



Caltrans Division of Research,
Innovation and System Information

Research

Notes

Planning
Policy
Programming

JANUARY 2016

Project Title:
UTC - University of Southern California,
METRANS, Tier 1

Task Number: 2569

Start Date: June 30, 2014

Completion Date: June 30, 2018

Task Manager:
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MAP-21 Competition - Contract (Amendment)

Conduct an integrated, multidisciplinary program of research aimed at increasing the economic competitiveness of large metropolitan areas through improved transportation system performance.

WHAT IS THE NEED?

The METRANS Transportation Center, a two-member consortium (California State University, Long Beach as member) led by the University of Southern California (USC) was awarded a \$1.4 million Tier 1 grant from the United States Department of Transportation (US DOT), in Federal Fiscal Year (FFY) 2013, to fund transportation research, workforce development, and technology transfer. In FFY 2015, the US DOT awarded the existing UTCs partial-year grants for FFY 2015, so METRANS will receive an augmentation up to \$1.4 million. Caltrans will execute a contract amendment with METRANS to provide up to an additional \$707,050 in match funding for state Fiscal Year (FY) 2015-16.

The US DOT extended the grant termination date out one full year to September 30, 2018; however, since Caltrans operates on a state fiscal year calendar, Caltrans' FY 2015/16 funding will need to be expended by May 15, 2018. The amended contract end date will be June 30, 2018.

WHAT ARE WE DOING?

The METRANS will conduct an integrated, multidisciplinary research program aimed at increasing the economic competitiveness of large metropolitan areas through improved transportation system performance; addressing passengers and freight across all surface transportation modes.

WHAT IS OUR GOAL?

METRANS primarily supports the activities of Caltrans' Planning and Modal Programs through the mechanisms of research and technology transfer.



DRISI provides solutions and
knowledge that improves
California's transportation system

WHAT IS THE BENEFIT?

METRANS provides a critical transportation knowledge base outside the US DOT, and addresses vital workforce needs for the next generation of transportation leaders.

WHAT IS THE PROGRESS TO DATE?

Year 1

The table below identifies the Year 1 research projects approved by the Executive Committee and Caltrans for FY 2013/14 and 2014/15.

<u>Project No.</u>	<u>Project Title – Year 1</u>
TO 001	Urban Spatial Structure, Employment Sub-Centers, and Passenger Freight Travel
TO 002	Mitigating Urban Freight through Effective Management of Truck Chassis
TO 003	Tracking Truck Flows with Programmable Mobile Devices for Drayage Efficiency Analysis
TO 004	Analysis and Prediction of Spatiotemporal Impact of Traffic Incidents for Better Mobility
TO 005	A Dynamical Framework for Integrated Corridor Management
TO 006	Development of Micro Wireless Sensor Platforms for Collecting Data of Passenger-Freight Interactions
TO 007	Vehicle to vehicle Communications in Mixed Passenger Freight Convoys
TO 008	Smart Truck Drive Assistant: A Cost Effective Container Delivery of Trucks

Year 2

Open Solicitation Research Program:

- Open call for proposals, Spring 2015
- Review and select research proposals, projects late summer 2015
- The table below identifies the research projects approved by the Executive Committee and Caltrans for FY 2014/15, 2015/16 and 2016/17.

<u>Project No.</u>	<u>Project Title – Year 2</u>
TO 009	Developing Affordable Housing Guidelines Near Rail Transit in Los Angeles
TO 010	Integration of Passenger and Freight Rail Scheduling
TO 011	Route Choice Characteristics of Owner-Operated Trucks in Southern California Freeways
TO 012	Simulation of Liquefaction-induced damage of the Port of Long Beach using UBC3D-PLM model
TO 013	The Decline in Inter-and-Intra Urban Mobility and its Impact on Passenger Travel
TO 014	Investigations of The Effect of Humid Air on NOx Emissions of a CNG Engine
TO 015	Development of an Economic Framework to Evaluate Resilience in Recovering from Major Port Disruptions
TO 016	Spatial Dynamics of Warehousing and Distribution in California

The year 1 and 2 projects are the result of a limited solicitation to key faculty conducted during the proposal writing process. Faculty were asked to submit short proposals on the METRANS topic areas. Proposals were reviewed by the METRANS Executive Committee and Caltrans Division of Research, Innovation and System Information. They were selected on the basis of proposal quality, relevance to the research topics, and likelihood of generating a scholarly product within a one-year period.