WCCTAC

West Contra Costa Transportation Advisory Committee

El Cerrito

Hercules

Pinole

Richmond

San Pablo

Contra Costa County

AC Transit

BART

WestCAT

TECHNICAL ADVISORY COMMITTEE MEETING NOTICE AND AGENDA

DATE & TIME: **Thursday September 11, 2014, 9:00 – 11:00 a.m.**

LOCATION: **City of San Pablo, Council Chambers**
13831 San Pablo Avenue (at Church Lane) San Pablo, California
(Accessible by AC Transit #72 and #72R)

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1. **Call to Order and Self-Introductions**

2. **Public Comment.** The public is welcome to address the TAC on any item that is not listed on the agenda. *Please fill out a speaker card and hand it to staff.*

3. **Minutes & Sign-In Sheet from July 10, 2014 meeting.** *(Attachments – APPROVE)*

AGENDA ITEMS

4. **I-80 ICM Status Report and Public Outreach Efforts** – *(Consultant – Circlepoint, CCTA staff; Powerpoint; Attachment, Action: Information Only).* Ivy Morrison from Circlepoint is the Public Affairs consultant on the I-80 ICM contract. She will present the public outreach powerpoint being developed for the September WCCTAC Board meeting. Hisham Noeimi from CCTA will review the maintenance agreements being prepared for each local agency to bring to their councils. Enclosed as background information is a copy of the MOU which governs the project and has already been signed by each jurisdiction; Hisham will answer any questions pertaining to the maintenance agreements and the MOU.

5. **Update on PDA Grant Applications and Future Grants.** *(CCTA Staff; Attachment; Information Only).* Enclosed are two separate and unrelated staff reports from CCTA. The first report is an update on the Priority Development Area (PDA) Planning Grant Program, which allocated $2.745 million to the Authority for PDA planning grants in Contra Costa. Working with review committees made up of local staff, Authority staff developed a recommended list of consultant teams and planning grants which was approved by the CCTA Planning Committee. The second CCTA staff report summarizes numerous grant opportunities and identifies key information on the C4P dates and matching requirements. And lastly, enclosed is an MTC memo on the upcoming Caltrans Sustainable Planning Grant.

6. **High Occupancy Transit Study Scope** – *(Staff, no attachments).* The WCCTAC Board directed staff to prepare a scope of work for a High Capacity Transit Investment Study in partnership with West County transit operators. A Draft Scope has been completed and is being initially reviewed by WCCTAC and transit operator staff. An updated draft will be sent under separate cover to TAC member prior to the meeting. Staff is seeking feedback in preparation for bringing this item to the WCCTAC Board in September.

7. **TDM** – *(Danelle Carey, WCCTAC Staff; No Attachment; Action: Information and Comment).* The Bay Area Commuter Benefits Program requires employers with 50 or more full-time employees in the Bay Area to offer commuter benefits to their employees. Employers subject to the program must select and implement one of the four Commuter Benefit options **by September 30, 2014**; www.commuterbenefits.511.org. The Commuter Benefits Program is mandatory for all employers in the Bay Area, per Senate Bill 1339, codified in California Government Code 65081. If employers require assistance in developing a commuter benefits program, 511 Contra Costa/WCCTAC can provide a consultation to determine the best commuter benefits program for your agency/company. For assistance, contact Danelle Carey, TDM Program Manager, dcarey@wcctac.org.

8. **Countywide Transportation Plan (CTP) Workshops**
   A CTP public outreach contract was approved by CCTA in May. There will be two workshops in West County – the first one in Richmond on Saturday, September 20 at 1:30 p.m. at the Bermuda Room at the Richmond Civic Center, and the second one at the Hercules Community Center at 7:00 p.m. on Monday, September 22.

9. **TAC and Staff Comments and Announcements**
   a. Project Manager Job Announcement – WCCTAC
   b. MTC grant announcements – 5310 and Caltrans Planning Grant

10. **Other Business**

11. **Upcoming meetings:**
    a. ***Board – Friday, September 26, 2014, 8:00 a.m. at El Cerrito Council Chambers***
    b. TAC – Thursday, October 9, 2014, 9:00 am

- In compliance with the Americans with Disabilities Act of 1990, if you need special assistance to participate in the WCCTAC Board meeting, or if you need a copy of the agenda and/or agenda packet materials in an alternative format, please contact Valerie Jenkins at 510.215.3217 prior to the meeting.
- If you have special transportation requirements and would like to attend the meeting, please call the phone number above at least 48 hours in advance to make arrangements.
- Handouts provided at the meeting are available upon request and may also be viewed at WCCTAC's office.
- Please refrain from wearing scented products to the meeting, as there may be attendees susceptible to environmental illnesses. Please also put cellular phones on silent mode during the meeting.
- A meeting sign-in sheet will be circulated at the meeting. Sign-in is optional.

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WCCTAC
West Contra Costa Transportation Advisory Committee

Minutes of July 10, 2014 WCCTAC-TAC Meeting

1. **Self-Introductions:** (see attached sign-in sheet)

2. **Public Comment:** None

3. **Minutes and Sign-In Sheets: June 12, 2014** - Minutes approved.

DISCUSSSION ITEMS

4. **Goods Movement**

Discussion: Caroline Clevenger from MTC and consultants from Cambridge Systematics engaged the TAC in a discussion on issues related to Goods Movement in the Bay Area and specifically in West County. MTC is leading a Goods Movement Collaborative Study. The feedback from TAC members included:

- Overcrossing upgrades are needed on I-80
- Bike-ped crossing on rail tracks need improvements
- Rail schedules and long trains affect bus schedules
- Cutting Blvd needs safety arms across the tracks
- Train horn noise has been raised by the Board and separate resolution
- Communication with rail companies is challenging. TAC supported appointing an ombudsman role.

Conclusion: A workshop on Goods Movement workshops will be held in Fall 2014 and Summer 2015 to continue the dialogue with local stake holders.

5. **West County Polling Effort**

Discussion: Suggestions from the TAC included asking about :

- Include questions regarding bus hours of operation
- Discuss interest in car share programs
- Address senior and disabled needs
- Look at Central Ave/I-80 intersection
- Bike locker needs
- Bus fares and paratransit fares
- Look at Hercules ITC interest
- Ferry service
- Bike share program

Conclusion: Sara LaBatt from EMC Research asked the TAC members what they would like to see in a survey polling effort set for late this year or early next year.

6. Countywide Transportation Plan (CTP) Update
Discussion: Matt Kelly presented CCTA's efforts to hold CTP workshops throughout the County in September.

7. TDM-
Discussion: Danelle Carey from WCCTAC gave an update on Bike Racks and Lockers, EV Charging Stations and the Commuter Benefits Program.

8. San Pablo Dam Road and El Portal Closure.
Discussion: Hisham Noeimi from CCTA presented an update on the Phase 1 efforts on I-80 and San Pablo Dam Road. A video on the actual planned modifications to enhance flow and safety was shown. The hot number for the project is 510-277-0444.

9. I-80 ICM Update
Discussion: RocQuel Johnson from Caltrans explained the upcoming closures on I-80 while the gantries are installed later in the summer through October. She also highlighted the six main tasks for the public relations consultant including:

- Media Events
- Message Development
- Web page development for use by other agencies
- Hotkline in different languages
- Media Outreach
- Meeting with local agencies and residents

Conclusion: The consultants from Circlepoint will attend the September TAC with more information.

10. TAC & Staff Member Comments and Announcements - none

11. Other Business - none

WCCTAC Technical Advisory Committee Meeting: May 8, 2014

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WCCTAC Technical Advisory Committee Meeting: May 8, 2014

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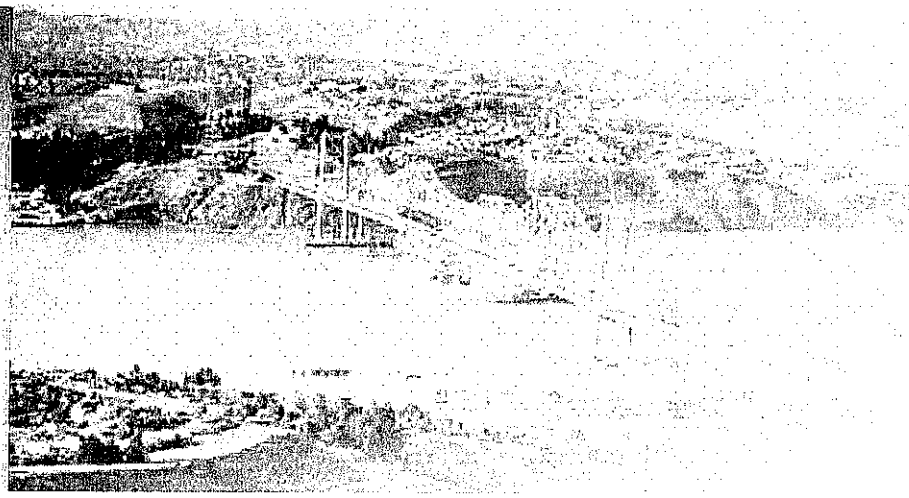
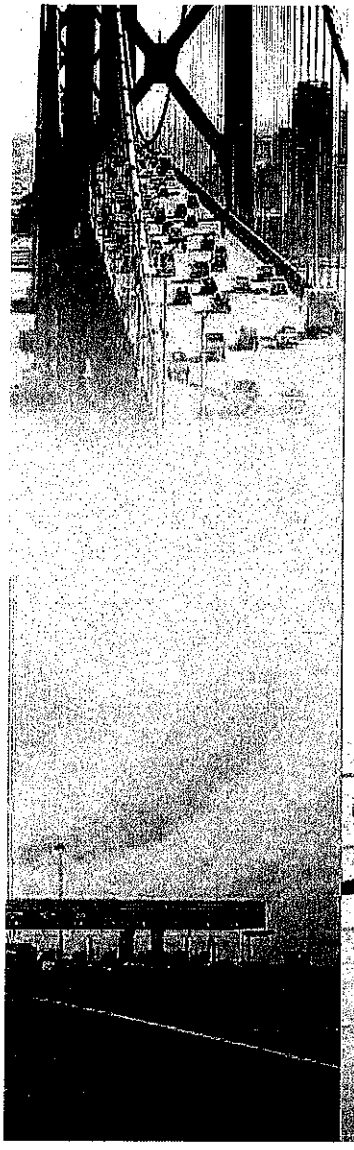


smart corridor
INTERSTATE 80
INTEGRATED CORRIDOR MOBILITY

I-80 ICM



MEMORANDUM OF UNDERSTANDING

Item 4

INTERSTATE 80 CORRIDOR
MEMORANDUM OF UNDERSTANDING (MOU)

CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)
&
LOCAL AND REGIONAL AGENCIES

FOR INTEGRATED CORRIDOR MOBILITY STRATEGIES IN ALAMEDA AND CONTRA COSTA COUNTIES

This MOU is a compilation of the goals, policies, and procedures intended to be followed by the parties working together in a coordinated manner to enhance traffic operations along the Interstate 80 (I-80) corridor in Alameda and Contra Costa Counties. This MOU is intended to identify the overall commitment and responsibilities regarding ownership, operations, and maintenance of the various equipments installed as part of the I-80 Integrated Corridor Mobility (ICM) Project. The following entities are parties to this MOU:
California Department of Transportation (Caltrans), Alameda County Transportation Commission (ACTC), Contra Costa Transportation Authority (CCTA), West Contra Costa Transportation Advisory Committee (WCCTAC), Contra Costa County, AC Transit, WestCAT, Cities of Oakland, Emeryville, Albany, Berkeley, El Cerrito, Richmond, San Pablo, Pinole, and Hercules.

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I. BACKGROUND

Interstate 80, between the Carquinez Bridge and the San Francisco Oakland Bay Bridge, is one of the most congested corridors in the San Francisco Bay Area. Traffic demands on the freeway far exceed the roadway capacity, causing severe congestion, unreliable travel times, and traffic diversion to the local arterials. During the peak periods, the majority of the corridor operates with significant congestion and delays. The congestion on the roadway network contributes to an increase in incident rates, including rear-end collisions on both the freeway and local arterials.
Congestion and associated incidents in this corridor are expected to increase over the next 20 years. By 2015, delay for westbound I-80 will increase by 50% in the AM peak, while delay for eastbound I-80 will increase by 100% in the PM peak.

The San Pablo Avenue corridor is approximately 20 miles long and is the major travel corridor parallel to I-80. This corridor extends from 17th Street in downtown Oakland to Hercules, through the cities of Emeryville, Berkeley and Albany in Alameda County; and the cities of El Cerrito, Richmond, San Pablo, Pinole, Hercules, and unincorporated portions of Contra Costa County. There are approximately 85 traffic signals along the project corridor. San Pablo Avenue is State Route 123 from West McArthur Boulevard in Emeryville to Cutting Boulevard in Richmond.

The East Bay SMART Corridor Program, which includes San Pablo Avenue, is an existing multi-modal Advanced Transportation Management System (ATMS) along the corridor. The program, which took effect in 2003, is a cooperative effort by the California Department of Transportation (Caltrans), the Metropolitan Transportation Commission (MTC), the Alameda County Transportation Commission (Alameda CTC), Contra Costa Transportation Authority (CCTA) and 15 local agencies.

Components of the SMART Corridor include Closed Circuit TV (CCTV), Vehicle Detection System (VDS), Emergency Vehicle Preemption (EVP), and Transit Signal Priority (TSP). These technologies are used to improve the performance of transportation systems, by promoting efficient use of the existing roadway and transit systems. The goal of the SMART Corridor is to allow local agencies to better manage congestion and incidents, improve transportation safety, mobility and efficiency along San Pablo Avenue, and efficiently operate and manage emergency services and transit resources.

In order to improve the efficiency of the entire transportation corridor, the I-80 ICM project will expand and integrate the San Pablo Avenue portion of the SMART Corridor with new elements on San Pablo Avenue, I-80 and crossing arterials. The primary goal of the I-80 ICM project is to enhance the effectiveness of the existing transportation network, including the freeway, ramps, parallel arterials, and the crossing arterials in Alameda and Contra Costa Counties, as well as the transit service.

The Project provides tools for Caltrans and local agencies to manage traffic, including:

- Monitoring/measuring devices such as cameras, video detection systems and loop detectors;
- Communication links to a central location: signal interconnect, wireless modems;
- Traffic control devices;
- Intelligence in form of software and algorithms to respond to changing traffic conditions on ramps and freeway; and
- Tools to communicate traffic/transit information back to drivers

The Project includes five major components:

- Adaptive ramp metering;
- Incident management;
- Information to motorists regarding transit and traffic travel time;
- Improvements along San Pablo Avenue and other arterials; and
- System Integration.

The Project benefits include:

- More reliable travel time within the existing transportation network by optimizing the use of existing capacity.
- Improved safety and operation of the transportation network.
- Reduced traffic congestion by expediting incident clearance and recovery.
- Improved air quality associated with reduced traffic congestion, and.
- Enhanced real-time traveler information.

The I-80 ICM project is a $93 million project that is primarily funded with Corridor Mobility Improvement Account (CMIA) and Traffic Light Synchronization Program (TLSP) funds secured in 2007. Contra Costa Measure J is a contributing fund for project development. Other local funds, including Alameda County 2000 Measure B funds, are also programmed for this project.

This project is developed through a partnership among Caltrans, the ten municipalities along the corridor (Oakland, Emeryville, Albany, Berkeley, El Cerrito, Richmond, San Pablo, Pinole, Hercules, and Contra Costa County), AC Transit, WestCAT, Alameda County Transportation Commission, Contra Costa Transportation Authority, West Contra Costa Transportation Advisory Committee, Metropolitan Transportation Commission, and the California Highway Patrol (CHP).

II. DEFINITION AND EXPLANATION OF TERMS

Active Traffic Management (ATM) – The use of technology for real-time management of traffic flow and communication of travel information to drivers in an effort to reduce congestion and to increase throughput along a corridor.

Adaptive Ramp Metering (ARM) – The use of freeway mainline, ramp, and local street traffic volumes to adjust metering rates for traffic entering the freeway on a real-time basis.

Closed Circuit Television (CCTV) Cameras – Fixed and pan-tilt-zoom cameras mounted on poles to monitor freeway, on-ramp, and local street traffic flow conditions as a way to confirm actual conditions and to implement appropriate traffic management strategies.

Changeable Message Signs (CMS) – Technology to provide advisory traveler information such as incidents, events, construction, maintenance, road closures, parking availability and travel times so that travelers can make informed choices of their travel mode or route.

Corridor Steering Committee (CSC) - The I-80 CSC will be comprised of executive staff or designees of all member agencies to address any issues not resolved by the I-80 Technical Coordinating Committee (I-80 TCC).

Emergency Vehicle Preemption (EVP) – Devices on emergency vehicles communicate with devices at traffic signals to provide a green traffic signal phase for emergency vehicles approaching an intersection.

End-of-Queue Detection – Detection at the entrance to the on-ramp to monitor the length of queued vehicles waiting for the ramp meter and alerts the ramp meter controller if the queue is approaching the adjacent local intersection. Monitoring could be in terms of occupancy (on the loop) or volume differential (vehicles in vs. vehicles out).

Highway Advisory Radio (HAR) – Radio system used to convey real-time traveler information to drivers during incidents or special events.

Incident Condition – An operational scenario as agreed upon by partnering agencies such as loss of fifty-percent of the through lanes on the freeway for 30 minutes or more.

Information Display Boards (IDB) – Large electronic signs used to display real-time traveler information with color and graphic capability to more efficiently communicate with drivers than is possible using traditional Changeable Message Signs.

Trailblazer Signs –Devices that are located at critical decision points along potential local routes to efficiently guide traffic that has left the freeway along a dedicated route past an incident.

Lane Use Signs (LUS) – An ATM device used to display graphic or text information relative to each specific lane, facilitating clear communication with motorists and dynamic lane management as needed for incident management or planned highway work.

Microwave Vehicle Detection System (MVDS) – Uses microwave motion sensor to detect a moving vehicle.

I-80 Policy Advisory Committee (I-80 PAC) – A committee formed to provide guidance and direction on any issues that may arise that require additional input from communities within the I-80 corridor.

Signal Coordination – A traffic operations strategy of setting traffic signal timing plans and offsets such that a platoon of vehicles can travel along a corridor under a green phase as they approach each intersection. (See alos Signal Flush Plans)

Signal Flush Plans – Special traffic signal timing plans that would be implemented at local intersections during freeway incidents in which a large amount of traffic would be expected to leave the freeway and use local streets to bypass an incident. Flush plans provide a long green phase for major traffic route during an incident. Plans are stored in the local traffic signal controller and called out by a plan number. These could be a series of timing plans used for different incident severity, are triggered under specified traffic volume thresholds, and will only be in effect until congestion dissipates on the local streets. (See also Signal Coordination)

Signal Interconnect – Connecting traffic signals along a corridor using copper, fiber, or wireless media to enable data transfer and communication.
Signal Timing Plans – Parameters for allowing green timing for each movement.

I-80 Technical Coordinating Committee (I-80 TCC) – Committee comprising of technical staff from agencies in the I-80 ICM Corridor, responsible for day-to-day transportation service, operations and management of their respective systems within the I-80 corridor.

Transit Signal Priority (TSP) – Equipment installed on transit vehicles that communicates with equipment at the traffic signal to grant an early green or green extension.

Transportation Management Center (TMC) – Central facility at Caltrans or local agencies that houses software, workstations, and staff to operate the system.

Variable Advisory Speed Signs (VASS) – Device that provides timely information to motorists on suggested reduced speeds in advance of downstream congestion or changing conditions. Also used for End of Queue Warning on the freeway. VASS could also be used for speed harmonization. Speed harmonization is a strategy of dynamically and automatically adjusting speed limits approaching areas of traffic congestion, collision, or special events to help maintain traffic flow and reduce risk of collisions due to speed differentials.

III. PURPOSE OF MOU, PROJECT DESCRIPTION, AND PROJECT GOVERNANCE

PURPOSE OF MOU

This MOU serves the following purposes:

- Confirm support from all project partners, particularly local support for ramp metering and other freeway elements;
- Articulate key operations and maintenance (O&M) principles for continuing project development;
- Clarify ownership, O&M, and management responsibilities;
- Clarify the distribution of costs and funding sources;
- Outline the framework for multi-agency cooperation, collaboration, and conflict resolution;
- Identify which Smart Corridor devices will be made part of the I-80 ICM project; and
- Signify the ongoing commitment of the project partners to deliver the project and make it a success.

PROJECT DESCRIPTION

The I-80 ICM Project is located in Alameda and Contra Costa Counties, on a segment of I-80 approximately 20 miles long, from just north of the I-80/580/880 Interchange to just south of the Carquinez Bridge, on San Pablo Avenue from MacArthur Blvd. in Oakland to Cummings Skyway in Contra Costa County (portions of which are also designated as State Route 123), and on other local arterials along the corridor that connect I-80 and San Pablo Avenue. The I-80 ICM Project consists of five major components, as described below:

a. Adaptive Ramp Metering

Adaptive ramp metering (ARM) will be implemented at 44 on-ramps for both directions of the freeway during the weekday peak periods and weekends as needed (refer to Attachment A). ARM manages traffic volumes at the freeway on-ramps during recurring congestion and freeway incidents. Incident-related congestion can be managed through the use of more restrictive metering upstream and less restrictive metering downstream of the incident. The ARM algorithm can adjust metering rates at each on-ramp based on the prevailing or real-time corridor traffic conditions, both on the freeway and the adjacent local arterial.

b. Incident Management

During an incident, Active Traffic Management (ATM) strategies will be deployed to reduce delay and to prevent secondary incidents on the freeway, and to also manage incident traffic on local arterials. This will be accomplished through specific incident response plans (IRP), to be developed in coordination with the local agencies, that employ the I-80 ICM project elements (i.e. CMS, CCTV, LUS, VASS) and San Pablo Avenue East Bay SMART Corridor devices (i.e. CCTV and MVDS) to expedite incident detection, response, and clearance while also minimizing incident impacts via enhanced motorist information.

c. Transit and Traffic Motorist Information

Real-time information for the transportation network, including travel speeds, travel time and transit options, will be provided to motorists and transit passengers via IDBs, CMS, HAR, and 511. This will assist motorists to make timely, informed, and personal decisions earlier in their journey through the corridor, thus, enhancing motorists' trip quality and convenience. This can also at times reduce traffic demand within the corridor by encouraging travelers to use available transit options or to postpone their travel to times when congestion is lower.

d. Improvements along San Pablo Avenue Corridor and Other Arterials

The I-80 ICM Project includes upgraded traffic signal hardware, software and interconnect enhancements, and installation of arterial management components such as closed-circuit television (CCTV) cameras, trailblazer signs, CMS and communication and detection equipment on San Pablo Avenue from MacArthur Boulevard in Oakland to Cummings Skyway in Contra Costa County and local arterials. Other improvements include: extended transit signal priority along San Pablo Avenue Corridor and crossing arterials; extended emergency vehicle preemption; and installation of pedestrian push buttons and countdown signal heads at traffic signals in Pinole, minor traffic signal modification in El Cerrito, intersection striping improvements for transit near El Cerrito del Norte BART Station, and installation of two new traffic signals in Richmond.

e. System Integration

System integration provides for coordinated operations between all of the above project components and sharing of corridor traffic and transit

information among various agencies relative to I-80, San Pablo Avenue and other key local arterials.

GOVERNANCE

It is the intent that all technical and operational matters be resolved among the partnering agencies at the lowest working level. In general, the I-80 integrated corridor management activities will be directed through three bodies of governance, in the following order of hierarchy, from low to high:

Technical Coordinating Committee (I-80 TCC):
The I-80 TCC will be comprised of technical staff responsible for day-to-day transportation service, operations and management of their respective systems within the I-80 corridor. The I-80 TCC will consist of representatives from Caltrans/District 4, the California Highway Patrol (CHP), Metropolitan Transportation Commission (MTC), Alameda County Transportation Commission (Alameda CTC), AC Transit, Contra Costa Transportation Authority (CCTA), Contra Costa County (CCC), the West Contra Costa Transportation Advisory Committee (WCCTAC), WestCAT, and the Cities of Hercules, Pinole, San Pablo, Richmond, El Cerrito, Albany, Berkeley, Emeryville, and Oakland. The I-80 TCC will develop operational strategies needed for integrated corridor system management, ultimately to be adopted by the I-80 Corridor Steering Committee (CSC) as appropriate.

The I-80 TCC will ensure efficient monitoring and enhanced day-to-day freeway and arterial operations, incident management, and timely dissemination of real-time multimodal traffic data to travelers.

The I-80 TCC will directly interact, communicate, and exchange information and cooperatively assist in resolving issues. In the course of these activities, operational protocols will be developed to best serve ramp metering, incident management, signal operations, and transit service.

While Caltrans will be responsible for 24/7 emergency deployment of the ICM components, The I-80 TCC members will, on an ongoing basis, provide input and concurrence on operational strategies such as ramp metering rates or operational periods, flush plans, traffic signal modifications & coordination, and activation of trailblazer signs on local arterials during incidents or major events that affect transportation.

The I-80 TCC will meet monthly or as needed. At these meetings, the I-80 TCC will review available traffic data and recommend solutions to issues relating to the

integrated corridor management, including ramp metering and incident response. For example, Caltrans' representative(s) will provide a status report on the operations of ramp metering in both counties. The status report will include a list of operational issues that were reported by the local agencies and how these issues were resolved. If needed, the Caltrans I-80 TCC representative will lead the I-80 TCC meetings and help formulate recommended changes to the daily operations of the system within the I-80 Corridor.

Corridor Steering Committee (I-80 CSC):
The I-80 CSC will be comprised of executive staff or designees from all member agencies. The I-80 CSC will meet as needed, to address issues unresolved by the I-80 TCC.

Policy Advisory Committee (I-80 PAC):
A Policy Advisory Committee (I-80 PAC) will provide guidance and direction on any issues that may arise that require additional input from communities within the corridor. The I-80 PAC will be comprised of three members: the Caltrans District 4 Director, one elected official from an Alameda County jurisdiction within the corridor appointed by the Alameda CTC, and one elected official appointed by WCCTAC. The I-80 PAC meetings will be held on an as-needed basis.

Table 1 below shows all of the partner agencies that will be represented by the three bodies.

Table 1: I-80 ICM Member Agencies

Member Agencies
California Department of Transportation (Caltrans)
California Highway Patrol (CHP)
Metropolitan Transportation Commission (MTC)
Alameda County Transportation Commission (Alameda CTC)
Contra Costa County
Contra Costa Transportation Authority (CCTA)
Western Contra Costa Transportation Advisory Committee (WCCTAC)
AC Transit
WestCAT
City of Albany
City of Berkeley
City of El Cerrito
City of Emeryville
City of Hercules
City of Oakland
City of Pinole
City of Richmond
City of San Pablo

IV. PROJECT GOALS & OBJECTIVES

The ICM strategies pursued herein shall:

1. Provide traffic operation on the corridor that is equitable and balanced for both the freeway and arterials.
2. Integrate transportation system management activities to enhance safety and mobility for all travel modes within the corridor.
3. Enhance overall transit travel time along corridor routes during normal operations.
4. Enhance trip reliability by providing consistent and predictable travel times on the freeway and local arterials.
5. Avoid impacts on local arterials while managing access at on-ramps during peak periods on weekdays and weekends.
6. Efficiently guide traffic naturally diverted to local arterials during major freeway incidents back to the freeway.
7. Cooperatively operate, manage and maintain all elements installed as part of the I-80 ICM project in an integrated and coordinated manner.
8. Cooperatively develop, implement, evaluate and revise strategies to ensure balanced benefits to local, regional, and inter-regional travelers.
9. Cooperatively identify and address any adverse impacts in a timely fashion.
10. Ensure on-going communication among partnering agencies for timely review and adjustment of activities as needed.
11. Ensure timely and appropriate communication with the public, media, and elected officials.
12. Monitor, evaluate, and report on project performance to ensure compliance with goals and objectives.
13. Facilitate cooperative activities that ensure the sustainability of benefits from the project.

V. OPERATIONS STRATEGIES AND PRINCIPLES

a. OPERATIONAL SCENARIOS & LEAD AGENCIES

Table 2 below illustrates the operational strategies that will initially be deployed as part of the I-80 ICM Project and the agencies that will take the lead in implementing the strategies.

Table 2 – Operational Strategies

Facility	Operational Strategy (Lead Agency or Agencies)	
	Normal Operations	*Incident Management / Special Events*
Freeway & Ramps	Adaptive Ramp Metering (Caltrans) Transit Priority (AC Transit & WestCAT)	Adaptive Ramp Metering (Caltrans) Lane Use Signals (Caltrans) Variable Advisory Speed Signs/ End-of-Queue Warning (Caltrans) Transit Priority (AC Transit & WestCAT)
San Pablo Avenue	Signal Coordination (Local & Caltrans) Transit Priority (AC Transit & WestCAT) Emergency Vehicle Preemption (1st Resp.)*	Flush Plans (Caltrans) Trailblazers (Caltrans) Transit Priority (AC Transit & WestCAT) Emergency Vehicle Preemption (1st Resp.)*
Crossing Arterials	Signal Coordination (Local & Caltrans) Transit Priority (AC Transit & WestCAT) Emergency Vehicle Preemption (1st Resp.)*	Flush Plans (Caltrans) Trailblazers (Caltrans) Transit Priority (AC Transit & WestCAT) Emergency Vehicle Preemption (1st Resp.)*

Note: The project will add and upgrade Emergency Vehicle Preemption (EVP) receivers along San Pablo Avenue and crossing arterials connecting to I-80, as shown in Attachment B, for use by first responders. Emergency vehicle response will continue to be operated by the first responders.

Normal Operations

Under normal conditions, ramp metering will function under adaptive control. This means that traffic conditions along the entire corridor (freeway, ramps, and local streets) will be considered when determining metering rates at each ramp. Each ramp will have an end-of-queue detector to monitor the queue length of vehicles waiting on the on-ramp using either occupancy or volume differential between end-of-queue detector and ramp output loop. If the end of queue approaches the cross street, the ramp meter controller will increase the metering rate up to the maximum rate in order to reduce the queue. If the queue is not dissipating, the ramp meter controller will change the meter to rest on green until the queue is dissipated. At ramp HOV bypass lanes, TSP will allow equipped buses to obtain priority by expediting or flushing out any queue ahead of the bus. Ramp metering will be operated by Caltrans.

On San Pablo Avenue and crossing arterials (connecting San Pablo Avenue to I-80), signal coordination and transit signal priority will be used to improve traffic flow throughout the corridor during normal operating conditions. Much of San Pablo Avenue already has traffic signal interconnect that allows for efficient signal timing coordination and progression. Additional signal interconnect on several crossing arterials will improve the flow of traffic between San Pablo Avenue and I-80. The I-80 ICM project will provide an update to the signal timing along the corridor for normal operating conditions. In the future, signal timing updates will be achieved through other programs, such as those administered by MTC. Local traffic signals will be controlled by the local agency during normal operations. As discussed below, Caltrans will have the ability to control certain signals if required during a special event or following an incident.

TSP exists along much of San Pablo Avenue and serves routes such as AC Transit 72 Rapid. This equipment is also used for emergency vehicle preemption. The I-80 ICM project will add TSP for San Pablo Avenue in the WestCAT service area, and for crossing arterials for AC Transit and WestCAT service areas.

Incident / Special Events Management

Incident conditions will be defined by the I-80 Technical Coordinating Committee (TCC) (e.g. blockage of 50% of freeway lanes for 30 minutes or more). Under incident conditions, ramp metering will continue to operate under an adaptive control as described above. Since freeway conditions rapidly change following an incident, the ramp meter rates could frequently adjust in reaction to the changes. Ramp metering at on-ramps will still be operated such that spillbacks onto the crossing arterials are avoided.

LUS will be turned on based on specific incident conditions. Red X's, yellow diagonal arrows, or text messages will be displayed to convey downstream conditions and guide traffic through the incident scene. Lane use signs will be operated by Caltrans.

VASS will display an advisory reduced speed to reflect downstream congestion or end-of-queue. Initially these signs will only be used for end-of-queue warning; however, the signs could be used for speed harmonization in the future. Speed harmonization is a strategy of dynamically and automatically adjusting speed limits approaching areas of traffic congestion, collision, or special events to help maintain traffic flow and reduce risk of collisions due to speed differentials. Variable advisory speed signs will be operated by Caltrans.

During incident conditions, San Pablo Avenue and crossing arterials may become congested due to traffic that (naturally) leaves the freeway to use the local streets to bypass the incident. The project will not actively divert freeway traffic on to local streets. Trailblazer signs placed on San Pablo Avenue and local arterials will advise drivers where to return back to the freeway after passing the incident location. These signs are

meant to discourage the use of other local streets that could lead to more severe congestion on the local network.

Traffic signal timing along a relevant incident route will be modified during an incident to help increase the throughput of traffic along that route, and to reduce recovery time to normal conditions. The incident timing is referred to as a "signal flush plan". Caltrans will be responsible for executing the appropriate flush plans on affected traffic signals (Caltrans and local agency owned) when an incident occurs. Caltrans and local agencies will develop the Incident Response Plan to help formulate acceptable timing plans that increases the throughput without adverse delays to local traffic including bicycles, pedestrians and transit. The timing plans will be preapproved so activation of them during incidents will be efficient.TSP and emergency vehicle preemption will still be operational during an incident.

The Incident Response Plan will identify a specific subset of devices (ramp metering, VASS, CMS, LUS, Trailblazer signs, IDB, and traffic signals) that will be used to manage the network during an incident. Each scenario will be dependent on many different parameters including time of day, location, incident severity, and expected incident duration. Local agencies will review and approve the use of each strategy. When an incident occurs, Caltrans will determine the scenario that is most appropriate for the incident and deploy the appropriate strategy.

b. OPERATING PRINCIPLES

The following primary guidelines will be used in directing day-to-day transportation management and operational activities along the corridor:

1. General

a. The project will not actively divert freeway traffic onto local streets in the event of an incident on the freeway.

b. The I-80 Technical Coordinating Committee (I-80 TCC) members shall actively participate in monitoring operations within their jurisdictions and in on-going communication relative to the corridor management operations.

c. Caltrans shall be responsible for 24/7 monitoring of ICM devices on the arterials and freeway, and during incidents, selecting and executing the appropriate pre-determined plans, protocols, and parameters in accordance with the IRP. Such activities will be undertaken from the Transportation Management Center (TMC) jointly operated by Caltrans and the California Highway Patrol (available via telephone at 510-286-

6915), located at 111 Grand Avenue, Oakland, and staffed on a 24/7 basis.

d. During normal conditions, each local agency shall have primary control and will be responsible for operating all the project devices within their jurisdiction. Refer to Attachment B for the project devices. Local agencies may also operate signals on San Pablo Avenue within Caltrans jurisdiction upon prior agreements and protocols developed for local needs.

e. Local jurisdictions shall provide contact information for a 24/7 dispatch and/or on-call personnel to be contacted for emergency activities or notification purposes.

f. For safety reasons, only under exigent and unforeseen circumstances such as being directed by law enforcement or in reaction to secondary accidents, Caltrans may be required to make short-term, spot decisions without first consulting with local agencies. Under such circumstances, Caltrans shall promptly notify the local jurisdictions of the actions taken as soon as possible and practicable.

2. Adaptive Ramp Metering

a. Ramp meters will be operating at the freeway on-ramps in both directions, during weekday and weekend peak periods. In addition, ramp meters may be activated during non-peak conditions, as needed, in response to prevailing traffic demand for special events or major incidents.

b. Ramp metering will be operated in adaptive fashion, considering traffic demands and capacity on both the freeway and local arterials. During the metering periods, the implemented system will automatically adjust metering rates to ensure that queues at on-ramps do not extend beyond local agency-specified maximum end-of-queue locations, or shall rest on green for as long a time as necessary.

c. End of queue detection will be used to monitor and contain the queues within the on-ramps, and when absolutely needed on the appropriate turn-lanes, as approved by local jurisdictions, on the local arterials specifically dedicated for freeway entry. Once queues extend beyond the end of queue detector, the ramp meter rate will increase or rest on green to avoid queuing that obstructs local traffic flow.

d. Ramp metering rates will be based on the Adaptive Ramp Metering Algorithm which will consider parameters such as end of queue detection, communication failures, etc.

e. If the ramp metering implementation or ramp metering plan modification does not perform as expected so that there would be excessive delays and queues impacting traffic operations on the local arterial, or results in excessive complaints, Caltrans will consider other options, such as, changing ramp metering rates or operating on-ramps on temporary "rest on green".

f. Caltrans shall promptly respond to requests to modify ramp metering rates from local agencies for initial diagnosis of the issue. If the response times are not met or the operational issue results in significant or adverse impacts, the matter shall be referred to the I-80 TCC for immediate resolution.

g. The metering rates will be developed to avoid delays to buses either at on-ramps or crossing arterials. For buses that are bound for the freeway, transit signal priority will be provided for the HOV by-pass lane ramp metering signal.

3. Local Arterials

a. Under normal conditions, local agencies will have, within their jurisdictions, control of the ICM devices and traffic signals which will be coordinated upon project implementation.

b. Under incident conditions, pre-approved Incident Response Plans (IRPs) will be implemented by Caltrans. Caltrans will assume control of the ICM devices until the incident is cleared. Typical daily signal operations will be resumed immediately upon incident clearance and stabilization of traffic conditions.

c. The IRPs will be evaluated periodically to assess their effectiveness and need for adjustments. Any adjustments to the IRPs will be subject to approval by the TCC.

d. Trailblazer signs installed on local arterials will direct motorists that have naturally diverted to the local streets, due to an incident on I-80, back to the freeway at appropriate location(s) downstream of the incident. Trailblazer signs will be activated only at locations where signal flush plans are turned on.

e. TSP will be utilized at crossing arterials adjacent to on-ramps to provide priority for transit vehicles along those routes.

4. Public Outreach, Response to Inquiries and Complaints

a. Caltrans shall address any and all public inquiries, complaints, and concerns in a timely manner via telephone hotline, e-mail, or correspondence, on an on-going basis, related to freeway operations or related to IRP.

b. On local streets, the local jurisdiction will address any and all public inquiries, complaints, and concerns in a timely manner via telephone hotline, e-mail, or correspondence, on an on-going basis.

c. Caltrans and local agencies will coordinate responses, as appropriate.

VI. EQUIPMENT OWNERSHIP & MAINTENANCE

The I-80 ICM project utilizes various equipment installed throughout the corridor, which are located within different jurisdictional rights-of-way. Table 5 in Section VIII provides a summary of ownership and maintenance responsibilities by type of equipment and right-of-way. Attachment B provides the location of each type of equipment to be utilized, grouped by operational strategy. Attachment B also delineates the ownership and operations responsibilities.

VII. PROJECT DEVELOPMENT PRINCIPLES

a. Project Documents

The following documents have been prepared to design the project:

Project Report:
Defines the purpose and need for the project, identifies the alternative selected, describes how that alternative was decided upon, and describes how consensus was reached among stakeholders.

Environmental Document:
For a capital project to proceed, it must receive official federal, state, and environmental approvals as well as consensus from all the stakeholders and the public.

Corridor Systems Management Plan (CSMP):
Overall corridor operational conditions, existing and future conditions, list of future projects, and recommendations.

Concept of Operations Report (Con Ops):
Concept for proposed system, user-oriented operational description, operational needs, system overview, operational and support environment, operational scenarios, summary of impacts.

Ramp Metering Plan (RMP):
Ramp Meeting operational plans, including metering rates.

Traffic Operations Analysis Report (TOAR):
Existing traffic conditions, proposed alternatives, traffic forecasts, modeling results.

The following documents will govern the implementation of the project:

Project Implementation Plan
Document identifying the staging and commissioning of each I-80 ICM project element (TOS, TLSP, ARM, and ATM).

Operations and Maintenance (O&M) Plan:
Operational scenarios and cost of operations, maintenance and management for each city along the corridor.

Incident Response Plan (IRP):

Overall incident response plan that defines various incident scenarios and procedures for managing traffic congestion during incidents, including signal flush plans.

System Integration Plan:
Specifies the procedures, methods and strategies to implement the required project elements based on project documents and system requirements.

Configuration Management Plan:
Details the process to establish and maintain the integrity and control of software and hardware products.

Outreach Plan:
Outlines strategies to disseminate periodic project information and updates to various stakeholders.

b. Construction

The project will be constructed in six contracts – four construction contracts, one material procurement contract, and one systems integration contract. While local business preference is not allowed for State-funded construction contracts, such as these, outreach will be conducted to encourage local participation.

PHASING AND IMPLEMENTATION SCHEDULE
For delivery purposes, the I-80 ICM project has been split into six contracts as shown in Table 3 below.

TABLE 3 – SCHEDULE OF CONSTRUCTION CONTRACT DELIVERY

I-80 ICM Construction Contracts	Tentative Construction Schedule		Implementing Agency for Construction & Procurement Contracts
	Start	End	
Project 1: Software Development / System Integration	March 2012	January 2015*	Alameda CTC
Project 2: Specialty Materials Procurement	October 2012	April 2014	Alameda CTC
Project 3: Traffic Operation Systems	April 2011	May 2012	Alameda CTC
Project 4: Adaptive Ramp Metering	May 2012	December 2013	Caltrans
Project 5: Active Traffic Management	May 2012	April 2014	Caltrans
Project 6: San Pablo Corridor Arterial and Transit Improvement Project	May 2011	December 2013	Alameda CTC

* Includes a 1-year rollout, implementation and commissioning period

The public will be notified as appropriate of imminent construction activities.

c. System Integration

The Project deploys a number of components and equipment that need to communicate with each other and with the TMC. In order to achieve such automated data flow, various components of the project are linked via a data network. The disaggregate components will be controlled and communicated utilizing a custom application (software) that will be developed by the System Integrator. The System Integrator working with the I-80 TCC will be responsible for developing a System Integration Plan for automated communications and interaction between the various devices and the TMC.

Phase I of System Integration integrates devices on San Pablo Avenue (existing devices from East Bay SMART Corridor and new devices installed under the project) and Phase II will address the I-80 devices and the interaction with San Pablo Avenue components system. System Integration provides for coordinated operations and sharing of corridor traffic and transit information among various agencies relative to I-80, San Pablo Avenue Corridor and other key local arterials. Software is provided to enable operations of all I-80 project elements from Caltrans TMC and share information with local agency TMC.

d. Implementation & Initial System Evaluation

Project Implementation is outlined in the Project Implementation Plan with input provided by the I-80 TCC. It is expected that Adaptive Ramp Metering and Active Traffic Management components of the projects listed on Table 3 will be activated at the same time, in early 2014.

After the devices are installed, system components will be tested individually and then collectively prior to performing a full rollout. Following full roll-out, driver behavior is expected to adjust and eventually settle into a repetitive, predictive pattern. The system will then be monitored extensively and minor fine tuning of signal timing and ramp metering algorithms will be performed as appropriate. The monitoring activities will include evaluating impacts of the project on transit operations and the magnitude of traffic diversion to local streets. Strategic transit enhancements, such as relocation of bus stops, etc., changes to the signal flush plans, and use of the trailblazer signs may be implemented to address such impacts. A study will be done to document conditions before and after the project is implemented, recommend changes, if necessary, and report on the project benefits.

e. Regular Operations & Maintenance

The regular operations and maintenance will be in accordance with the Project Operations and Maintenance Plan (O&M) developed for the project with input provided by the I-80 TCC. The O&M Plan addresses staffing, training, performance monitoring and reporting, and data ownership.

f. Configuration and Change Management

The configuration and change management will be in accordance with the Project Configuration Management Plan developed for the project with input provided by the I-80 TCC. The Configuration Management Plan details the process to establish and maintain the integrity and control of software and hardware products.

VIII. COSTS & FUNDING

The project is funded by various fund sources for the different phases of the project – Project Development, Construction, and Operation & Maintenance phases. Funding for each phase is outlined as follows:

a. Project Development Phase:

The following table (Table 4) breaks down funding for the project development phase:

Table 4 – Project Development Funding Sources

Fund Source	Funding Agency	Amount
CMAQ (Fed)	Federal	$ 3,243,000
STIP (CCC)	State	$ 954,000
CMA TIP	Alameda CTC	$ 1,080,000
Measure J	CCTA	$ 4,876,000
WCCTAC	WCCTAC	$ 47,000
2000 Measure B	Alameda CTC	$ 1,800,000
TFCA	BAAQMD	$ 1,155,000
Total		**$ 13,155,000**

b. Construction Phase:

The construction of freeway portion of I-80 ICM project is funded by $55.3 million from California State Proposition 1B Bond funds - Corridor Mobility Improvement Account (CMIA). The construction of San Pablo Avenue components is funded by $21.4 million from California State Proposition 1B Bond funds - Traffic Light Synchronization Program (TLSP) Account.

c. Operations & Maintenance (O&M) Phase:

Caltrans is responsible for funding, operating and maintaining the equipment in State right-of-way, except for traffic signals subject to other maintenance agreements and EVP receivers at Caltrans-maintained traffic signals. Caltrans shall maintain TSP receivers at HOV ramp meter bypass lanes.

- Caltrans is responsible for funding the 24/7 monitoring of the I-80 ICM from the TMC.

- Within Alameda County outside of State right-of-way, cities will be responsible for operations and maintenance of the equipment. Alameda CTC will provide funding for operating and maintaining ICM equipment.

- Within Contra Costa County outside of State right-of-way, local jurisdictions will be responsible for operations and maintenance of ICM equipment, and may choose to contract with Contra Costa County for maintenance. Local jurisdictions will not be responsible for funding the operations and maintenance of ICM equipment in perpetuity. CCTA will secure $2,000,000 in funding for operating and maintaining ICM equipment. This amount is estimated to fund about 15 years of operations and maintenance. CCTA will seek additional funding beyond the $2 million from regional and other sources.

- Funding for East Bay SMART Corridor devices that are not used for deploying I-80 ICM strategies will continue to be funded under the terms of the existing O&M Agreement between Alameda CTC and the local agencies.

- Cities / Contra Costa County will be responsible for funding, operating and maintaining existing and upgraded traffic signals within their right-of-way.

- Cities / Contra Costa County will be responsible for funding, operating and maintaining non-ICM equipment requested by local agencies within their right-of-way. This includes speed feedback signs (Pinole) and Changeable Message Signs on local arterials (Oakland).

- Funding for the TSP equipment in transit vehicles will be provided as part of the I-80 ICM project. Installation, Operation and maintenance of TSP equipment in the transit vehicles, and funding for installation, operations and maintenance of such equipment, will be the responsibility of the respective transit agency.

The foregoing is summarized in Table 5 below:

Table 5 - O&M and Funding Responsibility Table

Grouping	ROW	Equipment	O&M Responsibility	Funding Responsibility
East Bay SMART Corridor Equipment - Used for ICM Strategy	Caltrans	CCTV	Caltrans	Caltrans
		MVDS	Caltrans	Caltrans
		TSP	Caltrans	Caltrans
	Non-Caltrans	CCTV	Cities/County *	Alameda CTC or CCTA
		MVDS	Cities/County *	Alameda CTC or CCTA
		TSP	Cities/County *	CCTA/Alameda CTC*
East Bay SMART Corridor Equipment - NOT used for ICM Strategy	Caltrans	CCTV	NONE	NONE
		MVDS	NONE	NONE
		TSP	NONE	NONE
	Non-Caltrans	CCTV	Cities/County	Cities/County
		MVDS	NONE	NONE
		TSP	Cities**	Cities**
I-80 ICM Equipment - Used for ICM Strategy	Caltrans	CCTV	Caltrans	Caltrans
		MVDS	NONE	NONE
		TRAILBLAZERS	Caltrans	Caltrans
		TRAFFIC SIGNAL	Caltrans	Caltrans
		TSP	Caltrans	Caltrans
		EVP	Caltrans	Caltrans
	Non-Caltrans	CCTV	Cities/County (CC only) *	CCTA***
		MVDS	Cities/County (CC only) *	CCTA***
		TRAILBLAZERS	Cities/County	Alameda CTC or CCTA
		TRAFFIC SIGNAL	Cities/County	Cities/County
		TSP	Cities/County	Alameda CTC or CCTA
		EVP	Cities/County	Cities/County

I-80 ICM Equipment - Other/ Requested by Cities	Caltrans	Ramp Meter HOV TSP	Caltrans	Caltrans
	Non-Caltrans	OAKLAND: PTZ cameras Arterial CMS Intersection Detection (VID, Magnetometer), Video Encoders	Oakland	Oakland
		BERKELEY: Intersection Video Detection	Berkeley	Berkeley
		RICHMOND: Intersection Video Detection	Richmond	Richmond
		PINOLE: Speed feedback signs	Pinole	Pinole

NOTES:
* Contra Costa cities may contract with Contra Costa County for maintenance of these devices.
** No TSPs in Contra Costa County that are not used for I-80 ICM Strategy.
*** No new CCTV or MVDS in Alameda County.

Refer to Attachment C for detailed estimates of operations and maintenance costs in each jurisdiction. Responsibility for funding O&M costs is detailed in Table 5 above. The estimates are provided to document assumptions on how the O&M costs are derived.

IX. FUTURE MOU MODIFICATIONS

This MOU is a legally non-binding document. However, revisions to this MOU may be requested by the I-80 TCC and approved by the CSC. Revisions may also be recommended by the CSC. In either case, implementation of changes to the MOU would require a written amendment by all the partnering agencies that are signatories of this MOU. This MOU expires after ten years from the date of its execution, unless extended by partnering agencies pursuant to an approved amendment.

X. NEED FOR ADDITIONAL AGREEMENTS

New maintenance agreements or amendments to existing maintenance agreements between Caltrans and affected jurisdictions will be developed and executed as necessary to address maintenance arrangements, liabilities, or any other legal issues.

The parties to this MOU specifically repudiate the division of liability and indemnification outlined in Government Code section 895.2, and will address these topics in future agreements, as necessary.

STAKEHOLDER MOU NO. _____

The California Department of Transportation District 4 hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: 5/7/12

CALIFORNIA DEPARTMENT OF
TRANSPORTATION, DISTRICT 4

Signed by: _____

S. SEAN NOZZARI
Deputy District Director
Traffic Operations

STAKEHOLDER MOU NO. _____

The Alameda County Transportation Commission hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: June 1, 2012

ALAMEDA COUNTY TRANSPORTATION COMMISSION

By: _____
ARTHUR L. DAO
Executive Director

Recommended:

By: _____
STEWART D. NG
Deputy Director of Programming
and Projects

Reviewed as to Budget/Financial Controls:

By: _____
PATRICIA REAVEY
Director of Finance

Approved as to Legal Form:

By: _____
WENDEL, ROSEN, BLACK & DEAN LLP
Alameda CTC Counsel

STAKEHOLDER MOU NO. _____

Contra Costa County hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: May 14, 2012

CONTRA COSTA COUNTY

Signed by: _____

JULIA BUEREN
Public Works Director

STAKEHOLDER MOU NO. 15.00.06

The Contra Costa Transportation Authority hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: May 9, 2012

CONTRA COSTA TRANSPORTATION AUTHORITY

Signed by: _____
DON TATZIN
Chair

Signed by: _____
for RANDELL H. IWASAKI
Executive Director

Approved as to Form

Signed by: _____
MALATHY SUBRAMANIAN
Authority Counsel

STAKEHOLDER MOU NO. 12-01

The West Contra Costa Transportation Advisory Committee hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: 2.24.12

WEST CONTRA COSTA TRANSPORTATION ADVISORY COMMITTEE

Signed by: _____

CHRISTINA ATIENZA
Executive Director

AC Transit hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: 5/21/12

AC TRANSIT

Signed by: _____

DAVID J. ARMIJO
General Manager

APPROVED AS TO FORM AND CONTENT

Signed by: _____

VINCENT EWING
General Counsel

5/21/12

STAKEHOLDER MOU NO. _____

WestCAT hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: 5-7-12 WESTCAT

Signed by: _____
CHARLES ANDERSON
General Manager

STAKEHOLDER MOU NO. _____

The City of Albany hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: 5/14/2012

CITY OF ALBANY

Signed by: _____
BETH POLLARD
City Manager

Signed by: _____
CRAIG LABADIE
City Attorney

STAKEHOLDER MOU NO. _____

The City of Berkeley hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: May 17, 2012 CITY OF BERKELEY

Signed by: Tom Bates
TOM BATES
Mayor

Signed by: Mark Numainville
MARK NUMAINVILLE
Acting City Clerk

STAKEHOLDER MOU NO. _____

The City of El Cerrito hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: 5/17/12

CITY OF EL CERRITO

Signed By: _____
SCOTT HANIN
City Manager

Approved as to Form:

_____
SKY WOODRUFF
City Attorney

STAKEHOLDER MOU NO. _____

The City of Hercules hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: 05/07/2012

CITY OF HERCULES

Signed by: _____

STEVE DURAN
City Manager

STAKEHOLDER MOU NO. _____

The City of Oakland hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: 05-16-2012

CITY OF OAKLAND

Signed by: _____ for

Deanna J. Santana
City Administrator

STAKEHOLDER MOU NO. _____

The City of Pinole hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: 6/14/2012 CITY OF PINOLE

Signed by: Belinda B. Espinosa
BELINDA B. ESPINOSA
City Manager

STAKEHOLDER MOU NO. _____

The City Of Richmond hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: 5/17/12

CITY OF RICHMOND

Signed by: _____

WILLIAM A. LINDSAY
City Manager

STAKEHOLDER MOU NO. _____

The City Of San Pablo hereby approves the goals, responsibilities and procedures defined in the Memorandum of Understanding for the Interstate 80 Integrated Corridor Mobility Project. This Memorandum of Understanding is between the California Department of Transportation (Caltrans) and local and regional agencies.

Dated: 5-21-2012

CITY OF SAN PABLO

Signed by: _____

MATT RODRIGUEZ
City Manager

ATTACHMENT A

On-Ramp Metering Locations	Ramp Lane Configuration (Mix + HOV)	Vicinity
EASTBOUND		
Powell St.	2	Emeryville
Ashby Ave./Potter St.	2	Berkeley
University Ave.	2	Berkeley
Gilman St.	2	Berkeley
Buchanan St.	1	Albany
Central Ave.	2	Richmond
Carlson Blvd.	2	Richmond
Cutting Blvd. (loop ramp)	1	El Cerrito
Cutting Blvd.	2	El Cerrito
San Pablo Ave.	2	Richmond
San Pablo Dam Rd.	1	San Pablo
El Portal Dr.	2	Richmond
Eastbound Hilltop Dr. (loop ramp)	1	Richmond
Westbound Hilltop Dr.	1+1*	Richmond
Eastbound Fitzgerald/ Richmond Pkwy. (loop ramp)	2	Pinole
Westbound Fitzgerald/Richmond Parkway	1	Pinole
Southbound Appian Way (loop ramp)	1	Pinole
Northbound Appian Way	2	Pinole
Pinole Valley Rd.	1	Pinole
John Muir Pkwy. (SR-4)	By another project	
Willow Ave.	By another project	
Cummings Skyway	By another project	

*Note: * Denotes TSP installation at ramp meter*

On-Ramp Metering Locations	Ramp Lane Configuration (Mix + HOV)	Vicinity
WESTBOUND		
San Pablo Ave. / Pomona St.	1	CC County
Cummings Skyway	1	CC County
Willow Ave.	By another project	
John Muir Parkway (SR-4)	2+1*	Hercules
Pinole Valley Rd.	2*	Pinole
Appian Way	2	Pinole
Fitzgerald Dr./Richmond Parkway	1	Richmond
Westbound Hilltop Dr. (loop ramp)	1+1*	Richmond
Hilltop Dr.	1+1*	Richmond
El Portal Dr.	2	San Pablo
San Pablo Dam Rd.	2	San Pablo
Solano Ave.	1	Richmond
Barrett Ave.	2	Richmond
Potrero Ave.	2	Richmond
Carlson Blvd.	2	Richmond
Central Ave.	1	Richmond
Buchanan St.	2	Albany
Gilman St.	1+1*	Berkeley
University Ave. (loop)	1+1*	Berkeley
Ashby Ave. & Frontage Rd.	2+1*	Berkeley
Powell St./Frontage Rd.	2	Emeryville
Powell St.	1	Emeryville

*Note: * Denotes TSP installation at ramp meter*

ATTACHMENT B

Cameras

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
CLOSED-CIRCUIT TELEVISION (CCTV) CAMERA LOCATIONS
4/17/2012

No.	Main Street	Cross Street	Vicinity	Used by I-80 ICM Project?	Video Encoder?	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents	
EXISTING SMART CORRIDOR CCTV CAMERA LOCATIONS (USED FOR I-80 INCIDENT MANAGEMENT)									
1	San Pablo Ave	John Muir Pkwy	Hercules	Yes	Yes	Hercules	Hercules	Caltrans	
2	San Pablo Ave	Richmond Pkwy	Richmond	Yes	Yes	Richmond	Richmond	Caltrans	
3	San Pablo Ave	San Pablo Dam Rd	San Pablo	Yes	Yes	San Pablo	San Pablo	Caltrans	
4	San Pablo Dam Rd	I-80 SB Ramps	San Pablo	Yes	Yes	Caltrans	Caltrans	Caltrans	
5	San Pablo Ave	Cutting Blvd	El Cerrito	Yes	Yes	Caltrans	Caltrans	Caltrans	
6	San Pablo Ave	Portero Ave	El Cerrito	Yes	Yes	Caltrans	Caltrans	Caltrans	
7	Central Ave	I-80 NB ramps	Richmond	Yes	Yes	Caltrans	Caltrans	Caltrans	
8	San Pablo Ave	Central Ave	El Cerrito	Yes	Yes	Caltrans	Caltrans	Caltrans	
9	Buchanan St	I-80 NB Ramps	Albany	Yes	Yes	Caltrans	Caltrans	Caltrans	
10	San Pablo Ave	Buchanan St	Albany	Yes	Yes	Caltrans	Caltrans	Caltrans	
11	San Pablo Ave	Gilman St	Berkeley	Yes	Yes	Caltrans	Berkeley	Caltrans	
12	San Pablo Ave	University Ave	Berkeley	Yes	Yes	Caltrans	Berkeley	Caltrans	
13	San Pablo Ave	Ashby Ave	Berkeley	Yes	Yes	Caltrans	Berkeley	Caltrans	
14	San Pablo Ave	Powell St / Stanford Ave	Oakland	Yes	Yes	Oakland	Oakland	Caltrans	
15	San Pablo Ave	W. Grand Ave	Oakland	Yes	No	Oakland	Oakland	Caltrans	
EXISTING SMART CORRIDOR CCTV CAMERA LOCATIONS (*NOT* USED FOR I-80 INCIDENT MANAGEMENT)									
1	San Pablo Ave	Church Ln	San Pablo	No	Yes	Richmond	Richmond	**Not Used**	
2	San Pablo Ave	Macdonald Ave	Richmond	No	Yes	Richmond	Richmond	**Not Used**	
3	University Ave	6th St	Berkeley	No	Yes	Berkeley	Berkeley	**Not Used**	
4	Ashby Ave	7th St	Berkeley	No	Yes	Caltrans (Berkeley)	Berkeley	**Not Used**	
5	Powell St	Christie Ave	Emeryville	No	Yes	Emeryville	Emeryville	**Not Used**	
6	San Pablo Ave	40th St	Emeryville	No	Yes	Caltrans	Caltrans	**Not Used**	
7	W. Grand Ave	Mandela Pkwy	Oakland	No	Yes	Oakland	Oakland	**Not Used**	
NEW I-80 ICM PTZ CCTV LOCATIONS (VIDEO ENCODER AT CALTRANS-MAINTAINED LOCATIONS)									
1	San Pablo Ave	MacArthur Blvd	Oakland	Yes	No	Caltrans (CCTV O&M by Oakland)	Oakland	**Not Used**	E-1
2	I-80 EB on-ramp	Powell St	Emeryville	Yes	Yes	Caltrans	Caltrans	Caltrans	E-2
3	I-80 WB on/off ramps	Frontage Road/ Captian Dr	Emeryville	Yes	Yes	Caltrans	Caltrans	Caltrans	E-3
4	I-80 EB on/off ramps	Ashby	Berkeley	Yes	Yes	Caltrans	Caltrans	Caltrans	E-7
5	I-80 WB on-ramp	University	Berkeley	Yes	Yes	Caltrans	Caltrans	Caltrans	E-8
6	I-80 EB on/off ramps	Gilman	Berkeley	Yes	Yes	Caltrans	Caltrans	Caltrans	E-9
7	I-80 WB on/off ramp	Buchanan St	Albany	Yes	Yes	Caltrans	Caltrans	Caltrans	ATM
8	I-80 WB on/off ramp	Central Ave	Richmond	Yes	Yes	Caltrans	Caltrans	Caltrans	ATM
9	I-80 WB on-ramp	Potrero	El Cerrito	Yes	Yes	Caltrans	Caltrans	Caltrans	E-22
10	I-80 WB on-ramp	Cutting	Richmond	Yes	Yes	Caltrans	Caltrans	Caltrans	E-24
11	I-80 WB on/off ramps	Carlson	Richmond	Yes	Yes	Caltrans	Caltrans	Caltrans	E-32
12	I-80 EB on/off ramps	Carlson	Richmond	Yes	Yes	Caltrans	Caltrans	Caltrans	E-33
13	I-80 EB on/off ramps	San Pablo Ave	Richmond	Yes	Yes	Caltrans	Caltrans	Caltrans	E-36
14	I-80 EB on/off ramps	San Pablo Dam Rd	San Pablo	Yes	Yes	Caltrans	Caltrans	Caltrans	E-45
15	I-80 WB on-ramp	El Portal	San Pablo	Yes	Yes	Caltrans	Caltrans	Caltrans	E-47
16	I-80 EB on/off ramps	El Portal	San Pablo	Yes	Yes	Caltrans	Caltrans	Caltrans	E-50

Cameras

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
CLOSED-CIRCUIT TELEVISION (CCTV) CAMERA LOCATIONS
4/17/2012

No.	Main Street	Cross Street	Vicinity	Used by I-80 ICM Project?	Video Encoder?	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents	
17	I-80 WB on/off ramps	Hilltop	Richmond	Yes	Yes	Caltrans	Caltrans	Caltrans	E-52
18	I-80 EB on/off ramps	Hilltop	Richmond	Yes	Yes	Caltrans	Caltrans	Caltrans	E-54
19	I-80 WB on/off ramps	Richmond Parkway	Richmond	Yes	Yes	Caltrans	Caltrans	Caltrans	E-56
20	I-80 EB on/off ramps	Richmond Parkway	Pinole	Yes	Yes	Caltrans	Caltrans	Caltrans	E-59
21	I-80 EB on/off ramps	Appian	Pinole	Yes	Yes	Caltrans	Caltrans	Caltrans	E-61
22	I-80 WB on/off ramps	Appian	Pinole	Yes	Yes	Caltrans	Caltrans	Caltrans	E-63
23	I-80 WB on/off ramps	Pinole Valley Rd	Pinole	Yes	Yes	Caltrans	Caltrans	Caltrans	E-65
24	I-80 WB on-ramp	Willow	Hercules	Yes	Yes	Caltrans	Caltrans	Caltrans	E-68
25	I-80 EB on/off ramps	Willow	Hercules	Yes	Yes	Caltrans	Caltrans	Caltrans	E-71
26	I-80 WB on-ramp	Cummings Skyway	Conta Costa County	Yes	Yes	Caltrans	Caltrans	Caltrans	ATM
27	San Pablo Ave	20th	Oakland	Yes	No	Oakland	Oakland	**Not Used**	O-16
28	San Pablo Ave	30th	Oakland	Yes	No	Oakland	Oakland	**Not Used**	O-17
29	San Pablo Ave	35th	Oakland	Yes	No	Oakland	Oakland	**Not Used**	O-17
30	Grand	Harrison	Oakland	Yes	No	Oakland	Oakland	**Not Used**	O-19
31	Grand	Broadway	Oakland	Yes	No	Oakland	Oakland	**Not Used**	O-25
32	Grand	MacArthur Blvd	Oakland	Yes	No	Oakland	Oakland	**Not Used**	O-29
33	Grand	Lake Park	Oakland	Yes	No	Oakland	Oakland	**Not Used**	O-32
34	San Pablo Ave	El Portal	San Pablo	Yes	Yes	San Pablo	San Pablo	Caltrans	SP-10
35	San Pablo Ave	Hilltop	Richmond	Yes	Yes	Richmond	Richmond	Caltrans	R-7
36	San Pablo Ave	Appian	Pinole	Yes	Yes	Pinole	Pinole	Caltrans	P-9
37	San Pablo Ave	Pinole Valley Rd	Pinole	Yes	Yes	Pinole	Pinole	Caltrans	P-10
38	San Pablo Ave	Willow Ave	Conta Costa County	Yes	Yes	Conta Costa County	Conta Costa County	Caltrans	CC-1
39	San Pablo Ave	Cummings	Conta Costa County	Yes	Yes	Conta Costa County	Conta Costa County	Caltrans	CC-2
OAKLAND VIDEO ENCODER LOCATIONS (VIDEO DETECTION CAMERAS)									
1	W. Grand Ave	Mandela Pkwy	Oakland	No	Yes	Oakland	Oakland	**Not Used**	O-20
2	W. Grand Ave	Adeline St	Oakland	No	Yes	Oakland	Oakland	**Not Used**	O-22
3	W. Grand Ave	Broadway	Oakland	No	Yes	Oakland	Oakland	**Not Used**	O-25
4	Grand Ave	Webster St	Oakland	No	Yes	Oakland	Oakland	**Not Used**	O-26
5	Grand Ave	Valdez St	Oakland	No	Yes	Oakland	Oakland	**Not Used**	O-27
6	Grand Ave	MacArthur Blvd	Oakland	No	Yes	Oakland	Oakland	**Not Used**	O-29
7	MacArthur Blvd	Lakeshore Ave	Oakland	No	Yes	Oakland	Oakland	**Not Used**	O-30
8	Lakeshore Ave	Lake Park	Oakland	No	Yes	Oakland	Oakland	**Not Used**	O-31
9	Grand Ave	Lake Park	Oakland	No	Yes	Oakland	Oakland	**Not Used**	O-32

Vehicle Detection

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
VEHICLE DETECTION LOCATIONS (COUNT STATIONS)
4/17/2012

No.	Main Street	Cross Street	Vicinity	Used by I-80 ICM Project?	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
EXISTING SMART CORRIDOR MICROWAVE VEHICLE DETECTION STATIONS							
1	John Muir Pkwy	east of San Pablo Ave	Hercules	Yes	Contra Costa County	Contra Costa County	Caltrans
2	San Pablo Ave	southof Sycamore	Hercules	Yes	Hercules	Hercules	Caltrans
3	San Pablo Ave	south of Del Monte	Pinole	Yes	Pinole	Pinole	Caltrans
4	San Pablo Ave	south of Richmond Pkwy	Richmond	Yes	Richmond	Richmond	Caltrans
4	Richmond Pkwy	west of I-80	Richmond	Yes	Richmond	Richmond	Caltrans
6	San Pablo Ave	south of Robert H. Miller	Richmond	Yes	Richmond	Richmond	Caltrans
7	San Pablo Ave	south of El Portal	San Pablo	Yes	San Pablo	San Pablo	Caltrans
8	San Pablo Ave	south of Barrett	Richmond	Yes	Richmond	Richmond	Caltrans
9	San Pablo Ave	south of Eastshore / Hill	El Cerrito	Yes	Caltrans	Caltrans	Caltrans
10	San Pablo Ave	south of Portero	El Cerrito	Yes	Caltrans	Caltrans	Caltrans
11	Portero Ave	east of I-80	El Cerrito	Yes	El Cerrito	El Cerrito	Caltrans
12	Central Ave	east of I-80	El Cerrito	Yes	El Cerrito	El Cerrito	Caltrans
13	San Pablo Ave	south of Fairmont	Albany	Yes	Caltrans	Caltrans	Caltrans
14	San Pablo Ave	south of Buchanan	Albany	Yes	Caltrans	Caltrans	Caltrans
15	Buchanan Ave	east of I-80	Albany	Yes	Albany	Albany	Caltrans
16	San Pablo Ave	south of Gilman	Berkeley	Yes	Caltrans	Berkeley	Caltrans
17	Gilman	east of I-80	Berkeley	Yes	Berkeley	Berkeley	Caltrans
18	San Pablo Ave	south of University	Berkeley	Yes	Caltrans	Berkeley	Caltrans
19	University Ave	east of I-80	Berkeley	Yes	Berkeley	Berkeley	Caltrans
20	San Pablo Ave	south of Ashby	Berkeley	Yes	Caltrans	Berkeley	Caltrans
21	Ashby Ave	east of I-80	Berkeley	Yes	Caltrans	Berkeley	Caltrans
22	San Pablo Ave	south of Powell / Stanford	Emeryville	Yes	Caltrans	Caltrans	Caltrans
23	Powell	east of I-80	Emeryville	Yes	Emeryville	Emeryville	Caltrans
NEW I-80 ICM MICROWAVE VEHICLE DETECTION STATIONS							
1	San Pablo Dam Rd	east of San Pablo Ave	San Pablo	Yes	San Pablo	San Pablo	Caltrans
2	El Portal Dr	east of Mission Bell Dr	San Pablo	Yes	San Pablo	San Pablo	Caltrans
3	Hilltop Dr	south of Hillview Dr	Richmond	Yes	Richmond	Richmond	Caltrans
4	Richmond Pkwy	east of Lakeside Dr	Richmond	Yes	Richmond	Richmond	Caltrans
4	Appian Way	north of Mann Dr	Pinole	Yes	Pinole	Pinole	Caltrans
6	San Pablo Ave	west of Oakridge Rd	Pinole	Yes	Pinole	Pinole	Caltrans
7	Pinole Valley Rd	south of Henry Ave	Pinole	Yes	Pinole	Pinole	Caltrans
8	San Pablo Ave	south of Victoria Crescent	Hercules	Yes	Hercules	Hercules	Caltrans
9	San Pablo Ave	west of Cummings Skwy	Conta Costa County	Yes	Conta Costa County	Conta Costa County	Caltrans
10	San Pablo Ave	east of Cummins Skwy	Conta Costa County	Yes	Conta Costa County	Conta Costa County	Caltrans

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
EMERGENCY VEHICLE DETECTION (EVP)/ TRANSIT SIGNAL PRIORITY (TSP) INTERSECTIONS
4/17/2012

No.	Main Street	Cross Street	Vicinity	ROW (Maintaining Agency, if different)	Transit Agency User	Plan sheet
NEW I-80 ICM TSP INTERSECTIONS						
1	San Pablo Ave	Willow Rd	Hercules	Contra Costa County	WestCAT Regional	Vol2 G-18
2	Willow Rd	Hawthorne Dr	Hercules	Hercules	WestCAT Regional	Vol2 G-18
3	San Pablo Ave	Victoria Crescent E	Hercules	Contra Costa County	WestCAT Regional	Vol2 G-18
4	San Pablo Ave	John Muir Pkwy (SR 4)	Hercules	Contra Costa County	WestCAT Regional	Vol2 G-18
5	San Pablo Ave	Transit Center	Hercules	Hercules	WestCAT Regional	Vol2 G-18
6	San Pablo Ave	Sycamore Ave	Hercules	Hercules	WestCAT Regional	Vol2 G-18
7	Sycamore Ave	Willow Rd	Hercules	Hercules	WestCAT Regional	Vol2 G-18
8	San Pablo Ave	Hercules Ave	Hercules	Hercules	WestCAT Regional	Vol2 G-18
9	San Pablo Ave	John St	Pinole	Pinole	WestCAT Regional	Vol2 G-18
10	San Pablo Ave	Pinole Valley Rd	Pinole	Pinole	WestCAT Regional	Vol2 G-18
11	San Pablo Ave	Fernandez Ave	Pinole	Pinole	WestCAT Regional	Vol2 G-18
12	San Pablo Ave	Tennent Ave	Pinole	Pinole	WestCAT Regional	Vol2 G-18
13	Pinole Valley Rd	Tennent Ave	Pinole	Pinole	WestCAT Regional	Vol2 G-18
14	Pinole Valley Rd	Henry Ave	Pinole	Pinole	WestCAT Regional	Vol2 G-18
15	Pinole Valley Rd	Kaiser Entrance	Pinole	Pinole	WestCAT Regional	Vol2 G-18
16	San Pablo Ave	Oak Ridge Ln	Pinole	Pinole	WestCAT Regional	Vol2 G-18
17	San Pablo Ave	Appian Way	Pinole	Pinole	WestCAT Regional	Vol2 G-18
18	San Pablo Ave	Sunnyview Dr	Pinole	Pinole	WestCAT Regional	Vol2 G-18
19	San Pablo Ave	Pinole Shores	Pinole	Pinole	WestCAT Regional	Vol2 G-18
20	San Pablo Ave	Del Monte Dr	Pinole	Pinole	WestCAT Regional	Vol2 G-18
21	San Pablo Ave	Tara Hills Dr	Pinole	Pinole	WestCAT Regional	Vol2 G-18
22	San Pablo Ave	Shamrock Dr	Pinole	Pinole	WestCAT Regional	Vol2 G-18
23	San Pablo Ave	Crestwood Dr	Pinole	Pinole	WestCAT Regional	Vol2 G-18
24	San Pablo Ave	Kay Rd	Pinole	Contra Costa County	WestCAT Regional	Vol2 G-18
25	San Pablo Ave	Richmond Pkwy	Richmond	Contra Costa County	WestCAT Regional	Vol2 G-18
26	Richmond Pkwy	Lakeside Dr	Richmond	Richmond	WestCAT Regional AC Transit 72R	Vol2 G-18
27	Richmond Pkwy	Bella Vista Entrance	Richmond	Richmond	WestCAT Regional AC Transit 72R	Vol2 G-18
28	San Pablo Ave	Hilltop Dr	Richmond	Richmond	WestCAT Regional AC Transit 72R	Vol2 G-18
29	San Pablo Ave	Robert Miller Dr	Richmond	Richmond	AC Transit 72R	Vol2 G-18
30	San Pablo Ave	Rivers St	San Pablo	San Pablo	AC Transit 72R	Vol2 G-18
NEW I-80 ICM TSP FOR RAMP METER HOV LANES						
1	John Muir Parkway (SR-4)	I-80 WB on-ramp	Hercules	Caltrans	WestCAT Regional	ARM- CCO
2	Hilltop Dr	I-80 WB on-ramp	Richmond	Caltrans	AC Transit Transbay service	ARM- CCO
3	Hilltop Dr	I-80 EB on-ramp	Richmond	Caltrans	AC Transit Transbay service	
4	Hilltop Dr	I-80 WB on-ramp (loop)	Richmond	Caltrans	AC Transit Transbay service	ARM- CCO
5	Gilman St	I-80 WB on-ramp	Berkeley	Caltrans	AC Transit Transbay service	ARM- CCO
6	University Ave (loop)	I-80 WB on-ramp	Berkeley	Caltrans	AC Transit Transbay service	ARM- CCO
7	Ashby Ave	I-80 WB on-ramp	Berkeley	Caltrans	AC Transit Transbay service	ARM- CCO
NEW I-80 ICM EVP ONLY INSTALLATIONS (*CALTRANS RESPONSIBLE FOR MAINTAINENCE OF EVP EQUIPMENT BUT NOT REPLACEMENT)						
1	Willow Ave	I-80 WB Off Ramp	Hercules	Caltrans*	None at this time	E-69
2	Pinole Valley Rd	San Pablo Ave	Pinole	Pinole	None at this time	P-10
3	Appian Way	Canyon Dr	Pinole	Pinole	None at this time	P-7
4	Appian Way	I-80 WB Off Ramp	Pinole	Caltrans*	None at this time	E-63
5	Appian Way	I-80 EB On Ramp	Pinole	Caltrans*	None at this time	E-61
6	Richmond Pkwy	I-80 EB Off Ramp	Richmond	Caltrans*	None at this time	E-59
7	Richmond Pkwy	I-80 WB On Ramp (HOV)	Richmond	Caltrans*	None at this time	E-57
8	Hilltop Dr	Blume Dr	Richmond	Richmond	None at this time	R-12
9	Hilltop Dr	Shane Dr	Richmond	Richmond	None at this time	R-11
10	Hilltop Dr	Robert Miller Dr	Richmond	Richmond	None at this time	R-10
11	Hilltop Dr	Hillview Dr	Richmond	Richmond	None at this time	R-9
12	Hilltop Dr	Research Dr	Richmond	Richmond	None at this time	R-8
13	Hilltop Dr	I-80 EB Off Ramp	Richmond	Caltrans*	None at this time	E-54
14	Hilltop Dr	I-80 WB Off Ramp	Richmond	Caltrans*	None at this time	E-52

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
EMERGENCY VEHICLE DETECTION (EVP)/ TRANSIT SIGNAL PRIORITY (TSP) INTERSECTIONS
4/17/2012

No.	Main Street	Cross Street	Vicinity	ROW (Maintaining Agency, if different)	Transit Agency User	Plan sheet
15	El Portal Dr	Rollingwood Lane	San Pablo	San Pablo	None at this time	SP-9
16	El Portal Dr	Road 20	San Pablo	San Pablo	None at this time	SP-8
17	El Portal Dr	I-80 EB On Ramp	San Pablo	Caltrans*	None at this time	E-50
18	El Portal Dr	I-80 WB Off Ramp	San Pablo	Caltrans*	None at this time	E-48
19	San Pablo Dam Rd	Ventura Ave	San Pablo	San Pablo	None at this time	SP-7
20	San Pablo Dam Rd	Contra Costa Ave	San Pablo	San Pablo	None at this time	SP-6
21	San Pablo Dam Rd	I-80 EB On Ramp/Amador St	San Pablo	Caltrans*	None at this time	E-45
22	San Pablo Dam Rd	I-80 WB Off Ramp	San Pablo	Caltrans*	None at this time	E-43
23	McBryde Ave	Amador St (NEW SIGNAL)	Richmond	Caltrans (Richmond)	None at this time	E-41
24	McBryde Ave	I-80 WB Off Ramp (NEW SIGNAL)	Richmond	Caltrans (Richmond)	None at this time	E-38
25	Cutting Blvd	I-80 HOV Ramp	Richmond	Caltrans*	None at this time	E-34
26	Cutting Blvd	I-80 WB Off Ramp	Richmond	Caltrans*	None at this time	E-34
27	Potrero Ave	I-80 EB Off Ramp	El Cerrito	Caltrans*	None at this time	E-22
28	Central Ave	Carlson Blvd	El Cerrito	El Cerrito	None at this time	EC-3
29	Central Ave	San Luis Ave/Pierce St	Richmond	Richmond	None at this time	E-30
30	Central Ave	I-80 EB Off Ramp	Richmond	Caltrans*	None at this time	E-28
31	Central Ave	San Joaquin St/Iacuzzi St	Richmond	Caltrans*	None at this time	E-26
32	Fairmount Ave	San Pablo Ave	El Cerrito	Caltrans*	None at this time	E-15
33	Buchanan St	I-80 Eastbound Ramps	Albany	Caltrans*	None at this time	E-12
34	Buchanan St	I-80 Westbound Ramps	Albany	Caltrans*	None at this time	E-10
35	Gilman St	Eight St	Berkeley	Berkeley	None at this time	B-7
36	Gilman St	Sixth St	Berkeley	Berkeley	None at this time	B-5
37	University Ave	Ninth St	Berkeley	Berkeley	None at this time	B-4
38	University Ave	Sixth St	Berkeley	Berkeley	None at this time	B-3
39	Ashby Ave	Seventh St	Berkeley	Caltrans (Berkeley)	None at this time	E-5
40	Grand Ave	Lake Park/I-580 Off Ramp	Oakland	Oakland	None at this time	O-32
41	Grand Ave	Macarthur Blvd	Oakland	Oakland	None at this time	O-29
42	West Grand Ave	El Embaracadero	Oakland	Oakland	None at this time	O-28
43	West Grand Ave	Valdez St	Oakland	Oakland	None at this time	O-27
44	West Grand Ave	Webster St	Oakland	Oakland	None at this time	O-26
45	West Grand Ave	Broadway	Oakland	Oakland	None at this time	O-25
46	West Grand Ave	Market St	Oakland	Oakland	None at this time	O-23
47	West Grand Ave	Adeline St	Oakland	Oakland	None at this time	O-22
48	West Grand Ave	Poplar St	Oakland	Oakland	None at this time	O-21
49	West Grand Ave	Mandela Pkwy	Oakland	Oakland	None at this time	O-20
EXISTING EAST BAY SMART CORRIDOR TSP INSTALLATIONS (*CALTRANS RESPONSIBLE FOR MAINTAINENCE OF EVP EQUIPMENT BUT NOT REPLACEMENT)						
1	San Pablo Ave	Rumrill Rd	San Pablo	San Pablo	AC Transit (72R)	
2	San Pablo Ave	El Portal Dr	San Pablo	San Pablo	AC Transit (72R)	
3	San Pablo Ave	International Market Pl	San Pablo	San Pablo	AC Transit (72R)	
4	San Pablo Ave	23rd St	San Pablo	San Pablo	AC Transit (72R)	
5	San Pablo Ave	Van Ness St	San Pablo	San Pablo	AC Transit (72R)	
6	San Pablo Ave	Church Ln	San Pablo	San Pablo	AC Transit (72R)	
7	San Pablo Ave	Vale Rd	San Pablo	San Pablo	AC Transit (72R)	
8	San Pablo Ave	San Pablo Dam Rd	San Pablo	San Pablo	AC Transit (72R)	
9	San Pablo Ave	Food Maxx Entr	San Pablo	San Pablo	AC Transit (72R)	
10	San Pablo Ave	Rheem Ave	San Pablo	San Pablo	AC Transit (72R)	
11	San Pablo Ave	McBryde Ave	Richmond	Richmond	AC Transit (72R)	
12	San Pablo Ave	Esmond Ave	Richmond	Richmond	AC Transit (72R)	
13	San Pablo Ave	Garvin Ave	Richmond	Richmond	AC Transit (72R)	
14	San Pablo Ave	Solano Ave	Richmond	Richmond	AC Transit (72R)	
15	San Pablo Ave	Clinton Ave	Richmond	Richmond	AC Transit (72R)	
16	San Pablo Ave	Sierra Ave	Richmond	Richmond	AC Transit (72R)	
17	San Pablo Ave	Barrett Ave	Richmond	Richmond	AC Transit (72R)	
18	San Pablo Ave	EB 80 Ramps / Roosevelt	Richmond	Richmond	AC Transit (72R)	
19	San Pablo Ave	MacDonald Ave	Richmond	Richmond	AC Transit (72R)	

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
EMERGENCY VEHICLE DETECTION (EVP)/ TRANSIT SIGNAL PRIORITY (TSP) INTERSECTIONS
4/17/2012

No.	Main Street	Cross Street	Vicinity	ROW (Maintaining Agency, if different)	Transit Agency User	Plan sheet
20	San Pablo Ave	Conlon Ave	El Cerrito	El Cerrito	AC Transit (72R)	
21	San Pablo Ave	Knott Ave	El Cerrito	El Cerrito	AC Transit (72R)	
22	San Pablo Ave	Cutting Blvd	El Cerrito	Caltrans*	AC Transit (72R)	
23	San Pablo Ave	Hill St / Eastshore Blvd	El Cerrito	Caltrans*	AC Transit (72R)	
24	San Pablo Ave	Potrero Ave	El Cerrito	Caltrans*	AC Transit (72R)	
25	San Pablo Ave	Manila Ave / Bayview Ave	El Cerrito	Caltrans*	AC Transit (72R)	
26	San Pablo Ave	Schmidt Ln	El Cerrito	Caltrans*	AC Transit (72R)	
27	San Pablo Ave	Moeser Ln	El Cerrito	Caltrans*	AC Transit (72R)	
28	San Pablo Ave	Stockton Ave	El Cerrito	Caltrans*	AC Transit (72R)	
29	San Pablo Ave	Central Ave	El Cerrito	Caltrans*	AC Transit (72R)	
30	San Pablo Ave	Fairmount Ave	El Cerrito	Caltrans*	AC Transit (72R)	
31	San Pablo Ave	Carlson Blvd	El Cerrito	Caltrans*	AC Transit (72R)	
32	San Pablo Ave	Brighton Ave	Albany	Caltrans*	AC Transit (72R)	
33	San Pablo Ave	Clay St	Albany	Caltrans*	AC Transit (72R)	
34	San Pablo Ave	Washington Ave	Albany	Caltrans*	AC Transit (72R)	
35	San Pablo Ave	Solano Ave	Albany	Caltrans*	AC Transit (72R)	
36	San Pablo Ave	Buchanan St	Albany	Caltrans*	AC Transit (72R)	
37	San Pablo Ave	Marin Ave	Albany	Caltrans*	AC Transit (72R)	
38	San Pablo Ave	Monroe St	Albany	Caltrans*	AC Transit (72R)	
39	San Pablo Ave	Gilman St	Berkeley	Caltrans (Berkeley)	AC Transit (72R)	
40	San Pablo Ave	Cedar St	Berkeley	Caltrans (Berkeley)	AC Transit (72R)	
41	San Pablo Ave	Delaware St	Berkeley	Caltrans (Berkeley)	AC Transit (72R)	
42	San Pablo Ave	University Ave	Berkeley	Caltrans (Berkeley)	AC Transit (72R)	
43	San Pablo Ave	Addison St	Berkeley	Caltrans (Berkeley)	AC Transit (72R)	
44	San Pablo Ave	Allston Way	Berkeley	Caltrans (Berkeley)	AC Transit (72R)	
45	San Pablo Ave	Dwight Way	Berkeley	Caltrans (Berkeley)	AC Transit (72R)	
46	San Pablo Ave	Grayson St	Berkeley	Caltrans (Berkeley)	AC Transit (72R)	
47	San Pablo Ave	Heinz	Berkeley	Caltrans (Berkeley)	AC Transit (72R)	
48	San Pablo Ave	Ashby Ave (SR 13)	Berkeley	Caltrans (Berkeley)	AC Transit (72R)	
49	San Pablo Ave	65th St	Oakland	Caltrans (Oakland)	AC Transit (72R)	
50	San Pablo Ave	Alcatraz Ave	Oakland	Caltrans (Oakland)	AC Transit (72R)	
51	San Pablo Ave	63rd St	Oakland	Caltrans (Oakland)	AC Transit (72R)	
52	San Pablo Ave	Powell St / Stanford Ave	Oakland	Caltrans (Oakland)	AC Transit (72R)	
53	San Pablo Ave	53rd St	Emeryville	Caltrans*	AC Transit (72R)	
54	San Pablo Ave	47th St	Emeryville	Caltrans*	AC Transit (72R)	
55	San Pablo Ave	45th St	Emeryville	Caltrans*	AC Transit (72R)	
56	San Pablo Ave	Park Ave	Emeryville	Caltrans*	AC Transit (72R)	
57	San Pablo Ave	40th St	Emeryville	Caltrans*	AC Transit (72R)	
58	San Pablo Ave	Adeline St / MacArthur	Emeryville	Caltrans*	AC Transit (72R)	
59	San Pablo Ave	36th St	Oakland	Oakland	AC Transit (72R)	
60	San Pablo Ave	35th St	Oakland	Oakland	AC Transit (72R)	
61	San Pablo Ave	31st St / Market St / 30th St	Oakland	Oakland	AC Transit (72R)	
62	San Pablo Ave	27th St	Oakland	Oakland	AC Transit (72R)	
63	San Pablo Ave	West St / 25th St	Oakland	Oakland	AC Transit (72R)	
64	San Pablo Ave	West Grand Ave	Oakland	Oakland	AC Transit (72R)	
65	San Pablo Ave	Castro St / MLK Jr Way	Oakland	Oakland	AC Transit (72R)	
66	San Pablo Ave	20th St / MLK Jr Way	Oakland	Oakland	AC Transit (72R)	
67	San Pablo Ave	19th St / Jefferson St	Oakland	Oakland	AC Transit (72R)	
68	San Pablo Ave	17th St / Clay St	Oakland	Oakland	AC Transit (72R)	

Trailblazers

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
TRAILBLAZER SIGNS
4/17/2012

No.	Main Street	Cross Street	Vicinity	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
1	San Pablo Ave - northbound	south of W. Grand Ave	Oakland	Oakland	Not Applicable	Caltrans
2	San Pablo Ave - southbound	north of 23rd St	Oakland	Oakland	Not Applicable	Caltrans
3	San Pablo Ave - northbound	north of Aileen St	Oakland	Caltrans	Not Applicable	Caltrans
4	San Pablo Ave - southbound	north of Stanford St	Oakland	Caltrans	Not Applicable	Caltrans
5	San Pablo Ave - northbound	south of Carrison St	Berkeley	Caltrans	Not Applicable	Caltrans
6	San Pablo Ave - southbound	south of Burnett St	Berkeley	Caltrans	Not Applicable	Caltrans
7	San Pablo Ave - northbound	north of Addison St	Berkeley	Caltrans	Not Applicable	Caltrans
8	San Pablo Ave - southbound	north of University Ave	Berkeley	Caltrans	Not Applicable	Caltrans
9	San Pablo Ave - northbound	south of Gilman Ave	Berkeley	Caltrans	Not Applicable	Caltrans
10	San Pablo Ave - southbound	north of Gilman Ave	Berkeley	Caltrans	Not Applicable	Caltrans
11	San Pablo Ave - northbound	south of Marin Ave	Albany	Caltrans	Not Applicable	Caltrans
12	San Pablo Ave - southbound	north of Buchanan St	Albany	Caltrans	Not Applicable	Caltrans
13	San Pablo Ave - northbound	south of Central Ave	El Cerrito	Caltrans	Not Applicable	Caltrans
14	San Pablo Ave - southbound	north of Central Ave	El Cerrito	Caltrans	Not Applicable	Caltrans
15	San Pablo Ave - northbound	north of Hill St	El Cerrito	Caltrans	Not Applicable	Caltrans
16	San Pablo Ave - southbound	north of Hill St	El Cerrito	Caltrans	Not Applicable	Caltrans
17	San Pablo Ave - northbound	north of Barrett Ave	Richmond	Richmond	Not Applicable	Caltrans
18	San Pablo Ave - southbound	south of Clinton Ave	Richmond	Richmond	Not Applicable	Caltrans
19	San Pablo Ave - northbound	south of San Pablo Dam Rd	San Pablo	San Pablo	Not Applicable	Caltrans
20	San Pablo Ave - southbound	north of San Pablo Dam Rd	San Pablo	San Pablo	Not Applicable	Caltrans
21	San Pablo Ave - northbound	south of El Portal Dr	San Pablo	San Pablo	Not Applicable	Caltrans
22	San Pablo Ave - southbound	north of El Portal Dr	San Pablo	San Pablo	Not Applicable	Caltrans
23	San Pablo Ave - northbound	south of Hilltop Dr	Richmond	Richmond	Not Applicable	Caltrans
24	San Pablo Ave - southbound	north of Hilltop Dr	Richmond	Richmond	Not Applicable	Caltrans
25	San Pablo Ave - northbound	south of Richmond Pkwy	Richmond	Richmond	Not Applicable	Caltrans
26	San Pablo Ave - southbound	south of Kay Rd	Richmond	Richmond	Not Applicable	Caltrans
27	San Pablo Ave - northbound	west of Appian Way	Pinole	Pinole	Not Applicable	Caltrans
28	San Pablo Ave - southbound	east of Laurel Ave	Pinole	Pinole	Not Applicable	Caltrans
29	San Pablo Ave - northbound	south of Tennent Ave	Pinole	Pinole	Not Applicable	Caltrans
30	San Pablo Ave - southbound	north of Tennent Ave	Pinole	Pinole	Not Applicable	Caltrans
31	San Pablo Ave - northbound	south of John Muir Pkwy	Hercules	Hercules	Not Applicable	Caltrans
32	San Pablo Ave - southbound	north of John Muir Pkwy	Hercules	Hercules	Not Applicable	Caltrans
33	San Pablo Ave - northbound	wouth of Willow Ave	Hercules	Hercules	Not Applicable	Caltrans
34	Parker Ave - southbound	north of San Pablo Ave	Hercules	Contra Costa County	Not Applicable	Caltrans
35	San Pablo Ave - northbound	west of Cummings Skwy	Contra Costa County	Contra Costa County	Not Applicable	Caltrans
36	San Pablo Ave - southbound	east of Cummings Skwy	Contra Costa County	Contra Costa County	Not Applicable	Caltrans

Traffic Signals

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
TRAFFIC SIGNAL IMPROVEMENTS BY I-80 ICM PROJECT
4/17/2012

No.	Main Street/ Cross Street	Vicinity	NEW GPRS Modem	NEW Ethernet Module	NEW Ethernet Switch	NEW Intersection Detection	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
Freeway ramps Controllers (Controller and Equipment Upgrades)									
1	San Pablo Ave / Pomona St/ I-80 WB Ramps	Crockett	---	---	---	---	Caltrans	Caltrans	Caltrans
2	Willow Ave / I-80 EB Ramps	Hercules	---	---	---	---	Caltrans	Caltrans	Caltrans
3	Willow Ave / I-80 WB Ramps	Hercules	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
4	Pinole Valley Rd / I-80 EB Ramps	Pinole	---	---	---	---	Caltrans	Caltrans	Caltrans
5	Pinole Valley Rd / I-80 WB Ramps	Pinole	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
6	Appian Way / I-80 EB Ramps	Pinole	---	---	---	---	Caltrans	Caltrans	Caltrans
7	Appian Way / I-80 WB Ramps	Pinole	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
8	Richmond Pkwy / I-80 EB Ramps	Pinole	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
9	Richmond Pkwy / I-80 HOV Ramps	Richmond	---	---	---	---	Caltrans	Caltrans	Caltrans
10	Richmond Pkwy / I-80 WB Ramps	Richmond	---	---	---	---	Caltrans	Caltrans	Caltrans
11	Hilltop Dr / I-80 EB Ramps	Richmond	---	---	---	---	Caltrans	Caltrans	Caltrans
12	Hilltop Dr / I-80 WB Ramps	Richmond	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
13	El Portal Dr / I-80 EB Ramps	San Pablo	---	---	---	---	Caltrans	Caltrans	Caltrans
14	El Portal Dr / I-80 WB Off-ramp	San Pablo	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
15	San Pablo Dam Rd / I-80 WB & EB Ramps (one controller)	San Pablo	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
16	San Pablo Ave/ Roosevelt/ I-80 EB Ramps	Richmond	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
17	Barrett Ave / I-80 WB Ramps	Richmond	---	---	---	---	Caltrans	Caltrans	Caltrans
18	Cutting Blvd / I-80 HOV Ramps	Richmond	---	---	---	---	Caltrans	Caltrans	Caltrans
19	Cutting Blvd / I-80 WB Off-ramp	Richmond	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
20	Carlson Blvd/ I-80 EB Ramps	Richmond	---	---	---	---	Caltrans	Caltrans	Caltrans
21	Carlson Blvd/ I-80 WB Ramps	Richmond	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
22	Eastshore Blvd / Potrero Ave / I-80 Ramps	El Cerrito	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
23	Central Ave / I-80 EB Ramps	El Cerrito	---	---	---	---	Caltrans	Caltrans	Caltrans
24	Central Ave / I-80 WB Ramps	El Cerrito	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
25	Buchanan St / I-80 EB Ramps	Albany	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
26	Buchanan St / I-80 WB Ramps	Albany	---	---	---	---	Caltrans	Caltrans	Caltrans
27	Frontage Rd / I-80 WB Ramps	Emeryville	---	---	---	---	Caltrans	Caltrans	Caltrans
28	Powell St / I-80 EB Ramps	Emeryville	---	---	---	---	Caltrans	Caltrans	Caltrans
29	Powell St / Frontage Rd / I-80 WB On-ramp	Emeryville	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
San Pablo Avenue (Controller Upgrades and Equipment Upgrades)									
1	San Pablo Ave / Hercules Ave	Hercules	---	---	---	---	Hercules	Hercules	Caltrans
2	San Pablo Ave / Pinole Valley Rd	Pinole	---	---	---	---	Pinole	Pinole	Caltrans
3	San Pablo Ave / Tennent Ave	Pinole	---	---	---	---	Pinole	Pinole	Caltrans
4	San Pablo Ave / Appian Way	Pinole	---	---	---	---	Pinole	Pinole	Caltrans
5	San Pablo Ave / Sunnyview Dr	Pinole	---	---	---	---	Pinole	Pinole	Caltrans
6	San Pablo Ave / Pinole Shores Rd	Pinole	---	---	---	---	Pinole	Pinole	Caltrans
7	San Pablo Ave / Crestwood Dr	Pinole	---	---	---	---	Contra Costa County	Contra Costa County	Caltrans
8	San Pablo Ave / Kay Rd	Pinole	---	---	---	---	Contra Costa County	Contra Costa County	Caltrans
9	San Pablo Ave / Richmond Pkwy	Richmond	---	---	---	---	Richmond	Richmond	Caltrans

Traffic Signals

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
TRAFFIC SIGNAL IMPROVEMENTS BY I-80 ICM PROJECT
4/17/2012

No.	Main Street/ Cross Street	Vicinity	NEW GPRS Modem	NEW Ethernet Module	NEW Ethernet Switch	NEW Intersection Detection	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
10	San Pablo Ave / Hilltop Dr	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
11	San Pablo Ave / Robert Miller Dr	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
12	San Pablo Ave / McBryde Ave	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
13	San Pablo Ave / Esmond Ave	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
14	San Pablo Ave / Garvin Ave	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
15	San Pablo Ave / Solano Ave	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
16	San Pablo Ave / Clinton Ave	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
17	San Pablo Ave / Sierra Ave (Ped Signal between Clinton and I-80)	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
18	San Pablo Ave / Barrett Ave	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
19	San Pablo Ave / MacDonald Ave	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
20	San Pablo Ave / Cutting Blvd	El Cerrito	---	Yes	---	---	Caltrans	Caltrans	Caltrans
21	San Pablo Ave / Hill St / Eastshore Blvd	El Cerrito	---	Yes	---	---	Caltrans	Caltrans	Caltrans
22	San Pablo Ave / Potrero Ave	El Cerrito	---	Yes	---	---	Caltrans	Caltrans	Caltrans
23	San Pablo Ave / Manila Ave / Bayview Ave	El Cerrito	---	Yes	---	---	Caltrans	Caltrans	Caltrans
24	San Pablo Ave / Schmidt Ln	El Cerrito	---	Yes	---	---	Caltrans	Caltrans	Caltrans
25	San Pablo Ave / Moeser Ln	El Cerrito	---	Yes	---	---	Caltrans	Caltrans	Caltrans
26	San Pablo Ave / Stockton Ave	El Cerrito	---	Yes	---	---	Caltrans	Caltrans	Caltrans
27	San Pablo Ave / Central Ave	El Cerrito	---	Yes	---	---	Caltrans	Caltrans	Caltrans
28	San Pablo Ave / Fairmount Ave	El Cerrito	---	Yes	---	---	Caltrans	Caltrans	Caltrans
29	San Pablo Ave / Carlson Blvd	El Cerrito	---	Yes	---	---	Caltrans	Caltrans	Caltrans
30	San Pablo Ave / Brighton Ave	Albany	---	Yes	---	---	Caltrans	Caltrans	Caltrans
31	San Pablo Ave / Clay St	Albany	---	Yes	---	---	Caltrans	Caltrans	Caltrans
32	San Pablo Ave / Washington Ave	Albany	---	Yes	---	---	Caltrans	Caltrans	Caltrans
33	San Pablo Ave / Solano Ave	Albany	---	Yes	---	---	Caltrans	Caltrans	Caltrans
34	San Pablo Ave / Buchanan St	Albany	---	Yes	---	---	Caltrans	Caltrans	Caltrans
35	San Pablo Ave / Marin Ave	Albany	---	Yes	---	---	Caltrans	Caltrans	Caltrans
36	San Pablo Ave / Monroe St	Albany	---	Yes	---	---	Caltrans	Caltrans	Caltrans
37	San Pablo Ave / Gilman St	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
38	San Pablo Ave / Cedar St	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
39	San Pablo Ave / Delaware St	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
40	San Pablo Ave / University Ave	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
41	San Pablo Ave / Addison St	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
42	San Pablo Ave / Allston Way	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
43	San Pablo Ave / Dwight Way	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
44	San Pablo Ave / Grayson St	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
45	San Pablo Ave/ Heinz Ave	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
46	San Pablo Ave / Ashby Ave (SR 13)	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
47	San Pablo Ave / 65th St	Oakland	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
48	San Pablo Ave / Alcatraz Ave	Oakland	---	---	---	---	Oakland	Oakland	Caltrans
49	San Pablo Ave / 63rd St	Oakland	---	---	---	---	Oakland	Oakland	Caltrans

Traffic Signals

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
TRAFFIC SIGNAL IMPROVEMENTS BY I-80 ICM PROJECT
4/17/2012

No.	Main Street/ Cross Street	Vicinity	NEW GPRS Modem	NEW Ethernet Module	NEW Ethernet Switch	NEW Intersection Detection	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
50	San Pablo Ave / Stanford Ave	Oakland	---	---	---	---	Oakland	Oakland	Caltrans
51	San Pablo Ave / 53rd St	Emeryville	---	Yes	---	---	Caltrans	Caltrans	Caltrans
52	San Pablo Ave / 47th St	Emeryville	---	Yes	---	---	Caltrans	Caltrans	Caltrans
53	San Pablo Ave / 45th St	Emeryville	---	Yes	---	---	Caltrans	Caltrans	Caltrans
54	San Pablo Ave / Park Ave	Emeryville	---	Yes	---	---	Caltrans	Caltrans	Caltrans
55	San Pablo Ave / 40th St	Emeryville	---	Yes	---	---	Caltrans	Caltrans	Caltrans
56	San Pablo Ave / Adeline St	Emeryville	---	Yes	---	---	Caltrans	Caltrans	Caltrans
ICM Routes (Controller and Equipment Upgrades, New signals)									
1	Willow Ave / Sycamore	Hercules	---	---	---	---	Hercules	Hercules	Caltrans
2	Willow Ave / Hawthorne Dr	Hercules	---	---	---	---	Hercules	Hercules	Caltrans
3	Appian Way/ Fitzgerald	Pinole	---	---	---	---	Pinole	Pinole	Caltrans
4	Appian Way/ Tara Hills	Pinole	Yes	Yes	---	---	Pinole	Pinole	Caltrans
5	Richmond Pkwy / I-80 EB Ramps	Pinole	---	---	---	---	Caltrans	Caltrans	Caltrans
6	Richmond Pkwy / Bella Vista Entr	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
7	Richmond Pkwy / Lakeside Dr	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
8	Hilltop Dr / Blume Dr	Richmond	---	---	---	---	Richmond	Richmond	Richmond
9	Hilltop Dr / Shane Dr	Richmond	---	---	---	---	Richmond	Richmond	Richmond
10	Hilltop Dr / Robert Miller Dr	Richmond	---	---	---	---	Richmond	Richmond	Richmond
11	Hilltop Dr / Hillview Dr	Richmond	---	---	---	---	Richmond	Richmond	Richmond
12	Hilltop Dr / Research Dr	Richmond	---	---	---	---	Richmond	Richmond	Richmond
13	McBryde / I-80 WB off-ramp (*NEW SIGNAL)	Richmond	Yes	Yes	---	3 Video Cam	Richmond	Richmond	Caltrans
14	McBryde/ Amador (*NEW SIGNAL)	Richmond	Yes	Yes	---	4 Video Cam	Richmond	Richmond	Caltrans
15	Central Ave / San Luis St / Pierce St	Richmond	---	---	---	---	Richmond	Richmond	Caltrans
16	Gilman St / 6th St (*SIGNAL RECONSTRUCTION)	Berkeley	---	---	---	4 Video Cam	Berkeley	Berkeley	Caltrans
17	Gilman St / 8th St	Berkeley	---	---	---	4 Video Cam	Berkeley	Berkeley	Caltrans
18	University Ave / 6th St	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
19	University Ave/ 9th St	Berkeley	---	---	---	4 Video Cam	Berkeley	Berkeley	Caltrans
20	Ashby Ave / 7th St	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
21	Ashby Ave / 9th St	Berkeley	---	---	---	---	Berkeley	Berkeley	Caltrans
22	West Grand Ave/ Maritime	Oakland	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
23	West Grand Ave/ 880 ramps/ Frontage	Oakland	Yes	Yes	---	---	Caltrans	Caltrans	Caltrans
24	West Grand Ave / Mandela Pkwy	Oakland	---	Yes	Yes	4 Video Cam	Oakland	Oakland	Caltrans
25	West Grand Ave / Poplar St	Oakland	---	Yes	Yes	4 Video Cam	Oakland	Oakland	Caltrans
26	West Grand Ave / Adeline St	Oakland	---	Yes	Yes	4 Video Cam	Oakland	Oakland	Caltrans
27	West Grand Ave / Market St	Oakland	---	Yes	Yes	2 Video Cam	Oakland	Oakland	Caltrans
28	W. Grand Ave - MLK, Jr Wy	Oakland	---	Yes	Yes	2 Mag Lanes	Oakland	Oakland	Oakland
29	W. Grand Ave - Northgate Ave	Oakland	---	Yes	Yes	---	Oakland	Oakland	Oakland
30	W. Grand Ave - Broadway	Oakland	---	Yes	Yes	4 Video Cam	Oakland	Oakland	Oakland
31	Grand Ave - Webster St	Oakland	---	Yes	Yes	3 Video Cam	Oakland	Oakland	Oakland
32	Grand Ave - Valdez St	Oakland	---	Yes	Yes	3 Video Cam	Oakland	Oakland	Oakland
33	Grand Ave - El Embarcadero	Oakland	---	Yes	Yes	---	Oakland	Oakland	Oakland

Traffic Signals

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
TRAFFIC SIGNAL IMPROVEMENTS BY I-80 ICM PROJECT
4/17/2012

No.	Main Street/ Cross Street	Vicinity	NEW GPRS Modem	NEW Ethernet Module	NEW Ethernet Switch	NEW Intersection Detection	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
34	Grand Ave - MacArthur Blvd	Oakland	---	Yes	Yes	2 Video Cam 3 Mag Lanes	Oakland	Oakland	Oakland
35	Lake Shore Ave - MacArthur Blvd	Oakland	---	Yes	Yes	2 Video Cam 3 Mag Lanes	Oakland	Oakland	Oakland
36	Lake Shore Ave - Lake Park Ave	Oakland	---	Yes	Yes	3 Video Cam 3 Mag Lanes	Oakland	Oakland	Oakland
37	Grand Ave - Lake Park Ave	Oakland	---	Yes	Yes	4 Video Cam	Oakland	Oakland	Oakland
NEW FIELD MASTERS (Controller and Equipment Upgrades)									
1	Richmond Pkwy / Lakeside Dr	Richmond	Yes	Yes	---	---	Richmond	Richmond	Caltrans
2	Hilltop Dr / Robert Miller Dr	Richmond	Yes	Yes	---	---	Richmond	Richmond	Caltrans
3	El Portal Dr / Church Ln / Rollingwood Dr	San Pablo	Yes	Yes	---	---	San Pablo	San Pablo	Caltrans
4	San Pablo Dam Rd / Ventura Ave	San Pablo	Yes	Yes	---	---	San Pablo	San Pablo	Caltrans
5	San Pablo Ave / Knott Ave	El Cerrito	Yes	Yes	---	---	El Cerrito	El Cerrito	Caltrans
EXISTING CONTROLLER TO REMAIN (GPRS MODEM AND ETHERNET MODULE UPGRADE ONLY)									
1	San Pablo Ave- Cummings	CC County	Yes	Yes	---	---	CC County	CC County	Caltrans
2	San Pablo Ave- Refinery	CC County	Yes	Yes	---	---	CC County	CC County	Caltrans
3	Parker-2nd	CC County	Yes	Yes	---	---	CC County	CC County	Caltrans
4	Parker-4th	CC County	Yes	Yes	---	---	CC County	CC County	Caltrans
5	San Pablo Ave-Parker-Willow	CC County	Yes	Yes	---	---	CC County	CC County	Caltrans
6	Pinole Valley- Henry	Pinole	Yes	Yes	---	---	Pinole	Pinole	Caltrans
7	Fitzgerald/ Best Buy	Pinole	Yes	Yes	---	---	Pinole	Pinole	Caltrans
8	Central Ave/ Carlson Ave	El Cerrito	Yes	Yes	---	---	El Cerrito	El Cerrito	Caltrans
6	Powell St / Christie Ave	Emeryville	Yes	Yes	---	---	Emeryville	Emeryville	Caltrans
7	53rd / Hollis (support for Powell- Beudry)	Emeryville	Yes	Yes	---	---	Emeryville	Emeryville	Caltrans

Speed feedback

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
SPEED FEEDBACK SIGNS- PINOLE
4/17/2012

No.	Main Street	Cross Street	Vicinity	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
1	San Pablo Ave - eastbound	west of Del Monte Dr	Pinole	Pinole	NA	NA
2	San Pablo Ave - westbound	east of Sunnyview Dr	Pinole	Pinole	NA	NA

Arterial CMS

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
ARTERIAL CHANGEABLE MESSAGE SIGNS (CMS)- OAKLAND
4/17/2012

No.	Main Street	Cross Street	Vicinity	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
1	San Pablo Ave - northbound	north of 34th St	Oakland	Oakland	Oakland	Caltrans
2	San Pablo Ave - southbound	south of 35th St	Oakland	Oakland	Oakland	Caltrans
3	W. Grand Ave - eastbound	east of Chestnut St	Oakland	Oakland	Oakland	Caltrans
4	Lake Park Ave - westbound	east of Lakeshore Ave	Oakland	Oakland	Oakland	Caltrans

Ramp Meters

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
ADAPTIVE RAMP METERING LOCATIONS
4/17/2012

No.	Main Street	Cross Street	Vicinity	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
NEW I-80 ICM RAMP METERING CONTROLLERS (EASTBOUND I-80)						
1	I-80 eastbound on-ramp	Powell St.	Emeryville	Caltrans	Caltrans	Caltrans
2	I-80 eastbound on-ramp	Ashby Ave./Potter St.	Berkeley	Caltrans	Caltrans	Caltrans
3	I-80 eastbound on-ramp	University Ave.	Berkeley	Caltrans	Caltrans	Caltrans
4	I-80 eastbound on-ramp	Gilman St.	Berkeley	Caltrans	Caltrans	Caltrans
5	I-80 eastbound on-ramp	Buchanan St.	Albany	Caltrans	Caltrans	Caltrans
6	I-80 eastbound on-ramp	Central Ave.	Richmond	Caltrans	Caltrans	Caltrans
7	I-80 eastbound on-ramp	Carlson Blvd.	Richmond	Caltrans	Caltrans	Caltrans
8	I-80 eastbound on-ramp	Cutting Blvd. (loop ramp)	Richmond	Caltrans	Caltrans	Caltrans
9	I-80 eastbound on-ramp	Cutting Blvd.	Richmond	Caltrans	Caltrans	Caltrans
10	I-80 eastbound on-ramp	San Pablo Ave.	Richmond	Caltrans	Caltrans	Caltrans
11	I-80 eastbound on-ramp	San Pablo Dam Rd.	San Pablo	Caltrans	Caltrans	Caltrans
12	I-80 eastbound on-ramp	El Portal Dr.	San Pablo	Caltrans	Caltrans	Caltrans
13	I-80 eastbound on-ramp	Westbound Hilltop Dr.	Richmond	Caltrans	Caltrans	Caltrans
14	I-80 eastbound on-ramp	Eastbound Hilltop Dr. (loop ramp)	Richmond	Caltrans	Caltrans	Caltrans
15	I-80 eastbound on-ramp	Eastbound Fitzgerald/Richmond Parkway	Pinole	Caltrans	Caltrans	Caltrans
16	I-80 eastbound on-ramp	Eastbound Fitzgerald/ Richmond Pkwy. (loop ramp)	Pinole	Caltrans	Caltrans	Caltrans
17	I-80 eastbound on-ramp	Northbound Appian Way	Pinole	Caltrans	Caltrans	Caltrans
18	I-80 eastbound on-ramp	Southbound Appian Way (loop ramp)	Pinole	Caltrans	Caltrans	Caltrans
19	I-80 eastbound on-ramp	Pinole Valley Rd.	Pinole	Caltrans	Caltrans	Caltrans
20	I-80 eastbound on-ramp	John Muir Pkwy. (SR-4)	Hercules	Caltrans	Caltrans	Caltrans
21	I-80 eastbound on-ramp	Willow Ave.	Hercules	Caltrans	Caltrans	Caltrans
22	I-80 eastbound on-ramp	Cummings Skyway	Contra Costa County	Caltrans	Caltrans	Caltrans
NEW I-80 ICM RAMP METERING CONTROLLERS (WESTBOUND I-80)						
1	I-80 westbound on-ramp	San Pablo Ave. / Pomona St.	Crockett (CC County)	Caltrans	Caltrans	Caltrans

Ramp Meters

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
ADAPTIVE RAMP METERING LOCATIONS
4/17/2012

No.	Main Street	Cross Street	Vicinity	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
2	I-80 westbound on-ramp	Cummings Skyway	Contra Costa County	Caltrans	Caltrans	Caltrans
3	I-80 westbound on-ramp	Willow Ave.	Hercules	Caltrans	Caltrans	Caltrans
4	I-80 westbound on-ramp	John Muir Parkway (SR-4)	Hercules	Caltrans	Caltrans	Caltrans
5	I-80 westbound on-ramp	Pinole Valley Rd.	Pinole	Caltrans	Caltrans	Caltrans
6	I-80 westbound on-ramp	Appian Way	Pinole	Caltrans	Caltrans	Caltrans
7	I-80 westbound on-ramp	Fitzgerald Dr./Richmond Parkway	Pinole	Caltrans	Caltrans	Caltrans
8	I-80 westbound on-ramp	Hilltop Dr.	Richmond	Caltrans	Caltrans	Caltrans
9	I-80 westbound on-ramp	Westbound Hilltop Dr. (loop ramp)	Richmond	Caltrans	Caltrans	Caltrans
10	I-80 westbound on-ramp	El Portal Dr.	San Pablo	Caltrans	Caltrans	Caltrans
11	I-80 westbound on-ramp	San Pablo Dam Rd.	San Pablo	Caltrans	Caltrans	Caltrans
12	I-80 westbound on-ramp	Solano Ave.	Richmond	Caltrans	Caltrans	Caltrans
13	I-80 westbound on-ramp	Barrett Ave.	Richmond	Caltrans	Caltrans	Caltrans
14	I-80 westbound on-ramp	Potrero Ave.	Richmond	Caltrans	Caltrans	Caltrans
15	I-80 westbound on-ramp	Carlson Blvd.	Richmond	Caltrans	Caltrans	Caltrans
16	I-80 westbound on-ramp	Central Ave.	Richmond	Caltrans	Caltrans	Caltrans
17	I-80 westbound on-ramp	Buchanan St.	Albany	Caltrans	Caltrans	Caltrans
18	I-80 westbound on-ramp	Gilman St.	Berkeley	Caltrans	Caltrans	Caltrans
19	I-80 westbound on-ramp	University Ave. (loop)	Berkeley	Caltrans	Caltrans	Caltrans
20	I-80 westbound on-ramp	Ashby Ave. & Frontage Rd.	Berkeley	Caltrans	Caltrans	Caltrans
21	I-80 westbound on-ramp	Powell St./Frontage Rd.	Emeryville	Caltrans	Caltrans	Caltrans
22	I-80 westbound on-ramp	Powell St.	Emeryville	Caltrans	Caltrans	Caltrans

ATM Signs

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
ACTIVE TRAFFIC MANGEMENT (ATM) FREEWAY SIGNS
4/17/2012

No.	Main Street	Cross Street	Vicinity	LUS	VASS	VMS	IDB	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
NEW I-80 ICM ATM SIGNS (WESTBOUND I-80)										
1	I-80 westbound	Powell/ Frontage Hook ramp (SS 3-2)	Emeryville	Y	Y	---	---	Caltrans	Caltrans	Caltrans
2	I-80 westbound	Ashby Ave (SS 6-2)	Berkeley	Y	Y	---	---	Caltrans	Caltrans	Caltrans
3	I-80 westbound	bet. Ashby Ave and University Ave (SS8-1)	Berkeley	Y	Y	---	---	Caltrans	Caltrans	Caltrans
4	I-80 westbound	University Ave (SS 9-2)	Berkeley	Y	Y	Y	---	Caltrans	Caltrans	Caltrans
5	I-80 westbound	bet. Univeristy Ave and Gilman Ave (SS 12-1)	Berkeley	Y	Y	Y	---	Caltrans	Caltrans	Caltrans
6	I-80 westbound	Gilman Ave (SS 13-1)	Berkeley	---	---	---	Y	Caltrans	Caltrans	Caltrans
7	I-80 westbound	bet. Gilman Ave and Buchanan Ave (SS 13-2)	Berkeley	Y	Y	---	---	Caltrans	Caltrans	Caltrans
8	I-80 westbound	Cleveland Ave (SS 16-1)	Albany	Y	Y	---	---	Caltrans	Caltrans	Caltrans
9	I-80 westbound	Central Ave (SS 18-1)	Richmond	Y	Y	Y	---	Caltrans	Caltrans	Caltrans
10	I-80 westbound	bet. Central Ave and Carlson Ave (SS 21-1)	Richmond	Y	Y	---	---	Caltrans	Caltrans	Caltrans
11	I-80 westbound	bet. Carlson Ave and Potrero Ave (SS 23-1)	Richmond	Y	Y	---	---	Caltrans	Caltrans	Caltrans
12	I-80 westbound	bet. Potrero Ave and Cutting Blvd (SS 25-1)	Richmond	Y	Y	Y	---	Caltrans	Caltrans	Caltrans
13	I-80 westbound	Cutting Blvd (SS26-1)	Richmond	---	---	---	Y	Caltrans	Caltrans	Caltrans
14	I-80 westbound	bet. Solano and Barret	Richmond	---	Y	---	---	Caltrans	Caltrans	Caltrans
15	I-80 westbound	bet. San Pablo Dam Rd and McBryde	San Pablo	---	Y	---	---	Caltrans	Caltrans	Caltrans
16	I-80 westbound	bet. El Portal and San Pablo Dam Rd	San Pablo	---	Y	---	---	Caltrans	Caltrans	Caltrans
17	I-80 westbound	bet. Hilltop Dr and El Portal	San Pablo	---	Y	---	---	Caltrans	Caltrans	Caltrans
18	I-80 westbound	bet. Richmond Pkwy and Hilltop Dr	Richmond	---	Y	---	---	Caltrans	Caltrans	Caltrans
19	I-80 westbound	bet. Appian Way and Richmond Pkwy	Pinole	---	Y	---	---	Caltrans	Caltrans	Caltrans
20	I-80 westbound	bet. Pinole Valley Rd and Appian Way	Pinole	---	Y	---	---	Caltrans	Caltrans	Caltrans
21	I-80 westbound	bet. SR-4 and Pinole Valley Rd	Pinole	---	Y	---	---	Caltrans	Caltrans	Caltrans
22	I-80 westbound	bet. Willow Ave and SR-4	Hercules	---	Y	---	---	Caltrans	Caltrans	Caltrans
23	I-80 westbound	bet. California St OC and Willow (SS 56-1)	Contra Costa County	---	---	---	Y	Caltrans	Caltrans	Caltrans
24	I-80 westbound	bet. Cummings and California OC	Contra Costa County	---	Y	---	---	Caltrans	Caltrans	Caltrans
NEW I-80 ICM ATM SIGNS (EASTBOUND I-80)										
1	I-80 eastbound	bet. I-80/ I-880/ I-580 Interchange and Powell St	Emeryville	---	Y	---	---	Caltrans	Caltrans	Caltrans
2	I-80 eastbound	Powell St (SS 3-1)	Emeryville	---	---	---	Y	Caltrans	Caltrans	Caltrans
3	I-80 eastbound	bet. Powell St and Ashby Ave (SS 3-2 back)	Emeryville	---	Y	---	---	Caltrans	Caltrans	Caltrans
4	I-80 eastbound	bet. Powell St and Ashby Ave	Berkeley	---	Y	---	---	Caltrans	Caltrans	Caltrans
5	I-80 eastbound	bet. Ashby Ave and University Ave (SS 8-1 back)	Berkeley	---	Y	---	---	Caltrans	Caltrans	Caltrans
6	I-80 eastbound	bet. Ashby Ave and University Ave	Berkeley	---	Y	---	---	Caltrans	Caltrans	Caltrans
7	I-80 eastbound	bet. University Ave and Gilman Ave (SS 12-1 back)	Berkeley	---	Y	---	---	Caltrans	Caltrans	Caltrans
8	I-80 eastbound	bet. Gilman Ave and Buchanan Ave (SS 13-2 back)	Albany	---	Y	---	---	Caltrans	Caltrans	Caltrans
9	I-80 eastbound	Cleveland Ave (SS 16-1 back)	Albany	---	Y	---	---	Caltrans	Caltrans	Caltrans
10	I-80 eastbound	Cleveland Ave	Albany	---	Y	---	---	Caltrans	Caltrans	Caltrans
11	I-80 eastbound	Central Ave (SS 18-1 back)	Richmond	---	Y	---	---	Caltrans	Caltrans	Caltrans
12	I-80 eastbound	bet. Central Ave and Carlson Ave (SS 21-1 back)	Richmond	---	Y	---	---	Caltrans	Caltrans	Caltrans
13	I-80 eastbound	bet. Carlson Ave and Potrero Ave (SS 23-1 back)	Richmond	---	Y	---	---	Caltrans	Caltrans	Caltrans
14	I-80 eastbound	bet. Carlson Ave and Potrero Ave	Richmond	---	Y	---	---	Caltrans	Caltrans	Caltrans
15	I-80 eastbound	bet. Potrero Ave and Cutting Blvd (SS 25-1 back)	Richmond	---	Y	---	---	Caltrans	Caltrans	Caltrans

ATM Signs

INTERSTATE 80 CORRIDOR ICM MOU: ATTACHMENT B
ACTIVE TRAFFIC MANGEMENT (ATM) FREEWAY SIGNS
4/17/2012

No.	Main Street	Cross Street	Vicinity	LUS	VASS	VMS	IDB	ROW (Maintaining Agency, if different)	Operating Agency - Normal	Operating Agency - Incidents
16	I-80 eastbound	bet. Potrero Ave and Cutting Blvd	Richmond	---	Y	---	---	Caltrans	Caltrans	Caltrans
17	I-80 eastbound	MacDonald Ave	Richmond	---	Y	---	---	Caltrans	Caltrans	Caltrans
18	I-80 eastbound	El Portal Dr	San Pablo	---	Y	---	---	Caltrans	Caltrans	Caltrans
19	I-80 eastbound	bet. El Portal Dr and Hilltop Dr (SS 37-1)	San Pablo	---	Y	---	Y	Caltrans	Caltrans	Caltrans
20	I-80 eastbound	bet. Hilltop Dr and Richmond Blvd	San Pablo	---	Y	---	---	Caltrans	Caltrans	Caltrans
21	I-80 eastbound	bet. Richmond Pkwy and Appian Way	Pinole	---	Y	---	---	Caltrans	Caltrans	Caltrans
22	I-80 eastbound	bet. Appian Way and Pinole Valley Rd	Pinole	---	Y	---	---	Caltrans	Caltrans	Caltrans
23	I-80 eastbound	bet. Pinole Valley Rd and SR-4 (SS 50-1)	Hercules	---	Y	---	Y	Caltrans	Caltrans	Caltrans
24	I-80 eastbound	bet. Willow Ave and California St OC (S 55-1)	Hercules	---	Y	---	---	Caltrans	Caltrans	Caltrans
25	I-80 eastbound	bet. Willow Ave and California St OC (S 56-1)	Contra Costa County	---	Y	---	---	Caltrans	Caltrans	Caltrans

ATTACHMENT C

smart corridor
INTERSTATE 80
INTEGRATED CORRIDOR MOBILITY

ENTIRE SAN PABLO CORRIDOR ARTERIAL AND TRANSIT IMPROVEMENT PROJECT

Device	Number of Devices	Oakland	Emeryville	Berkeley	Albany	CCCounty	El Cerrito	San Pablo	Richmond	Pinole	Hercules	WestCAT	AC Transit
Existing SMART Corridor cameras (used by project)	15	2	0	3	2	0	3	2	2	0	1	0	0
New closed-circuit television (CCTV) cameras	39	8	2	3	1	3	1	4	9	6	2	0	0
New video encoders	35	10	2	3	1	1	1	3	8	4	2	0	0
Existing SMART Corridor Vehicle Detection Stations (used by project)	23	0	2	6	3	1	4	1	4	1	1	0	0
New Vehicle Detection Stations	10	0	0	0	0	2	0	2	2	3	1	0	0
Existing SMART Corridor TSP intersections	68	14	6	10	7	0	12	10	9	0	0	0	0
New TSP intersections (including ramp metering locations)	37	0	0	3	0	5	0	1	8	14	6	0	0
New EVP-only intersections	49	10	0	5	2	0	3	8	16	4	1	0	0
New Trailblazer Signs	36	4	0	6	2	3	4	4	6	4	3	0	0
New Traffic Signal	2	0	0	0	0	0	0	0	2	0	0	0	0
Traffic Signal Controller Upgrades (existing signal)	127	20	9	16	9	1	14	5	33	15	5	0	0
New Wireless GPRS modem (traffic signal controllers)	36	4	3	0	1	5	4	4	8	6	1	0	0
New Controller communications: Ethernet switch	14	14	0	0	0	0	0	0	0	0	0	0	0
New Controller communications: Ethernet module	72	17	9	0	8	5	14	4	8	6	1	0	0
New Intersection Vehicle Detection: Video Image Detection camera	53	35	0	11	0	0	0	0	7	0	0	0	0
New Intersection Vehilce Detection: Magnetometer	16	16	0	0	0	0	0	0	0	0	0	0	0
New Speed Feedback Signs	2	0	0	0	0	0	0	0	0	2	0	0	0
New Arterial Changeable Message Sign (CMS): single sided	2	2	0	0	0	0	0	0	0	0	0	0	0
New Arterial Changeable Message Sign (CMS): double-sided	1	1	0	0	0	0	0	0	0	0	0	0	0
Exisiting TSP emitters	40	0	0	0	0	0	0	0	0	0	0	0	40
New multi-mode (GPS-InfraRed) TSP Emitters	80	0	0	0	0	0	0	0	0	0	0	40	40
Traffic Signal System Software Maintenance/Upgrades		10%	10%	10%	0%	10%	10%	10%	10%	10%	10%		
TOTAL NUMBER OF DEVICES	**757**	**157**	**33**	**66**	**36**	**26**	**60**	**48**	**122**	**65**	**24**	**40**	**80**
TOTAL NUMBER OF NEW FIELD DEVICES	**552**	**135**	**22**	**41**	**22**	**24**	**39**	**40**	**83**	**49**	**17**	**40**	**40**
Delta Percent Increase of New Devices	100%	24.46%	3.99%	7.43%	3.99%	4.35%	7.07%	7.25%	15.04%	8.88%	3.08%	7.25%	7.25%
Total Maintenance Costs	$ 321,732.00	$ 67,267.50	$ 11,694.50	$ 27,924.00	$ 11,103.50	$ 12,601.00	$ 21,607.50	$ 20,860.50	$ 50,114.50	$ 26,206.00	$ 12,353.00		
Total Operating Costs	$ 224,564.64	$ 38,314.17	$ 12,706.72	$ 17,379.62	$ 8,410.72	$ 17,446.61	$ 14,487.74	$ 22,989.68	$ 50,725.19	$ 32,043.16	$ 10,061.01	$ 20,000.00	$ 40,000.00
TOTAL O&M COST	$ 546,296.64	$ 105,581.67	$ 24,401.22	$ 45,303.62	$ 19,514.22	$ 30,047.61	$ 36,095.24	$ 43,850.18	$ 100,839.69	$ 58,249.16	$ 22,414.01	$ 20,000.00	$ 40,000.00
Net Increase in Maintenance Costs - New Devices	$ 251,612.00	$ 54,554.50	$ 9,444.50	$ 18,157.00	$ 9,525.50	$ 9,601.00	$ 19,115.50	$ 17,532.50	$ 39,786.50	$ 22,456.00	$ 11,439.00		
Net Increase in Operating Costs - New Devices	$ 224,564.64	$ 38,314.17	$ 12,706.72	$ 17,379.62	$ 8,410.72	$ 17,446.61	$ 14,487.74	$ 22,989.68	$ 50,725.19	$ 32,043.16	$ 10,061.01	$ 20,000.00	$ 20,000.00
NET INCREASE IN TOTAL O&M COST	$ 476,176.64	$ 92,868.67	$ 22,151.22	$ 35,536.62	$ 17,936.22	$ 27,047.61	$ 33,603.24	$ 40,522.18	$ 90,511.69	$ 54,499.16	$ 21,500.01	$ 20,000.00	$ 20,000.00
TOTAL CALTRANS CONTRIBUTION TO INCREASED O&M COST	$ 188,159.64	$ 7,368.04	$ 15,760.46	$ 23,341.63	$ 17,578.22	$ 3,898.88	$ 24,981.14	$ 17,813.19	$ 44,961.47	$ 21,766.57	$ 10,688.04	$ -	$ -
TOTAL NON-CALTRANS REGIONAL CONTRIBUTION* TO INCREASED O&M COSTS	$ 137,004.59	$ 2,672.00	$ 358.00	$ 716.00	$ 358.00	$ 23,148.72	$ 8,622.09	$ 22,708.99	$ 35,878.22	$ 31,730.59	$ 10,811.98	$ -	$ -
TOTAL LOCAL CONTRIBUTION TO INCREASED O&M COSTS	$ 151,012.40	$ 82,828.64	$ 6,032.77	$ 11,478.99	$ -	$ -	$ -	$ -	$ 9,672.00	$ 1,000.00	$ -	$ 20,000.00	$ 20,000.00
TOTAL ESTIMATED CONSTRUCTION COST	$ 5,545,853.00	$ 1,698,158.00	$ 127,775.00	$ 488,535.00	$ 158,600.00	$ 224,050.00	$ 268,120.00	$ 355,450.00	$ 1,178,265.00	$ 473,400.00	$ 193,500.00	$ 190,000.00	$ 190,000.00

* Non-Caltrans Regional Contribution paid by regional MPO or CMAs

Notes:
THIS ATTACHMENT IS SHOWN FOR COST ESTIMATING PURPOSES AND PROVIDES BACKGROUND ON HOW THE O&M COSTS WERE ESTIMATED.

Total Number of Devices = sum of above quantities; this includes upgrades
Total Number of New Devices = does not include upgrades to existing devices.
Software Maintenance/Upgrades = based on percent of total new devices in each agency
Staffing Costs are assumed included in current staffing levels
50% of San Pablo Avenue Collocation costs already being paid by local agencies

BENEFITS TO LOCAL AGENCIES
- Ability to remotely monitor and revise signal timing without sending staff to field cabinet. Saves staff time.
- Ability to remotely view signal timing information in other jurisdictions. Improves efficiency.
- Creates tools that enable local agencies and Caltrans to improve traffic flow on local streets during major freeway incidents.

SUMMARY OF ACRONYMS

ATM	Active Traffic Management
CCTV	Closed Circuit Television
CMS	Changeable Message Sign
CT	Caltrans
CTC	(Alameda) County Transportation Commission
EVP	Emergency Vehicle Preemption
GPRS	General Packet Radio System
HW	Hardware
IP	Internet Protocol
MVDS	Microwave Vehicle Detection System
O&M	Operations and Maintenance
SIC	Signal Interconnect Cable
TS	Traffic Signal
TSP	Transit Signal Priority
VID	Video Image Detection

CALTRANS MAINTAINED

Device	Number of Devices	Oakland	Emeryville	Berkeley	Albany	CCCounty	El Cerrito	San Pablo	Richmond	Pinole	Hercules	WestCAT	AC Transit
Existing SMART Corridor cameras (used by project)	10	0	0	3	2	0	3	1	1	0	0	0	0
New closed-circuit television (CCTV) cameras	25	0	2	3	1	1	1	3	8	4	2	0	0
New video encoders	25	0	2	3	1	1	1	3	8	4	2	0	0
Existing SMART Corridor Vehicle Detection Stations (used by project)	9	0	1	4	2	0	2	0	0	0	0	0	0
New Vehicle Detection Stations	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing SMART Corridor TSP intersections	23	0	6	0	7	0	10	0	0	0	0	0	0
New TSP intersections (including ramp metering locations)	7	0	0	3	0	0	0	0	3	0	1	0	0
New EVP-only intersections	19	0	0	0	2	0	2	4	8	2	1	0	0
New Trailblazer Signs	14	2	0	6	2	0	4	0	0	0	0	0	0
New Traffic Signal	0	0	0	0	0	0	0	0	0	0	0	0	0
Traffic Signal Controller Upgrades (existing signal)	56	3	9	0	9	1	13	3	10	6	2	0	0
New Wireless GPRS modem (traffic signal controllers)	17	3	1	0	1	0	2	2	4	3	1	0	0
New Controller communications: Ethernet switch	0	0	0	0	0	0	0	0	0	0	0	0	0
New Controller communications: Ethernet module	40	3	7	0	8	0	12	2	4	3	1	0	0
New Intersection Vehicle Detection: Video Image Detection camera	0	0	0	0	0	0	0	0	0	0	0	0	0
New Intersection Vehilce Detection: Magnetometer	0	0	0	0	0	0	0	0	0	0	0	0	0
New Speed Feedback Signs	0	0	0	0	0	0	0	0	0	0	0	0	0
New Arterial Changeable Message Sign (CMS): single sided	0	0	0	0	0	0	0	0	0	0	0	0	0
New Arterial Changeable Message Sign (CMS): double-sided	0	0	0	0	0	0	0	0	0	0	0	0	0
Exisiting TSP emitters	0	0	0	0	0	0	0	0	0	0	0	0	0
New multi-mode (GPS-InfraRed) TSP Emitters	0	0	0	0	0	0	0	0	0	0	0	0	0
Software Maintenance/Upgrades	CALTRANS	10%											
TOTAL NUMBER OF DEVICES	**245**	**11**	**28**	**22**	**35**	**3**	**50**	**18**	**46**	**22**	**10**	**0**	**0**
TOTAL NUMBER OF NEW FIELD DEVICES	**170**	**8**	**18**	**15**	**22**	**2**	**32**	**14**	**35**	**16**	**8**	**0**	**0**
Delta Percent Increase of New Devices	30.80%	1.45%	3.26%	2.72%	3.99%	0.36%	5.80%	2.54%	6.34%	2.90%	1.45%	0.00%	0.00%
Total Maintenance Costs	$ 79,013.50	$ 4,038.50	$ 7,727.50	$ 10,724.50	$ 10,745.50	$ 945.00	$ 15,825.00	$ 5,304.00	$ 14,205.50	$ 6,373.50	$ 3,124.50	$ -	$ -
Total Operating Costs	$ 119,786.14	$ 4,079.54	$ 10,282.96	$ 11,609.13	$ 8,410.72	$ 3,203.88	$ 11,398.14	$ 12,923.19	$ 32,919.97	$ 16,895.07	$ 8,063.54		
TOTAL O&M COST	$ 198,799.64	$ 8,118.04	$ 18,010.46	$ 22,333.63	$ 19,156.22	$ 4,148.88	$ 27,223.14	$ 18,227.19	$ 47,125.47	$ 23,268.57	$ 11,188.04	$ -	$ -
Net Increase in Maintenance Costs - New Devices	$ 68,373.50	$ 3,288.50	$ 5,477.50	$ 11,732.50	$ 9,167.50	$ 695.00	$ 13,583.00	$ 4,890.00	$ 12,041.50	$ 4,873.50	$ 2,624.50	$ -	$ -
Net Increase in Operating Costs - New Devices	$ 119,786.14	$ 4,079.54	$ 10,282.96	$ 11,609.13	$ 8,410.72	$ 3,203.88	$ 11,398.14	$ 12,923.19	$ 32,919.97	$ 16,895.07	$ 8,063.54		
NET INCREASE IN TOTAL O&M COST	$ 188,159.64	$ 7,368.04	$ 15,760.46	$ 23,341.63	$ 17,578.22	$ 3,898.88	$ 24,981.14	$ 17,813.19	$ 44,961.47	$ 21,768.57	$ 10,688.04	$ -	$ -
TOTAL CALTRANS CONTRIBUTION TO INCREASED O&M COST	$ 188,159.64	$ 7,368.04	$ 15,760.46	$ 23,341.63	$ 17,578.22	$ 3,898.88	$ 24,981.14	$ 17,813.19	$ 44,961.47	$ 21,768.57	$ 10,688.04	$ -	$ -
TOTAL NON-CALTRANS REGIONAL CONTRIBUTION* TO INCREASED O&M COSTS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TOTAL LOCAL CONTRIBUTION TO INCREASED O&M COSTS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TOTAL ESTIMATED CONSTRUCTION COST	$ 1,505,080.00	$ 69,735.00	$ 119,185.00	$ 243,000.00	$ 158,600.00	$ 29,000.00	$ 241,850.00	$ 116,100.00	$ 310,560.00	$ 144,365.00	$ 72,595.00	$ -	$ -

*** Non-Caltrans Regional Contribution paid by regional MPO or CMAs**

Total Number of Devices = sum of above quantities.
Total Number of New Devices = does not include upgrades to existing devices.
Software Maintenance/Upgrades = based on percent of total devices in each agency
Individual agencies quantities are linked to this table

LOCAL MAINTAINED

Device	Number of Devices	Oakland	Emeryville	Berkeley	Albany	CCCounty	El Cerrito	San Pablo	Richmond	Pinole	Hercules	WestCAT	AC Transit
Existing SMART Corridor cameras (used by project)	5	2	0	0	0	0	0	1	1	0	1	0	0
New closed-circuit television (CCTV) cameras	14	8	0	0	0	2	0	1	1	2	0	0	0
New video encoders	10	10	0	0	0	0	0	0	0	0	0	0	0
Existing SMART Corridor Vehicle Detection Stations (used by project)	14	0	1	2	1	1	2	1	4	1	1	0	0
New Vehicle Detection Stations	10	0	0	0	0	2	0	2	2	3	1	0	0
Existing SMART Corridor TSP intersections	45	14	0	10	0	0	2	10	9	0	0	0	0
New TSP intersections	30	0	0	0	0	5	0	1	5	14	5	0	0
New EVP-only intersections	30	10	0	5	0	0	1	4	8	2	0	0	0
New Trailblazer Signs	22	2	0	0	0	3	0	4	6	4	3	0	0
New Traffic Signal	2	0	0	0	0	0	0	0	2	0	0	0	0
Traffic Signal Controller Upgrades (existing signal)	71	17	0	16	0	0	1	2	23	9	3	0	0
New Wireless GPRS modem (traffic signal controllers)	19	1	2	0	0	5	2	2	4	3	0	0	0
New Controller communications: Ethernet switch	14	14	0	0	0	0	0	0	0	0	0	0	0
New Controller communications: Ethernet module	32	14	2	0	0	5	2	2	4	3	0	0	0
New Intersection Vehicle Detection: Video Image Detection camera	53	35	0	11	0	0	0	0	7	0	0	0	0
New Intersection Vehilce Detection: Magnetometer	16	16	0	0	0	0	0	0	0	0	0	0	0
New Speed Feedback Signs	2	0	0	0	0	0	0	0	0	2	0	0	0
New Arterial Changeable Message Sign (CMS): single sided	2	2	0	0	0	0	0	0	0	0	0	0	0
New Arterial Changeable Message Sign (CMS): double-sided	1	1	0	0	0	0	0	0	0	0	0	0	0
Exisiting TSP emitters	40	0	0	0	0	0	0	0	0	0	0	0	40
New multi-mode (GPS-InfraRed) TSP Emitters	80	0	0	0	0	0	0	0	0	0	0	40	40
Software Maintenance/Upgrades		10%	10%	10%	0%	10%	10%	10%	10%	10%	10%	NA	NA
TOTAL NUMBER OF DEVICES	**512**	**146**	**5**	**44**	**1**	**23**	**10**	**30**	**76**	**43**	**14**	**40**	**80**
TOTAL NUMBER OF NEW FIELD DEVICES	**382**	**127**	**4**	**26**	**0**	**22**	**7**	**26**	**48**	**33**	**9**	**40**	**40**
Delta Percent Increase of New Devices	69.20%	23.01%	0.72%	4.71%	0.00%	3.99%	1.27%	4.71%	8.70%	5.98%	1.63%	7.25%	7.25%
Total Maintenance Costs	$ 182,718.50	$ 63,229.00	$ 3,967.00	$ 17,199.50	$ 358.00	$ 11,656.00	$ 5,782.50	$ 15,556.50	$ 35,909.00	$ 19,832.50	$ 9,228.50	$ 20,000.00	$ 40,000.00
Total Operating Costs	$ 104,778.49	$ 34,234.64	$ 2,423.77	$ 5,770.49	$ -	$ 14,242.72	$ 3,089.59	$ 10,066.49	$ 17,805.22	$ 15,148.09	$ 1,997.48		
TOTAL O&M COST	$ 347,496.99	$ 97,463.64	$ 6,390.77	$ 22,969.99	$ 358.00	$ 25,898.72	$ 8,872.09	$ 25,622.99	$ 53,714.22	$ 34,980.59	$ 11,225.98	$ 20,000.00	$ 40,000.00
Net Increase in Maintenance Costs - New Devices	$ 143,238.50	$ 51,266.00	$ 3,967.00	$ 6,424.50	$ 358.00	$ 8,906.00	$ 5,532.50	$ 12,642.50	$ 27,745.00	$ 17,582.50	$ 8,814.50	$ 20,000.00	$ 20,000.00
Net Increase in Operating Costs - New Devices	$ 104,778.49	$ 34,234.64	$ 2,423.77	$ 5,770.49	$ -	$ 14,242.72	$ 3,089.59	$ 10,066.49	$ 17,805.22	$ 15,148.09	$ 1,997.48		
NET INCREASE IN TOTAL O&M COST	$ 288,016.99	$ 85,500.64	$ 6,390.77	$ 12,194.99	$ 358.00	$ 23,148.72	$ 8,622.09	$ 22,708.99	$ 45,550.22	$ 32,730.59	$ 10,811.98	$ 20,000.00	$ 20,000.00
TOTAL CALTRANS CONTRIBUTION TO INCREASED O&M COST	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TOTAL NON-CALTRANS REGIONAL CONTRIBUTION* TO INCREASED O&M COSTS	$ 137,004.59	$ 2,672.00	$ 358.00	$ 716.00	$ 358.00	$ 23,148.72	$ 8,622.09	$ 22,708.99	$ 35,878.22	$ 31,730.59	$ 10,811.98	$ -	$ -
TOTAL LOCAL CONTRIBUTION TO INCREASED O&M COSTS	$ 151,012.40	$ 82,828.64	$ 6,032.77	$ 11,478.99	$ -	$ -	$ -	$ -	$ 9,672.00	$ 1,000.00	$ -	$ 20,000.00	$ 20,000.00
TOTAL ESTIMATED CONSTRUCTION COST	$ 4,040,773.00	$ 1,628,423.00	$ 8,590.00	$ 245,535.00	$ -	$ 194,960.00	$ 26,270.00	$ 239,350.00	$ 867,705.00	$ 329,035.00	$ 120,905.00	$ 190,000.00	$ 190,000.00

*** Non-Caltrans Regional Contribution paid by regional MPO or CMAs**

Total Number of Devices = sum of above quantities
Total Number of New Devices = does not include upgrades to existing devices.
Software Maintenance/Upgrades = based on percent of total devices in each agency
Individual agencies quantities are linked to this table

LOCAL SAN PABLO CORRIDOR ARTERIAL AND TRANSIT IMPROVEMENT (CONTRA COSTA REGION)

Device	Number of Devices	CCCounty	El Cerrito	San Pablo	Richmond	Pinole	Hercules	WestCAT
Existing SMART Corridor cameras (used by project)	3	0	0	1	1	0	1	0
New closed-circuit television (CCTV) cameras	6	2	0	1	1	2	0	0
New video encoders	0	0	0	0	0	0	0	0
Existing SMART Corridor Vehicle Detection Stations (used by project)	10	1	2	1	4	1	1	0
New Vehicle Detection Stations	10	2	0	2	2	3	1	0
Existing SMART Corridor TSP intersections	21	0	2	10	9	0	0	0
New TSP intersections (including ramp metering locations)	30	5	0	1	5	14	5	0
New EVP-only intersections	15	0	1	4	8	2	0	0
New Trailblazer Signs	20	3	0	4	6	4	3	0
New Traffic Signal	2	0	0	0	2	0	0	0
Traffic Signal Controller Upgrades (existing signal)	38	0	1	2	23	9	3	0
Wireless GPRS modem (traffic signal controllers)	16	5	2	2	4	3	0	0
Controller communications: Ethernet switch	0	0	0	0	0	0	0	0
Controller communications: Ethernet module	16	5	2	2	4	3	0	0
New Intersection Vehicle Detection: Video Image Detection camera	7	0	0	0	7	0	0	0
New Intersection Vehilce Detection: Magnetometer	0	0	0	0	0	0	0	0
Speed Feedback Signs	2	0	0	0	0	2	0	0
New Arterial Changeable Message Sign (CMS): single sided	0	0	0	0	0	0	0	0
New Arterial Changeable Message Sign (CMS): double-sided	0	0	0	0	0	0	0	0
Exisiting TSP emitters	0	0	0	0	0	0	0	0
New multi-mode (GPS-InfraRed) TSP Emitters	40	0	0	0	0	0	0	40
Software Maintenance/Upgrades								

TOTAL NUMBER OF DEVICES	236	23	10	30	76	43	14	40
TOTAL NUMBER OF NEW FIELD DEVICES	185	22	7	26	48	33	9	40
Delta Percent Increase of New Devices	33.51%	3.99%	1.27%	4.71%	8.70%	5.98%	1.63%	7.25%
Total Maintenance Costs	$ 97,965.00	$ 11,656.00	$ 5,782.50	$ 15,556.50	$ 35,909.00	$ 19,832.50	$ 9,228.50	$ 20,000.00
Total Operating Costs	$ 82,349.59	$ 14,242.72	$ 3,089.59	$ 10,066.49	$ 17,805.22	$ 15,148.09	$ 1,997.48	
TOTAL O&M COST	$ 180,314.59	$ 25,898.72	$ 8,872.09	$ 25,622.99	$ 53,714.22	$ 34,980.59	$ 11,225.98	$ 20,000.00
Net Increase in Maintenance Costs - New Devices	$ 81,223.00	$ 8,906.00	$ 5,532.50	$ 12,642.50	$ 27,745.00	$ 17,582.50	$ 8,814.50	$ 20,000.00
Net Increase in Operating Costs - New Devices	$ 82,349.59	$ 14,242.72	$ 3,089.59	$ 10,066.49	$ 17,805.22	$ 15,148.09	$ 1,997.48	
NET INCREASE IN TOTAL O&M COST	$ 163,572.59	$ 23,148.72	$ 8,622.09	$ 22,708.99	$ 45,550.22	$ 32,730.59	$ 10,811.98	$ 20,000.00
TOTAL CALTRANS CONTRIBUTION TO INCREASED O&M COST	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TOTAL NON-CALTRANS REGIONAL CONTRIBUTION* TO INCREASED O&M COSTS	$ 132,900.59	$ 23,148.72	$ 8,622.09	$ 22,708.99	$ 35,878.22	$ 31,730.59	$ 10,811.98	$ -
TOTAL LOCAL CONTRIBUTION TO INCREASED O&M COSTS	$ 30,672.00	$ -	$ -	$ -	$ 9,672.00	$ 1,000.00	$ -	$ 20,000.00

*** Non-Caltrans Regional Contribution paid by regional MPO or CMAs**

* This table is a subset of the information shown on the Local Summary.

Total Number of Devices = sum of above quantities
Total Number of New Devices = does not include upgrades to existing devices.
Software Maintenance/Upgrades = based on percent of total devices in each agency
Individual agencies quantities are linked to this table

Maintenance Costs -- OAKLAND (CT ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
Existing SMART Corridor cameras (used by project)	0	$9,300	$336	$0	10	Same as new CCTV Camera	$0			$0
New closed-circuit television (CCTV) cameras	0	$23,000	$336	$0	10	Alameda CTC Cost Data	$0			$0
New video encoders	0	$3,590	$359	$0	10	10% of Capital cost	$0			$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	0	$14,080	$358	$0	10	same as New MVDS	$0			$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0			$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New TSP intersections (including ramp metering locations)	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New EVP-only intersections	0	$5,060	$403	$0	10	Same as EVP/TSP intersection	$0			$0
New Trailblazer Signs	2	$24,675	$1,000	$2,000	10	Per Skyline; includes GPRS cost	$2,000	$2,000		$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	3	$2,500	$250	$750	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	3	$2,820	$282	$846	3	10% of Capital cost	$846	$846		$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	3	$1,475	$148	$443	10	10% of Capital cost	$443	$443		$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	0.00%	$500,000	$27,500	$0	5	Actual bids	$0			$0
Estimated Annual Maintenance Cost (Subtotal)				$4,039		Total Increase due to ICM Devices	$3,289	$3,289	$0	$0

TOTAL ESTIMATED CONSTRUCTION COST	$ 69,735.00

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
San Pablo Corridor Collocation	1.45%		$122,512	$1,776	Estimated Cost	$1,776	$1,776		$0
Wireless GPRS modem	3		$768	$2,304	$64 per month	$2,304	$2,304		$0
Point-Point T1 line for each camera	0		$2,100	$0	$175 per month	$0			$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	0		$660	$0	Alameda CTC Cost Data	$0			$0
IT/Staffing Assistance* - Maintenance Staff	1.45%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	1.45%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				$4,080	Total Increase due to ICM Devices	$4,080	$4,080	$0	$0

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	$8,119	Total Increase due to ICM Devices	$7,368	$7,368	$0	$0

Maintenance Costs – OAKLAND (LOCAL ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
Existing SMART Corridor cameras (used by project)	2	$9,300	$336	$672	10	Same as new CCTV Camera	$672		$672	$0
New closed-circuit television (CCTV) cameras	8	$23,000	$336	$2,688	10	Alameda CTC Cost Data	$2,688		$0	$2,688
New video encoders	10	$3,590	$359	$3,590	10	10% of Capital cost	$3,590			$3,590
Existing SMART Corridor Vehicle Detection Stations (used by project)	0	$14,080	$358	$0	10	same as New MVDS	$0		$0	$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0		$0	$0
Existing SMART Corridor TSP intersections**	14	$5,060	$403	$5,635	10	Alameda CTC Cost Data	$0		$0	$0
New TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New EVP-only intersections	10	$5,060	$403	$4,025	10	Same as EVP/TSP intersection	$4,025			$4,025
New Trailblazer Signs	2	$24,675	$1,000	$2,000	10	Per Skyline; includes GPRS cost	$2,000		$2,000	$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	17	$2,500	$250	$4,250	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	1	$2,820	$282	$282	3	10% of Capital cost	$282			$282
Controller communications: Ethernet switch	14	$4,060	$406	$5,684	10	10% of Capital cost	$5,684			$5,684
Controller communications: Ethernet module	14	$1,475	$148	$2,065	10	10% of Capital cost	$2,065			$2,065
New Intersection Vehicle Detection: Video Image Detection camera	35	$11,785	$336	$11,760	10	Estimated same as CCTV camera	$11,760			$11,760
New Intersection Vehilce Detection: Magnetometer	16	$8,438	$844	$13,500	10	10% of Capital cost	$13,500			$13,500
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	2	$160,333	$1,500	$3,000	10	Compared to trailblazer	$3,000			$3,000
New Arterial Changeable Message Sign (CMS): double-sided	1	$246,782	$2,000	$2,000	10	Compared to trailblazer	$2,000			$2,000
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	10.00%	$500,000	$27,500	$2,750	5	Actual bids	$0			$0
		Estimated Annual Maintenance Cost (Subtotal)		$63,229		Total Increase due to Project	$51,266	$0	$2,672	$48,594

TOTAL ESTIMATED CONSTRUCTION COST	$	1,628,423.00

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing
Oakland has existing signal system
** Maintenance of existing SMART Corridor TSP remains responsibility of Cities per previous maintenance agreement
*** Upgrades to Traffic Controllers and Oakland TMC will result in Maintenance and Operational cost savings
by reducing the repair efforts on existing controllers and by added functional control from TMC

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
San Pablo Corridor Collocation	23.01%		$122,512	$28,187	Estimated Cost	$28,187			$28,187
Wireless GPRS modem	1		$768	$768	$64 per month	$768			$768
Point-Point T1 line for each camera	0		$2,100	$0	$175 per month	$0			$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	8		$660	$5,280	Alameda CTC Cost Data	$5,280			$5,280
IT/Staffing Assistance* - Maintenance Staff	23.01%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	23.01%			$0	Internal based on each Agencies' O&M policy	$0			$0
		Estimated Annual Operating Cost (Subtotal)		$34,235	Total Increase due to ICM Devices	$34,235	$0	$0	$34,235

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	$97,464	Total Increase due to ICM Devices	$85,501	$0	$2,672	$82,829

Maintenance Costs – EMERYVILLE (LOCAL ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
Existing SMART Corridor cameras (used by project)	0	$9,300	$336	$0	10	Same as new CCTV Camera	$0		$0	$0
New closed-circuit television (CCTV) cameras	0	$23,000	$336	$0	10	Alameda CTC Cost Data	$0		$0	$0
New video encoders	0	$3,590	$359	$0	10	10% of Capital cost	$0			$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	1	$14,080	$358	$358	10	same as New MVDS	$358		$358	$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0		$0	$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0		$0	$0
New TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New EVP-only intersections	0	$5,060	$403	$0	10	Same as EVP/TSP intersection	$0			$0
New Trailblazer Signs	0	$24,675	$1,000	$0	10	Per Skyline; includes GPRS cost	$0		$0	$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	0	$2,500	$250	$0	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	2	$2,820	$282	$564	3	10% of Capital cost	$564			$564
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	2	$1,475	$148	$295	10	10% of Capital cost	$295			$295
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	10.00%	$500,000	$27,500	$2,750	5	Actual bids	$2,750			$2,750
Estimated Annual Maintenance Cost (Subtotal)				**$3,967**		**Total Increase due to ICM Devices**	**$3,967**	**$0**	**$358**	**$3,609**

TOTAL ESTIMATED CONSTRUCTION COST	**$ 8,590.00**

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing
New signal system for Emeryville being installed by project.

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
San Pablo Corridor Collocation	0.72%		$122,512	$888	Estimated Cost	$888			$888
Wireless GPRS modem	2		$768	$1,536	$64 per month	$1,536			$1,536
Point-Point T1 line for each camera	0		$2,100	$0	$175 per month	$0			$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	0		$660	$0	Alameda CTC Cost Data	$0			$0
IT/Staffing Assistance* - Maintenance Staff	0.72%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	0.72%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				**$2,424**	**Total Increase due to ICM Devices**	**$2,424**	**$0**	**$0**	**$2,424**

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	**$6,391**	**Total Increase due to ICM Devices**	**$6,391**	**$0**	**$358**	**$6,033**

Maintenance Costs – BERKELEY (CT ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
Existing SMART Corridor cameras (used by project)	3	$9,300	$336	$1,008	10	Same as new CCTV Camera	$1,008	$1,008		$0
New closed-circuit television (CCTV) cameras	3	$23,000	$336	$1,008	10	Alameda CTC Cost Data	$1,008	$1,008		$0
New video encoders	3	$3,590	$359	$1,077	10	10% of Capital cost	$1,077	$1,077		$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	4	$14,080	$358	$1,432	10	same as New MVDS	$1,432	$1,432		$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0			$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New TSP intersections (including ramp metering locations)	3	$5,060	$403	$1,208	10	Alameda CTC Cost Data	$1,208	$1,208		$0
New EVP-only intersections	0	$5,060	$403	$0	10	Same as EVP/TSP intersection	$0			$0
New Trailblazer Signs	6	$24,675	$1,000	$6,000	10	Per Skyline; includes GPRS cost	$6,000	$6,000		$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	0	$2,500	$250	$0	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	0	$2,820	$282	$0	3	10% of Capital cost	$0			$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	0	$1,475	$148	$0	10	10% of Capital cost	$0			$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	0.00%	$500,000	$27,500	$0	5	Actual bids	$0			$0
		Estimated Annual Maintenance Cost (Subtotal)		$10,725		Total Increase due to ICM Devices	$11,733	$11,733	$0	$0

TOTAL ESTIMATED CONSTRUCTION COST	$	243,000.00

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
San Pablo Corridor Collocation	2.72%		$122,512	$3,329	Estimated Cost	$3,329	$3,329		$0
Wireless GPRS modem	0		$768	$0	$64 per month	$0	$0		$0
Point-Point T1 line for each camera	3		$2,100	$6,300	$175 per month	$6,300	$6,300		$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	3		$660	$1,980	Alameda CTC Cost Data	$1,980	$1,980		$0
IT/Staffing Assistance* - Maintenance Staff	2.72%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	2.72%			$0	Internal based on each Agencies' O&M policy	$0			$0
		Estimated Annual Operating Cost (Subtotal)		$11,609	Total Increase due to ICM Devices	$11,609	$11,609	$0	$0

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	$22,334	Total Increase due to ICM Devices	$23,342	$23,342	$0	$0

Maintenance Costs – BERKELEY (LOCAL ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
Existing SMART Corridor cameras (used by project)	0	$9,300	$336	$0	10	Same as new CCTV Camera	$0		$0	$0
New closed-circuit television (CCTV) cameras	0	$23,000	$336	$0	10	Alameda CTC Cost Data	$0		$0	$0
New video encoders	0	$3,590	$359	$0	10	10% of Capital cost	$0			$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	2	$14,080	$358	$716	10	same as New MVDS	$716		$716	$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0		$0	$0
Existing SMART Corridor TSP intersections**	10	$5,060	$403	$4,025	10	Alameda CTC Cost Data	$0	$0	$0	$0
New TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New EVP-only intersections	5	$5,060	$403	$2,013	10	Same as EVP/TSP intersection	$2,013			$2,013
New Trailblazer Signs	0	$24,675	$1,000	$0	10	Per Skyline; includes GPRS cost	$0		$0	$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	16	$2,500	$250	$4,000	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	0	$2,820	$282	$0	3	10% of Capital cost	$0			$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	0	$1,475	$148	$0	10	10% of Capital cost	$0			$0
New Intersection Vehicle Detection: Video Image Detection camera	11	$11,785	$336	$3,696	10	Estimated same as CCTV camera	$3,696			$3,696
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	10.00%	$500,000	$27,500	$2,750	5	Actual bids	$0			$0
Estimated Annual Maintenance Cost (Subtotal)				**$17,200**		**Total Increase due to ICM Devices**	**$6,425**	**$0**	**$716**	**$5,709**

TOTAL ESTIMATED CONSTRUCTION COST	**$**	**245,535.00**

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing
Berkeley has existing signal system
** Maintenance of existing SMART Corridor TSP remains responsibility of Cities per previous maintenance agreement

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
San Pablo Corridor Collocation	4.71%		$122,512	$5,770	Estimated Cost	$5,770			$5,770
Wireless GPRS modem	0		$768	$0	$64 per month	$0			$0
Point-Point T1 line for each camera	0		$2,100	$0	$175 per month	$0			$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	0		$660	$0	Alameda CTC Cost Data	$0			$0
IT/Staffing Assistance* - Maintenance Staff	4.71%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	4.71%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				**$5,770**	**Total Increase due to ICM Devices**	**$5,770**	**$0**	**$0**	**$5,770**

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	**$22,970**	**Total Increase due to ICM Devices**	**$12,195**	**$0**	**$716**	**$11,479**

Maintenance Costs – ALBANY (CT ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
Existing SMART Corridor cameras (used by project)	2	$9,300	$336	$672	10	Same as new CCTV Camera	$672	$672		$0
New closed-circuit television (CCTV) cameras	1	$23,000	$336	$336	10	Alameda CTC Cost Data	$336	$336		$0
New video encoders	1	$3,590	$359	$359	10	10% of Capital cost	$359	$359		$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	2	$14,080	$358	$716	10	same as New MVDS	$716	$716		$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0			$0
Existing SMART Corridor TSP intersections	7	$5,060	$403	$2,818	10	Alameda CTC Cost Data	$2,818	$2,818		$0
New TSP intersections (including ramp metering locations)	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0	$0		$0
New EVP-only intersections	2	$5,060	$403	$805	10	Same as EVP/TSP intersection	$805	$805		$0
New Trailblazer Signs	2	$24,675	$1,000	$2,000	10	Per Skyline; includes GPRS cost	$2,000	$2,000		$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	9	$2,500	$250	$2,250	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	1	$2,820	$282	$282	3	10% of Capital cost	$282	$282		$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	8	$1,475	$148	$1,180	10	10% of Capital cost	$1,180	$1,180		$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	0.00%	$500,000	$27,500	$0	5	Actual bids	$0			$0
		Estimated Annual Maintenance Cost (Subtotal)		$10,746		Total Increase due to ICM Devices	$9,168	$9,168	$0	$0

TOTAL ESTIMATED CONSTRUCTION COST	$	158,600.00

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
San Pablo Corridor Collocation	3.99%		$122,512	$4,883	Estimated Cost	$4,883	$4,883		$0
Wireless GPRS modem	1		$768	$768	$64 per month	$768	$768		$0
Point-Point T1 line for each camera	1		$2,100	$2,100	$175 per month	$2,100	$2,100		$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	1		$660	$660	Alameda CTC Cost Data	$660	$660		$0
IT/Staffing Assistance* - Maintenance Staff	3.99%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	3.99%			$0	Internal based on each Agencies' O&M policy	$0			$0
		Estimated Annual Operating Cost (Subtotal)		$8,411	Total Increase due to ICM Devices	$8,411	$8,411	$0	$0

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	$19,156	Total Increase due to ICM Devices	$17,578	$17,578	$0	$0

Maintenance Costs – ALBANY (LOCAL ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
Existing SMART Corridor cameras (used by project)	0	$9,300	$336	$0	10	Same as new CCTV Camera	$0		$0	$0
New closed-circuit television (CCTV) cameras	0	$23,000	$336	$0	10	Alameda CTC Cost Data	$0		$0	$0
New video encoders	0	$3,590	$359	$0	10	10% of Capital cost	$0			$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	1	$14,080	$358	$358	10	same as New MVDS	$358		$358	$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0		$0	$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0		$0	$0
New TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New EVP-only intersections	0	$5,060	$403	$0	10	Same as EVP/TSP intersection	$0			$0
New Trailblazer Signs	0	$24,675	$1,000	$0	10	Per Skyline; includes GPRS cost	$0		$0	$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	0	$2,500	$250	$0	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	0	$2,820	$282	$0	3	10% of Capital cost	$0			$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	0	$1,475	$148	$0	10	10% of Capital cost	$0			$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	0.00%	$500,000	$27,500	$0	5	Actual bids	$0			$0
Estimated Annual Maintenance Cost (Subtotal)				**$358**		**Total Increase due to ICM Devices**	**$358**	**$0**	**$358**	**$0**

TOTAL ESTIMATED CONSTRUCTION COST	$ -

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing
Albany does not have signal system and will not be installing signal system as part of project

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by City
San Pablo Corridor Collocation	0.00%		$122,512	$0	Estimated Cost	$0			$0
Wireless GPRS modem	0		$768	$0	$64 per month	$0			$0
Point-Point T1 line for each camera	0		$2,100	$0	$175 per month	$0			$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	0		$660	$0	Alameda CTC Cost Data	$0			$0
IT/Staffing Assistance* - Maintenance Staff	0.00%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	0.00%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				**$0**	**Total Increase due to ICM Devices**	**$0**	**$0**	**$0**	**$0**

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	**$358**	**Total Increase due to ICM Devices**	**$358**	**$0**	**$358**	**$0**

Maintenance Costs -- CONTRA COSTA COUNTY (CT ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by County
Existing SMART Corridor cameras (used by project)	0	$9,300	$336	$0	10	Same as new CCTV Camera	$0			$0
New closed-circuit television (CCTV) cameras	1	$23,000	$336	$336	10	Alameda CTC Cost Data	$336	$336		$0
New video encoders	1	$3,590	$359	$359	10	10% of Capital cost	$359	$359		$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	0	$14,080	$358	$0	10	same as New MVDS	$0			$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0			$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New TSP intersections (including ramp metering locations)	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New EVP-only intersections	0	$5,060	$403	$0	10	Same as EVP/TSP intersection	$0			$0
New Trailblazer Signs	0	$24,675	$1,000	$0	10	Per Skyline; includes GPRS cost	$0			$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	1	$2,500	$250	$250	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	0	$2,820	$282	$0	3	10% of Capital cost	$0			$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	0	$1,475	$148	$0	10	10% of Capital cost	$0			$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	0.00%	$500,000	$27,500	$0	5	Actual bids	$0			$0
Estimated Annual Maintenance Cost (Subtotal)				$945		Total Increase due to ICM Devices	$695	$695	$0	$0

TOTAL ESTIMATED CONSTRUCTION COST	$ 29,090.00

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by County
San Pablo Corridor Collocation	0.36%		$122,512	$444	Estimated Cost	$444	$444		$0
Wireless GPRS modem	0		$768	$0	$64 per month	$0	$0		$0
Point-Point T1 line for each camera	1		$2,100	$2,100	$175 per month	$2,100	$2,100		$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	1		$660	$660	Alameda CTC Cost Data	$660	$660		$0
IT/Staffing Assistance* - Maintenance Staff	0.36%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	0.36%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				$3,204	Total Increase due to ICM Devices	$3,204	$3,204	$0	$0

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	$4,149	Total Increase due to ICM Devices	$3,899	$3,899	$0	$0

Maintenance Costs – CONTRA COSTA COUNTY (LOCAL ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by County
Existing SMART Corridor cameras (used by project)	0	$9,300	$336	$0	10	Same as new CCTV Camera	$0		$0	$0
New closed-circuit television (CCTV) cameras	2	$23,000	$336	$672	10	Alameda CTC Cost Data	$672		$672	$0
New video encoders	0	$3,590	$359	$0	10	10% of Capital cost	$0			$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	1	$14,080	$358	$358	10	same as New MVDS	$358		$358	$0
New Vehicle Detection Stations	2	$14,080	$358	$716	10	Alameda CTC Cost Data	$716		$716	$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0		$0	$0
New TSP intersections	5	$5,060	$403	$2,013	10	Alameda CTC Cost Data	$2,013		$2,013	$0
New EVP-only intersections	0	$5,060	$403	$0	10	Same as EVP/TSP intersection	$0			$0
New Trailblazer Signs	3	$24,675	$1,000	$3,000	10	Per Skyline; includes GPRS cost	$3,000		$3,000	$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	0	$2,500	$250	$0	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	5	$2,820	$282	$1,410	3	10% of Capital cost	$1,410		$1,410	$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	5	$1,475	$148	$738	10	10% of Capital cost	$738		$738	$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	10.00%	$500,000	$27,500	$2,750	5	Actual bids	$0			$0
Estimated Annual Maintenance Cost (Subtotal)				**$11,656**		**Total Increase due to ICM Devices**	**$8,906**	**$0**	**$8,906**	**$0**

TOTAL ESTIMATED CONSTRUCTION COST	**$ 194,960.00**

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing Contra Costa County has existing signal system.

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by County
San Pablo Corridor Collocation	3.99%		$122,512	$4,883	Estimated Cost	$4,883		$4,883	$0
Wireless GPRS modem	5		$768	$3,840	$64 per month	$3,840		$3,840	$0
Point-Point T1 line for each camera	2		$2,100	$4,200	$175 per month	$4,200		$4,200	$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	2		$660	$1,320	Alameda CTC Cost Data	$1,320		$1,320	$0
IT/Staffing Assistance* - Maintenance Staff	3.99%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	3.99%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				**$14,243**	**Total Increase due to ICM Devices**	**$14,243**	**$0**	**$14,243**	**$0**

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	**$28,899**	**Total Increase due to ICM Devices**	**$23,149**	**$0**	**$23,149**	**$0**

Maintenance Costs -- EL CERRITO (CT ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
Existing SMART Corridor cameras (used by project)	3	$9,300	$336	$1,008	10	Same as new CCTV Camera	$1,008	$1,008		$0
New closed-circuit television (CCTV) cameras	1	$23,000	$336	$336	10	Alameda CTC Cost Data	$336	$336		$0
New video encoders	1	$3,590	$359	$359	10	10% of Capital cost	$359	$359		$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	2	$14,080	$358	$716	10	same as New MVDS	$716	$716		$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0			$0
Existing SMART Corridor TSP intersections	10	$5,060	$403	$4,025	10	Alameda CTC Cost Data	$4,025	$4,025		$0
New TSP intersections (including ramp metering locations)	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New EVP-only intersections	2	$5,060	$403	$805	10	Same as EVP/TSP intersection	$805	$805		$0
New Trailblazer Signs	4	$24,675	$1,000	$4,000	10	Per Skyline; includes GPRS cost	$4,000	$4,000		$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	13	$2,500	$250	$3,250	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	2	$2,820	$282	$564	3	10% of Capital cost	$564	$564		$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	12	$1,475	$148	$1,770	10	10% of Capital cost	$1,770	$1,770		$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	0.00%	$500,000	$27,500	$0	5	Actual bids	$0			$0
Estimated Annual Maintenance Cost (Subtotal)				$15,825		Total Increase due to ICM Devices	$13,583	$13,583	$0	$0

TOTAL ESTIMATED CONSTRUCTION COST	$ 241,850.00

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
San Pablo Corridor Collocation	5.80%		$122,512	$7,102	Estimated Cost	$7,102	$7,102		$0
Wireless GPRS modem	2		$768	$1,536	$64 per month	$1,536	$1,536		$0
Point-Point T1 line for each camera	1		$2,100	$2,100	$175 per month	$2,100	$2,100		$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	1		$660	$660	Alameda CTC Cost Data	$660	$660		$0
IT/Staffing Assistance* - Maintenance Staff	5.80%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	5.80%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				$11,398	Total Increase due to ICM Devices	$11,398	$11,398	$0	$0

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	$27,223	Total Increase due to ICM Devices	$24,981	$24,981	$0	$0

Maintenance Costs -- EL CERRITO (LOCAL ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
Existing SMART Corridor cameras (used by project)	0	$9,300	$336	$0	10	Same as new CCTV Camera	$0		$0	$0
New closed-circuit television (CCTV) cameras	0	$23,000	$336	$0	10	Alameda CTC Cost Data	$0		$0	$0
New video encoders	0	$3,590	$359	$0	10	10% of Capital cost	$0			$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	2	$14,080	$358	$716	10	same as New MVDS	$716		$716	$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0		$0	$0
Existing SMART Corridor TSP intersections	2	$5,060	$403	$805	10	Alameda CTC Cost Data	$805		$805	$0
New TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New EVP-only intersections	1	$5,060	$403	$403	10	Same as EVP/TSP intersection	$403		$403	$0
New Trailblazer Signs	0	$24,675	$1,000	$0	10	Per Skyline; includes GPRS cost	$0		$0	$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	1	$2,500	$250	$250	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	2	$2,820	$282	$564	3	10% of Capital cost	$564		$564	$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	2	$1,475	$148	$295	10	10% of Capital cost	$295		$295	$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	10.00%	$500,000	$27,500	$2,750	5	Actual bids	$2,750		$2,750	$0
Estimated Annual Maintenance Cost (Subtotal)				**$5,783**		**Total Increase due to ICM Devices**	**$5,533**	**$0**	**$5,533**	**$0**

TOTAL ESTIMATED CONSTRUCTION COST	**$ 26,270.00**

* Sidewalk is El Cerrito right-of-way.

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing
New signal system for El Cerrito being provided by project.

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
San Pablo Corridor Collocation	1.27%		$122,512	$1,554	Estimated Cost	$1,554		$1,554	$0
Wireless GPRS modem	2		$768	$1,536	$64 per month	$1,536		$1,536	$0
Point-Point T1 line for each camera	0		$2,100	$0	$175 per month	$0			$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	0		$660	$0	Alameda CTC Cost Data	$0			$0
IT/Staffing Assistance* - Maintenance Staff	1.27%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	1.27%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				**$3,090**	**Total Increase due to ICM Devices**	**$3,090**	**$0**	**$3,090**	**$0**

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	**$8,872**	**Total Increase due to ICM Devices**	**$8,622**	**$0**	**$8,622**	**$0**

Maintenance Costs -- SAN PABLO AREA (CT ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
Existing SMART Corridor cameras (used by project)	1	$9,300	$336	$336	10	Same as new CCTV Camera	$336	$336		$0
New closed-circuit television (CCTV) cameras	3	$23,000	$336	$1,008	10	Alameda CTC Cost Data	$1,008	$1,008		$0
New video encoders	3	$3,590	$359	$1,077	10	10% of Capital cost	$1,077	$1,077		$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	0	$14,080	$358	$0	10	same as New MVDS	$0			$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0			$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New TSP intersections (including ramp metering locations)	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New EVP-only intersections	4	$5,060	$403	$1,610	10	Same as EVP/TSP intersection	$1,610	$1,610		$0
New Trailblazer Signs	0	$24,675	$1,000	$0	10	Per Skyline; includes GPRS cost	$0			$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	3	$2,500	$250	$750	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	2	$2,820	$282	$564	3	10% of Capital cost	$564	$564		$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	2	$1,475	$148	$295	10	10% of Capital cost	$295	$295		$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	0.00%	$500,000	$27,500	$0	10	Actual bids	$0			$0
Estimated Annual Maintenance Cost (Subtotal)				$5,304		Total Increase due to ICM Devices	$4,890	$4,890	$0	$0

TOTAL ESTIMATED CONSTRUCTION COST	$ 116,100.00

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
San Pablo Corridor Collocation	2.54%		$122,512	$3,107	Estimated Cost	$3,107	$3,107		$0
Wireless GPRS modem	2		$768	$1,536	$64 per month	$1,536	$1,536		$0
Point-Point T1 line for each camera	3		$2,100	$6,300	$175 per month	$6,300	$6,300		$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	3		$660	$1,980	Alameda CTC Cost Data	$1,980	$1,980		$0
IT/Staffing Assistance* - Maintenance Staff	2.54%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	2.54%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				$12,923	Total Increase due to ICM Devices	$12,923	$12,923	$0	$0

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	$18,227	Total Increase due to ICM Devices	$17,813	$17,813	$0	$0

Maintenance Costs – SAN PABLO (LOCAL ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
Existing SMART Corridor cameras (used by project)	1	$9,300	$336	$336	10	Same as new CCTV Camera	$336		$336	$0
New closed-circuit television (CCTV) cameras	1	$23,000	$336	$336	10	Alameda CTC Cost Data	$336		$336	$0
New video encoders	0	$3,590	$359	$0	10	10% of Capital cost	$0			$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	1	$14,080	$358	$358	10	same as New MVDS	$358		$358	$0
New Vehicle Detection Stations	2	$14,080	$358	$716	10	Alameda CTC Cost Data	$716		$716	$0
Existing SMART Corridor TSP intersections	10	$5,060	$403	$4,025	10	Alameda CTC Cost Data	$4,025		$4,025	$0
New TSP intersections	1	$5,060	$403	$403	10	Alameda CTC Cost Data	$403		$403	$0
New EVP-only intersections	4	$5,060	$403	$1,610	10	Same as EVP/TSP intersection	$1,610		$1,610	$0
New Trailblazer Signs	4	$24,675	$1,000	$4,000	10	Per Skyline; includes GPRS cost	$4,000		$4,000	$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	2	$2,500	$250	$500	10	10% of Capital cost	No increase in maint cost.			$0
Wireless GPRS modem (traffic signal controllers)	2	$2,820	$282	$564	3	10% of Capital cost	$564		$564	$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	2	$1,475	$148	$295	10	10% of Capital cost	$295		$295	$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	10.00%	$500,000	$27,500	$2,750	5	Actual bids	$0			$0
Estimated Annual Maintenance Cost (Subtotal)				**$15,557**		**Total Increase due to ICM Devices**	**$12,643**	**$0**	**$12,643**	**$0**

TOTAL ESTIMATED CONSTRUCTION COST	$ 239,350.00

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing San Pablo has existing signal system.

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
San Pablo Corridor Collocation	4.71%		$122,512	$5,770	Estimated Cost	$5,770		$5,770	$0
Wireless GPRS modem	2		$768	$1,536	$64 per month	$1,536		$1,536	$0
Point-Point T1 line for each camera	1		$2,100	$2,100	$175 per month	$2,100		$2,100	$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	1		$660	$660	Alameda CTC Cost Data	$660		$660	$0
IT/Staffing Assistance* - Maintenance Staff	4.71%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	4.71%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				**$10,066**	**Total Increase due to ICM Devices**	**$10,066**	**$0**	**$10,066**	**$0**

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	$28,623	Total Increase due to ICM Devices	$22,709	$0	$22,709	$0

Maintenance Costs -- RICHMOND (CT ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
Existing SMART Corridor cameras (used by project)	1	$9,300	$336	$336	10	Same as new CCTV Camera	$336	$336		$0
New closed-circuit television (CCTV) cameras	8	$23,000	$336	$2,688	10	Alameda CTC Cost Data	$2,688	$2,688		$0
New video encoders	8	$3,590	$359	$2,872	10	10% of Capital cost	$2,872	$2,872		$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	0	$14,080	$358	$0	10	same as New MVDS	$0			$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0			$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New TSP intersections (including ramp metering locations)	3	$5,060	$403	$1,208	10	Alameda CTC Cost Data	$1,208	$1,208		$0
New EVP-only intersections	8	$5,060	$403	$3,220	10	Same as EVP/TSP intersection	$3,220	$3,220		$0
New Trailblazer Signs	0	$24,675	$1,000	$0	10	Per Skyline; includes GPRS cost	$0			$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	10	$2,500	$250	$2,500	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	4	$2,820	$282	$1,128	3	10% of Capital cost	$1,128	$1,128		$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	4	$1,475	$148	$590	10	10% of Capital cost	$590	$590		$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0	$0		$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	0.00%	$500,000	$27,500	$0	5	Actual bids	$0			$0
		Estimated Annual Maintenance Cost (Subtotal)		$14,206		Total Increase due to ICM Devices	$12,042	$12,042	$0	$0

TOTAL ESTIMATED CONSTRUCTION COST	$ 310,560.00

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
San Pablo Corridor Collocation	6.34%		$122,512	$7,768	Estimated Cost	$7,768	$7,768		$0
Wireless GPRS modem	4		$768	$3,072	$64 per month	$3,072	$3,072		$0
Point-Point T1 line for each camera	8		$2,100	$16,800	$175 per month	$16,800	$16,800		$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	8		$660	$5,280	Alameda CTC Cost Data	$5,280	$5,280		$0
IT/Staffing Assistance* - Maintenance Staff	6.34%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	6.34%			$0	Internal based on each Agencies' O&M policy	$0			$0
		Estimated Annual Operating Cost (Subtotal)		$32,920	Total Increase due to ICM Devices	$32,920	$32,920	$0	$0

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	$47,126	Total Increase due to ICM Devices	$44,961	$44,961	$0	$0

Maintenance Costs -- RICHMOND (LOCAL ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
Existing SMART Corridor cameras (used by project)	1	$9,300	$336	$336	10	Same as new CCTV Camera	$336		$336	$0
New closed-circuit television (CCTV) cameras	1	$23,000	$336	$336	10	Alameda CTC Cost Data	$336		$336	$0
New video encoders	0	$3,590	$359	$0	10	10% of Capital cost	$0			$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	4	$14,080	$358	$1,432	10	same as New MVDS	$1,432		$1,432	$0
New Vehicle Detection Stations	2	$14,080	$358	$716	10	Alameda CTC Cost Data	$716		$716	$0
Existing SMART Corridor TSP intersections	9	$5,060	$403	$3,623	10	Alameda CTC Cost Data	$3,623		$3,623	$0
New TSP intersections	5	$5,060	$403	$2,013	10	Alameda CTC Cost Data	$2,013		$2,013	$0
New EVP-only intersections	8	$5,060	$403	$3,220	10	Same as EVP/TSP intersection	$3,220		$3,220	$0
New Trailblazer Signs	6	$24,675	$1,000	$6,000	10	Per Skyline; includes GPRS cost	$6,000		$6,000	$0
New Traffic Signal	2	$200,000	$3,000	$6,000	10	Based on City of Concord	$6,000			$6,000
Traffic Signal Controller Upgrades (existing signal)	23	$2,500	$250	$5,750	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	4	$2,820	$282	$1,128	3	10% of Capital cost	$1,128		$1,128	$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	4	$1,475	$148	$590	10	10% of Capital cost	$590		$590	$0
New Intersection Vehicle Detection: Video Image Detection camera	7	$11,785	$336	$2,352	10	Estimated same as CCTV camera	$2,352			$2,352
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	10.00%	$500,000	$27,500	$2,750	5	Actual bids	$0			$0
Estimated Annual Maintenance Cost (Subtotal)				**$35,909**		**Total Increase due to ICM Devices**	**$27,745**	**$0**	**$19,393**	**$8,352**

TOTAL ESTIMATED CONSTRUCTION COST	**$ 867,705.00**

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing Richmond has existing signal system.

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
San Pablo Corridor Collocation	8.70%		$122,512	$10,653	Estimated Cost	$10,653		$10,653	$0
Wireless GPRS modem	4		$768	$3,072	$64 per month	$3,072		$3,072	$0
Point-Point T1 line for each camera	1		$2,100	$2,100	$175 per month	$2,100		$2,100	$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	3		$660	$1,980	Alameda CTC Cost Data	$1,980		$660	$1,320
IT/Staffing Assistance* - Maintenance Staff	8.70%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	8.70%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				**$17,805**	**Total Increase due to ICM Devices**	**$17,805**	**$0**	**$16,485**	**$1,320**

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	**$53,714**	**Total Increase due to ICM Devices**	**$45,550**	**$0**	**$35,878**	**$9,672**

Maintenance Costs – PINOLE (CT ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
Existing SMART Corridor cameras (used by project)	0	$9,300	$336	$0	10	Same as new CCTV Camera	$0			$0
New closed-circuit television (CCTV) cameras	4	$23,000	$336	$1,344	10	Alameda CTC Cost Data	$1,344	$1,344		$0
New video encoders	4	$3,590	$359	$1,436	10	10% of Capital cost	$1,436	$1,436		$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	0	$14,080	$358	$0	10	same as New MVDS	$0			$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0			$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New TSP intersections (including ramp metering locations)	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New EVP-only intersections	2	$5,060	$403	$805	10	Same as EVP/TSP intersection	$805	$805		$0
New Trailblazer Signs	0	$24,675	$1,000	$0	10	Per Skyline; includes GPRS cost	$0			$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	6	$2,500	$250	$1,500	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	3	$2,820	$282	$846	3	10% of Capital cost	$846	$846		$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	3	$1,475	$148	$443	10	10% of Capital cost	$443	$443		$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	0.00%	$500,000	$27,500	$0	5	Actual bids	$0			$0
Estimated Annual Maintenance Cost (Subtotal)				**$6,374**		**Total Increase due to ICM Devices**	**$4,874**	**$4,874**	**$0**	**$0**

TOTAL ESTIMATED CONSTRUCTION COST	**$**	**144,365.00**

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
San Pablo Corridor Collocation	2.90%		$122,512	$3,551	Estimated Cost	$3,551	$3,551		$0
Wireless GPRS modem	3		$768	$2,304	$64 per month	$2,304	$2,304		$0
Point-Point T1 line for each camera	4		$2,100	$8,400	$175 per month	$8,400	$8,400		$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	4		$660	$2,640	Alameda CTC Cost Data	$2,640	$2,640		$0
IT/Staffing Assistance* - Maintenance Staff	2.90%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	2.90%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				**$16,895**	**Total Increase due to ICM Devices**	**$16,895**	**$16,895**	**$0**	**$0**

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	**$23,269**	**Total Increase due to ICM Devices**	**$21,769**	**$21,769**	**$0**	**$0**

Maintenance Costs – PINOLE (LOCAL ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
Existing SMART Corridor cameras (used by project)	0	$9,300	$336	$0	10	Same as new CCTV Camera	$0		$0	$0
New closed-circuit television (CCTV) cameras	2	$23,000	$336	$672	10	Alameda CTC Cost Data	$672		$672	$0
New video encoders	0	$3,590	$359	$0	10	10% of Capital cost	$0			$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	1	$14,080	$358	$358	10	same as New MVDS	$358		$358	$0
New Vehicle Detection Stations	3	$14,080	$358	$1,074	10	Alameda CTC Cost Data	$1,074		$1,074	$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0		$0	$0
New TSP intersections	14	$5,060	$403	$5,635	10	Alameda CTC Cost Data	$5,635		$5,635	$0
New EVP-only intersections	2	$5,060	$403	$805	10	Same as EVP/TSP intersection	$805		$805	$0
New Trailblazer Signs	4	$24,675	$1,000	$4,000	10	Per Skyline; includes GPRS cost	$4,000		$4,000	$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	9	$2,500	$250	$2,250	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	3	$2,820	$282	$846	3	10% of Capital cost	$846		$846	$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	3	$1,475	$148	$443	10	10% of Capital cost	$443		$443	$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	2	$12,875	$500	$1,000	15	Compared to trailblazer	$1,000			$1,000
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	10.00%	$500,000	$27,500	$2,750	5	Actual bids	$2,750		$2,750	$0
Estimated Annual Maintenance Cost (Subtotal)				$19,833		Total Increase due to ICM Devices	$17,583	$0	$16,583	$1,000

TOTAL ESTIMATED CONSTRUCTION COST	$	329,035.00

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing
New signal system workstation for Pinole (connected to County signal system) being provided by project.

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
San Pablo Corridor Collocation	5.98%		$122,512	$7,324	Estimated Cost	$7,324		$7,324	$0
Wireless GPRS modem	3		$768	$2,304	$64 per month	$2,304		$2,304	$0
Point-Point T1 line for each camera	2		$2,100	$4,200	$175 per month	$4,200		$4,200	$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	2		$660	$1,320	Alameda CTC Cost Data	$1,320		$1,320	$0
IT/Staffing Assistance* - Maintenance Staff	5.98%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	5.98%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				$15,148	Total Increase due to ICM Devices	$15,148	$0	$15,148	$0

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	$34,981	Total Increase due to ICM Devices	$32,731	$0	$31,731	$1,000

Maintenance Costs – HERCULES (CT ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
Existing SMART Corridor cameras (used by project)	0	$9,300	$336	$0	10	Same as new CCTV Camera	$0			$0
New closed-circuit television (CCTV) cameras	2	$23,000	$336	$672	10	Alameda CTC Cost Data	$672	$672		$0
New video encoders	2	$3,590	$359	$718	10	10% of Capital cost	$718	$718		$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	0	$14,080	$358	$0	10	same as New MVDS	$0			$0
New Vehicle Detection Stations	0	$14,080	$358	$0	10	Alameda CTC Cost Data	$0			$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0			$0
New TSP intersections (including ramp metering locations)	1	$5,060	$403	$403	10	Alameda CTC Cost Data	$403	$403		$0
New EVP-only intersections	1	$5,060	$403	$403	10	Same as EVP/TSP intersection	$403	$403		$0
New Trailblazer Signs	0	$24,675	$1,000	$0	10	Per Skyline; includes GPRS cost	$0			$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	2	$2,500	$250	$500	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	1	$2,820	$282	$282	3	10% of Capital cost	$282	$282		$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	1	$1,475	$148	$148	10	10% of Capital cost	$148	$148		$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	0.00%	$500,000	$27,500	$0	5	Actual bids	$0			$0
			Estimated Annual Maintenance Cost (Subtotal)	$3,125		Total Increase due to ICM Devices	$2,625	$2,625	$0	$0

TOTAL ESTIMATED CONSTRUCTION COST	$ 72,595.00

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
San Pablo Corridor Collocation	1.45%		$122,512	$1,776	Estimated Cost	$1,776	$1,776		$0
Wireless GPRS modem	1		$768	$768	$64 per month	$768	$768		$0
Point-Point T1 line for each camera	2		$2,100	$4,200	$175 per month	$4,200	$4,200		$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	2		$660	$1,320	Alameda CTC Cost Data	$1,320	$1,320		$0
IT/Staffing Assistance* - Maintenance Staff	1.45%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	1.45%			$0	Internal based on each Agencies' O&M policy	$0			$0
			Estimated Annual Operating Cost (Subtotal)	$8,064	Total Increase due to ICM Devices	$8,064	$8,064	$0	$0

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	$11,188	Total Increase due to ICM Devices	$10,688	$10,688	$0	$0

Maintenance Costs -- HERCULES (LOCAL ROW)

Device	Number of Devices	Unit Capital Cost	Unit Maintenance Cost/Year	Total Cost/Year	Life (Years)	Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
Existing SMART Corridor cameras (used by project)	1	$9,300	$336	$336	10	Same as new CCTV Camera	$336		$336	$0
New closed-circuit television (CCTV) cameras	0	$23,000	$336	$0	10	Alameda CTC Cost Data	$0		$0	$0
New video encoders	0	$3,590	$359	$0	10	10% of Capital cost	$0			$0
Existing SMART Corridor Vehicle Detection Stations (used by project)	1	$14,080	$358	$358	10	same as New MVDS	$358		$358	$0
New Vehicle Detection Stations	1	$14,080	$358	$358	10	Alameda CTC Cost Data	$358		$358	$0
Existing SMART Corridor TSP intersections	0	$5,060	$403	$0	10	Alameda CTC Cost Data	$0		$0	$0
New TSP intersections	5	$5,060	$403	$2,013	10	Alameda CTC Cost Data	$2,013		$2,013	$0
New EVP-only intersections	0	$5,060	$403	$0	10	Same as EVP/TSP intersection	$0			$0
New Trailblazer Signs	3	$24,675	$1,000	$3,000	10	Per Skyline; includes GPRS cost	$3,000		$3,000	$0
New Traffic Signal	0	$200,000	$3,000	$0	10	Based on City of Concord	$0			$0
Traffic Signal Controller Upgrades (existing signal)	3	$2,500	$250	$750	10	10% of Capital cost	No increase in maint cost.			
Wireless GPRS modem (traffic signal controllers)	0	$2,820	$282	$0	3	10% of Capital cost	$0			$0
Controller communications: Ethernet switch	0	$4,060	$406	$0	10	10% of Capital cost	$0			$0
Controller communications: Ethernet module	0	$1,475	$148	$0	10	10% of Capital cost	$0			$0
New Intersection Vehicle Detection: Video Image Detection camera	0	$11,785	$336	$0	10	Estimated same as CCTV camera	$0			$0
New Intersection Vehilce Detection: Magnetometer	0	$8,438	$844	$0	10	10% of Capital cost	$0			$0
Speed Feedback Signs	0	$12,875	$500	$0	15	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): single sided	0	$160,333	$1,500	$0	10	Compared to trailblazer	$0			$0
New Arterial Changeable Message Sign (CMS): double-sided	0	$246,782	$2,000	$0	10	Compared to trailblazer	$0			$0
Exisiting TSP emitters	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters	0	$4,750	$0	$0	10	Assumed to be same as existing	$0			$0
Traffic Signal Software Maintenance/Upgrades *	10.00%	$500,000	$27,500	$2,750	5	Actual bids	$2,750		$2,750	$0
Estimated Annual Maintenance Cost (Subtotal)				**$9,229**		**Total Increase due to ICM Devices**	**$8,815**	**$0**	**$8,815**	**$0**

TOTAL ESTIMATED CONSTRUCTION COST	**$**	**120,905.00**

* Local ROW cost only- no increase in maintenance cost if traffic signal system is existing
New signal system workstation for Hercules (connected to County signal system) being provided by project.

Operating Costs

Device	Quantity	Capital Cost	Unit Operation Cost	Total Cost/Year	Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by City
San Pablo Corridor Collocation	1.63%		$122,512	$1,997	Estimated Cost	$1,997		$1,997	$0
Wireless GPRS modem	0		$768	$0	$64 per month	$0			$0
Point-Point T1 line for each camera	0		$2,100	$0	$175 per month	$0			$0
Field Devices Electricity (new traffic signal, new CCTV cameras)	0		$660	$0	Alameda CTC Cost Data	$0			$0
IT/Staffing Assistance* - Maintenance Staff	1.63%			$0	Internal based on each Agencies' O&M policy	$0			$0
IT/Staffing Assistance* - Operation Staff	1.63%			$0	Internal based on each Agencies' O&M policy	$0			$0
Estimated Annual Operating Cost (Subtotal)				**$1,997**	**Total Increase due to ICM Devices**	**$1,997**	**$0**	**$1,997**	**$0**

*Provided by Alameda CTC or City Traffic Signal Coordinator for all agencies

Total Estimated Annual Operation and Maintenance Cost	**$11,226**	**Total Increase due to ICM Devices**	**$10,812**	**$0**	**$10,812**	**$0**

Operations and Maintenance Costs -- WestCAT

Device	Number of Devices	Unit Capital Cost	Unit Operations & Maintenance Cost/Year	Total Cost/Year	Life (Years)	Operations and Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by CCTA	Net Contribution by WestCAT
Exisiting TSP emitters (none for WestCAT)	0	$1,000	$500	$0	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters *	40	$4,750	$500	$20,000	10	Assumed to be same as existing	$20,000			$20,000
Total Estimated Annual Operation and Maintenance Cost				**$20,000**		**Total Increase due to ICM Devices**	**$20,000**	**$0**	**$0**	**$20,000**

TOTAL ESTIMATED CONSTRUCTION COST	**$ 190,000.00**

* Capital Cost includes estimated installation cost of $750 per bus (to be performed by transit agency)

Operations and Maintenance Costs – AC Transit

Device	Number of Devices	Unit Capital Cost	Unit Operations & Maintenance Cost/Year	Total Cost/Year	Life (Years)	Operations and Maintenance Cost Notes	Devices that Increase Inventory	Paid by Caltrans	Paid by Alameda CTC	Net Contribution by AC Transit
Exisiting TSP Emitters (AC Transit 72R)	40	$1,000	$500	$20,000	10	AC Transit Data	$0			$0
New multi-mode (GPS-InfraRed) TSP Emitters *	40	$4,750	$500	$20,000	10	Assumed to be same ex AC Transit	$20,000			$20,000
Total Estimated Annual Operation and Maintenance Cost				**$40,000**		**Total Increase due to ICM Devices**	**$20,000**	**$0**	**$0**	**$20,000**

TOTAL ESTIMATED CONSTRUCTION COST	**$ 190,000.00**

* Capital Cost includes estimated installation cost of $750 per bus (to be performed by transit agency). Includes future project to install emmitters on other buses. (expansion beyond 72R)

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Technical Coordinating Committee ***STAFF REPORT***

Meeting Date: August 21, 2014

Subject	**Approval of Recommended PDA Planning Grant Program**
Summary of Issues	MTC gave the Congestion Management Agencies, including the Authority, the responsibility for carrying out part of the Priority Development Area (PDA) Planning Grant Program. It allocated $2.745 million to the Authority for PDA planning grants in Contra Costa. To implement the program, the Authority released a request for qualifications in March for on-call consultant teams to support the planning grants and a call for projects in June for the planning grants themselves. Working with review committees made up of local staff, Authority staff has developed a recommended list of consultant teams and planning grants.
Recommendations	Staff recommends approval of recommended PDA Planning Grants and list of on-call consultant teams.
Financial Implications	MTC allocated $2.745 million in federal STP funds for PDA Planning Grants in Contra Costa. These funds will require a local match of $355,644. This match can be provided through staff time or direct financing.
Options	The TCC could reject or revise the recommendations.
Attachments	**A.** Recommended Consultant Teams **B.** Summary of Recommended Planning Grants
Changes from Committee	

Background

As part of its Resolution 4035, MTC allocated $2.745 million to the Authority to fund the PDA Planning Grant Program in Contra Costa. According to Resolution 2035, "[g]rants will be made to jurisdictions to provide support in planning for PDAs in areas such as providing housing, jobs, intensified land use, promoting alternative modes of travel to the single occupancy vehicle, and parking management."

The Authority's Initial PDA Strategy included the criteria and process for implementing the program in Contra Costa. This process included the following steps:

1. Establish a list of consultant teams with the capacity to provide eligible planning services and enter into contracts with them.

2. Select projects to receive planning grants and enter into agreements with project sponsors to spell out responsibilities, including provision of local match.

3. Work with project sponsors to select consultant teams to prepare the planning studies and develop a detailed scope and schedule for each.

4. For each planning study approve task orders outlining the detailed scopes and schedules.

5. Working with project sponsors and consultants, support the development of the planning studies.

Recommended List of Consultant Teams

On March 7, 2014, the Authority released a Request for Qualifications (RFQ) No. 14-1 for consultant teams interested in preparing a variety of planning studies for local agencies that would support the development of Priority Development Areas, or PDAs, in Contra Costa.

The RFQ required that firms or teams responding have sufficient experience and comprehensive skills in:

- Transportation planning, design and analysis
- Land use and urban design
- Developer financing, residential and commercial market assessment, project implementation, and economic revitalization
- Environmental assessment, and
- Community outreach.

In response, the Authority received qualifications from 14 consultant teams:

- ARUP
- BMS Group
- Community Design & Architecture Inc.
- Dyett & Bhatia
- Kittelson & Associates
- MIG
- Opticos Design
- Perkins + Will
- Placeworks
- PMC
- Raimi + Associates
- Stantec
- TJKM Transportation
- Wallace Roberts & Todd (WRT)

The qualifications were reviewed by a committee made up of local staff familiar with land use and transportation planning, especially in PDAs or infill areas, and Authority staff. (The committee was made up of Leigha Schmidt, City of Pittsburg; Carol Johnson, City of Concord;

Debbie Chamberlain, City of San Ramon; Yvetteh Ortiz, City of El Cerrito; and Brad Beck, Authority staff.) After reviewing the submitted qualifications, the committee selected six teams to interview. As a result of the interviews, the committee recommended the following five teams to provide consultant support for the PDA planning studies:

1. ARUP
2. Opticos Design
3. Perkins + Will
4. Raimi + Associates
5. Wallace Roberts & Todd (WRT)

The review committee recommended ARUP, Perkins + Will and WRT as the three firms that most clearly met the scoring criteria and would be able to provide the services most likely to be needed for the planning activities selected for funding. The review committee also agreed that both Raimi and Opticos had experience and skills that might also be useful for local agencies: Raimi has a focus on health and design that is an increasingly important concern in planning, while Opticos has the greatest experience in form-based codes which could also be useful to a local agency. A full list of the teams, including proposed subconsultants, is included in Attachment A.

Recommended List of Planning Grants

The Authority released a call for projects for the PDA Planning Grants on June 3, 2014. In response, the Authority received ten applications:

Project	Applicant	Request	Local Match
City of Oakley Downtown PDA Market Study	Oakley	$100,000	$11,500
San Pablo Avenue Complete Streets	Contra Costa County	$300,000	$150,000
PDA Market and Fiscal Analysis	Martinez	$200,000	*
Moraga Center Specific Plan Implementation Strategy	Moraga	$150,000	$18,000
SCS by Strengthening Public Health Plan	San Pablo	$149,000	$17,289
Grant, Salvio, and Oak Street Corridor Plan	Concord	$250,000	$28,675
Downtown Congestion Study for Implementing Lafayette's PDA	Lafayette	$450,000	$51,700
El Cerrito San Pablo Ave PDA Implementation Plan	El Cerrito	$317,000	$36,400
San Ramon IRH Trail Bike/Ped Overcrossings Bollinger Canyon & Crow Canyon Rd – Environmental Clearance	San Ramon	$150,000	$17,205
North Downtown Specific Plan	Walnut Creek	$650,000	$130,000
Totals		**$2,716,000**	**$460,769**

A summary of the proposed scopes of work for the proposed planning studies is included in Attachment B.

The $2.716 million requested is $29,000 less than the $2.745 million available for the grants, which means that the Authority could fund all ten of the applications. Because there is sufficient funding available to approve all ten applications, the review committee reviewed the applications only for their eligibility for the program. The committee, made up of local and Authority staff, agreed that nine of the applications were clearly eligible for the program funding. They did, however, have questions about the scope of the Sustainable Communities Strategy (SCS) by Strengthening Public Health Plan proposed by the City of San Pablo that they felt needed to be clarified before approving their request. The reviewers were unsure what the "branding" task involved and whether it was an eligible component of the program. Authority Staff is working with the City of San Pablo to clarify the scope and project purpose.

Authority Consultant Support

To help oversee implementation of the PDA Planning Grants, the Authority in March approved agreements with two contract planning managers. These services would be provided by Paul Fassinger of CTP Consulting, and Paul Krupka of Krupka Consulting. The total cost for the two contracts is $220,000, to be funded through Measure J Regional Planning (Org. OCP-18A).

The contract planning managers will be responsible for working with project sponsors to match the consultant teams to their planning studies; to develop the scopes of work and budgets for the studies; to assist with contract negotiation and preparation, to prepare memoranda of understanding (MOUs) and task orders for the studies; to facilitate the studies themselves; and to prepare the invoicing to Caltrans.

Providing Local Match

As noted above, to receive federal funds through the PDA Planning Grant program, sponsors must provide a local match of 11.47 percent of the total cost of the planning project. In practice, this means that the Authority will receive 88.53 percent back in federal funds of the total amount invoiced. The $2.745 million in federal STP funds allocated for the PDA Planning Grants program will require a local match of $355,644.

In the Authority's agreement with FHWA, some or all of the local match can be provided through in-kind staff or consultant services funded with non-federal funds. The Authority intends to use the $220,000 in Measure J funds for the contract planning managers overseeing implementation of the PDA Planning Grant program to provide about 62 percent of the required match. Local sponsors will need to provide the remainder, either through staff hours spent on the project or through direct contributions to the Authority.

Project sponsors may use their staff time — if properly documented and invoiced in a timely manner — to provide the remaining local match required.

Matching Sponsors and Consultants and Developing Scopes of Work

Once the Authority approves the list of consultant teams and planning grants, the Authority's PDA planning managers would work with project sponsors to select the consultant teams that would work on the planning studies and then with the consultant teams to refine the consultant scopes of work and determine the final budgets for each study.

This process will likely be iterative, with considerable back and forth between the various parties involved. At present, the grant requests are $29,000 below the total available in grant funding. The Authority intends to use these remaining funds as a contingency to allow for potential changes in scope or schedule.

Authority Staff will begin the process of matching consultants and planning studies, setting budgets and scopes, and developing the consultant contracts and sponsor MOUs in September/October. We expect this process to take six to eight weeks with Authority approval of contracts and MOUs in December.

Recommended Consultant Teams

ARUP

- Community Design + Architecture
- Architecture for the Blind
- CFA Consultants
- Economic & Planning Systems
- Eisen | Letunic
- LSA
- Taecker Planning
- Urban Planning Partners
- Vallier Design Associates

OPTICOS DESIGN

- ESA
- James Kennedy Consulting
- Lisa Wise Consulting
- Nelson / Nygaard
- Strategic Economics

PERKINS + WILL

- BKF Engineers
- David Powers
- Economic & Planning Systems
- Eisen | Letunic
- Fehr & Peers
- Lamphier-Gregory

RAIMI + ASSOCIATES

- Fehr & Peers
- Keyser Marston
- Lowercase Productions
- LSA
- M Lee Corporation
- Van Meter Williams Pollack

WALLACE ROBERTS + TODD (WRT)

- BAE Urban Economics
- BKF Engineers
- Eisen | Letunic
- Fehr & Peers
- Lamphier-Gregory

Summary of Recommended PDA Planning Grants

The following summarizes briefly the planning studies recommended for funding through the Contra Costa PDA Planning Grant Program.

CITY OF OAKLEY DOWNTOWN PDA MARKET STUDY

Sponsor City of Oakley **Request** $100,000

Scope The proposed study will assess the feasibility of TOD near or around a San Joaquin JPA Station and/or a Tri Delta Transit park and ride lot and the potential benefits they would bring to the Downtown PDA. These benefits would include expansion of retail and commercial uses and job creation. Detailed mapping of potential project sites and TOD opportunity areas would be expected, as well as corresponding *pro forma* analysis that outlines the market feasibility of a transit station and surrounding TOD development.

SAN PABLO AVENUE COMPLETE STREETS PROJECT

Sponsor Contra Costa County **Request** $300,000

Scope The project would produce a feasibility study to reallocate the existing road right-of-way along San Pablo Avenue to better accommodate bicyclists and pedestrians. The approximate 3 mile segment of the roadway between Rodeo and Crockett is owned and maintained by Contra Costa County and adjoins the San Francisco Bay Trail alignment. The goal of the study would be to identify a preferred alternative for the corridor to aide in seeking future funding for implementation.

Tasks intended to be conducted with the feasibility study include existing conditions analysis, collection of traffic volume data, traffic analysis, alternative development and analysis, community outreach, stakeholder partnering, and initial environmental studies. The feasibility study will also include developing alternatives for the corridor and identifying a preferred alternative that meets the objectives of the PDA. The preferred alternative plan will be displayed on a map identifying specific improvements recommended and the cost of improvements in order to implement bicycle and pedestrian improvements along the roadway.

PRIORITY DEVELOPMENT AREA MARKET AND FISCAL ANALYSIS

Sponsor City of Martinez **Request** $200,000

Scope The completion of a market study and fiscal analysis will provide:

(i) Current local and regional market conditions,

(ii) demand and supply of housing in the downtown and in the regional marketplace,

(iii) marketability of the downtown,

(iv) information regarding highest and best use, forecast urban growth,

(v) analysis of the existing opportunity sites and/or possible alternative uses,

(vi) discussion of market conditions as related to regional urban growth to understand competition,

(vii) overview of the market conditions and or barriers to development so the City can realistically begin to jumpstart the PDA.

The report will include demographics, maps of existing conditions and proposed land uses, financial data to understand users, competition and existing and future markets so we can engage the correct buyers. The report will include necessary policy documents as part of the General Plan Update within both the Land Use and Circulation Elements to further support the inclusion of green building techniques and links to public transit within all new developments within the PDA or as a separate zoning ordinance amendment.

MORAGA CENTER SPECIFIC PLAN IMPLEMENTATION STRATEGY

Sponsor Town of Moraga **Request** $150,000

Scope The scope of the Moraga Center Specific Plan Implementation Strategy project includes two tasks

Task 1: Eliminate inconsistencies between the Zoning Ordinance and the Moraga Center Specific Plan (MCSP)

- Establish a 10 -12 dwelling unit per acre (DUA) zoning district
- Revise 6DUA Residential zoning district
- Establish a mixed use district or districts, or amend existing commercial zoning districts to allow:

  o Mixed Retail-Residential;

  o Mixed Office-Residential; and

  o Community Commercial
- Amend Zoning Map
- Amend zoning ordinance to allow for streamlining of development approval

Task 2: Augment the Circulation Element of the MCSP

- Develop conceptual streetscape plan for streets and infrastructure within the MCSP
- Develop scenic corridor design guidelines applicable to the specific plan area
- Develop of a Transportation Demand Management (TDM) Program and tailored parking standards appropriate to the Specific Plan area.

SUSTAINABLE COMMUNITIES STRATEGY BY STRENGTHENING PUBLIC HEALTH PLAN

Sponsor City of San Pablo **Request** $148,786

Scope The proposed program would create a comprehensive medical sub-corridor and infrastructure plan to promote service, commercial, and residential infill development.

Task 1: A Targeted Industries Study. This task will result in a base analysis of major State and regional medical economic trends, such as business types, occupations, employment, and workforce. Deliverables will also include identification of existing local medical clusters in San Pablo, targeted local medical industries, linkages between clusters and residential areas. A compilation of all deliverables will be in a final report that will be presented at a workshop and to the chamber of commerce, merchants association, and other organizations of interest. A list of proposed modifications to the General Plan, Zoning Ordinance, and Specific Plan will be considered to streamline site occupation as needed.

Task 2: A Vacant and Underutilized Parcel Survey. This survey will identify the parcels in the PDA that are ready to be utilized. Deliverables include a PDA basemap and report that will include information on each parcel that will be most useful to marketing the sites, a mapping and property report that includes underutilized sites, collaboration on a sub-corridor study for economic development and transit linkage, and a marketing report for realtors.

Task 3: Marketing, Outreach, and Branding Program. This task involves the development of a marketing, outreach, and branding approach. Deliverables include the development of a branding program to market San Pablo as the medical arm of the East Bay by advertising health, well-being, productivity and connectivity, and the development of marketing materials.

GRANT STREET, SALVIO STREET AND OAK STREET CORRIDOR PLAN

Sponsor City of Concord **Request** $250,000

Scope The proposed plan has three components:

Community Outreach and Coordination

Coordination with BART regarding the status and scope of the Station Plaza improvements that they currently have underway, and outreach to local residents and business owners to obtain feedback on the next two tasks.

Identify and Visualize

Develop a conceptual plan for the roadway segments by

- Examining opportunities and constraints along the segments
- Evaluating feasibility of green street/Low Impact Development stormwater improvement
- Examining and reviewing options for "revitalizing and restoring the street grid" along Salvio Street and the Park N' Shop retail center.

Design Development

1) Design Development Plans for the three streets;
2) Program discussing implementation of sidewalk cafes, pop-up retail kiosks, parklets, and identifying primary/secondary locations for potential vendor events;
3) Identification of other opportunities to improve streetscape in the short-term.
4) The final Corridor Plan will recommend and identify shelf-ready projects for implementation that encompass a unified design that considers all users and aspects of the streetscape.

DOWNTOWN CONGESTION STUDY FOR IMPLEMENTING LAFAYETTE'S PDA

Sponsor City of Lafayette **Request** $450,000

Scope This proposed PDA planning activity is composed of 5 parts and is complemented by other ongoing and future planning efforts.

Part 1: Maximizing the existing infrastructure - Evaluate critical intersections for a range of opportunities to increase efficiencies, ranging from re-channelization, improved signal timing strategies, to major geometric reconfiguration that could include multiple roundabouts.

Part 2: Fundamentally transforming the roadway network - Explore downtown bypass route options to more efficiently connect through traffic south of SR 24 to the freeway.

Part 3: Taking an innovative, multi-modal demand management approach, Part A - Examine a park-and-walk model for downtown schools deploying formal satellite drop-off areas with supervised shuttles and/or a "walking school bus" program administered similarly to the existing crossing guard program (paid professional personnel, not volunteers).

Part 4: Taking an innovative, multi-modal demand management approach, Part B - Evaluate whether there are congestion-relief benefits to providing off-street parking in the downtown or its edges and if appropriate, identify the locations and shuttle service requirements.

Part 5 Providing the consultant with the opportunity to propose their own "game changing" solution concepts.

EL CERRITO SAN PABLO AVENUE PDA IMPLEMENTATION PLAN

Sponsor City of El Cerrito **Request** $317,000

Scope

A. Capital Improvement Projects and Programmatic Needs

1. Develop a comprehensive list of the public policies, programs, and capital improvement projects needed to support full implementation of the San Pablo Avenue Specification Plan (SPA SP), including adequate utility capacity; focusing on multiple modes of transportation and the reduction of vehicle miles traveled; orderly management of parking demand and supply; the development of urban open and green space; and a mix of housing types for all income levels.

2. Conduct the required studies for gaps in current PDA planning processes, including infrastructure capacity assessments of sanitary system and telecommunication infrastructure; build-out of demand for public parking and required infrastructure and programs to manage demand over time; and an affordable housing strategy.

3. Calculate the public costs of implementing these policies, programs, and projects.

B. Financing Plan

1. Identify potential financing sources.

2. Evaluate the revenue-generating capacity from those sources based on residential and commercial development projections in Plan area.

3. Prepare required financial analyses (such as a nexus study) to legally establish a fee structure, assessment districts, and/or other revenue generating instruments.

4. Evaluate impact of the proposed fees on the financial feasibility of new development.

5. Develop a financing plan and a phasing plan to identify at what thresholds certain types of fees might be needed and identify policy recommendations and next steps.

SAN RAMON IRON HORSE TRAIL BICYCLE/PEDESTRIAN OVERCROSSINGS BOLLINGER CANYON ROAD AND CROW CANYON ROAD – ENVIRONMENTAL CLEARANCE DESIGN

Sponsor City of San Ramon **Request** $150,000

Scope The purpose of the Priority Development Area (PDA) grant is to complete the Environmental Phase of the Project for both the Bollinger Canyon Road and Crow Canyon Road Iron Horse Trail overcrossing locations as part of Phase II of the project, which consists of Community Outreach and Preliminary Design.

NORTH DOWNTOWN SPECIFIC PLAN

Sponsor City of Walnut Creek **Request** $ 650,000

Scope The main objectives of the proposed North Downtown Specific Plan include improving connectivity throughout the study area; identifying new infrastructure improvements needed to expand access to a broad range of transportation options, including walking, bicycling, and transit; and enhancing land uses to identify potential areas of intensification.

The components of this plan will include:

- Community and stakeholder outreach
- Land use analysis
- Market feasibility analysis
- Improved transportation network recommendations
- Complete Streets design
- New infrastructure needs
- Policy analysis
- Implementation schedule/funding opportunities

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Technical Coordinating Committee ***STAFF REPORT***

Meeting Date: August 21, 2014

Subject	**Funding Summary**
Summary of Issues	This report provides current information regarding application deadlines for potential project funding sources and successful application results for agencies in Contra Costa County.
Recommendations	None. This report is for information only.
Financial Implications	None.
Options	N/A
Attachments	**A.** CCTA Local Agency Upcoming Funding Opportunities Summary
Changes from Committee	

CCTA Local Agency Funding Opportunities Summary - Updated 8/11/14

Upcoming Funding Opportunities

Funding Program	Fund Source	Application Deadlines	Program and Contact Info
Bay Area AQMD Bike Rack Voucher (Year 2 Cycle)	R	Late Summer 2014	http://www.baaqmd.gov/Divisions/Strategic-Incentives/Alternative-Transportation/BRVP.aspx
Car Sharing for Local Governments	F	October 17, 2014	http://www.mtc.ca.gov/news/current_topics/7-14/car_share.htm

Attachment A

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Previous Successful Applications

Category	Funding Program	Fund Source*	Successful Awardees	Allocation Amount(s)	Application Date(s)	Program and Contact Info
Air Quality						
	Climate Initiatives Grants- MTC	F	SCTA/RCPA TAM/CCTA (dynamic ridesharing technology)	$1,500,000	7/30/2011	http://www.mtc.ca.gov/planning/climate/ -
	EPA Climate Showcase Communities through EPA's Local Climate and Energy Program.	F	The Small Cities Climate Action Partnership, El Cerrito, Albany, Piedmont, and San Pablo	$23,000	_	http://epa.gov/cleanenergy/energy-programs/state-and-local/showcase.html
	Bay Area Air District (BAAQMD) Climate Change (Protection) grants	F	El Cerrito Lafayette Contra Costa County Richmond	$75,000 $75,000 $40,000 $74,987	_	http://www.baaqmd.gov/Divisions/Strategic-Incentives/Climate-Protection-Grant-Program.aspx
	Bay Area AQMD Shuttle/Feeder Bus Service and Regional Rideshare-FY13	R			11/19/2012	Avra Goldman, Env. Planner, Strategic Incentives, (415) 749-5093, agoldman@baaqmd.gov http://www.baaqmd.gov/Divisions/Strategic-Incentives/Funding-Sources/TFCA/Regional-Fund.aspx
	Air Resources Board Vehicle Incentive Program for FY 2011/2012	R	Contra Costa County	$18,000	Ongoing through December 31, 2012	Future funding opportunities uncertain

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Category	Funding Program	Fund Source*	Successful Awardees	Allocation Amount(s)	Application Date(s)	Program and Contact Info
	Climate Change/ Extreme Weather Vulnerability Assessment	F	TBD	TBD	1/22/2013	http://www.fhwa.dot.gov/environment/climate_change/adaptation/ongoing_and_current_research/vulnerability_assessment_pilots/2013-2014_solicitation/solicitation/index.cfm
Bike/Ped/Trails						
	Measure J PBTF FY 11/12-14/15	L	Richmond - Ohlone Greenway Gap Closure	$332,400	Sept. 2011	Brad Beck at bbeck@ccta.net (925) 256-4726 http://ccta.net/EN/main/bike/MJ_bikeped_funding.html
			Richmond - Transit Village Eastside Improvements	$588,000		
			Orinda - Lafayette BART Wayfinding & Lighting	$394,100		
			Martinez to Crockett segment; Bay Trail	$1,000,000		
			Walnut Creek - Downtown ped connections & bike storage	$350,000		
			Hercules - Creekside Trail Gap Closure	$600,000		
			Pittsburg - Frontage Road Class 1 path	$52,000		

Category	Funding Program	Fund Source*	Successful Awardees	Allocation Amount(s)	Application Date(s)	Program and Contact Info
			Concord - Franquette Ped/Bike trail connection project	$470,000		
			CC County - Bailey/SR 4 Interchange ped/bike improvements	$345,300		
			East Bay Regional Park District	$986,200		
	Federal Safe Routes to School (SRTS) – Federal Program (Cycle 3)	F	Danville County	$225,500 $849,000	10/17/2011	http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/srts_list.htm
	Safe Routes to School (SR2S) Program Cycle 10-FY 11/12-12/13	S	Contra Costa County	$450,000	3/30/2012	http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm
	BTA 2012-13	S	–	–	5/31/2012	http://www.dot.ca.gov/hq/LocalPrograms/bta/BTACallForProjects.htm
	Active Transportation Program (Caltrans)	S			05/21/2014	http://www.dot.ca.gov/hq/LocalPrograms/atp/index.html

	Active Transportation Program (MTC-Regional)	R	Results pending		07/24/2014	http://www.mtc.ca.gov/funding/ATP/ http://files.mtc.ca.gov/pdf/ATP/Ltr-MTC_ATP_Guidelines_CTC_Submit_2014-04-24a.pdf
	TDA Article 3 FY 2014/15	S	Contra Costa County	$241,797	1/24/2014	http://www.mtc.ca.gov/funding/STA-TDA TDA & RM2 Operating Program Manager, Cheryl Chi, 510-817-5939, cchi@mtc.ca.gov
			Town of Moraga	$ 50,000		
			San Pablo	$ 77,500		
			Richmond	$ 82,500		
			Lafayette	$ 32,000		
			Pleasant Hill	$ 90,000		
			Concord	$ 92,500		
			Pittsburg	$132,500		
Planning, Maintenance, Safety, Bridge, Other						
	FHWA 2012 Discretionary Programs Delta Region Transportation Development Ferry Boat Highway for LIFE Innovative Bridge Research and Development Interstate Maintenance	F	None in Contra Costa County, except for Value Pricing Pilot Program (see below)	–	1/6/2012	http://www.fhwa.dot.gov/discretionary/ MTC- Louis Schuman at (510) 286-5332 or Thelma Riel (510) 286-5240 FHWA- Angela Jacobs, Office of Operations (202) 366-0076, Angela.jacobs@dot.gov

	National Historic Covered Bridge Preservation National Scenic Byways Public Lands Highways					
	Rail Highway Crossing Hazard Elimination in High Speed Rail Corridors					
	Transportation Community and System Preservation					
	Truck Parking Facilities					
	Value Pricing Pilot Program		Contra Costa I-80 tolled-corridor real-time ridesharing	$322,400		

	Priority Development Area (PDA) Planning Program, PDA Technical Assistance and PDA Staffing Assistance	R	TBD	TBD	4/02/2014	Therese Trivedi, ttrivedi@mtc.ca.gov, 510-817-5767 http://www.mtc.ca.gov/planning/smart_growth/stations/pda.htm
	Caltrans FY 14/15 Federal and State Planning Grants Environmental Justice Community Based Transportation Planning Partnership Planning Statewide/ Urban Transit Planning Studies Rural/Small Urban Transit Planning Studies	F,S	San Pablo-Rumrill/ 13th St Corridor Mobility Plan (FY 13/14 Cycle)	–	2/03/2014	http://www.dot.ca.gov/hq/tpp/grants.html Blesilda Gebreyesus (510) 286-5575, blesilda_gebreyesus@dot.ca.gov Becky Frank (510) 286-5536, becky_frank@dot.ca.gov
	Transit Planning Student Internships					

Transit/Livable Communities						
	Transit Performance Initiative Program	F			04/25/14	http://www.mtc.ca.gov/funding
	FY 14/15, 15/16 Transit Capital Priorities (TCP)	F, L	Results pending		08/04/2014	Shruti Hari (MTC),TCP Program Manager, shari@mtc.ca.gov, (510) 817-5960, http://www.mtc.ca.gov/funding/FTA/tcp/TCP_CFP_letter.pdf
	New Freedom Program for Large Urbanized Areas – Cycle 5	F			1/10/2014	http://www.mtc.ca.gov/funding/new_freedom.htm
	MTC/TransForm Safe Routes to Transit Cycle IV	R	Richmond	$501,829	8/8/2011	http://www.mtc.ca.gov/pdf/SR2T_Cycle_IV_Call_for_Projects.pdf Sandra Padilla/Transform (510) 740-3150X304
	New Freedom Program Small Urbanized Area FY 2013	F	TBD		4/19/2013	http://www.dot.ca.gov/hq/MassTrans/5317.html Scott Sauer, (916) 657-3863
	Low Income Flexible Transportation Program	F	WestCAT N. Richmond	$250,141 $172,900	–	http://www.mtc.ca.gov/planning/lifeline/lift.htm
	Real time Transit Info Grants	F	AC Transit WestCAT	$927,000 $551,000	3/21/2012	Expected grant size is $40,000 to $60,000. Eligible applicants include publicly funded transportation operators in the MTC region that did not receive funding through Phase I of the RM2 Real-time Transit Information Grants executed in 2005.

	Transit Oriented Development (TOD) Program-Bond Measure, Proposition 1C, Cycle 1	R	–		–	
	Measure J TLC FY 11/12-14/15	L	West County Share Central County Share Southwest County Share	$6,377,900 $5,766,900 $3,582.50	–	Brad Beck at bbeck@ccta.net (925) 256-4726 http://ccta.net/EN/main/bike/MJ_bikeped_funding.html
	FTA Section 5310	F	–	–	3/11/2013	Peter Engel, CCTA, 925-256-4741, pengel@ccta.net, http://www.mtc.ca.gov/funding/FTA/5310.htm
	FTA Section 5311 non-urbanized	F	–	–	4/5/2013	http://www.dot.ca.gov/hq/MassTrans/5311.html
Safety- Roadway						
	HSIP Cycle 6	F	Concord Richmond	$450,000 $286,600	7/26/2013	http://www.dot.ca.gov/hq/LocalPrograms/hsip.htm John C. Brewster, D-4 Local Assistance 510-286-6485, e-mail: john_brewster@dot.ca.gov
Major Projects						
	PUC-Highway-Rail Grade Separation Establish Priority List for fiscal year 14/15 & 15/16	S	City of Brentwood (Lone Tree Way/UPRR)	$5,000,000 (allocation pending successful CPUC award)	10/25/13 (Every two years)	http://www.cpuc.ca.gov/PUC/safety/Rail/Crossings/funding.htm

	TIGER 6 (FY 2014)	F	–	–	4/28/14	http://www.dot.gov/tiger
	Bridges identified for Proposition 1B Seismic Bond Match	S	Antioch Concord Orinda Orinda Pittsburg	$917,600 $506,928 $144,000 $11,929 $57,400	–	CTC quarterly Prop 1B update http://www.dot.ca.gov/hq/transprog/ctcbooks/2012/0612/034_3.11_3Q_Prop1B_Report.pdf
	Highway Bridge Program- MAP 21	F	Various countywide bridge rehabilitation, replacement and preventative maintenance	–	9/30/ and 01/31 of each year	http://www.dot.ca.gov/hq/LocalPrograms/hbrr99/hbrr99a.htm
Signal Improvements						
	Program for Arterial System Synchronization (PASS) from MTC FY 13/14 Cycle	S –	 Fitzgerald Dr/Richmond Pkwy	 $19,145	5/20/14 5/17/2013 4/10/2012	Vamsi Tabjula, MTC Program Manager, PASS (510) 817-5936, VTabjulu@mtc.ca.gov http://www.mtc.ca.gov/services/arterial_operations/pass.htm
	NextGen Arterial Operations Program	F			04/18/14	http://www.mtc.ca.gov/services/arterial_operations/index.htm Lin Zhang, MTC Program Manager lzhang@mtc.ca.gov
Roadway Maintenance						
			Round 14 Successful Awardees			
	P-TAP Round 15	R	Antioch Clayton Pinole Lafayette	$48,000 $10,848 $12,504 $22,198	10/21/2013	For more info, contact Amy Burch at 510-817-5735 or aburch@mtc.ca.gov http://new.streetsaveronline.com/forms/pt

			Orinda San Pablo Brentwood El Cerrito Martinez Moraga Richmond Concord Danville Oakley	$8,000 $11,362 $45,600 $16,344 $29,040 $12,720 $48,000 $48,000 $37,440 $29,592		ap15application http://www.mtcpms.org/ptap/index.html
Other						
	Energy Efficiency and Conservation Block Grant (EECBG) formula grants, US Dept. of Energy (Large Cities)	F	Concord Richmond Antioch Walnut Creek Pittsburg Brentwood Danville Contra Costa County	$1,151,900 $955,100 $885,000 $677,700 $565,500 $197,000 $168,400 $3,574,300	12/14/2009	http://www1.eere.energy.gov/wip/eecbg.html Future funding opportunities uncertain
	Energy Efficiency and Conservation Block Grant (EECBG) formula grants, US Dept of Energy (Small Cities)	F	Lafayette Pleasant Hill	$137,000 $180,934	–	http://www1.eere.energy.gov/wip/eecbg.html Future funding opportunities uncertain

	Environmental Enhancement and Mitigation Program (EEMP) FY 11/12	S	EBRPD	$350,000	–	http://resources.ca.gov/eem/
	Tire-Derived Product Grant (FY 2013/14)	S	–	–	04/28/2014	http://www.calrecycle.ca.gov/Tires/Grants/TIP/default.htm
	Regional Priority Conservation Area Program	F	–	–	7/19/2013 (proposals accepted on a continuous basis)	http://scc.ca.gov, Amy Hutzel, SCC, ahutzel@scc.ca.gov or 510.286.4180

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WEST CONTRA COSTA TRANSPORTATION ADVISORY COMMITTEE (WCCTAC)

PROJECT MANAGER (SENIOR PLANNER) – JOB DESCRIPTION

FULL TIME – 37.5 HOURS/WEEK

ANNUAL SALARY RANGE: $85,800-$104,280

WCCTAC is one of four regional transportation-planning committees in Contra Costa County. It has been in existence since 1988 and formally became a Joint Powers Agency in 1990. The WCCTAC office is located at 6333 Potrero Avenue, near the intersection of San Pablo Avenue (two blocks from Del Norte BART). WCCTAC is governed by a Board of Directors. The Board is comprised of elected representatives from five member cities (El Cerrito, Hercules, Pinole, Richmond, and San Pablo), Contra Costa County, as well as three transit agencies: BART, AC Transit, and WestCAT. WCCTAC is charged with assessing the transportation needs of the West Contra Costa region, coordinating the actions of its members, and making policy and funding decisions regarding transportation issues.

THE POSITION:

The Project Manager is responsible for the planning, development, execution and oversight of various types of transportation projects and programs. The duties will include: planning, coordination, grant writing and administration, directing studies, and conducting research and analysis related to transit service, roadway improvements, and bicycle and pedestrian enhancements. The Project Manager reports to the Executive Director.

DUTIES:

1. Manage assigned projects and monitor through implementation.
2. Pursue, obtain and administer funding to meet local transportation goals.
3. Research innovative and creative solutions for transportation planning projects.
4. Serve as liaison to other agencies to both identify and communicate opportunities and to ensure effective coordination.
5. Assist in the preparation of the WCCTAC Board packets, and Technical Advisory Committee (TAC) packets including the preparation of staff reports.
6. Read, interpret, and write reports.
7. Maintain website content.
8. Other duties as determined or assigned.

QUALIFICATIONS:

Knowledge: Understanding of general transportation policies, planning and funding processes at various levels of government. Background in transportation planning, urban planning, public administration, business administration, or a related field. Familiarity with Bay Area transportation issues and key agencies.

Ability to: Manage multiple projects simultaneously with minimal supervision. Prioritize work load and meet deadlines. Communicate in a clear, concise, and tactful manner with a wide variety of audiences. Display strong written and verbal skills. Develop and maintain positive working relationships. Use computer applications including Microsoft Word, Excel, Access and Powerpoint. Facilitate meetings and speak in public settings. Attend meetings during the day and some evenings. Ability to drive or take public transit.

Education and Experience: A bachelor's degree from an accredited four year college or university is required. A Master's degree in a relevant field is desirable. A minimum of five years of increasingly responsible experience in the area of transportation planning, public administration or transportation engineering is required.

WORKING CONDITIONS AND BENEFITS:

Working conditions and benefits (such as work hours, vacation, holidays, sick leave, health plan, vision plan, dental plan, bereavement leave, life insurance, retirement, and administrative leave) include:

- PERS (Public Employees Retirement System) 2.5% at age 55 formula for "classic members", and 2% at age 62 for new members
- 100% Medical and Dental coverage of insurance premiums
- Vision care allowance of $425 per year
- Paid Vacation – 75 hours per year
- Administrative Leave – 60 hours per year
- Sick Leave- 7.5 hours per month
- Holidays- 13 legal holidays per year
- Deferred Compensation available through ICMA
- Employee Assistance
- Life Insurance and Workers Compensation Insurance

Email your resume, cover letter and your contact information by September 18, 2014 to:
John Nemeth, WCCTAC Executive Director: jnemeth@wcctac.org or
6333 Potrero Avenue, El Cerrito, CA 94530

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METROPOLITAN
TRANSPORTATION
COMMISSION

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Memorandum

TO: Transit Finance Working Group DATE: August 6, 2014

FR: Drennen Shelton

RE: FTA Section 5310 FY13 and FY14 Large Urbanized Area Program Guidelines

FTA Section 5310: FY13 and FY14 Call for Projects

Under the two-year federal surface transportation authorization, Moving Ahead for Progress in the 21st Century (MAP-21), the New Freedom program was eliminated as a stand-alone program, and consolidated with the Section 5310 Elderly and Disabled program into a single program, the Section 5310 Formula Grants for the Enhanced Mobility of Seniors and Individuals with Disabilities. This expanded program provides a mix of capital and operating funding. Under this cycle, Caltrans continues in the role as the designated recipient, but has delegated program development of the Bay Area's large urbanized areas to MTC. Approximately $8.3M will be available to the region for programming. Staff will be seeking Commission approval in September for an October 1 Call for Projects release date for the FY13 and FY14 large urbanized area program.

Major Program Changes

Under this new consolidated program, the major program changes are:

- 55% of available funds must be set aside for capital projects
- Eligible capital projects now include mobility management projects
- Operations projects (including mobility management) are now eligible
- Funding comes to the region by urbanized area for Large Urbanized Areas (small Urbanized Area funds continue to be pooled at the state level)

Under this new program, projects will be evaluated by one regional scoring panel, consisting of Bay Area representatives of paratransit coordinating councils, transit accessibility staff, disabled population interests, MTC Policy Advisory Council Equity and Access Subcommittee member, and MTC staff.

Draft Guidelines

Attached to this memo, you will find the draft program guidelines. Staff welcomes the Working Group's feedback on the draft guidelines. The guidelines will also be presented to the Regional Mobility Management Group, the 5310 Advisory Committee, and the Bay Area Transit Accessibility Working Group prior to Commission approval. Caltrans will issue program guidelines for the FY13 and FY14 funding cycle in September. The MTC program guidelines are preliminary, and based on prior practices of the 5310 and New Freedom programs.

As with the previous Section 5310 and New Freedom programs under SAFETEA-LU, extra points will be awarded to projects that are coordinated or contain mobility management

elements, consistent with the Coordinated Public Transit—Human Services Transportation Plan (the Coordinated Plan).

Below is the schedule for the FY13 and FY14 funding cycle for the Bay Area's Large Urbanized Areas.

Section 5310 FY13 and FY14 Cycle Schedule – Large Urbanized Areas

Activity	Date
MTC approves regional guidelines	September 24, 2014
Caltrans releases call for projects	October 1, 2014
Applications due to MTC	November 6, 2014
Preliminary Program of Projects due to Caltrans	January 1, 2015
Program of Projects to Programming and Allocations Committee	January 14, 2015
Program of Projects to Commission	January 28, 2015
Adopted Program of Projects due to Caltrans	January 30, 2015
Grant Approved by FTA	September 30, 2015

If you have questions regarding the 5310 FY13 & FY14 Cycle, please contact Drennen Shelton (dshelton@mtc.ca.gov / 510-817-5909).

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METROPOLITAN
TRANSPORTATION
COMMISSION

FY2012-13 and FY2013-14 Federal Transit Administration (FTA) Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Program Guidelines for Large Urbanized Areas

September 2014 (Expected)

METROPOLITAN TRANSPORTATION COMMISSION
FY2012-13 and FY2013-14 FEDERAL TRANSIT ADMINISTRATION (FTA)
SECTION 5310 ENHANCED MOBILITY OF SENIORS AND INDIVIDUALS
WITH DISABILITIES PROGRAM GUIDELINES FOR LARGE URBANIZED AREAS
September 2014

The following guidelines reflect guidance included in the Federal Transit Administration (FTA) Circular C 9070.1G, the *Enhanced Mobility of Seniors and Individuals with Disabilities Program Guidance and Application Instructions*. The FTA Circular is available at http://www.fta.dot.gov/documents/C9070_1G_FINAL_circular_-3.pdf.

1. INTRODUCTION. In March 2013, MTC adopted an updated Coordinated Public Transit–Human Services Transportation Plan (Coordinated Plan). Pursuant to federal requirements, projects funded through the Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities must be included in a Coordinated Plan. FTA describes the Coordinated Plan as a "unified, comprehensive strategy for public transportation service delivery that identifies the transportation needs of individuals with disabilities, older adults, and individuals with limited income, laying out strategies for meeting these needs, and prioritizing services."

The Coordinated Plan update considers projects or solutions to directly address transportation gaps for seniors, low-income persons and persons with disabilities, as well as strategies to deliver services more efficiently. One of the key coordination strategies was to strengthen "mobility management" throughout the Bay Area. Mobility Management is a strategic, cost-effective approach to encourage the development of services and best practices in the coordination of transportation services connecting people needing transportation to available transportation resources within a community. Through partnerships with many transportation service providers, mobility management enables individuals to use a travel method that meets their specific needs, is appropriate for their situation and trip, and is cost-efficient. Strategies that can strengthen mobility management in the Bay Area include:

- Identifying and designating Consolidated Transportation Service Agencies (CTSAs) to facilitate subregional mobility management and transportation coordination efforts
- Providing information and managing demand across a family of transportation services
- Coordinating advocacy with human service agencies to identify resources to sustain coordinated transportation service delivery

All activities that meet federal eligibility requirements, as described in section 6 below, are eligible to receive funding in this call for projects, including mobility management, operations and capital projects; however, in the FY13 & FY14 Section 5310 application form and scoring criteria, there is increased emphasis on mobility management and coordination.
Refer to Chapters 7 & 8, and Appendix C of the Coordinated Plan, available at www.mtc.ca.gov/planning/pths/ for several examples of mobility management projects.

A variety of mobility management activities are currently taking place throughout the Bay Area. Some efforts are well-developed, while others are in their infancy. In areas where mobility management activities are well-developed, applicants are encouraged to consider how their project can be coordinated with existing efforts, and/or how existing efforts can be maintained or expanded. In areas where mobility management activities are just beginning and/or are taking

place in a fragmented manner, applicants are encouraged to consider how existing activities can be better coordinated or enhanced.

Even those applicants who are not proposing a mobility management project per se should consider how their project might be better coordinated with local mobility management efforts and/or other transportation services in the area. For example, an applicant proposing an operations project should aim to integrate that service with a coordinated "family of transportation services," by participating in available and related local coordination activities (e.g., information and referrals, shared driver training).

2. STATUTORY AUTHORITY. The Section 5310 Program is authorized under the Moving Ahead for Progress in the 21st Century Act (MAP-21), enacted on July 6, 2012, authorizing funding for federal surface transportation programs for fiscal years (FY) 2013 and 2014. As codified under 49 U.S.C. 5310, this program authorizes the formula assistance program for the Enhanced Mobility of Seniors and Individuals with Disabilities Program and provides formula funding to states and designated recipients (recipients) to improve mobility for seniors and individuals with disabilities.

3. PROGRAM GOAL. The goal of the Section 5310 program is to improve mobility for seniors and individuals with disabilities by removing barriers to transportation services and expanding the transportation mobility options available. FTA provides financial assistance for such services planned, designed, and carried out to meet the special transportation needs of seniors and individuals with disabilities in large urbanized, small urbanized, and rural areas. The program requires coordination with other federally assisted programs and services to make the most efficient use of federal resources.

4. FUNDING APPORTIONMENT AND AVAILABILITY. Of the total Section 5310 funds available, FTA apportions 60 percent to large urbanized areas[1] (UZAs), 20 percent to the states for small UZAs, and 20 percent to the states for rural areas with less than 50,000 in population. Section 5310 funds are apportioned among the recipients by formula. The formula is based on the number of seniors and individuals with disabilities in each such area as a percentage of the number of seniors and individuals with disabilities in all such areas. **Figure 1** shows the Bay Area's five large UZAs. (Note that the names given to the urbanized areas correspond to the most populated city/cities within the area, and that the urbanized areas themselves are larger than the cities for which they are named.) **Table 1** shows actual large UZA apportionments for FY 2013 and FY 2014. Funds are available for obligation during the fiscal year of apportionment plus two additional years. See Section 7 and Table 2 for amounts available for programming, which differ slightly from the apportionments due to administrative reductions.

[1] An urbanized area is an area encompassing a population of not less than 50,000 people that has been defined and designated in the most recent decennial census as an "urbanized area" by the Secretary of Commerce. Large urbanized areas as used in the context of FTA formula grant programs are urbanized areas with a population of greater than 200,000, and small urbanized areas are those with a population of at least 50,000 but less than 200,000.

Figure 1. Map of Urbanized Areas

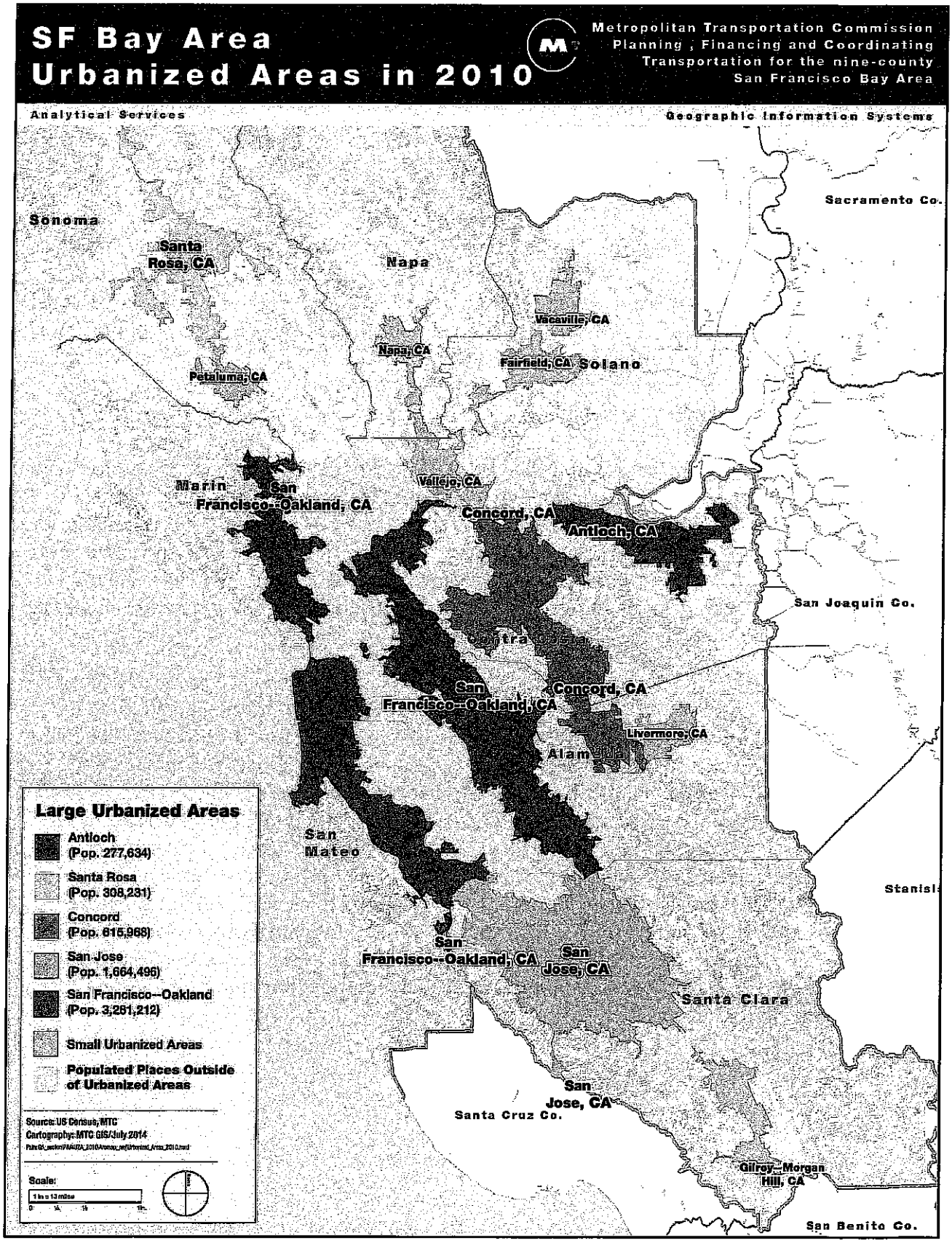

Table 1. Section 5310 Apportionments

Area	Actual FY13	Actual FY14	2-Year Total
Bay Area Large UZAs	**$4,664,054**	**$4,544,537**	**$9,208,591**
Antioch	$188,392	$202,016	$390,408
Concord	$457,727	$467,290	$925,017
San Francisco-Oakland	$2,674,483	$2,537,064	$5,211,547
San Jose	$1,089,650	$1,089,774	$2,179,424
Santa Rosa	$253,802	$248,393	$502,195

Notes:

UZA = Urbanized Area

5. ROLE OF THE DESIGNATED RECIPIENTS. For the Bay Area's large UZA funding apportionment, Caltrans is the designated recipient, but MTC is responsible for conducting the competitive project selection process. For the small and non-UZA apportionment, the competitive selection is conducted by Caltrans on a statewide basis. More information on the small and non-UZA call for projects is available at http://www.dot.ca.gov/hq/MassTrans/5310.html.

   Once projects in the large UZA are selected, MTC will submit a program of projects consistent with the FTA Circular C 9070.1G, and Caltrans will submit the grant application directly to FTA as the direct recipient of the funds. Caltrans will execute Standard Agreements with the region's successful applicants, and oversee all aspects of program and grant management, including monitoring subrecipient compliance with federal requirements, procurement oversight, FTA compliance and reporting, and invoicing and reimbursements.

6. ELIGIBLE ACTIVITIES. Section 5310 funds are available for capital and operating expenses to support the provision of transportation services to meet the specific needs of seniors and individuals with disabilities. See Appendix 1 for a detailed list of these activities.

   Traditional Section 5310 Projects: Section 5310 provides that of an area's apportionment, not less than 55 percent shall be available for traditional Section 5310 projects—those public transportation capital projects planned, designed, and carried out to meet the specific needs of seniors and individuals with disabilities when public transportation is insufficient, unavailable, or inappropriate. Support for mobility management activities is eligible as a traditional Section 5310 capital project.

   Expanded Section 5310 Projects: In addition to the above required capital projects, up to 45 percent of an area's apportionment may be utilized for additional public transportation projects that exceed the ADA minimum requirements, improve access to fixed-route service and decrease reliance by individuals with disabilities on ADA-complementary paratransit service, or provide alternatives to public transportation that assist seniors and individuals with disabilities with transportation. Such projects must be targeted toward meeting the transportation needs of seniors and individuals with disabilities, although they may be used

by the general public. It is not sufficient that seniors and individuals with disabilities are included (or assumed to be included) among the people who will benefit from the project. FTA encourages projects that are open to the public as a means of avoiding unnecessary segregation of services.

MTC must clearly identify the projects that are part of the required 55 percent capital projects as part of the program of projects submitted to Caltrans. Many projects may be eligible under both the required and optional criteria, but a discrete set of projects that meet the required criteria constituting at least 55 percent of the grant amount in each urbanized area, exclusive of administrative expenses, must be identified.

Mobility Management Emphasis. Consistent with the Bay Area's Coordinated Plan, the FY13 and FY14 Section 5310 Program will prioritize projects and activities consistent with the mobility management strategies detailed in Chapter 8 of the plan, available at www.mtc.ca.gov/planning/pths/. Mobility management is a strategic, cost-effective approach to connect people to transportation resources within a community including services provided by human services agencies and other community sponsors. The strategy is intended to build coordination among existing public transportation providers and other transportation service providers with the result of expanding the availability of service. Through partnerships with many transportation service providers, mobility management enables individuals to use a travel method that meets their specific needs, is appropriate for their situation and trip, and is cost-effective.

All activities that meet federal eligibility requirements are eligible to receive funding in this call for projects, including mobility management, operations and capital projects; however, in the application form and scoring criteria, there is increased emphasis on mobility management and coordination.

Illustrative List of Eligible Activities. Following is an illustrative list of activities that are eligible for funding under the FY13 and FY14 Section 5310 Program:

Traditional Section 5310 Capital Projects

(1) Acquisition of expansion or replacement buses or vans,

(2) Radios and communication equipment; and

(3) Computer hardware and software;

(4) Transit-related intelligent transportation systems (ITS);

(5) Wheelchair restraints;

(6) Dispatch systems; and

(7) Support for mobility management and coordination programs among public transportation providers and other human service agencies providing transportation.

Expanded Section 5310 Projects

(1) Public transportation projects that exceed the requirements of ADA;

(2) Public transportation projects that improve access to fixed-route service and decrease reliance by individuals with disabilities on ADA-complementary paratransit service; or

(3) Alternatives to public transportation that assist seniors and individuals with disabilities with transportation.

(4) Support for mobility management and coordination programs among public transportation providers and other human service agencies providing transportation.

7. FUNDING DISTRIBUTION. Projects may compete for funding that is apportioned to the UZA in which the project will provide services. Projects that will provide services in multiple UZAs may compete for funding from all of the affected UZAs. This call for projects is for large UZAs only.

Large UZA Programming Targets. The total funding available for the Bay Area's large UZAs in the FY13 and FY14 Cycle is approximately $8.3 million. This consists of the FY 2013 and FY 2014 apportionments, less a five percent set-aside for Caltrans program administration and an additional set-aside of up to five percent set-aside for regional mobility management and Coordinated Plan implementation activities.[2] The target programming amount for each large UZA is shown in **Table 2.** There is no minimum or maximum grant request, except that applicants should not request more than the target amount for the large UZAs in which their projects will provide services.

Table 2. Programming Targets

Bay Area Large UZAs	Traditional Capital Programming Targets	Expanded Operations Programming Targets
Antioch UZA	$214,724	$136,643
Concord UZA	$508,759	$323,756
San Francisco--Oakland UZA	$2,866,351	$1,824,041
San Jose UZA	$1,198,683	$762,798
Santa Rosa UZA	$276,207	$175,768
Subtotals	***$5,064,725***	***$3,223,007***
Total Two Year Programming Target		**$8,287,732**

Notes:

UZA = Urbanized Area

8. ELIGIBLE SUBRECIPIENTS. There are three categories of eligible subrecipients of Section 5310 funds: a) private non-profit organizations; b) state or local governmental authorities; and c) operators of public transportation services.

Section 5310 provides that of the amounts apportioned to states and designated recipients, not less than 55 percent shall be available for traditional Section 5310 projects—those public transportation capital projects planned, designed, and carried out to meet the special needs of seniors and individuals with disabilities when public transportation is insufficient,

[2] MTC will submit a project to use 5 percent of the eligible operating apportionment to fund planning and technical assistance.

unavailable, or inappropriate. Further, the law provides that, for these projects, a recipient may allocate the funds apportioned to it to:

a. A private nonprofit organization; or

b. A state or local governmental authority that:

(1) is approved by a state to coordinate services for seniors and individuals with disabilities; or

(2) certifies that there are no nonprofit organizations readily available in the area to provide the service.

These provisions, found at 49 U.S.C. 5310(b)(1) and (b)(2), essentially maintain the status quo for traditional Section 5310 projects as defined in Federal law.

Governmental authorities eligible to apply for Section 5310 funds as "coordinators of services for seniors and individuals with disabilities" are those designated by the state to coordinate human service activities in a particular area. Examples of such eligible governmental authorities include a county agency on aging or a public transit provider which the state has identified as the lead agency to coordinate transportation services funded by multiple federal or state human service programs.

In addition to the above required capital projects, up to 45 percent of an area's apportionment may be utilized for Expanded Section 5310 projects—additional public transportation projects that exceed the ADA minimum requirements, improve access to fixed-route service and decrease reliance by individuals with disabilities on ADA-complementary paratransit service, or provide alternatives to public transportation that assist seniors and individuals with disabilities with transportation. Eligible subrecipients for Expanded Section 5310 activities include a state or local governmental authority, a private nonprofit organization, or an operator of public transportation that receives a Section 5310 grant indirectly through a recipient.

All recipients/subrecipients will be required to have a Dun and Bradstreet (D&B) Data Universal Numbering System (DUNS) number and provide it during the application process.[3] A DUNS number may be obtained from D&B by telephone (866-705-5711) or the Internet (http://fedgov.dnb.com/webform).

9. ROLE OF SUBRECIPIENTS. Section 5310 subrecipients' responsibilities include:
   - Making best efforts to execute selected projects;
   - Meeting program requirements and grant/funding agreement requirements including, but not limited to, Title VI reporting requirements; and
   - Complying with other applicable local, state, and federal requirements.

10. FEDERAL/LOCAL MATCHING REQUIREMENTS.

[3] A Dun and Bradstreet (D&B) Data Universal Numbering System (DUNS) number is a unique, non-indicative 9-digit identifier issued and maintained by D&B that verifies the existence of a business entity. The DUNS number is a universal identifier required for Federal financial assistance applicants, as well as recipients and their direct subrecipients.

a. General. Section 5310 funds may be used to finance capital and operating expenses. The federal share of eligible capital costs shall be in an amount not to exceed 80 percent of the net cost of the activity. The federal share of the eligible operating costs may not exceed 50 percent of the net operating costs of the activity.

The local share of eligible capital costs shall be not less than 20 percent of the net cost of the activity, and the local share for eligible operating costs shall be not less than 50 percent of the net operating costs. The local share may be provided from an undistributed cash surplus, a replacement or depreciation cash fund or reserve, a service agreement with a state or local service agency or private social service organization, or new capital. Some examples of these sources of local match include: state or local appropriations; dedicated tax revenues; private donations; revenue from service contracts; transportation development credits; and net income generated from advertising and concessions. Non-cash share such as donations, volunteered services, or in-kind contributions is eligible to be counted toward the local match as long as the value of each is documented and supported, represents a cost which would otherwise be eligible under the program, and is included in the net project costs in the project budget.

Income from contracts to provide human service transportation may be used either to reduce the net project cost (treated as revenue) or to provide local match for Section 5310 operating assistance. In either case, the cost of providing the contract service is included in the total project cost. No FTA program funds can be used as a source of local match for other FTA programs, even when used to contract for service. All sources of local match must be identified and described in the grant application at the time of grant award.

In addition, the local share may be derived from federal programs that are eligible to be expended for transportation, other than DOT programs, or from DOT's Federal Lands Highway program. Examples of types of programs that are potential sources of local match include: employment, training, aging, medical, community services, and rehabilitation services.

b. Exceptions. The federal share is 85 percent for the acquisition of vehicles for purposes of complying with or maintaining compliance with the Americans with Disabilities Act (ADA) or the Clean Air Act. *Applicants wishing to apply for assistance at the higher match ratio should inform MTC before submitting an application, as MTC would need to consult the FTA regional office for further guidance regarding methods of computing the incremental cost.*

11. COORDINATED PLANNING. Title 49 U.S.C. 5310, as amended by MAP-21, requires a recipient of Section 5310 funds to certify that projects selected for funding under this program are included in a locally developed, coordinated public transit-human service transportation plan and that the plan was developed and approved through a process that included participation by seniors; individuals with disabilities; representatives of public, private, nonprofit transportation and human service providers; and other members of the public. A locally developed, coordinated, public transit-human services transportation plan ("coordinated plan") identifies the transportation needs of individuals with disabilities, older adults, and people with low incomes, and provides strategies for meeting those local needs. The Bay Area's Coordinated Plan was updated in March 2013 and is available at http://www.mtc.ca.gov/planning/pths/.

Agencies and organizations interested in applying for Section 5310 funds must consider the transportation needs, proposed solutions, and enhanced coordination strategies presented in the Coordinated Plan in developing their project proposals. Applicants will be asked to demonstrate their proposed project's consistency with the Coordinated Plan. Following is a list of the solutions and strategies that are identified in Chapters 7 and 8, respectively, of the plan.

Solutions to Gaps

1. Mobility management, travel training, and transportation coordination activities
2. Additions or improvements to paratransit that exceed ADA requirements, and demand-responsive services other than ADA paratransit
3. Additions or improvements to public transit services and transit access
4. Solutions to address affordability barriers

Strategies to Enhance Coordination of Service Delivery

1. Strengthen mobility management in the Bay Area, by:
    a. Identifying and designating Consolidated Transportation Service Agencies (CTSAs) to facilitate subregional mobility management and transportation coordination efforts
    b. Providing information and managing demand across a family of transportation services
    c. Promoting coordinated advocacy with human service agencies to identify resources to sustain ongoing coordination activities
2. Promote walkable communities, complete streets, and integration of transportation and land use decisions

12. APPLICATION FORMS AND TECHNICAL ASSISTANCE. The application form will be available at http://www.mtc.ca.gov/funding/FTA/5310.htm. MTC will host an applicant workshop following the release of the Call for Projects and provide technical assistance to applicants during the call for projects.

13. APPLICATION EVALUATION. Following an initial eligibility screening by MTC staff, eligible projects will be evaluated by a panel consisting of Bay Area representatives of paratransit coordinating councils, transit accessibility staff, disabled population interests, MTC Policy Advisory Council Equity and Access Subcommittee member, and MTC staff. Applications will be evaluated on a range of qualitative and quantitative criteria, including project readiness, extent of coordination and outreach, useful life of existing vehicles, utilization information for service expansion or other equipment, and other needs and benefits including the extent to which the project eliminates barriers and improves access for seniors and individuals with disabilities.

14. TIMELINE. The anticipated timeline for the FY13 and FY14 Section 5310 program is as follows:

Release Call for Projects	October 1, 2014
Outreach	October 2014
Applicant Workshop at MTC	October 14, 2014
Project Applications Due to MTC	**November 6, 2014**
Project Selection	November 7 – December 31
Commission Actions: Program Adoption and add projects to TIP	January 2015
Adopted program of projects due to Caltrans	January 30, 2015
Grant Approved by FTA	Expected September 2015
Projects begin	Expected December 2015

15. COMPLIANCE WITH FEDERAL REQUIREMENTS. Applicants should be prepared to abide by all applicable federal requirements as specified in 49 U.S.C. Section 5310, FTA Circulars C 9070.1G (http://www.fta.dot.gov/documents/C9070_1G_FINAL_circular_-3.pdf) and 4702.1B (http://www.fta.dot.gov/documents/FTA_Title_VI_FINAL.pdf), the most current FTA Master Agreement (http://www.fta.dot.gov/documents/20-Master.pdf), and the most current Certifications and Assurances for FTA Assistance Programs (http://www.fta.dot.gov/documents/2014_Certs_and_Assurances.pdf).

Caltrans includes language regarding these federal requirements in its standard agreements with subrecipients and requires each subrecipient to execute a certification of compliance with the relevant federal requirements. Subrecipient certifications are required of the subrecipient prior to the execution of a standard agreement by Caltrans and annually thereafter when FTA publishes the annual list of certifications and assurances.

16. REPORTING REQUIREMENTS. Subrecipients to Caltrans will be required to submit regular reports to Caltrans on the following, but not limited to:
    a. Budget or schedule changes, if any
    b. Progress toward meeting milestones
    c. Quantitative or qualitative information, as available
    d. Financial status report
    e. Disadvantaged Business Enterprise (DBE) participation as applicable

In addition, MTC may hold an initial meeting, with follow-ups as needed, regarding successful applicant implementation (related to Title VI, project scope, annual reporting).

17. TITLE VI.

As a condition of receiving Federal Transit Administration Section 5310 Program funds, subrecipients must comply with the requirements of the US Department of Transportation's Title VI regulations. The purpose of Title VI is to ensure that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity

receiving Federal financial assistance. Subrecipients are also responsible for ensuring compliance of each of their subrecipients (if any), including collecting Title VI Programs, and for ensuring that their third-party contractors are complying with Title VI and the subrecipient's Title VI Program. (See FTA C 4702.1B Chapter II (6) and Appendix L, Scenario Three.)

As outlined in FTA Circular 4702.1B, Title VI Requirements and Guidelines for Federal Transit Administration Recipients, ("Title VI Circular"), issued on October 1, 2012, applicants will be required to ensure Title VI Plans are complete and have been implemented.

In order to document that Section 5310 funds are passed through without regard to race, color or national origin, and to document that minority populations are not being denied the benefits of or excluded from participation in the Section 5310 Program, MTC will prepare and maintain the following information, as required by the Title VI Circular, Chapter VI(6):

a. A record of funding requests received from private non-profit organizations, State or local governmental authorities, and Indian tribes. MTC's records will identify those applicants that would use grant program funds to provide assistance to predominantly minority populations and indicate whether those applicants were accepted or rejected for funding.

b. A description of how MTC develops its competitive selection process or annual program of projects submitted to Caltrans as part of its grant applications. The description will emphasize the method used to ensure the equitable distribution of funds to subrecipients that serve predominantly minority populations, including Native American tribes, where present.

c. A description of MTC's criteria for selecting entities to participate in an FTA grant program.

MTC requires that all Section 5310 Program subrecipients submit all appropriate FTA certifications and assurances to Caltrans prior to standard agreement execution and annually thereafter, as requested by Caltrans. MTC, within its administration, planning, and technical assistance capacity, also will comply with all appropriate certifications and assurances for FTA assistance programs and will submit this information to the FTA as required.

The certifications and assurances pertaining to civil rights include:

1. Nondiscrimination Assurances in Accordance with the Civil Rights Act

2. Documentation Pertaining to Civil Rights Lawsuits and Complaints

Nondiscrimination assurances included above involve the prohibition of discrimination on the basis of race, color, creed, national origin, sex, or age, and prohibit discrimination in employment or business opportunity, as specified by 49 U.S.C. 5332 (otherwise known as Title VI of the Civil Rights Act of 1964), as amended (42 U.S.C. 2000d et seq.) and U.S. DOT regulations, Nondiscrimination in Federally-Assisted Programs of the Department of Transportation-Effectuation of Title VI of the Civil Rights Act, 49 C.F.R. Part 21. By complying with the Civil Rights Act, no person, on the basis of race, color, national origin, creed, sex, or age, will be excluded from participation in, be denied the benefits of any program for which the subrecipient receives federal funding via MTC.

Title VI Programs

All Section 5310 Program subrecipients must submit Title VI Programs to Caltrans. Title VI Programs will be required with the submission of the standard agreement and annually thereafter, as requested by Caltrans, with the submission of the annual FTA certifications and assurances.

Every Title VI Program shall include the following information (Note: detailed instructions on the following Title VI requirements are available in FTA C 4702.1B, Chapter III-2 through III-12):

(1) A copy of the subrecipient's Title VI notice to the public that indicates the subrecipient complies with Title VI, and informs members of the public of the protections against discrimination afforded to them by Title VI. Include a list of locations where the notice is posted. A sample Title VI notice is in FTA C 4702.1B, Appendix B.

(2) A copy of the subrecipient's instructions to the public regarding how to file a Title VI discrimination complaint, including a copy of the complaint form. Sample complaint procedures are in FTA C 4702.1B, Appendix C, and a sample Title VI complaint form is in FTA C 4702.1B, Appendix D.

(3) A list of any public transportation-related Title VI investigations, complaints, or lawsuits filed with the subrecipient since the time of the last submission. See FTA C 4702.1B, Appendix E for an example of how to report this information. This list should include only those investigations, complaints, or lawsuits that pertain to allegations of discrimination on the basis of race, color, and/or national origin in transit-related activities and programs and that pertain to the subrecipient submitting the report, not necessarily the larger agency or department of which the subrecipient is a part.

(4) A public participation plan that includes an outreach plan to engage minority and limited English proficient populations, as well as a summary of outreach efforts made since the last Title VI Program submission. A subrecipient's targeted public participation plan for minority populations may be part of efforts that extend more broadly to include other constituencies that are traditionally underserved, such as people with disabilities, low-income populations, and others.

(5) A copy of the subrecipient plan for providing language assistance to persons with limited English proficiency (LEP), based on the DOT LEP Guidance. Subrecipients may choose to adopt MTC's language assistance plan where appropriate. Operational differences between MTC and the subrecipient may require, in some instances, that the subrecipient tailor its language assistance plan.

(6) Subrecipients that have transit-related, non-elected planning boards, advisory councils or committees, or similar bodies, the membership of which is selected by the subrecipient, must provide a table depicting the racial breakdown of the membership of those committees, and a description of efforts made to encourage the participation of minorities on such committees or councils.

(7) Those subrecipients who are also primary recipients (i.e., those who have their own subrecipients) shall include a narrative or description of efforts the primary recipient uses

to ensure subrecipients are complying with Title VI, as well as a schedule of subrecipient Title VI program submissions.

(8) If the subrecipient has constructed a facility, such as a vehicle storage facility, maintenance facility, operation center, etc., the subrecipient shall include a copy of the Title VI equity analysis conducted during the planning stage with regard to the location of the facility.

(9) Additional information as specified in FTA C 4702.1B chapters IV, V, and VI, depending on whether the subrecipient is a fixed route transit provider, a State, or an MPO.

The Title VI Program must be approved by the subrecipient's board of directors or appropriate governing entity or official(s) responsible for policy decisions prior to submission to Caltrans. Subrecipients shall submit a copy of the board resolution, meeting minutes, or similar documentation with the Title VI Program as evidence that the board of directors or appropriate governing entity or official(s) has approved the Title VI Program.

Appendix 1
Section 5310 Program – Eligible Activities

The following list of eligible activities is excerpted from Federal Transit Administration (FTA) Circular C 9070.1G, the *Enhanced Mobility of Seniors and Individuals with Disabilities Program Guidance and Application Instructions*. Applicants are encouraged to develop innovative solutions to meet the needs of individuals with disabilities in their communities, considering the transportation needs, solutions, and strategies for enhanced coordination in the Bay Area's Coordinated Public Transit—Human Services Transportation Plan.

Traditional Section 5310 Capital Projects	
Vehicles	Acquisition of expansion or replacement buses and/or vans
Equipment	(1) Radios and communication equipment; (2) computer hardware and software; (3) wheelchair restraints (4) transit-related intelligent transportation systems (ITS) *[must be included in the Bay Area Intelligent Transportation Systems (ITS) Architecture (http://www.mtc.ca.gov/planning/ITS/)]*; (5) Dispatch systems.
Support for Mobility Management and Coordination	(1) The promotion, enhancement, and facilitation of access to transportation services, including the integration and coordination of services for individuals with disabilities, seniors, and low-income individuals; (2) Support for short-term management activities to plan and implement coordinated services; (3) The support of state and local coordination policy bodies and councils; (4) The operation of transportation brokerages to coordinate providers, funding agencies, and passengers; (5) The development and operation of one-stop transportation traveler call centers to coordinate transportation information on all travel modes and to manage eligibility requirements and arrangements for customers among supporting programs; (6) Operational planning for the acquisition of intelligent transportation technologies to help plan and operate coordinated systems inclusive of geographic information systems (GIS) mapping, global positioning system technology, coordinated vehicle scheduling, dispatching and monitoring technologies, as well as technologies to track costs and billing in a coordinated system, and single smart customer payment systems; and (7) Funding to support the administrative costs of sharing services provided to clients along with other seniors and/or individuals with disabilities and the coordinated usage of vehicles with other nonprofits.

Appendix 1

Expanded Section 5310 Projects	
Public Transportation Projects that Exceed the Requirements of the ADA	(1) Expansion of paratransit service parameters beyond the three-fourths mile required by the ADA; (2) Expansion of current hours of operation for ADA paratransit services that are beyond those provided on the fixed-route services; (3) The incremental cost of providing same day service; (4) The incremental cost of making door-to-door service available to all eligible ADA paratransit riders, but not on a case-by-case basis for individual riders in an otherwise curb-to-curb system; (5) Enhancement of the level of service by providing escorts or assisting riders through the door of their destination; (6) Feeder services. Accessible "feeder" service (transit service that provides access) to commuter rail, commuter bus, intercity rail, and intercity bus stations, for which complementary paratransit service is not required under the ADA.
Public Transportation Projects that Improve Accessibility.	Training programs for individual users on awareness, knowledge, and skills of public and alternative transportation options available in their communities. This includes travel instruction and travel training services.
Public Transportation Alternatives that Assist Seniors and Individuals with Disabilities with Transportation.	(1) Supporting the administration and expenses related to voucher programs for transportation services offered by human service providers. This activity is intended to support and supplement existing transportation services by expanding the number of providers available or the number of passengers receiving transportation services. Vouchers can be used as an administrative mechanism for payment of alternative transportation services to supplement available public transportation. The Section 5310 program can provide vouchers to seniors and individuals with disabilities to purchase rides, including: (a) mileage reimbursement as part of a volunteer driver program; (b) a taxi trip; or (c) trips provided by a human service agency. Providers of transportation can then submit the voucher for reimbursement to the recipient for payment based on predetermined rates or contractual arrangements. Transit passes or vouchers for use on existing fixed-route or ADA complementary paratransit service are not eligible. (2) Supporting volunteer driver and aide programs. Volunteer driver programs are eligible and include support for costs associated with the administration, management of driver recruitment, safety, background checks, scheduling, coordination with passengers, other related support functions, mileage reimbursement, and insurance associated with volunteer driver programs. The costs of enhancements to increase capacity of volunteer driver programs are also eligible.

Appendix 1

Expanded Section 5310 Projects (*Continued*)	
Support for Mobility Management and Coordination	(1) The promotion, enhancement, and facilitation of access to transportation services, including the integration and coordination of services for individuals with disabilities, seniors, and low-income individuals; (2) Support for short-term management activities to plan and implement coordinated services; (3) The support of state and local coordination policy bodies and councils; (4) The operation of transportation brokerages to coordinate providers, funding agencies, and passengers; (5) The development and operation of one-stop transportation traveler call centers to coordinate transportation information on all travel modes and to manage eligibility requirements and arrangements for customers among supporting programs; (6) Operational planning for the acquisition of intelligent transportation technologies to help plan and operate coordinated systems inclusive of geographic information systems (GIS) mapping, global positioning system technology, coordinated vehicle scheduling, dispatching and monitoring technologies, as well as technologies to track costs and billing in a coordinated system, and single smart customer payment systems; and (7) Funding to support the administrative costs of sharing services provided to clients along with other seniors and/or individuals with disabilities and the coordinated usage of vehicles with other nonprofits.

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Memorandum

TO: Interested Parties

DATE: September 2, 2014

FR: Therese Trivedi

RE: Caltrans Sustainable Transportation Planning Grants Program FY 15-16 Cycle

Caltrans released the Fiscal Year 2015-2016 round of federal and state planning grants on September 2, 2014. **Applications are due to Caltrans on October 31, 2014** for the following grant programs:

- Strategic Partnerships
- Sustainable Communities

Attachment 1 includes a brief summary of the grant programs and applicant eligibility. The grant application and all Caltrans requirements are found at: *http://www.dot.ca.gov/hq/tpp/grants.html*. Please review the Grant Application Guide document on the website, which provides detailed information about the grant programs and the application process.

Caltrans will host an **informational open house** about these grant programs on **Thursday, September 11, 2014**, from 10 a.m. to 12 p.m. at the Caltrans District 4 Office, 111 Grand Avenue in Oakland, in the Tamalpais Room (Room 13-220). Prospective applicants are welcome to attend this event to receive a presentation on the grant programs and application process.

For **Strategic Partnerships** grants:
As indicated in the Caltrans materials, Metropolitan Planning Organizations (MPO) are eligible to apply as Primary Applicants. If you are interested in submitting a Strategic Partnerships grant application:

- Notify MTC by **October 1, 2014** of your intent to apply under this category providing a brief project description.
- Secure the 20% local match required for this grant program.
- Provide MTC by **October 15, 2024** several application elements including: the cover sheet (first page of the application) and signature sheet (last page of the application) which requires signature by MTC; project description; and scope of work and timeline. Your agency/organization signature must already be on the signature sheet. We will then return the fully signed signature sheet to you.
- Complete the application and submit it to Caltrans by the **October 31, 2014** deadline. It is your responsibility to submit the application to Caltrans.
- Following submittal to Caltrans in October, provide MTC with a printed and electronic copy of the final grant application

For **Sustainable Communities** grants:
If you are interested in submitting a Sustainable Communities grant application and are applying on behalf of a city, county, transit operator, or Native American Tribal Government:

- You should submit grant applications directly to Caltrans. **As your agency qualifies for direct grant applications to Caltrans, please work directly with Caltrans staff to apply for this planning grant.**

If you are interested in submitting a Sustainable Communities grant application and your organization is a university, community college, community-based organization, non-profit organization or other public entity:

- As your agency/organization is not eligible to submit an application on your own, **you will need to identify a primary applicant** (as detailed in Attachment 1) **and request that that agency sponsor your grant application**. This allows you to submit a grant application as a "sub-applicant".

Letters of Support:
Eligible applicants requesting a letter of support from MTC should plan to submit a request, including a sample letter of support, to my attention **no later than October 10, 2014** with the following:

a. Contact name and mailing address (Note that letters of support must be addressed to the applicant and must be submitted with the application.)
b. Sample letter of support
c. Grant program for which you are applying
d. Project description (preferably the scope of work)
e. Grant request amount

You are encouraged to consider how your proposal relates to Plan Bay Area (the region's Sustainable Communities Strategy/Regional Transportation Plan) and how your proposal complements Plan Bay Area policies and strategies. MTC staff will review these requests and work with applicants to achieve consistency with the appropriate regional policies and strategies.

Please contact Therese Trivedi (ttrivedi@mtc.ca.gov, 510-817-5767) if you have further questions.

Attachment 1
Summary of FY 15-16 Caltrans Planning Grants

Strategic Partnerships
Consistent with the intent of partnership planning, the Strategic Partnerships grant funds planning projects that encourage regional agencies to partner with Caltrans to identify and address statewide/interregional transportation deficiencies in the state highway system, strengthen government-to-government relationships, and achieve programmed system improvements, all in an effort to achieve the Caltrans Mission and overarching objectives.

Who May Apply as **Primary Applicants** – Metropolitan Planning Organizations/Regional Transportation Planning Agencies (MPO/RTPAs); **Sub-applicants** – transit agencies, universities, community colleges, Native American Tribal Governments, cities and counties, community-based organizations, non-profit organizations, and other public entities.

The estimated budget for this program is $1.5 million, with maximum grant awards up to $500,000 (minimum grant is $100,000). A local match of 20% of the total project amount is required.

Sustainable Communities
The Sustainable Communities grant funds transportation planning projects that identify and address mobility deficiencies in the multimodal transportation system, encourage stakeholder collaboration, involve active public engagement, integrate Smart Mobility 2010 concepts, ultimately result in programmed system improvements, and achieve the Caltrans Mission and overarching objectives.

Who May Apply as **Primary Applicants** – MPO/RTPAs, Transit Agencies, Cities, Counties, and Native American Tribal Governments; **Sub-applicants** – Transit Agencies, Universities, Community Colleges, Native American Tribal Governments, Cities and Counties, Community-Based Organizations, Non-Profit Organizations, and Other Public Entities.

The estimated budget for this program is $8.3 million, with maximum grant awards up to $500,000 (minimum grant is $50,000). A local match of 11.47% of the total project amount is required.

MTC does not accept sub-applicants for the Sustainable Communities grant program. Community-based organizations, non-profit organizations, and universities are not eligible to apply on their own for this grants. These organizations must apply as a sub-applicant to an eligible agency (cities, counties, transit agencies, Native American Tribal Governments).

*Please refer to http://www.dot.ca.gov/hq/tpp/grants.html for more information on all grant programs or attend the **Caltrans informational open house** on Thursday, September 11, 2014, from 10 a.m. to 12 p.m. at the Caltrans District 4 Office, 111 Grand Avenue in Oakland in the Tamalpais Room (Room 13-220).*