



James Johnson
City of Long Beach
Councilmember, Seventh District

Date: August 7, 2012

To: Honorable Mayor and Members of the City Council

From: Councilmember James Johnson, Seventh District
Vice-Mayor Robert Garcia, First District *RG*
Councilwoman Gerrie Schipske, Fifth District *GS*

Subject: Saving Money While Improving Our Streets

RECOMMENDATION:

Receive a presentation from Public Works regarding the results from the first year of implementation of the City's Residential Street Maintenance Policy.

DISCUSSION

On May 3, 2011, the City Council passed a new street maintenance policy for our residential streets (see Attachment 1). After years of neglecting maintenance, and allowing our streets to deteriorate to the point where repair costs exceed maintenance by 700% to 1300%, we have recently implemented a citywide policy that incorporates maintenance into our Capital Improvement Program. This more efficient, effective plan will save the city millions of dollars while improving our streets over the long term.

In its first year of implementation, over two miles of residential streets were slurry sealed in District 7 and over five miles Citywide. According to a recent study by the Michigan Department of Transportation, preventive maintenance programs for streets saved \$6 for every \$1 spent performing preventive maintenance (see Attachment 2). We spent approximately \$80,000 per mile for slurry sealing, for a total of \$400,000. Thus, this preventive maintenance in FY 12 saved the City \$720,000 for the 7th District and \$2,400,000 Citywide in long-run savings.

Several Council Districts have immediately embraced this new maintenance policy by including a slurry seal program in their residential street repair program. Other Council Districts had already queued up streets for repair and were unable to add a maintenance component for the first year. Additionally, one district pursued an alternative program ("cape seal") that offers an intermediate repair option for streets that are too deteriorated for a slurry seal, but do not yet need a traditional repave.

As more Council Districts include slurry sealing in their residential street repair program, the City as a whole will benefit from the additional savings that will accrue and the continued improvement of residential streets over the long run.

FISCAL IMPACT

Implementation of the new street maintenance policy in FY 12 saved the City \$720,000 for the 7th District and \$2,400,000 Citywide over the long run. Increased participation in the slurry seal program may significantly increase savings in future years while improving the long-term condition of residential streets.

*Attachments: (1) Adopted Citywide Residential Street Maintenance Policy
(2) The Hole Story: Facts and Fallacies of Potholes, pp. 8-9*



James Johnson
City of Long Beach
Councilmember, Seventh District

Date: May 3, 2011

To: Honorable Mayor and Members of the City Council

From: Vice Mayor Suja Lowenthal, Second District
Councilmember Gary DeLong, Third District
Councilmember James Johnson, Seventh District

Subject: Improving our Residential Streets Efficiently and Equitably

RECOMMENDATION:

Request that the City Manager, subsequent to the adoption of the Capital Improvement Program on an annual basis, present Councilmembers with recommendations for residential street work allocating 50% of each District's residential street repair funding to preventative street maintenance and 50% to street repaving or rebuilding.

DISCUSSION

Due to years of difficult budget cuts, zero General Fund dollars are currently dedicated citywide for ongoing street maintenance, such as slurry sealing asphalt streets. Citywide money for residential street repairs in FY11 was provided by Measure R in the amount of \$3,131,201, which was distributed to the nine districts in allocations determined by both need and an equitable distribution through the districts. Typically, these funds are used to repave or rebuild streets at a cost of approximately \$3.50 and \$6.50 per square foot, respectively. In construction, maintaining a street can be as much as 13 times cheaper, as slurry sealing costs approximately \$0.50 per square foot.

While council districts have taken different approaches to the use of their limited residential street work dollars, a "worst first" strategy has sometimes been utilized in which the worst streets in a district are the first slated for repaving or replacement. While such an approach is intuitive, it is not the most efficient use of scarce dollars. According to the City Auditor's 2008 street review, "Extensive research has demonstrated that it is more economical in the long run to invest early in maintaining streets that are still in good condition than it is to defer maintenance until streets have deteriorated and more expensive repairs are needed. (Long Beach Streets Review Phase II, page 2). Additionally, the

American Public Works Association states that "[p]reventing streets in good condition from slipping into deterioration will break the chronic cycle" of paying more money for worse roads. (The Hole Story: Facts and Fallacies of Potholes, 11)

At the same time, there is a need for the City to tackle the worst streets that diminish the quality of life in our neighborhoods. Therefore, it would be prudent for the City to spend resources on both preventative maintenance and making essential repairs.

Money spent on preventative maintenance such as slurry sealing reduces street degradation and postpones the costly repaving or rebuilding resulting from deferred maintenance. Public Works has estimated that over a 20 year period, and assuming a consistent annual investment of \$4 million in residential street repair, reallocating residential street funding to 50% maintenance (e.g., slurry seal) and 50% repair could result in efficiency savings of approximately \$30 million. By pursuing a consistent investment in preventative maintenance, we can get better streets over the long run with the same amount of financial resources.

Under this proposal the City Manager, through the Public Works Department, would present each Councilmember with a proposed allocation of residential street work every year that splits existing dollars equally between maintenance and major repairs (i.e., traditional repaving or rebuilding) for each district. Maintenance activities could consist of slurry sealing or other techniques that maintain street quality at a cost significantly less than reconstruction. While each Councilmember would retain the discretion to modify this proposed allocation to accommodate any special needs in the district, presenting a proposed maintenance allocation would encourage the re-institutionalization of routine street maintenance in Long Beach and focus more on our City's long-term needs than short-term fixes. Pothole repairs are budgeted for separately by the City, and would not be affected by this proposal.

FISCAL IMPACT

If all Councilmembers were to utilize the staff recommended allocation outlined in this memo, and assuming a consistent annual investment of \$4 million, efficiency savings to the city are estimated at \$30 million dollars over 20 years in terms of street repairs avoided with proper maintenance.

Attachments:

The Hole Story: Facts and Fallacies of Potholes
Long Beach Streets Review Phase II (pages 2, 3, 13, 14)



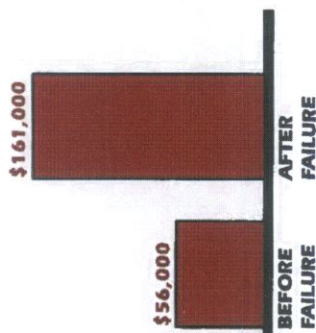
resurfacing before rapid deterioration begins extend the pavement life for a fraction of the cost of those who wait 'just a couple of years'...Ask why they waited and the universal answer is 'to save funds.'"

Deferring maintenance has been a popular solution during recent periods of revenue shortfall, and now local governments are facing the consequences. The street for which an overlay was deferred several years ago now needs a complete rehabilitation or reconstruction at five times the cost.

Research and field experience have repeatedly shown that over the long run maintaining good roads in good condition costs substantially less per year than allowing them to deteriorate to the point that major rehabilitation or reconstruction is required. The Michigan Department of Transportation recently issued a report that documented overall budget savings of \$6 for every \$1 spent performing timely preventive maintenance actions. Copies of this study and the MI DOT Highway Preventive Maintenance Program Guidelines can be obtained from APWA.

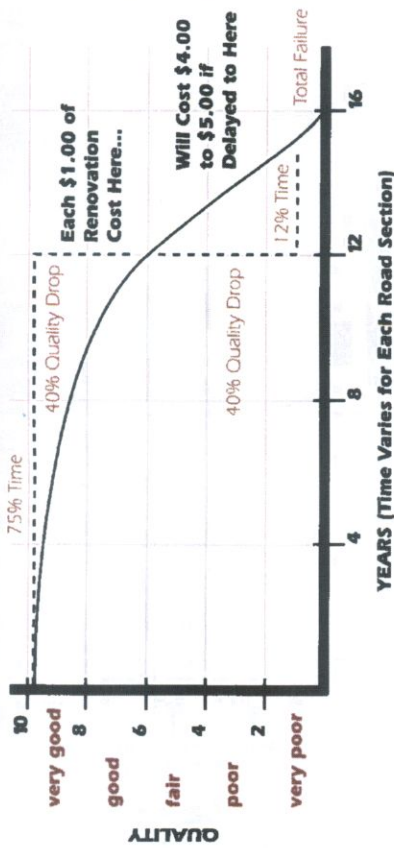
WHY? The cost of a rehabilitation effort in terms of time and materials is substantially higher than the cost of routine maintenance and timely resurfacing. In Lee County, Florida, it

COMPARISON OF RECONSTRUCTION VS. OVERLAY (LEE COUNTY, FLORIDA)

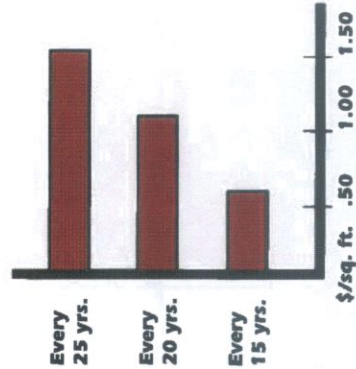


costs \$175,660 to reconstruct one mile of 24-foot wide collector roadway and it costs \$34,860 to overlay the same type of roadway with 1.5 inches of asphalt concrete. In terms of materials and work effort an overlay placed before failure involves only the thickness of the overlay whereas after failure, reconstruction of the same roadway involves 12-inches of subbase material, 8-inches of base material and the thickness of the asphalt surface. Clearly, periodic maintenance of a good road is less expensive than reconstructing it. However, what about the cumulative cost of periodic maintenance? Won't several seal coats or overlays add up to the cost of a rehabilitation project? Fort Collins, Colorado, compared two maintenance strategies: one involved performing high quality maintenance coupled with "appropriately timed" overlays; the other involved deferring overlays several years

COST OF TIMELY MAINTENANCE



ANNUALIZED COST TO OVERLAY EVERY 15, 20, 25 YEARS



and then carrying out a major rehabilitation. Their analysis found the second strategy to be four times as expensive as the first. Another, more comprehensive study conducted by Thomas R. McDonald, a noted pavement maintenance consultant and

author, found that the cumulative cost of a well maintained pavement over a 15 year design life was 3.4 times less than a non-maintained pavement.

In addition to being less costly, the periodic "upward bumps" in the appearance and ride quality of a well maintained pavement give the public a positive perception of the stewardship being exercised over public property.

Don't my driving costs go up on poor pavements?

YES! Poorly maintained roads mean direct out-of-pocket costs to you and every other vehicle owner. Motorists "pay" for poorly maintained pavements in damaged tires, more frequent front-end alignments, more frequent