



# City of San Antonio

## Agenda Memorandum

**File Number:**  
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**Agenda Item Number:** 4

**Agenda Date:** March 29, 2023

**In Control:** Audit and Accountability Committee

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**DEPARTMENT:** Office of the City Auditor

**DEPARTMENT HEAD:** Kevin Barthold

**COUNCIL DISTRICTS IMPACTED:** Citywide

**SUBJECT:**

Acceptance of the Office of the City Auditor Report AU22-038 Audit of Public Works - Traffic Signals.

**SUMMARY:**

Determine if Public Works Traffic Division operations are managed effectively and efficiently and controls over traffic signals are adequate.

**BACKGROUND INFORMATION:**

Background

The Public Works Department is responsible for the installation, maintenance, and monitoring of traffic signals. The Traffic Division is the group within the Public Works Department that develops, monitors, and maintains the City's traffic signal system. At the time of the audit, the

Traffic Division maintained a total of 1,454 signalized intersections and monitored traffic daily for safety and efficiency. This total includes more than 175 signalized intersections owned by the Texas Department of Transportation (TxDOT) along highways throughout the City of San Antonio that are monitored and maintained by the Traffic Division. The City is reimbursed at a flat rate for maintenance plus costs for repairs by TxDOT on these signals. Performance for the division is measured by improvements to traffic flow within specific high traffic corridors in San Antonio.

Each intersection is equipped with a traffic signal controller cabinet which houses the traffic controller, network switch, conflict monitor, and other supporting devices that control and manage traffic flow. A typical signalized intersection can cost up to \$400,000 to construct.

Traffic signal maintenance crews in the Traffic Division perform scheduled maintenance and inspections and respond to 311 requests that require crews to investigate and resolve. Annual scheduled maintenance is performed on all traffic lights throughout the City of San Antonio on a year-round rotating basis. The Traffic Division uses the Kimley-Horn Integrated Traffic System (KITS) to monitor and maintain the City's traffic signal network.

### Scope & Methodology

The audit scope included Traffic Division operations, system controls, physical access controls, and performance standards during fiscal years 2021 and 2022.

We performed interviews with relevant department personnel; performed walkthroughs of daily operations, maintenance activities, and system controls; and reviewed relevant documentation including third-party contracts, department policies, administrative directives, service level agreements, and SAP reports. In addition, we determined if performance measures are properly supported, and reviewed system configurations to determine if traffic signal conflict monitors are operating as intended. Further, we reviewed maintenance activities to confirm if service requests are completed within agreed-upon timelines and annual maintenance is conducted. Additionally, we reviewed TxDOT billings to determine if payments from TxDOT for maintenance are supported. Finally, we reviewed the KITS system to determine if general and application controls are adequate.

### Conclusions

Traffic Division operations are managed effectively and controls over traffic signals are adequate. Traffic signals are appropriately configured and monitored to prevent unsafe conditions. In addition, payments received from TxDOT for the maintenance of State-owned traffic signals are supported. Annual maintenance of traffic signals is reviewed and approved. Finally, KITS is appropriately updated and supported, and security settings are up to date.

However, the audit team identified areas in which controls could be improved over policies and procedures and annual maintenance.

We recommended that the Public Works Director:

- Consolidate and organize existing policies and procedures that cover the management and maintenance of the City's traffic signal network and continue developing new policies and procedures, as needed.
- Review the preventative maintenance schedule to ensure it is complete, establish a process for ensuring the preventative maintenance schedule is updated periodically, and ensure maintenance is completed on eight signals we identified as not being on the schedule.

Public Works Management agreed with the audit findings and has developed positive action plans to address them.

**ISSUE:**

This item is presented for acceptance by the Audit and Accountability Committee.

**FISCAL IMPACT:**

None

**ALTERNATIVES:**

N/A

**RECOMMENDATION:**

Staff recommends acceptance of this audit report.