

# STATEMENT OF WORK

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## **KUCERA** INTERNATIONAL INCORPORATED AERIAL PHOTOGRAPHY - DIGITAL PHOTOGRAMMETRY - GIS SERVICES

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MAIN OFFICE:	38133 Western Parkway	Willoughby, Ohio 44094	(440) 975-4230
BRANCH OFFICE:	110 West Reynolds Street, Suite 207	Plant City, Florida 33563	(813) 754-9247

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The scope of work is to perform aerial lidar data classification, hydrographic feature breakline compilation, hydro DEM preparation, and metadata and reports for a designated area of approximately 203 square miles around the City of Gainesville, Florida. The work is being performed under Florida Department of Revenue (FL DOR) aerial mapping service contract P0121 in association with the Alachua County 2017 aerial orthophotography project. The work is being performed using 8ppsm aerial lidar and ground survey data captured by Kucera for the City of Gainesville under the Phase I Data Acquisition Purchase Order. Specifics of the work are as follows:

1. The project area is as outlined in the attachment, with a 200' outer buffer.
2. The lidar return will be processed/classified georeferenced bare earth and non-ground return, and delivered in tiled ASPRS LAS V.4 form with classes 1 (unclassified/non ground) and 2 (ground). Further classification of non-ground return will be at the option of the City.
3. Hydrographic feature breaklines including streams, rivers, canals, ponds, lakes, and significant ditches will be 3D stereocompiled directly from the lidar return (lidargrammetry) and/or from the Alachua County digital aerial photography using traditional photogrammetry. The hydro features will be edited and converted to GIS form supporting hydro-enforcement/flattening of the lidar bare earth DEM and generation of one foot contour topography.
4. The lidar bare earth return and hydro feature breaklines will be merged to form a hydro-enforced digital elevation model (HE-DEM) from which one foot contour topography can be generated. The HE-DEM will be delivered in tiled raster (e.g., Geo-TIFF, IMG) and vector (e.g., shapefile, geodatabase) GIS form.
5. The lidar bare earth return and HE-DEM will meet USGS QL1 vertical accuracy standards, i.e., non-vegetated vertical accuracy (NVA) within 10cm RMSE/19.6cm at 95% confidence, vegetated vertical accuracy (VVA) within 29.4cm at 95% confidence. The data will be tested for accuracy using ground surveyed checkpoints, with results of accuracy testing being included in metadata and reports.
6. The project deliverables will include a project survey report, FGDC metadata, and other reports as applicable.

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7. All contract work will be completed by August 31, 2017.

8. Consultant fees for the above described services are as follows:

Lidar classification	\$ 17,000
Hydro breakline collection	\$ 25,000
Hydro DEM preparation	\$ 18,500
Metadata and reports	<u>\$ 3,000</u>
Total:	\$ 64,000