OFFICE OF THE CITY AUDITOR
COLORADO SPRINGS, COLORADO

16-10 Streets Maintenance and Operations Coordination

May 2016

Office Of The City Auditor
Colorado Springs, Colorado

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16-10 City of Colorado Springs Street Maintenance Operation and Coordination

May 2016

Purpose **-** To identify opportunities to improve the effectiveness and efficiency of coordination activities and operations affecting City streets.

Highlights **-** We conclude that improved coordination efforts have been adopted that resulted in more effective operations for both the City and Colorado Springs Utilities (Utilities). While dialog and coordination activities have been ongoing for many years, heightened awareness of the combined impact on the public streets of utility cuts and paving operations have led to continued process improvements.

This audit was requested in 2015 by the Director of Public Works in anticipation of ballot measure 2C and the impact of increased paving operations on the City and Colorado Springs Utilities. Because all of the water, waste water, gas and most electric lines in the City are underground, work by Utilities for repair and maintenance of underground structures was the most common reason for a street to be cut.

Ballot measure 2C was projected to generate approximately $250 million over five years to be used to pave and repair approximately 1,000 miles of roads. Colorado Springs had 5,688 lane miles of paved roads being maintained within the City limits. Colorado Springs Utilities had approximately 2,050 miles of water pipelines, with approximately 84,000 valves and manhole covers in the roadways. Given these conditions, the coordination and prioritization of projects needed to be as effective as possible.

Seven observations and one opportunity for improvement were identified. The issues were communicated to management as they were identified and many were in the process of being implemented. The details can be found in the attached report.

Management Response

Management agreed with the recommendations. Their detailed responses can be found in the attached report.

Recommendations

1. More effective strategies for meetings should be implemented.

2. Improve public communication for 2C related work.

3. Improvements in 2C Requests for Proposal development.

4. Determine services and costs affected by 2C work and document agreements.

5. Ensure Utilities is positioned for an increase in water main failures. Gather data and determine root cause.

6. Ensure the Project Viewer is accessible and used consistently.

7. Utilities should reconsider the budget for water main projects and coordinate the schedule with City paving.

Opportunity for Improvement

1. Establish a tone of collaboration, respect and cooperation.

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Street Maintenance Operations and Coordination

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Street Maintenance Operations and Coordination

REPORT DETAILS

SCOPE AND OBJECTIVE

To identify opportunities to improve the effectiveness and efficiency of coordination activities and operations affecting City streets with the end result being improved road conditions, reducing the impact of utility cuts into existing pavement, and over the long term, a reduction of costs for both the City and Colorado Springs Utilities through better integration of projects.

CONCLUSION

We conclude that improved coordination efforts have been adopted that have resulted in more effective operations for both the City and Colorado Springs Utilities (Utilities). While dialog and coordination activities have been ongoing for many years, heightened awareness of the combined impact on the public streets of utility cuts and paving operations have led to continued process improvements.

The auditors also observed procurement activities related to ballot measure 2C. Based on our review of the development of the Requests for Proposal (RFPs), the subsequent evaluation, and the selection process; we conclude that appropriate processes were followed.

Because this audit is being conducted as ongoing monitoring, we have communicated the identified issues with management during the course of the audit work. Therefore, many of the recommendations are already in the process of being implemented. A total of seven recommendations and one opportunity for improvement were made. The current status of implementation is noted with each recommendation.

BACKGROUND

This audit was requested in 2015 by the Director of Public Works in anticipation of ballot measure 2C and the impact of increased paving operations on the Public Works Department as well as Colorado Springs Utilities. Because all of the water, waste water, gas and most electric lines in the City are underground, work by Utilities for repair and maintenance of underground structures was the most common reason for a street to be cut. The City charges permit and pavement degradation fees to businesses and Utilities, who cut into the street. The fees charged depend on the age of the pavement. When a road has been repaved, utility cuts are restricted for five years, except for emergencies where a higher fee is charged. Because 2C will result in approximately 200 lane miles of new paving each year, there was significant risk that Colorado Springs Utilities would not be able to adequately repair and replace underground pipes and gas lines in advance of the paving operations, resulting in increased costs and cuts degrading newly paved roads. Utility valves and manhole covers in the street and the adjacent hydrants were also considerations in this audit.

BALLOT MEASURE 2C

Ballot measure 2C proposed a five year sales tax of .62% projected to generate approximately $50,000,000 per year to be used exclusively for road repair and maintenance. The measure passed in November 2015 and tax collections began on January 1, 2016. Key facets of 2C include:

- All money collected under 2C must be kept in a separate City fund
- External contractors must be engaged to provide all services paid for with 2C funds.
- No City employees or equipment may be funded by 2C.
- Only projects directly related to road repair and maintenance may be funded by 2C.
- The Office of the City Auditor (OCA) was required to calculate the pre-2C level of spending on road repair and maintenance activities. We determined that the 2012 to 2014 average annual spending for street repair and maintenance from the general fund was $2,698,513. Report 16-06 is attached as Appendix 1.
- The OCA will also evaluate whether the City has maintained this level of spending, $2,698,513, from the General Fund each year during the 2C term.

STREETS AND UTILITIES

Compared to the 20 largest cities in the state, Colorado Springs has the largest geographic area at 195 square miles. Denver, in comparison covers 153 square miles making Colorado Springs the most expansive municipality in Colorado. Colorado Springs has 5,688 lane miles of paved roads being maintained within the City limits. Denver's population is about 650,000 compared to Colorado Springs population of approximately 450,000. The City has more road infrastructure to maintain with less tax producing population per mile.

Colorado Springs Utilities had approximately 2,050 miles of water pipelines, with approximately 84,000 valves and manhole covers, most of which were under City streets and projected to be at end of life within 10 years. Per Utilities, infrastructure improvement programs have recently allowed only 0.3% to 0.4% of the water system to be replaced on an annual basis.

<u>Coordinating City road paving and Utilities underground or under-road repairs and maintenance</u>

Given these conditions and the 2C increased funding for paving roads, the coordination and prioritization of projects needed to be as effective as possible.

Ballot measure 2C restricts funding to road repair and maintenance activities. However, road quality is affected by the condition of the water, wastewater and stormwater lines installed beneath the surface due to cuts into the street for underground infrastructure repairs. Water lines have the greatest impact on streets because they are typically buried deep underground. They are almost always within the street, and they operate under high pressures. Wastewater lines are also deeply buried, but because the pipes are not under pressure, breaks are less frequent.

The prioritization process, used by Utilities to determine replacement of water mains, involved detailed analysis of the age, type, and condition of the pipes as well as other factors such as consequence of failure, known leaks, recent breaks, and soil corrosiveness. Using this model, the planned Water Main Replacement Program (WMRP) for 2016 did not include any spending for proactive maintenance, cathodic protection, or repair projects ahead of the 2C paving work prior to this audit.

The initial project list for 2C road work was based on the City's pavement quality index, which rates each road segment based on 10 types of problems and assigns a rating of 0—10 with 10 being a perfect road. As of August 2015, 53.33% of City roads ranked between 3.0 and 6.89, putting them in the "needs to be repaved" category. Utilities have ongoing infrastructure repairs and maintenance which result in cuts into the pavement. By including Utilities in the planning of paving projects and prioritizing spending based on the roads to be repaved, the list of roads to be repaved in 2016 was adjusted. The result should be a significant reduction in the number of utility cuts into new pavement because of water main related work.

Additional coordination between City and Utilities paving activities

In order to pave a street and still protect the subsurface structures attached to the valves and manhole covers, a multiple step process has been followed in which crews cut the existing pavement, lower the valve and manhole cover, the road is milled and repaved, then the valve and manhole covers must be raised back to the level of the new pavement. Contractors performing paving work are required to ensure these processes are executed in a manner consistent with Utilities' standards. Valve and manhole work has been performed by Utilities in the past.

Additional activities between City and Utilities require coordination at various levels, creating an integral working environment. The City provided inspection services to ensure that road work due to business or Utilities maintenance were repaired according to specifications. Utilities provided barricading services for certain City projects. Utilities must acquire certain permits from the City before beginning a project in the road.

Each entity was responsible for repairs to its assets and responded to emergency situations. Because of the interaction between Utilities assets and the roads, sometimes it was difficult to determine who was responsible when a problem occurred.

Coordination and communication tools

An online mapping application called the Project Viewer was developed to help with project coordination between the City and Utilities. This tool allows projects to be placed on the map with details such as the start dates, end dates, and the project manager's contact information. The application uses these details to identify conflicts, such as a water main replacement project that is schedule just after the road has been paved. Since the passage of 2C, Colorado Springs Utilities and Public Works have been working very closely to align the 2C paving work with opportunities to repair and replace water mains ahead of paving operations.

To help keep the public informed of the unprecedented level of activity and traffic impact due to 2C along with the related Utilities' work, a Cone Zone application has been developed where citizens can use a map to see which projects are happening every week. Additional work is being done to improve public communications.

PROCUREMENT ACTIVITIES

Because 2C funds must employ external contractors to perform the work, the auditors monitored the 2C Pre-Overlay Concrete, Asphalt Overlay, and Materials Testing and Inspection Services Request for Proposal (RFP) development, evaluation, and selection process for compliance with procurement policies.

Based on our review of the development of the RFPs, the subsequent evaluation, and the selection process, we conclude that appropriate processes were followed. We verified the following.

1) Procurement process was conducted properly and in accordance with the City of Colorado Springs Procurement Policies,
2) Selection was properly documented; fair, unbiased and based on a competitive bid process, and
3) Evaluations and selections were made that provided the best value to the City.

The OCA staff reviewed the draft RFP language for consistency and to articulate developments in coordination efforts between the City and Colorado Springs Utilities regarding work within the roadways. As issues were identified regarding the RFP content, they were communicated to management and improvements were made promptly. Pre-proposal conferences, interviews and the evaluation processes were observed. Throughout the procurement process, the evaluation team took care to abide by City policies and procedures.

The OCA would like to thank everyone involved that has helped facilitate this audit. We appreciate your willingness to work together to improve the outcomes for the public. We plan to continue monitoring coordination and quality of streets projects in 2016.

COMMENDABLE PRACTICES

City Public Works Department requested this audit for purposes of ensuring highest and best use of Ballot Measure 2C funding. Colorado Springs Utilities Water Services updated their 2016 planned projects to ensure funds were budgeted to support and coordinate water maintenance in coordination with City 2C work. Both the City and Utilities have responded promptly to begin implementation of the recommendations identified during the audit.

The efforts of City and Utilities management and staff to quickly respond in the last 6 months to the vote for 2C in November 2015 and the beginning of contractor operations in early 2016 is commendable. In a matter of a few months they have successfully completed concrete and storm sewer inspections to identify the areas needing attention prior to 2C road work. Utilities Water and Gas divisions evaluated

the subsurface structures in the path of 2C work and modified their approach to respond to necessary repairs and maintenance ahead of paving. Working together, the two entities have prepared for the launch of a $250 million road repair program and approximately $140 million for Utilities infrastructure repair program over the next five years. By coordinating their efforts there should be an overall reduction in the impact to the public and improvement to infrastructure.

OBSERVATIONS AND OPPORTUNITIES AND RESPONSES

OBSERVATION 1 – COORDINATION MEETINGS NEED TO BE IMPROVED

During planning for this audit, both City Public Works (City) and Colorado Springs Utilities (Utilities) management indicated their highest concern was for improved communications and coordination. Coordination meetings had been occurring between the City and Colorado Springs Utilities prior to the passage of 2C. The auditors observed these meetings and noted that improvements could be made to increase their effectiveness.

AUDITOR'S RECOMMENDATION

The City and Utilities should implement more effective strategies for meetings. For projects involving coordination between Utilities and the City, determine the objective in advance, make certain the correct attendees are present, and ensure follow up of identified issues is completed. Both entities should consider sharing project status that does not require discussion via other means of communication (i.e. a project dashboard, use of the project viewer, or email). Improving the organization and accountability of the meetings should improve communication and coordination.

Prior to the issuance of this report, this recommendation was being implemented.

MANAGEMENT RESPONSE

City of Colorado Springs: We agree with the finding and are implementing the suggested improvements.

Colorado Springs Utilities: We agree with the finding and will continue implementation of the auditor's recommendation.

OBSERVATION 2 – IMPROVEMENTS NEEDED IN PUBLIC COMMUNICATION

Historically, limited signage and other public outreach have been provided for City or Colorado Springs Utilities projects in the roadway. With the large volume of projects anticipated because of 2C, there is an increased need to provide the public with accurate, timely information. Additionally, City and Utilities historically have not provided joint messaging of projects. Citizens may not be aware that Utilities work is being performed in coordination with streets work. A recently added Cone Zone application should help improve public communication.

AUDITOR'S RECOMMENDATION

The City and Utilities should improve their public communication and project identification efforts for 2C related work. The City and Colorado Springs Utilities should coordinate messaging on projects to alert and inform the public. Multiple methods should be used to accomplish this, including worksite specific signage, fliers, and direct citizen contact as well as use of technology and social media.

MANAGEMENT RESPONSE

City of Colorado Springs: We agree with the finding and are in the process of implementing the suggested improvements.

Colorado Springs Utilities: We agree with the finding and will continue implementation of the auditor's recommendation.

OBSERVATION 3 – IMPROVEMENTS NEEDED IN REQUEST FOR PROPOSAL (RFP) DEVELOPMENT

The auditors reviewed the draft Request for Proposal (RFP) documents for the 2C contracted work. Recommendations were provided to clarify language, schedule, and order of precedence in these documents. RFP's should contain accurate, consistent, clear and legally defensible language. All contracting documents should be reviewed regularly by appropriate personnel in the City Attorney's office and other subject matter experts. A legal review and full review of procurement standard documents had not been completed in recent years and was an outstanding recommendation of OCA 13-15 City Procurement Audit Report.

The Office of City Auditor 2C RFP improvement recommendations were brought to the attention of management and promptly implemented.

AUDITOR'S RECOMMENDATION

Incorporate proposed changes to the 2C RFPs. Continue efforts to review and update all City contracting documents.

Prior to the issuance of this report, this recommendation was being implemented.

MANAGEMENT RESPONSE

City of Colorado Springs: We agree with this recommendation and the suggested changes have been incorporated into the 2C RFPs.

OBSERVATION 4 – FINALIZE ISSUES REGARDING CHARGES FOR SERVICES

The City charged fees for permits and pavement degradation when work was done within the roadway because it compromises the integrity and life of the surface structure. Colorado Springs Utilities (directly

and via its contractors) was by far the largest single payer of these fees due to water pipe maintenance and other utility project street cuts. The fees charged for pavement degradation were intended to help the City offset the cost to maintain a street which would deteriorate more quickly because of the utility cut. The fees were both a cost recovery mechanism and a deterrent to incentivize contractors to avoid cutting into pavement, especially new pavement. As such, the fees should be set high enough to achieve the desired effect and they should be universally applied.

During the audit, it was reported that negotiations were conducted at the staff level, sometimes in the field, to determine the exact amount to be charged. Sometimes agreements were reached to waive the fees if the road was repaved by Utilities rather than patched. For the water repair and maintenance activities by Colorado Springs Utilities ahead of 2C paving, an agreement was reached to waive those fees due to the benefit of reducing future cuts into newly paved surfaces.

In addition to the published fees there were other services performed by the City and Colorado Springs Utilities in response to projects in the roadways. These services include inspections, traffic control barricades, and moving utility valve and manholes to protect them from paving. With 2C work beginning in 2016, the two entities had not finalized and documented the fee structure for services. Negotiations were ongoing.

AUDITOR'S RECOMMENDATION

The City and Utilities should work together to determine services and costs that are affected by 2C work. Once agreements are reached they should be documented to ensure compliance with the agreement.

MANAGEMENT RESPONSE

City of Colorado Springs: We agree with the recommendation and will implement the suggestion.

Colorado Springs Utilities: We agree with the finding and will implement the auditor's recommendation.

OBSERVATION 5 – CORRELATION BETWEEN PAVING ACTIVITY AND WATER MAIN BREAKS

Data provided by City and Utilities staff indicates there was a correlation between paving operations and water main breaks. The incidence of breaks was higher in road segments which had recently been paved versus those that had not been repaved. Possible contributing factors include the age and type of water pipe as well as water pressures. There are disadvantages to both the City and Utilities if paving operations result in more water main failures.

Operation of fire hydrants by paving contractors was one point where the paving operation has a nexus with the water system. Because Utilities operated at high water pressures, the potential for damaging "water hammer" impacts due to improper fire hydrant operation was increased. A water hammer can occur when fluid is forced to stop or change directions suddenly, such as when a valve closes or a hydrant opens abruptly. When combined with other factors such as weakened pipes, water hammer can occur and result in costly repairs. Paving and concrete contactors working on City projects were required

to get temporary water permits from Utilities. The permits instruct which hydrants to use and establish a billing mechanism; however no one monitored the opening and closing of hydrant valves to ensure they were properly handled.

Given the planned increase in paving operations due to 2C and holding all other factors the same, Utilities could expect to see approximately an increase in water main breaks as a result of 2C paving work.

AUDITOR'S RECOMMENDATION

Colorado Springs Utilities should:

1. Ensure Utilities is positioned for an increased incidence of water main failures beginning in 2016.
2. Work with the City to determine the root cause for these failures. Determine the appropriate data to be gathered by the City and Utilities to identify and address mitigation opportunities such as operation of fire hydrants.

MANAGEMENT RESPONSE

Colorado Springs Utilities: The City and Utilities are effectively sequencing paving work to ensure that necessary water main renewal projects are completed prior to paving, thereby fortifying water mains to better withstand potential damage from paving work. We believe that by taking these precautions, damage from paving activities can be reduced significantly or eliminated. In addition, we are training paving contractors to properly operate hydrants to avoid damage to the water system.

City of Colorado Springs: The City and CSU are proactively working to make sure that water main renewal projects are completed prior to paving operations, and to minimize the instances of water main breaks.

OBSERVATION 6 – INCONSISTENT USE OF PROJECT VIEWER APPLICATION

City and Utilities shared a resource, the Project Viewer application, which could show a map of planned projects and pavement moratoriums. Geographic information system (GIS) data from both the City and Utilities was combined in the Project Viewer and conflicts (such as a planned water main replacement project scheduled to occur after a street had been repaved) were automatically sent to the appropriate project manager for resolution. During the audit period, the Project Viewer application experienced numerous outages as the City and Utilities worked on networking and security issues. Also, auditors observed inconsistent use of this tool by several departments and inconsistent understanding of when and how to properly use it to communicate projects. Inaccurate and incomplete data in the Project Viewer application could lead to missed opportunities resulting in project coordination conflicts, higher costs and/or street cuts.

AUDITOR'S RECOMMENDATION

City and Colorado Springs Utilities should:

- Ensure both organizations support access to and the stability of the Project Viewer as it is a critical shared application.
- All planned City and Utilities projects that impact or touch the right of way should be included in the Project Viewer tool according to a pre-determined schedule (meaning at a certain point in the planning process, the information should be entered and updates should be made timely).
- Pavement moratoriums and other features, such as accurate limits in the GIS shapes, which impact other users, should be reported consistently.

MANAGEMENT RESPONSE

City of Colorado Springs: We agree with the finding and are in the process of implementing the suggested improvements.

Colorado Springs Utilities: We agree with the finding and will implement the auditor's recommendation.

OBSERVATION 7 – PRIORITIZATION OF UTILITIES WATER PREVENTATIVE MAINTENANCE AND CAPITAL PROJECTS IMPROVEMENT

Colorado Springs Utilities utilized a risk model to prioritize their water main maintenance and replacement programs. This model considered the condition and criticality of the pipe, meaning greater weight was given to the larger pipes even though 83% of main breaks within the past two years occurred in mains of 10" or less. As a result, per management there was only one large water main replacement project in the 2016 budget. That meant that none of the streets planned to be paved as part of the 2C work were being considered for water main replacements ahead of the paving.

A consulting study conducted for Utilities in September 2013 showed several contributing factors for the current state of the Utilities water mains. These factors included the type, age, thickness of the pipes, the corrosiveness of the soils, and the high pressures found in many parts of the system. The consultant's recommendations emphasized use of cathodic protection and pressure reduction as a means to extend the life of the system. Per Utilities, prior to the initiation of this audit, cathodic protection was not adequately funded in 2016 to help protect these lines in front of the 2C paving schedule.

Given the Utilities budget and prioritization process in place at the time this audit was conducted, very few water mains under the new road segments would have the most cost effective preventative maintenance approach (cathodic protection) and very few would have been replaced. The 2016 2C planned projects would include approximately 74 road segments of new pavement resulting in a 5 year moratorium on non-emergency utility cuts. By the conclusion of 2C work in 2020, there would be 370 road segments (approximately 1,000 miles) under new pavement. This represents about 18% of all City streets.

AUDITOR'S RECOMMENDATION

Management at Colorado Springs Utilities should reconsider the budget for water main replacements and preventative maintenance activities. Future maintenance or water main replacement projects should be coordinated with the City's Public Works department for road quality and cost benefits to both City and Utilities.

Prior to the issuance of this report, Utilities has committed to refocusing its Water budget on activities to repair water mains and install cathodic protection ahead of and in coordination with the 2C paving work.

MANAGEMENT RESPONSE

Colorado Springs Utilities: We agree with the finding and have implemented the auditor's recommendation. As a point of clarification, earlier this year, as the City and Utilities developed the initial 2C paving lists, Utilities performed an additional prioritization of all 2C segments to determine which ones were good candidates for paving in 2016 (e.g. – low probability of failure, no delay from Utilities' replacements, etc.). This second review considered the condition of mains of all diameters and material types within a road segment to determine which ones could be paved with minimal probability of failure requiring repairs that would damage paving during the 5-year moratorium on non-emergency utility cuts. Additionally, Utilities will complete cathodic protection on about 18.5 miles of mains under 2C paving completed in 2016.

City of Colorado Springs: We are ready to assist any way that we can to increase the level of coordination.

OPPORTUNITY 1 – IMPROVEMENT OPPORTUNITIES FOR CITY AND COLORADO SPRINGS UTILITIES INTER-ORGANIZATIONAL COMMUNICATION AND TONE

During interviews and meetings, the auditors observed misunderstanding and misgivings between some City and Utilities employees. For newly appointed senior management in both organizations, a cooperative, respectful working relationship appeared to be developing over the audit period. However, in middle management, supervisors, and employees, there was a tendency to doubt and suspect the sister organization. One of Mayor John Suthers' top three priorities is to have "Collaborative Leadership" and to "enhance cooperation with our regional partners and other local governments in our area." Lack of trust and respect between organizations impedes cooperation, communication, and productivity for organizations, citizens, and ratepayers. Research indicates senior management sets the tone of the organization also known as tone at the top.

AUDITOR'S RECOMMENDATION

Senior management of the City and Utilities should establish a tone of collaboration, respect, and cooperation between departments and organizations. Additionally, management should look for opportunities to build relationships for the accomplishment of overarching goals and objectives.

MANAGEMENT RESPONSE

City of Colorado Springs: We agree.

Colorado Springs Utilities: We agree.

APPENDIX 1 - CITY OF COLORADO SPRINGS BALLOT MEASURE 2C AVERAGE ROAD MAINTENANCE SPENDING (2012 – 2014)

OFFICE OF THE CITY AUDITOR
COLORADO SPRINGS, COLORADO

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16-06 City of Colorado Springs Ballot Measure 2C Average Road Maintenance Spending (2012-2014)

March 2016

Purpose

The purpose of this audit was to determine the average amount spent from the General Fund on repair and maintenance of roads and streets during the years 2012, 2013, and 2014. The average amount spent will be used to measure future maintenance of effort during the term of Ballot Measure 2C. (See the bottom of page 2 for the ballot language.)

Conclusion:

Average annual spending for repair and maintenance of roads and streets from the General Fund for the period 2012 through 2014 was $2,698,513. The Office of the City Auditor will evaluate whether the City has maintained this level of spending from the General Fund each year during the 2C term.

Background:

The Ballot for 2C included a directive for the Office of the City Auditor to calculate the 3-year average spending on repair and maintenance of roads and streets funded by the General Fund. In addition to activities funded by the General Fund, the Streets Department receives funding from the Pikes Peak Regional Transportation Authority (PPRTA). Because the PPRTA funds are subject to their own policies and oversight, this funding source was excluded for the purpose of this calculation.

Some activities performed by the Streets Division do not directly impact the repair and maintenance of the roads and therefore, were also excluded from the calculation. Whenever possible actual costs or budgetary line items were identified. Some costs had to be allocated based on the labor charged for applicable activities.

Streets Spending Breakdown

Applicable General Fund expenditures for Ballot Measure 2C

Details by category provided on back page	2012	2013	2014
Total Divisional Spending	$21,431,009	$22,045,657	$23,896,989
Less: PPRTA - not funded through the General Fund	$11,312,285	$11,233,911	$12,554,997
Less: Streets General Fund activities other than road repair and maintenance	$8,715,030	$8,187,944	$7,273,949
Balance: Applicable 2C related road repair and maintenance costs	$1,403,694	$2,623,802	$4,068,043
Average Applicable Expenditures 2012—2014	$2,698,513		

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16-06 City of Colorado Springs Ballot Measure 2C Average Road Maintenance Spending (2012-014)

March 2016

Methodology

Streets Division expenditures fell into the broad categories of Labor and Benefits, Operating Expenses, and defined Capital Improvement Projects (CIP). For this analysis, all PPRTA projects and related expenditures were first removed from the detailed data.

Labor was broken down into direct and indirect categories. The indirect category included supervision, inspection, and administrative salaries and benefits. Applicable amounts were determined based on the estimated percentage of time designated as contributing to road repair and maintenance for each employee, as opposed to other activities. Direct Labor and Benefits were calculated based on the actual labor reported in the work order system specifically identified as road repair and maintenance projects, exclusive of PPRTA funded work. Examples of work orders that were excluded from road repair and maintenance include snow removal, street sweeping, drainage projects, and dead animal removal.

Operating expenses for the Streets Division were reduced by all non-road repair and maintenance activities whenever the specific spending amount could be identified. Excluded expenditures included contracted snow removal, capital improvements made to the Streets facilities, and expenditures for drainage related projects. The remaining operating expenses were allocated using the percentage of applicable labor and benefits to total labor and benefits. Lastly, several Capital Improvement Projects (CIP) were included in their entirety in the calculation of applicable direct operating expenses.

Applicable Expenses	2012	2013	2014	3 year average
Indirect Labor—Supervisors/Inspectors/ Administrative Salaries & Benefits	$ 344,723	$ 365,624	$ 405,616	
Direct Labor & Benefits	900,270	671,681	525,229	
Allocated Operating Expenses	158,701	109,072	175,853	
Direct Operating Expenses CIP Project #9320032—Road and Bridge Repair		1,477,425	290,018	
CIP Project #9320033—Academy Blvd. Paving			671,327	
Pothole Road Repairs			2,000,000	
Total	$ 1,403,694	$ 2,623,802	$ 4,068,043	**$ 2,698,513**

Excerpt from Ballot Measure 2C

"The expenditure of these revenues for road repairs and improvements is to be in addition to, and not in lieu of, amounts currently being expended by the City for road maintenance and improvements. During the period the temporary sales and use tax increase is in effect, the City will maintain spending on repair and maintenance of roads and streets at the average of the City's annual spending amount for such repair and maintenance during fiscal years 2012, 2013 and 2014. The City Auditor will perform an audit to calculate such average spending amount. Subject to City Charter limitations on preparation, submission and approval of the annual budget and annual appropriation ordinance, during such period, the City will annually expend at least the amount so computed on repair and maintenance of roads and streets. "

This audit was conducted in conformance with the International Standards for the Professional Practice of Internal Auditing, a part of the Professional Practices Framework promulgated by the Institute of Internal Auditors.

City Council's
Office Of The City Auditor
Colorado Springs, Colorado

About our Office

The mission of the Office of the City Auditor is to provide City Council with an independent, objective and comprehensive auditing program for operations of the City. Our auditing program includes:

- Evaluating the adequacy of financial controls, records and operations
- Evaluating the effectiveness and efficiency of organizational operations
- Providing Council, management and employees objective analysis, appraisals, and recommendations for improving systems and activities

The Office of the City Auditor is responsible for auditing the systems used by the City of Colorado Springs and its enterprises, including Colorado Springs Utilities. We perform a variety of audits for these entities, including financial audits, performance audits, contract audits, construction audits, and information system audits. We also perform follow-up on a periodic basis to monitor and ensure management actions have been effectively implemented.

Authorization and Organizational Placement

Our audits are conducted under the authority of Chapter 1, Article 2, Part 7 of the Colorado Springs City Code, and more specifically parts 703, 705 and 706 of the Code. The Office of the City Auditor is structured in a manner to provide organizational independence from the entities it audits. This independence is accomplished by the City Auditor being appointed by and reporting directly to the City Council.

Audit Standards

The audit was conducted in a manner that conforms with the International Standards for the Professional Practice of Internal Auditing, a part of the Professional Practices Framework promulgated by the Institute of Internal Auditors.

The audit included interviews with appropriate personnel and such tests of records and other supporting documentation as deemed necessary in the circumstances. We reviewed the internal control structure and compliance tests. Sufficient competent evidential matter was gathered to support our conclusions.

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