INSTITUTE OF TRANSPORTATION STUDIES | UCIrvine

SEMINAR

Thursday, February 18, 2010
2:00 – 3:30pm

Seminar Room 4080 AIR Building

IDENTIFYING SITES WITH TARGETED CRASH TYPES FOR ENGINEERING INVESTIGATIONS IN CALIFORNIA

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Highway agencies screen their roadways to identify locations that require safety improvements. Many agencies use electronic roadway screening methods to identify locations for further engineering investigation. Only sites identified by these screening methods would be afforded investigative resources to determine if a roadway deficiency is present and if improvements are needed. Electronic roadway screening methods, such as the California Department of Transportation's Table C method, works by evaluating the crashes that occurred along a roadway. The screening method identifies roadway segments for further engineering investigation if the locations are found to have collision concentrations above threshold levels for various roadway types. This type of roadway screening method is referred to as a concentration-based screening method. Concentration-based screening methods are generally useful in identifying locations for further investigation but have many limitations that reduce their overall effectiveness.

This project explores ways to improve the current concentration-based electronic roadway screening methods used for identifying site locations for further engineering investigation. This project improves on the existing methodology by identifying locations that consider: 1) specific crash types, 2) collision severity, and 3) roadway characteristics. To validate the usefulness of the new screening methodology, it was applied to the Table C method for a single vehicle run-off-the-road (SVROR) test case. The test case demonstrates that the new screening methodology improves the status quo by addressing deficiencies in the existing Table C screening method.