FY 2009 RESEARCH PROBLEM STATEMENT

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TITLE

IM-09-06 Bike Truck Conflicts

PROBLEM (Description of need)

As both freight and bicycle/pedestrian traffic through the state of Oregon increase, the potential for bike-truck conflicts will likely increase. Both increased bicycle/pedestrian safety, and increased freight mobility are identified strategies in the OTP. While design solutions exist that can increase bicycle/pedestrian safety, these solutions often restrict freight mobility. Further, there are many locations throughout the state where highway users cannot be separated by directing cyclists to a lower-classified road. Freight routes often coincide with a commercial downtown street system. Research is needed to identify what are the best practices for safely accommodating cyclists on designated urban freight routes.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY

This project's primary goal is to fill the information gap and to provide planners and policy-makers an array of solutions for transportation network problems involving non-motorized modes and trucks.

The research will include:

1. Conduct a national literature review to identify a) areas with high bicycle or pedestrian usage yet low crash rates, and b) from these locations, local documents showing best practices and design solutions for shared bike-truck road design.
2. Conduct analysis of Oregon (and possibly other NW states') truck-at-fault and other truck crash data to identify truck crashes where a bicycle or pedestrian is involved. From this information, pinpoint Oregon's top 15 truck-bike hazard points, and in consultation with the Bicycle Transportation Alliance, ODOT regional and bicycle/pedestrian staff, select 7-10 locations for further analysis.
3. Using the best practices data from task 1, develop detailed alternatives of the 7-10 sites to demonstrate how improved roadway design could minimize bike or pedestrian to truck conflict in the future.
4. From the results of task 1 and task 3, prepare a manual of bike- or pedestrian-friendly, truck-friendly truck route design for Oregon showing 4-5 different techniques for addressing various problems and using photographs and drawings.

The focus will be on identifying solutions that support continued freight mobility.

BENEFITS

The proposed research will help identify locations where roadway design could improve public safety,

while preserving freight mobility. The resulting information could be used to support regional transportation planning where freight routes and bike usage intersect. The resulting information would also develop the understanding of how the specific interactions between freight and bike or pedestrian roadwey users impacts public safety, providing a specific focus on the role of freight mobility impacts.

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