



# Highlights

## Why OCA Did This Study

In accordance with the Office of the City Auditor's Fiscal Year 2016 Audit Work Plan, we conducted a performance audit focusing on quality management of street repaving projects under the City of San Diego's (City's) Capital Improvement Program (CIP). The overall objectives of this audit were to:

- 1) Determine if the Public Works Department (Public Works) employs qualified Resident Engineers to oversee CIP street repaving projects; and
- 2) Determine whether Public Works' CIP street repaving projects meet construction quality management expectations.



## What OCA Recommends

We recommended Public Works and the Transportation and Storm Water Department (TSW) collaborate to strengthen their quality management process for all CIP repaving contracts. The process should include a quality control plan for contractors to record pertinent information for Resident Engineer verification and to ensure workmanship meets contract specifications.

We also recommended that TSW analyze identified repaved blocks that did not perform as expected to determine the associated causes of deterioration. TSW should also determine if a process should be established for ongoing analysis.

Management agreed to implement all recommendations. For more information, contact Eduardo Luna at (619)533-3165 or [cityauditor@sandiego.gov](mailto:cityauditor@sandiego.gov)

City of San Diego, Office of  
the City Auditor

## Performance Audit of the City's Quality Management of Street Repaving Projects

The Quality Management Process Should be Improved Through Better Project Controls

### What OCA Found

San Diegans need a reliable and well-maintained local street and road system. Driving on rough roads causes accelerated vehicle depreciation, vehicle repair costs, increased fuel consumption and tire wear. Years of underinvestment in the City of San Diego's (City) streets led to over half of the City's 3,000 miles of streets to be in either fair or poor condition in Fiscal Year 2012.

To address the backlog of street repairs, in Fiscal Year 2016 the Mayor pledged a goal of repairing 1,000 miles of streets by the year 2020. The goal begins by increasing the number of miles to be repaired from 199 miles in Fiscal Year 2014 to 322 miles in Fiscal Year 2016. Additionally, the Fiscal Year 2017 Adopted Budget estimates a minimum target allocation of approximately \$15.9 million General Fund dollars to infrastructure improvements, including street repair.

While commitment to project time and cost are important to achieve the Mayor's goal, quality provides a third critical component to ensuring the long-term durability of the City's streets. Quality is defined as conformance with requirements and the degree of excellence or customer satisfaction. A robust quality management process, embodying both quality control and assurance activities, addresses the need to verify and maintain a desired level of quality in an existing product or service by careful planning, continued inspections, and corrective action. Quality control is the planned process of testing and monitoring work performed to ensure that the work meets specifications while quality assurance is the verification of these activities.

The Public Works Department (Public Works) coordinates with the Transportation and Storm Water Department (TSW) to accomplish more expensive street repairs, known as asphalt overlay (repaving), under the City's Capital Improvement Program (CIP) whereby the City hires a private contractor to perform the work. Under the City's quality management process for street repaving, the contractor performs quality control activities while the City Laboratory and Resident Engineers verify these activities through material testing and inspections.

### Based on our review of the City's quality management process we found that:

- Public Works employs qualified Resident Engineers who have met the qualifications for the Assistant Civil Engineer classification;
- The City Laboratory has a process to perform materials testing prior to repaving and consistently conducts and records compaction tests after repaving;
- The quality management process does not require the contractor to have a well-defined quality control plan to document that repaving activities meet City specifications;
- The contractor and Resident Engineers are not required to record key activities related to the quality of repaving work;
- Without a requirement to record key repaving quality activities, the City cannot ensure that street repaving meets all specifications;
- Resident Engineers' inspections are limited to observations when they are onsite; and
- The lack of recorded information precludes evaluation of the City's quality control process.

