

**CITY OF PEORIA, ARIZONA  
COUNCIL COMMUNICATIONS**

**CC:** \_\_\_\_\_  
**Amend No.** \_\_\_\_\_

**Date prepared:** May 21, 2010

**Council Meeting Date:** July 6, 2010

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**TO:** Carl Swenson, City Manager

**THROUGH:** Susan J. Daluddung, Deputy City Manager

**FROM:** Andrew Granger, P. E., Engineering Director

**SUBJECT:** Resurvey Benchmarks of the City of Peoria's Horizontal and Vertical Control Network (Engineering Project No. PW00137, Solicitation No. P10-0051)

**RECOMMENDATION:**

Discussion and possible action to award a design services contract for the Resurvey Benchmarks of the City's horizontal and vertical control network to RBF Consulting in the amount of \$223,384.

In addition, approve the carryover of \$20,000 in project funds from FY 2010 to FY 2011, and authorize a budget amendment in the same amount from the General Fund Contingency Account 1000-0300-570000 to the Resurvey Benchmarks project, General Fund Other Professional Services Account 1000-0310-520099-CIPST-PW00137.

**SUMMARY:**

The City of Peoria has a grid of survey monuments throughout the city which are used by various people to perform a number of functions. Engineers use them to determine the exact location of projects and the elevation of facilities. Others use them for cadastral purposes, which means that they use them to determine property lines and to stake recorded property. Still others use them to establish the GIS network and match the electronic files to the actual locations on the ground.

The last time the city verified the grid was in 2001. A survey of all the existing monuments was performed and the result of that work is on the city's web page as the

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**CITY CLERK USE ONLY:**

- Consent Agenda
- Carry Over to Date: \_\_\_\_\_
- Approved
- Unfinished Business (Date heard previous: \_\_\_\_\_)
- New Business
- Public Hearing: No Action Taken

**ORD. #** \_\_\_\_\_ **RES. #** \_\_\_\_\_  
**LCON#** \_\_\_\_\_ **LIC. #** \_\_\_\_\_  
**Action Date:** \_\_\_\_\_

Horizontal and Vertical Control Network. Although it has served its original intended purpose well, it is in need of being updated primarily due to advances in technology.

Since the last survey was performed there has been subsidence in some areas of the City. Subsidence is the slow process of the ground surface compressing down as the ground water is removed. Since it is important for sewer lines to flow downhill, such movement becomes important to track. Also, there have been advancements in the art of surveying which takes advantage of the Geodetic Positioning System satellite network. Such advances have increased the accuracy and decreased the cost of survey work.

The City issued a statement of interest and qualifications utilizing the best value system (Performance-based Information Procurement System - PIPS). The solicitations were advertised in the Peoria Times as well as Bid Net, Bid Source, IMS, Contractor's Plan Room, Grand Canyon Minority Contractors and posted on the City of Peoria Materials Management web site resulting in ninety-four (94) firms receiving the solicitation. Six (6) teams responded to the advertised requests. Three firms were selected for interviews. RBF Consulting was ultimately selected by the selection committee as the most advantageous and qualified firm for this project.

This project includes the following work elements:

- Meet with the County and Federal Agencies to obtain relevant data and updated procedures for establishing the network.
- Meet with the Federal Agency to obtain a Continuously Operating Reference Station (CORS) and install the station inside the City limits. This enables surveyors to use the satellites with enhanced accuracy.
- Visit each monument to verify its location and accuracy.
- Replace or re-list monuments that have been moved or destroyed.
- Create a map showing the movement of the ground from the last survey.
- Extend the grid to the "developable" parts of the city north of Happy Valley Road, South of the Carefree Highway using the existing Maricopa County Geodetic Densification and Cadastral Survey.
- Produce electronic files that the City's GIS department will use.
- Migrate the existing network from the modified state plane to the current state plane grid used by MCDOT and ADOT.

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This project is scheduled to begin in late July 2010 and be completed in January 2011.

**FISCAL NOTE:**

Funding for this contract is available in the FY2011 Capital Improvement Program. Payment will be from the General Fund, Other Professional Services Account 1000-0310-543001-CIPST-PW00137CO in the amount of \$223,384.

**CONTACT:** Geoffrey Zinnecker, Civil Engineer, 623-773-7293

The contract  
pertaining to this  
agenda item is on file  
in the City Clerk's  
Office.