

Agenda Report

September 19, 2016

TO: Honorable Mayor and City Council

THROUGH: Municipal Services Committee (September 13, 2016)

FROM: Department of Transportation

SUBJECT: AUTHORIZATION TO ENTER INTO A CONTRACT WITH LIVE TRAFFIC DATA LLC TO PROVIDE CITYWIDE TRAFFIC MONITORING

RECOMMENDATION:

It is recommended that the City Council:

1. Find that the following proposed action is exempt from review pursuant to the California Environmental Quality Act (CEQA), pursuant to State CEQA Guidelines Section 15061 (b) (3);
2. Authorize the City Manager to enter into a contract, without competitive bidding pursuant to City Charter Section 1002(F), contracts for professional or unique services, with Live Traffic Data LLC to provide Citywide Traffic Monitoring for a term of five (5) years. The contract has no direct monetary value; and
3. Grant the proposed contract an exemption from the Competitive Selection process pursuant to Pasadena Municipal Code Section 4.08.049(B) contracts for which the City's best interests are served.

BACKGROUND:

In 2012, the City implemented a pilot program to automate the monitoring of travel speeds and approach queues at six intersections on Orange Grove Boulevard from Lake Avenue to Sierra Madre Boulevard. The City partnered with the University of Minnesota and its affiliate, ITERIS Inc., to implement the "Smart Signal System" pilot deployment. The system uses an event data logging device placed inside each traffic signal cabinet in the corridor. Once installed, the device automatically logs all "events" inside the traffic signal cabinet with second by second precision. The recorded events include all vehicular detections, pedestrian push button activations, and every instance

when each traffic signal display turns green, yellow or red for all approaches of a signalized intersection. This information is then processed using proprietary algorithms that produce historical travel time and traffic queuing information. At the conclusion of the pilot project, staff compared the travel time information derived from the system with the travel times from field-measured travel times and found the processed data from the Smart Signal System to be very accurate and very close to the actual field-measured data.

After the initial deployment, the Smart Signal System was spun off by the University of Minnesota to a private company, Live Traffic Data LLC (LTD). Since the implementation of the pilot program in Pasadena, this system has been deployed in other agencies elsewhere in the country and has continued to evolve and improve. The system now uses a more streamlined recording device inside the traffic signal cabinet. At the same time, the features of the software were expanded with an improved graphical user interface and enhanced reporting capabilities that produce data that can be used to better manage and optimize traffic signal synchronization around the City.

In 2014, LTD approached the Department of Transportation with a proposal to perform a citywide deployment of the LTD system at no cost to the City of Pasadena in exchange for the exclusive rights to use the live streaming of travel data from the system. Finding merit in the proposal, the Department of Transportation, in close consultation with the City Attorney's Office and DoIT, negotiated the following aspects of the agreement:

- This is a full-turnkey proposal with no direct costs to the City of Pasadena
- LTD shall furnish and install all equipment, shall maintain their equipment and be responsible for their removals inside the City's traffic signal cabinets at the end of the contract
- City staff time is required to coordinate the installation, maintenance and removal of LTD equipment in City cabinets and to set up their data server
- This is a five-year contract with early termination clauses for certain conditions
- The City shall have access to all processed data which are either updated in "near real-time" or archived. Access to this data will enable staff or the public to see the level of congestion or Level of Service on the particular roadways included under this contract.
- The City shall have no access to raw data that could be utilized for litigation to reconstruct traffic collisions occurring at traffic signals. The raw data is still subject to court subpoena but the custodian and interpretation and disclosure of such data shall be strictly LTD's responsibility
- LTD shall have no exclusive right to mine traffic data from signal cabinets if during the contract period another company could offer similar services, as long as there is available space where an additional device can fit in the City's traffic signal cabinets.
- The City has the right to immediately remove any LTD device that is causing traffic signals to malfunction.

- Upon execution of the contract and issuance of Notice to Proceed, the project would take approximately 12 to 18 months to complete installation of the equipment.

Benefits of LTD to the City include the following:

- The Citywide deployment of the LTD system would showcase Pasadena as an innovation test-bed for new technologies
- The City's access to all processed traffic data along all signalized corridors will automate the performance monitoring of major corridors
- Since the system monitors vehicle detection and instances when signal changes from green to yellow to red, the included iMonitor™ application is capable of evaluating vehicular traffic arrivals at a traffic signal against the start of green signal. This allows traffic engineers to optimize traffic signal synchronization year-round if needed. Optimized travel times along major corridors could reduce greenhouse gas and other harmful vehicle emissions.
- Having gone through a pilot testing process and deployment at multiple locations, the project reduces risk to its operation and maintenance.
- This project will not cause controversies with respect to the visual aspect of project deployment because the data logging device will not be visible to the public. If there is a need to install any visible equipment, it will be a small and unobtrusive wireless communication device at certain intersections where the City has no direct communications. The system has no impact to traffic signal operations.

The partially funded Capital Improvement Project (CIP) 75602 Implementation of Citywide Transportation Performance Monitoring Network would cover the staff time to oversee the project deployment. The LTD system will automate a large portion of the data acquisition needed to fulfill the goals of this capital improvement project. Additionally, the Department periodically uses consultant services to retime traffic signal synchronization in one or more mobility corridors annually. The LTD data will reduce the need for future consultant services by allowing staff to accomplish the routine retiming which will result in potential savings in the Department's consultant services budget.

COUNCIL POLICY CONSIDERATION:

This project is consistent with the Guiding Principle to enhance livability and the Mobility Element Policy 1.10 that states: "Continuously evaluate the operation of the City's transportation system to manage the speed of travel at or below the speed limit, manage queues at intersections and develop improvements to increase safety of all transportation services."

ENVIRONMENTAL ANALYSIS:

This contract is exempt from CEQA per section 15061 (b) (3), the General Rule. The General Rule can be applied when it can be seen with certainty that the activity will not


have a significant effect on the environment. The proposed action will not result in any new development or physical changes.

FISCAL IMPACT:

Per the terms of the agreement, the City will incur no direct costs for the installation, maintenance and operation or removal of the LTD equipment. However, costs will be incurred for City staff time to provide access to traffic signal cabinets and to monitor installation and removal of LTD equipment. Such costs are expected to be nominal and would be charged to existing operating budget and to CIP 75602 Implementation of Citywide Transportation Performance Monitoring Network.


The staff time necessary to make use of the traffic data provided by LTD is a part of the Department's on-going traffic management activities and will be absorbed within the Department of Transportation's operating budget.

Respectfully submitted,



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Attachment:

Attachment A – Live Traffic Data's iConnect System Software Cut Sheet