

SHRP 2: Project L38A Pilot Testing of SHRP 2 Reliability Data and Analytical Products: Southern California Pilot Site

Overview

The objective of this project was to develop system designs for programs to monitor travel time reliability and to prepare a guidebook that practitioners and others can use to design, build, operate, and maintain such systems. Generally, such travel time reliability monitoring systems will be built on top of existing traffic monitoring systems. The focus of this project was on travel time reliability. The data from the monitoring systems developed in this project – from both public and private sources – included, wherever cost-effective, information on the seven sources of non-recurring congestion. This data was used to construct performance measures or to perform various types of analyses useful for operations management as well as performance measurement, planning, and programming.

The Southern California site uses the reliability guide from L02, analysis tools for forecasting reliability and estimating impacts from L07, L08, and C11 as well as the guide on reliability performance measures from the L05 product. The Southern California site focused on two freeway facilities: I-210 in Los Angeles County and I-5 in Orange County. Both facilities already have had extensive performance assessments and micro-simulation modeling performed on them, and both had limited reliability analyses conducted. The pilot testing demonstrates that the reliability analysis tools have the potential for modeling reliability impacts but require some modifications before they are ready for use by agencies.

Data Sets

- **Sample Travel Time Results:** This dataset contains speed, flow, and travel time data from PeMS for multiple detectors on the first segment of I-210 EB mainline in Los Angeles, CA.
- **Highway 210 – Segment 1 Detailed Data – Eastbound:** Caltrans data for congestion along Highway 210.
- **Highway 210 Incident Data:** Delay causing incidents on Highway 210
- **Caltrans District 7 Vehicle Detection System Analysis:** Delay information on VDS enabled facilities in Caltrans District 7.
- **Travel Time Data:** This dataset contains speed, flow, and travel time data from PeMS for multiple detectors on I-210 EB and I-5 in Southern California in Los Angeles, CA. Please see the Related Artifacts section for a sample of these data.
- **Highway 210 Eastbound Congestion Data – Weekdays:** Caltrans District 7 data for Highway 210 Eastbound on weekdays.

- **I-5 Northbound Congestion Data – AM Peak Period:** Caltrans District 12 data for I-5 Northbound through Orange County during the AM peak period.
- **I-5 Northbound Congestion Data – PM Peak Period:** Caltrans District 12 data for I-5 Northbound through Orange County during the PM peak period.
- **I-5 Northbound Congestion Data – Weekdays:** Caltrans District 12 data for I-5 Northbound through Orange County on weekdays.
- **Corridor Delay Analysis Results – TASAS LA I-210 EB:** This dataset was collected and processed for the SHRP2 Project L38A “Pilot Testing of SHRP 2 Reliability Data and Analytical Products: Southern California Pilot Site.”
- **Corridor Delay Analysis Results – TASAS ORA I-5 NB:** This dataset was collected and processed for the SHRP2 Project L38A “Pilot Testing of SHRP 2 Reliability Data and Analytical Products: Southern California Pilot Site.”