

RESEARCH REPORT DOCUMENTATION PAGE

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12. Performing Organization Name and Address NDDOT M+R <input checked="" type="checkbox"/> North Dakota DOT NDDOT OTHER* <input type="checkbox"/> Materials and Research Division NDSU <input type="checkbox"/> 300 Airport Road UND <input type="checkbox"/> Bismarck ND 58504-6005 UGPTI <input type="checkbox"/> OTHER* <input type="checkbox"/> *see supplementary notes		13. Sponsoring Agency Name and Address North Dakota DOT Materials and Research Division 300 Airport Road Bismarck ND 58504-6005	
14. Supplementary Notes			
15. Abstract Purpose and Need Warm Mix Asphalts (WMA) are being used in many projects throughout the United States and Europe. The benefits that have been reported are reduced emissions, reduced fuel consumption for the burner, paving aspects, and reduced exposure to workers. Objective The objective of this project is to compare the performance of WMA produced using Evotherm 3G, Advera® WMA, and the foamed asphalt process. The density of the WMA produced by the different processes and a control section of Hot Mix Asphalt (HMA) will be compared. The fuel consumption of the plant will be monitored to compare efficiency of the different production processes. Laboratory testing will be performed on both the research and control sections. The testing shall include TSR Lottman test, PG testing of the liquid asphalt mixed with additives before and after the WMA is produced, and moisture test.. Scope This project will use thin lift paving projects to evaluate the WMA production processes using Evotherm 3G and foamed asphalt to provide the viscosity reduction in the asphalt. Five projects have been selected for this research project and they are SS-3-015(010)060, SS-3-015(018)073, SS-4-003(011)159, SS-4-041(012)057, and SCB-6-032(045)219. Summary The construction of the WMA was very similar to the HMA. The WMA was paved with no noticeable differences besides the difference in temperature. Compaction, mat temperature, rolling efforts and fuel usage was monitored during the construction of the projects.			
16. Key Words Warm Mix Asphalt Asphalt Density Paving	17. Distribution Statement No restrictions. This document is available by clicking this link: North Dakota Department of Transportation Materials and Research Division: 300 Airport Road Bismarck ND 58504-6005 Office: (701) 328-6900 Fax: (701) 328-0310		18. No. of Pages 39 19. File type Pdf