



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

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 2018 maintenance work to let concerned residents know which streets will receive treatments and how it may affect them. Possible locations are schools, and community buildings within the East PMP area. Town Hall or the Library for the work in the downtown area. 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 2018 maintenance. Possible HOA's are Founders Village, and Castlewood Ranch. 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 22 lane miles, which is 3% of the Town's streets. A lane mile is a single lane width by a mile long.

Slurry seal is a form of maintenance to keep a newer street in good condition. This type of seal is thin in nature and meant to keep water out of minor cracks, and improve skid resistance. This year the Town will complete approximately 54 lane miles of slurry seal, which is 8% 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 5 lane miles of mill & overlay, which is approximately 1% 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 8 lane miles of concrete restoration, which is approximately 1% of the Town's streets.

A Street that has reached its end of service life, or has passed it requires reconstruction, or full depth reclamation. 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. Reconstruction essentially begins a new service life for the pavement. This year the Town will perform approximately 6 lane miles of reconstruction, which is approximately 1% 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 2017. Bids were opened for the projects on February 1, and 2, 2018.

A list showing the various PMP & Capital reconstruction projects and the bid results is attached (**Attachment B**). The Capital reconstruction projects included in the PMP contracts consist of Lantern Trail Reconstruction, and Wagonwheel Trail Reconstruction. Additional Capital reconstruction projects include Tabor Drive, Tabor Court, Heritage Avenue, Deckers Place, and Stratton Avenue Full Depth Reclamation. All 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 bid amount plus contingency and the contractors are shown on the following table:

2018 PMP RECOMMENDED AWARD

PROJECT	BID AMOUNT PLUS CONTINGENCY	CONTRACTOR
2018 Asphalt Overlay, and Full Depth Reclamation Project	\$1,448,794 + \$144,881(10%) Contingency	PLM Asphalt and Concrete Inc., Aurora, CO (Second Low Bidder)
2018 Lantern Trail Reconstruction Project	\$1,167,504 + \$116,751(10%) Contingency	Schmidt Construction, Company, Castle Rock, CO
2018 Wagonwheel Reconstruction Project	\$1,055,011 + \$105,502(10%) Contingency	PLM Asphalt and Concrete Inc., Aurora, CO
2018 Slurry Seal Project	\$1,908,709 + \$190,871(10%) Contingency	Vance Brothers Inc., Denver, CO

2018 Mastic and Crack Seal Project	\$257,550 + \$38,633(15%)* Contingency	Avery Asphalt Inc., Colorado Springs, CO
2018 Wilcox Concrete Pavement Restoration Project	\$519,573 + \$77,936(15%)* Contingency	PLM Asphalt and Concrete Inc., Aurora, CO
2018 Meadows Blvd. Concrete Restoration Project	\$807,792 + 121,169(15%)* Contingency	Sabell's Enterprises LLLLP, Arvada, CO
2018 Curb, Gutter, and Sidewalk Replacement Project	\$1,490,855 + \$74,641(5%) Contingency	Silva Construction Inc., Brighton, CO
TOTAL:	\$9,526,172	

* Contingency amounts greater than 10% are to provide for unanticipated conditions that have typically occurred with these types of pavement maintenance treatments that are difficult to determine until removal of the material occurs. If contingency is not needed, it will not be used.

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