AUTHORIZATION TO DISTRIBUTE REQUESTS FOR QUALIFICATIONS FOR THE DESIGN OF TRANSIT SIGNAL PRIORITY

Public Works Department - Transit

Our streets and highways are getting more congested as the population grows and more cars enter the transportation system. It is staff's desire to improve public transit service so that more travelers will utilize transit, freeing up space on our streets, diminishing our dependence on fossil fuels and improving air quality.

A simplified explanation of a signal priority system is as follows: 1) the bus approaching the intersection is detected; 2) the traffic control system processes the request and decides whether to grant priority based on defined conditions. Typically, if the intersection signals are already displaying a green phase, the controller will extend the length of the green phase to enable the bus to pass through. If the intersection signals are displaying a red phase as the bus approaches, the controller will shorten the green phase on the cross street to provide an earlier green phase for the bus approach; and 3) on being notified that the bus has cleared the intersection, the controller restores the normal signal timing through predetermined logic.

Signal priority is a tool that can be used to help make emergency and transit service more reliable, faster and more cost effective. Signal priority has little impact on general traffic and is an inexpensive way to make transit more competitive with the automobile.

Signal priority systems will also work with emergency vehicles, reducing response time to emergencies, improving safety and stress levels of emergency vehicle personnel and reducing accidents involving emergency vehicles at intersections.

Currently, the City has 4 intersections that have functional signal priority systems and several other intersections that have the components required to make them operable.
The services to be rendered under this contract would consist of, but not be limited to, the preparation of a complete design and specification of a signal priority system. In addition to the preparation of the design, it is anticipated that the consultant would also perform intersection and vehicle surveys, identify intersection controller upgrades, preparation of an engineer’s estimate and contract documents.

Over the past three years, staff has been applying for and has been awarded approximately $79,000 to upgrade the City’s infrastructure to allow for additional signal priority systems.

This project is funded by 80% FTA 5307 grants and 20% local match.

RECOMMENDATION: That the City Council authorize staff to distribute a Request for Qualifications for the design of a transit signal priority system.