

## Aerial Imagery & Lidar Services - Eligible Vendors Qualification Summary

### **Aerial Services Inc.**

ASI is a veteran-owned small business corporation delivering quality geospatial solutions with speed, accuracy, innovation and a resilient service ethic to the public and private sectors for over 54 years. ASI offers a full line of geospatial services. All phases of a project can be produced in-house from the acquisition of the photography and LiDAR (Light Detection and Ranging) data using manned or unmanned aircraft systems, ground control and survey, to the delivery of the digital 3D mapping data, LiDAR classification, and/or GIS solutions. This enables solid QA/QC of all projects. Their breadth of services compliments their corporate culture and reputation for producing geospatial services known for quality, accuracy, and timeliness.

#### **Service Offerings**

- Aerial Imaging (manned and unmanned)
- Aerial LiDAR (manned and unmanned)
- Digital Orthoimagery
- Aerotriangulation
- Precision Aerial Film Scanning
- LiDAR Classification
- Digital Terrain Models (DEM, DTM, DSM)
- 3D Topographic Mapping
- Photogrammetric Mapping
- Geographic Information Systems (GIS)

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### **Ayres Associates Inc.**

Ayres is a nationwide professional consulting firm providing services in photogrammetry, lidar, and digital mapping; GIS; survey; civil, structural, transportation, river, levee, and water resources engineering; environmental science; planning; and architecture. Incorporated in Eau Claire, Wisconsin, Ayres employs over 300 people who provide services from a network of offices around the country.

Ayres' geospatial services division is based in Madison, Wisconsin. The geospatial division originated as Alster & Associates Photogrammetric Engineering (founded in 1951) and merged with Ayres in 1978. The geospatial division consists of certified photogrammetrists, highly trained technicians, and project managers, all of whom have formal education in the discipline of geography. Nationally recognized for our skill and experience in aerial mapping, land surveying, and GIS, we deliver efficient and intelligent solutions. Our geospatial division provides a diverse range of mapping services to clients in the Midwest and around the country:

- Aerial imagery acquisition
- Planimetric and topographic mapping
- Aerial lidar (fixed wing and helicopter)

- GPS and conventional survey
  - Oblique aerial imagery
  - Digital orthoimagery
  - Ground base lidar (Mobile and HD Scanning)
  - GIS consulting, training, and development
  - Remote sensing
  - Digital terrain modeling (DTM)
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### **Fugro USA Land Inc.**

Fugro's core business is in the acquisition, processing, and delivery of high quality aerial imagery and imagery derived photogrammetric products. As one of the first firms in the United States to produce digital orthoimagery and the first to produce digital orthoimagery in black-and-white, color, and color-infrared, Fugro's technical expertise has evolved with digital orthoimagery technology.

Our commitment to the field of photogrammetry drives us to adopt new technologies and services, and provide our clients access to the appropriate technology for specific applications. Using this extensive knowledge and with our understanding of the project area, in terms of weather, terrain and topology, we propose, and are recommending, the use of the Leica ADS100. Fugro has successfully delivered over 2 million sq. mi. of digital imagery products over the last 13 years using the Leica ADS series of digital imagery sensors. This experience includes multiple county and statewide orthophotography projects with common pixel resolutions ranging from 2-inch to 1-meter GSD. Professional services include:

- High-Resolution Digital Orthoimagery
  - Planimetric Mapping
  - 3D Modeling / GIS Solutions
  - Lidar and Mapping Contours
  - Online Data Solutions
  - Change Detection Services
  - Coastal and River Bathymetry
  - Land Use / Land Cover Mapping
  - Thermal Imagery / Mapping
  - Oblique Imagery
  - Wetland Mapping
  - True Orthoimagery
  - Priority Processing
  - Emergency Response
  - Mobile/Terrestrial Lidar
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### **GPI Geospatial Inc.**

The staff at GPI are experts in aerial imagery/LiDAR acquisition, photogrammetry, and surveying. We have established a long and successful relationship providing these services to many statewide transportation agencies, cities, and municipalities throughout the country. Geospatial services are the

lifeblood of our company, so we take pride in maintaining client relationships and delivering superior work products.

The aerial imagery geospatial services include a detailed analysis of the DPA (terrain, location, and regional weather conditions, etc.), flight planning, field surveyed control, and targeting, analytical triangulation, orthorectification, photogrammetrically-compiled planimetric data, and printing hard copy image mosaics.

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### **KBM Geospatial Inc. d/b/a 95West Aerial Mapping LLC**

KBM GeoSpatial, LLC (previously KBM, Inc., started in 1952) is a wholly owned subsidiary of Widseth Smith Nolting and Associates, Inc. (Widseth) as of June 15, 2016 when KBM Inc. was acquired by Widseth. This acquisition combined and maximized the significant strengths of two outstanding companies, to offer immense benefits to our clients. The merger joins KBM GeoSpatial's (KBM Geo) years of expertise in medium and high voltage electrical distribution, transmission planning and construction design, municipal utility electrical engineering, and aerial mapping services, with Widseth capabilities in engineering – civil, structural, electrical and mechanical—as well as architecture, surveying, environmental, and water resources. This combination allows the expanded company to provide a wide array of services along with additional depth in technical personnel.

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### **Kucera International Inc.**

Kucera International Inc. has been fully devoted for over 67 years to providing aerial and ground-based surveying, remote sensing, photogrammetric mapping, geospatial data conversion, and related services to government and private users. Today, Kucera stands as one of the most advanced, experienced, and reputable companies in the surveying/mapping and geomatic services field, annually completing these services for hundreds of individual projects throughout the United States and abroad covering areas ranging in size from a few acres to tens of thousands of square miles. Kucera has dedicated staff of over 60, including licensed/certified photogrammetrists, surveyors, engineers, pilots, aircraft mechanics, and GIS and management professionals. For aerial acquisition Kucera owns and operates a fleet of high-performance, multi-port manned aircraft and drones outfitted with the latest generation digital aerial imaging, remote sensing, and LiDAR systems. Kucera is further well-equipped with advanced ground and airborne surveying technologies, robust aerial data processing, mapping, modeling, and analysis software, and current version GIS and CAD systems. Kucera is a privately held, Ohio corporate headquartered in Willoughby, Ohio, with branch offices in Columbus, Ohio, Pittsburgh, Pennsylvania, and Plant City, Florida.

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### **Martinez Geospatial Inc.**

MTZ provides superior Photogrammetry & Orthophotography, Land Surveying, High-Definition Static Laser Scanning (HDS), Mobile LiDAR (Light Detection and Ranging), Small Unmanned Aircraft Systems (sUAS), three-dimensional (3-D) Spatial Modeling/Building Information Modeling (BIM), Rendering & Visualization, and Aviation Consulting services for public and private clients nationwide. Founded in 1974, MTZ has built an industry-wide reputation as an expert in gathering, understanding, and delivering

high-quality geospatial data through the use of many different methods. Whether utilizing ground-based imagery; aerial imagery from a fixed-wing aircraft, rotorcraft, or drone; airborne, mobile terrestrial, or static terrestrial LiDAR; global navigation satellite systems (GNSS); and/or traditional survey methods, MTZ takes tremendous pride in developing innovative geospatial solutions tailored to the specific, unique requirements of each individual project. MTZ is certified as a Disadvantaged Business Enterprise (DBE) by the Minnesota Unified Certification Program (MnUCP) for Surveying and Mapping (Except Geophysical) Services (NAICS Code 541370), a Minority Business Enterprise (MBE) and Small Business Enterprise (SBE) by the Central Certification (CERT) Program, and a Targeted Group (TG) small business by the Minnesota Office of State Procurement (OSP) Program.

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### **NV5 Geospatial Inc.**

NV5 Geospatial is a full-service geospatial firm providing spatial data collection, generation, analysis, and integration, and analysis for clients worldwide. With a mapping and survey heritage dating back to 1969, NV5 Geospatial is dedicated to embracing its legacy traits of flexibility, creativity, innovation, responsiveness, partnership, client satisfaction, and on time, first time right products, which has defined our success. NV5 Geospatial's core business is devoted to providing geospatial data acquisition and post-processing services to our clients.

NV5 Geospatial has provided high-resolution airborne data (imagery and lidar), geospatial products, and land survey data to clients in the state of Minnesota (MnDNR, MnDOT, NPS, and several cities and counties) for over two decades. These projects have varied in size from small sites to large scale regions varying in complexity of terrain and land cover. Likewise, we are specialists in the collection of lidar for various applications, providing services to state agencies such as the States of Minnesota, Illinois, Wisconsin, Pennsylvania, Virginia, Kentucky, Vermont, North Carolina, Oregon, Connecticut, New York, Maine, and Florida. We have also worked with federal agencies which include the USFS, USGS, NOAA, and USACE; local coalitions and various private clients including those in the utility and energy sectors.

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### **Sanborn Map Company Inc.**

In business and continual operation since 1866, Sanborn is a geospatial solutions company that specializes in providing a broad range of geographic information products and services to government agencies, commercial organizations, and institutions throughout the United States and abroad. Our offerings include:

- GPS ground control surveys and field data collection
- Aerial imagery acquisition, including airborne GPS and IMU controlled imagery, using advanced digital aerial imagery sensors
- Digital orthophoto imagery creation
- Digital oblique imagery creation and oblique imagery viewing platform
- Airborne, terrestrial and mobile lidar data acquisition and production for digital elevation/terrain and feature modeling
- Planimetric and topographic mapping

- Remote sensing analysis, including change detection, land cover/land use mapping, impervious/pervious surface mapping, and fire risk assessments
- Data collection, and utility mapping and asset inventory creation
- Corridor and transmission line mapping
- 3D infrastructure modeling and simulation
- Parcel, facility and data conversion mapping
- GIS and CAD database creation
- GIS consulting and training
- GeoIT support including data analysis, data hosting, website creation, and custom application development
- Unmanned aerial systems (UAS)
- Indoor mapping

Sanborn is experienced in and equipped to perform city, county, state and national level imagery, lidar and photogrammetric mapping programs. Our resources include a wholly owned fleet of aircraft, vehicles, and sensor systems, as well as a world-class IT infrastructure and the software needed to produce and quality control data for use in any mainstream GIS or CAD system. Sanborn is also a Google Cloud Services Partner, enabling us to bring this solution to our clients.

Sanborn's staff of over 130 technical and management professionals operate primarily from three offices in the United States, and are capable of supporting virtually any mapping requirement. Sanborn is an ISO 9001:2015-certified contractor, and the ISO process governs all of our administrative, management, production, and quality control processes.

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## **Surdex Corp**

Surdex is one of the premier aerial mapping companies in the United States, under continuous operation by the same ownership since 1954. We are based out of Chesterfield, Missouri. Over the last decade we have grown from a regional company to a national and even international presence, but a majority of our projects are right here in the Midwest, where we can work at maximum efficiency. Our clientele includes federal, state, and local governments as well as private engineering firms, defense mapping entities, and Homeland Security. Our projects range in size from small engineering projects of less than one square mile up to statewide acquisition; however, a large portion of our projects are for municipalities, counties or multi-county collaboratives.

Our aerial imagery and project capacity is fully dependent on area size, resolution and collection window. For NAIP, where we have collected up to ten states worth of 60cm resolution imagery in one summer season; this may not apply to many projects in Minnesota. For instance, a peak of fall colors ortho project can have acquisition windows as short as a couple days or a week at the most, which reduces the amount of area that can be acquired for that type of project. For the likely scenario of mainly leaf-off ortho projects, Surdex can handle typical statewide leaf-off at half meter or 30cm resolution projects up to approximately half the area of the State of Minnesota without the assistance of subcontractors in a single acquisition season. Should a larger, single-season project be requested, Surdex can work with one of our trusted subcontractors as needed and approved by the State.

## **The Atlantic Group LLC**

Atlantic is a Limited Liability Company that specializes in providing remote sensing, surveying, and consulting services throughout North America and beyond. Atlantic's headquarters is in Huntsville, Alabama with a production office in Knoxville (Alcoa), Tennessee and satellite offices located in Colorado, Georgia, Maryland, South Carolina and Texas. Atlantic was established in 2005 and since that time, the company has grown from a start-up to a full-service geospatial firm with approximately (75) employees, many of whom are certified or licensed. Our company is equipped with the technological assets to take on nearly any project nationwide – simultaneously.

Specific to this Request for Proposal, we are fully qualified to complete any digital orthophotography and Lidar work as required by the State of Minnesota and will maintain any and all licenses, permits, insurance, or other authorizations necessary to adhere to all applicable requirements. Furthermore, Atlantic has a proven history of successfully delivering products that meet and/or exceed our client's digital orthophotography specifications – especially those that require extreme attention to detail in regard to color/tone balancing and consortium customization.

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## **Woolpert Inc.**

We have provided airborne data services since 1969. With more than 50 years of experience in surveying and mapping technologies, Woolpert has the capabilities to provide integrated geospatial services and project support to the State and its partners. Our 300+ geospatial professionals and Research and Development department together innovate processes and tools that yield balance between performance, quality, accuracy, and economy. With 30 offices nationwide, we have the expertise and resources to guide projects from discovery to delivery – all while leveraging cuttingedge technology to elevate time-tested geoscience principles.

**Experience.** Woolpert has performed geospatial projects for hundreds of federal, state, and local governments clients including statewide imagery and lidar programs spanning Indiana, Ohio, Maine, Minnesota, and Tennessee. Throughout the life cycles of these programs we meet with program stakeholders to understand the data needs and opportunities between them. This gives us continued insight to successful service.

**Quality.** Woolpert is International Organization for Standardization (ISO) 9001:2015 certified for the acquisition, processing, and utilization of geospatial data through photogrammetric and remote sensing techniques. We adhere to Project Management Institute (PMI) frameworks for managing work. Our Quality and Project Management programs are integrated across disciplines, teams and workflows to ensure the most effective and valuable service to clients.