Quality Report

PIX4Dmatic v1.77.1

Camera	SONY_ILCE6000_E16mmF2.8_16.0_6000x4000
Average GSD	0.074 ftUS
Project CRS	NAD83(2011) / Louisiana South (ftUS) + NAVD88 height (ftUS) - EPSG:6479+6360 [GEOID18]

Quality check

Matches	Median of 15631 matches per calibrated image	✓
Dataset	100% calibrated (57/57), 1 block	✓
Camera optimization	0.01% relative difference between initial and optimized internal camera parameters	✓
Checkpoints	3 Checkpoints, Mean RMS position error 0.086 ftUS / Sigma 0.041	✓
ATPs	338939 ATPs	

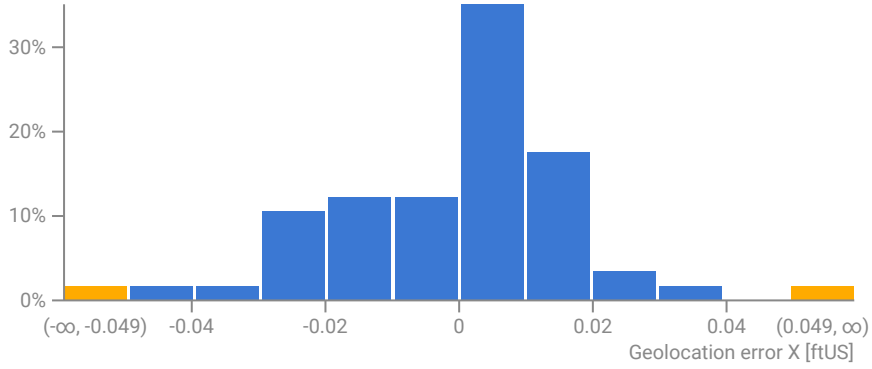
Cameras

Internal camera parameters

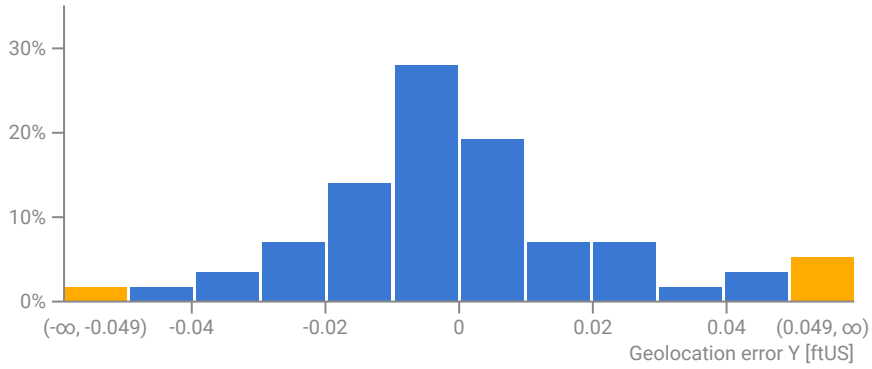
SONY_ILCE6000_E16mmF2.8_16.0_6000x4000. Sensor dimensions: 23.5 mm x 15.667 mm

	Focal length	Principal point x	Principal point y	R1	R2	R3	T1	T2
Initial	4069.8 px 15.94 mm	3000.0 px 11.75 mm	2000.0 px 7.833 mm	-0.0660000	0.0910000	0.0050000	-0.0020000	-0.0020000
Optimized	4070.1 px 15.941 mm	3006.8 px 11.776 mm	1978.6 px 7.75 mm	-0.0682907	0.1020613	-0.0086471	0.0007408	0.0024826
Uncertainties (Sigma)	0.2 px <0.001 mm	<0.1 px <0.001 mm	<0.1 px <0.001 mm	<0.0000001	<0.0000001	<0.0000001	<0.0000001	<0.0000001

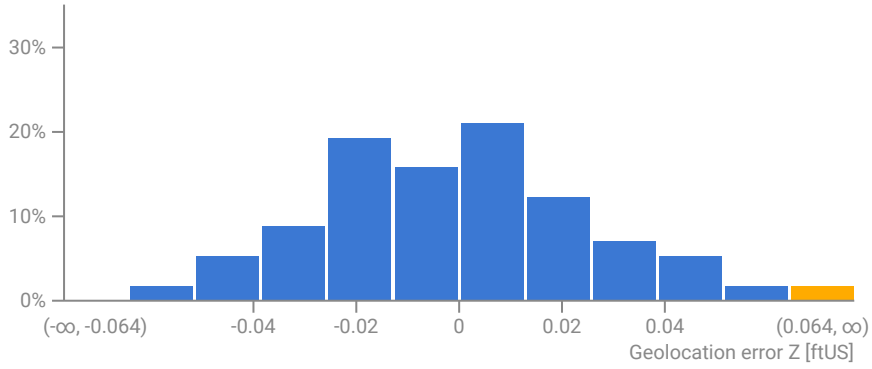
Absolute geolocation variance



	Geolocation error X [ftUS]
Mean	0.001
Median	0.003
Sigma	0.031
RMS	0.031



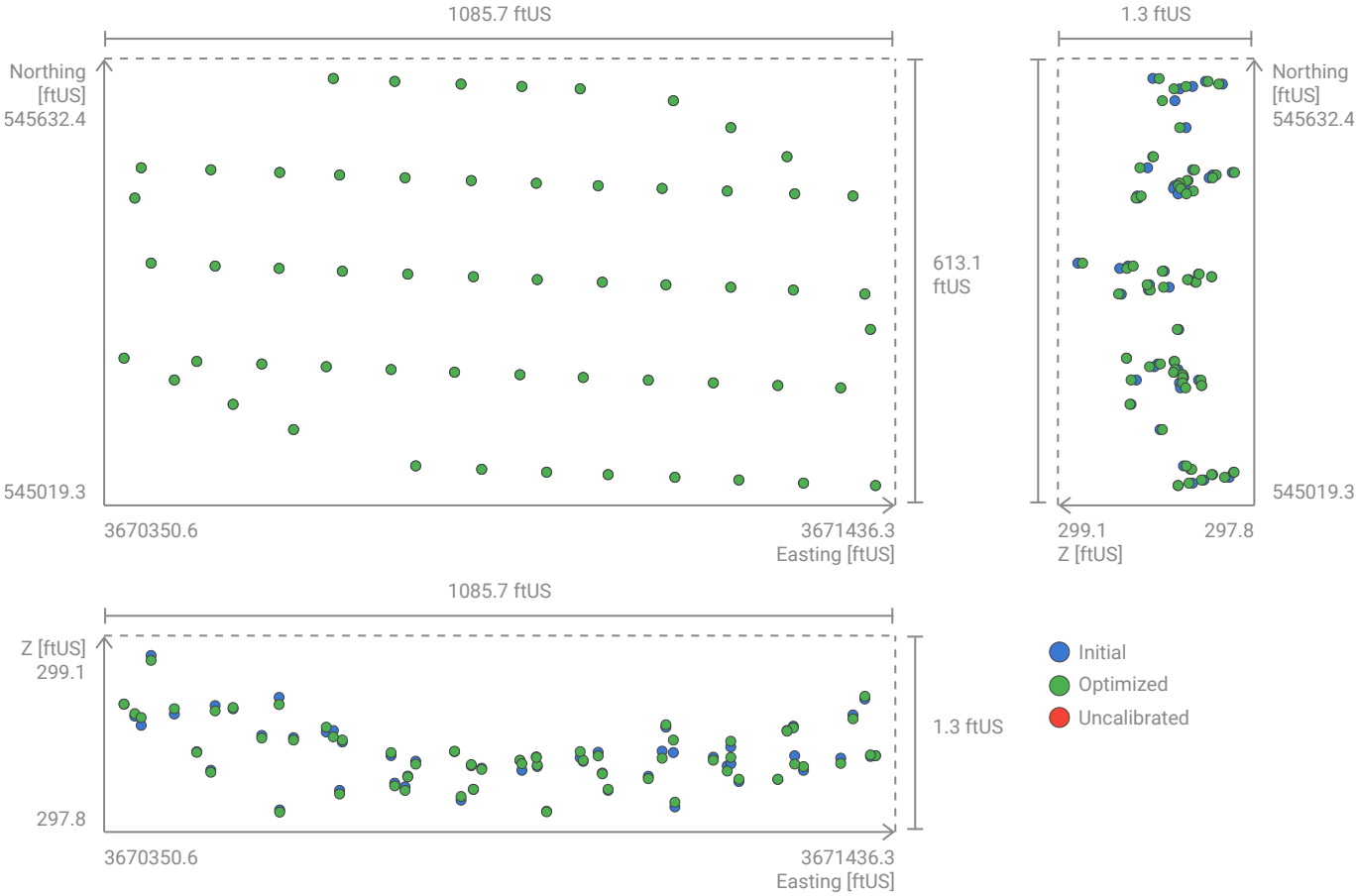
	Geolocation error Y [ftUS]
Mean	0.004
Median	-0.002
Sigma	0.062
RMS	0.062



	Geolocation error Z [ftUS]
Mean	-0.000
Median	-0.000
Sigma	0.027
RMS	0.027

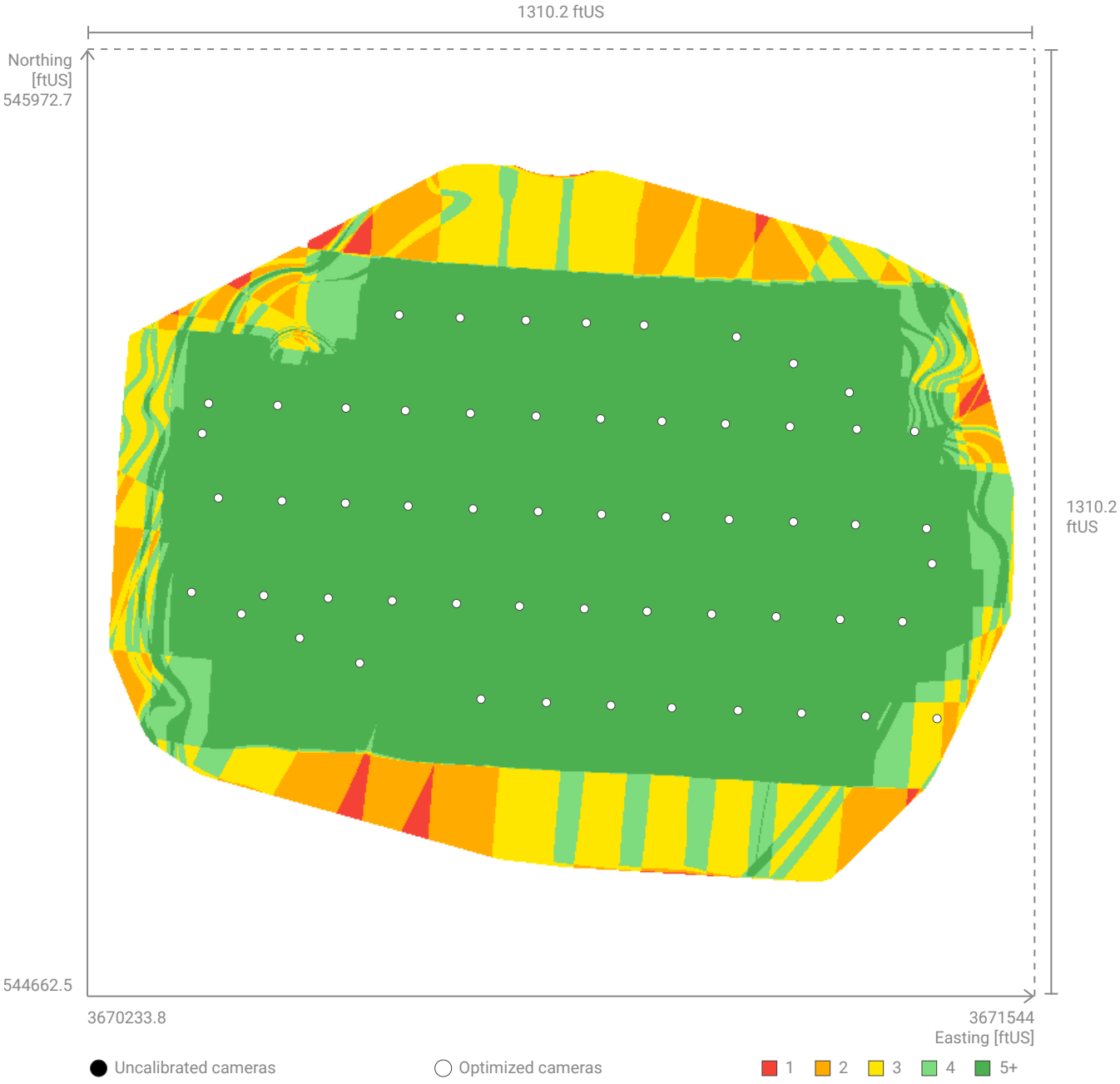
The geolocation error is the difference between the initial and computed camera positions. Plots show the per-axis distributions of geolocation errors across the cameras. Large positive and negative errors are denoted with the orange bins. Note that the image geolocation errors do not correspond to the accuracy of the observed 3D points.

Camera positions



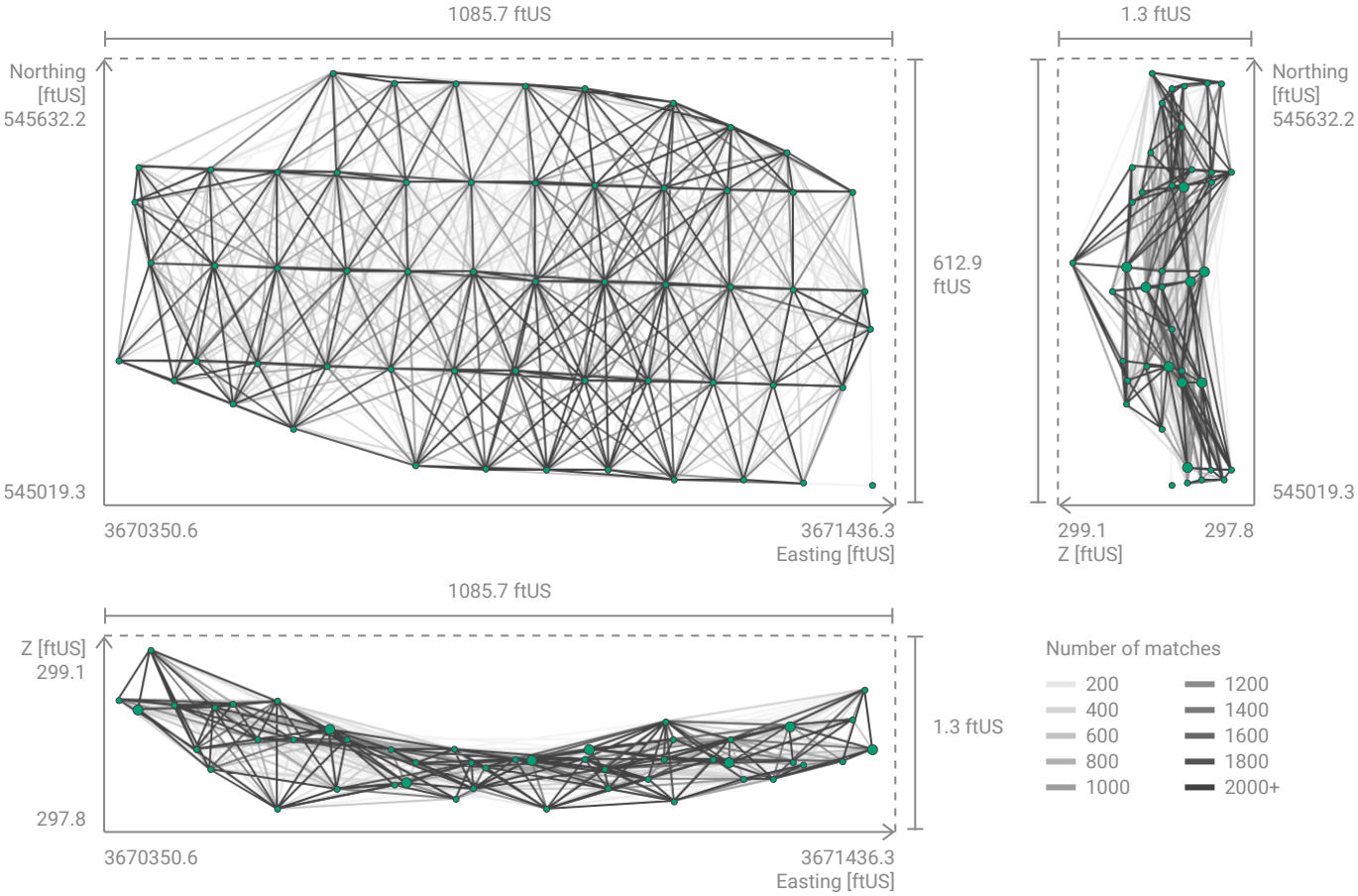
Initial and computed camera positions.

Overlap



This graph shows the number of overlapping images for each pixel of the DSM preview. For precise 3D modeling and mapping applications, the overlap should be in green, i.e. each pixel should be visible in more than 5 images.

2D Keypoint matches



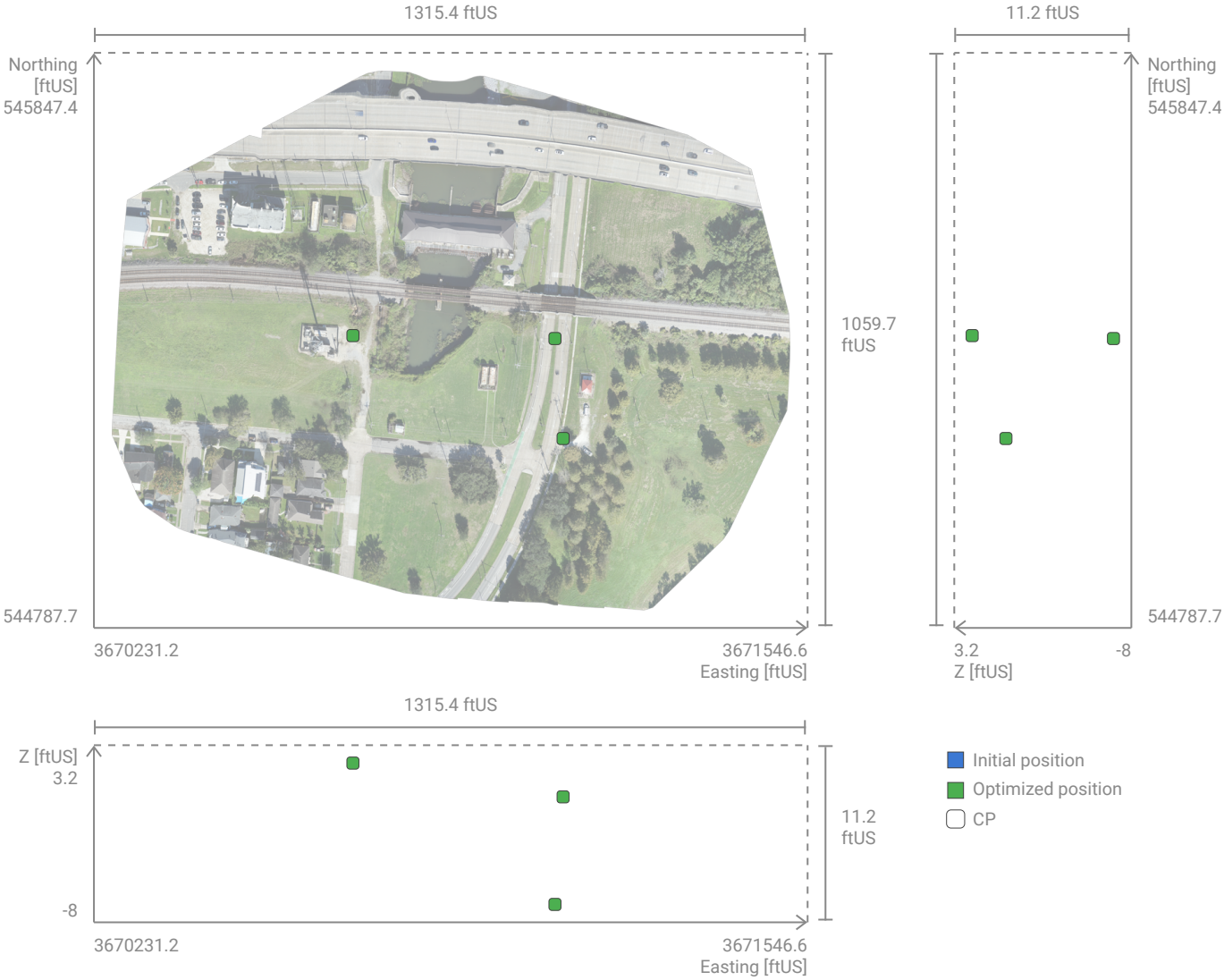
Computed camera positions with links between matched cameras. The opacity of the links indicates the number of matched 2D keypoints between the cameras. Near-transparent links indicate weak links and require manual tie points or more cameras. The different colors identify the distinct calibration blocks. To improve visibility, camera positions may be slightly shifted and multiple cameras may be grouped into a single point on the plot. Group of multiple cameras is indicated by a larger point on the plot.

Tie points

Checkpoints (CPs)

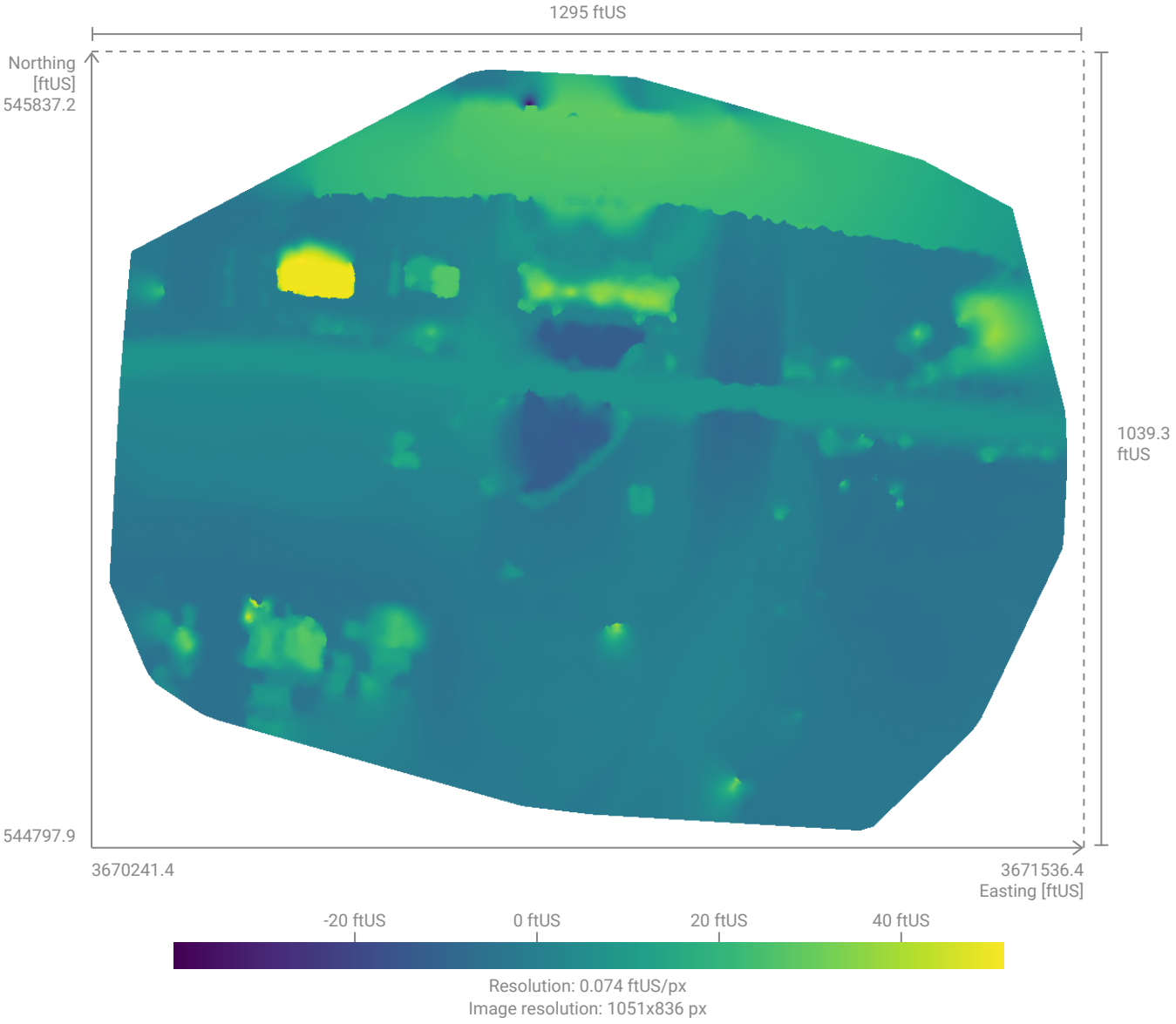
Label	Position error			Reprojection error [px]	Accuracy		Verified/ Marked
	X [ftUS]	Y [ftUS]	Z [ftUS]		X/Y [ftUS]	Z [ftUS]	
1	-0.011	0.105	0.064	1.0	0.066	0.066	4/4
2	0.098	0.197	0.005	0.4	0.066	0.066	4/4
3	-0.024	0.174	0.006	0.4	0.066	0.066	4/4
Min	-0.024	0.105	0.005	0.4			
Max	0.098	0.197	0.064	1.0			
Mean	0.021	0.158	0.025	0.6			
Median	-0.011	0.174	0.006	0.4			
Sigma	0.055	0.039	0.028	0.3			
RMS	0.059	0.163	0.037	0.7			

Tie point positions

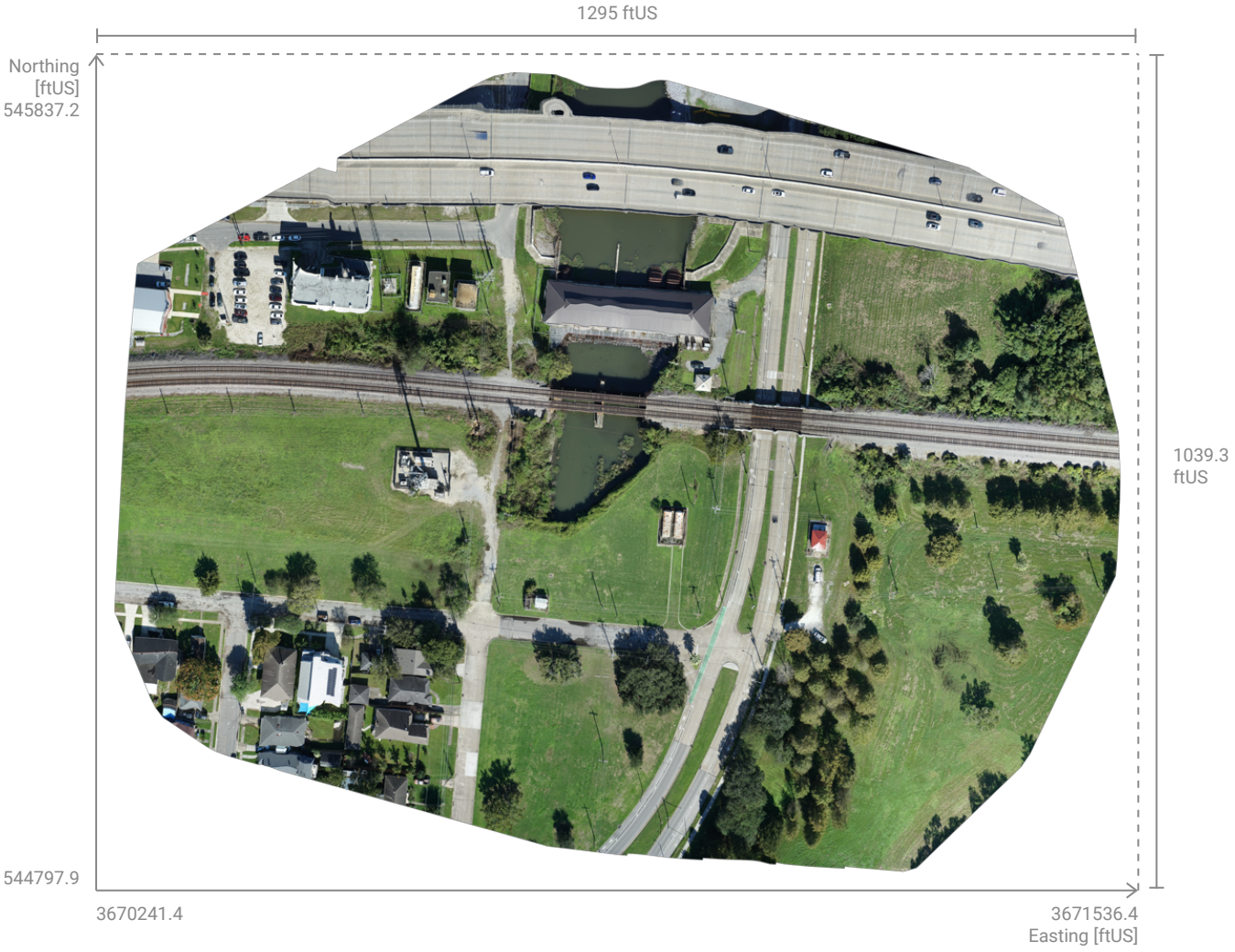


Initial or optimized position of tie points.

DSM


1295 ftUS
Northing [ftUS]
545837.2
1039.3 ftUS
544797.9
3670241.4
3671536.4
Easting [ftUS]
-20 ftUS
0 ftUS
20 ftUS
40 ftUS
Resolution: 0.074 ftUS/px
Image resolution: 1051x836 px

Orthomosaic



Resolution: 0.074 ftUS/px
Image resolution: 1051x836 px

Hardware & Settings

System information

Hardware: CPU: 13th Gen Intel(R) Core(TM) i9-13900HX, cpus=1, threads=32
RAM: 63.78 GB
GPU: NVIDIA Corporation NVIDIA GeForce RTX 4080 Laptop GPU/PCIe/SSE2 (Driver: 4.1.0 NVIDIA 546.33)
Operating system: Windows 11

Coordinate reference systems

Image coordinate reference system	WGS 84 - EPSG:4326
Ground control point (GCP) coordinate reference system	NAD83(2011) / Louisiana South (ftUS) + NAVD88 height (ftUS) - EPSG:6479+6360 [GEOID18]
Project coordinate reference system	NAD83(2011) / Louisiana South (ftUS) + NAVD88 height (ftUS) - EPSG:6479+6360 [GEOID18]

Processing settings

Calibration	Calibration: Reoptimization	DSM
Completed	Completed	Completed
Template: Map **Pipeline:** Trusted location and orientation **Image scale:** 1 **Internals confidence:** High **Externals confidence:** Default **Simultaneous camera internals and MTP/GCP optimization:** Disabled **Max. extracted keypoints:** Automatic **Use automatic ITPs:** Disabled	**Rematch:** Disabled **Camera internals:** Optimized internals **Internals confidence:** High **Externals confidence:** Default **Simultaneous camera internals and MTP/GCP optimization:** Disabled	**Input point cloud:** Automatic tie points **Interpolation:** Enabled **Resolution:** 0.074 ftUS/px **Surface smoothing:** 12 px **Mask-aware:** Disabled
1m 33s	12s	1m 25s

Orthomosaic
Completed
Resolution: 0.074 ftUS/px **Algorithm:** Hardware accelerated **Oblique:** Disabled **Blending algorithm:** Minimal **Mask-aware:** Disabled
53s