

Client

Caltrans District 7
Allen Chen
213.897.8922

Location

Los Angeles and Ventura
Counties, California

Services

- Software System Design
- Plans and Specifications
- TMC Facility Design
- ATMS Design and Implementation

Date

2004

Key Personnel

Dan Lukasik, P.E.

Transportation Management Center (TMC) Upgrade – Caltrans District 7

Scope of Services

Delcan Corporation developed the system design, plans and specifications, and installed and integrated all elements for the upgraded Caltrans District 7 Traffic Management Center (TMC). This center acts as the nucleus of the traffic operations system in California's Los Angeles and Ventura Counties.

The TMC upgrade design project consisted of two integrated activities:

- Design and implementation of the Advanced Transportation Management System (ATMS), which includes the development of the custom control center software; and
- Design of the TMC facility.

The ATMS software provides a graphical user interface, which allows operators to control and monitor all traffic operations system elements, including closed-circuit television (CCTV) cameras, changeable message signs (CMS), vehicle detector stations (VDS) and ramp metering stations (RMS). The system uses advanced algorithms to detect freeway traffic incidents and implements expert system technology to manage freeway events. A summary of the ATMS software functions includes:

- Traffic Surveillance;
- Ramp Metering;
- Incident Detection;
- Event Management;
- Planned Lane Closures;
- Advanced Traveler Information Systems (ATIS); and
- Traffic Data Analysis.



**Transportation
Management Center
(TMC) Upgrade –
Caltrans District 7
(Continued)**

The TMC facility design included the renovation of 13,420 feet of the Caltrans District 7 office in downtown Los Angeles at a total construction cost of \$3.2 million. Aside from its transportation management function, it is the center of operation for the California Highway Patrol (CHP), Caltrans Freeway Service Patrol (FSP), and Caltrans Maintenance dispatch.

Results

The TMC has been designed to communicate and control over 1,180 ramp metering and vehicle detector station controllers, over 20,000 vehicle detectors, over 450 closed-circuit television cameras, 125 changeable message signs and 27 active highway advisory radio (HAR) systems.