



## **STAFF REPORT**

**To:** Honorable Mayor and Members of Town Council

**From:** Aaron Monks, Project Manager

**Title:** Award of Contracts for the 2017 Pavement Maintenance Program, 2017 Bridge Maintenance Program, and Capital Improvement Projects

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### **Notification and Outreach Efforts**

Staff has developed specific public coordination outreach to ensure that residences and businesses will understand construction impacts and how this may affect access to individual businesses and residences. Public outreach will occur in numerous forms such as; 1) Public Outreach Open Houses, 2) Town newsletters, 3) HOA mediums such as newsletters, 4) Town social media, 5) Door notification, 6) Press releases, 7) Town's web site and others. Residents and businesses will be notified of actual dates that work is to be completed adjacent to their properties, and traffic control plans will be developed and managed to ensure worker and public safety.

Town staff will host multiple Public Outreach Open Houses the last part of March. These Public Outreach Open Houses will consist of detailed maps of the 2017 maintenance work to let concerned residents know which streets will receive treatments and how it may affect them. Possible locations are the DC Oaks High School, South Elementary School, and the Plum Creek Golf Course Club House. These are tentative locations. Actual locations will be communicated on the Public Outreach Open House mailer. Staff plans to coordinate with neighborhood Home Owners Association's (HOA) to attend their meetings. Staff will present detailed maps of the 2017 maintenance. Possible HOA's are Plum Creek, and Crystal Valley. Furthermore, press releases will be published before the start of PMP construction season to notify the public of work locations and dates.

### **History of Past Town Council, Boards & Commissions, or Other Discussions**

The Public Works Commission at their October 3, 2011 meeting voted unanimously to recommend to Town Council to adopt the proposed Five Year Pavement Maintenance Program, and the Overall Condition Index (OCI) goal to be set at 75 for primary streets and 70 for residential streets. The OCI is an average rating of each street's condition.

This was done in an effort to minimize impacts of roadway maintenance to residents, and to reduce costs of work by concentrating in one area of Town. Town Council approved the Town's rotating five year PMP regionalized area plan for residential streets at the November 1, 2011 Town Council meeting. The Town's five year regional

plan divides the town into five regionalized areas. Primary streets can be included in any year of the five year program. The PMP program will then annually rotate around these five areas excluding primary streets and downtown Castle Rock such that every fifth year repairs to an area's residential street system will occur.

## **Discussion**

The Town's goal for the PMP is to preserve and extend the life of the Town's streets by making the most cost effective annual improvements to selected street segments. These goals are met when proper street maintenance is administered to these segments.

Staff determines which streets require maintenance by evaluating the street's condition rating in addition to a subjective analysis. A pavement management program, Cartegraph's Pavement Asset Module, establishes these condition ratings. This program establishes a condition rating based on staff's field observation for the streets, and rates them from poor to excellent condition. Different types of street maintenance treatments, such as crack seal, slurry seal, mill & overlay, full depth reclamation, and reconstruction are identified based on the condition of the roadway.

The most commonly used and cost effective pavement maintenance activity is crack sealing. Crack seal material is placed into pavement cracks, generally 1/8 of an inch and larger to seal and fill to prevent the intrusion of water and incompressible material into the crack, and to reinforce the adjacent pavement. This year under the PMP the Town will apply crack seal material to approximately 47 lane miles, which is 8% of the Town's streets. A lane mile is a lane width by a mile long.

Slurry seal is a form of maintenance to keep a newer street in good condition and to extend its design life. This type of seal is thin in nature and meant to keep water out of minor cracks, and improve skid resistance. Staff evaluates the condition of streets to attempt to keep a good street in serviceable condition with a treatment that extends the service life at minimum cost. This year the Town will complete approximately 16 lane miles of slurry, which is 3% of the Town's streets.

Another category of street maintenance is an asphalt mill and overlay. This maintenance treatment removes and replaces a layer of asphalt without compromising the original pavement section. This work is more costly than a slurry seal and normally will be done to a street that has more than one distress. The distresses include minor alligator or fatigue cracking, joint reflection cracking, longitudinal / transverse cracking, thermal cracking, potholes, raveling and rutting. This year the Town will complete approximately 9 lane miles of mill & overlay, which is approximately 2% of the Town's streets.

Concrete restoration is also performed on concrete pavement streets. Concrete pavement streets that are determined to have adequate remaining design life receive concrete panel replacement, diamond grinding, and resealing of the joints. Panel replacement focuses on removing and replacing damaged panels restoring the structural integrity of the concrete pavement. Diamond grinding is performed after the panel replacement. Diamond grinding improves the smoothness of the pavement, which reduces the tire thumping noise, and improves safety by providing a skid resistant

surface. This year the Town will complete approximately 4 lanes miles of concrete restoration, which is approximately 1% of the Town's streets.

A Street that is in very poor condition and is beyond application of surface treatments requires reconstruction, or full depth reclamation which is the most costly forms of street rehabilitation. Reconstruction, and full depth reclamation involves removing the pavement section in its entirety, moisture conditioning the subgrade and installing a new pavement section. The pavement section will vary in depth from 4 inches to 6 inches depending on the classification of the street. This year the Town will perform approximately 3.2 lane miles of reconstruction, which is approximately 0.5% of the Town's streets.

Staff also evaluates the condition of the Town's concrete curb, gutter, and public sidewalks within the projects' limits. These contracts will remove and replace damaged concrete infrastructure that is a hazard to pedestrians or to the traveling public.

The invitation to bid for construction of the various projects was advertised in December 2016. Bids were opened for each of the projects on January 19, 2017.

A list showing the various PMP projects and the bid results are attached (**Attachment B**). The CIP included in the PMP contracts consist of Emerald Drive Reconstruction, West Prestwick Way Reconstruction, October Place Reconstruction, and Downtown Crosswalk Rehabilitation. Bridge maintenance included in the PMP contracts consist of Meadows Parkway Bridges over Plum Creek.

All low bids were checked for accuracy, references were checked, and all documents were reviewed for contract compliance. Staff believes that each of the recommended bidders is qualified to perform the work associated with the respective maintenance contract. A summary of the individual contracts with low bid amount plus contingency and the contractors are shown on the following table:

**2017 PMP RECOMMENDED AWARD**

PROJECT	BID AMOUNT PLUS CONTINGENCY	CONTRACTOR
2017 Asphalt Overlay, and Full Depth Reclamation Project, including Bridge Maintenance	\$2,456,339 + \$46,358 Contingency	PLM Asphalt and Concrete Inc., Aurora, CO
2017 Reconstruction Project	\$1,963,396 + \$69,733 Contingency	Chavez Construction, Inc., Littleton, CO
2017 Slurry Seal Project	\$602,473 + \$59,242 Contingency	Foothills Paving & Maintenance, Inc., Golden, CO

2017 Mastic and Crack Seal Project	\$213,435 + \$32,016 Contingency	Foothills Paving & Maintenance, Inc., Golden, CO
2017 Concrete Restoration Project, including Downtown crosswalk Rehabilitation	\$809,651 + \$78,217 Contingency	The Perfect Patch Asphalt Company, Commerce City, CO
201 Curb, Gutter, and Sidewalk Replacement Project	\$448,465 + \$22,424 Contingency	Sabell's Enterprises LLLP, Arvada, CO
<b>TOTAL:</b>	<b>\$6,801,749</b>	

It is anticipated that concrete repairs, the reconstructions, and the CIP portions of the PMP projects will begin in mid-April. The asphalt overlay and sealing portions will occur in the summer months. All PMP, associated Bridge Maintenance Program, and associated CIP projects are expected to be completed in the fall.