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October 8, 2012

Mr. Todd Pulsifer
GIS Manager
Department of Public Utilities
City of Columbus
910 Dublin Road, 3rd Floor
Columbus, Ohio 43215

RE: 2013 City of Columbus Ortho-Imagery

Dear Mr. Pulsifer:

Woolpert is pleased to submit our scope and fee proposal for the 2013 City of Columbus Ortho Project.

Project Boundary

The image to the right depicts the 2013 City of Columbus Ortho Project Coverage Area (plus the area comprising Dublin). The 2013 project area includes all of Franklin and portions of Delaware, Union, Licking, Fairfield, Pickaway and Madison Counties. In total, the project area is comprised of approximately 712 square miles (same coverage as the 2011 3-inch ortho project).

Regional Participation

For the 2013 Project, Columbus will partner with the City of Dublin and Delaware County for the acquisition and development of 3-inch, 4-band, 8-bit ortho-imagery produced from aerial imagery acquired with an average sidelap of 60%. The increase of sidelap (from 30% to 60%) will reduce the vertical displacement which was observed in the prior 2011 3-inch ortho project.

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Through partnering with Dublin and Delaware County, Columbus is receiving a cost savings. This is due to the City of Dublin and Delaware County's Area of Coverage, which together cover a portion of Columbus' Service Area.

Aerial Imagery Acquisition

Woolpert will acquire new 4-band, 8-bit aerial imagery covering the City of Columbus. Aerial imagery will be acquired during the spring of 2013 (leaf-off conditions) with an average sidelap of 60%. The aerial imagery will support the generation of project area wide 1"=100' scale ortho-imagery with a pixel resolution of 3-inches.

Ground Control

Woolpert will utilize existing ground control established for the 2011 project to support the 1"=100' scale ortho base mapping.

If any new ground control points are needed (i.e. due to an existing point being destroyed or obscured), Woolpert will perform the survey and supply a control diagram to the City of Columbus depicting the proposed location(s) of the new horizontal and vertical GPS control points. Each new control point (if necessary) will consist of a photo identifiable point (ie. North edge of sidewalk at east edge of paved driveway).

The datums, coordinate system and units to be used are as follows:

Datums

Horizontal: North American Datum 1983 (HARN)
Vertical: North American Vertical Datum 1988

Coordinate System

Ohio State Plane, South Zone

Units

US Survey Feet

Aerial Triangulation

Woolpert will perform aerial triangulation on the newly acquired aerial imagery acquired during the spring of 2013. Triangulation extends and densifies the ground control and will subsequently support the 1"=100' scale ortho base mapping.

Ortho Base Mapping

Woolpert will produce project area wide (~712 square miles) 1"=100' scale ortho-imagery, with a pixel resolution of 3-inches. The existing OSIP LiDAR DEM (2011) will be used to rectify the new 3-inch aerial imagery.

The final ortho tiles will be delivered as 4-band (RGBN), 8-bit imagery. Utilizing the existing tiling system (1,250' x 1,250' tiles), the ortho tiles will be approximately 100 megabytes in size. All ortho tiles will be delivered as full image tiles.

The imagery will be delivered in geotiff format, with the appropriate tiff world files and metadata. Upon acceptance of the ortho-imagery by the City, Woolpert will produce project area wide MrSID Images.

Deliverables

Woolpert will supply the City of Columbus with an external hard drive containing the digital ortho-imagery dataset (tiled geotiffs and citywide MrSID images).

Schedule

- Woolpert will acquire new aerial imagery on or before April 30, 2013.
- Woolpert will produce and cache the ortho-imagery (for Columbus' Review) to Woolpert's SmartView Connect Server on or before August 30, 2013.
- Upon acceptance (by Columbus) of the base ortho-imagery, Woolpert will process the citywide SIDs (separate natural color and color infrared SIDs) and deliver all ortho data (SIDs and geotiffs) on an external hard drive. This process will require 30 days from the date of acceptance by Columbus.

Estimated Fees

City of Columbus Service Area (approximately 712 square miles in size)

4-Band, 8-Bit Ortho-Imagery **1"=100' Scale Base Mapping**	
Service	*Fee*
Total – 3-Inch Pixel Resolution (4-band, 8-bit)	**$267,834.00**

The estimated fee above is based upon the participation of the City of Dublin and Delaware County (same specifications). If one or both elect to pass on participating, the fee estimate may no longer be valid and may require re-negotiation.

We appreciate the opportunity to present this price proposal and look forward to again working with you and your team. If you have any questions or need further clarification regarding the above, please call me at 614.827.6155. I can also be reached via my e-mail address: brian.stevens@woolpert.com.

Sincerely,

WOOLPERT Inc.

Brian Stevens, CP, SP
Project Manager