

MEMO

To: Bob Perrault, City Manager

Date: September 21, 2006

From: Jim Garing, City Engineer

Subject: Local Street Selection, Funding

1. HISTORY

The City of Grover Beach incorporated in late 1959. Hanging in the hallway of City Hall is a September 10, 1956 aerial photograph of the town of Grover, some three years prior to incorporation. A brief examination of the 1956 aerial photograph reveals that streets in the town were mostly dirt. None of the streets which existed at that time were constructed to what would be considered full width today and Fourth Street, north of Ocean View Avenue, did not exist. A close examination of the photograph yields the path of surveyors surveying for the route of North Fourth Street between Ocean View Avenue and the freeway in 1956. Except as a dirt street, Oak Park Boulevard did not exist south of Grand Avenue.

Given the condition of streets in 1956, a great deal has been accomplished in terms of paving City streets. Virtually every street which was created by D.W. Grover in 1887 is now paved.

During the time the Town of Grover was governed by San Luis Obispo County, construction standards were considerably below today's standards. When paved at all, streets were paved to a very narrow width, using sub-standard pavement or chip seal over the top of a type of street base, which would not be allowed in today's construction.

2. CURRENT FINANCING

The current Capital Improvement Plan under Project Number 283 indicates amounts set aside from various funds for local street rehabilitation including funds from the Water Fund (Fund 6) for placement of water mains where appropriate when streets are re-constructed. Beginning in Fiscal Year 04, the amount indicated in the current Capital Improvement Plan was \$541,177.00. Moving forward from Fiscal Year 04 through Fiscal Year 2010, amounts set aside from all funds for local street rehabilitation including construction of water mains associated with street construction varied between a low of \$395,000.00 and a high for Fiscal Year 2008, 2009 and 2010 of \$540,000.00 per year. The actual Fiscal Year 07 Budget varies somewhat from the Capital Improvement Plan and lists \$505,000.00 being made available in Fiscal Year 07, which includes \$100,000.00 from the Water Fund for water main extension in this Fiscal Year 07. In this Fiscal Year, from the above funding shown for Fiscal Year 07 in the budget, the City Council has approved award of the contract for South 6th Street and will consider award of the contract for South 14th Street later in the spring of 2007.

3. DESIGNATING STREETS FOR REHABILITATION

On July 3, 2003, the City Council delegated the decision of which street segments would be rehabilitated in future years to the City Engineer and Community Development Department. On May 3, 2004, the City Council adopted Resolution No. 04-31; establishing annual local street improvement program selection criteria. These various criteria include consideration of the condition of existing streets, analysis of whether the street, if left un-repaired, would considerably increase in cost to repair at a later date or whether the street is consuming an inordinate amount of maintenance effort, as well as if the particular street segment might effect flooding, whether neighborhood participation in additional improvements is evident, the anticipated life span of the repaired street, and other similar criteria.

It is staff's thinking at present that the City Council will likely wish to add the input from the recently re-programmed Micro Paver Pavement Management System as a modifier which would affect the ranking or placement in order of streets for rehabilitation.

4. DESIGN LIFE AND COST CONSIDERATIONS

City streets and highways are typically designed for a life span of 20 years before major reconstruction is necessary. From the perspective of visual condition and ride quality, City streets do not appear to deteriorate significantly for the first 15 to 17 years of typical life span. At this point in their lifespan, the Micro Paver Program considers them to have a 60 to 80 rating. After the period of 15 to 17 years, the appearance of the deterioration, including alligator cracking, ride quality, and surface deformation begin to rapidly appear, making it obvious that the street is in need of repairs. At this point the Micro Paver Program assigns a rating below 60.

The Micro Paver program is a decision making tool for the development of cost effective maintenance and repair alternatives for roads, streets, and parking lots. The program provides many important capabilities, including;

- Pavement condition rating.
- Pavement deterioration modeling.
- Present and future pavement conditions.
- Determination of maintenance and repair.
- Pavement network inventory.

The program operates using street condition data collected by visually inspecting street sections or blocks city wide. The data collected for each street section or block includes:

- Alligatoring
- Bumps/sags
- Cracking
- Corrugation
- Joint cracks
- Patching
- Polishing

- Pot holes
- Rutting
- Shoving
- Slippage
- Swelling

If a street section is found to be free of defects, the program gives it a score of 100. If defects are present, they are entered as a percentage of the total area. The program then deducts the percentage of defects from the starting number, giving each section or block a rating number. The ratings go from 0-20 = failed to very poor, 20-40 = very poor to poor, 40-60 = poor to fair, 60-80 = fair to good, and 80-100 = good to excellent. This program, like all others, is designed to apportion available funding to street sections in the 60 to 80 rating area to save and extend the life of the road section. Although the program's recommendations are to make best use of available funding, it can be programmed to choose from any of the rating areas.

If the program is set to apportion available funding to street sections in the 60 to 80 rating, streets in poorer condition (below 60) will be unfunded and not recommended for repair because it is not as cost effective to repair streets in conditions below 60 as it is to repair streets which are in better condition.

According to the Asphalt Institute, repair of typical City streets should be done before deterioration, including ride quality and alligating is visually obvious. This is typically in the age of 15 to 17 years for a City street. If the streets are then over laid or repaired at this stage of wear, the cost of repair is much lower, typically \$1.00 to \$2.00 per square foot in repair costs at the age of 15 to 17 years compared to \$4.00 to \$6.00 per square foot at the age of 20 years. It becomes obvious that from the perspective of being able to repair the maximum square footage of street surface, streets should be repaired at the 15 to 17 year life span level where deterioration is not immediately apparent. This becomes a problem for policy makers because the population at large does not understand why streets which appear reasonably sound are repaired, when other streets which have deteriorated significantly are not repaired.

Most Pavement Management System Programs will program streets for repair at the 15 to 17 year life span level instead of waiting until the deterioration condition of streets is quite obvious and repair costs skyrocket. The problem arises in that many streets exist in Grover Beach which are in a state of advanced deterioration currently. These streets are much more expensive to repair than streets which have reached the 75% of life span level (15 to 17 years).

In the past, staff and Council have attempted to strike a balance between the two levels of street condition in order to answer concerns from the citizens as well as being wise in using street repair dollars early in the life of the street so that streets last as long as possible.

5. TOTAL REPAIR COSTS

The current Micro Paver Pavement Management System Program has been recently updated with current City of Grover Beach street conditions for every street in the City as well as the most current estimates and square footage for repair costs of streets based upon the condition of the streets involved. The Micro Paver Pavement Management System Program estimates the

total cost to repair all streets in the City of Grover Beach at their current condition to reconstructed or new condition to be \$47,000,000.00. In the best of worlds, the City would simply borrow the funding necessary to make the repairs on City streets and then fund debt service over the ensuing twenty years of street life so that the citizens could enjoy fully repaired streets. A question arises regarding how such a debt service might be funded. In the case of the City of Grover Beach, an obvious option would be a citywide assessment district /bond issue wherein the citizens would pay into an assessment district or on their property tax bill for the street repair costs involved. Roughly estimating the cost to the citizens of the City of Grover Beach for such an assessment district or bond issue, amortizing \$47,000,000.00 over a period of twenty years, at an interest rate of 5.5% yields an annual debt service of \$3,932,929.00. If one assumes that this debt service would be spread over all the parcels within the City of Grover Beach, (estimated number 4,850) this would yield a debt service per parcel in the City of \$811.00 per year or \$67.50 per month per parcel.

Using the same analysis as in the above paragraph, but amortizing over a period of 15 years to allow the repairs of streets to begin at the 15-year period, yields an estimated annual debt service of \$4,682,403.00 or a per parcel annual cost of \$965.00 which equates to a monthly cost per parcel of \$80.50.

From the above discussion regarding the total cost to re-build all of the streets in the City of Grover Beach which are currently deteriorated, one can see that the annual debt service for such a project exceeds the funding currently being set aside for local street rehabilitation by approximately a factor of 10:1. A daunting ratio to be sure, there may be other funding sources on the near horizon which could partially alleviate the gross shortfall in required funding for the repairs needed. Other sources would include the City Sales Tax issue, which has been placed on the November ballot, as well as potential one-time funding from a State Public Works initiative, which also appears on the November ballot. The Sales Tax issue on the local ballot does not limit funding allocation to streets alone but allocates the funding to the general resources required by the City. Of the amount generated by the Sales Tax issue, if it were to pass, it is certainly conceivable that funding in the rough amount of \$200,000.00 or perhaps \$300,000.00 might be additionally allocated to local street rehabilitation requirements. The State Public Works Initiative on the November ballot, if it passes, might result in a one-time funding amount which could be allocated to local street rehabilitation in the approximate amount of \$400,000.00. Both of these funding sources would obviously be helpful but do not come close to the amount actually required compared to the problem at hand.

Other funding sources which might be available for local street rehabilitation include funding periodically provided through the San Luis Obispo Council of Governments, which funding originates at State level. This funding has in the past been as high as one million dollars in a single year but has been significantly reduced in the last few years and very little has been recently available due to State budget constraints. In addition to the above, certain grants might be available; however, current City staff is unable to devote significant time to the search for such grants.

6. OTHER FACTORS

An issue which the City Council might wish to re-visit is that of Ordinance No. 04-14 adopted by Council which sets forth a maximum of 4-feet of pave-out for certain types of private property improvements such as additions or remodels. Often 4-feet of pave-out is a great deal less than that required for a smooth street conformance in front the proposed project. In those cases, the City has been paying for the additional paving to make the required conformance. In those cases, City funds are being utilized for street pave-out or partial street pave-outs in lieu of being otherwise used for street repairs in the general street system which would perhaps benefit the general public.

Attachments:

- Exhibit 1. Street Condition and Rehabilitation Timing
- Exhibit 2. Staff Report, dated January 3, 2005 on FY 05 Local Street Improvement Program with Attachments 1-5
- Exhibit 3. Ordinance No. 04-14