Request for Information

Request for Qualifications

Kern GEONET Aerial Photography Update Spring 2008

Kern Geographic Information Network (Kern GEONET) was established by the signing of a Memorandum of Understanding (MOU) between the City of Bakersfield, the County of Kern and the Kern Council of Governments. The MOU was signed in April 1996. The purpose of this group is the collaborative development and use of GIS and geospatial technologies within the public agencies within Kern County. This request for information will be used to enable Kern GEONET members to select an Aerial Photography Vendor for the 2008 flight and possibly for 2-3 additional 2 year updates beyond that.

Our original vendor, with whom we have had a relationship since 2000 (2000, 2003, 2006 flights) is Airphoto USA/Digital Globe. In 2000 Kern GEONET worked with KernCOG on an RFP to evaluate and purchase aerial photography. Since that time each GEONET participant has individually negotiated and contracted for updates (though we jointly agreed on the schedule for new flights). The only exception to this has been that the City of Bakersfield has purchased photography on a more frequent schedule to meet specific resolution or frequency needs. The KernGEONET customer base has jointly agreed (and the Kern GEONET Executive Committee has requested) that a new evaluation process take place prior to the 2008 flight and that the current state of the industry be taken into account.

The end result of this effort will be that KernGEONET will agree on a company to provide our 2008 aerial photography, and then each participating agency will establish individual contracts to license or purchase the photography. This will bypass some of the complexities of collaborative purchases and will establish a solid customer base for the selected company. Some agencies purchase data for the whole county while others only purchase for their sphere of influence.

The following information is a guideline to define the scope of the project. As this is not an RFP, each respondent may choose to respond to each item as desired.

Complete information discussing each of these areas will facilitate review and is recommended. The Kern GEONET may request additional information and reserves the right to establish a formal bid or RFP process.

All inquiries concerning this RFI should be directed to the following Contact Person:

Jeff Orton - GIS Coordinator
Kern County Engineering and Survey Services Department
ortonj@co.kern.ca.us
FAX (661) 862-5101

Schedule & Submission

Issuance Date . . . . . .December 10, 2007
Due Date . . . . . January 11, 2008
Due Time . . . . . Before 4:00 p.m.

The vendor shall submit six (6) written copies of the information packet and, one (1) copy on compact disk. The file must be a Microsoft Word or Adobe Acrobat PDF document. Please submit all information packets to:

Michael Heimer
Kern Coucil of Governments
1401 19th St. Suite 300
Bakersfield, CA 93301
Telephone (661) 861-2191

Information packets may be delivered in person, by courier service or by mail to the address indicated above. All information packets must be sealed and received before 4 P.M. ON January 11, 2008 at the above office and address.

Geographic Area

The project area will encompass all of Kern County, plus a buffer of three (3) miles beyond the county boundary. Kern County boundary map attached. This area is approximately 9000 mi^2. As noted below, if costs are reasonable we may be interested in 6" pixel photography of some of the cities.

General

All ratios and dimensions assume U.S. survey feet. No scale ratios or dimensions in these specifications are metric. All digital products will be delivered in the California State Plane, Zone 5 projection using the NAD83 horizontal datum, in US Survey feet. The County will make the existing DTM from 2006 available to the chosen provider. The 2006 DTM is licensed by the County of Kern from INTERMAP and is to be used for purposes of planning and orthorectification for Kern GEONET clients only.

For the following products please propose recommended flight elevation and photo scale.

Pixel size: 1 foot
40F/30S overlap

Optional: 6" Urban Areas
60F/40S overlap
6" pixels would be beneficial in urban areas and may be considered depending on cost.

Ground Conditions

The imagery shall be obtained as early in the spring of 2008 as possible, the sun angle should be at least 35 degrees. The imagery may not be obtained when the ground is obscured by clouds, snow, haze, fog, dust, or other obstruction.

Camera

This project encourages the use of a digital camera(s) capable of capturing natural color (R G B bands). Conventional analog film cameras are discouraged for this project. Responses must identify the manufacturer and model number of the sensor(s) to be.

Positional Accuracy

The orthophoto images must meet National Map Accuracy Standards for positional accuracy at the intended usage scale.

Desired Map Scale Horizontal Accuracy : 1"=100' +/- 3.3 ft

Image Clarity

The aerial photography will be taken in accordance with ASPRS Standards for Aerial Photography whereby the image acquisition shall not be secured when the ground is obscured by haze, snow, smoke, dust, flood waters, or environmental factors that may obscure ground detail. There also should not be any digital artifacts that adversely affect the proper tone value of the pixels, produced as a result of the image post-process.

Brightness/Contrast

In an effort to determine the optimum image quality parameters at the onset of the project, the selected vendor will submit sample images of varying contrast and brightness. Kern GEONET will review of the contrast and brightness of the sample imagery during the prototype review meeting.

Shadows

The delivered images should allow identification of at least some, and preferably all, detail in shadow areas.

Mosaic

Seam lines shall be placed in areas of consistent tonal balance and between buildings or bridges. A dynamic range adjustment shall be completed across the entire block of images to provide a tonally balanced product. The mosaic parameters shall be carried from block to block to ensure the entire project area has consistent tonal qualities.

Ground Control

The contractor will employ airborne GPS.

Kern GEONET will provide the supplemental ground control survey for designated communities listed on attached map.

The Respondent shall prepare a ground control needs plan. Control points necessary in addition to existing ground control points will be denoted. Kern GEONET will make every effort to meet the minimum ground control needs. Note: due to the size of the county, expectations are that ground control needs should be kept to a minimum.

Aerotriangulation

Fully digital analytical aerotriangulation will be used as appropriate to supplement the ground control GPS data and the airborne GPS data acquired during the flight. Note that the orthoimagery must integrate seamlessly across the entire project area.

Existing Digital Elevation Models

The Partnership will supply DSM/DTM data created from our 2006 IFSAR flight by INTERMAP.

Deliverables

General: all reports shall be delivered in digital form, as Adobe Acrobat (.pdf) documents.

1. Flight Lines And Exposure Index
ESRI shape files documenting the actual flight lines flown and their identifying exposure

numbers will be delivered.

2. Camera Specifications and Certification Reports

Camera specifications, including manufacturer, model, and the characteristics of the sensor will be provided.

3. Sample Images

Within 30 days of the flight the contractor will deliver the raw, unrectified, unprocessed images to the Kern GEONET technical Committee for review.

4. Imagery

Tiles: each file shall be provided in TIFF World File format and be non-compressed. The TIFF files shall not include any GeoTIFF header data. The vendor shall include an ESRI shapefile or filegeodatabase, which indexes the individual image tiles. Visible seams or sutures within a tile or between tiles, which exhibit a noticeable "edge" or "displacement" effect, will be grounds for rejection of that tile. The option for receiving the product in MrSID or ECW should be discussed with relevant pricing.

Proprietary seamless format: If your company has image viewer software for easy use of a single seamless data set, we would also like the data delivered in that format with viewing software. Most agencies currently use Airphoto USA/Digital Globe Photomapper internally.

Delivery Medium:

Digital images will be delivered on external hard drive(s).

5. Imagery Metadata

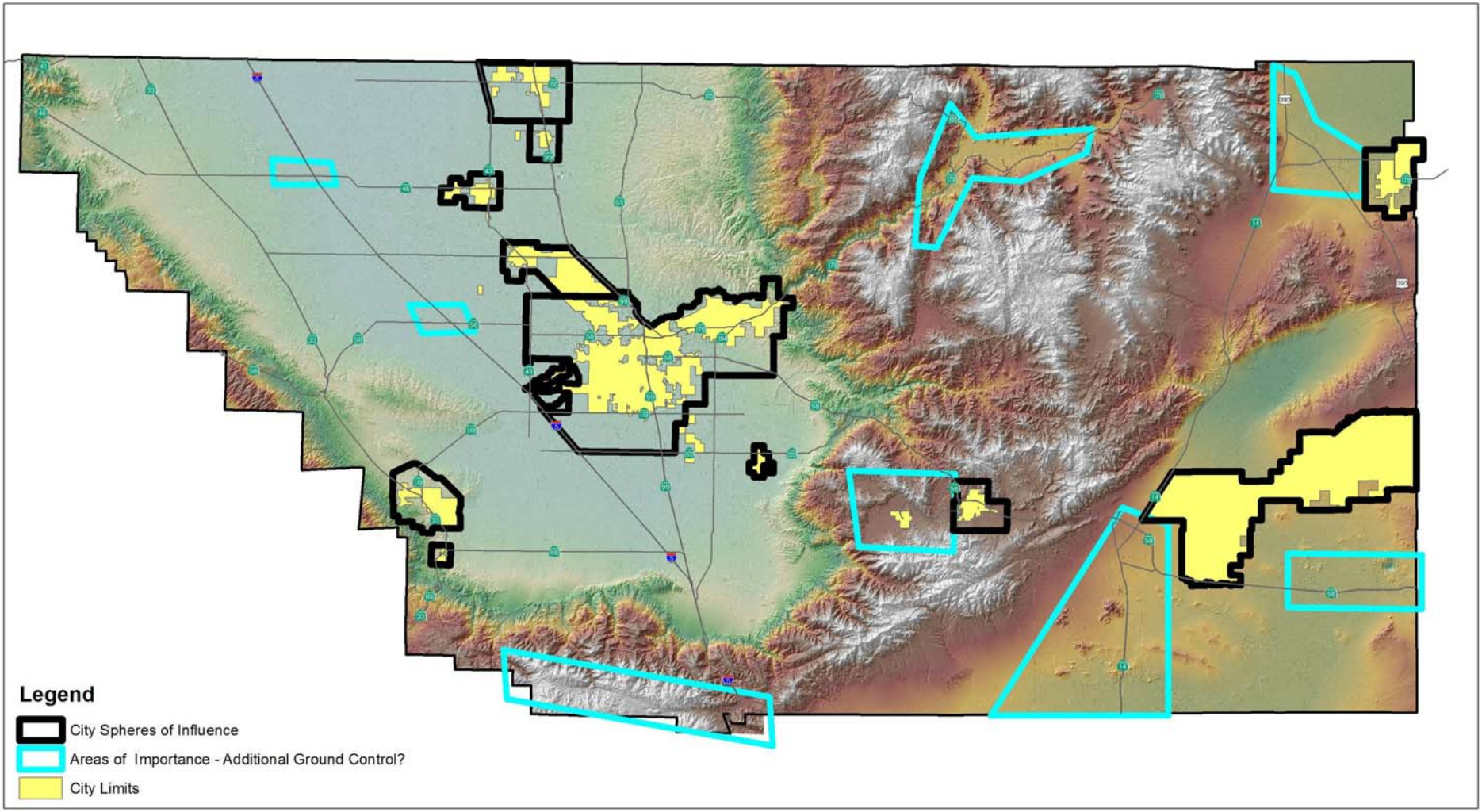
The contractor shall provide metadata compiled to the current standard endorsed by the Federal Geographic Data Committee (FGDC) for each of the data deliverables. Currently, this is the Content Standard for Digital Geospatial Metadata Version 2 (FGDC-STD-001-1998). A separate report listing each tile and its date and time of acquisition is also required.

FGDC compliant metadata is also a required deliverable.

Contracting

For this project we would like to evaluate vendor aerial photography products and prices as a Kern GEONET group. KernGEONET Members who participated in the original effort or who have joined since are:

- County of Kern
- City of Arvin
- City of Bakersfield
- California City
- City of Delano
- City of Maricopa
- City of McFarland
- City of Ridgecrest
- City of Shafter
- City of Taft
- City of Tehachapi
- City of Wasco
- Kern COG
- Kern County Superintendent of Schools
- Kern High School District
- Kern Water Agency
- Kern Water Bank
- Kern Delta Water District
- Semitropic Water Storage District
- Tehachapi-Cummings Water District
- Arvin-Edison Water Storage District
- Wheeler Ridge Water
- Metropolitan Habitat Conservation Program
- California Department of Transportation District 6


Legend
City Spheres of Influence
Areas of Importance - Additional Ground Control?
City Limits