UTC Project Information	
Project Title	Development of Low-Cost Wireless Sensors for Real-Time Lifeline Condition Assessment
University	Oregon State University
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Funding Source(s) and Amounts Provided (by each agency or organization)	
Total Project Cost	$19993.00
Agency ID or Contract Number	
Start and End Dates	Start: 01/15/2015 End: 06/15/2016
Brief Description of Research Project	This research proposes to develop a low-cost wireless sensor to assess the condition of the lifeline bridges following a natural hazard. The primary goal of the sensor will be to minimize cost and increase the ease of installation. Off-the-shelf hardware will be adopted to meet the design criteria, emphasizing multiple year autonomous operation. The sensors will be configured to measure individual member demands, calculated locally at the node, eliminating the challenge of time-synchronization. Structural models will be developed to predict the loss of the structure based on these measurements. The sensors will be paired with a wide-area network, allowing real-time analysis of the entire transportation system following an event. Therefore, this project will deliver a low-cost sensor that can be widely deployed throughout the Pacific Northwest transportation network to provide first responders with an overview of the current state, and route appropriately.

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	
Project Type (basic, applied, advanced, etc)	Applied