

DEPARTMENT OF TRANSPORTATION

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TO: Tom Norton, Peggy Catlin, Regional Transportation Directors, Tim Harris, Ed Fink, Tim Aschenbrener, Laurie Reed, Jennifer Webster, Jennifer Finch, Doug Lang, Celina Benavidez, Travis Vallin, Larry Warner

FROM: Craig Siracusa *Craig Siracusa*

SUBJECT: Policy memo -18 Pavement Preventive Maintenance Initiatives

This memo outlines the two Pavement Preventive Maintenance initiatives that we have discussed at several RTD meetings.

Background: The primary focus of our Surface Treatment Program has been on Fair and Poor rated pavements. Our rehabilitation projects have been aimed at repairing structural damage and restoring measurable pavement conditions such as ride, rutting, and cracking. Pavement Preventive Maintenance, on the other hand, focuses cost effective treatment of pavements generally rated Good or Fair. These are usually low-cost treatments to extend the service life of pavements and retard the onset of deterioration. Fellow DOT's have demonstrate that for each dollar spent on Preventive Maintenance they have achieve a savings of four to ten dollars in future pavement rehabilitation and reconstruction.

Pavements deteriorate slowly at first, but at a point in their life (a different time for flexible and rigid pavements) there is a precipitous increase in the rate of deterioration. Using our pavement deterioration model we can predict this key point in a pavement's life and then we can plan and implement projects to apply one or more preventive maintenance treatments that will extend service life. AASHTO has summed things up quite nicely by defining pavement preventive maintenance as:

Applying the right treatment to the right pavement at the right time

Our Maintenance Levels of Service (MLOS) program for Pavement Maintenance is primarily a reactive maintenance program based in quality assurance techniques that help a maintenance manager maintain highway infrastructure to an "acceptable" number of defects or deficiencies. Although the MLOS program does not contain any element that drives preventive maintenance some is currently performed.

Action Plan: Our two-pronged Pavement Preventive Maintenance program will be implemented as described below:

1. Pavement Preventive Maintenance – Surface Treatment Program

Dedicated Dollars:

5% of each Region's Surface Treatment Program dollars spent annually on pavement preventive maintenance

Implementation Start Date:

FY 05 funding, projects to advertisement this winter for placement in the spring and summer of 2004

Where/What - Short-term (FY 04):

The Materials and Geotechnical Branch will work with the Regional Materials Engineers to identify a list of candidate locations, based primarily on pavement age, and will identify a menu of preventive maintenance treatments that are appropriate for these locations. The Maintenance Branch-Maintenance Engineering, with assistance from the Materials and Geotechnical Branch, the Contracts Branch, and the Project Development Branch will develop standard specifications and cost estimating guidelines.

There will be an NHI Preventive Maintenance training course in Denver on February 3-4, 2004.

Where/What- Long-term (FY 05 and beyond):

The Materials and Geotechnical Branch will:

- Develop a Preventive Maintenance Manual which will include standard specifications, cost estimating guidelines, and project selection guidelines,
- Coordinate with Maintenance on the organizational understanding of preventive maintenance such that cost effective treatments are utilized uniformly across the State,
- Develop a system for including future preventive maintenance projects and treatments in the three-year plan,
- Continue to evolve the Pavement Management System software assumptions that generate projects and treatment recommendations such that they are calibrated and verified to actual results.

Initial Implementation Strategy:

Preventive Maintenance will be implemented through capital projects (not M-jobs): exempt from CE Pool

2. Pavement Preventive Maintenance – MLOS

Dedicated Dollars (FY 05):

\$5 million (adjusted annually)

Implementation Start Date:

July 2004 (FY 05)

Where/What:

Same short and long term strategies as above

Initial Implementation Strategy:

Create separate measure under the Pavement Program Area of MLOS and track accomplishments in terms of targeted projects completed and/or percentage of allocated funds spent on PM. Perform PM with maintenance forces or M-jobs.