

Matanuska Susitna Borough LiDAR/Imagery Project

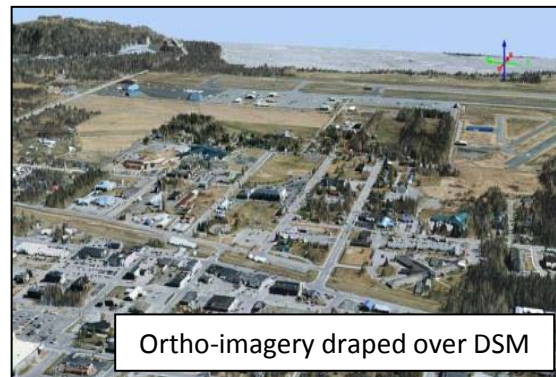
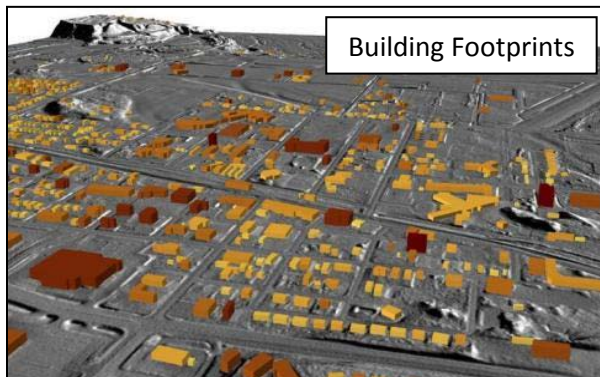
Project Summary

The project objectives include the acquisition of high resolution Light Detection and Ranging (LiDAR) and aerial photography data for 3680 sq/mi of the Matanuska-Susitna Borough, as well as the development of a digital elevation model, contours, ortho-rectified imagery, and additional products. See *Attachment A* for the project area map. See *Attachments B & C* for the collection status at the end of 2011 for both the LiDAR and imagery. The two small areas not collected in 2011 will be collected in 2012.

Project Deliverables

All the deliverables will be public domain.

- ½ ft, ortho-rectified, 4-band imagery for a 270 sq/mi urbanized area
- 1 ft, ortho-rectified, 4-band imagery for the entire 3680 sq/mi area
- Point Cloud Data w/ 1m true nominal pulse spacing (nps) and 0.6m nps through overlap
- Automated “vegetation” classification; low (1-6ft), medium (6-15ft) and high (>15ft)
- Intensity Images
- 1 m first return digital surface model (DSM) (aka top of canopy)
- 1 m bare earth digital elevation model (DEM) w/ hydro-flattening
- 1 m first return hillshade
- 1m bare earth hillshade
- 2 ft contours
- Building footprints @ 97% accuracy
- Breaklines



Example Uses for the Data

- 3-D Visualization
- Automated Feature Extraction
- Building Site Suitability Analysis
- Change Detection
- Disaster and Emergency Response Planning
- Floodplain Mapping
- Landslide Analysis
- Route Mapping (pipelines, railroads)
- Slope Analysis
- Timber Volumetric Studies
- Tower Coverage
- Tower Placement
- Transportation Planning
- Urban Modeling
- Vegetation Mapping

Delivery Blocks

The project has been divided into 7 blocks/areas that will be delivered in the sequence shown in the table below. See *Attachment D* for the delivery blocks map.

| Block | Size |
|-----------------|-----------|
| Point MacKenzie | 583 sq/mi |
| Willow | 567 sq/mi |
| Caswell Lakes | 537 sq/mi |
| Talkeetna | 597 sq/mi |
| North Susitna | 421 sq/mi |
| Matanuska | 472 sq/mi |
| Core Area | 503 sq/mi |

Project Partners and/or Funding Sources

- Coastal Impact Assistance Program (CIAP)
- Alaska Industrial Development and Export Authority (AIDEA) - Alaska Energy Authority (AEA)
- United States Geological Survey (USGS)
- Matanuska Susitna Borough (MSB)
- United States Army Corps of Engineers (USACE)
- United States Fish and Wildlife Service (USFWS)
- The Nature Conservancy (TNC)/National Oceanic and Atmospheric Administration (NOAA)
- Mat-Su Salmon Partnership
- Alaska Pacific University (APU)

Contact Information

The best way to receive updated project information is to visit the MSB LiDAR & Imagery Project website (<http://www.matsugov.us/it/2011-lidar-imagery-project>), navigate to the General Info tab, and sign up for email notifications of project updates.

Project questions can be addressed to either:

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