METROPOLITAN
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COMMISSION

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ACTIVE TRANSPORTATION WORKING GROUP: AGENDA

MEETING NOTICE

Thursday, March 19, 2016	Chair: Sean Co
9:30 a.m. – 11:30 a.m.	Co-Chair: Brad Beck
101 8th Street	Staff Contact: Kevin Mulder
Oakland, California 94607	Call-in #: 888-273-3658
Fishbowl Conference Room, 3rd Floor	Access code: 9427202

1. Introductions & Meeting Notes - All — 9:30 a.m.

2. Bicycle Travel Demand Model – Cambridge Systematics will present on the bicycle model developed for Los Angeles Metro to assist with modeling bicycle related investments. — 9:35 a.m.

3. Active Transportation & BART – Steve Beroldo, BART, will present on BART's various efforts to enhance pedestrian and bicycle access and accessibility on BART. — 10:05 a.m.

4. OBAG 2 – Mallory Atkinson, MTC will update the group on the second round of the One Bay Area Grant program. — 10:30 a.m.

5. Complete Streets Checklist Process – Kevin Mulder, MTC, will describe the process for administering the Complete Streets Checklist with CMAs and BPACs. — 10:50 a.m.

6. Bike Share Planning – Working group discussion around the open Bike Share Capital Program and ongoing bike share planning efforts. — 11:10 a.m.

7. Announcements/Next Meeting – Please direct suggestions for future meeting topics to MTC Staff.

Next Meeting:
Thursday, July 21, 2016* *at 375 Beale in San Francisco*
***Note: The ATWG meeting is the 3rd Thursday every other month starting in January**

Members will alternate taking meeting notes and typing them up for distribution.

Bike Planner Overview

A Web-based Sketch Planning Tool for Los Angeles County

presented by

David Von Stroh

May 19, 2016 – MTC ATWG

CAMBRIDGE SYSTEMATICS

Metro

Agenda

- Bike Planner Overview
- Demo
- Appendix slides (won't get to likely but available for Q&A)
  - More detailed model descriptions
    - Utilitarian
    - Recreational

Bike Planner Overview

Guiding Principles

- Created web-based tool for city staff to evaluate projects
- Completed within 1 year (no new data collection)
- Impacts are sensitive to local conditions at block level
  - Demographics, density of bike facilities by type, land use mix
- Estimates impacts of:
  - Bikeways (Paths, Lanes, Tracks, Boulevards),
  - Transit Station Bike Parking Facilities, and
  - Workplace Bike Amenities (parking, showers)
- Sketch-level scenario analysis
  - Includes recreational and utilitarian bicycling impacts
  - Reduced VMT, new bike trips and BMT

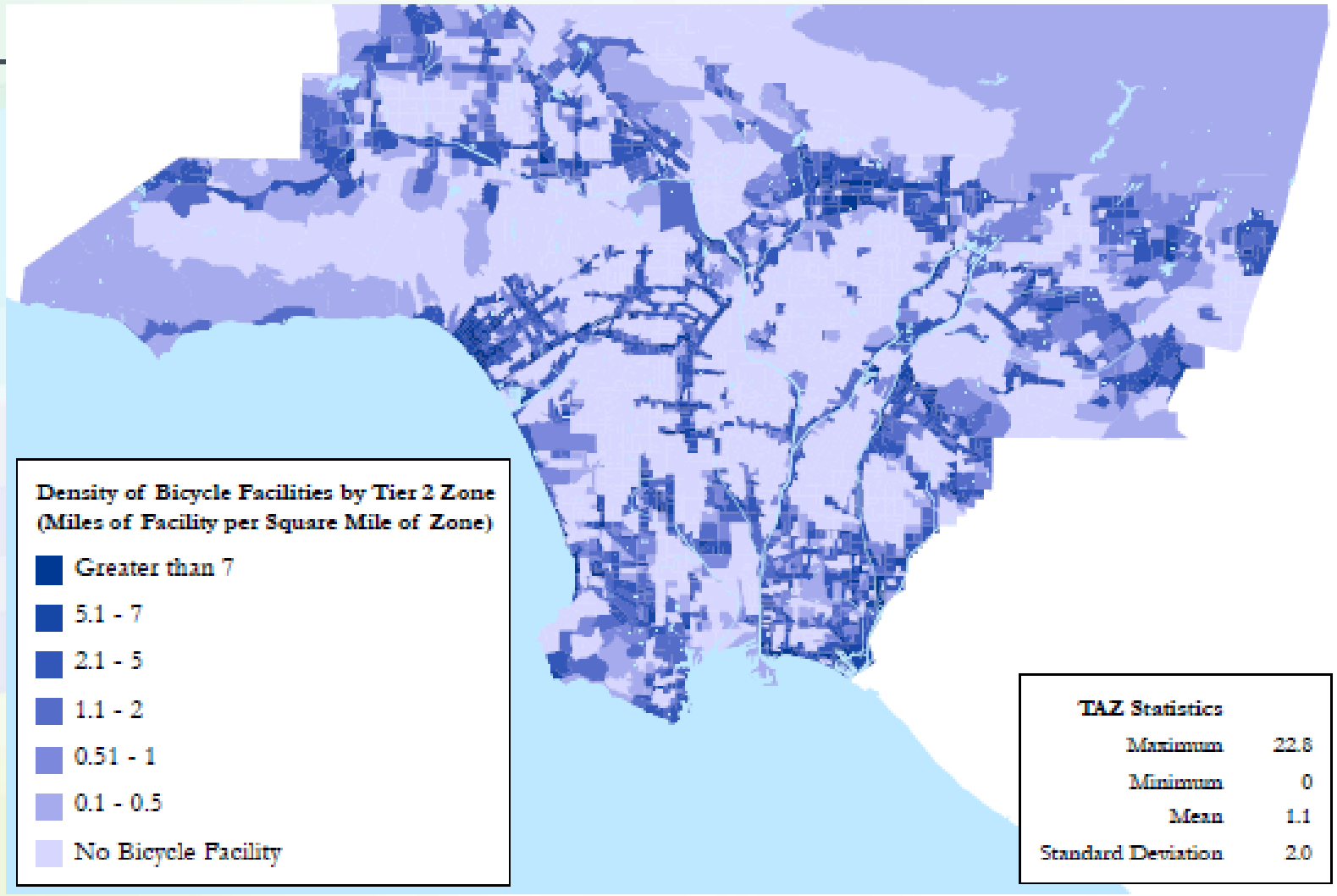
Oversight

- Convened Peer Review Panel to review methods and results:
  - Jennifer Dill, PSU
  - Peter Furth, Northeastern U.
  - Jeremy Raw, FHWA
  - Bill Stein, Portland Metro
  - Susan Handy, UC Davis
  - David Ory, MTC
  - Thomas Götschi, U. Zürich
- Convened User Group to review interface / operations
  - City staff
  - LA County Bike Coalition
  - SCAG

Model Application

- Apply models to block level data
  - Population, employment, other demographics from 2007-2011 ACS
  - Recreational trip from 2009 NHTS
  - 2035 population growth factors and density from SCAG forecasts (TAZ-level)
  - Land use and infrastructure (intersection and bike facility density) calculated based on one-mile buffer around block centroid
- Off-model adjustments
  - **Workplace parking** - Commute mode share increased based on # workers with improved parking
  - **Transit parking** – Nonwork trips increased based on avg. transit boardings/alightings per station in jurisdiction * number of improved stations
- Results summarized at jurisdiction level for scenario analysis

Regional Context – Existing Bicycle Facilities



Unweighted average across tracts: 1.1 mi/sq. mi. (mostly on-street)

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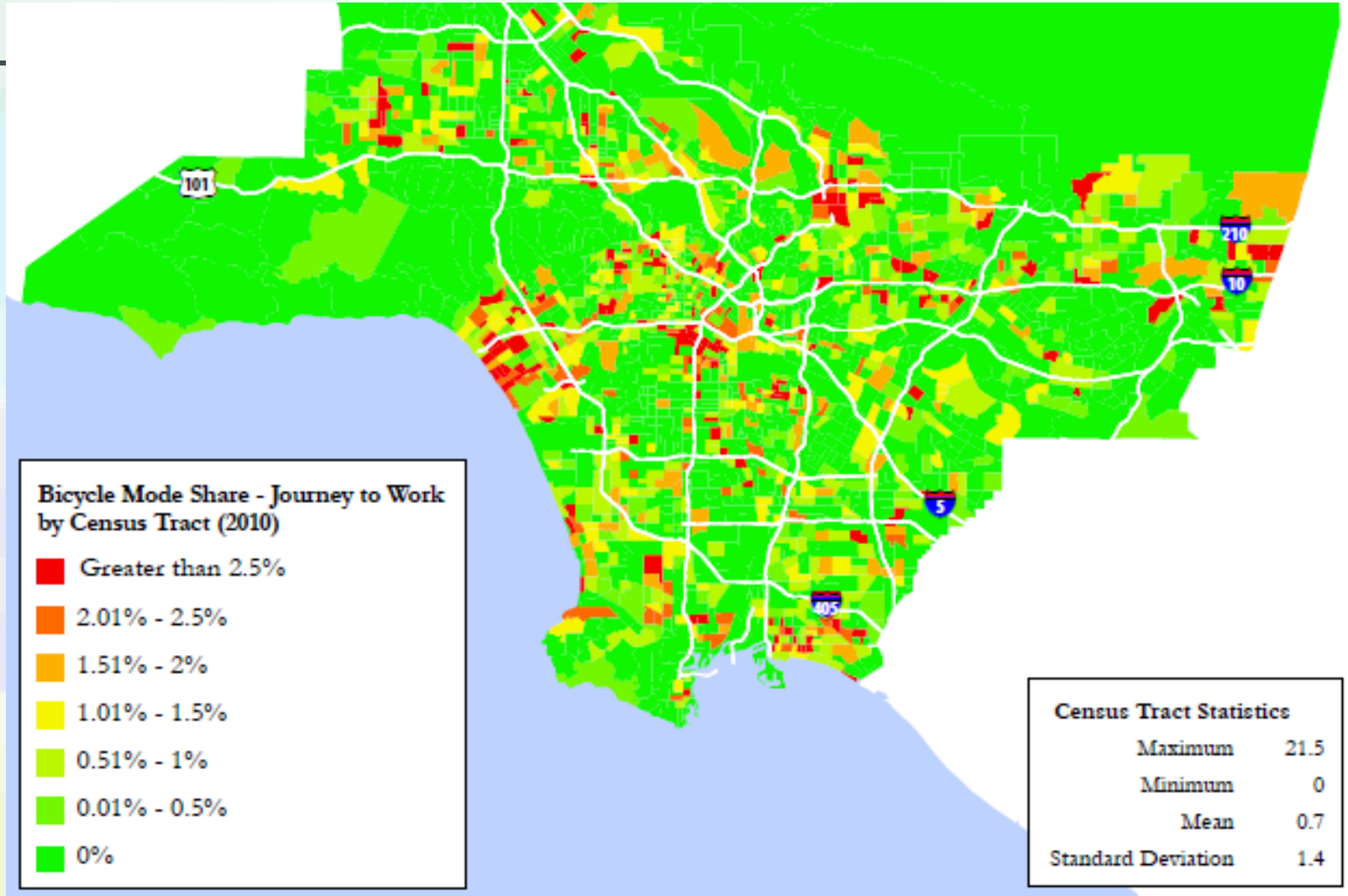
Regional Context – Existing Bicycle Mode Share



Average bicycle work-trip mode share = 0.75%

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Bike Planner Framework

- Trip Purposes
  - Work
  - Other utilitarian (e.g., errands, visit friends)
  - Recreational (includes exercise)
- Approach
  - Work: Logistic regression model
  - Other utilitarian: Factored from work trips
  - Recreational: discrete choice + regression models

Work / Utilitarian Bike Trip Model

- Evaluated alternative data sources
  - Disaggregate – NHTS and SCAG travel surveys – insufficient observations
  - Aggregate – Census (ACS) journey to work (tract level)
- Tested different model forms (linear, logistic, etc.)
- Tested numerous explanatory variables
  - Infrastructure – bike facilities, road density, connectivity
  - Land use – area type, population and employment densities
  - Sociodemographic – income, auto ownership, etc.
  - Interactive terms – (none significant)

Methodology – Bikeway Projects

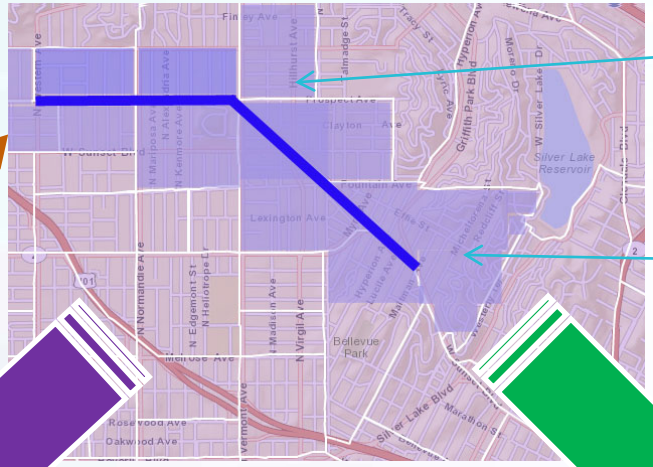
User-Defined

Shapefile

- New Bikeway Type
- Bikeway Attributes
- Project Location

GIS Calculation

Areal Factors Influence Project Impact



Fixed

Census Tract (later block)

Socioeconomic

Population Jobs Age Education
Income Sex Car Ownership

Land Use & Facilities

Density Grade Bike Facilities
Car Traffic Cycling Conditions

Work / Utilitarian Trip Prediction Model

Recreation Trip Prediction Model

Bike Trip Models

Predict change in bike travel

New Annual Bike Trips

Due to bikeway investments (year 2035 vs. no build)

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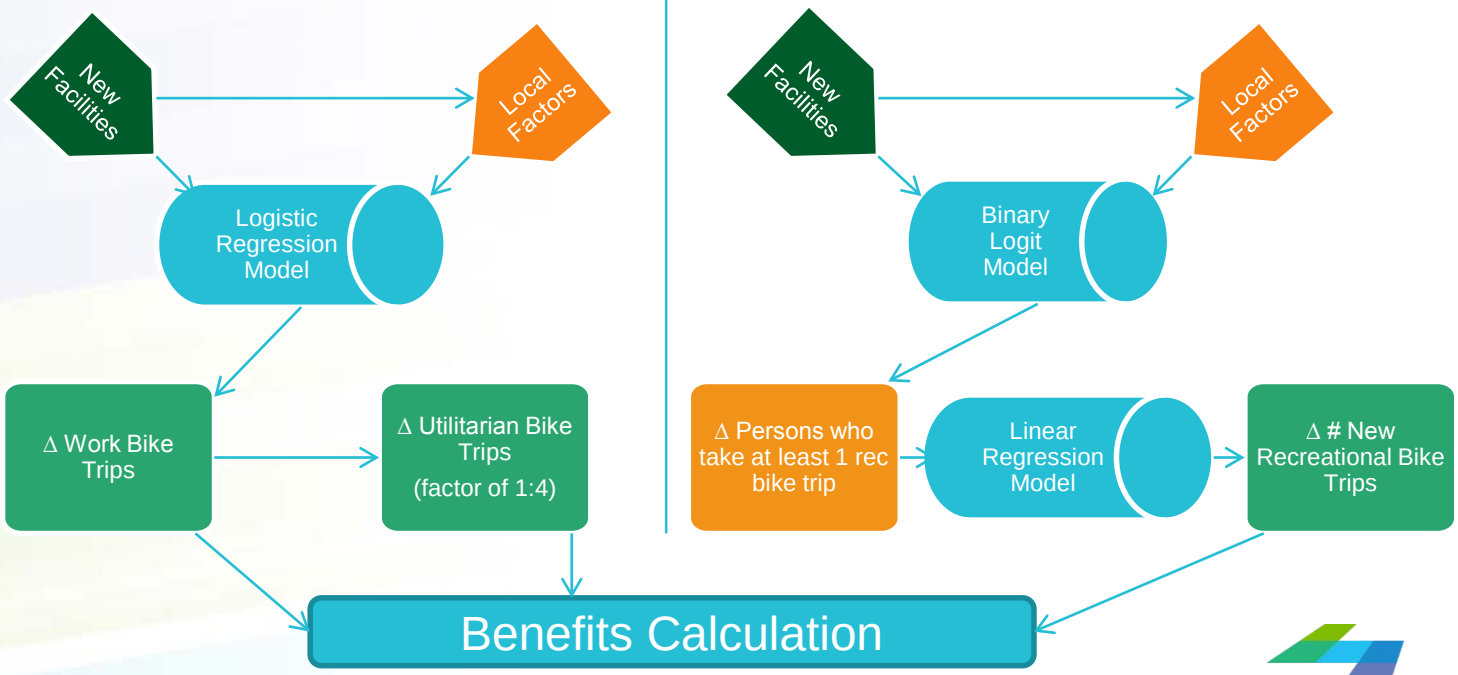
Bike Planner Models

	Work / Utilitarian	Recreational
Data Source	ACS (2006 - 2010), LA County	NHTS (2009) LA & Orange
Travel Purpose	Work & non-work utilitarian	Strictly recreational (no destination)
Model Type	Logistic regression	2-Step: binary logit + linear regression



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Other Projects

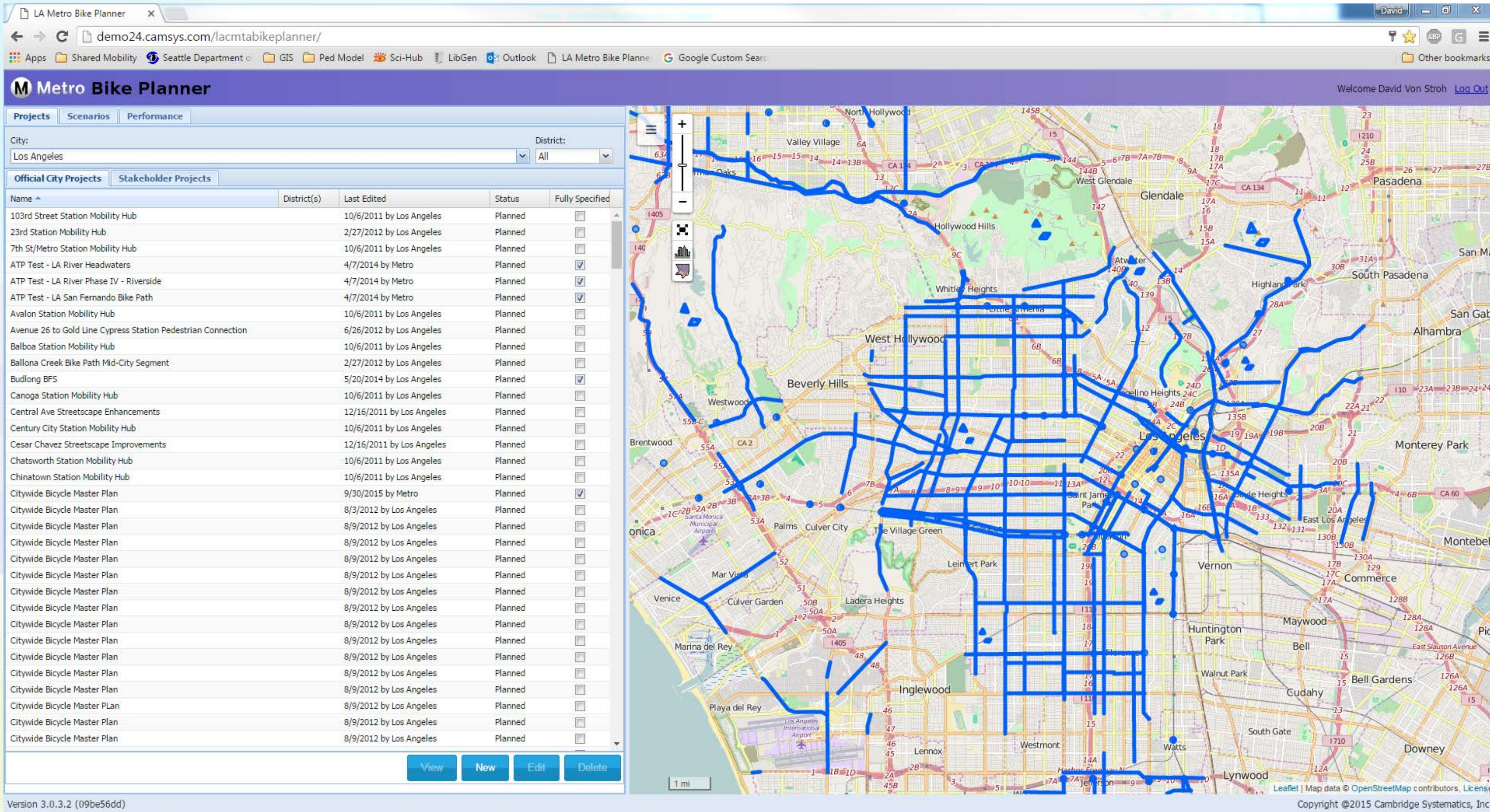
- Other projects evaluated by Bike Planner
  - **Workplace parking** - Commute mode share increased based on # workers with improved parking
  - **Transit parking** – Nonwork trips increased based on avg. transit boardings/alightings per station in jurisdiction * number of improved stations
- Bike Planner allows for scenario analysis to evaluate/prioritize packages of projects against performance.

Benefits Estimation (2035 vs. 2035 no build)

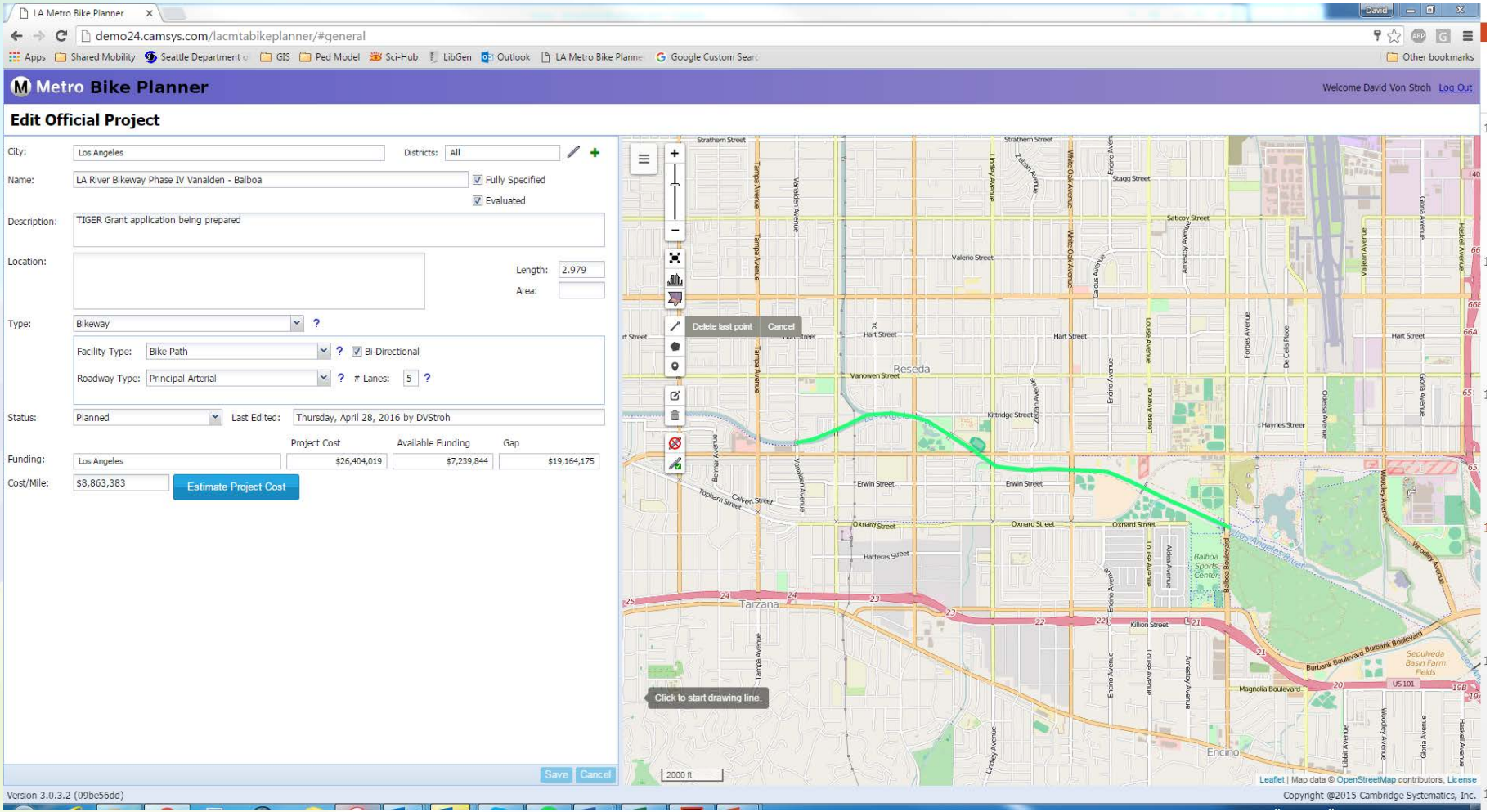
Benefit Category	Description	Performance Measure
Mobility		
New Trips	New bike trips (work, non-work, rec)	# annual trips by purpose
New BMT	New bicycle miles traveled (w, nw, r)	# annual BMT by purpose
Reduced VMT	Reduction in vehicle miles traveled	Reduction in annual VMT
Environmental		
Energy Consumption	Reduced vehicle fuel consumption	Annual gallons of motor vehicle fuel reduced
GHG Emissions	Reduced carbon equivalent emissions	Annual lbs of GHG reduced
Air Pollution Damages	Reduced cost of air pollution damages (public health, building repair, agriculture, ecosystems)	Annual cost savings as a result of better air quality($)
Economic		
Household Savings	Household vehicle O&M cost savings	Annual O&M savings ($)
Public Health		
Fitness Benefits	Reduced heath care & mortality costs due to increased physical activity & health	Annual economic value of public health benefits of added physical activity

Bike Planner Demo

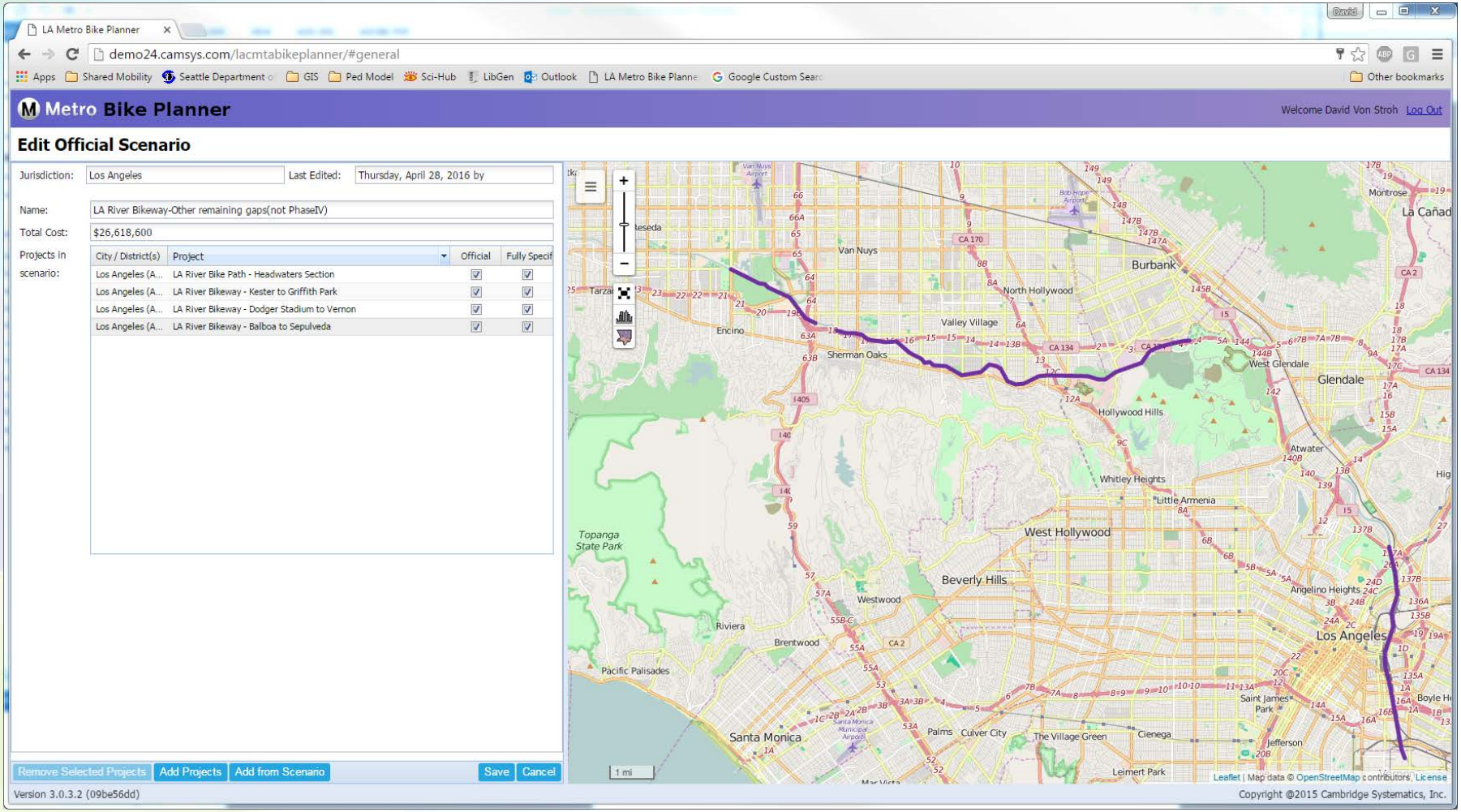
Jurisdiction view of all projects



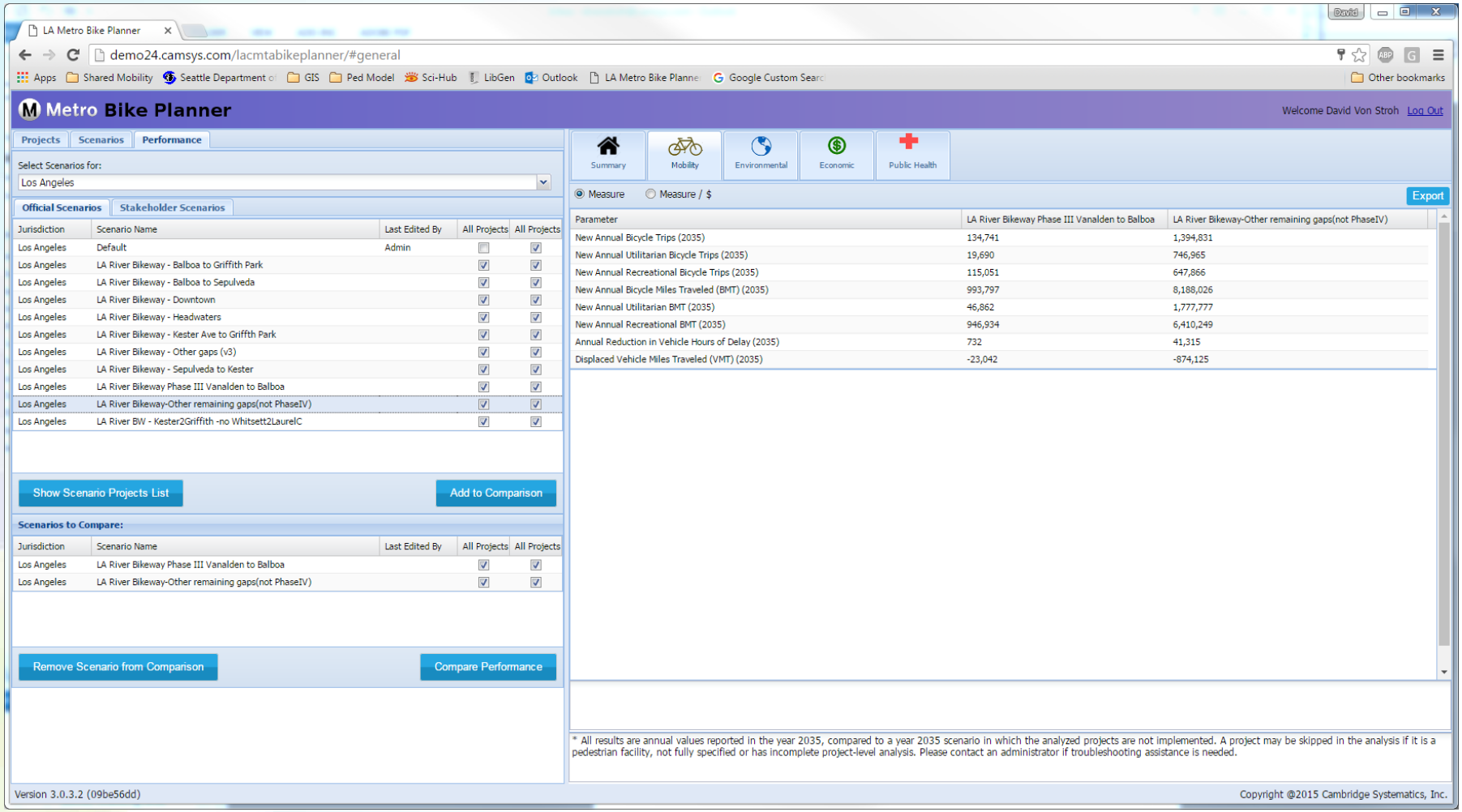
Creating/editing a project



Creating/editing scenarios



Evaluating Performance



Export benefits report

User	David Von Stroh			
Date	5/13/2016			
Analysis Year	2035			
Parameter			**LA River Bikeway Phase III Vanalden to Balboa**	**LA River Bikeway-Other remaining gaps(not PhaseIV)**
		Jurisdiction	Los Angeles	Los Angeles
		Total Number of Projects	1	4
		Total Cost ($)	26,404,019	26,618,600
		Projects Analyzed	1	4
		Analyzed Cost ($)	26,404,019	26,618,600
	Project Type Breakdown			
		Bikeways (Bike Path)	1	4
		Bikeways (Separated Cycle Track)	0	0
		Bikeways (Bike Lane)	0	0
		Bikeways (Bike Boulevard)	0	0
		Worksite Bicycle Amenities	0	0
		Transit Station Bike Parking	0	0
		Bikesharing	0	0
Mobility	New Annual Bicycle Trips (2035)			
		Total	134,741	1,394,831
		Total / $	0.0051	0.052
		Utilitarian	19,690	746,965
		Utilitarian / $	0.0007	0.028
		Recreational	115,051	647,866
		Recreational / $	0.0044	0.024
	New Annual Bicycle Miles Traveled (2035)			
		Total	993,797	8,188,026
		Total / $	0.038	0.31
		Utilitarian	46,862	1,777,777
		Utilitarian / $	0.0018	0.067
		Recreational	946,934	6,410,249
		Recreational / $	0.036	0.24
	Congestion Reduction			
		Annual vehicle hours of delay reduced	732	41,315
		Annual vehicle hours of delay reduced / $	0.0000	0.0016
		Displaced vehicle miles traveled	-23,042	-874,125
		Displaced vehicle miles traveled / $	-0.0009	-0.033

Analysis Summary | Project List_Scenario 246 | Project List_Scenario 247 | Bikeway_List | WorksiteAmenities_List | ...

Export benefits (cont.)

User	David Von Stroh			
Date	5/13/2016			
Analysis Year	2035			
Parameter			**LA River Bikeway Phase III Vanalden to Balboa**	**LA River Bikeway-Other remaining gaps(not PhaseIV)**
Environmental	Greenhouse Gas Emissions Reduction			
		Annual Lbs of Greenhouse Gas Emissions Reduced	11,713	536,606
		Annual Lbs of Greenhouse Gas Emissions Reduced / $	0.0004	0.020
	Energy Consumption Reduction			
		Annual gallons of motor vehicle fuel saved	598	27,388
		Annual gallons of motor vehicle fuel saved / $	0.0000	0.0010
	Air Pollution Damage Savings			
		Annual air pollution cost savings ($)	323	12,238
		Annual air pollution cost savings ($) / $	0.0000	0.0005
Economic	Household Savings			
		Total annual vehicle operating cost savings ($)	9,984	378,756
		Total annual vehicle operating cost savings ($) / $	0.0004	0.014
Public Health	Reduction in health care and mortality costs			
		Annual value of public health benefits of added physical activity ($)	1,478,112	11,804,706
		Annual value of public health benefits of added physical activity ($) / $	0.056	0.44

Work Trip Model

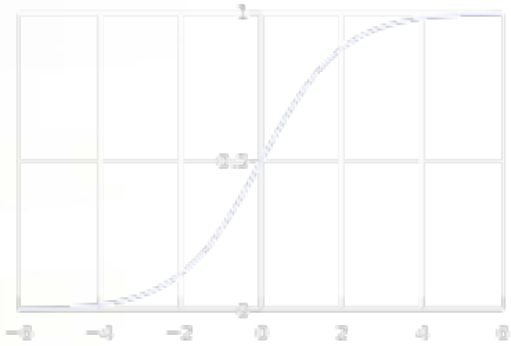
Bicycle Work Trip Model

Parameter	Work Trip Model Coefficient
Intercept	-4.82
Dense Urban (Core, CBD & Urban Business District)	1.15
Other Urban Area	0.92
Suburban	0.39
Percentage of HH with Zero Vehicles	1.99
Intersections per Sq. Mi.	0.00063
% of Roads with Grades Greater than 3%	[illegible]
Mean Travel Time to Work (Drive Alone)	-0.05
Miles of Class 1 (off-street) Bicycle Facilities per Sq. Mi.	0.09
Miles of Class 2 & 3 (on-street) Bicycle Facilities per Sq. Mi.	0.13

Key constants

Trip Purpose	Work	Other Utilitarian
Avg 1-way length (mi)	3.8	2.3
Fraction all trips	20%	80%
Commute days/year	250	

Logistic regression



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Work Trip Model Sensitivity Tests

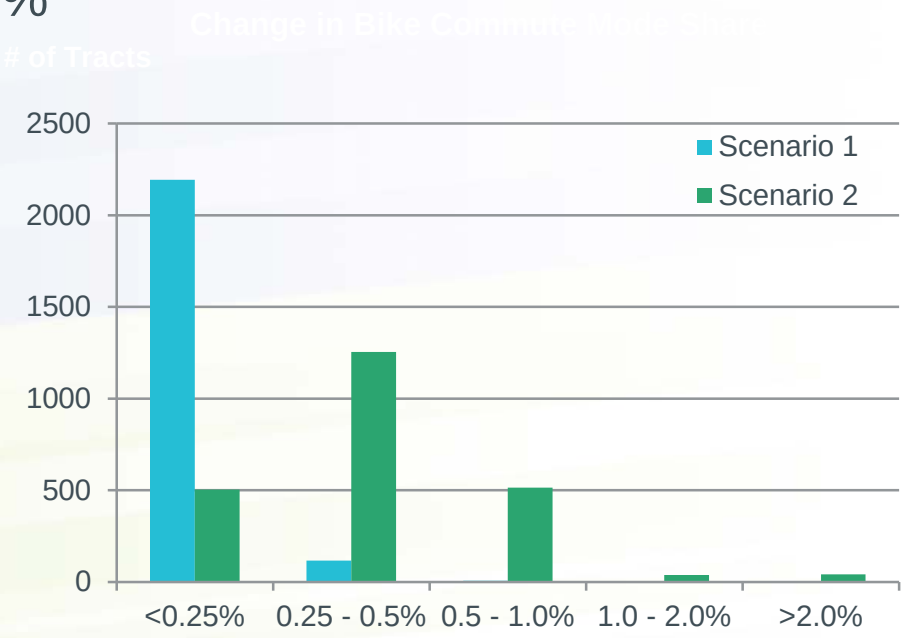
- Scenario 1 - Increasing to 2.5 mi/sq mi would raise bike commute share to 0.90%
  - Average 1-mile spacing of bike lanes + bike paths every 4 mi
- Scenario 2 - Increasing to 5.0 mi/sq mi would raise bike commute share to ~1.2%
  - Average ½-mile spacing of bike lanes + bike paths every 2 mi

	Facility Density Average mi/sq mi		Bicycle Mode Share – Commute
Scenario	Class 1	Class 2&3	Mean
Base	0.18	0.90	0.76%
Scenario 1	0.5	2.0	0.89%
Scenario 2	1.0	4.0	1.16%

*Based on logistic model

Mode Share Impact Varies by Location

- Under Scenario 1, most tracts see an increase in bike mode share of <0.25%
- Under Scenario 2, most tracts see an increase of 0.25-0.5%, with some seeing up to 1%



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Comparison with Recent National Study

- Buehler and Pucher (2012)
  - City-level data from 90 of the 100 largest U.S. cities
  - Evaluated length of bike paths and lanes per capita vs. % commuting by bike
  - Elasticity of bike trips w/r/t facility density:
  - 0.25 (paths), 0.31 (lanes)
- CS – Metro work trip model elasticity:
  - 0.13-0.15 (from base)
  - 0.31 (Scenario 1 to Scenario 2)

Buehler, R. and J. Pucher (2012). Cycling to work in 90 large American cities: new evidence on the role of bike paths and lanes. Transportation 39: 409-432.

Key Findings of Sensitivity Tests

- Models to predict bicycle work trip mode share were successfully estimated, with bicycle facilities, land use, and demographic variables significant in expected ways
- Impacts of bike facilities are comparable to a recent nationwide study on this topic
- Other supportive policies (parking, bikeshare, information, enforcement, etc.) would provide additional benefits

Recreational Model

Recreational Bicycling

- Definition – three criteria:
  - Bicycle is used
  - Trip purpose is fitness, enjoyment, or both
  - Origin and destination are the same
    - E.g. , start at home, ride on bicycle trail, ride back home
- Benefit impacts:
  - Public health only

Data Sources and Variable Processing

- Data sources
  - 2009 NHTS person data (~10,000 L.A., Orange Co. residents)
    - Information on bicycling activity in past week
    - Sociodemographics and dependent variables
- GIS Data processing
  - Facility density by tract
  - Proximity measures:
    - Number and length of facilities within 1, 2, 5, 10 miles

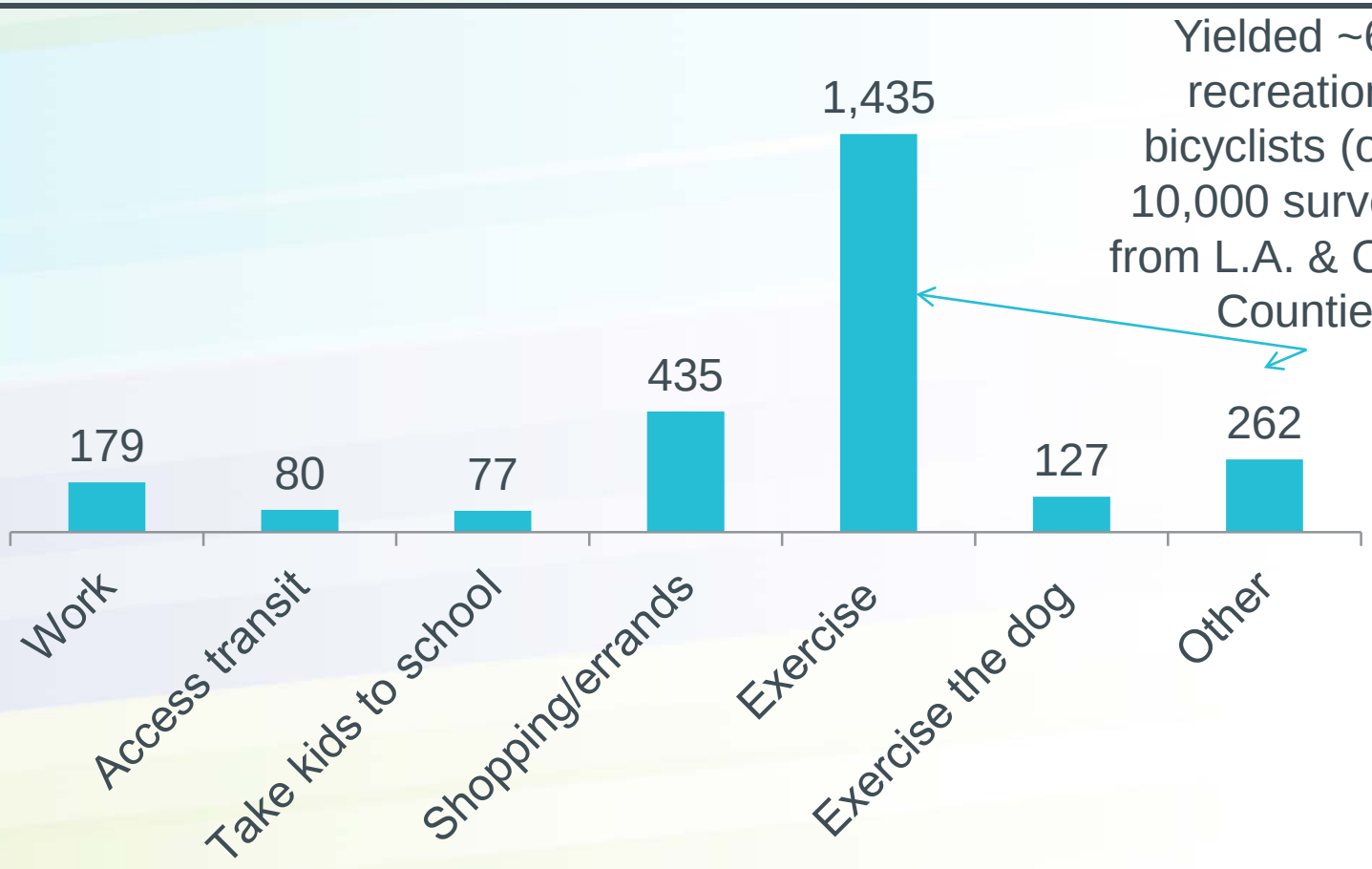
NHTS Person Data Set Questionnaire

- Questions on bicycling (in the ***past week***)
  - How many times did you bicycle?
  - For what reasons (select from table)?
- Data issues
  - Total bike trips split into estimated number by purpose
  - Possible confusion of purposes – e.g., reports “exercise” but is destined to the beach or gym

Summary of Recreational Model

- Two-stage model
  1. Identify individuals that bicycle for recreation
  2. Compute the number of trips made by each individual
- Key findings
  - » Demographics – greatest impact
  - » Bicycle facilities – significant, but lower impact
- Data limitations
  - » Estimation dataset: NHTS person data (disaggregate)
  - » Application dataset: Census (aggregate)
  - » GIS processing

Reasons for Bicycling



Source: CS and NHTS 2009 SCAG-area persons dataset; Contains approx. 10,000 residents from Los Angeles & Orange Counties

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Binary Logit Model (n ~ 10,000): Propensity to Bicycle for Recreation

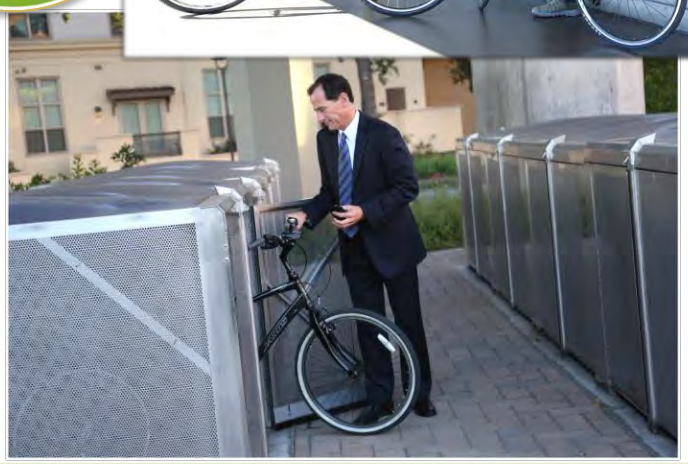
Variable	**Coefficient** (t-statistic)
Constant	-2.52 (-11.4)
Sex and Age	
Female	-1.04 (-10.5)
Age (continuous): Number of years over 44	-0.044 (-9.4)
Education Level	
Less than high school (base)	-
High school or GED	0.41 (1.8)
Vocational/Associate's	0.54 (2.4)
Graduated college	0.68 (3.0)
Master's, Ph.D., or Professional Degree	0.71 (3.0)
Bicycle Facilities	
Distance to nearest bike trail: < 1 mile	0.20 (1.7)
1-2 miles	0.041 (0.3)
> 2 miles	-
Facility density in home TAZ (miles per sq. mi.): Class 1	0.13 (2.1)
Class 2 & 3	0.056 (1.9)

Linear Regression Model (n ~ 600): Number of Weekly Recreational Bicycling Trips

Variable	Coefficient (t-statistic)
Constant	2.92 (8.78)
Gender and Age	
Female	-0.27 (-1.89)
Age	-0.029 (-3.15)
Additional Years over 44	0.057 (3.74)
Education Level	
High School or Associate's	0.50 (1.96)
College Graduate or above	0.79 (2.97)
Household Data	
Household Children under 18	-0.12 (-1.85)
Household Income ($100,000s)	-0.33 (-2.51)

BART Bike Program Update

May 2016



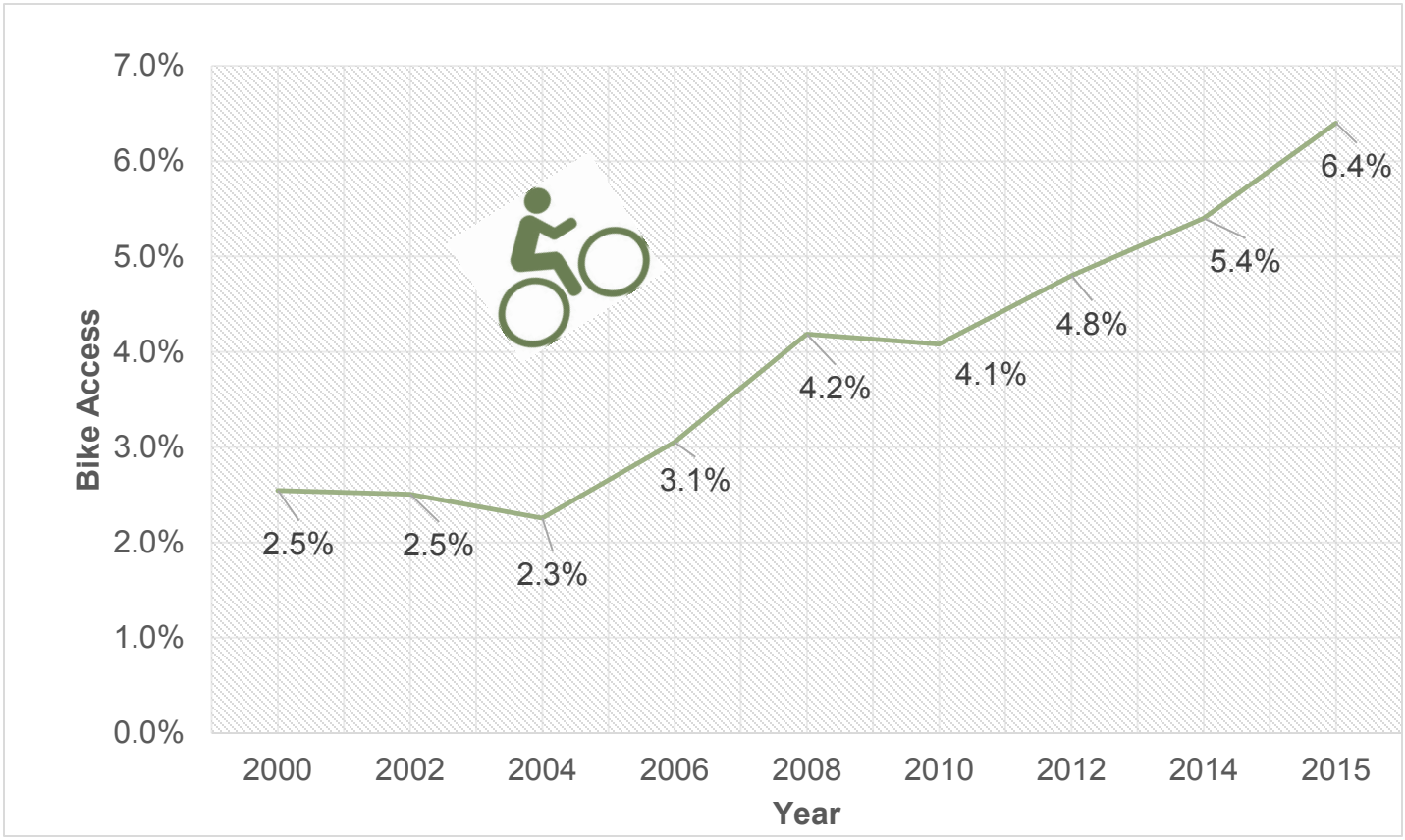
2012 BART Bicycle Plan

Double access from 4% to 8% by 2022

Bike Plan Strategies	Where We've Focused
Improve Station **Circulation**	
Provide Plentiful Secure **Parking**	
Optimize Bike Accommodations **On Board**	
Complement Policies and Facilities with **Persuasive Programs**	
Improve Access **Beyond BART** Boundaries	

Trends

Bike Access to BART



Trends

Bike Access by Station

Top Ten Bike Access Stations In 2015

Station	%	Station	%
Lake Merritt	14.8%	Ashby	11.1%
19th St. Oakland	14.3%	Fruitvale	10.9%
MacArthur	14.0%	16th St. Mission	10.0%
West Oakland	12.2%	San Leandro	9.1%
North Berkeley	11.9%	Castro Valley	9.0%

Trends

Largest Increases in Bike Access

Station	2008	2015	Station	2008	2015
19th St. Oakland	6.2%	14.3%	MacArthur	8.2%	14.0%
West Oakland	4.8%	12.2%	Montgomery St.	1.3%	6.8%
Castro Valley	1.9%	9.0%	Coliseum	0.5%	5.3%
Lake Merritt	8.2%	14.8%	16th St. Mission	5.4%	10.0%
San Leandro	2.6%	9.1%	Powell St.	2.0%	6.2%

Trends

Parked vs Onboard

Smaller percentage parked

2008 = 40%

vs

2015 = 25%

Higher percentage onboard

2008 = 60%

vs

2015 = 75%

Varies Significantly by Station

Most Parked	%	Fewest Parked	%
19th St. Oakland	53%	16th St. Mission	5%
El Cerrito Plaza	50%	24th St. Mission	6%
Pleasant Hill	49%	Pittsburg/Bay Point	8%
Walnut Creek	42%	Richmond	8%
North Concord/Martinez	41%	San Bruno	10%

2022 Projections

	Ridership	Bike Access
2015	Total = 433,000 Home to BART = 195,000	6.4% ~13,000 Home to BART
2022	Total = 466,000 Home to BART = 210,000	10% ~ 21,000 Home to BART

2022 Projections--Home to BART
Top 10 Stations

Station	Bike Access	Station	Bike Access
19th St. Oakland	1,237	Balboa Park	896
West Oakland	1,232	16th St. Mission	810
MacArthur	1,195	San Leandro	800
Lake Merritt	1,032	24th St. Mission	750
Fruitvale	922	Dublin/Pleasanton	570

Moving Forward

Bike Parking Capital Plan Third Edition

New edition to focus on parking capacity needs for 2022 (10% bike access, up to 60% parked).

Recommendations by station will vary depending on anticipated demand.

MINOR CAPITAL INVESTMENTS

Develop protocol for "monitor and install" based on annual occupancy audit where use exceeds 85%.

MORE SIGNIFICANT CAPITAL INVESTMENT

1) Concept with site plans and renderings
2) Vet with stakeholders, revise as needed
3) Bring project to "grant ready" stage (preliminary engineering/cost)

Moving Forward

Secure Bike Parking Expansion

Funded

MacArthur, Concord, Pleasant Hill, Lafayette and Downtown Berkeley Bike Stations, Walnut Creek Bike Pavilion

Design Stage

Embarcadero (modernization), Lake Merritt, Dublin/Pleasanton

Next Priorities to Move to Design Stage

San Leandro, 19th St (expansion), West Oakland, Rockridge, North Berkeley

Bikeep Demo
High Security Smart Racks

Demo to deploy 10 units at 16th Street and 10 units at Pleasant Hill

Advantages:

- High security—stronger than U locks
- Smart card/Clipper compatible
- Could deploy in paid area or concourse

Moving Forward

Vertical Circulation—Escalators and Stair Channels

New Escalator Signage System-wide

CHANNEL PRIORITIES:

-12th & 19th Street,
- Civic Center
- Coliseum
- Del Norte
- Downtown Berkeley
- Lake Merritt

Moving Forward

BikeShare Expansion

Agreement executed between MTC and Motivate to expand from 700 to 7,000 bikes.

Phase one of rollout with 25% of new bikes including these BART stations:

16th Street	Dtwn. Berkeley	Ashby
24th Street	Rockridge	Lake Merritt
12th Street	19th Street	MacArthur

Roll out starts summer/fall 2016

Bike Space Improvements:
New cars and Bike Straps

Prototype Strap
Being Tested

Bike Space Option on
New Train Cars

Moving Forward--Highlights

- Continue to expand secure parking using Station Profile data and projections to implement strategically
- Develop 2022 Capital Plan to meet 10% demand and identify resources needed
- In addition to secure parking:
  - BikeShare expansion
  - Bike Space enhancements
  - Stair channel capital program

COMPLETE STREETS CHECKLIST GUIDANCE

http:// completestreets.mtc.ca.gov

Basic Information

- Project sponsors are responsible for completing checklists and are encouraged to submit completed checklists early in the project conception process. Checklists can only be completed online via the Complete Streets web application: http://completestreets.mtc.ca.gov/.
- First-time users will need to create a user account under *Sponsor login*. Contact MTC if your agency is not listed under the *Sponsor* dropdown menu or if you have other questions.
- The checklist should not take long to complete, but you may save your progress and finish the checklist later using the blue *Save* button. Simply log in again when you are ready to finish.
- All projects must complete questions 1-4. Projects requesting funds for Project Specifications and Estimates (PS&E), Preliminary Engineering (PE), Construction (CON) must also answer questions 5-10.
- Checklists are only publicly visible online *after* MTC or a CMA admin user approval. If there are time constraints with your project, please contact MTC staff to expedite review.

Projects

Each checklist must be linked to a project. If your project already exists in the database, you may select it from the Projects page or use the dropdown selector when creating the checklist. If your project is not in the database, it must be created. Projects will cover a program of capital improvements and may be titled something like "Citywide curb ramp enhancements". When creating a project:

- **Sponsors –** Select the name of the sponsoring agency from the pull down list. This is the name of the agency that will be implementing the project. If you don't see your agency listed please contact MTC staff to add your agency.
- **Name -** Add the title of the project. In some cases projects will cover a program of capital improvements such as "Citywide curb ramp enhancements". In other cases, a project will cover only one location.
- **Description –** Add a short, detailed description of the type of project and the scope of work.

Checklists

Each distinct project location requires a completed checklist. If a project has four locations (e.g. intersections or segments), four checklists are required. Checklists should provide details about the location of the proposed improvements. When creating your checklist:

1. **Name –** Add the title of the project. If there are multiple locations for the project, it may be helpful to add a location descriptor for each checklist.
2. **Description –** Add a short description of the type of project and scope of work.
3. **Project Status –** Select one of two options: *In Progress* or *Submitted*. *In Progress* allows projects to be saved and edited. *Submitted* indicates the checklist is complete and is awaiting approval.
4. **Project –** Select your project from the dropdown list.
5. **Location –** This is the city or county where the project is located. If you do not see your city or county on this list, please contact MTC staff. This may be different from your contact address.
6. **Contact Name, phone, e-mail, address –** Provide the information for the lead contact. This information will be displayed along with the project checklist.

Project Information

Name	-
Description	-
Status	-
Project	-
City	-
Contact Name, Email, Phone, Address	-

I. Existing Conditions

❶ Project Area

a. What bicycle and pedestrian accommodations are currently included on the facility or on facilities it intersects or crosses? Please check all that apply.

Examples include:

- Class I bicycle paths
- Class II bicycle lanes
- Class III bicycle routes
- Class IV bikeways
- Bicycle boxes
- Raised separated bikeways
- Bicycle Boulevards
- Bicycle parking
- Sidewalks on one side or both sides of street
- Marked crosswalks
- Protected intersection
- Painted conflict zones
- Narrow unpaved path
- Pedestrian-actuated traffic signals or routine pedestrian cycle
- Bulb-outs
- Bicycle actuated traffic signals or routine bicyclist cycle
- High visibility crosswalks
- Pedestrian-level lighting
- ADA-compliant ramps
- Traffic signal push buttons
- Refuge islands on roadways

- Transit shelter
- Wide curb lanes
- Right turn only lanes
- Transit vehicle stops
- Pedestrian countdown signals
- Way-finding or directional signage

Additional space is given for other facilities and for applicants to provide detail on items checked above.

b. If there are no existing pedestrian or bicycle facilities, how far from the proposed project are the closest parallel bikeways and walkways?

- 0-1/4 mile
- 1/4 mile to 1/2 mile
- 1/2 mile to 1 mile
- 1+ mile

c. Please describe the overall context of the project area:

Examples include: # of lanes and lane designations, lane widths, and posted and observed speeds.

d. Please indicate needed pedestrian, bicycle, or transit improvements in the project area that staff or the public have identified.

Examples include:

- Improved lighting
- Sidewalks
- Improved intersections
- Mid-block crossings
- Accommodations for the elderly or disabled or school age children
- Transit shelters
- ADA facilities
- Widened curb lanes
- Bicycle parking
- Traffic signals responsive to bicycles
- Shorter vehicular traffic signal cycles
- Longer pedestrian signal crossing times
- Addressing choke points or gaps in pedestrian or bicycle network
- RR crossings
- Bike racks on busses
- Widened or better-lit under crossings
- Removed slip lanes
- Right turn only lanes

e. What existing challenges could the proposed project improve for bicycle, pedestrian, or transit travel in the vicinity of the proposed project?

Examples of existing challenges include:

- traffic signals that are unresponsive to bicycles;
- Unresponsive signals to bicycles

- Lack of bicycle parking
- Freeway on-off ramps
- Narrow curb lanes
- Choke points
- RR crossings
- No bike racks on buses
- Wide roadway crossings
- Long signal cycles which require pedestrians to wait long periods of time
- Short signal crossing times
- Narrow undercrossings, overcrossings
- Slip lanes
- Sidewalk obstruction or missing sidewalk
- Pedestrian-level lighting
- Lack of ADA compliant facilities
- Lack of Transit vehicle stops

❷A DEMAND

What trip generators (existing and future) are in the vicinity of the proposed project that might attract walking or bicycling customers, employees, students, visitors or others?

Examples of generators include:

- Educational institutions
- Transit stations
- Senior centers
- High-density land uses
- Downtowns
- Shopping areas
- Medical centers
- Major public venues
- Government buildings
- Parks

❸A COLLISIONS

Have you considered collisions involving bicyclists and pedestrians along the route of the facility?

[yes or no]

If so, please provide the number of collisions and describe the outcomes of each:

Possible data sources include: SWITRS (specify queries); local police data; history of complaints from pedestrians and cyclists; anecdotal reports; etc.

If so, what resources have you consulted?

MTC's Safety Toolbox is one example of collision countermeasures.

II. Plans, Policies and Process

❹ Plans

a. Do any adopted plans call for the development of bicycle or pedestrian facilities on, crossing or adjacent to the proposed facility/project?

   Is the proposed project consistent with these plans?

Please check all plans in which bicycle or pedestrian facilities are identified for the project or its corridor, such as:

- City, town, or countywide bicycle and/or pedestrian plans
- ADA transition plan
- General plan
- Specific plan
- Regional transportation plan
- Sales tax expenditure plan
- Station area access plan
- Neighborhood plans
- Park or trails plans
- Short range transit plans
- San Francisco Bay Trail plan

Additional space is given for other facilities and for applicants to provide detail on selected items. For each plan cited, please provide adoption date and URL or staff contact.

❺ Policies, Design Standards & Guidelines

a. Do any local, statewide or federal policies call for incorporating bicycle and/or pedestrian facilities into this project?

   If so have the policies been followed?

In addition to locally-adopted policies, examples include:

- Caltrans Deputy Directive 64
- Caltrans Highway Design Manual (Chapter 1000)
- ACR 211
- MUTCD 2003
- MUTCD California supplement
- Americans with Disabilities Act Accessibility Guidelines (ADAAG)
- MTC Pedestrian Districts Study

Please also see guidance for question #4, above, for examples of plans which may contain applicable policies.

b. If this project includes a bicycle and/or pedestrian facility, which applicable design standards or guidelines have been followed?

Examples of design standards and guidelines include:

- American Association of State Highway and Transportation Officials (AASHTO) guides:
  - *Green Book*
  - *Guide for the Development of Bicycle Facilities*
  - *Guide for the Planning, Design, and Operation of Pedestrian Facilities*
- Americans with Disabilities Act Accessibility Guidelines
- Caltrans *Design Information Bulletin 89*
- Caltrans *Highway Design Manual*
- Caltrans *California MUTCD*
- Caltrans *Pedestrian and Bicycle Facilities in California*
- FHWA *MUTCD*
- ITE *Designing Urban Walkable Thoroughfares*
- NACTO *Urban Bikeway Design Guide*

❻A Review

What comments have been made regarding bicycle and pedestrian accommodations at BPAC, stakeholder, or public meetings at which the proposed project has been discussed?

Although this checklist may be completed prior to BPAC, stakeholder or public review of the proposed project, some projects may have been presented to reviewing bodies and/or the public at this stage. For these projects, please summarize comments received that seek to influence project design with respect to accommodating bicyclist and pedestrian travel.

How have you responded to comments received?

Project sponsors should describe how the comments from question #6a were considered in the design of the project.

III. The Project

❼ Project Scope

What accommodations, if any, are included for bicyclists and pedestrians in the proposed project design?

Have you considered including the following?

- Class I bicycle paths
- Class II bicycle lanes
- Class III bicycle routes
- Class IV bikeways
- Bicycle boxes
- Raised separated bikeways
- Bicycle Boulevards

- Bicycle parking
- Sidewalks on one side or both sides of street
- Widened sidewalks
- Marked crosswalks
- Protected intersection
- Painted conflict zones
- Narrow unpaved path
- Pedestrian-actuated traffic signals or routine pedestrian cycle
- Bulb-outs
- Bicycle actuated traffic signals or routine bicyclist cycle
- High visibility crosswalks
- Pedestrian-level lighting
- ADA-compliant ramps
- Traffic signal push buttons
- Refuge islands on roadways
- Transit shelters
- Wide curb lanes
- Right turn only lanes
- Transit vehicle stops
- Pedestrian countdown signals
- Way-finding or directional signage

Other facilities may include facilities for disabled persons as required by US DOT, as of 11-29-06: Curb ramps, including truncated domes; accessible signal actuation; adequate sidewalk width; acceptable slope and cross-slope (particularly for driveway ramps over sidewalks, overcrossings and trails); and adequate green signal crossing time.

❽ Hindering Bicyclists/Pedestrians

a. Will the proposed project remove an existing bicycle or pedestrian facility or block or hinder bicycle or pedestrian movement?

[yes or no]

If yes, please describe situation in detail.

Examples of projects that could inadvertently worsen conditions for bicyclists and/or pedestrians include: removal of existing roadway shoulder; narrowing of existing curb lane; creating large corner radii; right turn slip lanes; multiple right or left turn lanes; roadway widening, which increases pedestrian crossing distance; increasing green time for one direction of traffic, which increases delay for pedestrians waiting to cross; crosswalk removal; redirecting bicyclists or pedestrians to routes that

	require significant out-of-direction travel; and elimination of an existing bicycle and/or pedestrian facility.
b. If the proposed project incorporates neither bicycle nor pedestrian facilities, or if the proposed project would hinder bicycle or pedestrian travel, list reasons why the project cannot be re-designed to accommodate these facilities. Was a road diet or car parking removal considered?	
What would be the cost of the added bicycle and/or pedestrian facility? If the proposed project incorporates bicycle or pedestrian improvements, what proportion is the bicycle and/or pedestrian facility of the total project cost?	The Federal Highway Administration recommends including up to 20 percent of the project cost to address non-motorized access improvements; MTC encourages local agencies to adopt their own percentages. Therefore, please provide estimated cost of planned bicycle and/or pedestrian improvements as a percent of total project cost if none are proposed for the project. Has your jurisdiction adopted a threshold? If so, please provide percent and attach adopted threshold policy.
If right-of-way challenges are the reason for the hindrance, please explain the analysis that led to this conclusion.	If lack of adequate right-of-way precludes the accommodation of bicyclists and/or pedestrians, please describe limitations. Please make distinction between absence of right-of-way and trade-offs between various transportation modes and/or parking. For instance, does existing curb/gutter/sidewalk prevent striping of a new bicycle lane (If so, please attach intersection LOS data and existing travel lane configuration and widths)? Would curb extensions (to shorten street crossing distance for pedestrians) require eliminating on-street parking spaces?

❾ Construction Period

How will access for bicyclists and pedestrians be maintained during project construction?	Specify or attach applicable policies and construction permit conditions.

❿ Ongoing Maintenance

What agency will be responsible for ongoing maintenance of the facility? How will ongoing maintenance be budgeted?	*No guidance*

METROPOLITAN
TRANSPORTATION
COMMISSION

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April 29, 2016

CALL FOR PROJECTS

Bike Share Capital Program

The Metropolitan Transportation Commission (MTC) invites your public agency to submit a Letter of Interest for Phase 1 of the Bike Share Capital Program, which is intended to launch or expand bike share programs throughout the region. Documents for this Call for Projects are available on the MTC website at http://www.mtc.ca.gov/our-work/plans-projects/bicycle-pedestrian-planning.

Interested agencies must submit one electronic PDF version of their letter (three page maximum) by 4:00 p.m. on Friday, June 17, 2016. After reviewing submitted letters, staff will present the results to MTC Commissioners for consideration at a Committee meeting, and following Commissioner feedback, a number of agencies may be asked to submit full proposals. Other key dates and details are included in the full program description.

The goal of the Bike Share Capital Program is to expand bicycle access and use through bike sharing and to facilitate multimodal transportation in connection with transit. Up to $2 million in funding is available in Phase 1, which is a one-time funding source intended to help project sponsors with capital purchase and initial implementation costs. Ongoing bike share operations are not eligible.

Please submit your Letter of Interest to Kevin Mulder, Project Manager, at kmulder@mtc.ca.gov, or call (510) 817-5764 with any questions.

Thank you for your interest.

Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Bike Share Capital Program Phase 1 Application

AB:KM
J:\PROJECT\Ped and Bike\Bike Share Capital Program\Bike Share Capital Program Application Draft-Final.docx

Bike Share Capital Program
Phase 1

MTC is now accepting Letters of Interest from public agencies to launch or expand bike share programs throughout the region. The **Bike Share Capital Program** and the application process are described below and online at http://www.mtc.ca.gov/our-work/plans-projects/bicycle-pedestrian-planning. Letters are due by **4:00 p.m., Friday, June 17, 2016.**

Background/Goals & Objectives

Bike sharing has been a mixed success in the Bay Area, as demonstrated by the Bay Area Air Quality Management District's pilot bike share program, Bay Area Bike Share (BABS). The program launched in 2013 and reached 800,000 trips in early 2016, ranging from 0.12 to 2.7 trips per bike per day in the participating cities (San Francisco, San Jose, Mountain View, Redwood City and Palo Alto). In May 2015, MTC's Commission approved a privately-funded BABS expansion in Berkeley, Emeryville, Oakland, San Francisco, and San Jose by Motivate Inc. that will add over 6,000 bikes to the system at no cost to those cities or the region.

MTC's Commission also set aside $4.5 million for the Bike Share Capital Program in the remaining Bay Area communities at the same May 2015 meeting. The Bike Share Capital Program will award grants over two phases, with the timing of the second phase to be determined following Phase 1.

The Bike Share Capital Program funding is a one-time funding source to help project sponsors with capital purchase and initial implementation costs and will not be an on-going grant program. It will also not fund operations due to constraints on the federal Congestion Mitigation and Air Quality (CMAQ) funds committed to the program. The goal of the program is to expand bicycle access and bicycle use and to facilitate multimodal transportation in connection with transit.

Program Summary

Eligible projects	Bike share capital projects in Bay Area communities other than Berkeley, Emeryville, Oakland, San Francisco, and San Jose
Total amount available	Up to $2 million in Phase 1
Type of funds	Congestion Mitigation and Air Quality Funds (CMAQ) – Federal Funds administered by Caltrans Local Assistance
Grant minimum	$500,000
Grant maximum	$1,250,000
Required local match	11.47% of total project cost

Eligible Projects

Eligibility is limited to capital expenses related to launching or expanding a bike share program. The grant and match can pay for direct project costs, including staff and project management; however, planning studies are ineligible due to CMAQ fund source limitations. Both smart dock- and smart bike-based systems are eligible; typical components will include, but may not be limited to:

- Bicycles
- Station components
    - Kiosks, docks/racks, & platforms/bases
    - Solar kits & batteries
    - Map modules
    - Cables, plugs, & tools
- Testing equipment
- Purchase of support/rebalancing vehicles for bicycles
- Membership cards & readers
- Planning, engineering, design, & permitting
- Site prep & installation
- Project management
- Web/software & testing
- Component shipping

Eligible Applicants

Public agencies (with agreements in place to receive federal-aid funding) are eligible applicants. While all public agencies are eligible to apply, projects located in Priority Development Areas (PDAs) will receive priority (see http://mtc.ca.gov/our-work/plans-projects/focused-growth-livable-communities/priority-development-areas for more information).

Interested businesses, non-profit 501(c)(3) organizations, and community organizations may also apply if they partner with a public agency that will sponsor the project. In such cases, if a grant is awarded, the public agency will be the grant recipient and can subcontract with the business / organization to implement the project. The public agency is responsible for carrying out all requirements and obligations associated with the use of federal funds. The public agency is also accountable for implementing and delivering the project. Successful grant recipients will work with Caltrans to meet federal-aid requirements in order to receive federal funds for the project.

Grant Funding

The fund source for these competitive grants is federal CMAQ funds, and projects must follow federal procurement rules, including a competitive bid process. A local, non-federal match of 11.47 percent of the total project budget is required by these federal funds and must be provided as a match. In addition, all projects must meet CMAQ eligibility and requirements. Following grant awards, project sponsors must apply to Caltrans Local Assistance and comply with federal-aid requirements before incurring any project costs eligible for reimbursement. More information on CMAQ requirements can be found here:

- http://www.fhwa.dot.gov/environment/air_quality/cmaq/policy_and_guidance/2013_guidance/index.cfm

Local assistance procedures can be found at the Caltrans website:

- http://www.dot.ca.gov/hq/LocalPrograms/index.html

Project sponsors must also meet all requirements of the MTC Regional Project Delivery Policy:

- http://mtc.ca.gov/our-work/fund-invest/federal-funding/project-delivery (also see Appendix A).

Project sponsors are responsible for compliance with the requirements of California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).

The 11.47 percent required local match is based on total project cost, not the amount of the grant. For example: an agency with a $600,000 project could apply for $531,180 in grant funding (88.53% of $600,000) with a $68,820 local match (11.47% of $600,000).

Application Process

The Bike Share Capital Program will follow a two-step application and evaluation process that will be overseen by an evaluation committee of staff from MTC and other evaluators as appropriate.

Step One: All interested applicants must submit a Letter of Interest, including the following components (3-page limit):

- **Applicant Information**: Identify the project title, name of applicant, project manager, contact information, and any project partners.
- **Project Description**: Describe the proposed project, including project type (e.g. "smart bike" vs. "smart dock" system), purpose, and need of the project (please also attach a map of the project area, service area, and/or photos — these attachments will not count towards the page limit).
- **Project Impacts**: Explain how the project will measurably increase bicycling in the community, address first/last mile needs, and reduce GHG and particulate matter (PM) emissions.
- **Project Readiness**: Describe project readiness, including any supporting studies, complementary TDM efforts, and/or other related activities and strategies.
- **Local Support**: Identify local support for the proposed project thus far, and include a letter of support from the City Manager's office and/or transit agency general manager (will not count towards the page limit).
- **Funding**: Identify a total budget for the project, the amount of grant funding requested, and local match. If membership, usage, or advertising/sponsorship revenue is expected to be generated from the project, address how the funds will be used. Appendix B and the project website include a budget template to assist with budget development (it is not required to submit the line item budget with the letter, but if submitted, it will not count towards the limit).
- **Data Collection and Evaluation**: Identify planned data collection efforts, outcomes that signify success, and how the project will be evaluated to measure performance.

The evaluation committee will review all Letters of Interest and contact applicants, as needed, for additional information, clarification, and/or modification. Staff will then present the results of Step One to an MTC Committee in July or September for further review before conducting **Step Two**.

Step Two: The evaluation committee will identify a small number of promising projects and invite these applicants to submit a more formal proposal for further evaluation. The formal proposal will include and expand upon the components listed in **Step One** and will also require a detailed implementation and full funding plan. Applicants are encouraged to develop funding options for ongoing operations and maintenance early in the application process. Potential sources may include, but are not limited to:

- Local sponsorship
- County transportation sales tax or vehicle license fees
- Fuel tax
- Transportation Development Act Article 3 (TDA-3)
- Active Transportation Program (ATP)
    - Note: ATP is not expected to be available in the near-term given programming cycles
- Bicycle Transportation Account (BTA)
- Transportation Management Areas (TMAs)
- Other local funding
- One Bay Area Grant program (OBAG 2) – currently only available for capital

The evaluation committee will quantitatively evaluate proposals against the following criteria:

- Potential for impact (including bicycle mode shift, reduced VMT, first/last mile solutions, etc.)
- Full funding plan for ongoing operations
- Readiness and local support (including feasibility studies, bike facilities, complete streets policies, other engagement, etc.)
- Local match share of total project cost
- Capability of the project partners to implement the project
- Location within a Priority Development Area (PDA), Community of Concern (COC), or Community Air Risk Evaluation (CARE) Program area

All Letters of Interest and Proposals (if invited to submit a proposal) must be submitted electronically to the MTC Project Manager as follows:

Kevin Mulder, Project Manager
RE: Application for Bike Share Capital Program
kmulder@mtc.ca.gov

Schedule & Timeline

MTC issues call for projects	Friday, April 29, 2016
Pre-Application Workshops **Please RSVP to Kevin Mulder:** kmulder@mtc.ca.gov or (510) 817-5764	Thursday, May 12, 2016, from 2:00 – 4:00 pm Joseph P. Bort MetroCenter, Oakland Friday, May 13, 2016 from 1:00 – 3:00 pm SamTrans, 1250 San Carlos Avenue, San Carlos Monday, May 16, 2016 from 2:30 – 4:30 pm Napa Valley Transportation Authority, 625 Burnell Street, Napa

Deadline for Letters of Interest to MTC	Friday, June 17, 2016 at 4:00 pm
MTC Programming & Allocations Committee reviews results of Step One and considers full application process *(tentative)*	Wednesday, July 13, 2016
Select applicants are invited to submit detailed proposals *(tentative)*	Friday, July 22, 2016
Deadline for selected applicants to submit proposals to MTC for further evaluation *(tentative)*	Friday, October 7, 2016 by 4:00 pm
Review Process	October – November 2016
Recommended Program of Projects *(tentative)*	December 14, 2016 (MTC's Programming and Allocations Committee)
Commission Approval *(tentative)*	December 21, 2016
TIP Revision Approval *(tentative)*	January 2017
Request for Obligation / E-76 from Caltrans *(tentative)*	June 2017 – MTC strongly advises obligating funds within six months of receiving Commission/TIP approval
E-76 Approval from Caltrans *(tentative)*	July 2017
Project Implementation	By December 2018, or within 24 months of receiving MTC Commission approval. • Funds must be obligated by January 2018

MTC Contact

For questions about grant application requirements or to discuss potential project ideas in advance of submitting an application, please contact **Kevin Mulder**, Project Manager, at (510) 817-5764 or at kmulder@mtc.ca.gov.

Appendix A
Delivery Requirements

Project sponsor understands and agrees to comply with timeframe deadlines indicated in MTC's Regional Project Delivery Policy, MTC Resolution #3606. The full resolution policy is in the attached link: http://mtc.ca.gov/our-work/fund-invest/federal-funding/project-delivery

In addition, project sponsor agrees to the following:

a. Project Manager/Engineer should have previous project experience with the Federal Aid Process administered by Caltrans Local Assistance, District 4. If such qualified personnel are not on staff, project sponsor should to hire a consultant with such experience or commit to attend Federal Aid Process training class sponsored by Caltrans.
b. Federal funds through the Bike Share Capital Program are fixed at the programmed amount, and therefore any cost escalation will not be funded through the Bike Share Capital Program.
c. Project Managers shall participate in monthly calls with other successful applicants and MTC to ensure project delivery goals are on track and met.
d. The "before" and "after" photos of the project will be sent to MTC for use in publications, press releases, reports, etc. about the Bike Share Capital Program.
e. MTC will be notified immediately to discuss potential project implications that will affect the delivery of the project.

The project sponsor commits to maintaining the project.

Appendix B
Bike Share Capital Program Budget Template

Capital Expenses		Proposed Units	Estimated cost per Unit	Total Cost
Planning & Engineering				
Preliminary Engineering				$ -
Construction Engineering				$ -
Other				$ -
Line Item Capital				
Bikes		-	$ -	$ -
Terminals/stations/kiosks		-	$ -	$ -
Station components		-	$ -	$ -
Docks		-	$ -	$ -
Map/information panels		-	$ -	$ -
Keys		-	$ -	$ -
Tools/supplies		-	$ -	$ -
Replacement/spare parts		-	$ -	$ -
Office/workroom/storage		-	$ -	$ -
Web Site		-	$ -	$ -
Communication / IT		-	$ -	$ -
Installation (per station)		-	$ -	$ -
Rebalancing vehicle(s)		-	$ -	$ -
Other		-	$ -	$ -
Total Capital Expenses				**$ -**

See project website (http://www.mtc.ca.gov/our-work/plans-projects/bicycle-pedestrian-planning) for a downloadable spreadsheet of the budget templates.

Operating Expenses & Funding		Proposed Units	Estimated cost per Unit	Total Cost
Fixed Schedule Costs				
Per bike fee		-	$ -	$ -
Per dock fee		-	$ -	$ -
Per terminal/kiosk fee		-	$ -	$ -
Software license				$ -
Other				$ -
Line Item Operating				
Technical support				$ -
Management & administration				$ -
Field labor				$ -
Accounting, marketing & legal				$ -
Software license/support				$ -
Vehicle fuel & maintenance		-	$ -	$ -
Wireless/connectivity		-	$ -	$ -
Insurance (combined)				$ -
Customer call center				$ -
Other				$ -
Total Annual Operating Expenses				**$ -**
Operating Funding Commitments				
Sponsorship/advertising				$ -
Membership revenue				$ -
Local support				$ -
Other				$ -
Total Annual Operating Funding				**$ -**

See project website (http://www.mtc.ca.gov/our-work/plans-projects/bicycle-pedestrian-planning) for a downloadable spreadsheet of the budget templates.