CALIFORNIA DEPARTMENT OF TRANSPORTATION

District 4 Bicycle Advisory Committee (BAC) Meeting

May 13, 2015
1:30 – 3:30 PM
Conference Room 230, 15th Floor, 111 Grand Ave, Oakland
Phone Bridge: 1.510.286.2230

AGENDA

1:30 PM	1. Welcome and introductions
1:35 PM	2. Agenda review
1:40 PM	3. Public Comment
1:45 PM	4. Review and approval of summary of January 2015 meeting
1:50 PM	5. Announcements and updates: new Caltrans Strategic Management Plan goals and implementation steps, Class IV Bikeway Summit, recent California Highway Design Manual proposed revisions (including previously discussed guidance for wider bike lanes on steep streets), US 50/Watt Avenue (Sacramento) bikeway opening
2:10 PM	6. California Traffic Control Devices Committee June 2015 meeting agenda item on bicycle signal faces
2:20 PM	7. Update on Richmond-San Rafael Bridge Bikeway Project Design Concept
2:30 PM	8. Request for bicycle warning lights on Route 1 between Pacifica and the Tom Lantos Tunnels
3:00 PM	9. Review of District 4 Project Initiation Document (PID) Work Plan and prioritization of PID-phase projects to review at future meetings
3:25 PM	10. Topics for next meeting, announcements and information sharing

Caltrans District 4 Pedestrian Advisory Committee (PAC) and Bicycle Advisory Committee (BAC) Joint Meeting
January 21, 2015, 1:30 – 3:30 PM
Draft Meeting Summary

PAC members in attendance:

Carol Levine, Chair, Alameda County resident
David Simons, Vice Chair, Santa Clara County resident
Ellen Barton, San Mateo City/County Association of Governments
Tony Dang, California WALKS
Patrick Golier, San Francisco Municipal Transportation Agency
Steven Grover, Alameda County resident
Kate Howe, Alameda County resident
Lauren Ledbetter, Santa Clara Valley Transportation Authority
Mariana Parreiras, San Francisco Bay Area Rapid Transit District
Steve Weinberger, Sonoma County resident

PAC members who participated via teleconference:

Rocky Birdsey, Marin Center for Independent Living
Marty Martinez, Safe Routes to School National Partnership, San Francisco resident

BAC members in attendance:

Rick Marshall, Chair, Napa County Public Works
Gary Helfrich, Vice Chair, Sonoma County Bicycle Coalition
Steve Beroldo, San Francisco Bay Area Rapid Transit District
Mike Costanzo, Napa County Bicycle Coalition
Adam Foster, Contra Costa County resident
Bert Hill, San Francisco Bicycle Coalition
David Hoffman, Marin County Bicycle Coalition
Lauren Ledbetter, Santa Clara Valley Transportation Authority
Bruce "Ole" Ohlsen, Bike East Bay, Contra Costa County resident
Mike Sallaberry, San Francisco Municipal Transportation Authority
Jean Severinghaus, Marin County resident
Richard Swent, Silicon Valley Bicycle Coalition

Non-members who participated in the meeting:

Beth Thomas, Caltrans Liaison to the District 4 PAC & BAC
Anne Darrow, Napa County Safe Routes to School
Ann Killebrew, Richmond Bicycle and Pedestrian Advisory Committee
Joe Partansky, Advocacy for Human/Disability Rights

The following BAC members were not present:

Eric Anderson, City of Berkeley
Brad Beck, Contra Costa Transportation Authority
Matthew Bomberg, Alameda County Transportation Commission
Andrew Hart, Solano Transportation Authority
Robert Tidmore, San Francisco resident
Sean Co, Ex Officio, Metropolitan Transportation Commission

The following PAC members were not present:

Matthew Bomberg, Alameda County Transportation Commission
Dana Turrey, Sonoma County Transportation Authority

Before calling the meeting to order, Rick Marshall, Chair of the District 4 BAC, and Carol Levine, Chair of the District 4 PAC, jointly decided that Rick would chair this meeting.

Agenda Item #1: Welcome and introductions

A quorum was reached with both the PAC and BAC.

Agenda Item #2: Review and approval of summary of Sept 2014 PAC meeting and Oct 2014 BAC meeting

PAC members reviewed and approved the Sept 2014 PAC meeting summary with an edit to the list of members who attended. The PAC recommended that future meeting summaries include which members participated by phone and which members were not present. BAC members reviewed and approved the Oct 2014 BAC meeting summary with two abstentions.

Agenda Item #3: Nomination and election of District 4 BAC Chair and Vice Chair for calendar year 2015

The BAC nominated and elected Gary Helfrich as Chair and Mike Sallaberry as Vice Chair.

Agenda Item #4: Discussion of conflicts between motor vehicles turning at intersections and pedestrians and bicyclists trying to cross, with a focus on signalized intersections and freeway ramp openings

PAC and BAC members discussed examples of treatments to minimize conflicts between turning vehicles and crossing pedestrians and bicyclists. Steve Weinberger provided an example of a raised crossing of the Highway 101 northbound onramp at Old Redwood Highway in the Town of Windsor. He showed a video of the operations. Other topics discussed included new ITE guidance on pedestrian and bicycle treatments at interchanges, the use of truck aprons to reduce the radius of corners where motor vehicles are turning, and opportunities to redesign interchanges. Beth described issues with interchanges from Caltrans' perspective. A subcommittee was formed to look into current best practices that address these issues, including raised crosswalks and recommendations in the ITE guidelines.

Agenda Item #5: Information sharing: District 4 PAC letter regarding implementation of the State Smart Transportation Initiative report recommendations for Caltrans

Lauren provided an overview of the SSTI report, the PAC letter with recommendations, and the response letter from the Caltrans director. The response letter described the Caltrans Strategic Management Plan 2015-2020 and the Caltrans Improvement Project. The letter also included a link to the CIP website and contact information for the CIP Program Manager.

Agenda Item #6: Update on results of informal PAC and BAC member survey regarding placing a white stripe on the Bay Bridge Bike and Pedestrian Path to delineate the border between the pedestrian and bicycle space

Beth gave an overview of a proposal to remove the white stripe from the path plans through a contract change order. PAC and BAC members discussed the pros and cons of providing a white stripe to separate the pedestrian and bicycle sides, which some members indicated could be justified with the potential for higher volumes on the path once the Yerba Buena Island connection is completed. A motion was passed to recommend providing a white stripe on the path, with one member opposed. Gary and Carol agreed to write up the PAC/BAC joint recommendation.

Agenda Item #7: Public comment

Rick updated the PAC and BAC on a new "Pass Bikes 3ft Min" sign in Napa County, which includes the "State Law" option above. He showed a photo of the location where the first such sign was installed in Napa County.

Joe Partansky commented on the access needs of users of four-wheeled and motorized mobility aid devices.

Agenda Item #8: Topics for next meeting

- Conflicts between pedestrians and bicyclists on bridges and overcrossings – mode separation techniques and effectiveness
- Implementation of roundabouts – examples of successful roundabouts

The PAC and BAC agreed to hold joint meetings every other quarter. Carol and Gary will work with Beth on scheduling joint meetings.

Agenda Item #9: Announcements and information sharing

No announcements were made.

Caltrans®

Strategic Management Plan

2015-2020

Caltrans
Strategic Management Plan

2015 - 2020

Edmund G. Brown, Jr.
Governor
State of California

Brian P. Kelly
Secretary
California State Transportation Agency

Malcolm Dougherty
Director
California Department of Transportation

Kome Ajise
Chief Deputy
California Department of Transportation

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Our Mission

Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.

Safety and Health

Provide a safe transportation system for workers and users, and promote health through active transportation and reduced pollution in communities.

Stewardship and Efficiency

Money counts. Responsibly manage California's transportation-related assets.

Sustainability, Livability and Economy

Make long-lasting, smart mobility decisions that improve the environment, support a vibrant economy, and build communities, not sprawl.

System Performance

Utilize leadership, collaboration and strategic partnerships to develop an integrated transportation system that provides reliable and accessible mobility for travelers.

Organizational Excellence

Be a national leader in delivering quality service through excellent employee performance, public communication, and accountability.

Our Vision

A performance-driven, transparent and accountable organization that values its people, resources and partners, and meets new challenges through leadership, innovation and teamwork .

Integrity ▪ Commitment ▪ Teamwork ▪ Innovation

Message from the Director

I am very pleased to present the 2015 – 2020 Caltrans Strategic Management Plan. This Plan is the culmination of extensive effort by both the Caltrans Executive Board, which provided reviews, discussion, and analysis of the Plan, and by Caltrans' employees, stakeholders, and partners who provided essential input for the Plan.

The need to redefine our Mission statement and to develop a Vision statement was identified during the 2012 Program Review process. In February 2014, the Caltrans and California State Transportation Agency executive management teams met at length to discuss the development of new Mission and Vision statements. Our previous Mission statement: "Caltrans Improves Mobility Across California" resonated with many in the Department. It was short and catchy, but it didn't tell how we engage our stakeholders on issues important to all of us: safety, sustainability, integration, efficiency, and California's economy and livability. Our new Mission statement reads:

> *"Provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability."*

Our Mission defines what we do and who we are. Our Vision defines our ideals—what we aspire to be. We are entrusted with efficiently managing, preserving, and protecting California's transportation system, one of the State's most vital assets. We manage a world-class transportation system that connects the people and regions of our state. We play a significant role in making our economy the 8th largest in the world, bringing goods and services to California's customers. We now have a Vision broad enough to encompass the many facets and challenges of our work:

> *"A performance-driven, transparent, and accountable organization that values its people, resources, and partners and meets new challenges through leadership, innovation, and teamwork."*

I encourage all of you to read this Strategic Management Plan, and as you do, think about how our Mission, Vision, and Goals connect to you. Throughout the Plan, you will see a strong focus on safety, preservation, and operations. We will be using strategic objectives and performance metrics as tools to manage from the Plan—with quarterly reports tied to these objectives and metrics. California's livability and economy depend on transportation. Your work is vital in helping to fulfill California's future.

Sincerely,

Malcolm Dougherty
Director, Caltrans
March 2015

Implementing the Mission

We recognize the vital need for collaboration and partnership with all our stakeholders to provide Californians with a world-class transportation system. We must meet mobility demands and satisfy economic, environmental, and social equity considerations while maintaining a focus on safety, preservation, and operations.

Caltrans and the California State Transportation Agency (CalSTA) are committed to modernizing the Department by addressing these challenges, now and in the future. Our new Mission and Vision, coupled with the goals and strategic objectives, provide Caltrans with a direction that is now consistent with the State's planning and policy objectives and set the course for Caltrans' role in California's transportation system.

Caltrans directly manages more than 50,000 lane miles of State and federal highways, as well as over 12,000 highway bridges; permits more than 400 public-use airports; and operates three of the top five Amtrak intercity rail services. Caltrans administers technical assistance and grants to regional partners for local planning and projects. We recognize that California needs a robust, multimodal, sustainable transportation system to provide efficient operation and service for goods imported into the United States.

Caltrans is meeting the evolving challenges associated with providing transportation funding, project delivery, and societal needs. The Department will play a strong role in helping the State achieve the Governor's greenhouse gas (GHG) reduction objectives. We will explore new options that address long-term funding stability, and adopt new strategies to funding repair and maintenance of the system. Caltrans and CalSTA established the California Transportation Infrastructure Priorities Workgroup in 2013 to identify and discuss the challenges for the State's transportation system and provide robust funding recommendations to the CalSTA Secretary.

In 2015, the transportation focus shifted from capacity to a fix-it-first philosophy centered on preservation, maintenance, and operation of our existing transportation infrastructure. Caltrans will focus on improving operation of the transportation system, achieving greater efficiency, and addressing the growing backlog of maintenance projects.

STRATEGIC MANAGEMENT PLAN

The goal for Caltrans is to be a high-performance, efficient, transparent, accountable, and modern organization —meeting transportation challenges by improving communication, building stronger partnerships, and fostering a culture of performance and innovation. This Strategic Management Plan is a key tool to achieve that goal.

The purpose of the Strategic Management Plan is to be a roadmap of Caltrans' role, expectations, and operations as we meet the challenges of modernizing Caltrans into a world-class Department of Transportation. The tools we will use to implement this Plan are performance management, transparency, accountability, sustainability, and innovation.

The Plan serves a number of functions:

- Provides clear direction for meeting statewide objectives;
- Creates and deepens strategic partnerships; and
- Provides performance measures that monitor success.

CONTINUOUS IMPROVEMENT

The 2015 - 2020 Strategic Management Plan is the result of a comprehensive process. Since the 2007-2012 Strategic Plan, Caltrans has undertaken several reviews, studies, and evaluations including: 2012 Program Review and Stakeholder Survey, 2013 Strategic Management Plan Development and Employee Survey, 2013 Enterprise Risk Profile, 2013/14 State Smart Transportation Initiative Review, now referred to as the Caltrans Improvement Project. Each of these contributes to the continuous improvement process and influences the 2015 - 2020 Strategic Management Plan. The Plan was created in a 15-month period through extensive discussions within Caltrans and CalSTA, and with the valuable participation of Caltrans employees, stakeholders, and partners.

Ongoing efforts essential to the success of this Strategic Management Plan include:

- Development of an Asset Management Plan to preserve the condition of the transportation assets and improve system performance;
- Establishment of the Office of Enterprise Risk Management to better connect an enterprise risk approach to strategic planning;
- Preparation and implementation of the Strategic Highway Safety Plan to increase safety and reduce fatalities and injuries;
- Implementation of Smart Mobility and Complete Streets initiatives to improve livability and revitalize communities;
- Implementation of the California Freight Mobility Plan, and State Rail Plan that will enhance economic competitiveness, sustainable goods movement, and rail service;
- Update of the Interregional Transportation Strategic Plan to prioritize transportation projects statewide;
- Development of the California Transportation Plan 2040 to meet future mobility needs and reduce greenhouse gas emissions; and
- Publishing of *The Mile Marker*, our quarterly performance journal, to increase transparency and accurate accounting of our performance.

The objectives and performance measures within the Strategic Management Plan support actions, recommendations, and activities in each of these efforts to achieve our departmental goals.

CALTRANS EXECUTIVE BOARD

The common thread throughout all these activities is participation by the Caltrans Executive Board. Created in May of 2012 and led by the Director, the Executive Board makes decisions on departmental strategic direction, broad operational policy, and departmental structure. The Executive Board is composed of the Director and Chief Deputy, all District Directors, all Assistant Directors, and all Deputy Directors. The Caltrans Executive Board is responsible for monitoring, measuring, and reporting progress in implementing the Strategic Management Plan and the Caltrans Improvement Project. The Executive Board will inform and engage stakeholders and partners, including regional agencies, self-help counties, local agencies, CalSTA, and the State Legislature.

OUR GOALS

The Caltrans Executive Board established five goal teams. These teams, working with Caltrans, CalSTA, and external stakeholders, built on lessons learned from prior goals and strategic objectives to develop and define five new cross-cutting goals for Caltrans, along with their corresponding objectives and performance measures. In keeping with continuous improvement, the Executive Board will review the effectiveness of the performance measures on a regular basis. These goals are summarized below.

Safety and Health: *Provide a safe transportation system for workers and users and promote health through active transportation and reduced pollution in communities.* The safety of our workers and the users of California's transportation system is our number one priority. The most important attribute of a transportation system is that it is safe for users and can be planned, designed, built, maintained,

and operated safely. Our transportation system has measurable effects on the health of Californians. This is manifest by the impact of emissions from the transportation system, and the health benefits of active transportation programs.

Stewardship and Efficiency: *Money counts. Responsibly manage California's transportation-related assets.* As stewards of a transportation system that is vital to the economy and livability of our state, Caltrans is committed to the most effective and efficient use of every transportation dollar. Caltrans will keep California's transportation system in the best condition possible and advocate for adequate resources.

Sustainability, Livability and Economy: *Make long-lasting, smart mobility decisions that improve the environment, support a vibrant economy, and build communities, not sprawl.* Sustainability is a central element of our new Mission. Caltrans has chosen to define sustainability as the consideration of these three areas:

- People – fostering community health and vitality,
- Planet – preserving and restoring environmental and ecological systems,
- Prosperity – promoting economic development.

Over time, sustainability elements will be incorporated into all Caltrans programs, policies, processes, projects, plans, and procedures.

System Performance: *Utilize leadership, collaboration, and strategic partnerships to develop an integrated transportation system that provides reliable and accessible mobility for travelers.* A transportation system must be safe, well-maintained, and high-performing. System Performance is managed on a regional and corridor basis. We must work with our partners to ensure the State's transportation system is contributing to an efficient and interconnected network.

The safety of our workers and the users of California's transportation system is our number one priority.

Organizational Excellence: *Be a national leader in delivering quality service through excellent employee performance, public communication, and accountability.* A world-class transportation system requires a world-class staff to plan, design, build, maintain, operate, and manage it. Significant achievements can, and will, be accomplished with a capable, educated, well-trained, and motivated workforce equipped with the right tools and resources. Caltrans is committed to providing its staff with these tools and resources.

OUR STRATEGIC OBJECTIVES AND PERFORMANCE MEASURES

Our Mission defines what we do and who we are. Our Vision defines our ideals—what we aspire to be. Our goals, along with their corresponding strategic objectives and performance measures, define and quantify how we put our vision into practice and how we broaden and deepen our success. The goal teams, using recommendations from the Executive Board, have developed strategic objectives that are aligned with State initiatives from the Governor's Office. These objectives will guide activities in each district, program, and division to accomplish our goals. Caltrans will use performance measures to monitor progress of aggressive, yet attainable, targets.

Some performance measures are in development. The Office of Strategic Management and the Programs will complete the development of these performance measures and their targets, and then submit these to the Executive Board for approval. Once the performance measures are approved, the goal teams will create baselines, set targets, and measure progress toward the targets. For example, our Sustainability, Livability, and Economy Goal will have performance measures for accessibility, livability, prosperity, and resiliency. These measures will consider factors such as multimodal proximity to jobs and housing, air and noise pollution from the transportation system, gross State and federal product output, and climate change impacts.

MANAGE FROM THE PLAN

We are committed to achieving significant change in both the operations and culture of Caltrans. Change that provides Californians with a safe and efficient transportation system created in partnerships with our stakeholders. Change that produces a sustainable transportation system, livable communities, and multimodal choices for Californians. Change that supports organizational excellence in our staff. These tenets ensure Caltrans is well-positioned to meet California's mobility, safety, and sustainability needs today and well into the future.

The Strategic Management Plan is a living document. As the transportation landscape changes, whether by State or federal policy or funding modifications, the Strategic Management Plan may be revisited, revised, or amended. As performance measures, targets, and strategies evolve over time, a corresponding set of strategic decisions on resource allocation, focus areas, and approaches will be made. It is all part of the continuous improvement process for Caltrans to be a performance-driven, transparent, and accountable organization.

We are committed to achieving significant change in both the operations and culture of Caltrans.

GOAL 1

Safety and Health

"Provide a safe transportation system for workers and users and promote health through active transportation and reduced pollution in communities."

Safety has been, and continues to be, Caltrans' first priority. We provide a safe transportation system for all users, including bicyclists and pedestrians. Our policies and practices are designed to continually decrease collisions, injuries, and fatalities on our system. Caltrans is committed to improving worker safety, both in our daily operations and during each phase of project development. Our annual goal is zero work zone-related worker fatalities.

We will engage with our strategic partners in the use of flexible and innovative design and delivery practices that will result in increased worker safety. Multi-divisional teams will promote maintenance and construction strategies that reduce worker exposure to harm and improve their safety. Caltrans will expand existing multimedia safety campaigns, such as "Be Work Zone Alert" which spotlights children of Caltrans employees, and "Slow for the Cone Zone" which educates drivers on the dangers of excessive speed and distracted driving in work zones.

SLOW FOR THE CONE ZONE™ CALTRANS

In addition, Caltrans and the Department of Motor Vehicles are improving the bicycle and pedestrian safety information available to the public. With input and advice from our national and international engagement, Caltrans published the new California Manual for Uniform Traffic Control Devices (MUTCD) in October 2014. The MUTCD now includes new safety features that will improve safety and mobility for all travelers.

We have expanded our primary goal to include the health impacts on communities from criteria pollutants and greenhouse gases generated within our transportation system. The 2013 Zero Emission Vehicle (ZEV) Action Plan from the Governor's Office of Planning and Research provides a roadmap for 1.5 million zero-emission vehicles on California roadways by 2025. The implementation of this Action Plan will reduce both greenhouse gas emissions and conventional pollutants, while increasing the operation of quiet and clean vehicles. Caltrans is doing its part by increasing the number of Department zero-emissions and low-emissions vehicles in our fleet.

Our Active Transportation Program (ATP) consolidates a set of smaller programs that enhance public health, encourage increased trips by walking and bicycling, increase safety and mobility for non-motorized users, and reduce both vehicle miles traveled and greenhouse gas emissions. The ATP, along with the Low Carbon Transit Operations Program and the Transit and Intercity Rail Capital Program, will improve bike, pedestrian, and transit alternatives to private car trips. The combined implementation of these programs will make Caltrans a leader in active transportation.

Goal 1: Safety and Health

Strategic Objectives	Performance Measures	Targets
Zero worker fatalities.	Number of work zone-related worker fatalities per calendar year.	Zero work zone-related worker fatalities per calendar year.
Reduce user fatalities and injuries by adopting a "Toward Zero Deaths" practice.	Number of auto travel fatalities per 100 million vehicle miles traveled.	Maintain 0.5 or less fatalities per 100 million vehicle miles traveled on the State Highway System every year.
	Number of fatalities for bicycle, pedestrian, and transit modes of travel.	10% reduction in number of fatalities in a calendar year in each of the following mode types: car, transit, pedestrian, and bicyclist.
Promote community health through active transportation and reduced pollution in communities.	Increase and improvement in opportunities for safe and accessible active transportation.	100% of funds of allocated vs. programmed. 100% of projects being allocated for construction awarded within six months.
	Percent reduction of transportation system-related air pollution for criteria pollutant emissions.	85% reduction (from 2000 levels) in diesel particulate matter emissions statewide by 2020. 80% reduction (from 2010 levels) in NOx emissions in South Coast Air Basin by 2023.

See Appendix for all strategic objectives, performance measures, and targets.

Safety remains Caltrans' first priority and top goal toward zero deaths.

GOAL 2 Stewardship and Efficiency

"Money counts. Responsibly manage California's transportation-related assets."

Caltrans is the steward of the State Highway System. Proposition 1B has provided funding for transportation infrastructure, mainly on capacity-building projects, over the past five years. As this funding sunsets, Caltrans will embrace a fix-it-first philosophy to support our aging infrastructure. The 2014 California 5-Year Infrastructure Plan identified $59 billion in deferred maintenance needs for roads. By focusing on maintenance and repair, we will be able to maximize the use of limited transportation funds and address the backlog of maintenance projects.

Decreases in fuel consumption, due to improvements in the average vehicle miles per gallon, have reduced funding available from taxes on fuel. Caltrans must now look to innovative financing strategies. The Road Charge Pilot Program will examine the potential of revenues based on the number of vehicle miles traveled and the feasibility of providing Caltrans a long-term sustainable revenue source to maintain the transportation infrastructure. The expanded use of congestion pricing on toll roads and managed lanes, which maximize capacity of existing highway lanes, may also be a way of generating significant revenue.

One of the first steps in the efficient management of the transportation system will be the completion and implementation of a Transportation Asset Management Plan (TAMP). In September 2014, Senate Bill 486 was signed by the Governor to adopt TAMP as a statutory requirement. The implementation of TAMP provides Caltrans with risk management and financial analysis to guide investment strategies. This, in turn, will help Caltrans maximize the effectiveness of transportation investments, extend the life of pavement, and improve performance by examining life cycle costs. As the first phase of TAMP, Caltrans is conducting a State Highway Operations and Protection Program (SHOPP) Pilot Project in 2016. This will result in a clearer and more transparent methodology for SHOPP project prioritization based on several factors including: safety, sustainability, system performance, and efficiency.

Part of responsibly managing the State's transportation assets is the efficient delivery of projects and services that improve the maintenance and operation of the system. Caltrans is pursuing new approaches in the delivery of transportation services that increase efficiency and remove unnecessary bottlenecks throughout our processes. Caltrans is working in tandem with the California High-Speed Rail Authority to address multimodal transportation services related to high-speed rail. The Caltrans Freight Advisory Committee meets to coordinate regional freight priorities between public and private sector freight stakeholders. The Active Transportation and Livable Communities Group, among others, advises Caltrans on a wide range of organizational policies and practices.

Success in project delivery is determined by many factors. To increase our success, Caltrans will focus on better communication methods and earlier stakeholder involvement. Caltrans has also moved decision making closer to the issues by increasing delegation to the districts. This will improve timely decision making on projects and increase effective communication with our local partners.

Goal 2: Stewardship and Efficiency

Strategic Objectives	Performance Measures	Targets
Effectively manage transportation assets by implementing the asset management plan, embracing a fix-it-first philosophy.	Percentage of distressed lane miles on the State Highway System.	By 2020, no more than 12% of total system area of pavement is distressed.*
	Bridge Health Index.	By 2020, maintain 95 or better rating on Bridge Health Index.*
	Measure of ITS elements health, system operability, and equipment workability.	By 2020, maintain 90% or better ITS elements health.*
Efficiently deliver projects and services on time and on budget.	Percentage of planned projects delivered in the fiscal year.	Deliver 100% of planned projects for each fiscal year.

See Appendix for all strategic objectives, performance measures, and targets.

*These targets will be achieved through development and implementation of the Asset Management Plan, as required by SB 486 (Chapter 917, 2014).

GOAL 3

Sustainability, Livability and Economy

"Make long-lasting, smart mobility decisions that improve the environment, support a vibrant economy, and build communities, not sprawl."

Sustainability, livability, and the economy are central to improving the quality of life in California. This goal promotes communities, assists in the integration of a multimodal transportation system, improves both air and water quality, and helps California better address the challenges of climate change. To accomplish this goal, we focus on the impacts of transportation on People, Planet, and Prosperity.

Sustainability measures will be incorporated into the State Transportation Improvement Program. SHOPP projects will be prioritized to align these investments with statewide and regional Sustainable Communities strategies. Caltrans is leading the implementation of several new transit and active transportation programs, and providing support for others. Caltrans staff are important contributors to the High-Speed Rail Project, the new Affordable Housing Sustainable Communities Program, and the Strategic Growth Council.

People
Planet
Prosperity

Caltrans will support livability initiatives that promote efficient land use and invest in transportation facilities that improve local economies and community quality of life. We will improve livability by considering transportation-related outcomes in concert with community outcomes (such as accessibility to public and active transportation travel options, proximity of affordable housing to employment and civic centers, and a high-quality public realm) that supports natural systems, local businesses, and community vitality.

The quality of our mobility decisions contributes to economic prosperity by enhancing the safe and efficient movement of people, goods, and services. Investments in the State's transportation infrastructure provide significant economic returns, preserve ecological health, contribute to climate change resilient systems, and create conditions that attract businesses and employers to local communities.

The California Transportation Plan (CTP) 2040, the first statewide plan completed under the requirements of Senate Bill 391, will provide a long-range framework to both meet mobility needs and reduce greenhouse gas emissions. The CTP 2040 will be the interregional equivalent of the Sustainable Communities Strategies developed by regions pursuant to Senate Bill 375. The Division of Transportation Planning has initiated the Sustainable Mobility Program to assist in the implementation of both Smart Mobility 2010 and California Transportation Plan 2040. In addition, Caltrans will increase the competitiveness and efficiency of the freight system through targeted investments in trade corridors.

Goal 3: Sustainability, Livability and Economy

Strategic Objectives	Performance Measures	Targets
PEOPLE: Improve the quality of life for all Californians by providing mobility choice, increasing accessibility to all modes of transportation and creating transportation corridors not only for conveyance of people, goods, and services, but also as livable public spaces.	Percentage increase of non-auto modes for: • Bicycle • Pedestrian • Transit	By 2020, increase non-auto modes: • Triple bicycle; • Double pedestrian; and • Double transit. (2010-12 California Household Travel survey is baseline.)
PLANET: Reduce environmental impacts from the transportation system with emphasis on supporting a statewide reduction of greenhouse gas emissions to achieve 80% below 1990 levels by 2050.	Per capita vehicle miles traveled.	By 2020, achieve 15% reduction (3% per year) of statewide per capita VMT relative to 2010 levels reported by District.
	Percent reduction of transportation system-related air pollution for: • Greenhouse gas (GHG) emissions • Criteria pollutant emissions	• 15% reduction (from 2010 levels) of GHG to achieve 1990 levels by 2020. • 85% reduction (from 2000 levels) in diesel particulate matter emissions statewide by 2020. • 80% reduction (from 2010 levels) in NOx emissions in South Coast Air Basin by 2023.
	Percent reduction of pollutants from Caltrans design, construction, operation, and maintenance of transportation infrastructure and building for: • Greenhouse gas (GHG) emissions • Criteria air emissions • Water pollution	By 2020, reduce Caltrans' internal operational pollutants by District from 2010 levels (from planning, project delivery, construction, operations, maintenance, equipment, and buildings) including: • 15% reduction by 2015 and 20% reduction by 2020 of Caltrans' GHG emissions per EO-B-18-12. • 10% reduction in water pollutants. By 2020, 85% reduction (from 2000 levels) in diesel particulate matter emissions statewide. By 2023, 80% reduction (from 2010 levels) in NOx emissions in South Coast Air Basin.
PROSPERITY: Improve economic prosperity of the State and local communities through a resilient and integrated transportation system.	Freight system competitiveness, transportation system efficiency, return on transportation investment.	By 2020, 10% increase in freight system efficiency.

See Appendix for all strategic objectives, performance measures, and targets.

GOAL 4

System Performance

"Utilize leadership, collaboration, and strategic partnerships to develop an integrated transportation system that provides reliable and accessible mobility for travelers."

A high-performing, integrated transportation system requires collaboration among strategic partners. With that collaboration, it is possible to create an efficient multimodal transportation system. This transportation system will offer options and a reliable travel time to every user, from highways and rail to transit, bicycling and walking; considering first- and last-mile challenges; and connecting different modes together to provide ease of use.

Caltrans recognizes that not every transportation solution is a highway solution. Caltrans is now better positioned to work with our regional partners to integrate all modes, including high-speed rail and intercity rail, into our State transportation system. The increased collaboration, transportation management and operations, and greater integration will improve system performance for all travelers.

We will use transportation system management and operations to better manage existing infrastructure. This will improve travel time reliability, reduce peak period travel times, reduce delays in all modes of travel, maximize safety, and improve operations that foster the economy, particularly resulting from incidents and events. We will also develop multimodal integrated corridor management strategies, beginning in areas of highest statewide importance.

Caltrans will integrate Complete Streets elements, multimodal design, and land use to increase person throughput system-wide. We will work with our transportation partners early in planning and project development to identify community, environmental, and aesthetic considerations. This approach ensures that transportation and land-use concerns are addressed before projects are scoped, programmed, and developed.

The Complete Streets Implementation Action (CSIA) Plan 2.0, released in early 2015, will help to provide a seamless, interconnected transportation system that supports active transportation modes. CSIA Plan 2.0 includes over 100 action items to further integrate complete streets policies into the planning and development of transportation projects. We will continue to educate our staff in innovative street design approaches for metro areas and town centers, inform the State Bicycle and Pedestrian Plan, and support District Complete Streets partnerships.

Goal 4: System Performance

Strategic Objectives	Performance Measures	Targets
Improve travel time reliability for all modes.	Travel time reliability on four commute directions (SR-57, US-110, I-80 and I-210).	By 2020, improve buffer time index (BTI) reliability ranking by one level (unreliable to moderately reliable or moderately reliable to reliable) on four commute directions (SR-57, US-110, I-80, and I-210).
	Average endpoint on-time performance (OTP) for intercity rail.	By 2020, achieve 90% on-time performance.
Reduce peak period travel times and delay for all modes through intelligent transportation systems, operational strategies, demand management, and land use/ transportation integration.	Rate of growth in Daily Vehicle Hours of Delay (DVHD) statewide.	By 2020, reduce to an 8% rate of growth in Daily Vehicle Hours of Delay (DVHD) under 35 miles per hour on urban State highways.
	Average all stations on-time performance (OTP) for intercity rail.	By 2020, achieve 90% average on-time performance.
Improve integration and operation of the transportation system.	Percentage of 25 top integrated corridors with real-time multimodal system information available to the public.	By 2020, provide real-time multimodal system information to the public on 50% of the top integrated corridors.

See Appendix for all strategic objectives, performance measures, and targets.

Improve travel time reliability.

Reduce peak period travel times.

Reduce delays in all modes of travel.

GOAL 5

Organizational Excellence

"Be a national leader in delivering quality service through excellent employee performance, public communication, and accountability."

Caltrans has a diverse, trained, and motivated workforce. As our focus shifts to maintaining the infrastructure and improving operability of the transportation system, we will invest in our staff to increase their expertise so that we are prepared to meet evolving transportation challenges. We are developing our staff by reinstating rotation programs that build broad experience and provide training on new skills. We will continue to research how we identify the key drivers of creativity and innovation in our staff.

In addition to technical training to promote organizational excellence, we will make a conscious investment in supervisory, management, and leadership training. To increase accountability, we have developed and distributed tools such as the employee and manager handbooks and implemented an ethics hotline to promote the values of integrity, commitment, teamwork, and innovation.

Our new Mission calls for a focus on better communication methods and earlier stakeholder involvement. Through organizational excellence, Caltrans will improve collaborative partnerships with agencies, industries, municipalities, and tribal governments, building relationships with these partners to gain efficiencies. We are working with our partners to gain a new understanding and better focus on common objectives as we move forward. We will include key partners in the development of projects and plans to produce better and more timely decisions. Our internal and external communication will be improved by the use of monthly Director's videos, newsletters, town halls and the publication of our performance journalism tool, *The Mile Marker*.

To ensure that resources are used effectively, we will continue to employ *means and methods* that reduce waste and save time. The inclusion of a continuous improvement process and the introduction of Lean 6-Sigma into the culture of Caltrans reduces waste in Department operations and saves time in decision processes. Consistent use of this performance improvement methodology will contribute to performance-based management being used throughout Caltrans. Caltrans staff with Lean 6-Sigma training will use their newly-acquired skill sets (including complex analytical and statistical tools that identify waste and inefficiencies in processes) in all performance improvement projects.

Goal 5: Organizational Excellence

Strategic Objectives	Performance Measures	Targets
Promote a positive work environment and implement a management system to maximize accomplishments, encourage innovation and creativity, and ensure staff performance is aligned with Department and State strategic goals.	Percentage of employees who indicate that they work in a positive environment.	By 2016, establish a baseline number through a survey and achieve a 5% increase in responses each subsequent year through 2020.
	Percentage of Caltrans employees who agree, or strongly agree, that employees are encouraged to try new ideas and new ways of doing things to improve Caltrans.	By 2016, percentage to reach 75%. Maintain level at least at 75% through 2020.
Continuously increase customer satisfaction.	Percentage of external survey respondents who said Caltrans was doing a good or excellent job in meeting their needs.	By 2016 (or next survey date), increase to 75% the percentage of external survey respondents (general public and external stakeholders) who rate Caltrans as doing a good or excellent job at meeting survey respondents' needs.
Improve internal and external communication to better demonstrate professionalism and service levels to the public and stakeholders.	Percentage of Caltrans employees who rate Caltrans management as good or very good at being open and honest in communications with employees.	By December 2015, conduct survey to show target of 50% of Caltrans employees who rate Caltrans management as good or very good at being open and honest in communications with employees. Through 2020, increase rating 5% annually.
	Percentage of stakeholders who feel that overall Department communication, professionalism, and service levels have improved.	Conduct baseline survey followed by annual survey to show target of 5% annual increase of employees and stakeholders who feel that overall the Department's communication, professionalism, and service levels have improved.
	Percentage of stakeholders who give positive feedback on *The Mile Marker*.	Conduct baseline survey followed by annual survey to show target of 5% annual increase in the number of people (employees, stakeholders, and public) who provide positive feedback about *The Mile Marker*, including specific outcomes for performance journalism (e.g., transparency, use of plain language, etc.)
Improve partnerships with agencies, industries, municipalities, and tribal governments.	Percent increase in the number of partners who agree or strongly agree that Caltrans is a collaborative partner.	By 2016 (or next survey date), increase to 75% the percentage of partners who agree or strongly agree that Caltrans is a collaborative partner. Through 2020, maintain or increase the percentage every year.

See Appendix for all strategic objectives, performance measures, and targets.

CHAPTER 300
GEOMETRIC CROSS SECTION

The selection of a cross section is based upon the joint use of the transportation corridor by vehicles, including trucks, public transit, cyclists and pedestrians. Designers should recognize the implications of this sharing of the transportation corridor and are encouraged to consider not only vehicular movement, but also movement of people, distribution of goods, and provision of essential services. Designers need also to consider the plan for the future of the route, consult Transportation Concept Reports for state routes.

Topic 301 - Traveled Way Standards

The traveled way width is determined by the number of lanes required to accommodate operational needs, terrain, safety and other concerns. The traveled way width includes the width of all lanes and bike lanes, but does not include the width of shoulders, sidewalks, curbs, dikes, gutters, or gutter pans. See Topic 307 for State highway cross sections, and Topic 308 for road cross sections under other jurisdictions.

Index 301.1 – Lane Width

The minimum lane width on two-lane and multilane highways, ramps, collector-distributor roads, and other appurtenant roadways shall be 12 feet, except as follows:

- **For conventional State highways with posted speeds less than or equal to 40 miles per hour and AADTT (truck volume) less than 250 per lane that are in urban, city or town centers (rural main streets), the minimum lane width shall be 11 feet.** The preferred lane width is 12 feet. See Index 81.3 for place type definitions.

  Where a 2-lane conventional State highway connects to a freeway within an interchange, the lane width shall be 12 feet.

  Where a multilane State highway connects to a freeway within an interchange, the outer most lane of the highway in each direction of travel shall be 12 feet.

- For highways, ramps, and roads with curve radii of 300 feet or less, widening due to offtracking in order to minimize bicycle and vehicle conflicts must be considered. See Index 404.1 and Table 504.3A.

- For lane widths on roads under other jurisdictions, see Topic 308.

301.2 Class II Bikeway (Bike Lane) Lane Width

(1) *General.* **Class II bikeways (bike lanes), for the preferential use of bicycles, may be established within the roadbed and shall be located immediately adjacent to a traffic lane as allowed in this manual.** Typical Class II bikeway configurations are illustrated in Figure 301.2A. A bikeway located behind on-street parking, physical separation, or barrier within the roadway is not a Class II bikeway (bike lane); see Index 1003.1 Class I Bikeway (Bike Path) for standards and design guidance. **The minimum Class II bike lane width shall be 4 feet, except where:**

- <u>Adjacent to on-street parking, the minimum bike lane should be 5 feet.</u>

- <u>Posted speeds are greater than 40 miles per hour, the minimum bike lane should be 6 feet, or</u>

- **On highways with concrete curb and gutter, a minimum width of 3 feet measured from the bike lane stripe to the joint between the shoulder pavement and the gutter shall be provided.**

Class II bikeways may be included as part of the shoulder width See Topic 302.

As grades increase, downhill bicycle speeds can increase, which increases the width needed for the comfort of bicycle operation. If bicycle lanes are to be marked, additional bike lane width is recommended to accommodate these higher bicycle speeds. See Index 204.5(4) for guidance on accommodating bicyclists on uphill grades where a Class II bikeway is not included.

challenges with visibility between turning vehicles and pedestrians. Multiple right-turn-only lanes should not be free right-turns when there is a pedestrian crossing. If there is a pedestrian crossing on the receiving leg of multiple right-turn-only lanes, the intersection should be controlled by a pedestrian signal head, or geometrically designed such that pedestrians cross only one turning lane at a time.

Locations with right-turn-only lanes should provide a minimum 4-foot width for bicycle use between the right-turn and through lane when bikes are permitted. Configurations that create a weaving area without defined lanes should not be used.

For signing and delineation of bicycle lanes at intersections, consult District Traffic Operations.

Figure 403.6B depicts an intersection with a left-turn-only bicycle lane, which should be considered when bicycle left-turns are common. A left-turn-only bicycle lane may be considered at any intersection and should always be considered as a tool to provide mobility for bicyclists. Signing and delineation options for bicycle left-turn-only lanes are shown in California MUTCD.

(2) *Design of Intersections at Interchanges.* The design of at-grade intersections at interchanges should be accomplished in a manner that will minimize confusion of motorists and bicyclists. Higher speed, uncontrolled entries and exits from freeway ramps should not be used at the intersection of the ramps with the local road. The smallest curb return radius should be used that accommodates the design vehicle. Intersections with interior angles close to 90 degrees reduce speeds at conflict points between motorists, bicyclists, and pedestrians. The intersection skew guidance in Index 403.3 applies to all ramp termini at the local road.

403.7 Refuge Areas

Traffic islands should be used to provide refuge areas for bicyclists and pedestrians. See Index 405.4 for further guidance.

403.8 Prohibited Turns

Traffic islands may be used to direct bicycle and motorized vehicle traffic streams in desired directions and prevent undesirable movements. Care should be taken so that islands used for this purpose accommodate convenient and safe pedestrian and bicycle crossings, drainage, and striping options. See Topic 303.

403.9 Effective Signal Control

At intersections with complex turning movements, channelization is required for effective signal control. Channelization permits the sorting of approaching bicycles and motorized vehicles which may move through the intersection during separate signal phases. Pedestrians may also have their own signal phase. This requirement is of particular importance when traffic-actuated signal controls are employed.

The California MUTCD has warrants for the placement of signals to control vehicular, bicycle and pedestrian traffic. Pedestrian activated devices, signals or beacons are not required, but must be evaluated where directional, multilane, pedestrian crossings occur. These locations may include:

- Mid-block street crossings;
- Channelized turn lanes;
- Ramp entries and exits; and
- Roundabouts.

The evaluation, selection, programming and use of a chosen device should be done with the guidance of the appropriate Traffic Operations engineer.

403.10 Installation of Traffic Control Devices

Channelization may provide locations for the installation of essential traffic control devices, such as “STOP” and directional signs. See Index 405.4 for information about the design of traffic islands.

403.11 Summary

- Give preference to the major move(s).
- Reduce areas of conflict.
- Reduce the duration of conflicts.
- Cross traffic at right angles or skew no more than 75 degrees. (90 degrees preferred.)

When determining storage length, the end of the left-turn lane is typically placed at least 3 feet, but not more than 30 feet, from the nearest edge of shoulder of the intersecting roadway. Although often set by the placement of a crosswalk line or limit line, the end of the storage lane should always be located so that the appropriate turning template can be accommodated.

(3) *Double Left-turn Lanes.* At signalized intersections on multilane conventional highways and on multilane ramp terminals, double left-turn lanes should be considered if the left-turn demand is 300 vehicles per hour or more. The lane widths and other design elements of left-turn lanes given under Index 405.2(2) applies to double as well as single left-turn lanes.

The design of double left-turn lanes can be accomplished by adding one or two lanes in the median. See "Guidelines for Reconstruction of Intersections", published by Headquarters, Division of Traffic Operations, for the various treatments of double left-turn lanes.

(4) *Two-way Left-turn Lane (TWLTL).* The TWLTL consists of a striped lane in the median of an arterial and is devised to address the special capacity and safety problems associated with high-density strip development. It can be used on 2-lane highways as well as multilane highways. Normally, the District Traffic Operations Branch should determine the need for a TWLTL.

The minimum width for a TWLTL shall be 12 feet (see Index 301.1). The preferred width is 14 feet. Wider TWLTL's are occasionally provided to conform with local agency standards. However, TWLTL's wider than 14 feet are not recommended, and in no case should the width of a TWLTL exceed 16 feet. Additional width may encourage drivers in opposite directions to use the TWLTL simultaneously.

405.3 Right-turn Channelization

(1) *General.* For right-turning traffic, delays are less critical and conflicts less severe than for left-turning traffic. Nevertheless, right-turn lanes can be justified on the basis of capacity, analysis, and crash experience.

In rural areas a history of high speed rear-end collisions may warrant the addition of a right-turn lane.

In urban areas other factors may contribute to the need such as:

- High volumes of right-turning traffic causing backup and delay on the through lanes.
- Conflicts between crossing pedestrians and right-turning vehicles and bicycles.
- Frequent rear-end and sideswipe collisions involving right-turning vehicles.

Where right-turn channelization is proposed, lower speed right-turn lanes should be provided to reduce the likelihood of conflicts between vehicles, pedestrians, and bicyclists.

(2) *Design Elements.*

(a) Lane and Shoulder Width--**Index 301.1 shall be used for right-turn lane width requirements. Shoulder width shall be a minimum of 4 feet.** Although not desirable, lane and shoulder widths less than those given above can be considered for right-turn lanes under the following conditions pursuant to Index 82.2:

- On urban, city or town centers (rural main streets) where width is restricted, consideration may be given to reducing the lane width to 11 feet.

- In urban, city or town centers (rural main streets) with posted speeds less than 40 miles per hour in severely constrained situations, if truck or bus use is low, consideration may be given to reducing the right-turn lane width to 10 feet.
- Shoulder widths may also be considered for reduction under constricted situations. Whenever possible, at least a 2-foot shoulder should be provided where the right-turn lane is adjacent to a curb. Entire omission of the shoulder should only be considered in constrained situations and where an 11-foot lane can be constructed.

Gutter pans can be included within a shoulder, but cannot be included as part of the lane width. Additional right of way for a future right-turn lane should be considered when an intersection is being designed.

(b) Curve Radius--Where pedestrians are allowed to cross a free right-turning roadway, the curve radius should be such that the operating speed of vehicular traffic is no more than 20 miles per hour at the pedestrian crossing. See NCHRP Report 672, "Roundabouts: An Informational Guide" for guidance on the determination of design speed (fastest path) for turning vehicles. See Index 504.3(3) for additional information.

(c) Tapers--Approach tapers are usually unnecessary since main line traffic need not be shifted laterally to provide space for the right-turn lane. If, in some rare instances, a lateral shift were needed, the approach taper would use the same formula as for a left-turn lane.

Bay tapers are treated as a mirror image of the left-turn bay taper.

(d) Deceleration Lane Length--The conditions and principles of left-turn lane deceleration apply to right-turn deceleration. Where full deceleration is desired off the high-speed through lanes, the lengths in Table 405.2B should be used. Where partial deceleration is permitted on the through lanes because of limited right of way or other constraints, average running speeds in Table 405.2B may be reduced 10 miles per hour to 20 miles per hour for a lower entry speed. For example, if the main line speed is 50 miles per hour and a 10 miles per hour deceleration is permitted on the through lanes, the deceleration length may be that required for 40 miles per hour.

(e) Storage Length--Right-turn storage length is determined in the same manner as left-turn storage length. See Index 405.2(2)(e).

(3) Right-turn Lanes at Off-ramp Intersections. Diamond off-ramps with a free right-turn at the local street and separate right-turn off-ramps around the outside of a loop will likely cause conflict as traffic volumes increase. Serious conflicts occur when the right-turning vehicle must weave across multiple lanes on the local street in order to turn left at a major cross street close to the ramp terminal. Furthermore, free right-turns create sight distance issues for pedestrians and bicyclists crossing the off-ramp, or pedestrians crossing the local road. Also, rear-end collisions can occur as right-turning drivers slow down or stop waiting for a gap in local street traffic. Free right-turns usually end up with "YIELD", "STOP", or signal controls thus defeating their purpose of increasing intersection capacity.

405.4 Traffic Islands

A traffic island is an area between traffic lanes for channelization of bicycle and vehicle movements or for pedestrian refuge. An island may be defined by paint, raised pavement markers, curbs, pavement edge, or other devices. The California MUTCD should be referenced when considering the

is anticipated, separate facilities for pedestrians may be beneficial to minimize conflicts. Please note, sidewalks are not Class I bikeways because they are primarily intended to serve pedestrians, generally cannot meet the design standards for Class I bikeways, and do not minimize vehicle cross flows. See Index 1003.3 for discussion of the issues associated with sidewalk bikeways.

(1) Widths and Cross Slopes. See Figure 1003.1A for two-way Class I bikeway (bike path) width, cross slope, and side slope details. The term "shoulder" as used in the context of a bike path is an unobstructed all weather surface on either side of the bike path with similar functionality as shoulders on roadways with the exception that motor vehicle parking and use is not allowed. The shoulder area is not considered part of the bike path traveled way.

Experience has shown that paved paths less than 12 feet wide can break up along the edge as a result of loads from maintenance vehicles.

(a) Traveled Way. **The minimum paved width of travel way for a two-way bike path shall be 8 feet**, 10-foot preferred**. The minimum paved width for a one-way bike path shall be 5 feet.** It should be assumed that bike paths will be used for two-way travel. Development of a one-way bike path should be undertaken only in rare situations where there is a need for only one-direction of travel. Two-way use of bike paths designed for one-way travel increases the risk of head-on collisions, as it is difficult to enforce one-way operation. This is not meant to apply to two one-way bike paths that are parallel and adjacent to each other within a wide right of way.

Where heavy bicycle volumes are anticipated and/or significant pedestrian traffic is expected, the paved width of a two-way bike path should be greater than 10 feet, preferably 12 feet or more. Another important factor to consider in determining the appropriate width is that bicyclists will tend to ride side by side on bike paths, and bicyclists may need adequate passing clearance next to pedestrians and slower moving bicyclists.

See Index 1003.1(16) Drainage, for cross slope information.

(b) Shoulder. **A minimum 2-foot wide shoulder, composed of the same pavement material as the bike path or all weather surface material that is free of vegetation, shall be provided adjacent to the traveled way of the bike path when not on a structure**; see Figure 1003.1A. A shoulder width of 3 feet should be provided where feasible. A wider shoulder can reduce bicycle conflicts with pedestrians. Where the paved bike path width is wider than the minimum required, the unpaved shoulder area may be reduced proportionately. If all or part of the shoulder is paved with the same material as the bike path, it is to be delineated from the traveled way of the bike path with an edge line.

See Index 1003.1(16), Drainage, for cross slope information.

(2) Bike Path Separation from a Pedestrian Walkway. If there is an adjacent pedestrian walkway, the edge of the traveled way of the bike path is to be separated from the pedestrian walkway by a minimum width of 5 feet of unpaved material. The 5-foot area of unpaved material may include landscaping or other features that provide a continuous obstacle to deter bike path and walkway users from using both paths as a single facility. These obstacles may be fences, railings, solid walls, or dense shrubbery. Flexible delineators, poles, curbs, or pavement markers are not to be used because they will not deter users from using both paths as a single facility. These obstacles between the pedestrian walkways and bike paths are not to obstruct stopping sight distance along curves or corner sight distance at intersections with roadways or other paths.

(3) Clearance to Obstructions. **A minimum 2-foot horizontal clearance from the paved edge of a bike path to obstructions shall be provided.** See Figure 1003.1A. <u>3 feet should be provided.</u> Adequate clearance from fixed objects is needed regardless of the paved width. If a path is paved contiguous with a continuous fixed object (e.g., fence, wall, and

D4 FY14-15 Project Inidiation Document (PID) Workplan
(Does not include State Highway Operation and Protection Program projects)

County	Route	Begin Postmile	End Postmile	Description	Location	Estimated PID Completion Date (MM/YYYY)	Capital Cost ($M)	Project Sponsor
ALA	880	30.6	30.9	Lake Merritt Channel Bicycle Pedestrian Bridge	In Oakland, below I-\880 between the San Francisco Bay Trail and Laney College	06/2015	10.5	City of Oakland
ALA ALA ALA ALA SCL CC	80 92 84 84 880 680	VAR	VAR	Convert HOVLs to Express Lanes	WB Approaches to the SFOBB, San Mateo-Hayward and Dumbarton Bridges. NB and SB ALA/SCL-880 between Hegenberger Rd. and SR-237. NB and SB CC-680 between Alcosta Blvd. and Rudgear Rd.	12/2015	69	MTC
CC	4	12.8	R19.1	Add mixed-flow lanes and operational improvements	From SR 4 / SR 242 interchange in Concord to SR 4 / San Marcos interchange in Pittsburg / Baypoint area	12/2015	259.0	CCTA
CC	4	19.0	21.0	Modify ramps at the Bailey Rd intersection	Pittsburg/Bay point (Pursing PEER)	12/2014	0.35	Contra Costa County
CC	239	Var	Var	New Route from Brentwood to Tracy	Brentwood to Tracy	12/2014	420.0	CCTA
CC	580	5.4	6.1	San Francisco Bay Trail: Castro Street To The Richmond-San Rafael Bridge	Richmond	10/2014	12.0	City of Richmond
CC	680	R11.5	25.0	Conversion of HOVLs to Express Lanes	NB: SR-242 to Marina Vista SB: Marina Vista to Rudgear Rd.	12/2014	19.0	CCTA
MRN	131	3.7	4.4	SR 131 Relinquish	From Lyford Drive to MRN County line	06/2015	0.0	Town of Tiburon
NAP	29	33.5	35.5	Implementation of Napa Valley Vine Trail	SR 29 - Bothe SP to Dunaweal Ln, and Fair Way in Calistoga to Silverado Trail	06/2015	6.0	County of Napa
SCL	237	0.4	3.0	Convert HOV to Express Lanes	SR 237 Phase 2: North First St in San Jose to Mathilda Ave in Sunnyvale	12/2014	20.0	VTA
SCL	237	2.5	3.0	Modify Interchange	SR 237/Mathilda Ave and US 101/Mathilda Ave in Sunnyvale	10/2014	17.0	VTA
SCL	680	4.5	11.0	Modify interchange	I-680/Montague interchange in San Jose	06/2015	15.3	SCL County
SF	1	0.26	1.66	To realign the M-Ocean View Light Rail Transit	From the intersection of 19th Avenue and Eucalyptus Drive to the Junipero Serra interchange at Brotherhood Way	06/2015	520.0	SFMTA
SM	82	Var	Var	Part of the Grand Blvd Initiative, demonstrate complete street improvements to meet all modes of transportation	In the Cities of Daly City, South San Francisco, and San Bruno	06/2015	14.7	SamTrans
SM	101	6.6	26.1	Add HOV lanes in both directions	From Whipple Ave in Redwood City to I-380	12/2014	150.0	SMCTA
SM	101	11.0	11.2	Bike/Ped crossing over US 101 near Hillsdale Blvd	US 101 near Hillsdale Blvd	12/2014	30.0	City of San Mateo
SM	101	14.5	14.9	US 101 Peninsula Ave Interchange improvement	US 101 Peninsula Ave	04/2015	14.0	SMCTA
SM	101	20.3	26.0	Add Aux lanes in both direction	San Bruno Ave to SF County Line	02/2015	55.0	SMCTA
SM	101	21.4	21.6	US 101/Produce Ave Interchange	In South San Francisco	TBD	60.0	City of SSF
SOL	80	23.1	23.2	Interchange Modifications at Lagoon Valley	At Lagoon Valley in Vacaville	12/2015	6.0	City of Vacaville
SON	101	20.2	22.2	Bike/Ped Overcrossing	City of Santa Rosa north of Downtown, south of Bicentennial	06/2015	10.0	City of Santa Rosa
SF ALA	80	5.6	7.7	SFOBB West Span Bike/Pedestrian Path	On I-80 SFOBB WB	12/2014	400.0	BATA
Var	Var	Var	Var	Navigation, Fender, Conduits, Aviation Lights Upgrade, Racon, Beacons	6 Toll Bridges	12/2014	20.0	BATA
Var	Var	Var	Var	Various Toll Bridges - Substations, power cables, other electrical work	Various locations	06/2015	15.0	BATA
Var	Var	Var	Var	Various Toll Bridges - replace air and water systems, install waste water systems	Various locations	06/2015	15.0	BATA