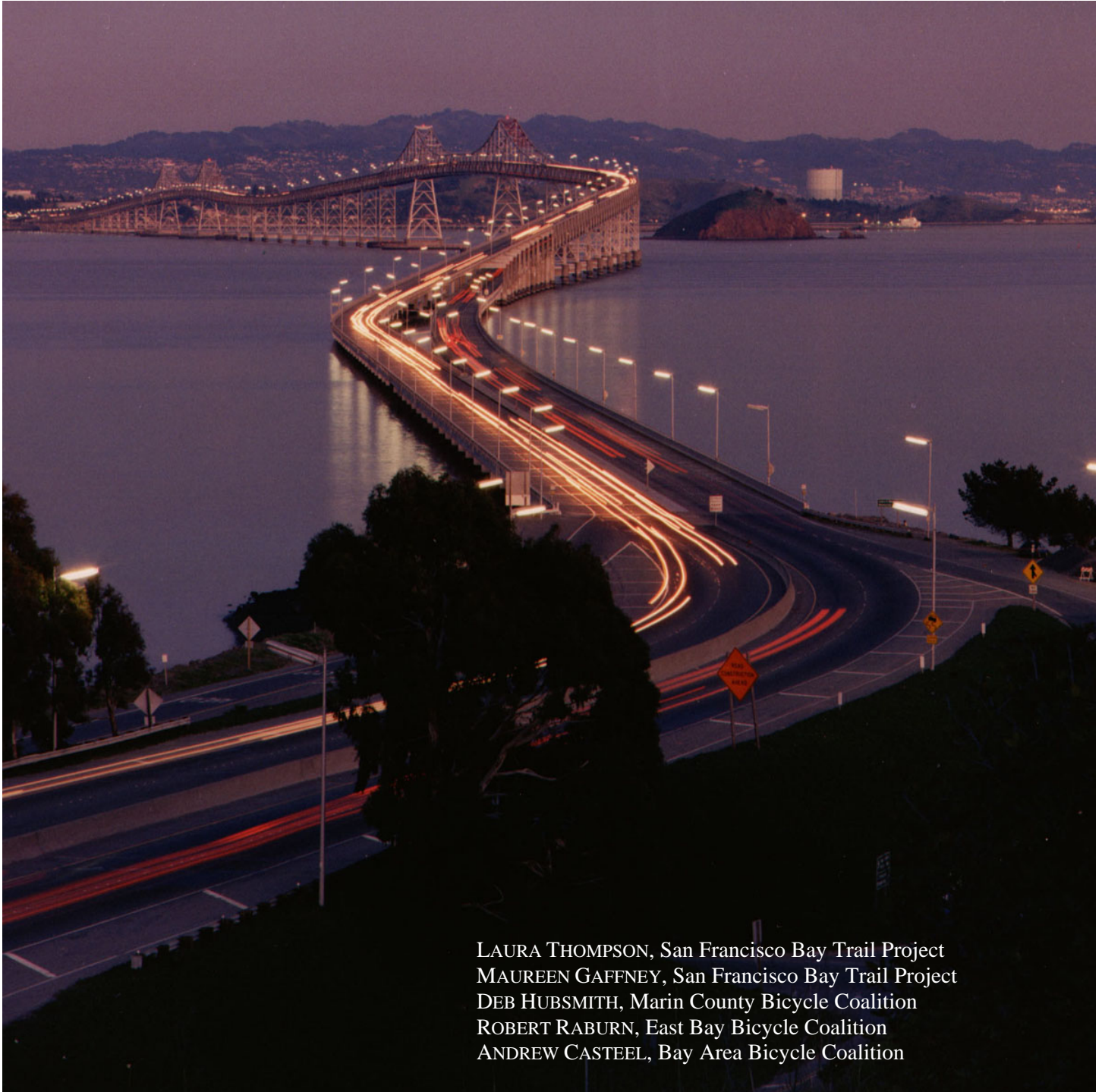


The Case for Public Access on the Richmond-San Rafael Bridge
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INTRODUCTION

For more than a decade, public access advocates, elected officials, and local jurisdictions have been seeking a safe, viable option for bicycle and pedestrian access on the Richmond-San Rafael Bridge. After three studies and countless agency and advocate hours, the time is right for a demonstration project on the Richmond-San Rafael Bridge (RSR Bridge). As outlined below, the RSR Bridge is a critical connector between two major population and employment centers, and is an integral link in the 500-mile San Francisco Bay Trail—a planned regional trail connecting all nine Bay Area counties, 47 cities, and countless park districts, transit centers and neighborhoods. Public access to four and a half of the region’s seven toll bridges is secured and these well-used facilities are an integral part of the Bay Area’s transportation fabric.



RICHMOND-SAN RAFAEL BRIDGE DEMONSTRATION PROJECT

1. Demonstration Project for Public Access is Warranted

A solid barrier placed on the Richmond-San Rafael Bridge in the vacant third lane on the upper (westbound) deck in the near-term as a demonstration project will:

- Retain current automobile capacity on the bridge
- Allow for a two-way multi-use pathway of 9 to 12-feet in width
- Allow for bicycle/pedestrian access during commute and non-commute hours
- Allow for actual bicycle/pedestrian user counts for a project that has been under serious consideration and the subject of three studies over the past 11 years
- Allow for a cost/benefit analysis based on actual user counts
- Provide long overdue transportation equality while spending considerably less than the estimated \$119 million for the moveable barrier alternative
- Demonstrate Caltrans' commitment to a comprehensive transportation system in the Bay Area
- Help the Bay Area come into compliance with AB32 and SB375.

2. Adopted Plans

Bicycle and pedestrian access to the RSR Bridge is *specifically* called for in each of the following regional or local plans:

- ✓ San Francisco Bay Trail Plan (adopted 1989)
- ✓ Metropolitan Transportation Commission Regional Bicycle Plan (adopted 2001)
- ✓ Bay Area Air Quality Management District Ozone Strategy (adopted 2001)
- ✓ Contra Costa Countywide Bicycle and Pedestrian Plan (adopted 2003)
- ✓ Marin County Bicycle and Pedestrian Plan (Update adopted 2008)
- ✓ City of San Rafael Bike and Pedestrian Plan (adopted 2001)
- ✓ City of Richmond General Plan (update adopted 1994)

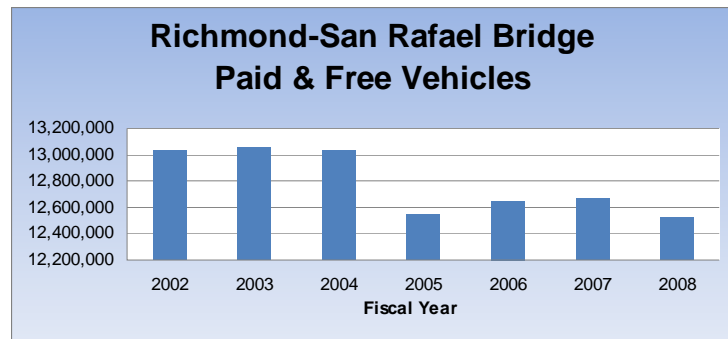
Other Agencies in Support of Access:

- ✓ Bay Area Toll Authority
- ✓ Bay Area Air Quality Management District
- ✓ San Francisco Bay Conservation and Development Commission

3. No Demand for the Third Lane

Vehicle trips on the Richmond-San Rafael Bridge have been in steady decline since their peak in 2003. Bridge crossings in fiscal year 2008 are the lowest since 2002 (*MTC Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2008* Table 8). Due to the recent meteoric rise in gas prices, overall driving is down by nearly 4% nationwide (U.S. Department of Transportation—Federal Highway Administration).

This reduction in vehicle trips occurred prior to the current economic crisis and there is every reason to suspect that this decline in vehicle trips will continue for the foreseeable future, as gas prices continue to rise and as the Bay Area will be working to implement solutions to be in compliance with AB32 and SB375.



Caltrans' November 2007 document *Project Study Report/Project Development Support for Non-Motorized Access and Third Lane on the Richmond-San Rafael Bridge* (PSR) table 4 "2030 Projected Motor Vehicle Demand on the Richmond-San Rafael Bridge" shows that the throughput capacity of a 6-lane facility versus the current 4-lane facility is only an additional 85 vehicles in the peak morning commute direction. While the above-referenced table shows a 22% increase in throughput for the eastbound pm direction under a 6-lane scenario, it is important to note that the proposed bike/pedestrian facility is proposed only for the upper deck or westbound direction. Therefore, the projected 22% increase in throughput for the eastbound direction is in no way affected by the proposed demonstration project and could move forward as soon as Caltrans was able to secure permits and funding. While it is difficult to predict with accuracy the number of bicycles or pedestrians that would use the facility on a given day, continuing to prohibit alternative transportation to such an important regional facility in order to improve throughput by only 85 vehicles (1.7%) for an overall price of \$119 million is illogical.

In the above-referenced PSR Caltrans states "...as a four-lane facility, the bridge has the capacity to handle 52% of the projected 2030 traffic westbound volume and 77% of the projected 2030 traffic eastbound volume." Nowhere in the study does Caltrans present the logical follow-on to these estimates—i.e. how much of this projected demand a 6-lane facility could handle. This omission likely results from the fact that by their own numbers (increased capacity of only 1.7%), a six-lane configuration will not address any real or perceived congestion on the Richmond-San Rafael Bridge.

Caltrans further states "The data in tables 3 and 4 (projected demand) do not indicate what percentage of the westbound congestion will be a result of inadequacy of toll plaza operations and what percentage could be attributed to limited lane capacity" and "While adding capacity on the bridge would help reduce the congestion on the bridge, the

queuing problem that occurs behind the toll plaza due to this bottleneck during peak commute hours will require additional measures, e.g., increasing the capacity of the toll plaza, adding more pre-paid electronic toll booths, and/or adding dedicated carpool lanes.”

The most recent cost estimate for the alternative put forward by Caltrans in the November 2007 Draft PSR—(three lanes, moveable barrier, option 1B(2)) was \$119 million. However, this estimate did not include modifications to the toll plaza. Due to the physical constraints at the toll plaza (refinery equipment and operations, retaining wall, bay), adding more capacity would be a massive undertaking and one that is not currently under consideration by this or any other study.

SAFETY ON THE RICHMOND-SAN RAFAEL BRIDGE

Installing a bicycle and pedestrian pathway on the upper deck of the Richmond-San Rafael Bridge could actually increase safety. What follows are crash data and reports from other bridges, along with some recommendations:

1. Crash Data from 2001 to 2006 on the Richmond-San Rafael Bridge

The following chart comes from the November 2007 draft of the Project Study Report/Project Development Support for Non-Motorized Access and use of the Third Lane on the Richmond-San Rafael Bridge. The seismic retrofit of the bridge took place from 2003 through 2005. During that time period, barriers were set up for construction in a manner similar to how a barrier could be installed to create a bicycle and pedestrian pathway. The year before the seismic retrofit began, there were 94 crashes on the bridge. After the barrier was first installed in 2003, crashes increased to 112. However, after drivers became accustomed to the barrier and slowed down, crashes dropped to only 77 in 2004 and to 63 in 2005. As such, there was nearly a 33% reduction in crashes after the barriers were installed for construction of the seismic retrofit project.

Year	Number	% diff from Previous Yr.
2001	96	n/a
2002	94	-2%
2003	112	19%
2004	77	-31%
2005	63	-18%
2006	58	-8%

Note: Barrier went up in 2003 and was removed in 2005. As would be expected, accidents went up the first year w/ barrier, but then came down as motorists became used to the barrier and likely reduced speeds.

2. Speeds on the Richmond-San Rafael Bridge

The speed limit on the RSR Bridge is 55 mph however, people often drive 75 to 85 mph on this bridge, and rarely does one ever see a driver pulled over for speeding. Studies have repeatedly shown that the propensity for crashes and their severity increases with automobile speed. It was for this reason that the Golden Gate Bridge lowered their speed limit from 50 mph to 45. A press release from August 5, 2008 taken from the Golden Gate Bridge's website states: "The accident rate on the Golden Gate Bridge is now three times lower than what it was in the 1980s largely due to the reduction in the speed limit, enforcement, and driver education and awareness." Since 1970 there have been 36 fatalities of which 16 were from head-on collisions. The smooth and safe flow of traffic across the 1.7 mile long Bridge has been enhanced through a number of operational and safety features including the reduction of the speed limit to 45 mph, increased law enforcement patrols and increased use of radar, and establishing the Bridge as a special driving zone.

3. Recommendations for Safety on the Richmond-San Rafael Bridge

We recommend that Caltrans, the CHP, the Bay Area Toll Authority, and bicycle and pedestrian advocates work together to develop a safety plan for the RSR Bridge that is similar to that of the Golden Gate Bridge. The plan should include the following components:

- 1) Install the demonstration project bicycle and pedestrian pathway on the upper deck
- 2) Reduce the speed limit for automobiles
- 3) Increase enforcement of the speed limit
- 4) Conduct driver education and awareness
- 5) Use radar to show drivers how fast they are traveling
- 6) Monitor speed and crashes to compare data before and after the bicycle and pedestrian public access demonstration project

BICYCLE FACILITY USE

Projected use of bicycle facilities is only one of numerous factors considered to justify spending public money to complete a network of trails and bicycle lanes. National travel behavior surveys clearly indicate that bicycling and walking can be real transportation choices for a significant portion of daily trips. Nearly half of all trips for personal transportation in the United States are three miles or less. (*Active Transportation for America, Rails-to-Trails Conservancy*)

The planned Bay Area regional bicycle network is over 1,600 miles in length, including the 500-mile San Francisco Bay Trail. A complete regional bicycle network will provide safe and direct access to transit stations, activity centers and employment areas. Increased use of the bicycle as a primary form of transportation can have noticeable

benefits to the region in congestion reduction and improved air quality. (*Regional Bicycle Plan, Metropolitan Transportation Commission*)

1. Bicycle Use Increases in the Bay Area

San Francisco is experiencing rapid growth in bicycle use. According to preliminary numbers released by the Metropolitan Transportation Authority based on a citywide intersection count in August 2008, bicycle traffic increased 23.7% in one year (August 2007 – August 2008) and 43.3% in two years (August 2006 – August 2008). This is a remarkable increase given that the city has been forbidden to make any physical improvements for bicycle circulation since June 2006 as the result of a court-ordered injunction on the Bike Plan.

In Marin County bicycle use increased 66% between 1999 and 2007. Bicycling and walking as a form of transportation encompasses 13.6% of trips in Marin County, significantly higher than the national average of 9.5%. The Fruitvale BART station in Oakland reported a 40% increase in use by bicyclists over the previous year. Organizers of the 2008 Bay Area Bike to Work Day estimate that participation increased an average of 40% from previous years throughout the entire Bay Area.

The accelerating growth of bicycle use in the Bay Area validates the “build it and they will come” approach to bicycle transportation. Over time, investments in bicycle infrastructure and education have filled gaps in the Bay Area’s regional bicycle network and created a setting that supports the bicycle as a legitimate form of transportation. The growing use of the bicycle as a form of transportation presents a public responsibility for continued investment in safety and access improvements to complete a comprehensive network and attract a broader range of Bay Area bicyclists.

2. Bay Area Bridges

The Bay Area toll bridges are essential components of the regional bicycle network. Bicyclists and pedestrians are accommodated on the Golden Gate Bridge, the Carquinez Bridge and the Dumbarton Bridge. Pathways are currently under construction on the East Span of the Bay Bridge and the Benicia-Martinez Bridge. The Richmond-San Rafael Bridge, the West Span of the Bay Bridge and the San Mateo Bridge do not currently allow bicyclists and pedestrians.

The Golden Gate Bridge has accommodated bicyclists and pedestrians along its 1.2-mile span since 1937. Use of the Golden Gate Bridge ranges between 160 (weekday) and 640 (weekend) bicyclists per hour, plus hundreds of pedestrians.

Bicycle use in Portland, Oregon points to increased use with increased investments in bicycle access on bridges. Overall, bicycle traffic on Portland’s four bicycle-friendly bridges has increased 15% over the past year. Bicycle traffic represents 20%, 15%, 14% and 5% of all vehicles on the four bridges in the city. (*Portland 2008 Bicycle Count*)

3. Richmond-San Rafael Bridge Vicinity

The City of San Rafael has a population of approximately 57,000 people and the City of Richmond approximately 105,000 people. More than 74,000 live within a three-mile radius of the bridge and the employment centers of downtown San Rafael, the Canal Area, Point Richmond and downtown Richmond. By 2035, an additional 38,000 people are expected to live in these two communities. (*Association of Bay Area Governments, Projections 2007*)

Significant progress has been made in recent years to complete a comprehensive, connected network of trails and bike lanes on both sides of the Richmond-San Rafael Bridge. In Marin County, efforts to complete the North-South Greenway received a boost with the passage of Measure Q in November 2008. Voters authorized the construction of the SMART train between Larkspur and Cloverdale and 70 miles of bicycle/pedestrian pathways. Cal Park Hill Tunnel, a key piece of the Marin County North-South Greenway along the SMART alignment is currently under construction and will provide direct bicycle and pedestrian access between Larkspur and San Rafael by 2010. This regional bikeway is located two miles from the Richmond-San Rafael Bridge with direct connections along Sir Francis Drake Boulevard and Andersen Drive, as well as East Francisco Boulevard. In Richmond, over 30 miles of trails and bike lanes link to Point Richmond and the Richmond-San Rafael Bridge area. These trails connect residential areas, employment centers, transit stations and schools. The Richmond Greenway, connecting Point Richmond to Berkeley and the Ohlone Trail will be complete in 2009.



COSTS RELATED TO THE RICHMOND SAN-RAFAEL BRIDGE

The seismic retrofit for the Richmond-San Rafael Bridge cost nearly \$1 billion.

The November 2007 draft of the Project Study Report/Project Development Support for Non-Motorized Access and use of the Third Lane on the Richmond-San Rafael Bridge recommended alternative 1B2, a moveable barrier on the upper deck, at a cost of \$55 million in 2008 dollars, including 25 years of operating costs for moving the barrier daily. Caltrans later increased this cost estimate to \$119.4 million; however, this work would also have included construction necessary to open the third lane to vehicles, so the costs are only partially attributed to the bicycle and pedestrian access. Even so, this cost would have been approximately 10% of the seismic retrofit cost.

The proposed demonstration project could measure safety and use. This alternative would cost significantly less than was spent on the seismic retrofit of the Richmond-San Rafael Bridge and the recommended moveable barrier alternative.

Since 1997, support letters, plans, resolutions, public testimony and articles have been registered by the following individuals and organizations:

- Assemblymember Carol Migden
- Assemblymember Joe Nation
- Association of Bay Area Governments
- Bay Area Air Quality Management District
- Bay Area Bicycle Coalition
- Bay Area Toll Authority
- City of Richmond Redevelopment Agency
- Clif Bar
- East Bay Bicycle Coalition
- East Bay Regional Park District
- Ken Bukowski, Vice Mayor, City of Emeryville
- Marin County Bicycle Coalition
- Marin County Board of Supervisors
- Marin Independent Journal
- Mountain Hardware
- San Francisco Bay Trail Project
- Senator John Burton
- Senator Tom Torlakson
- Trails for Richmond Action Committee
- West Contra Costa County

SUMMARY

- Bicycle/pedestrian access on Richmond-San Rafael Bridge (RSRB) is specifically **called for in seven regional, county or local plans** and is supported by many regional agencies.
- Caltrans' November 2007 document shows that the **throughput capacity of a 6-lane facility versus the current 4-lane facility is only an additional 85 vehicles in the peak morning commute direction, or an increase of 1.7%.**
- **Vehicle trips on the RSRB have been in steady decline** since their peak in 2003. Bridge crossings in fiscal year 2008 are the lowest since 2002.
- **More than 74,000 live within a three-mile radius of the bridge** and the employment centers of downtown San Rafael, the Canal Area, Point Richmond and downtown Richmond. By 2035, **an additional 38,000 people are expected to live in these two communities.**
- **Overall driving is down by nearly 4% nationwide** (U.S. Department of Transportation—Federal Highway Administration).
- According to Caltrans PSR, the eastbound lower deck would be the major beneficiary of an additional lane (22% increase in throughput). A third lane on the lower deck would not be affected by a multi-use path on the upper deck.
- Caltrans' PSR states that it is **unclear how much of the projected congestion results from lane capacity vs. toll plaza and other off-bridge constraints such as Sir Francis Drake Blvd. and the 580/101 merge.**
- The Caltrans cost estimate for preferred Alternative (1B2) is \$119 million (not including toll plaza modifications). Immediate access via a permanent barrier can be achieved for significantly less than this estimate.
- After an initial adjustment period, **crashes were reduced by up to 31%** when a K-rail barrier of the type proposed for the demonstration project was in place between 2003 and 2005.
- **Bicycling as transportation has increased** significantly nationwide, and **between 40% and 60%** in the San Francisco Bay Area in recent years.