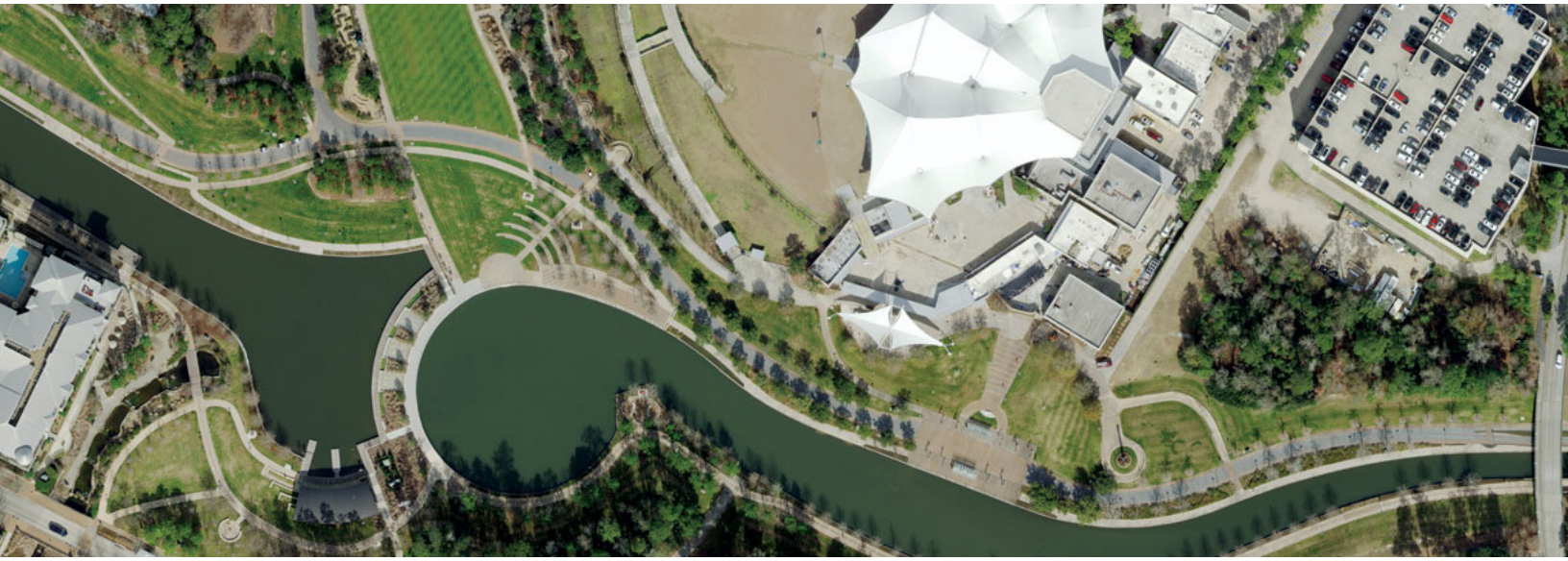
Aerial Mapping

Surdex, a Bowman company offers high-resolution orthoimagery, lidar and digital mapping services. Our full-service firm offers the highest-quality aerial imagery, lidar data, mapping products, technical resources and support for all your geospatial goals.

Our team supports clients from the public sector (including federal, state, county and municipal entities) and private sector on small- to large-scale projects. To provide our clients with custom imagery and mapping products, we own a fleet of specialized acquisition aircraft equipped with large- and medium-format digital sensors (including the Leica ADS100s, Phase One PAS Panas, Phase One two-camera sensor systems, Teledyne Optech Galaxy T2000 sensors). Our investment in state-of-the-art processing equipment, a highly-skilled workforce and a proven methodology for quality control ensures our clients' spatial data will meet their specifications and be on schedule.



Expertise

- **Aerial data acquisition** with multispectral digital imaging and lidar sensors
- Customized **orthoimagery** processing procedures
- **Lidar data processing** for bare-earth and hydro-enforced elevation models, classifications, and contours
- **Stereo compilation**

Benefits

- Ability to provide all primary geospatial products: digital orthoimagery, lidar data and planimetric and topographic mapping products
- Highest possible quality products, adherence to schedule
- Topographic mapping and value-added lidar products that can address any project requirements
- Up-to-date equipment and software suite enable us to provide accurate and high-quality topographic modeling and planimetric mapping data
- GIS-ready digital orthoimagery and 3D mesh for use by assessors, fire/police, and security

Aerial Mapping

GROUND CONTROL SURVEYS

We conduct nationwide ground control surveys using RTK and geodetic-grade GPS systems. Our skilled crews and top-tier equipment ensure highly reliable control data.

AERIAL ACQUISITION

Our fleet includes ten aircraft, highlighted by four premier twin-turbine Cessna 441 Conquests, which can operate at altitudes of up to 35,000 ft and cruise at speeds exceeding 300 knots.

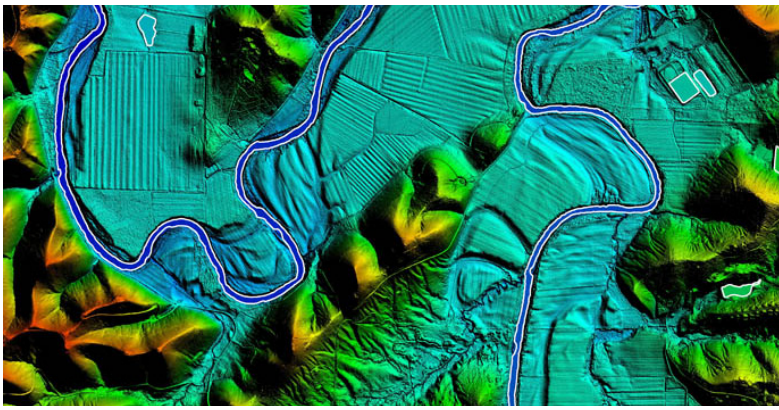
They can ferry from our home base to any of the lower 48 states within six hours, allowing us to take advantage of good weather in project areas.

DIGITAL ORTHOIMAGERY

Our processing environment combines customized, open-source, and third-party software, all integrated with a central database for comprehensive status tracking and high task automation. Processing occurs in a distributed environment under a unified user interface, facilitating easy cross-training. We prioritize speed to meet cost efficiency without compromising image quality and accuracy.

PLANIMETRIC AND TOPOGRAPHIC MAPPING

Many of our digital orthoimagery and lidar projects also include mapping, and our production process for these services includes the same rigorous quality assurance/quality control (QA/QC) emphasis as our other products. Stereo compilation of planimetric and topographic mapping is performed in the native CAD and GIS software to minimize the need for conversion.



LIDAR PROCESSING

We process all lidar data using commercial software products and custom software tools. As with our digital orthoimagery processes, we have several layers of redundant QA/QC to assure that our clients' specifications are maintained, and products are delivered within the requested schedule.

10 aircraft including our premier imagery acquisition aircraft, four twin-turbine Cessna 441s