

# Memorandum

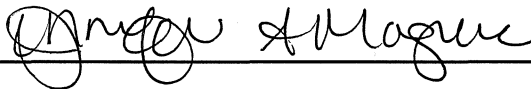
**TO:** HONORABLE MAYOR  
AND CITY COUNCIL

**FROM:** Robert Sapien, Jr.

**SUBJECT:** "SEE BELOW"

**DATE:** September 28, 2018

Approved



Date

9-28-18

## INFORMATION

**SUBJECT: PUBLIC SAFETY AND TRANSPORTATION DEPARTMENTS DEPLOY LATEST TECHNOLOGY FOR EMERGENCY VEHICLE PREEMPTION FOR IMPROVED TRAFFIC MANAGEMENT AND EMERGENCY RESPONSE TIMES THROUGHOUT THE CITY.**

## BACKGROUND

In the 2016-2017 Mayor's March Budget Message, the Administration was directed to provide resources to implement strategic improvement in technology to improve emergency response times. The Department of Transportation (DOT), Fire Department, and Police Department began collaborating to develop a Centralized Emergency Vehicle Preemption (CEVP) solution utilizing software to interface between TransCore's Traffic Signal Management system and Intergraph's Computer Aided Dispatch system. This interface communicates and coordinates an emergency response vehicle location via a global positioning system to DOT's Traffic Signal Management system and turns traffic signals green along the response route to clear standing vehicles that can impede response; allowing emergency vehicles to proceed through intersections safely.

## ANALYSIS

The system allows the first approaching emergency vehicle enroute to Priority 1 calls at an intersection to receive preemption, followed by all subsequent emergency vehicles, and holds the green light traffic signal for up to 85 seconds, if necessary. Emergency vehicles approaching beyond 85 seconds would trigger a new preemption cycle. The preemption solution includes specific safety protocols as well. For example, should the crosswalk signal be in use for pedestrian crossing, the preemption would occur after the crosswalk countdown has ended. Additionally, as the CEVP signal preemption cannot override a green signal of conflicting traffic for a specific time period to allow traffic to slow safely.

Pilot intersection locations were identified in January 2018 and by July 2018 test phases of activation were underway in three areas of San Jose for emergency vehicles enroute to Priority 1 calls. The test areas were Tully Road and Tenth Street, Skyway Drive and Monterey Road, and 17<sup>th</sup> Street and Santa Clara Street, with a combined total of 41 City managed intersections. Based on favorable results shared at a debriefing meeting with stakeholders on July 18, 2018, DOT recommended a full scale deployment, which began on July 30, 2018.

#### NEXT STEPS

To date, there are currently 101 intersections operating under the new CEVP system. The remaining 854 intersections are projected to be completed by December 2018. The new CEVP system only functions at City of San Jose managed signalized intersections and will not operate at County and some State traffic signals (e.g., all signals located on expressways and some freeway ramps). The existing optical based preemption system, at approximately 336 intersections, will remain in place to support mutual aid emergency response by neighboring agencies whose Computer Aided Dispatch systems are not integrated with the City of San Jose's CEVP system. Due to DOT's high vacancy rate in its electrical maintenance unit, these optical sensors are not currently proactively maintained. To achieve a high level of CEVP reliability, software and hardware operation and maintenance resources will need to be established on an on-going basis. The Fire Department will continue to monitor and report on response time performance semi-annually at the Public Safety, Finance, and Strategic Support Committee.

#### COORDINATION

The memorandum was coordinated with the Police Department and Department of Transportation.

/s/

ROBERT SAPIEN, JR.  
Acting Fire Chief, Fire Department

For questions, please contact Ryan Dulin, Deputy Director, at (408) 794-6984.