



California State Transportation Agency

California
Transportation
Infrastructure Priorities
White Paper:

Tolling and Pricing for
Congestion Management
and Transportation
Infrastructure Funding

Recommendations to the Secretary of
Transportation

September 10, 2014 Draft

Tolling and Pricing on State Highways

This whitepaper provide background and recommendations from the California Transportation Investment Priorities (CTIP) Workgroup on the tolling and pricing highway assets for congestion management and revenue for transportation infrastructure. The California State Transportation Agency (CalSTA) established the CTIP workgroup in April 2013 to examine the current status of the state’s transportation system and discuss the challenges that lie ahead. The workgroup includes a diverse group of transportation stakeholders. An Interim Recommendation Report was issued in February 2014 and posted on the CalSTA website. The CTIP workgroup continues to meet on specific topics in 2014 – one of these being the subject of tolling and pricing.

Tolls are fees that drivers pay to use specific transportation facilities; such has bridges, highways, or managed lanes. California has a total of 170 centerline miles of toll bridges, toll roads, and priced managed lanes (also known as express lanes). These facilities are located in the San Francisco Bay Area, Los Angeles County, Orange County, and San Diego County.

Traditionally, tolling has been seen as a means to get new bridges, tunnels, and roads built by leveraging the revenue stream from tolls over many years. Many states have expressed a growing interest in tolling as the introduction of more fuel-efficient vehicles and inflation have reduced the amount and buying power of fuel tax revenues, which historically have represented their largest source of transportation funding. Tolling is also seen as a true “user fee” in that the toll revenues collected from system users are reinvested back into the maintenance and improvement of the system. Toll revenues can also be leveraged to provide financing for other transportation improvements.

Beyond the motivation for funding, there also is a motivation to use pricing as a means of managing demand to reduce congestion. A subset of tolling, pricing focuses on the use of tolls to manage traffic demand, with revenue generation being a secondary objective. Various adjectives are sometimes used to modify the term pricing: variable-, congestion-, and value-. They all essentially mean the same thing: varying the toll charged based upon the time of day, day of week, and/or real-time traffic conditions in order to appropriately manage traffic. Pricing can be applied to traditional toll roads, bridges, tunnels, or designated highway lanes.

1 Background on Tolling and Pricing in California

California has long used tolling, albeit in a very limited way, to help pay for transportation infrastructure. For much of the 20th century, the focus was to charge tolls to finance large transportation projects, specifically bridges. The State built 9 toll bridges in the San Francisco Bay Area, Los Angeles, and San

Toll Bridges in California

Richmond-San Rafael Bridge
Golden Gate Bridge
San Francisco-Oakland Bay Bridge
San Mateo-Hayward Bridge
Dumbarton Bridge
Carquinez Bridge
Benicia-Martinez Bridge
Antioch Bridge

Toll Roads in California

State Route 73 (Orange County)
State Route 125 (San Diego County)
State Route 133 (Orange County)
State Route 241 (Orange County)
State Route 261 (Orange County)

Express Lanes in California

I-10 (Los Angeles County)
I-15 (San Diego County)
State Route 91 (Orange County)
I-110 (Los Angeles County)
State Route 237 (Santa Clara County)
I-680 (Alameda and Santa Clara Counties)

Diego, and a separate bridge district comprised of several counties built and continues to operate the Golden Gate Bridge.

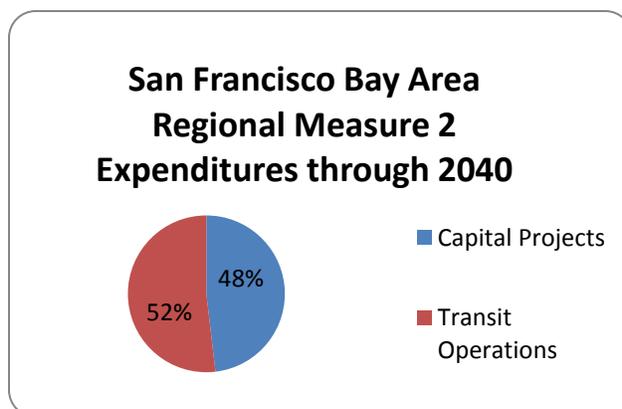
In 1987, two joint powers authorities were authorized to charge tolls as well as development fees to finance a 67-mile network of highways in Orange County. This was followed two years later by the State's first public-private partnership (P3) law in 1989, which authorized Caltrans to establish franchise agreements with private entities for up to four transportation facilities and mandated the use of tolls to help finance the projects. Two projects were built using this P3 provision. One of these projects, the State Route 91 Express Lanes, was the first priced managed lane facility in California, where a combination of tolling, access control, and vehicle occupancy were used in order to ensure that the facility operated at a high level of performance.

In 1993, Assembly Bill 713 was passed, implementing priced managed lanes (express lanes) on Interstate 15 in San Diego County. In this particular project, the San Diego Association of Governments was given authority to convert existing high-occupancy vehicle (HOV) lanes to high-occupancy/toll (HOT) lanes. The success of this project led to subsequent legislation (Assembly Bill 2032) in 2003 that authorized other regional transportation agencies to operate a limited number of express lane projects elsewhere in San Diego County as well as in Alameda and Santa Clara Counties. This was later followed by legislation in 2006 (Assembly Bill 1467) that allowed regional transportation agencies to request approval from the California Transportation Commission to operate express lanes. The number of projects was limited to four - two in northern California and two in southern California. Projects were authorized in Los Angeles and Riverside Counties and the San Francisco Bay Area under this provision, which expired in 2012.

A new statute (Senate Bill X2 4) authorizing P3 projects became law in 2009. Under this statute, regional transportation agencies or Caltrans could enter into P3 agreements for projects, and tolling is an option to provide a source of financing for the projects. This law will sunset in 2017. In 2010, Assembly Bill 798 became law, establishing the California Transportation Finance Authority (CTFA). CTFA was granted the power to authorize Caltrans or other regional transportation agencies to use tolls as a means of financing a transportation facility. This authority through the CTFA has no sunset date.

2 Typical Uses of Toll Revenue

The primary intent of tolling on the bridges was for project financing purposes. That historic policy driver remains today, but tolls are now also being used to pay for the operations and maintenance costs of the bridges. State law initially required that tolls be removed from the State-owned toll bridges once the revenue bonds used to finance the facilities were paid off but in 1972 this requirement was removed and instead tolls were to be set to cover the costs of operating and maintaining the facilities as well as pay off project indebtedness. Tolls collected on the Golden Gate Bridge also subsidize transit service and ferry service. Tolls collected on the State-owned bridges in the San Francisco Bay Area not only cover the costs of operations and



maintenance but also the costs of replacing or retrofitting bridges for seismic safety, and expanding bridges to handle increased traffic. In addition, voters in the San Francisco Bay Area have twice approved specific bridge toll increases to finance freeway and transit improvements in the region and cover the costs of operating transit service. The most recent measure (Regional Measure 2) is expected to provide over \$3 billion in toll revenues through the year 2040 to cover highway and transit improvements and subsidize transit operations in the region. (Tolls were removed from the bridges in southern California once the facilities were paid for and their seismic safety retrofits were completed.)

State laws require that tolls collected on P3 projects or authorized by CTFA could also be used to cover the costs of operating and maintaining the facility in addition to financing. Excess toll revenues from a P3 project may be repaid into the State Highway Account, while excess toll revenues from a project authorized by CTFA are to be used for HOV improvements or other transportation improvements in the corridor in which they were collected.

State laws require that toll revenues from express lanes are to be used to cover the capital, operations, and maintenance costs of the lanes. Any remaining revenues are to be used to fund improvements on the same freeway corridor, or operational subsidies for public transit operations. In some specific cases, these excess revenues can be dedicated to expansion and enhancements to the adjacent general purpose lanes in the corridor.

91 Express Lane Toll Revenue Generation (2013)

Gross Revenues = \$39.3 million
Operating Expenses = \$17 million
<hr/>
Net Revenue = \$22.3 million

The revenue potential for express lanes can be high; the express lanes on State Route 91 generated \$22.3 million in net revenues in 2013. In San Diego, the express lanes on I-15 were expected to generate over \$5 million in toll revenue in fiscal year 2014. Approximately 18 percent of those revenues were dedicated to financing transit service in the I-15 corridor.

The use of tolling and pricing has been increasingly supported by the federal government as a means to increase capacity and manage existing capacity. Since 2005, federal law has allowed states to convert HOV lanes to HOT lanes without federal approval. The Moving Ahead for Progress in the 21st Century Act (MAP-21), which took effect in October 2012, further streamlined the use of tolling by eliminating federal approval and tolling agreement requirements to toll new capacity on existing freeways. Federal law also requires toll revenues to be used first to cover the costs of developing, operating, and maintaining the facility, and providing a return on investment to any private investment partner. Excess revenues may be used for any transportation purpose within the subject corridor for which Federal funds would normally be used.

3 Recommendations from the Tolling and Pricing Subgroup

Over the past several months, the California State Transportation Agency and the CTIP Workgroup have convened to discuss policies and issues related to developing a tolling and pricing policy for state highways. Through these efforts, the CTIP workgroup recommends moving forward on a clear policy that would clarify the process for determining use of toll revenues, and streamlining the statutory process to use tolling and pricing where appropriate. The following are suggested recommendations from the Tolling and Pricing subgroup:

3.1 Policy on Tolling and Pricing Related to Congestion Management and Funding Transportation Infrastructure

CalSTA or Caltrans should issue a high-level policy that provides general guidelines on the use of tolling on the State Highway System (SHS). The policy should state that Caltrans will support the use of tolling on the SHS, where appropriate, to optimize system performance and provide an alternative source of transportation funding to maintain and improve infrastructure. Caltrans or a regional transportation agency could have the authority to collect tolls.

The policy would require that tolling be considered during the planning and development of capacity improvements on the SHS. Tolling could be used on new SHS facilities, new capacity added to existing SHS facilities, and existing high-occupancy vehicle lanes. Congestion pricing and all-electronic tolling would be required for priced managed lanes and would need to be considered for other toll facilities where feasible. Incentives such as discounted tolls or toll-free passage could be granted to high-occupancy vehicles, transit vehicles, and zero- and low-emission vehicles, as appropriate.

The policy would require that whenever tolls are implemented on the SHS, Caltrans and regional transportation agencies would sign agreements that define overall roles, responsibilities and requirements related to maintenance, operations, data sharing, performance monitoring, and annual audits and reports. Regional transportation agencies that sponsor projects would be required to reimburse Caltrans for costs incurred relative to the development, operation, and maintenance of the facility as part of these agreements.

Toll revenues would be used first be used for direct expenses of the toll facility, including:

- Debt service, if any.
- Administration.
- Operations and maintenance.
- Capital improvements.
- Reimbursement to the California Highway Patrol for enforcement services.
- Appropriate reserves for the above items.

Unless otherwise specified by project financing requirements, excess toll revenues, if any, would need to be used for projects that improve travel reliability, provide travel options, or improve the safety and operations of the transportation corridor in which the tolls were collected. These improvements could include, but not be limited to:

- Transit service
- Active transportation projects.
- Operational improvements.
- Augmentation to existing maintenance and operation expenses on adjacent lanes.
- Completion of regional managed lane networks.
- An expenditure plan for the use of excess revenues would be developed collaboratively by project stakeholders on an annual basis. The plan and each annual update would be made available for public review and comment for not less than 30 days prior to adoption by the governing board of the project operator. For projects operated by the department, the plan shall be adopted by the commission. The plan would take into account the financial contributions and roles and responsibilities of all project stakeholders.

3.2 Policy on Managed Lanes

Caltrans has been in the process of updating its existing policy on HOV lanes on the SHS to address managed lanes - HOV lanes and express lanes. The policy has been vetted with regional stakeholders and should be finalized to reflect the comments received from stakeholders and the requirements of the statewide tolling policy.

The policy would state that Caltrans supports the use of managed lanes on the SHS as a sustainable transportation system management solution. Managed lanes will be used to promote carpooling and transit ridership, improve travel time reliability, reduce greenhouse gas emissions, and maximize the efficiency of the freeway system by increasing person and vehicle throughput while reducing congestion and delay. Caltrans will partner with regional transportation agencies to develop plans for managed lanes on the SHS in each of the State's large urban areas.

The policy would identify the types of operational strategies used on managed lanes, including pricing. Caltrans or a regional transportation agency could have the authority to collect tolls on priced managed lanes. Operational strategies (and any changes in those strategies) for managed lanes would be determined by Caltrans in cooperation with regional transportation agencies and the California Highway Patrol, and in consultation with other affected stakeholders. Operational strategies would be determined based on factors such as safety and mobility considerations, regional consistency, traffic forecasts, life cycle costs, revenue potential, enforcement needs, environmental considerations, and community support.

The use of toll revenues from managed lanes would be addressed under the statewide tolling policy.

3.3 Legislation to Expand the Use of Tolling and Pricing in California

There is currently very limited authority for Caltrans and regional transportation agencies to collect tolls on the SHS. The CTIP Workgroup recommends this authority should be expanded through legislation. The proposed legislation should permanently reinstate the process established under Assembly Bill 1467 in 2006, in which regional agencies could apply to the California Transportation Commission to operate express lanes. The proposed legislation would expand this authority to Caltrans, eliminate the cap on the number of projects that could be approved, and would also include express toll lanes and toll roads as a qualifying project, in addition to express lanes. Provisions of the legislation would be as follows:

- Caltrans and regional transportation agencies could enter into agreements to develop and operate high-occupancy toll lanes, express toll lanes, toll roads, or a network comprised of two or more such facilities.
- Caltrans could operate the facility and collect the tolls, or could authorize the regional transportation agency to operate the facility and collect the tolls.
- The California Transportation Commission would be required to approve the agreements, and develop eligibility criteria.
- Toll revenues would need to be used for direct expenses related to the development, maintenance, administration, and operation, including collection and enforcement, of the facilities or network, and reserves for these purposes.

- Unless required by any project financing agreements, any remaining revenue would be used for projects that improve travel reliability, provide travel options, or improve the safety and operations of the State highway corridor in which the tolls were collected. An expenditure plan for the use of excess toll revenues, if any, shall be developed by the department and the regional transportation agency and updated annually. The plan and each annual update would be made available for public review and comment for not less than 30 days prior to adoption by the governing board of the project operator. For projects operated by the department, the plan shall be adopted by the commission.
- Regional transportation agencies and Caltrans would have the ability to issue toll revenue bonds to finance projects.
- A regional transportation agency would be defined as a regional transportation planning agency, a county transportation commission, any other local or regional transportation entity that is designated by statute as a regional transportation agency, or a joint exercise of powers authority.

4 Definitions

Below are definitions for several terms used throughout this white paper.

Tolling: Charging a price to motorists to use a transportation facility, such as a bridge, tunnel, or road. Revenues are typically used to pay for the costs of building, operating and maintaining the facility.

Pricing: Tolls that vary based on the level of vehicle demand on a highway facility. Tolls may vary by time of day (static) or according to real-time conditions on the facility. Also known as congestion pricing, value pricing, or variable pricing.

Managed Lanes: A set of exclusive or preferential use lanes on a freeway that are proactively managed in response to changing conditions using strategies such as access control, vehicle eligibility, pricing, or a combination thereof.

High Occupancy Vehicle (HOV) Lane: A type of managed lane that may be used by vehicles carrying a minimum number of occupants.

High Occupancy/Toll (HOT) Lane: An HOV lane that lower occupancy vehicles may access by paying a toll.

Express Toll Lane: A managed lane on which all users pay a toll; vehicles carrying a minimum number of occupants may pay a discounted toll to use the lane.

Express Lanes: A blanket term for HOT lanes or express toll lanes.

Electronic Toll Collection (ETC): A method of collecting tolls using a transponder (associated with a pre-paid account) mounted in a vehicle and overhead antennas that read the transponder. An ETC system may utilize an automated license plate reader to assist in identifying vehicles not equipped with a transponder.

All-Electronic Tolling: The collection of tolls on toll facilities using only ETC. Also known as cashless tolling.

Regional Transportation Agency: A regional transportation planning agency, a county transportation commission, any other local or regional transportation entity that is designated by statute as a regional transportation agency, or a joint exercise of powers authority.

DISCUSSION DRAFT