



STATE OF MINNESOTA
OFFICE MEMORANDUM

Office of Materials
Mailstop 645
1400 Gervais Avenue
Maplewood MN 55109

DATE: June 23, 2009

TO: File

FROM: John Garrity
Bituminous Engineer

PHONE: 651-366-5577

SUBJECT: Warm Mix Asphalt Position

The use of Warm Mix Asphalt (WMA) is rapidly increasing across the United States. While the Minnesota Department of Transportation's (MnDOT) experience with WMA has been limited to test cells on the MnROAD facility near Albertville the benefits of WMA look promising.

WMA processes generally reduce the viscosity of the asphalt through a variety of means and enable the complete coating of aggregates at temperatures 35 to 100F lower than conventional hot mix asphalt (HMA). Lower mixing temperatures allow producers to get closer to a fumes-free asphalt mix and will result in lower plant emissions and radiated heat. WMA also reduces energy consumption at the plant.

Other benefits from WMA may be improved mixture durability by reducing production aging of the mixture and the ability to haul mixture longer distances without the worry of losing mix temperature. Warm mixes may also allow faster construction of pavements which need to be opened to traffic as soon as possible. Because the mix is not so hot to begin with, less time is required to cool the mix before the next lift is placed.

There are presently more than 15 different WMA processes available. How each of the processes will perform is unknown. The 2009 MnDOT Bituminous Specification does not address WMA; however, MnDOT is interested in considering the use of WMA as an option to HMA and will proceed on a case-by-case basis.