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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 <u>Purpose and Need</u> Water based paint pavement markings deteriorate quickly and are commonly remarked annually. The North Dakota Department of Transportation needs a cost effective long-term pavement marking system that lasts longer than the available water based paints. <u>Objective</u> The objective of this study was to determine if 3M Stamark Liquid Pavement Marking Series 1200 is a cost effective and more durable alternative than presently used water based paint. <u>Scope</u> The evaluation period for this study will be 5 years or until the markings need to be replaced. A review will be conducted annually and a report generated that documents the performance. The Items that will be monitored and evaluated are as follows: visual inspection (bead loss or retention, snow plow damage etc), color change (visual and photos), night visibility, measure retroreflectance values using 30 meter geometry, comparison with our currently specified paint on same project (control section), and durability (length of performance until replaced or over-coated). This experimental project was incorporated into project ACNH-1-083(058)111. The project is located on the U.S. Highway 83 northbound roadway between Wilton and Washburn. The Series1200 liquid paint marking begins at mile point 127.3 and ends at 128.3. <u>Summary</u> The object of this experimental project was to determine if the 3M Stamark Liquid Pavement Marking Series 1200 is more durable and also more cost effective than the presently used water based paint. The experimental pavement marking was applied with a specially designed pavement-marking machine that would allow for placement of the two component liquid materials, glass beads and ceramic reflective elements. The Series 1200 paint once applied is brighter than regular water base paint. However, the retroreflectivity test data of the first evaluation, proved to be significantly lower than the manufacturer's initial reflectance range. This could be partly due to the ceramic reflective elements being shaved off, possibly by snowplows. The expected values should be around 1200-1400 for white and 700-850 for yellow. The average retroreflectivity value for the white Series 1200 was 391 and the white water base was 276. The average retroreflectivity value for the yellow Series 1200 was 269 and the yellow water base was 135. This experimental project had been remarked in the summer of 2001 with a water based paint. The retroreflectivity data from the second evaluation in May 2002 cannot be considered representative of the performance of the Series 1200 paint. During the second evaluation, the Series 1200 paint appeared brighter than the water based paint in daylight. The experimental section was chip sealed in August 2002 and all Series 1200 markings were obliterated.			
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