

TO: JAMES L. APP, CITY MANAGER  
FROM: ROBERT A. LATA, COMMUNITY DEVELOPMENT DIRECTOR  
SUBJECT: CDBG-FUNDED LED-LIGHTED CROSSWALKS  
DATE: SEPTEMBER 20, 2005

Needs: For the City Council to decide whether or not to authorize the installation of wireless LED-lighted crosswalks.

Facts:

1. LED-lighted crosswalks may utilize hard-wired or wireless systems. The LED-lighted crosswalk recently installed at 24<sup>th</sup> and Oak Streets is a hard-wired system.
2. Hard-wired systems require sawcutting and laying of conduit; wireless systems do not as individual LED marker lights are solar-powered and activated via radio transmission. Because there is no sawcutting, conduit, or connection to the electrical grid, wireless systems cost considerably less than hard-wired systems.
3. The construction contract for the hard-wired crosswalk at 24<sup>th</sup> and Oak Streets was \$57,308. It is estimated that the cost for wireless systems at the intersection of Spring and 34<sup>th</sup> Street would cost about \$35,000.
4. The City Council has allocated a total of \$75,000 in CDBG funds to install an LED-lighted crosswalk at the intersection of Spring and 34<sup>th</sup> Streets.
5. A year ago, staff researched wireless systems and found that several cities that had installed them had encountered some problems. In the last three months, staff conducted a new round of investigations and received reports from several cities that they had experienced several months of satisfactory performance. Some cities are installing multiple wireless systems.
6. There are presently two domestic manufacturers of wireless systems: Silicon Constellations and Spot Devices, both of which are located in the Bay Area. Several cities throughout California have installed one or both of these systems. All cities interviewed by staff have reported satisfaction with manufacturers' responses whenever problems have occurred. Manufacturers have stated that they have made improvements to their systems to prevent problems associated with moisture intrusion into the marker lights, which had been causing some shorts.
7. The Police Chief and Housing Programs Manager have interviewed representatives of both wireless manufacturers and seen demonstrations of their products. Both systems have very similar technical specifications and appear to be capable of performing as well as hard-wired systems.
8. Wireless systems are solar-powered: both in the individual marker lights and in the pole-mounted transmitter and lighted warning signs. Both systems would incorporate solar panels mounted atop the warning sign poles. Both systems provide batteries that can operate the markers, transmitter, and warning signs for up to 30 days in the event of periods of prolonged cloud cover.
9. Both systems offer marker lights that are mounted into base plates with tamper-proof screws. In the event a marker light malfunctions, the marker light can easily be removed and replaced.

Analysis and  
Conclusion:

The continued investment by other cities in wireless systems, the recent favorable reports regarding their performance, and their substantially lower cost would seem to indicate that the time may be right to install a wireless LED-lighted crosswalk system. The Council would have the option of authorizing all future crosswalk systems to be wireless or to authorize only a single

wireless installation as a test case – so that its performance can be evaluated prior to authorizing a second wireless installation.

Policy

Reference: Federal procurement regulations for the Community Development Block Grant Program.

Fiscal Impact: The LED-Lighted Crosswalks program addressed by this report is to be funded with CDBG funds. There will be no impact to the General Fund.

- Options:
- a.** That the City Council, by minute action, authorize staff to seek bids to install wireless LED-lighted crosswalks at multiple locations.
  - b.** That the City Council, by minute action, authorize staff to seek bids to install a wireless LED-lighted crosswalk system at a single location (34<sup>th</sup> and Spring Streets) as a test case, and determine that future installations of wireless systems will be subject to subsequent Council authorization following an evaluation of the test case.
  - c.** Amend, modify, or reject the foregoing options.

Prepared by:

Ed Gallagher  
Housing Programs Manager

ED\STIMPS\LED CROSSWALKS 04\WIRELESS AUTHORIZATION CCR 092005