

The Problem

- **Traffic jams:** The amount of traffic exceeds the existing capacity of the freeway during long peak periods, which causes unreliable travel times, abrupt stop-and-go conditions, and severe congestion during commute hours. This also results in cars avoiding or diverting from the freeway and using local streets, adding to congestion in surrounding communities.
- **Accidents:** Traffic congestion contributes to accidents on the freeway.
- **Delays in emergency response:** The combined effect of incidents and congestion hinders the ability of emergency service personnel to reach accidents quickly.
- **Less reliable travel time:** Congestion and incidents impact the reliability of travel times through the corridor. Inadequate traveler information further affect drivers' ability to predict travel time.

The Solution

Intelligent Transportation System Technologies

ITS technologies have been used around the San Francisco Bay Area for several years. Electronic message signs that provide travel time information are an example most people experience every day. This project would bring these and other technologies together as a comprehensive system along the I-80 corridor that would provide the following benefits:

- Improved travel times
- Improved safety for motorists and other roadway users
- Reduced traffic congestion
- Improved travel time reliability

Improving Mobility along the I-80 Corridor

Interstate 80 (I-80) is an integral part of the San Francisco Bay Area transportation network. The freeway is a major route for commuters and transit services and is crucial for the transport of goods into and out of the region. The I-80 corridor is one of the most congested corridors in the San Francisco Bay Area, with traffic volumes reaching about 290,000 vehicles per day. This project focuses on the I-80 Corridor from San Francisco-Oakland Bay Bridge Toll Plaza to the Carquinez Bridge.

The California Department of Transportation (Caltrans), in cooperation with ten municipalities, two transit agencies and four regional agencies (MTC, Alameda CTC, CCTA and WCCTAC) is studying ways to reduce

congestion and improve safety through the use of intelligent transportation system (ITS) technologies. ITS is a combination of computer and communication technologies that make transportation systems operate more efficiently and safely. By giving drivers accurate, real-time information, along with managing traffic entering the freeway, the efficiency of the existing transportation system can be improved to move vehicles and people in a safer and more efficient manner, without requiring construction of new roads or the widening of existing ones.

For more information on how these ITS technologies work in unison, view the project video on the Alameda CTC I-80 ICM Project page at http://www.alamedactc.org/app_pages/view/1700 and/or visit the Caltrans project page at <http://www.dot.ca.gov/dist4/projects/80icm/>

Follow us on Twitter @AlamedaCTC and/or @CaltransD4.



PROJECT SCHEDULE

SAN PABLO AVE. CONSTRUCTION

SEPTEMBER 2012

BEGIN CONSTRUCTION

JANUARY 2014

COMPLETE CONSTRUCTION

INTERSTATE 80 CONSTRUCTION

LATE 2012

BEGIN CONSTRUCTION

WINTER 2014

COMPLETE CONSTRUCTION





FOR MORE INFORMATION

For more information about the project, please visit: www.alamedactc.org

Project Components

Once the project is implemented, Caltrans will have the ability to maximize the effectiveness of the existing transportation network, which would lead to improved safety and reduced travel times. For example, when there is an accident on I-80, drivers may be directed to change lanes to avoid accident-related congestion.

The project includes the following components and associated intelligent transportation technologies:

Components	ITS technologies
 <p>Incident management</p> <ul style="list-style-type: none"> Provides advance warning of accidents, construction zones, or other incidents Improves access for emergency vehicles Decreases traffic accidents and improves safety 	<ul style="list-style-type: none"> Sign bridge structures (gantries) Variable advisory speed signs Lane use signals Variable message signs Closed circuit TV cameras Trailblazer Signs
 <p>Adaptive ramp metering</p> <ul style="list-style-type: none"> Reduces congestion and congestion-related accidents on freeway Manages queues on freeway on-ramps Encourages high-occupancy vehicle use by reducing delay for carpools and transit 	<ul style="list-style-type: none"> Ramp meters adapt to actual traffic conditions over the entire freeway corridor Sensors to collect traffic information Ramp meters provide preferential signal green time for vehicles in HOV lane
 <p>Traffic and transit information</p> <ul style="list-style-type: none"> Provides drivers with information to plan or adjust travel routes (alternate freeway routes) and/or use of transit Improves travel time reliability 	<ul style="list-style-type: none"> Information display boards showing transit/traffic traveler information
 <p>System integration</p> <ul style="list-style-type: none"> Automates the system operations Proactively coordinates management of traffic along the corridor Shares information among local and regional agencies 	<ul style="list-style-type: none"> Communications network interfaces with each project component Central system to operate all technologies from a single location (Caltrans Traffic Management Center)



Project visual simulation with proposed sign bridge structure (gantry)

Project Partners and Funding

Total project cost is estimated at \$80 million and is being implemented by the Alameda CTC in partnership with Caltrans, the Metropolitan Transportation Commission (MTC) and the Contra Costa Transportation Authority (CCTA) and financed through federal, state (including Corridor Mobility Improvement Account (CMIA) funds) and local funds.



METROPOLITAN TRANSPORTATION COMMISSION

