SUBJECT: Consider Recommending Adoption of Resolution No. 08-018 in Support of the Alameda County Congestion Management Agency (CMA) I-80 Integrated Corridor Mobility Project, its Grant Submittal for $24.3 Million in Traffic Light Synchronization Program Funds to the California Transportation Commission, and Authorization to Utilize a Portion of the Fully Funded Richmond Parkway Transit Center Project as Local Matching Funds.

RECOMMENDED ACTION:

☐ Information Only  ☐ Briefing Item  ☑ Recommended Motion

Motions:

1. The Finance and Audit Committee: Recommend the Board of Directors adopt Resolution No. 08-018

2. Board of Directors: Adopt Resolution No. 08-018

Justification for Same Day Board Action: See discussion in Memo justifying the request for same day action by the Board of Directors.

Fiscal Impact: If the Traffic Light Synchronization Program (TLSP) grant application is approved, about $6.5 million in funding will be made available for transit projects, with a substantial portion of those funds supporting AC Transit projects in the West Contra Costa County area.
Background/Discussion:

In March 2007 the California Transportation Commission (CTC) approved $55.3 million in funding for the freeway portion of CMA’s Integrated Corridor Mobility (ICM) Project (the Project), and indicated that CMA should apply for $24.3 million in arterial and transit funding from the TLSP account. CMA is seeking support for the Project from AC Transit and a variety of cities and other jurisdictions that would be affected by it.

The I-80 ICM Project covers about 20 miles of I-80, from Crockett in Contra Costa County to Emeryville in Alameda County. Given the level of traffic congestion in this corridor – ranked most congested in the Bay Area during the morning peak in 2006 – a comprehensive corridor approach is essential as traffic levels continue to increase. The Project will make use of various state-of-the-art practices to better manage the flow of traffic and people in this corridor, including:

- Increased ramp metering, including HOV bypass lanes for transit
- Encourage increased use of public transit, carpools and HOV lanes
- Traffic flow management through variable speed limit signage
- Variable message signage
- Parking facility information and real time transit information at critical freeway points
- Coordinated traffic signal systems and additional transit signal priority on arterial roadways
- Increased CCTV camera coverage and vehicle detection systems
- Improved incident management

This overall approach is geared to make more efficient use of existing freeway, arterial and transit resources, thereby smoothing traffic flow and increasing people throughput in the Corridor.

In response to the CTC directive, Alameda County CMA is applying for $24.3 in funding for the arterial and transit portions of the ICM Project on Friday, March 28, 2008. Given the obvious benefit to AC Transit, staff is requesting, by resolution, Board support for CMA’s funding application.

In addition, the Project will be graded and ranked higher if it can demonstrate local matching funds. Staff is also requesting that CMA be allowed to list a portion of the fully funded Richmond Parkway Transit Center (RPTC) for matching funds; RPTC has received commitments of $28.7 million for construction of a 660-space commuter parking garage, a 12-14 bay transit center, improved connections to the entrance of the I-80 median HOV lane, and associated other improvements. CMA’s listing of a portion of the RPTC Regional Measure 2 funding will not affect the RPTC project in any way, but will improve the chances of I-80 ICM funding.

Justification for Same Day Board Action: Section 5.5.4 of Board Policy No. 100 permits, under certain circumstances, an item considered by a Standing Committee to
be considered on the same day as the action by the Standing Committee. The pertinent portions of the section require: (1) the Board President to concur that extenuating circumstances require Board consideration of the item; (2) the extenuating circumstances are communicated to the Board in writing prior to the consideration of the item; and (3) a majority of the Board concur that extenuating circumstances exist and the item requires the Board’s immediate consideration.

The Board President was contacted on March 20, 2008 and concurred that extenuating circumstances require Board same day consideration of this GM Memo. The extenuating circumstances justifying joint consideration of this item are: the Alameda County Congestion Management Agency must file its grant submittal by Friday, March 28, 2008, not permitting compliance with the usual procedure for considering this item. The staff recommends the Board concur that extenuating circumstances exist and the item requires the Board’s immediate consideration.

Prior Board Actions:

Attachments:
Attachment A: Resolution 08-018
Attachment B: I-80 Corridor – Executive Summary and Fact Sheets
Attachment C: Transit and Arterial Operations Portion Fact Sheet

Approved by: Rick Fernandez, General Manager
Nancy Skowbo, Assistant General Manager Service Development

Prepared by: Jon Twichell, Transportation Planning Manager

Date Prepared: March 14, 2008
RESOLUTION NO. 08-018

A RESOLUTION IN SUPPORT OF THE ALAMEDA COUNTY CONGESTION MANAGEMENT AGENCY I-80 INTEGRATED CORRIDOR MOBILITY PROJECT, CMA’S GRANT SUBMITTAL FOR $24.3 MILLION, AND AUTHORIZATION TO USE A PORTION OF RICHMOND PARKWAY TRANSIT CENTER FUND COMMITMENTS AS LOCAL MATCHING FUNDS

WHEREAS, Interstate 80 (“I-80”) is an integrated freeway, arterial and principal transportation corridor from the Carquinez Bridge to the Bay Bridge Toll Plaza, a distance of approximately 20.5 miles, for the movement of people, goods, and vehicles within Contra Costa and Alameda counties; and

WHEREAS, Alameda County Congestion Management Agency (“ACCMA”), West Contra Costa Transportation Advisory Committee (“WCCTAC”), Contra Costa Transportation Authority (“CCTA”), California Department of Transportation District 4 (“Caltrans”), and Metropolitan Transportation Commission (“MTC”) (collectively the “Sponsoring Agencies”), in partnership with Contra Costa County, the cities of Hercules, Pinole, San Pablo, Richmond, El Cerrito, Albany, Berkeley, Emeryville, and Oakland, Alameda-Contra Costa Transit District (“AC Transit”) and Western Contra Costa Transit Authority (“WestCAT”) (collectively the “the Participating Agencies”), jointly participated in the development of a Systems Engineering Management Plan (“SEMP”) and a Project Study Report (“PSR”) defining the I-80 Integrated Corridor Mobility Project (“I-80 ICM Project”); and

WHEREAS, the Participating Agencies have identified overall goals for the I-80 Project including improvement of mobility, enhancement of safety and increase in efficiency for all modes of travel along the corridor; including public transit; and

WHEREAS, with the support of the other Sponsoring Agencies, the ACCMA submitted an application to the CTC for full funding of the estimated project cost of $87.7 million, consisting of three components: a) a $55.3 million freeway component, that focuses primarily on I-80; b) a $8.1 million project development component local match; and c) $24.3 million local arterial and transit component, that focuses on major arterials, crossing surface streets, and public transit, through the Corridor Mobility Improvement Account (“CMIA”) of the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, approved by California voters as Proposition 1B on November 7, 2006 (“Bond Act”); and

WHEREAS, on March 15, 2007 the CTC approved $55.3 million in funding for the Freeway components of the I-80 ICM Project; and

WHEREAS, the CTC also recommended that the Participating Agencies should collectively apply for the $24.3 million local arterial and transit component of the I-80
ICM Project from the Traffic Light Synchronization Program ("TLSP"), which is another component of the Bond Act;

NOW, THEREFORE, BE IT RESOLVED THAT AC TRANSIT HEREBY:

SECTION 1. Supports implementation of the I-80 ICM Project as described in “Exhibit A, I-80 Executive Summary” with the understanding that the freeway component of the I-80 ICM Project will not be implemented separately without the local arterial and transit components; and

SECTION 2. Supports the primary goal of the I-80 ICM Project to deploy a comprehensive systems management strategy in order to create a balanced, responsive, and equitable system that will monitor and control traffic and improve the safety and mobility of all users, including transit customers; and

SECTION 3. Will participate in the Technical and Policy Steering Committee meetings to finalize the requirements of the I-80 ICM Project; and

SECTION 4. Will participate in the development of a Corridor System Management Plan (CSMP), one of the technical requirements of the Bond Act; and

SECTION 5. Agrees and understands that the Technical Committee (comprised of staff representatives from Participating Agencies and Caltrans) will determine the policies for the overall system operation, including the adaptive ramp metering system. The cities and counties will remain continually involved with system operation and monitoring, including evaluation and modification of such policies to ensure that local roadway networks are not adversely affected; and

SECTION 6. Supports ACCMA, CCTA, and WCCTAC, on behalf of all the Participating Agencies, in jointly pursing $24.3 million in funding for the local arterial and transit components of the I-80 ICM Project from the Traffic Light Synchronization Program ("TLSP") of the Bond Act; and

SECTION 7. Authorizes CMA to list Regional Measure 2 funding for the Richmond Parkway Transit Center as local matching funds

SECTION 8. This resolution shall become effective immediately upon its passage and adoption by four affirmative votes of the Board of Directors.

PASSED AND ADOPTED THIS ____ day of March 2008.

H. E. Christian Peeples, President
ATTEST:

Linda Nemeroff, District Secretary

I, Linda Nemeroff, District Secretary for the Alameda-Contra Costa Transit District, do hereby certify that the foregoing Resolution was passed and adopted at a Regular Meeting of the Board of Directors held on the ______ day of March 2008 by the following roll call vote:

AYES: DIRECTOR(S):

NOES: DIRECTOR(S):

ABSENT: DIRECTOR(S):

ABSTAIN: DIRECTOR(S):

__________________________
Linda Nemeroff, District Secretary

Approved as to Form:

__________________________
Kenneth C. Scheidig, General Counsel
I-80 CORRIDOR—EXECUTIVE SUMMARY

The Problem
The Interstate-80 (I-80) corridor from the Bay Bridge to the Carquinez Bridge is the worst congested corridor in the Bay Area. This corridor has ranked as the most congested corridor in the entire San Francisco Bay Area during the last six years, with traffic volumes reaching 312,000 vehicles per day, with an average of 20,000 hours of delay daily. Currently, the demand on the freeway far exceeds the roadway capacity, causing unreliable travel times, erratic operating speeds, breakdowns, as well as diversion to the local arterials. The congestion on the roadway network contributes to an increase in incident rates, including rear-end accidents on both freeway and local arterials. These contribute to delays for transit services operating along the corridors. The combined effect of the incidents and the congestion hinders efficient incident response times and creates additional secondary incidents.

I-80 Integrated Corridor Mobility (I-80 ICM) Project
The primary goal of the I-80 ICM Project is to enhance the current Transportation Management System along the I-80 corridor to build a balanced, responsive, and equitable integrated system that will monitor and maintain optimum traffic flow along the network to improve the safety and mobility for all users, including transit customers. The project will utilize State-of-the-Practice ITS technologies to enhance the effectiveness of the existing transportation network in both freeway and parallel arterials in Alameda and Contra Costa Counties. At a cost of $87.7 million, the project will create a balanced network with an emphasis on system reliability and efficiency through a multi-modal solution. Proposed project elements include:

- Freeway Management System
  - Corridor-wide adaptive ramp metering including ramp metering HOV bypass lanes for transit access
  - Speed harmonization through advisory variable speed signs
- Arterial Management System
- Transit Management System
- Traveler Information System
- Commercial Vehicle Operations (CVO)
- Traffic Surveillance and Control System
- Incident Management System

The project also includes integration with the East Bay SMART Corridor Program, a joint Alameda and Contra Costa County Intelligent Transportation (ITS) program, and the Caltrans Transportation Management Center (TMC). The I-80 ICM project consists of multiple systems and strategies, working collectively, to address the challenges of the imbalanced flow of traffic in the corridor. Since this corridor is constrained on both sides, the best feasible alternative for congestion management is to improve and streamline the efficiency of the total transportation system.
The strategies proposed to improve the corridor are a multi-pronged approach to manage the different challenges along the corridor, including incidents, variable speeds, and arterial/freeway integration. The system components of the I-80 ICM project are listed in the table below.

<table>
<thead>
<tr>
<th>System Component</th>
<th>Element</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeway Management System</td>
<td>Adaptive Ramp Metering</td>
<td>Speed harmonization, optimize flow of traffic, reduce delay, decrease incidents, merge control, decrease arterial spillover, and improve safety</td>
</tr>
<tr>
<td></td>
<td>Advisory Variable Speed Signs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variable Message Signs</td>
<td></td>
</tr>
<tr>
<td>Transit Management System</td>
<td>Ramp meters with HOV bypass for transit access only</td>
<td>Improve travel time reliability, reduce travel time, encourage mode shift</td>
</tr>
<tr>
<td></td>
<td>Transit Signal Priority (TSP)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transit/traffic traveler information at BART stations</td>
<td></td>
</tr>
<tr>
<td>Arterial Management System</td>
<td>Coordinated traffic signal systems, TMC for local jurisdictions</td>
<td>Optimize traffic flow on local arterials, maximize coordination</td>
</tr>
<tr>
<td>Incident Management System</td>
<td>Vehicle detection system, incident response plan, diversion management</td>
<td>Decrease number of incidents, decrease incident response time, and decrease incident recovery time</td>
</tr>
<tr>
<td>Traveler Information System</td>
<td>511 enhancement, SMART Corridor ATIS enhancement, variable message signs, Highway Advisory Radio (HAR)</td>
<td>Enhanced traveler information for all users</td>
</tr>
<tr>
<td>Traffic Surveillance and Monitoring System</td>
<td>CCTV cameras, vehicle detection system</td>
<td>Traffic Monitoring</td>
</tr>
<tr>
<td>Commercial Vehicle Operations (CVO)</td>
<td>Future preferential treatment of CVO, value pricing</td>
<td>Best time use of freeway by commercial vehicle users</td>
</tr>
</tbody>
</table>

**Strong Support for the I-80 ICM Project**

The I-80 ICM project is the result of many hours of stakeholder meetings which produced a comprehensive needs assessment by the stakeholders, including five years of cooperative work through the East Bay SMART Corridors partnership. The goals and objectives are agreed upon by all of the agencies, and there is a full commitment by Caltrans, the cities, counties, regional agencies, CHP, and transit agencies. The Systems Engineering Management Plan (SEMP) and Project Study Report (PSR) have been completed. The final project was approved by the California Transportation Commission (CTC).

**The Benefits**

The expected benefits are: Improved travel time reliability; balanced and stable traffic flow; speed harmonization; mode shift to transit and HOV lanes; better utilization of existing capacity and throughput maximization; reduced incidents and number of accidents; reduced size and severity of bottlenecks; and reduced emissions.

The I-80 ICM Project is a unique project from a benefit-cost standpoint. This project ranked number one among the list of CMIA projects selected by the CTC. Other benefits include reduction in mobile pollutants, fuel consumption, driver frustration, and more travelers shifting to transit alternatives. The improvements along the I-80 corridor will reduce congestion, increase safety and improve the operation of the freeway, and will benefit the entire network in the area.

These benefits have been quantified using extensive research of similar projects and micro simulation techniques. The average benefits for similar systems management projects include safety improvements in the range of 15% to 50% reduction in accidents, and improvement in mobility in the range of 10% to 25% increase in peak hour speeds.
Project Limit and Cost Breakdown

The project limits are along the Interstate 80 corridor from Highway 4 (Contra Costa County) to San Francisco Bay Bridge Toll Plaza (Alameda County). The limits of this project include locations in both Contra Costa County and Alameda County.

Cost Breakdown for Arterial and Freeway

<table>
<thead>
<tr>
<th>Cost Breakdown for Arterial and Freeway</th>
<th>Arterial</th>
<th>Freeway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cost</td>
<td>$24.3M</td>
<td>$63.4M</td>
</tr>
<tr>
<td>Project Development and Engineering</td>
<td>$2.4M</td>
<td>$8.1M</td>
</tr>
<tr>
<td>Hard Construction Cost</td>
<td>$17.1M</td>
<td>$41.3M</td>
</tr>
<tr>
<td>Software Development</td>
<td>$1.1M</td>
<td>$3.4M</td>
</tr>
<tr>
<td>System Integration</td>
<td>$1.3M</td>
<td>$3.6M</td>
</tr>
<tr>
<td>Construction Management including Staff Time</td>
<td>$2.4M</td>
<td>$7.0M</td>
</tr>
<tr>
<td>Total Construction Cost Including SW and HW and System Integration</td>
<td>$21.9M</td>
<td>$55.3M</td>
</tr>
<tr>
<td>Total Project Cost</td>
<td>$87.7M</td>
<td></td>
</tr>
</tbody>
</table>

1. All costs are in millions
2. Arterial costs include transit
3. All costs are inclusive of contingency and escalation costs
Traveler Information System

Feature Description and Concept:
The Traveler Information System (TIS) disseminates traffic and road conditions, incident information, and provides emergency alerts and advisories to the travelers. The information would be provided through dynamic message signs, highway advisory radio, highway advisory telephone, and internet websites. Parking and transit information would be provided through the transit management systems to promote transit usage. Additionally, personalized traveler information, including mobile devices, will be provided to targeted travelers in the corridor. The traveler information system works with all other sub-elements of the system as a means of information delivery.

Key Features:
- Enhancement to the East Bay SMART Corridors website to provide real-time traffic conditions to the public and agencies
- Integration with the Bay Area 511 system, Contra Costa County 511 system, and the East Bay SMART Corridors program
- Enhancement to the 511 system to provide specific information for the I-80 Corridor, including parking and transit information
- Highway advisory radio to provide traffic information via an AM radio channel
- Traveler information dissemination through dynamic message signs and radio and TV stations
- Information to commercial vehicle operators for trip planning
- Personalized traveler information for I-80 travelers

Benefits:
- Real-time traffic information for I-80 Corridor travelers, enabling more-informed decisions in mode choice and time of travel
- Reduce congestion ahead of incidents and reduce traffic delays
- Provide Bay Area-wide traffic information
- Increased safety and mobility

Challenges:
- Integration of SF Bay Area 511 Program with the East Bay SMART Corridors Program
- Integration of added new features with existing 511
- Integration with Freeway Management System and Caltrans District 4 Advanced Transportation Management System (ATMS)
- Integration with the commercial vehicle operators’ systems
Feature Description and Concept:
The Transit Management System (TMS) improves and enhances existing transit service and service reliability to encourage transit ridership and promote mode shifts. The TMS system will include additional transit signal priority equipment for crossing arterials, ramp metering by-pass lanes for transit vehicles, dynamic message signs at key transit facilities and parking facilities, and traveler information systems. The TMS would reduce delays for transit riders, increase travel speeds, improve transit reliability, improve interagency coordination, and provide alternative transportation choices to the public. Encouraging transit rideship would reduce the amount of auto ridership in the corridor, reducing overall congestion in the corridor.

Key Features:
- Transit signal priority devices along the crossing arterials
- Extension of Bus Rapid Transit (BRT) to San Pablo Avenue and Highway 4
- Queue-jump lanes at key intersections for preferential transit operation
- Freeway shoulder utilization at selected segments along the I-80 Corridor for transit operation, if feasible
- High Occupancy Vehicle (HOV) by-pass lanes for transit vehicles at selected ramps
- Dynamic message signs at key transit stations and parking facilities to provide real-time transit information and parking information to encourage transit ridership and promote park-and-ride utilization
- Integration of the Richmond Transit Center with the I-80 ICM system

Benefits:
- Reduction in travel time for transit users in the range of 10%-30% through preferential transit treatments
- Increase in ridership through enhanced traveler information and travel time reliability (existing Rapid Bus achieved 77% increase in ridership during peak hours)
- Mode shift from single auto trips (existing Rapid Bus achieved 19% mode shift)

Challenges:
- Integration of the parking and transit systems
- Shoulder utilization along segments with limited shoulder widths
- HOV by-pass lanes at locations with limited right-of-way and environmental constraints
**Integrated Corridor Mobility (ICM) Project**

**Arterial Management System**

**Feature Description and Concept:**
The Arterial Management System (AMS) enhances monitoring and control of traffic flow along San Pablo Avenue and the crossing arterials. The AMS would complete the missing gaps in the ITS elements along the arterials, including installation of additional Closed Circuit TVs, detection equipment and communication systems. Existing traffic control systems, as well as the local Transportation Management Centers (TMC), will be upgraded to intertie with Caltrans traffic signal and freeway management systems. With the upgraded equipment, the local agencies would be able to optimize traffic flow based on prevailing conditions and improve the overall operation of the systems to reduce delays for the motorists. The local agencies would be able to monitor traffic conditions at the ramp termini and across jurisdictional boundaries. The AMS system would also accommodate the transit signal priority, emergency preemption system, and trailblazer signs for the Transit and Incident Management applications.

**Key Features:**
- Upgrade existing traffic signal control systems with the latest technologies
- Upgrade existing local Traffic Management Centers (TMC)
- Installation of additional ITS elements including Closed Circuit TV cameras and mid-block detections
- Signal interconnect for agencies to monitor the conditions across jurisdictional boundaries
- Signal retiming for effective freeway-ramp-local arterial systems
- Operational improvements and signal coordination to maximize the efficiency to the varying demand at different times of the day
- Consideration of turning movement restriction during peak hours, if warranted

**Benefits:**
- Reduction in incidents and crashes in the range of 7%-10%
- Reduction in delays in the range of 14%-19% as a result of signal synchronization
- Increase in throughput up to 15%
- Improved mobility for both local and regional traffic

**Challenges:**
- Integration with the East Bay SMART Corridors Program and Caltrans Advanced Traffic Management System (ATMS)
- Consideration of various local policies and traffic issues
- Corridor-wide system integration involving multiple agencies

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**ICM Subsystem**
- Freeway Management System
- **Arterial Management System**
- Transit Management System
- Traveler Information System
- Incident Management System
- Traffic Surveillance & Monitoring System
- Commercial Vehicle Operations
Feature Description and Concept:
The Traffic Surveillance and Monitoring System (TSMS) will complete the ITS installation and integration along the freeway and arterials to allow monitoring and performance measurement of the roadway system for all ICM activities. Additional detection systems will be installed throughout the corridor, including freeway, ramps, local intersections, and arterials for continuous performance monitoring of the system. Other ITS devices, such as Closed Circuit TVs and communication systems will be installed. The information collected by the system may be used for freeway management, incident management, arterial management, and transit management to coordinate and implement system-wide response plans. The objective of this feature is to upgrade the existing detection monitoring and verification systems to allow for much faster response to both recurrent and non-recurrent congestion.

Key Features:
- Vehicle detectors detect vehicle presence, volume, and speed to provide input to a process that can initiate appropriate procedures to resolve congestion or signal timing issues
- CCTV cameras provide the ability to visually confirm incidents and disabled vehicles on shoulders and to monitor general traffic conditions, including ramps and ramp termini
- Communication system for information delivery to the Transportation Management Centers

Benefits:
- Complete system monitoring to allow Active Traffic Management across the entire I-80 network
- Monitoring and response delivery for the entire system
- Performance monitoring consistent with Caltrans and regional requirements to measure system enhancements
- Provides capability for 24/7 operation at the Caltrans TMC and other agencies if desired

Challenges:
- Integration of various I-80 ICM subsystems
- Communication costs associated with entire system implementation
- Multiple systems and strategies working collectively
Feature Description and Concept:
The Incident Management System (IMS) develops and implements a multi-agency semi-automated response plan to address incidents and emergencies in the I-80 ICM corridor, for both the freeway as well as arterials. The incident management system would be integrated with the Active Traffic Management strategies to allow faster response times to the incidents, reducing delays and improving safety. The enhanced incident management system would help drivers to safely navigate around incidents, facilitating rapid and safe incident clearance and reopening of travel lanes. The main objective of enhanced incident management is to reduce the time between detection and recovery periods.

Key Features:
- Incident detection through semi-automated system
- Incident response plan preparation by all agencies
- Shoulder utilization by emergency service vehicles during incidents
- Emergency preemption equipment on crossing arterials and ramp meters
- Trailblazer and static signs on mainline and crossing arterials to redirect traffic back to freeways to minimize impacts on local streets
- Diversion management through lane closures, detours, and revised signal timing strategies
- Driver alerts for anticipated delays on freeways through dynamic message signs, highway advisory radio, and other traveler information systems

Benefits:
- Reduction in response times in the range of 50-60% using various incident management strategies and techniques
- Increase in throughput using various incident management strategies
- Reduction in impacts on local streets through the use of trailblazer and static signs to redirect diverted traffic to the freeway
- Reduction in incident related congestion and secondary incidents
- Improved mobility and environmental benefits including fuel savings

Challenges:
- Coordination with various emergency management agencies
- Integration with various system components, including the freeway and arterial management systems
- Operational and management costs and impacts on CHP and other local agencies

ICM SubSystem
- Freeway Management System
- Arterial Management System
- Transit Management System
- Traveler Information System
- Incident Management System
- Traffic Surveillance & Control System
- Commercial Vehicle Operations
Integrated Corridor Mobility (ICM) Project

Commercial Vehicle Operations

**Feature Description and Concept:**
The Commercial Vehicle Operations (CVO) component consists of the comprehensive study of provisions to minimize impacts of commercial vehicle operation on the freeways to ensure traffic efficiency and safety, while achieving regional goods movement goals and objectives. During peak periods, heavy truck traffic can consume road capacity and result in severe congestion. The CVO strategies will be examined for application to the I-80 corridor to improve the overall operation, increase goods movement productivity, and reduce the negative impact on the overall traffic during congested periods. The key objective of this feature is to improve safety, efficiency, mobility, and to reduce commercial vehicle travel times.

**Key Features:**
- Consideration of toll incentives to encourage commercial vehicles use of these facilities during non-congested hours
- Consideration of value pricing fees for commercial vehicles to use the corridor during non-rush hour traffic
- Consideration of time of day restrictions for commercial vehicles during peak periods (possible future application)
- Consideration for designated lane segment use to separate trucks from passenger vehicles to improve overall operation
- Dissemination of optimum travel times to CVO operators through 511 and I-80 SMART Corridors website
- Dissemination of real time information and permanent signs to enhance commercial vehicles parking availability for trucks layover

**Benefits:**
- Increase in general passenger auto throughput during peak periods in the range of 7%-8%
- Environmental benefits including fuel savings for both the general traffic and commercial vehicles
- Increase in commercial vehicle productivity during non-congested hours

**Challenges:**
- Acceptance by the commercial vehicle operators and trucking industry
- Coordination with the Bay Area Good Movements strategies
- Acceptance of value pricing by key stakeholders
- Integration with the Bay Area Toll Authority (BATA) plans and systems

*ICM Subsystem*

- Freeway Management System
- Arterial Management System
- Transit Management System
- Traveler Information System
- Incident Management System
- Traffic Surveillance & Control System

*Commercial Vehicle Operations*
Overall Project Description

The San Pablo Avenue Transit and Arterial Operations Improvement Project in Alameda and Contra Costa counties is an integral part of the Interstate-80 (I-80) Integrated Corridor Mobility (ICM) project to enhance the current Transportation Management System along the I-80 corridor and will build a balanced, responsive, equitable and integrated system. The corridor management elements will be used to manage the transportation system through “Active Traffic Management” which includes enhanced incident detection and management and integrated corridor management. The I-80 ICM project consists of multiple systems and strategies, working collectively, to address the challenges in the corridor. Proposed project elements include:

- Corridor-wide Adaptive Ramp Metering
- Ramp metering HOV bypass lanes for transit access
- Variable Speed Limit signs
- Closed-Circuit Television cameras, Highway Advisory Radio and Dynamic Message Signs
- Vehicle Detection Systems
- Commercial Vehicle Operations system
- Emergency Vehicle and Transit Signal Priority systems
- Arterial Management System
- Integration of arterial traffic signals with the Freeway Management System

The total estimated cost of the I-80 ICM project is $87.7 million. The estimate for the freeway portion of the project is $63.4 million. The San Pablo Avenue Transit and Arterial component of the project (local

Continued on other side
improvements) is estimated at $24.3 million. The California Transportation Commission (CTC) approved $55.3 million for the freeway portion and Alameda County Congestion Management Agency (ACCMA) and Contra Costa Transportation Authority (CCTA) have agreed to fund the project development costs ($8.1 million). ACCMA is requesting $2 million in earmark funds for project development for the San Pablo Avenue Transit and Arterial components of the project.

SAN PABLO AVENUE TRANSIT AND ARTERIAL PROJECT PURPOSE
The primary goal of the San Pablo Avenue Transit and Arterial Operation Improvement project is to build a comprehensive systems management project for the arterial and transit components of the I-80 corridor to create a balanced, responsive, and equitable system that will monitor and control traffic and improve the safety and mobility of the users, including transit customers.

The proposed elements for the San Pablo Avenue transit and arterial portion (local improvements) include the following:

- **Video Detection Systems on arterials (including queue detectors)**
- **Emergency Vehicle Pre-Eemption devices for emergency vehicles**
- **Transit Signal Priority for Bus Rapid Transit extension**
- **Trailblazer Signs on arterials for incident management**
- **Variable Message Signs at major transit and parking facilities to display transit and parking information**

**PROJECT BENEFITS**
The I-80 ICM Project and the complementary San Pablo Avenue Transit and Arterial Improvement Project are a unique project from a benefit-cost standpoint. Benefits of the I-80 ICM project include providing enhanced incident detection, reduction of incidents, increase in travel speeds and travel time reliability and reduction in variable flow. Other benefits include reduction in mobile pollutants, fuel consumption, and driver frustration. Associated transit improvements would encourage shift to transit options. The improvements along the I-80 corridor will reduce congestion, increase safety, improve the operation of the freeway, and increase throughput.

The benefits for similar projects include safety improvements in the range of 15% to 50% reduction in accident and improvement in mobility in the range of 10% to 25% increase in peak hour speeds. Other benefits include air pollution, fuel consumption and greenhouse gas reductions as a result of improved speeds and delay reduction.

**Project Participants**
There are a total 20 agencies involved with the I-80 ICM project, as follows:

- Alameda County Congestion Management Agency
- Contra Costa Transportation Authority
- West Contra Costa Transportation Advisory Committee
- Metropolitan Transportation Commission
- California Department of Transportation
- California Highway Patrol
- AC Transit
- WestCAT
- Water Transit Authority
- BART
- City of Albany
- City of Berkeley
- City of Emeryville
- City of El Cerrito
- City of Hercules
- City of Oakland
- City of Hercules
- City of Richmond
- City of San Pablo
- Contra Costa County

All participating agencies have adopted or are in the process of adopting a Resolution of Support for this project.