

**City of Culver City, California
Agenda Item Report**

Meeting Date: 09/22/14		Item Number: <u>C-2</u>	
CITY COUNCIL AGENDA ITEM: Approval of an Agreement with the County of Los Angeles in an Amount Not-to-Exceed \$32,000 to Obtain Citywide Aerial Photography and Related Imagery Products.			
Contact Person/Dept.: Johnnie Griffing		Phone Number: 310.253.5950	
Fiscal Impact: Yes ☒ No ☐		General Fund: Yes ☒ No ☐	
Public Hearing: ☐		Action Item: ☒	Attachments: ☐
Commission Action Required:		Yes ☐ No ☒	Date: _____
Public Notification: (E-mail) Agenda and Meetings – City Council (09/17/14)			
Department Approval: Michele Williams (09/12/14)		City Attorney Approval: Carol Schwab (by H. Baker) (09/15/14)	
Chief Financial Officer Approval: Jeff Muir (by M. Noller) (09/16/14)		City Manager Approval: John M. Nachbar (09/17/14)	

RECOMMENDATION:

Staff recommends that City Council approve a Professional Services Agreement with the County of Los Angeles in an amount not-to-exceed \$32,000 to obtain aerial photography and related imagery products through the Los Angeles Region Imagery Acquisition Consortium (LAR-IAC) Program.

BACKGROUND:

The City's Geographic Information Systems (GIS) program manages and publishes multiple data layers of location-based information which is used by staff and the public. One of the most critical layers is aerial orthophotography. This digital imagery serves as an important base and is often used to build and derive other GIS data layers. Aerial orthophotography is used as an analysis tool and is also used to verify and assess City infrastructure.

Prior to 2005, the City had been in the practice of updating the aerials every 3 years. This was a very costly endeavor as the City contracted independently with vendors to fly, photograph, and process aerials within the City boundary and surrounding areas. In an effort to reduce costs, the County of Los Angeles along with cities throughout the County established the Los Angeles Region Imagery Acquisition Consortium (LAR-IAC) program. Culver City has participated in this program since its inception. Participation in LAR-IAC has resulted in significant cost savings for all of the participating agencies (over 50 cities), which now collaborate to obtain aerial imagery. Economies of scale and efficiencies are also achieved as LA County is flown only

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once to produce the aerial imagery as opposed to each agency individually contracting for this service.

DISCUSSION:

The imagery deliverables from past LAR-IAC projects include:

Digital Imagery – Digital technology was used to capture the aerial photography. This provided improved quality and accuracy as opposed to scanned film. The resolution of the imagery was 4 inch pixels.

Oblique Aerial Imagery – Oblique imagery is aerial photography that is taken at an angle rather than the traditional straight down view. It is more intuitive and useful in situations where additional information is required. Analysis can be performed to calculate length, distance, height, acreage, and other measurements.

LiDAR (Digital Terrain Model) – Light Detection and Ranging (LiDAR) technology is universally used as a tool to measure elevation change. The LiDAR collection system uses a powerful laser sensor mounted on the underside of an aircraft to emit infrared laser light that measures the distance to the ground. LiDAR technology can be used as a source for highly accurate digital elevation models and digital terrain models (DEM/DTM) to create precise elevation contours and to enhance orthoimagery. The data can be used for enhanced 3-D visualization, disaster management purposes, and mapping applications (i.e. flood mapping, drainage of streams, water contamination, etc.)

Infrared Imagery – Infrared film is sensitive to green, red, and near-infrared portions of the color spectrum. The colors on the imagery show information about vegetation health, water content, and other information not visible to the natural eye. Infrared imagery can be used to assess soil moisture, seepage patterns, differentiating tree species, and areas of “stressed” vegetation.

Building Footprints – Digital outlines for buildings larger than 400 square feet. The building footprint layer has greatly enhanced the City’s GIS data inventory as this was previously captured manually by tracing the aerial photos.

The County through the LAR-IAC program has committed to re-flying the area and providing updated aerial orthophotography and oblique aerial imagery every two years. The LiDAR and infrared imagery products are updated every four years.

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FISCAL ANALYSIS:

The approval of the proposed agreement with Los Angeles County would result in an expenditure not to exceed \$32,000. Sufficient funds have been allocated in the City Council Adopted Budget for Fiscal Year 2014/2015 in the IT Department Maintenance and Operations budget (10124100.600200).

ATTACHMENTS:

None.

MOTION:

That the City Council:

- 1) Approve an agreement with the County of Los Angeles in an amount not-to-exceed \$32,000 to obtain aerial imagery products through the Los Angeles Region Imagery Acquisition Consortium (LAR-IAC) Program; and,
- 2) Authorize the City Attorney to review/ prepare the necessary documents; and,
- 3) Authorize the City Manager to execute such documents on behalf of the City.