



Meeting Date: April 22, 2019

Agenda Item: 7b

Report No. CC-19-50

Status: General Orders

Purpose: Approve 5 Year Pavement Management Plan and 5 Year Capital Streets Plan; Approve ½ Cent Pavement Management Plan Funding and Capital Plan Funding; Provide Direction on City/County Perimeter Roads Proposal; Approve Budget Amendment

Prior Council Action or Part of an Approved Project: Yes

Background Summary:

Pavement Management

The pavement management (PM) program is a systematic process for inspection, evaluation, planning, maintenance and rehabilitation of the City's transportation network. In selecting recommended projects, staff performs an engineering analysis of available strategies for a particular segment given the pavement conditions per the pavement management inventory and staff coordinates with other projects (utility and road), as well as field inspections.

Several documents are attached.

1. Summary of the 5 year PM plan. This plan lists the streets to be improved, the type of treatment, and the proposed fiscal year of the improvement.
2. Proposed allocation of funds by treatment type and street classifications for FY19 through FY23. FY24 is a place holder and used to help allocation of costs for FY23. Historically, it takes six to twelve months for design completion, development of bid documents, and relocation of utilities. Engineering costs identified in one fiscal year are for the design of construction projects for the following fiscal year. For example: FY19 engineering costs retain the services of a design engineer for FY20 construction projects totaling about \$2.3 million. Over the 5 years, funding for arterials/collectors is \$5.7 million and \$7.2 million for residential streets.
3. Breakdown of the proposed costs for each street and the ranking.
4. Graphical showing of the streets to be improved by treatment type for each fiscal year.
5. Proposed 5 year capital improvement plan.
6. Report of current status of capital projects.
7. City / County perimeter roads.

Transportation staff identified 3 additional techniques/treatments for maintaining the streets.

1. High Density Mineral Bond (HA5). Primary application is for residential asphalt streets and significantly reduces the naturally occurring oxidation of the asphalt. The oxidation is a major factor in the deterioration of asphalt roads. The cost of HA5 is approximately \$3.00/sq. yd. and replaces the need for a layer of micro-surface, which costs \$4.50/sq. yd. HA5 does not improve the ranking of the street but does maintain current ranking and does improve the life of the street. Traffic will wear off the treatment over time; the rate is dependent upon the amount of traffic. Therefore, HA5 is not a good candidate for high traffic streets such as collectors and arterials.
2. Grinding of Portland cement concrete pavements. Grinding will improve the ride-ability of a concrete street at a cost of approximately \$10/sq. yd. vs. \$12.80/sq. yd. for an asphalt overlay. Expected life of the grinding is 16 to 17 years vs. 7 years for an asphalt overlay.
3. Installation of under-drains along the edges of pavements where the ground water is high, particularly in the extremely heavy clay areas of the community. Saturated subgrades are a major source of pavement deterioration and failure. Areas identified for rehabilitation of concrete panels will have the under drains installed a year before the scheduled replacement of the panels in order to dry out the subgrade and possibly reduce the amount of material to be excavated, thickness of new base, and concrete.

½ Cent PM Proposed Spending by Category

The table below shows the proposed distribution of funds from the ½ cent sales tax for the implementation of the FY19 PM plan. Locations for application of crack sealing and deferred maintenance will be determined by staff in the field. Locations for the other treatments are per the presented 5 year PM capital plan.

Crack Sealing	\$ 375,000
Deferred Maintenance	610,000
Micro-surface	390,000
High Density Mineral Bond	300,000
Diamond Grind	465,000
Pavement Reconstruction	340,000
Testing	25,000
Engineering	350,000
Contingency/Reserve	<u>205,000</u>
Total	\$3,060,000

Capital Improvements

New transportation projects have been funded using multiple sources of funds. US Hwy 177/Perkins Road improvements is an example.

General Fund 5yr Capital Improvements

The funding for the identified projects is proposed from the General Fund during FY20 through FY24. They are divided between arterial street Projects and alternative transportation projects. Unless otherwise noted, project costs include design, right-of-way (ROW) acquisition, utility relocation, and construction.

1. A current project is the reconstruction of Perkins Road from Hall of Fame to just north of Lakeview Road, addition of a center turn lane, and construction of 10-foot walking/biking trails along each side. Included in the project is rebuilding McElroy each side of Perkins Road and completing a mill and overlay of the existing asphalt pavement from 6th Avenue to Hall of Fame and from the north end of the new construction to Airport Road. The City's responsibility for the project is to provide the professional services, purchase the required rights-of-way, and the cost of any reimbursable utility relocation. The project has now progressed far enough to allow an estimate for right-of-way costs and utility relocations.
Negotiations have begun on acquisition of rights-of-way as well as relocation of utilities. Most of the private owned utilities are within the existing right-of-way and therefore are required to relocate at the utilities expense. OG&E is located both within the public right-of-way and in private easements. The City is responsible for the cost of relocating OG&E facilities within the private easements. We estimate the cost for the new rights-of-way and utility relocations to be \$2.5 million. This figure does not include the costs for relocating Stillwater Electric Utility or Water Utility Engineering lines.
2. Sangre from 26th Avenue to 6th Avenue: Professional services for this project was started several years ago but canceled due to a shortage of funding. The project was analyzed and recommended as part of the update to the Stillwater Transportation Enhancement Plan (STEP) in 2017/2018. The analysis considered the effect of a 3 lane, 4 lane and 5 lane facility and determined a 4 lane facility was the appropriate typical section. The project requires the widening of two box bridge structures and includes wide paths for pedestrians and other alternative transportation users as well as new signals at 19th and Sangre and improved east bound to south bound right turn at 6th Avenue. Estimated project costs are \$6.4 million. The project is listed for funding from FY20 to FY22. Design, ROW, and utility relocations would commence in FY20 with a late FY21 or early FY22 bid date.
3. 19th Avenue from Country Club to Sangre Road: This project was evaluated and recommended as part of the STEP update. It is for a 3 lane facility with adjacent alternative transportation paths similar to the section of 19th from Sangre to Western. The project includes widening one box bridge structure. Estimated project costs are \$5.7 million. Design is scheduled for FY24 with ROW, utility relocations, and construction beginning FY25.
4. Country Club 9th to 6th Avenues: The updated STEP plan analysis showed this section of Country Club is at capacity. Programmed project costs are \$0.6 million. Additional ROW and utility relocations are not likely to be required. Design and construction can begin in FY23.
5. Airport Arterial Phase IIIB: This is the last phase of a multi-phase project to widen and extend Western from Hall of Fame to Airport Road, and widening of Airport Road to Washington. Previous phases of the project have been funded in part by Oklahoma Department of Transportation. Currently, Phase IIIA is under design and will terminate at the south terminal access road. Phase IIIB will continue the road northeasterly to Airport Road and then to Washington Street. The project provides for 4 lanes and alternative transportation paths along the entire route. It also includes widening and new signals at Washington as well as drainage improvements at the intersection. Design, ROW, utility relocations, and initial construction is shown for FY24 with additional funding in FY25. Project costs are programmed for \$3.0 million.
6. 6th Avenue Alternate Transportation Corridors: This project provides \$1.04 million to study, develop, and implement a corridor of transportation options other than motorized vehicles along the north and south sides of 6th Avenue. The study phase would occur in FY20 with the goal that the information gathered can be used in the design of 6th Avenue improvements. Included in the study would be ways to improve north south connectivity across 6th Avenue and connectivity between the downtown community and Oklahoma State University. Funding for improvements

would be in FY22 and FY23. Construction of the improvements prior to the construction of 6th Avenue gives the opportunity for a reduction of vehicles in the corridor during construction. The improvements might qualify for ODOT participation.

7. Improved Alternate Transportation Routes to Southwest Schools: This project provides \$200,000 to design and construct sidewalk improvements along 19th Avenue west of Sangre Road and in the residential neighborhoods north of 19th Avenue and east of Country Club Road. Included is construction of a pedestrian signal across 19th Avenue at Westbrook Road. The improvements would allow greater bicycle and pedestrian access to the Sangre Ridge middle and elementary schools south of 19th Avenue. This project might also be eligible for ODOT participation.
8. Kameoka Trail Connections: This project provides \$2.3 million in funding for completion of the Kameoka Trail between 9th Avenue and Perkins Road to Strickland Park. Funding is provided in FY23 and FY24.
9. 19th Avenue Sidewalks Sangre to Western: Included in the construction of 19th Avenue from Sangre to Western Roads was a 10' wide multi-use path along the north side. Significant development has occurred along the south side of 19th Avenue and a path along the south side will provide better connectivity of those neighborhoods to Babcock Park and other points in the City.
10. Western Road Improvements: The STEP update study shows the portion of Western Road between 12th and 6th Avenues is at capacity and the section from 26th to 19th Avenues will reach capacity within the study time. This project is shown as two phases and requires about \$10 million to complete. A significant portion of this cost is for the purchase of ROW between 12th and 6th Avenues. The project might be eligible for participation with ODOT. It is not shown as part of the 5 year plan but is listed to indicate its priority for advancement if additional funds become available.

½ Cent Sales Tax FY19 Capital Plan

Staff is requesting \$2.5 million be allocated from the ½ cent sales tax fund for purchase of rights-of-way and utility relocations for improvements to US Hwy 177/Perkins Road from approximately 5th Avenue north to Airport Road. This is reflected on the attached budget amendment moving \$3 million from Stillwater Utilities Authority to the citywide capital improvement fund.

Status of Current Funded Capital Projects

Since the spring of 2017, \$13.1 million of transportation and drainage improvements has been authorized. Project types include streets and facilities for alternate forms of transportation. Of this amount, \$1.1 million has been complete, and \$1.2 million is under contract. Of the \$8.5 million in design, \$7.64 million is scheduled to be let by September 1, 2019.

City County Perimeter Road Maintenance

Along the boundary between the city limits and the county there are numerous instances where the entirety of the road is in the City and other instances where the City limits stop at the ROW line and the road maintenance belongs to the County. In some of these instances, more City residents use the road than County residents. In 1981 the City and County Commission developed a policy for how the roads were to be maintained. Since then, considerable annexation and growth has occurred. In addition, both entities now have sales tax funding for the maintenance and improvements of the roads. The sales taxes are paid to both entities regardless of where the citizens who use the roads reside. An updated agreement will allow both jurisdictions to use their resources more efficiently and provide better maintenance of the roads.

One concept is for the City to maintain the perimeter roads south of 6th Avenue and west of Perkins Road and the County would maintain the others. Any improvements to a road or culvert replacement would be split between the two jurisdictions depending upon the amount of adjacent land within the City Limits. A couple exceptions are along 19th Avenue east of Perkins Road to Jardot and then Jardot north to 12th. These roads were paved by the City and we would continue to maintain them. In the area of Jardot and Lakeview there is about a quarter mile of Jardot south of Lakeview which the County would be required to maintain and about a quarter mile north of Lakeview the City would maintain. These areas would be swapped to provide for a clean delineation of responsibilities at Lakeview. The final attachment shows the divisions of maintenance responsibility. The 5 year pavement management plan includes a couple of projects for joint participation. If Council agrees, staff will work with the County's attorney to develop a resolution for implementation, which will be brought back to Council for review and approval.

Alternatives: The following alternatives are available:

Alternative 1: Approve 5 year Pavement Management Plan and 5 year Capital Streets Plan as proposed, approve ½ Cent Pavement Management Plan funding and Capital Plan funding as proposed, and approve the budget amendment.

Alternative 2: Approve 5 year Pavement Management Plan and 5 year Capital Streets Plan with identified changes.

Alternative 3: Approve ½ Cent Pavement Management Plan funding and Capital Plan funding with identified changes and approve the budget amendment.

Recommendation: Staff recommends Alternative 1: Approve 5 year Pavement Management Plan and 5 year Capital Streets Plan as proposed, approve ½ Cent Pavement Management Plan funding and Capital Plan funding as proposed, and approve the budget amendment.

Prepared by: Monty Karns, Director of City Engineering.

Reviewed by: Paula J. Dennison, Assistant City Manager

Submitted by: Norman McNickle, City Manager

Attachments: Summary of 5 Year PM Plan
Proposed Allocation of Funds by Treatment Type and Street Classifications for FYs 19-23
Breakdown of the Proposed Costs for Each Street and the Ranking
Graphical Showing of the Streets for Improvement by Treatment Type for Each Fiscal Year
5 Year Capital Improvement Plan
Current Status of Capital Projects
Perimeter Roads
Budget Amendment