



Merrick & Company
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December 21, 2009

Ms. Mary Jo Horace
Director
Department of Geographic Information Systems and Special Projects
Bureau of Technology
69 West Washington
Chicago, IL 60602

RE: Synopsis of the Contract for the Ortho Aerial 2010-2012 Imagery Project (RFP #09-50-1061P)

Dear Ms. Horace:

It is a pleasure to provide Cook County (County) with a brief summary outlining the scope of services Merrick & Company (Merrick) will provide in regards to the Ortho Aerial 2010-2012 Imagery Project. The following services and associated lump sum fees will be performed:

Contract Purpose

The County requires the acquisition of 4-band digital imagery at a pixel resolution of six-inch (6"), and the creation of subsequent ortho imagery deliverables. The intent is for the aerial imagery to be acquired annually in the Spring of 2010, 2011 and 2012. The ortho imagery products developed from the aerial imagery will update the County's enterprise Geographical Information System (GIS), and will support various applications within the County's and/or region's GIS. The project area is approximately 4,146 square miles (approximately 4,160 square miles with a 300-foot buffer), and includes all or portions of eight (8) counties in northeast Illinois. These 8 counties include Cook, Lake, McHenry, DuPage, Will, Kane, Kendall, and Grundy. It is anticipated that a total of 18,905 rectangular tiles formatted to 2,500' x 2,500' will be required to encompass the 4,160 square mile project area.

Contract Summary

To meet the purpose and requirements of the contract, Merrick has presented a technical process to perform the following:

- Perform photo-identifiable GPS checkpoint survey
- Acquire and post-process Digital Mapping Camera (DMC) 4-band aerial imagery
- Perform Analytical Triangulation (AT)
- Prepare / Update Digital Elevation Model (DEM) from existing source(s)
- Rectify and mosaic 4-band digital ortho imagery
- Prepare and deliver 4-band and black and white (panchromatic) digital orthophotography
 - Includes true ortho rectification for the "special consideration" area

An Employee-Owned Corporation

■ Engineering ■ Architecture ■ Information Systems ■ Design-Build

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- Prepare and deliver FGDC compliant metadata
- Prepare (update) and deliver preliminary and final version 9.2 geodatabase design documentation

MJ Harden Associates, Inc. (MJH) of Mission, KS is supporting Merrick with the DMC image acquisition, post-processing, AT, and true ortho rectification and mosaicking tasks. MJH has the resources and experience to ensure completing all required tasks – especially the critical task of image acquisition.

To accomplish the photo-identifiable GPS survey tasks, Merrick has added **American Surveying & Engineering, P.C. (ASE)** of Chicago, IL to our team. ASE is a certified Minority Business Enterprise (MBE). Merrick and ASE have extensive experience working together on many similar projects, including previous contracts with the County. Additionally, ASE will employ Mr. Mike Hoather to review and comment on the metadata. Mr. Hoather was the foremost author for the metadata documents Merrick submitted prior contracts / deliverables.

Merrick has solicited **Pinnacle Mapping Technologies, Inc. (PMT)** of Indianapolis, IN to assist with the image edit and QC tasks in regards to the ortho imagery products. PMT is a certified Women Business Enterprise (WBE). Similar to ASE, Merrick and PMT have extensive experience working together on previous contracts with the County.

Contract Deliverables

Merrick proposes the following deliverables to be provided to the County for this project, and that the County will maintain sole ownership of such:

Ground Control Products

1. ASCII Coordinate listing of all existing and new (temporary) GPS checkpoints.
2. Geodatabase point feature class of the checkpoints.
3. Final control / GPS report including narrative, field notes, sketches, etc. (hard copy and digital [soft] copy of the report).
4. FGDC compliant metadata in HTML, XML and TXT formats.

Aerial Imagery Products

1. Preliminary flight line / control diagram(s).
2. One (1) set of original, unprocessed DMC images.*
3. Geodatabase line feature class of the flight lines.
4. Geodatabase point feature class of the photocenters.
5. Valid USGS Camera Calibration Report(s).
6. FGDC compliant metadata in HTML, XML and TXT formats.

* Unprocessed DMC imagery is not in GeoTIFF format.

Analytical Aerotriangulation (AT) Products

1. AT results report and computations (include ABGPS derived photocenters, IMU and ground control coordinates).
2. Geodatabase polygon feature class of the stereo-model limits.

3. FGDC compliant metadata in HTML, XML and TXT formats (i.e., stereo-models).

DEM Products

1. Geodatabase point feature class of the photocenters.
2. FGDC compliant metadata in HTML, XML and TXT formats.

Digital Ortho Imagery Products

1. One (1) set of half-foot (0.5') / six-inch (6") pixel resolution uncompressed 4-band stack (R,G,B,IR), 32-bit digital orthophotography in GeoTIFF format (.tif).
2. One (1) set of half-foot (0.5') / six-inch (6") pixel resolution black and white (panchromatic) digital orthophotography in GeoTIFF format (.tif).
3. FGDC compliant metadata in HTML, XML and TXT formats.

Geodatabase Design

1. Preliminary and final version 9.2 geodatabase design documentation in PDF format.

Cook County Support / Assistance / Responsibility

1. Assistance with TRACON Coordination.
2. Dedicating the appropriate project management resources to this project.
3. Access to existing Cook County materials and/or data.
4. Assistance with ESRI shapefiles of the project boundary(s) and various tile layouts with attributes.
5. Timely and thorough review, feedback, and acceptance of deliverable products.

Contract Timeframe

Merrick is proposing an approximate three hundred sixty-five (365) calendar day production / delivery schedule for producing the required deliverables. The anticipated detailed proposed schedule (for 2010) is as follows:

<u>Task Name</u>	<u>Start</u>	<u>Finish</u>
Phase One: Project Initiation		
Survey Tasks - American Surveying & Engineering, P.C.		
Photo-id Ground Control - Field Work	4/2/2010	4/30/2010
Photo-id Ground Control - Office Work	5/3/2010	5/28/2010
DMC Imagery - MJ Harden		
Acquisition	4/2/2010	5/14/2010
Analytical Aerotriangulation	5/17/2010	6/25/2010
Phase Two: Pilot Project		
DEM Preparation	6/28/2010	7/2/2010
Ortho Rectification and Mosaicking	7/5/2010	7/30/2010
QC	8/2/2010	8/13/2010
Submit Pilot Project to County		8/13/2010
Pilot Project Review at Cook County	8/16/2010	8/27/2010
Pilot Project Review Meeting		8/27/2010*

Phase Three: Countywide Production

DEM Preparation	7/5/2010	8/6/2010
Ortho Rectification and Mosaicking	8/2/2010	9/24/2010
QC	8/23/2010	3/18/2011
Deliverable Prep and Incremental Deliveries	9/27/2010	4/1/2011
Area 1 Delivery		10/29/2010
Area 2 Delivery		12/3/2010
Area 3 Delivery		1/7/2011
Area 4 Delivery		2/4/2011
Area 5 Delivery		3/4/2011
Area 6 Delivery		4/1/2011
Review at Cook County	11/1/2010	4/29/2011

* Tentative Date

The aforementioned schedule is based on the April 2010 timeframe associated with the Board Consideration of Contract Execution as stated in the RFP. It is the hope of Merrick that the Board can make all necessary approvals in February or early March 2010 (at the latest); therefore, allowing the imagery acquisition to commence in March (i.e., one-month early) to ensure leaf-off collection.

Contract Cost

Task	2010	2011	2012	TOTAL
Project Management (Including, if any, site visits, data handling, overhead, etc.	\$55,915.29	\$58,341.01	\$60,888.02	\$175,144.32
Control Survey	\$96,996.00	\$99,938.31	\$102,970.43	\$299,904.74
Aerial Source Imagery	\$411,093.44	\$435,682.01	\$461,744.25	\$1,308,519.71
Aerotriangulation	\$85,250.91	\$90,332.71	\$95,719.25	\$271,302.87
Orthorectified Imagery, DEM	\$595,403.86	\$616,370.28	\$638,117.28	\$1,849,891.43
Geodatabase Design	\$1,948.69	\$2,044.32	\$2,144.73	\$6,137.74
Metadata	\$1,750.27	\$1,784.24	\$3,105.07	\$6,639.58
Grand Total	\$1,248,358.48	\$1,304,492.88	\$1,364,689.03	\$3,917,540.39

All fees are listed should be considered Lump Sum (fixed fee), and are based on domestic pricing.

Merrick would invoice Cook County on a monthly basis based on a percent complete for each required task.

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Should have any questions, please feel free to contact me at 303-353-3903. I can also be e-mailed at doug.jacoby@merrick.com.

Sincerely,

Merrick & Company

A handwritten signature in black ink, appearing to read "Doug Jacoby".

Doug Jacoby, CMS, GISP
Director of Projects

cc: Mr. Alan Hobscheid, GIS Manager, Geographic Information Systems Division, Cook County Department of Technology