



City of Woodland

REPORT TO MAYOR AND CITY COUNCIL

AGENDA ITEM

TO: THE HONORABLE MAYOR
AND CITY COUNCIL

DATE: March 4, 2008

SUBJECT: 2008 Road Maintenance, Project No. 07-42;
Approve Plans and Specifications, and
Authorize Bid Advertisement

Report in Brief

The 2008 Road Maintenance Project No. 07-42, is the yearly road maintenance project utilizing the voter approved Measure E funds to repair, maintain and extend the life of the Woodland streets infrastructure. This project was approved in the Capital Budget on February 20, 2007. The engineer's estimate for construction is \$1,449,000. The total project budget, including "soft" costs is \$1,603,700. Plans and specifications for the project are complete and ready for bidding upon Council authorization.

Staff recommends City Council approve the plans and specifications for the 2008 Road Maintenance, Project No. 07-42, and authorize bid advertisement.

Background

In 2006, voters approved the extension of the Measure E ½ cent sales tax along with advisory measures to identify voter preferences for use of those tax proceeds. Under the advisory measures, road maintenance and repair requirements received the second highest voter response. Accordingly, on an annual basis, the Public Works Engineering and Operations and Maintenance Divisions collaborate to evaluate road system inspection data and maintenance and repair requirements for determining the most cost-effective maintenance and repair treatments for addressing those requirements. This project is the 2008 submission to address road system needs.

Discussion

Road system repair requirements are identified through an objective defect rating process and modeling system called MicroPaver, developed by the U.S. Army Corps of Engineers. MicroPaver uses computer modeling to help prioritize work needs based on road classification and use characteristics, visual inspection of road conditions and an objective rating of existing defects. After

producing MicroPaver generated system needs, staff refines the needs and establishes priorities and various maintenance and repair methods, materials and techniques to meet the needs of each pavement section and to maximize return on investment. In the process, staff considers various additional factors as warranted, including future plans involving other City or development projects, school zones and calendars, incident histories, and efficiency and cost-effectiveness through the combining and zoning of repair needs for economy of scale. The project plans and specifications are available for review at the Public Works counter and explanations of project details and repair methods and treatment types are available from Public Works Transportation staff at 661-5961.

Upon Council authorization, the bids will be solicited with a projected opening on April 9, 2008. If one or more bids are responsive and within the project budget, staff anticipates the bid award will be scheduled for April 15, 2008 and construction could begin in early May.

The roadway segments where work will be performed, and treatments they will receive are shown on the Project Map included as Attachment No. 1 and summarized in the Project Street Listing included as Attachment No. 2 of this report.

Types of Surface Seals used in the 2008 Maintenance Project include:

Slurry Sealing is the process of applying a mixture of asphalt, rock additives such as lime or Portland cement and water to an existing road surface forming a thin impervious surface layer. Slurry seals need approximately six hours to fully cure depending on weather conditions. Parking and access to the street is limited on the day of application but streets are rarely closed overnight for slurry seal work. The average thickness of a slurry seal is 3/8 inch. Slurry seals are used throughout the City for streets in good condition that are beginning to show early signs of deterioration.

Chip Seals spread a layer of hot asphalt oil on the pavement surface and cover it with rock “chips” which are compressed with a rubber tire roller. The oil holds the chips in place and also seals the surface of the existing pavement to prevent water intrusion. Chip seals can be driven on at slow speeds immediately after the roller is finished but roads are typically kept closed for approximately six hours to allow further curing before reopening to traffic. Chip seals are used in combination with slurry, cape and Micro surfacing and are seldom used in residential areas of the City due to their unpopularity because of loose rock and the need for excessive, slow speeds when driving over them in the first few weeks after placement. The average thickness of a chip seal is 3/8 inch. Chip seals are used for streets that are beginning to show more advanced signs of aging and more severe distress that Slurry can not repair.

Scrub Cape Sealing is a two-day combination surface treatment that includes the chip and slurry seals and the application of a rejuvenating emulsion – a polymer modified asphalt rejuvenating agent, mixed with water. Scrub cape seals are used as an alternative to chip seals. The emulsified oil is sprayed on the surface of the pavement and then a specially designed drag broom scrubs the oil in to the pavement, which fills the voids and cracks in the pavement. This is followed by a layer of rock chips as it is done in the chip seal application. The average thickness of a scrub cape seal is 3/4 inch. The treatment is more advanced than a chip seal and is sufficient even for roads with mild to severe distresses.

Fabric Cape Sealing is a two-day combination treatment similar to the scrub cape seal. On the first day, before the first layer of oil is placed, hot asphalt oil is spread on the pavement immediately followed by the placement of paving fabric which becomes fully embedded in the oil. This is followed by a standard chip seal process. This chip rolling ends day one and the roads can be reopened. On the second day of application – often separated by a few days to a few weeks – a slurry seal is applied over the rock chips. Both days of treatment will have road closures during the work day. The composite thickness of the fabric cape seal is approximately 3/4 inch.

Micro Surfacing is a one day treatment unless rut filling is required. It is similar in application and cure-time to a slurry seal and will also require road closures and parking restrictions. Micro surfacing cures into a harder surface and as a result is less susceptible to power steering tire scuffs. It is also good for use in areas with higher traffic volumes. The average thickness of micro surfacing is 3/8 to 5/8 inch.

Fiscal Impact

The project is fully funded in the current Capital Budget approved as part of the Mid Year Adjustments on December 4, 2007. The total budget is \$1,603,700; the engineer's estimate for the construction work is \$1,449,000. The project is entirely funded from Measure E. There is no impact to the General Fund.

Public Contact

Posting of the City Council agenda.

Recommendation for Action

Staff recommends City Council approve the plans and specifications for the 2008 Road Maintenance, Project No. 07-42, and authorize bid advertisement.

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Attachments: Project Map
Project Street Listing