

# **FIX IT NOW OR FIX IT LATER**

## **The Public Works Dilemma of Deferring Road Improvements**

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One of the biggest challenges facing a number of cities and counties throughout Colorado is that much needed road improvements are being deferred due to budget shortfalls. In some agencies, the funding shortfalls are significant and there is a huge gap between what is needed to maintain a road system in good condition and what is available. The result of deferring repairs and having a "wait until tomorrow" approach is that roads are deteriorating to poor condition and the overall cost of maintaining a roadway system increases dramatically.

A fundamental concept of pavement management is that as a road deteriorates from good to fair and to poor condition, the proper "fix" shifts from preventive maintenance such as crack filling and seal coating, to resurfacing and rehabilitating, and then to reconstructing and rebuilding. The problem with this "fix it now or fix it later" dilemma is that the cost of reconstructing a road tomorrow increases by as much as 5 to 10 times the cost of resurfacing it today.

The Colorado DOT has determined that the cost to reconstruct a roadway in poor condition costs approximately 5 times the cost to maintain it in good condition through preventive maintenance and rehabilitation.

One unintended consequence of having a budget constrained road improvement program is the limitation placed on project design and scoping. Many agencies have implemented sophisticated pavement management systems (PMS) that effectively optimize program funding and provide guidance on using the right repair strategy at the right time on the right projects. However, with a goal of "stretching the taxpayers dollar" and repairing as many miles as possible, it's not uncommon for an agency to substitute a "functional" overlay (ie. band-aid repair) for what is actually the right fix recommended by the pavement management system.

According to Chris Jacobsen, Infrastructure Maintenance/Operations Engineer – City of Lakewood, "Street maintenance is one of the few municipal services where making the choice to provide a high level of service to citizens by properly funding an annual street resurfacing and repair program is also the most inexpensive choice in the long run. It's like investing in regular maintenance for your car, it gives you the best performance from the car, as well as saves you from big repair bills in the future."

From an industry perspective, the reaction to the funding dilemma is mixed. "Obviously, a contractor has to bid and construct a project according to the design plan and specification requirements of the contract," stated Craig Lamberty, President, United

Companies of Mesa County. “However, with regard to quality and how long a project lasts, you can’t squeeze blood from a turnip and expect miracles from a contractor on thin overlays,” Lamberty added. He went on to point out that just as the quality of a contractor’s workmanship is a key component of how long a project lasts, so is project funding. Also, with the rising cost of construction the buying power of an agency has been reduced.

When an agency can not optimize the program due to limited funding, the network condition worsens and a “worst first” approach to roadway improvements may develop. A “worst first” approach creates a situation where it becomes increasingly more difficult to maintain system quality. Reconstruction costs are much higher than conventional preventive maintenance and rehabilitation treatments that attempt to maintain a roadway while it is in good or fair condition. “Once a roadway reaches a certain point it is no longer cost effective for some treatments as they will not perform,” stated Jay Goldbaum, CDOT Pavement Design Program Manager.

With budget cuts and rising maintenance costs it all comes down to money and the balancing act of resource allocation. Local agency officials have tough decisions on how to spend the limited taxpayers dollars. We can only hope that they understand the engineering of pavement management (ie. fix it now or fix it later) and the consequences and long term budgetary impacts of deferring road improvements.

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