CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: October 9, 2007

TO: Mayor and Councilmembers

FROM: Engineering Division, Public Works Department

SUBJECT: Pavement Maintenance Update And Design Contract

RECOMMENDATION: That Council:

A. Receive a staff report on the updated Pavement Management System; and
B. Authorize the Public Works Director to execute a professional services contract with Flowers and Associates, Inc. (Flowers), in the amount of $57,897 for design services for pavement maintenance, and approve expenditures of up to $5,800 for extra services of Flowers that may result from necessary changes in the scope of work.

EXECUTIVE SUMMARY:

This report outlines recommended changes to the City's pavement maintenance strategy in order to maximize the use of available pavement maintenance funds. Limited available funding and increased pavement material costs have resulted in less pavement being maintained per year as compared to previous years. The updated strategy includes the goal that available funds be allocated to the highest need. Consequently, the more frequently traveled roads are proposed to receive more frequent maintenance. To accomplish this, staff is recommending an increase in the number of pavement maintenance zones from six to seven. The seven zones would consist of two arterial road zones and five residential road zones. The road maintenance schedule would change from pavement treatment in each zone every 6 years to: 1) arterial roads receiving treatment every 4-6 years, and 2) residential roads receiving treatment every 8-10 years.

DISCUSSION:

BACKGROUND

The City has a roadway network consisting of approximately 238 miles of pavement with an estimated replacement value of $244.5 million. The City has been tracking its road pavement maintenance conditions since 1985. At that time, the pavement condition index (PCI) was an average of 59 out of a possible 100, with 100 being a new pavement surface and 0 being essentially a dirt road. A PCI rating of 59 is slightly

above the level where significant pavement maintenance is required. Since 1985, and with the passing of Measure D in 1989, the City has implemented a strategic pavement maintenance system based on the proven concept that it is far less costly to proactively maintain a street than it is to allow the street to deteriorate to a point of needing significant rehabilitation. This proactive methodology has proved successful in raising the pavement quality of City streets. Since 1992 the City has achieved its longstanding goal to maintain a PCI of 70 or higher. The current average PCI of all City streets is 71.

In 1990, the City was divided into six pavement maintenance zones. Maintenance zone scheduling has proven to be a cost-effective pavement maintenance methodology. Scheduling roadwork utilizing maintenance zones is more convenient for those that use the roadway (including motorists, cyclists, and those using alternative modes of transportation) because it reduces the number of contractor mobilizations, and concentrates construction activities in one area, thereby allowing users to possibly avoid the construction zone. This method also assists in informing the public about the year in which the pavement maintenance work will be scheduled in their neighborhoods.

From 1985 to 1996, the City spent an average of $3.2 million per year on pavement maintenance as a response to complaints by the public regarding deteriorated roads. The $3.2 million in 1985 equates to approximately $8.2 million in today's dollars. In comparison, since 1996, the City has been able to budget an average of $2.2 million per year on pavement maintenance. This year's pavement maintenance budget is $1.9 million. As a result of reduced funds budgeted for this program and increased material costs, less pavement maintenance work has resulted. The Citywide PCI has dropped from a peak of 75 in 1996 to its current level of 71. With the current funding level, the PCI trend is projected to continue to decline. With current material costs, staff estimates that approximately $4 million per year is needed to maintain a PCI of 70.

REVISED PAVEMENT MAINTENANCE SYSTEM STRATEGY

The past pavement maintenance strategy has been to apply pavement maintenance, at least slurry seal, to virtually every street within a pavement maintenance zone. Until a few years ago, the available pavement maintenance funds were sufficient to accomplish this. However, in recent years, staff recognized that the surface area of City roads which could be maintained per year was decreasing. Increased costs and limited funds currently do not allow road maintenance of every street within a zone. For the current pavement maintenance contract, the City is able to slurry seal only 50% of the roads within that zone.

The revised strategy is to have a higher frequency of maintenance on the more traveled arterial roads where most bus routes and bike lanes are located, since the condition of these roads will affect more "users" more often. With this philosophy, the more widely used arterial roads, which require more frequent maintenance, would become their own maintenance zones. This results in changing from six City pavement zones to seven. Two zones will be arterial streets and five zones will be residential streets.

Staff proposes that for the two arterial zones, the maintenance schedule would be on a four- to six-year cycle, with four years for primary arterials and six for secondary arterials. The residential zones would be maintained on an eight- to ten-year cycle.

To differentiate between the prior and the newly reconfigured zone maintenance system, staff would implement a new zone numbering system. Under the previous zone lettering system, Area C would have been the next maintenance zone. The new Zone 2 incorporates the majority of the previous Area C and is the next logical maintenance zone choice.

The proposed seven zones appear to be the optimal number of zones considering the criteria of limited funding, road type needs and proposed frequency of road treatment.

CURRENT DESIGN PROJECT DESCRIPTION

The design contract for Pavement Maintenance Zone 2 evaluates the condition of 6.1 million square feet of asphalt streets within this zone, as well as other streets requiring repair outside of Zone 2. It also identifies and recommends repair and maintenance procedures to apply to the streets and prepares construction contract(s) so the work can be bid, awarded, and constructed.

Staff requested and received a proposal from Flowers. The proposed scope of services from Flowers includes the following:

- Surveying pavement condition
- Marking streets for asphalt pavement repair work for both design and construction
- Preparing specifications for asphalt pavement repairs
- Preparing construction cost estimates for pavement preparation, slurry seal, crack seal, and other alternative repair options.

The design for the Pavement Maintenance Project is scheduled to be completed by March 2008, with construction work scheduled to occur in spring/summer 2008.

DESIGN PHASE CONSULTANT ENGINEERING SERVICES

Staff recommends that Council authorize the Public Works Director to execute a contract with Flowers in the amount of $63,697 for design and the scope of work as identified. Flowers is one of the participants in the City's Prequalified Engineering Services Program and is experienced in this type of work.

FUNDING:

ESTIMATED TOTAL PROJECT COST

Design (contract)	$63,697
Other Design Costs (City Staff)	$60,000
Construction Cost Estimate w/Change Order Allowance	$1,606,303
Construction Management/Inspection	$220,000
TOTAL	**$1,950,000**

There are sufficient funds in the Streets Capital Program to pay for the costs associated with this project. Measure D funds are a significant funding source for the Streets Capital Program, including the design and construction of this pavement maintenance project.

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SUBMITTED BY: Anthony J. Nisich, Public Works Director

APPROVED BY: City Administrator's Office