



September 8, 2004

TO: J. C. Lenzi, Eastern Region
Don Senn, North Central Region
Lorena Eng, Northwest Region, NB82-101
Randy Hain, Olympic Region, 47440
Don Whitehouse, South Central Region
Don Wagner, Southwest Region, S15
Dave Dye, Northwest Region, TB85-95

FROM: Don Nelson 
360-705-7101

SUBJECT: **Project Delivery Memo #04-06** – Pavement Markings

Purpose and Direction

Background: It has been determined that in western Washington during periods of inclement weather, paint used for pavement markings becomes ineffective quite quickly. In the interest of providing the most visible delineation of highway pavement markings, the decision has been made to use profiled methyl methacrylate (MMA). This decision is effective immediately as outlined below. Appropriate changes to the *Design Manual* will be made in the next manual revision.

The purpose of this memo is to change the design standard for pavement markings in western Washington on the Interstate and selected sections of major arterial highways. The change specifies that MMA be used on all lane lines, wide lines used for delineation at ramp connections, and drop lane lines; and MMA Flat Type D be used for all symbol markings. In non-continuously illuminated sections, the profiled MMA will continue to be supplemented with Type 2 raised pavement markings (RPMs). RPMs will still be used in ramp connection areas and along highway skip line striping. The Region striping policies list the selected sections of major arterial highways where MMA will be used.

Types of Projects Affected: All projects in western Washington on the Interstate System, including I-90 to Issaquah, and selected sections of major arterial highways that will require the replacement of pavement markings.

Action Requested

Program Management

For projects that have been identified for MMA and are funded by the 2003 Transportation Funding (Nickel) Package, the cost of incorporating MMA shall be incorporated within the established budget for that project. If the inclusion of MMA does result in an overall increase to the project that will exceed the established budget, a Project Control Form can be submitted through Program Management and will be considered on a case-by-case basis.

Project Development

Incorporate MMA in contract plans for projects on the Interstate System and selected arterials in western Washington that will require the replacement of pavement markings.

Contract Ad and Award

For contracts currently being advertised for bids and that fit the description of affected projects, evaluate the ad schedule and, if appropriate, add a special provision and plan details that incorporate MMA in the contract by addendum.

Construction

Projects that are currently under contract and fit the description of affected projects should be evaluated on a case-by-case basis to determine if the change to MMA is appropriate. The evaluation should consider the potential for time extensions due to the 3 to 4 week pavement cure requirements for application of MMA. Make the substitution by change order. This memo constitutes Headquarters Construction approval of the change.

DN:cd
KJD/HJP

Attachment: Figure 830-1, Pavement Marking Material Guide, Modified

cc/att: Assistant State Design Engineers	Tom Baker
Design Trainers	Chris Christopher
Region Construction Engineers	Kevin Dayton
Region Construction Trainers	Harold Peterfeso
Region Materials Engineers	Bill Prill
Region Project Development Engineers	Toby Rickman
Region Traffic Engineers	Greg Selstead
John Conrad	Megan White

Ice Chisel Snow Removal Areas					
Roadway Classification	Marking Type				
	Center Lines	Lane Lines	Edge Lines	Wide Lines	Special Markings
Interstate	N.A.	Plastic Insets	Paint	Paint	Paint
Major Arterial	Paint and RRPMS	Paint	Paint	Paint	Paint
Minor Arterial	Paint	Paint	Paint	Paint	Paint
Collector	Paint	Paint	Paint	Paint	Paint

Steel Blade Snow Removal Areas					
Roadway Classification	Marking Type				
	Center Lines	Lane Lines	Edge Lines	Wide Lines	Special Markings
Interstate-Urban	N.A.	Plastic	Paint or Plastic	Paint or Plastic	Paint or Plastic
Interstate-Rural	N.A.	Paint	Paint or Plastic	Paint or Plastic	Paint or Plastic
Major Arterial	Paint and RRPMS or Plastic	Paint	Paint or Plastic	Paint or Plastic	Paint or Plastic
Minor Arterial	Paint	Paint	Paint	Paint or Plastic	Paint or Plastic
Collector	Paint	Paint	Paint	Paint or Plastic	Paint or Plastic

Rubber Blade Snow Removal Areas					
Roadway Classification	Marking Type				
	Center Lines	Lane Lines	Edge Lines	Wide Lines	Special Markings
Interstate-Urban	N.A. ⁸ MMA RRPMS only or ⁸ MMA Plastic and RRPMS	⁸ MMA RRPMS only or ⁸ MMA Plastic and RRPMS	Paint or Plastic	Plastic ⁹	MMA ¹⁰ Plastic
Interstate-Rural	N.A. ⁸ MMA RRPMS only or ⁸ MMA Plastic and RRPMS	⁸ MMA RRPMS only or ⁸ MMA Plastic and RRPMS	Paint	Plastic ⁹	MMA ¹⁰ Plastic
Major Arterial	Paint and RRPMS or Plastic and RRPMS	⁹ Paint and RRPMS	Paint	Plastic ⁹	Plastic ⁹
Minor Arterial	Paint and RRPMS	Paint and RRPMS	Paint	Plastic	Plastic
Collector	Paint and RRPMS	Paint	Paint	Plastic	Plastic

Notes

1. Insets are grooves ground into the pavement and filled with material, usually methyl methacrylate.
2. Plastic refers to methyl methacrylate, thermoplastic, or preformed tape.
3. See Standard Plan H-5d for RPM substitute applications.
4. See Standard Plan H-3 and H-3a for RPM applications with paint or plastic.
5. Special Markings include arrows, symbols, letters, channelizing lines, and transverse markings.
6. RRPMS refers to RPMs installed in a groove ground into the pavement.
7. Type 2 RPMs are not required with painted or plastic center or lane line in continuously illuminated sections. See Section 830.03(2).

⁸. MMA refers to profiled methyl methacrylate.

Pavement Marking Material Guide

⁹. Consult Region striping policy. Figure 830-1

¹⁰. MMA refers to flat methyl methacrylate.