

## Report submitted for July – December 2012 reporting period

<b>UTC Project Information</b>	
Project Title	Use of Blended Synthetic Fibers to Reduce Cracking Risk in High Performance Concrete
University	Oregon State University
Principal Investigator	Jason H. Ideker
PI Contact Information	<a href="mailto:jason.ideker@oregonstate.edu">jason.ideker@oregonstate.edu</a> , 541-737-9571
Funding Source(s) and Amounts Provided (by each agency or organization)	PacTrans - 20K, ODOT - 50K
Total Project Cost	70K
Agency ID or Contract Number	UW119A and K5250A
Start and End Dates	July 1, 2012 - June 30, 2013
Brief Description of Research Project	Early-age bridge deck cracking is a major concern for many DOTs throughout the United States and specifically those in the Pacific Northwest. Cracking within the first months of a bridge deck's lifespan severely hinder its long-term performance and durability ultimately reducing the sustainability of this crucial piece of transportation infrastructure. Increased maintenance costs, driver interruptions and possible damage to bridge structure are also a result. This is a specific problem that the Oregon DOT has experienced and is trying to find solutions to reduce or eliminate related cracking. The incorporation of blended sizes of synthetic fibers could provide resistance to shrinkage-related cracking in addition to other benefits such as increased resistance to surface wearing and ultimately reduce maintenance costs and provide longer lasting more sustainable bridge decks. The extension of the proposed research to other types of paving surfaces, e.g. rigid concrete pavements to resist cracking is a possible broader impact.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links Reports Project website	The Use Of Synthetic Blended Fibers To Reduce Cracking Risk In High Performance Concrete <a href="http://depts.washington.edu/pactrans/wp-content/uploads/2012/12/PacTrans-11-739437-Ideker-Jason-Small-Project.pdf">http://depts.washington.edu/pactrans/wp-content/uploads/2012/12/PacTrans-11-739437-Ideker-Jason-Small-Project.pdf</a>