

UTC Project Information	
Project Title	Deterioration of Green Conflict Paint for Bicycle Facilities
University	University of Idaho
Principal Investigator	Emad Kassem
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Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans \$20,000 University of Idaho \$20,000
Total Project Cost	\$40,000
Agency ID or Contract Number	69A3551747110
Start and End Dates	September 1, 2018-August 31, 2020
Brief Description of Research Project	<p>Many cities in the Pacific Northwest are expanding their bicycle network to improve mobility. One recent innovation is the use of “green conflict” paint to improve bike lane visibility. The goal of is this project was to evaluate the performance of green conflict paint under simulated deterioration and different operating conditions, including rain and snow. The relevant PacTrans theme is Improved Reliability across Modes: decision support tools for winter road maintenance and performance under extreme conditions.</p> <p>We tested different paint products (e.g., water-based and thermoplastic) under varying levels of simulated traffic and snow removal agitation. We evaluated several measures of effectiveness including retroreflectivity, friction, color, and texture.</p>

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	<p>This study used a new laboratory evaluation procedure to examine pavement marking deterioration for bike lanes. This procedure can be standardized and used as pre-qualifying testing for assessing different pavement marking products or selecting a suitable material from a set of alternatives for a specific climate or operational conditions. This method reduces the testing time from years (based on field observations) to days (if conducted in the laboratory).</p>
<p>Impacts/Benefits of Implementation (actual, or anticipated)</p>	<p>The proposed laboratory evaluation procedure is flexible since it has room to test the pavement markings under different environments (e.g., cold, hot, rainy, or snowy) and types of traffic loads (e.g., different types of tires, steel wheels, and studded tires). It is also advantageous since it is less expensive, easier to perform, and reduce the testing time from years (based on field observations) to days (if conducted in the laboratory). This procedure shall assist the transportation agencies to understand the performance of all available pavement marking materials and prioritize them to be used in a suitable location and climate.</p>
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project Website 	<p>Kassem, E., Lowry, M., Fanijo, E., and Mohamed, M. Deterioration of Green Conflict Paint for Bicycle Facilities, PacTrans 2021</p>