The I-80 Integrated Corridor Mobility (ICM) Project

ITE – San Francisco Bay Area Section
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Presentation Outline

• Introduction / Background
• Project Element Strategy
• Video
• Operations and Delivery Strategy
• Current Status
Project Location – I-80 and San Pablo Avenue (SR 123)
Why the I-80 Corridor?

- Ranked as one of the most congested corridors in the region, approximately 300,000 vehicles per day
- Over 20,000 vehicle-hours of delay per day
- Inconsistent level of service (C to F)
- Variable speeds (stop & go to 65 mph)
- Un-reliability of travel (20 to >60 min)
- High incident rates: over 2,000 incidents annually
Recurring Congestion & Loss of Capacity
Accident Profile – Westbound
(Average of one accident per day during peak hour)
# Project Stakeholders

| Alameda County Transportation Commission | AC Transit | City of Emeryville |
| Contra Costa Transportation Authority | Western Contra Costa Transit Authority | City of El Cerrito |
| West Contra Costa Transportation Advisory Committee | Water Emergency Transportation Authority | City of Hercules |
| California Department Of Transportation | BART | City of Pinole |
| Metropolitan Transportation Commission | Amtrak | City of Richmond |
| California Highway Patrol | Contra Costa County | City of Oakland |
| Federal Highway Administration | City of Albany | City of San Pablo |
| Federal Transit Administration | City of Berkeley |
I-80 ICM Strategies

Adaptive Ramp Metering
- Systemwide Metering Algorithm
- Advanced Queue Detection
- HOV Preference

Traffic Management
- Trailblazer Signs
- Traffic Signal Interconnect
- Multijurisdictional Signal Coordination
- System Detection
- CCTV Cameras

Transit Management
- Transit Signal Priority for AC Transit and WestCAT
- Ramp Meter Priority
- Comparative Transit Travel Times
- Park-n-Ride Compatibility

Traveler Information
- CMS/VMS
- Information Display Boards
- Highway Advisory Radio
- 511 and East Bay SMART Corridor Integration

Incident Management
- Freeway and Arterial Strategies to Manage Incident Traffic
- Uses Tools from all Systems
- Coordination led by Caltrans

Surveillance/Monitoring
- Freeway and Arterial Detection
- CCTV Cameras
- Monitor Mainline and Ramp End-of-Queue

Adaptive Ramp Metering
- Systemwide Metering Algorithm
- Advanced Queue Detection
- HOV Preference

I-80 ICM
Integrated Corridor Mobility
Selected Alternative

- **Corridorwide:**
  - Traffic Operations System (TOS)
  - Adaptive Ramp Metering
  - End-of-Queue Warning (Variable Advisory Speed Signs – VASS)
  - Information Display Boards
  - Trailblazer Signs

- **Westbound Only:**
  - Lane Management: Central to Powell
Information Display Board (IDB)

SFO via 880  40 min
SFO via 80  30 min
Ashby Ave  8 min
Travel Time Trend
Hayward via 880  25 min
Hayward via 880  15 min
Accident at 98th Ave

University Ave
△ OK for all Trend

SFO via 880  40 min
SFO via 80  30 min
EXIT to SFO  63 min
EXIT Central Avenue
Departure Times:
7 min, 22 min, 37 min
Parking Available

TRAVEL TIME
Carquinez Bridge  32 min

Information Display Board (IDB)

Gilman
University
Ashby
Powell

Vallejo
San Francisco
Dublin
San Jose
Project Video

Google: i-80 icm
System Integration
High-Level Integration Approach

- Integrate agency subsystems
- Utilize existing networks
- Integrate traffic incident management responsibilities
Incident Response Strategies – Arterials

- Trailblazer Signs
- Incident Timing Plans
- CCTV Cameras
Incident Response Strategies – Freeways

- Lane Use Signs
- CMS/VMS
- VASS
- Ramp Meters
- Detection / CCTV Cameras
Key Incident Management Concepts

- No active direction for drivers to use alternate routes
- Caltrans will control local traffic signals during incidents using pre-approved timing plans
- Caltrans wants an EASY button
- Provide notification to all agencies when strategies are deployed
- Post-incident debrief
- All stakeholders have signed MOU
Delivery Strategy

Procurement Package

Freeway Construction Projects

Arterial Construction Projects

System Integration

PROJECT 1: System Integration
I-80 ICM Project

PROJECT 2: Equipment

PROJECT 3: Traffic Operations System

PROJECT 4: Adaptive Ramp Metering

PROJECT 5: Active Traffic Management

PROJECT 6: San Pablo Improvements

PROJECT 7: DEFERRED Transit Center

DEFERRED
Current Status

- Project 1 – System Integration: Ongoing
- Project 2 – Material Procurement: Evaluating Material Submittals
- Project 3 – Traffic Operations System: Construction Complete
- Project 4 – Adaptive Ramp Metering: Under Construction
- Project 5 – Active Traffic Management: Under Construction
- Project 6 – San Pablo Arterial & Transit: Construction Complete in April 2013
Questions?