TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Oregon DOT

INSTRUCTIONS:
Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # TPF-5(307)	**Transportation Pooled Fund Program - Report Period:** ☐Quarter 1 (January 1 – March 31) ☐Quarter 2 (April 1 – June 30) XQuarter 3 (July 1 – September 30) ☐Quarter 4 (October 1 – December 31)

Project Title: Validation of Tsunami Design Guidelines for Coastal Bridges		
Name of Project Manager(s): Steven Soltesz	**Phone Number:** 503-986-2851	**E-Mail** Steven.m.soltesz@odot.state.or.us
Lead Agency Project ID: TPF-5(307)	**Other Project ID (i.e., contract #):**	**Project Start Date:** Under development
Original Project End Date:	**Current Project End Date:**	**Number of Extensions:**

Project schedule status:

☐ On schedule ☐ On revised schedule ☐ Ahead of schedule ☐ Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date

Project Description:

The functionality and survivability of coastal bridges under earthquake and tsunami excitations is a major concern of western US states. A significant number of these bridges are vital to the emergency first response transportation of coastal cities immediately after a Cascadia Subduction Zone earthquake or other major earthquake events that generate tsunami waves in the Pacific Ocean, which will likely be followed by a local tsunami 15 to 60 minutes afterward. At least two numerical studies sponsored by California and Oregon of tsunami loads on a number of coastal bridges have been completed or nearly completed. Several studies have also been conducted on the effects of the "Great Japan Earthquake" of 2011 by Japanese research institutes as well as at UNR. Significant progress in the development of a tsunami design guideline has been made and the results appear promising. However, the reliability of the numerical results is unknown at this point due to a lack of experimental data needed for verification and validation. Thus, it is essential that experiments be conducted to provide data to verify and validate the numerical results to assess the accuracy of the load prediction equations. When validated, the numerical model can then be used to further improve the numerical analysis and development of practice design guidelines.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):

The technical advisory committee met in July to develop a scope of work. The Pacific Earthquake Engineering Research Center (PEER) was asked to develop a detailed work plan to conduct the tasks in the scope of work.

Anticipated work next quarter:

The work plan from PEER will be reviewed by the technical advisory committee in October. If the TAC agrees to proceed with PEER to conduct the research, a contract will be put in place to start the work.

Significant Results:

Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope and fiscal constraints set forth in the agreement, along with recommended solutions to those problems).

Potential Implementation: