COUNCIL COMMUNICATION
City Manager's Office

GENERAL INFORMATION

Agenda Date: 08/22/05   Communication No.: 05-483
Agenda Item Type: Resolution   Roll Call No.:

Submitted by: Al Ihde, Acting Information Technology Director

SUBJECT—

Recommendation to approve purchase of material and labor to install internal and external wireless network equipment throughout all City buildings currently connected to City network, exempted from competitive bidding and advertising requirements.

SYNOPSIS—

Information Technology is now in the next stage of upgrading Network Infrastructure to create Network "Hotspots" at all city buildings that are currently connected to City Network. This will provide any City owned wireless laptop or wireless mobile device connectivity to City high speed network inside or outside of all City buildings using 802.11 b/g Technology. Example (Building Inspector's, Fire Mobile Devices or laptops, Police Mobile Devices or laptops, anyone with a City Wireless Device)

FISCAL IMPACT—

Purchase Cost $31,539.14 which has been budgeted in Information Technology FY06 CIP.

RECOMMENDATION—

Approval

BACKGROUND—

The City of Des Moines Information Technology Department has moved to the next stage of providing wireless network capability externally and internally to all remote City buildings. The process of selecting the correct external antennas and configuring wireless access points is very critical to the operational success of wireless communications. At this point in time, the information technology staff does not have

the skills and monitoring/testing equipment to move forward on this project without assistance from outside support.

In March of 2005 the Information Technology Department was asked to provide network service for the temporary East Side Library/Fire Department Training Location at Douglas Elementary on Douglas Avenue. The Information Technology Department did initial research to determine what options were available to provide this service by May 15, 2005. It appeared we may have the capability to use a wireless point-to-point connection between Grandview Golf Course and Douglas Elementary which were approximately 2 miles apart, as visual line of site appeared to be available. No one in the Information Technology Department had knowledge or expertise to build a wireless point-to-point connection needed to provide this service. Bob Langford, Cisco Sales Representative for the City of Des Moines was contacted for a recommendation on an outside resource to assist with the project. Mr. Langford identified two potential vendors: Doug Shreve, a private consulting electrical engineer, and Pomeroy IT Solutions. Information Technology added Communication Innovators to the vendor list.

Doug Shreve was the only outside resource that responded to the request. Due to the time constraint, IT had to move forward using Doug Shreve as our outside resource. Doug was able to meet the goals requested, and the connection is currently functioning without problems.

Doug Shreve has now ended his Private Consulting Electrical Engineering Service and has joined with Campbell Consulting at 764 76th Street, West Des Moines.

Staff is requesting that the City of Des Moines Information Technology Department continue to retain the services of Doug Shreve representing Campbell Consulting for the upgrade of the City Network to build wireless HOTSPOTS at all remote City Building where our existing cabled network resides and any other new locations that are needed in the future. This recommendation is based on Mr. Shreve's expertise in the area, his responsiveness to tight deadlines, and his familiarity with the City's technology infrastructure.

Campbell Consulting will provide the following service for the Wireless Project:

1. Site Inventory and survey.
    a. Document information on physical structure of building.
    b. Test of any wireless interference in the area.
    c. Determine and Select external antenna for best coverage.
    d. Determine location on building to mount antenna.

2. Document Antenna Requirements
    a. Recommend antenna for best coverage.
        i. Manufacturer
        ii. Material needed for installation.
        iii. Estimate installation cost.

3. Physically install Wireless Access Point with Antenna's
    a. Install access point inside of building.
    b. Install cat 5 cabling from access point to network switch.
    c. Install antenna cabling from access point inside of building to external antenna.
    d. Install external antenna on building.

4. Software Configurations

  a. Recommend configurations to IT Network Staff to management access points.
  b. Assist IT Network Staff on software configurations.

5. Test & Monitor Wireless Segment.
  a. After initial installation monitoring will be preformed to verify reliable and performance.