Santa Cruz County Regional Transportation Commission

Traffic Operations System (TOS)

Fact Sheet

October 2009

Project Highlights

- **Components to detect, communicate and understand roadway usage and conditions**
- **Primarily on highways**
- **Coordinated with Caltrans and CA Highway Patrol**
- **Improves safety and provides traveler information**

Project Description

Santa Cruz County's transportation system relies on several Traffic Operation System (TOS) components to run more efficiently and safely to provide the public with important transportation information. Santa Cruz County's TOS elements were implemented as the result of a cooperative effort between the Regional Transportation Commission (RTC) and Caltrans. Components include the following:

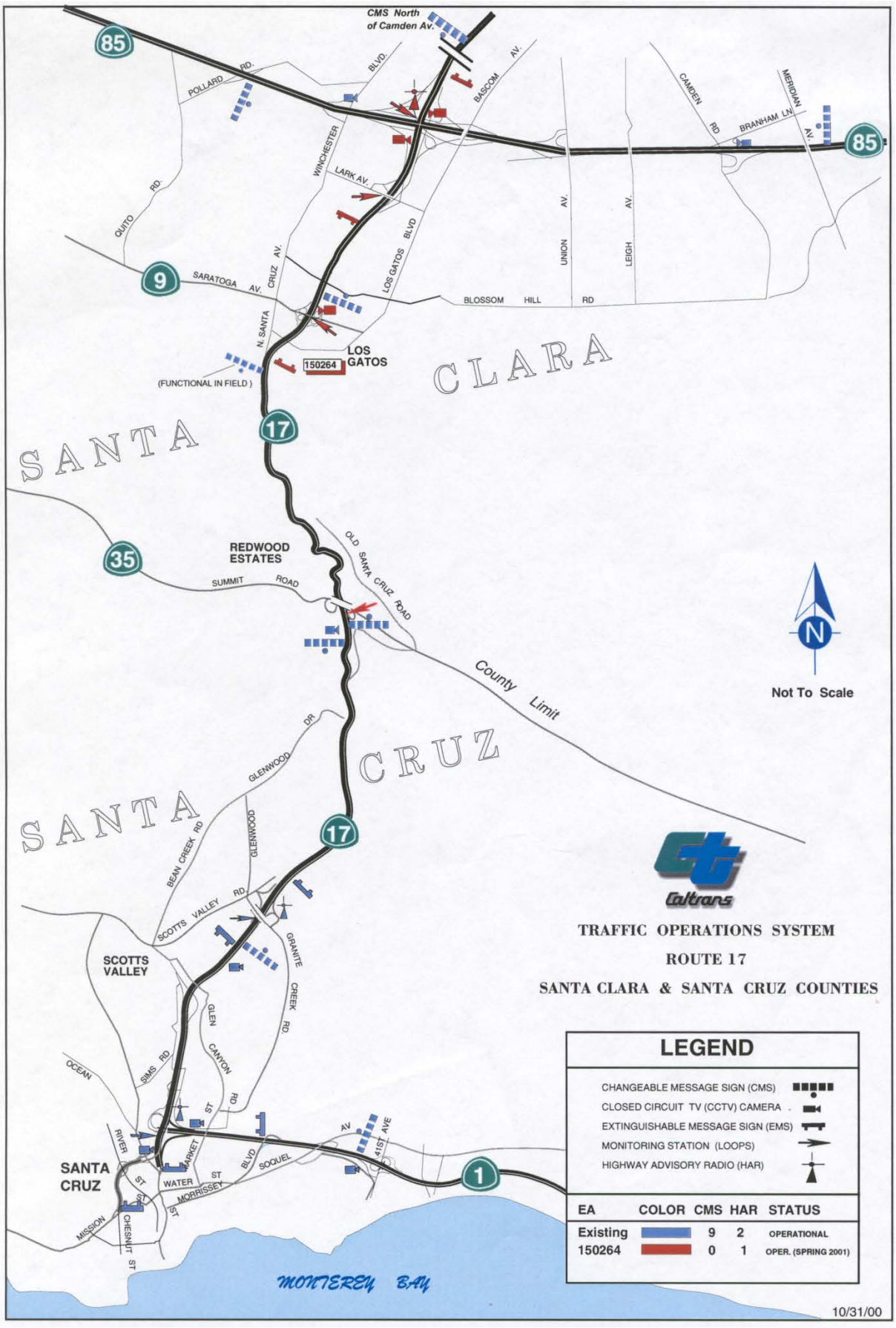
- Changeable Message Signs (CMS): displays messages about roadway conditions (incidents, delays)
- Dynamic Curve Warning Sign (in photo): broadcast driver speeds and cautions drivers about safe speeds
- Highway Advisory Radio (HAR): broadcast additional information about major incidents (AM 840)
- Extinguishable Message Signs (EMS): advises motorists to tune in to the HAR frequency
- Closed Circuit TV (CCTV) Cameras: verify displayed messages, monitor incidents, and conditions
- Magnetic Loop Traffic Monitoring Stations: obtain information about traffic speeds, and counts
- Traffic Management Center (TMC): operators at the Oakland TMC and San Luis Obispo TMC control and operate the individual TOS components

How It Works

TMC operators obtain information about incidents from the CHP dispatch centers, from Caltrans crews who respond to incidents and from viewing images collected by CCTV's located in the field. The information is used to determine whether the TOS should be activated, determine which TOS components should be employed, compose messages for display and broadcast, and update the information broadcasted as needed. Motorist view the information and may adjust their travel plans or driving behavior to suit conditions. A new CCTV camera at the Fishhook allows motorists to check real time travel conditions before making their trip.

Future TOS System Improvements

Currently, the TOS system does not include sufficient equipment to detect and monitor incidents and speeds on the highways, determine the length of the back ups and provide the most timely and relevant information to motorists. In addition, the traffic management center does not have sufficient personnel to adequately respond to all warranted incidents. Identified improvements include additional strategically placed CMS signs and CCTV cameras, enabling public access to traffic cameras via the web, increasing the number and reliability of monitoring stations, installing speed monitoring equipment for safety and public information purposes. There is insufficient funding to implement all of these improvements. Caltrans and the RTC continue to seek new funding opportunities.


CMS North of Camden Av.
85
POLLARD RD.
BLVD.
WINCHESTER
BASCOM AV.
CAMDEN RD
BRANHAM LN
MERIDIAN AV.
85
LARK AV.
QUITO RD.
9
SARATOGA AV.
CRUZ AV.
LOS GATOS BLVD
UNION AV.
LEIGH AV.
BLOSSOM HILL RD
N. SANTA
LOS GATOS
150264
(FUNCTIONAL IN FIELD)
SANTA CLARA
17
SANTA CRUZ
35
REDWOOD ESTATES
SUMMIT ROAD
OLD SANTA CRUZ ROAD
County Limit
N
Not To Scale
GLENWOOD DR
BEAN CREEK RD
GLENWOOD
SCOTTS VALLEY RD
17
SCOTTS VALLEY
GRANITE CREEK RD
GLEN CANYON RD
OCEAN
SIMS RD
ST
RIVER ST
MARKET ST
WATER ST
MORRISSEY BLVD
SOQUEL AV.
41ST AVE
1
SANTA CRUZ
MISSION ST
CHESTNUT ST
MONTEREY BAY
Caltrans
TRAFFIC OPERATIONS SYSTEM
ROUTE 17
SANTA CLARA & SANTA CRUZ COUNTIES
LEGEND
CHANGEABLE MESSAGE SIGN (CMS)
CLOSED CIRCUIT TV (CCTV) CAMERA
EXTINGUISHABLE MESSAGE SIGN (EMS)
MONITORING STATION (LOOPS)
HIGHWAY ADVISORY RADIO (HAR)
EA COLOR CMS HAR STATUS
Existing 9 2 OPERATIONAL
150264 0 1 OPER. (SPRING 2001)
10/31/00