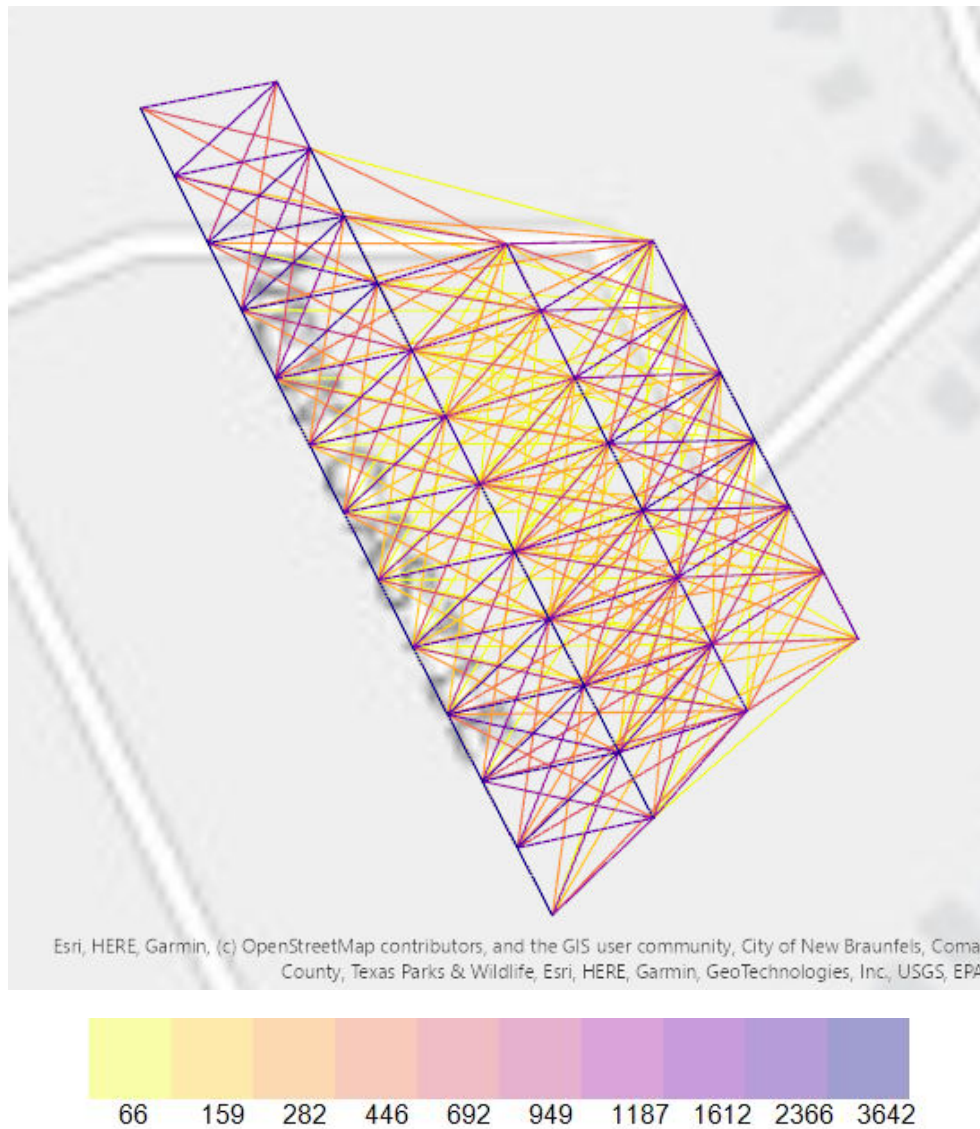
The adjusted image positions with links showing the number of tie points between matched images after the Adjust Images processing step. Darker links indicate a higher number of tie points between the images. Images with a greater number of links generally produce more accurate results.

Solution Points

2 Images	57,439
3 Images	19,288
4 Images	7,091
5 Images	3,920
6 Images	2,217
7 Images	762
8 Images	233
9 Images	108
10 Images	30
11 Images	3

The frequency of solution points per image observations. Solution points with a higher number of image observations generally produce more accurate results.

Geolocation Details

Ground Control Points

	dX (m)	dY (m)	dZ (m)	Projection Error (pixels)	Status
From Map 0	-0.013	-0.008	0.017	1.465	2/5
From Map 1	0.012	-0.005	-0.004	3.694	4/6
From Map 2	-0.004	0.011	0.001	4.698	3/5
RMSE	0.010	0.008	0.010		
Min	-0.013	-0.008	-0.004		
Max	0.012	0.011	0.017		
Median	-0.004	-0.005	0.001		
Mean	-0.002	-0.000	-0.000		

Project Settings

System Information

Hardware	CPU: Intel(R) Core(TM) i5-6200U CPU @ 2.30GHz RAM: 8GB
Operating System	Microsoft Windows 11 Pro, 64-bit
ArcGIS Drone2Map Version	2023.1.0

Coordinate Information

Image Coordinate System	GCS_WGS_1984/VCS:EGM96 Geoid
Project Coordinate System	WGS_1984_UTM_Zone_14N/VCS:EGM96 Geoid
Control Points Coordinate System	WGS_1984_UTM_Zone_14N/VCS:EGM96 Geoid

Project Resolution

Project Resolution	Automatic 4 x GSD (0.016 m)

Pre-Processing

Project Area	No
Waterbody Mask	No
Correction Feature	No

2D Product

Processing Options

Create True Ortho	Yes
Create Digital Surface Model	Yes
Create Digital Terrain Model	Yes
Color Balance	Yes
Enhance True Ortho	Yes
Merge Tiles	Yes

3D Product

Processing Options

Create Point Cloud	Yes
Merge LAS Tiles	Yes
Create DSM Textured Mesh	Yes
Create 3D Textured Mesh	Yes
Enhance Textured Mesh	No