Los Angeles Region Express Lanes Project
AB 1467 Application

SUBMITTED TO THE

California Transportation Commission

BY THE

Los Angeles County Metropolitan Transportation Authority

IN PARTNERSHIP WITH THE

California Department of Transportation
District 7

March 31, 2008

Metro

Caltrans

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Executive Summary

The Los Angeles County Metropolitan Transportation Authority (LACMTA), in cooperation with the California Department of Transportation District 7 (Department), request that the California Transportation Commission (CTC) approve the Los Angeles Region Express Lanes Project as one of the Southern California authorized tolled facilities pursuant to Assembly Bill 1467 and that the CTC forward its recommendation to the state legislature for enactment of legislative authority for this project.

LACMTA's Los Angeles Region Express Lanes Project is a systemwide transportation strategy that integrates variable highway and parking pricing, expanded transit services and innovative transportation technologies in a way that significantly improves mobility in the country's most congested urban region. LACMTA's partners include the Department, the City of Los Angeles, the County of Los Angeles, the Southern California Association of Governments (SCAG), the San Gabriel Valley, Central Los Angeles and South Bay Cities subregional agencies, the Southern California Regional Rail Authority, Foothill Transit, Torrance Transit and Gardena Municipal Bus Lines. The highlights of the project are listed below:

LOS ANGELES REGION EXPRESS LANES PROJECT	
Project	Congestion pricing on Interstate 110, Harbor Transitway, in the South Bay Cities area to downtown Los Angeles and the parallel Interstate 210, Interstate 10 and State Route 60 corridors in the San Gabriel Valley area. The City of Los Angeles downtown Los Angeles Intelligent Parking Management Program is the linkage amongst the four corridors.
Costs	Costs are estimated t $43.3 million for Operating Segment 1 and $74.8 million for Operating Segment 2, for a total of $119.1 million. Escalated to midyear of construction for each year (3.0%) per year. Annual Operations and Maintenance costs are estimated at $50.5 million in 2010 and $82.2 million in 2012.
Revenue	With the implementation of Operating Segment 1, the first year (2010) estimated revenues are $85.8 million. With the implementation of Operating Segment 2, the 2012 revenues are estimated at $159.1 million.
Project length, miles	86 (183 lane miles)
Project Phase	In planning phase. Operational Segment 1 scheduled to open in 2010; Operational Segment 2 scheduled to open in 2012.
Existence of HOV lane in corridor	Existing HOV lanes would be converted to Express Lanes in these corridors

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The Los Angeles County Metropolitan Transportation Authority (LACMTA), in cooperation with the California Department of Transportation District 7 (Department), requests that the California Transportation Commission (CTC) approve the Los Angeles Region Express Lanes Project as one of the Southern California authorized tolled facilities pursuant to Assembly Bill 1467 and that the CTC forward its recommendation to the state legislature for enactment of legislative authority for this project.

This program includes conversion of HOV lanes to Express Lanes with congestion pricing on the Interstate 110, Harbor Transitway, in the South Bay Cities to the Central Los Angeles subregions and the Interstate 210, Interstate 10 and State Route 60 corridors in the San Gabriel Valley subregion. The following responds to the CTC's application requirements.

I. Project Eligibility

PART A – COMPLIANCE WITH STREETS & HIGHWAYS CODE

A 1: Provide evidence to support that the proposed project is consistent with the established standards, requirements, and limitations that apply to those facilities in Sections of the Streets and Highways Code as follows:
Sections 149, 149.1, 149.3, 149.4, 149.5, 149.6 and 149.7

The Los Angeles program is designed to meet the following federal and state requirements that pertain to Express or High Occupancy Toll (HOT) Lanes. The LACMTA is seeking an enactment of a state statute to implement the Los Angeles Regional Express Lanes Project project.

Federal Law

The federal transportation funding bill, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), specifically authorized the creation of up to five congestion pricing pilot programs, no more than three of which could implement tolls on the interstate system. The program, renamed the Value Pricing Program in the Transportation Action for the 21st Century (TEA-21), has been continued through successive reauthorizations including the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and has provided funding for the planning and development of several Express Lanes projects.

The SAFETEA-LU value pricing program encourages implementation and evaluation of value pricing pilot projects to manage congestion on highways through tolling and other pricing mechanisms. This is the only program that provides funding to support studies and implementation aspects of a tolling or pricing project.

The program is limited to 15 slots (which the Federal Highway Administration (FHWA) has reserved for "states") of which only one vacancy remains. Each state can have multiple projects.[1] Funding is now distributed through the Congestion-Reduction Demonstration Initiatives program.

The LACMTA applied in December 2007 to the USDOT Congestion -Reduction Demonstration Initiatives program for federal grant funds to help implement the Los Angeles Region Express Lanes Project.

California Law

State law remains more restrictive than federal law. State law, amended by 2004 legislation (**Assembly Bill 2032 (Dutra)**), permits implementation of new Express Lanes as demonstration projects in a few specific cases: two new express lanes projects in Santa Clara County, two in San Diego County, and the Interstate 680 Sunol Grade Express Lane and one additional project in Alameda County. Assembly Bill 2032 sets forth specific requirements for each of the demonstration projects including:

1. A minimum Level of Service C must be maintained in the Express Lanes (this may be relaxed to Level of Service D through consultation with the Department);
2. Revenues from each express lane must be spent on investments within that corridor;
3. An evaluation must be conducted for each project and submitted to the legislature.

In May 2006, the governor approved **Assembly Bill 1467 (Nunez)**[2], which increases the number of express lanes projects by four (two in northern California and two in southern California). These projects must be reviewed by the California Transportation Commission (CTC) and then approved by the legislature prior to implementation. The requirements established by Assembly Bill 2032 also apply to the projects authorized under Assembly Bill 1467.

Also in 2006, **Assembly Bill 32 (Nunez)**[3], the California Global Warming Solutions Act of 2006, was enacted, which requires an inventory and mitigation of air quality emissions. The California Air Resources Board (CARB) is currently developing, pursuant to Assembly Bill 32, a Draft Scoping Plan which will be released in June 2008. The Final Scoping Plan will be approve by CARB in November 2009.

In concert with CARB's reduction of greenhouse gases efforts, the LACMTA is working on a plan to manage demand and sustain it over time with adequate funding. The Express Lanes Project addresses two of the four integrated strategies to reduce greenhouse gases:

- Alternative Mode Infrastructure – The Express Lanes encourage transit, carpool and vanpool ridership through rider incentives and funding of new transit service along those corridors.

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[1] See http://www.ops.fhwa.dot.gov/tolling_pricing/programs/hov_facilities.htm for additional information.
[2] Assembly Bill 1467 (Nunez) Section 143 of, and to add Section 149.7 to, the CA Streets and Highways Code
[3] Assembly Bill 32 (Nunez), An act to add Division 25.5 (commencing with Section 38500) to the Health and Safety Code, relating to air pollution.

- Pricing Strategies – The Express Lanes incorporate congestion pricing, through tolls, to manage demand along those corridors.

The LACMTA will monitor Assembly Bill 32 compliance requirements as they are developed by CARB. The Department will address AB 32 compliance in the environmental document for this project.

Compliance with Streets and Highways Code Sections

The following, in italics by section, are the requirements that are placed on a regional agency ("Agency") implementing an express lane system. The Los Angeles Region Express Lanes Project compliance is listed under each section.

Once the Los Angeles Region Express Lanes Project is qualified by the CTC, subsequent legislation would be developed that would apply all or some of these requirements to the Los Angeles region system.

Section 149
The department may construct exclusive or preferential lanes for buses only or for buses and other high-occupancy vehicles.

The Los Angeles Region's High Occupancy (HOV) Lanes were built by the Department pursuant to this law.

Sections 149.1, 149.4, 149.5 and 149.6
Agency may conduct, administer, and operate a value pricing and transit development program utilizing a high-occupancy vehicle expressway and may direct and authorize the entry and use of the high-occupancy vehicle lanes by single-occupant vehicles for a fee.

The LACMTA will operate a congestion pricing program on the four corridors and allow SOVs to use the Express Lanes for a fee

Sections 149.1, 149.4, 149.5 and 149.6
Implementation of the program shall ensure that Level of Service C, unless an exception is approved by the Department of Transportation.

The Express Lanes will operate at a minimum of 50 mph which is a Level of Service C.

Sections 149.4, 149.5 and 149.6
Agency shall carry out the program in cooperation with the Department of Transportation, including coordination of design, construction and operation of the system

The LACMTA and Caltrans will sign an interagency agreement to develop and operate the program

Sections 149.1, 149.4, 149.5 and 149.6
Agreements between Agency, the Department of Transportation, and the Department of the California Highway Patrol shall identify the respective obligations and liabilities of those entities and assign them responsibilities relating to the program.

The LACMTA will establish agreements with the Department and California Highway Patrol that identify their respective obligations and liabilities in connection with the proposed project.

Section 149.3
The department may undertake the construction of exclusive or preferential lane facilities pursuant to a cooperative agreement with any public or private agency that provides mass transit services.

The LACMTA and the Department will sign an interagency agreement

Sections 149.1, 149.4, 149.5 and 149.6
The revenue generated from the program shall be available to Agency for the direct expenses related to the operation (including collection and enforcement), maintenance, and administration of the demonstration program. Administrative expenses shall not exceed 3 percent of the revenues. All remaining revenue generated by the demonstration program shall be used in the corridor from which the revenue was generated for facilities and the improvement of transit service, including, but not limited to, support for transit operations pursuant to an expenditure plan adopted by Agency.

Toll revenues shall be available to the LACMTA for expenses related to the operation (including collection and enforcement), maintenance, and administration of the congestion pricing program. Reimbursement for related planning and administrative costs for the operation of the congestion pricing project/program shall not exceed 3 percent of the revenues, without prior Board approval.

Remaining revenues shall be invested within the program area for transportation improvements, including, but not limited to, transit operations support and for other eligible operating and capital projects pursuant to an expenditure plan adopted by the LACMTA.

See cost estimates regarding 3% administrative costs compliance and Tables 3 and 4 regarding use of toll revenue for maintenance and operations and provision of subsidies for transit services in the four corridors.

Sections 149.4, 149.5 and 149.6
Agency may issue bonds at any time to finance any costs necessary to implement the value pricing program.

The LACMTA does not anticipate a need for bond financing for this project.

Section 149.6
Not later than three years after Agency first collects revenues from any of the projects, Agency shall submit a report to the Legislature on its findings, conclusions, and recommendations concerning the demonstration program authorized by this section. The report shall include an analysis of the effect of the HOT lanes on the adjacent mixed-flow lanes and any comments submitted by the department and the Department of the California Highway Patrol regarding operation of the lane.

The LACMTA will provide reports to Legislature in accordance with this Section.

Section 149.7
(a) A regional transportation agency, as defined in Section 143, in cooperation with the department, may apply to the commission to develop and operate high-occupancy toll lanes, including the administration and operation of a value pricing program and exclusive or preferential lane facilities for public transit. Agency shall provide any information or data requested by the commission or the Legislative Analyst.

The LACMTA, in cooperation with the Department, has submitted this application pursuant to the requirements in Section 149.7 (Assembly Bill 1467), which includes the CTC processes, and the CTC Assembly Bill 1467 guidelines. The LACMTA will provide the Commission and Legislative Analyst with information and reports.

A 2: Provide the reason for pursuing this project.

The Los Angeles County Metropolitan Transportation Authority (LACMTA) in cooperation with the California Department of Transportation, District 7 (Department) and its partners the City of Los Angeles, County of Los Angeles, the Southern California Association of Governments (SCAG), the San Gabriel Valley, Central Los Angeles and South Bay Cities subregional agencies and the transit agencies of the Southern California Regional Rail Authority (SCRRA), Foothill Transit, Torrance Transit and Gardena Municipal Bus Lines, are proposing to implement a combination of strategies that include congestion-pricing, enhanced transit service, and active traffic management technologies to help manage traffic congestion.

LACMTA, in cooperation with the Department, has developed a Los Angeles Region Express Lanes Project with the goals of increasing mobility through congestion pricing techniques, improving air quality and generating revenue for complementary transit services. These services are needed to generate the additional capacity in both the Express Lanes and the general purpose lanes that would allow the Express Lanes to operate more efficiently.

Why does Los Angeles need to create tolled facilities when it already has High Occupancy Vehicle Lanes? The answer is in the growing congestion in the region and the increasing congestion in the current HOV system. Another tool in the toolbox is needed and that tool is congestion pricing.

The Traffic Congestion and Funding Problems in the Los Angeles Region

Los Angeles traffic congestion is heading from bad to worse. Los Angeles consistently has been ranked as the urban area with the worst traffic congestion in the country. The average commuter spends 72 hours per year idling in traffic. The average freeway speed during the afternoon peak period in the region is projected to deteriorate to 14 miles-per-hour in 2030, unless the region finds additional solutions beyond completing the highway and transit projects in the pipeline.

Funding formulas through fuel taxes and state and federal programs fail to meet the region's needs. The Los Angeles region is now faced with congestion reduction choices that include the option of roadway pricing or congestion pricing.

High Occupancy Vehicle (HOV) Lanes Reaching their Capacity

Los Angeles County has 470 lane miles of HOV facilities, or 36% of the total 1320 HOV lane miles in the State of California. On average, each HOV facility in Los Angeles County carries 1350 vehicles per hour or 3200 people per hour, during peak hours. These volumes well exceed

the minimum expected volume of 800 vehicles per hour or 1800 people per hour, as specified in the *HOV Guidelines for Planning, Design, and Operations*. On average, the person-trip volume of an HOV lane is two (2) times greater than that of a mixed-flow lane during peak hours.

Perhaps the most serious challenge Los Angeles County HOV lanes face is that they are now so popular that they are getting too crowded. Right now, several HOV lanes in Los Angeles County are close to reaching a maximum desirable operating capacity. To ensure these lanes continue to be effective, the region must find ways to better manage the flow. One of the options is to implement managed lane concepts such as congestion pricing.

The LACMTA and the Department could chose to not implement Express Lanes. Then the HOV lanes in these corridors, which are operating at or beyond their practical capacity during the peak hours, would no longer provide the travel time advantage needed to encourage more HOV formation. Options open to the LACMTA and the Department at that stage could include:

1. Increasing the HOV vehicle occupancy requirement (e.g., from HOV 2 plus to HOV 3 plus);
2. Adding HOV lanes, which is a costly and challenging option due to land use limitations and environmental considerations;
3. Making spot improvements that would provide temporary relief;
4. Making operational improvements through the application of innovative technologies, which, although effective, would not result in changes in travel behavior;
5. Increasing transit services substantially, which would not be effective if the buses operate in congested traffic and would be costly and require more time for implementation if requiring new rail systems; and
6. Implementing travel demand management techniques, such as congestion-pricing.

With these options under consideration, the Los Angeles Region partners are proposing to implement a combination of strategies that include congestion-pricing, enhanced transit service, and active traffic management technologies to help manage traffic congestion.

Congestion Pricing a Solution

Congestion pricing is one approach for efficiently managing capacity on Los Angeles' busy roadways by:

- Changing commuting behavior
- Generating additional funds for more transit, vanpools and other transportation options to increase mobility

The Los Angeles Regional Express Lanes Project will use congestion pricing to manage Los Angeles' roadway capacity. Under the proposed program, when driving on an Express Lane, the driver pays a toll that varies according to:

- Vehicle passenger occupancy; and
- Congestion level of the highway

The latest technology will involve an easy to use electronic "fast pass" collection system so that patrons do not have to wait in line at toll booths.

Monitoring congestion makes it possible to control the traffic levels at all times and maintain the performance objective of traffic speed at a minimum of 50 mph. Congestion pricing, when integrated with other traffic management options, will help improve the travel speeds of the Express Lanes as well as the general purpose lanes.

The Los Angeles Region Express Lanes projects meet the following basic criteria for successful congestion pricing:

- HOV lane segments are long enough to offer significant travel time savings to commuters;
- Roadways lead to major activity centers; and
- Access to high speed parallel express bus service options (such as the Interstate 10 El Monte Busway or Harbor Transitway) and/or commuter rail service (such as Metrolink).

Toll revenues shall be available to the LACMTA for expenses related to the operation (including collection and enforcement), maintenance, and administration of the congestion pricing program. Reimbursement for related planning and administrative costs for the operation of the congestion pricing project/program shall not exceed 3 percent of the revenues, without prior Board approval.

Remaining revenues shall be invested within the program area for transportation improvements, including, but not limited to, transit operations support and for other eligible operating and capital projects pursuant to an expenditure plan adopted by the LACMTA.

A Systems Approach

LACMTA's Los Angeles Region Express Lanes Project is a systemwide transportation strategy that integrates variable highway and parking pricing, expanded transit services and innovative transportation technologies in a way that significantly improves mobility in the country's most congested urban region.

This systemwide approach incorporates improvements in three of the nine sub-regions of Los Angeles County: the San Gabriel Valley, Central Los Angeles, and the South Bay Cities. These three sub-regions represent nearly 50 percent of both population and employment in Los Angeles County. It is projected that by the year 2030 these three sub-regions combined will generate about 50 percent of the region's peak-period home-to-work trips.

The program includes congestion pricing on the Interstate 110, Harbor Transitway, in the South Bay Cities area to downtown Los Angeles and the parallel Interstate 210, Interstate 10 and State Route 60 corridors in the San Gabriel Valley area. The City of Los Angeles downtown Los Angeles Intelligent Parking Management Program is the linkage amongst the four corridors. All these corridors have existing or planned HOV lanes which will be converted to congestion-priced Express Lanes.

The Interstate 110, Harbor Transitway, is a key north/south corridor into downtown Los Angeles. The Interstate 210, Interstate 10 and State Route 60 corridors are parallel corridors also into downtown Los Angeles. All four corridors need to have consistent demand management pricing solutions. If only one or two of the corridors were tolled, then the other corridors would experience even more congestion. These corridors capture the travel demand from the South Bay Cities and the San Gabriel Valley into and through downtown Los Angeles and work together as one system.

This comprehensive package of strategies will optimize the operational performance of the Los Angeles Region's multi-modal transportation system and will provide more travel choices by allowing a better management of the use of physical infrastructure at both origins/ destinations and along the roadways.

Next Steps

Once the Los Angeles Region Express Lanes Project is approved by the California Transportation Commission (CTC) and submitted to the legislature to enact legislative authority, the LACMTA, in cooperation with the Department, will initiate the Express Lanes Project, starting with the environmental phase.

The environmental, design and construction phases will be led by the Department, including roadway work and toll equipment design and installation, which may be procured through a contract with a tolling specialist contractor.

The operations and maintenance phases of the tolling equipment will be led by the LACMTA, which includes the procurement of a system operator.

PART B – DEPARTMENT OF TRANSPORTATION COOPERATION & STATE HIGHWAY COMPATIBILITY

B 1: Provide evidence that the Department of Transportation (Department) supports this project and that the project application was submitted in cooperation with the Department.

The Department supports this application as evidenced by its letter, attached.

B 2: Provide evidence that the Department determined the project to be consistent with State Highway System requirements.

The Los Angeles Region's High Occupancy (HOV) Lanes were authorized under state law[4], which allows the Department to construct exclusive or preferential lanes for buses only or for buses and other high-occupancy vehicles on existing highways that are part of the State Highway System. Prior to constructing the lanes, the Department conducted engineering estimates of the effect of such lanes on safety, congestion, and highway capacity, as required by law.

The LACMTA and the Department will conduct a system evaluation with this project to track its implementation, procurement processes, implementation, institutional issues and system performance and determine the success/lessons learned of the project.

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[4] California Streets and Highways Code 149.0

PART C – TECHNICAL FEASIBILITY

C: Provide a Project Study Report/Project Report (PSR/PR) or a PSR equivalent that describes, but is not limited to, the following:

C 1: The type and size of the project, the location, all proposed interconnections with other transportation facilities, the communities that may be affected, and alternatives (e.g. alignments) that may need to be evaluated.

The proposed Express Lanes Project include the conversion of existing High Occupancy Vehicle (HOV) lanes to Express Lanes in Operating Segment 1 along:

- Interstate 10 (El Monte Busway);
- Interstate 210 (from Interstate 605 to Interstate 710); and
- Interstate 110 (Harbor Freeway Transitway).

An Operating Segment 2 would include the conversion of HOV lanes to Express Lanes on three major freeway corridors east of Interstate 605 to the San Bernardino County line. These corridors are:

- State Route 60 (under construction);
- Interstate 10 (in design); and
- Interstate 210 (existing).

The Interstate 10 in the second segment is one the "Corridors of the Future" that were designated by the USDOT. When the Express Lanes in both segments are fully operational, the Los Angeles Region will have the largest Express Lanes network in the country and around the world with an estimated 183 lane-miles.

This proposed system of Express Lanes will serve three of the nine sub-regions of Los Angeles County: the San Gabriel Valley, Central Los Angeles, and the South Bay Cities. These three sub-regions represent nearly 50 percent of both population and employment in Los Angeles County.

Figure 1 provides a graphical representation of the congestion-pricing components of the application, including the extent of the proposed Express Lanes network and its location within the three sub-regions. **Figure 2** in **Appendix A** includes the individual maps of the Express Lanes corridors and the location of all tolling equipment. **Table 1** summarizes the Express Lanes program.

In addition to converting HOV lanes to Express Lanes, a variety of complementary transit services and adaptation of new transportation technologies would be deployed to optimize the operational performance of the overall transportation system. These include expanding Bus Rapid Transit (BRT) and express bus services in these corridors, implementing an intelligent parking management system in the downtown of the City of Los Angeles, and expanding and promoting vanpools and transit by providing incentives.

Fig 1: Los Angeles Region Express Lanes Plan

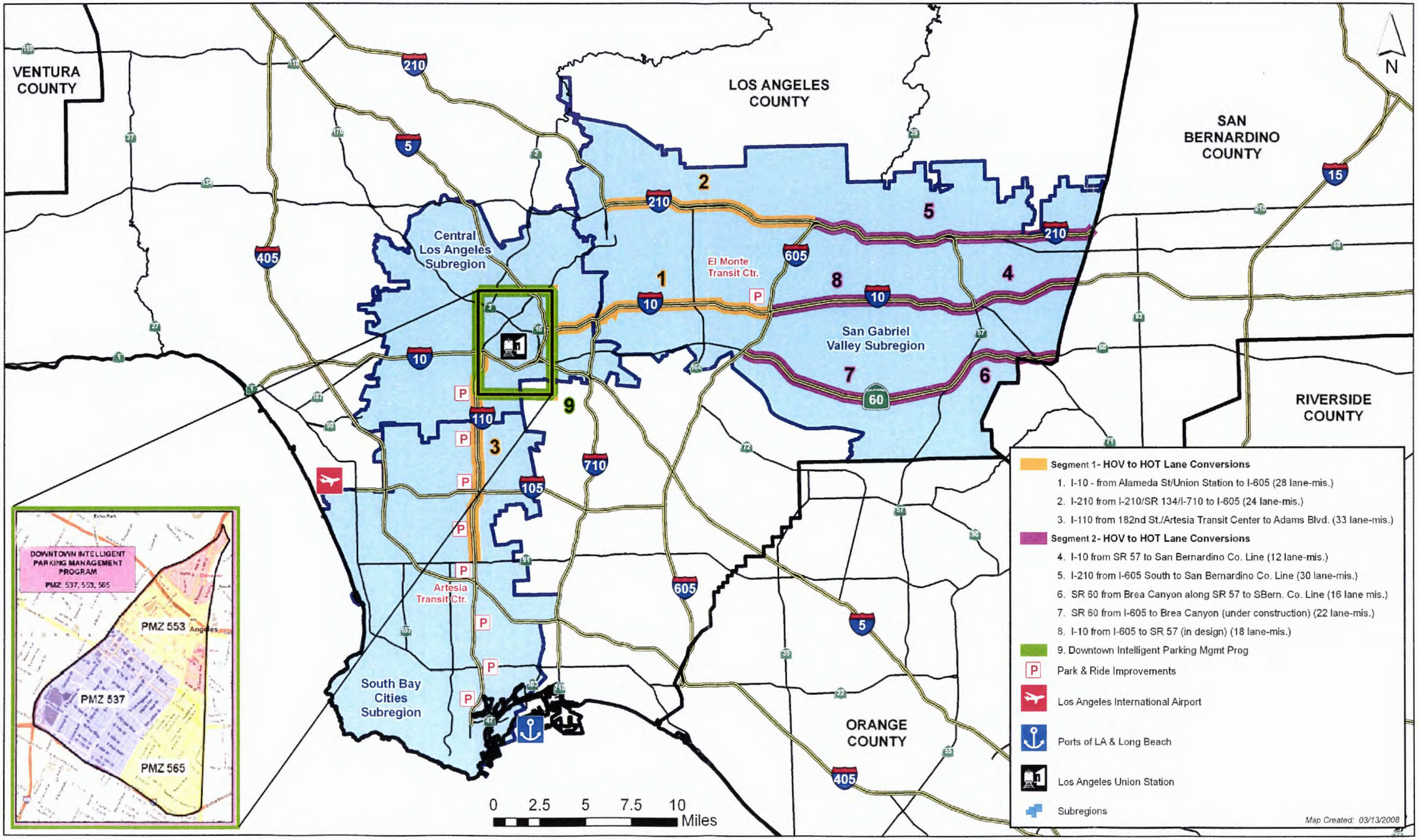

Table 1 - Summary of Proposed Los Angeles Region Express Lanes Project

Essential Characteristics for Express Lane Success	Los Angeles Region Express Lanes Project
General Description	The conversion of existing High Occupancy Vehicle (HOV) lanes to Express Lanes along Interstate 10 (El Monte Busway), Interstate 210 (from Interstate 605 to Interstate 710) and Interstate 110 (Harbor Freeway Transitway) as part of a first phase. A second operating segment would include the conversion of HOV lanes to Express Lanes on three major freeway corridors east of Interstate 605 to the San Bernardino County line. These corridors are State Route 60 (under construction), Interstate 10 (in design), and Interstate 210 (existing).
Costs	Costs are estimated t $43.3 million for Operating Segment 1 and $74.8 million for Operating Segment 2, for a total of $119.1 million. Escalated to midyear of construction for each year (3.0%) per year.
Revenue	With the implementation of Operating Segment 1, the first year (2010) estimated revenues are $85.8 million. With the implementation of Operating Segment 2, the 2012 revenues are estimated at $159.1 million. (Assumes tolling of hybrids. Revenues are slightly less if hybrids are exempt from tolls)
Project length, miles	86 (183 lane miles)
Project Phase	In planning phase. Operational Segment 1 scheduled to open in 2010; Operational Segment 2 scheduled to open in 2012.
Existence of HOV lane in corridor	Existing HOV lanes would be converted to Express Lanes in these corridors
Free flow conditions in HOV lane and congested flow in general purpose lanes (existing or forecast in near terms)	The current ADT on the Express Lanes corridors (all lanes) ranges form 226,000 to 331,000. The current HOV lanes improve travel times over the General Purpose Lanes by 23% to 53%. But the HOV lanes are projected to slow down in the peak hours the near future. The planned Express lanes will improve travel times over the HOV lanes by 25% to 36% while maintaining a minimum 50 mph speed at Level of Service C. Sufficient HOV lane capacity exists in the 24 hour period on all corridors except for the Interstate 210 and Interstate 10 corridors where dynamic congestion pricing and implementation of increased transit will create capacity to maintain free flow conditions.
Ability to manage volume and traffic flow in HOT lane	Tolls would be dynamically priced to maintain a Level of Service C, or 50 mph, in the Express Lanes

(to maintain value of lane)	SOVs would be charged the highest toll rate with HOV2s charged a marginally lower rate. HOV3s would be exempt from the Toll except on the Interstate 10 corridor where they would be charged marginally less than HOV2s. Transit, emergency vehicles and motorcycles would be exempt. There is an option to either toll or not toll hybrids, depending on a potential change in state law regarding use of hybrids on HOV lanes.
Availability of physical space for HOT lane improvements (signs, readers, buffer, enforcement, etc.)	The Express Lanes System will use the existing HOV lanes in the corridors. The signs will be placed in the median barrier or in another location so as not to disrupt traffic flow. The existing HOV buffers will also be used for the Express Lanes. Signs will be placed so that both the General Purpose lane driver and the Express Lane driver can see them and make a decision to enter or exist the Express Lane
Public policy support	The LACMTA has begun the stakeholder and public outreach process.
Availability of alternatives to drive alone travel	Net toll revenues will be used to fund increased transit service in those corridors consistent with LACMTA's approved expenditure plan.
Linkage to parking policy at employment centers served by corridor	The City of Los Angeles' Downtown Parking Management Plan will link the Express Lanes to create a connected system of congestion pricing.
Ability to finance start-up	Federal, state and local funding sources will provide funding for this project.
Ability to generate sufficient revenue to pay for capital, operations and maintenance, and centralized services	Toll revenue will pay first for operating and maintaining the toll facility and then for increased transit services along the Express Lanes corridors
Support of implementing and operating organizations	The LACMTA, in cooperation with and support of Caltrans, is implementing this program. Four subregional agencies and many local and state officials are involved in this process.

C 2: The timeframe for project completion.

The Operating Segment 1 projects are planned to be in operation in 2010 and the Operating Segment 2 projects in 2012. See the attached Fact Sheets in **Appendix E** for details.

The LACMTA is currently in the System Planning phase of the Express Lanes system and is performing the following tasks:

- Feasibility Assessment;
- Stakeholder Support;
- Development of the Conceptual Framework;
- Legislative Action; and
- Public Outreach.

C 3: How the proposed schedule is reasonable given the scope and complexity of the project.

This project is less complex than most since it will only need to add the tolling equipment to the existing HOV lanes in those corridors and would require a Negative Declaration environmental document. Minor roadway work would be completed, as necessary, but no major roadway widening is required or planned. The following is the planned schedule for both operating segments (OS 1 and OS 2).

Table 2 – Project Delivery Schedule

Project Delivery Baseline (Milestones)	Month/Year OS 1	Month/Year OS 2
Begin Environmental Phase (PA&ED)	Jun-08	Jun-10
Draft Environmental Document Milestone	Dec. 08	Dec-10
Draft Project Report Milestone	Dec-08	Dec-10
End Environmental Phase (PA&ED Milestone)	Jun-09	Jun-11
Begin Design Phase	Jun-09	Jun-11
End Design Phase (Plans, Specifications, and Estimates Milestone)	Dec-09	Dec-11
Begin Right-of-Way	Jun-09	Jan-11
End Right-of-Way (Right-of-way Certification Milestone)	Dec-09	Dec-11
Begin Construction Phase	Apr-10	Apr-12
End Construction Phase (Construction Contract Acceptance Milestone)	Dec-10	Dec-12
Begin Closeout Phase	Dec-10	Dec-12
End Closeout Phase (Closeout Report Milestone)	Jun-11	Jun-13

C 4: The methods expected to be followed to assure that the project will be completed and will be completed on time.

The Department and the LACMTA will develop an interagency agreement that will detail their respective roles and responsibilities for the project. Both agencies have executed several interagency agreements previously for other highway and transit projects.

Early in the planning and implementation process, the LACMTA, in cooperation with the Department, will establish an organization and management plan.

At a minimum, the organization and management plan will identify:

- Roles and responsibilities;
- A detailed responsibility matrix that clearly identifies each element of work and varying responsibilities associated with that work element;
- An overall program schedule; and,
- A communications and meeting plan

This plan will evolve and will be updated periodically as the project moves toward implementation. See attached draft organization chart in **Appendix C** which outlines the LACTC and Department planned roles and responsibilities.

C 5: The plan for operation of the facility.

The Department will continue to operate the roadway facility; the LACMTA will operate the toll facility. The operation of the toll facility will be contracted out by the LACMTA to a system integrator contractor/operator.

The Department will be responsible for the environmental, design and construction phases of the project, including roadway work and toll equipment design and installation, which may be procured through a contract with a tolling specialist contractor. The LACMTA will provide support activities during this phase.

The LACMTA will be responsible for the operations and maintenance phases of the tolling equipment, which includes the procurement of a system operator.

The system operator will be responsible for the operations of the toll facilities and the collection and enforcement of the toll revenues, maintenance of the tolling equipment, customer service and account management, among other duties. The initial goals will be:

- Determine if 24/7 toll operations meets objectives and is generally supported by resources and the public.
- Use dynamic pricing strategies to maintain free flow speeds.
- Implement an enforcement system that is visible, effective and fair (from the public's perspective) to ensure the integrity of the facility.
- Share information and research with agencies along the corridor to obtain their support and ensure the success of the facility.
- Implement a continuing and comprehensive evaluation of the facility to maintain support, to encourage continued growth, to use in marketing campaigns and to inform the public.

The basic operating elements of the Express Lane network include:

- The Express Lanes would be open to all vehicles, except trucks, with a graduated toll designed to keep the lane moving at a minimum travel speed of 50 miles per hour, which is a Level of Service C.

- The toll rate would be set dynamically over the 24-hour period of the day, varying with the level of traffic congestion.
- The toll rate would be the highest for solo drivers and lower for 2-plus passenger occupancy vehicles (HOV2s).
- Three-plus passenger occupancy vehicles (HOV3s) will pay marginally less than HOV2s on the Interstate 10 Express Lane. HOV3s will be exempted from paying tolls on all other Express lane facilities.
- Buses, vanpools, motorcycles and emergency vehicles would be exempt from tolls.
- Toll revenues would be used to cover the Express Lanes operating costs and improvements along the Express lane corridors. These improvements could include, for example, additional transit facilities and service, subsidies for vanpools, and traffic management improvements.
- The LACMTA and its regional partners would implement several transit and technology-based traffic management projects prior to operating the Express Lanes.
- Prior to actually charging the tolls for the use of Express lane corridors, there will be a test period for Express Lane users before the tolling begins.

It is expected that the conversion of HOV Lanes to Express Lanes along the proposed corridors would result in improved operational performance, mainly due driver behavioral shifts, without negatively impacting the general purpose lanes. These shifts would result in a combined net benefit for highway and transit users for the priced managed lanes to be deemed worthwhile by the public and result in growing acceptance.

This operating plan will be further developed during the design phase of this program.

C 6: The technology that will be used to maximize interoperability with relevant local and statewide transportation technology.

The Los Angeles Region Express Lanes network will use a similar technology as used by the San Diego Association of Governments (SANDAG) for the implementation of its Interstate 15 Managed Lanes corridor. The LACMTA will use dedicated short range communications (DSRC) equipment, including the Title 21 FasTrak transponders and readers that are standard by law in California, to collect tolls electronically on the Los Angeles Region Express Lanes facilities.

Antennas mounted on overhead gantries along the corridors will read the transponders and send the information to a reader for further transmission via the lane controller to the administration office. Additional equipment to be installed along the lanes will include automatic vehicle detection (AVD) to identify the presence of a vehicle and violation enforcement system (VES) to take an image of vehicles that are not authorized to travel on the Express Lanes.

The following is a brief description of the toll technology elements of the proposal.

Dynamic Value Based Pricing/Demand Management - The congestion pricing strategy will apply a per-mile toll that would be dynamically calculated and adjusted as often as necessary (e.g., every 3 minutes) to efficiently manage travel demand and traffic congestion levels.

the LACMTA plans to use the value of travel time savings (VOTT), defined as the difference in travel time between the Express Lanes and the adjacent general purpose lanes for traveling

along the same corridor during the peak-period to reach a particular destination, as an additional criterion for setting the toll rate. This criterion will actually operate as the base calculation for setting the toll rate and will be filtered by an additional layer of information that incorporates the basic volume-to-capacity calculation to ensure compliance with a minimum Level of Service (LOS) of C along the Express Lanes.

The LACMTA will determine the priority of the criteria to be met to guarantee the desired Level of Service (LOS). Traffic parameters, such as vehicle counts, speed, and passenger occupancy will be measured at various locations along the Express Lanes and the adjacent general purpose lanes and used as key inputs into the toll rate algorithm computations. The algorithm is anticipated to operate as often as every three or six minutes, but can be more or less frequent based on a user-specified interval that will depend on the level of traffic. Overtime, the operation of the Express Lanes will allow refining the algorithm that would set the toll rates after the demonstration period is over.

Transit Incentive Programs - As part of future enhancements to LACMTA's operation of the Express Lanes and complementary transit services, several incentive programs that link the use of the Express Lanes to the use of transit services will be proposed. For example, the LACMTA may provide a toll credit to the regular transit pass holder that could be applied to the occasional use of the Express Lanes. Another incentive program that will be implemented on these corridors is for vanpools, where the LACMTA will provide a subsidy of up to $400 a month on new or existing vanpools to lower the leasing cost of a vanpool vehicle and for passenger fares. Vanpoolers would be able to reduce their one-way peak-period commute travel time by an average of 20 minutes by using the Express Lanes. They would also avoid the stress and additional expenses associated with driving alone and will be exempt from paying any tolls.

Violation Enforcement System (VES) - All users of the Express Lanes facilities, including vanpools, will be required to obtain and mount transponders on their vehicles to allow the automated processing of violations (vehicles without a transponder). To support the automated citation process, image capture on the lanes, image processing, and optical character recognition (OCR) systems are required. See **Appendix B** for the diagram of the VES process.

VES would complement the enforcement of violations on the Express Lanes through additional means, such as the assistance of the CHP and the use of associated equipment. The VES is the initial step that enables the processing of violations for not having a transponder. Enforcing drivers' compliance with the requirements for accessing the Express Lanes, such as meeting the vehicle passenger requirement matching the information stored in the transponder, will have to be enforced by other means, such as manual inspections by the CHP.

Enforcement is critical to the successful operation of any HOV/managed lane facility. Visible and effective enforcement promotes fairness and maintains the integrity of the facility to help gain and maintain public acceptance of the project. Continued technology improvements will provide effective video capture and optical character recognition systems for license plate capture. However, these improvements alone will not be sufficient for an effective enforcement system. It will be necessary to implement a reliable and accurate mobile CHP enforcement system that complements the improved video systems. Visible and effective enforcement promotes fairness and maintains the integrity of the facility to help gain and maintain public acceptance of the project. This mobile enforcement cost has been included in the operations cost estimates.

Variable Toll Rate Structure - Under any of the technology and incentive options discussed above, a common element will be the use of a variable toll rate that will be set dynamically

based on the continuous measurement of traffic flow rates and graduated according to the vehicle passenger occupancy. Although among the alternatives is to consider traffic flow along the Express Lanes as the main determinant of the toll rate, other pricing algorithms can also take into consideration the traffic conditions along the general purpose lanes and dynamically adjust the per-mile toll on the Express Lanes.

Regional ITS Integration - The Regional Integration of Intelligent Transportation Systems (RIITS) Network supports information exchange in real time between freeway, traffic, transit and emergency service agencies to improve management of the Los Angeles County transportation system and better serve the traveling public. The goal of the RIITS Network is to coordinate multi-modal operations among regional transportation stakeholders.

The systems that are currently being interfaced through RIITS or will be interfaced in the near future include:

- The Los Angeles Region Express Lane network;
- The Los Angeles SAFE Freeway Service Patrol;
- City of Los Angeles' proposed Changeable Message Signs Program;
- City of Los Angeles proposed Downtown Intelligent Parking Management Program; and
- City of Los Angeles Downtown DASH System Enhancements.

Corridor Management Approach: The Department and the LACMTA are in the process of developing a Corridor Management Plan (CMP) on the Interstate 210, Interstate 405, Interstate 5 and US 101 to ensure a coordinated, multi-modal, congestion management approach.

Caltrans District 7 is committed to prepare CMPs using a multi-disciplinary and multi-function approach, including but not limited to, representatives from district traffic operations, planning, and maintenance. Participation of other functions such as design, program-project management, and environmental is recommended based on the corridor. Regional agencies, congestion management agencies and modal operators will be involved through all stages of plan development. This effort will be coordinated with LACMTA's ITS program.

C 7: How the proposed project is consistent with applicable state and federal statutes and regulations and standards. Document the applicable state and federal standards and provide evidence that the proposed design meets the standards

Besides meeting the state and federal laws outlined in B-2, the project will not reduce the existing roadway design features, such as horizontal clearance and vertical clearance. If due to a terrain restriction, new non-standard design features need to be included in the project, an exception to mandatory design standards will be requested.

The LACMTA and the Department will also seek Federal Highway Administration (FHWA) operational approval to convert the HOV lanes to Express Lanes. Federal review is needed if a significant change in the operation of HOV lanes is contemplated. The change in use of HOV lanes, such as hours of use, generally does not require federal approval. However, the permission of Single Occupant Vehicles (SOVs) to use the Express Lanes may be considered a significant change.

This federal review will determine if other Federal actions or approvals are needed, as well as what those actions are, and when they should happen. This review will assess:

1. The original approvals granted and commitments made that assumed the HOV lanes would remain in place, such as previously-approved non-standard shoulder width;
2. The impacts of the proposed change on operational and safety issues;
3. Environmental impacts of the proposed change and whether compliance with NEPA is required; and
4. Consistency with existing transportation conformity determinations.

The LACMTA's pending USDOT Congestion Pricing Grant Application is the first step in receiving federal approval to convert the HOV lanes to Express Lanes. Further processing will be required through the FHWA.

C 8: Whether the project is outside the purview of federal oversight, or whether it will require some level of federal involvement due to its location on the National Highway System or Federal Interstate System or because federal permits are required.

See response to C-7

C 9: Evidence that the project has received environment clearance. If environmental clearance was not yet received, explain whether the project is likely to receive environmental clearance to meet the timeline set forth in the project proposal.

The project may require a Negative Declaration environmental document. The project will be completed within the existing state-owned right-of-way. This process should take less than one year to achieve the FONSI (Finding of No Significant Impact). The USDOT anticipates that a HOV to HOT Lane or Express Lane conversion may be a categorical exemption project.

C 10: The required state and local permits and the schedule to obtain them.

The various required state and local permits will be detailed in the environmental document. A railroad permit will be needed if the Express Lanes impact the Gold Line rail project right-of-way along the I-210 corridor or impact the Metrolink rail right-of-way along the I-10 corridor. Local permits will be required for placement of utility services for toll facility operation outside of the state-owned right-of-way.

C 11: All negative impacts known for the project. For each negative impact, document whether there is a mitigation plan identified.

The discussion of the various stakeholders, their concerns and the LACMTA's responses are contained in the response to E14.

C 12: If not too early to determine, the method by which the operator proposes to secure all property interests required for the transportation facility.

The LACMTA and the Department do not anticipate any right-of-way takes since the project will be built within the existing state-owned right-of-way.

C 13: Whether there is a process in place to develop a maintenance plan with the Department. Specifically, whether there is a process to clearly define assumptions or responsibilities during the operational phase including law enforcement, toll collection and maintenance.

The maintenance plan will be outlined in detail once the design phase has been completed for the project and the contract documents have been prepared for the operation of the Express Lane system. The plan is to have the system integrator contractor maintain the tolling equipment and the Department to maintain the roadway. The initial roles and responsibilities will be outlined in a Department/LACMTA Interagency Agreement and amended once the operational details have been designed.

At this planning stage, the following roles and responsibilities are anticipated:

- Toll collection, electronic toll collection enforcement and associated electric/communication services, and maintenance of the tolling equipment and the back office will be the contracted system operator's responsibility. The LACMTA would have oversight of that contract.
- Roadway work and maintenance would continue to be the responsibility of the Department.
- The California Highway Patrol (CHP) would perform the highway traffic laws enforcement and visual enforcement that the vehicle in the Express Lanes had a transponder and the appropriate occupancy if claiming an HOV discount.

PART D – FINANCIAL FEASIBILITY

D 1: Provide information relative to the project financial plan and feasibility.

The financial plan is summarized below and detailed in the Appendices. The tolling locations are detailed in **Appendix A** on corridor-level maps. The engineer's estimate of the estimated capital costs, estimated operations and maintenance costs and the estimated revenue generation is detailed in **Appendix B**. The facts sheets which detail the Express Lanes including project schedule, phasing, costs and funding sources, are included in **Appendix E**.

The LACMTA plans to fund the project with 80% from federal funds, including a USDOT Congestion Pricing grant, and 20% from state and local funds.

General Costs Assumptions: The following assumptions were used to develop the cost and revenue estimates:

1. The costs estimates are calculated by corridor utilizing three location components per corridor (see **Appendix A** for corridor map detail):
    a. Existing number of intermediate access/egress points.
    b. Existing number of direct access ramps (e.g. bus only facilities).
    c. Existing number of direct access points at termini.
2. The cost estimates include Express Lanes-related installations plus an allowance for some related roadway work and LACMTA and Department support and administrative costs.
3. The cost estimates assume that the telecommunications backbone currently in place to support ITS equipment will be utilized for Express lane purposes. There is existing fiber optic communications in each of the corridors. Additional fibers connecting corridors to a toll operations center will be required.

    Leased communication from telephone companies is another communications alternative that will be explored.
4. The cost estimates do not take into account any facility requirements for transit, such as transit centers and bus purchases.
5. For purposes of estimating costs and revenues, the following assumptions were used regarding tolls:
    a. Single Occupant Vehicles (SOVs) can use all the facilities all the time with a fee.
    b. Vehicles with two occupants (HOV2s) will pay a fee but lower than the SOVs.
    c. Vehicles with three or more occupants (HOV3s) are exempt from the fee except on Interstate 10, where they will pay a fee due to the heavy congestion on Interstate10, although lower than the HOV2s and SOVs.
    d. Two scenarios have been developed: one assuming that hybrids will be exempt and another scenario assuming hybrids will pay.
    e. Motorcycles, emergency vehicles, and buses and vanpools will be exempt.
    f. Trucks and RVs will not be allowed on the Express Lanes.
6. Adjustments were made to existing data to account for
    a. An infusion of SOV patrons who become eligible to use the facility, and
    b. A departure of some HOV patrons who will not be willing to pay the newly-assessed toll.
7. Further adjustments were made to account for peak-hour capacity constraints in the Express lanes.
8. Travel demand estimates were used to assist in estimating revenue, in locating tolling equipment, and in estimating operating costs for the facility.

Capital Estimated Costs: The capital costs for the Express Lane program are estimated to be $43.3 million for Operating Segment 1 and $74.8 million for Operating Segment 2, for a total estimated cost of $119.1 million. These costs are escalated to midyear of construction at three percent (3.0%) per year.

The following are the key assumptions were made to estimate the costs in the LACMTA engineer's estimate (see **Appendix A** for the corridor maps detailing the tolling locations and **Appendix B** for details):

1. Capital costs reflect an electronic toll system only, without cash transactions or toll collection booths.
2. Since the project is in the planning stage and design work has not been initiated, the unit for capital cost development was by tolling location type.
3. Tolling location types by corridor considered in the analysis were:
    a. Type 1A: for existing intermediate access/egress points, one-lane facility
    b. Type 1B: for existing intermediate access/egress points, two-lane facility
    c. Type 2: for existing direct access ramps
    d. Type 3A: for existing direct access points at termini, one lane facility
    e. Type 3B: for existing direct access points at termini, two-lane facility
4. Assumed equipment was defined for each tolling location.
5. Unit costs were those utilized for San Diego Association of Government's (SANDAG) Interstate15 managed lanes facility and other similar Express Lane projects with a three percent (3%) escalation rate used for the Year of Expenditure (YOE).
6. Lane installation costs were calculated by lane type. The installation cost per lane type was multiplied by the number of locations for that lane type and cost escalation adjustments were made for each operational segment. Lane installation costs were then summed for a total installation cost.
7. A lump sum cost was utilized for lane transition installation cost. This cost was an allocation that recognizes that temporary location of some equipment may be required in the transition period prior to the completion of the full Express lane network, requiring additional installation costs.
8. Year of expenditure (YOE) costs for Operational Segment 1 Express Lanes were escalated to 2010, at an assumed inflation rate per year of three percent (3%)`.
9. For Operational Segment 2 Express Lanes, YOE costs were escalated to 2012, at the same inflation rate per year. The I-10 segment currently under design was assumed to be expedited from its projected completion in 2014 to 2012.
10. A lump sum cost was utilized for additional items including:
    a. Data center cost
        (1) Third party software cost
        (2) Hardware cost
        (3) System integrator software cost
        (4) System implementation cost
    b. Customer service center facility setup cost
11. Engineering and design costs and project management costs were included – see Appendix B for details.

12. Project contingency will be assumed to be 30% of toll system costs.
13. Gantry cost and installation will be assumed for single and dual lane monitoring points.
14. Internal Metro program administration costs will be assumed to be three percent (3%) of toll system costs.

Operations and Maintenance Estimated Costs: As with the capital costs, the Operations and Maintenance Costs are planning level estimates since detailed engineering has not been initiated. The following are the key assumptions:

1. Operations and Maintenance (O&M) costs reflect an electronic toll system only, without cash transactions or toll collection booths.
2. O&M costs have been developed based on relevant industry data and similar facilities, such as SANDAG's I-15 project.
3. O&M cost estimates are assumed to be limited to
    a. Toll operations and maintenance;
    b. Utility and insurance costs; and
    c. California Highway Patrol (CHP) HOT lane enforcement.
4. The following typical broader O&M items are assumed to not be included and the responsibility of others:
    a. General agency administration (Management, finance, accounting, legal counsel, public relations)
    b. General agency operations (Traffic management and, management of operations)
    c. Professional services (Public safety, annual consultant costs)
    d. Roadway, bridge, ITS (non-toll related) and infrastructure routine maintenance
    e. Renewal and replacement of non-toll infrastructure such as pavement, bridges, buildings, guardrail
5. O&M toll operations are assumed to include:
    a. Operations for toll account customer service and violations enforcement
        i. Initial estimates will be based on estimated transaction volumes
        ii. (b) Where information is not available, assumptions will be made for:
            1. % product usage (transponder, video, etc.)
            2. % violations, violation response rates
            3. Processing costs
            4. Cost per transaction and violation type
    b. Routine maintenance of toll roadside and back office equipment
        i. Based on cost per lane of toll equipment
    c. Renewal and replacement of toll roadside and back office equipment
        i. Based on cost per lane of toll equipment

d. Utility and Insurance costs

Revenue Estimates: With the implementation of Operating Segment 1 in 2010, the first year revenues are estimated to be $85.8 million. With the implementation of Operating Segment 2 in 2012, the annual revenues are estimated to be $159.1 million. This assumes tolling of hybrids. Revenues are slightly less if hybrids are exempt from tolls.

The key assumptions used for estimating revenues are listed below. See **Appendix B** for details.

1. Assumed number of transactions were calculated for each corridor based upon:
    a. Current HOV usage of HOV2s and HOV3s based on Caltrans District 7 data.
    b. SOV transactions were assumed to be 25% of demand, unless transit and HOV2s and HOV3s are greater than 75%. In that case, the SOV percentage will be adjusted accordingly.
2. Violation rate was assumed to be 10%.
3. Estimates did not take into account ability to pay or any other demographics-related characteristics.
4. Toll rates were assessed based on observed willingness to pay on other HOT or Express Lane facilities in California.
    a. Revenue was calculated by taking expected annual vehicle-miles traveled (VMT) and multiplying by an expected average toll rate per mile. Since the LACMTA has not established any toll rates, the engineer's estimate looked at the Orange County State Route 91 and other operating express or HOT lanes for reasonableness for purposes of this estimate.
    b. Toll rates may be adjusted, upon a reasonableness test and upon Metro approval, to ensure a net positive revenue stream in order to fund complementary transit services in each applicable corridor, consistent with allowable use of net revenues by state statute.
5. The toll rates will be differentiated among SOVs, HOV2s and HOV3s. The exact rates would based on the following concepts:
    a. SOVs will pay the highest average rate per mile.
    b. HOV2s will pay marginally less than SOVs.
    c. HOV3s will pay marginally less than HOV2s on the I-10 HOT Lane. HOV3s will be exempted from paying tolls on all other HOT lane facilities.
    d. HOV4s and higher (i.e. transit and vanpools, and emergency vehicles), HOV3s on all corridors except I-10 and motorcycles will be exempted from paying tolls
    e. In the analysis, two scenarios were developed: one assuming that hybrids would be exempt and another assuming hybrids would pay.

Net Operating Revenues: **Table 3** details the toll revenues net the operations and maintenance costs and then net the transit services costs over a ten year period. **Table 4** lists the transit services by ridership, marginal cost per hour, total operating costs and subsidy needed. These

transit services are increases to the current transit service along the Express Lanes corridors and are critical to creating the capacity and increasing mode share in the corridors.

Toll revenues shall be available to the LACMTA for expenses related to the operation (including collection and enforcement), maintenance, and administration of the congestion pricing program. Reimbursement for related planning and administrative costs for the operation of the congestion pricing project/program shall not exceed three percent (3%) of the revenues, without prior Board approval.

Remaining revenues shall be invested within the program area for transportation improvements, including, but not limited to, transit operations support and for other eligible operating and capital projects pursuant to an expenditure plan adopted by the LACMTA.

Caltrans District 7 Draft Project Study Report: The Department has prepared a preliminary draft Project Study Report (PSR) for the Los Angeles Region Express Lanes Project, which is included in **Appendix F**. For the draft cost estimate in the PSR, the Department has used the LACMTA's engineer's estimate, but has re-estimated the Caltrans Traffic Control, Administration and Roadway Infrastructure costs. For this application, the LACMTA is using the engineer's estimate, and will work with the Department during the design phase of the project to refine the estimate of the Department's needed project development and roadway costs.

TABLE 3 - Los Angeles Region Express Lanes - Use Of Net Operating Costs

$ in Millions (escalated)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Express Lane System Revenue [1]	$ 86	$ 86	$ 159	$ 160	$ 161	$ 162	$ 163	$ 164	$ 164	$ 165	$ 166
Less: Toll Operations Costs [2]	51	51	82	83	83	84	84	85	85	86	95
Less: Transit Subsidies [3]	17	18	19	20	21	22	23	24	25	27	28
Balance	$ 18	$ 17	$ 58	$ 57	$ 57	$ 56	$ 56	$ 54	$ 54	$ 53	$ 43

Data Sources:
Note 1 - Revenues Estimate - see Appendix B
Note 2 - Toll Operations and Maintenance Estimate - see Appendix B
Note 3 - Transit Costs Worksheet - see Table 3

TABLE 4 - Los Angeles Region Express Lanes – Transit Operating Costs

INCREMENTAL OPERATING COSTS

REGIONAL PARTNER	EXPRESS LANE	NEW EQUIPMENT	KEY VARIABLES	2010	2015	2020
Foothill Transit	I-10	10 Silver Streak 60' Articulated	New Ridership:	1,549,314	1,710,568	1,888,605
			Annual Revenue Service Hours:	33,793	37,310	41,193
			Marginal Cost Per Hour - New Service:	$ 79.46	$ 92.12	$ 106.79
			Annual Operating Costs - New Service:	$ 2,685,155	$ 3,436,817	$ 4,398,893
			Required Subsidy:	$ 1,879,580	$ 2,405,735	$ 3,079,178
Foothill Transit	I-210	15 Hi-Capacity Buses for 690 Line	New Ridership:	64,880	71,633	79,088
			Annual Revenue Service Hours:	1,763	1,946	2,149
			Marginal Cost Per Hour - New Service:	$ 79.46	$ 92.12	$ 106.79
			Annual Operating Costs - New Service:	$ 140,072	$ 179,283	$ 229,470
			Required Subsidy:	$ 105,053	$ 134,461	$ 172,101
Foothill Transit	I-10	5 Hi-Capacity Commuter Buses	New Ridership:	1,032,371	1,139,821	1,258,454
			Annual Revenue Service Hours:	21,462	23,696	26,162
			Marginal Cost Per Hour - New Service:	$ 113.00	$ 131.00	$ 151.86
			Annual Operating Costs - New Service:	$ 2,425,181	$ 3,104,068	$ 3,972,996
			Required Subsidy:	$ 1,818,885	$ 2,328,050	$ 2,979,746
LACMTA	I-10	33 Buses for I-10 El Monte Busway	New Ridership:	3,721,388	4,108,713	4,536,351
			Annual Revenue Service Hours:	87,050	96,110	106,113
			Marginal Cost Per Hour - New Service:	$ 90.18	$ 104.54	$ 121.19
			Annual Operating Costs - New Service:	$ 7,850,000	$ 10,047,468	$ 12,860,079
			Required Subsidy:	$ 5,691,250	$ 7,284,414	$ 9,323,557
LACMTA	I-110	50 Buses for I-110 Transitway	New Ridership:	3,468,000	3,828,952	4,227,473
			Annual Revenue Service Hours:	115,600	127,632	140,916
			Marginal Cost Per Hour - New Service:	$ 80.00	$ 92.74	$ 107.51
			Annual Operating Costs - New Service:	$ 9,248,000	$ 11,836,813	$ 15,150,319
			Required Subsidy:	$ 6,704,800	$ 8,581,690	$ 10,983,981
Gardena Municipal Bus Lines	I-110	3 Gas/Hybrid Buses for Line 1	New Ridership:	300,000	331,224	369,284
			Annual Revenue Service Hours:	8,413	9,289	10,255
			Marginal Cost Per Hour - New Service:	$ 71.32	$ 82.68	$ 95.85
			Annual Operating Costs - New Service:	$ 600,000	$ 767,959	$ 982,936
			Required Subsidy:	$ 450,000	$ 575,970	$ 737,202
Torrance Transit	I-110	6 Rapid Line & Expansion Buses	New Ridership:	69,390	76,620	84,600
			Annual Revenue Service Hours:	2,313	2,554	2,820
			Marginal Cost Per Hour - New Service:	$ 220.00	$ 255.04	$ 295.66
			Annual Operating Costs - New Service:	$ 508,860	$ 651,306	$ 833,628
			Required Subsidy:	$ 375,539	$ 480,664	$ 615,217
Metrolink	I-10 SR 60	15 Rail Cars for San Bernardino and Riverside Lines	New Ridership:	878,151	969,550	1,070,461
			Annual Revenue Service Hours:			
			Marginal Cost Per Hour - New Service:			
			Annual Operating Costs - New Service:	$ 1,305,650	$ 1,513,606	$ 1,754,684
			Required Subsidy:	$0	$0	$0
TOTAL	ALL	ALL NEW EQUIPMENT	New Ridership:	11,083,494	12,237,081	13,514,316
			Annual Revenue Service Hours:	270,393	298,536	329,608
			Annual Operating Costs - New Service:	$ 24,762,918	$ 31,537,321	$ 40,183,005
			Required Subsidy:	$ 17,025,107	$ 21,790,983	$ 27,890,982

NOTE: Assumes 2% annual growth in ridership and annual service hours; 3% annual CPI for operating costs; projected annual required subsidy is based on 2010 annual operating cost/required subsidy ratios.

Data Sources: Metro; 2003 Short Range Transportation Plan - Technical Document, pg. 125 and transit operator data.

Definitions:
New Ridership: Incremental new ridership associated with new equipment
Annual Revenue Service Hours: incremental new service hours associated with new equipment
Marginal Cost Per Hour - New Service: Incremental cost per hour of new equipment
Annual Operating Costs - New Service: Total incremental operating costs of new equipment
Annual Costs Net of Fares - New Service: Incremental operating costs less incremental revenue associated with new equipment and incremental ridership

D 2: Document a financial plan and financial guarantees which will allow for access to the necessary capital to finance the facility.

At this time, no financing is anticipated to be required for the construction of the project.

D 3: Provide evidence of the proposer's ability and commitment to provide sufficient equity in the project as well as the ability to obtain the other necessary financing.

Only public funding will be used for these projects. Private equity is not being considered.

D 4: Explain how shortfalls will be funded if revenues do not meet projections.

If the required federal funding is not secured, then the LACMTA will increase its local match or consider financing against the toll revenues net the operations and maintenance costs.

D 5: Explain how the financial plan demonstrates a reasonable basis for funding project development and operations.

These projects are very cost effective since the existing roadway structure and HOV lanes are already in existence. Therefore, the funding required for the project is within the means of the LACMTA to provide through federal, state and local grants. No financing against the toll revenue is anticipated at this time.

Regarding the operations and maintenance costs, it is shown in **Table 3** that the anticipated toll revenues will exceed the operations and maintenance costs needs. This net revenue can then be provided to fund increased transit operations on these Express Lanes, as shown in **Table 4**. Before these transit subsidies can be considered for payment, the LACMTA will adopt an expenditure plan.

Los Angeles Region's contribution to the Express Lanes costs in this application is a small representation of the region's overall contribution to congestion reduction. The financial plan for the five-year period between Fiscal Year 2005 and Fiscal Year 2009 is over $22 billion. It is anticipated that these funds will be spent for countywide capital and operating activities that would assist in reducing the traffic congestion levels in the region by allocating projected funding as follows: $8.2 billion for bus and rail operations, $4.2 billion for bus and rail capital, and $9.6 billion for highway and road improvements. It is estimated that approximately 83 percent of the estimated $22 billion will be from local and state sources.

D 6: If, applicable, describe the nature and amount of the proposer's financial contribution to the project.

This project does not require a private sector proposer's equity contribution since local and federal funding will be sufficient.

D 7: Describe how the estimated cost of the facility is reasonable in relation to the cost of similar projects through a cost/benefit analysis.

Table 9 in **Appendix D** compares the Los Angeles Region Express Lanes plan with four other express lanes projects in the United States. It can be shown that the Los Angeles system favorably compares to other systems in the country with regards to the factors necessary for the successful implementation of Express Lanes. It is particularly cost effective because the underlying roadway infrastructure and HOV lane designations and striping have or will have already been done in advance of the conversion to express lanes.

The Department has performed an analysis based on its Cal B/C model of the Los Angeles Region Express Lanes projects and has determined that the Express Lanes Project benefit/cost ratio is 7.7 and the rate of return 50%. This analysis is summarized in **Table 5,** below. The detailed summary by corridor is included in **Appendix F**.

Table 5 – Cal B/C Benefit Cost Analysis

			Avg. Annual Benefits (1,000s)			20-Year Investment Analysis		
Project Description	Length (miles)	Project Cost ($1,000s)	Veh-Hours of Delay Saved	Delay Savings	Safety Benefit	Net Present Value ($1,000s)	B/C Ratio	Rate of Return
Summary Highway User Benefits:								
Annual Benefit	--	--	10,910	$53,000	--			
10-Year Total			109,098	$530,000	--			
20-Year Total	94.0	$118,000	218,196	$1,060,000	--	**$848,900**	**7.7**	**50.0%**

D 8: Provide an analysis of the projected rate of return and life cycle cost estimate of the proposed project and/or facility.

The various components of the cost estimate assume their expected life cycle costs. The maintenance and operations costs assume replacement costs at the end of the useful life of the tolling equipment. Those costs would be funded with toll revenues. The rate of return, based on the Caltrans Cal B/C analysis summarized in **Table 5** above and included in **Appendix F,** is 50%.

D 9: Explain how the financial information submitted is sufficient to determine the financial capability to fulfill the obligations described in the project application.

The financial information in **Appendix B** includes all the elements that are required to implement the Los Angeles Region Express Lane projects. This includes the capital costs to the contractor as well as to the Department and LACMTA, the operations and maintenance costs and the estimated toll revenues. The Department has also prepared a draft Project Study Report (see **Appendix G**).

D 10: Identify the proposed ownership arrangements for each phase of the project and indicate assumptions on legal liabilities and responsibilities during each phase of the project.

The LACMTA and the Department have agreed to work cooperatively to deliver the Express Lanes project in a timely and cost effective manner. The Department, as the owner/operator of the highway system, will be responsible for the environmental, design and construction phases of the Express Lanes tolling equipment and any required roadway work. The LACMTA will be responsible for the system operator contract for the operation of the Express Lanes tolling system.

Organization -- The LACMTA will appoint the Project Director and will have, with the assistance of The Department, the overall responsibility for the project. The LACMTA and the Department agree to staff and manage the project in accordance with the Organization Chart contained in this application (see **Figure 3** in **Appendix C**).

Plans and Specifications -- The Department will prepare the preliminary engineering plans, technical and/or performance specifications, base survey information, and other technical documents needed for inclusion in the procurement documents and for the overall implementation of the project. The Department will pre-approve these documents and necessary design exceptions identified as part of the preliminary design process for inclusion in the Invitation for Bids.

Environmental Requirements -- The Department will be responsible for compliance with environmental review processes and the completion of the NEPA/CEQA and related environmental review documents required under Federal and State law.

Procurement Documents and Process -- The Department will be responsible for preparing and issuing all necessary procurement documents, including the Request for Qualifications and the Invitation for Bids, for the design and construction of the project. The Department will also be responsible for carrying out the procurement process for the selection of the contractor for the design and construction phase, including the determination of the pre-qualified bidders, the determination of the lowest responsive bidder, and contract award.

The LACMTA will be responsible for preparing and issuing all necessary procurement documents, including the Request for Qualifications and the Invitation for Bids, for the operation of the Express Lanes project. The LACMTA will also be responsible for carrying out the procurement process for the selection of the system operator, including the determination of the pre-qualified bidders, the determination of the lowest responsive bidder, and contract award. The Department will participate and in the review of procurement documents and processes.

Contract –The Department will be responsible for developing, directing, and managing to the terms and conditions of the design and construction contract, which will include appropriate provisions for insurance, bonding, indemnification, change orders, claims, liquidated damages, incentives, environmental compliance, monthly reporting, invoicing and payment. The Department will be responsible for entering into the contract with the successful bidder.

The LACMTA will be responsible for developing, directing, and managing to the terms and conditions of the system operator contract, which will include appropriate provisions for insurance, bonding, indemnification, change orders, claims, liquidated damages, incentives,

environmental compliance, monthly reporting, invoicing and payment. The Department and the LACMTA will cooperate in the development of the other contract documents. The LACMTA will be responsible for entering into the operations contract with the successful bidder.

Cost Estimate -- The Department will develop and maintain a current ongoing cost estimate of the construction of the project.

Right-of-Way (ROW) – No right-of-way is anticipated to be needed since the project will be built within the state-owned right-of-way. If right-of-way and/or utility relocation become necessary, then The Department will be responsible for identifying ROW acquisition and easement limits. The Department will be responsible for acquiring right of way for the project in accordance with The Department' property acquisition policies and procedures and applicable Federal and State law, with the assistance of the LACMTA. The Department will be responsible for managing the utility relocation process and for carrying out the protection, removal, or relocation of utilities in accordance with applicable Federal and State law.

Third Party Agreements -- The LACMTA will be responsible for entering into and implementing agreements with local jurisdictions and other third parties in accordance with the LACMTA Master Cooperative Agreement process.

Project Administration -- The Department will be responsible for overall contract management and administration for the construction contract and the LACMTA for the system operations contract, including change orders, cost and schedule management, claims, document control, financial management, and payments to the contractor. The LACMTA and the Department agree that they will avoid duplicative reviews.

Review and Oversight Activities - During design and construction, The Department will be responsible for QA Audits and inspection and testing oversight (including verification testing), for surveying services, and for monitoring of environmental compliance. The LACMTA will be responsible for review and oversight of system operations contract, with cooperation from the Department.

Close-Out -- The Department will be responsible for the close-out of the construction contract and the LACMTA for the operations contract, including the resolution of all claims.

Maintenance - Upon project completion and acceptance, The Department will assume responsibility for operations and maintenance of the roadway and the LACMTA will be responsible for the operations and equipment through a contract with the system operator.

D 11: Describe the extent that adequate and transparent procurement policies have been adopted to maximize competitive bidding opportunities for potential contractors and suppliers.

Both the Department and the LACMTA have transparent procurement policies that meet state and federal law and have been approved by the appropriate state and federal agencies. These policies and procedures encourage and maximize competitive bidding opportunities.

PART E – REGIONAL TRANSPORTATION PLAN & COMMUNITY SUPPORT

E 1: Provide documentation to show that the project is consistent with City and County comprehensive plans and regional transportation plans and with plans and documents for the Regional Transportation Agency's long range plan. If the project is not consistent, please identify the steps proposed that will achieve consistency with such plans.

The concept of congestion pricing is supported in the SCAG Regional Transportation Plan, recently released LACMTA 2008 Long Range Transportation Plan (LRTP) and the Caltrans District 7 Business Plan.

For example, the SCAG's Draft 2008 RTP[1] discusses the need to address travel demand through Travel Demand Management (TDM) strategies which are designed to influence an individual's travel behavior by making alternatives to the single-occupant automobile more attractive, especially during peak commute periods, or by enacting regulatory strategies. Some examples of TDM strategies are carpools and vanpools, public transit, non-motorized modes, congestion pricing, and providing the public with reliable and timely traveler information.

The LACMTA 2008 LRTP advocates and supports the implementation of incentives and disincentives to encourage alternatives to driving alone, including congestion pricing/toll lanes or other roadway pricing options.[2] LACMTA's 2001 LRTP included sensitivity tests to examine the effects of pricing and land use on the performance of the region's transportation system, concluding that these strategies combined have tremendous positive impact on transit share, highway speed, mobility, and air quality. These studies and other research conducted at several universities in Southern California have also provided revenue estimates from applying congestion pricing in Los Angeles that have ranged in the billions of dollars annually. However, implementing congestion pricing is not only about revenue, but also about providing value and travel options in the region.

The LACMTA will explore new transportation revenues such as public-private partnerships, congestion pricing and a congestion mitigation fee. The LACMTA Board and Congestion Pricing Ad Hoc Committee will set the direction for determining the feasibility for any strategy to secure funding to increase mobility in Los Angeles County for the next 25 years.[3]
The Department also supports congestion pricing, including express or Express Lanes in its HOV Business Plan.

Once the Los Angeles Region Express Lanes Project has been authorized, it will be amended into the LACMTA LRTP and SCAG RTP and the LACMTA and SCAG Regional Transportation Improvement Program (TIP) and then the California Transportation Commission's State TIP and Federal TIP.

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[1] SCAG Draft 2008 Regional Transportation Plan
[2] LACMTA 2008 Long Range Transportation Plan, Draft, p. 21
[3] LACMTA 2008 Long Range Transportation Plan, Draft, p. 23

E2: Describe how the project proposed includes improvements that are compatible with the present and planned transportation system. Include the methods by which the project provides continuity with existing and planned state and local facilities.

The proposed Express Lanes for Los Angeles Region differ from other Express Lanes projects that have been implemented in the country due to the systemwide approach and size of the system. The Los Angeles Region Express Lanes Project would convert 183 lane-miles of HOV lanes to Express Lanes (representing over one-third of the Los Angeles Region HOV lane network) within a very short time-frame. Thus, the Los Angeles Region proposes an Express Lanes network implementation that will result in more significant mobility benefits in a shorter timeframe.

In addition, the Los Angeles Region Express Lanes Project includes improvements that are compatible with and enhance the effectiveness of the existing and planned elements in the existing transit system in the Los Angeles region. The following is a brief description of some of these services, as well as of proposed transit projects and complimentary services.

Downtown Los Angeles Parking Management Linkage

Linking the Express Lanes system to downtown Los Angeles is the City of Los Angeles' Intelligent Parking Management Program. This program would be implemented in the downtown area of the City of Los Angeles as part of the proposed first phase for converting HOV lanes to Express Lanes. The City of Los Angeles already has approved this project.

The project complements the congestion-pricing component that the Los Angeles Region has proposed by linking the proposed Express Lanes along the three east-west corridors to the proposed north-south Express Lanes corridor along the Harbor Transitway. This project allows for a comprehensive strategy to be implemented to relieve traffic congestion, improve curb access, and better manage traffic demand in the Downtown Los Angeles by applying optimal pricing strategies and operational policies for on-street and off-street parking.

To support the new parking project and policies, new parking technology will be deployed to provide motorists with alternative payment options and real-time parking availability information. This real-time information from nearly 17,000 on-street and off-street parking spaces will aid motorists in understanding their parking options and will guide them to available parking, thus eliminating the need to search for parking, which creates additional traffic congestion.

Existing Public Transit Systems

The public transportation system in the Los Angeles Region provides a dense grid of transit options that includes heavy rail, light rail, commuter rail, local buses, and Bus Rapid Transit (BRT). As a result of its expanded service, transit ridership in the Los Angeles Region is growing at an annual rate of about 6 percent, which is almost double the national average.

The Express Lane system will enhance the reliability and connectivity of the following existing systems:

Fixed Guideway Systems - Over the past 20 years, the Los Angeles Region has had the most ambitious and aggressive program of new fixed guideway construction in the United States. During that period, over $8.6 billion has been spent for building nine new fixed guideway

projects. Over 60 percent of that funding has come from state and local sources, with some projects being entirely funded by these sources, such as the Blue Line (from the downtown of the City of Los Angeles to the City of Long Beach), the Green Line (from the City of Norwalk to the City of Redondo Beach), and the Gold Line (from the downtown of the City of Los Angeles to the City of Pasadena).

LACMTA's subway system expands 17.4 miles from downtown in the City of Los Angeles to North Hollywood and to Wilshire Boulevard and Western Avenue. These rail systems combined cover 62 stations along 73 miles of service and recorded a ridership of over 82 million in the year 2006. The Gold Line is currently being extended 6 miles (8 stations) into East Los Angeles. It is scheduled to begin operations in the year 2009. Also, construction recently started for the Expo Line, an 8.5 mile expansion (10 stations) to LACMTA's light rail network from the CBD of the City of Los Angeles to Culver City on the Westside of Los Angeles County. The construction cost of the Expo Line (about $640 million) is almost entirely funded by non-federal sources and is scheduled to commence operations in 2010.

Bus Service - Complementing light and heavy rail systems is Los Angeles extensive bus service that covers over 18,500 stops and which recorded a ridership of about 400 million passengers in the year 2006. This regional bus service is supplemented by bus service provided by 16 municipal bus operators.

Metro Rapid - The Metro Rapid Program is a high quality bus operation that provides fast, frequent, regional bus service throughout Los Angeles County. Key features of Metro Rapid include frequent service, bus signal priority, headway-based operations, fewer stops, low-floor buses to facilitate boarding and alighting, color-coded buses and stations, and simple route layouts. These attributes make the Metro Rapid a BRT system. The Metro Rapid has reduced passenger travel times significantly, improved service reliability, and reduced delays associated with signalized intersections and dwell times at bus stops. About one-third of the reduction in travel time is attributed to the bus signal priority system.

Metro currently operates 17 Metro Rapid Lines serving approximately 180,000 daily riders. When complete in 2008, the Metro Rapid network will consist of 28 lines with over 400 miles of service throughout the region. Ridership increase along the existing Metro Rapid corridors has varied, but Metro has realized an overall average corridor ridership increase of 20 percent, of which one-third is by patrons who previously used the automobile.

Also planned, is a BRT project along Wilshire Boulevard, which has recently been approved for project development by the Federal Transit Administration. This is a 12.5-mile bus-only lane project between the CBD of the City of Los Angeles and the City of Santa Monica. The project is a stand-alone fixed-guideway project consisting of dedicated peak-period bus-only lanes in both the eastbound and westbound directions.

Metro Orange Line - This BRT system runs parallel to the U.S. 101 and connects to Metro's Red Line in North Hollywood. It consists of an exclusive 13-mile at-grade transitway that includes 13 stations along its path. About 95 percent of the estimated $330 million construction costs were funded by local and state sources. The number of daily boardings along the Orange Line, which started operations in October 2005, is currently over 23,000 passengers. This ridership was projected to be achieved by the year 2020. The innovative features of this BRT system, including its technology applications, have helped achieve this success.

Park and Ride Facilities – The Los Angeles Region has an extensive park and ride system. The Express Lanes system map (**Figure 1**) shows the major park and ride sites along the Express Lanes corridors. Additional park and ride enhancements are planned to complement and support the operation of these corridors.

Increased Transit Service Funded with Express Lanes Net Toll Revenue

The following projects are important for providing complementary services for the operation of the Express Lanes. In particular, these services are needed to generate the additional capacity in both the Express Lanes and the general purpose lanes that would allow the Express Lanes to operate more efficiently.

The toll revenues shall first be available to the LACMTA for expenses related to the operation (including collection and enforcement), maintenance, and administration of the congestion pricing program. Reimbursement for related planning and administrative costs for the operation of the congestion pricing project/program shall not exceed 3 percent of the revenues, without prior Board approval.

Remaining revenues shall be invested within the program area for transportation improvements, including, but not limited to, transit operations support and for other eligible operating and capital projects pursuant to an expenditure plan adopted by the LACMTA.

In advance of the start-up of the operation of the Express Lanes, the LACMTA and its transit partners will increase service along the Harbor Transitway, the El Monte Busway, and the managed lanes along the Interstate 210 and the State Route 60. A significant number of bus lines already traverse these corridors, but additional transit enhancements will allow the Express Lanes and the general purpose lanes to operate more efficiently.

The LACMTA, Metrolink, Foothill Transit, Torrance Transit, and Gardena Transit are collectively providing 122 new buses, 15 new rail cars, and related capital improvements, to enhance bus and rail lines running adjacent to or along routes that run parallel or the vicinity of the proposed Express Lanes corridors. The capital costs will be funded with a combination of federal, state and local funds. The operating costs are planned to be funded with the net toll revenue from the planned Express Lanes (see **Tables 3** and **4**).

Foothill Transit Express Lanes Service - With the implementation of congestion-pricing on the Interstate 10, El Monte Busway, the demand for Silver Streak express bus service is expected to increase by 25 to 30 percent. Therefore, ten additional 60-foot articulated buses will be provided to meet the additional demand. It is also expected that the demand for peak-hour commuter service will increase along the El Monte Busway, requiring five additional high-capacity commuter buses to provide more frequent service. Similarly, the bus service of Line 690 along the Interstate 210 will be restructured to provide high-capacity and high-frequency express service. Fifteen additional buses for Line 690 will be provided to meet the expected increase in transit demand.

In 2010, Foothill Transit will run 57,000 more revenue service hours and generate over 2.6 million new transit riders. Net toll revenues are anticipated to pay for the $3.8 million annual operating subsidy.

LACMTA Express Lanes Service - To enhance its bus transit services, the LACMTA will be purchasing:

- 33 additional buses for the El Monte Busway to support the operations of the proposed Express Lanes along the Interstate 10.
- 50 additional buses for the Harbor Transitway to support the operations of the proposed Express Lanes along the Interstate 110.

In 2010, the LACMTA will run over 202,000 more revenue service hours and generate over 7.1 million new transit riders. Net toll revenues are anticipated to pay for the $12.3 million annual operating subsidy.

Gardena Municipal Bus Lines Express Lanes Service s - To enhance its bus transit services, Gardena Municipal Bus Lines proposes the purchases of 3 gasoline/hybrid buses for Line 1 that operates along the Interstate 110, Harbor Transitway, to support the operations of the proposed Express Lanes along Interstate 110.

In 2010, Gardena Municipal Bus Lines will run over 8,400 revenue service hours and generate over 300,000 new transit riders. Net toll revenues are anticipated to pay for the $450,000 annual operating subsidy.

Torrance Transit Express Lanes Service - To enhance its express bus transit services, Torrance Transit proposes the purchases of 6 expansion buses for expand it Rapid Line service along the Harbor Transitway to support the operations of the proposed Express Lanes along the interstate 110.

In 2010, Torrance Transit will run over 2,300 revenue service hours and generate over 69,380 new transit riders. Net toll revenues are anticipated to pay for the $375,000 annual operating subsidy.

SCRRA Metrolink Express Lanes Service - To enhance rail services, The Southern California Regional Rail Authority (SCRRA) will purchase 15 rail cars for Metrolink service. The cars would be used to increase the capacity of trains on the Metrolink San Bernardino Line that parallels the Interstate 10 and the Riverside Line that parallels the State Route 60. The agency will purchase 11 cars to make each train composed of a 6-car set for the San Bernardino Line and of a 4-car set for the Riverside Line.

In 2010, by adding additional rail cars to its existing trains, Metrolink will generate over 878,000 new commuter rail riders which will bring its ridership along the Interstate 10 Express Lane corridor to 5.5 million riders. This increase in service will generate enough fare revenue to cover the additional operating cost, so no net tolls would be required for this service.

Other Planned Transit Enhancements to the Express Lanes System

Express Lane Connectors

LACMTA, Ramirez Flyover at LA Union Station, Interstate 10 - The Ramirez Flyover at the Union Station project is a two-lane bus only drop ramp linking the transit plaza to the intersection of Ramirez Street and Center Street, parallel to the U.S. 101 and El Monte Busway. It will increase the overall bus flow through the plaza by 100 to 125 percent.

LACMTA, Adams/Figueroa Flyover, Interstate 110 - This is a Project Study Report to analyze the construction of a flyover from the Harbor Transitway over Adams Boulevard, to provide a direct connector from the northbound off-ramp HOV lane directly to Figueroa Street. The objective is to improve traffic flow at the end of the current end of the transitway.

Planned Traffic Management Improvements

Various traffic management techniques are being planned and deployed by the Los Angeles Region, including:

City and County of Los Angeles ATSAC Projects - Improvements and enhancements to the City and County of Los Angeles Automated Traffic Surveillance and Control Systems (ATSAC),

LACMTA Regional Integration of RIITS - The Regional Integration of Intelligent Transportation Systems (RIITS) Network supports information exchange in real time between freeway, traffic, transit and emergency service agencies to improve management of the Los Angeles County transportation system and better serve the traveling public. The goal of the RIITS Network is to coordinate multi-modal operations among regional transportation stakeholders.

The systems that are currently being interfaced through RIITS or will be interfaced in the near future include:

- The Los Angeles Region Express Lane network;
- The Los Angeles SAFE Freeway Service Patrol;
- City of Los Angeles' proposed Changeable Message Signs Program;
- City of Los Angeles proposed Downtown Intelligent Parking Management Program; and
- City of Los Angeles Downtown DASH System Enhancements.

The Department's Interstate 210 Congestion Relief Project System Wide Adaptive Ramp Metering (SWARM) - Interstate 210 is a heavily traveled east-west corridor in Los Angeles County comprised of segments ranging from three to six lanes by direction, with many segments including dedicated HOV lanes and now a proposed Express Lane system. The Interstate 210 Congestion Relief Project, which has been completed, included the expansion of existing traffic management strategies.

SWARM is an advanced metering strategy and works by evaluating real-time traffic situations at selected and dynamic bottlenecks throughout the corridor, in order to predict future congestion and properly set upstream ramp metering rates helping to reduce congestion. This methodology improves the ability to maximize and maintain efficiency of traffic flow throughout the corridor. It represents an innovation over current metering capabilities, by implementing ramp metering on a system wide basis, thus, responding to both recurring and non-recurring traffic congestion.

Interstate 210 Active Traffic Management Project –The Department proposes to investigate the feasibility of implementing Active Traffic Management on the Interstate 210 corridor, and, if feasible, design and implement a Pilot Demonstration Test of the selected ATMS technologies and strategies.

Adaptive Signal Control - This Department project proposes the development and deployment of an adaptive signal control system on 5 corridors targeting approximately 200 intersections to enable arterial management through signal timing optimization based on real-time traffic conditions.

Traveler Information Systems

The following proposed traveler information system adaptations are designed to provide travelers with real-time transit scheduling information to enhance the travelers' experience.

- 511 System Improvements/Enhancements - These items are specifically focused on the provision of additional information to end users (the general public).
- LACMTA Next Trip Bus Information - LACMTA is developing a system that will allow customers to obtain information on when the next bus or train will arrive at a particular bus stop or rail station.
- LADOT AVL/Passenger Information System
- Torrance Transit, AVL/Passenger Information System
- LADOT Changeable Message Signs Program
- LACMTA Real-time Passenger Information - Real-time passenger information displays at each of the 12 Harbor Transitway stations

LACMTA Vanpool Program

LACMTA Vanpool Start-up Program - This program will be designed to assist in the formation of up to 300 vanpools along the proposed Express Lanes corridors. It will provide a viable commute alternative compared to carpooling or driving alone. In addition to receiving the incentive of free access to the Express Lanes, vanpools along those corridors will also be eligible for new start-up assistance. In addition, the program will offer extensive outreach where a dedicated vanpool representative will actively attempt to form vanpools in employment areas and provide a much higher level of support to ensure that vanpools not only are created, but also retained. This representative will also host meetings with groups of businesses located along the target Express Lanes corridors to increase awareness about as a reliable commute option.

Transit Station and Division Upgrades

LACMTA Bus Division Upgrade - The LACMTA proposes to construct a new maintenance and operating division in the downtown of the City of Los Angeles to accommodate the service expansion for the implementation of the Express Lanes corridors.

Other transit station and stop improvements that will enhance the service and connectivity of the Express Lanes system include:

- Metrolink Pomona Station, Interstate 10;
- Foothill Transit Freeway Bus Stop, Interstate 10;
- The LACMTA, Improved Bus Access, Interstate 110;
- The LACMTA, Ticket Vending Machines, Interstate 110;
- Metrolink, Double Track Project, State Route-60 and Interstate 10;
- Gold Line Construction Authority Foothill Extension, Interstate 210;
- LADOT, Transportation System Management (TSM) Improvements;
- The LACMTA, Artesia Transit Center, Interstate 110;
- The LACMTA, Improved signage and security for park and ride lots along the Harbor Transitway;
- Foothill Transit, West Covina Park and Ride; and

- The LACMTA, El Monte Transit Center.

E 3: Explain how the proposed project helps to achieve performance, safety, mobility, and air quality or transportation demand management goals.

Performance

The Express Lanes offer reliability and a travel time savings compared to the existing HOV lanes in those corridors. For example:

- During peak period, HOV lanes on Interstate 10 currently provide a 46% improvement in travel time over general purpose lanes at an average speed of 35 mph. This project will maintain a 50 mph speed on the Express Lanes, a 30% improvement, thereby improving their relative advantage.

- During peak period, HOV lanes on Interstate 110 currently provide a 53% improvement in travel time over general purpose lanes at an average speed of 41 mph. This project will maintain a 50 mph speed on the Express Lanes, an 18% improvement, thereby improving their relative advantage.

- During peak period, HOV lanes on Interstate 210 currently provide a 36% improvement in travel time over general purpose lanes at an average speed of 35 mph. This project will maintain a 50 mph speed on the Express Lanes, a 30% improvement, thereby improving their relative advantage.

- During peak period, HOV lanes on State Route 60 currently provide a 23% improvement in travel time over general purpose lanes at an average speed of 37 mph. This project will maintain a 50 mph speed on the Express Lanes, a 26% improvement, thereby improving their relative advantage.

The HOV statistics are shown on **Table 6** and the travel speed savings of the Express Lanes compared to the HOV Lanes and general purpose lanes are shown on **Table 7**.

Table 6 - HOV Lane Statistics [4]

STATISTICS FOR PEAK HOUR:	Interstate 10 6:30-7:30 am	State Route-60 6:45-7:45 am	Interstate 110 7:00-8:00 am	Interstate 210 7:30-8:30 am	Totals
HOV VEHICLE SUMMARY					
Carpools	1301	1357	3054	1407	7119
Vanpools	35	9	33	6	83
Buses	72	5	30	2	109
Motorcycles	58	18	46	53	175
HOV Lane Violators	49	0	12	6	67
* Total Vehicles in HOV Lane	1515	1389	3175	1474	7553
HOV PEOPLE SUMMARY					
People in Carpools & Vanpools	4204	2908	6528	2919	16559
People in Buses	2530	110	960	20	3620
People on Motorcycles	58	18	46	53	175
Violators	92	0	12	6	110
* Total HOV People	6884	3036	7546	2998	20464
MAINLINE SUMMARY					
Mixed-Flow (MF) Lanes	4	4	4	4	16
Mixed-Flow Vehicles	5775	5365	5770	6140	23050
Mixed-Flow People	6285	5750	6115	6480	24630
Mixed-Flow People/Lane	1571	1438	1529	1620	1539
FREEWAY & OCCUPANCY SUMMARY					
HOV Lane Time Savings	46%	23%	53%	36%	-
# of Ingress/Egress - Eastbound	5	2	3	15	-
# of Ingress/Egress - Westbound	9	3	3	13	-
Percent Fwy People Carried in HOV Lane	52%	35%	55%	32%	-
Percent Fwy People Carried per MF Lane	12%	16%	11%	17%	-
HOV Occupancy	4.54	2.19	2.38	2.02	-
Mainline Occupancy	1.09	1.07	1.06	1.06	-
# Park and Ride Sites/Spaces	5 / 2089	3 / 413	8 / 1693	4 / 1190	20 / 5385
Parallel Rail Service	Commuter Rail	Commuter & Light Rail	Light Rail	Commuter & Light Rail	
Bus Service	Express Bus	Express Bus	Express Bus	Express Bus	

[4] Data excerpted from Caltrans District 7 2007 HOV Annual Report, July 2007. HOV Lane time savings measured for westbound (AM) travel. Interstate 110 Contains 2 HOV lanes each direction for a portion of its length

Table 7 – Los Angeles Region Express Lanes Improvements in Speed

Express Lanes Corridor	Current Speeds, GP Lanes (MPH)	Current Speeds, HOV Lanes (MPH)	Projected Speeds, Express Lanes (MPH)	Difference in Speeds - HOV vs. Express Lanes (MPH)	Percentage Improvement in Speed
Interstate 10	30	35	50	15	30.00%
Interstate 110	35	41	50	9	18.00%
Interstate 210	26	35	50	15	30.00%
State Route 60	32	37	50	13	26.00%

When reviewing current average daily traffic counts on the four corridors that would include the HOV lane conversions and those estimated for the year 2015, it is estimated that vehicle capacity would be available for the operation of the proposed Express Lanes during the 24-hour period. Currently, most of the general purpose lanes along the four corridors are operating at 60 percent to 85 percent of their useful capacity.

Similarly, during an average 24-hour period, the HOV lanes are operating at 25 percent to 35 percent of their available capacity. Regarding the forecast for the year 2015, with the exception of the Express Lanes corridors along the Interstate 210 and State Route 60 that are proposed in Operating Segment 2, the general purpose lanes along the other two corridors would be operating near or exceeding 100 percent of the useful traffic flow capacity. Even when considering a useful capacity of 2,000 vehicles per lane per hour (rather than 1800 vehicles per lane per hour), most of the corridors would still be operating at over 85 percent of their traffic flow capacity.

The analysis also indicates that while the travel demand along the general purpose lanes is expected to increase to a level where the lanes are essentially congested during the average day, the HOV lanes would continue to have space available during the off-peak hours and in the "shoulder" hours, which are just before or after the peak-periods. It is estimated that the travel demand along the HOV lanes of the proposed four corridors would only use about 50 percent of the managed lane's overall traffic carrying capacity during the 24-hour period. Therefore, the remaining 50 percent capacity would be available to travelers willing to pay a toll for a trip that would be faster and more reliable than using the general purpose lanes.

Safety

During the construction as well as the operation and maintenance phases, the contractor will be required to adhere to all applicable safety standards and guidelines for working on and in proximity to energized equipment, active roadways and a maintenance environment, including:

- The LACMTA safety procedures and guidelines;
- Department safety procedures and guidelines;
- Occupational Safety and Health Administration (OSHA);
- National Electrical Manufacturers Association (NEMA); and
- Any other local, State or Federal procedures or guidelines that provides for a safe operation and working environment.

Mobility

The congestion-pricing strategy that is included in the Los Angeles Region Express Lanes Project is a bold and new concept for congestion management and trip reduction. When considering the implementation of congestion-pricing in the Los Angeles Region, it is important to emphasize its large geographic size, complex socio-economic and urban structure, and age of its freeway system. The Los Angeles Region partners propose to create additional roadway capacity from converting HOV lanes (those currently existing, under construction, or to be implemented in the near-term) to Express Lanes. What makes the proposed Express Lanes for Los Angeles Region different from other Express Lanes projects that have been implemented in the country is the systemwide approach that would convert 183 lane-miles of HOV lanes to Express Lanes (representing over one-third of the Los Angeles Region HOV lane network) within a very short time-frame. Thus, the Los Angeles Region proposes an Express Lanes network implementation that will result in more significant mobility benefits in a shorter time period.

Air Quality

The Express Lane projects improve mobility and reduce congestion and therefore should improve air quality by reducing mobile source emissions. This can be attributed to the following.

- First, mobile sources are a large contributor to regional smog. By cutting traffic jams and improving mobility, this Draft 2008 Plan helps to reduce the two pollutants that contribute to ozone (i.e., oxides of nitrogen and reactive organic gases).
- Second, localized air pollution is often caused by traffic jams on freeways and busy streets.

By speeding up freeway and street traffic, emissions of carbon monoxide and particulates are reduced for those communities adjacent to these crowded roadways.

According to the LACMTA's Draft 2008 Long Range Transportation Plan, when compared to current conditions, mobile source emissions are reduced due to a combination of mobility benefits and improved clean air technologies. Further, when compared to the "No Build" scenario in 2030, the LACMTA's Draft 2008 Plan reduces mobile source emissions by another 4.6 percent.[5] The Express Lanes program will further reduce emissions due to its congestion relief and increased vehicle occupancy benefits.

The air quality emissions reductions will be quantified in April 2008 as a result of SCAG's analysis, through its air quality emissions model.

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[5] LACMTA 2008 Long Range Transportation Plan, Draft

See also discussion in B2 regarding compliance with Assembly Bill 32 (Nunez), the California Global Warming Solutions Act of 2006

Transportation Demand Management

Experience shows that as a roadway facility approaches its design traffic flow capacity during the peak-hour of travel, travelers make several behavioral shifts, including: 1) changing routes corridors; 2) changing the time of the day of their travel; 3) changing modes of travel; and, 4) changing trip destinations. These changes can be expected to occur to some degree in the Los Angeles Region, the extent of which will be evaluated as part of the monitoring of the Express Lanes network operations and the refinement of travel demand forecasts.

E 4: Explain whether the proposed project is consistent with applicable state and federal environmental statutes and regulations, the air quality component of the RTP, and whether the proposal adequately addresses or improves air quality conformity.

See response to E-3, Air Quality section.

E 5: Identify any emission reductions provided by the proposed project.

Emissions reductions will be quantified in April 2008 as a result of SCAG's analysis, through its air quality emissions model, of the Los Angeles Region Express Lanes Project.

E 6: Explain how the project improves connections among the transportation modes.

A principal goal in building a regional Express Lanes network is to connect and extend the existing HOV system. Connecting the system and increasing transit service has two benefits from perspectives of both travelers and system owner/operators:

1. A connected network provides better service to Express Lane users, including express buses and carpools, by reducing the need to travel in the general purpose lanes. This increases travel time reliability; and

2. From the perspective of the system owner or operator, connecting the network eliminates merges where Express Lanes end and therefore reduces the chance of merge-related bottlenecks and accidents.

It is expected that the conversion of HOV lanes to Express Lanes along the proposed corridors would result in improved operational performance, mainly due to driver behavioral shifts. These shifts will result in a combined net benefit for highway and transit users that will demonstrate to the public the effectiveness of the Express Lanes in improving the operating performance of the corridor. The perceived benefits should result in growing public acceptance of this strategy.

E 7: Identify the project benefits to the affected community transportation system and provide an explanation whether this project enhances adjacent transportation facilities.

See Section E -2

E 8: Explain whether the proposed project will enhance the state's economic development efforts.

Construction of the Los Angeles Region Express Lanes Project will bring substantial economic benefits to Los Angeles County and the state. The reduction in congestion-related costs that the system will facilitate will make the region more competitive relative to the rest of the country and the world.

An investment in public transportation provides a broad and sustainable economic stimulus to local communities, metropolitan regions, states and the nation. This investment:

- Boosts business revenues and profits;
- Creates jobs and expands the labor pool;
- Stimulates development and redevelopment;
- Expands local and state tax revenues and reduces expenditures required for other essential public services; and
- Reduces household and business costs and enhances worker and business productivity.

Several statistics measure the economic impact of transit. For example:

1. Business Sales: Every $10 million capital investment in public transportation can return up to $30 million in business sales alone.[6]
2. Jobs Creation: The U.S. Department of Transportation estimated that every $1 billion of funding invested in transportation infrastructure creates 47,000 jobs.[7]

The LACMTA's investment in the Express Lanes Project could be calculated, in part, by comparing the Express Lanes costs to the economic indicators listed above. **Table 8** below demonstrates how these benefits could be calculated.

Table 8: Economic Benefits of the Los Angeles Region Express Lanes Project

Express Lanes Cost	Business Sales	Jobs Creation
$119.0 million	$357 million	5,593 jobs

[6] Cambridge Systematics, Inc. with Glen Weisbrod Associates, Inc., "Public Transportation and the Nation's Economy: A Quantitative Analysis of Public Transportation's Economic Impact," Washington, DC, October 1999

[7] "Introduction to JOBMOD, Washington: Federal Highway Administration, 2002.

LACMTA Economic Model - In addition to the metrics shown above, the LACMTA will run its REMI economic model[8] when it runs its next travel demand model scenario with the Express Lanes Project congestion pricing options. This model will show the dollar values of the following types of regional benefits in the year 2030:

- The creation of an additional jobs;
- An increase of Gross Regional Product;
- An increase of real, disposable personal income; and
- A boost in regional exports.

The LACMTA will transmit this additional economic information when it becomes available in April 2008.

Governor's Strategic Growth Plan - The Express Lanes system is consistent with the Governor's Strategic Growth Plan (SGP), which emphasizes transportation investment designed to decrease congestion, improve travel times, and increase safety, while accommodating future growth in the population and the economy. The SGP supports the deployment of demand-management strategies, such as dedicated truck lanes and high occupancy toll lanes, and the building of new capacity and the increasing of public transportation ridership. This requires innovation in transportation planning, construction and management, sustained coordination between regional transportation agencies and the state, and dedicated funding.

The Express Lanes program does just that – an innovative program that reflects the coordination between the region and the state for a program that will relieve congestion, employ demand management techniques through congestion pricing, generate revenue, improve the Los Angeles region's economy and increase transit ridership.

In Governor Schwarzenegger's 2008 State of the State address, he proposed a set of new policies to leverage partnerships with the private sector and increase synergy between public agencies. He is empowering California to build, operate and maintain infrastructure better, faster and for less. The Governor called on California to pass legislation that will permit the broad use of Performance Based Infrastructure (PBI)—also referred to as public-private partnerships. Fixing traffic congestion is one of the Governor's priorities.

Although not an equity-type public/private partnership, the Express Lanes program takes advantage of the public sector's planning, public outreach and roadway expertise with the private sector's ability to operate and maintain a new tolling system for the Express Lanes program.

As highlighted in the SCAG Draft 2008 Regional Transportation Plan, the employment growth rate in the region will slow down after 2010. One of the benefits of the Express Lane program is

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[8] Regional Economic Models, Inc., based in Amherst, Mass., is a model used by the LACMTA that reveals the economic and demographic effects that policy initiatives may cause on a local economy.

to facilitate commuting to jobs within the entire region by speeding up travel times during the extended commuter hours. This will also help the state's continued economic growth.

E 9: Explain if the project is critical to attracting or maintaining competitive industries and businesses to the region, consistent with state objectives.

The Los Angeles Region is the home of major transportation investments that are of regional and national significance, including the Port of Los Angeles, the Port of Long Beach, and the Los Angeles LAX International Airport. Los Angeles County's economy is ranked 16th worldwide, and its two ports combined rank fifth worldwide in the volume of cargo that is handled. Los Angeles County is the most populous county in the country and comprises about 85 percent of the Los Angeles-Long Beach-Santa Ana urbanized area. Despite its large urban sprawl development, the Los Angeles urban area has the second highest population density in the country, estimated at 7,068 persons per square mile. To maintain and/or improve the region's attractiveness to competitive industries and businesses, improvement to flow of people and goods is critical.

E 10: Explain whether the regional agency governing body has taken action to approve this proposal and whether local impacts have been addressed. Provide the Board or other resolution to document the action taken.

An indication of the readiness of local political leaders to solve the traffic congestion problem is a motion by the City of Los Angeles in February 2007 directing the city's Department of Transportation (LADOT) to coordinate with the Department and the LACMTA regarding the feasibility of implementing Express Lanes on new and/or existing carpool lanes of freeways or on arterial roads in the Los Angeles Region. More recently, the City of Los Angeles approved in December 2007 to partner with the LACMTA to submit to the USDOT the Los Angeles Region Congestion-Reduction Demonstration Initiative funding application. Among other projects, this application includes the City of Los Angeles Intelligent Parking Management Program that would use variable parking rates to manage traffic congestion in the city's CBD.

The LACMTA Board of Directors has also acted quickly in 2007 to support innovative congestion-reduction initiatives. In June 2007, the LACMTA Board of Directors approved a motion to develop a congestion-pricing operating plan for implementing congestion-pricing in Los Angeles County by the year 2010. In September 2007, the LACMTA Board approved the formation of an Ad-Hoc Congestion Pricing Committee, which is comprised of members from the LACMTA's Board of Directors and the Director of Caltrans- District 7, to provide policy guidance and recommendations to the LACMTA Board of Directors for implementing congestion-pricing. In November 2007, the LACMTA's Board of Directors approved the submittal of the Los Angeles Region Congestion-Reduction Demonstration Initiative proposal to the USDOT.

In December 2007, LACMTA submitted on behalf of itself and its state and local transportation partners, the Los Angeles Region Congestion-Reduction Demonstration Initiative proposal to USDOT. The proposal's primary emphasis focuses on the conversion of HOV lanes to Express Lanes.

In February 2008, LACMTA staff updated its Board on the congestion pricing grant and the next steps for implementing the Express Lanes, including the submittal of the state Assembly Bill 1467 application for Express Lane designation.

E 11: Explain whether this project will bring a significant transportation and economic benefit to the community, the region, and/or the state.

The Los Angeles Region Express Lanes Project will convert existing HOV lanes, as well as HOV lanes that are currently either under construction or in design and which will be completed in the near-term, to Express Lanes. This application is only one of the strategies proposed in the Los Angeles Region and is expected to be an effective strategy, within a larger framework of strategies, to manage traffic congestion, mitigate air quality and other environmental impacts, and generate new revenues to fund local transportation investments. Within the larger framework of strategies, the Los Angeles Region partners propose enhanced transit service and technology improvements.

In this regard, demand management strategies that encourage the travel by modes other than relying on the use of private vehicles and solo driving during peak-periods, such as enhanced transit service and parking pricing, will also be implemented in conjunction with the Express Lanes. Overall, the combination of these strategies allows for an integrated approach that has resulted in the successful implementation of congestion-pricing in San Diego, Orange County, Minneapolis, London, Stockholm, Singapore and other cities around the world by providing more transportation choices to urban travelers in a way that reduces traffic congestion and improves the quality of life while maintaining a vibrant economy.

E 12: Describe any ancillary benefits to the communities because of the project.

In Los Angeles County, transit riders traveling on buses along the proposed Express Lanes will benefit significantly from toll-financed transit improvements and potentially from credits that could be accumulated from the regular use of transit and later be redeemed for the use of the Express Lanes when they stand to benefit the most.

For example, the Los Angeles Region Congestion- Reduction Demonstration Initiative that was submitted to the USDOT includes funding for the purchase of 15 commuter rail cars and for 122 buses to provide express service along the priced corridors, encourages the formation of vanpools and provides a monthly subsidy of $400 per vanpool vehicle, provides credits for regular bus users to redeem for the use of the Express Lanes, and makes several improvements to park and ride facilities and transit stations located along the Express Lanes. Although no decision has been made on the toll amount, LACMTA expects to use the net revenues from tolls to pay for the transit operating expenses along the Express Lanes corridors. Commuters from all income groups will benefit from these improvements, particularly low-income commuters because they are more likely to be transit users and vanpoolers.

In addition, the parking management project, which is a component of the initiative, is expected to better manage traffic demand in Downtown Los Angeles, which is the major destination for most of the traffic traveling along the corridors that include the HOV lanes proposed for conversion to Express Lanes. Traffic flow is expected to be better regulated, as well as the improved use of both streets and parking facilities, with drivers encouraged to shift discretionary trips from peak-periods to off-peak periods of travel. Also, with transit service improvements and

vanpool incentives, eventually more people will be able to enter Downtown Los Angeles during the day. Other alternatives and/or complementary strategies include eliminating parking subsidies provided by employers to their employees and encouraging parking cash-out programs, among other options.

E 13: Explain the extent of support or opposition for the project. Explain the national and regional transportation issues and needs, as well as the impacts this project may have on those needs.

See response to E14 and copies of letters of support in **Appendix G**.

There is no known opposition to the Express Lanes plan. There are many questions and concerns which are being addresses by the LACMTA and its Ad Hoc Congestion Pricing Committee and through its public and community outreach efforts.

At the LACMTA's last Ad Hoc Congestion Pricing Committee meeting, Board members raised a number of questions regarding the LACMTA's Express Lanes proposal. Most of these questions were discussed in the LACMTA's response to congressional representatives highlighted in E-14, below. Board members raised two additional questions related to the USDOT application. The first question refers to the intended use of revenues to be generated from implementing the Express Lanes, and the second refers to where else High Occupancy Vehicle (HOV) lanes have been converted to HOT lanes or Express Lanes. In response to the first question on the intended use of revenues, the LACMTA explained:

- Toll revenues would be used to cover Express Lanes operation and maintenance expenses first and then for transit and technology improvements along the Express Lanes corridors.

- Toll revenues would be used for improvements along that same corridor. These improvements could include, for example, additional transit facilities and service, subsidies for vanpools, and funding for advanced traffic signal timing and arterial capacity improvements.

With respect to the second question on where else HOV-to-HOT lane or Express Lanes conversions have been implemented, the LACMTA shared that similar projects already have been implemented in California and other parts of the country. Similar projects have been implemented and are currently operating along freeway segments in San Diego, California (Interstate 15), Denver, Colorado (Interstate 25), Minneapolis, Minnesota (Interstate 394), and Houston, Texas (Interstate 10 and US 290, respectively). The LACMTA also explained that the Puget Sound Regional Council of Washington State is expected to operate a pilot project that includes conversion of existing HOV lanes to HOT lanes along a segment of State Route 167 from 2008 to 2012. Furthermore, the Florida Department of Transportation received about $63 million from the USDOT's Urban Partnership Agreement Program to implement a HOT lane project that includes the conversion of an existing HOV lane along Interstate 95 in Miami- Dade County.

All of these projects have different characteristics, including the operation as reversible lanes (in San Diego and Colorado), the toll structure, and minimum passenger requirements. Other regions in California and the rest of the country are currently studying the feasibility of

converting some of their HOV lanes to HOT lanes or Express Lanes or expanding their existing HOT lanes or Express Lanes, such as Alameda County and San Diego County, respectively.

E 14: Describe any plans intended to work with the community. List the affected local jurisdictions and provide clear written statements of the extent of support for the project from all affected local jurisdictions, if available. Describe any environmental justice issues or concerns.

An extensive public outreach program with stakeholder outreach, a multi-agency taskforce, and public meetings are necessary for the success and acceptance of the Los Angeles Region Express Lanes Project.

Express Lanes will not just be implemented as a revenue generator for added capacity. They will be communicated to the public and implemented as a congestion management tool first and a source of revenue second. The LACMTA will develop a public outreach plan that includes the following principles:

- The Express Lanes program must provide viable and recognized travel options for the public.
- For project acceptance, strong stakeholder and public outreach programs are a necessity.
- The development of a revenue plan that includes a transit component.
- In order for the public to accept the concept of dynamic pricing, early and frequent (on-going) public awareness initiatives that include public outreach, active marketing and surveys will be done.

Described below is the LACMTA's organizational structure to communicate and help implement the Express Lanes program, its public partners and issues and responses recently raised by elected official and community members.

LACMTA Organizational Structure for Community and Local Agency Outreach

The LACMTA organizational structure includes the following:

Ad-Hoc Congestion Pricing Committee (ACPC) – The LACMTA Board has established the Ad Hoc Congestion Pricing Committee to develop for implementing congestion pricing which includes the collection of tolls to reduce congestion in the urban core while raising revenue. This group is comprised of members from the LACMTA's Board of Directors, including the Caltrans Director for District 7, to provide policy guidance and recommendations to the LACMTA Board of Directors.

Transportation Agency Advisory Group (TAAG) – comprised of representatives from federal, state, regional and local transportation agencies to guide the progress for developing the Express Lanes, including the LACMTA, the Southern California Association of Governments, Los Angeles County Department of Public Works, Los Angeles City Department of

Transportation, the regions five Council of Governments, the Port of Los Angeles and the Port of Long Beach, the Federal Highway Administration and the Federal Transit Administration.

Community Advisory Groups (CAGs) – comprised of representatives from the TAAG and other interest groups, such as businesses, road users, environmental agencies, social services, industry, academia, and public policy institutes, who will be grouped according to particular community interest and expertise to provide input during the development of the Express Lanes.

Congestion Pricing Program Manager (PM) – The PM will be selected from the LACMTA staff to manage the day-to-day activities related to the development of the Express Lanes, provide guidance and input to the contractor, and review progress to ensure compliance with scope of work, budget, and schedules. Also, to coordinate work between the contractor and the LACMTA's Communications Department, to update the ACPC, TAAG, and CAGs of work progress and serve as the liaison among them, and to seek advice on issues needing further guidance.

LACMTA Web Site on Congestion Reduction Choices – The LACMTA had also set up a web site dedicated to providing information on its congestion reduction and congestion pricing programs.[9] A phone line ((213) 922-4200) and an e-mail address (congestionreduction@metro.net) have also been established.

Public Agency Partners

The following agencies are partners for this plan:

Los Angeles County Metropolitan Transportation Authority (LACMTA) - The LACMTA is the lead agency for this Express Lanes proposal. As the Regional Transportation Planning Agency (RTPA) for Los Angeles County, it is responsible for preparing the Long Range Transportation Plan. In addition, it is also designated by law as the Congestion Management Agency for the Los Angeles County.

California Department of Transportation (Caltrans - District 7) - District 7, which includes Los Angeles and Ventura counties, is the second largest geographically among California's 12 districts. Caltrans - District 7 is responsible for the operation and maintenance of the largest urban freeway system in the country.

City of Los Angeles Department of Transportation (LADOT) - The LADOT delivers an array of transportation-related services to reduce traffic congestion and facilitate the flow of traffic along city streets, increase the safety of motorists, pedestrians, and bicyclists, calm traffic within residential neighborhoods, and mitigate the impact of traffic associated with new commercial and residential developments. The City will be implementing its Intelligent Parking Management Program, which will integrate with the Express Lanes network.

Los Angeles County Department of Public Works (LACDPW) - The LACDPW serves over one million residents in the unincorporated areas of Los Angeles County, as well as contract cities. Among its responsibilities is to recommend solutions to improve mobility in the congested local highways and streets of those areas.

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[9] http://www.metro.net/projects_programs/congestion_reduction/congestion_reduction.htm

Southern California Association of Governments (SCAG) - SCAG is the designated Metropolitan Planning Organization (MPO) for six counties in Southern California: Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial.

San Gabriel Valley Council of Governments (SGVCOG) - The SGVCOG serves the San Gabriel Valley and its estimated population of about 1.8 million residents that live in 31 incorporated cities and unincorporated communities.

South Bay Cities Council of Governments (SBCCOG) - The SBCCOG serves fifteen cities, comprising over 1.4 million people, in addition to portions of the City of Los Angeles and unincorporated portions of Los Angeles County.

Southern California Regional Rail Authority (Metrolink) - Metrolink is a regional rail transit system formed in 1992 by five county transportation agencies: The Los Angeles County Metropolitan Transportation Authority (LACMTA), the Orange County Transportation Authority, the Riverside County Transportation Commission, the San Bernardino Association of Governments, and the Ventura County Transportation Commission.

Foothill Transit - Foothill Transit, a joint powers authority of 21-member cities in the San Gabriel and Pomona Valleys, was created in 1988 to provide better bus service to the community while reducing costs and improving local control.

Gardena Municipal Bus Lines- The Gardena Municipal Bus Lines, an enterprise agency of the City of Gardena, provides Gardena residents with primary fixed route schedules and demand response vehicles which provide much needed mobility to many elderly and handicapped people in the area who otherwise would be unable to carry out the routines of their daily lives.

Torrance Transit - Torrance Transit has operated weekday service on eight fixed-routes continuously since 1940, including the City of Torrance, regional connections to Los Angeles Long Beach and Los Angeles International Airport. Service is also provided to Gardena, Redondo Beach, Lomita, Carson and numerous other communities within the South Bay region of Los Angeles County.

California Partners for Advanced Transit and Highways (PATH) - Administered through the University of California, Berkeley, PATH is also a partner in this proposal to conduct Active Traffic Management research and applications along the Interstate 210 in the San Gabriel Valley sub-region. Recent projects conducted by PATH include: i) Smart Parking Management Pilot Project Planning; ii) New Approach to Bottleneck Capacity Analysis; and, iii) Measure and Field Test the Effectiveness of Adaptive Traffic Control for Arterial Signal Management.

Public Outreach

The following is a summary of the issues and responses to the LACMTA's elected officials, communities and the public.

Congressional Briefing

On January 9, 2008 the LACMTA held a briefing for United States Congressional Representatives Xavier Becerra, Lucile Roybal-Allard, and Hilda Solis. The Representatives each raised some concerns about the USDOT application and wanted to know what impacts could be expected on low-income commuters. The LACMTA responded to their concerns in a

letter, with input from the Department. The LACMTA also provided their staff with copies of its USDOT application, an Executive Summary of the USDOT application, and other relevant information regarding the congestion-reduction initiative. Most recently, the LACMTA contacted legislative aides to provide question and answer documents (in English and Spanish) on the congestion reduction proposal.

Technical Advisory Committee & COGs

Also in January, the LACMTA made presentations to its Technical Advisory Committee, the San Gabriel Valley Council of Governments, and the South Bay Cities Council of Governments. These presentations focused on the contents of the Congestion-Reduction Demonstration Initiative proposal that was submitted to the USDOT and also provided an update on the status of the Los Angeles County Congestion Pricing Operating Plan. The LACMTA emphasized the need for public outreach and welcomed any input from the region's transportation agencies and other stakeholders.

Public Outreach Live Chat

In January 2008, the Board Chair's Live Chat provided an opportunity to hear more from the public about congestion reduction pricing efforts. The Board Chair shared with those listening that the LACMTA has a website link where information may be found about the congestion pricing efforts, as well as other strategies that the LACMTA is pursuing to manage traffic congestion in the region.

LACMTA Congestion Pricing Communications Task Force

The LACMTA also held meetings with the Congestion Pricing Communications Task Force that includes representatives from the Department and the Southern California Associations of Governments (SCAG). The Task Force is ensuring that there is a consistent message given in developing the congestion-reduction initiative and the Congestion Pricing Operating Plan. To further fulfill the Board's request to initiate public outreach and engage community groups, this Task Force now plans to coordinate and schedule a general stakeholders meeting during March of 2008. The LACMTA anticipates having the meeting serve as another venue where it can discuss and share information on the region's congestion-reduction efforts with representatives from sub-regional Councils of Governments, cities, and other transportation and public agencies, as well as representatives from various community groups within the region.

Through the Congestion Pricing Communications Task Force, the LACMTA also initiated discussions on conducting a Congestion Reduction Choices Workshop with the USDOT that would focus on congestion pricing. The USDOT has encouraged the LACMTA to work with them in conducting such a workshop in Los Angeles. The LACMTA has begun developing an agenda and is working with a tentative April 2008 date.

Congestion Pricing Concept

Of concern to the public is how the congestion pricing Express Lanes concept would work. The LACMTA explained that the main objective of any congestion pricing strategy is to improve mobility in a transportation system. Congestion pricing also plays an important role in improving air quality and reducing greenhouse gas emissions. While a pricing system will indeed generate revenues for local transportation investments, establishing a new source of revenue is not the fundamental purpose of congestion pricing. It is a byproduct of pricing.

Revenues generated by the pricing system will be used to pay for the operations, maintenance, and enforcement of the toll system as well as providing subsidies for various transit programs along those corridors to encourage modal shift. These include paying for transit operating

expenses to provide expanded, more reliable services, and additional choices for commuters of all income groups.

The tolls along the corridors will be set dynamically according to the traffic congestion levels to guarantee a minimum travel speed of 50 miles per hour along the Express Lanes, which is consistent with a Level of Service C.

For now, the LACMTA has not determined the fee that motorists would pay, as this aspect will be analyzed as part of the detailed implementation plan. Estimates of toll rates have been included in this application in order to calculate estimated toll revenue (see **Attachment B**).

The LACMTA explained that it does expect that the tolls would vary by the travel distance of the vehicle on the priced lanes and the time of the day, with higher fees during peak periods. The LACMTA also explained that any toll rate increases in the future will depend on the level of traffic demand along the Express Lanes to avoid congested travel conditions. Alternatively, toll rates could decrease if the travel demand along the Express Lanes is below desired levels that maximize vehicle throughput. Currently, fees for accessing the express lanes in Orange County range from $1.20 to $10.00. Similarly, fees for accessing the Managed Lanes reversible lanes in San Diego County range from $0.50 to $8.00. The congestion pricing applications in Orange County, San Diego County, and other parts of the country indicate that the main purpose of Express Lanes is to manage traffic congestion rather than to generate a new revenue stream.

Community and Public Outreach

Community outreach is a critical element for initiating an education program in the region that will allow for informed public participation and input. As part of the public outreach program, the LACMTA will form advisory groups to engage representatives of local cities, local governments, private and public agencies, as well as the community. Initially, surveys will be conducted and the data analyzed to assess the public perception on key issues related to congestion-reduction, including pricing.

Regarding questions with regard to outreach along the Interstate 110 corridor, with a December 31, 2007, application submittal deadline that the USDOT established, the LACMTA only was able to contact a few agencies and organizations along Interstate 110 and the other proposed corridors. In particular for Interstate 1-110, the LACMTA contacted the South Bay Cities Council of Governments (SBCCOG) and the City of Los Angeles about the USDOT funding opportunity and its intent to include the HOV lane conversions along the Harbor Transitway to Express Lanes as proposed in its USDOT application. Both the SBCCOG and the City of Los Angeles responded to the LACMTA's notification by submitting a list of projects for inclusion in the Los Angeles Region Congestion-Reduction Demonstration Initiative application. More recently, the LACMTA provided an update to the SBCCOG Board of Directors at its January 2008 meeting on the ongoing congestion-reduction pricing initiatives in the region. The presentation emphasized the need to engage the SBCCOG and its member cities, as well the City of Los Angeles and other of the region's transportation agencies and community groups, in developing a public outreach campaign that will address the concerns of those likely to be impacted by the proposed congestion-reduction projects.

The LACMTA does plan to do more extensive outreach that will include presentations and explanations of the congestion-pricing related initiatives that are currently being considered in the Los Angeles Region. Its planned outreach efforts will engage local communities in more direct discussions about these initiatives. The LACMTA plans to hold a stakeholder meeting that will solicit input regarding congestion-pricing public outreach efforts for the region.

Also, in March 2008, the LACMTA anticipates its Board of Directors authorizing the award of a contract for developing a Congestion Pricing Operating Plan for Los Angeles County. Once awarded, this 12-month consultant contract will include a task for conducting a public outreach program that will obtain input from communities, local officials, and political leaders. Working with the consultant, the LACMTA will organize localized community outreach efforts during Summer 2008.

Environmental Justice Issues

A balanced transportation plan must provide equivalent transportation benefits to all parts of the Los Angeles region's population, including the transit dependent and minority groups.

Congestion pricing benefits all because it provides more options to commuters from all walks of life. Each commuter may select which mode makes the most sense to her or him in terms of cost and travel time. At certain times of day, the least expensive travel options—ride sharing and transit—may also be the fastest.

Revenues generated from tolls not needed for the operations and maintenance of the lanes would be used to fund improvements to mass transit, which many low income families depend on. Additionally, buses and vanpools would be exempt from any Express Lanes charges. This means that anyone commuting by these modes—whatever his or her income—would travel without paying the toll.

According to the Federal Highway Administration (FHWA), survey results from currently operating projects in California and other parts of the country show that drivers of all income levels use priced lanes. Although many low-income users do not choose to use the tolled facility every day, they support having the option. Survey responses for San Diego's Express Lanes indicate that lower income users show a high level of support. Similarly, an evaluation of the State Route 91 Express Lanes, which surveyed express lane users as well as drivers who choose the parallel free lanes, shows that lower income drivers utilize the priced facilities and are as likely to approve the facilities as drivers with higher incomes.

Survey results from projects currently operating in California and other parts of the country show that drivers of all income levels use priced lanes. Although many low income users do not choose to use the tolled facility every day, they support having the option. For example, responses for a survey for San Diego's Managed Lanes that was conducted in the year 2001 indicate that lower income users show a high level of support. Similarly, an evaluation of the State Route 91 Express Lanes, which surveyed express lane users as well as drivers who choose the parallel free lanes, shows that lower income drivers utilize the priced facilities and are as likely to approve the facilities as drivers with higher incomes.

In 1997, the Southern California Association of Governments (SCAG) conducted a study (Reduce Emissions and Congestion on Highways -REACH) that considered regional market-based transportation pricing in five of the member counties in its region. This study concluded that all income quintiles, including low income groups, would experience a net increase in benefits under pricing.

In Los Angeles County, low-income transit riders traveling on buses along the proposed Express Lanes would benefit significantly from toll-financed transit improvements and potentially from credits that could be accumulated from the regular use of transit and later be redeemed for the use of the priced lanes when they stand to benefit the most.

For example, the Los Angeles Region Congestion- Reduction Demonstration Initiative that was submitted to the USDOT includes funding for the purchase of 15 commuter rail cars and for 122 buses to provide express service along the priced corridors, encourages the formation of vanpools and provides a monthly subsidy of $400 per vanpool vehicle, provides credits for regular bus users to redeem for the use of the Express Lanes, and makes several improvements to park and ride facilities and transit stations located along the Express Lanes.

Although no decision has been made on the toll amount, the LACMTA expects to use the net revenues from tolls to pay for the transit operating expenses along the Express Lanes corridors. Commuters from all income groups will benefit from these improvements, particularly low-income commuters because they are more likely to be transit users and vanpoolers.

Congestion Pricing Operating Plan

The Congestion Pricing Operating Plan that the LACMTA will be developing in the next 12 months, with support from consultants with expertise in the field, will conduct extensive analyses and public outreach to identify and mitigate impacts that could result from the implementation of congestion pricing projects in Los Angeles County. In addition, the one-year, HOV-to-Express Lanes conversion demonstration project that was included in the LACMTA's USDOT application will allow it to better assess the use of the roadway facilities by all income groups, as well as impacts.

Cities Traffic Signal Synchronization and Arterial Streets Impacts

Traffic signal synchronization is an important component of our Los Angeles Region Congestion-Reduction Demonstration Initiative as submitted to the USDOT, and the LACMTA will be working the cities on that component. In its application the LACMTA describes how it plans to leverage the extensive deployment of intelligent transportation system technologies that have been instituted in Los Angeles County, many of which include traffic signal synchronization. However, regardless of the implementation of the Express Lanes, congested traffic conditions on the county's freeways are already negatively impacting arterials and streets.

Tolls will not be charged at on-ramps or off-ramps and will not require toll booths or plazas that could result in additional traffic congestion with traffic spillover on adjacent arterials. There are several projects and technologies that will analyze and mitigate any negative traffic impacts from the conversion of HOV lanes to Express Lanes. Among these projects are systemwide adaptive ramp metering and active traffic management for selected freeways and adaptive signal control for major arterials. The Congestion Pricing Operating Plan will analyze in further detail any potential negative impacts from the conversion of HOV lanes to Express Lanes on adjacent arterials and streets.

Truck Traffic and Goods Movement

Truck traffic and goods movement are expected to grow along the freeway corridors included in the proposal that was submitted to the USDOT. This is not due to the implementation of the Express Lanes, but to the economic activity that extends beyond the boundaries of Los Angeles County. The USDOT recently designated Interstate 10 as one of the country's "Corridors of the Future". By law, trucks are not allowed to use HOV lanes and accordingly, they will not be allowed to use the Express Lanes. The LACMTA and other Los Angeles County agencies are actively involved in developing a regional Multi-County Goods Movement Action Plan that includes the five largest counties in the SCAG region. The LACMTA is seeking to ensure that needed projects to address truck traffic along the corridors are properly identified and readied for future available funding.

Changing the 72% Single Driver Behavior

Changing the travel behavior of solo drivers in the Los Angeles region has been an ongoing challenge that the LACMTA hopes to achieve through a comprehensive strategy that integrates innovative technology, transit, and telecommuting strategies. The LACMTA has invested considerably during the past decade in its Travel Demand Management (TDM) Program, which incorporates several applications of these strategies with the goal of getting people out of their cars by modifying their travel behavior. TDM strategies provide low-cost travel solutions that reduce or eliminate demand on roads and freeways. The LACMTA has programmed over $90 million for TDM projects through our Countywide Call for Projects (CFP) between 1993 and 2007. Some of TDM projects that it has funded are those that: (1) improve the efficiency of existing transportation infrastructure by increasing the use of high occupancy vehicles (transit, vanpools, carpools); (2) eliminate trips or combine trips through telecommuting, modified work schedules, and ridesharing; and (3) apply new technologies that support or enhance transit uses, such as smart cards, real time traffic and transit information, among others.

In addition to implementing TDM projects through the LACMTA's CFP process, changing the driver behavior of solo drivers in Los Angeles County will require more reliable travel choices or alternatives that are as efficient as the automobile. To make these alternatives more competitive, the external cost of driving alone needs to be internalized. Congestion pricing is one TDM strategy that could trigger changes in the travel behavior of solo drivers by internalizing driving costs to them. The Los Angeles Region Express Lanes Project application lays out the LACMTA's plans for implementing a congestion pricing strategy.

Impact on General Purpose Lanes

General purpose lanes along the proposed Express Lanes are already operating at congested conditions well below design standards. Consistent with traffic flow theory, maximum vehicle throughput (about 1650 vehicles per hour) per freeway lane is achieved at a travel speed that ranges between 45 and 50 miles per hour. Current travel speeds along both freeway general purpose lanes and HOV lanes during the peak periods of travel are much lower than this desired travel speed. Projections show that the HOV lanes that are proposed to be converted to Express Lanes will be operating at the same travel speed as the parallel general purpose lanes in the next few years. The result from this lower speed is lower vehicle throughput, and consequently, lower number of people moving on the HOV and general purpose lanes. For example, one lane of the Express Lanes along State Route 91 in Orange County carries twice as many vehicles per hour than a parallel general purpose lane, and consequently, a higher number of people.

The LACMTA's goal is to provide a win-win situation for those travelers that choose to use either the Express Lanes or the general purpose lanes. Congestion pricing is one potential tool to achieve this objective. However, toll rates cannot be set too high or too low, so as to better manage travel demand and traffic congestion levels. The REACH study that SCAG conducted in 1997 for Los Angeles County concluded that average travel speeds on priced and non-priced road facilities are sensitive to congestion pricing. More balanced pricing rates were found to improve the travel speeds on both the priced and non-priced road facilities.

Although, additional analysis needs to be conducted before implementing the proposed Express Lanes, the concept is workable as other demonstrations of congestion pricing have been successful. The Express Lanes that are proposed in Los Angeles County will allow moving not only more vehicles and at higher speeds but also more people. The conversion of HOV lanes to Express Lanes along some of the freeway corridors in the region will be accompanied by

increased efficiency in the freeway mainline system, expansion of transit capacity, and continued availability of free travel for vanpools. Drivers not wiling to pay the tolls or not meeting the minimum vehicle passenger requirements to use the Express Lanes without paying a fee will benefit from this expanded transit service by shifting modes or changing travel times. Those that choose to continue driving along the general purpose lanes could eventually benefit from the operation of the Express Lanes from the mode shifts by other drivers. This could also be achieved by shifts in the time of the day where trips are made along the general purpose lanes by shifting discretionary trips from peak to off-peak periods of travel.

National surveys show that between 50 and 75 percent of the trips during the morning and afternoon peak periods of travel are indeed discretionary trips. Thus, the operation of the Express Lanes will provide an incentive for travelers to use transit, form vanpools and/or carpools, and eliminate unnecessary discretionary travel from peak periods, which will eventually improve the operational efficiency of the general purpose lanes and the Express Lanes and will increase the overall throughput of both vehicles and people.

PART F – PERFORMANCE MEASURES

F 1: Describe the Regional Transportation Agency's performance measures used to track and report annually on the following: Safety; Mobility; Accessibility; Reliability; Productivity; System Preservation; Return on investment/Lifecycle Cost; Emission Reduction

See also E-3

As the lead for the operation of the Express Lanes program, the LACMTA will be establishing performance measures for the system.

In converting the HOV lanes to Express Lanes for the Los Angeles Region Express Lanes network, the LACMTA has considered the appropriate balance between eligibility, level of service and pricing conditions in order to achieve effective and sustainable lane management. Estimates have been documented in this application and will be refined during the engineering phase of this program.

The LACMTA, in cooperation with the Department, has considered the peak hour volumes in highway mainline general purpose lanes and the Express Lanes and has established a performance objective of Level of Service (LOS) C in the Express Lanes. The dynamic congestion pricing in the Express Lanes will serve as a tool to manage traffic flow against the LOS performance objective.

The LACMTA will also encourage transit use and higher occupancy vehicles in order to create the capacity that is necessary to maintain a 50 mph condition in the Express Lanes. The LACMTA plans to use the net toll revenue to subsidize increased transit service in the Express lanes corridors.
The Department will employ its performance management system during the construction and installation of the Express Lanes system.

Finally, the LACMTA will conduct a review of the system operator's performance on a monthly basis, utilizing all required system reports provided by the Contractor.

The performance measures for the following factors will be developed during the engineering phase of the project. References for each factor include:

- Safety –this measure will be a factor for both the construction and operation of the system. See E-3 for a listing of safety policy references.
- Mobility – Mobility and congestion relief will be the primary benefits of the system. The measurement will be both vehicle and person through-put and connectivity to the rest of the transportation system. - see E-3
- Accessibility – The LACMTA has a well-established accessibility policy and the increased transit services associated with this system will adhere to the LACMTA's policy. All vehicles will be able to access the Express Lanes, except for trucks.
- Reliability, Productivity, System Preservation – these measures will be developed as part of the system operator's performance contract. Examples of measures include travel time savings in the Express Lanes, no degradation to general purpose lanes and a variety of system operator performance measures listed below.

- Return on investment (ROI)/Lifecycle Cost – a portion of this measure is based on the system operator's performance and a portion based on the congestion relief value that the Los Angeles Region will enjoy with these Express Lanes verses their costs, both capital and ongoing operations and maintenance. An equation will be developed that quantifies that ROI.
- Emission Reduction – The LACMTA will request that the Southern California Association of Governments (SCAG) run its air quality emissions model to determine the success of the Express Lanes. Measurements include (1) the percentage of Single Occupant Vehicles (SOVs) to use the Express Lanes; (2) the percentage of High Occupancy Vehicles (HOVs) to shift out of the Express Lanes and (3) the year of implementation of the Express Lanes.
- Example of System Operator Performance Measures
    - Mean Time to Respond and Repair
    - Mean Time Between Failures
    - Availability
        - Deployed Lanes Availability
        - System Availability
        - Web Site Availability
    - Reports and Record Keeping
    - Spare Parts Availability
    - Preventive Maintenance
    - Back office System Processing
    - Customer Satisfaction
        - Contractor performance shall be rated based on measured customer satisfaction and on operational, processing and financial performance.

Other issues that will be important for the system operator to perform are:

- Customer Privacy
- Public Communications
- Interoperability Requirements
    - The California Toll Operators Committee (CTOC), an informal organization of all FasTrak™ toll and parking facility operators in California, define the interoperability specifications for back-office file transfers. This file transfer specification allows a FasTrak™ agency to be paid for toll or parking charges incurred by a customer with an account at another interoperable agency.
- Customer Account Management
- Revenue Management
- Payment Processing
- Transponder Management
- Violation Enforcement/Processing/Collections

II. Secondary Evaluation and Project Eligibility Criteria

The following criteria are to be completed only if the project team is known. Where a project team is not known given the stage of the project, this secondary evaluation and eligibility criteria is not required.

G 1: Describe the team's qualifications and experience.

The Department and the LACMTA will develop a team approach through an Interagency Agreement. As highlighted in D-10 above, Caltrans will be the lead for the environmental, design and construction phases and the LACMTA will be the lead to contract out the system operations of the Express Lanes system.

Department Experience

High Occupancy Vehicle Operations Branch, Office of Freeway Operations Division of Operations, District 7, Los Angeles and Ventura Counties

The Caltrans District 7 HOV Operations unit was established in the mid-1970's to monitor the operations of the first HOV lane in Los Angeles County, the El Monte Busway, which opened in January 1973 on Interstate 10.

About this same period, permanent manual occupancy count locations were determined for Los Angeles County, to monitor the growth of carpools in the region over time, and in particular, on various freeways, to determine the effects of adding HOV lanes.

In the early 1990's, HOV Program and Project Management merged with HOV Operations to form the HOV Branch. During that time, the 20-year and 30-year HOV plans were determined in cooperation and partnership with MTA, and MTA made a commitment to invest in HOV lanes.

The HOV Operations Branch today has 7 permanent Transportation Engineers (5 with Civil Engineering licenses) headed by a Senior Transportation Engineer, who has been in charge of HOV Operations, Traffic Monitoring, Freeway Service Patrol, and Callboxes at various times for over 10 years. This unit produced the first annual HOV report in 1997, setting the standard for the state, and releases it on the internet for worldwide use. Combined, the staff of HOV Operations has approximately 70 years of Operations experience.

The HOV Program and Project Management Branch merged back into the Program and Project Management Division, instead of the Operations Division.
Currently, HOV Operations monitors, performs, collects and analyzes the following types of work and data:

- Inventory of Facilities and Miles
- Electronic Data, such as volumes in the HOV lane for the peak periods (hourly and on a 24 hour basis)
- Manual Occupancy Counts to determine violations, hybrid volumes, buses, motorcycles, vanpools, etc.
- Changes and Introduced Legislation for the Year.
- Typical Time Savings in the HOV lane.
- Total Number of Carpools on the Freeway (HOV and non-HOV for over 15 years)

- Supports the Ramp Metering and HOV Bypass Programs
- Produces Ingress/Egress Location Maps for each HOV Route
- Produces People/Vehicle Comparisons for Mixed Flow and HOV lanes for each Route.
- Supports Project and Program Management from inception to conclusion of HOV project.

LACMTA Experience

The LACMTA will contract with a consultant who will work with LACMTA staff to develop the operational plan and procurement documents to procure a system operator for the Express Lanes system.

G 2: Describe the extent of experience with similar infrastructure projects.

The Los Angeles Region partners included in this in this application to the California Transportation Commission have considerable experience in research and planning for congestion pricing initiatives. The following is a brief description of their experience researching congestion-pricing.

OffPeak Program - The *OffPeak* program (administered by PierPass Inc.) is a successful peak-period pricing program that is unique in the world and which was developed as a way to address chronic congestion and air quality issues in and around the Port of Los Angeles and the Port of Long Beach. Being a market-based incentive program to mitigate traffic congestion during peak-periods, the *OffPeak* program has resulted in major traffic relief along major travel corridors located in the vicinity of the ports, particularly along the Interstate 710 and the Interstate 110.

Alameda Corridor - The 20-mile long Alameda Corridor is the first link in the national rail system for goods movement from the Port of Los Angeles and the Port of Long Beach, through the transcontinental rail system near downtown the City of Los Angeles, to be then distributed to destinations across the United States. With more than 60 percent of the cargo arriving at the two ports ultimately reaching markets outside of Southern California, the Alameda Corridor has seen a 106 percent growth in cargo movement over the last four years. These ports also handle 24 percent of the country's total exports. Thus, with a trade volume of about $300 billion, the Alameda Corridor is a project of regional and national significance.

While the Alameda Corridor focused on the north-south corridor between downtown the City of Los Angeles and the Port of Los Angeles and the Port of Long Beach, the Alameda Corridor East (ACE) focuses on the east-west corridor that is parallel to Interstate 10 and State Route 60 between East Los Angeles (just east of the downtown of the City of Los Angeles) to the San Bernardino County. The ACE is a set of projects to mitigate the anticipated traffic congestion and to enhance the overall mobility and safety caused by the expected increase in rail freight traffic through eastern Los Angeles County. The Alameda Corridor East Construction Authority has identified specific construction projects that are currently under construction, ranging from low-cost improvements in safety features and signal devices at rail crossings to expensive grade separations, which involve building underpasses or bridges so that rail and motor-vehicle traffic no longer intersect.

Reduce Emissions and Congestion on Highways (REACH) - The Los Angeles Region was among the first regions in the country to examine different pricing strategies and their public acceptance to mitigate traffic congestion. In 1995, SCAG created the REACH Task Force that included the LACMTA and the Department, among other regional agencies. This group reviewed market-based transportation management concepts, including vehicle user-fees and

toll lanes. A key finding of this study was that Express Lanes have the most promise of introducing transportation pricing strategies to the region. The study also identified public acceptability and equity issues that needed to be addressed for the successful implementation of this pricing strategy.

Draft 2008 Regional Transportation Plan (RTP) - SCAG's Draft 2008 RTP discusses the need to address travel demand thought the combination of Travel Demand Management (TDM) strategies designed to influence an individual's travel behavior by making travel alternatives other than the single-occupant automobile be more attractive, especially during peak commute periods or by enacting regulatory strategies. The Draft 2008 RTP recommends the implementation of congestion-pricing strategies, particularly Express Lanes, along some of the region's corridors.

Caltrans Business Plan - Caltrans - District 7 recently submitted to the USDOT its Business Plan for improving the operating performance of the freeway system that it manages in the Los Angeles Region. This plan includes congestion-pricing options, including the implementation of Express Lanes.

LACMTA Long Range Transportation Plan (LRTP) - The LACMTA's 2001 LRTP included sensitivity tests to examine the effects of pricing (and land use) on the performance of the region's transportation system. It concluded that these strategies combined have tremendous positive impact on transit share, highway speed, mobility, and air quality. This finding is consistent with the research conducted at several universities in Southern California. The LACMTA's 2008 Draft LRTP supports congestion pricing as a tool for congestion management, increased transit use and revenue generation.

G 3: Provide a description of the team's ability to perform work.

Neither the construction contractor nor the system operator has been selected at this time. The team's ability to perform work will be a criterion in the procurement selection process.

G 4: Describe the leadership structure.

The organizational structure for the Express Lanes Project is shown in **Figure 3** in **Appendix C**. The Department will be the lead agency for the environmental, design and construction phases and will work with a proposed partnership structure with the LACMTA through an Interagency Agreement. The LACMTA will be the lead for the tolling operations phase.

The management structure within the LACMTA to manage this project, including public partners and community outreach include:

Ad-Hoc Congestion Pricing Committee (ACPC) – The LACMTA Board has also established the Ad Hoc Congestion Pricing Committee to develop for implementing congestion pricing which includes the collection of tolls to reduce congestion in the urban core while raising revenue. This group is comprised of members from the LACMTA's Board of Directors, including The Department Director for District 7, to provide policy guidance and recommendations to the LACMTA Board of Directors.

Transportation Agency Advisory Group (TAAG) – comprised of representatives from federal, state, regional and local transportation agencies to guide the progress for developing the Express Lanes, including the LACMTA, the Southern California Association of Governments,

Los Angeles County Department of Public Works, Los Angeles City Department of Transportation, the regions five Council of Governments, the Port of Los Angeles and the Port of Long Beach, the Federal Highway Administration and the Federal Transit Administration.

Community Advisory Groups (CAGs) – to comprise representatives from the TAAG and other interest groups, such as businesses, road users, environmental agencies, social services, industry, academia, and public policy institutes, who will be grouped according to particular community interest and expertise to provide input during the development of the Express Lanes.

Congestion Pricing Program Manager (PM) – The PM will be selected from the LACMTA staff to manage the different day-to-day activities related to the development of the Express Lanes, provide guidance and input to the Contractor, and review progress to ensure compliance with scope of work, budget, and schedules. Also, to coordinate work between the Contractor and LACMTA's Communications Department, to update the ACPC, TAAG, and CAGs of work progress and serve as the liaison among them, and to seek advice on issues needing further guidance.

G 5: Provide a description/background relative to the Project Manager's experience.

The contractor's project manager for the construction or the operation phase has not been selected. The description of the project management at both the Department and LACMTA is described in G-1 above.

G 6: Describe the anticipated management approach for this project.

[The management approach for this project is described in G-1 and in D-10, as well as other sections in this application.

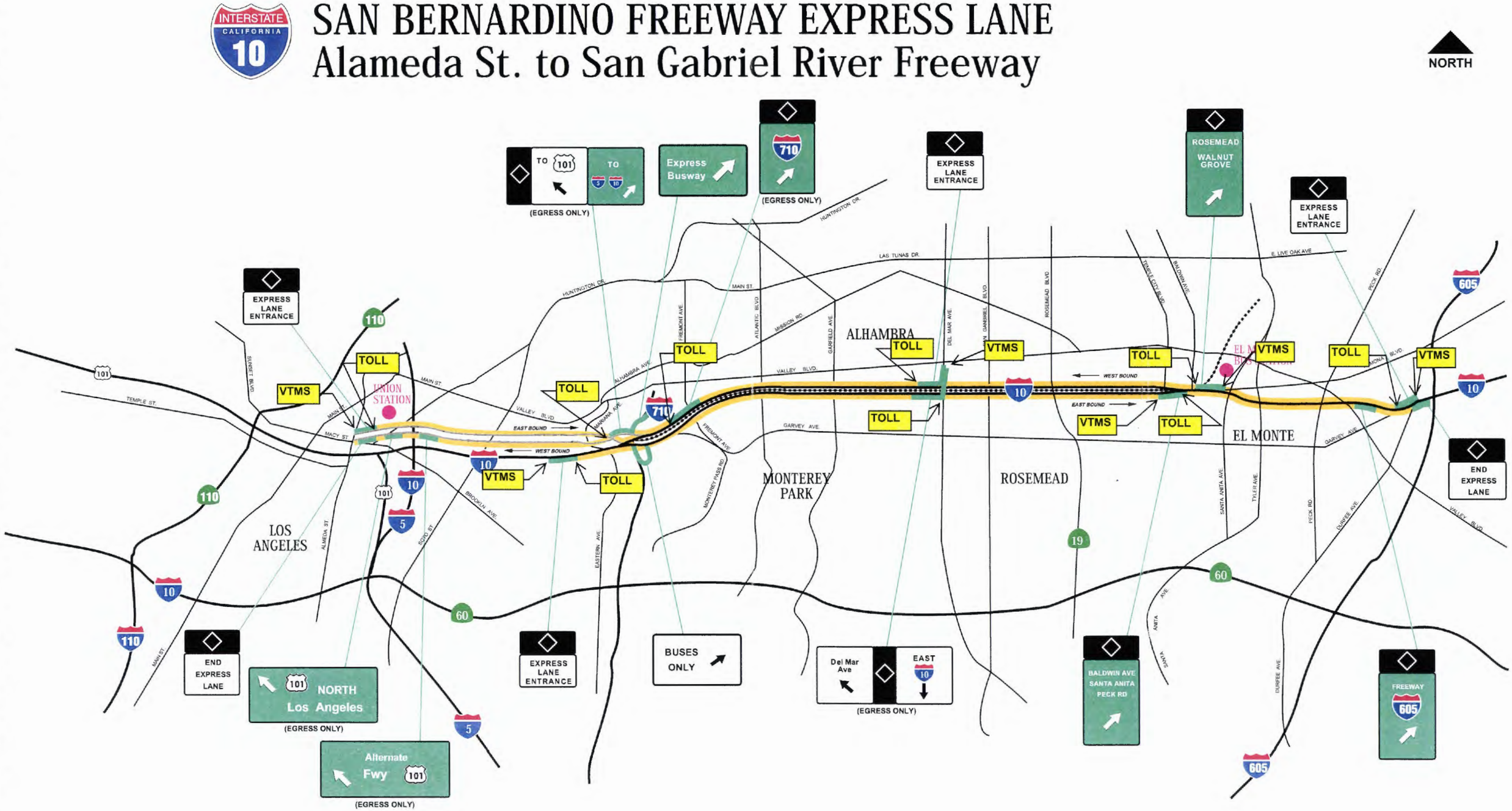
G 7: Describe the planned public involvement strategy.

The LACMTA and the major transportation agencies in the Los Angeles Region have held several meetings to discuss this Express Lanes plan. The LACMTA and its regional partners are also preparing a detailed implementation plan with extensive outreach to local jurisdictions and communities. Among the objectives of this plan is to implement the projects included in the Los Angeles Region Express Lanes plan as a win-win strategy to manage traffic congestion in the region. Public outreach will be an important element to achieve public support for the proposed projects. In particular, the Express Lanes would be designed, implemented, and operated to provide travel time and mobility benefits to highway and transit users without adversely impacting adjacent freeway lanes and arterials. See E-14 for details.

Appendix A

Figure 2: **Los Angeles Region Express Lanes Corridor Maps**

SAN BERNARDINO FREEWAY EXPRESS LANE
Alameda St. to San Gabriel River Freeway

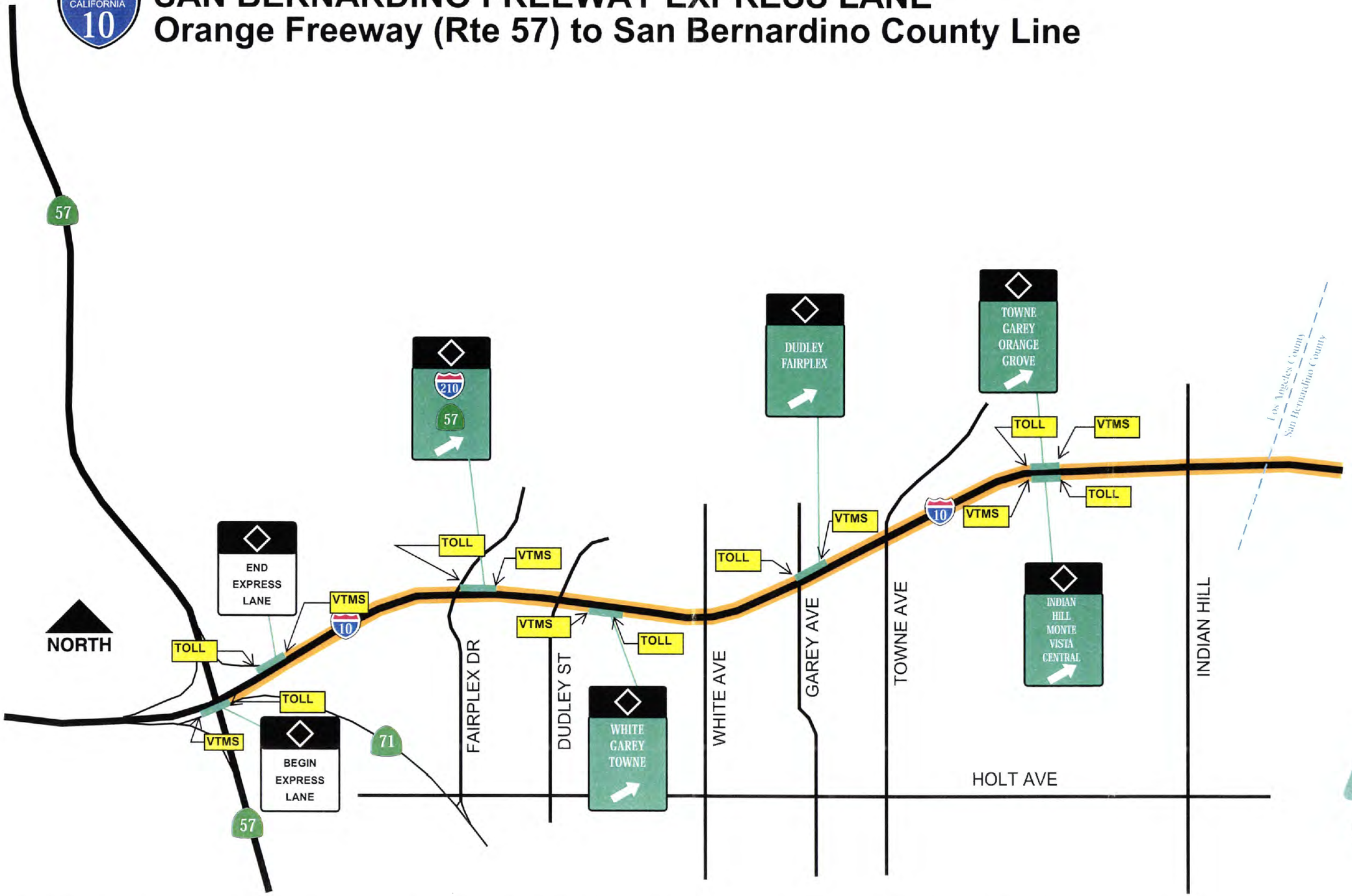


NO SCALE

Caltrans

10_EXPRESS. 3/31/08

SAN BERNARDINO FREEWAY EXPRESS LANE
Orange Freeway (Rte 57) to San Bernardino County Line



NO SCALE

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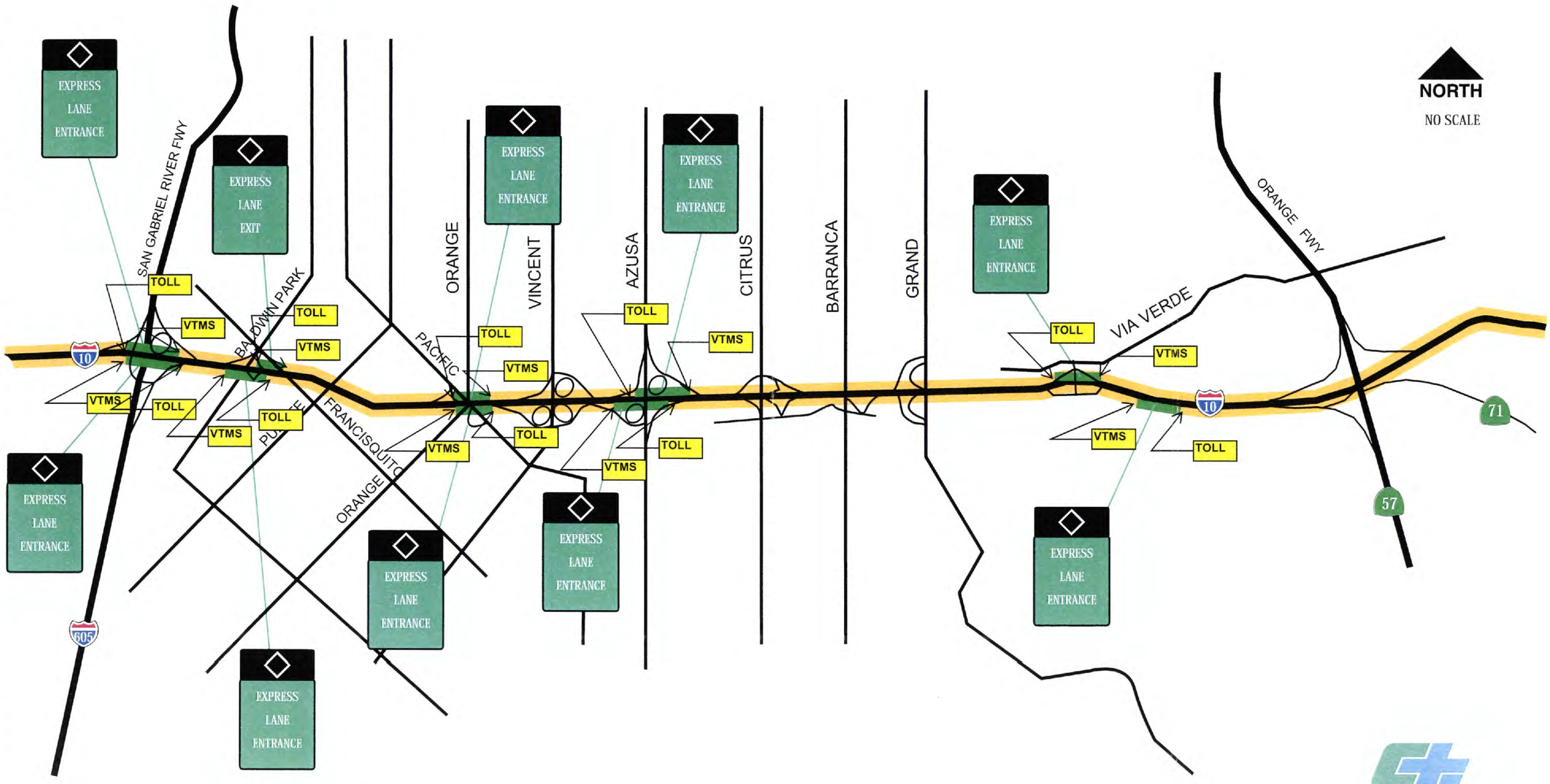
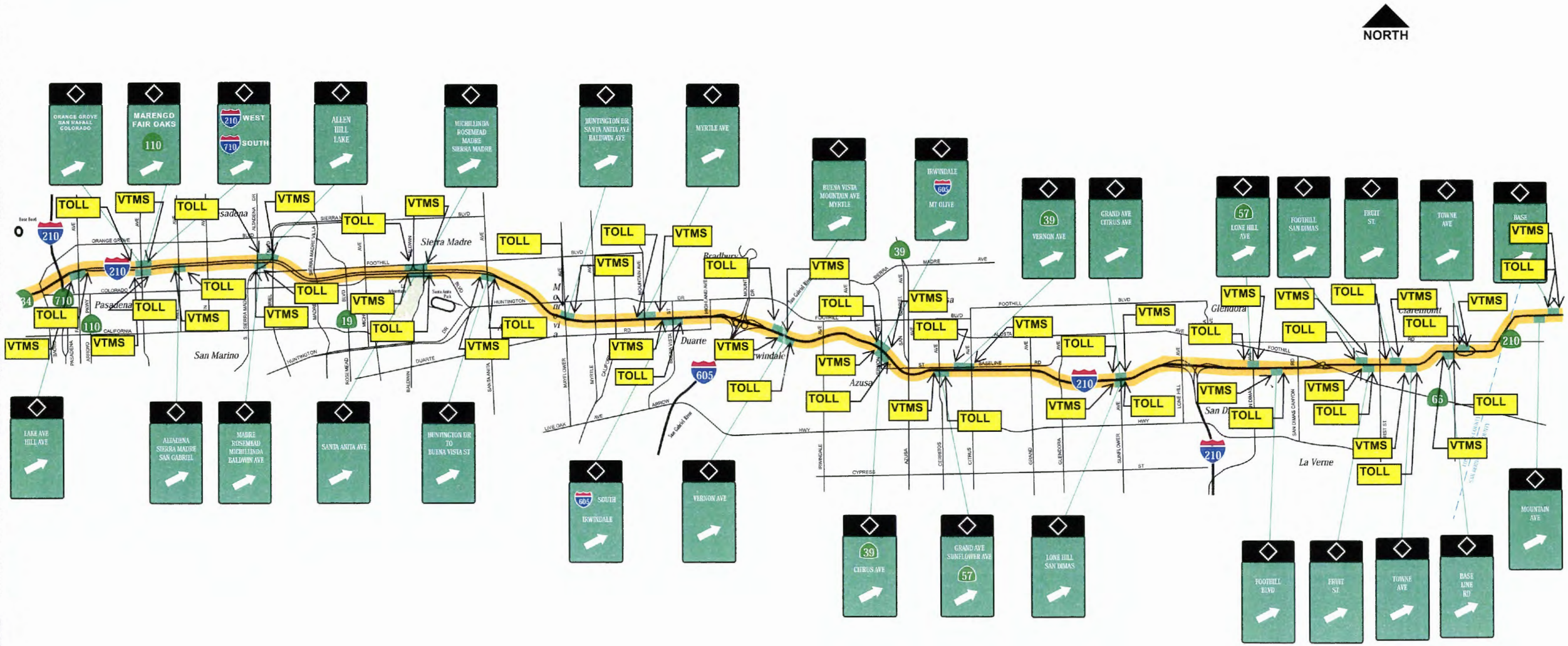
District 7 Graphic Services • 10_EXPRESS(SB) • 3/31/08

SAN BERNARDINO FREEWAY EXPRESS LANE
San Gabriel River Freeway (Rte 605) to Orange Fwy (Rte 57)



FOOTHILL FREEWAY EXPRESS LANE

Ventura Freeway (Rte 134) to San Bernardino County Line



NO SCALE

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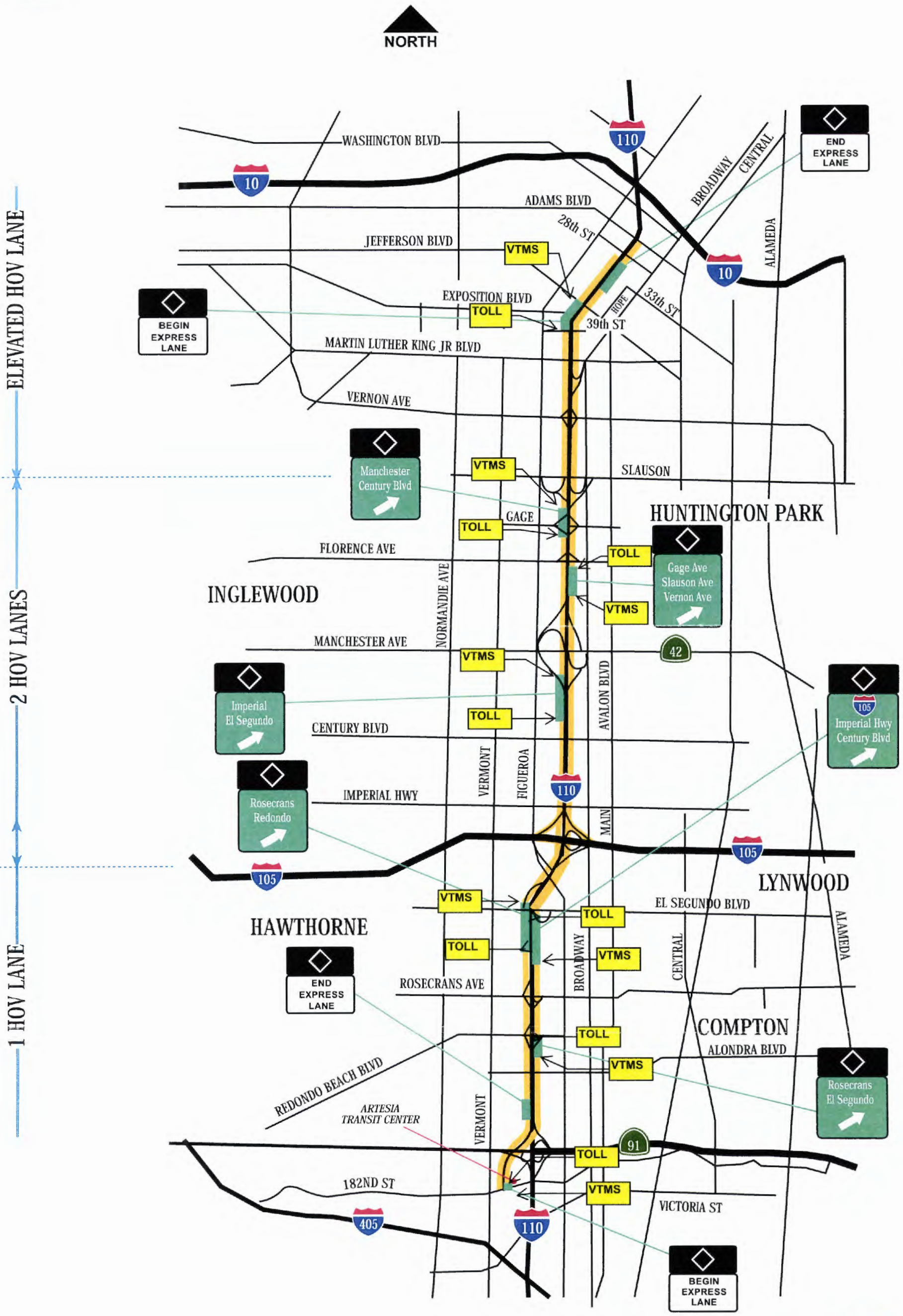
210 EXPRESS 03/31/08

HARBOR FREEWAY EXPRESS LANE
Adams Blvd to Artesia Freeway (Rte 91)



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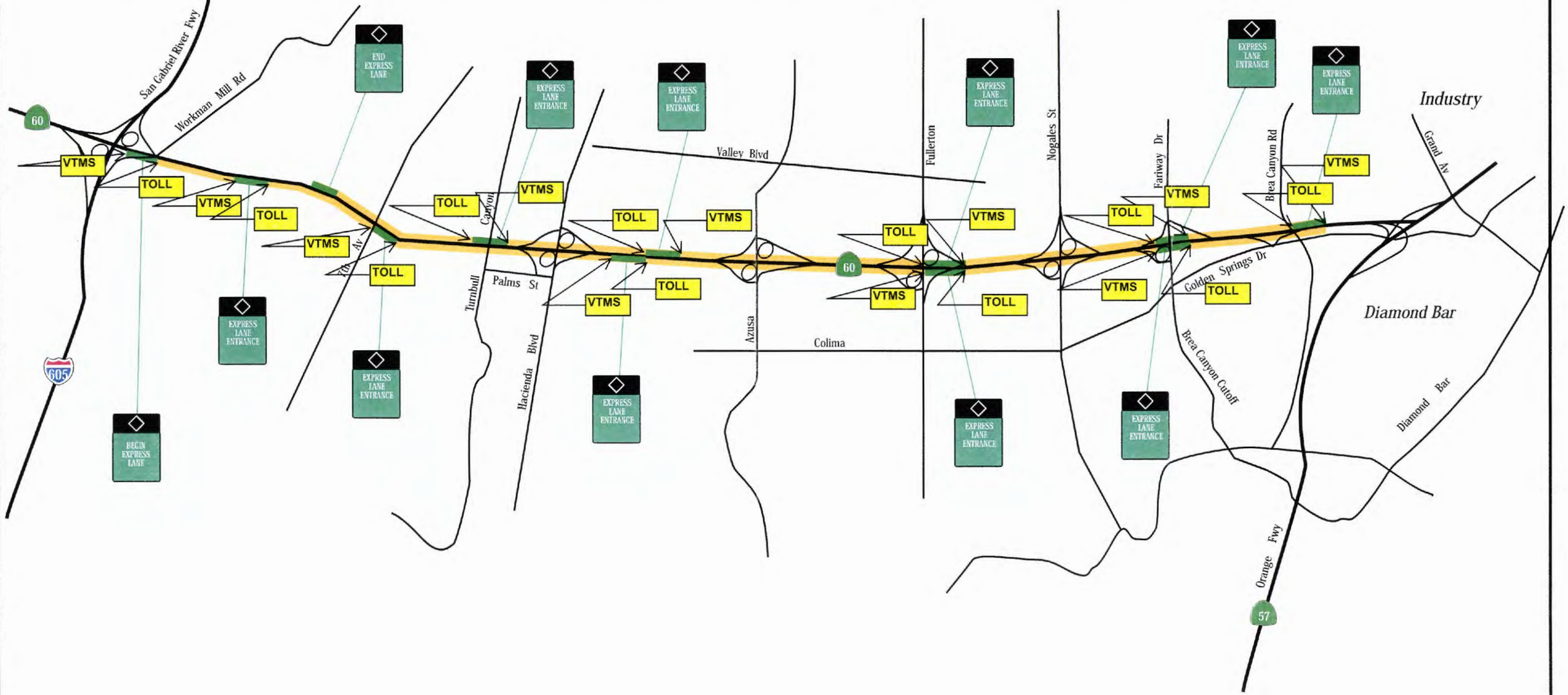
NO SCALE

Caltrans

110 EXPRESS • 03/31/08

POMONA FREEWAY EXPRESS LANE

San Gabriel River Freeway (Rte 605) to Brea Canyon Road



NO SCALE

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NORTH

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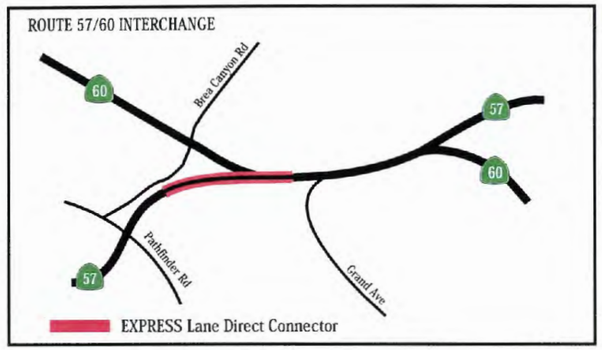
60 EXPRESS (605to57) HOV • 3/31/08

POMONA FREEWAY EXPRESS LANE

Brea Canyon Road to San Bernardino County Line



NORTH

Pomona
Diamond Bar
Industry
Chino Hills
Diamond Bar Blvd
Golden Springs Dr
Brea Canyon Rd
Grand Ave
Phillips Ranch Rd
Old Pomona Rd
Rio Rancho Rd
Garey Ave
Towne Ave
Riverside Dr
Chino Hills Parkway
Los Angeles County
San Bernardino County

TOLL
VTMS
EXPRESS LANE EXIT
END EXPRESS LANE
BEGIN EXPRESS LANE
Brea Cyn Rd
Diamond Bar Blvd NORTH 57
Phillips Ranch Rd
71 Garey

NO SCALE

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APPENDIX B

Los Angeles Region Express Lanes
Cost and Revenue Estimates

LA EXPR[redacted]NES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) COMPONENTS - [redacted]ERNARDINO FREEWAY CORRIDOR C-1 (OS 1-1 14 Miles)

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS	Alameda Street		1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS	N Soto Street		1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES	5 Egress		1 +1S	WB	1	2	1	2	2	0	FSp
One Lane VES	710 Egress		1 +1S	WB	1	2	1	2	2	0	FSp
VTMS	Del Mar Ave WB		1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								FSp
One Lane VES	Del Mar Ave EB		1 +1S	EB	1	2	1	2	2	0	
VTMS	Rosemead Blvd EB		1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								FSp
One Lane VES	Rosemead Blvd WB		1 +1S	WB		2	1	2	2	1	
VTMS			1								SPC-1
VTMS	605		1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								FSp
Total			**15 +9S**		**8**	**18**	**9**	**18**	**18**	**6**	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS	Pasadena Ave		1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS	Los Robles Ave		1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES	Hill Ave		1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS	Lake Ave		1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS	Allen Ave		1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES	Sierra Madre Blvd		1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS	Mitchillinda Ave		1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES	Santa Anita Ave		1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	WB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
Total			24 +12S		8	24	12	24	24	12	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	NB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	NB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	NB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	SB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
VTMS			1	SB	1	3	2	3	3	1	SPC-1
Two Lane VES			2 +1S								SPC-1
VTMS			1	NB	1	3	2	3	3	1	SPC-1
Two Lane VES			2 +1S								SPC-1
VTMS			1	SB	1	3	2	3	3	1	SPC-1
Two Lane VES			2 +1S								SPC-1
VTMS			1	SB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
Total			**19 + 8S**		**7**	**19**	**11**	**19**	**19**	**8**	

Table of Abbreviations

NB	Northbound	AVI	Automatic Vehicle Identification
SB	Southbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

LA EXPRI ANES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) COMPONENTS - BERNARDINO FREEWAY CORRIDOR C-1 (OS 2-4 6 Miles)

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
VTMS			1 +1S	EB		2	1	2	2	1	FSp
One Lane VES			1								
Total			**12 +6S**		**5**	**12**	**6**	**12**	**12**	**6**	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	WB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	WB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	WB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	WB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
Total			**34 +17S**		**9**	**34**	**17**	**34**	**34**	**17**	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
Total			**14 +7S**		**5**	**14**	**7**	**14**	**14**	**7**	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

LA EXPRESS LANES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) COMPONENTS - SR 60 From I-605 to Brea Canyon CORRIDOR C-4 (OS 2-7 11 Miles)

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
Total			**24 +12S**		**12**	**24**	**12**	**24**	**24**	**12**	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

LA EXPRESS LANES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) COMPONENTS -I-10 From I-605 to SR 57 CORRIDOR C-1 (OS 2-8 9 Miles)

Los Angeles Metropolitan	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
Total			**24 +12S**		12	24	12	24	24	12	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

FREEWAY SUMMARY

Los Angeles Metropolitan Transportation Commission (Metro) Express Lane System	Operating Segment 1	Operating Segment 2	Total	Corridor							
				I-10 - from Alameda St/Union Station to I-605	I-210 from I-210/SR 134/I-710 to I-605	I-110 from 182nd St./Artesia Transit Center to Adams Blvd	I-10 from SR 57 to San Bernardino Co. Line	I-210 from I-210 South to San Bernardino Co. Line	SR 60 from Brea Canyon along SR 27 to Riverside/SBern. Co. Line	SR 60 from I-605 to Brea Canyon	I-10 from I-605 to SR 57
VTMS	26	54	80	6	12	8	6	17	7	12	12
One Lane VES - Single	14	32	46	7	4	3	4	1	3	12	12
Two Lane VES - Single	3	0	3	0	0	3	0	0	0	0	0
One Lane VES Combined	6	11	17	1	4	1	1	8	2	0	0
Total Lane Types	**23**	**43**	**66**	**8**	**8**	**7**	**5**	**9**	**5**	12	12
Total Toll Zone Lanes			**86**	**9**	**12**	**11**	**6**	**17**	**7**	**12**	**12**

Note: Total Toll Zone Lanes include only the main HOV lanes where there is toll collection equipment, it is either 1 or 2. It does not include the shoulder or the GP lane that has the VTMS

Summary of LACMTA Program Cost By Operating Segment (Draft 3/14/08)

A. Toll System Costs

Tolling Location Type Quantities and Costs Note 1	Unit Cost	Subsystem Quantity	Subsystem Cost	Operating Segment 1 Quantity	Operating Segment 1 Cost (2010)	Operating Segment 2 Quantity	Operating Segment 2 Cost (2012)	Full System Quantity	Full System Cost
1 Lane w/ VES + 1 Shoulder									
Total			**$240,140**	14	$ 3,566,703	32	$ 8,648,950	46	**$12,215,653**
2 Lane w/ VES + 1 Shoulder									
Total			**$358,290**	3	$ 1,140,330	-	$ -	3	**$1,140,330**
3 Lane w/ VES									
Total			**$420,920**	-	$ -	-	$ -	-	**$0**

Tolling Location Type Quantities and Costs	Unit Cost	Subsystem Quantity	Subsystem Cost	Operating Segment 1 Quantity	Operating Segment 1 Cost (2010)	Operating Segment 2 Quantity	Operating Segment 2 Cost (2012)	Full System Quantity	Full System Cost
1 Lanes w/ VES-(Dual Directions Combined for 2 lanes) + 2 Shoulder									
Total			**$398,310**	8	$ 2,535,402	11	$ 4,931,316	17	**$7,466,718**
2 Lanes w/ VES-(Dual Directions Combined for 4 lanes)									
Total			**$518,340**	-	$ -	-	$ -	-	**$0**
Total Lane Types				23		43		66	
						Note 22			
VTMS, (25' x 17'6") installed, including support Note 6	$172,100	1	$172,100	23	$ 4,747,103	43	$ 10,459,804	66	**$15,206,907**
Misc Cables		Lump Sum			$10,609		$11,255		*$21,864*
Spare Parts (10% of Total) Note 7		Lump Sum			$622,080		$1,323,387		*$1,945,467*
Grand Total Lane Equipment					**$12,622,227**		**$25,374,712**		**$37,996,939**
Lane Transition Costs (Installation)					$50,000		$50,000		*$100,000*
Escalation Factor Per Year Note 8	1.030								

Additional Items (Sheet A) Systems Costs and Back Office	Unit Cost	Subsystem Quantity	Subsystem Cost	Operating Segment 1 Quantity	Operating Segment 1 Cost (2010)	Operating Segment 2 Quantity	Operating Segment 2 Cost (2012)	Full System Quantity	Full System Cost
Total Back-Office and Related Systems & Equipment					**$11,484,243**		**$532,025**		**$12,016,268**
Total System Wide Costs (Including Ins., War., Doc., Training...)					**$2,060,798**		**$150,000**		**$2,210,798**
Total Engineering Design and Project Management					**$4,063,677**		**$4,046,544**		**$8,110,221**
Grand Total Additional Items					**$17,608,717**		**$4,728,569**		**$22,337,287**
GRAND TOTAL TOLL SYSTEM COSTS					**$30,230,945**		**$30,103,281**		**$60,434,226**

B. Additional Program Costs

	Unit Cost	Subsystem Quantity	Subsystem Cost	Operating Segment 1 Quantity	Operating Segment 1 Cost (2010)	Operating Segment 2 Quantity	Operating Segment 2 Cost (2012)	Full System Quantity	Full System Cost
Preparation of Equipment Pads Note 16		LS	$1,500	49	$77,976	97	$163,762	146	$241,738
Power Drop From Right of Way to ETC Power Panel Note 17		LS	$10,000	49	$519,841	97	$1,091,744	146	$1,611,585
Traffic Control Note 18		LS	$35,000	49	$1,819,444	97	$3,821,102	146	$5,640,546
Segment Phasing Costs		LS	$0	0	$0	0	$0	0	$0
Communications Infrastructure Note 19		LS	$0	1	$190,325	1	$156,029	2	$346,355
Consultant Program Oversight and Management (10% of above)	10%	LS	$0	0	$3,288,853	0	$3,538,592	0	$6,827,445
Interal LACMTA Program Admin Costs (3% of above)	3%	LS	$0	0	$1,085,322	0	$1,167,735	0	$2,253,057
Internal CalTrans Administration & Oversight (3% of above)	3%	LS	$0	0	$1,117,881	0	$1,202,767	0	$2,320,648
Roadway Infrastructure Modifications Note 22		LS	$0	1	$7,200,000	1	$4,800,000	2	$12,000,000
Project Contingency	30%	LS	30% of all above $		$13,674,176		$13,828,504	0	$27,502,680
TOTAL ADDITIONAL PROGRAM COSTS					**$28,973,818**		**$29,770,235**		**$58,744,053**

C. GRAND TOTAL A+B Costs

Note 20 **$119,180,000**

Notes To Program Costs	3/14/2008
Los Angeles Metropolitan Transportation Commission (Metro) Express Lane System	
Toll System Costs	
1. Equipment Quantities	Equipment quantities and lane types are preliminary estimates subject to revision based on actual design and construction.
2. Violation Enforcement Cameras	Configuration includes 1 HI Resolution Camera per travel lane and low resolution camera per shoulder
3. ETC (AVI) Antenna	Configuration includes1 antenna per lane and 1 per shoulder
4. AVI Reader	Configuration assumes 1 reader per antenna - depending on reader multiple antennas may be interfaced to a single reader
5. Cabinets	Assumes a NEMA type cabinet with AC and locking for all ETC equipment.
6. Video Toll Message Signs	Assumed configuration and size is (25' x 17' 6") mounted on cantilever at roadside adjacent to GP lanes and preceding toll access points.
	Sign is a combination of LED and Static Information.
7. Spares	Spares calculated at 10% of in lane equipment minus cost of gantry and lane labor.
8. Escalation	Escalation is assumed to midyear of construction for each year (3.0%) per year.
9. Video Audit System (DVAS)	Estimate does not provide for DVAS at each site but includes (2) mobile systems - System resides at host / CSC.
	Mobile DVAS units provide random site DVAS capability and interfaces to network at site location.
10. System Software and Development	Includes Lane, Dynamic Pricing, MOMS, and CSC.
11. CSC and Violations Processing Center	Total includes both a VPC and CSC capability to handle violations processing customer service requirements and full CSC operations. Also an option to add an additional walk-in service center for Phase 2.
12. System Testing	Includes Commissioning Test and Corridor Testing in Phase 2.
13. Software License	Allocates software between systems software and license-different SI's allocate between the two differently.
14. Engineering and Design	Estimate of system integrator's required level of engineering and design to develop all of the systems.
15. Project Management	Estimate of system integration overall project management required to complete the design, development, installation and testing.
16. Equipment Pads	Quantity is subject to change depending on number of cabinets and/or the use of a larger pad for multiple cabinets. Worst Case assumption includes pads for VTMS and ETC locations.
17. Power Drop	Estimate assumes one power service drop per toll zone location. Cost subject to change based on distance from service point. Worst Case assumption includes pads for VTMS and ETC locations.
18. Traffic Control	Assumed to be $3,500 per event. Each installation assumes total of 10 events per site ($35,000 per site)
18. Communications Infrastructure	Includes communications equipment not included per site but required to interface with each corridor hub.
19. Grand Total A+B Costs	Rounded to thousands.
20. Toll Zone Quantity	Assumes worst case total (both directions) for SR 60 from I-605 60 Brea Canyon and I-101 from I-605 to SR 57 since both segments not yet constructed
21. VTMS Quantity	Assumes worst case total requiring one VTMS in vicinity of each additional toll zone
22. Roadway Infrastructure and Modifications	This number has been provided to the estimate to cover costs of required modifications for items such as roadway signing, striping and roadway traffic control and will be modified upon preliminary design.

From Summary of Program Cost Sheet			GRAND TOTAL A+B Costs =		$ 119,180,000
Los Angeles Metropolitan Transportation Commission (Metro) Express Lane System					
OS	**Corridor**	**Operating Segment (OS)**	**No. Toll Zone Lanes** Note 1	**% of Total Toll Zone Lanes**	**Segment Cost Estimate** Note 2
		Operating Segment 1			
OS 1-1	C-1	I-10 from Alameda St/Union Station to I-605	9	10.5%	$ 12,472,325.58
OS 1-2	C-2	I-210 from I-210/SR 134/I-710 to I-605	12	14.0%	$ 16,629,767.44
OS 1-3	C-3	I-110 from 182nd St./Artesia Transit Center to Adams Blvd.	11	12.8%	$ 15,243,953.49
		Total Lanes OS-1	**32**	**37.2%**	**$ 44,346,046.51**
		Operating Segment 2			
OS 2-4	C-1	I-10 from SR57 to San Bernardino County Line	6	7.0%	$ 8,314,883.72
OS 2-5	C-2	I-210 from I-210 South to San Bernardino County Line	17	19.8%	$ 23,558,837.21
OS 2-6	C-4	SR 60 from Brea Canyon along SR 57 to San Bernardino Co. Line	7	8.1%	$ 9,700,697.67
OS 2-7	C-4	SR 60 from I-605 to Brea Canyon (HOV lane under construction)	12	14.0%	$ 16,629,767.44
OS 2-8	C-1	I-10 from I-605 to SR 57 (HOV lane in design)	12	14.0%	$ 16,629,767.44
		Total Lanes OS-2	**54**	**62.8%**	**$ 74,833,953.49**
		(Program Check) Total Number of Lanes	**86**	**100.0%**	**$ 119,180,000.00**

Note 1: The number of Toll Zone Lanes for a segment represents the sum of all toll lanes where toll collection equipment is installed. Shoulders are not counted as a lane.

Note 2: System costs have been allocated across all roadway segments, however they will be ***incurred*** in the early stages of the project

Definitions and Abbreviations

AVDS: Automatic Vehicle Detection System using an overhead laser profiler for automatic vehicle detection and separation.

Automatic Vehicle Identification (AVI): A system consisting of an antenna and reader, that meet Caltrans Title 21 requirements, installed in a toll lane and a compatible transponder mounted on a vehicle for automatic identification of the transponder as it passes through the lane.

Back Office Communication Equipment: All of the equipment necessary to process the ETC transactions and captured images sent from the zone controllers over the WAN for processing at the CSC and VPC.

Business Rules: A set of rules that defines how the Express Lane toll collection system should respond to various situations that occur during the toll collection process based on business case and policy decisions made by the Los Angeles County Metropolitan Transportation Authority (Metro), as the same may be amended from time to time by written agreement of the Authority and the Contractor.

Central Computer System: The back office central computer systems that interfaces with the Corridor Servers and violation enforcement servers, and provides toll collection functions for managing the Congestion Pricing Express Lane operations, including Maintenance On-line Management System (MOMS) functionality.

Corridor Servers: All zone controllers in a corridor will be networked in a local area network configuration with the corridor server which will be the interface to the Toll Systems wide area network for transmitting the transaction and image data to the central computer system.

CSC: The Customer Service Center that supports account management, account maintenance, and call center functions.

CSC Office Equipment: Contains infrastructure equipment, software, and services required to establish and maintain accounts, to support customers, to obtain correct name and addresses, and to prepare customer billing notification according to established Business Rules.

Electronic Toll Collection (ETC): A system of integrated devices and components that permit the automatic recording of vehicle transactions through electronic media in a toll revenue collection system

ETC Antenna: An integral part of the AVI system mounted above the toll zones used to interface between the ETC Reader and a vehicle's transponder.

ETC Reader w/RF module: The reader and Radio Frequency (RF) module is the main subsystem of the AVI system that provides the communications link between the zone controller

and the transponder via the ETC antenna and the transponder message interface to the zone controller.

FSp Gantry: Full Span gantry

HOV: High Occupancy Vehicle. Typically HOV +2, HOV+3 or HOV +4

Maintenance On-line Management System (MOMS): An automated, fully integrated system for monitoring the status of operational equipment in real time, to record equipment and process failures, notify maintenance personnel, generate and track work orders, maintain preventative maintenance schedules, generate repair history, and maintain parts inventory and asset management.

Mobile Enforcement Equipment: This may consist of one or multiple equipment configurations such as a personal digital assistant (PDA) unit that can link in real time to the CSC for account information or it can be configured as a mobile enforcement reader (MER) that is installed in an enforcement vehicle and allows an enforcement officer to check an adjacent vehicle for (1) the presence of a valid transponder and (2) the time of the last transponder read, or it can be a combination of the two equipment configuration.

Optical Character Recognition (OCR): A software process that recognizes characters which, in this application, extracts the license plate numbers from the image of the license plate.

Optical Plate Recognition (OPR): A software process that recognizes license plate characteristics, as well as the license plate characters which, in this application, extracts the license plate numbers from the image of the license plate as well as any "specialty plate configurations" for proper identifications with DHSMV or others.

Redundant Zone Controller: The in-lane processor linked to all of the peripheral lane equipment used to detect and capture vehicle and transponder data in the toll zone. The zone controller is networked directly with the corridor server and provides both transaction data and equipment status and alarm messages to the central computer and MOMs via the corridor server. A redundant or duplicated controller provides high system availability and minimizes the amount of lost revenue due to controller down time.

SPC Gantry: Single Pole Cantilever gantry for mounting the toll collection and VTMS equipment.

SPC-1: Single Pole Single Side Cantilever

SPC-2: Single Pole Double Side Cantilever

System: The software and hardware procured, furnished, and installed under Contract that meets the functional and operational requirements specified.

System Tests: All tests conducted on the system to ensure and verify system reliability, accuracy, performance and auditability. Typically they include the Factory Acceptance (functional compliance) Test, Commissioning (Installation/operational readiness) Test, Operational (verification of accuracy, reliability and performance) Test and Segment Test (i.e. an operational test conducted on each road segment prior to collection of revenue).

Uninterruptible Power Supply (UPS): A battery backup power system in the event utility power becomes unavailable.

Variable Toll Message Sign (VTMS): Digital electronic message sign that provides toll rate information to the traveling public. For some applications the VTMS provides both toll rate information and estimated travel times to the next exits.

Violation Enforcement System (VES): Digital video or still image based system located at toll lanes used to record license plate images of selected vehicles (to be defined in the Business Rules) in digital video or still image form. Typically consists of a high resolution camera with supplemental lighting to capture images in the travel lane and a lower resolution camera with supplemental lighting to capture images in the shoulder.

Video Audit System (VAS): System with cameras generally located at each gantry/toll zone area that permits remote viewing of vehicular events and images in real time or stored for review. System provides transaction event data overlaid on video for correlation of vehicle and transaction data. For this project this capability will be provided in a mobile configuration not at every toll zone

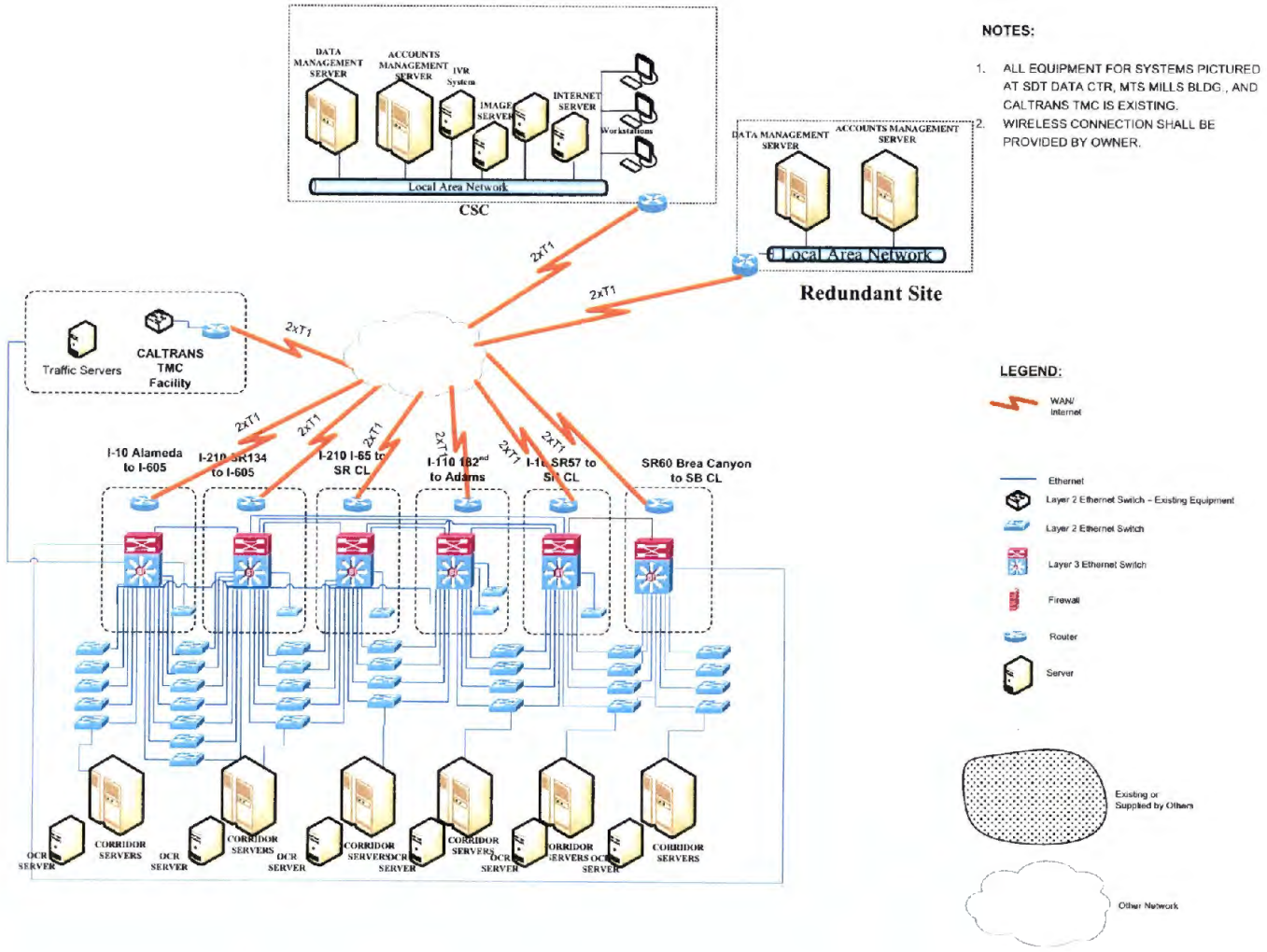
Violation Processing Center (VPC): Contains infrastructure equipment, software, and services required to establish and maintain accounts, to support customers, to process violations and license plate images, to obtain correct name and addresses, and to prepare customer billing notification for video tolling and violation enforcement according to established Business Rules.

VToll: A transaction that was a non-AVI transaction at the time it was created at the lane but after image review process the license plate was determined to belong to a video based customer and the violation was converted to a video toll transaction and posted to the customer account accordingly.

WAN: Wide Area Network

CORRIDOR Toll Collection System – Fiber Optics / Communications Network Overview

Assumptions:
1. There is existing fiber optic communications in each of the corridors. Additional fibers connecting corridors to a toll operations center will be required.
2. There are some transit centers on each corridor that will host the Layer 3 Switch and Servers.
3. Leased communication from telephone companies is another communications alternative.



Initial Concept Estimate for Toll Operations and Maintenance

The following is a cost estimate for the operations and maintenance costs associated with toll collection for the Los Angeles Region Express Lanes project.

Toll Operations

These cost estimates include the costs for toll operations including toll patron customer service and violations processing.

For the purposes of this cost model and given the limited data available for the project, HNTB built the cost estimates for toll operations based on the transaction volumes developed by HNTB for the revenue estimates. Using industry data and HNTB's experience with other toll agencies, costs for toll operations were developed from these estimates. The following assumptions and considerations should be noted.

- Estimate is for conceptual planning purposes only and does not represent investment grade projections. Given the very limited data, this estimate is sketch level only.
- Toll Operating costs include:
    - Customer service center (CSC) and account management for both revenue accounts and non-revenue accounts.
        - Revenue accounts include SOV, HOV2 and where applicable, HOV3
        - Non-Revenue accounts include HOV4 and greater, plus HOV3 where applicable
        - Non-revenue accounts are assumed to require only 30% of the effort of revenue accounts
        - Includes activities such as account creation, billing, account management, dispute resolution, account closing
    - Violation processing center (VPC) including:
        - Violation image review for license plate identification
        - License plate look-up
        - Violation noticing and collection
- Operating Segment 1-1, 1-2 and 1-3 open in 2010, all other segments 2012.
- Operating cost estimates are based on the projected labor (full time employee equivalents) required based on an estimated number of customer accounts. The number of accounts are based on assumptions regarding traffic characteristics including:
    - 85% commuter, 15% occasional users
    - Average patron drives on 1.5 operating segments per trip
    - 80% of the patrons will use home transponders
    - Each account will average 1.8 transponders
    - Based on these rough initial assumptions, there will be 1.8 million accounts in 2010, ramping up to 3.2 million in 2012 (Note this is highly dependent on the traffic assumptions and easily subject to wide variation as more data is available.)
- Direct costs for CSC/VPC office space, utilities, security and janitorial services estimated on a per employee basis.

- Direct costs for fixed items such as communications, supplies and equipment as a lump sum.
- Credit card processing fees based on 2% of total revenue.
- Printing and postage based on estimated volumes of violation notices
- Network and database administration for the CSC/VPC system only
- Regular hardware and software maintenance for the CSC/VPC system only

In addition to the assumptions noted, the following observations/considerations should be made:

- The projected volume of transactions rivals the largest toll agencies in the U.S.
    - Projected toll operating costs for LA HOT lanes are in the "ballpark"
- There are no similar style HOT lanes projects of this magnitude to compare this project to, so in many ways, this is new ground.
    - Therefore it is difficult to quantify an "economy of scale"
- Operating costs could be reduced by agency operational decisions such as:
    - Requiring or maximizing use of credit card replenishment
    - Maximizing automated account opening and management via the internet or automated telephone

Toll Maintenance and Renewal and Replacement (R&R)

The cost for the maintenance of toll collection equipment can be summarized by costs for routine maintenance of roadside equipment and renewal and replacement (R&R) costs.

Routine maintenance would include preventative and corrective maintenance generally performed on a regular basis using third-party contracted services per lane of equipment for a monthly or annual fee. Cost is estimated per equivalent lane of equipment.

R&R costs are the non-routine replacement costs that occur on a less frequent basis for the replacement of particular components as they become obsolete. In the toll industry, experience has shown that equipment is generally considered for replacement within 7-10 years. Note that the costs presented are only for equipment replacement and do not include major system re-design or conversions that would be handled in a long term capital program. The costs also assume no significant infrastructure modifications, only equipment replacement in place. Cost is estimated per equivalent lane of equipment.

The following page provides the first draft of the estimated toll operations and maintenance costs for the project.

Draft Conceptual Estimate of Toll Operations and Maintenance Costs
(2008 dollars)

	Toll Operations (Customer Service and Violations)	Toll Roadside Equipment Maintenance	Toll Roadside Equipment Replacement	Total
2010	$ 50,000,000	$ 465,000		$ 50,465,000
2011	$ 50,000,000	$ 465,000		$ 50,465,000
2012	$ 81,000,000	$ 1,290,000		$ 82,290,000
2013	$ 82,000,000	$ 1,290,000		$ 83,290,000
2014	$ 82,000,000	$ 1,290,000		$ 83,290,000
2015	$ 83,000,000	$ 1,290,000		$ 84,290,000
2016	$ 83,000,000	$ 1,290,000		$ 84,290,000
2017	$ 84,000,000	$ 1,290,000		$ 85,290,000
2018	$ 84,000,000	$ 1,290,000		$ 85,290,000
2019	$ 85,000,000	$ 1,290,000		$ 86,290,000
2020	$ 85,000,000	$ 1,290,000	$ 8,600,000	$ 94,890,000
2021	$ 85,000,000	$ 1,290,000		$ 86,290,000
2022	$ 86,000,000	$ 1,290,000		$ 87,290,000
2023	$ 86,000,000	$ 1,290,000		$ 87,290,000
2024	$ 87,000,000	$ 1,290,000		$ 88,290,000
2025	$ 87,000,000	$ 1,290,000		$ 88,290,000
2026	$ 88,000,000	$ 1,290,000		$ 89,290,000
2027	$ 88,000,000	$ 1,290,000	$ 8,600,000	$ 97,890,000
2028	$ 89,000,000	$ 1,290,000		$ 90,290,000
2029	$ 89,000,000	$ 1,290,000		$ 90,290,000
2030	$ 90,000,000	$ 1,290,000		$ 91,290,000
2031	$ 90,000,000	$ 1,290,000		$ 91,290,000
2032	$ 90,000,000	$ 1,290,000		$ 91,290,000
2033	$ 91,000,000	$ 1,290,000		$ 92,290,000
2034	$ 91,000,000	$ 1,290,000	$ 8,600,000	$ 100,890,000
2035	$ 92,000,000	$ 1,290,000		$ 93,290,000
2036	$ 93,000,000	$ 1,290,000		$ 94,290,000
2037	$ 93,000,000	$ 1,290,000		$ 94,290,000
2038	$ 94,000,000	$ 1,290,000		$ 95,290,000
2039	$ 94,000,000	$ 1,290,000		$ 95,290,000
2040	$ 95,000,000	$ 1,290,000		$ 96,290,000
2041	$ 95,000,000	$ 1,290,000	$ 8,600,000	$ 104,890,000
2042	$ 96,000,000	$ 1,290,000		$ 97,290,000
2043	$ 96,000,000	$ 1,290,000		$ 97,290,000
2044	$ 96,000,000	$ 1,290,000		$ 97,290,000
2045	$ 97,000,000	$ 1,290,000		$ 98,290,000
2046	$ 97,000,000	$ 1,290,000		$ 98,290,000
2047	$ 98,000,000	$ 1,290,000		$ 99,290,000
2048	$ 98,000,000	$ 1,290,000		$ 99,290,000
2049	$ 99,000,000	$ 1,290,000		$ 100,290,000

Key Assumptions

Toll Revenue Assessment

Los Angeles Region Express Lanes

1. Table 1 summarizes the assumed average daily traffic (ADT) volumes for the HOV lanes on each segment. These volumes were drawn from a sampling of publicly-available PeMS data.

Table 1 – ADT's on HOV Segments, 2008

Operating Segment	Weekday Volume		Saturday Volume		Sunday Volume	
	EB*	WB**	EB*	WB**	EB*	WB**
1-1	12,600	14,700	14,700	17,900	10,200	14,800
1-2	13,200	15,000	16,900	16,500	12,100	14,900
1-3	28,700	41,200	27,600	41,600	21,800	41,700
2-4	12,800	12,300	15,100	15,200	11,300	13,700
2-5	11,100	13,500	14,700	15,300	10,400	14,800
2-6	11,600	12,400	14,000	14,200	10,300	11,800
2-7	11,600	12,400	14,000	14,200	10,300	11,800
2-8	12,800	12,300	15,100	15,200	11,300	13,700

**NB for OS 1-3 (I-110)*

***SB for OS 1-3 (I-110)*

No HOV data was available for operating segments 2-7 and 2-8, since their construction is not complete. Therefore, it was assumed that operating segment (OS) 2-7 had the same ADT as OS 2-6, and that OS 2-8 had the same ADT as OS 2-4.

The data for OS 1-3 (I-110) was drawn from the portion of the roadway with 4 HOV lanes.

2. Table 2 summarizes the composition of traffic that was assumed for each operating segment. These estimates were based on HOV occupancy data available from Caltrans' *2007 HOV Annual Report* for District 7. All operating segments within a particular numbered route were assumed to have the same composition. In other words:
    a. Operating segments 1-2 and 2-5 each had the same composition, since both were located on I-210.
    b. Operating segments 1-1, 2-4, and 2-8 each had the same composition, since all were located on I-10.
    c. Operating segments 2-6 and 2-7 each had the same composition, since both were located on SR-60.

Table 2 – Traffic Composition by Operating Segment

OS	Dir	HOV-2	HOV-3	HOV-4+	Vanpools	Buses	Motorcycles	Violators	Hybrids
1-1	EB	38.5%	30.2%	6.3%	3.3%	10.4%	3.2%	5.0%	3.2%
1-1	WB	38.5%	30.2%	6.3%	3.3%	10.4%	3.2%	5.0%	3.2%
1-2	EB	83.8%	7.0%	0.9%	1.1%	0.1%	2.7%	0.3%	4.2%
1-2	WB	85.2%	2.6%	0.5%	0.5%	0.2%	3.8%	0.4%	6.8%
1-3	NB	87.7%	1.2%	0.4%	1.2%	1.2%	1.5%	0.3%	6.6%
1-3	SB	84.9%	3.8%	1.5%	1.5%	1.0%	1.5%	0.7%	5.1%
2-4	EB	38.5%	30.2%	6.3%	3.3%	10.4%	3.2%	5.0%	3.2%
2-4	WB	38.5%	30.2%	6.3%	3.3%	10.4%	3.2%	5.0%	3.2%
2-5	EB	83.8%	7.0%	0.9%	1.1%	0.1%	2.7%	0.3%	4.2%
2-5	WB	85.2%	2.6%	0.5%	0.5%	0.2%	3.8%	0.4%	6.8%
2-6	EB	92.8%	2.2%	0.4%	0.9%	0.1%	2.6%	0.1%	0.9%
2-6	WB	87.5%	6.6%	1.5%	0.6%	0.3%	1.3%	0.0%	2.3%
2-7	EB	92.8%	2.2%	0.4%	0.9%	0.1%	2.6%	0.1%	0.9%
2-7	WB	87.5%	6.6%	1.5%	0.6%	0.3%	1.3%	0.0%	2.3%
2-8	EB	38.5%	30.2%	6.3%	3.3%	10.4%	3.2%	5.0%	3.2%
2-8	WB	38.5%	30.2%	6.3%	3.3%	10.4%	3.2%	5.0%	3.2%

3. Hourly profiles were developed for existing HOV traffic for each operating segment. These profiles took the ADT volumes and distributed them throughout the day. The distribution was based on hourly data available from the PeMS system.

4. The hourly volumes were then increased by 33% in order to account for the projected increase in both single-occupant vehicles (SOV's) and violators. These new hourly volumes will hereafter be referred to as "Express Lane volumes".

5. The conversion from HOV to Express Lanes had the following effects on vehicle composition:
    a. The volumes of HOV-3, HOV-4, Transit, Exempt, and Hybrids were assumed to *not* change after the conversion to Express Lanes.
    b. SOV's comprised 25% of the Express Lane volumes.
    c. Violators comprised 10% of the Express Lane volumes.
    d. The volume of HOV-2's was assumed to decrease by approximately **16%**. This decrease may be attributed to the fact that these vehicles, which previously paid no toll, will now be required to pay a toll.

6. The Express Lanes were assumed to have a capacity of 1800 vehicles per lane per hour. If the projected Express Lane volumes for a particular segment exceeded 1800 vehicles, then the SOV volume was reduced. In other words, *SOV volumes will comprise less than 25% of peak-hour traffic if the lane is capacity-constrained.*

7. The following average rates per mile were assessed:
    a. SOV's were assumed to pay an average of **35¢ per mile** on weekdays and **15¢ per mile** on weekends.

b. HOV-2's were assumed to pay **35%** of the SOV rate (i.e. 12.3¢ per mile on weekdays and 5.3¢ per mile on weekends).
c. Hybrids were assumed to pay **15%** of the SOV rate (i.e. 5.3¢ per mile on weekdays and 2.3¢ per mile on weekends).
d. HOV-3's were assumed to pay **15%** of the SOV rate on operating segments 1-1, 2-4, and 2-8. All other operating segments were assumed to be toll-free for HOV-3's.
e. All other vehicle types were assumed to travel toll-free.

These estimates are based in part on existing traffic and revenue data obtained from the OCTA and SANDAG.

8. This revenue estimate did not include any revenue related to violators. That is to say, it does not include any potential revenue associated with:
   a. Violation penalties
   b. Violation administrative fees
   c. Account management fees
   d. Citation fines from the California Highway Patrol

   In other words, this revenue estimate focuses solely on toll revenue from valid transactions. It makes no estimate of revenue that could be recovered from violators or delinquent accounts.

9. Revenue was assumed to grow at a rate of 0.55% per year. This rate is consistent with projected traffic growth for the region's highways.

It is important to note that revenue growth for a dynamic tolling system can be extremely difficult to predict. For example:

- As overall traffic grows, congestion will build in the general purpose lanes. This will increase the value of the Express Lanes. As a result, tolls in the Express Lanes will rise (in order to maintain an appropriate level of service). This will tend to increase revenue.
- However, as traffic volumes grow, less capacity is available in the Express Lanes for single-occupant vehicles. This means that the vehicles that pay the most tolls will eventually be squeezed out of the Express Lanes. This will tend to decrease revenue.

In short, projected revenue is not simply a function of traffic growth. It is also a function of operating policy. Over time, it will likely be necessary to increase the tolls assessed to HOV-2's and HOV-3's in order to sustain revenue as well as to maintain an appropriate service level in the Express Lanes.

Key Results

Table 3 summarizes the revenue expected for 2010:

Table 3 – 2010 Revenue Summary (by vehicle type)

Operating Segment	Vehicle Type									
	SOV	HOV-2	HOV-3	HOV-4+	Vanpools	Buses	Hybrid	Cycles	Violators	Total
OS 1-1	11,550,187	4,303,501	1,849,649	0	0	0	194,030	0	0	17,897,367
OS 1-2	11,168,664	9,071,775	0	0	0	0	304,317	0	0	20,544,756
OS 1-3	24,038,228	22,586,092	0	0	0	0	750,111	0	0	47,374,431
OS 2-4	0	0	0	0	0	0	0	0	0	0
OS 2-5	0	0	0	0	0	0	0	0	0	0
OS 2-6	0	0	0	0	0	0	0	0	0	0
OS 2-7	0	0	0	0	0	0	0	0	0	0
OS 2-8	0	0	0	0	0	0	0	0	0	0
Total	46,757,079	35,961,368	1,849,649	0	0	0	1,248,458	0	0	85,816,553
Share of Total	54.5%	41.9%	2.2%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	

The following observations may be drawn from Table 3:

- A total of **$85.8 million** is expected to be generated in 2010.
- Only operating segments 1-1 through 1-3 are open in 2010. Therefore, no revenue is generated by operating segments 2-4 through 2-8.
- SOV's account for nearly 55% of the expected revenue.
- Hybrids are expected to generate about $1.3 million in revenue. If hybrids were not tolled, then the total expected revenue would fall to about $84.6 million.
- It should be noted that tolling of HOV-3's only occurs on I-10, which corresponds to operating segments 1-1, 2-4, and 2-8.

Table 4 summarizes the expected revenue for 2012, when operating segments 2-4 through 2-8 are completed.

Table 4 – 2012 Revenue Summary (by vehicle type)

Operating Segment	Vehicle Type									
	SOV	HOV-2	HOV-3	HOV-4+	Vanpools	Buses	Hybrid	Cycles	Violators	Total
OS 1-1	11,677,781	4,351,041	1,870,082	0	0	0	196,173	0	0	18,095,078
OS 1-2	11,292,043	9,171,990	0	0	0	0	307,679	0	0	20,771,712
OS 1-3	24,303,777	22,835,599	0	0	0	0	758,398	0	0	47,897,773
OS 2-4	5,271,786	1,724,205	740,739	0	0	0	77,433	0	0	7,814,164
OS 2-5	12,796,302	10,096,059	0	0	0	0	342,068	0	0	23,234,429
OS 2-6	6,819,127	5,566,699	0	0	0	0	50,351	0	0	12,436,176
OS 2-7	9,376,299	7,654,212	0	0	0	0	69,232	0	0	17,099,743
OS 2-8	7,907,679	2,586,307	1,111,108	0	0	0	116,150	0	0	11,721,245
Total	89,444,794	63,986,113	3,721,929	0	0	0	1,917,483	0	0	159,070,320
Share of Total	56.2%	40.2%	2.3%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	

The following observations may be drawn from Table 4:

- Overall revenue is expected to nearly double with the opening of the last five operating segments. The expected revenue for 2012 is **$159.1 million**.
- Operating segment 1-3 is expected to generate the most revenue, at **$47.9 million**. This is because OS 1-3 is a 4-lane facility for most of its length, and therefore is able to carry more vehicles per linear mile.
- Hybrids are expected to generate about $1.9 million in revenue. If they are left untolled, expected revenue would fall to $157.2 million.

Table 5 summarizes the annual vehicle-miles traveled for each vehicle type in 2012.

Table 5 – 2012 VMT Summary (by vehicle type)

Operating Segment	Vehicle Type									
	SOV	HOV-2	HOV-3	HOV-4+	Vanpools	Buses	Hybrid	Cycles	Violators	Total
OS 1-1	41,663,079	43,423,206	43,550,373	9,117,352	4,700,627	15,083,803	4,569,066	4,662,588	18,538,012	185,308,106
OS 1-2	39,826,504	91,774,375	5,970,223	878,950	1,019,967	160,005	7,179,010	4,190,206	16,798,458	167,797,699
OS 1-3	85,067,138	224,623,355	8,542,454	3,221,697	4,211,194	3,327,877	17,385,132	4,634,686	39,014,260	390,027,794
OS 2-4	18,683,674	17,342,819	17,385,457	3,638,314	1,871,575	6,024,681	1,817,584	1,861,664	7,633,187	76,258,953
OS 2-5	45,566,398	101,744,592	6,487,677	965,856	1,109,498	167,362	8,041,778	4,677,297	18,780,411	187,540,869
OS 2-6	23,863,794	55,523,848	3,213,634	672,888	532,239	133,379	1,174,436	1,405,571	9,623,296	96,143,085
OS 2-7	32,812,716	76,345,291	4,418,747	925,221	731,829	183,396	1,614,850	1,932,661	13,232,032	132,196,741
OS 2-8	28,025,510	26,014,228	26,078,186	5,457,471	2,807,363	9,037,021	2,726,376	2,792,496	11,449,780	114,388,430
Total	315,508,813	636,791,714	115,646,752	24,877,749	16,984,292	34,117,525	44,508,231	26,157,169	135,069,435	1,349,661,678
Share	23%	47%	9%	2%	1%	3%	3%	2%	10%	

By comparing Table 4 with Table 5, the following observations may be made:

- SOV's only contribute about 23% of the traffic, but they generate nearly 56% of the revenue.
- HOV-2's contribute nearly equal shares of traffic (47%) and revenue (40%).
- About 78% of all vehicles in the HOV lanes are tolled.
    - 23% are tolled at the "full" rate (SOV's).
    - 47% are tolled at the "35% rate" (HOV-2's).
    - 8% are tolled at the "15% rate" (hybrids and the HOV-3 vehicles on OS 1-1, 2-4, and 2-8).

Table 6 summarizes the growth of expected revenue over time. It contains 2 columns—one assuming that hybrids are tolled and another assuming that hybrids are untolled. As noted earlier, **this is a planning-level estimate only**. Actual growth is difficult to project without an understanding of the flexibility to adjust tolling policy over time.

Table 6 –Expected Express Lane System Revenue, 2010 through 2040

Year	Revenue (in millions)	
	Hybrids Tolled	Hybrids Untolled
2010	$ 85.8	$ 84.6
2011	$ 86.3	$ 85.0
2012	$ 159.1	$ 157.2
2013	$ 159.9	$ 158.0
2014	$ 160.8	$ 158.9
2015	$ 161.7	$ 159.8
2016	$ 162.6	$ 160.6
2017	$ 163.5	$ 161.5
2018	$ 164.4	$ 162.4
2019	$ 165.3	$ 163.3
2020	$ 166.2	$ 164.2
2021	$ 167.1	$ 165.1
2022	$ 168.1	$ 166.0
2023	$ 169.0	$ 166.9
2024	$ 169.9	$ 167.9
2025	$ 170.8	$ 168.8
2026	$ 171.8	$ 169.7
2027	$ 172.7	$ 170.7
2028	$ 173.7	$ 171.6
2029	$ 174.6	$ 172.5
2030	$ 175.6	$ 173.5
2031	$ 176.6	$ 174.4
2032	$ 177.5	$ 175.4
2033	$ 178.5	$ 176.4
2034	$ 179.5	$ 177.3
2035	$ 180.5	$ 178.3
2036	$ 181.5	$ 179.3
2037	$ 182.5	$ 180.3
2038	$ 183.5	$ 181.3
2039	$ 184.5	$ 182.3
2040	$ 185.5	$ 183.3

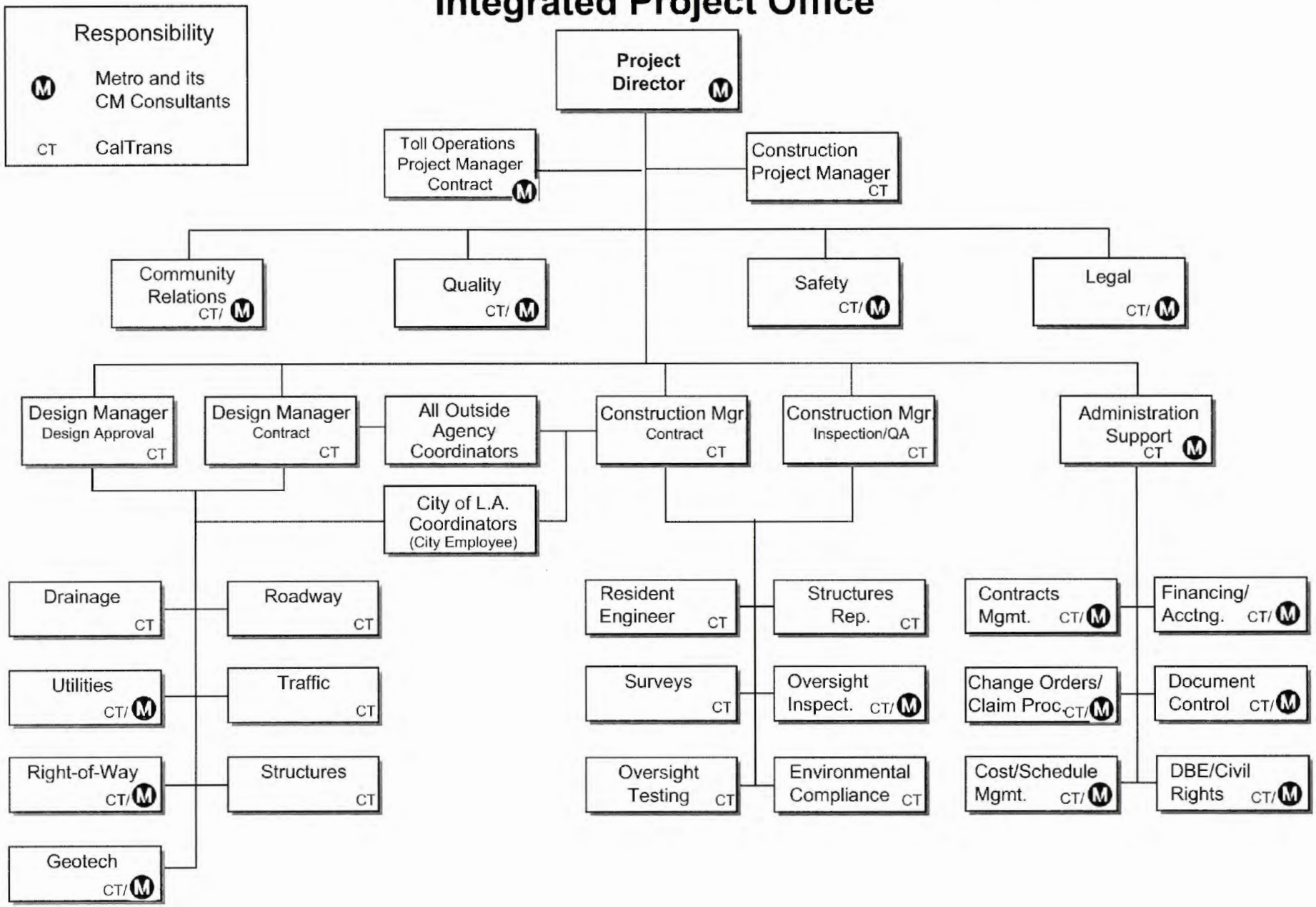
A sensitivity analysis was also performed for two key variables—the acceptable capacity of the Express Lanes, and the relative fares charged to HOV-2's, HOV-3's, and hybrids. This was not an exhaustive analysis; it was simply intended to understand the degree to which revenue depends on these two factors. Here is what the analysis indicated:

- **Variable #1 – Change Relative Rates.** A scenario was considered in which (a) HOV-2's were charged 50% of the SOV rate (up from 35% in the initial analysis); (b) hybrids were charged 33% of the SOV rate (up from 15%); and (c) HOV-3's on I-10 were charged 33% of the SOV rate (also up from 15%). This scenario was estimated to **increase** revenue by **20-25%**.
- **Variable #2 – Reduce Capacity of Express Lanes.** A scenario was considered in which the capacity of the Express Lanes was reduced from 1800 vehicles per hour per lane (vphpl) down to 1650 vphpl. This scenario was estimated to **reduce** revenue by **4-7%**.

Appendix C

Los Angeles Region Express Lanes
Metro/Caltrans Organization Chart

Los Angeles Region Express Lanes Project
Integrated Project Office



March 31, 2008

Appendix D

Los Angeles Region Express Lanes
Comparisons to Other Express Lanes

Table 9 - Comparison of Proposed Los Angeles Region Express Lanes Project with Other Express Lanes

Essential Characteristics for Express Lane Success	I-15 (San Diego, CA)	SR-91 (Orange County CA)	I-394 (Minneapolis)	I-680 (Alameda County, CA)	Los Angeles Region Express Lanes Project
General Description	Expansion of SANDAG's FasTrak road pricing program by creating a 20-mile managed lanes facility in the median of I-15 between SR 163 and SR 78. The I-15 FasTrak Program allows solo drivers to pay a per-trip fee to use the existing high occupancy vehicle (HOV) lanes Multiple access points to and from regular highway lanes	SR 91 in California was the first fully automated toll road in the world and the first toll road in the United States to vary tolls by the level of congestion on the roadway. Motorists that choose to use the lanes are notified of the current toll well in advance of the facility via electronic message signs. The tolls are paid exclusively through electronic toll collection. Users of the facility must have an account and a transponder.	MnPASS is envisioned to be a system of express toll lanes using ETC. State legislation approved in 2003 allows conversion of the I-394 HOV lanes to HOT lanes. The I-394 HOV lanes are 11 miles in length and include a three-mile barrier separated reversible section and eight miles of concurrent flow HOV lanes.	Bay Area's first toll lane project. 14-mile stretch of southbound I-680 over the Sunol Grade. 11 miles in Alameda County, 3 miles in Santa Clara County The I-680 HOT lane project will convert the 14-mile HOV section from Hwy 84 in the north to Hwy 237 in the south into a HOT.	The conversion of existing High Occupancy Vehicle (HOV) lanes to Express Lanes along Interstate 10 (El Monte Busway), Interstate 210 (from Interstate 605 to Interstate 710) and Interstate 110 (Harbor Freeway Transitway) as part of a first phase. A second operating segment would include the conversion of HOV lanes to Express Lanes on three major freeway corridors east of Interstate 605 to the San Bernardino County line. These corridors are State Route 60 (under construction), Interstate 10 (in design), and Interstate 210 (existing).
Costs	The total cost for the freeway improvements, including expansion of FasTrak and the transit elements of the I-15 Managed Lanes, is estimated to be approximately $1.1	Total annualized costs of operation and amortization of the Express Lanes infrastructure were estimated at $3-5 million. OCTA purchased the	Capital Costs $10,682,800 O, M &W - 1st Year $1,800,000 Enforcement $200,000	Annual cost of the proposed HOT lane comprises: Capital cost at $2.2M / mile or $30.8M O&M cost at $70K /	Costs are estimated at $43.3 million for Operating Segment 1 and $74.8 million for Operating Segment 2, for a total of $119.1 million. Escalated to midyear of construction for each year

	billion in current dollars	SR 91 from the private consortium for $207 million plus financed the remaining debt.	Evaluation $300,000 Total $12,982,800	mile /year	(3.0%) per year.
Revenue	The FasTrak revenue pays for approximately $750,000 per year in operating costs and $60,000 for enforcement provided by the California Highway Patrol. State law requires the remaining revenue to be spent improving transit service along the I-15 corridor.	Tolls are $1.20 to $10.00. Annual toll revenues were $53 million by year 2007. Rte 91 is 10 miles long with two ingress points and only one egress. So average trip length is 10 miles. Effective FY 2007, ending June 30, 2007, their gross potential revenue divided by total gross trips was $2.77 Rte. 91 is variable congestion pricing with a pre-determined price based on volume and time of day Rates range from $1.20 (off peak) to $10.00 HOV3s are free except for 4pm - 6pm when they pay 50% of posted rate.	When the project was modeled it was estimated revenue would start in the range $2m to $2.5m maturing at $3m to $3.5m. Annual revenue in fact is running at just under half forecast - at just a bit over $1m. In part the project seems to be a victim of its own success in managing traffic. By acting as a safety valve for traffic in the peak of the peak the managed lanes have so improved traffic flows in the free lanes there isn't the incentive they expected to use the toll lanes	The projection is for first-year revenues in a range of $6.3 to $14.7 million. The operations cost to administer the lanes is estimated to be $1.1 million. Under full implementation in both directions, the net revenue estimate (gross revenues minus cost) over a 20-year period is between $83 and $228 million.	With the implementation of Operating Segment 1, the first year (2010) revenues are estimated at $85.8 million. With the implementation of Operating Segment 2, the 2012 revenues are estimated at $159.1 million. (Assumes tolling of hybrids. Revenues are slightly less of hybrids are exempt from tolls)
Project length, miles	20	10	11	14	86 (183 lane miles)
Project Phase (in operation,	In operation. An extension is planned	In operation	I-394 MnPASS express lanes open	Opening scheduled for early 2010.	In planning phase. Operational Segment 1

in design, in planning stage, etc.			in 2005-		scheduled to open in 2010; Operational Segment 2 scheduled to open in 2012.
Existence of HOV lane in corridor	Existing HOV lanes in median	Four new lanes in median Two lanes are provided in each direction, separated from the main line by plastic pylons and a painted buffer	Two general-purpose (GP) lanes in each direction and an adjacent inside HOV lane. Conversion of existing HOV lanes to HOT lanes.	Conversion	Existing HOV lanes would be converted to Express Lanes in these corridors
Free flow conditions in HOV lane and congested flow in general purpose lanes (existing or forecast in near terms)	The Average Daily Traffic (ADT) on the I-15 freeway corridor today ranges from 170,000 to 290,000 vehicles, with daily commute delays ranging from 30-45 minutes on the mainline Traffic delays will increase as the regional economy and populations expand along the corridor. By 2020, average volumes are expected to approach 380,000 vehicles per day on the corridor, with commute delays ranging from 80 to 90 minutes on the mainline if no transportation improvements are implemented	The express lanes were built within what had been one of the most heavily congested freeway corridors of California, with typical peak period delays of 30-40 minutes on the mainline. The toll lanes have attracted a substantial share of the traffic using the SR 91 corridor. Since opening day, toll lane use has grown steadily. By the end of June 1997, the total two-way ADT in the toll lanes was approaching 30,000 vehicles per day (about 13% of the total SR 91 ADT) and weekend toll lane ADT had reached 17,000 vehicles, with both	Existing facilities have peak period congestion in the general-purpose lanes. Congestion tops list of Minneapolis Metro Area concerns, and the general purpose lanes on Interstate 394 are congested while the HOV lanes are underutilized, even during the peak period	I-680 daily traffic ranged from 138,000 to 164,000. The corridor became the most congested in the entire Bay Area. 2000 forecasts assuming HOV lanes in place calculated HOV-only volume between 1093 vph and 1428 vph.	The current ADT on each of the Express Lanes corridors (all lanes) ranges from 226,000 to 331,000. The current HOV lanes improve travel times over the General Purpose Lanes by 23% to 53%. But the HOV lanes are projected to slow down in the peak hours the near future. The planned Express lanes will improve travel times over the HOV lanes by 25% to 36% while maintaining a minimum 50 mph speed. Sufficient HOV lane capacity exists in the 24 hour period on all corridors except for the I-210 and I-10 corridors where dynamic congestion pricing and implementation

		volumes continuing to rise. The current number of vehicles in the express lanes is 40,000 per day. The increased capacity from adding two new toll lanes in each direction substantially reduced peak period freeway congestion on SR 91, giving short term travel time benefits to all commuters in the corridor. In the six months after opening of the express lanes, the typical PM peak trip delay on the freeway fell from 30-40 minutes to less than 10 minutes per trip.			of increased transit will create capacity to maintain free flow conditions.
Ability to manage volume and traffic flow in HOT lane (to maintain value of lane)	The number of daily carpools on the HOV lanes has increased from 7,700 to 15,463 (101 percent increase). Average daily traffic on the carpool lanes has increased from 9,400 to 20,116 vehicles per day (107 percent increase).	The toll rates are set according to level of congestion typically experienced on the roadway, thereby making travel during the peak periods the most expensive time to travel. Although, the facility is open 24 hours a day, seven days a week and tolls are charged at all	Variable toll rate set to ensure free-flow traffic in the HOT lanes for all users. I-394 minimum toll $ 0.25 with peak average $1 to $4 (max toll $8)	The toll would vary by time of day and day of the week. For example, it would be highest during the peak traffic period and lowest (if charged at all) during the night hours. The toll level can be adjusted	Tolls would be dynamically priced to maintain a Level of Service C, or a minimum of 50 mph, in the Express Lanes SOVs would be charged the highest toll rate with HOV2s charged a marginally lower rate. HOV3s would be exempt from the Toll except on the I-10 corridor where they

	The violation rate remains between five and fifteen percent. A combination of toll revenues and citation revenues (fees and forfeitures) are used to fund enforcement by the California Highway Patrol The I-15 FasTrakTM program has maximized the use of previously underutilized capacity on the HOV lanes. Demand for the program continues to grow, despite a leveling of traffic on the HOV lanes in the past 12 months. There are now 27,921 I-15 FasTrak customers	times, the operators use price in an attempt to shift vehicles out of the peak period. The facility is also managed to encourage travel in high occupancy vehicles. Carpools with three or more occupants, motorcycles, and vehicles with disabled person license plates are free at all times with the exception of the evening peak period in the peak direction, when HOVs are charged 50% of the posted toll. Zero-emission vehicles are charged. The OCTA Board of Directors of the SR 91 Express Lanes has implemented a toll policy that is based on an automatic CPI adjustment of the tolls. The lanes are continuously monitored and this data is used the make adjustments to the tolls as necessary to keep the facility free-flowing.		upward, or SMART usage could be suspended during times of exceptionally high demand, to make sure that the HOV lanes would continue to be free-flowing. The proposal for I-680 is for electronic toll collection. It would use the same technology as the FasTrak toll collection system now used on the Bay Area's bridges.	would be charged marginally less than HOV2s. Transit, emergency vehicles and motorcycles would be exempt. There is an option to either toll or not toll hybrids, depending on a potential change in state law regarding use of hybrids on HOV lanes.
Availability of physical	The Managed Lanes are being constructed	N/A	Five eastbound and six westbound	N/A	The Express Lanes System will use the

space for HOT lane improvements (signs, readers, buffer, enforcement, etc.)	mostly within the existing freeway median, though some outside widening is required. Managed Lane traffic may be configured using a movable barrier to accommodate the specific traffic demands throughout the day.		access points in the eight-mile concurrent flow section. SOVs able to use the lanes for a fee. Double white line buffer separating the adjacent GP lanes. Multiple mid-point access locations. Electronic toll collection system		existing HOV lanes in the corridors. The signs will be placed in the median barrier or in the shoulder lane. The existing HOV buffers will also be used for the Express Lanes. Signs will be placed so that both the General Purpose lane driver and the Express Lane driver can see them and make a decision to enter or exist the Express Lane
Public policy support (MPO, State DOT, local governments)	California Senate Bill 313, signed into law in September 2001, allows SANDAG to continue value pricing on I-15 indefinitely, subject to federal approval. California Assembly Bill 2032, signed into law in 2004, authorizes SANDAG to implement similar programs on two additional corridors in the region. I-15 commuters overwhelmingly support the project. I-15 FasTrak is a successful program that supports reduced	The idea of providing extra toll-financed lanes to bypass congestion was consistently popular among SR 91 commuters, receiving approval percentages in the 60-80% range. The approval percentages for toll lane users were 5-10% higher than for non-users.	In early 2003, the Governor supported the idea of converting the I-394 HOV lanes to tolled lanes. Legislation was approved in the spring of 2003 allowing the HOT project on the I-394 HOV lanes. In December 2003, the Governor and Congressman Kennedy introduced the FAST lanes concept. State leadership was engaged early and kept involved	57-60% initial support for HOT lane proposal. Minority level strong opposition initially. More information about HOT lane project and benefits increased level of support by 10%. 67-70% support following provision of additional information.	Metro has begun the stakeholder and public outreach process.

	travel time, reliability of on-time transit arrival, and improved traveler safety.		throughout the planning and design phases of the I-394 project. Several state legislators instrumental in passing the HOT lane legislation. An independent survey released through the State and Local Policy Program at the Humphrey Institute has found more than six out of every 10 Minnesotans living near I-394 like the idea of giving solo drivers the option of paying a toll to use the I-394 high occupancy vehicle (HOV) lane. The survey found strong support for converting the existing I-394 HOV lanes.		
Availability of alternatives to drive alone	An integral part of the Managed Lanes is the Bus Rapid Transit	In October 1995, two months before the express lanes opened,	Buses, carpools, vanpools, and motorcycles will	Toll revenues used for transit operations	Net toll revenues will be used to fund increased transit service in those

travel	(BRT) System -- a system of transit routes connecting residential areas with major employment centers along the corridor. Preferential access to the Managed Lanes will allow buses to provide high-speed, "rapid" service. Bus Rapid Transit Centers (BRTCs) are planned adjacent the freeway.	Metrolink commuter rail service began in the SR 91 corridor, directly parallel to the express lanes. An initial period of flat patronage was followed in September 1996 by a service and schedule adjustment, after which Metrolink patronage steadily increased. Currently, the commuter rail line enjoys a small but growing level of ridership. There is no indication that the express lanes had any effect on the development of commuter rail patronage in the corridor.	continue to use the HOV lanes for free.		corridors.
Linkage to parking policy at employment centers served by corridor	The stations will have "Park & Ride" lots for carpools and will be connected to the managed lanes by direct-access ramps, allowing buses and HOVs to quickly bypass freeway on-ramps. The BRT System provides needed transportation alternatives to single	Data on the utilization of park and ride lots convenient to SR 91 commuters show no widespread and consistent changes related to opening the express lanes. Usage trends for these ridesharing facilities vary greatly, probably due to a variety of local factors rather than the influence of the express lanes.	N/A	N/A	The City of Los Angeles' Downtown Parking Management Plan will link the Express Lanes to create a connected system of congestion pricing.

	occupancy vehicles and reduces demand and congestion on the corridor.				
Ability to finance start-up	Federal, state, regional and private sources will provide funding for this project.	N/A	N/A	N/A	LACMTA anticipates federal, state and local funding sources will provide funding for this project.
Ability to generate sufficient revenue to pay for capital, operations and maintenance, and centralized services	The program currently is fully funded from the toll revenues collected (approximately $2 million per year).	In April 1997, the California Private Transportation Company (CPTC), which operates the facility, issued its first annual report. The report states that the first year's toll revenues covered operating costs but only a small portion of amortized capital costs. However, CPTC predicted that traffic and revenue growth will lead to financial break-even by the end of 1998.	Preliminary revenue estimates - Initial annual gross revenues $2.0M - $2.5M At maturity, annual revenues $3.0M - $3.5M. Project is expected to recover its operating and maintenance costs. Project is expected to produce enough net revenue to amortize the construction costs in approximately 8 to 10 years.	Toll revenue will pay for: Operating and maintaining the toll facility; Building the I-680 northbound HOV lane and other HOV facilities; Transit service in the I-680 corridor.	Toll revenue will pay for: Operating and maintaining the toll facility; Increased transit services along the Express Lanes corridors
Support of implementing and operating organizations (State DOT, state and local law enforcement, etc.)	Caltrans and the San Diego Association of Governments (SANDAG) are working together on solutions.	The Orange County Transportation Authority (OCTA) and the Riverside County Transportation Commission (RCTC) are working together to improve travel along SR 91.	Increased enforcement through partnership with state and local enforcement agencies. Relying primarily on State Patrol.	Participants: ACTIA ACCMA Valley Transportation Authority Bay Area Toll Authority	Metro, in cooperation with and support of Caltrans, is implementing this program. Four subregional agencies and many local and state officials are involved in this process.

			Three methods: (1) Enforcement tag. Special transponders in police vehicles used to follow SOVs in HOT lane. Audible tone on enforcement tag if valid transponder is read for SOV; (2) Mobile reader. Mounted on police vehicle; (3) Enforcement beacons	Caltrans Federal Highway Administration Enforcement would be done through a combination of enhanced highway patrol and video surveillance.	

Appendix E

Los Angeles Region Express Lanes
Fact Sheets

Public Partnership Application - High Occupancy Toll Lanes

County: Los Angeles	RouteS: I-10, 1-210, I-110, SR 60	PPNO: 4135
Project Title: Los Angeles Region Express Lanes Project - Total Program		

We acknowledge the scope, cost, schedule, benefits, and information as identified on the attached application and project fact and funding sheets are true to the best of our knowledge and belief. We certify that funding sources cited are committed and expected to be available; the estimated costs represent full project funding, and the description of benefits is the best estimate possible.

Name:	Frank Flores	Date	March 31, 2008
Title:	Executive Officer, Programming and Policy Analysis		
Agency:	Los Angeles County Metropolitan Transportation Authority		

Public Partnership Application *for* High Occupancy Toll Lanes
Project Fact Sheet
Los Angeles Regional Express Lanes Project, Total Program

Lead Agency: Los Angeles County Metropolitan Transportation Authority (Metro) **Fact Sheet Date: 03/07/08**

Contact Person	Frank Flores		
Phone Number	(213) 922-2456	Fax Number	(213) 922-2476
Email Address	floresf@metro.net		

Project Information:

County	Caltrans District	PPNO *	EA *	Region/MPO/ TIP ID*	Route / Corridor *	Post Mile Back *	Post Mile Ahead *
Los Angeles	7	4135	27440K	LA0G092	I-10, 1-210, I 110, SR 60	var.	var.

* NOTE: PPNO & EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO. Route/Corridor & Post Mile Back/Ahead used for State Highway System.

Legislative Districts	Senate: 21, 22, 24, 25, 26, 28, 29, 30, and 32	Congressional: 26, 29, 31, 32, 33, 34, 35, 38 and 42
	Assembly: 44, 45, 46, 48, 49, 50, 51, 57, 58, 59, 60, and 61	
Implementing Agency (by component)	E&P (PA&ED): Caltrans	PS&E: Caltrans
	R/W: Caltrans	CON: Caltrans Toll Operations: Metro
Project Title	Los Angeles Regional Express Lane Project - Total Program	

Location - Project Limits - Description and Scope of Work (Provide a project location map on a separate sheet and attach to this form)
The conversion of existing High Occupancy Vehicle (HOV) lanes to Express Lanes along Interstate 10 (El Monte Busway), Interstate 210 (from Interstate 605 to Interstate 710) and Interstate 110 (Harbor Freeway Transitway) as part of a first phase. A second operating segment would include the conversion of HOV lanes to Express Lanes on three major freeway corridors east of Interstate 605 to the San Bernardino County line. These corridors are State Route 60 (under construction), Interstate 10 (in design), and Interstate 210 (existing).

Description of Major Project Benefits

Travel speeds improvement in corridor	The current ADT on the Express Lanes corridors (all lanes) ranges form 226,000 to 331,000. The current HOV lanes improve travel times over the General Purpose Lanes by 23% to 53%. But the HOV lanes are projected to slow down in the peak hours the near future. The planned Express lanes will improve travel times over the HOV lanes by 25% to 36% while maintaining a minimum 50 mph speed.
Other related benefits:	Increased mobility, improved air quality and revenue generation for transit. Also, increase in auto occupancy; encouragement of transit use; increased throughput of HOV system.

Corridor System Management Plan (I-210 only) Month/Year

Lead Agency: Caltrans in cooperation with Metro

Plan Adoption Date: Caltrans is preparing Corridor System Mgt Plans on the following routes first: 210, 405, 5, and 101 Dec-08

Plan Implementation Date: The I-10, I-110 and SR 60 corridor plans are not scheduled at this time Jun-09

Expected Source(s) of Additional Funding if the Current Funding Plan Proves Insufficient

Metro Sales Tax Revenues and/or Toll Revenue Bonds

Project Delivery Baseline (Milestones)		Month/Year - OS 1	Month/Year - OS 2
Begin Environmental Phase (PA&ED)		Jun-08	Jun-10
Draft Environmental Document Milestone	Document Type: Negative Declaration	Dec. 08	Dec-10
Draft Project Report Milestone		Dec-08	Dec-10
End Environmental Phase (PA&ED Milestone)		Jun-09	Jun-11
Begin Design Phase		Jun-09	Jun-11
End Design Phase (Plans, Specifications, and Estimates Milestone)		Dec-09	Dec-11
Begin Right-of-Way		Jun-09	Jan-11
End Right-of-Way (Right-of-way Certification Milestone)		Dec-09	Dec-11
Begin Construction Phase		Apr-10	Apr-12
End Construction Phase (Construction Contract Acceptance Milestone)		Dec-10	Dec-12
Begin Closeout Phase		Dec-10	Dec-12
End Closeout Phase (Closeout Report Milestone)		Jun-11	Jun-13

Public Partnership - HOT Lane Application
Project Fact Sheet - Project Cost and Funding Plan
(dollars in thousands and escalated)
Shaded fields are automatically calculated. Please do not fill these fields.

				Date: 7-Mar-08
County	CT District	PPNO *	EA*	Region/MPO/TIP ID *
Los Angeles	7	4135	27440K	LA0G092
Project Title:	Los Angeles Regional Express Lane Project - Total Program			

* NOTE: PPNO and EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO

Proposed Total Project Cost								Project
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)	0	0	10	3	0	0	0	13
PS&E	0	0	14	0	7	0	0	21
R/W SUP (CT) *	0	0	0	0	0	0	0	0
CON SUP (CT) *	0	0	0	0	0	0	0	0
R/W	0	0	0	0	0	0	0	0
CON	0	0	0	36	0	49	0	85
TOTAL	0	0	24	39	7	49	0	119

Funding Source:	Federal Funds (Federal Congestion Pricing Grant and other federal grants)							
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)			8	2				10
PS&E			10		5			15
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON				30		40		70
TOTAL	0	0	18	32	5	40	0	95

* NOTE: R/W SUP and CON SUP to be used only for projects implemented by Caltrans

Funding Source:	State/Local (State Funds for project development and Local Funds for construction)							
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)			2	1				3
PS&E			4		2			6
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON				6		9		15
TOTAL	0	0	6	7	2	9	0	24

Funding Source:								
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:								
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Shaded fields are automatically calculated. Please do not fill these fields.

Public Partnership - HOT Lane Application
Project Fact Sheet - Project Cost and Funding Plan
(dollars in thousands and escalated)

Shaded fields are automatically calculated. Please do not fill these fields.

				Date: 7-Mar-08
County	CT District	PPNO *	EA*	Region/MPO/TIP ID *
Los Angeles	7	4135	27440K	LA0G092
Project Title:	Los Angeles Regional Express Lane Project - Total Program			

* NOTE: PPNO and EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Shaded fields are automatically calculated. Please do not fill these fields.

Public Partnership Application - High Occupancy Toll Lanes

County: Los Angeles	**Route:** I-10	**PPNO:** 4135
Project Title: Los Angeles Region Express Lanes Project		

We acknowledge the scope, cost, schedule, benefits, and information as identified on the attached application and project fact and funding sheets are true to the best of our knowledge and belief. We certify that funding sources cited are committed and expected to be available; the estimated costs represent full project funding, and the description of benefits is the best estimate possible.

Name:	Frank Flores	Date	March 31, 2008
Title:	Executive Officer, Programming and Policy Analysis		
Agency:	Los Angeles County Metropolitan Transportation Authority		

Public Partnership Application
for High Occupancy Toll Lanes
Project Fact Sheet
Los Angeles Regional Express Lanes Project, I-10

Lead Agency: Los Angeles County Metropolitan Transportation Authority (Metro) **Fact Sheet Date: 03/07/08**

Contact Person	Frank Flores		
Phone Number	(213) 922-2456	Fax Number	(213) 922-2476
Email Address	floresf@metro.net		

Project Information:

County	Caltrans District	PPNO *	EA *	Region/MPO/ TIP ID*	Route / Corridor *	Post Mile Back *	Post Mile Ahead *
Los Angeles	7	4135	27440K	LA0G092	I-10	18	48

* NOTE: PPNO & EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO. Route/Corridor & Post Mile Back/Ahead used for State Highway System.

Legislative Districts	Senate: 21, 22, and 24	Congressional: 29, 32, and 34
	Assembly: 45, 46, and 49	
Implementing Agency (by component)	E&P (PA&ED): Caltrans	PS&E: Caltrans
	R/W: Caltrans	CON: Caltrans Toll Operations: Metro
Project Title	Los Angeles Regional Express Lane Project - I-10	

Location - Project Limits - Description and Scope of Work (Provide a project location map on a separate sheet and attach to this form)
Conversion of High Occupancy Vehicle (HOV) lanes to High Occupancy Toll (HOT) lanes on I-10 from Alameda St/Union Station to San Bernardino County Line. This corridor will be built in two operating segments: Operating Segment 1 (OS 1) on I-10 from Alameda St/Union Station to I-605 and Operating Segment 2 (OS 2) on I-10 from SR57 to San Bernardino County Line.

Description of Major Project Benefits

Travel speeds improvement in corridor	During peak period, HOV lanes on I-10 currently provide a 46% improvement in travel time over general purpose lanes at an average speed of 35 mph. This project will maintain a minimum 50 mph speed on the HOV lanes, a 30% improvement, thereby improving their relative advantage.
Other related benefits:	Increased mobility, improved air quality and revenue generation for transit. Also, increase in auto occupancy; encouragement of transit use; increased throughput of HOV system.

Corridor System Management Plan		Month/Year
Lead Agency:	Caltrans in cooperation with Metro	
Plan Adoption Date:	Caltrans is preparing Corridor System Mgt Plans on the following routes first: 210, 405, 5, and 101	
Plan Implementation Date:	The I-10 corridor plan is not scheduled at this time	

Expected Source(s) of Additional Funding if the Current Funding Plan Proves Insufficient

Metro Sales Tax Revenues and/or Toll Revenue Bonds

Project Delivery Baseline (Milestones)		Month/Year - OS 1	Month/Year - OS 2
Begin Environmental Phase (PA&ED)		Jun-08	Jun-10
Draft Environmental Document Milestone	Document Type: Negative Declaration	Dec. 08	Dec-10
Draft Project Report Milestone		Dec-08	Dec-10
End Environmental Phase (PA&ED Milestone)		Jun-09	Jun-11
Begin Design Phase		Jun-09	Jun-11
End Design Phase (Plans, Specifications, and Estimates Milestone)		Dec-09	Dec-11
Begin Right-of-Way		Jun-09	Jan-11
End Right-of-Way (Right-of-way Certification Milestone)		Dec-09	Dec-11
Begin Construction Phase		Apr-10	Apr-12
End Construction Phase (Construction Contract Acceptance Milestone)		Dec-10	Dec-12
Begin Closeout Phase		Dec-10	Dec-12
End Closeout Phase (Closeout Report Milestone)		Jun-11	Jun-13

Public Partnership - HOT Lane Application
Project Fact Sheet - Project Cost and Funding Plan
(dollars in thousands and escalated)
Shaded fields are automatically calculated. Please do not fill these fields.

				Date: 7-Mar-08
County	CT District	PPNO *	EA*	Region/MPO/TIP ID *
Los Angeles	7	4135	27440K	LA0G092
Project Title:	Los Angeles Regional Express Lane Project - I-10			

* NOTE: PPNO and EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO

Proposed Total Project Cost								Project
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)	0	0	4	0	0	0	0	4
PS&E	0	0	7	0	0	0	0	7
R/W SUP (CT) *	0	0	0	0	0	0	0	0
CON SUP (CT) *	0	0	0	0	0	0	0	0
R/W	0	0	0	0	0	0	0	0
CON	0	0	0	12	0	15	0	27
TOTAL	0	0	11	12	0	15	0	38

Funding Source:	Federal Funds (Federal Congestion Pricing Grant and other federal grants)							
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)			3					3
PS&E			5					5
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON				10		12		22
TOTAL	0	0	8	10	0	12	0	30

* NOTE: R/W SUP and CON SUP to be used only for projects implemented by Caltrans

Funding Source:	State/Local (State Funds for project development and Local Funds for construction)							
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)			1					1
PS&E			2					2
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON				2		3		5
TOTAL	0	0	3	2	0	3	0	8

Funding Source:								
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:								
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Shaded fields are automatically calculated. Please do not fill these fields.

Public Partnership - HOT Lane Application
Project Fact Sheet - Project Cost and Funding Plan
(dollars in thousands and escalated)

Shaded fields are automatically calculated. Please do not fill these fields.

				Date: 7-Mar-08
County	CT District	PPNO *	EA*	Region/MPO/TIP ID *
Los Angeles	7	4135	27440K	LA0G092
Project Title:	Los Angeles Regional Express Lane Project - I-10			

* NOTE: PPNO and EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Shaded fields are automatically calculated. Please do not fill these fields.

Public Partnership Application - High Occupancy Toll Lanes

County: Los Angeles	**Route:** I-210	**PPNO:** 4135
Project Title: Los Angeles Region Express Lanes Project		

We acknowledge the scope, cost, schedule, benefits, and information as identified on the attached application and project fact and funding sheets are true to the best of our knowledge and belief. We certify that funding sources cited are committed and expected to be available; the estimated costs represent full project funding, and the description of benefits is the best estimate possible.

Name:	Frank Flores	Date	March 31, 2008
Title:	Executive Officer, Programming and Policy Analysis		
Agency:	Los Angeles County Metropolitan Transportation Authority		

Public Partnership Application *for* High Occupancy Toll Lanes
Project Fact Sheet
Los Angeles Regional Express Lanes Project, I-210

Lead Agency: Los Angeles County Metropolitan Transportation Authority (Metro) **Fact Sheet Date: 03/07/08**

Contact Person	Frank Flores		
Phone Number	(213) 922-2456	Fax Number	(213) 922-2476
Email Address	floresf@metro.net		

Project Information:

County	Caltrans District	PPNO *	EA *	Region/MPO/ TIP ID*	Route / Corridor *	Post Mile Back *	Post Mile Ahead *
Los Angeles	7	4135	27440K	LA0G092	I-210	25	58

* NOTE: PPNO & EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO. Route/Corridor & Post Mile Back/Ahead used for State Highway System.

Legislative Districts	Senate: 21, 24 and 29	Congressional: 26, 29 and 32
	Assembly: 44, 57, and 59	
Implementing Agency (by component)	E&P (PA&ED): Caltrans	PS&E: Caltrans
	R/W: Caltrans	CON: Caltrans Toll Operations: Metro
Project Title	Los Angeles Regional Express Lane Project - I-210	

Location - Project Limits - Description and Scope of Work (Provide a project location map on a separate sheet and attach to this form)
Conversion of High Occupancy Vehicle (HOV) lanes to High Occupancy Toll (HOT) lanes on I-210 from I-210/SR134/I-710 to San Bernardino County Line. This corridor will be built in two operating segments: Operating Segment 1(OS 1) on I-210 from I-210/SR 134/I-710 to I-605 and Operating Segment 2 (OS 2) on I-210 from I-210 South to San Bernardino County Line.

Description of Major Project Benefits

Travel time in corridor	During peak period, HOV lanes on I-210 currently provide a 36% improvement in travel time over general purpose lanes at an average speed of 35 mph. This project will maintain a 50 mph speed on the HOV lanes, a 30% improvement, thereby improving their relative advantage.
Other related benefits:	Increased mobility, improved air quality and revenue generation for transit. Also, increase in auto occupancy; encouragement of transit use; increased throughput of HOV system.

Corridor System Management Plan	Month/Year
Lead Agency: Caltrans in cooperation with Metro	
Plan Adoption Date:	Dec-08
Plan Implementation Date:	Jun-09

Expected Source(s) of Additional Funding if the Current Funding Plan Proves Insufficient

Metro Sales Tax Revenues and/or Toll Revenue Bonds

Project Delivery Baseline (Milestones)		Month/Year - OS 1	Month/Year - OS 2
Begin Environmental Phase (PA&ED)		Jun-08	Jun-10
Draft Environmental Document Milestone	Document Type: Negative Declaration	Dec. 08	Dec-10
Draft Project Report Milestone		Dec-08	Dec-10
End Environmental Phase (PA&ED Milestone)		Jun-09	Jun-11
Begin Design Phase		Jun-09	Jun-11
End Design Phase (Plans, Specifications, and Estimates Milestone)		Dec-09	Dec-11
Begin Right-of-Way		Jun-09	Jan-11
End Right-of-Way (Right-of-way Certification Milestone)		Dec-09	Dec-11
Begin Construction Phase		Apr-10	Apr-12
End Construction Phase (Construction Contract Acceptance Milestone)		Dec-10	Dec-12
Begin Closeout Phase		Dec-10	Dec-12
End Closeout Phase (Closeout Report Milestone)		Jun-11	Jun-13

Public Partnership - HOT Lane Application
Project Fact Sheet - Project Cost and Funding Plan
(dollars in thousands and escalated)
Shaded fields are automatically calculated. Please do not fill these fields.

				Date: 7-Mar-08
County	CT District	PPNO *	EA*	Region/MPO/TIP ID *
Los Angeles	7	4135	27440K	LA0G092
Project Title:	Los Angeles Regional Express Lane Project - I-210			

* NOTE: PPNO and EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO

Proposed Total Project Cost								Project
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)	0	0	4	0	0	0	0	4
PS&E	0	0	3	0	3	0	0	6
R/W SUP (CT) *	0	0	0	0	0	0	0	0
CON SUP (CT) *	0	0	0	0	0	0	0	0
R/W	0	0	0	0	0	0	0	0
CON	0	0	0	15	0	15	0	30
TOTAL	0	0	7	15	3	15	0	40

Funding Source:	Federal Funds (Federal Congestion Pricing Grant and other federal grants)							
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)			3					3
PS&E			2		2			4
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON				13		12		25
TOTAL	0	0	5	13	2	12	0	32

* NOTE: R/W SUP and CON SUP to be used only for projects implemented by Caltrans

Funding Source:	State/Local (State Funds for project development and Local Funds for construction)							
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)			1					1
PS&E			1		1			2
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON				2		3		5
TOTAL	0	0	2	2	1	3	0	8

Funding Source:								
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:								
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Shaded fields are automatically calculated. Please do not fill these fields.

Public Partnership - HOT Lane Application
Project Fact Sheet - Project Cost and Funding Plan
(dollars in thousands and escalated)
Shaded fields are automatically calculated. Please do not fill these fields.

				Date:	7-Mar-08
County	CT District	PPNO *	EA*	Region/MPO/TIP ID *	
Los Angeles	7	4135	27440K	LA0G092	
Project Title:	Los Angeles Regional Express Lane Project - I-210				

* NOTE: PPNO and EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Shaded fields are automatically calculated. Please do not fill these fields.

Public Partnership Application - High Occupancy Toll Lanes

County: Los Angeles	**Route: I-110**	**PPNO: 4135**
Project Title: Los Angeles Region Express Lanes Project		

We acknowledge the scope, cost, schedule, benefits, and information as identified on the attached application and project fact and funding sheets are true to the best of our knowledge and belief. We certify that funding sources cited are committed and expected to be available; the estimated costs represent full project funding, and the description of benefits is the best estimate possible.

Name:	Frank Flores	Date	March 31, 2008
Title:	Executive Officer, Programming and Policy Analysis		
Agency:	Los Angeles County Metropolitan Transportation Authority		

Public Partnership Application *for* High Occupancy Toll Lanes
Project Fact Sheet
Los Angeles Regional Express Lanes Project, I-110

Lead Agency: Los Angeles County Metropolitan Transportation Authority (Metro) **Fact Sheet Date: 03/07/08**

Contact Person	Frank Flores		
Phone Number	(213) 922-2456	Fax Number	(213) 922-2476
Email Address	floresf@metro.net		

Project Information:

County	Caltrans District	PPNO *	EA *	Region/MPO/ TIP ID*	Route / Corridor *	Post Mile Back *	Post Mile Ahead *
Los Angeles	7	4135	27440K	LA0G092	I-110	10	22

* NOTE: PPNO & EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO. Route/Corridor & Post Mile Back/Ahead used for State Highway System.

Legislative Districts	Senate: 22, 25, 26, and 28	Congressional: 31, 33, and 35
	Assembly: 46, 48, 50, and 51	
Implementing Agency (by component)	E&P (PA&ED): Caltrans	PS&E: Caltrans
	R/W: Caltrans	CON: Metro Caltrans Toll Operations: Metro
Project Title	Los Angeles Regional Express Lane Project - I-110	

Location - Project Limits - Description and Scope of Work (Provide a project location map on a separate sheet and attach to this form)
Conversion of High Occupancy Vehicle (HOV) lanes to High Occupancy Toll (HOT) lanes on I-110 from 182nd St./Artesia Transit Center to Adams Blvd. This project is in Operating Segment 1 (OS 1)

Description of Major Project Benefits

Travel time in corridor	During peak period, HOV lanes on I-110 currently provide a 53% improvement in travel time over general purpose lanes at an average speed of 41 mph. This project will maintain a 50 mph speed on the Express Lanes, an 18% improvement, thereby improving their relative advantage
Other related benefits:	Increased mobility, improved air quality and revenue generation for transit. Also, increase in auto occupancy; encouragement of transit use; increased throughput of HOV system.

Corridor System Management Plan		Month/Year
Lead Agency:	Caltrans in cooperation with Metro	
Plan Adoption Date:	Caltrans is preparing Corridor System Mgt Plans on the following routes first: 210, 405, 5, and 101	
Plan Implementation Date:	The I-110 corridor plan is not scheduled at this time	

Expected Source(s) of Additional Funding if the Current Funding Plan Proves Insufficient

Metro Sales Tax Revenues and/or Toll Revenue Bonds

Project Delivery Baseline (Milestones)			Month/Year - OS 1
Begin Environmental Phase (PA&ED)			Jun-08
Draft Environmental Document Milestone	Document Type: Negative Declaration		Dec. 08
Draft Project Report Milestone			Dec-08
End Environmental Phase (PA&ED Milestone)			Jun-09
Begin Design Phase			Jun-09
End Design Phase (Plans, Specifications, and Estimates Milestone)			Dec-09
Begin Right-of-Way			Jun-09
End Right-of-Way (Right-of-way Certification Milestone)			Dec-09
Begin Construction Phase			Apr-10
End Construction Phase (Construction Contract Acceptance Milestone)			Dec-10
Begin Closeout Phase			Dec-10
End Closeout Phase (Closeout Report Milestone)			Jun-11

Public Partnership - HOT Lane Application
Project Fact Sheet - Project Cost and Funding Plan
(dollars in thousands and escalated)
Shaded fields are automatically calculated. Please do not fill these fields.

				Date: 7-Mar-08
County	CT District	PPNO *	EA*	Region/MPO/TIP ID *
Los Angeles	7	4135	27440K	LA0G092
Project Title:	Los Angeles Regional Express Lane Project - I-110			

* NOTE: PPNO and EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO

Proposed Total Project Cost								Project
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)	0	0	2	0	0	0	0	2
PS&E	0	0	4	0	0	0	0	4
R/W SUP (CT) *	0	0	0	0	0	0	0	0
CON SUP (CT) *	0	0	0	0	0	0	0	0
R/W	0	0	0	0	0	0	0	0
CON	0	0	0	9	0	0	0	9
TOTAL	0	0	6	9	0	0	0	15

Funding Source:	Federal Funds (Federal Congestion Pricing Grant and other federal grants)							
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)			2					2
PS&E			3					3
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON				7				7
TOTAL	0	0	5	7	0	0	0	12

* NOTE: R/W SUP and CON SUP to be used only for projects implemented by Caltrans

Funding Source:	State/Local (State Funds for project development and Local Funds for construction)							
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)			0					0
PS&E			1					1
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON				2				2
TOTAL	0	0	1	2	0	0	0	3

Funding Source:								
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:								
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Shaded fields are automatically calculated. Please do not fill these fields.

Public Partnership - HOT Lane Application
Project Fact Sheet - Project Cost and Funding Plan
(dollars in thousands and escalated)
Shaded fields are automatically calculated. Please do not fill these fields.

				Date: 7-Mar-08
County	CT District	PPNO *	EA*	Region/MPO/TIP ID *
Los Angeles	7	4135	27440K	LA0G092
Project Title:	Los Angeles Regional Express Lane Project - I-110			

* NOTE: PPNO and EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Shaded fields are automatically calculated. Please do not fill these fields.

Public Partnership Application - High Occupancy Toll Lanes

County: Los Angeles	**Route:** I-60	**PPNO:** 4135
Project Title: Los Angeles Region Express Lanes Project		

We acknowledge the scope, cost, schedule, benefits, and information as identified on the attached application and project fact and funding sheets are true to the best of our knowledge and belief. We certify that funding sources cited are committed and expected to be available; the estimated costs represent full project funding, and the description of benefits is the best estimate possible.

Name:	Frank Flores	Date	March 31, 2008
Title:	Executive Officer, Programming and Policy Analysis		
Agency:	Los Angeles County Metropolitan Transportation Authority		

Public Partnership Application *for* High Occupancy Toll Lanes
Project Fact Sheet
Los Angeles Regional Express Lanes Project, SR 60

Lead Agency: Los Angeles County Metropolitan Transportation Authority (Metro) **Fact Sheet Date: 03/07/08**

Contact Person	Frank Flores		
Phone Number	(213) 922-2456	Fax Number	(213) 922-2476
Email Address	floresf@metro.net		

Project Information:

County	Caltrans District	PPNO *	EA *	Region/MPO/ TIP ID*	Route / Corridor *	Post Mile Back *	Post Mile Ahead *
Los Angeles	7	4135	27440K	LA0G092	SR 60	13	32

* NOTE: PPNO & EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO. Route/Corridor & Post Mile Back/Ahead used for State Highway System.

Legislative Districts	Senate: 24, 29, 30, and 32	Congressional: 38 and 42
	Assembly: 57, 58, 60, and 61	
Implementing Agency (by component)	E&P (PA&ED): Caltrans	PS&E: Caltrans
	R/W: Caltrans	CON: Caltrans Toll Operations: Metro
Project Title	Los Angeles Regional Express Lane Project - SR 60	

Location - Project Limits - Description and Scope of Work (Provide a project location map on a separate sheet and attach to this form)
Conversion of High Occupancy Vehicle (HOV) lanes to High Occupancy Toll (HOT) lanes on SR 60 from I-605 to San Bernardino County Line. SR 60 will be implemented in two segments, both in Operating Segment 2 (OS 2): SR 60 from Brea Canyon along SR 57 to San Bernardino Co. Line and SR 60 from I-605 to Brea Canyon (HOV lane under construction)

Description of Major Project Benefits

Travel time in corridor	During peak period, HOV lanes on SR 60 currently provide a 23% improvement in travel time over general purpose lanes at an average speed of 37 mph. This project will maintain a 50 mph speed on the HOV lanes, a 26% improvement, thereby improving their relative advantage.
Other related benefits:	Increased mobility, improved air quality and revenue generation for transit. Also, increase in auto occupancy; encouragement of transit use; increased throughput of HOV system.

Corridor System Management Plan		Month/Year
Lead Agency:	Caltrans in cooperation with Metro	
Plan Adoption Date:	Caltrans is preparing Corridor System Mgt Plans on the following routes first: 210, 405, 5, and 101	
Plan Implementation Date:	The SR 60 corridor plan is not scheduled at this time	

Expected Source(s) of Additional Funding if the Current Funding Plan Proves Insufficient

Metro Sales Tax Revenues and/or Toll Revenue Bonds

Project Delivery Baseline (Milestones)		Month/Year - OS 2
Begin Environmental Phase (PA&ED)		Jun-10
Draft Environmental Document Milestone	Document Type: Negative Declaration	Dec-10
Draft Project Report Milestone		Dec-10
End Environmental Phase (PA&ED Milestone)		Jun-11
Begin Design Phase		Jun-11
End Design Phase (Plans, Specifications, and Estimates Milestone)		Dec-11
Begin Right-of-Way		Jan-11
End Right-of-Way (Right-of-way Certification Milestone)		Dec-11
Begin Construction Phase		Apr-12
End Construction Phase (Construction Contract Acceptance Milestone)		Dec-12
Begin Closeout Phase		Dec-12
End Closeout Phase (Closeout Report Milestone)		Jun-13

Public Partnership - HOT Lane Application
Project Fact Sheet - Project Cost and Funding Plan
(dollars in thousands and escalated)
Shaded fields are automatically calculated. Please do not fill these fields.

				Date: 7-Mar-08
County	CT District	PPNO *	EA*	Region/MPO/TIP ID *
Los Angeles	7	4135	27440K	LA0G092
Project Title:	Los Angeles Regional Express Lane Project - SR 60			

* NOTE: PPNO and EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO

Proposed Total Project Cost								Project
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)	0	0	0	3	0	0	0	3
PS&E	0	0	0	0	4	0	0	4
R/W SUP (CT) *	0	0	0	0	0	0	0	0
CON SUP (CT) *	0	0	0	0	0	0	0	0
R/W	0	0	0	0	0	0	0	0
CON	0	0	0	0	0	19	0	19
TOTAL	0	0	0	3	4	19	0	26

Funding Source:	Federal Funds (Federal Congestion Pricing Grant and other federal grants)							
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)				2				2
PS&E					3			3
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON						16		16
TOTAL	0	0	0	2	3	16		21

* NOTE: R/W SUP and CON SUP to be used only for projects implemented by Caltrans

Funding Source:	State/Local (State Funds for project development and Local Funds for construction)							
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)				1				1
PS&E					1			1
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON						3		3
TOTAL	0	0	0	1	1	3		5

Funding Source:								
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0		0

Funding Source:								
Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Shaded fields are automatically calculated. Please do not fill these fields.

Public Partnership - HOT Lane Application
Project Fact Sheet - Project Cost and Funding Plan
(dollars in thousands and escalated)
Shaded fields are automatically calculated. Please do not fill these fields.

				Date: 7-Mar-08
County	CT District	PPNO *	EA*	Region/MPO/TIP ID *
Los Angeles	7	4135	27440K	LA0G092
Project Title:	Los Angeles Regional Express Lane Project - SR 60			

* NOTE: PPNO and EA assigned by Caltrans. Region/MPO/TIP ID assigned by RTPA/MPO

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Funding Source:

Component	Prior	07/08	08/09	09/10	10/11	11/12	12/13	Total
E&P (PA&ED)								0
PS&E								0
R/W SUP (CT) *								0
CON SUP (CT) *								0
R/W								0
CON								0
TOTAL	0	0	0	0	0	0	0	0

Shaded fields are automatically calculated. Please do not fill these fields.

Appendix F

Los Angeles Region Express Lanes

Cal B/C Benefit/Cost Analysis

Prepared by Caltrans

PPNO	Dist	County	Route	Post Mile	Project Description	Length (miles)	Project Cost ($1,000s)	Avg. Annual Benefits (1,000s) Veh-Hours of Delay Saved	Delay Savings	Safety Benefit	20-Year Investment Analysis Net Present Value ($1,000s)	B/C Ratio	Rate of Return
					Summary Highway User Benefits:								
					Annual Benefit	--	--	10,910	$53,000	--			
					10-Year Total			109,098	$530,000	--			
					20-Year Total	94.0	$119,000	218,196	$1,060,000	--	**$848,900**	**7.7**	**50.0%**
	7	LA	10	18-48	10-HOT Lane System, Operating Segment 1	30.0	$38,000	3,775.7	$16,700	--	$277,200	8.6	55.5%
	7	LA	110	10-22	110-HOT Lane System, Operating Segment 1	12.0	$15,000	995.5	$4,400	--	$60,700	5.1	35.1%
	7	LA	210	25-58	210-HOT Lane System, Operating Segment 1	33.0	$40,000	4,993.5	$22,000	--	$361,700	10.2	63.6%
	7	LA	60	13-32	60-HOT Lane System, Operating Segment 1	19.0	$26,000	2,236.1	$9,900	--	$149,300	6.9	45.8%

BENEFIT/COST ANALYSIS INPUT SHEET - *Highway Project*

District: 7 **County:** Los Angeles

Project: Los Angeles Regional Express Lanes Projects

Route: I-210
Post mile: 25-58

Funding: ITIP / RTIP / Share

EA:
PPNO:

PROJECT DATA

Type of Project	Enter "X"
Lane Addition	
HOV Lane	
Passing Lane	
Pavement Rehabilitation	
Other (describe: HOV to HOT Conversion)	X

Project Location (enter 1 for So. Cal., 2 for No. Cal., or 3 for rural)	1	
Length of Construction Period	2	years
Duration of Peak Period	6	hours

HIGHWAY DESIGN AND TRAFFIC DATA

Highway Design	w/o Project	w/ Project	HOV Restriction
Number of General Traffic Lanes	4	4	
Number of HOV Lanes	1	1	2
Highway Free-Flow Speed (in mph)	65	65	(2 or 3)
Project Length (in miles)	33	33	
Pavement IRI (in inches/mile), if pav. project			

Average Daily Traffic	w/o Project	w/ Project
Current	299,718	
Forecast (20 years after construction)	380,642	380,642
Average Hourly HOV Traffic (if HOV lanes)	1,530	
Percent Trucks (include RVs, if applicable)	8%	8
Truck Speed (if passing lane project)		

HIGHWAY ACCIDENT DATA

Actual 3-Year Accident Data for Facility

	Count (No.)
Fatal Accidents	7
Injury Accidents	400
Property Damage Only (PDO) Accidents	1100

Statewide Average for Highway Classification

	w/o Project	w/ Project
Accident Rate (per mil. veh-mi)	0.81	
Percent Fatal Accidents	0.4%	
Percent Injury Accidents	22.0%	

PROJECT COSTS

Enter the net costs of the project in today's dollars

Project Support Costs	$ 10000000	
Right-of-Way Costs	$ 0	
	$	Year 0
	$	Year 1
	$	Year 2
Construction Costs	30000000	Year 3
Mitigation/Other Costs	$	
Expected Annual Maintenance/ Operations Costs	$	
Rehabilitation Costs	$	Year:

COMMENTS:

E-Mail:

Prepared by:

Phone No:

The HQ Division of Transportation Planning FAX number is ATSS 8-453-0001. For questions, contact:

	Phone No.	E-Mail
Mahmoud Mahdavi	8-453-9525	mahmoud_mahdavi@dot.ca.gov

BENEFIT/COST ANALYSIS INPUT SHEET - *Highway Project*

District: 7 **County:** Los Angeles

Route: I-10
Post mile: 18-48

Project: Los Angeles Regional Express Lanes Projects

Funding: ITIP / RTIP / Share

EA:
PPNO:

PROJECT DATA

Type of Project	Enter "X"
Lane Addition	
HOV Lane	
Passing Lane	
Pavement Rehabilitation	
Other (describe: HOV to HOT Conversion)	X

Project Location (enter 1 for So. Cal., 2 for No. Cal., or 3 for rural)	1	
Length of Construction Period	2	years
Duration of Peak Period	6	hours

HIGHWAY ACCIDENT DATA

Actual 3-Year Accident Data for Facility

	Count (No.)
Fatal Accidents	1
Injury Accidents	8
Property Damage Only (PDO) Accidents	6

Statewide Average for Highway Classification

	w/o Project	w/ Project
Accident Rate (per mil. veh-mi)	0.12	
Percent Fatal Accidents	0.9%	
Percent Injury Accidents	8.0%	

HIGHWAY DESIGN AND TRAFFIC DATA

Highway Design	w/o Project	w/ Project	HOV Restriction
Number of General Traffic Lanes	4	4	
Number of HOV Lanes	1	1	2,3
Highway Free-Flow Speed (in mph)	65	65	(2 or 3)
Project Length (in miles)	30	30	
Pavement IRI (in inches/mile), if pav. project			

Average Daily Traffic	w/o Project	w/ Project
Current	289,739	
Forecast (20 years after construction)	336,097	336,097
Average Hourly HOV Traffic (if HOV lanes)	1,230	
Percent Trucks (include RVs, if applicable)	5%	5
Truck Speed (if passing lane project)		

PROJECT COSTS

Enter the net costs of the project in today's dollars

Project Support Costs	$ 11000000	
Right-of-Way Costs	$ 0	
	$	Year 0
	$	Year 1
	$	Year 2
Construction Costs	27000000	Year 3
Mitigation/Other Costs	$	
Expected Annual Maintenance/ Operations Costs	$	
Rehabilitation Costs	$	Year:

COMMENTS:

E-Mail:

Prepared by:

Phone No:

The HQ Division of Transportation Planning FAX number is ATSS 8-453-0001. For questions, contact:

	Phone No.	E-Mail
Mahmoud Mahdavi	8-453-9525	mahmoud_mahdavi@dot.ca.gov

BENEFIT/COST ANALYSIS INPUT SHEET - *Highway Project*

District: 7 **County:** Los Angeles

Route: I-110
Post mile: 10-22

Project: Los Angeles Regional Express Lanes Projects

Funding: ITIP / RTIP / Share

EA:
PPNO:

PROJECT DATA

Type of Project	Enter "X"
Lane Addition	
HOV Lane	
Passing Lane	
Pavement Rehabilitation	
Other (describe: HOV to HOT Conversion)	X

Project Location (enter 1 for So. Cal., 2 for No. Cal., or 3 for rural)	1	
Length of Construction Period	2	years
Duration of Peak Period	6	hours

HIGHWAY ACCIDENT DATA

Actual 3-Year Accident Data for Facility

	Count (No.)
Fatal Accidents	9
Injury Accidents	969
Property Damage Only (PDO) Accidents	2360

Statewide Average for Highway Classification

	w/o Project	w/ Project
Accident Rate (per mil. veh-mi)		
Percent Fatal Accidents		
Percent Injury Accidents		

HIGHWAY DESIGN AND TRAFFIC DATA

Highway Design	w/o Project	w/ Project	HOV Restriction
Number of General Traffic Lanes	4	4	2
Number of HOV Lanes	2	2	(2 or 3)
Highway Free-Flow Speed (in mph)	65	65	
Project Length (in miles)	12	12	
Pavement IRI (in inches/mile), if pav. project			

Average Daily Traffic	w/o Project	w/ Project
Current	308,729	
Forecast (20 years after construction)	330,340	330,340
Average Hourly HOV Traffic (if HOV lanes)	1,400	
Percent Trucks (include RVs, if applicable)	6%	6
Truck Speed (if passing lane project)		

PROJECT COSTS

Enter the net costs of the project in today's dollars

Project Support Costs	$ 6000000	
Right-of-Way Costs	$ 0	
	$	Year 0
	$	Year 1
	$	Year 2
Construction Costs	9000000	Year 3
Mitigation/Other Costs	$	
Expected Annual Maintenance/ Operations Costs	$	
Rehabilitation Costs	$	Year:

COMMENTS:

E-Mail:

Prepared by:

Phone No:

The HQ Division of Transportation Planning FAX number is ATSS 8-453-0001. For questions, contact:

	Phone No.	E-Mail
Mahmoud Mahdavi	8-453-9525	mahmoud_mahdavi@dot.ca.gov

BENEFIT/COST ANALYSIS INPUT SHEET - *Highway Project*

District: 7 **County:** Los Angeles

Route: SR 60
Post mile: 13-32

Project: Los Angeles Regional Express Lanes Projects

Funding: ITIP / RTIP / Share

EA:
PPNO:

PROJECT DATA

Type of Project	Enter "X"
Lane Addition	
HOV Lane	
Passing Lane	
Pavement Rehabilitation	
Other (describe: HOV to HOT Conversion)	X

Project Location (enter 1 for So. Cal., 2 for No. Cal., or 3 for rural)	1	
Length of Construction Period	2	years
Duration of Peak Period	6	hours

HIGHWAY DESIGN AND TRAFFIC DATA

Highway Design	w/o Project	w/ Project	HOV Restriction
Number of General Traffic Lanes	4	4	
Number of HOV Lanes	1	1	2
Highway Free-Flow Speed (in mph)	65	65	*(2 or 3)*
Project Length (in miles)	19	19	
Pavement IRI (in inches/mile), if pav. project			

Average Daily Traffic	w/o Project	w/ Project
Current	223,306	
Forecast (20 years after construction)	232,238	232,238
Average Hourly HOV Traffic (if HOV lanes)	1,365	
Percent Trucks (include RVs, if applicable)	7%	7
Truck Speed (if passing lane project)		

HIGHWAY ACCIDENT DATA

Actual 3-Year Accident Data for Facility

	Count (No.)
Fatal Accidents	4
Injury Accidents	340
Property Damage Only (PDO) Accidents	635

Statewide Average for Highway Classification

	w/o Project	w/ Project
Accident Rate (per mil. veh-mi)	1.25	
Percent Fatal Accidents	0.4%	
Percent Injury Accidents	31.0%	

PROJECT COSTS

Enter the net costs of the project in today's dollars

Project Support Costs	$ 7000000	
Right-of-Way Costs	$ 0	
	$	Year 0
	$	Year 1
	$	Year 2
Construction Costs	19000000	Year 3
Mitigation/Other Costs	$	
Expected Annual Maintenance/ Operations Costs	$	
Rehabilitation Costs	$	Year:

COMMENTS:

E-Mail:

Prepared by:

Phone No:

The HQ Division of Transportation Planning FAX number is ATSS 8-453-0001. For questions, contact:

	Phone No.	E-Mail
Mahmoud Mahdavi	8-453-9525	mahmoud_mahdavi@dot.ca.gov

Appendix G

Los Angeles Region Express Lanes

Draft Project Study Report (PSR)

Prepared by:
Caltrans District 7

07 – LA – 10 PM 17.12/48.26
07 – LA –60 PM 11.48/30.45
07 – 110 – PM 9.65/20.70
07 – 210 PM 24.59/52.15
Program Code 20.xx.075.651
EA 27440K
March 2008

Project Study Report
To
Request Programming
And
Provide Project Approval

In Los Angeles County on Route 10 from Alameda/Union Station to the San Bernardino County Line
In Los Angeles County on Route 60 from Route 605 to the San Bernardino County Line
In Los Angeles County on Route 110 from 182nd Street/Artesia Transit Center to Adams Blvd.
In Los Angeles County on Route 210 from I-210/I-710/SR 134 to the San Bernardino County Line

I have reviewed the right of way information contained in this Project Study Report and the R./W Data Sheet attached hereto, and find the data to be complete, current, and accurate.

_____
***Andrew P. Nierenberg**, District 7 Division Chief, Right of Way*

APPROVAL RECOMMENDED BY:

_____
***Javad Rahimzadeh**, Project Manager*

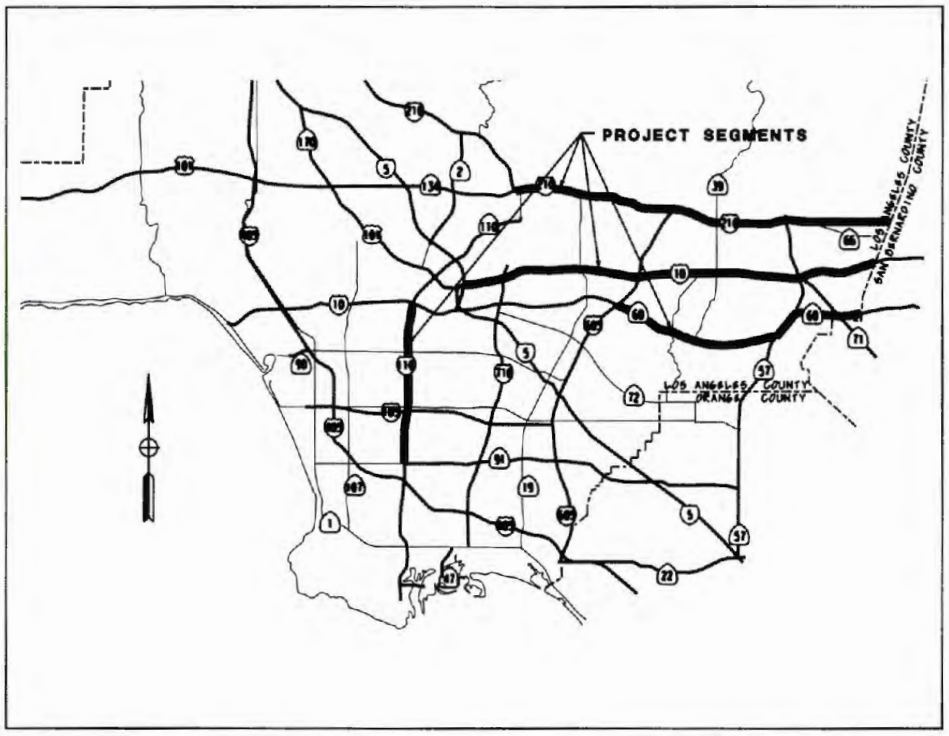
CONCURRED BY:

_____
***Frank L. Quon**, District Deputy Director*
Division of Operations

APPROVED BY:

_____ _____
***Douglas R. Failing**, District Director* *DATE*

07 – LA – 10 PM 17.12/48.26
07 – LA –60 PM 11.48/30.45
07 – 110 – PM 9.65/22.00
07 – 210 PM 24.59/52.15
EA 27440K



In Los Angeles County on Route 10 from Alameda/Union Station to the San Bernardino County Line
In Los Angeles County on Route 60 from Route 605 to the San Bernardino County Line
In Los Angeles County on Route 110 from 182nd Street/Artesia Transit Center to Adams Blvd.
In Los Angeles County on Route 210 from I-210/I-710/SR 134 to the San Bernardino County Line

07 – LA – 10 PM 17.12/48.26
07 – LA –60 PM 11.48/30.45
07 – 110 – PM 9.65/20.70
07 – 210 PM 24.59/52.15
EA 27440K

This Project Study Report has been prepared under the direction of the following Registered Engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

ELECTRICAL

Jacqueline C. Tan Date

Table of Contents

1. INTRODUCTION

This Project Study Report (PSR) proposes the conversion of existing High Occupancy Vehicle (HOV) lanes to High Occupancy Toll (HOT) lanes along Interstate 10 (El Monte Busway), Interstate 210 (from Interstate 605 to Interstate 710) and Interstate 110 (Harbor Freeway Transitway) as part of a first phase. A second phase would include the conversion of HOV lanes to HOT lanes on three major freeway corridors east of Interstate 605 to the San Bernardino County line. These corridors are State Route 60 (under construction), Interstate 10 (in design), and Interstate 210 (existing). The estimated construction cost of this project is $108,600,000.

2. RECOMMENDATION/PROPOSAL

It is proposed to convert the existing High Occupancy Vehicle (HOV) lanes to High Occupancy Toll (HOT) Lanes on Routes 10, 60, 110, and 210 in Los Angeles County.

See the Cost estimate (Attachment B)for specific work items included in this project.

Project Limits (Dist., Co., Rte., PM)	07 – LA – 10 PM 17.12/48.26 07 – LA –60 PM 11.48/30.45 07 – 110 – PM 9.65/20.70 07 – 210 PM 24.59/52.15
Number of Alternatives:	1
Alternative Recommended for Programming:	1
Programmed or Proposed Capital Construction Costs	Phase 1: $55,348,634 Phase 2: $53,251,364 Total for both phases: $108,600,000
Programmed or Proposal Capital Right of Way Costs:	$0
Funding Source:	50% USDOT Congestion Pricing Grant funds and 50% Local Funds
Type of Facility (conventional, expressway, freeway):	Freeway
Number of Structures:	0
Anticipated Environmental Determination/Document	Negative Declaration

Legal Description	HOV lanes to be converted to High Occupancy Toll (HOT) Lanes in Los Angeles County on Route 10 from Alameda/Union Station to the San Bernardino County Line, on Route 60 from Route 605 to the San Bernardino County Line, on Route 110 from 182nd Street/Artesia Transit Center to Adams Blvd., and on Route 210 from I-210/I-710/SR 134 to the San Bernardino County Line.

It is recommended that this project be programmed, and proceed to the Project Approval and Environmental Document (PA/ED) phase. A project report will serve as approval of the "selected" alternative.

3. BACKGROUND

Routes 10, 60, and 210 are east-west transportation corridors connecting Los Angeles County with San Bernardino County, serving commute, commercial and recreational traffic. In recent years, these important transportation corridors have experienced significant and rapidly growing traffic congestion in the AM and PM peak hours. The increase in traffic is due primarily to more motorists commuting from affordable housing origins in eastern San Bernardino and Riverside Counties to the employment centers in Los Angeles County. Route 110 is primarily a north-south transportation corridor connecting the South Bay cities with Los Angeles' central business district.

4. PURPOSE AND NEED STATEMENT

Need:

The congestion-reduction demonstration initiative proposed by Metro and its regional partners is an integrated systemwide approach to mitigating traffic congestion along major highways and arterial facilities in the region. This initiative relies on the introduction of High Occupancy Toll (HOT) lanes (i.e. congestion pricing) to major highways, deployment of new traffic technologies with far-reaching potential, improvement of transit service and other alternatives to driving, and the implementation of an intelligent parking management system in the downtown of the City of Los Angeles that allows charging variable fees depending of the level of traffic congestion.

Purpose:

The Los Angeles County Metropolitan Transportation Authority (Metro) along with the California Department of Transportation (Caltrans) and its regional partners are proposing the Los Angeles HOT Lanes Projects as part of their Los Angeles Region

Congestion-Reduction Demonstration Initiative. The Initiative is a systemwide transportation strategy that integrates variable highway and parking pricing, expanded transit services and innovative transportation technologies in a way that significantly improves mobility in the country's most congested urban region.

HOT Lanes are designated special use lanes on an otherwise free highway facility. HOT Lanes permit single or low-occupancy vehicles to use the HOV facility for a fee, while High Occupancy Vehicles are allowed to use the lanes for free. HOT Lanes are managed so that they remain uncongested at all times, including peak hours.

The goal of the HOT Lanes is better utilization of a freeway's capacity and reduced congestion. HOT Lanes achieve this through encouragement of carpooling. HOT Lanes achieve congestion reduction by permitting a controlled or managed number of additional cars on the freeway to use the HOV lane, to the point that capacity is available and overall performance of the lane is not substantially affected. The adjustable toll rates applied to single occupancy drivers in the HOT Lanes provide the mechanism to manage the overall number of cars that can use the lane while still maintaining an acceptable Level of Service (LOS).

A combination of electronic toll collection and enhanced highway patrol enforcement will assure an acceptable level of compliance by HOT Lane users. The HOT Lanes system components could be adjusted as changes in traffic and economic conditions warrant. The recommended separation between the HOT Lane and the adjacent mixed-flow lanes is a buffer zone delineated by solid striping. There will be limited intermediate ingress/egress locations for HOT Lane users.

The roadway construction components of the HOT Lanes projects include striping, signing and installation of the Electronic Toll Collection System (ETCS).

Proposed Engineering Features.

The existing HOV lane on the proposed project for all four routes for both phases would be converted to HOT Lane facility. The HOT Lane facility will be separated from the mainline mixed-flow lanes by delineated solid striping.

HOT Lanes: Changing lanes in and out of the HOT Lane facility is restricted to specific zones where drivers enter and exit the facility. No additional widening of the freeway traveled lanes is required to accommodate the addition of the HOT Lanes.

Tolling Facilities. Electronic tolling equipment will be installed at the beginning of the HOT Lanes as well as at each intermediate entrances with overhead detection equipment capable of communicating with transponders that are mounted in the Single Occupant Vehicle (SOV). Transponders are electronic transceiver devices that enable the unique identification and tolling of a SOV. Each electronic tolling facility will be linked to the Toll Data Center (TDC) that collects and records toll data from each electronic tolling facility. This TDC will be owned and operated by Metro. The TDC then transfers toll

data to the Customer Service Center (CSC) operated by the Metro, which will handle payment processing. Drivers of a SOV that intend to use the HOT Lanes facility will be required to set up accounts through the RCSC similar to those required for use of the existing FasTrak system on the San Francisco Bay Area Toll Bridges. Accounts will be managed through the CSC.

In order to maintain LOS C or better in the HOT Lane facility (LOS D or better, as authorized by written agreement with Caltrans), toll rates will be adjusted based on the congestion in the HOT Lanes. Operations in the HOT lanes facility is legislatively required to be Level of Service (LOS) C or better.

Signage. Approximately 0.8 km (one-half mile) preceding each tolling facility, an overhead variable message sign (VTMS) will be installed that is capable of displaying dynamic up-to-date toll rate information to SOV's to enable them to make an informed decision as to whether or not to enter the HOT Lane. The overhead VTMS sign will also contain static information that HOV's are allowed to use the HOT Lane free of charge. Approximately 1.6 km (one mile) preceding each tolling facility, overhead static signs will be installed to inform all users that an entrance to the HOT Lane facility is coming up. Also, an overhead static sign will be placed at the beginning of each entrance to direct users into the HOT Lane facility.

Prior to each intermediate exit from the HOT Lane facility, static informational signs will be mounted on the adjacent concrete median barrier to give advance notice of an upcoming exit. Overhead sign structures are not proposed for intermediate exits.

All sign structures will be installed within the existing freeway facility.

The estimated construction cost of the proposed improvements for Phase 1 of the Los Angeles HOT Lanes projects is estimated to be $55,348,634. The estimated construction cost of the proposed improvements for Phase 2 of the Los Angeles HOT Lanes projects is estimated to be $ 53,251,364. The total estimated construction cost estimate for both phases is $108,600,000. The proposed project will be funded by a combination of USDOT Congestion Pricing Grant funds and from local funds.

This is a HB5 Program project and has been assigned the Project Development Category 4A.

Phase 1 of the proposed project is anticipated to be ready to advertise for bid in December 2009 with construction estimated to be completed by December 2010. Phase 2 of the proposed project is anticipated to be ready to advertise for bid in December 20011 with construction estimated to be completed by December 2012

5. DEFICIENCIES

Los Angeles County has 470 lane miles of HOV facilities, or 36% of the total 1320 HOV lane miles in the State of California. On average, each HOV facility in Los Angeles County carries 1350 vehicles per hour or 3200 people per hour, during peak hours. These volumes well exceed the minimum expected volume of 800 vehicles per hour or 1800 people per hour, as specified in the *HOV Guidelines for Planning, Design, and Operations*. On average, the person-trip volume of an HOV lane is two (2) times greater than that of a mixed-flow lane during peak hours.

Perhaps the most serious challenge Los Angeles County HOV lanes face is that they are now so popular that they are getting too crowded. Right now, several HOV lanes in Los Angeles County are close to reaching a maximum desirable operating capacity, including the I-10 and I-210 corridors. To ensure these lanes continue to be effective, the region must find ways to better manage the flow. One of the options is to implement managed lane concepts such as congestion pricing.

6. CORRIDOR AND SYSTEM COORDINATION

This project is part of the Los Angeles Regional Congestion – Reduction Demonstration Initiative, and is the first of a series of projects.

7. ALTERNATIVES

A. Viable Alternative

This Project Study Report (PSR) proposes the conversion of existing High Occupancy (HOV) lanes to High Occupancy Toll (HOT) lanes along Interstate 10 (El Monte Busway), Interstate 210 (from Interstate 605 to Interstate 710) and Interstate 110 (Harbor Freeway Transitway) as part of a first phase. A second phase would include the conversion of HOV lanes to HOT lanes on three major freeway corridors east of Interstate 605 to the San Bernardino County line. These corridors are State Route 60 (under construction), Interstate 10 (in design), and Interstate 210 (existing).

B. Rejected Alternatives

No Build Alternative

If Metro and the Department do not implement the HOT lanes, then the HOV lanes in these corridors, which are operating at or beyond their practical capacity during the peak hours, would no longer provide the travel time advantage needed to encourage more HOV formation. Options open to the Metro and Caltrans at that stage could include:

Barrier Separated Facility

A barrier-separated facility would construct the Express Lanes facility separated from the adjacent mixed-flow lanes by a physical barrier such a concrete barrier in the buffer zone. This alternative is more effective to deter lane crossing and toll evasion compared to an Express Lanes facility that only utilizes solid stripes. However, this alternative was rejected due to the high capital cost to construct the widened freeway that would allow construction of a sufficiently wide buffer zone for the physical barrier and standard shoulders, high maintenance costs to maintain the physical barrier, and the lack of flexibility to be able to easily modify the layout of the HOT lanes facility.

8. CONSIDERATIONS REQUIRING DISCUSSION

A. Traffic and Accident Data

Traffic and accident data are pending. For traffic volume information, see Attachment D for details.

B. Transportation Management plan for Use During Construction

A Transportation Management Plan will be required to minimize delay and inconvenience to the travelling public during the construction period. For the preliminary Transportation Management Plan Data Sheet, please see Attachment I.

C. Value Analysis

A value analysis will be done during the project report stage of this Project.

D. Non-Standard design features

At this early stage, we do not anticipate any change to the existing design features in this project. However, this HOT lane conversion is considered by FHWA as a significant change to the original HOV lane, all previously-approved exceptions to mandatory design standards will be required to re-submit for review and re-approval. All existing HOV lanes in these four freeways have a left shoulder width less than 10 feet, so they do not meet the standards of shoulder width and horizontal clearance.

The existing HOV lanes on Rte 210 and Rte 10 are next to a railroad. Due to this right-of-way constraint, some new sign posts may need to encroach into the narrow left shoulder instead of engaging into the long process to acquire right-of-way from the railroad companies. If this happens, an exception to mandatory design standards will be requested.

E. Highway Planting

The proposed installation of conduit will have minimal impact on existing planting. Any impacts on planting will be restored.

F. Structures

At this early stage it has not yet been determined if the electrical conduit installations will require installation along bridge structures, but a determination will be made during the Project Report stage.

G. Storm Water Clearance

The State Water Resources Control Board permit for Storm Water Pollution Prevention Plan and NPDES permit are required for proposed project. Storm Water management for this project at PSR phase consists of:

(1) Treatment Best Management Practices (BMP)
(2) Design Pollution Prevention (DDP-PMP)
(3) Construction Site (BMP)

The Storm Water Pollution Control Checklist is prepared to minimize impacts to storm water quality during construction.

H. Right of Way Data Sheet

All proposed improvements will be within the existing right of way, therefore, no additional right of way is required for this project.

9. COMMUNITY INVOLVEMENT

A public outreach is planned, but does not start yet at this early planning stage.

10. ENVIRONMENTAL DETERMINATION/DOCUMENT

The projects will require a Negative Declaration environmental document. The project will be completed within the existing state-owned right-of-way. This process should take one year to achieve the FONSI (Finding of No Significant Impact).

11. HAZARDOUS WASTE MATERIAL

This project will install about 400 sign posts in 2.5-foot diameter pile foundations and about 140 controller cabinets in concrete pad foundations. In this region, lead-contamination from vehicle exhaust is prevalent at top feet of soil. A site investigation may be needed to determine the lead concentration in the proposed excavation spots, if no recent investigation report is available. All excavated soil will be disposed of off-site properly.

12. FUNDING

12A. CAPITAL COST

Capital Cost Estimate for the Alternative Identified for Programming in the 20.xx.075.451 STIP

The total project construction cost of the identified alternative is estimated as follows:

Fiscal Year	Right of Way	Construction Capital Phase 1	Construction Capital Phase 2
2007/08			
2008/09		$ 18,449,545	$
2009/10		$ 36,899,089	$
2010/11			$ 17,750,455
2011/12			$ 35,500,909

The discussed alternative has yet to determine the means of communications for the Electronic Toll Collection System. The two scenarios involve either using two T1 telephone lines or using Caltrans fiber optic communication system facility for communications. Use of the Caltrans fiber optic communication system facility has a construction cost estimate of $108,600,000 and is shown in Attachment B as the Report cost estimate. Please see Attachment C for communications details. Use of the latter communications system has a construction cost estimate of $87,100,000 and utilizes point to point service with the telephone company's redundant service path.

The overall cost estimate for the Report differs from LACMTA's (Metro) Los Angeles Region Express Lanes Projects AB 1467 Application. The California Department of Transportation District 7 (Department) referenced the cost estimate from Metro's Application in creating the Report's construction and support cost estimates. Traffic Control and Toll System costs were adjusted per Department's current costs and practices for communications, electrical, and equipment installations. Toll equipment costs, operating, and program costs were not changed from the Application except for overall cost percentages. Please see attached engineer's cost estimate in Attachment B.

12B. CAPITAL SUPPORT ESTIMATE

PROJECT SUPPORT COMPONENTS							
	Design Phase		Right of Way Phase		Construction Phase		Total
	Dist	DES	Dist	DES	Dist	DES	
Phase 1 Estimated PS $'s ($1000's)	$ 6323	$	$	$ -	$ 8129.5		$ 14,452.5
Phase 2 Estimated PS $'s ($1000's)	$ 6226	$	$	$ -	$ 8004.8		$ 14,230.8
Total	$ 12,549				$ 16,134.3		$ 28,683.3

METRO PROJECT SUPPORT COMPONENTS				
	Design Phase	Right of Way Phase	Construction Phase	Total
	Metro	Metro	Metro	
Phase 1 Estimated $'s ($1000's)	$ 863.0	$	$ 1,109.7	$ 1972.7
Phase 2 Estimated $'s ($1000's)	$ 834.5	$	$ 1,072.9	$ 1,907.4
Total	$1,697.6		$ 2,182.6	$ 3880.1

13. SCHEDULE

HQ Milestones	Phase 1 Delivery Date (Month, Day, Year)	Phase 2 Delivery Date (Month, Day, Year)
Begin Environmental	June 2008	June 2010
PA & ED	June 2009	June 2011
Regular Right of Way	June 2009	January 2011
Project PS&E	September 2009	September 2011
Right of Way Certification	December 2009	December 2011
Ready to List	December 2009	December 2011
Approve Contract	April 2010	April 2012
Contract Acceptance	December 2010	December 2012
End Project	June 2011	June 2013

14. FHWA COORDINATION

This Report will be reviewed by Robert Cady, Federal Highway Administration (FHWA) Field Operations Engineer District 7 before completion. This project is eligible for federal-aid funding and is considered to be full oversight under current FHWA-Caltrans Stewardship agreements.

15. DISTRICT CONTACTS

JACQUELINE C. TAN, Senior Design Engineer Office of ITS	213-897-4698
PETER LIN, Senior Design Engineer Office of ITS	213-897-1918
ALLEN CHEN, Senior Design Engineer Office of ITS	213-897-8922
PETER WONG, Chief Office of ITS	213-897-0254
DAWN HELOU, Senior Engineer Office of Freeway Operations	213-897-6672
JAVAD RAHIMZADEH, Project Manager Office of Project Management-Central	213-897-6846

16. PROJECT REVIEWS

Field Review *Pending* Date _____

District Maintenance *Pending* Date _____

District Safety Review *Pending* Date _____

Constructability Review *Pending* Date _____

HQ Design Coordinator *Pending* Date _____

Project Manager District Safety Review *Pending* Date _____

17. ATTACHMENTS

A. Los Angeles Region Express Lanes Plan

B. Cost Estimate

C. Los Angeles Express Lanes Electronic Toll Collection System and Definitions and Abbreviations

D. Average Daily Traffic Volumes

E. HOT Lane Corridor Toll Collection System

F. Hazardous Waste Assessment (n/a)

G. Right of Way Data Sheet (n/a)

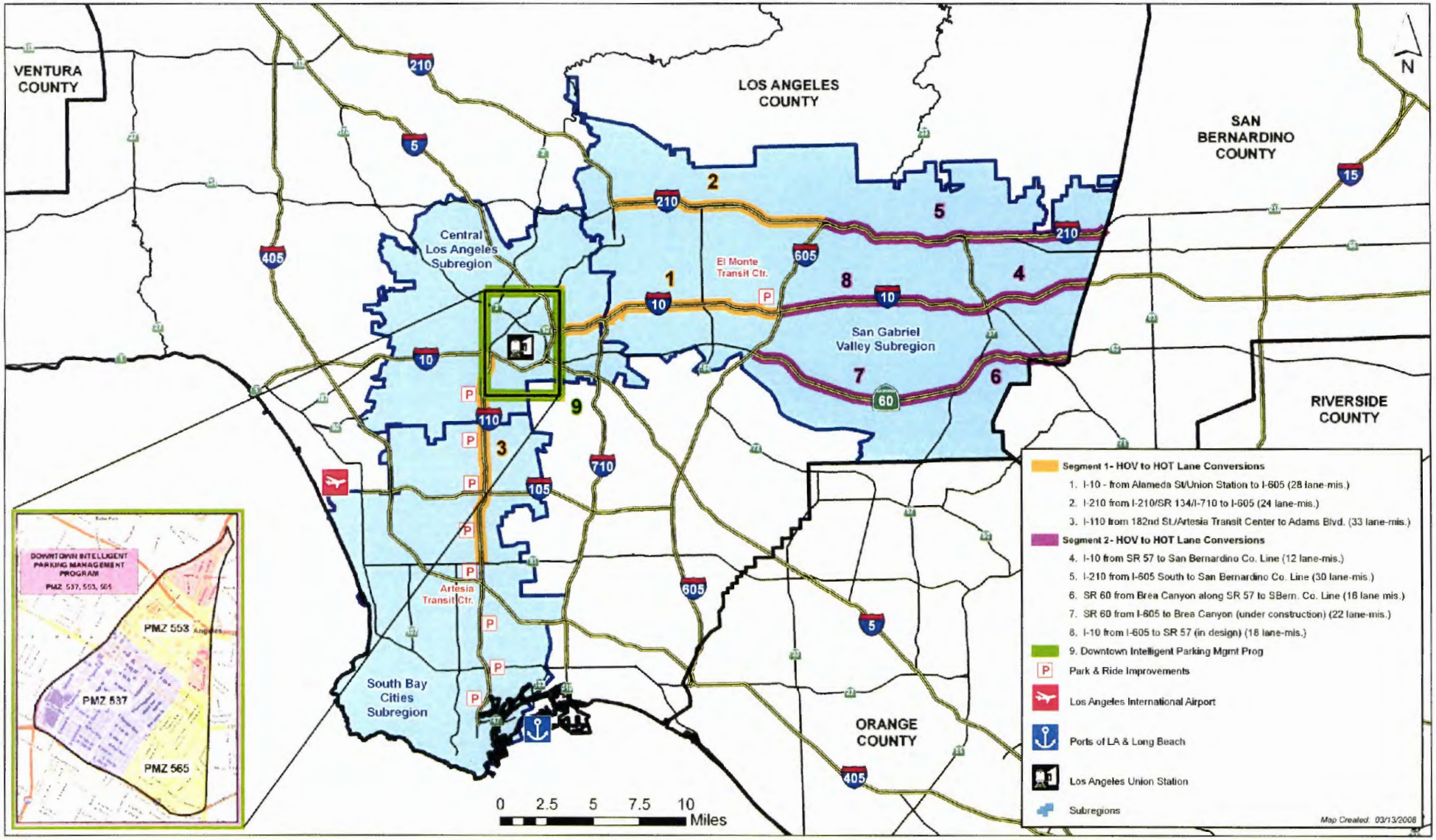
H. Storm Water Data Report (n/a)

I. Preliminary Transportation Management Plan Data Sheet

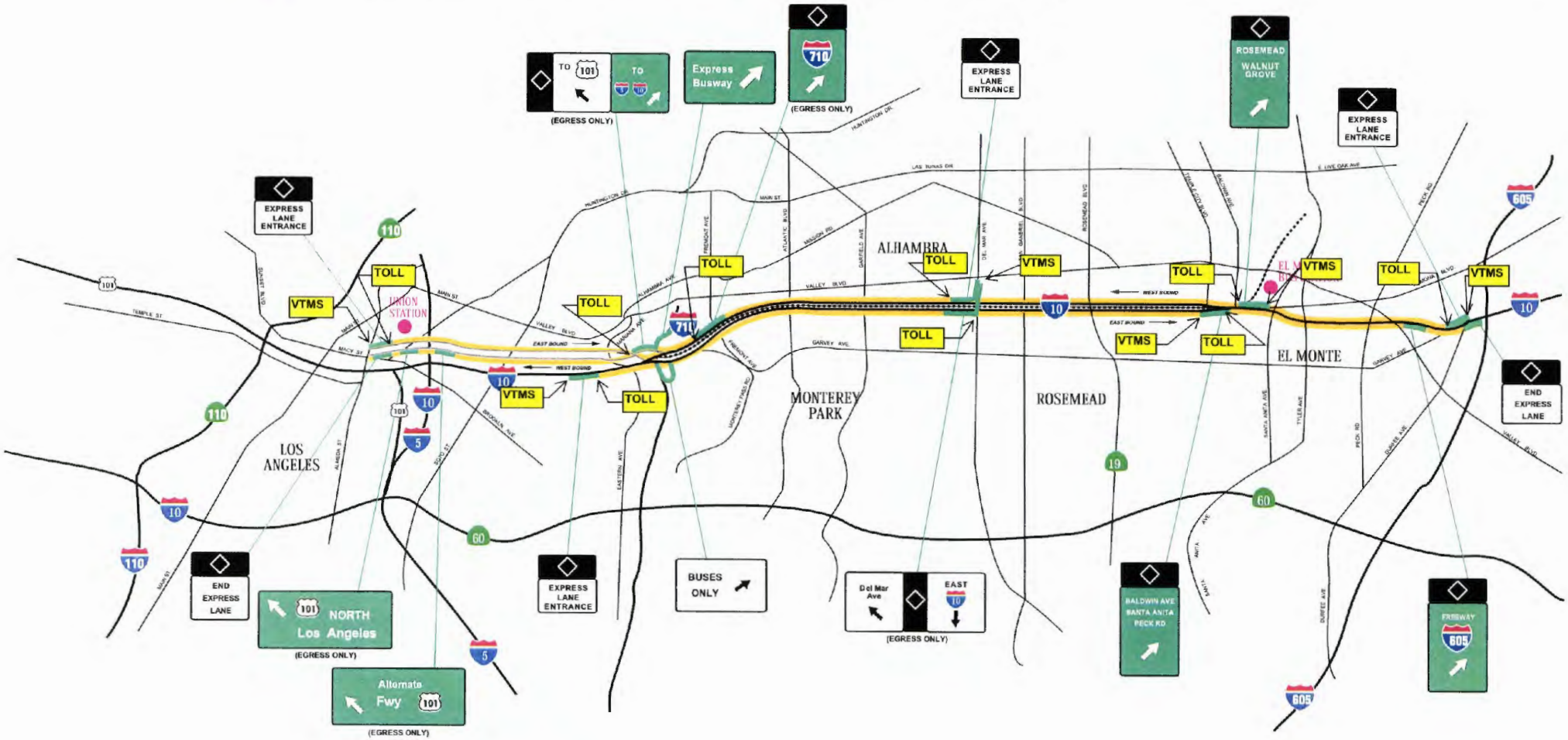
ATTACHMENT A

Los Angeles Region Express Lanes Plan

Fig 1: Los Angeles Region Express Lanes Plan



SAN BERNARDINO FREEWAY EXPRESS LANE
Alameda St. to San Gabriel River Freeway



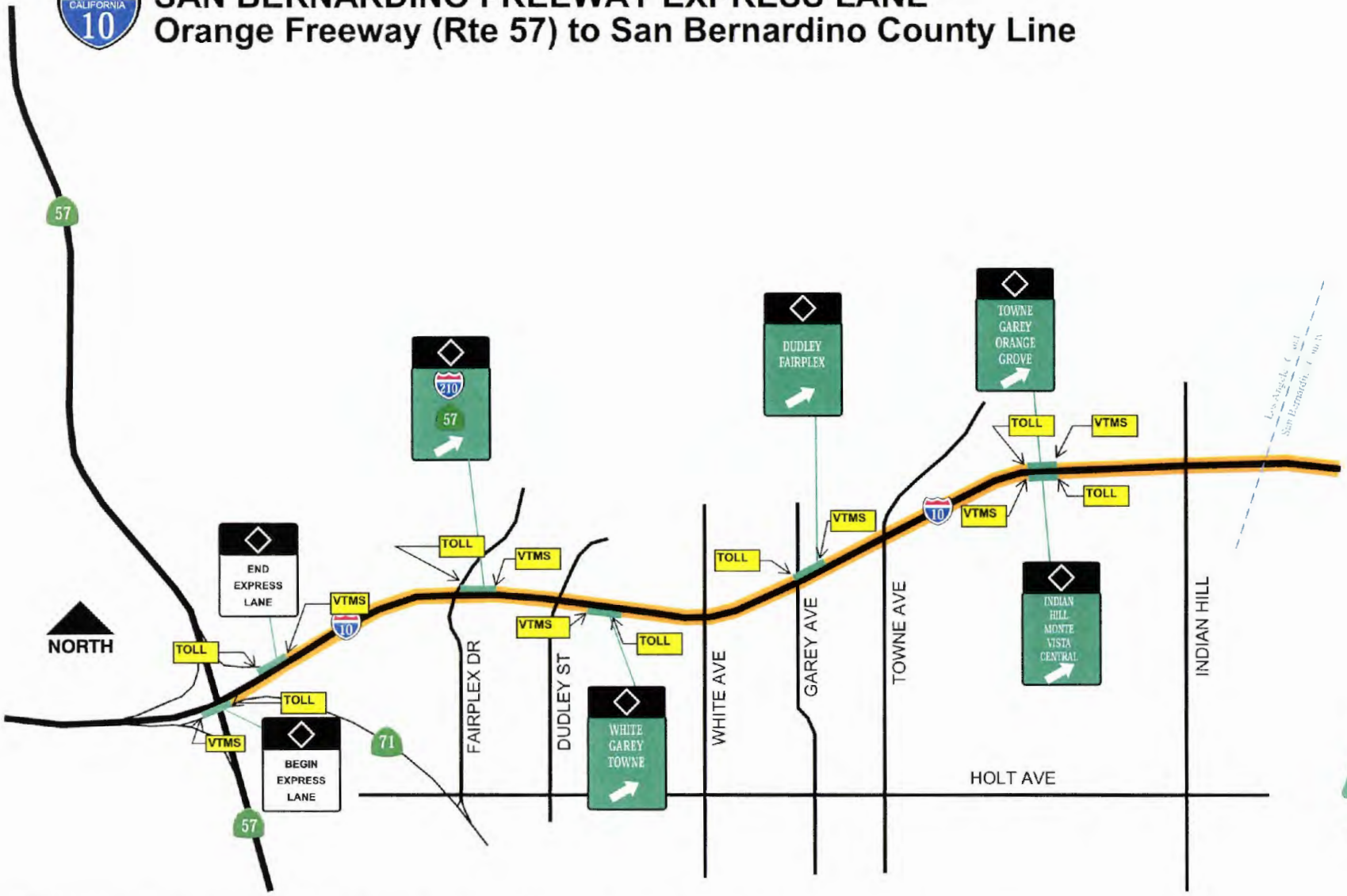
NO SCALE

Caltrans

California Department of Transportation · District 7, Los Angeles and Ventura Counties · 100 S. Main St., Los Angeles, CA 90012
Rideshare Information (800) COMMUTE · Bike Lockers (213) 897-0235

10_EXPRESS. 3/31/08

SAN BERNARDINO FREEWAY EXPRESS LANE
Orange Freeway (Rte 57) to San Bernardino County Line



NO SCALE

Caltrans

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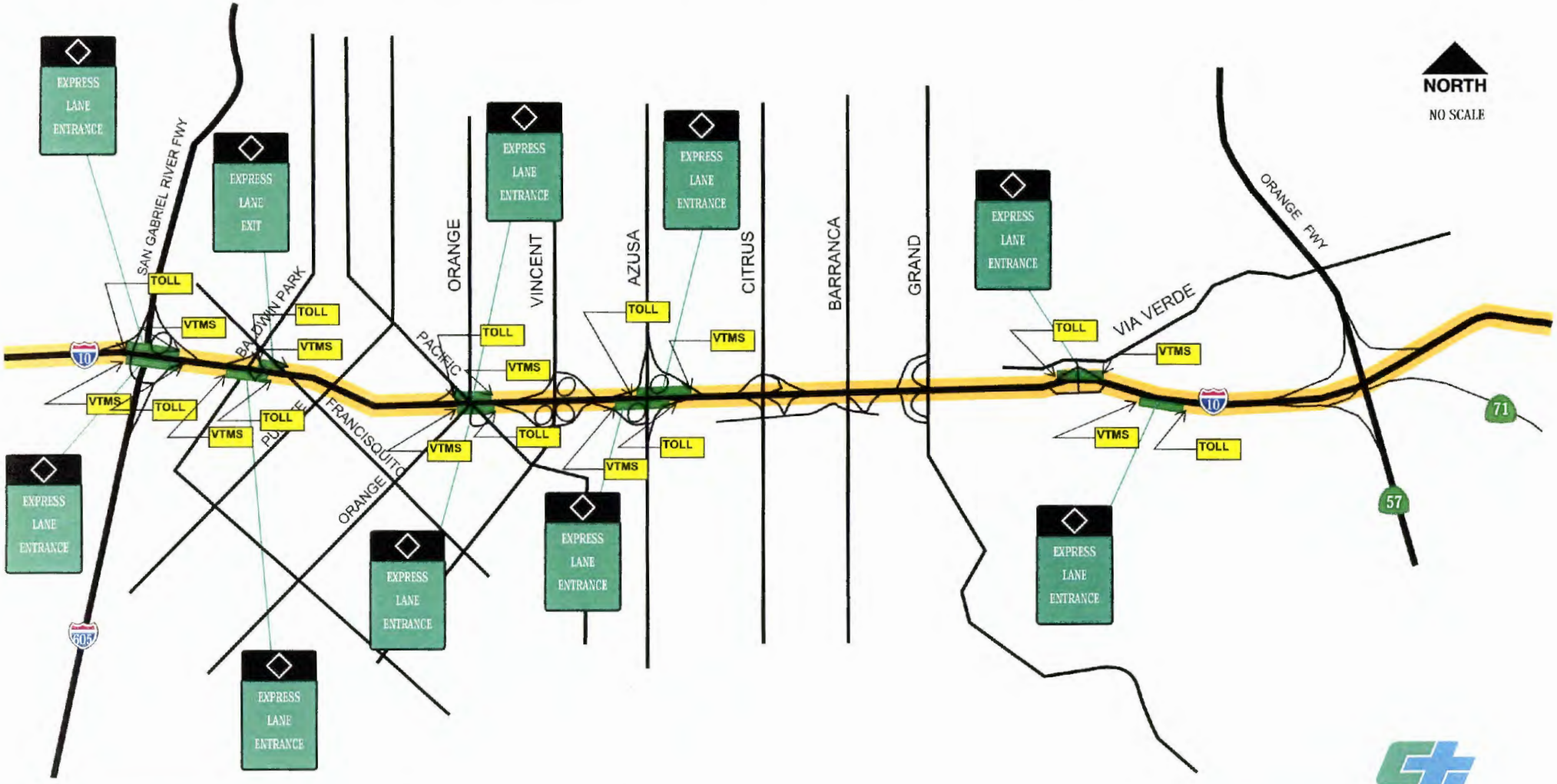
District 7 Graphic Services • 10_EXPRESS(SB) • 3/31/08

SAN BERNARDINO FREEWAY EXPRESS LANE
San Gabriel River Freeway (Rte 605) to Orange Fwy (Rte 57)



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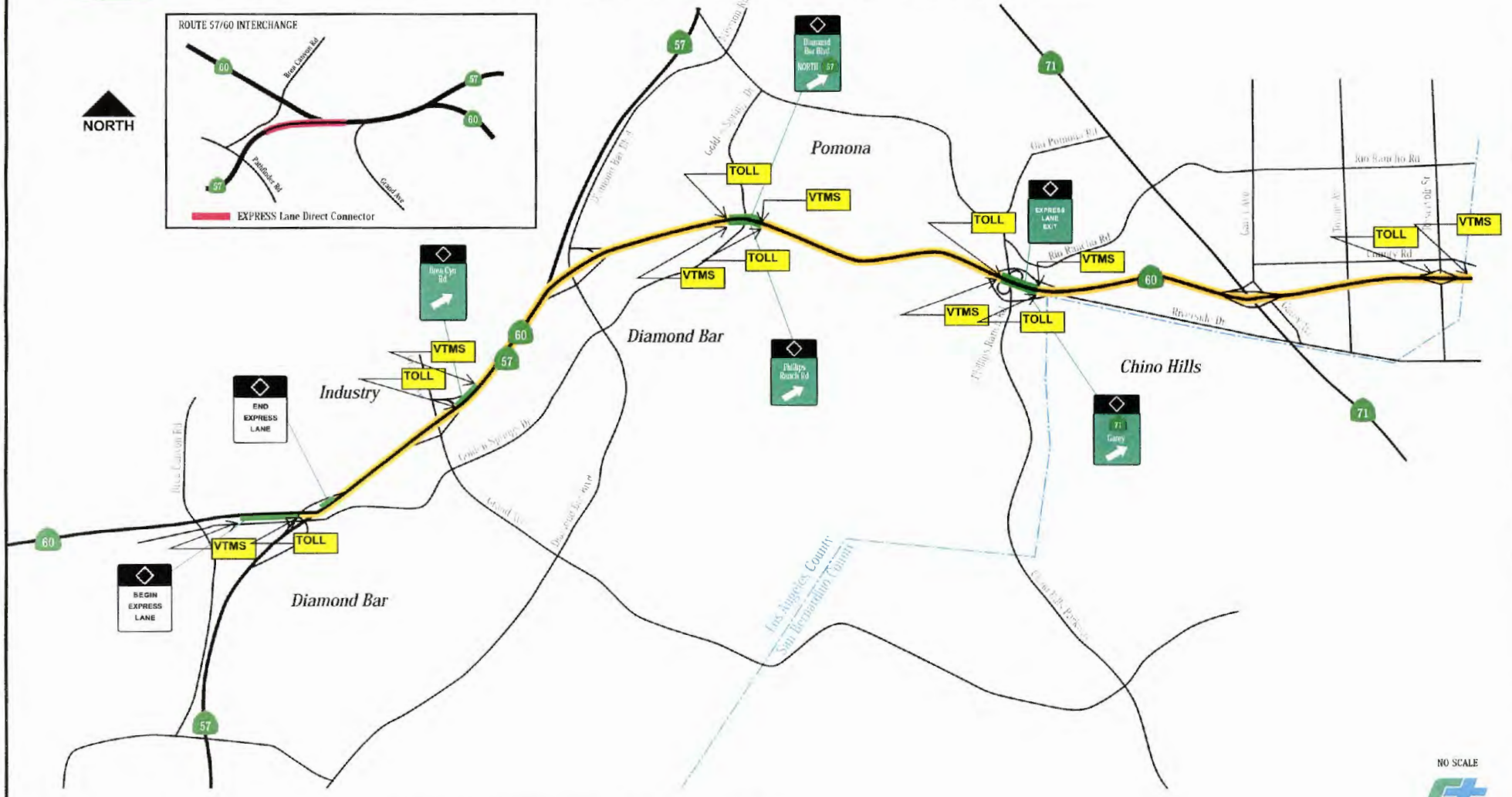
Caltrans

10_EXPRESS(605to57) • 3/31/08

POMONA FREEWAY EXPRESS LANE

Brea Canyon Road to San Bernardino County Line



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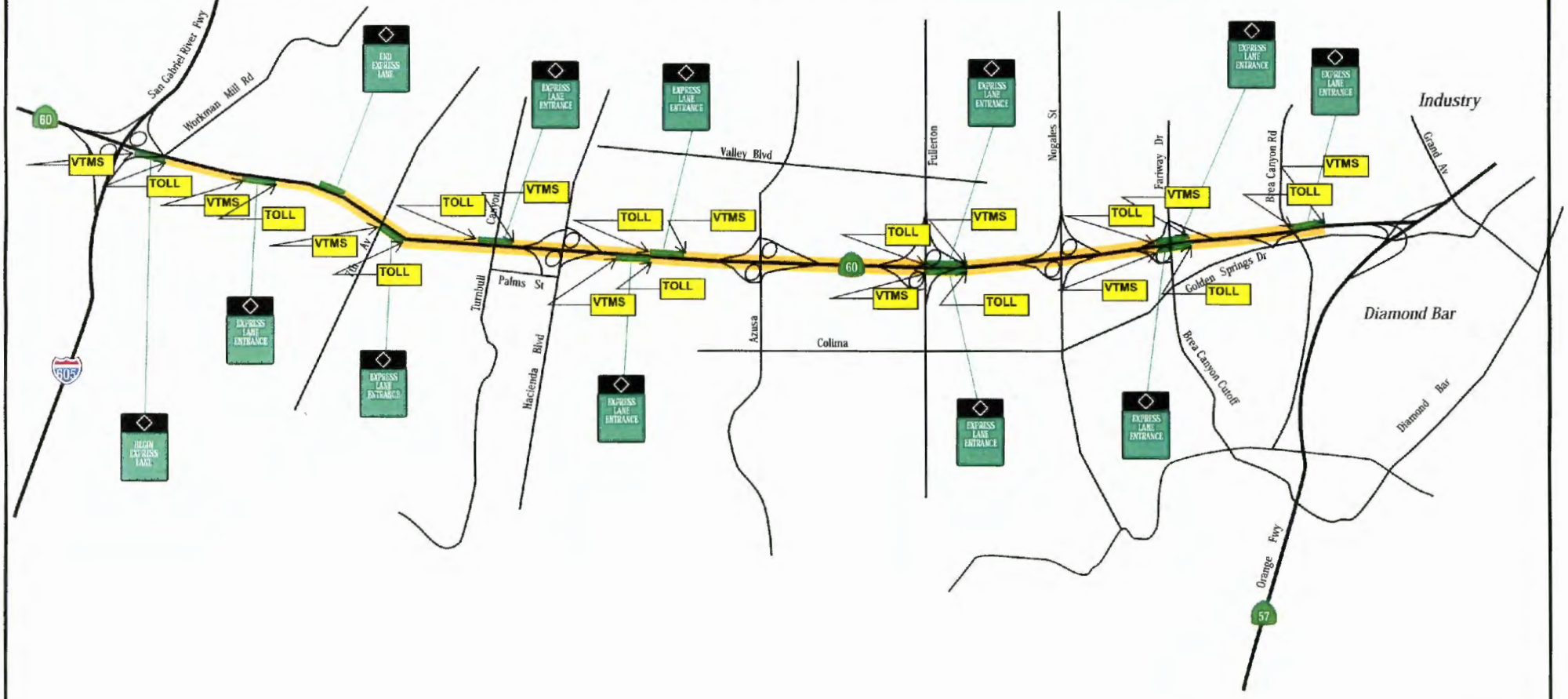
Rideshare Information (800) COMMUTE • Bike Lockers (213) 897-0235

Caltrans

District 7 Graphic Services • 60 HOV • 3/31/08

POMONA FREEWAY EXPRESS LANE

San Gabriel River Freeway (Rte 605) to Brea Canyon Road



NO SCALE

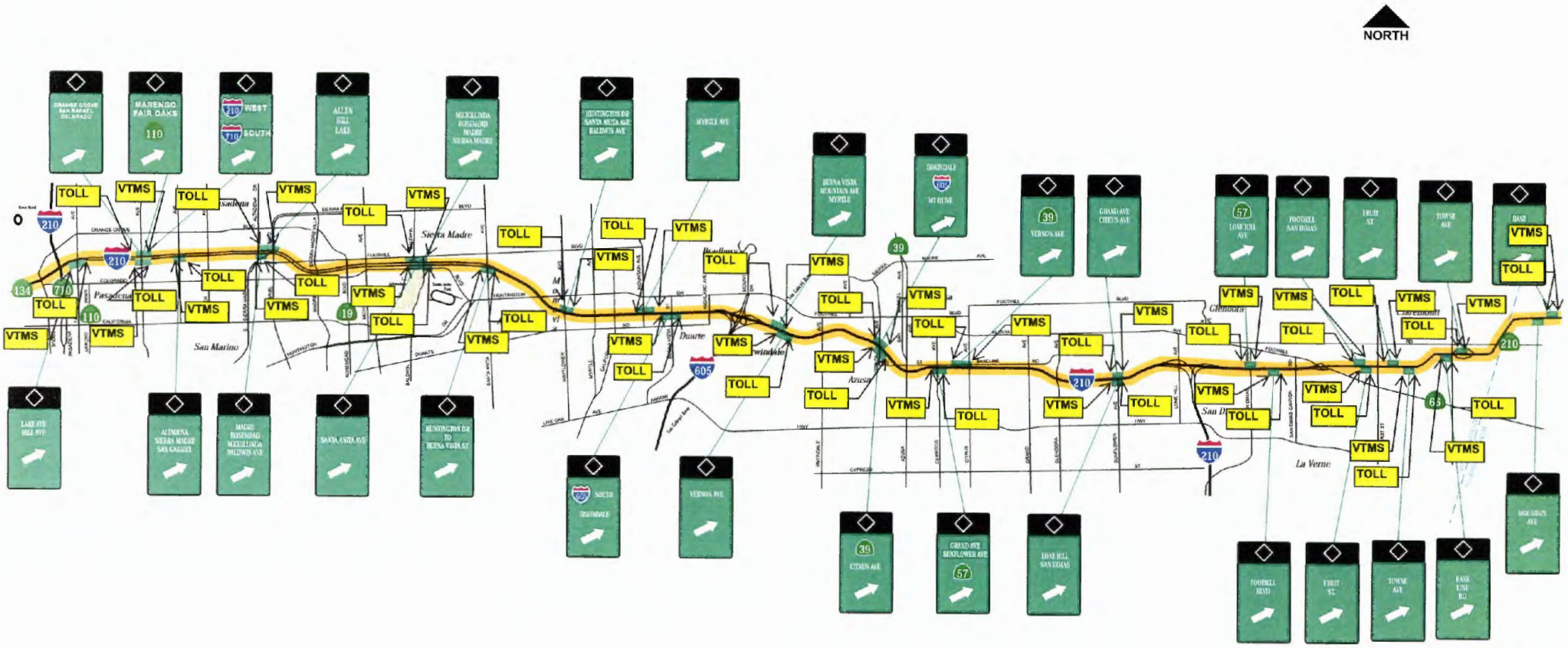
NORTH

California Department of Transportation • District 7, Los Angeles and Ventura Counties • 100 S. Main St., Los Angeles, CA 90012
Rideshare Information (800) COMMUTE • Bike Lockers (213) 897-0235

60 EXPRESS (605to57) HOV • 3/31/08

FOOTHILL FREEWAY EXPRESS LANE

Ventura Freeway (Rte 134) to San Bernardino County Line



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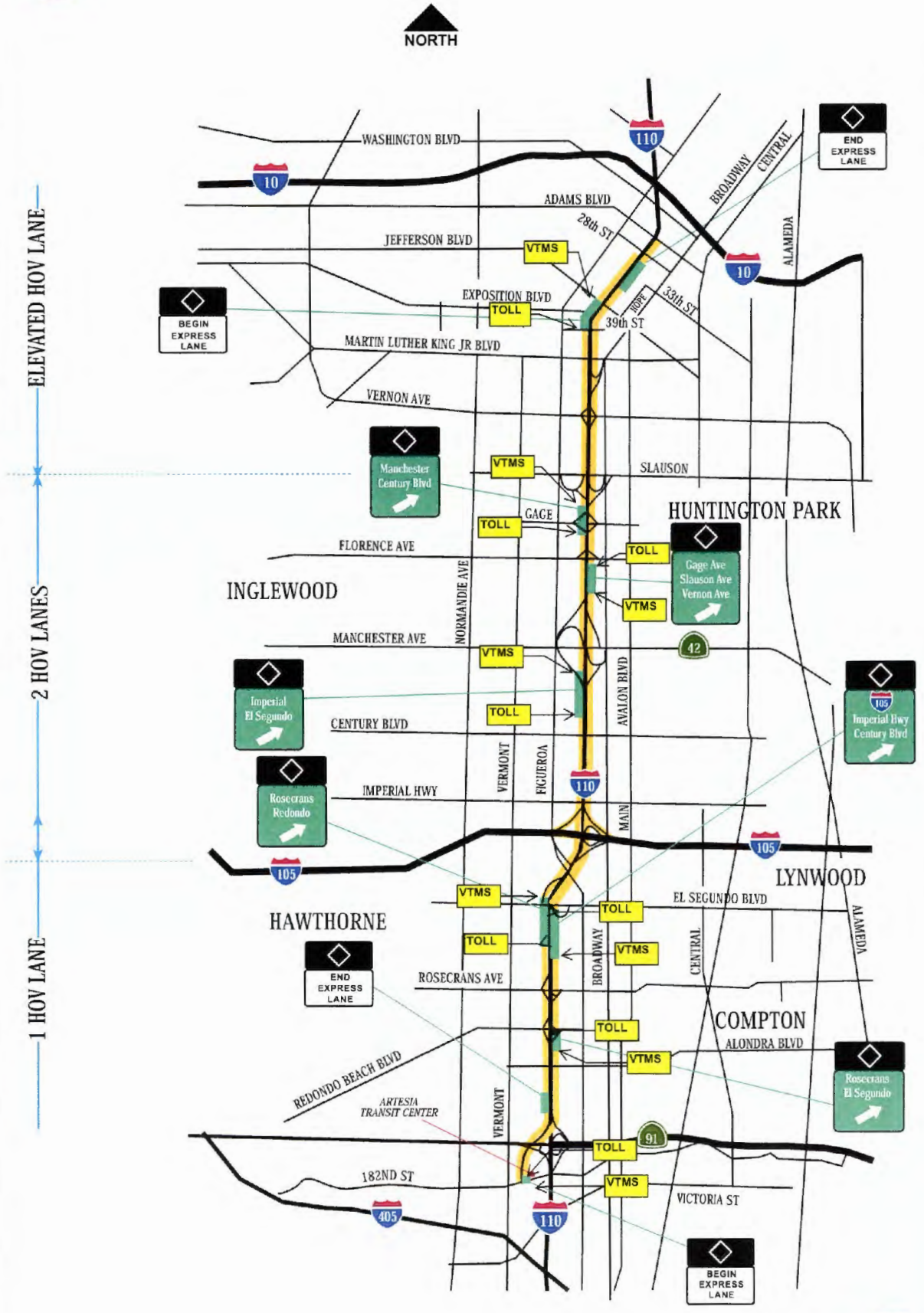
HARBOR FREEWAY EXPRESS LANE
Adams Blvd to Artesia Freeway (Rte 91)



California Department of Transportation · District 7, Los Angeles and Ventura Counties · 120 S. Spring St., Los Angeles, CA 90012
Rideshare Information (800) COMMUTE · Bike Lockers (213) 897-0235

NO SCALE

Caltrans

110 EXPRESS · 03/31/08

ATTACHMENT B

Cost Estimate

ATTACHMENT B

DRAFT PROJECT STUDY REPORT COST ESTIMATE SUMMARY

07 – LA – 10 PM 17.12/48.26
07 – LA –60 PM 11.48/30.45
07 – 110 – PM 9.65/20.70
07 – 210 PM 24.59/52.15
07-388 - 27440K
PP No. 4135

Project Description:

Limits In Los Angeles County on Route 10 from Alameda/Union Station to the San Bernardino County Line
In Los Angeles County on Route 60 from Route 605 to the San Bernardino County Line
In Los Angeles County on Route 110 from 182nd Street/Artesia Transit Center to Adams Boulevard
In Los Angeles County on Route 210 from I-210/I-710/SR 134 to the San Bernardino County Line

EA/Program 27440K

Proposed Improvement (Scope) High Occupancy Toll (HOT) Lanes

Phase

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$108,555,000
TOTAL STRUCTURE ITEMS	$0
SUBTOTAL CONSTRUCTION COSTS	$108,555,000
TOTAL RIGHT OF WAY ITEMS (Cert. Date 3/1/02)	$0
TOTAL PROJECT CAPITAL OUTLAY COSTS	**$108,600,000**

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Clearing & Grubbing	0	LS	$16,000	$0 $0	
			Subtotal Earthwork		$0

Section 2 Pavement Structural Section

Subtotal Pavement Structural Section	$0

Section 3 Drainage

Subtotal Drainage	$0

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Irrigation Modification	0	LS	$20,000	$0	
Highway Planting	0	LS	$9,000	$0	
Storm Water Pollution Control	1	LS	$200,000	$200,000	
Hazardous Waste Mitigation (Aerially Deposited Lead Soil)	1	LS	$500,000	$500,000	
Resident Engineer Office	1	LS	$200,000	$200,000	
Contractor's Lead Compliance Plan	0	LS	$5,000	$0	
Time Related Overhead	0	LS	$294,000	$0	
			Subtotal Specialty Items		$900,000
Section 5 Traffic Items					
Misc. Electrical [1]	0	LS	$100,000	$0	
Electronic Toll Collection System[2] Operating Segment 1	1	EA	$41,028,015	$41,028,015	
Electronic Toll Collection System[2] Operating Segment 2	1	EA	$39,473,381	$39,473,381	
System Testing & Documentation	0	LS	$20,000	$0	
Traffic Management Plan	1	LS	$160,000	$160,000	
COZEEP	1	LS	$1,147,200	$1,147,200	
			Subtotal Traffic Items		$81,808,596
			TOTAL SECTIONS 1 thru 5		$82,708,596

Note [2] LACMTA's engineer's estimate less Traffic Control, Caltrans Administration and Roadway Infrastructure Costs

07 – LA – 10 PM 17.12/48.26
07 – LA –60 PM 11.48/30.45
07 – 110 – PM 9.65/20.70
07 – 210 PM 24.59/52.15
07-388 - 27440K
PP No. 4135

Section 6 Minor Items				Item Cost	Section Cost
Subtotal Sections 1 thru 5	$82,708,596	x (5%)	=	$4,135,430	
			TOTAL MINOR ITEMS		$4,135,430
Section 7 Roadway Mobilization					
Subtotal Sections 1 thru 5	$82,708,596				
Minor Items	$4,135,430				
Sum	$86,844,026	x (5%)	=	$4,342,201	
			TOTAL ROADWAY MOBILIZATION		$4,342,201
Section 8 Roadway Additions					
Supplemental Work					
Subtotal Sections 1 thru 5	$82,708,596				
Minor Items	$4,135,430				
Sum	$86,844,026	x (5%)	=	$4,342,201	
Contingencies					
Subtotal Sections 1 thru 5	$82,708,596				
Minor Items	$4,135,430				
Sum	$86,844,026	x (15%)	=	$13,026,604	
			TOTAL ROADWAY ADDITIONS		$17,368,805
			TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)		**$108,555,000**

Estimate Prepared By: Jackie Tan (Print Name) Phone # (213) 897-4698 DATE March 26, 2008

Estimate Checked By: _____ Phone # _____ DATE _____

07 – LA – 10 PM 17.12/48.26
07 – LA –60 PM 11.48/30.45
07 – 110 – PM 9.65/20.70
07 – 210 PM 24.59/52.15
07-388 - 27440K
PP No. 4135

II-STRUCTURES ITEMS

	STRUCTURE
Conduit Installation on Structure	$0

SUBTOTAL STRUCTURES ITEMS $0

Railroad Related Costs	N/A	N/A	N/A

TOTAL STRUCTURES ITEMS $0

USE **$0**

COMMENTS :

Estimate Prepared By _____ Phone # _____
(Print Name)

07 – LA – 10 PM 17.12/48.26
07 – LA –60 PM 11.48/30.45
07 – 110 – PM 9.65/20.70
07 – 210 PM 24.59/52.15
07-388 - 27440K
PP No. 4135

III. RIGHT OF WAY ITEMS

ESCALATED VALUE

A. Acquisition, including excess lands, damages to remainder(s) and Goodwill _____

B. Utility Relocation (State share) _____

C. Relocation Assistance _____

D. Clearance/Demolition _____

E. Title and Escrow Fees _____

TOTAL RIGHT OF WAY ITEMS (Escalated Value) _____ $0

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) _____

F. Construction Contract Work

Brief Description of Work:

_____

_____

Right of Way Branch Cost Estimate for Work _____

COMMENTS:

LA EXPRESS LANES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) COMPONENTS - SAN BERNARDINO FREEWAY CORRIDOR C-1 (OS 1-1 14 Miles)

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS	Alameda Street		1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS	N Soto Street		1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES	5 Egress		1 +1S	WB	1	2	1	2	2	0	FSp
One Lane VES	710 Egress		1 +1S	WB	1	2	1	2	2	0	FSp
VTMS	Del Mar Ave WB		1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								FSp
One Lane VES	Del Mar Ave EB		1 +1S	EB	1	2	1	2	2	0	
VTMS	Rosemead Blvd EB		1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								FSp
One Lane VES	Rosemead Blvd WB		1 +1S	WB		2	1	2	2	1	
VTMS			1								SPC-1
VTMS	605		1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								FSp
Total			**15 +9S**		**8**	**18**	**9**	**18**	**18**	**6**	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

LA EXPRESS LANES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) COMPONENTS - FOOTHILL FREEWAY CORRIDOR C-2 (OS 1-2 12 Miles)

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS	Pasadena Ave		1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS	Los Robles Ave		1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES	Hill Ave		1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS	Lake Ave		1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS	Allen Ave		1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES	Sierra Madre Blvd		1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS	Mitchillinda Ave		1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES	Santa Anita Ave		1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	WB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
Total			**24 +12S**		**8**	**24**	**12**	**24**	**24**	**12**	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

LA EXPRESS LANES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) COMPONENTS - HARBOR FREEWAY CORRIDOR C-3 (OS 1-3 12 Miles)

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	NB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	NB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	NB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	SB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
VTMS			1	SB	1	3	2	3	3	1	SPC-1
Two Lane VES			2 +1S								SPC-1
VTMS			1	NB	1	3	2	3	3	1	SPC-1
Two Lane VES			2 +1S								SPC-1
VTMS			1	SB	1	3	2	3	3	1	SPC-1
Two Lane VES			2 +1S								SPC-1
VTMS			1	SB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
Total			**19 + 8S**		**7**	**19**	**11**	**19**	**19**	**8**	

Table of Abbreviations

NB	Northbound	AVI	Automatic Vehicle Identification
SB	Southbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

LA EXPRESS LANES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) COMPONENTS - SAN BERNARDINO FREEWAY CORRIDOR C-1 (OS 2-4 6 Miles)

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
VTMS			1 +1S	EB		2	1	2	2	1	FSp
One Lane VES			1								
Total			**12 +6S**		**5**	**12**	**6**	**12**	**12**	**6**	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

LA EXPRESS LANES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) CO. NENTS - FOOTHILL FREEWAY CORRIDOR C-2 (OS 2-5 15 Miles)

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	WB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	WB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	WB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
One Lane VES			1 +1S	WB		2	1	2	2	1	SPC-1
VTMS			1								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
Total			**34 +17S**		**9**	**34**	**17**	**34**	**34**	**17**	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

LA EXPRESS LANES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) COMPONENTS - POMONA FREEWAY CORRIDOR C-4 (OS 2-6 8 Miles)

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	EB	1	2	1	2	2	1	FSp
One Lane VES			1 +1S								
One Lane VES			1 +1S	WB		2	1	2	2	1	FSp
VTMS			1								
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
Total			**14 +7S**		**5**	**14**	**7**	**14**	**14**	**7**	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

LA EXPRESS LANES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) COMPONENTS - SR 60 From I-605 to Brea Canyon CORRIDOR C-4 (OS 2-7 11 Miles)

Los Angeles Metropolitan Transportation	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
Total			24 +12S		12	24	12	24	24	12	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

LA EXPRESS LANES ELECTRONIC TOLL COLLECTION SYSTEM (ETCS) COMPONENTS -I-10 From I-605 to SR 57 CORRIDOR C-1 (OS 2-8 9 Miles)

Los Angeles Metropolitan	Location	Station #	No. of Lanes	Direction	Zone Controller	AVDS	TSI	VES	AVI Antennas	VTMS	Gantry Type
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	EB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
VTMS			1	WB	1	2	1	2	2	1	SPC-1
One Lane VES			1 +1S								SPC-1
Total			24 +12S		12	24	12	24	24	12	

Table of Abbreviations

EB	Eastbound	AVI	Automatic Vehicle Identification
WB	Westbound	VTMS	Variable Toll Message Sign
SPC-1	Single Post Single Side	VES	Violation Enforcement System
FSp	Full Span	TSI	Transaction Status Indicator
SPC-2	Single Post Double Side	AVDS	Automatic Vehicle Detection System

FREEWAY SUMMARY

Los Angeles Metropolitan Transportation Commission (Metro) Express Lane System	Operating Segment 1	Operating Segment 2	Total	Corridor							
				I-10 - from Alameda St/Union Station to I-605	I-210 from I-210/SR 134/I-710 to I-605	I-110 from 182nd St./Artesia Transit Center to Adams Blvd	I-10 from SR 57 to San Bernardino Co. Line	I-210 from I-210 South to San Bernardino Co. Line	SR 60 from Brea Canyon along SR 27 to Riverside/SBern. Co. Line	SR 60 from I-605 to Brea Canyon	I-10 from I-605 to SR 57
VTMS	26	54	80	6	12	8	6	17	7	12	12
One Lane VES - Single	14	32	46	7	4	3	4	1	3	12	12
Two Lane VES - Single	3	0	3	0	0	3	0	0	0	0	0
One Lane VES Combined	6	11	17	1	4	1	1	8	2	0	0
Total Lane Types	**23**	**43**	**66**	**8**	**8**	**7**	**5**	**9**	**5**	12	12
Total Toll Zone Lanes			**86**	**9**	**12**	**11**	**6**	**17**	**7**	**12**	**12**

Note: Total Toll Zone Lanes include only the main HOV lanes where there is toll collection equipment, it is either 1 or 2. It does not include the shoulder or the GP lane that has the VTMS

Summary of LACMTA Program Cost By Operating Segment (Draft 3/14/08)

A. Toll System Costs

Tolling Location Type Quantities and Costs Note 1	Unit Cost	Subsystem Quantity	Subsystem Cost	Operating Segment 1 Quantity	Operating Segment 1 Cost (2010)	Operating Segment 2 Quantity	Operating Segment 2 Cost (2012)	Full System Quantity	Full System Cost
1 Lane w/ VES +1 Shoulder									
Total			**$240,140**	[redacted]	**$ 3,566,703**	[redacted]	**$ 8,648,950**	[redacted]	**$12,215,653**
2 Lane w/ VES +1 Shoulder									
Total			**$358,290**	[redacted]	**$ 1,140,330**	[redacted]	**$ -**	[redacted]	**$1,140,330**
3 Lane w/ VES									
Total			**$420,920**	[redacted]	**$ -**	[redacted]	**$ -**	[redacted]	**$0**

Tolling Location Type Quantities and Costs	Unit Cost	Subsystem Quantity	Subsystem Cost	Operating Segment 1 Quantity	Operating Segment 1 Cost (2010)	Operating Segment 2 Quantity	Operating Segment 2 Cost (2012)	Full System Quantity	Full System Cost
1 Lanes w/ VES-(Dual Directions Combined for 2 lanes) +2 Shoulder									
Total			**$398,310**	[redacted]	**$ 2,535,402**	[redacted]	**$ 4,931,316**	[redacted]	**$7,466,718**
2 Lanes w/ VES-(Dual Directions Combined for 4 lanes)									
Total			**$518,340**	[redacted]	**$ -**	[redacted]	**$ -**	[redacted]	**$0**
Total Lane Types				[redacted]		[redacted]		[redacted]	
						Note 22			
VTMS, (25' x 17'6") installed, including support Note 6	$172,100	1	$172,100	[redacted]	**$ 4,747,103**	[redacted]	**$ 10,459,804**	[redacted]	**$15,206,907**
Misc Cables		Lump Sum			$10,609		$11,255		*$21,864*
Spare Parts (10% of Total) Note 7		Lump Sum			$622,080		$1,323,387		*$1,945,467*
Grand Total Lane Equipment					**$12,622,227**		**$25,374,712**		**$37,996,939**
Lane Transition Costs (Installation)					$50,000		$50,000		*$100,000*
Escalation Factor Per Year Note 8	**1.030**								

Additional Items (Sheet A) Systems Costs and Back Office	Unit Cost	Subsystem Quantity	Subsystem Cost	Operating Segment 1 Quantity	Operating Segment 1 Cost (2010)	Operating Segment 2 Quantity	Operating Segment 2 Cost (2012)	Full System Quantity	Full System Cost
Total Back-Office and Related Systems & Equipment					**$11,484,243**		**$532,025**		**$12,016,268**
Total System Wide Costs (Including Ins., War., Doc., Training...)					**$2,060,798**		**$150,000**		**$2,210,798**
Total Engineering Design and Project Management					**$4,063,677**		**$4,046,544**		**$8,110,221**
Grand Total Additional Items					**$17,608,717**		**$4,728,569**		**$22,337,287**
[redacted]					[redacted]		[redacted]		[redacted]

B. Additional Program Costs

	Unit Cost	Subsystem Quantity	Subsystem Cost	Operating Segment 1 Quantity	Operating Segment 1 Cost (2010)	Operating Segment 2 Quantity	Operating Segment 2 Cost (2012)	Full System Quantity	Full System Cost
Preparation of Equipment Pads Note 16		LS	$1,500	49	$77,976	97	$163,762	146	$241,738
Power Drop From Right of Way to ETC Power Panel Note 17		LS	$10,000	49	$519,841	97	$1,091,744	146	$1,611,585
Traffic Control Note 18		LS	$35,000	49	$1,819,444	97	$3,821,102	146	$5,640,546
Segment Phasing Costs		LS	$0	0	$0	0	$0	0	$0
Communications Infrastructure Note 19		LS	$0	1	$190,325	1	$156,029	2	$346,355
Consultant Program Oversight and Management (10% of above)	10%	LS	$0	0	$3,288,853	0	$3,538,592	0	$6,827,445
Interal LACMTA Program Admin Costs (3% of above)	3%	LS	$0	0	$1,085,322	0	$1,167,735	0	$2,253,057
Internal CalTrans Administration & Oversight (3% of above)	3%	LS	$0	0	$1,117,881	0	$1,202,767	0	$2,320,648
Roadway Infrastructure Modifications Note 22		LS	$0	1	$7,200,000	1	$4,800,000	2	$12,000,000
Project Contingency	30%	LS	30% of all above $		$13,674,176		$13,828,504	0	$27,502,680
TOTAL ADDITIONAL PROGRAM COSTS					**$28,973,818**		**$29,770,235**		**$58,744,053**

C. GRAND TOTAL A+B Costs

Note 20 **$119,180,000**

Notes To Program Costs	3/14/2008
Los Angeles Metropolitan Transportation Commission (Metro) Express Lane System	
Toll System Costs	
1. Equipment Quantities	Equipment quantities and lane types are preliminary estimates subject to revision based on actual design and construction.
2. Violation Enforcement Cameras	Configuration includes 1 HI Resolution Camera per travel lane and low resolution camera per shoulder
3. ETC (AVI) Antenna	Configuration includes1 antenna per lane and 1 per shoulder
4. AVI Reader	Configuration assumes 1 reader per antenna - depending on reader multiple antennas may be interfaced to a single reader
5. Cabinets	Assumes a NEMA type cabinet with AC and locking for all ETC equipment.
6. Video Toll Message Signs	Assumed configuration and size is (25' x 17' 6") mounted on cantilever at roadside adjacent to GP lanes and preceding toll access points.
	Sign is a combination of LED and Static Information.
7. Spares	Spares calculated at 10% of in lane equipment minus cost of gantry and lane labor.
8. Escalation	Escalation is assumed to midyear of construction for each year (3.0%) per year.
9. Video Audit System (DVAS)	Estimate does not provide for DVAS at each site but includes (2) mobile systems - System resides at host / CSC.
	Mobile DVAS units provide random site DVAS capability and interfaces to network at site location.
10. System Software and Development	Includes Lane, Dynamic Pricing, MOMS, and CSC.
11. CSC and Violations Processing Center	Total includes both a VPC and CSC capability to handle violations processing customer service requirements and full CSC operations. Also an option to add an additional walk-in service center for Phase 2.
12. System Testing	Includes Commissioning Test and Corridor Testing in Phase 2.
13. Software License	Allocates software between systems software and license-different SI's allocate between the two differently.
14. Engineering and Design	Estimate of system integrator's required level of engineering and design to develop all of the systems.
15. Project Management	Estimate of system integration overall project management required to complete the design, development, installation and testing.
16. Equipment Pads	Quantity is subject to change depending on number of cabinets and/or the use of a larger pad for multiple cabinets. Worst Case assumption includes pads for VTMS and ETC locations.
17. Power Drop	Estimate assumes one power service drop per toll zone location. Cost subject to change based on distance from service point. Worst Case assumption includes pads for VTMS and ETC locations.
18. Traffic Control	Assumed to be $3,500 per event. Each installation assumes total of 10 events per site ($35,000 per site)
18. Communications Infrastructure	Includes communications equipment not included per site but required to interface with each corridor hub.
19. Grand Total A+B Costs	Rounded to thousands.
20. Toll Zone Quantity	Assumes worst case total (both directions) for SR 60 from I-605 6o Brea Canyon and I-101 from I-605 to SR 57 since both segments not yet constructed
21. VTMS Quantity	Assumes worst case total requiring one VTMS in vicinity of each additional toll zone
22. Roadway Infrastructure and Modifications	This number has been provided to the estimate to cover costs of required modifications for items such as roadway signing, striping and roadway traffic control and will be modified upon preliminary design.

From Summary of Program Cost Sheet			GRAND TOTAL A+B Costs =		$ 119,180,000
Los Angeles Metropolitan Transportation Commission (Metro) Express Lane System					
OS	**Corridor**	**Operating Segment (OS)**	**No. Toll Zone Lanes** Note 1	**% of Total Toll Zone Lanes**	**Segment Cost Estimate** Note 2
		Operating Segment 1			
OS 1-1	C-1	I-10 from Alameda St/Union Station to I-605	9	10.5%	$ 12,472,325.58
OS 1-2	C-2	I-210 from I-210/SR 134/I-710 to I-605	12	14.0%	$ 16,629,767.44
OS 1-3	C-3	I-110 from 182nd St./Artesia Transit Center to Adams Blvd.	11	12.8%	$ 15,243,953.49
		Total Lanes OS-1	**32**	**37.2%**	**$ 44,346,046.51**
		Operating Segment 2			
OS 2-4	C-1	I-10 from SR57 to San Bernardino County Line	6	7.0%	$ 8,314,883.72
OS 2-5	C-2	I-210 from I-210 South to San Bernardino County Line	17	19.8%	$ 23,558,837.21
OS 2-6	C-4	SR 60 from Brea Canyon along SR 57 to San Bernardino Co. Line	7	8.1%	$ 9,700,697.67
OS 2-7	C-4	SR 60 from I-605 to Brea Canyon (HOV lane under construction)	12	14.0%	$ 16,629,767.44
OS 2-8	C-1	I-10 from I-605 to SR 57 (HOV lane in design)	12	14.0%	$ 16,629,767.44
		Total Lanes OS-2	**54**	**62.8%**	**$ 74,833,953.49**
		(Program Check) Total Number of Lanes	**86**	**100.0%**	**$ 119,180,000.00**

Note 1: The number of Toll Zone Lanes for a segment represents the sum of all toll lanes where toll collection equipment is installed. Shoulders are not counted as a lane.

Note 2: System costs have been allocated across all roadway segments, however they will be ***incurred*** in the early stages of the project

ATTACHMENT C

Los Angeles Express Lanes Electronic Toll Collection System
and
Definitions and Abbreviations

Definitions and Abbreviations

AVDS: Automatic Vehicle Detection System using an overhead laser profiler for automatic vehicle detection and separation.

Automatic Vehicle Identification (AVI): A system consisting of an antenna and reader, that meet Caltrans Title 21 requirements, installed in a toll lane and a compatible transponder mounted on a vehicle for automatic identification of the transponder as it passes through the lane.

Back Office Communication Equipment: All of the equipment necessary to process the ETC transactions and captured images sent from the zone controllers over the WAN for processing at the CSC and VPC.

Business Rules: A set of rules that defines how the Express Lane toll collection system should respond to various situations that occur during the toll collection process based on business case and policy decisions made by the Los Angeles County Metropolitan Transportation Authority (Metro), as the same may be amended from time to time by written agreement of the Authority and the Contractor.

Central Computer System: The back office central computer systems that interfaces with the Corridor Servers and violation enforcement servers, and provides toll collection functions for managing the Congestion Pricing Express Lane operations, including Maintenance On-line Management System (MOMS) functionality.

Corridor Servers: All zone controllers in a corridor will be networked in a local area network configuration with the corridor server which will be the interface to the Toll Systems wide area network for transmitting the transaction and image data to the central computer system.

CSC: The Customer Service Center that supports account management, account maintenance, and call center functions.

CSC Office Equipment: Contains infrastructure equipment, software, and services required to establish and maintain accounts, to support customers, to obtain correct name and addresses, and to prepare customer billing notification according to established Business Rules.

Electronic Toll Collection (ETC): A system of integrated devices and components that permit the automatic recording of vehicle transactions through electronic media in a toll revenue collection system

ETC Antenna: An integral part of the AVI system mounted above the toll zones used to interface between the ETC Reader and a vehicle's transponder.

ETC Reader w/RF module: The reader and Radio Frequency (RF) module is the main subsystem of the AVI system that provides the communications link between the zone controller

and the transponder via the ETC antenna and the transponder message interface to the zone controller.

FSp Gantry: Full Span gantry

HOV: High Occupancy Vehicle. Typically HOV +2, HOV+3 or HOV +4

Maintenance On-line Management System (MOMS): An automated, fully integrated system for monitoring the status of operational equipment in real time, to record equipment and process failures, notify maintenance personnel, generate and track work orders, maintain preventative maintenance schedules, generate repair history, and maintain parts inventory and asset management.

Mobile Enforcement Equipment: This may consist of one or multiple equipment configurations such as a personal digital assistant (PDA) unit that can link in real time to the CSC for account information or it can be configured as a mobile enforcement reader (MER) that is installed in an enforcement vehicle and allows an enforcement officer to check an adjacent vehicle for (1) the presence of a valid transponder and (2) the time of the last transponder read, or it can be a combination of the two equipment configuration.

Optical Character Recognition (OCR): A software process that recognizes characters which, in this application, extracts the license plate numbers from the image of the license plate.

Optical Plate Recognition (OPR): A software process that recognizes license plate characteristics, as well as the license plate characters which, in this application, extracts the license plate numbers from the image of the license plate as well as any "specialty plate configurations" for proper identifications with DHSMV or others.

Redundant Zone Controller: The in-lane processor linked to all of the peripheral lane equipment used to detect and capture vehicle and transponder data in the toll zone. The zone controller is networked directly with the corridor server and provides both transaction data and equipment status and alarm messages to the central computer and MOMs via the corridor server. A redundant or duplicated controller provides high system availability and minimizes the amount of lost revenue due to controller down time.

SPC Gantry: Single Pole Cantilever gantry for mounting the toll collection and VTMS equipment.

SPC-1: Single Pole Single Side Cantilever

SPC-2: Single Pole Double Side Cantilever

System: The software and hardware procured, furnished, and installed under Contract that meets the functional and operational requirements specified.

System Tests: All tests conducted on the system to ensure and verify system reliability, accuracy, performance and auditability. Typically they include the Factory Acceptance (functional compliance) Test, Commissioning (Installation/operational readiness) Test, Operational (verification of accuracy, reliability and performance) Test and Segment Test (i.e. an operational test conducted on each road segment prior to collection of revenue).

Uninterruptible Power Supply (UPS): A battery backup power system in the event utility power becomes unavailable.

Variable Toll Message Sign (VTMS): Digital electronic message sign that provides toll rate information to the traveling public. For some applications the VTMS provides both toll rate information and estimated travel times to the next exits.

Violation Enforcement System (VES): Digital video or still image based system located at toll lanes used to record license plate images of selected vehicles (to be defined in the Business Rules) in digital video or still image form. Typically consists of a high resolution camera with supplemental lighting to capture images in the travel lane and a lower resolution camera with supplemental lighting to capture images in the shoulder.

Video Audit System (VAS): System with cameras generally located at each gantry/toll zone area that permits remote viewing of vehicular events and images in real time or stored for review. System provides transaction event data overlaid on video for correlation of vehicle and transaction data. For this project this capability will be provided in a mobile configuration not at every toll zone

Violation Processing Center (VPC): Contains infrastructure equipment, software, and services required to establish and maintain accounts, to support customers, to process violations and license plate images, to obtain correct name and addresses, and to prepare customer billing notification for video tolling and violation enforcement according to established Business Rules.

VToll: A transaction that was a non-AVI transaction at the time it was created at the lane but after image review process the license plate was determined to belong to a video based customer and the violation was converted to a video toll transaction and posted to the customer account accordingly.

WAN: Wide Area Network

ATTACHMENT D

Average Daily Traffic Volumes

Average Daily Traffic

Table 1 summarizes the assumed average daily traffic (ADT) volumes for the HOV lanes on each segment. These volumes were drawn from a sampling of publicly-available PeMS data.

Table 1 – ADT's on HOV Segments, 2008

Operating Segment	Weekday Volume		Saturday Volume		Sunday Volume	
	EB*	WB**	EB*	WB**	EB*	WB**
1-1	12,600	14,700	14,700	17,900	10,200	14,800
1-2	13,200	15,000	16,900	16,500	12,100	14,900
1-3	28,700	41,200	27,600	41,600	21,800	41,700
2-4	12,800	12,300	15,100	15,200	11,300	13,700
2-5	11,100	13,500	14,700	15,300	10,400	14,800
2-6	11,600	12,400	14,000	14,200	10,300	11,800
2-7	11,600	12,400	14,000	14,200	10,300	11,800
2-8	12,800	12,300	15,100	15,200	11,300	13,700

**NB for OS 1-3 (I-110)*

***SB for OS 1-3 (I-110)*

No HOV data was available for operating segments 2-7 and 2-8, since their construction is not complete. Therefore, it was assumed that operating segment (OS) 2-7 had the same ADT as OS 2-6, and that OS 2-8 had the same ADT as OS 2-4.

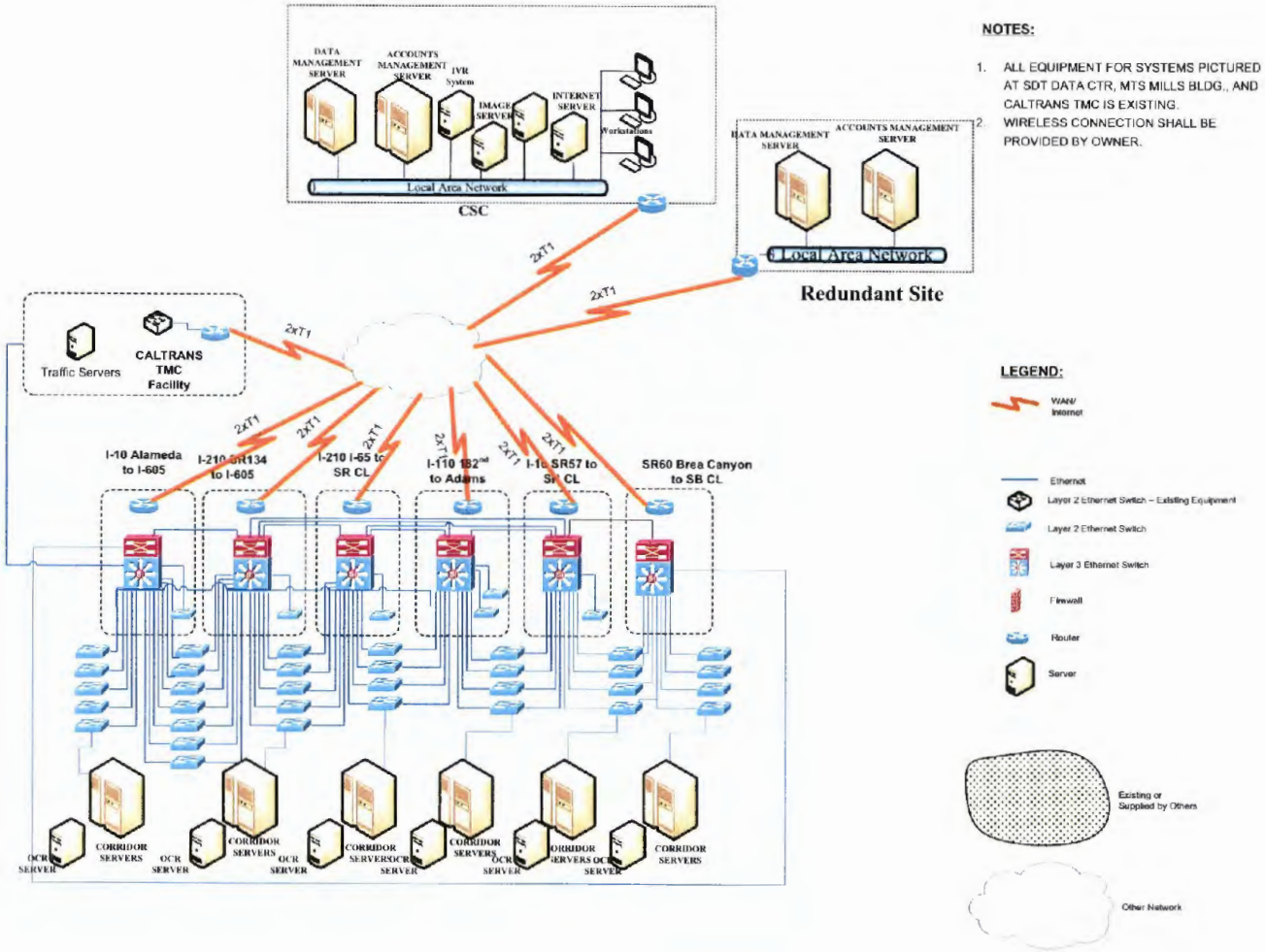
The data for OS 1-3 (I-110) was drawn from the portion of the roadway with 4 HOV lanes.

ATTACHMENT E

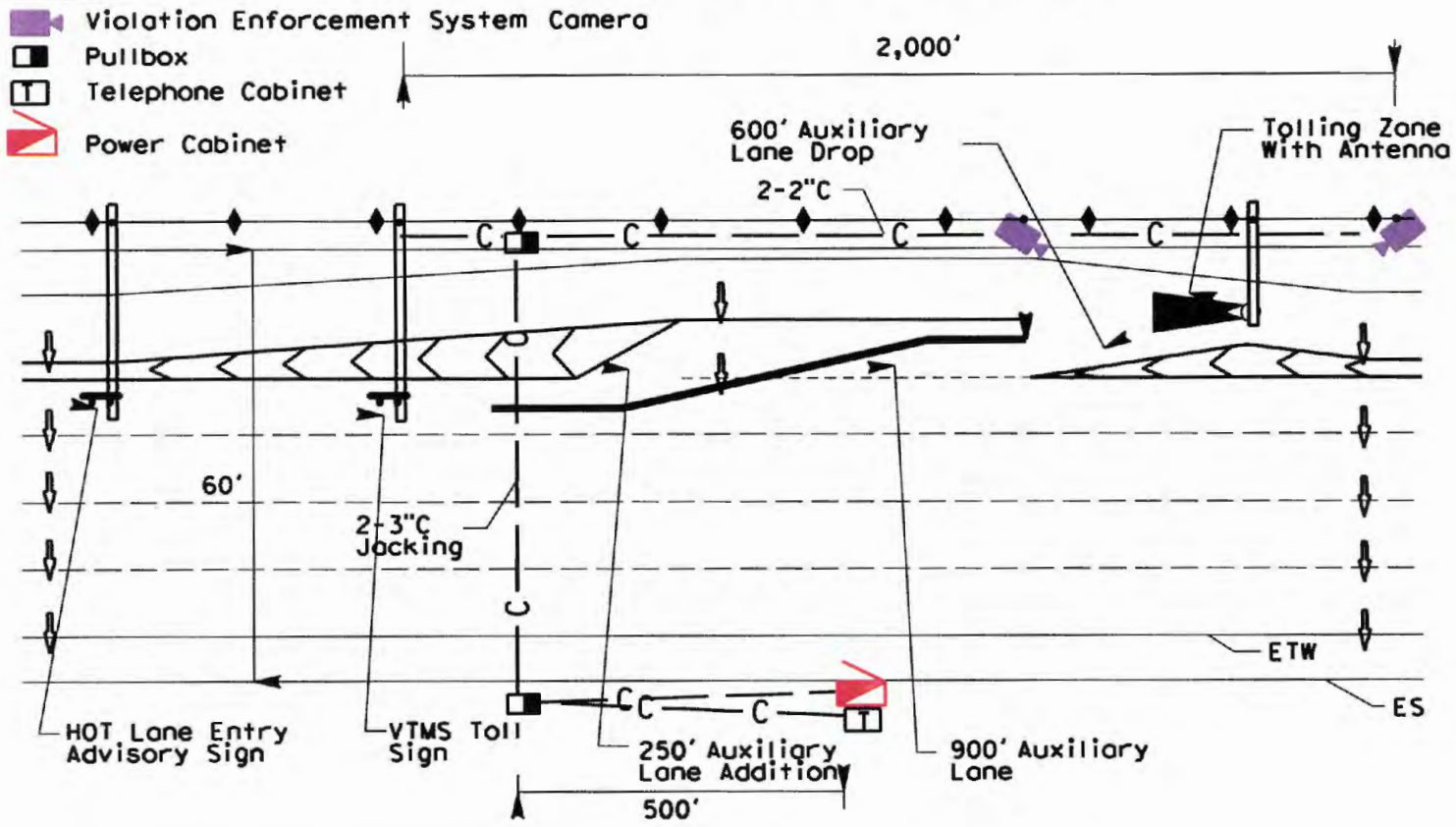
HOT Lane Corridor Toll Collection System

CORRIDOR Toll Collection System – Fiber Optics / Communications Network Overview

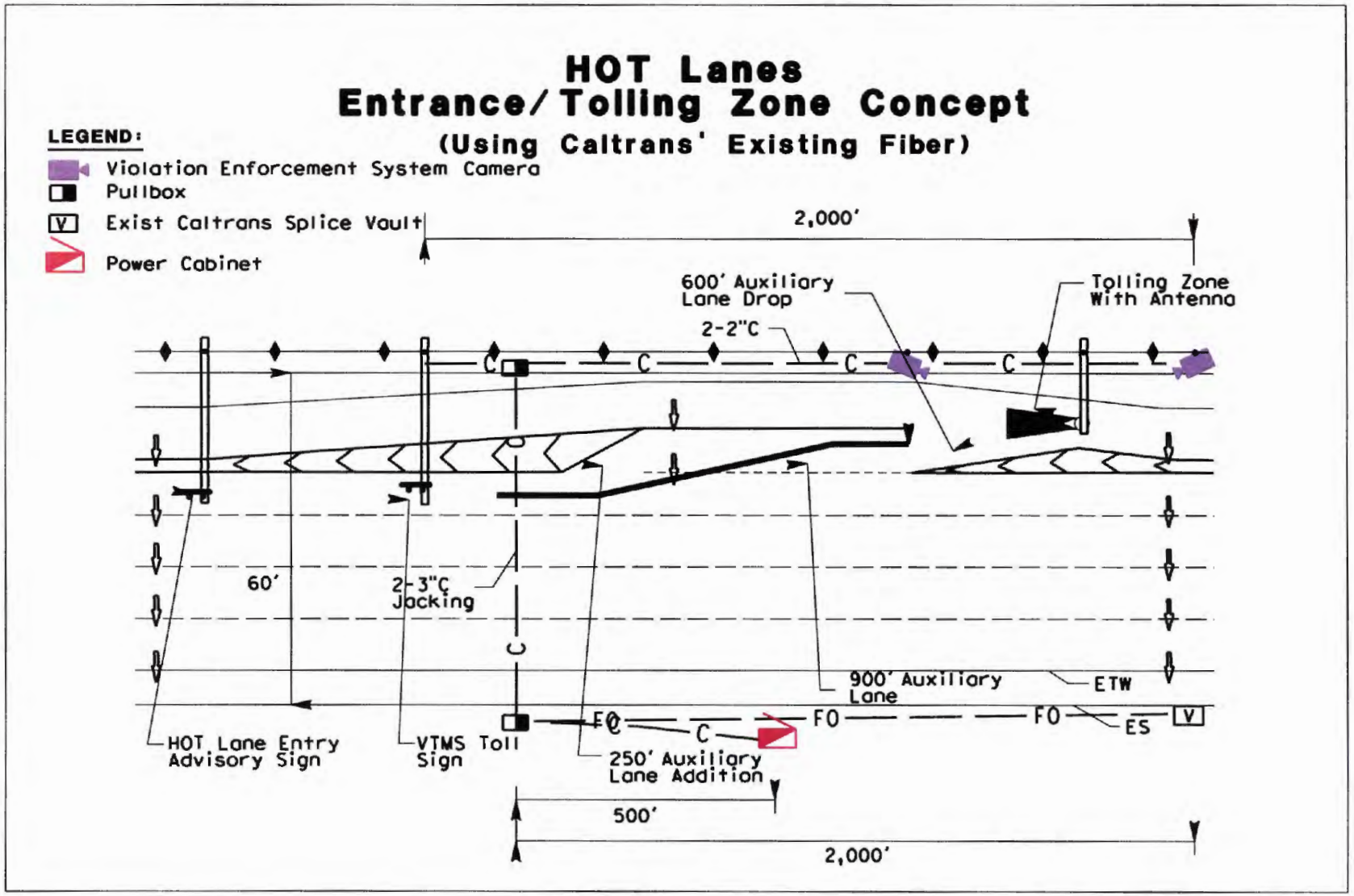
Assumptions:
1. There is existing fiber optic communications in each of the corridors. Additional fibers connecting corridors to a toll operations center will be required.
2. There are some transit centers on each corridor that will host the Layer 3 Switch and Servers.
3. Leased communication from telephone companies is another communications alternative.



HOT Lanes
Entrance/Tolling Zone Concept
(Using 2-T1 Lines Communication)



HOT Lanes
Entrance/ Tolling Zone Concept
(Using Caltrans' Existing Fiber)



ATTACHMENT F

Hazardous Waste Assessment

ATTACHMENT G

Right of Way Data Sheet

ATTACHMENT H

Storm Water Data Report

ATTACHMENT I

Preliminary Transportation Management Plan Data Sheet

TRANSPORTATION MANAGEMENT PLAN DATA SHEET
(Preliminary TMP Elements and Costs)

Co/Rte/PM LA / 10,60,110,210 / HOV EA 07-27440K Alternative No. _____

Project Limit Alameda Union Station to San Bernardino County Line

Project Description Convert High Occupancy Vehicle (HOV) Lanes to Express Lanes
Route 10 from Alameda Union Station to San Bernardino County Line
Route 60 from Route 605 I/C to San Bernardino County Line
Route 110 from 182nd St/Artesia Transit Center to Adams Blvd
Route 210 from Route 210/710/134 I/C to San Bernardino County Line

1) Public Information	
☒ a. Brochures and Mailers	$ 25,000.00
☒ b. Press Release	
☒ c. Paid Advertising	$ 135,000.00
☐ d. Public Information Center/Kiosk	
☐ e. Public Meeting/Speakers Bureau	
☐ f. Telephone Hotline	
☒ g. Internet	
☐ h. Others _____	
2) Motorists Information Strategies	
☐ a. Changeable Message Signs (Fixed)	
☐ b. Changeable Message Signs (Portable)	
☐ c. Ground Mounted Signs	
☐ d. Highway Advisory Radio	
☐ e. Caltrans Highway Information Network (CHIN)	
☐ f. Others _____	
3) Incident Management	
☒ a. Construction Zone Enhanced Enforcement Program (COZEEP)	$ 838,200.00
☒ b. Freeway Service Patrol	$ 309,000.00
☒ c. Traffic Management Team	
☐ d. Helicopter Surveillance	
☐ e. Traffic Surveillance Stations (Loop Detector and CCTV)	
☐ f. Others _____	

4) Construction Strategies

- [x] a. Lane Closure Chart
- [ ] b. Reversible Lanes
- [ ] c. Total Facility Closure
- [ ] d. Contra Flow
- [ ] e. Truck Traffic Restrictions $ _____
- [ ] f. Reduced Speed Zone $ _____
- [ ] g. Connector and Ramp Closures
- [ ] h. Incentive and Disincentive $ _____
- [ ] i. Moveable Barrier $ _____
- [ ] j. Others _____ $ _____

5) Demand Management

- [ ] a. HOV Lanes/Ramps (New or Convert) $ _____
- [ ] b. Park and Ride Lots $ _____
- [ ] c. Rideshare Incentives $ _____
- [ ] d. Variable Work Hours
- [ ] e. Telecommute
- [ ] f. Ramp Metering (Temporary Installation) $ _____
- [ ] g. Ramp Metering (Modify Existing) $ _____
- [ ] h. Others _____ $ _____

6) Alternative Route Strategies

- [ ] a. Add Capacity to Freeway Connector $ _____
- [ ] b. Street Improvement (widening, traffic signal... etc) $ _____
- [ ] c. Traffic Control Officers $ _____
- [ ] d. Parking Restrictions
- [ ] e. Others _____ $ _____

7) Other Strategies

- [ ] a. Application of New Technology $ _____
- [ ] e. Others _____ $ _____

TOTAL ESTIMATED COST OF TMP ELEMENTS = $ 1,307,200.00

Project Notes:

1. TMP cost is based on the assumption that work can be done in thirty (30) 55-hour closures. Mainline closures and ramp closures on weekdays for all other items of work will be at nighttime.

2. TMP element cost detail:
   PAC Cost:
   Paid advertising radio / television = **$ 135,000**
   Fact Sheets = **$ 25,000**

   COZEEP Cost:
   55-hr closure @30
   32 nighttime hours and 23 daytime hours on a 55-hour closure
   $110/hour per officer
   2 patrol cars for every 55-hr closure
   2 CHP officers per patrol car during night time
   1 CHP officer per patrol car during daytime

   2 officers x $110/officer x 2 cars x 30 closures x 32 nighttime hours/closure = $ 422,400
   1 officer x $110/officer x 2 cars x 30 closures x 23 daytime hours/closure = $ 151,800

   For weekday closures:
   2 officers x $110/officer x 2 cars x 60 closures x 10 nighttime hours/closure = $ 264,000

   Total estimated COZEEP Cost = $838,200

   FSP: For heavy vehicle service at a rate of $200/hr for 12 hrs/day from 0700H to 1900H
   For small vehicle service at a rate of $90/hr for 55 hrs

   $ 200/hr x 30 closures x 12 hrs/day x 2 days x 1 vehicle = $ 144,000
   $ 100/hr x 30 closures x 55 hours x 1 vehicle = $165,000
   Total estimated FSP Cost = $ 309,000

PREPARED BY D Vergara DATE 3/25/08
Daisy Vergara, TE

APPROVAL RECOMMENDED BY Mark Oregel DATE 3/25/08
Martin Oregel,
Senior Transportation Engineer

APPROVED BY for Mark Oregel DATE 3/25/08
John Yang,
District Traffic manager

Appendix H

Los Angeles Region Express Lanes Project

Letters of Support

San Gabriel Valley Council of Governments

3452 East Foothill Blvd. Suite 810, Pasadena, California 91107 Phone: (626) 564-9702 FAX: (626) 564-1116 E-Mail SGV@sgvcog.org

December 28, 2007

Honorable Mary E. Peters
U.S. Secretary of Transportation
400 Seventh Street, S.W.
Room 10200
Washington, D.C. 20590

Dear Secretary Peters:

We have been advised that the Los Angeles County Metropolitan Transportation Authority (LACMTA) is submitting an application for funding for the Congestion-Reduction Demonstration Initiatives to the U.S. Department of Transportation (USDOT) on behalf of the Los Angeles County region. We understand this application includes priority projects supported by the San Gabriel Valley Council of Governments (SGVCOG).

Over the past decade the SGVCOG has served the San Gabriel Valley and its more than 1.5 million California residents living in 31 incorporated cities and unincorporated communities. Major SGVCOG transportation accomplishments include: the formation of the Pasadena Blue Line Construction Authority to build the 13.6 mile Metro Gold Line light rail from Downtown Los Angeles to Pasadena, the formation of the Alameda Corridor East Construction Authority to construct grade separations for busy intersections of rail and vehicular traffic, and the formation of a Metro West San Gabriel Valley Sector Governance Council to improve bus service to the eight SGV cities not served by Foothill Transit.

As proposed, the USDOT application includes implementation of congestion pricing on portions of the Interstate 10 and 210 and State Route 60 within the San Gabriel Valley. We are enthused about the new initiatives supported by USDOT and innovative measures undertaken by LACMTA's board. We are pleased that LACMTA has worked collaboratively with the California Department of Transportation, the Southern California Association of Governments and other key transportation stakeholders in Los Angeles County to develop the region's Congestion-Reduction Demonstration Initiatives application.

We thank you for your careful review of LACMTA's application, your appreciation of our many complex issues, and your support in improving the quality of life for the residents and workers of the Los Angeles region.

Sincerely,

Nicholas Conway
Executive Director

cc: Roger Snoble, Los Angeles County Metropolitan Transportation Authority

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY 711

Flex your power!
Be energy efficient!

December 27, 2007

The Honorable Mary E. Peters, Secretary
United States Department of Transportation
400 Seventh Street, S.W., Room 10200
Washington, D.C. 20590

Dear Secretary Peters:

I am pleased to share with you the California Department of Transportation's (Department) full support for the Congestion-Reduction Demonstration Initiatives application for funding to be submitted to the United States Department of Transportation (USDOT) by the Los Angeles County Metropolitan Transportation Authority (Metro) on behalf of the Los Angeles County region. This application is being submitted in cooperation with a number of major transportation stakeholders in Los Angeles, including the support of key policy makers.

I am particularly pleased that this Congestion-Reduction Demonstration Initiatives application has been a collaborative effort with the Department's District 7, the Metro, the Southern California Association of Governments, the City of Los Angeles Department of Transportation, the Los Angeles County Department of Public Works, and other key transportation stakeholders in Los Angeles County. Working together, these entities have agreed on an application that effectively deals with the wide array of mobility challenges faced each day by the 10 million residents of the most populous county in the United States. These challenges also have an impact on the country's economy, as Los Angeles is a global trade gateway between the United States and Asia.

Enacting the proposals in this Congestion-Reduction Demonstration Initiatives application will help mitigate the traffic congestion problem in Los Angeles, which is consistently ranked as being the worst in the country. Specifically, Metro's application includes countywide mobility enhancements made possible through innovative transit and technology projects/programs. Additionally, the proposal would implement a congestion-pricing strategy that envisions a system-wide approach that could serve as a model for implementation in other areas of the country. To succeed in this effort, the Department and our Los Angeles County regional partners are seeking the support of the USDOT.

I would like to highlight that the Los Angeles area has been a continuing pioneer in the implementation of Intelligent Transportation Systems strategies in California, as well as the nation. Los Angeles has demonstrated its ability to create a model of strong institutional coordination and collaboration to deploy integrated solutions across a complex multi-modal transportation system.

It is our understanding that the Metro will submit its Congestion-Reduction Demonstration Initiatives application to the USDOT by December 31, 2007, and that your agency could make a decision as early as January, 2008. We wholeheartedly believe that Los Angeles County, which comprises the most congested urban area in the United States, would be a prime candidate to become a qualified jurisdiction under the USDOT's Congestion-Reduction Demonstration Initiatives program.

We thank you in advance for your careful review of our region's Congestion-Reduction Demonstration Initiatives application.

Sincerely,

WILL KEMPTON
Director

c: Roger Snoble, Metro
Randell H. Iwasaki, Chief Deputy Director
Douglas R. Failing, District 7 Director

bc: Michael Miles, Deputy Director, Maintenance and Operations
Robert Copp, Chief, Division of Traffic Operations
John Wolf, Assistant Chief, Division of Traffic Operations
DO File

Reference: DOTS 20079135

John Wolf/amc

CITY OF LOS ANGELES
CALIFORNIA

RITA L. ROBINSON
GENERAL MANAGER

ANTONIO R. VILLARAIGOSA
MAYOR

DEPARTMENT OF TRANSPORTATION
100 S. Main St., 10th Floor
LOS ANGELES, CA 90012
(213) 972-4949
FAX (213) 972-4910

December 27, 2007

Honorable Mary E. Peters
U.S. Secretary of Transportation
400 Seventh Street, S.W.
Room 10200
Washington, D.C. 20590

Dear Secretary Peters:

We are pleased to share with you our full support for the Congestion-Reduction Demonstration Initiatives application for funding to be submitted to the U.S. Department of Transportation (USDOT) by the Los Angeles County Metropolitan Transportation Authority (Metro) on behalf of the Los Angeles County region. This application is being submitted in cooperation with a number of major transportation stakeholders in Los Angeles, including the Los Angeles Department of Transportation.

Enacting the proposals in this Congestion-Reduction Demonstration Initiatives application will help mitigate the traffic congestion problem in Los Angeles, which is consistently ranked as being the worst in the country. Specifically, Metro's application includes countywide mobility enhancements made possible through innovative transit and technology projects and programs. Additionally, we are proposing to implement a congestion-pricing scheme that envisions a system-wide approach that could serve as a model to be implemented in other areas of the country. To succeed in this effort, the regional partners in Los Angeles County are seeking the support of the USDOT.

We are particularly pleased that Metro has worked collaboratively with the California Department of Transportation, the Southern California Association of Governments, the City of Los Angeles Department of Transportation, the Los Angeles County Department of Public Works, and other key transportation stakeholders in Los Angeles County to develop the region's Congestion-Reduction Demonstration Initiatives application. Working together, these entities have agreed on an application that effectively deals with the wide array of mobility challenges faced each day by our county's 10 million residents, the most populous in the United States. These challenges also have an impact on the economy of the country due to the status of Los Angeles as a trade gateway.

It is our understanding that Metro will be submitting its Congestion-Reduction Demonstration Initiatives application to the USDOT by December 31, 2007 and that your agency could make a decision as early as January 2008. We wholeheartedly believe that Los Angeles County, which comprises the most congested urban area in the United States, would be a prime candidate to become a qualified jurisdiction under the USDOT's Congestion-Reduction Demonstration Initiatives program.

We thank you in advance for your careful review of our region's Congestion-Reduction Demonstration Initiatives application.

Sincerely,

Selwyn Hollins

for Rita L. Robinson, General Manager
Los Angeles Department of Transportation

ANTONIO R. VILLARAIGOSA
MAYOR

December 21, 2007

Honorable Mary E. Peters
U.S. Secretary of Transportation
400 Seventh Street, S.W.
Room 10200
Washington, D.C. 20590

Re: Los Angeles County Metropolitan Transportation Authority (Metro) Congestion-Reduction Demonstration Initiatives Application Letter

Dear Secretary Peters:

I write to express my support for the Congestion-Reduction Demonstration Initiatives application for funding to be submitted to the U.S. Department of Transportation (USDOT) by the Los Angeles County Metropolitan Transportation Authority (Metro) on behalf of the Los Angeles County region.

Metro's application includes countywide mobility enhancements made possible through innovative transit and technology projects and programs that will effectively address the mobility challenges faced daily by Los Angeles County's ten million residents, the most populous and congested urban area in the nation. These challenges also have an impact on the economy of the country due to the status of Los Angeles as a trade gateway. For these reasons, Los Angeles County would be a prime candidate to become a qualified jurisdiction under the USDOT's Congestion-Reduction Demonstration Initiatives program.

I thank you in advance for your careful review of our region's application. Should you have any questions concerning MTA's application, please contact Heidi Sickler, Policy Analyst, of my staff at (213) 978-3062.

Very truly yours,

ANTONIO R. VILLARAIGOSA
Mayor

ARV:hs

200 NORTH SPRING STREET • LOS ANGELES, CALIFORNIA 90012
PHONE: (213) 978-0600 • FAX: (213) 978-0750
EMAIL: MAYOR@LACITY.ORG

SOUTHERN CALIFORNIA

ASSOCIATION of GOVERNMENTS

Main Office

818 West Seventh Street

12th Floor

Los Angeles, California

90017-3435

t (213) 236-1800

f (213) 236-1825

www.scag.ca.gov

December 20, 2007

Honorable Mary E. Peters
U.S. Secretary of Transportation
400 Seventh Street, S.W.
Room 10200
Washington, D.C. 20590

Dear Secretary Peters:

The Southern California association of Governments (SCAG) is pleased to share with you our full support for the Congestion-Reduction Demonstration Initiatives application for funding submitted to the U.S. Department of Transportation (USDOT) by the Los Angeles County Metropolitan Transportation Authority (Metro) on behalf of Los Angeles County.

This application is being submitted in cooperation with a number of major transportation stakeholders in Southern California, including SCAG, the California Department of Transportation, the City of Los Angeles Department of Transportation, the Los Angeles County Department of Public Works, and other key transportation stakeholders in Los Angeles County. Working together, these entities have agreed on an application that effectively deals with the wide array of mobility challenges faced each day by our county's 10 million residents, the most populous in the United States.

Specifically, Metro's application includes countywide mobility enhancements made possible through innovative transit and technology projects and programs.

In addition, Metro is proposing to implement a congestion-pricing scheme that envisions a system-wide approach that could serve as a model to be implemented in other areas of the country. To succeed in this effort, the regional partners in the Los Angeles metropolitan region are seeking the support of the USDOT.

Enacting the proposals in this Congestion-Reduction Demonstration Initiatives application will help mitigate the traffic congestion problem in Los Angeles, which is consistently ranked as being the worst in the country.

These challenges also have an impact on the economy of the country due to the status of Los Angeles as a trade gateway. In 2005, the Ports of Los Angeles and Long Beach accounted for approximately 24% of all U.S. container export traffic and 40% of all U.S. import container traffic. Seventy percent of the import container traffic goes to areas outside of the region.

It is our understanding that Metro will submit its Congestion-Reduction Demonstration Initiatives application to the USDOT by December 31, 2007 and that your agency could make a decision as early as January 2008. We wholeheartedly believe that Los Angeles County, which comprises the most congested urban area in the United States, would be a prime candidate to become a qualified jurisdiction under the USDOT's Congestion-Reduction Demonstration Initiatives program.

We highly recommend your consideration and approval of Metro's Congestion-Reduction Demonstration Initiatives application.

Sincerely,

Hasan Ikhrata,
Director, Planning and Policy
Southern California Association of Governments

Cc: Roger Snoble

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

DONALD L. WOLFE, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: PD-0

December 18, 2007

The Honorable Mary E. Peters
U.S. Secretary of Transportation
400 Seventh Street, S.W., Room 10200
Washington, D.C. 20590

Dear Secretary Peters:

CONGESTION-REDUCTION DEMONSTRATION INITIATIVES APPLICATION

We are pleased to share with you our full support for the Congestion-Reduction Demonstration Initiatives application for funding to be submitted to the U.S. Department of Transportation (USDOT) by the Los Angeles County Metropolitan Transportation Authority (Metro) on behalf of the Los Angeles County region. This application is being submitted in cooperation with a number of major transportation stakeholders in Los Angeles, including the County of Los Angeles Department of Public Works.

Implementing the proposals in this application will help mitigate the traffic congestion problem in Los Angeles, which is consistently ranked as being the worst in the country. Specifically, Metro's application includes countywide mobility enhancements made possible through innovative transit and technology projects and programs. Additionally, Metro is proposing to implement a congestion-pricing scheme that envisions a system-wide approach that could serve as a model to be implemented in other areas of the country. To succeed in this effort, the regional partners in the County of Los Angeles are seeking the support of the USDOT.

We are particularly pleased that Metro has worked collaboratively with the California Department of Transportation, the Southern California Association of Governments, the City of Los Angeles Department of Transportation, ourselves, and other key transportation stakeholders in the County of Los Angeles to develop the region's Congestion-Reduction Demonstration Initiatives application. Working together, we have agreed on an application that sets forth a plan addressing many of the mobility challenges faced each day by our County's ten million residents, the most populous county in the United States. These challenges also have an impact on the economy of the country since Los Angeles is a trade gateway.

It is our understanding that Metro will be submitting its Congestion-Reduction Demonstration Initiatives application to the USDOT by December 31, 2007, and that your agency could make a decision as early as January 2008. We wholeheartedly believe that the County of Los Angeles, which comprises the most congested urban area in the United States, would be a prime candidate to become a qualified jurisdiction under the USDOT's Congestion-Reduction Demonstration Initiatives program.

We thank you in advance for your careful review of our Congestion-Reduction Demonstration Initiatives application.

Very truly yours,

Donald L. Wolfe

DONALD L. WOLFE
Director of Public Works

SA:abc
P:\pdpub\Admin\MEMO\Letter of Support w_ congestion pricing.doc

cc: Metropolitan Transportation Authority (Gladys Lowe)

METROLINK®
SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY

December 31, 2007

Honorable Mary E. Peters
U.S. Secretary of Transportation
400 Seventh Street, S.W.
Room 10200
Washington, D.C. 20590

Dear Secretary Peters:

We are pleased to share with you our full support for the Congestion-Reduction Demonstration Initiatives application for funding to be submitted to the U.S. Department of Transportation (USDOT) by the Los Angeles County Metropolitan Transportation Authority (LACMTA) on behalf of the Los Angeles County region. This application is being submitted in cooperation with a number of major transportation stakeholders in Los Angeles, including the Southern California Regional Rail Authority (SCRRA).

Enacting the proposals in this Congestion-Reduction Demonstration Initiatives application will help mitigate the traffic congestion problem in Los Angeles, which is consistently ranked as being the worst in the country. Specifically, LACMTA's application includes countywide mobility enhancements made possible through innovative transit and technology projects and programs. Additionally, we are proposing to implement a congestion-pricing scheme that envisions a system-wide approach that could serve as a model to be implemented in other areas of the country. To succeed in this effort, the regional partners in Los Angeles County are seeking the support of the USDOT.

We are particularly pleased that LACMTA has worked collaboratively with the California Department of Transportation, the Southern California Association of Governments, the City of Los Angeles Department of Transportation, the Los Angeles County Department of Public Works, SCRRA and other key transportation stakeholders in Los Angeles County to develop the region's Congestion-Reduction Demonstration Initiatives application. Working together, these entities have agreed on an application that effectively deals with the wide array of mobility challenges faced each day by our county's 10 million residents, the most populous in the United States. These challenges also have an impact on the economy of the country due to the status of Los Angeles as a trade gateway.

700 S. Flower Street 26th Floor Los Angeles CA 90017 Tel [213] 452.0200 Fax [213] 452.0425
www.metrolinktrains.com

It is our understanding that LACMTA will be submitting its Congestion-Reduction Demonstration Initiatives application to the USDOT by December 31, 2007 and that your agency could make a decision as early as January 2008. We wholeheartedly believe that Los Angeles County, which comprises the most congested urban area in the United States, would be a prime candidate to become a qualified jurisdiction under the USDOT's Congestion-Reduction Demonstration Initiatives program.

We thank you in advance for your careful review of our region's Congestion-Reduction Demonstration Initiatives application.

Sincerely,

David Solow
Chief Executive Officer

Cc: Roger Snoble, LACMTA

CALIFORNIA PATH
California Partners for
Advanced Transit and Highways

CALIFORNIA PATH HEADQUARTERS
University of California, Berkeley
1357 South 46th St., Bldg. 452
Richmond, CA 94804–4648
Tel: (510) 665-3406
Fax: (510) 665-3537
http://www.path.berkeley.edu

January 4, 2008

The Honorable Mary E. Peters
United States Secretary of Transportation
1200 New Jersey Ave, SE
Washington, D.C. 20590

Dear Secretary Peters:

We are very pleased to write and submit to you this letter of support for the Congestion-Reduction Demonstration Initiatives Application for funding that was just submitted to the U.S. Department of Transportation (USDOT) by the Los Angeles County Metropolitan Transportation Authority (Metro) on behalf of the Los Angeles County region. This application has been submitted in cooperation with several major transportation agency stakeholders in Los Angeles County together with the California Partners for Advanced Transit and Highways (PATH) Program of the Institute of Transportation Studies at the University of California, Berkeley.

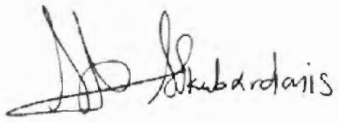
Enacting the proposals in this Congestion-Reduction Demonstration Initiatives Application will contribute to mitigating existing traffic congestion in the Los Angeles region, which has consistently been ranked as the worst in the nation. Specifically, Metro's application includes countywide mobility enhancements made possible through innovative transit and technology projects and programs. Additionally, the application is proposing to implement a congestion-pricing plan that envisions a system-wide approach that could serve as a model to be implemented in other areas of the country. To succeed in this effort, the regional partners in Los Angeles County are seeking the support of the United States Department of Transportation (USDOT).

Metro has developed its Congestion-Reduction Demonstration Initiatives Application by working collaboratively with its institutional regional partners and assembling a robust team including the California Department of Transportation, the Southern California Association of Governments, the City of Los Angeles Department of Transportation, and the Los Angeles County Department of Public Works, as well as other key transportation stakeholders in Los Angeles County. We feel very fortunate and excited to be a member of this team; moreover, with PATH's 21-year history as a continuing expert and leader in the field of intelligent transportation system technologies, we firmly believe that we can substantively contribute to the overall success of the program in the Los Angeles region.

We feel that this application effectively deals with a wide array of mobility challenges faced on a daily basis by Los Angeles County's 10 million residents, the most populous in the United States. These challenges also have an impact on the economy of the country due to the status of Los Angeles as a major international trade gateway. Thus we wholeheartedly believe that Los Angeles County would be a prime candidate to become a qualified jurisdiction under the USDOT's Congestion-Reduction Demonstration Initiatives program.

We thank you in advance for your careful review of the Los Angeles Congestion-Reduction Demonstration Initiatives Application.

Sincerely,



Alex Skabardonis, PhD.
Director, California PATH Program
Professor, Department of Civil & Environmental Engineering
University of California, Berkeley