

Project Information Form

Project Title:	Sustainable Mitigation of Stormwater Runoff Through Fully Permeable Pavement
University:	California State University, Long Beach
Principal Investigator:	Shadi Saadeh
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Funding Source(s) and Amounts Provided (by each agency or organization):	California Department of Transportation (Caltrans) - \$89,134.06
Total Project Cost:	\$89,134.06
Agency ID or Contract Number:	CSULB-CT-TO-024 Caltrans 65A0527 Task Order 024
Start and End Dates:	April 1, 2016 – September 15, 2017
Brief Description of Research Project:	Sustainability and cost effectiveness in infrastructure development have received significant attention in recent times. The California Department of Transportation (Caltrans) is interested in the development of fully permeable pavement designs for use in areas that carry heavy truck traffic, as a potential stormwater best management practice (BMP) to provide low-impact infrastructure and efficient system operation. Fully permeable pavement is a contemporary design approach in which each layer of the pavement is permeable and stores water, thereby avoiding the adverse effects of stormwater on receiving waters. An innovative design methodology was developed based on a mechanistic-empirical design approach by the University of California Pavement Research Center (UCPRC). To validate and calibrate the newly developed design method, two test sections comprised of porous asphalt and pervious concrete pavement were constructed at California State University, Long Beach. Test sections showed reliable performance in terms of pavement distresses after 15 months of traffic. The collected data from the strain gages and pressure cells revealed that the asphalt section has experienced more stress and strain in comparison to the concrete section. The collected data will be used to validate and calibrate the pavement structural design procedure.
Describe Implementation of Research Outcomes (or why not implemented): Place any photos here	



National Center for Sustainable Transportation

Impacts/Benefits of Implementation (actual, not anticipated):	
Web Links <ul style="list-style-type: none">• Reports• Project website	https://ncst.ucdavis.edu/project/sustainable-mitigation-of-stormwater-runoff-through-fully-permeable-pavement/