Metropolitan Transportation Commission

Bay Area Metro Center
375 Beale Street
San Francisco, CA 94105

Meeting Agenda

Programming and Allocations Committee

Committee Members:
David Rabbitt, Chair Gina Papan, Vice Chair
Margaret Abe-Koga, Cindy Chavez, Federal D. Glover, Nate Miley, Hillary Ronen, Amy R. Worth
Non-Voting Member: Dina El-Tawansy

Wednesday, September 14, 2022 9:45 AM REMOTE

The Programming and Allocations Committee is scheduled to meet on Wednesday, September 14, 2022 at 9:45 a.m. or immediately following the 9:40 a.m. Administration Committee meeting, in the Bay Area Metro Center (Remotely). In light of Governor Newsom's State of Emergency declaration regarding COVID-19 and in accordance with the recently signed Assembly Bill 361 allowing remote meetings, this meeting will be accessible via webcast, teleconference, and Zoom for all participants. A Zoom panelist link for meeting participants will be sent separately to committee, commission, or board members.

The meeting webcast will be available at https://mtc.ca.gov/whats-happening/meetings/live-webcasts.
Members of the public are encouraged to participate remotely via Zoom at the following link or phone number:
Attendee Link: https://bayareametro.zoom.us/j/88367689936
Or iPhone one-tap: US: +13462487799,,88367689936# or +17193594580,,88367689936#
Or Join by Telephone: (for higher quality, dial a number based on your current location) US: +1 408 638 0968 or +1 669 900 6833 or +1 253 215 8782 or +1 346 248 7799 or +1 312 626 6799 or +1 646 876 9923 or +1 301 715 8592 or 877 853 5247 (Toll Free) or 888 788 0099 (Toll Free)
Webinar ID: 883 6768 9936
International numbers available: https://bayareametro.zoom.us/u/kXbT9k2wf

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Members of the public may participate by phone or Zoom or may submit comments by email at info@bayareametro.gov by 5:00 p.m. the day before the scheduled meeting date. Please include the committee or board meeting name in the subject line. Due to the current circumstances there may be limited opportunity to address comments during the meeting. All comments received will be submitted into the record.

1. Call to Order / Roll Call / Confirm Quorum

Quorum: A quorum of this committee shall be a majority of its regular non-ex-officio voting members (5).

2. Consent Calendar

2a. 22-1210 Minutes of July 13, 2022 meeting

Action: Committee Approval

Attachments: 2a_22-1210_July_13_2022_Prog&Allocations_Draft_Minutes.pdf
2a_22-1210_July_13_2022_Prog&Allocations_Translated_Public_Speaker_anc

2b. 22-1030 MTC Resolution No. 4475, Revised. 2021 Transportation Improvement Program (TIP) Amendment 2021-26.

Action: Commission Approval

Presenter: Adam Crenshaw

Attachments: 2b_22-1030_Reso-4475_TIP_Amendment_2021-26.pdf

2c. 22-1259 MTC Resolution Nos. 4522, Revised 4523, Revised and 4524, Revised, and 4528. Allocation of $172 million in FY 2022-23 Transportation Development Act (TDA), State Transit Assistance (STA), Regional Measure 2 (RM2), 5% Unrestricted State, and 2% Bridge Toll funds to six operators and MTC to support transit operations and capital projects in the region.

Action: Commission Approval

Presenter: Kenji Anzai

Attachments: 2c_22-1259_Resos_4522-4523-4524-4528_TransitOps_Allocations.pdf

2d. 22-1291 MTC Resolution Nos. 4035, Revised and 4202, Revised. Revisions to the One Bay Area Grant programs (OBAG 1 and 2), including extending obligation deadlines for the OBAG 2 County and Safe & Seamless Mobility Quick-Strike Programs.

Action: Commission Approval

Presenter: Thomas Arndt

Attachments: 2d_22-1291_Resos_4035-4202_Safe_and_Seamless_Mobility_Quick-Strike_Pr

2e. 22-1323 MTC Resolution No. 4534, Revised. Amendment to Regional Program of Nominations for Senate Bill 1 Trade Corridor Enhancement Program.

Action: Commission Approval

Presenter: Kenneth Kao

Attachments: 2e_22-1323_Reso_4534_Trade_Corridor_Enhancement_Program.pdf

2f. 22-1451 FY 2021-22 Federal Earmark Repurposing. Federal Highway Administration (FHWA) repurposed earmark funds under the earmark repurposing provision of the Consolidated Appropriations Act, 2022.

Action: Information

Presenter: Mallory Atkinson

Attachments: 2f_22-1451_Federal_Earmark_Repurposing.pdf

3. Federal

3a. 22-1285 MTC Resolution Nos. 4444, Revised, 4510, Revised, 4513, Revised, and 4169, Revised. Transit Capital Priorities Policy and Program FY2021-22 - FY2023-24

Update of Transit Capital Priorities (TCP) Process and Criteria and programming of $42.3 million in in the TCP program; including $40.0 million in FTA Formula Revenue funding for FYs 2021-22 through 2023-24, for transit operator state-of-good-repair consistent with the TCP Process and Criteria and additional programming of $2.3 million in AB 664 Bridge Tolls; a correction to the BATA Project Savings program; and discussion of financing against future FTA revenues.

Action: Commission Approval

Presenter: Margaret Doyle

Attachments: 3a_22-1285_Resos_4444-4510-4513-4169_TCP_Program.pdf

3b. 22-1292 MTC Resolution No. 4505, Revised.

Revisions to the One Bay Area Grant program (OBAG 3), including programming $103 million in OBAG 3 Regional Program funds..

Action: Commission Approval

Presenter: Mallory Atkinson

Attachments: 3b_22-1292_Reso-4505_OBAG3_Revisions.pdf

3c. 22-1258 MTC Resolution Nos. 4544 and 4545. Adoption of the 2023 Transportation Improvement Program (TIP) and Transportation Air Quality Conformity Analysis for Plan Bay Area 2050 (Plan) and the 2023 TIP.

The federally required TIP is a comprehensive listing of all Bay Area surface transportation projects that receive federal funds, are subject to a federally required action or are regionally significant for air quality conformity purposes. MTC is required to make a positive air quality conformity determination for the TIP and Plan in accordance with EPA's transportation conformity regulations and MTC's Bay Area Air Quality Conformity Procedures.

Action: Commission Approval

Presenter: Adam Crenshaw

Attachments: 3c_22-1258_Resos_4544-4545_2023_TIP_and_Air_Quality_Confirmity.pdf
3c_22-1258_Reso-4544_Attachment_A.pdf

4. Regional

4a. 22-1287 MTC Resolution No. 4504, Revised. FY 2022-23 MTC Fund Estimate

Updates the FY 2022-23 MTC Fund Estimate to incorporate actual FY 2021-22 revenue for the State Transit Assistance (STA) and State of Good Repair (SGR) programs and revises FY 2022-23 revenue estimates.

Action: Commission Approval

Presenter: William Bacon

Attachments: 4a_22-1287_Reso-4504_FY2023_MTC_Fund_Estimate.pdf

5. Information

5a. 22-1402 California Transportation Commission (CTC) and State Funding Programs Update

Staff will provide an update on the CTC's meeting of August 17-18, 2022 and state funding programs under the CTC's purview.

Action: Information

Presenter: Kenneth Kao

Attachments: 5a_22-1402_PAC_CTC_Update.pdf

6. Public Comment / Other Business

7. Adjournment / Next Meeting

The next meeting of the Programming and Allocations Committee is scheduled to be held on Wednesday, October 12, 2022. Any changes to the schedule will be duly noticed to the public.

Public Comment: The public is encouraged to comment on agenda items at Committee meetings by completing a request-to-speak card (available from staff) and passing it to the Committee secretary. Public comment may be limited by any of the procedures set forth in Section 3.09 of MTC's Procedures Manual (Resolution No. 1058, Revised) if, in the chair's judgment, it is necessary to maintain the orderly flow of business.

Meeting Conduct: If this meeting is willfully interrupted or disrupted by one or more persons rendering orderly conduct of the meeting unfeasible, the Chair may order the removal of individuals who are willfully disrupting the meeting. Such individuals may be arrested. If order cannot be restored by such removal, the members of the Committee may direct that the meeting room be cleared (except for representatives of the press or other news media not participating in the disturbance), and the session may continue.

Record of Meeting: Committee meetings are recorded. Copies of recordings are available at a nominal charge, or recordings may be listened to at MTC offices by appointment. Audiocasts are maintained on MTC's Web site (mtc.ca.gov) for public review for at least one year.

Accessibility and Title VI: MTC provides services/accommodations upon request to persons with disabilities and individuals who are limited-English proficient who wish to address Commission matters. For accommodations or translations assistance, please call 415.778.6757 or 415.778.6769 for TDD/TTY. We require three working days' notice to accommodate your request.

可及性和法令第六章：MTC 根據要求向希望來委員會討論有關事宜的殘疾人士及英語有限者提供服務/方便。需要便利設施或翻譯協助者，請致電 415.778.6757 或 415.778.6769 TDD / TTY。我們要求您在三個工作日前告知，以滿足您的要求。

Acceso y el Titulo VI: La MTC puede proveer asistencia/facilitar la comunicación a las personas discapacitadas y los individuos con conocimiento limitado del inglés quienes quieran dirigirse a la Comisión. Para solicitar asistencia, por favor llame al número 415.778.6757 o al 415.778.6769 para TDD/TTY. Requerimos que solicite asistencia con tres días hábiles de anticipación para poderle proveer asistencia.

Attachments are sent to Committee members, key staff and others as appropriate. Copies will be available at the meeting.

All items on the agenda are subject to action and/or change by the Committee. Actions recommended by staff are subject to change by the Committee.

MTC's Chair and Vice-Chair are ex-officio voting members of all standing Committees.

375 Beale Street, Suite 800
San Francisco, CA 94105

Metropolitan Transportation Commission

Legislation Details (With Text)

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On agenda:	9/14/2022			**Final action:**	
Title:	Minutes of July 13, 2022 meeting				
Sponsors:					
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Attachments:	2a_22-1210_July_13_2022_Prog&Allocations_Draft_Minutes.pdf 2a_22-				

Date	Ver.	Action By	Action	Result

Subject:
Minutes of July 13, 2022 meeting

Recommended Action:
Committee Approval

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Metropolitan Transportation Commission

Meeting Minutes

Bay Area Metro Center
375 Beale Street
San Francisco, CA 94105

Programming and Allocations Committee

Committee Members:
David Rabbitt, Chair Gina Papan, Vice Chair
Margaret Abe-Koga, Cindy Chavez, Federal D. Glover, Nate Miley, Hillary Ronen, Amy R. Worth
Non-Voting Member: Dina El-Tawansy

Wednesday, July 13, 2022 **9:45 AM** **REMOTE**

Call Meeting to Order

1. Roll Call / Confirm Quorum

Present: 6 - Commissioner Abe-Koga, Commissioner Miley, Vice Chair Papan, Chair Rabbitt, Commissioner Ronen, and Commissioner Worth

Absent: 2 - Commissioner Chavez, and Commissioner Glover

Non-Voting Member Absent: Commissioner El-Tawansy
Ex Officio Voting Members Present: Commission Chair Pedroza and Vice Chair Josefowitz
Ad Hoc Non-Voting Members Present: Commissioner Giacopini and Commission Spering

2. Consent Calendar

Upon the motion by Commissioner Ronen and seconded by Vice Chair Papan, the Consent Calendar was unanimously approved by the following vote:

Aye: 6 - Commissioner Abe-Koga, Commissioner Miley, Vice Chair Papan, Chair Rabbitt, Commissioner Ronen and Commissioner Worth

Absent: 2 - Commissioner Chavez and Commissioner Glover

2a. 22-1029 Minutes of June 8, 2022 meeting

Action: Committee Approval

2b. 21-1625 Quarterly Report of the Executive Director's Delegated Authority Actions

Action: Information

Presenter: Kenji Anzai

2c. 22-1052 Transit Performance Initiative - Investment Program Semi-Annual Report

Action: Information

Presenter: Anne Spevack

2d. 22-1050 FY 2021-22 Federal Earmark Repurposing. Potential projects to receive Federal Highway Administration (FHWA) repurposed earmark funds under the earmark repurposing provision of the Consolidated Appropriations Act, 2022.

Action: Commission Approval

Presenter: Mallory Atkinson

2e. 22-1053 MTC Resolution No. 4179, Revised. Revision to the Lifeline Transportation Program (LTP) Cycle 4 Program of Projects.

Action: Commission Approval

Presenter: Judis Santos

2f. 22-0070 Housing Incentive Pool (HIP) Program Progress Report (2018-20)

Action: Information

Presenter: Mallory Atkinson

2g. 22-1134 FY 2021-22 Federal Apportionment Exchange Agreements. Request to authorize the Executive Director, or designee, to enter into agreements with various Regional Transportation Planning Agencies (RTPAs) to exchange up to $50 million in federal apportionment balances.

Action: Committee Approval

Presenter: Mallory Atkinson

2h. 22-0855 MTC Resolution No. 4523, Revised. Allocation of $44 million in FY 2022-23 Transportation Development Act (TDA) funds to Sonoma County Transit (SCT) and Central Contra Costa Transportation Authority (CCCTA) to support transit operations and capital projects in the region.

Action: Commission Approval

Presenter: Kenji Anzai

3. Regional

3a. 22-1046 MTC Resolution Nos, 4504, Revised, and 4532

Revisions to the FY 2022-23 MTC Fund Estimate and approval of the FY 2022-23 State Transit Assistance State of Good Repair (STA-SGR) project list.

Action: Commission Approval

Presenter: Terence Lee

Upon the motion by Vice Chair Papan and seconded by Commissioner Ronen, the Committee unanimously approved the referral of MTC Resolution Nos, 4504, Revised, and 4532 to the Commission for approval. The motion carried by the following vote:

Aye: 6 - Commissioner Abe-Koga, Commissioner Miley, Vice Chair Papan, Chair Rabbitt, Commissioner Ronen and Commissioner Worth

Absent: 2 - Commissioner Chavez and Commissioner Glover

4. State

4a. 22-1051 MTC Resolution Nos. 4533 and 4534. Adoption of Regional Program of Applications for two Senate Bill 1 Competitive Programs.

Recommendation of projects for regional application support for Senate Bill 1 (SB 1) Solution for Congested Corridors and Trade Corridor Enhancement Programs.

Action: Commission Approval

Presenter: Kenneth Kao

Upon the motion by Commissioner Worth and seconded by Vice Chair Papan, the Committee unanimously approved the referral of MTC Resolution Nos. 4533 and 4534 to the Commission for approval. The motion carried by the following vote:

Aye: 6 - Commissioner Abe-Koga, Commissioner Miley, Vice Chair Papan, Chair Rabbitt, Commissioner Ronen and Commissioner Worth

Absent: 2 - Commissioner Chavez and Commissioner Glover

5. Information

5a. 22-1031 Draft 2023 Transportation Improvement Program (TIP) and Draft Air Quality Conformity Analysis for the Amended Plan Bay Area 2050 and the Draft 2023 TIP.

The federally required TIP is the region's transportation funding document containing surface transportation projects and anticipated funding over the next four years. The projects are expected to receive federal funds, be subject to a federally required action, or are regionally significant. Federal air quality regulations require an air quality conformity determination on the TIP. The Draft 2023 TIP was released for public review on July 5, 2022. The written comment period ends at 5:00 p.m. August 3, 2022. The Draft 2023 TIP and Draft Air Quality Conformity Analysis are available on the internet at:
<https://mtc.ca.gov/funding/transportation-improvement-program-tip>.

Action: Information

Presenter: Adam Crenshaw

5b. 22-1057 Major Project Advancement Policy (MAP) - Principles, Approach, and Preliminary Endorsement Table

Based on Commission direction at the May workshop, staff presented a revised framework including principles for funding strategies, risk management, and policy reinforcements; an approach to project sequencing; and a preliminary draft endorsement table.

Action: Information

Presenter: Theresa Romell

Written public comment was received from Gail Switzer.

The following members of the public were called to speak: Anthony Nachor, John Corso (Local 38 Plumbers and Pipefitters), Bruce Agid (South Beach Rincon Mission Bay Neighborhood Association), Alex Lantsberg (San Francisco Electrical Construction Industry), Kevin Burke (Transbay Coalition), Marisa (Fund our Future), Haggis (Cantonese speaker), Steve Roberts (Rail Passengers Association of California), Jessica Perla, Jessica Lum (San Francisco Travel Association), Peter Straus (San Francisco Transit Riders), Simon Timony, Eric Schatmeier, Charley Lavery (Operating Engineers Union), Byron Lopez (Fund our Future - Spanish speaker), Garrick Mitchler (East Cut Community Benefit District), Vincent Courtney (Northern California District Council of Laborers), Seema Sri, Adam Van de Water (TJPA), Jonathon Kass (SPUR), Sandy (Cantonese speaker), Anthony Viscuso (Heat & Frost Insulators Local 16), Adina Levin (Friends of Caltrain), Kenneth Russell, Jose Almanza (IBW Local 6), Jerry Causin (Bay Area Transit Workers Union), Ben Summers, Roberto Hernandez, John Rizzo (Sierra Club San Francisco Bay Area Chapter), Dan Torres (Sprinkler Fitters Local 483), Wu (Cantonese speaker), Armie Morgan (Operating Engineers), Nestor Cuellas (Spanish speaker), Ice Wong (Cantonese speaker), Pedro Conceicao, Chris Chang, Michael Rooney, Howard Wong, Rudy Gonzalez (SF Building and Construction Trades Council), Kim (Cantonese speaker), Kimberly Tavaglione (San Francisco Labor Council).

5c. 22-1032 California Transportation Commission (CTC) and State Funding Programs Update

Staff provided an update on the CTC's meeting of June 29-30, 2022 and state funding programs under the CTC's purview.

Action: Information

Presenter: Kenneth Kao

The following members of the public were called to speak: Guo Zhen Yu (Cantonese Speaker) gave comments related to agenda item 5b, and Marisa (Fund Our Future).

6. Public Comment / Other Business

7. Adjournment / Next Meeting

The next meeting of the Programming and Allocations Committee is scheduled to be held on Wednesday, September 14, 2022 remotely and by webcast. Any changes to the schedule will be duly noticed to the public.

Speaker Comments — Cantonese

Haggis, 1:24:36	
Comment:	Good morning, everyone. [Inaudible] I have been in the printing industry for decades and we mainly print invitations for ceremonies or different activities. Most customers need to come to the offline store to check their orders. If subway routes can be extended to Caltrain Station and BART Station, then it will be more convenient for people to commute. Therefore, we sincerely ask the Committee to pass the DTX subway extension project. It not only promotes the economy of the communities around but also brings more job opportunities for people here. Thank you so much and that's all.
Sandy, 1:41:55	
Comment:	Hello everyone, I am Sandy Yang and I live in the Sunset District in San Francisco. I am a follower of Miu Kuang Baddish Temple. Miu Kuang Baddish Temple is in Yunyang District. Many of the followers now have moved to other cities, but we are still hoping to visit the temple as much as we can. We do it at festivals and birthdays, but the inconvenient public transportation has stopped us from doing it. Therefore, we hope that the DTX Project can be taken into consideration and will be implemented. This can help us to inherit the culture of Miu Kuang Baddish Temple. Thanks.
Wu, 1:52:45	
Comment:	Hello, everyone, my name is Jackie Wu and I immigrated to the States more than 10 years ago and lived in the suburban areas. When I lived in Hong Kong, I have experienced how convenient the public transportation was in Hong Kong, connecting the CBD and the suburb areas. That's why most citizens in Hong Kong do not need to drive, which makes the environment and air fresher and cleaner. Many immigrants have shared the same thoughts as I have, and they are very supportive of the DTX Project. We think that it is a good project for our environment and also can make San Francisco a good example of environmental protection. Based on these opinions I gathered, please consider supporting the DTX Project. Thanks.
Ice Wong, 1:56:16	
Comment:	Hello, everyone. I am Ice Wong and I am a new immigrant who is currently working and studying for my degree in the States. Now, we have arrived in the post-pandemic time. I went back to the campus and my workplace. However, it takes a long time for me to commute by driving back and forth. I spent quite a lot on the commute for gas and parking. Hope everybody support DTX Project, because it can help to release some burdens of people like me. It not only promotes the development of San Francisco but also fulfills our hope of living in a city with advanced and convenient infrastructures. Thanks.

Kim, 2:02:58	
Comment:	Hello, my name is Shukim Wu, I live in [redacted], the elderly apartment on the Middle Street. My son and his family moved to South Bay a long time ago. However, my grandson is still very young, and my son is pretty occupied with his work, and he needed to go business trips quite often. I am asked to help take care of the kiddo. Every time when he has this kind of situation, he needs to pick me up at my house, which takes a long way of driving. It is not an environmentally friendly way and also costs money to do it. Therefore, it will be more convenient if we have the DTX Project launched in San Francisco. I sincerely hope that this project can be fully supported by you. Thanks.
Guo Zhen Yu, 2:08:26	
Comment:	Okay. My name is Guozhen Yu, I live in the Sunset District. I have a lot of sickness and I need to go to San Jose. Transportation is a bit problem for me. So hopefully, there will be some help with that for public transportation for people to come and help the elderly who are disabled, especially the RHSS workers.

Written Comments Received via Email

Chinese	English
Zhong Wei Yu: 各位運輸委員會委員早晨，我叫余國晶Guo Zhen Yu，我住在三藩市唐人埠49號Spofford街，我因為患有老年疾病，每天都需要護理員照顧，但最合適照顧我的，自然應該是我的媳婦，因為她才是最了解我的護理需要的人。但是，因為媳婦住在聖荷西，因為沒有直通的公共交通工具，她不能每天來照顧我。在三藩市，好像我這樣的殘障人士十分多，大部份都需要依靠居住在三藩市以外的年輕家人，通勤來三藩市提供護理服務。我十分贊成市中心鐵路延伸計劃DTX，因為不單可以因此增加三藩市的工作機會，又同時可以改善現時殘障人士的護理服務。謝謝各位委員。	Dear MTC members, good morning, I am Guo Zhen Yu, living at [redacted], Chinatown, San Francisco. I have some elderly diseases and need nursing services every day. My daughter-in-law is the best person to take care of me as she best knows my needs. However, she lives in San Jose. She couldn't come to see me every day due to without direct public transit. There are many disabled people like me living in San Francisco. Most of them rely on nursing services provided by their young family members commuting from other towns. I agree with the downtown rail extension plan (DTX), which not only increases job opportunities in San Francisco, but also improves nursing services for disabled people. Thank you.
Shui Ying Chan: 你好，我的名字叫Shiu Ying Chang，我從香港移民美國已經10幾年，我住在333 Clementina	Hi, I am Shiu Ying Chan. I have immigrated to USA from Hong Kong for over 10 years. Now, I live on [redacted]. Before I immigrated to the USA, Hong Kong had well-developed public transit to connect to the city center and suburbs.

Street。我移民之前，在香港，當時已經有全面的公共交通工具，接通市中心及郊區任何角落，90%的香港市民無需擁有汽車，因此，雖然香港是人口最密集的城市，但環境污染及空氣污染程度非常低。我們這些移民來美的亞裔居民，絕大部份都支持擴展鐵路網絡DTX。因為這是我們經驗之談，三藩市應該成為環保運動的榜樣，請支持DTX優先基建項目。謝謝	90% of Hong Kong people did not own private cars. Thus, despite being densely populated, Hong Kong had no serious environmental pollution and air pollution issues. Most Asian immigrants support DTX because we have a better experience in using public transit. San Francisco should become a role model in environmental protection. Please support DTX and take it as a priority infrastructure project. Thank you.
Hao Ci Zhu: 大家好，我叫Sandy，我姓楊。我是三藩市日落區妙光精舍Miu Kuang Baddish Temple的學生第子。我們的寺廟在三藩市弘楊佛法已經幾十年，隨着寺廟的弟子學生漸漸年紀大了，很多已經搬出三藩市，但是弟子學生們，都經常希望回來拜會寺廟主持，和在節令和生辰祈福。不過，很多佛教信眾，都因為欠缺公共交通工具，而不能來參拜。因此我們希望，鐵路延伸計劃DTX，可以優先實行。使三藩市好像我們的寺廟一樣的宗教文化，繼續承傳興旺下去。謝謝，願各位，祝大家福有悠歸。	Hi, I am Sandy Yang. I am a follower of Miu Kuang Baddish Temple. The temple has provided services in San Francisco for over 10 years. Some followers move out of San Francisco due to getting older. However, all of us want to come to the temple for religious activities, such as visiting the abbot, attending holiday and birthday celebrations. Many followers cannot come due to lack of public transit. So, we would like to see the DTX be implemented so that the temple could continue to provide its religious services. Best wishes!
Ounxi Li: 各位MTC委員早晨，我叫Qunxi Li，我是個半工讀的新移民，隨着疫情之後大學開課和商店重開，我每天需要駕車來回在我的工作和課室上課之間，浪費了大量可以用來溫習和讀書的時間，還加上沉重的汽油費和泊車費的負擔。好像我這樣的年輕人很多，我們也不希望成為破壞三藩市灣區空氣環境的人。我希望你們考慮通過支持DTX，因為這是三藩市灣區的未來，也是我們年輕人希望的理想居住城市必須有的基礎設施。謝謝。	Dear MTC members, good morning. I am Qunxi Li. I am a new immigrant who is currently working and studying for my degree in the States. The university and store reopen after the pandemic. I drive between my workplace and university every day. I spend a lot of time commuting, instead of studying. Also, the fuel and parking costs are a big burden for young people like me. We also want to keep the air clean in San Francisco. Please support the DTX plan as it represents the future of San Francisco. Also, such infrastructure is necessary for building an ideal livable city to attract young people like me.

Kam Yung Wong: From Fund Our Future 伸延鐵路工程計劃 DTX 交通委員會，早晨，我叫Terry Luk陸朝基，我在三藩市華埠經營太平洋印刷，已經幾十年，我們是加州唯一極少數印製傳統喜宴壽宴請柬的店舖。很多遍布加州的華僑長者，十分重視傳統文化特色的請柬，包括使用指定的紙質和香味，因此無論在加州任何地區，顧客每當需要印製請柬時，都必須親自到來三藩市華埠下單。但由於現時的鐵路系統，還未能貫穿高鐵和捷運，因此多年來我們的顧客都抱怨為何三藩市缺乏方便的共乘交通工具。我在此懇請委員會，通過市中心伸延鐵路工程計劃(DTX)定立為最優先的基建項目，以加強經濟復甦，繁榮文化工業，及增加就業機會。謝謝各位委員，聽取我們三藩市華埠商戶的意見。	From Fund Our Future DTX Dear MTC members, good morning. I am Terry Luk. I have operated my business — Pacific Printing Company in San Francisco for over ten years. My business is one of a few of stores that prints the invitation for traditional wedding and birthday ceremonies in California. Many elderly Chinese living in California select the invitation with traditional culture features, such as special paper and customized fragrance. Customers in California need to go to Chinatown, San Francisco to order these invitations in person. However, San Francisco has no high-speed railway or metro lines. We have always received our customers' complaints about inconvenient transport in San Francisco. I earnestly request the MTC to set the DTX as a priority project, so as to strengthen the local economic recovery, drive cultural development and increase job opportunities. Thank you for considering the opinions of Chinese merchants in San Francisco.

Speaker Comments — Spanish

Byron Lopez (Spanish), 1:34:02	
Comment:	Hello, can you hear me? … OK, my name if Byron Lopez. I'm here speaking for my colleagues and friends and members of the city's community and the Bay Area. I want the DTX project to move from Level 2 to Level 1. First, because there is a lot of unemployment among construction workers. There are a lot of projects that they need. I saw in the presentation that they are going to be until 2035 to start construction on Level 2 projects and that is not enough time. There are a lot of businesses that need support due to the pandemic and this will help more to attract people to the city and bring business and economic support here in the city. Thank you.
Nestor Cuellas (Spanish), 1:55:00	
Comment:	Good morning. I am going to speak in Spanish. OK. Thank you. Can you hear me? … OK. Good morning, Commissioners. My name is Nestor Cuellas. I work in San Francisco. I support the construction of the extension to downtown. This project is not only good for San Francisco, but it will also be good for all the residents of the Bay Area. And I ask you to move the project from Level 2 to Level 1. The community needs this improvement in the transportation, in public transportation, especially for all the thousands of people who don't drive cars and depend on public transportation. Thank you.

375 Beale Street, Suite 800
San Francisco, CA 94105

Metropolitan Transportation Commission

Legislation Details (With Text)

File #:	22-1030	**Version:**	1	**Name:**	
Type:	Resolution			**Status:**	Commission Approval
File created:	5/26/2022			**In control:**	Programming and Allocations Committee
On agenda:	9/14/2022			**Final action:**	
Title:	MTC Resolution No. 4475, Revised. 2021 Transportation Improvement Program (TIP) Amendment 2021-26.				
Sponsors:					
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Code sections:					
Attachments:	2b_22-1030_Reso-4475_TIP_Amendment_2021-26.pdf				

Date	Ver.	Action By	Action	Result

Subject:
MTC Resolution No. 4475, Revised. 2021 Transportation Improvement Program (TIP) Amendment 2021-26.

Presenter:
Adam Crenshaw

Recommended Action:
Commission Approval

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Metropolitan Transportation Commission
Programming and Allocations Committee

September 14, 2022 **Agenda Item 2b - 22-1030**

MTC Resolution No. 4475, Revised

Subject:

2021 Transportation Improvement Program (TIP) Amendment 2021-26.

Background:

The federally required TIP is a comprehensive listing of Bay Area surface transportation projects that receive federal funds, are subject to a federally required action or are regionally significant. As required by state statutes, MTC, as the federally designated Metropolitan Planning Organization (MPO) for the nine-county San Francisco Bay Area Region, must prepare and adopt the TIP every two years. The 2021 TIP, covering the four-year period from FY 2020-21 through 2023-24, was adopted by the Commission on February 24, 2021, and was approved by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) on April 16, 2021. The 2021 TIP is valid for four years under federal regulations. The TIP may be revised to make necessary changes prior to the next update. The TIP is posted on MTC's website at: https://mtc.ca.gov/funding/transportation-improvement-program-tip.

Amendment 2021-26 makes revisions to 335 projects with a net funding decrease of approximately $62 million. Among other changes, this revision will:

- Archive 325 projects that have either been completed or where future funding will be programmed on other listings;
- Delete 4 projects that will not move forward as federal projects at this time;
- Update the scope of one project and the funding plan of another to reflect local decisions;
- Amend MTC's Priority Conservation Area Grant Implementation project into the TIP;
- Amend Caltrain's Mini-High Platform Improvements project into the TIP to reflect the award of $460,000 in federal Transit Infrastructure Grants - Community Project Funding/ Congressionally Directed Spending funds;
- Amend VTA's Zero Emissions Bus Transition On-Road Charging Pilot project into the TIP to reflect the award of $15.6 million in FTA Bus and Bus Facilities discretionary funding; and

- Amend a new FTA Section 5310 Enhanced Mobility for Seniors and Persons with Disabilities-funded grouped listing into the TIP.

The 2021 TIP is also designed such that, once implemented, it makes progress toward achieving the performance targets established per federal regulations.

The revisions made pursuant to this amendment will not change the air quality conformity finding; therefore, a conformity determination is not required.

The TIP Revision Summary for this amendment is attached (Attachment 1) and is also posted on the Internet at: https://mtc.ca.gov/funding/transportation-improvement-program/2021-tip/2021-tip-revisions.

The TIP public participation process also serves to satisfy the public involvement requirements of the FTA annual Program of Projects for applicable funds.

This amendment will be transmitted to Caltrans after the Commission approval; Caltrans will then forward the amendment to FTA/FHWA for final federal agency review and approval.

Issues:

This Amendment contains changes that are contingent upon Commission approval of programming changes included in Programming and Allocations Committee Agenda Item 2d. Only items approved by the Committee will be forwarded to the Commission.

Changes included in this amendment to the 2021 TIP will also be made in future amendments to the 2023 TIP as required. The 2023 TIP is being considered for adoption under Agenda Item 3c.

Recommendations:

Refer MTC Resolution No. 4475, Revised to the Commission for approval.

Attachments:

- Attachment 1: Summary Report of Amended Projects for TIP Amendment 2021-26
- MTC Resolution No. 4475, Revised

Therese W. McMillan

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
System: Local Road					
ALA110072	Oakland	Lake Merritt Improvement Project	Archive project as it has been completed	$0	0.0%
ALA110104	Metropolitan Transportation Commission (MTC)	Bay Bridge Park	Archive this project as all funding has been allocated	$0	0.0%
ALA130024	Oakland	Lakeside Complete Streets and Road Diet	Archive project from the TIP as all funds have been completed	$0	0.0%
ALA130026	Berkeley	Shattuck Complete Streets and De-couplet	Archive project from the TIP as it has been completed	$0	0.0%
ALA130028	Berkeley	Hearst Avenue Complete Streets	Archive project from the TIP as it has been completed	$0	0.0%
ALA150007	Alameda (City)	Cross Alameda Trail (includes SRTS component)	Archive this project as the funding has been allocated	$0	0.0%
ALA150010	Oakland	International Boulevard Improvement Project	Archive project as all funding has been obligated	$0	0.0%
ALA150012	Oakland	Laurel Access to Mills, Maxwell Park and Seminary	Archive project as it has been completed	$0	0.0%
ALA150042	Oakland	Oakland: Telegraph Ave Bike/Ped Imps and Road Diet	Archive project as all funding has been obligated	$0	0.0%
ALA150043	Oakland	Oakland: Shattuck and Claremont Bike/Ped Imps	Archive project as all funding has been obligated	$0	0.0%
ALA150044	Oakland	19th St BART to Lake Merritt Urban Greenway	Archive project as all funding has been obligated	$0	0.0%
ALA150049	Berkeley	goBerkeley Residential Shared Parking Pilot	Archive project as all funding has been obligated	$0	0.0%
ALA150050	Oakland	Oakland Parking and Mobility Management	Archive project from the TIP as it has been completed	$0	0.0%
ALA170012	Metropolitan Transportation Commission (MTC)	Bay Bridge Forward-Commuter Parking Access Imps.	Archive project as it is not a federal project	$0	0.0%
ALA170040	Metropolitan Transportation Commission (MTC)	I-880 Integrated Corridor Management North Segment	Archive this project as all funds have been obligated	$0	0.0%
ALA170047	Alameda County	Active Oakland: A Comprehensive SR2S Program	Archive this project as it has been completed	$0	0.0%
ALA170052	Oakland	Oakland Fruitvale Ave Bike/Ped Imprvmnts H8-04-014	Archive project as all funding has been obligated	$0	0.0%
ALA170053	Oakland	Oakland 35th Ave Bike/Ped Improvements H8-04-015	Archive project as all funding has been obligated	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
ALA170054	Berkeley	John Muir Safe Routes to School	Archive project as it has been completed	$0	0.0%
ALA170061	Newark	Thornton Avenue Pavement Rehabilitation	Archive project from the TIP as it has been completed	$0	0.0%
ALA170068	Livermore	Livermore Pavement Rehabilitation - MTS Routes	Archive project from the TIP as it has been completed	$0	0.0%
ALA170070	Pleasanton	Pavement Rehabilitation Hacienda Business Park	Archive project from the TIP as it has been completed	$0	0.0%
ALA170071	Union City	Union City-Dyer Street Pavement Rehabilitation	Archive project from the TIP as it has been completed	$0	0.0%
ALA170078	Oakland	Oakland - Crossing to Safety	Archive project as all funding has been allocated	$0	0.0%
ALA170085	Alameda County Transportation Commission (ACTC)	7th Street Grade Separation East	Update the funding plan to change the source for $48M in RTP-LRP and $4.8M in SB1-LPP to Sales Tax and add $92.5M in Sales Tax and $20M in Other Local funds	$112,500,000	44.6%
ALA170093	Emeryville	Emeryville Quiet Zone Safety Engineering Measures	Archive project as the funding has been allocated	$0	0.0%
ALA170094	Berkeley	Berkeley - Sacramento St Complete Streets Imps	Archive project as it has been completed	$0	0.0%
ALA190006	Alameda County	Alameda County - Vasco Road Safety Improvements	Archive project from the TIP as it has been completed	$0	0.0%
ALA190015	Alameda County	Active and Safe Oakland	Archive this project as it has been completed	$0	0.0%
ALA210021	Alameda County Transportation Commission (ACTC)	Various Bike Education and Promotion Programs	Archive this project as it has been completed	$0	0.0%
ALA991081	Oakland	42nd Ave and High St I-880 Access Improvements	Archive project as all funding has been allocated	$0	0.0%
CC-070008	Antioch	Laurel Road Extension	Update the funding plan to change the program year and source for $10M in CON funds from FY25 RTP-LRP to FY22 Private Developer Fee funds and archive this project as it has been completed	$0	0.0%
CC-070009	Antioch	Slatten Ranch Road Extension Phase I	Archive project as it has no funding in the active years of the TIP	$0	0.0%
CC-070067	Contra Costa Transportation Authority (CCTA)	Mokelumne Trail Bike/Ped Overcrossing	Update the funding plan to reflect the amount of loccl funds used for the project and Archive this project as the funding has been allocated	$1,870,000	16.3%
CC-130001	Contra Costa County	Bailey Road-State Route 4 Interchange	Archive this project as the funding has been obligated	$0	0.0%
CC-130006	Concord	Concord BART Station Bike/Ped Access Improvements	Archive project as it has been completed	$0	0.0%
CC-130025	Martinez	Martinez Various Streets and Roads Preservation	Archive this project as the funding has been obligated	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
CC-130027	Contra Costa County	Port Chicago Hwy/Willow Pass Rd Bike Ped Upgrades	Archive this project as the funding has been obligated	$0	0.0%
CC-130038	Danville	Vista Grande Street Pedestrian Improvements/SR2S	Archive this project as it has been completed	$0	0.0%
CC-130047	Richmond	37th Street Bicycle and Pedestrian Improvements	Archive this project as the funding has been obligated	$0	0.0%
CC-150010	Contra Costa County	CC County - Rio Vista Elementary Ped Connection	Archive this project as it has been completed	$0	0.0%
CC-150016	Richmond	The Yellow Brick Road in Richmond's Iron Triangle	Archive this project as it has been completed	$0	0.0%
CC-150017	San Pablo	Rumrill Blvd Complete Streets Improvements	Archive this project as the funding has been allocated	$0	0.0%
CC-150018	Walnut Creek	Walnut Creek-Parking Guidance System Pilot	Archive this project as it has been completed	$0	0.0%
CC-170021	Contra Costa County	Pacheco Blvd Sidewalk Gap Closure Phase 3	Archive this project as it has been completed	$0	0.0%
CC-170022	Concord	Commerce Ave Complete Streets	Archive project from the TIP as it has been completed	$0	0.0%
CC-170025	Walnut Creek	Walnut Creek-N. Main St Rehab - I680 to California	Archive project from the TIP as it has been completed	$0	0.0%
CC-170026	San Ramon	San Ramon Valley Street Smarts	Archive project as federal funds have obligated	$0	0.0%
CC-170028	Contra Costa County	Kirker Pass Road Open Grade Overlay	Archive this project as it has been completed	$0	0.0%
CC-170029	Contra Costa County	West County Walk and Bike Leaders	Archive this project as the funding has been obligated	$0	0.0%
CC-170030	El Cerrito	Carlson Blvd and Central Ave Pavement Rehab	Archive project as it has been completed	$0	0.0%
CC-170032	Orinda	Orinda Way Pavement Rehabilitation	Archive this project as it has been completed	$0	0.0%
CC-170033	Lafayette	Pleasant Hill Rd Pavement Rehab and Maintenance	Archive this project as it has been completed	$0	0.0%
CC-170035	Antioch	Antioch - L Street Pathway to Transit	Update the project scope to reduce the locations and remove traffic signal and bus shelter improvements	$0	0.0%
CC-170036	Antioch	Antioch Pavement Rehabilitation	Archive this project as it has been completed	$0	0.0%
CC-170041	Oakley	Oakley Street Repair and Resurfacing	Archive project from the TIP as it has been completed	$0	0.0%
CC-170044	Pleasant Hill	Pleasant Hill Road Improvements	Archive this project as it has been completed	$0	0.0%
CC-170045	San Ramon	Alcosta Boulevard Pavement Rehab	Archive project from the TIP as it has been completed	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
CC-170046	Moraga	Moraga Way and Canyon/Camino Pablo Improvements	Archive this project as it has been completed	$0	0.0%
CC-170049	Pittsburg	Pittsburg Active Transp. and Safe Routes Plan	Archive this project as it has been completed	$0	0.0%
CC-170057	Richmond	Richmond: Roadway Preservation and ADA Improvement	Archive this project as it has been completed	$0	0.0%
MRN110010	Sausalito	Sausalito - Bridgeway/US 101 Off Ramp Bicycle Imps	Archive project as it has been completed	$0	0.0%
MRN130005	San Rafael	San Rafael Transit Center Pedestrian Access Imps.	Archive this project as it has been completed	$0	0.0%
MRN130009	Fairfax	Parkade Circulation and Safety Improvements	Archive project as it has been completed	$0	0.0%
MRN150008	San Rafael	Grand Avenue Bicycle Pedestrian Improvements	Archive this project as it has been completed	$0	0.0%
MRN150016	Novato	Vineyard Road Improvements	Archive project as project is complete	$0	0.0%
MRN170011	Transportation Authority of Marin (TAM)	North-South Greenway Gap Closure	Archive project as it has been completed	$0	0.0%
MRN170012	San Rafael	Francisco Boulevard East Sidewalk Widening	Archive project as all funds have obligated	$0	0.0%
MRN170016	San Rafael	Francisco Blvd West Multi-Use Pathway	Archive this project as it has been completed	$0	0.0%
MRN170019	Corte Madera	Corte Madera-Paradise Drive Multiuse Path	Archive project as all funds have obligated	$0	0.0%
MRN170020	San Anselmo	San Anselmo Bike Spine	Archive project as all funds have obligated	$0	0.0%
MRN170021	San Anselmo	Sir Francis Drake Blvd Pavement Rehabilitation	Archive project as all funds have obligated	$0	0.0%
MRN170022	Novato	Novato-Measure A Group 10 Pavement Rehabilitation	Archive this project as it has been completed	$0	0.0%
MRN170023	Corte Madera	Central Marin Regional Pathway Gap Closure	Archive project as all funding has been allocated	$0	0.0%
MRN190002	Novato	Novato Annual Pavement Rehabilitation	Archive project as the project is complete	$0	0.0%
NAP110014	Napa Valley Transportation Authority	Napa Valley Vine Trail Design and Construction	Archive as project is complete	$0	0.0%
NAP110028	Napa (City)	California Boulevard Roundabouts	Archive project as all funds have obligated	$0	0.0%
NAP170002	Napa County	Napa County: 2014 Earthquake Pavement Repair	Archive project as it has been completed	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
NAP170008	Napa County	Silverado Trail Phase L Rehab	Archive project as all funds have obligated	$0	0.0%
REG130005	Metropolitan Transportation Commission (MTC)	Bay Area Housing Initiatives	Archive this project as the funding has been allocated	$0	0.0%
REG170010	Metropolitan Transportation Commission (MTC)	Reg. Prog. for Arterial System Synchronization	Archive this project as the funding has been obligated	$0	0.0%
REG170012	Metropolitan Transportation Commission (MTC)	Shared Use Mobility	Archive this project as all funding has been obligated	$0	0.0%
REG170015	Metropolitan Transportation Commission (MTC)	Innovative Deployments to Enhance Arterials Ct 1-2	Archive this project as the funding has been obligated	$0	0.0%
SCL130001	Santa Clara Valley Transportation Authority (VTA)	SR 237/US 101/Mathilda Interchange Modifications	Archive this project as this has been completed.	$0	0.0%
SCL170025	Sunnyvale	Fair Oaks Avenue Bikeway - Phase 2	Archive this project as the funding has been obligated	$0	0.0%
SCL170030	San Jose	McKee Road Safety Improvements	Archive as all funds have obligated	$0	0.0%
SCL170057	Sunnyvale	Sunnyvale Ped and Bike Infrastructure Improvements	Archive this project as the funding has been obligated	$0	0.0%
SCL170063	Morgan Hill	Dunne Avenue Pavement Rehabilitation	Archive this project as the funding has been obligated	$0	0.0%
SCL170065	Santa Clara Valley Transportation Authority (VTA)	IDEA Cat 2: Valley Transportation Authority	Archive this project as all funding has been obligated.	$0	0.0%
SCL210005	Santa Clara County	Active and Safe Routes to a Healthier City	Archive this project as the funding has been allocated	$0	0.0%
SF-130011	San Francisco Dept of Public Works (SFDPW)	SF- Second Street Complete Streets and Road Diet	Archive this project as all funding has been obligated.	$0	0.0%
SF-130021	Port of San Francisco	Pier 70 19th Street & Illinois Street Sidewalk	Archive project as all funds have obligated	$0	0.0%
SF-150001	San Francisco Dept of Public Works (SFDPW)	John Yehall Chin Safe Routes to School	Archive this project as all funding has been obligated.	$0	0.0%
SF-190005	San Francisco Municipal Transport Agency (SFMTA)	6th Street Pedestrian Safety Improvements	Archive project as the funding has been allocated	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
SF-190010	San Francisco Dept of Public Works (SFDPW)	Alemany Interchange Improvements, Phase 2	Archive this project as all funding has been obligated.	$0	0.0%
SM-150012	Daly City	Daly City Central Corridor Bike/Ped Safety Imprmnt	Archive this project as the funding has been allocated	$0	0.0%
SM-150015	South San Francisco	SSF Linden/Spruce Ave Traffic Calming Improvements	Archive this project as it has been completed	$0	0.0%
SM-170014	San Mateo County	San Mateo Countywide Pavement Maintenance	Archive as all funds have obligated	$0	0.0%
SM-170015	Burlingame	Hoover School Area Sidewalk Impvts (Summit Dr.)	Archive this project as it has been completed	$0	0.0%
SM-170020	Burlingame	Burlingame: Broadway PDA Lighting Improvements	Archive project as all funds have obligated	$0	0.0%
SM-170021	Burlingame	Burlingame Street Resurfacing	Archive this project as it has been completed	$0	0.0%
SM-170022	Colma	Colma - Mission Road Bike/Ped Improvements	Archive this project as it has been completed	$0	0.0%
SM-170023	Daly City	Daly City Street Resurfacing and Slurry Seal	Archive this project as the funding has been obligated	$0	0.0%
SM-170024	East Palo Alto	East Palo Alto Citywide Street Resurfacing	Archive this project as it has been completed	$0	0.0%
SM-170026	Hillsborough	Hillsborough Street Resurfacing	Archive this project as it has been completed	$0	0.0%
SM-170027	Menlo Park	Menlo Park-Santa Cruz Avenue & Middle Avenue Rehab	Archive as funds have obligated	$0	0.0%
SM-170028	Millbrae	Millbrae Street Rehabilitation	Archive as project is completed	$0	0.0%
SM-170029	Pacifica	Pacifica - Palmetto Sidewalk Extension	Archive this project as it has been completed	$0	0.0%
SM-170032	Redwood City	Redwood City Pavement Preservation	Archive this project as it has been completed	$0	0.0%
SM-170033	San Bruno	Huntington/San Antonio Street Rehabilitation	Archive this project as it has been completed	$0	0.0%
SM-170034	San Carlos	Ped Enhancements Arroyo/Cedar & Hemlock/Orange	Archive this project as it has been completed	$0	0.0%
SM-170035	San Carlos	Cedar and Brittan Ave Pavement Rehab	Archive this project as it has been completed.	$0	0.0%
SM-170036	South San Francisco	SSF Pavement Rehabilitation	Archive as project has been completed	$0	0.0%
SM-170037	Woodside	Road Rehabilitation - Town of Woodside	Archive this project as it has been completed	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
SM-170038	San Mateo (City)	North San Mateo Drive Sustainable Streets	Update the funding plan to change the source for $460K in prior year Local CON funds to $400K in TDA and $60K in Sales Tax and add $140K in Sales Tax funds and archive this project as it has been completed	$140,000	3.5%
SM-170039	San Mateo (City)	Laurie Meadows Ped/Bike Safety Improvements	Archive this project as it has been completed	$0	0.0%
SM-170040	San Mateo (City)	San Mateo Street Rehabilitation	Archive as all funds have obligated	$0	0.0%
SM-170042	Belmont	Ralston Avenue Corridor Bike-Ped Imps	Archive as all funds have obligated	$0	0.0%
SM-190008	Atherton	Atherton Street Preservation	Archive this project as it has been completed	$0	0.0%
SOL170006	Fairfield	East Tabor Tolenas SR2S Sidewalk Gap Closure	Archive this project as the funding has been allocated	$0	0.0%
SON110050	Sonoma County Regional Parks	Central Sonoma Valley Trail	Archive project as it has been completed	$0	0.0%
SON130010	Sonoma County	Sonoma County Various Streets & Roads Preservation	Archive this project as the funding has been obligated	$0	0.0%
SON130012	Windsor	Conde Ln/Johnson St Pedestrian Improvements	Archive project as it has been completed	$0	0.0%
SON130013	Windsor	Bell Rd/Market St/Windsor River Rd Ped Improvement	Archive this project as it has been completed	$0	0.0%
SON130015	Sonoma County	Bodega Highway Pavement Rehabilitation	Archive as project is complete	$0	0.0%
SON130016	Cloverdale	Cloverdale - Safe Routes to School Phase 2	Archive this project as it has been completed	$0	0.0%
SON150010	Sonoma County Transportation Authority (SCTA)	Santa Rosa Car Share	Archive project as all funds have obligated	$0	0.0%
SON150011	Sonoma County	Sonoma SRTS High School Pilot	Archive project as all funding has been allocated	$0	0.0%
SON170010	Sonoma County	Sonoma County - River Road Pavement Rehab	Archive as federal funds have obligated	$0	0.0%
SON170011	Petaluma	Petaluma Blvd South Road Diet at E Street	Archive project as all funds have obligated	$0	0.0%
SON170013	Sonoma County	Rehabilitaiton of Various Roads in Sonoma County	Archive this project as the funding has been obligated	$0	0.0%
SON170015	Cotati	E. Cotati Avenue Street Rehabilitation	Archive project as all funding has been allocated	$0	0.0%
SON170016	Rohnert Park	Rohnert Park Various Streets Rehabilitation	Archive project as all funds have obligated	$0	0.0%

System: Port Freight Rail

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
ALA110046	Oakland	Oakland Army Base Infrastructure Improvements	Update the funding plan to remove $34M in RTP-LRP and archive this project as it has been completed	-$34,000,000	-11.3%
System: Public Land Trail					
ALA130035	Berkeley	Bay Trail Shoreline Access Staging Area	Archive project from the TIP as it has been completed	$0	0.0%
ALA150048	Berkeley	9th St Bicycle Blvd Extension Pathway Ph II	Archive project as it has been completed	$0	0.0%
MRN130013	San Anselmo	Sunny Hill Ridge and Red Hill Trails	Archive this project as it has been completed	$0	0.0%
MRN170026	Novato	Hill Recreation Area Improvements	Archive this project as it has been completed	$0	0.0%
NAP130008	Yountville	Hopper Creek Pedestrian Bridge and Path Project	Archive this project as the funding has been allocated	$0	0.0%
NAP170007	Napa (City)	Vine Trail Gap Closure - Soscol Avenue Corridor	Archive project as all funds have obligated	$0	0.0%
REG210201	Metropolitan Transportation Commission (MTC)	Priority Conservation Area Grant Implementation	Amend a new exempt project into the TIP with $525K in STP and $500K in Regional Exchange Funds	$1,025,000	~%
SCL170056	Santa Clara (City)	Santa Clara School Access Improvements	Archive this project as all federal funds have been obligated	$0	0.0%
System: Region					
REG090042	Metropolitan Transportation Commission (MTC)	511 Traveler Information	Archive this project as the funding has been obligated	$0	0.0%
REG170004	Metropolitan Transportation Commission (MTC)	Bay Bridge Forward - Commuter Parking Initiative	Archive this project as the funding has been allocated	$0	0.0%
REG170019	Bay Area Air Quality Management District (BAAQMD)	Spare the Air	Archive this project as the funding has been obligated	$0	0.0%
REG170020	Bay Area Air Quality Management District (BAAQMD)	Electric Vehicle Programs and Outreach	Archive this project as the funding has been obligated	$0	0.0%
REG170021	Bay Area Air Quality Management District (BAAQMD)	Electric Vehicle Infrastructure/Vehicle Buyback	Archive this project as the funding has been allocated	$0	0.0%
REG170024	Metropolitan Transportation Commission (MTC)	Bay Bridge Forward-Commuter Parking Initiative O&M	Archive this project as the funding has been obligated	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
REG170025	Metropolitan Transportation Commission (MTC)	Community Based Transportation Planning	Archive this project as the funding has been obligated	$0	0.0%
REG170028	Metropolitan Transportation Commission (MTC)	Regional Car Sharing	Archive project as all funding has been obligated	$0	0.0%
System: State Highway					
ALA170011	Metropolitan Transportation Commission (MTC)	Bay Bridge Forward - West Grand HOV/Bus Only Lane	Archive project as all funding has been allocated	$0	0.0%
CC-190011	Metropolitan Transportation Commission (MTC)	Richmond-San Rafael Bridge Bicycle Access	Archive this project as the funding has been allocated	$0	0.0%
NAP150001	Calistoga	SR 128 and Petrified Forest Intersection Imp	Archive this project as the funding has been allocated	$0	0.0%
REG170005	Metropolitan Transportation Commission (MTC)	Bay Bridge Forward - Flexible On-Demand Transit	Archive this project as the funding has been allocated	$0	0.0%
REG170007	Metropolitan Transportation Commission (MTC)	Incident Management Program	Archive this project as the funding has been obligated	$0	0.0%
REG170018	Metropolitan Transportation Commission (MTC)	Connected & Automated Vehicles	Archive this project as the funding has been obligated	$0	0.0%
SCL130044	Santa Clara Valley Transportation Authority (VTA)	I-880 Stevens Creek Landscaping	Archive this project as this has been completed.	$0	0.0%
SCL190008	Santa Clara Valley Transportation Authority (VTA)	US 101/De L Cruz Blvd - Trimble Road I/C Imp	Update the funding plan to add $22.4M in Sales Tax funds and archive this project as all funding has been obligated.	$22,400,000	42.3%
SCL190015	Santa Clara Valley Transportation Authority (VTA)	I-280/Saratoga Avenue Interchange Improvement	Delete this project from the TIP as funding has been redirected. The project will be added back to the TIP once future funding has been identified	-$60,000,000	-100.0%
SCL190016	Santa Clara Valley Transportation Authority (VTA)	I-280 NB Braided Ramps btw Foothill Expwy & SR 85	Delete this project from the TIP as funding has been redirected. The project will be added back to the TIP once future funding has been identified	-$54,000,000	-100.0%
SCL190017	Santa Clara Valley Transportation Authority (VTA)	I-680/ Alum Rock/ McKee Road Interchange Imp	Delete this project from the TIP as funding has been redirected. The project will be added back to the TIP once future funding has been identified	-$47,000,000	-100.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
SF-170003	Metropolitan Transportation Commission (MTC)	Bay Bridge Forward-Sterling/Bryant St Managed Lane	Archive project as it all funds have been allocated	$0	0.0%
SM-090015	Half Moon Bay	Route 1 improvements in Half Moon Bay	Archive this project as the funding has been allocated	$0	0.0%
SM-190004	Metropolitan Transportation Commission (MTC)	FPP: US 101 Adaptive Ramp Metering	Archive this project as the funding has been obligated	$0	0.0%
VAR170013	Metropolitan Transportation Commission (MTC)	Bay Bridge Forward - Casual Carpool	Archive this project as the funding has been allocated	$0	0.0%
VAR170014	Metropolitan Transportation Commission (MTC)	Bay Bridge Forward - Integrated Bridge Corridor	Archive this project as the funding has been allocated	$0	0.0%
VAR170021	Metropolitan Transportation Commission (MTC)	Freeway Performance Program: I-880 Corridor	Archive this project as all funding has been obligated	$0	0.0%
VAR190003	Metropolitan Transportation Commission (MTC)	FPP: I-80 in Alameda, Contra Costa and SF	Archive this project as the funding has been obligated	$0	0.0%
VAR190004	Metropolitan Transportation Commission (MTC)	Freeway Performance Program: SR 37	Archive this project as the funding has been obligated	$0	0.0%
System: Toll Way					
REG130004	Bay Area Infrastructure Financing Authority(BAIFA)	Regional Express Lane Network	Archive project as all funding has been allocated	$0	0.0%
System: Transit					
ALA010034	Alameda Contra Costa Transit District (AC Transit)	AC Transit: Facilities Upgrade	Archive this project as the funding has been put into grants	$0	0.0%
ALA030030	Livermore Amador Valley Transit (LAVTA)	LAVTA: Preventive Maintenance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	$0	0.0%
ALA090068	Bay Area Rapid Transit District (BART)	MacArthur BART Plaza Remodel	Archive project from the TIP as it has been completed	$0	0.0%
ALA110003	Bay Area Rapid Transit District (BART)	Hayward Shop and Yard Expansion	Archive this old listing. Will create new listing for Hayward Fleet Maintenance Facilities	$0	0.0%
ALA110099	Altamont Commuter Express (ACE)	ACE Preventative Maintenance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	-$1,000,000	-23.7%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
ALA130032	Bay Area Rapid Transit District (BART)	BART Metro Priority Track Elements	Archive this project as the funding has been obligated	$0	0.0%
ALA150020	Alameda Contra Costa Transit District (AC Transit)	AC Transit: South County Corridors	Archive this project as the funding has been put into grants	$0	0.0%
ALA150031	Livermore Amador Valley Transit (LAVTA)	LAVTA: Replacement (11) 40' Hybrid Buses	Archive this project as all funding has been put into grants	$0	0.0%
ALA150032	Livermore Amador Valley Transit (LAVTA)	LAVTA: Replacement (9) 30' Hybrid Buses	Archive this project as all funding has been obligated	$0	0.0%
ALA150035	Livermore Amador Valley Transit (LAVTA)	LAVTA: Farebox Replacement	Archive this project as all funding has been obligated	$0	0.0%
ALA150038	Alameda Contra Costa Transit District (AC Transit)	AC Transit: Purchase (10) Double-Deck Diesel Buses	Archive this project as the funding has been put into grants	$0	0.0%
ALA150045	Alameda Contra Costa Transit District (AC Transit)	AC Transit: PM - Exchange for 40ft Fuel Cell ZEB	Archive this project as the funding has been put into grants	$0	0.0%
ALA150052	Alameda Contra Costa Transit District (AC Transit)	AC Transit: SFOBB Forward	Archive project from the TIP as it has been completed	$0	0.0%
ALA170013	Union City Transit	Union City Transit Travel Time Improvements	Archive project from the TIP as it has been completed	$0	0.0%
ALA170014	Union City Transit	Union City Paratransit Van Procurement	Archive project as the funding has been put into grants	$0	0.0%
ALA170027	Alameda Contra Costa Transit District (AC Transit)	AC Transit: Purchase 36 Coach Buses (MCIs)	Archive this project as the funding has been put into grants	$0	0.0%
ALA170028	Alameda Contra Costa Transit District (AC Transit)	AC Transit: Purchase (35) 40ft Diesel Buses	Archive this project as the funding has been put into grants	$0	0.0%
ALA170029	Alameda Contra Costa Transit District (AC Transit)	AC Transit: Preventive Maintenance (Swap)	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	$0	0.0%
ALA170030	Alameda Contra Costa Transit District (AC Transit)	AC Transit: Preventive Maintenance (Deferred Comp)	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	$0	0.0%
ALA170039	Union City Transit	Union City: ADA Paratransit Operating Subsidy	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
ALA170041	Alameda Contra Costa Transit District (AC Transit)	AC Transit: 5 Battery Electric Bus purchase	Archive this project as the funding has been put into grants	$0	0.0%
ALA170058	Metropolitan Transportation Commission (MTC)	Bay Bridge Forward: West Grand TSP	Archive this project as the funds have been obligated	$0	0.0%
ALA170059	Alameda Contra Costa Transit District (AC Transit)	San Pablo and Telegraph Ave Rapid Bus Upgrades	Archive as funds have obligated	$0	0.0%
ALA170082	Alameda Contra Costa Transit District (AC Transit)	AC Transit: Purchase 40 Zero-Emission Buses	Archive this project as the funding has been put into grants	$0	0.0%
ALA170091	Livermore Amador Valley Transit (LAVTA)	Livermore Transit Center Rehab and Improvement	Archive this project as all funding has been obligated	$0	0.0%
ALA190005	Livermore Amador Valley Transit (LAVTA)	Hybrid Bus Battery Pack Replacement	Archive this project as all funding has been obligated	$0	0.0%
ALA210003	Livermore Amador Valley Transit (LAVTA)	LAVTA Replacement 40' Hybrid Buses	Archive this project as all funding has been obligated	$0	0.0%
ALA210004	Livermore Amador Valley Transit (LAVTA)	LAVTA Fareboxes for Replacement Vehicles	Archive this project as all funding has been obligated	$0	0.0%
ALA210005	Livermore Amador Valley Transit (LAVTA)	LAVTA AVLs for Replacement Vehicles	Archive this project as all funding has been obligated	$0	0.0%
ALA210006	Livermore Amador Valley Transit (LAVTA)	LAVTA Radios for Replacement Vehicles	Archive this project as all funding has been obligated	$0	0.0%
ALA990076	Alameda Contra Costa Transit District (AC Transit)	AC Transit: ADA Paratransit Assistance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%
ALA990077	Livermore Amador Valley Transit (LAVTA)	LAVTA: ADA Paratransit Operating Subsidy	Archive this project as all funding has been obligated and future funding will be included in MTC Group Listing	$0	0.0%
BRT99T01B	Bay Area Rapid Transit District (BART)	BART:ADA Paratransit Capital Accessibility Improve	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%
CC-030025	Western Contra Costa Transit Authority (WestCAT)	WCCTA: Preventive Maintenance Program	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	$0	0.0%
CC-030035	Eastern Contra Costa Transit Authority (Tri Delta)	Tri-Delta: ADA Operating Assistance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
CC-130045	Central Contra Costa Transit Agency (CCCTA)	CCCTA: Access Improvements Implementation	Archive this project as the funding has been obligated	$0	0.0%
CC-150006	Central Contra Costa Transit Agency (CCCTA)	CCCTA: Replace 18 30' Buses	Archive this project as the funding has been put into grants	$0	0.0%
CC-150007	Central Contra Costa Transit Agency (CCCTA)	CCCTA: Replace 13 35' Buses	Archive this project as the funding has been put into grants	$0	0.0%
CC-150012	Central Contra Costa Transit Agency (CCCTA)	REMIX Software Implementation	Archive this project as it has been completed	$0	0.0%
CC-150015	Western Contra Costa Transit Authority (WestCAT)	WestCAT: Purchase (1) Fast Fare Electronic Farebox	Archive this project as it has been completed	$0	0.0%
CC-150019	Bay Area Rapid Transit District (BART)	Concord Yard Wheel Truing Facility	Archive as federal funds have obligated	$0	0.0%
CC-150021	Western Contra Costa Transit Authority (WestCAT)	WestCAT - AVL System with APC Element.	Archive this project as it has been completed	$0	0.0%
CC-170006	Western Contra Costa Transit Authority (WestCAT)	WestCAT: Replace (2) 2002 40ft Revenue Vehicles	Archive this project as it has been completed	$0	0.0%
CC-170007	Western Contra Costa Transit Authority (WestCAT)	WestCAT: Purchase 2 Fast Fare Electronic Fareboxes	Archive this project as it has been completed	$0	0.0%
CC-170008	Western Contra Costa Transit Authority (WestCAT)	WestCAT Replace (6) 2008 35ft Revenue Vehicles	Archive this project as it has been completed	$0	0.0%
CC-170009	Western Contra Costa Transit Authority (WestCAT)	WestCAT: Purchase (6) Electronic Fareboxes	Archive this project as it has been completed	$0	0.0%
CC-170010	Western Contra Costa Transit Authority (WestCAT)	WestCAT Replace 5 35ft and 4 40ft Vehicles	Archive this project as it has been completed	$0	0.0%
CC-170011	Western Contra Costa Transit Authority (WestCAT)	WestCAT: Purchase (9) Electronic Fareboxe	Archive this project as it has been completed	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
CC-170012	Western Contra Costa Transit Authority (WestCAT)	WestCAT - Replace (2) DAR MiniVans	Archive this project as it has been completed	$0	0.0%
CC-170013	Western Contra Costa Transit Authority (WestCAT)	WestCAT: Purchase of (2) Radio Systems	Archive this project as it has been completed	$0	0.0%
CC-170024	Bay Area Rapid Transit District (BART)	El Cerrito del Norte BART Station Modernization	Archive project as it has been completed	$0	0.0%
CC-170051	Central Contra Costa Transit Agency (CCCTA)	CCCTA Replace 42 Ford Cutaways - 22"	Archive this project as the funding has been put into grants	$0	0.0%
CC-170053	Central Contra Costa Transit Agency (CCCTA)	CCCTA Replace 3 Gasoline 7-Year Paratransit Vans	Archive this project as the funding has been put into grants	$0	0.0%
CC-190010	Eastern Contra Costa Transit Authority (Tri Delta)	ECCTA: Oakley Park and Ride	Archive project as the funding has been put into grants	$0	0.0%
CC-990045	Western Contra Costa Transit Authority (WestCAT)	WestCat: ADA Paratransit Operating Subsidy	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%
MRN110040	Marin County Transit District	MCTD Preventive Maintenance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	$0	0.0%
MRN110041	Marin County Transit District	Marin Transit Low Income Youth Pass Program	Archive this project as the funding has been allocated	$0	0.0%
MRN110047	Marin County Transit District	MCTD: ADA Paratransit Assistance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%
MRN130001	Golden Gate Bridge, Highway and Transit District	Larkspur Ferry Terminal Parking Garage	Archive project as funding has been allocated. Project will be added back to the TIP once future funding has been identified	$0	0.0%
MRN150003	Marin County Transit District	MCTD: On Board Vehicle Equipment	Archive this project as it has been completed	$0	0.0%
MRN150005	Golden Gate Bridge, Highway and Transit District	MS Sonoma Ferry Boat Refurbishment	Archive this project as the funding has been put into grants	$0	0.0%
MRN150012	Marin County Transit District	MCTD - Replace 13 -40ft Buses	Archive this project as it has been completed	$0	0.0%
MRN150013	Marin County Transit District	MCTD - Emergency Radio System	Archive this project as it has been completed	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
MRN170006	Marin County Transit District	MCTD: Replace Articulated Vehicles	Archive this project as all funding has been obligated	$0	0.0%
MRN170007	Marin County Transit District	MCTD-Replace diesel vehicles	Archive this project as the funding has been put into grants	$0	0.0%
MRN170008	Golden Gate Bridge, Highway and Transit District	GGBHTD: Replace 67 Diesel Buses with Hybrid Buses	Archive this project as it has been completed	$0	0.0%
MRN170009	Golden Gate Bridge, Highway and Transit District	GGBHTD: Replace Paratransit Vehicles	Archive this project as it has been completed	$0	0.0%
MRN170024	Golden Gate Bridge, Highway and Transit District	Replace 14 - 22' Gas Body-on-Chassis Vehicles	Archive this project as it has been completed	$0	0.0%
MRN210001	Marin County Transit District	MCTD: Replacement Paratransit Vehicles	Archive this project as the funding has been put into grants	$0	0.0%
MRN210002	Marin County Transit District	MCTD - Bus Stop Improvements	Archive project as all funds have obligated	$0	0.0%
NAP030004	Napa Valley Transportation Authority	NVTA: ADA Operating Assistance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%
NAP190004	Metropolitan Transportation Commission (MTC)	Napa Valley Forward	Archive this project as the funding has been allocated	$0	0.0%
NAP970010	Napa Valley Transportation Authority	Napa Vine Operating Assistance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190006	$0	0.0%
REG090045	Metropolitan Transportation Commission (MTC)	Clipper Fare Collection System	Archive this project as the funding has been obligated	$0	0.0%
REG090055	Water Emergency Transportation Authority (WETA)	WETA: Ferry Propulsion System Replacement	Archive this project as the funding has been put into grants	$0	0.0%
REG110020	Water Emergency Transportation Authority (WETA)	WETA: Facilities Rehabilitation	Archive this project as the funding has been put into grants	$0	0.0%
REG110039	Metropolitan Transportation Commission (MTC)	GL: 5307 JARC Set-aside FY13-FY14 Large UA	Archive this grouped listing as the funding has been put into grants	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
REG150004	Metropolitan Transportation Commission (MTC)	GL: Lifeline Cycle 4 5307 JARC	Archive this grouped listing as the funding has been put into grants	$0	0.0%
REG150005	Bay Area Rapid Transit District (BART)	Transit-Oriented Development Pilot Planning Progra	Archive this project as all funding has been put into grants	$0	0.0%
REG170008	Bay Area Rapid Transit District (BART)	BART Integrated Carpool to Transit Access Program	Archive this project as it has been completed.	$0	0.0%
REG170009	Bay Area Rapid Transit District (BART)	BART Train Seat Modification	Archive project as all funding has been obligated	$0	0.0%
REG210202	Caltrain	Caltrain Mini-High Platform Improvements	Amend a new exempt project into the TIP with $460K in Community Project Earmark funds and $115K in Local funds	$575,000	~%
SCL050046	Santa Clara Valley Transportation Authority (VTA)	VTA: ADA Operating Set Aside	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%
SCL110104	Santa Clara Valley Transportation Authority (VTA)	VTA: Light Rail Track Crossovers and Switches	Update the funding plan to remove $28M in RTP-LRP and archive this project as it has been completed.	-$28,229,895	-80.2%
SCL150005	Santa Clara Valley Transportation Authority (VTA)	VTA Train to Wayside Communication System Upgrade	Archive this project as the funding has been put into grants	$0	0.0%
SCL150006	Santa Clara Valley Transportation Authority (VTA)	VTA: Back-up Power for Elevated Stations	Archive this project as the funding has been put into grants	$0	0.0%
SCL170002	Santa Clara Valley Transportation Authority (VTA)	VTA BART Phase II TOD and Station Access Planning	Archive this project as the funding has been put into grants	$0	0.0%
SCL170006	Santa Clara Valley Transportation Authority (VTA)	VTA: Replace Fault Monitoring System on LRVs	Archive this project as the funding has been put into grants	$0	0.0%
SCL170007	Santa Clara Valley Transportation Authority (VTA)	VTA: Pedestrian Swing Gates Replacement	Archive this project as the funding has been put into grants	$0	0.0%
SCL170008	Santa Clara Valley Transportation Authority (VTA)	VTA: Vasona Pedestrian Back Gates	Archive this project as the funding has been put into grants	$0	0.0%
SCL170009	Santa Clara Valley Transportation Authority (VTA)	VTA: Chaboya Yard Well Removal	Archive this project as it has been completed.	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
SCL170010	Santa Clara Valley Transportation Authority (VTA)	VTA: Guadalupe Train Wash Replacement	Archive this project as the funding has been put into grants	$0	0.0%
SCL170011	Santa Clara Valley Transportation Authority (VTA)	VTA: Upgrade Rail Grade Crossing Control Equipment	Archive this project as the funding has been put into grants	$0	0.0%
SCL170046	Santa Clara Valley Transportation Authority (VTA)	VTA: Systemwide Security Improvements	Archive this project as the funding has been put into grants	$0	0.0%
SCL170048	Santa Clara Valley Transportation Authority (VTA)	VTA: Light Rail Roadway Protection System	Archive this project as the funding has been allocated	$0	0.0%
SCL170049	Santa Clara Valley Transportation Authority (VTA)	VTA: SCADA Middleware Replacement	Archive this project as the funding has been put into grants	$0	0.0%
SCL190023	Santa Clara Valley Transportation Authority (VTA)	VTA: Bus CCTV Replacement	Archive this project as the funding has been put into grants	$0	0.0%
SCL190024	Santa Clara Valley Transportation Authority (VTA)	VTA: Transit Center Park and Ride Rehab	Archive this project as the funding has been put into grants	$0	0.0%
SCL190025	Santa Clara Valley Transportation Authority (VTA)	VTA: Gigabit Ethernet Network	Archive this project as all funding has been obligated.	$0	0.0%
SCL190027	Santa Clara Valley Transportation Authority (VTA)	VTA: SCADA Hardware, Software, Network Upgrade	Archive this project as the funding has been put into grants	$0	0.0%
SCL190035	Santa Clara Valley Transportation Authority (VTA)	VTA - Not on Transit Program	Archive this project as all funding has been obligated.	$0	0.0%
SCL190037	Santa Clara Valley Transportation Authority (VTA)	VTA: Bus & LR Vehicle Mobile Router Replacement	Archive this project as the funding has been put into grants	$0	0.0%
SCL190040	Santa Clara Valley Transportation Authority (VTA)	VTA: Fuel Dispenser & UDC Replacement	Archive this project as all funding has been obligated.	$0	0.0%
SCL190041	Santa Clara Valley Transportation Authority (VTA)	VTA: Replace UPSs and PDU in OCC/EOC	Archive this project as the funding has been put into grants	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
SCL190043	Santa Clara Valley Transportation Authority (VTA)	Replace/Upgrade Fire Alarm at Guadalupe & Chaboya	Archive this project as the funding has been put into grants	$0	0.0%
SCL190044	Santa Clara Valley Transportation Authority (VTA)	VTA: Network & Gigabit Fiber Upgrade	Archive this project as the funding has been put into grants	$0	0.0%
SCL190045	Santa Clara Valley Transportation Authority (VTA)	VTA: Cameras for VTA ACCESS Paratransit Vehicles	Archive this project as the funding has been put into grants	$0	0.0%
SCL190046	Santa Clara Valley Transportation Authority (VTA)	VTA: Rehab of LR System Elevators and Escalators	Archive this project as the funding has been put into grants	$0	0.0%
SCL190047	Santa Clara Valley Transportation Authority (VTA)	VTA: Downtown San Jose Speed Improvements	Archive this project as the funding has been put into grants	$0	0.0%
SCL190049	Santa Clara Valley Transportation Authority (VTA)	VTA: Public Address System Upgrade	Archive this project as the funding has been put into grants	$0	0.0%
SCL190050	Santa Clara Valley Transportation Authority (VTA)	VTA: LR Platform CCTV System Replacement	Archive this project as the funding has been put into grants	$0	0.0%
SCL190051	Santa Clara Valley Transportation Authority (VTA)	VTA: Pedestrian Backgates - Non-Vasona	Archive this project as the funding has been put into grants	$0	0.0%
SCL190052	Santa Clara Valley Transportation Authority (VTA)	VTA: Guadalupe Roll Up Doors	Archive this project as the funding has been put into grants	$0	0.0%
SCL190054	Santa Clara Valley Transportation Authority (VTA)	VTA: Guadalupe Entrance Security Improvement	Archive this project as the funding has been put into grants	$0	0.0%
SCL210010	Santa Clara Valley Transportation Authority (VTA)	VTA: Ohlone/Chynoweth Interlocking	Archive this project as the funding has been put into grants	$0	0.0%
SCL210011	Santa Clara Valley Transportation Authority (VTA)	VTA: LRV Electronic Equipment Modernization	Delete this project as it will not be completed.	-$7,761,360	-100.0%
SCL210201	Santa Clara Valley Transportation Authority (VTA)	VTA ZEB Transition On-Route Charging Pilot	Amend a new exempt project into the TIP with $15.6M in 5339 Discretionary and $3.9M in Local funds	$19,486,000	~%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
SCL990046	Santa Clara Valley Transportation Authority (VTA)	VTA: Preventive Maintenance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	$0	0.0%
SF-130010	San Francisco County Transport Authority (SFCTA)	Construct Treasure Island Bus Terminal Facility	Archive this project as the funding has been allocated	$0	0.0%
SF-150005	San Francisco Municipal Transport Agency (SFMTA)	SFMTA - Replacement of 40' Motor Coaches	Archive this project as the funding has been put into grants	$0	0.0%
SF-150006	San Francisco Municipal Transport Agency (SFMTA)	SFMTA Replacement of 60' Motor Coaches	Archive this project as the funding has been put into grants	$0	0.0%
SF-170006	San Francisco Municipal Transport Agency (SFMTA)	SFMTA: Station-area Ped and Bike Access Improvemnt	Archive this project as the funding has been put into grants	$0	0.0%
SF-170008	San Francisco Municipal Transport Agency (SFMTA)	SFMTA: Replace 35 Paratransit Cutaway Vans	Archive this project as the funding has been allocated	$0	0.0%
SF-170020	San Francisco Municipal Transport Agency (SFMTA)	SFMTA: Replacement of 30' Motor Coaches	Archive project as it has been completed	$0	0.0%
SF-170022	Golden Gate Bridge, Highway and Transit District	GGBHTD: Replace 2 Paratransit Vehicles	Archive this project as the funding has been put into grants	$0	0.0%
SF-190001	San Francisco Municipal Transport Agency (SFMTA)	Woods Bus Facility Modernization	Archive project as all funds have been put into grants	$0	0.0%
SF-190002	San Francisco Municipal Transport Agency (SFMTA)	L-Taraval - SGR Project Elements	Archive this project as it has been completed	$0	0.0%
SF-190003	San Francisco Municipal Transport Agency (SFMTA)	Muni Metro East Facility - Boiler Replacement	Archive this project as the funding has been put into grants	$0	0.0%
SF-190004	San Francisco Municipal Transport Agency (SFMTA)	SFMTA-Facilities Condition Assessment Repairs	Archive project as the funding has been put into grants	$0	0.0%
SF-210002	San Francisco Municipal Transport Agency (SFMTA)	SFMTA National Transit Adaptation Strategy	Archive this project as it has been completed	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
SF-990022	San Francisco Municipal Transport Agency (SFMTA)	SFMTA: ADA Paratransit Operating Support	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%
SM-030023	San Mateo County Transit District (SAMTRANS)	SAMTRANS: Preventive Maintenance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	$0	0.0%
SM-050005	Bay Area Rapid Transit District (BART)	BART: Preventive Maintenance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	$0	0.0%
SM-070049	San Mateo County Transit District (SAMTRANS)	SAMTRANS Facility/Equipment Rehab/Replacement	Archive project as it has been completed	$0	0.0%
SM-130029	Bay Area Rapid Transit District (BART)	Daly City BART Station Intermodal Improvements	Archive project as it has been completed	$0	0.0%
SM-150010	San Mateo County Transit District (SAMTRANS)	SamTrans - Replacement of Cutaway Buses	Archive this project as future paratransit vehicle replacements will be programmed on SM-210015	$0	0.0%
SM-150011	San Mateo County Transit District (SAMTRANS)	SamTrans - Purchase of Replacement Minivans	Archive this project as future paratransit vehicle replacements will be programmed on SM-210015	$0	0.0%
SM-170005	Caltrain	South San Francisco Caltrain Station Improvements	Archive this project as the funding has been put into grants	$0	0.0%
SM-170008	San Mateo County Transit District (SAMTRANS)	El Camino Real Traffic Signal Priority Project	Archive project as it has been completed	$0	0.0%
SM-990026	San Mateo County Transit District (SAMTRANS)	SAMTRANS: ADA Paratransit Operating Subsidy	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%
SOL010006	Fairfield	City of Fairfield Operating Assistance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190006	$0	0.0%
SOL010007	Vacaville	Vacaville Transit: Operating Assistance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190006	$0	0.0%
SOL070032	Solano County Transit (SolTrans)	SolTrans: Preventive Maintenance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	$0	0.0%
SOL110025	Solano County Transit (SolTrans)	SolTrans: ADA Paratransit Operating Subsidy	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%
SOL110040	Solano County Transit (SolTrans)	SolTrans: Operating Assistance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190006	$0	0.0%
SOL130017	Vacaville	Transit Marketing and Public Outreach	Archive this project as it has been completed	$0	0.0%

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
SOL170017	Solano Transportation Authority (STA)	SolanoExpress Capitol Improvements	Archive this project from the TIP as the funding has been allocated	$0	0.0%
SOL190001	Solano Transportation Authority (STA)	SolanoExpress Corp Yard Elec	Archive this project as the funding has been allocated	$0	0.0%
SON030005	Sonoma County Transit	Sonoma Co Transit: Preventive Maintenance Program	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	$0	0.0%
SON090023	Santa Rosa City Bus	Santa Rosa CityBus: Operating Assistance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190006	$0	0.0%
SON090024	Santa Rosa City Bus	Santa Rosa CityBus: Preventative Maintenance	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR190007	$0	0.0%
SON150007	Petaluma	Petaluma Transit: ADA Set-Aside	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%
SON150012	Sonoma County Transit	Sonoma County Transit: Replacement CNG Buses	Archive this project as the funding has been put into grants	$0	0.0%
SON150013	Sonoma County Transit	Sonoma County Transit: Replace 2006 CNG Buses	Archive this project as the funding has been put into grants	$0	0.0%
SON170003	Santa Rosa City Bus	Santa Rosa CityBus-paratransit operations	Archive this project as funding on this listing has been put into grants and future funding will be programmed on VAR210003	$0	0.0%
SON170018	Petaluma	Petaluma Purchase 1 Remanufactured Fixed Route Bus	Archive this project as the funding has been put into grants	$0	0.0%
SON170020	Petaluma	Petaluma: Replace 2 Paratransit Cutaways	Archive this project as the funding has been put into grants	$0	0.0%
SON190004	Petaluma	Petaluma: Purchase Replacement Paratransit Van	Archive this project as the funding has been put into grants	$0	0.0%
SON190005	Petaluma	Petaluma Transit: Security Systems Upgrade	Archive this project as the funding has been put into grants	$0	0.0%
VAR150001	Metropolitan Transportation Commission (MTC)	GL: FTA 5311 Rural Area FY16	Archive this grouped listing as the funding has been put into grants	$0	0.0%
VAR170018	Metropolitan Transportation Commission (MTC)	GL: FTA 5311 Rural Area FY17	Archive this grouped listing as the funding has been put into grants	$0	0.0%
VAR170019	Metropolitan Transportation Commission (MTC)	GL: FTA 5311 Rural Area FY18	Archive this grouped listing as the funding has been put into grants	$0	0.0%
VAR170026	Metropolitan Transportation Commission (MTC)	GL: FTA 5311 Rural Area FY19 and FY20	Archive this grouped listing as the funding has been put into grants	$0	0.0%

TIP Revision Summary
2021-26

Attachment 1

TIP ID	Sponsor	Project Name	Description of Change	Funding Change ($)	Funding Change (%)
VAR190005	Metropolitan Transportation Commission (MTC)	GL: FTA Section 5310 Program FY18 and FY19	Archive this grouped listing as the funding has been put into grants	$0	0.0%
VAR210201	Metropolitan Transportation Commission (MTC)	GL: FTA Section 5310 Program FY20 and FY21	Amend a new grouped listing into the TIP with $3.8M in 5310 and $8.5M in FTA COVID Relief Funds	$12,295,351	~%
			Total Funding Change:	-$61,699,904	

TIP Revision Summary

	Federal	State	Regional	Local	Total	2021 TIP Only
Current:	$2,159,147,935	$568,367,711	$365,666,530	$1,536,726,896	$4,629,909,072	$527,130,915
Proposed:	$2,181,807,998	$563,567,711	$366,166,530	$1,456,666,929	$4,568,209,168	$611,592,906
Delta:	$22,660,063	-$4,800,000	$500,000	-$80,059,967	-$61,699,904	$84,461,991

Date: February 24, 2021
W.I.: 1512
Referred by: PAC
Revised: 04/28/21-C 05/26/21-C 06/23/21-C 07/28/21-C 10/21/21-C 12/15/21-C 01/26/22-C 02/23/22-C 03/23/22-C 04/27/22-C 05/25/22-C 06/22/22-C 09/28/22-C

ABSTRACT

Resolution No. 4475, Revised

This resolution adopts the 2021 Transportation Improvement Program (TIP) for the San Francisco Bay Area, and supporting documents as listed in Attachment A.

Subsequent revisions are listed below and described further in Attachment B to this resolution.

Further discussion of the 2021 TIP adoption is contained in the summaries to the Programming & Allocations Committee dated November 4, 2020, February 10, 2021, April 14, 2021, May 12, 2021, June 9, 2021, July 14, 2021, December 8, 2021, January 12, 2022, February 9, 2022, March 9, 2022, April 13, 2022, May 11, 2022, June 8, 2022, and September 14, 2022 and to the Planning Committee dated October 8, 2021. This resolution was revised as outlined below. Additional information on each revision is included in Attachment B: 'Revisions to the 2021 TIP'.

2021 TIP Revisions

Revision #	Revision Type	# of Projects	Net Funding Change ($)	MTC Approval Date	Final Approval Date
2021-01	Admin. Mod.	25	$33,457,609	5/17/2021	5/17/2021
2021-02	Admin. Mod.	9	$278,029,000	6/17/2021	6/17/2021
2021-03	Amendment	57	$366,721,065	4/28/2021	5/21/2021
2021-04	Admin. Mod.	40	$110,248,859	6/30/2021	6/30/2021
2021-05	Amendment	22	$733,155,111	5/26/2021	7/16/2021
2021-06	Amendment	57	$313,850,305	6/23/2021	7/16/2021
2021-07	Amendment	53	$686,063,624	7/28/2021	8/4/2021
2021-08	Admin. Mod.	23	$26,086,617	8/4/2021	8/4/2021
2021-09	Admin. Mod.	7	$87,814,143	8/20/2021	8/20/2021
2021-10	Amendment	18	$3,607,893,000	10/21/2021	12/3/2021
2021-11	Admin. Mod.	90	$143,447,209	1/11/2022	1/11/2022
2021-12	Amendment	24	$81,684,470	12/15/2021	2/11/2022

2021-13	Admin. Mod.	5	$0	2/18/2022	2/18/2022
2021-14	Amendment	6	$5,406,171	1/26/2022	3/11/2022
2021-15	Admin. Mod.	14	$195,029,981	3/24/2022	3/24/2022
2021-16	Amendment	2	$12,246,000	2/23/2022	4/22/2022
2021-17	Admin. Mod	17	$216,146,195	5/13/2022	5/13/2022
2021-18	Amendment	34	$139,743,694	3/23/2022	6/3/2022
2021-19	Admin. Mod	33	$140,230,874	6/8/2022	6/8/2022
2021-20	Amendment	28	$444,378,128	4/27/2022	7/1/2022
2021-21	Amendment	31	$508,006,146	5/25/2022	7/15/2022
2021-22	Amendment	14	$119,161,149	6/22/2022	7/29/2022
2021-23	Admin. Mod	8	$12,866,856	7/8/2022	7/8/2022
2021-24	Admin. Mod	9	-$2,059,629	8/25/2022	8/25/2022
2021-25	Admin. Mod	Pending	Pending	Pending	Pending
2021-26	Amendment	335	-$61,699,904	9/28/2022	Pending
Net Funding Change		961	$8,197,906,673		
Absolute Funding Change			$8,325,425,739		

Date: February 24, 2021
W.I.: 1512
Referred by: PAC

Re: 2021 Federal Transportation Improvement Program (TIP)

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4475

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to California Government Code Section 66500 et seq.; and

WHEREAS, MTC is the federally designated Metropolitan Planning Organization (MPO), pursuant to Section 134(d) of Title 23 of the United States Code (USC) for the nine-county San Francisco Bay Area region (the region); and

WHEREAS, Title 23 Code of Federal Regulations Part 450 (23 CFR §450) requires the region to carry out a continuing, cooperative and comprehensive transportation planning process as a condition to the receipt of federal assistance to develop and update at least every four years, a Transportation Improvement Program (TIP) consisting of a comprehensive listing of transportation projects that receive federal funds or that are subject to a federally required action, or that are regionally significant; and

WHEREAS, Section 65074 of the California Government Code requires all state MPOs to update their TIPS concurrently every even year, except for 2020; and

WHEREAS, the TIP must be consistent with the Regional Transportation Plan (RTP) adopted pursuant to Government Code Section 66508, the State Implementation Plan (SIP) as required by the federal Clean Air Act (42 U.S.C. Section 7401 et seq.); and the San Francisco Bay Area Transportation Air Quality Conformity Protocol (MTC Resolution 3757, Revised), which establish the Air Quality Conformity Procedures for MTC's TIP and RTP; and

WHEREAS, federal regulations (23 CFR §450.326(k)) require that the TIP be financially constrained, by year, to reasonable estimates of available federal and state transportation funds; and

WHEREAS, federal regulations (23 CFR §450.326) require that the TIP be designed such that once implemented, it makes progress toward achieving the performance targets established under §450.306(d) and that the TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the TIP toward achieving the performance targets identified in the metropolitan transportation plan, linking investment priorities to those performance targets; and

WHEREAS, federal regulations (23 CFR §450.316) require that the MPO develop and use a documented public participation plan that defines a process for providing citizens, affected public agencies and interested parties with reasonable opportunities to be involved in the metropolitan transportation planning process; and

WHEREAS, federal regulations (23 CFR §450.332(a)) allow MTC to move projects between years in the first four years of the TIP without a TIP amendment, if Expedited Project Selection Procedures (EPSP) are adopted to ensure such shifts are consistent with the required year by year financial constraints; and

WHEREAS, MTC, the State, and public transportation operators within the region have developed and implemented EPSP for the federal TIP as required by Federal Regulations (23 CFR 450.332(a)) and Section 134 of Title 23 United States Code (USC §134), as outlined in Attachment A to this Resolution, and MTC Resolution 3606, Revised; and

WHEREAS, federal regulations prescribe the timely use of federal apportionment and obligation authority; and

WHEREAS, federal regulations (23 CFR §630.106) prescribe the timely expenditure, invoicing and reimbursement of federally obligated transportation funds; and

WHEREAS, state statues (Streets and Highways Code Section 182), and California Transportation Commission (CTC) policies and guidance prescribe requirements for the timely use of federal and state funds; and

WHEREAS, MTC has adopted the regional project funding policy (MTC Resolution 3606, Revised) prescribing management practices, expectations and requirements on state and federal funds coming to the region in order to meet federal and state timely use of funds requirements; and

WHEREAS, MTC has found in MTC Resolution No. 4374 that the 2021 TIP, as set forth in this resolution, conforms to the applicable provisions of the SIP for the San Francisco Bay Area; and

WHEREAS, the San Francisco Bay Area air basin was designated by U.S. Environmental Protection Agency as nonattainment for the fine particulate matter (PM2.5) standard in December 2009, and MTC must demonstrate conformance to this standard through an interim emissions test until a PM2.5 SIP is approved by the federal Environmental Protection Agency (U.S. EPA); now, therefore be it

RESOLVED, that MTC adopts the 2021 TIP, attached hereto as Attachment A and incorporated herein as though set forth at length; and be it further

RESOLVED, that MTC has developed the 2021 TIP in cooperation with the Bay Area County Transportation Agencies, transit operators, the Bay Area Air Quality Management District (BAAQMD), the California Department of Transportation (Caltrans), and other partner agencies and interested stakeholders, and in consultation with the Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and U.S. EPA; and, be it further

RESOLVED, that the 2021 TIP was developed in accordance with the region's Public Participation Plan and consultation process (MTC Resolution No. 4174, Revised) as required by Federal Regulations (23 CFR §450.316); and, be it further

RESOLVED, that the projects and programs included in the 2021 TIP, attached hereto as Attachment A to this resolution, and incorporated herein as though set forth at length, are consistent with the RTP; and, be it further

RESOLVED, that the 2021 TIP is financially constrained, by year, to reasonable estimates of available federal, state and local transportation funds; and, be it further

RESOLVED, that the 2021 TIP makes progress toward achieving the performance targets established under §450.306(d); and, be it further

RESOLVED, that MTC approves the EPSP developed by MTC, the State, and public transportation operators within the region for the federal TIP as required by federal regulations

(23 CFR 450.332(a)) and Section 134 of Title 23 United States Code (USC §134), as outlined in Attachment A to this Resolution, and MTC Resolution 3606, Revised; and, be it further

RESOLVED, that projects and project sponsors with funds programmed in the federal TIP must comply with the provisions and requirements of the regional project funding delivery policy, MTC Resolution 3603, Revised; and, be it further

RESOLVED, that MTC will support, where appropriate, efforts by project sponsors to obtain letters of no prejudice or full funding agreements from FTA for projects contained in the transit element of the TIP; and, be it further

RESOLVED, that the public participation process conducted for the 2021 TIP satisfies the public involvement requirements of the FTA annual Program of Projects for applicable fund sources; and, be it further

RESOLVED, that the adoption of the TIP shall not constitute MTC's review or approval of those projects included in the TIP pursuant to Government Code Sections 66518 and 66520, or provisions in federal regulations (49 CFR Part 17) regarding Intergovernmental Review of Federal Programs; and, be it further

RESOLVED, that MTC's review of projects contained in the TIP was accomplished in accordance with procedures and guidelines set forth in the San Francisco Bay Area Transportation Air Quality Conformity Protocol (MTC Resolution 3757, Revised); and, be it further

RESOLVED, that MTC finds that the 2021 TIP conforms to the applicable provisions of the State Implementation Plan (SIP) and the applicable transportation conformity budgets in the SIP approved for the national 8-hour ozone standard and to the emissions test for the national fine particulate matter standard (MTC Resolution No. 4474); and, be it further

RESOLVED, that the projects and programs included in the 2021 TIP do not interfere with the timely implementation of the traffic control measures (TCMs) contained in the SIP; and, be it further

RESOLVED, that MTC finds all regionally significant capacity-increasing projects included in the 2021 TIP are consistent with the Amended Plan Bay Area 2040 (the 2040

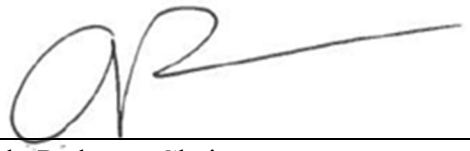
Regional Transportation Plan including the Sustainable Communities Strategy for the San Francisco Bay Area) and, be it further

RESOLVED, that revisions to the 2021 TIP as set forth in Attachment B to this resolution and incorporated herein as though set forth at length, shall be made in accordance with rules and procedures established in the public participation plan and in MTC Resolution No. 4475, and that MTC's review of projects revised in the TIP shall be accomplished in accordance with procedures and guidelines set forth in the San Francisco Bay Area Transportation Air Quality Conformity Protocol (MTC Resolution 3757, Revised) and as otherwise adopted by MTC; and, be it further

RESOLVED, that staff have the authority to make technical corrections, and the Executive Director and Deputy Executive Directors have signature authority to approve administrative modifications for the TIP and Federal Statewide Transportation Improvement Program (FSTIP) under delegated authority by Caltrans, and to forward all required TIP amendments once approved by MTC to the appropriate state and federal agencies for review and approval; and, be it further

RESOLVED, that a copy of this resolution shall be forwarded to FHWA, the FTA, U.S. EPA, Caltrans, the Association of Bay Area Governments (ABAG), and to such other agencies and local officials upon request.

METROPOLITAN TRANSPORTATION COMMISSION



Alfredo Pedroza, Chair

The above resolution was entered into by the
Metropolitan Transportation Commission
at a regular meeting of the Commission held in
San Francisco, California, and at other remote
locations on February 24, 2021.

Date: February 24, 2021
W.I.: 1512
Referred by: PAC

Attachment A
Resolution No. 4475

2021 Transportation Improvement Program

The 2021 Transportation Improvement Program for the San Francisco Bay Area, adopted February 24, 2021, is comprised of the following, incorporated herein as though set forth at length:

- A Guide to the 2021 Transportation Improvement Program (TIP) for the San Francisco Bay Area
- TIP Overview
- Expedited Project Selection Process
- TIP Revision Procedures
- Financial Capacity Assessments
- County Summaries
- Project Listings
- Appendices
- The 2021 TIP Investment Analysis: Focus on Low-Income and Minority Communities
- The 2021 TIP Performance Report

Date: February 24, 2021
W.I.: 1512
Referred by: PAC
Revised: 04/28/21-C 05/26/21-C
06/23/21-C 07/28/21-C
10/21/21-C 12/15/21-C
01/26/22-C 02/23/22-C
03/23/22-C 04/27/22-C
05/25/22-C 06/22/22-C
09/28/22-C

Revisions to the 2021 TIP

Revisions to the 2021 Transportation Improvement Program (TIP) are included as they are approved.

Revision 2021-01 is an administrative modification that revises 25 projects with a net funding increase of approximately $33.5 million. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on May 17, 2021. Among other changes, this revision:

- Updates the funding plan of the Golden Gate Bridge, Highway and Transportation District's Suicide Deterrent System project to reflect the programming of $7.9 million in Surface Transportation Block Grant Program (STP) funds and to change the source for $7.7 million in funding from federal Highway Infrastructure Program (FHIP) to STP;
- Updates the funding plan of the Solano I-80 Managed Lanes project to reflect additional programming of federal Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) funds through the State Transportation Improvement Program (STIP);
- Updates the Santa Clara Valley Transportation Authority's (VTA) US 101/De L Cruz Blvd - Trimble Road I/C project to reflect the programming of $25 million in SB1 Local Partnership Program Competitive funds;
- Updates the Bay Area Rapid Transit District's (BART) Railcar Procurement and Transbay Core Capacity Programs to reflect changes in the funding plans including the addition of $562 million in FTA Capital Investment Grant (CIG) funds and $6.8 million in CRRSAA funds; and
- Updates the funding plans and back-up listings of the Highway Safety Improvement Program (HSIP) and Highway Bridge Program (HBP) funded grouped listing to reflect the latest programming information from Caltrans.
- Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

The administrative modification is financially constrained by year and MTC relies on the State's programming capacity in the amount of $25 million in SB1 Local Partnership Program funding, $562 million in FTA CIG funding, $1.8 million in HBP funding, $7.1 million in STIP funds,

$350,000 in FTA Pilot Program for Transit-Oriented Development Planning grant funding, and $7.9 million in federal CRRSSAA funding to reflect the net change in funding over the four years of the TIP. MTC's 2021 TIP, as revised with Revision No. 2021-01, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-02 is an administrative modification that revises nine projects with a net funding increase of approximately $278 million. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on June 17, 2021. Among other changes, this revision:

- Updates the funding plans and back-up listings of five State Highway Operation and Protection Program (SHOPP) funded grouped listings to reflect the latest information from Caltrans, including the addition of $290 million in SHOPP funding to the active years of the TIP, and to split out the scope and funding for one sub-project to the Solano Transportation Authority's Rio Vista State Route 12 Pavement Rehabilitation and Intersection Improvements project; and
- Updates the funding plan of the Napa Valley Transportation Authority's State Routes 12, 29, and 221 Soscol Junction Interchange Improvements project to reflect the award of $25 million in Road Repair and Accountability Act (SB1) Solutions for Congested Corridors Program funding and $422,000 in SB1 Local Partnership Program funding.

The administrative modification is financially constrained by year and MTC relies on the State's programming capacity in the amount of $25.4 million in SB1 funding and $290 million in SHOPP funding to reflect the net change in funding over the four years of the TIP. MTC's 2021 TIP, as revised with Revision No. 2021-02, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-03 is an amendment that revises 57 projects with a net funding increase of approximately $367 million. The revision was referred by the Programming and Allocations Committee on April 14, 2021, and approved by the MTC Commission on April 28, 2021. Caltrans approval was received on May 12, 2021, and final federal approval was received on May 21, 2021. Among other changes, this revision:

- Adds seven new exempt projects and updates16 existing projects and 2 grouped listings to reflect the adoption of the FY2020-21 Transit Capital Priorities Program of Projects;
- Adds three new exempt projects and updates the funding plan of one existing project to reflect the approval of the state's portion of Cycle 5 of the Active Transportation Program;
- Adds two new exempt projects and updates the funding plan of one existing project to reflect the awards of discretionary funding from the Federal Transit Administration;
- Adds one new exempt project and updates the funding plan of one existing project to reflect the award of funding through the One Bay Area Grant 2 Program (OBAG2);
- Archives six projects; and

- Carries forward changes made in the 2019 TIP that were not included in the Final 2021 TIP.

Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

Revision 2021-04 is an administrative modification that revises 40 projects with a net funding increase of approximately $110 million. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on June 30, 2021. Among other changes, this revision:

- Updates the funding plan of MTC's 511 Next Generation project to reflect the award of $200,000 in Work Zone Data Exchange (WZDx) Demonstration Grant funds;
- Updates the funding plans of 10 Regional/County Planning Activities project listings to reflect the award of regional Surface Transportation Block Grant (STP) funding through the Safe and Seamless Mobility Quick-Strike program;
- Updates the funding plan of the Marin County portion of the Marin Sonoma Narrows Project to reflect the programming of Congestion Mitigation and Air Quality Improvement Program (CMAQ) and federal Highway Infrastructure Program (FHIP) funds and to reflect the use of Advance Construction (AC) authorization;
- Updates the funding plans of 10 projects to reflect recently approved changes in the Active Transportation Program (ATP), the State Transportation Improvement Program (STIP), and the Local Partnership Program (LPP); and
- Updates the funding plans of six Transit Capital Priories (TCP) funded Americans with Disabilities Act (ADA) Operating Support projects to reflect that ongoing funding is being combined into a new grouped listing and updates this grouped listing, two additional grouped listings and two individual listings to reflect recent changes to the TCP program.

The administrative modification is financially constrained by year and MTC relies on the State's programming capacity in the amount of $3.8 million in ATP, $6.3 million in prior year FHIP funds, $200,000 in WZDx funds, $2.7 million in STIP funds and $722,000 in LPP funds to reflect the net change in funding over the four years of the TIP. MTC's 2021 TIP, as revised with Revision No. 2021-04, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-05 is an amendment that revises 22 projects with a net funding increase of approximately $733 million. The revision was referred by the Programming and Allocations Committee on May 12, 2021 and approved by the MTC Commission on May 26, 2021. Caltrans approval was received on July 1, 2021, and final federal approval was received on July 16, 2021. Among other changes, this revision:

- Updates the funding plans of eight projects, adds one new exempt project, and adds one new grouped listing to reflect the adoption of the latest round of the Transit Capital Priorities Program;
- Updates the total cost of the Golden Gate Bridge Seismic Retrofit Phase 3B project by adding $605 million in uncommitted funding outside of the active years of the 2021 TIP;
- Adds one new exempt regional Surface Transportation Block Grant Program (STP) funded project, updates the scope of one existing STP funded project, and archives one completed STP funded project;
- Adds one new exempt Active Transportation Program funded project;
- Adds one new Federal Lands Highways Program and Tribal Transportation Program funded grouped listing to the TIP; and
- Updates the funding plans of six projects to add funding to the active years of the TIP.

Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

Revision 2021-06 is an amendment that revises 57 projects with a net funding increase of approximately $314 million. The revision was referred by the Programming and Allocations Committee on June 9, 2021, and approved by the MTC Commission on June 23, 2021. Caltrans approval was received on July 7, 2021, and final federal approval was received on July 16, 2021. Among other changes, this revision:

- Adds 23 new projects and updates the funding plans of two existing projects to reflect the adoption of the Safe and Seamless Mobility Quick Strike Program;
- Adds five new projects and updates the funding plans of 20 existing projects to reflect the recent adoption of the latest round of the Transit Capital Priorities Program;
- Updates the Caltrain Electrification and San Francisco Central Subway projects to reflect recent awards of Federal Transit Administration New Starts funding from the American Rescue Plan Act of 2021; and
- Archives two projects as they have been completed.

Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

Revision 2021-07 is an amendment that revises 53 projects with a net funding increase of approximately $686 million. The revision was referred by the Programming and Allocations Committee on July 14, 2021, and approved by the MTC Commission on July 28, 2021. Caltrans approval was received on July 30, 2021, and final federal approval was received on August 4, 2021. Among other changes, this revision:

- Adds seven new projects, deletes one existing project and updates five other existing projects to reflect recent changes in the regional Surface Transportation Block Grant Program (STP), the Congestion Mitigation and Air Quality Improvement Program

(CMAQ), and the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) Program;
- Adds three new projects to reflect the programming of Transit Capital Priorities (TCP) Program funds;
- Adds two new projects and updates the funding plans of two existing projects to reflect the award of funding through the Active Transportation Program (ATP), the Federal Transit Administration's Capital Investment Grants (CIG) program, the Road Repair and Accountability Act's Local Partnership Program (SB1-LPP), and the California Natural Resource Agency's grant program; and
- Adds seven new projects, combines two existing projects, and updates the scope or funding plans of six other existing projects to reflect local programming decisions.

Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

Revision 2021-08 is an administrative modification that revises 23 projects with a net increase in funding of $26 million. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on August 4, 2021. Among other changes, this revision:

- Updates the funding plans of 11 regional Surface Transportation Block Grant/ Congestion Mitigation and Air Quality Improvement Program (STP/CMAQ) funded projects to reflect recent programming changes including the adoption of the Safe and Seamless Mobility Quick-Strike program;
- Updates the funding plans of six projects to reflect programming changes in the Active Transportation Program (ATP), the Road Repair and Accountability Act – Local Partnership Program (SB1-LPP), State Transportation Improvement Program (STIP), High Priority Program earmark program (HPP), Construction of Ferry Boats and Ferry Terminal Facilities Formula Program (FBP); and
- Updates the funding plans and back-up listings of the Railroad Highway Crossing program and Lifeline Transportation Program group listings to reflect the latest programming decisions.

The administrative modification is financially constrained by year and MTC relies on the State's programming capacity in the amount of $3 million in ATP funds, $167,765 in HPP funds, $624,745 in FBP funds, $9.5 million in Section 130 Railroad-Highway Crossing funds, $410,180 in Urban Greening Grant funds, $235,369 in Proposition 1B California Transit Security Grant Program funds, $11 million in STIP funds and $47 million in SB1-LPP funds to reflect the net change in funding over the four years of the TIP. MTC's 2021 TIP, as revised with Revision No. 2021-08, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-09 is an administrative modification that revises seven projects with a net increase in funding of $88 million. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on August 20, 2021. Among other changes, this revision:

- Updates the funding plans of four projects to reflect changes in the Congestion Mitigation and Air Quality Improvement Program (CMAQ), the Road Repair and Accountability Act – Trade Corridor Enhancement Program (SB1-TCEP), the Road Repair and Accountability Act – Local Streets and Roads Program (SB1-LSRP), and the Infill Infrastructure Grant Program (IIG); and
- Updates the funding plans and back-up listings of three State Highway Operation and Protection Program (SHOPP) group listings to reflect the latest programming decisions.

The administrative modification is financially constrained by year and MTC relies on the State's programming capacity in the amount of $87 million in SHOPP funds, $146,040 in Community Development Block Grant funds, $1 million in IIG funds, $55 million in SB1-TCEP, and $256,832 in SB1-LSRP funds to reflect the net change in funding over the four years of the TIP. MTC's 2021 TIP, as revised with Revision No. 2021-09, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-10 is an amendment that serves to conform the 2021 TIP to Plan Bay Area 2050 and revises 18 projects with a net increase in funding of approximately $3.6 billion. The revision was referred by the Planning Committee on October 8, 2021, and approved by the MTC Commission on October 21, 2021. Caltrans approval was received on November 8, 2021, and final federal approval was received on December 3, 2021. Among other changes, this revision:

- Updates 10 existing projects in the 2021 TIP to reflect changes in scope or cost that are included in the Draft Plan Bay Area 2050; and
- Adds eight new projects to the 2021 TIP.

Changes made with this revision do not conflict with the financial constraint requirements. The Transportation-Air Quality Conformity Analysis for Plan Bay Area 2050 and Amended 2021 TIP demonstrates that the TIP and Plan are consistent with ("conform to") the federal air quality plan known as the State Implementation Plan (SIP), as required by federal conformity regulations.

Revision 2021-11 is an administrative modification that revises 90 projects with a net increase in funding of $143 million. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on January11, 2022. Among other changes, this revision:

- Updates the funding plans of 68 regional Surface Transportation Block Grant Program/Congestion Mitigation and Air Quality Improvement Program (STP/ CMAQ) funded projects to reflect planned and actual obligations;
- Updates the funding plans and back-up listings of the Federal Lands Highways Program/Tribal Transportation Program funded group listing, the Local Highway Bridge

Program (HBP) funded group listing, and six State Highway Operation and Protection Program (SHOPP) funded group listings to reflect updates from Caltrans; and
- Updates the funding plans of six individually listed projects to reflect the latest programming decisions in the HBP, the Core Capacity Challenge Grant Program, and the Safe and Seamless Mobility Quick-Strike Program.

The administrative modification is financially constrained by year and MTC relies on the State's programming capacity in the amount of $107 million in SHOPP funds, $598 in repurposed earmark funds, $1 million in HBP funds, $42,526 in Tribal Transportation Program funds, $739,000 in California Transportation Commission managed Coronavirus Response and Relief Supplemental Appropriations Act funds, and $50,000 in Road Repair and Accountability Act - Local Streets and Roads Program funds. MTC's 2021 TIP, as revised with Revision No. 2021-11, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-12 is an amendment that revises 24 projects with a net funding increase of approximately $82 million. The revision was referred by the Programming and Allocations Committee on December 8, 2021 and approved by the MTC Commission on December 15, 2021. Caltrans approval was received on January 28, 2022 and final federal approval was received on February 11, 2022. Among other changes, this revision:

- Amends three new exempt projects into the TIP and updates one existing project to reflect the award of funding through the Active Transportation Program (ATP);
- Amends eight new exempt projects into the TIP, updates two existing projects and deletes one project to reflect the award of regional Surface Transportation Block Grant Program (STP) and Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) funds;
- Amends one new exempt Transit Capital Priorities project into the TIP;
- Splits out the ongoing and future extensions of the Sonoma Marin Area Rail Transit system and multi-use pathway to a new project listing and archives the completed segments from the TIP; and
- Archives two other projects from the TIP as the funding has been obligated.

Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

Revision 2021-13 is an administrative modification that revises five projects with no net change in funding. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on February 18, 2022. Among other changes, this revision:

- Updates the funding plans of three projects to reflect the latest programming decisions and obligations; and

- Updates the description of Alameda CTC's I-680 Express Lane Gap Closure: SR-84 to Alcosta Blvd. project and the Bike Share Capital Program to better reflect the existing scopes of the projects.

The administrative modification is financially constrained by year. MTC's 2021 TIP, as revised with Revision No. 2021-13, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-14 is an amendment that revises six projects with a net funding increase of approximately $5.4 million. The revision was referred by the Programming and Allocations Committee on January 12, 2022 and approved by the MTC Commission on January 26, 2022. Caltrans approval was received on March 3, 2022 and final federal approval was received on March 11, 2022. Among other changes, this revision:

- Adds three new projects to reflect the recent adoption of the Climate Initiatives Program Mobility Hubs Pilot Program;
- Adds two new projects to reflect changes in the One Bay Area Grant (OBAG2) County Program; and
- Updates one Local Highway Bridge Program-funded project to reflect the latest programming information from Caltrans.

Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

Revision 2021-15 is an administrative modification that revises 14 projects with a net increase in funding of $195 million. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on March 24, 2022. Among other changes, this revision:

- Updates the funding plan of one existing Active Transportation Program (ATP) funded project to reflect the latest programming decisions;
- Updates the funding plans of three Surface Transportation Block Grant Program/Congestion Mitigation and Air Quality Improvement Program (STP/CMAQ) funded projects to reflect planned and actual obligations;
- Updates the funding plan of the San Francisco County Transportation Authority's Yerba Buena Island (YBI) Ramp Improvements project to reflect the award of $18 million in Rebuilding American Infrastructure with Sustainability and Equity (RAISE) funds;
- Updates the funding plan of the Clipper 2.0 Fare Payment System project to reflect the advance of $30 million in One Bay Area Grant 3 (OBAG 3) funding to active years of the TIP; and
- Updates the funding plans and back-up listings of five State Highway Operation and Protection Program (SHOPP) funded group listings to reflect the latest information from Caltrans.

The administrative modification is financially constrained by year and MTC relies on the State's programming capacity in the amount of $198 million in SHOPP funds, $12,948 in Highway Bridge Program funds, $18 million in RAISE funds, and $4 million in Road Repair and Accountability Act (SB1) funds. MTC's 2021 TIP, as revised with Revision No. 2021-15, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-16 is an amendment that revises two projects with a net funding increase of approximately $12 million. The revision was referred by the Programming and Allocations Committee on February 9, 2022 and approved by the MTC Commission on February 23, 2022. Caltrans approval was received on April 11, 2022 and final federal approval was received on April 22, 2022. This revision adds two new Congestion Mitigation and Air Quality Improvement Program (CMAQ) funded projects to the TIP to reflect the latest changes in the Climate Initiatives Program Mobility Hubs Pilot Program and the Regional Active Operation Management Program. Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

Revision 2021-17 is an administrative modification that revises 17 projects with a net increase in funding of $216 million. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on May 13, 2022. Among other changes, this revision:

- Updates the funding plan of the Water Emergency Transportation Authority's Replace Ferry Vessels project to reflect the programming of $1.1 million in Construction of Ferry Boats and Ferry Terminal Facilities Formula Program (FBP) funds;
- Updates the funding plan of five projects to reflect the adoption of the latest round of the Transit Capital Priorities Program;
- Updates the funding plans of seven Surface Transportation Block Grant Program/Congestion Mitigation and Air Quality Improvement Program (STP/CMAQ) funded projects and one High Priority Project (HPP) Earmark funded project to reflect planned and actual obligations; and
- Updates the funding plans and back-up listings of the Alameda County Traffic Operations Systems and Mobility Program funded group listing, the Transit Operating Assistance funded group listing, the Transit Preventative Maintenance funded group listing, and the Transit ADA Operating Support funded group listings to reflect the latest programming decisions.

The administrative modification is financially constrained by year and MTC relies on the State's programming capacity in the amount of $1.3 million in HPP Earmark funds and $1.1 million in FBP funds. MTC's 2021 TIP, as revised with Revision No. 2021-17, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-18 is an amendment that revises 34 projects with a net funding increase of approximately $140 million. The revision was referred by the Programming and Allocations Committee on March 9, 2022 and approved by the MTC Commission on March 23, 2022. Caltrans approval was received on May 16, 2022 and final federal approval was received on June 3, 2022. Among other changes, this revision:

- Adds 13 new regional Surface Transportation Block Grant Program (STP) projects and one new Congestion Mitigation and Air Quality Improvement Program (CMAQ) funded project to the TIP and updates 14 existing STP funded projects to reflect programming decisions in the One Bay Area Grant 2 and 3 (OBAG2 and OBAG3) programs; and
- Archives 5 projects as they have been completed or all federal funding has been obligated.

Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

Revision 2021-19 is an administrative modification that revises 33 projects with a net increase in funding of $140 million. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on June 8, 2022. Among other changes, this revision:

- Updates the funding plans of six projects to reflect changes in the Surface Transportation Block Grant Program/Congestion Mitigation and Air Quality Improvement Program (STP/CMAQ), Regional Transportation Improvement Program (RTIP), and the Road Repair and Accountability Act – Local Partnership Program (SB1-LPP);
- Updates the funding plans and back-up listings of the Local Highway Bridge Program (HBP) funded group listing, the Highway Safety Improvement Program (HSIP) group listing, and the FTA Section 5311 group listing for FY21-FY23 to reflect the latest programming decisions;
- Updates the funding plans and back-up listings of seven State Highway Operation and Protection Program (SHOPP) funded group listings to reflect the latest information from Caltrans; and
- Updates the funding plans and back-up listings of two grouped listings and updates the funding plans of fifteen individually-listed projects to reflect the adoption of the latest round of the Transit Capital Priorities (TCP) Program.

The administrative modification is financially constrained by year and MTC relies on the State's programming capacity in the amount of $75 million in SHOPP funds, $1.3 million in HBP funds, $5.9 million in HSIP funds, and $2 million in federal Transit Infrastructure Grant funds. MTC's 2021 TIP, as revised with Revision No. 2021-19, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-20 is an amendment that revises 28 projects with a net funding increase of approximately $444.4 million. The revision was referred by the Programming and Allocations Committee on April 13, 2022 and approved by the MTC Commission on April 27, 2022. Caltrans approval was received on June 17, 2022 and final federal approval was received on July 1, 2022. Among other changes, this revision:

- Updates Santa Rosa CityBus's Electric Bus Replacement project to reflect the award of $4.3 million in FTA Grants for Bus and Bus Facilities Program funds;
- Updates WETA's Electric Vessels and Related Infrastructure project to reflect the award of $3.4 million in FTA Passenger Ferry Grant Program funds;
- Adds Fairfield's West Texas St Complete Streets project to the TIP to reflect the award of approximately $11 million in statewide Active Transportation Program Cycle 5 funds;
- Adds 11 new projects and updates 10 existing projects to partially reflect the recent adoption of the Transit Capital Priorities Program for FY2021-22 to FY2023-24; and
- Updates four existing projects to reflect the latest programming decisions in the One Bay Area Grant (OBAG) 2 Program.

Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

Revision 2021-21 is an amendment that revises 31 projects with a net funding increase of approximately $508 million. The revision was referred by the Programming and Allocations Committee on May 11, 2022 and approved by the MTC Commission on May 25, 2022. Caltrans approval was received on July 8, 2022 and final federal approval was received on July 15, 2022. Among other changes, this revision:

- Adds one new exempt project and updates the funding plans of 11 existing projects to reflect the latest programming decisions in the Transit Capital Priorities Program;
- Adds Tri-Delta Transit's Hydrogen Fueling Station project to reflect the award of $4 million in FTA Bus and Bus Facilities Discretionary Program funds;
- Adds one new project and updates five existing projects to reflect the latest programming decisions in the State Transportation Improvement Program;
- Adds two new projects, updates two existing projects and deletes three existing projects to reflect changes in the One Bay Area Grant 2 (OBAG2) Program;
- Adds one new locally funded project; and
- Archives four projects from the TIP.

Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

Revision 2021-22 is an amendment that revises 14 projects with a net funding increase of approximately $119 million. The revision was referred by the Programming and Allocations Committee on June 8, 2022 and approved by the MTC Commission on June 22, 2022. Caltrans

approval was received on July 20, 2022 and final federal approval was received on July 29, 2022. Among other changes, this revision:

- Updates the Napa Valley Transportation Authority's Rolling Stock Replacement project to reflect the award of $8.5 million in FTA Bus and Bus Facilities Discretionary funding;
- Adds the City of Milpitas's South Milpitas Blvd. Extension and Bridge project;
- Updates three projects and deletes one project to reflect the latest programming decisions in the Transit Capital Priorities Program; and
- Adds one new project, updates four existing projects, deletes two projects and adds one previously archived project back into the TIP to reflect programming changes in the One Bay Area Grant (OBAG) 2 and 3 programs.

Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

Revision 2021-23 is an administrative modification that revises eight projects with a net increase in funding of $12.9 million. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on July 8, 2022. Among other changes, this revision:

- Updates the funding plan of the Regional Streets and Roads project to reflect the advance of $10 million in One Bay area Grant 3 (OBAG 3) funding and updates one additional project to reflect changes in the OBAG 2 program;
- Updates the funding plan of the Bay Area Rapid Transit's (BART) Fare Collection Equipment project to reflect the award of $2 million in Transit Infrastructure Grant – Community Project Funding funds;
- Updates the funding plan of BART's Transbay Core Capacity Program to reflect the award of $143 million in FTA Capital Investment Grant (CIG) funds; and
- Updates the funding plans two individually listed projects to reflect the latest programming decisions in the Transit Capital Priorities (TCP) Program.

The administrative modification is financially constrained by year and MTC relies on the State's programming capacity in the amount of $2 million in federal Transit Infrastructure Grant-Community Project Funding funds, $143 million in CIG funds and $732,000 in RIP funds. MTC's 2021 TIP, as revised with Revision No. 2021-23, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-24 is an administrative modification that revises nine projects with a net decrease in funding of $2.1 million. The revision was approved into the Federal-Statewide TIP by the Deputy Executive Director on August 25, 2022. Among other changes, this revision:

- Updates the funding plan of one project to reflect changes in the Surface Transportation Block Grant Program/Congestion Mitigation and Air Quality Improvement Program (STP/CMAQ);

- Updates the funding plan and back-up listing of the Highway Safety Improvement Program (HSIP) funded grouped listing to reflect the latest programming information from Caltrans; and
- Updates the funding plan of one individual State Highway Operation and Protection Program (SHOPP) project and the funding plan and back-up listing of one SHOPP funded group listing to reflect the latest information from Caltrans.

The administrative modification is financially constrained by year and MTC relies on the State's programming capacity in the amount of $18.2 million in SHOPP funds and $381,730 in HSIP funds. MTC's 2021 TIP, as revised with Revision No. 2021-24, remains in conformity with the applicable State Implementation Plan (SIP) for air quality and the revision does not interfere with the timely implementation of the Transportation Control Measures contained in the SIP.

Revision 2021-25 is a pending administrative modification.

Revision 2021-26 is an amendment that revises 335 projects with a net funding decrease of approximately $62 million. The revision was referred by the Programming and Allocations Committee on September 14, 2022 and approved by the MTC Commission on September 28, 2022. Caltrans approval is expected in October and final federal approval is expected in November. Among other changes, this revision:

- Archives 325 projects that have either been completed or where future funding will be programmed on other listings;
- Deletes four projects that will not move forward as federal projects at this time;
- Updates the scope of one project and the funding plan of another to reflect local decisions;
- Amends MTC's Priority Conservation Area Grant Implementation project into the TIP;
- Amends Caltrain's Mini-High Platform Improvements project into the TIP to reflect the award of $460,000 in federal Transit Infrastructure Grants - Community Project Funding/Congressionally Directed Spending funds;
- Amends VTA's Zero Emissions Bus Transition On-Road Charging Pilot project into he TIP to reflect the award of $15.6 million in FTA Bus and Bus Facilities discretionary funding; and
- Amends a new FTA Section 5310 Enhanced Mobility for Seniors and Persons with Disabilities-funded grouped listing into the TIP.

Changes made with this revision do not affect the air quality conformity finding or conflict with the financial constraint requirements.

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Metropolitan Transportation Commission

Legislation Details (With Text)

File #:	22-1259	**Version:**	1	**Name:**	
Type:	Resolution			**Status:**	Commission Approval
File created:	7/25/2022			**In control:**	Programming and Allocations Committee
On agenda:	9/14/2022			**Final action:**	
Title:	MTC Resolution Nos. 4522, Revised 4523, Revised and 4524, Revised, and 4528. Allocation of $172 million in FY 2022-23 Transportation Development Act (TDA), State Transit Assistance (STA), Regional Measure 2 (RM2), 5% Unrestricted State, and 2% Bridge Toll funds to six operators and MTC to support transit operations and capital projects in the region.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	2c_22-1259_Resos_4522-4523-4524-4528_TransitOps_Allocations.pdf				

Date	Ver.	Action By	Action	Result

Subject:

MTC Resolution Nos. 4522, Revised 4523, Revised and 4524, Revised, and 4528. Allocation of $172 million in FY 2022-23 Transportation Development Act (TDA), State Transit Assistance (STA), Regional Measure 2 (RM2), 5% Unrestricted State, and 2% Bridge Toll funds to six operators and MTC to support transit operations and capital projects in the region.

Presenter:

Kenji Anzai

Recommended Action:

Commission Approval

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Metropolitan Transportation Commission
Programming and Allocations Committee

September 14, 2022 **Agenda Item 2c - 22-1259**

MTC Resolution Nos. 4522, Revised 4523, Revised and 4524, Revised, and 4528

Subject:

Allocation of $172 million in FY 2022-23 Transportation Development Act (TDA), State Transit Assistance (STA), Regional Measure 2 (RM2), 5% Unrestricted State, and 2% Bridge Toll funds to six operators and MTC to support transit operations and capital projects in the region.

Background:

This month's proposed actions continue the annual allocation process of the funds identified above for FY 2022-23. Six entities are requesting TDA allocations this month that exceed the $1 million delegated authority limit. Allocation requests that are less than $1 million are approved separately through the Executive Director's Delegated Authority process and reported on quarterly to this Committee. These funds are a significant share of the revenue for transit agencies' operating budgets.

The proposed allocation amounts are based on the programming levels identified in the FY 2022-23 Fund Estimate (MTC Resolution 4504). The proposed allocations are summarized in the following table:

Allocation Amounts by Entity[1] (amounts in millions)

Entity	**RM2** (Res. 4522)	**TDA** (Res. 4523)	**STA** (Res. 4524)	**5% Unrestricted State** (Res. 4528)	**2% Bridge Toll** (Res. 4528)	**Grand Total**
GGBHTD	$2.1	$17.2	$4.6			**$23.9**
SamTrans		$55.8	$18.6			**$74.4**
ECCTA		$17.3	$4.6			**$21.9**
Marin Transit		$11.4	$1.5			**$12.9**
SolTrans		$9.0				**$9.0**

[1] Includes all allocations to be approved in the resolutions listed above, the details of which are provided in Attachment A, including allocations for transit capital or planning and administration. Not inclusive of allocations approved by Executive Director's Delegated Authority as allowed by MTC Resolution No. 3620, Revised.

Entity	**RM2** (Res. 4522)	**TDA** (Res. 4523)	**STA** (Res. 4524)	**5% Unrestricted State** (Res. 4528)	**2% Bridge Toll** (Res. 4528)	**Grand Total**
WETA	$16.0			$8.5	$4.7	**$29.2**
MTC	$0.7		$0.3			**$1.0**
Grand Total	**$18.8**	**$110.7**	**$29.6**	**$8.5**	**$4.7**	**$172.3**

Information regarding the FY 2022-23 operating budgets and current and future operations for the transit operators included in the list above is provided in Attachment A. Rising fuel and labor costs as well as an increase in service hours are common themes contributing to higher operating costs amongst operators. One million dollars is being allocated to MTC for the Clipper program following a true-up of RM2 operating revenue for FY 2021-22. To stay within authorized revenue levels in FY 2021-22, funds were rescinded only from the Clipper program and the Clipper program is being compensated this fiscal year to retain a proportionate share of RM2 operating funds.

Issues:

None identified.

Recommendations:

Refer MTC Resolution Nos. 4522, Revised, 4523, Revised, 4524, Revised, and 4528 to the Commission for approval.

Attachments:

- Attachment A – Transit Operator Budget Summary
- MTC Resolution No. 4522, Revised
- MTC Resolution No. 4523, Revised
- MTC Resolution No. 4524, Revised
- MTC Resolution No. 4528

Therese W. McMillan

Attachment A – Transit Operator Budget Summary

Golden Gate Bridge, Highway and Transportation District (GGBHTD)

Adopted Operating Budget	$140.7 million
Increase in Budget compared to FY2021-22	25.2%
Projected Ridership (Estimated FY 2022-23 as a percentage of FY 2018-19 actual)	27%
Total Proposed FY2022-23 Operating Allocation[1]	$24.2 million
Proportion of Operating Budget Funded with Allocations	17%
Estimated COVID Relief Funding at the End of FY2022-23	$38.9 million

Budget and Operating Highlights

The GGBHTD (District) was created to maintain and operate the Golden Gate Bridge as well as a bus and ferry system that serves Marin and Sonoma Counties. It was designed to support these operations with toll revenue from the Golden Gate Bridge. As such, it relies heavily on toll revenues, although it does have other revenue sources to support its transit operations.

The decreased bridge, bus, and ferry traffic brought about by the pandemic and the associated collapse of toll and fare revenue resulted in decreased revenues overall. In spite of deep service cuts to offset them, the revenue losses resulted in a significant budget deficit that was only filled by federal relief funds provided to the District. Ridership and bridge traffic have recovered somewhat from their pandemic lows but are still well below their pre-COVID levels at approximately 40%and 80% of normal, respectively (ridership increased significantly after the FY 2022-23 ridership projection shown in the table above was made). The successive waves of variants have presented a challenge to the financial recovery of the District from the pandemic.

[1] Includes allocations made through Executive Director's Delegated Authority as allowed by MTC Resolution No. 3620, Revised. Any allocations made by Delegated Authority will be reported as part of the quarterly Delegated Authority update to the Commission. Excludes allocations made for transit capital or planning and administration purposes.

The District has sufficient relief funds to balance their budget for the time being, and is using $74 million of relief funding to balance their budget in FY 2022-23. However, the District could face fiscal challenges if ridership and bridge traffic remain below their pre-pandemic levels in the following years, as expenses are expected to rise as the District begins to reverse some service cuts to recover lost patronage.

San Mateo County Transit District (SamTrans)

Adopted Operating Budget	$219 million
Increase in Budget compared to FY2021-22	11.5%
Projected Ridership (Estimated FY 2022-23 as a percentage of FY 2018-19 actual)	72%
Total Proposed FY2022-23 Operating Allocation[1]	$86.3 million
Proportion of Operating Budget Funded with Allocations	39%
Estimated COVID Relief Funding at the End of FY2022-23	$0

Budget and Operating Highlights

SamTrans' FY2022-23 Operating Budget assumes a 52% growth in TDA and STA revenues, driven by strong sales tax receipts and high diesel prices and consumption. The budget also includes a 14 % increase in fare revenues as ridership continues to rebound. The $12 million in American Rescue Plan (ARP) funds in this budget represents the remainder of the federal relief funds allocated to SamTrams. SamTrans is also being allocated $8 million to partially fulfill the MTC commitment for the Caltrain ROW repayment.

The budget includes a 20% increase, or $26 million, in motor bus operations costs in part to facilitate the implementation of *Reimagine SamTrans* – a plan to redesign the SamTrans bus network to include new, streamlined, and more frequent bus service. The plan was approved by

[1] Includes allocations made through Executive Director's Delegated Authority as allowed by MTC Resolution No. 3620, Revised. Any allocations made by Delegated Authority will be reported as part of the quarterly Delegated Authority update to the Commission. Excludes allocations made for transit capital or planning and administration purposes.

the SamTrans Board in March 2022 following nearly three years of outreach and planning. Implementation began in August 2022 and will require a total of 328 active bus operators by February 2023. With current staffing levels of 283 operators, SamTrans is planning to onboard 88 new bus operator trainees, which accounts for attrition.

Eastern Contra Costa Transportation Authority (ECCTA) / Tri Delta Transit

Adopted Operating Budget	$31.5 million
Increase in Budget compared to FY2021-22	19.9%
Projected Ridership (Estimated FY 2022-23 as a percentage of FY 2018-19 actual)	63%
Total Proposed FY2022-23 Operating Allocation[1]	$23.4 million
Proportion of Operating Budget Funded with Allocations	74%
Estimated COVID Relief Funding at the End of FY2022-23	$2.5 million

Budget and Operating Highlights

ECCTA's increased budget over FY2021-22 is due to a combination of increased services and projected cost increases. In response to inflationary pressures, ECCTA instituted a cost-of-living salary increase of 5% along with a bonus. This cost, combined with increased fuel and utilities costs, have meant higher transit provision costs across the board for ECCTA.

ECCTA is taking steps to transition its fleet to Zero-Emission Buses, having purchased two electric buses in addition to six diesel buses this year. Currently, electric buses are roughly twice the price of diesel buses and must be taken out of service for hours at a time to recharge, introducing logistical complexity and great monetary expense into the operations of any agency that uses them. That ECCTA would still assume these costs amidst its current fiscal pressures demonstrates their commitment to achieving the state's emissions targets.

[1] Includes allocations made through Executive Director's Delegated Authority as allowed by MTC Resolution No. 3620, Revised. Any allocations made by Delegated Authority will be reported as part of the quarterly Delegated Authority update to the Commission. Excludes allocations made for transit capital or planning and administration purposes.

Capital funds allocated in this resolution (but not included in the operations figures listed above) consist of $1.2 million to help fund the Antioch Park-and-Ride and software upgrades. Other major projects at ECCTA include park-and-ride facilities at other locations and the acquisition of zero-emission buses. The Oakley Park and Ride facility will open this fall and ECCTA plans to implement service changes in conjunction with the opening of that facility. This action results from a comprehensive service analysis that was completed last fiscal year.

Marin County Transit District

Adopted Operating Budget	$38.9 million
Increase in Budget compared to FY2021-22	24.1%
Projected Ridership (Estimated FY 2022-23 as a percentage of FY 2018-19 actual)	80%
Total Proposed FY2022-23 Operating Allocation[1]	$14.4 million
Proportion of Operating Budget Funded with Allocations	37%
Estimated COVID Relief Funding at the End of FY2022-23	0

Budget and Operating Highlights

Marin Transit's operating budget includes a significant increase in contract service costs (16%) to account for an anticipated new contract with Golden Gate Transit for operations, new rates on the Marin Airporter contract, and to allow for a 34% increase in paratransit service hours over currently operated hours as demand for paratransit services is anticipated to return. Marin Transit is budgeting for 170,100 hours of local service, which is in line with pre-pandemic service, while fixed-route ridership is approaching 80% of pre-pandemic levels. The budget also assumes a 13% increase in fuel costs to account for rising and volatile fuel prices.

[1] Includes allocations made through Executive Director's Delegated Authority as allowed by MTC Resolution No. 3620, Revised. Any allocations made by Delegated Authority will be reported as part of the quarterly Delegated Authority update to the Commission. Excludes allocations made for transit capital or planning and administration purposes.

Sales tax revenues from TDA and Measures A and AA make up nearly 60% of projected operating revenues. Sales taxes have performed better than originally anticipated, and TDA revenues in FY 2022-23 are projected to be 35% higher than actual revenues in FY 2021-22. The FY 2022-23 budget also includes the expenditure of the remaining $3.6 million of federal COVID relief funds, while also fully funding emergency and contingency reserves sufficient for six months of operating expenses.

Solano County Transit (SolTrans)

Adopted Operating Budget	$18.3 million
Increase in Budget compared to FY2021-22	17.3%
Projected Ridership (Estimated FY 2022-23 as a percentage of FY 2018-19 actual)	51%
Total Proposed FY2022-23 Operating Allocation[1]	$7.9 million
Proportion of Operating Budget Funded with Allocations	43%
Estimated COVID Relief Funding at the End of FY2022-23	$5.0 million

Budget and Operating Highlights

Starting this fiscal year, all Solano Express services will be operated by SolTrans. Prior to this change, Fairfield and Suisun Transit (FAST) and SolTrans each operated two intercity express routes. This transfer of service responsibility increases intercity service revenue hours by about 30% and SolTrans has also budgeted for a small increase to local service that is currently around 70% of FY 2018-19 levels. Currently, the contract for service accounts for around two-thirds of the budget increase. The total increase in the service contract of up to 30% is proportionate to the growth in vehicle hours. Around 21%, or $3.9 million of the operating budget is supported by federal COVID relief funding. The balance of federal COVID funding is projected to be used to

[1] Includes allocations made through Executive Director's Delegated Authority as allowed by MTC Resolution No. 3620, Revised. Any allocations made by Delegated Authority will be reported as part of the quarterly Delegated Authority update to the Commission. Excludes allocations made for transit capital or planning and administration purposes. Additional allocations will be made to SolTrans later this fiscal year to support Solano Express service.

support FY 2023-24 operations and a projected operating revenue shortfall starting in FY2024-25.

Major capital projects include upgrading its operation and maintenance facility in anticipation of fleet electrification, however, insufficient funding is affecting implementation. Delivery of one battery-electric commuter coach is expected so that SolTrans can pilot induction charging and test the range of the bus. Five CNG commuter coaches will also be delivered in the current fiscal year. $3.8 million in TDA will help support capital projects.

Water Emergency Transportation Authority (WETA)

Adopted Operating Budget	$61 million
Increase in Budget compared to FY2021-22	18%
Projected Ridership (Estimated FY 2022-23 as a percentage of FY 2018-19 actual)	64%
Total Proposed FY2022-23 Operating Allocation	$16.7 million
Proportion of Operating Budget Funded with Allocations	27%
Estimated COVID Relief Funding at the End of FY2022-23[1]	$21 million

Budget and Operating Highlights

WETA is continuing the Pandemic Recovery Program they initiated at the start of last fiscal year. The program includes placing more emphasis on midday and late evening service to accommodate riders with non-traditional work schedules and reducing fares. WETA plans to complete its 2050 Service Vision and Business Plan by the end of the fiscal year. WETA will also develop a five-year fare program for implementation in FY 2023-24.

The budget includes $1.7 million to operate the world's first hydrogen propelled passenger ferry vessel along the San Francisco waterfront as part of a six-month demonstration project. The budget for fuel is increasing from $10 million to $16 million, and accounts for 66% of the total

[1] Calculation includes the $26 million in competitive federal American Rescue Plan Act funds WETA received.

operating budget increase. Prior to the pandemic, farebox revenues covered between 50-60% of WETA's operating expense. Although ridership is expected to return to 70% of pre-pandemic levels by the end of the fiscal year, lower ridership coupled with current fare policy means that farebox revenues are budgeted to be $11.2 million in FY 2022-23, compared to $22.4 million in FY 2018-19 and are projected to cover 18% of the total operating budget. Approximately 44% of the FY 2022-23 operating budget is funded by $27 million in federal COVID relief funding.

Date: June 22, 2022
W.I.: 1255
Referred by: PAC
Revised: 09/28/22-C

ABSTRACT

Resolution No. 4522, Revised

This resolution approves the allocation of the Regional Measure 2 operating and planning funds for FY 2022-23.

This resolution allocates funds to AC Transit, MTC, and the Transbay Joint Powers Authority.

On September 28, 2022, Attachment A was revised to allocate funds to the Golden Gate Bridge Highway and Transit District (GGBHTD), Water Emergency Transportation Authority (WETA), and MTC.

Discussion of the allocations made under this resolution are contained in the MTC Programming and Allocations Committee Summary Sheets dated June 8, 2022 and September 14, 2022.

Date: June 22, 2022
W.I.: 1255
Referred by: PAC

Re: Allocation of Regional Measure 2 funds for transit operations and planning for FY 2022-23

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4522

WHEREAS, pursuant to Government Code Section 66500 et seq., the Metropolitan Transportation Commission ("MTC") is the regional transportation planning agency for the San Francisco Bay Area; and

WHEREAS, Streets and Highways Code Sections 30950 *et seq.* created the Bay Area Toll Authority ("BATA") which is a public instrumentality governed by the same board as that governing MTC; and

WHEREAS, on March 2, 2004, voters approved Regional Measure 2, increasing the toll for all vehicles on the seven state-owned toll bridges in the San Francisco Bay Area by $1.00, with this extra dollar funding various transportation projects within the region that have been determined to reduce congestion or to make improvements to travel in the toll bridge corridors, as identified in SB 916 (Chapter 715, Statutes of 2004), commonly referred as Regional Measure 2 ("RM2"); and

WHEREAS, RM2 establishes the Regional Traffic Relief Plan and programs eligible for RM2 funding for transit operating and planning assistance as identified in Streets and Highways Code Section 30914(d).

WHEREAS, RM2 assigns administrative duties and responsibilities for the implementation of the Regional Traffic Relief Plan to MTC; and

WHEREAS, BATA shall fund the projects of the Regional Traffic Relief Plan by transferring RM2 authorized funds to MTC; and

WHEREAS, MTC adopted policies and procedures for the implementation of the Regional Measure 2 Regional Traffic Relief Plan on June 23, 2004, specifying the allocation criteria and project compliance requirements for RM 2 funding (MTC Resolution No. 3636, Revised); and

WHEREAS, MTC has reviewed the allocation requests submitted for RM2 transit operations and planning funds from the project sponsor(s) listed in Attachment A to this resolution, attached hereto and incorporated herein as though set forth at length funds; and

WHEREAS, project sponsors seeking RM2 funds are required to submit an Operating Assistance Proposal (OAP), pursuant to Streets and Highway Code Section 30914(e) to MTC for review and approval, which demonstrates a fully funded operating plan and consistency with the performance measures, as applicable; and

WHEREAS, Attachment A lists the projects requested by project sponsors for RM2 funding, project specific conditions, and amounts recommended for RM2 allocation by MTC staff; and

RESOLVED, that MTC approves staff's review of the OAP for the projects listed in Attachment A; and be it further

RESOLVED, that MTC approves the allocation of RM2 funds in accordance with Attachment A; and be it further

RESOLVED, that the allocation and reimbursement of RM2 funds as set forth in Attachment A are conditioned upon the project sponsor complying with the provisions of the Regional Measure 2 Regional Traffic Relief Plan Policy and Procedures as set for in length in MTC Resolution 3636, Revised; and be it further

RESOLVED, that the allocation and reimbursement of RM2 funds are further conditioned upon the project specific conditions as set forth in Attachment A; and, be it further

RESOLVED, that a certified copy of this resolution, shall be forwarded to the project sponsors.

METROPOLITAN TRANSPORTATION COMMISSION

Alfredo Pedroza, Chair

The above resolution was entered into
by the Metropolitan Transportation
Commission at the regular meeting
of the Commission held in San Francisco,
California and at other remote locations,
on June 22, 2022.

Date: June 22, 2022
W.I.: 1255
Referred by: PAC
Revised: 09/28/22-C

Attachment A
MTC Resolution No. 4522
Page 1 of 1

FY 2022-23 ALLOCATION OF REGIONAL MEASURE 2 FUNDS
FOR TRANSIT OPERATIONS AND PLANNING

1. Funding for each route is limited to the amount identified in the FY2022-23 RM2 Operating Program (MTC Resolution 4521).
2. Allocation amounts may be reduced in order to stay within the statutorily mandated RM2 operating program limit of 38% of annual revenue [SHC Section 30915(d)].
3. Payment of RM2 operating funds may be limited to no more than 1/12 of the allocated amount monthly.
4. For FY 2022-23, operating advances will be considered on a case-by-case basis.
5. RM2 performance requirements are suspended due to the continuing transit impacts resulting from the COVID-19 pandemic.

Claimant	Project Description	Allocation Amount	Allocation Code	Approval Date	Project Number
TJPA[1]	Transbay Transit Center	$ 2,627,193	01	06/22/22	13
MTC	Clipper	$ 1,751,462	02	06/22/22	12
AC Transit	Express Bus Service	$ 4,716,766	03	06/22/22	4
AC Transit	Dumbarton Bus	$ 3,244,888	04	06/22/22	5
AC Transit	Owl Bus Service	$ 1,310,107	05	06/22/22	7
AC Transit	Enhanced/Rapid Bus Service	$ 2,627,193	06	06/22/22	9
WETA	Planning and Administration	$ 2,627,193	07	09/28/22	11
WETA	Ferry Operations	$ 13,398,683	08	09/28/22	6
GGBHTD	Route 40	$ 2,135,450	09	09/28/22	1
MTC[2]	Clipper	$ 744,000	02	09/28/22	12
	Total	**$ 35,182,935**			

Notes
1. The allocation of funds to TJPA shall be subject to the same conditions included in MTC Resolution 4526.
2. Additional allocation to MTC as a result of reduced revenue in FY 2021-22 and rescission from the Clipper project in FY 2021-22.

Date: June 22, 2022
W.I.: 1514
Referred by: PAC
Revised: 07/27/22-C
09/28/22-C

ABSTRACT

Resolution No. 4523, Revised

This resolution approves the allocation of fiscal year 2022-2023 Transportation Development Act Article 4, Article 4.5 and Article 8 funds to claimants in the MTC region.

This resolution allocates funds to Alameda-Contra Costa Transit District (AC Transit), Livermore Amador Valley Transit Authority (LAVTA), Napa Valley Transportation Authority (NVTA) and Santa Clara Valley Transportation Authority (VTA).

Attachment A of this resolution was revised on July 27, 2022 to allocate funds to Central Contra Costa Transit Authority (CCCTA) and Sonoma County Transit.

On September 28, 2022, Attachment A was revised to allocate funds to the Golden Gate Bridge Highway and Transit District (GGBHTD), San Mateo County Transit District (SamTrans), Eastern Contra Costa Transit Authority (ECCTA or Tri Delta Transit), Marin County Transit District, and Solano County Transit (SolTrans).
Discussion of the allocations made under this resolution is contained in the MTC Programming and Allocations Committee Summary Sheets dated June 8, 2022, July 13, 2022, and September 14, 2022.

Date: June 22, 2022
W.I.: 1514
Referred by: PAC

Re: Allocation of Fiscal Year 2022-23 Transportation Development Act Article 4, Article 4.5 and Article 8 Funds to Claimants in the MTC Region

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4523

WHEREAS, pursuant to Government Code Section 66500 et seq., the Metropolitan Transportation Commission ("MTC") is the regional transportation planning agency for the San Francisco Bay Area; and

WHEREAS, the Mills-Alquist-Deddeh Act ("Transportation Development Act" or "TDA"), Public Utilities Code Section 99200 et seq., makes certain retail sales tax revenues available to eligible claimants for public transportation projects and purposes; and

WHEREAS, MTC is responsible for the allocation of TDA funds to eligible claimants within the MTC region; and

WHEREAS, claimants in the MTC region have submitted claims for the allocation of fiscal year 2021-22 TDA funds; and

WHEREAS, Attachment A to this resolution, attached hereto and incorporated herein as though set forth at length, lists the amounts of and purposes for the fiscal year 2022-23 allocations requested by claimants, and is from time-to-time revised; and

WHEREAS, this resolution, including the revisions to Attachment A and the sum of all allocations made under this resolution, are recorded and maintained electronically by MTC; and

WHEREAS, Attachment B to this resolution, attached hereto and incorporated herein as though set forth at length, lists the required findings MTC must make, as the case may be, pertaining to the various claimants to which funds are allocated; and

WHEREAS, the claimants to which funds are allocated under this resolution have certified that the projects and purposes listed and recorded in Attachment A are in compliance with the requirements of the California Environmental Quality Act (Public Resources Code

Section 2l000 et seq.), and with the State Environmental Impact Report Guidelines (l4 California Code of Regulations Section l5000 et seq.); now, therefore, be it

RESOLVED, that MTC approves the findings set forth in Attachment B to this resolution; and, be it further

RESOLVED, that MTC approves the allocation of fiscal year 2022-23 TDA funds to the claimants, in the amounts, for the purposes, and subject to the conditions, as listed and recorded on Attachment A to this resolution; and, be it further

RESOLVED, that pursuant to 21 California Code of Regulations Sections 6621 and 6659, a certified copy of this resolution, along with written allocation instructions for the disbursement of TDA funds as allocated herein, shall be forwarded to the county auditor of the county in which each claimant is located; and, be it further

RESOLVED, that all TDA allocations are subject to continued compliance with MTC Resolution No. 3866, Revised, the Transit Coordination Implementation Plan.

METROPOLITAN TRANSPORTATION COMMISSION

Alfredo Pedroza, Chair

The above resolution was approved by the
Metropolitan Transportation Commission
at a regular meeting of the Commission held
in San Francisco, California, and at other
remote locations, on June 22, 2022.

Date: June 22, 2022
Referred by: PAC
Revised: 07/27/22-C
09/28/22-C

Attachment A

ALLOCATION OF TRANSPORTATION DEVELOPMENT ACT ARTICLE 4, 4.5 and 8 FUNDS
DURING FISCAL YEAR 2022-23

All TDA allocations are subject to continued compliance with MTC Resolution 3866,
the Transit Coordination Implementation Plan.

Claimant	Project Description	Allocation Amount	Alloc. Code	Approval Date	Apportionment Area
5801 - 99233.7, 99275 Community Transit Service - Operations					
VTA	Paratransit Operations	6,880,509	01	06/22/22	Santa Clara County
AC Transit	Paratransit Operations	5,109,152	02	06/22/22	Alameda 4.5
CCCTA	Paratransit Operations	1,332,243	13	07/27/22	CCCTA 4.5
SamTrans	Paratransit Operations	2,790,948	19	09/28/22	San Mateo County
	Subtotal	**16,112,852**			
5802 - 99260A Transit - Operations					
VTA	Transit Operations	130,729,623	03	06/22/22	VTA
NVTA	Transit Operations	5,075,466	04	06/22/22	NVTA
AC Transit	Transit Operations	67,976,124	05	06/22/22	Alameda D1
AC Transit	Transit Operations	18,280,448	06	06/22/22	Alameda D2
AC Transit	Transit Operations	10,774,214	07	06/22/22	Costa D1
LAVTA	Transit Operations	10,610,799	08	06/22/22	LAVTA
Sonoma County T	Transit Operations	5,905,289	14	07/27/22	Sonoma County
CCCTA	Transit Operations	19,694,537	15	07/27/22	CCCTA
ECCTA	Transit Operations	16,147,136	20	09/28/22	ECCTA
GGBHTD	Transit Operations	8,867,685	21	09/28/22	GGBHTD - Marin
SamTrans	Transit Operations	53,028,002	22	09/28/22	SamTrans
Marin Transit	Transit Operations	11,411,858	23	09/28/22	Marin Transit
GGBHTD	Transit Operations	8,356,950	24	09/28/22	GGBHTD - Sonoma
SolTrans	Transit Operations	5,175,600	25	09/28/22	Vallejo/Benicia
	Subtotal	**372,033,731**			

5803 - 99260A Transit - Capital

LAVTA	Transit Capital	5,988,747	09	06/22/22	LAVTA
NVTA	Transit Capital	1,000,000	10	06/22/22	NVTA
Sonoma County T	Transit Capital	4,890,666	16	07/27/22	Sonoma County
CCCTA	Transit Capital	9,968,877	17	07/27/22	CCCTA
ECCTA	Transit Capital	1,200,000	26	09/28/22	ECCTA
SolTrans	Transit Capital	3,862,652	27	09/28/22	Vallejo/Benicia
	Subtotal	**26,910,942**			

5807 - 99400C Transit - Operations

NVTA	Transit Operations	1,219,490	11	06/22/22	NVTA
Sonoma County T	Transit Operations	2,583,792	18	07/27/22	Sonoma County
	Subtotal	**3,803,282**			

5812 - 99400D Planning and Administration - Operations

NVTA	Planning & Administration	3,362,200	12	06/22/22	NVTA
	Subtotal	**3,362,200**			

Total ***422,223,007***

ALLOCATION OF FISCAL YEAR 2022-23
TRANSPORTATION DEVELOPMENT ACT
ARTICLE 4, ARTICLE 4.5 AND ARTICLE 8
FUNDS TO CLAIMANTS IN THE MTC REGION

FINDINGS

The following findings pertain, as the case may be, to claimants to which Transportation Development Act funds are allocated under this resolution.

Transportation Development Act Article 4 Funds

Public Utilities Code § 99268 et seq.

1. That each claimant has submitted, or shall have submitted prior to the disbursement of funds, copies, to MTC and to appropriate agencies, of all required State Controller's reports and fiscal audit reports prepared in accordance with Public Utilities Code §§ 99243 and 99245; and

2. That the projects and purposes for which each claimant has submitted an application for TDA Article 4 funds to MTC are in conformance with MTC's Regional Transportation Plan (21 California. Code of Regulations § 6651), and with the applicable state regulations (21 California Code of Regulations § 6600 et seq.), and with the applicable MTC rules and regulations; and

3. That the claimant is in compliance with the 50% expenditure limitation of Public Utilities Code § 99268, or is exempt from compliance with the applicable fare or fares-plus-local-support recovery ratio requirement (Public Utilities Code §§ 99268.2, 99268.3, 99268.4, 99268.12, or 99270.5) as provided by PUC § 99268.9; and

4. That the sum of each claimant's total allocation of Transportation Development Act and State Transit Assistance funds does not exceed the amount that the claimant is eligible to

receive, in accordance with the calculations prescribed by 2l California Code of Regulations § 6633.l, or § 6634; and

5. That pursuant to Public Utilities Code § 99233.7 certain funds identified in Attachment A and available for purposes stated in TDA Article 4.5 can be used to better advantage by a claimant for purposes stated in Article 4 in the development of a balanced transportation system.

Transportation Development Act Article 4.5 Funds

Public Utilities Code § 99275

1. That each claimant has submitted, or shall have submitted prior to the disbursement of funds, copies, to MTC and to appropriate agencies, of all required State Controller's reports and fiscal audit reports prepared in accordance with Public Utilities Code §§ 99243 and 99245; and

2. That the projects and purposes for which each claimant has submitted an application for TDA Article 4.5 funds to MTC are in conformance with MTC's Regional Transportation Plan (21 California Code of Regulations § 6651), and with the applicable state regulations (21 California Code of Regulations § 6600 et seq.), and with the applicable MTC rules and regulations, including MTC Resolution No. 1209, Revised; and

3. That in accordance with Public Utilities Code § 99275.5(c), MTC finds that the projects and purposes for which each claimant has submitted an application for TDA Article 4.5 funds to MTC, responds to a transportation need not otherwise met in the community of the claimant; that the services of the claimant are integrated with existing transit services, as warranted; that the claimant has prepared and submitted to MTC an estimate of revenues, operating costs and patronage for the fiscal year in which TDA Article 4.5 funds are allocated; and that the claimant is exempt from applicable fare or fares-plus-local-match recovery ratio requirement (as set forth, respectively, in Public Utilities Code § 99268.5 or MTC Resolution No. 1209, Revised) as provided by PUC § 99268.9; and

4. That the sum of each claimant's total allocation of Transportation Development Act and State Transit Assistance funds does not exceed the amount that the claimant is eligible to

receive, in accordance with the calculations prescribed by 21 California Code of Regulations § 6634; and

5. That each claimant is in compliance with Public Utilities Code §§ 99155 and 99155.5, regarding user identification cards.

Transportation Development Act Article 8 Transit Funds

Public Utilities Code §§ 99400(c), 99400(d) and 99400(e)

1. That each claimant has submitted, or shall have submitted prior to the disbursement of funds, copies, to MTC and to appropriate agencies, of all required State Controller's reports and fiscal audit reports prepared in accordance with Public Utilities Code §§ 99243 and 99245; and
2. That the projects and purposes for which each claimant has submitted an application for TDA Article 8 funds to MTC are in conformance with MTC's Regional Transportation Plan (21 California Code of Regulations § 6651), and with the applicable state regulations (21 California Code of Regulations § 6600 et seq.), and with the applicable MTC rules and regulations, including MTC Resolution No. 1209, Revised; and

3. That the claimant is exempt from applicable fare or fares-plus-local-match recovery ratio requirement (as set forth, respectively, in Public Utilities Code §§ 99268.5, 99268.12, or MTC Resolution No. 1209, Revised) as provided by PUC § 99268.9; and

4. That the sum of each claimant's total allocation of Transportation Development Act and State Transit Assistance funds does not exceed the amount that the claimant is eligible to receive, in accordance with the calculations prescribed by 2l California Code of Regulations § 6634.

Date: June 22, 2022
W.I.: 1514
Referred by: PAC
Revised: 09/28/22-C

ABSTRACT

Resolution No. 4524, Revised

This resolution approves the allocation of State Transit Assistance (STA) funds for fiscal year 2022-23.

This resolution allocates funds to AC Transit, Livermore Amador Valley Transit Authority (LAVTA), MTC, and Santa Clara Valley Transportation Authority (VTA).

On September 28, 2022, Attachment A was revised to allocate funds to the Eastern Contra Costa Transit Authority (ECCTA or Tri Delta Transit), Golden Gate Bridge Highway and Transit District (GGBHTD), San Mateo County Transit District (SamTrans), Marin County Transit District, and MTC.

Discussion of the allocations made under this resolution is contained in the MTC Programming and Allocations Committee Summary Sheets dated June 8, 2022 and September 14, 2022.

Date: June 22, 2022
W.I.: 1514
Referred by: PAC

Re: Allocation of Fiscal Year 2022-23 State Transit Assistance to Claimants in the MTC Region

METROPOLITAN TRANSPORTATION COMMISSION

RESOLUTION NO. 4524

WHEREAS, pursuant to Government Code § 66500 et seq., the Metropolitan Transportation Commission ("MTC") is the regional transportation planning agency for the San Francisco Bay Area; and

WHEREAS, the Mills-Alquist-Deddeh Act ("Transportation Development Act" or "TDA"), Public Utilities Code Section 99200 et seq., provides that the State Controller shall, pursuant to Public Utilities Code Section 99310, allocate funds in the Public Transportation Account ("PTA") to the MTC region to be subsequently allocated by MTC to eligible claimants in the region; and

WHEREAS, pursuant to Public Utilities Code Section 993l3.6, MTC has created a State Transit Assistance ("STA") fund which resides with the Alameda County Auditor for the deposit of PTA funds allocated to the MTC region; and

WHEREAS, pursuant to Public Utilities Code Section 993l3.6(d), MTC may allocate funds to itself for projects to achieve regional transit coordination objectives; and

WHEREAS, pursuant to Public Utilities Code Sections 99314.5(a) and 99314.5(b), claimants eligible for Transportation Development Act Article 4 and Article 8 funds are eligible claimants for State Transit Assistance funds; and

WHEREAS, eligible claimants have submitted applications to MTC for the allocation of fiscal year 2022-23 STA funds; and

WHEREAS, Attachment A to this resolution, attached hereto and incorporated herein as though set forth at length, lists the amounts of and purposes for the fiscal year 2022-23 allocations requested by claimants, and is from time-to-time revised; and

WHEREAS, this resolution, including the revisions to Attachment A and the sum of all allocations made under this resolution, are recorded and maintained electronically by MTC; and

WHEREAS, pursuant to 2l California Code of Regulations Section 6754, MTC Resolution Nos. 4321 and 4433, and Attachment B to this resolution, attached hereto and incorporated herein as though set forth at length, lists the required findings MTC must make, as the case may be, pertaining to the various claimants to which funds are allocated; and

WHEREAS, the claimants to which funds are allocated under this resolution have certified that the projects and purposes listed and recorded in Attachment A are in compliance with the requirements of the California Environmental Quality Act (Public Resources Code Section 2l000 et seq.), and with the State Environmental Impact Report Guidelines (l4 California Code of Regulations Section l5000 et seq.); now, therefore, be it

RESOLVED, that MTC approves the findings set forth in Attachment B to this resolution; and, be it further

RESOLVED, that MTC approves the allocation of fiscal year 2022-23 STA funds to the claimants, in the amounts, for the purposes, and subject to the conditions, as listed and recorded on Attachment A to this resolution;

RESOLVED, that, pursuant to 21 Cal. Code of Regs. §§ 6621 and 6753, a certified copy of this resolution, along with written allocation instructions for the disbursement of STA funds as allocated herein, shall be forwarded to the Alameda County Auditor; and, be it further

RESOLVED, that all STA allocations are subject to continued compliance with MTC Resolution 3866, the Transit Coordination Implementation Plan; and, be it further

RESOLVED, this resolution incorporates any revisions to the TDA, either by statute or regulation, made hereafter.

METROPOLITAN TRANSPORTATION COMMISSION

Alfredo Pedroza, Chair

The above resolution was entered into by the Metropolitan Transportation Commission at a duly called and noticed meeting held in San Francisco, California and at other remote locations on June 22, 2022.

Date: June 22, 2022
Referred by: PAC
Revised: 09/28/22-C

Attachment A
ALLOCATION OF STATE TRANSIT ASSISTANCE FUNDS
DURING FISCAL YEAR 2022-23

All STA allocations are subject to continued compliance with MTC Resolution 3866, Revised,
the Transit Coordination Implementation Plan.

Claimant	Project Description	Allocation Amount	Alloc. Code	Approval Date	Apportionment Area	Note
5820 - 6730A Operations - County Block Grant						
LAVTA	Transit Operations	1,377,503	01	06/22/22	LAVTA	
ECCTA	Transit Operations	3,172,715	07	09/28/22	Tri-Delta Transit	
	Subtotal	**4,550,218**				
5820 - 6730A Operations - Population-based MTC Coordination						
MTC	Clipper START Administratic	3,000,000	02	06/22/22	Fare Program	
MTC	Clipper Operations	9,000,000	03	06/22/22	MTC	
MTC	Clipper	256,000	03	09/28/22	MTC	
SamTrans	Transit Operations	8,000,000	08	09/28/22	MTC	
	Subtotal	**20,256,000**				
5820 - 6730A Operations - Revenue-based						
VTA	Transit Operations	28,362,250	04	06/22/22	VTA	
AC Transit	Transit Operations	29,636,318	05	06/22/22	AC Transit	
ECCTA	Transit Operations	1,404,496	09	09/28/22	BART	
SamTrans	Transit Operations	9,095,193	10	09/28/22	SamTrans	
Marin Transit	Transit Operations	1,500,000	11	09/28/22	Marin Transit	
GGBHTD	Transit Operations	4,559,143	12	09/28/22	GGBHTD	
	Subtotal	**74,557,400**				
5821 - 6730B Capital Costs - Revenue-based						
SamTrans	Transit Capital	1,541,284	13	09/28/22	SamTrans	
	Subtotal	**1,541,284**				
5822 - 6731C Paratransit - Operations - Population-Based County Block Grant						
VTA	Paratransit Operations	1,870,260	06	06/22/22	Santa Clara County	
	Subtotal	**1,870,260**				
	Total	***102,775,162***				

ALLOCATION OF FISCAL YEAR 2022-23 STATE TRANSIT ASSISTANCE FUNDS TO CLAIMANTS IN THE MTC REGION

FINDINGS

The following findings pertain, as the case may be, to claimants to which State Transit Assistance (STA) funds are allocated under this resolution.

1. That each claimant has submitted, or shall have submitted prior to the disbursement of funds, copies, to MTC and to appropriate agencies, of all required State Controller's reports and fiscal audit reports prepared in accordance with PUC §§ 99243 and 99245; and

2. That the projects and purposes for which each claimant has submitted an application for STA funds to MTC are in conformance with MTC's Regional Transportation Plan (21 Cal. Code of Regs. § 6651), and with the applicable state regulations (21 Cal. Code of Regs. § 6600 et seq.), and with the applicable MTC rules and regulations; and

4. That each claimant is making full use of federal funds available under the Fixing America's Surface Transportation (FAST) Act, as amended; and

5. That the sum of each claimant's allocation of Transportation Development Act and State Transit Assistance funds does not exceed the amount the claimant is eligible to receive, in accordance with the calculations prescribed by 21 Cal. Code of Regs. § 6633.1 or § 6634; and

6. That MTC has given priority consideration to claims to offset reductions in federal operating assistance and the unanticipated increase in the cost of fuel, to enhance existing public transportation services, and to meet high priority regional, countywide, or area wide public transportation needs; and

7. That each claimant has submitted to MTC a copy of a certification from the California Highway Patrol verifying that the claimant is in compliance with Section 1808.1 of the Vehicle Code ("Pull Notice Program"), as required by PUC § 99251; and

8. That each claimant is in compliance with MTC's Transit Coordination Implementation Plan, pursuant to Government Code §§ 66516 and 66516.5, PUC §§ 99314.5(c) and §99314.7, and MTC Resolution No. 3866, Revised.

Notes:
The following requirements are suspended for FY 2022-23:

a. Productivity Improvement Program requirement (PUC § 99244)
b. Efficiency standards under PUC § 99314.6
c. MTC State Transit Assistance standard (PUC § 99314.7)

Date: September 28, 2022
W.I.: 1514
Referred by: PAC

ABSTRACT

Resolution No. 4528

This resolution approves the Five Percent Unrestricted State Fund Revenues and the Two Percent Bridge Toll Revenues program of projects and allocation of funds for FY 2022-23. Attachment A to this resolution lists the projects to be funded.

This resolution allocates funds to the Water Emergency Transportation Authority (WETA).

Further discussion is contained in the MTC Programming and Allocations Summary sheet dated September 14, 2022.

Date: September 28, 2022
W.I.: 1514
Referred by: PAC

RE: Programming and Allocation of Five Percent Unrestricted State Fund Revenues and Two Percent Bridge Toll Revenues in the Fiscal Year 2022-23 to Various Claimants

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4528

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to Government Code Section 66500 et seq., and

WHEREAS, with the toll increase authorized by the Regional Measure 1, approved by the voters on November 8, 1988, 3% of the revenue from the toll increase collected on all the state-owned bridges in the region may be allocated by MTC pursuant to Streets and Highways Code §§ 30913 and 30914, for certain projects which are designed to reduce vehicular traffic congestion on these bridges; and

WHEREAS, Streets and Highways Code §§ 30913 and 30914 have been amended to require that an additional 2% of those toll revenues be allocated by MTC for the planning, construction, and acquisition of rapid water transit systems; and,

WHEREAS, pursuant to Streets and Highways Code § 30894, MTC has adopted MTC Resolution No. 4015 which sets forth MTC's Bridge Toll Revenue Allocation Policy and established the Five Percent Unrestricted State Fund Revenues and Two Percent Bridge Toll Revenues Programming and Allocation Policy; and

WHEREAS, the claimants listed on Attachment A have submitted applications to MTC for allocation of Five Percent Unrestricted State Fund Revenues and Two Percent Bridge Toll Revenues in FY 2022-23; and

WHEREAS, those applications are for projects and purposes that are in conformance with MTC's Regional Transportation Plan, with the requirements of the California Environmental Quality Act (Public Resources Code § 2100 et seq.) and the State Environmental Impact Report Guidelines (14 Cal. Admin. Code § 15000 et seq.); now therefore, be it

RESOLVED, that MTC approves the programming and allocation of Five Percent Unrestricted State Fund Revenues and Two Percent Bridge Toll Revenues in FY 2022-23 to the claimants, in the amounts, for the purposes, and subject to the conditions listed on Attachment A to this resolution, attached hereto and incorporated herein as though set forth at length.

METROPOLITAN TRANSPORTATION COMMISSION

_____

Alfredo Pedroza, Chair

The above resolution was entered into by the Metropolitan Transportation Commission at a regular meeting of the Commission held in San Francisco, California and at other remote locations on September 28, 2022.

Date: September 28, 2022
Referred by: PAC

Attachment A

ALLOCATION OF FIVE PERCENT UNRESTRICTED STATE FUND REVENUES AND TWO PERCENT BRIDGE TOLL REVENUES

FOR FISCAL YEAR 2022-23

Claimant	Project Description	Allocation Amount	Alloc. Code	Approval Date	Apportionment Area
Five Percent Unrestricted State Fund Revenues					
WETA	WETA Business Plan	700,000	01	09/28/22	Ferry
WETA	Replacement Vessels - MV Solano and MV Mare Island	7,786,000	02	09/28/22	Ferry
	Subtotal	**8,486,000**			
Two Percent Bridge Toll Revenues					
WETA	Utility/Infrastructure Study for All-Electric Vessels	250,000	01	09/28/22	Ferry
WETA	Electric Vessels Expansion	1,260,000	02	09/28/22	Ferry
WETA	Terminal Reconfiguration - Vallejo	550,000	03	09/28/22	Ferry
WETA	MV Solano Replacement	2,600,000	04	09/28/22	Ferry
	Subtotal	**4,660,000**			
	Total	***13,146,000***			

375 Beale Street, Suite 800
San Francisco, CA 94105

Metropolitan Transportation Commission

Legislation Details (With Text)

File #:	22-1291	**Version:**	1	**Name:**	
Type:	Resolution			**Status:**	Commission Approval
File created:	8/9/2022			**In control:**	Programming and Allocations Committee
On agenda:	9/14/2022			**Final action:**	
Title:	MTC Resolution Nos. 4035, Revised and 4202, Revised. Revisions to the One Bay Area Grant programs (OBAG 1 and 2), including extending obligation deadlines for the OBAG 2 County and Safe & Seamless Mobility Quick-Strike Programs.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	2d_22-1291_Resos_4035-4202_Safe_and_Seamless_Mobility_Quick-Strike_Program.pdf				

Date	Ver.	Action By	Action	Result

Subject:

MTC Resolution Nos. 4035, Revised and 4202, Revised. Revisions to the One Bay Area Grant programs (OBAG 1 and 2), including extending obligation deadlines for the OBAG 2 County and Safe & Seamless Mobility Quick-Strike Programs.

Presenter:

Thomas Arndt

Recommended Action:

Commission Approval

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Metropolitan Transportation Commission
Programming and Allocations Committee

September 14, 2022 **Agenda Item 2d - 22-1291**

MTC Resolutions No. 4035, Revised and 4202, Revised

Subject:

Revisions to the One Bay Area Grant programs (OBAG 1 and 2), including extending obligation deadlines for the OBAG 2 County and Safe & Seamless Mobility Quick-Strike Programs.

Background:

The OBAG 1 and 2 programs adopted by the Commission establish the commitments and policies for investing Surface Transportation Block Grant Program (STP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds for regional and county programs from FY 2012-13 through FY 2021-22.

This month, staff recommend the following revisions to the OBAG 1 and OBAG 2 programs:

1) **Transit Performance Initiatives (TPI) Programs:**

   Redirect $1.3 million for SolanoExpress bus purchases from the City of Fairfield, which operates Fairfield and Suisun Transit (FAST), to SolTrans within the following OBAG 1 programs:

   - $333,719 from the TPI Incentive Program, and
   - $1,000,000 from the TPI Capital Investment Program.

   The Commission previously awarded $1.3 million in TPI funding to Fairfield for SolanoExpress replacement bus procurements. In fall 2021, the Solano Transportation Authority (STA) Board voted to consolidate SolanoExpress operations under SolTrans, transitioning routes previously operated by FAST to SolTrans. Given the associated turnover of SolanoExpress rolling stock procurement and ownership from Fairfield to SolTrans, staff recommends reassigning the $1.3 million from Fairfield to SolTrans.

   These funds were originally programmed to Fairfield as part of an in-county fund swap, wherein Fairfield would use the federal funds for a bus procurement in order to free up non-federal funds for the Fairgrounds Drive Solano Express Bus Stop Improvement project, a TPI eligible project. The transit improvements at the Fairgrounds Drive bus stop have already been completed, but the bicycle and pedestrian elements are pending construction of overall interchange improvements at Fairgrounds Drive and State Route 37. Therefore, this action would also revise the project names to clarify that the local fund swap resulting from the federally-funded bus

procurement will also include an additional TPI-eligible Solano Express Bus Stop Improvement project at West Texas Street.

2) **Priority Conservation Area (PCA) Grant Program:**

Reprogram $525,000 in project savings and unprogrammed balances to PCA Grant Implementation within the following OBAG 1 and OBAG 2 regional programs:

- $145,000 in savings from completed OBAG 1 PCA projects, and
- $380,000 in OBAG 2 unprogrammed balances.

This revision supports PCA Grants implementation and grant program administration.

3) **Project Obligation Deadlines:**

Extend the adopted OBAG 2 project obligation deadlines by one year, as follows:

- From September 30, 2022 to September 30, 2023 for the Safe & Seamless Mobility Quick-Strike Program, and
- From January 31, 2023 to January 31, 2024 for all other OBAG 2 projects and programs.

As of July 31, 2022, project sponsors throughout the region had obligated roughly 80% of available OBAG 2 funding, leaving an additional 20%, or approximately $200 million, left to obligate in the remaining 6 months of the OBAG 2 cycle.

In August, MTC staff surveyed sponsors with unobligated funds about their project delivery schedules and anticipated ability to meet the current obligation deadlines of January 31, 2023 and September 30, 2022 for the OBAG 2 and Quick-Strike funds, respectively. While the bulk of remaining projects are anticipated to still meet these deadlines, many sponsors cited ongoing staffing shortages, turnover, supply chain delays, and extended project approval processes as common factors in project delays preventing timely obligation of funds. Extending the existing program deadlines by one year acknowledges the challenges that project sponsors have faced in recent years in delivering these regional and local priority projects.

Issues:

None.

Recommendation:

Refer MTC Resolutions No. 4035, Revised and No. 4202, Revised to the Commission for approval.

Attachments:

MTC Resolution No. 4035, Revised, Attachment B-1

MTC Resolution No. 4202, Revised, Attachments A, A-11, and B-1

Therese W. McMillan

Date: May 17, 2012
W.I.: 1512
Referred by: Planning
Revised: 10/24/12-C 11/28/12-C 12/19/12-C
01/23/13-C 02/27/13-C 05/22/13-C
09/25/13-C 11/20/13-C 12/18/13-C
01/22/14-C 02/26/14-C 03/26/14-C
04/23/14-C 05/28/14-C 06/25/14-C
07/23/14-C 09/24/14-C 12/17/14-C
03/25/15-C 05/27/15-C 06/24/15-C
07/22/15-C 09/23/15-C 10/28/15-C
11/18/15-C 12/16/15-C 01/27/16-C
02/24/16-C 03/23/16-C 05/25/16-C
07/27/16-C 12/21/16-C 01/25/17-C
04/26/17-C 05/24/17-C 06/28/17-C
07/26/17-C 09/27/17-C 10/25/17-C
11/15/17-C 02/28/18-C 03/28/18-C
05/23/18-C 06/27/18-C 07/25/18-C
09/26/18-C 12/19/18-C 01/23/19-C
04/24/19-C 09/25/19-C 03/25/20-C
09/23/20-C 11/20/20-C 07/28/21-C
09/22/21-C 09/28/22-C

ABSTRACT

Resolution No. 4035, Revised

This resolution adopts the Project Selection Policies and Programming for federal Surface Transportation Authorization Act following the Safe, Accountable, Flexible and Efficient Transportation Equity Act (SAFETEA), and any extensions of SAFETEA in the interim. The Project Selection Policies contain the project categories that are to be funded with various fund sources including federal surface transportation act funding available to MTC for its programming discretion to be included in the federal Transportation Improvement Program (TIP).

The resolution includes the following attachments:

Attachment A – Project Selection Policies
Attachment B-1 – Regional Program Project List
Attachment B-2 – OneBayArea Grant (OBAG 1) Project List

Attachment A (page 13) was revised on October 24, 2012 to update the PDA Investment & Growth Strategy (Appendix A-6) and to update county OBAG fund distributions using the most current RHNA data (Appendix A-1 and Appendix A-4). The Commission also directed $20 million of the $40 million in the regional PDA Implementation program to eight CMAs and the San Francisco Planning Department for local PDA planning implementation**.** Attachment B-1 and B-2 were revised to add new projects selected by the Solano Transportation Authority and Santa Clara Valley Transportation

Authority and to add projects under the Freeway Performance Initiative and to reflect the redirection of the $20 million in PDA planning implementation funds.

Attachment A (pages 8, 9 and 13) was revised on November 28, 2012 to confirm and clarify the actions on October 24, 2012 with respect to the County PDA Planning Program.

Attachment A (page 12) was revised on December 19, 2012 to provide an extension for the Complete Streets policy requirement. Attachments B-1 and B-2 were revised to add new projects selected by the Solano Transportation Authority, Sonoma County Transportation Authority and Santa Clara Valley Transportation Authority; add funding for CMA Planning activities; and to shift funding between two San Francisco Municipal Transportation Agency projects under the Transit Performance Initiatives Program.

Attachments B-1 and B-2 were revised on January 23, 2013 to add new projects selected by various Congestion Management Agencies and to add new projects selected by the Commission in the Transit Rehabilitation Program.

As referred by the Programming and Allocations Committee, Attachment B-1 and Appendix A-2 were revised on February 27, 2013 to add Regional Safe Routes to School programs for Alameda and San Mateo counties, and to reflect previous Commission actions pertaining to the Transit Capital Rehabilitation Program, and to reflect earlier Commission approvals of fund augmentations to the county congestion management agencies for regional planning activities. As referred by the Planning Committee, Attachments A and B-1 were revised to reflect Commission approval of the regional Priority Development Area (PDA) Planning and Implementation program and Priority Conservation Area (PCA) program.

As referred by the Programming and Allocations Committee, Attachments B-1 and B-2 and Appendix A-2 to Attachment A were revised on May 22, 2013 to shift funding between components of the Freeway Performance Initiative Program with no change in total funding; and split the FSP/Incident Management project into the Incident Management Program and FSP/Callbox Program with no change in total funding; and redirect funding from ACE fare collection equipment to ACE positive train control; and add new OBAG projects selected by the Contra Costa Transportation Authority, Napa County Transportation and Planning Agency, City/County Association of Governments of San Mateo (CCAG), and the Solano Transportation Authority, including OBAG augmentation for CCAG Planning activities.

Attachments B-1 and B-2 were revised on September 25, 2013 to add new projects selected by various Congestion Management Agencies in the OneBayArea Grant, Regional Safe Routes to School, and Priority Conservation Area Programs.

Attachment A, Attachments B-1 and B-2 and Appendix A-2 to Attachment A were revised on November 20, 2013 to add new projects and make grant amount changes as directed by various Congestion Management Agencies in the OneBayArea Grant Program. Also the deadline for jurisdictions' adoption of general plans meeting the latest RHNA was updated to reflect the later than scheduled adoption of Plan Bay Area.

Attachment B-1 to the resolution was revised on December 18, 2013 to add an FPI project for environmental studies for the I-280/Winchester I/C modification.

Attachment B-2 was revised on January 22, 2014 to adjust project grant amounts as directed by various Congestion Management Agencies in the OneBayArea Grant Program, including changes as a result of the 2014 RTIP.

Attachments B-1 and B-2 were revised on February 26, 2014 to add six OBAG projects selected by the CMA's, make adjustments between two Santa Clara OBAG projects, and add three PDA Planning Program projects in Sonoma County.

Attachment B-1 was revised on March 26, 2014 to add 15 projects to the Transit Performance Initiative Program and 3 projects in Marin County to the North Bay Priority Conservation Area Program.

On April 23, 2014, Attachment B-1 was revised to add 13 projects to the Priority Conservation Grant Program, revise the grant amount for the BART Car Exchange Preventative Maintenance Project in the Transit Capital Rehabilitation Program, and add three projects to the Climate Initiatives Program totaling $14,000,000.

As referred by the Planning Committee, Attachment B-1 was revised on May 28, 2014 to reflect Commission approval of the selection of projects for the PDA Planning Technical Assistance and PDA Staffing Assistance Programs.

As referred by the Programming and Allocations Committee, Attachment A and Attachment B-2 were revised on May 28, 2014 to change the program delivery deadline from March 31, 2016 to January 31,

2017, and to adjust two projects as requested by Congestion Management Agencies in the OneBayArea Grant Program.

On June 25, 2014, Attachment B-1 was revised to add an additional $500,000 to the Breuner Marsh Project in the regional PCA Program and to identify a transportation exchange project (Silverado Trail Phase G) for the Soscol Headwaters Preserve Acquisition in the North Bay PCA Program, and to Redirect $2,500,000 from Ramp Metering and Traffic Operations System (TOS) elements to the Program for Arterial System Synchronization (PASS), within the Freeway Performance Initiatives (FPI) Program.

On July 23, 2014, Attachment B-1 was revised to redirect $22.0 million from the Cycles 1 & 2 Freeway Performance Initiatives (FPI) Programs and $5 million from other projects and savings to the Golden Gate Bridge Suicide Deterrent System.

On September 24, 2014, Attachments B-1 and B-2 were revised to add 5 projects totaling $19M to the Transit Performance Initiative Program (TPI), to shift funding within the Freeway Performance Initiative Program; to add a project for $4 million for SFMTA for priority identified TPI funding; to provide an additional $500,000 to the Freeway Performance Initiative (FPI); and to amend programming for two projects in Santa Clara County: San Jose's The Alameda "Beautiful Way" Phase 2 project, and Palo Alto's US-101/Adobe Creek Bicycle and Pedestrian Bridge project.

On December 17, 2014, Attachments A, B-1, and B-2 and Appendices A-1 and A-2 to Attachment A were revised to add a fifth year – FY 2016-17 - to the Cycle 2/OBAG 1 program to address the overall funding shortfall and provide additional programming in FY 2016-17 to maintain on-going commitments in FY 2016-17; make adjustments within the Freeway Performance Initiatives Program; rescind the Brentwood Wallace Ranch Easement Acquisition from the Priority Conservation Area (PCA) Program reducing the PCA program from $5 million to $4.5 million and use this funding to help with the FY 17 shortfall; identify two Santa Clara Local Priority Development Area Planning Program projects totaling $740,305 to be included within MTC's Regional Priority Development Area Program grants; make revisions to local OBAG compliance policies for complete streets and housing as they pertain to jurisdictions' general plans update deadlines; add five car sharing projects totaling $2,000,000 under the climate initiatives program; and add the Clipper Fare Collection Back Office Equipment Replacement Project to the Transit Capital Priority Program for $2,684,772.

On March 25, 2015, Attachments B-1 and B-2 were revised to: add FY 2016-17 regional planning funds to Attachment B-1 per Commission action in December 2014; Redirect $1.0 million from the ALA-I-

680 Freeway Performance Initiative (FPI) project to Preliminary Engineering (PE) for various FPI corridors and redirect $270,000 in FPI Right of Way (ROW) savings to the SCL I-680 FPI project to cover an increase in Caltrans support costs; direct funding to the statewide local streets and roads needs assessment; identify specific Priority Development Area (PDA) planning grants in San Mateo County; delete the $10.2 million Masonic Avenue Complete Streets project and add the SF Light Rail Vehicle Procurement project in San Francisco County; and redirect $0.5 million from the Capitol Expressway Traffic ITS and Bike/Pedestrian Improvement project to the San Tomas Expressway Box Culvert Rehabilitation project in Santa Clara County.

On May 27, 2015, Attachment B-1 was revised to add Round 3 ($9,529,829) of the Transit Performance Incentive Program which involves 7 new projects and augmentations to 7 existing projects; and to add the Grand Avenue Bicycle / Pedestrian Improvements Project ($717,000) in San Rafael to the Safe Routes to School Program, and delete the Bicycle sharing project ($6,000,000).

On June 24, 2015, Attachment B-1 was revised to identify a $265,000 Local Priority Development Area Planning Grant for the City of Palo Alto.

On July 22, 2015, Attachments B-1 and Attachment B-2 were revised to redirect $3,000,000 from the SFMTA N-Judah Mobility Maximization project to the SFMTA Colored Lanes on MTC Rapid Network project within the Transit Performance Initiative program, identify a $252,000 Safe Routes to Schools grant for San Mateo County, redirect $2,100,000 in Freeway Performance Initiative funding from the Alameda County I-680 project to the Various Corridors – Caltrans Preliminary Engineering project, delete $500,000 from the SMART Vehicle Purchase project in Sonoma County (revised from $6,600,000 to $6,100,000), and add the SMART Clipper Card Service project in Sonoma County for $500,000.

On September 23, 2015, Attachment B-2 was revised to redirect $6,100,000 from the SMART Vehicle Purchase project to the SMART San Rafael to Larkspur Extension project.

On October 28, 2015, Attachment B-1 and B-2 were revised to redirect $350,000 from Vacaville's Ulatis Creek Bicycle/Pedestrian Pathway and Streetscape project to Vallejo's Downtown Streetscape – Phases 3 and 4 project, and to redirect $122,249 from Marin Transit's Preventive Maintenance program to the preliminary engineering phase of Marin Transit's Relocate Transit Maintenance Facility project.

On November 18, 2015, Attachment B-1 and Appendix A-3 to Attachment A were revised to increase the program amount for the Safe Routes to School Program by $2.35 million increasing the FY 2016-17 program amount to $5.0 million.

On December 16, 2015, Attachment B-1 was revised to add six parking management and transportation demand management projects totaling $6,000,000 under the Climate Initiatives Program.

On January 27, 2016, Attachments B-1 and B-2 were revised to: add the Golden Gate Bridge Highway and Transportation District's Advanced Communications and Information System (ACIS) project for $2,000,000 under the Transit Capital Rehabilitation program; redirect $10,000,000 under the Transit Capital Rehabilitation program from SFMTA's New 60' Flyer Trolley Bus Replacement project to SFMTA's New 40' Neoplan Bus Replacement project; and add $74,000 in grant funding to the City of San Rafael's Grand Avenue Bicycle/Pedestrian Improvements project under the Regional Safe Routes to School program; and redirect $67,265 from the San Francisco Department of Public Work's ER Taylor Safe Routes to School project to the Chinatown Broadway Complete Streets Phase IV project; and redirect $298,000 from Menlo Park's Various Streets and Roads Preservation project and $142,000 from San Bruno's San Bruno Avenue Pedestrian Improvements project to Daly City's John Daly Boulevard Bicycle and Pedestrian Improvements project ($290,000) and San Carlo's Streetscape and Pedestrian Improvements project ($150,000); and redirect $89,980 from Vacaville's Ulatis Creek Bicycle and Pedestrian Path and Streetscape project to Suisun City's Driftwood Drive Path project.

On February 24, 2016, Attachment B-1 and Appendix A-2 were revised to transfer $75,000 from BCDC Planning to MTC Planning within the Regional Planning Activities program, to enable an equivalent amount of MTC funds to support Bay Area Regional Collaborative Consultant expenses.

On March 23, 2016, Attachment B-1 was revised to transfer $280,000 from MTC's 511- Traveler Information to MTC's Regional Performance Initiatives Implementation; identify funding for Service Authority for Freeways and Expressways (SAFE) separately from MTC funding (no change in total funding), direct $1,073,000 to the Alameda County Safe Routes to School Program within the Regional Safe Routes to School Program; and identify three Priority Development Area planning grants in Santa Clara County within the Priority Development Area Planning and Implementation Program.

On May 25, 2016, Attachment B-1 was revised to redirect $68,228 in cost savings from MTC/VTA's SR 82 Relinquishment Exploration Study to ABAG PDA Planning within the Priority Development Area (PDA) Planning and Implementation Program; redirect $20.0 million in unobligated balances and

cost savings within the Freeway Performance Initiative (FPI) for Caltrans to direct towards support and capital needs related to the close-out of active ramp metering projects and/or delivery of any outstanding ramp metering projects; transfer $1,171,461 from Golden Gate Bridge Highway and Transportation District's Advanced Communications and Information System (ACIS) to its MS Sonoma Refurbishment project; and add Round 4 ($23,457,614) of the Transit Performance Initiative (TPI) Incentive Program, which involves 14 new projects and augmentations to nine existing projects.

On July 27, 2016, Attachment B-1and B-2 were revised to: reflect updated cost savings numbers within the Freeway Performance Initiative (FPI); direct $360,000 to the San Francisco Department of Public Health's Safe Routes to School Non-Infrastructure Program, direct $314,000 to the Solano Transportation Authority's Solano County Safe Routes to School Non-Infrastructure Program and redirect $791,000 from San Rafael's Grand Avenue Bicycle and Pedestrian Improvements project to Marin County's North Civic Center Drive Bicycle and Pedestrian Improvements project within the Regional Safe Routes to School Program; direct $9 million to AC Transit's Higher Capacity Bus Fleets/Increased Service Frequencies program and $1 million to MTC's West Grand Avenue Transit Signal Priority project within the Transit Performance Initiative – Capital Investment Program; identify a transportation exchange project (Vineyard Road Improvements) for Novato's Thatcher Ranch Easement and Pacheco Hill Parkland Acquisitions in the North Bay PCA Program; redirect $52,251 from San Francisco Department of Public Works' (SF DPW) ER Taylor Safe Routes to School project to the Second Street Complete Streets project in the One Bay Area Grant County Program; and update the Second Street Complete Streets project to reflect that it will be implemented by SF DPW.

On December 21, 2016, Attachments B-1 and B-2 and appendices A-1, A-2 and A-4 were revised to: transfer $100,000 from BCDC Planning to MTC Planning within the Regional Planning Activities program to support Bay Area Regional Collaborative expenses; redirect $500,000 from MTC/SAFE's Incident Management Program within the Freeway Performance Initiative and $338,000 from Hayward's Comprehensive Parking Management Plan Implementation project to MTC's Spare the Air Youth Program within the Climate Initiatives program; revise the project title of the Incident Management Program to clarify the focus on I-880 Integrated Corridor Management and direct $383,000 in program savings for future use; direct $5,820,000 from the Regional Performance Initiatives Corridor Implementation project under the Freeway Performance Initiative program as follows: $1,100,000 to CCTA's San Pablo Dam Road project to facilitate an exchange of an equivalent amount of local funds to support MTC's Bay Bridge Forward Commuter Parking Initiative, $1,100,000 to CCTA's SR 4 Operational Improvements, and $3,620,000 for MTC's Bay Bridge Forward Commuter Parking Initiative - Related Activities project; repurpose $10,000,000 in Transit Oriented Affordable

Housing (TOAH) loan funds to a new Affordable Housing Jumpstart Program; transfer $40,000 from San Anselmo's Sunny Hill Ridge and Red Hills Trail project to Mill Valley's Bayfront Park Recreational Bay Access project within the North Bay Priority Conservation Area (PCA) program; transfer $100,000 from Emeryville's Hollis Street Preservation project to Berkeley's Hearst Avenue Complete Streets project within the County Program; and transfer $14,000 from MTC's Regional Performance Initiatives Corridor Implementation to Caltrans' to reflect actual obligations for their Ramp Metering and TOS Elements Program within the Freeway Performance Initiative. Appendices A-1, A-2 and A-4 were revised to reflect programming actions taken by the Commission with this action or in prior actions pertaining to the overall funding levels for Climate Initiatives, Safe Routes to School, Transit Capital Priorities, and Transit Performance Initiative programs within the Regional Program and the final amounts distributed to each county through the County Program.

On January 25, 2017, Attachment B-1 was revised to add Round 3 of the Transit Performance Initiative (TPI) Capital Investment Program, which involves five new projects; the programing for these projects is derived from $14,962,000 in unprogrammed balances and $3,991,000 redirected from Round 2 TPI projects, for a total of $18,953,000.

On April 26, 2017, Attachment B-1 and B-2 were revised to program $345,000 in Regional Safe Routes to School Program funding and redirect $150,000 from Cloverdale's Safe Routes to School Phase 2 project in Sonoma County Program funding to the Sonoma County Safe Routes to School Program; reprogram $859,506 within the Transit Performance Initiatives (TPI) – Incentive Program, and $1,118,681 within Round 3 of the TPI – Investment Program.

On May 24, 2017, Attachment B-2 was revised to redirect $3,440,000 from Sunnyvale's East & West Channel Multi-Use Trail to Milpitas' Montague Expressway Pedestrian Bridge at Milpitas BART; reprogram $223,065 from Duane Avenue Preservation to Maude Avenue Bikeway and Streetscape within Sunnyvale; reprogram $550,928 from San Tomas Expressway Box Culvert Rehabilitation to the Capitol Expressway Traffic ITS and Bike/Pedestrian Improvements within Santa Clara County; and re-name San Jose's Downtown San Jose Bike Lanes and De-couplet to Almaden Ave. & Vine St. Safety Improvements to reflect a revised scope.

On June 28, 2017, Attachments B-1 and B-2 were revised to redirect $265,000 from Palo Alto Local PDA Planning to VTA for Local PDA Planning – Santa Clara within the Regional PDA Planning Program; redirect $412,000 in cost savings from Fremont's Various Streets and Roads Preservation to Fremont's City Center Multi-Modal Improvements within the Alameda County Program; revise the

name of the Sonoma County Safe Routes to School (SRTS) project to clarify that the funds are supplemental to the OBAG County Program base SRTS funds; and redirect $264,000 in cost savings from the Santa Rosa Complete Streets Road Diet on Transit Corridors project and $100,000 from the Sonoma County SRTS to an unprogrammed balance for the Sonoma County Program.
On July 26, 2017, Attachment B-1 was revised to program $2,322,000 in unprogrammed balances within the Transit Performance Initiative (TPI) Capital Investment Program, for four new North Bay projects.

On September 27, 2017, Attachment B-2 was revised to redirect $94,000 in cost savings from Dixon's West A Street Preservation to Solano County's Redwood-Fairgrounds Drive Interchange Bike/Transit Improvements within the Solano County Program.

On October 25, 2017, Attachment B-1 was revised to redirect $44,000 from Caltrain's Map-Based Real-Time Train Display to its Control Point Installation project and redirect $96,000 from Napa Valley Transportation Authority's Comprehensive Operational Analysis to its Imola Avenue and SR 29 Express Bus Improvements project within the Transit Performance Initiative – Incentive Program; and program $73 in remaining program balances to the NVTA Imola Avenue and SR-29 Express Bus Improvements Project within the Transit Performance Initiative – Investment Program.

On November 15, 2017, Attachment B-1 was revised to program $105,000 in Regional Safe Routes to School (SRTS) to Napa Valley Transportation Authority for Napa County's SRTS Program, $225,000 to San Mateo County Office of Education for San Mateo County's SRTS Program, and $1,000,000 to Los Altos for the Miramonte Ave Bicycle and Pedestrian Access Improvements within Santa Clara County; and to redirect $783,000 in the Climate Initiatives Program from Walnut Creek's Parking Guidance System Pilot to the N Main St Rehabilitation project as part of a funding exchange arrangement.

On February 28, 2018, Attachments B-1 and B-2 were revised to program $607,000 to Moraga's Moraga Way and Canyon Rd/Camino Pablo Improvements project and $215,000 to Concord's Willow Pass Repaving and Safe Routes to School (SRTS) project within the Regional SRTS program; program $364,000 to Santa Rosa's US 101 Bike/Pedestrian Overcrossing project within the Sonoma County Program; and reprogram the SFPark to Cycle 1 and clarify exchange projects within the program.

On March 28, 2018, Attachments B-1 and B-2 were revised to reduce the amount programmed within the Regional Climate Initiatives Program to the Contra Costa Transportation Authority (CCTA) Car Share4All project to $573,453 to reflect a change in scope; redirect $630,000 in project savings from the NextGen

Arterial Operations Program (AOP), a subcomponent of the Program for Arterial System Synchronization (PASS), to the AC Transit South Alameda County Corridors Travel Time Improvements project; and to identify Santa Clara Valley Transportation Authority (VTA) as the sponsor of the Montague Expressway Pedestrian Overcrossing at Milpitas BART.

On May 23, 2018, Attachments B-1 and B-2 were revised to redirect $20,587 from Union City's Single Point Login Terminals on Revenue Vehicles to its South Alameda County Major Corridor Travel Time Improvements project within the Transit Performance Initiative program; and reflect the redirection of $4,350,000 in Regional Transportation Improvement Program (RTIP) funds from Palo Alto's US 101/Adobe Creek Bicycle and Pedestrian Bridge to San Jose's West San Carlos Urban Village Streetscape Improvements project within Santa Clara County's OBAG 1 County Program.

On June 27, 2018, Attachment B-1 was revised to redirect $820,000 from MTC's Bay Bridge Forward Commuter Parking Initiatives Related Activities project to CCTA's I-80 Central Ave Interchange Improvements; $636,763 from ECCTA's Replacement of Eleven 40' Buses project to the Clipper® Next Generation Fare Collection System project within the Transit Capital Rehabilitation Program; and to program $400,411 in unprogrammed balances within the Climate Initiatives Program to MTC's Carsharing Implementation project.

On July 25, 2018, Attachment B-1 was revised to redirect $150,000 from Oakland's Transportation Impact Review Streamlining Technical Assistance grant within the Regional PDA Planning Grant program, with $65,000 directed to Rohnert Park's Central Rohnert Park PDA/Creekside Neighborhood Subarea Connector Path Technical Assistance grant, and $85,000 directed to Windsor's PDA Planning and Implementation Staffing Assistance grant.

On September 26, 2018, Attachments B-1 and B-2 were revised to redirect $1,000,000 from Los Altos' Miramonte Ave Bicycle and Pedestrian Access Improvements project and $346,000 in Santa Clara County's Safe Routes to School program (SRTS) unprogrammed balances to Sunnyvale's East Sunnyvale Area Sense of Place Improvements project within the Regional SRTS program; redirect $794,000 from Santa Clara County's Capitol Expressway Traffic Intelligent Transportation Systems (ITS) and Bike/Pedestrian Improvements project to Sunnyvale's East Sunnyvale Area Sense of Place Improvements project within the Santa Clara County Program; direct $2,332,747 from Caltrain's Control Point Installation project to its Positive Train Control project within the Transportation Performance Initiative (TPI) Incentive program; and direct $500,000 within the TPI Investment program

from Novato's Downtown SMART Station project to Novato Pavement Rehabilitation as part of a local funding exchange to support the Downtown SMART Station project.

On December 19, 2018, Attachment B-2 was revised to redirect $794,000 from Sunnyvale's East Sunnyvale Area Sense of Place Improvements project to Sunnyvale's Peery Park Sense of Place Improvements within the Santa Clara County Program.

On January 23, 2019, Attachment B-1 was revised to redirect $500,000 from Santa Clara Valley Transportation Authority's (VTA's) Santa Clara Pocket Track Light Rail Interlocking to VTA's Light Rail Crossovers and Switches project within the Transit Performance Initiative Capital Investments Program.

On April 24, 2019, Attachment B-1 was revised to redirect $1,600,000 from AC Transit's Bay Bridge Forward (BBF) Higher Capacity Bus Fleets and Increased Service Frequencies project to its Double Decker Bus Wash project within the Transit Performance Initiative (TPI) Investment Program.

On September 25, 2019, Attachment B-1 was revised to change the sponsor of the I-80 Central Ave Interchange Improvements project from the Contra Costa Transportation Authority (CCTA) to the City of Richmond.

On March 25, 2020, Attachment B-1 was revised to reflect the redirection of $25,000 from the Bay Bridge Forward Commuter Parking Initiatives to the Fruitvale Quick Build project within the exchange program.

On September 23, 2020, Attachments B-1 and B-2 were revised to reflect actual obligations on various Caltrans' Ramp Metering and Traffic Operating System (TOS) Elements projects within the Freeway Performance Initiative and to redirect $310,804 in project savings from San Jose's Citywide Safe Routes to School Infrastructure Program to Campbell's Harriet Ave Sidewalk Project within the Santa Clara County Program.

On November 20, 2020, Attachments B-1 and B-2 were revised to redirect $817,297 from ECCTA's Non-ADA Paratransit to Fixed-Route Program to ECCTA's Hydrogen Fueling Maintenance Infrastructure Upgrade project within the Transit Performance Initiative Incentive Program; and redirect $241,868 in project savings from San Jose's Better Bikeway project to Campbell's Harriet Ave Sidewalk Improvements project within the Santa Clara County Program.

On July 28, 2021, Attachment B-2 was revised to redirect $1,475,000 in project close-out savings from the Hercules Transit Center to the City of Danville's San Ramon Valley Blvd. Improvements project (in lieu of the Diablo Road Trail which is receiving non-federal funds from CCTA as part of an exchange, and was nominated for the recent regional safe and seamless quick strike program but did not make the final funding cut) within the Contra Costa County Program.

On September 22, 2021, Attachment B-1 was revised to change the name of MTC's Carsharing Implementation project to the Carsharing/Mobility Hubs Implementation project; and to redirect $225,411 from MTC's Carsharing/Mobility Hubs Implementation project to BART's MacArthur BART Station Mobility Hubs Pilot Program project within the Climate Initiatives program.

On September 28, 2022, Attachment B-1 was revised to reassign two existing awards totaling $1,333,719 from the City of Fairfield to Solano County Transit (SolTrans) for SolanoExpress bus purchases, including clarifications to the associated local fund swap for bus stop improvements.

Further discussion of the Project Selection Criteria and Programming Policies is contained in the memorandum to the Joint Planning Committee dated May 11, 2012; to the Programming and Allocations Committee dated October 10, 2012; to the Commission dated November 28, 2012; to the Programming and Allocations Committee dated December 12, 2012 and January 9, 2013; to the Joint Planning Committee dated February 8, 2013; to the Programming and Allocations Committee dated February 13, 2013, May 8, 2013, September 11, 2013, November 13, 2013, December 11, 2013, January 8, 2014, February 12, 2014, March 5, 2014, April 9, 2014; to the Planning Committee dated May 9, 2014; to the MTC Programming and Allocations Committee Summary Sheet dated May 14, 2014, June 11, 2014, July 9, 2014, September 10, 2014, December 10, 2014, March 11, 2015, May 13, 2015; to the Administration Committee on May 13, 2015; to the Programming and Allocations Committee on June 10, 2015, July 8, 2015, September 9, 2015, October 14, 2015, November 4, 2015, December 9, 2015, January 13, 2016, February 10, 2016, March 9, 2016, April 13, 2016, May 11, 2016, July 13, 2016, December 14, 2016, January 11, 2017, April 12, 2017, May 10, 2017, June 14, 2017, July 12, 2017, September 13, 2017, October 11, 2017, November 8, 2017, February 14, 2018, March 7, 2018, May 9, 2018, June 13, 2018, July 11, 2018, September 12, 2018, December 12, 2018, January 9, 2019, April 10, 2019, September 4, 2019, March 11, 2020, September 9, 2020, November 4, 2020, and July 14, 2021; to the Joint Planning Committee dated September 10, 2021, and to the Programming and Allocations Committee dated September 14, 2022.

Date: May 17, 2012
W.I.: 1512
Referred By: Planning

RE: Federal Cycle 2 Program covering FY 2012-13, FY 2013-14, FY 2014-15 and FY 2015-16: Project Selection Policies and Programming

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4035

WHEREAS, the Metropolitan Transportation Commission (MTC) is the Regional Transportation Planning Agency (RTPA) for the San Francisco Bay Area pursuant to Government Code Section 66500 et seq.; and

WHEREAS, MTC is the designated Metropolitan Planning Organization (MPO) for the nine-county San Francisco Bay Area region and is required to prepare and endorse a Transportation Improvement Program (TIP) which includes federal funds; and

WHEREAS, MTC is the designated recipient for federal funding administered by the Federal Highway Administration (FHWA)assigned to the MPO/RTPA of the San Francisco Bay Area for the programming of projects (regional federal funds); and

WHEREAS, the federal funds assigned to the MPOs/RTPAs for their discretion are subject to availability and must be used within prescribed funding deadlines regardless of project readiness; and

WHEREAS, MTC, in cooperation with the Association of Bay Area Governments, (ABAG), the Bay Area Air Quality Management District (BAAQMD), the Bay Conservation and Development Commission (BCDC), California Department of Transportation (Caltrans), Congestion Management Agencies (CMAs), transit operators, counties, cities, and interested stakeholders, has developed criteria, policies and procedures to be used in the selection of projects to be funded with various funding including regional federal funds as set forth in Attachments A, B-1 and B-2 of this Resolution, incorporated herein as though set forth at length; and

WHEREAS, using the policies set forth in Attachment A of this Resolution, MTC, in cooperation with the Bay Area Partnership and interested stakeholders, has or will develop a program of projects to be funded with these funds for inclusion in the federal Transportation Improvement Program (TIP), as set forth in Attachments B-1 and B-2 of this Resolution, incorporated herein as though set forth at length; and

WHEREAS the federal TIP and subsequent TIP amendments and updates are subject to public review and comment; now therefore be it

RESOLVED that MTC approves the "Project Selection Policies and Programming" for projects to be funded with Cycle 2 Program funds as set forth in Attachments A, B-1 and B-2 of this Resolution; and be it further

RESOLVED that the federal funding shall be pooled and redistributed on a regional basis for implementation of Project Selection Criteria, Policies, Procedures and Programming, consistent with the Regional Transportation Plan (RTP); and be it further

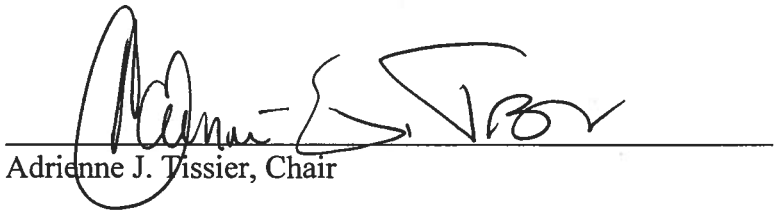
RESOLVED that the projects will be included in the federal TIP subject to final federal approval; and be it further

RESOLVED that the Executive Director or his designee can make technical adjustments and other non-substantial revisions, including updates to fund distributions to reflect final 2014-2022 FHWA figures; and be it further

RESOLVED that the Executive Director or designee is authorized to revise Attachments B-1 and B-2 as necessary to reflect the programming of projects as the projects are selected and included in the federal TIP; and be it further

RESOLVED that the Executive Director shall make available a copy of this resolution, and such other information as may be required, to the Governor, Caltrans, and to other such agencies as may be appropriate.

METROPOLITAN TRANSPORTATION COMMISSION



Adrienne J. Tissier, Chair

The above resolution was entered into by the Metropolitan Transportation Commission at the regular meeting of the Commission held in Oakland, California, on May 17, 2012

Attachment B-1

OBAG 1 Regional Programs
FY 2012-13 through FY 2016-17

September 2022

MTC Res. No. 4035, Attachment B-1
Adopted: 05/17/12-C
Revised: 10/24/12-C
11/28/12-C 12/19/12-C 01/23/13-C 02/27/13-C 05/22/13-C 09/25/13-C
11/20/13-C 12/18/13-C 02/26/14-C 03/26/14-C 04/23/14-C 05/28/14-C
06/25/14-C 07/23/14-C 09/24/14-C 11/19/14-C 12/17/14-C 03/25/15-C
05/27/15-C 06/24/15-C 07/22/15-C 10/28/15-C 11/18/15-C 12/16/15-C
01/27/16-C 02/24/16-C 03/23/16-C 05/25/16-C 07/27/16-C 12/21/16-C
01/25/17-C 04/26/17-C 06/28/17-C 07/26/17-C 10/25/17-C 11/15/17-C
02/28/18-C 03/28/18-C 05/23/18-C 06/27/18-C 07/25/18-C 09/26/18-C
01/23/19-C 04/24/19-C 09/25/19-C 03/25/20-C 09/23/20-C 11/20/20-C
03/23/22-C 09/28/22-C

OBAG 1 Regional Programs Project List

Project Category and Title	Implementing Agency	Total STP/CMAQ	Total Other RTIP/TAP/TFCA	Total OBAG 1
OBAG 1 REGIONAL PROGRAMS		**$438,146,000**	**$53,080,000**	**$492,046,000**
1. REGIONAL PLANNING ACTIVITIES (STP Planning)				
ABAG Planning	ABAG	$3,393,000	$0	$3,393,000
BCDC Planning	BCDC	$1,526,000	$0	$1,526,000
MTC Planning	MTC	$3,568,000	$0	$3,568,000
1. REGIONAL PLANNING ACTIVITIES (STP Planning)	**TOTAL:**	**$8,487,000**	**$0**	**$8,487,000**
2. REGIONAL OPERATIONS (RO)				
511 - Traveler Information	MTC	$57,520,000	$0	$57,520,000
Clipper® Fare Media Collection	MTC	$21,400,000	$0	$21,400,000
SUBTOTAL		$78,920,000	$0	$78,920,000
Incident Management Program - I-880 Integrated Corridor Management	MTC	$11,357,000	$0	$11,357,000
FSP/Call Box Program	MTC/SAFE	$14,462,000	$0	$14,462,000
SUBTOTAL		$25,819,000	$0	$25,819,000
2. REGIONAL OPERATIONS (RO)	**TOTAL:**	**$104,739,000**	**$0**	**$104,739,000**
3. FREEWAY PERFORMANCE INITIATIVE (FPI)				
Regional Performance Initiatives Implementation	SAFE	$7,750,000	$0	$7,750,000
Regional Performance Initiatives Corridor Implementation	MTC	$7,480,000	$0	$7,480,000
Program for Arterial System Synchronization (PASS)	MTC	$8,370,000	$0	$8,370,000
PASS - LAVTA Dublin Blvd Transit Performance Initiative	MTC	$500,000	$0	$500,000
PASS - AC Transit South Alameda County Corridors Travel Time Imps	MTC	$1,130,000	$0	$1,130,000
I-80 Central Ave Interchange Improvements	Richmond	$820,000	$0	$820,000
Bay Bridge Forward - Commuter Parking Initiative (Funding Exchange)	MTC	$0	$3,875,000	$3,875,000
Bay Bridge Forward - Fruitvale Quick Build (Funding Exchange)	MTC	$0	$25,000	$25,000
CC-I-80 San Pablo Dam Rd I/C (Funding Exchange)	CCTA	$1,100,000	$0	$1,100,000
SUBTOTAL	$587,506	$27,150,000	$3,080,000	$31,050,000
Ramp Metering and TOS Elements - MTC Program				
FPI - ALA SR92 & I-880: Clawiter to Hesperian & Decoto Road	Caltrans	$1,243,506	$0	$1,243,506
FPI - CC SR4 & SR242: Loveridge to Alhambra & I-680 to SR 4 Ph. 1	SAFE	$750,000	$0	$750,000
FPI - CC SR4 & SR242: Loveridge to Alhambra & I-680 to SR 4 Ph. 2	Caltrans	$6,867,786	$0	$6,867,786
FPI - CC SR 4 Operational Improvements	CCTA	$1,100,000	$0	$1,100,000
FPI - MRN US-101 (Savings from SCL 101)	Caltrans	$402,152	$0	$402,152
FPI - Various Corridors Caltrans Preliminary Engineering (PE) and Right of Way (ROW) (Revised)	Caltrans	$1,241,298	$0	$1,241,298
FPI - SOL I-80 Ramp Meeting and Traffic Operations	Caltrans	$170,000	$0	$170,000
FPI - SCL US 101: San Benito County Line to SR 85	Caltrans	$3,099,206	$0	$3,099,206
FPI - SON 101 - MRN Co Line - Men Co Line	MTC	$350,000	$0	$350,000
FPI - SCL I-680: US 101 to ALA Co. Line	Caltrans	$134,052	$0	$134,052
Unprogrammed Future RTIP	TBD	$0	$34,000,000	$34,000,000
SUBTOTAL		$15,358,000	$34,000,000	$49,358,000
Ramp Metering and TOS Elements - Caltrans Program				
FPI Caltrans - ALA I-680, ALA I-880, MRN US-101 (Savings from Caltrans ROW)	Caltrans	$270,000	$0	$270,000
FPI Caltrans - ALA I-680, ALA I-880, MRN US-101 (Savings from SCL 101)	Caltrans	$3,417,000	$0	$3,417,000
FPI Caltrans - ALA I-680, ALA I-880, MRN US-101 (Savings from CC 4/242)	Caltrans	$4,686,000	$0	$4,686,000
FPI Caltrans - ALA I-580 - SJ Co. Line to I-238	Caltrans	$4,808,000	$0	$4,808,000
FPI Caltrans - ALA I-680, ALA I-880, MRN US-101	Caltrans	$6,819,000	$0	$6,819,000
SUBTOTAL		$20,000,000	$0	$20,000,000
3. FREEWAY PERFORMANCE INITIATIVE (FPI)	**TOTAL:**	**$62,508,000**	**$37,080,000**	**$100,408,000**
4. PAVEMENT MANAGEMENT PROGRAM (PMP)				
Pavement Management Program (PMP)	MTC	$1,547,000	$0	$1,547,000
Pavement Technical Advisory Program (PTAP)	MTC	$7,500,000	$0	$7,500,000
Statewide Local Streets and Roads (LSR) Needs Assessment	MTC/Caltrans	$53,000	$0	$53,000
4. PAVEMENT MANAGEMENT PROGRAM (PMP)	**TOTAL:**	**$9,100,000**	**$0**	**$9,100,000**
5. PRIORTY DEVELOPMENT AREA (PDA) PLANNING AND IMPLEMENTATION				
Regional PDA Implementation				
PDA Planning - ABAG	ABAG	$2,068,228	$0	$2,068,228
SUBTOTAL		$2,068,228	$0	$2,068,228
Affordable Housing Jumpstart Program				
Affordable Housing Jumpstart Program (Funding Exchange)	MTC		$10,000,000	$10,000,000
SUBTOTAL		$0	$10,000,000	$10,000,000
Local PDA Planning				
Local PDA Planning - Alameda	ACTC	$3,905,000	$0	$3,905,000
Local PDA Planning - Contra Costa	CCTA	$2,745,000	$0	$2,745,000
Local PDA Planning - Marin	TAM	$750,000	$0	$750,000
Local PDA Planning - City of Napa	Napa	$275,000	$0	$275,000
Local PDA Planning - American Canyon	American Canyon	$475,000	$0	$475,000
Local PDA Planning - San Francisco	SF City/County	$2,380,000	$0	$2,380,000
Local PDA Planning - San Mateo	SMCCAG	$218,000	$0	$218,000

Attachment B-1

OBAG 1 Regional Programs
FY 2012-13 through FY 2016-17

September 2022

MTC Res. No. 4035, Attachment B-1
Adopted: 05/17/12-C
Revised: 10/24/12-C
11/28/12-C 12/19/12-C 01/23/13-C 02/27/13-C 05/22/13-C 09/25/13-C
11/20/13-C 12/18/13-C 02/26/14-C 03/26/14-C 04/23/14-C 05/28/14-C
06/25/14-C 07/23/14-C 09/24/14-C 11/19/14-C 12/17/14-C 03/25/15-C
05/27/15-C 06/24/15-C 07/22/15-C 10/28/15-C 11/18/15-C 12/16/15-C
01/27/16-C 02/24/16-C 03/23/16-C 05/25/16-C 07/27/16-C 12/21/16-C
01/25/17-C 04/26/17-C 06/28/17-C 07/26/17-C 10/25/17-C 11/15/17-C
02/28/18-C 03/28/18-C 05/23/18-C 06/27/18-C 07/25/18-C 09/26/18-C
01/23/19-C 04/24/19-C 09/25/19-C 03/25/20-C 09/23/20-C 11/20/20-C
03/23/22-C 09/28/22-C

OBAG 1 Regional Programs Project List

Project Category and Title	Implementing Agency	Total STP/CMAQ	Total Other RTIP/TAP/TFCA	Total OBAG 1
OBAG 1 REGIONAL PROGRAMS		**$438,146,000**	**$53,080,000**	**$492,046,000**
Belmont Village Specific/Implementation Plan	Belmont	$440,000	$0	$440,000
Millbrae PDA Specific Plan	Millbrae	$500,000	$0	$500,000
Redwood City Downtown Sequoia Station and Streetcar Planning Study	Redwood City	$450,000	$0	$450,000
Mountain View El Camino Real Streetscape Study	Mountain View	$260,000	$0	$260,000
San Jose Stevens Creek/Santana Row/Winchester Specific Plan	MTC/San Jose	$640,305	$0	$640,305
Santa Clara El Camino Corridor Precise Plan	MTC/Santa Clara	$100,000	$0	$100,000
North 1st Street Urban Village Plan	San Jose	$369,962	$0	$369,962
Berryessa BART Urban Village Plan	San Jose	$331,630	$0	$331,630
Local PDA Planning - Santa Clara	VTA	$3,647,103	$0	$3,647,103
Local PDA Planning - Solano	STA	$1,066,000	$0	$1,066,000
Santa Rosa - Roseland/Sebastopol Road PDA Planning	Santa Rosa	$647,000	$0	$647,000
Sonoma County - Sonoma Springs Area Plan	Sonoma County	$450,000	$0	$450,000
Sonoma County - Airport Employment Center Planning	Sonoma County	$350,000	$0	$350,000
SUBTOTAL		$20,000,000	$0	$20,000,000
Regional PDA Planning				
Regional PDA Implementation Priorities				
Bay Area Transit Core Capacity Study	MTC	$250,000	$0	$250,000
Public Lands Near Rail Corridors Assessment	MTC	$500,000	$0	$500,000
PDA Implementation Studies/Forums	MTC	$156,500	$0	$156,500
State Route 82 Relinquishment Exploration Study	MTC/VTA	$206,772	$0	$206,772
PDA Planning				
Oakland Downtown Specific Plan	Oakland	$750,000	$0	$750,000
South Berkeley/ Adeline/Ashby BART Specific Plan	Berkeley	$750,000	$0	$750,000
Bay Fair BART Transit Village Specific Plan	San Leandro	$440,000	$0	$440,000
Alameda Naval Air Station Specific Plan	Alameda	$250,000	$0	$250,000
Del Norte BART Station Precise Plan	El Cerrito	$302,500	$0	$302,500
Mission Bay Railyard and I-280 Alternatives	San Francisco	$700,000	$0	$700,000
Santa Clara El Camino Corridor Precise Plan	Santa Clara	$750,000	$0	$750,000
Sunnyvale El Camino Corridor Precise Plan	Sunnyvale	$587,000	$0	$587,000
San Jose Stevens Creek/Santana Row/Winchester Specific Plan	San Jose	$750,000	$0	$750,000
Staff Assistance				
Alameda PDA TDM Plan	Alameda	$150,000	$0	$150,000
Downtown Livermore Parking Implementation Plan	Livermore	$100,000	$0	$100,000
Oakland Transportation Impact Review Streamlining	Oakland	$150,000	$0	$150,000
Oakland Complete Streets, Design Guidance, Circulation Element Update	Oakland	$235,000	$0	$235,000
Downtown Oakland Parking Management Strategy	Oakland	$200,000	$0	$200,000
Windsor Parking Management and Pricing	MTC	$85,000	$0	$85,000
Technical Assistance				
Concord Salvio Streetscape	Concord	$50,000	$0	$50,000
South Richmond Affordable Housing and Commercial Linkage	Richmond	$60,000	$0	$60,000
San Mateo Planning/Growth Forum Series	San Mateo	$25,000	$0	$25,000
South San Francisco El Camino/Chestnut Ave Infrastructure Financing Analysis	SSF	$60,000	$0	$60,000
Milpitas Transit Area Parking Analysis	Milpitas	$60,000	$0	$60,000
Morgan Hill Housing/Employment Market Demand/Circulation Analysis	Morgan Hill	$60,000	$0	$60,000
Sab Jose West San Carlos Master Streetscape Plan	San Jose	$60,000	$0	$60,000
Sunnyvale Mathilda Ave Downtown Plan Line	Sunnyvale	$60,000	$0	$60,000
Downtown Sunnyvale Block 15 Sale/Land Exchange	Sunnyvale	$59,000	$0	$59,000
Sunnyvale El Camino Street Space Allocation Study	Sunnyvale	$60,000	$0	$60,000
Central Rohnert Park PDA/Creekside Neighb. Subarea Connector Path	MTC	$65,000	$0	$65,000
SUBTOTAL		$7,931,772	$0	$7,931,772
5. PRIORTY DEVELOPMENT AREA (PDA) PLANNING AND IMPLEMENTATION	**TOTAL:**	**$30,000,000**	**$10,000,000**	**$40,000,000**
6. CLIMATE INITIATIVES PROGRAM (CIP)				
Car Sharing				
Hayward RFP for Car Sharing Services	Hayward	$200,480	$0	$200,480
Oakland Car Share and Outreach Program	Oakland	$320,526	$0	$320,526
CCTA Car Share4All	CCTA	$573,453	$0	$573,453
TAM Car Share CANAL	TAM	$125,000	$0	$125,000
City of San Mateo Car Sharing - A Catalyst for Change	San Mateo	$210,000	$0	$210,000
Santa Rosa Car Share	SCTA	$170,130	$0	$170,130
Transportation Demand Management				
goBerkeley Residential Shared Parking Pilot	Berkeley	$950,000	$0	$950,000
Oakland Demand-Responsive Parking and Mobility Mgmt Initiative	Oakland	$1,300,000	$0	$1,300,000
Walnut Creek N Main St Rehab (for Parking Guidance System Pilot)	Walnut Creek	$783,000	$0	$783,000
Downtown San Mateo Parking Technology Implementation	San Mateo	$1,500,000	$0	$1,500,000
Peery Park Rides	VTA/Sunnyvale	$1,129,000	$0	$1,129,000
Public Education Outreach	MTC	$312,000	$0	$312,000
EV Charging Infrastructure and Vehicles (Programmed by BAAQMD)*	BAAQMD	$0	$6,000,000	$6,000,000
Spare the Air Youth Program - 2	MTC	$838,000	$0	$838,000

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OBAG 1 Regional Programs
FY 2012-13 through FY 2016-17

September 2022

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OBAG 1 Regional Programs Project List

Project Category and Title	Implementing Agency	Total STP/CMAQ	Total Other RTIP/TAP/TFCA	Total OBAG 1
OBAG 1 REGIONAL PROGRAMS		**$438,146,000**	**$53,080,000**	**$492,046,000**
Mobility Hubs Pilot Program				
Carsharing/Mobility Hubs Implementation	MTC	$189,495	$0	$189,495
BART: MacArthur BART Station	BART	$210,916	$0	$210,916
6. CLIMATE INITIATIVES PROGRAM (CIP)	**TOTAL:**	**$8,812,000**	**$6,000,000**	**$14,812,000**
* Selected and funded by the BAAQMD. Listed here for informational purposes only				
7. REGIONAL SAFE ROUTES TO SCHOOL (RSRTS)				
Specific projects TBD by CMAs				
Alameda County SRTS Program	ACTC	$5,366,000	$0	$5,366,000
Cavallo Rd, Drake St, and 'G' Street Safe Routes to School Imps	Antioch	$330,000	$0	$330,000
Actuated Ped /Bicycle Traffic Signal on Oak Grove Rd at Sierra Rd	Concord	$504,900	$0	$504,900
Concord: Willow Pass Repaving & SRTS	Concord	$215,000	$0	$215,000
Port Chicago Hwy/Willow Pass Rd Pedestrian & Bicycle Imps	Contra Costa County	$441,700	$0	$441,700
West Contra Costa SRTS Non-Infrastructure Program	Contra Costa County	$709,800	$0	$709,800
Vista Grande Street Pedestrian Safe Routes to School Imps	Danville	$157,000	$0	$157,000
Happy Valley Road Walkway Safe Routes to School Imps	Lafayette	$100,000	$0	$100,000
Moraga Road Safe Routes to School Bicycle/Pedestrian Imps	Moraga	$100,000	$0	$100,000
Moraga: Moraga Way and Canyon Rd/Camino Pablo Imps.	Moraga	$607,000	$0	$607,000
Orinda Sidewalk Imps	Orinda	$100,000	$0	$100,000
Pittsburg School Area Safety Imps	Pittsburg	$203,000	$0	$203,000
Pleasant Hill - Boyd Road and Elinora Drive Sidewalks	Pleasant Hill	$395,000	$0	$395,000
San Ramon School Crossings Enhancements	San Ramon	$247,600	$0	$247,600
North Civic Center Bicycle and Pedestrian Imps	Marin County	$791,000	$0	$791,000
Napa County SRTS Program - 2	NVTA	$105,000	$0	$105,000
Napa County SRTS Non-Infrastructure Program	NVTA	$420,000	$0	$420,000
San Francisco SRTS Non-Infrastructure Program	SFDPH	$1,799,000	$0	$1,799,000
San Mateo County SRTS Program	SMCCAG	$2,382,000	$0	$2,382,000
Campbell - Virginia Avenue Sidewalks	Campbell	$708,000	$0	$708,000
Mountain View - El Camino to Miramonte Complete Streets	Mountain View	$840,000	$0	$840,000
Mountain View SRTS Non-Infrastructure Program	Mountain View	$500,000	$0	$500,000
Palo Alto - Arastradero Road Schoolscape/Multi-use Trail	Palo Alto	$1,000,000	$0	$1,000,000
San Jose - Walk N' Roll Phase 2	San Jose	$1,000,000	$0	$1,000,000
City of Santa Clara SRTS Non-Infrastructure Program Phase 2	Santa Clara	$500,000	$0	$500,000
Santa Clara County SRTS Non-Infrastructure Program	Santa Clara County	$838,000	$0	$838,000
Sunnyvale: East Sunnyvale Area Sense of Place Improvements	Sunnyvale	$1,346,000	$0	$1,346,000
Solano County SRTS Non-Infrastructure Program	STA	$1,570,000	$0	$1,570,000
Sonoma County SRTS Program	SCTA	$345,000	$0	$345,000
Sonoma County SRTS Program	Sonoma County TPW	$1,379,000	$0	$1,379,000
7. REGIONAL SAFE ROUTES TO SCHOOL (RSRTS)	**TOTAL:**	**$25,000,000**	**$0**	**$25,000,000**
8. TRANSIT CAPITAL REHABILITATION PROGRAM				
SolTrans - Preventive Maintenance	SolTrans	$1,000,000	$0	$1,000,000
Transit Capital Rehabilitation				
Specific Projects TBD by Commission				
Advanced Communications and Information System (ACIS)	GGBHTD	$828,539	$0	$828,539
MS Sonoma Ferry Refurbishment	GGBHTD	$1,171,461	$0	$1,171,461
BART Car Exchange Preventative Maintenance	BART	$2,831,849	$0	$2,831,849
Clipper Fare Collection Equipment Replacement	MTC	$9,994,633	$0	$9,994,633
Clipper Back Office Fare Collection Equipment Replacement	MTC	$2,684,772	$0	$2,684,772
Clipper Next Generation Fare Collection System	MTC	$636,763	$0	$636,763
SFMTA - New 60' Flyer Trolley Bus Replacement	SFMTA	$5,502,261	$0	$5,502,261
SFMTA - New 40' Neoplan Bus Replacement	SFMTA	$10,000,000	$0	$10,000,000
VTA Preventive Maintenance (for vehicle replacement)	VTA	$3,349,722	$0	$3,349,722
SUBTOTAL		$37,000,000	$0	$37,000,000
Transit Performance Initiative (TPI) Incentive Program				
Specific Projects TBD by Commission				
TPI - AC Transit Spectrum Ridership Growth	AC Transit	$1,802,676	$0	$1,802,676
TPI - AC Transit - East Bay Bus Rapid Transit	AC Transit	$4,547,305	$0	$4,547,305
TPI - LAVTA - Wheels Marketing Initiatives	LAVTA	$423,798	$0	$423,798
TPI - ACE Positive Train Control	SJRRC/ACE	$502,214	$0	$502,214
TPI - Union City - South Alameda County Major Corridors Travel Time Imps	Union City	$160,587	$0	$160,587
TPI - CCCTA - 511 Real-Time Interface	CCCTA	$100,000	$0	$100,000
TPI - CCCTA - Implementation of Access Improvement	CCCTA	$685,196	$0	$685,196
TPI - CCCTA - Remix Software Implementation	CCCTA	$35,451	$0	$35,451
TPI - ECCTA - Hydrogen Fueling Maintenance Infrastructure Upgrade	ECCTA	$817,297	$0	$817,297
TPI - WCCTA - Purchase of Automatic Vehicle Locator System	WCCTA	$344,513	$0	$344,513
TPI - GGBHTD - Building Ridership to Meet Capacity Campaign	GGBHTD	$387,440	$0	$387,440
TPI - GGBHTD - Regional Customer Study: On-Board Bus and Ferry Surveys	GGBHTD	$402,572	$0	$402,572
TPI - Marin Transit Preventive Maintenance (for low income youth pass)	Marin Transit	$99,289	$0	$99,289
TPI - MCTD Preventative Maintenance (Youth Pass Program)	Marin Transit	$239,808	$0	$239,808

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FY 2012-13 through FY 2016-17

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03/23/22-C 09/28/22-C

OBAG 1 Regional Programs Project List

Project Category and Title	Implementing Agency	Total STP/CMAQ	Total Other RTIP/TAP/TFCA	Total OBAG 1
OBAG 1 REGIONAL PROGRAMS		**$438,146,000**	**$53,080,000**	**$492,046,000**
TPI - Relocate Transit Maintenance Facility (PE only) (Youth Pass Program)	Marin Transit	$122,249	$0	$122,249
TPI - NVTA - Am. Canyon Priority Signal Interconnection on SR 29	NVTA	$91,757	$0	$91,757
TPI - NVTA - Bus Mobility Device Retrofits	NVTA	$120,988	$0	$120,988
TPI - NVTA - Imola Ave and SR 29 Express Bus Improvements	NVTA	$96,058	$0	$96,058
TPI - BART Train Car Accident Repair	BART	$1,493,189	$0	$1,493,189
TPI - BART - Metro Priority Track Elements	BART	$3,459,057	$0	$3,459,057
TPI - BART - Concord Shop Wheel Truing	BART	$7,165,450	$0	$7,165,450
TPI - Caltrain - Off-peak Marketing Campaign	Caltrain	$44,200	$0	$44,200
TPI - WETA - Central Bay Operations and Maintenance	WETA	$1,325,466	$0	$1,325,466
TPI - BART 24th Street Train Control Upgrade	BART	$2,000,000	$0	$2,000,000
TPI - SFMTA Light Rail Vehicle Rehabilitation	SFMTA	$5,120,704	$0	$5,120,704
TPI - SFMTA - Light Rail Vehicle (LRV) Propulsion System	SFMTA	$9,285,937	$0	$9,285,937
TPI - SFMTA Preventive Maintenance (for low income youth pass)	SFMTA	$1,600,000	$0	$1,600,000
TPI - SFMTA Light Rail Vehicle Overhaul	SFMTA	$5,337,401	$0	$5,337,401
TPI - Caltrain - Control Point Installation	Caltrain	$1,802,415	$0	$1,802,415
TPI - Caltrain - Postitive Train Control	Caltrain	$2,332,747	$0	$2,332,747
TPI - SamTrans - Preventative Maintenance (Service Plan Implementation)	SMCTD	$1,344,917	$0	$1,344,917
TPI - VTA Preventive Maintenance (for low income fare pilot)	VTA	$1,302,018	$0	$1,302,018
TPI - VTA - Montague Expressway Pedestrian Bridge at Milpitas BART	VTA	$2,768,555	$0	$2,768,555
TPI - Fairfield - Expand bus service between Fairfield and Vacaville	Fairfield	$372,216	$0	$372,216
~~TPI - Fairfield - SolanoExpress Service Vehicle Replacement (for SolanoExpress Bus Stop Imps)~~ **(Removed)**	~~Fairfield~~	~~$333,719~~	~~$0~~	~~$333,719~~
TPI - SolTrans - SolanoExpress Bus Purchases (for STA Bus Stop Imps) (New)	**SolTrans**	**$333,719**	**$0**	**$333,719**
TPI - SolTrans - 40' Electric Bus Purchase & Hybrid-Diesel Bus Replacement	SolTrans	$399,223	$0	$399,223
TPI - Petaluma - Transit Signal Priority, Phase I, II & III	Petaluma	$378,692	$0	$378,692
TPI - Santa Rosa - CityBus COA and Service Plan	Santa Rosa	$100,000	$0	$100,000
TPI - Santa Rosa - Reimagining CityBus Implementation	Santa Rosa	$682,177	$0	$682,177
TPI - Sonoma County Transit - 30-foot CNG Bus Replacements	Sonoma County	$173,052	$0	$173,052
TPI - Sonoma County Transit - 40-foot CNG Bus Replacements	Sonoma County	$199,667	$0	$199,667
SUBTOTAL		$60,000,000	$0	$60,000,000
8. TRANSIT CAPITAL REHABILITATION PROGRAM	**TOTAL:**	**$98,000,000**	**$0**	**$98,000,000**
9. TRANSIT PERFORMANCE INITIATIVE (TPI)				
TPI - Capital Investment Program				
TPI - Round 1				
AC Transit Line 51 Corridor Speed Protection and Restoration	AC Transit	$10,515,624	$0	$10,515,624
SFMTA Potrero Ave Fast Track Transit and Streetscape Imps	SFMTA	$4,133,031	$0	$4,133,031
SFMTA Colored Lanes on MTA Rapid Network	SFMTA	$3,000,000	$0	$3,000,000
SFMTA Mission Mobility Maximization	SFMTA	$5,383,109	$0	$5,383,109
SFMTA N-Judah Mobility Maximization	SFMTA	$2,383,860	$0	$2,383,860
VTA Light Rail Transit Signal Priority	VTA	$1,587,176	$0	$1,587,176
VTA Stevens Creek - Limited 323 Transit Signal Priority	VTA	$712,888	$0	$712,888
TPI - Round 2				
AC Transit South Alameda County Corridors Travel Time Imps	AC Transit	$5,000,000	$0	$5,000,000
MTC Clipper Phase III Implementation	MTC	$8,000,000	$0	$8,000,000
LAVTA Dublin Blvd Transit Performance Initiative	LAVTA	$1,009,440	$0	$1,009,440
SFMTA Colored Lanes on MTA Rapid Network	SFMTA	$1,000,000	$0	$1,000,000
SFMTA Geary BRT Phase 1: Near-Term Improvements	SFMTA	$3,990,560	$0	$3,990,560
VTA Prev. Maint. (for Mountain View Double Track Phase 1)	VTA	$8,000,000	$0	$8,000,000
TPI - Round 3				
AC Transit San Pablo and Telegraph Ave Rapid Bus Upgrades	AC Transit	$3,881,319	$0	$3,881,319
BART Train Seat Modification	BART	$1,503,239	$0	$1,503,239
SamTrans Traffic Signal Priority on El Camino Real	SamTrans	$3,459,000	$0	$3,459,000
SFMTA Geary BRT Phase 1: Near-Term Improvements	SFMTA	$5,618,681	$0	$5,618,681
VTA Light Rail Crossovers & Switches	VTA	$500,000	$0	$500,000
BBF - AC Transit Double Decker Bus Wash	AC Transit	$1,600,000	$0	$1,600,000
BBF - AC Transit Higher Capacity Bus Fleets-Increased Service Freq.	AC Transit	$7,400,000	$0	$7,400,000
BBF - West Grand Ave Transit Signal Priority	MTC	$1,000,000	$0	$1,000,000
TPI - Round 4				
~~Fairfield Solano Express Service Vehicle Repl. (for SolanoExpress Fairgrounds Dr/SR 37 Bus Stop)~~ **(Removed)**	~~Fairfield~~	~~$1,000,000~~	~~$0~~	~~$1,000,000~~
SolanoExpress Bus Purchases (for STA Bus Stop Improvements) (Revised)	**SolTrans**	**$1,000,000**	**$0**	**$1,000,000**
Novato Pavement Rehabilitation (for Novato Downtown SMART Station)	Novato	$500,000	$0	$500,000
NVTA Imola Ave and SR 29 Express Bus Improvements	NVTA	$411,073	$0	$411,073
Santa Rosa CityBus New Transit System Optimization	Santa Rosa	$411,000	$0	$411,000
9. TRANSIT PERFORMANCE INITIATIVE (TPI)	**TOTAL:**	**$82,000,000**	**$0**	**$82,000,000**
10. PRIORITY CONSERVATION AREA (PCA)				
North Bay PCA Program				
Specific projects TBD by North Bay CMAs				
Marin PCA - Mill Valley - Sausalito Pathway Preservation	Marin County	$320,000	$0	$320,000

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Project Category and Title	Implementing Agency	Total STP/CMAQ	Total Other RTIP/TAP/TFCA	Total OBAG 1
OBAG 1 REGIONAL PROGRAMS		**$438,146,000**	**$53,080,000**	**$492,046,000**
Marin PCA - Bayfront Park Recreational Bay Access	Mill Valley	$140,000	$0	$140,000
Marin PCA - Thatcher Ranch Easement Acq. (Vineyard Rd Improvements)	Novato	$250,000	$0	$250,000
Marin PCA - Pacheco Hill Parkland Acq. (Vinyard Rd. Improvements)	Novato	$500,000	$0	$500,000
Marin PCA - Sunny Hill Ridge and Red Hill Trails	San Anselmo	$40,000	$0	$40,000
Napa PCA: Napa Soscol Headwaters Preserve Acq. (SilveradoTrail Phase G Overlay)	Napa County	$1,107,000	$0	$1,107,000
Napa PCA - Silverado Trail Yountville-Napa Safety Imps	Napa County	$143,000	$0	$143,000
Solano PCA - Suisun Valley Bicycle and Pedestrian Imps	Solano County	$1,175,000	$0	$1,175,000
Solano PCA - Solano PCA Assessment Plan	STA	$75,000	$0	$75,000
Sonoma PCA - Sonoma County Urban Footprint Planning	Sonoma County	$250,000	$0	$250,000
Sonoma PCA - Bodega Hwy Roadway Preservation	Sonoma County	$1,000,000	$0	$1,000,000
SUBTOTAL		$5,000,000	$0	$5,000,000
Peninsula, Southern and Eastern Counties PCA Program				
Bay Trail Shoreline Access Staging Area	Berkeley	$500,000	$0	$500,000
Breuner Marsh Restoration and Public Access	EBRPD	$1,000,000	$0	$1,000,000
SF Bay Trail, Pinole Shores to Bay Front Park	EBRPD	$119,711	$0	$119,711
Coyote Creek Trail: Brokaw Road to Union Pacific Railroad	San Jose	$712,700	$0	$712,700
Pier 70 - Crane Cove Park	Port of SF	$1,000,000	$0	$1,000,000
Twin Peaks Connectivity Conceptual Plan	SF Rec. and Parks	$167,589	$0	$167,589
Southern Skyline Blvd. Ridge Trail Extension	SF PUC	$1,000,000	$0	$1,000,000
SUBTOTAL		$4,500,000	$0	$4,500,000
10. PRIORITY CONSERVATION AREA (PCA)	**TOTAL:**	**$9,500,000**	**$0**	**$9,500,000**
OBAG 1 REGIONAL PROGRAMS TOTAL	**TOTAL:**	**$438,146,000**	**$53,080,000**	**$492,046,000**

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Date: November 18, 2015
W.I.: 1512
Referred by: PAC
Revised: 07/27/16-C 10/26/16-C 12/21/16-C
03/22/17-C 04/26/17-C 05/24/17-C
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04/25/18-C 05/23/18-C 06/27/18-C
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12/19/18-C 01/23/19-C 02/27/19-C
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09/25/19-C 10/23/19-C 11/20/19-C
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11/17/21-C 12/15/21-C 01/26/22-C
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ABSTRACT

Resolution No. 4202, Revised

Adoption of the project selection policies and project programming for the second round of the One Bay Area Grant program (OBAG 2). The project selection criteria and programming policy contain the project categories that are to be funded with various fund sources including federal surface transportation act funding available to MTC for its programming discretion to be included in the federal Transportation Improvement Program (TIP) for the OBAG 2 funding period.

The resolution includes the following attachments:

- Attachment A – OBAG 2 Project Selection Criteria and Programming Policy
- Attachment B-1 – OBAG 2 Regional Program Project List
- Attachment B-2 – OBAG 2 County Program Project List

On July 27, 2016, Attachment A, and Attachments B-1 and B-2 were revised to add additional funding and projects to the OBAG 2 framework, including $72 million in additional Fixing America's Surface Transportation Act (FAST) funding, and to incorporate housing-related policies.

On October 26, 2016, Attachment A, and Attachment B-1 were revised to clarify language related to the North Bay Priority Conservation Area (PCA) Program in Attachment A and to deprogram

$2,500,000 from the Water Emergency Transportation Authority (WETA) Ferry Service Enhancement Pilot within the Regional Active Operational Management Program.

On December 21, 2016, Attachments B-1 and B-2 were revised to redirect $417,000 in un-programmed balances from the Regional Active Operational Management program to MTC's Spare the Air Youth within the Climate Initiatives Program; divide MTC's Rideshare Program into three subcomponents totaling $10,000,000: $720,000 for Rideshare Implementation, $7,280,000 for the Carpool Program, and $2,000,000 for the Vanpool Program; direct $1,785,000 from 511 Next Gen to the Commuter Benefits program; direct $1,000,000 in un-programmed balances to SMART's Multi-Use Pathway; transfer $1,000,000 from MTC's Casual Carpool project to MTC's Eastbay Commuter Parking project within the Bay Bridge Forward program, as the former will be funded with non-federal funds; transfer $500,000 from the Freeway Performance Initiative program and $500,000 in un-programmed balances to US 101/Marin Sonoma Narrow's B2 Phase 2 project in the Regional Active Operational Management Program; shift $40,000,000 from the BART Car Replacement/Expansion project to the Golden Gate Bridge Suicide Deterrent project and $13 million from MTC's Clipper project to un-programmed balances within the Transit Priorities program as part of a RM2 funding action to address a cost increase on the Golden Gate Bridge Suicide Deterrent project; and program $5,990,000 to Alameda County's Safe Routes to School Program in the County Program.

On March 22, 2017, Attachment B-1 was revised to program $17,000,000 in un-programmed balances within the Regional Transit Priorities Program to MTC's Clipper Program, as part of the FY17 Transit Capital Priorities program.

On April 26, 2017, Attachment B-2 was revised to program $1,655,000 to the Sonoma Safe Routes to School program; and redirect $1,000 from Contra Costa Transportation Authority's Planning Activities Base to its discretionary balance and $1,000 from San Francisco County Transportation Authority's Planning Activities Base to its discretionary balance to address an inconsistency between amounts programmed to planning activities in Appendix A-3 and reflect actual amounts obligated for planning.

On May 24, 2017, Attachment B-1 was revised to redirect $1,237,000 from 511 Next Gen to AOM Implementation within the Regional Active Operational Management program to reflect re-organization of staff between program elements; direct $18,000,000 in Arterial/Transit Performance to the Program for Arterial System Synchronization ($5,000,000) and the Next Gen Arterial

Operations Program ($13,000,000) within the Regional Active Operational Management program; direct $19,000,000 from the Transportation Management System (TMS) Field Equipment Devices Operations and Maintenance to TMS Implementation ($2,910,000), Performance-Based Intelligent Transportation Systems Device Maintenance and Rehabilitation ($5,940,000), Transportation Management Center Asset Upgrade and Replacement ($4,000,000), I-880 Communication Upgrade and Infrastructure Gap Closures ($4,000,000) and a Detection Technology Pilot ($5,000,000) within the Regional Active Operational Management program; and remove $290,556 in un-programmed balances from the Regional Active Operational Management program to address over-programming in a previous cycles of the STP/CMAQ regional programs.

On June 28, 2017, Attachments B-1 and B-2 were revised to reprogram $1,000,000 from the SMART Pathway – 2nd to Andersen to San Rafael's Grand Ave Bike/Pedestrian Improvements within the Regional Climate Initiatives program as part of a funding exchange within the City of San Rafael, conditioned on San Rafael committing $1 million in non-federal funds to the construction of the pathway, and a resolution of local support for the use of federal funds on the Grand Ave project, and TAM approval of the redirection of local measure funds between the projects; split out $8,729,000 from the 511 Next Gen program to 511 Implementation within the Regional Active Operational Management program; program $1,250,000 to Golden Gate Bridge Highway and Transportation District for the Bettini Transit Center as part of the Marin County Program; and program $2,617,000 within the San Mateo County Program to the San Mateo County Office of Education for the SRTS program, including $223,000 in supplemental funds from San Mateo's discretionary balance.

On July 26, 2017, Attachment B-1 was revised to program $12,000,000 to the US 101 Marin Sonoma Narrows project as part of a fund exchange agreement with Sonoma County Transportation Authority; $11,000,000 in exchange funds are added to the program for tracking purposes, with the final $1 million in exchange funds to be identified through a future Commission action.

On September 27, 2017, Attachment B-1 was revised to change the name of the Next Gen Arterial Operations Program (NGAOP) to Innovative Deployment for Enhanced Arterials (IDEA) to reflect program rebranding and additional focus on advanced technologies; program $4,160,000 to Incident Management Implementation and $8,840,000 to I-880 Integrated Corridor Mobility project within the Regional Active Operational Management program; split out the Connected Vehicles/Shared Mobility program into the Connected Vehicles/Automated Vehicles

program for $2,500,000 and the Shared Use Mobility program for $2,500,000; and program $16,000,000 for three corridors within the Freeway Performance Program, with $8,000,000 for I-680, $3,000,000 for I-880, and $5,000,000 for SR-84.

On October 25, 2017, Attachment B-1 was revised to program $10,000,000 to the Bay Area Air Quality Management District for the Spare the Air program, in lieu of the Electric Vehicle Programs within the Regional Climate Initiatives Program, conditioned on the Air District contribution of an additional $10 million to advance implementation of electric vehicles within the region.

On November 15, 2017, Attachment B-2 was revised to program $200,000 in the Alameda County Program to the I-580 Corridor Study, to support a joint corridor study between Alameda County Transportation Commission (ACTC) and MTC; $122,000 within the Napa County Program to Napa Valley Transportation Authority (NVTA) for the Napa County Safe Routes to School (SRTS) Program; and $300,000 within the Contra Costa County Program to San Ramon for the San Ramon Valley Street Smarts Program.

On December 20, 2017, Attachments A, Appendix A-3, B-1, and B-2 were revised to program $334 million in the County Program to local and county projects recommended by the nine Congestion Management Agencies (CMAs); redirect $10,248,000 from BART Car Replacement/Expansion to Clipper within the Regional Transit Priorities Program; revise the CMA Planning Activities funding amounts to reflect the supplementary funds requested by several CMAs through their County Programs; and clarify the program details for the Local Housing Production Incentive program (also known as the *80K by 2020 Challenge Grant*).

On January 24, 2018, Attachment B-1 was revised to redirect $4,100,000 from Performance-Based ITS Device Maintenance and Rehabilitation to I-880 Communication Upgrade and Infrastructure Gap Closures, within the Transportation Management System program.

On February 28, 2018, Attachments B-1 and B-2 were revised to program $13 million in Innovative Deployments to Enhance Arterials (IDEA) program grants within the Regional Active Operational Management Program; redirect $822,000 within Contra Costa County's Safe Routes to School Program (SRTS) for future SRTS projects; program $2,813,000 to San Francisco SRTS Non-Infrastructure Program within the San Francisco County Program; and clarify MTC exchange fund projects.

On March 28, 2018, Attachment B-1 was revised to distribute the $1.5 million Community-Based Transportation Planning Program among the nine county Congestion Management Areas (CMAs); clarify the limits of three Freeway Performance Program projects within the Regional Active Operational Management Program; and reflect the programming of $30,000 in MTC exchange funds for Bay Area Greenprint Functionality Improvements, as part of the PCA program.

On April 25, 2018, Attachment B-1 was revised to program $8,200,000 in Priority Conservation Area (PCA) grants within the North Bay PCA Program; $3,400,000 to Sonoma County Transportation Authority (SCTA) for the Marin Sonoma Narrows B2 Phase 2 project, as part of an exchange agreement in which an equal amount of SCTA's future Regional Transportation Improvement Program (RTIP) funds will be programmed at MTC's discretion; $7,288,000 in PDA Planning and Implementation grants; and $500,000 to MTC for PDA Implementation.

On May 23, 2018, Attachments B-1 and B-2 were revised to change the project sponsor from MTC to VTA for the IDEA Program project at the Veteran's Administration Palo Alto Medical Center; redirect funds within the Santa Clara County OBAG 2 County Program to reduce San Jose's West San Carlos Urban Village Streetscape Improvements by $2,050,000, redirecting $1,000,000 from the project to Santa Clara's Saratoga Creek Trail Phase 1 and $1,050,000 to Saratoga's Prospect Rd Complete Streets project; and direct an additional an additional $25,000 in unprogrammed balances within Santa Clara County OBAG 2 County Program to Saratoga's Prospect Rd Complete Streets project.

On June 27, 2018, Attachments B-1 and B-2 were revised to program $800,000 to MTC's Carsharing Implementation and $325,000 to Targeted Transportation Alternatives within the Climate Initiatives Program; redirect from MTC's 511 NextGen program $8,271,000 to 511 Implementation, $2,000,000 to Contra Costa Transportation Authority's (CCTA's) I-80 Central Ave Interchange Improvements project, and $380,000 to an unprogrammed balance within the Regional Active Operational Management program; clarify the scope of MTC's Freeway Performance Program I-880 to reflect the project limits of I-80 to I-280; and redirect $1,394,000 from Vallejo's Local Streets Rehabilitation project to Fairfield's Heart of Fairfield project within the Solano County Program.

On July 25, 2018, Attachment B-1 was revised to program $1,600,000 to Santa Clara Valley Transportation Authority (VTA) for the SR 85 Transit Guideway Study as part of a fund exchange agreement; remove Rohnert Park's $65,000 Central Rohnert Park PDA/Creekside Neighborhood Subarea Connector Path Technical Assistance grant from the Regional PDA Planning Grant program as it will be funded through a prior cycle; reduce the funding for Windsor's PDA Planning and Implementation Staffing Assistance grant by $85,000 as this project will receive an equivalent amount of funds through a prior cycle; a total of $150,000 balance created by these two revisions was returned to the Regional PDA Planning Grant Program un-programmed balance.

On September 12, 2018, Attachments B-1 and B-2 were revised to program $3,000,000 within the Freeway Performance Program to the US 101 corridor in San Mateo and Santa Clara counties; direct an additional $6,000,000 within the Freeway Performance Program to the I-680 corridor within Contra Costa County, $4,000,000 of which is part of an exchange agreement with Contra Costa Transportation Authority (CCTA); redirect $15,000 within the Innovative Deployment for Enhanced Arterials (IDEA) program from IDEA Technical Assistance to VTA's IDEA grant at the Veterans Affairs Palo Alto Medical Center; redirect $48,000 from MTC's Clipper to the BART Car Replacement/Expansion project within the Transit Priorities program to reflect program amounts previously adopted through the Transit Capital Priorities (TCP) program; revise the amount programmed to VTA's SR 85 Transit Guideway Study within Regional Strategic Initiatives to $1,200,000 to reflect amount previously approved; redirect $1,214,000 from Berkeley's North Shattuck Avenue Rehabilitation project to its Southside Complete Streets and Transit Improvements project within the Alameda County Program; from Sunnyvale's East Sunnyvale Area Sense of Place Improvements, redirect $1,000,000 to Los Altos' Miramonte Ave Bicycle and Pedestrian Access Improvements and $1,140,000 to the Safe Routes to School program balance within the Santa Clara County Program; and program $4,500,000 available from a previous funding cycle to the following projects within Regional Strategic Initiatives: $617,000 to Novato's Pavement Rehabilitation (for Downtown Novato SMART Station) as part of a local funding exchange, $1,120,000 to the Transportation Authority of Marin (TAM) for the Old Redwood Highway Multi-Use Pathway project, $763,000 for San Rafael's Grand Ave Bridge project, and $2,000,000 to TAM for the US 101 Marin Sonoma Narrows project.

On November 28, 2018, Attachment B-1 was revised to make adjustments related to the MTC/SCVTA Funding Exchange Agreement MTC Resolution No. 4356 and to the MTC/CCTA

Funding Exchange Agreement MTC Resolution No. 4357, and to program $4,000,000 in MTC exchange funds in accordance with MTC Resolution 3989, to the following projects: $619,000 to CCTA for Innovative Deployment for Enhanced Arterials; $621,000 to the city of Walnut Creek for innovative Deployment for Enhanced Arterials; $500,000 to the city of Richmond for the Richmond-San Rafael Bridge Bikeway Access; $1,160,000 to MTC for Richmond-San Rafael Bridge Forward; and $1,100,000 to MTC for Napa Valley Transportation Demand.
On December 19, 2018, Attachments B-1 and B-2 were revised to redirect $5,200,000 from MTC's I-880 Integrated Corridor Management (ICM) Central Segment to the I-880 ICM Northern Segment project within the Regional Active Operational Management Program; clarify the Diridon Integrated Station Area Concept Plan project within the Regional Priority Development Planning and Implementation Program to reference Santa Clara Valley Transportation Authority (VTA) as a project partner; within the Santa Clara County Program, redirect $794,000 in unprogrammed balances to Sunnyvale's East Sunnyvale Sense of Place Improvements, clarify the remaining unprogrammed balance is discretionary, and clarify the division of funding for Santa Clara's Saratoga Creek Trail Phase 1 project between the county's Safe Routes to School program and its discretionary program.

On January 23, 2019, Attachment B-2 was revised to redirect $15,980,000 within the San Francisco County Program from the Better Market Street project to the Central Subway project.

On February 27, 2019, Attachment B-1 was revised to change the fund source of $3,779,849 programmed to the Golden Gate Bridge Suicide Deterrent in Surface Transportation Block Grant Program (STP) funds to federal Highway Infrastructure Program (STP Bump) funds provided in the Consolidated Appropriations Act, 2018. Of the $3,779,849 freed up by this swap, $1,000,000 is returned to the region's STP/CMAQ balance to help address the CMAQ shortfall as a result of the region becoming attainment for carbon monoxide (CO) and therefore receiving less CMAQ funds which are distributed based on air quality status. The remaining $2,779,849 is held for future Commission action.

On March 27, 2019, Attachment A, Appendix A-8, Appendix A-10, and Attachment B-1 were revised to clarify provisions pertaining to the interim status report requirements for Priority Development Area (PDA) Investment & Growth Strategies; change the recipient of the Concord IDEA project from CCTA to the City of Concord and reduce the MTC Exchange funding from $619,000 to $589,000; and redirect the $30,000 in MTC Exchange funds to a new MTC-led Concord IDEA project.

On June 26, 2019, Attachment B-2 was revised to program $822,000 in unprogrammed Safe Routes to School Program (SRTS) balances within the Contra Costa County Program to six existing projects; and to redirect $251,000 within the San Mateo County Program from Atherton's Middlefield Road Class II Bike Lanes to its James Avenue Rehabilitation.

On July 24, 2019, Attachment A was revised to delegate authority to the Executive Director or designee to sign Letters of Understanding for the exchange of STP/CMAQ funds with other regions, within certain conditions and limitations, and to delegate to a Committee of the Commission the authority to approve exchanges beyond these conditions and limitations.

On September 25, 2019, Attachments B-1 and B-2 were revised to clarify that the $300,000 programmed to Alameda County Transportation Commission (ACTC) within the Community Based Transportation Plan (CBTP) Updates program will be directed to its Congestion Management Agency (CMA) Planning program as part of an internal fund exchange within ACTC; redirect $9.6 million from 511 Implementation to 511 Next Gen within the Bay Area 511 Traveler Information Program; within the Freeway Performance Program redirect $625,000 in from MTC's SR 84 (US 101 to I-880) to the environmental phase of MTC's I-580 WB HOV Lane Extension project and change the project sponsor of the I-80/Central Ave. Interchange Improvements project from the Contra Costa Transportation Authority (CCTA) to City of Richmond; within the Innovative Deployment to Enhance Arterials (IDEA) program, clarify that LAVTA is a partner agency for the Dublin Category 2 IDEA project; within the Transportation Management Systems (TMS) program, change the name of the overall program to Connected Bay Area, redirect $2 million from the Detection Technology Pilot project and $1.8 million from the Performance-Based ITS Device Maintenance and Rehabilitation project to provide an additional $3.8 million to the I-880 Communications Upgrade and Infrastructure Gap Closures project; within the Incident Management program, redirect $1 million from MTC's I-880 Integrated Corridor Management (ICM) Central Segment to the Northern Segment; within the San Francisco County program, redirect $3,366,000 from John Yehall Chin Elementary Safe Routes to School (SRTS) Improvement; and within the Santa Clara County program, redirect $1 million from Los Altos' Miramonte Ave Bicycle and Pedestrian Access Improvements project to Cupertino's McClellan Rd Separated Bike Lane project, and program $1,346,000 in unprogrammed discretionary balances to Campbell's Harriet Ave Sidewalk project and Los Gatos Shannon Rd Complete Streets project.

On October 23, 2019, Attachment B-1 was revised to redirect $3 million from MTC's Detection Technology Pilot project to establish the InterConnect Bay Area grant program within the Connected Bay Area program; direct $5 million ($4 million Solano County and $1 million other North Bay counties) within the Housing Incentive Pool program to establish the Sub-HIP program, with specific projects to be recommended through future programming actions; and program $1 million to BART for AB2923 Implementation from unprogrammed balances within the PDA Planning & Implementation program.

On November 20, 2019, Attachments B-1 and B-2 were revised to program $6,023,000 in MTC exchange funds in accordance with MTC Resolution No. 3989 to 13 projects within the Priority Conservation Area (PCA) Grants program; and within the Contra Costa County program, redirect $1,025,000 from Brentwood's Various Streets and Roads Preservation project to Pittsburg's Pavement Improvements project, redirect $618,000 from San Pablo's Market Street Pavement Rehabilitation project to Giant Road Pavement Rehabilitation project; and revise the name of Walnut Creek's Ygnacio Valley Road Rehabilitation project to reflect the latest proposed scope of work.

On February 26, 2020, Attachments A, B-1, and B-2 were revised to program $1 million to MTC for SR 37 corridor planning in Marin, Napa, Solano, and Sonoma Counties and $3 million to MTC for I-80 corridor planning from the Carquinez Bridge to the San Francisco-Oakland Bay Bridge (SFOBB) Toll Plaza within the Freeway Performance Program; revise the name of the Concord Willow Pass Road Rehabilitation and Safe Routes to School project within the Contra Costa County Program to reflect the project's current scope; and clarify language within the OBAG 2 Project Selection Criteria and Programming Policy to reflect the Commission adoption of Housing Incentive Pool (HIP) program guidelines, MTC Resolution No. 4348.

On May 27, 2020, Attachment B-1 was revised to clarify the scope of MTC's Freeway Performance Program planning-only project on I-80 extends from Carquinez Bridge in Contra Costa to Fremont Street in San Francisco; change the sponsor for three projects within the Regional Priority Conservation Area (PCA) Grant program; and to redirect $104,000 in the North Bay Priority PCA Grant program from Novato's Carmel Open Space Acquisition project to Novato's Hill Area National Recreation Area, as the former project has been cancelled.

On July 22, 2020, Attachment B-1 was revised to program $5 million to five projects in Solano, Marin, Napa, and Sonoma Counties within the Housing Incentive Pool Pilot Program (Sub-HIP)

and program $1 million to the Napa Valley Forward Traffic Calming and Multimodal Improvements project within the Freeway Performance Program (FPP); and incorporate $7,681,887 in federal Highway Infrastructure Program apportionment provided through the Department of Transportation Appropriations Act, 2020 to the Golden Gate Bridge Suicide Deterrent.

On September 23, 2020, Attachment B-2 was revised to redirect $2,000,000 from Napa's Silverado Trail Five-way Intersection Improvement project to Napa Valley Transportation Authority's Vine Transit Bus Maintenance Facility within the Napa County Program, and $1,394,000 from Fairfield's Heart of Fairfield Improvements to its Cadenasso Dr. repaving project within the Solano County Program.

On November 20, 2020, Attachment B-1 was revised to program $1,000,000 to SFCTA for the environmental phase of the Yerba Buena Island/Treasure Island Multi-Use Pathway project within the Priority Conservation Area (PCA) Grants program, with payback from BATA at a future date; $647,000 in MTC exchange funds in accordance with MTC Resolution No. 3989 to four projects within the Priority Conservation Area (PCA) Grants program; and to clarify the project sponsor of the Old Redwood Highway Multi-Use Pathway project as Larkspur, rather than the Transportation Authority of Marin (TAM).

On January 27, 2021, Attachments A and Attachment B-1 were revised, and Appendix A-11 was added, to incorporate additional funding into the OBAG 2 framework, including $52.9 million in STP/CMAQ program balances made available through FY2018-FY2020 appropriations of Federal Highway Infrastructure Program (FHIP) funds, and a $1.5 million balance redirected from the Cycle 1 STP/CMAQ Climate Initiatives program, as part of the Safe & Seamless Mobility Quick-Strike program.

On February 24, 2021, Attachment B-1 was revised to program a total of $7.91 million in Federal Highway Infrastructure Program (FHIP) funds provided in the Consolidated Appropriations Act, 2021, and project savings from previous STP/CMAQ cycles to the Golden Gate Bridge Highway and Transportation District (GGBHTD) for shareable costs of an increase to the Golden Gate Bridge Suicide Deterrent System. Because the final FFY 2021 FHIP amount is not yet available at the time of the Commission meeting, the final split between the two fund sources will be adjusted by staff as a technical change, with the total amount not to exceed $7.91 million.

On April 28, 2021, Attachment B-1 was revised to change the fund source of $13,942,852 from Federal Highway Infrastructure Program (FHIP) funds to Surface Transportation Block Grant (STP) funds for the Gate Bridge Highway and Transportation District (GGBHTD) for the Golden Gate Bridge Suicide Deterrent System project; program $61,708,245 in STP/CMAQ funds, and $13,942,852 in FHIP funds redirected from the GGB suicide deterrent system, to the Transportation Authority of Marin (TAM) for the US-101 Marin-Sonoma Narrows Segment B7 project as part of the SB1/RMS alternative funding plan; and program $99,840,510 in STP/CMAQ funds to the Solano Transportation Authority (STA) for the Solano I-80 Express Lanes project as part of the SB1/RMS alternative funding plan. The programmed funding to TAM and STA serves as a loan to the project sponsors to permit the projects to move to construction while Regional Measure 3 funds are unavailable. The loaned funds shall be repaid to MTC as non-federal funds and will be subject to future OBAG programming.

On May 26, 2021, Attachment B-1 and Appendix A-11 were revised to program $34,593,076 in Federal Highway Infrastructure Program funds made available through federal Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) to augment the Regional Safe and Seamless Mobility Quick-Strike program framework; and to program $7,775,000 in Priority Development Area (PDA) Planning and Implementation grants and $87,000 in Regional PDA Supportive Studies within the Regional PDA Planning and Implementation program.

On June 23, 2021, Attachment B-1 was revised to program $83,118,000 to various local and regional projects within the Regional Safe and Seamless Mobility Quick-Strike program; and program $1,000,000 in project savings from previous fund cycles to VTA's Diridon Station Planning and Studies project as part of the Regional Strategic Initiatives program.

On July 28, 2021, Attachments A, B-1, and B-2 were revised to: temporarily increase the delegated authority amount the Executive Director may authorize for STP/CMAQ exchanges from $2 million per region to $100 million in total for federal fiscal year 2020-2021; to program $4,667,000 to AC Transit for Bus Purchases and to reflect changes in program amounts and projects proposed for MTC regional exchange funds (in accordance with MTC Resolution No. 3989) as part of the funding arrangement for the Solano I-80 Express Lanes project; to program $1,750,000 within the Regional Safe and Seamless Mobility Quick-Strike program; to transit integration planning efforts in Solano, Sonoma, and East Bay Counties; redirect $130,000 in project savings from the County of Contra Costa Local Streets and Roads Preservation project to

the City of Danville's San Ramon Valley Blvd. Improvements project (in lieu of the Diablo Road Trail project which will be provided an equivalent amount of non-federal funds from CCTA) and redirect $350,000 in project savings from the County of Contra Costa Local Streets and Roads Preservation project to the City of Pinole's Safety Improvements at Appian Way and Marlesta Rd project within the Contra Costa County program; and to cancel the $4,655,000 El Camino Real Pedestrian Safety & Streetscape Improvements project in Palo Alto, direct $41,428 from the cancelled project to Campbell's Harriet Avenue Sidewalk project, and leave the remaining $4,614,572 balance unprogrammed within the Santa Clara county program.

On September 22, 2021, Attachment B-1 was revised to program $4,191,538 to various projects within the Regional Safe & Seamless Mobility Quick-Strike program; $184,000 in prior cycle project savings to San Mateo County's Broadmoor SRTS Pedestrian Safety and Mobility Improvements project within the Regional Strategic Investments program; and to redirect $800,000 from MTC's Carsharing Implementation project and $1,848,099 from the Climate Initiatives unprogrammed balance to various projects within the Mobility Hubs Pilot Program.

On November 17, 2021, Attachment B-2 was revised to redirect $948,000 from the City of Redwood City's US-101/Woodside Rd. Class I Bikeway project to the following projects: Daly City's Southgate Avenue and School Street Safety Improvements ($450,000) and Millbrae's Park Boulevard and Santa Teresa Way Improvements ($347,000), leaving an unprogrammed balance of $151,000 in the San Mateo County Program.

On December 15, 2021, Attachment B-2 was revised to program $4,613,572 in unprogrammed balances from the Santa Clara County Program to the following projects: Campbell's PDA Enhancements ($550,000), Mountain View's Shoreline Boulevard Pathway Improvements ($1,996,000), and San Jose's Julian and St. James Livable Streets Couplet Conversion ($2,067,572). In the San Mateo County Program, the project title for Millbrae's Park Blvd, San Anselmo Ave, and Santa Teresa Way Improvements was revised to clarify the project scope.

On January 26, 2022, Attachment B-1 was revised to direct $12,000,000 in unprogrammed balances from the Freeway Performance Program to MTC's Bay Bridge Forward Preliminary Engineering project, and to revise SCTA/MTC's $750,000 Sonoma Integration and Coordination Implementation Planning project to reflect that these funds will be used to advance the Blue Ribbon Transit Transformational Action Plan as part of a fund swap with SCTA.

On February 23, 2022, Attachment B-2 was revised to redirect $120,000 in project savings within the Contra Costa County Program, from El Cerrito's Carson Boulevard and Central Avenue Pavement Rehabilitation project to the El Cerrito's El Cerrito del Norte TOD Complete Streets Improvements project.

On March 23, 2022, Attachment B-1 was revised to redirect $251,000 within the Priority Conservation Area grant program from Albany's Albany Hill Access Improvements project and $249,000 in regional program balances to Santa Clara Valley Transportation Authority's (VTA's) Highway 17 Bicycle/Pedestrian Trail and Wildlife Overcrossing Project as part of a fund exchange agreement with the Midpeninsula Regional Open Space District; revise $2,322,000 in Regional Active Operational Management program funds to reflect the amounts awarded to projects, technical advisory services, and project evaluations through the MTC's Connected Vehicles/Automated Vehicles program; and direct $14,495 in unprogrammed balances within the Climate Initiatives program to the Bay Area Rapid Transit (BART) MacArthur BART Station Mobility Hub project as part of a fund source change between fund cycles, with no net change in the total amount programmed to the project.

On April 27, 2022, Attachments B-1 and B-2 were revised to program $2,240,000 within the Freeway Performance Program for MTC's I-880 Optimized Corridor Operations project; reprogram $1,800,000 in Safe & Seamless Mobility Quick-Strike funds from Vallejo's Bay Trail/Vine Trail Gap Closure Segment to Vallejo's Springs Road Pavement Preservation project as part of a local funding exchange; revise MTC's $1.4 million Blue Ribbon Centralized Program Eligibility project within the Safe & Seamless Mobility Quick-Strike program to redirect $900,000 to Clipper for Regional Transit Connection contract expenses in support of the project; rename MTC's Interconnect Bay Area Program project to Regional Communications Infrastructure Upgrade; reprogram $2,206,000 within the Napa County Program to NVTA's Vine Trail Calistoga to St. Helena project from St. Helena's $1,206,000 Main Street Pedestrian Improvements project and American Canyon's $1,000,000 Green Island Road Improvements; and rename the City of Alameda's City-Wide Pavement Rehabilitation project within the Alameda County Program to Grand Street Pavement Resurfacing and Safety Improvements.

On May 25, 2022, Attachment B-2 was revised to redirect funds within the Santa Clara County Program, including $2,449,000 from Santa Clara's San Tomas Aquino Creek Trail Underpass and $790,000 Hetch Hetchy Trail Phase 1 projects, and $919,000 from Palo Alto's Waverly Multi-Use Path, East Meadow Drive and Fabian Way Enhanced Bikeways project, and

reprogram $3,351,000 of these funds to Los Gatos' Creek Trail to Highway 9 Trailhead Connection and $807,000 to Cupertino's new Stevens Creek Boulevard Class IV Bike Lanes project; redirect funds within the Alameda County Program, including $1,662,000 from Hayward's Winton Avenue Complete Streets project and $225,000 from Emeryville's Slurry Seal of Frontage Road, 65th Street, and Powell Street projects, and reprogram $620,000 of these funds to ACTC's Alameda County Safe Routes to School Non-Infrastructure Program, leaving an unprogrammed balance of $1,267,000 within the Alameda County Program.

On June 22, 2022, Attachment B-1 was revised to deprogram $400,000 from Cupertino's VTA Cores and Corridors PDA Plan, leaving an unprogrammed balance of $400,000 within the PDA Planning & Implementation program; program $100,000 in regional program balances to the Capitol Corridor Joint Powers Authority's (CCJPA's) State Route 84 Ardenwood Intermodal Bus Facility project within the Regional Strategic Investments program as part of a fund exchange agreement with CCJPA; and reprogram $1,250,000 within the Safe and Seamless Mobility Quick-Strike program to MTC's Bay Bridge Forward project's preliminary engineering phase, including $500,000 from MTC's Blue Ribbon Centralized Program Eligibility project and $750,000 in remaining program balance from the Blue Ribbon Transit Recovery Action Plan.

On September 28, 2022, Attachments A, A-11, and B-1 were revised to extend project obligation deadlines, and program a $380,000 balance within the Regional Active Operational Management program and $145,000 in prior cycle savings to MTC's Priority Conservation Area (PCA) Grant Implementation.

Further discussion of the project selection criteria and programming policy is contained in the memorandum to the Programming and Allocations Committee dated November 4, 2015, July 13, 2016, October 12, 2016, December 14, 2016, February 8, 2017 (action deferred to March 2017), March 8, 2017, April 12, 2017, May 10, 2017, June 14, 2017, July 12, 2017, September 13, 2017, October 11, 2017, November 8, 2017, December 13, 2017, January 10, 2018, February 14, 2018, March 7, 2018, and April 11, 2018; the Planning Committee dated April 6, 2018; the Programming and Allocations Committee dated May 9, 2018, June 13, 2018, July 11, 2018, September 12, 2018, November 14, 2018, December 12, 2018, January 9, 2019, February 13, 2019, March 6, 2019, June 12, 2019, July 10, 2019, September 4, 2019, October 9, 2019, November 13, 2019, February 12, 2020, May 13, 2020, July 8, 2020, September 9 2020, November 4, 2020, January 13, 2021, February 10, 2021, April 14, 2021, and May 12, 2021; the Planning Committee dated May 14, 2021; the Programming and Allocations Committee dated

June 9, 2021, July 14, 2021; and September 8, 2021; the Planning Committee dated September 10, 2021; and the Programming and Allocations Committee dated November 10, 2021, December 8, 2021, January 12, 2022, February 9, 2022; Operations Committee dated February 11, 2022; and the Programming and Allocations Committee dated March 9, 2022, April 13, 2022, May 11, 2022, June 8, 2022, and September 14, 2022.

Date: November 18, 2015
W.I.: 1512
Referred By: Programming & Allocations

RE: One Bay Area Grant Program Second Round (OBAG 2) Project Selection Criteria and Programming Policy

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4202

WHEREAS, the Metropolitan Transportation Commission (MTC) is the Regional Transportation Planning Agency (RTPA) for the San Francisco Bay Area pursuant to Government Code Section 66500 et seq.; and

WHEREAS, MTC is the designated Metropolitan Planning Organization (MPO) for the nine-county San Francisco Bay Area region and is required to prepare and endorse a Transportation Improvement Program (TIP) which includes federal funds; and

WHEREAS, MTC is the designated recipient for state and federal funding assigned to the RTPA/MPO of the San Francisco Bay Area for the programming of projects; and

WHEREAS, state and federal funds assigned for RTPA/MPO programming discretion are subject to availability and must be used within prescribed funding deadlines regardless of project readiness; and

WHEREAS, MTC, in cooperation with the Association of Bay Area Governments (ABAG), the Bay Area Air Quality Management District (BAAQMD), the Bay Conservation and Development Commission (BCDC), California Department of Transportation (Caltrans), Congestion Management Agencies (CMAs), county Transportation Authorities (TAs), transit operators, counties, cities, and interested stakeholders, has developed criteria, policies and procedures to be used in the selection of projects to be funded with various funding including regional federal funds as set forth in Attachments A, B-1 and B-2 of this Resolution, incorporated herein as though set forth at length; and

WHEREAS, using the policies set forth in Attachment A of this Resolution, MTC, in cooperation with the Bay Area Partnership and interested stakeholders, will develop a program of projects to be funded with these funds for inclusion in the federal TIP, as set forth in Attachments B-1 and B-2 of this Resolution, incorporated herein as though set forth at length; and

WHEREAS the federal TIP and subsequent TIP amendments and updates are subject to public review and comment; now therefore be it

RESOLVED that MTC approves the "Project Selection Criteria and Programming Policy" for projects to be funded in the OBAG 2 Program as set forth in Attachments A, B-1 and B-2 of this Resolution; and be it further

RESOLVED that the regional discretionary funding shall be pooled and distributed on a regional basis for implementation of project selection criteria, policies, procedures and programming, consistent with the Regional Transportation Plan (RTP); and be it further

RESOLVED that the projects will be included in the federal TIP subject to final federal approval and requirements; and be it further

RESOLVED that the Executive Director or designee may make technical adjustments and other non-substantial revisions, including updates to fund sources and distributions to reflect final funding criteria and availability; and be it further

RESOLVED that the Executive Director or designee is authorized to revise Attachments B-1 and B-2 as necessary to reflect the programming of projects as the projects are selected, revised and included in the federal TIP; and be it further

RESOLVED that the Executive Director or designee shall make available a copy of this resolution, and attachements as may be required and appropriate.

METROPOLITAN TRANSPORTATION COMMISSION

Dave Cortese, Chair

The above resolution was entered into
by the Metropolitan Transportation
Commission at the regular meeting
of the Commission held in Oakland,
California, on November 18, 2015

Date: November 18, 2015
W.I.: 1512
Referred by: P&A
Revised: 07/27/16-C 10/26/16-C
12/20/17-C 03/27/19-C
07/24/19-C 02/26/20-C
01/27/21-C 07/28/21-C
09/28/22

Attachment A
Resolution No. 4202

OBAG 2
One Bay Area Grant Program
Project Selection Criteria and Programming Policy

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OBAG 2 – One Bay Area Grant Program
Project Selection Criteria and Programming Policy

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The One Bay Area Grant Program (OBAG 2) is the second round of the federal funding program designed to support the implementation of *Plan Bay Area,* the region's first Sustainable Communities Strategy (SCS). OBAG 2 covers the five-year period from FY 2017-18 to FY 2021-22. The proposed revenue estimates, funding approach, programming policies, project guidance, and timeline for OBAG 2 are outlined in this attachment.

BACKGROUND

The inaugural One Bay Area Grant Program (OBAG 1) was approved by the Commission in May 2012 (MTC Resolution 4035). The OBAG 1 program incorporated the following program features:

- Targeting project investments to the region's Priority Development Areas (PDAs);
- Rewarding jurisdictions that accept housing allocations through the Regional Housing Need Allocation (RHNA) process and produce housing;
- Supporting open space preservation in Priority Conservation Areas (PCAs); and
- Providing a larger and more flexible funding pot to deliver transportation projects in categories such as Transportation for Livable Communities (TLC), bicycle and pedestrian improvements, local streets and roads preservation, and planning activities, while also providing dedicated funding opportunities for Safe Routes to School activities and PCAs.

The early outcomes of the OBAG 1 program are documented in the One Bay Area Grant Report Card located at: (http://files.mtc.ca.gov/pdf/OBAG_Report_Card.pdf). The key findings of the report highlight a variety of improvements as compared to previous federal highway funding programs, including: increased grant and project size, complexity, and multi-modality; significant investments in active transportation and TLC projects; region wide achievement of PDA investment targets; and compliance with local performance and accountability requirements. Considering the positive results achieved in OBAG 1, and in order to further extend the timeframe for OBAG to meet its policy goals, OBAG 2 maintains largely the same framework and policies.

REVENUE ESTIMATES AND PROGRAM ARCHITECTURE

OBAG 2 funding is based on anticipated future federal transportation program apportionments from the regional Surface Transportation Block Grant Program (STP) and Congestion Mitigation and Air Quality Improvement (CMAQ) Programs. Originally, the programming capacity estimated for OBAG 2 amounted to $790 million (down from $827 million programmed with OBAG 1). The estimated decrease in revenues between program cycles reflects annual apportionment amounts in the federal surface transportation act (Moving Ahead for Progress in the 21st Century Act, or MAP-21) authorized after approval of OBAG 1 not keeping pace with estimated growth rates, as well as changes in state and federal programs that impacted estimated regional funding levels (such as the elimination of the Transportation Enhancements (TE) program). Subsequent to the Commission's original adoption of OBAG 2, Congress approved the Fixing America's Surface Transportation (FAST) Act, providing an additional estimated $72 million during the OBAG 2 period. The revised total STP/CMAQ funding for OBAG 2 is $862 million.

The OBAG 2 program continues to integrate the region's federal transportation program with California's climate statutes and the Sustainable Communities Strategy (SCS), and contributes to the implementation of the goals and objectives of the Regional Transportation Plan. Funding distribution formulas to the counties will continue to encourage land-use, housing and complete streets policies that support the production of housing with supportive transportation investments. This is accomplished through the following principles:

1. **Realistic Revenue Assumptions:**

   OBAG 2 funding is based on anticipated future federal transportation program apportionments. In past years, the Surface Transportation Block Grant Program/Congestion Mitigation and Air Quality Improvement programs (STP/CMAQ) have not grown, and changes in the federal and state programs (such as elimination of the Transportation Enhancement (TE) program) resulted in decreases that were not anticipated when OBAG 1 was developed. For the initial OBAG 2 estimates, a 2% annual escalation rate above current federal revenues was assumed, consistent with the mark-up of the Developing a Reliable and Innovative Vision for the Economy (DRIVE) Act by the Senate Environment and Public Works Committee. Even with the 2% escalation, revenues for OBAG 2 were expected to be 4% less than OBAG 1 revenues. Following the Commission's original adoption of OBAG 2, an additional $72 million in FAST Act revenue was made available, for a total of $862 million for OBAG 2 - an increase of 4% over the OBAG 1 funding level.

   If there are significant changes in federal apportionments over the OBAG 2 time period, MTC will return to the Commission to recommend adjustments to the program. These adjustments could include increasing or decreasing funding amounts for one or more programs, postponement of projects, expansion of existing programs, development of new programs, or adjustments to subsequent programming cycles.

   Upon enactment and extension of the federal surface transportation authorizations expected during the OBAG funding period, MTC will need to closely monitor any new federal programs, their eligibility rules, and how funding is distributed to the states and regions. It is anticipated that any changes to the current federal programs would likely overlap to a large extent with projects that are currently eligible for funding under 23 U.S.C., although the actual fund sources may no longer mirror the current STP and CMAQ programs. Therefore, any reference to a specific fund source in the OBAG 2 programming serves as a proxy for replacement fund sources for which MTC has discretionary project selection and programming authority.

   OBAG 2 programming capacity is based on apportionment rather than obligation authority. Because obligation authority (the amount actually received) is less than the apportionment level, there is typically a carryover balance from year to year of unfunded commitments. MTC's current negative obligation authority imbalance is $51 million, and has held steady the past few years as a result of the region's excellent delivery record. Successful project delivery has allowed MTC to capture additional, unused obligation authority (OA) from other states, enabling the region to deliver additional projects each year. Because this negative balance has held steady, there does not appear to be a need to true-up the

difference at this time. MTC staff will continue to monitor this OA shortfall throughout the OBAG 2 period and make adjustments as necessary in the next round of programming.

2. Support Existing Programs:

Originally, the OBAG program was expected to face declining revenues from $827 million in OBAG 1 to $790 million in OBAG 2. Therefore, no new programs were introduced with OBAG 2 and the anticipated funding reduction was spread among the various transportation needs supported in OBAG 1. With the $72 million in additional revenues from the FAST Act, funding for OBAG 2 increased to $862 million.

The OBAG 2 program categories and commitments for the regional and county programs are outlined in Appendix A-1.

3. Support Plan Bay Area's Sustainable Communities Strategy by Linking OBAG Funding to Housing:

County Program Distribution Formula

OBAG 1's county distribution formula leveraged transportation dollars to reward jurisdictions that produce housing and accept housing allocations through the Regional Housing Need Allocation (RHNA) process. The formula also considered the share of affordable housing within housing production and RHNA allocations.

In OBAG 2, the county distribution formula is updated to use the latest housing data from the Association of Bay Area Government (ABAG). The formula is also based on housing over a longer time frame, considering housing production between 1999 and 2006 (weighted 30%) and between 2007 and 2014 (weighted 70%) in order to mitigate the effect of the recent recession and major swings in housing permit approvals.

The OBAG 2 formula places additional emphasis on housing production and the share of affordable housing within both production and RHNA. The formula also expands the definition of affordable housing to include housing for moderate-income households in addition to low- and very low-income households. Furthermore, housing production is capped at the total RHNA allocation.

The distribution formula factors for OBAG 2 are detailed in the table below.

OBAG 2 County Distribution Formula Factors

	Population	Housing RHNA	Housing Production	Housing Affordability *
OBAG 2	**50%**	**20%**	**30%**	**60%**

*OBAG 2 housing affordability factor includes housing at the very low, low and moderate income levels which are weighted within both housing production and RHNA allocation.

The distribution formula is further adjusted to ensure that CMA base planning funds are no more than 50% of the total distribution for that county. The resulting proposed county program formula distributions are presented in Appendix A-2.

Priority Development Areas (PDAs)

OBAG 2 continues to support the SCS for the Bay Area by promoting transportation investments in Priority Development Areas (PDAs).

- PDA Investment targets remain at OBAG 1 levels: 50% for the four North Bay counties and 70% for the remaining counties.
- PDA Investment and Growth Strategies should play a strong role in guiding the County CMA project selection and be aligned with the Plan Bay Area update cycle.

Priority Conservation Areas (PCAs)

OBAG 2 maintains the two separate Priority Conservation Area (PCA) programs as introduced in OBAG 1, with one program dedicating funding to the four North Bay counties and one competitive program for the remaining counties.

4. Continue Flexibility and Local Transportation Investment Decision Making:

OBAG 2 continues to provide the same base share of the funding pot (40%) to the county CMAs for local decision-making. The program allows CMAs the flexibility to invest in various transportation categories, such as Transportation for Livable Communities (TLC), bicycle and pedestrian improvements, local streets and roads preservation, and planning and outreach activities.

In addition to the base county program, two previously regional programs, Safe Routes to School and the Federal-Aid Secondary (rural roads), have been consolidated into the county program with guaranteed minimum funding amounts to ensure the programs continue to be funded at specified levels.

5. Cultivate Linkages with Local Land-Use Planning:

As a condition to access funds, local jurisdictions need to continue to align their general plans' housing and complete streets policies as a part of OBAG 2 and as separately required by state law.

Complete Streets Requirement

Jurisdictions must adopt a complete streets resolution by the date the CMAs submit their OBAG 2 project recommendations to MTC, incorporating MTC's required complete streets elements as outlined in MTC's Complete Streets Guidance.

Alternatively, to recognize local jurisdictions' efforts to update their general plan circulation element to incorporate the provisions of the 2008 Complete Streets Act in

response to the provisions stated in OBAG 1, a jurisdiction may adopt a significant revision to the circulation element of the general plan that complies with the Act after January 1, 2010 and before the date the CMAs submit their OBAG 2 project recommendations to MTC.

The approach above focuses on the adoption of local complete streets resolutions, while acknowledging the jurisdictions that took efforts to update their circulation element in anticipation of future OBAG requirements.

Housing Element Requirement

Jurisdictions (cities and counties) must have a general plan housing element adopted and certified by the California Department of Housing and Community Development (HCD) for 2014-2022 RHNA by May 31, 2015. Jurisdictions that have failed to meet this deadline must have their housing elements certified by HCD by June 30, 2016 in order to be eligible to receive OBAG 2 funding.

Furthermore, under state statute, jurisdictions are required to submit Housing Element Annual Reports by April 1 every year. All cities and counties receiving OBAG 2 funding must comply with this requirement during the entire OBAG 2 funding period or risk deprogramming of OBAG 2 funding.

The complete streets and housing requirements are not required for jurisdictions with no general plan or land use authority such as Caltrans, CMAs or transit agencies under a JPA or district (not under the governance of a local jurisdiction). However, in such instances the jurisdiction in which the project is physically located must meet these requirements, except for transit/rail agency property such as, track, rolling stock or a maintenance facility.

Surplus Land Requirement

Cities and counties receiving funds through the County Program must adopt a surplus land resolution by the date the CMAs submit their OBAG 2 project recommendations to MTC. The resolution must verify that any disposition of surplus land undertaken by the jurisdiction complies with the State Surplus Land Act, as amended by AB 2135, 2014. MTC will issue guidance to assist cities and counties in drafting a resolution to meet this requirement. This guidance will be posted on the OBAG 2 website: http://mtc.ca.gov/our-work/fund-invest/federal-funding/obag-2.

This requirement shall not apply to charter cities unless and until a final court decision is rendered that charter cities are subject to the provisions of the Act. In addition, the resolution is not required for public agencies with no general plan or land use authority.

6. Continue Transparency and Outreach to the Public Throughout the Process:

CMAs will continue to report on their outreach process as part of their solicitation and selection of projects for OBAG. Each CMA will develop a memorandum addressing outreach efforts, agency coordination, distribution methodology and Title VI compliance. CMA reporting requirements are provided in Appendix A-10, the Checklist for CMA and Local Jurisdiction Compliance with MTC Resolution 4202.

PROGRAM CATEGORIES AND PROJECT LIST

Appendix A-1 outlines the OBAG 2 program categories and commitments.

Attachment B of Resolution 4202 contains the list of projects to be programmed under the OBAG 2 program. Attachments B-1 and B-2 list the projects receiving OBAG 2 funding through the regional programs and county programs respectively. The project lists are subject to project selection actions (conducted by MTC for most of the regional programs and by the CMAs for the county programs and other funds distributed to them). MTC staff will update Attachments B-1 and B-2 as projects are selected or revised by the Commission and CMAs and are included in the federal Transportation Improvement Program (TIP).

GENERAL PROGRAMMING POLICIES

The following programming policies apply to all projects funded in OBAG 2:

1. **Public Involvement.** MTC is committed to a public involvement process that is proactive and provides comprehensive information, timely public notice, public access to key decisions, and opportunities for continuing involvement. MTC provides many methods to fulfill this commitment, as outlined in the *MTC Public Participation Plan*, Resolution No. 4174. The Commission's adoption of the OBAG 2 program, including policy and procedures, meets the provisions of the *MTC Public Participation Plan*. MTC's advisory committees and the Bay Area Partnership have been consulted in the development of funding commitments and policies for this program; and opportunities to comment have been provided to other stakeholders and members of the public.

   Furthermore, investments made in the OBAG 2 program must be consistent with federal Title VI requirements. Title VI prohibits discrimination on the basis of race, color, income, and national origin in programs and activities receiving federal financial assistance. Public outreach to and involvement of individuals in low income and minority communities covered under Title VI of the Civil Rights Act and the Executive Order pertaining to Environmental Justice is critical to both local and regional decisions. Additionally, when CMAs select projects for funding at the county level, they must consider equitable solicitation and selection of project candidates in accordance with federal Title VI requirements (as set forth in Appendix A-7).

2. **Commission Approval of Programs and Projects and the Transportation Improvement Program (TIP).** Projects approved as part of the OBAG 2 program must be amended into the TIP. The federally-required TIP is a comprehensive listing of all San Francisco Bay Area surface transportation projects that receive federal funds, and/or are subject to a federally required action, such as federal environmental clearance, and/or are regionally significant for air quality conformity or modeling purposes. It is the project sponsor's responsibility to ensure their project is properly programmed in the TIP in a timely manner. Where CMAs are responsible for project selection, the Commission will revise the TIP to include the resulting projects and Attachment B to this Resolution may be updated by MTC staff to reflect these revisions. Where responsibility for project selection is assigned to MTC, TIP amendments and a revision to Attachment B to add or delete a project will be reviewed and approved by the Commission.

Changes to existing projects in Attachment B may be made by MTC staff following approval of a related TIP revision.

3. **Minimum Grant Size.** Funding grants per project must be a minimum of $500,000 for counties with a population over 1 million (Alameda, Contra Costa, and Santa Clara counties) and $250,000 for counties with a population under one million (Marin, Napa, San Francisco, San Mateo, Solano, and Sonoma counties). The objective of a grant minimum requirement is to maximize the efficient use of federal funds and minimize the number of federal-aid projects which place administrative burdens on project sponsors, CMAs, MTC, Caltrans, and Federal Highway Administration (FHWA) staff.

   To provide flexibility, an alternative averaging approach may be used. For this approach, a CMA may program grant amounts no less than $100,000 for any project, provided that the overall average of all grant amounts within their County CMA Program meets the county minimum grant amount threshold. This lower threshold of $100,000 also applies to Safe Routes to School projects, which are typically of smaller scale.

   Furthermore, all OBAG 2 programming amounts must be rounded to thousands.

4. **Air Quality Conformity.** In the Bay Area, it is the responsibility of MTC to make a regional air quality conformity determination for the TIP in accordance with federal Clean Air Act requirements and Environmental Protection Agency (EPA) conformity regulations. MTC evaluates the impact of the TIP on regional air quality during the update of the TIP. Non-exempt projects that are not incorporated in the current finding for the TIP will not be considered for funding in the OBAG 2 program until the development of a subsequent air quality finding for the TIP. Additionally, the U.S. Environmental Protection Agency has designated the Bay Area as a non-attainment area for fine particulate matter ($PM_{2.5}$). Therefore, based on consultation with the MTC Air Quality Conformity Task Force, projects deemed Projects of Air Quality Concern (POAQC) must complete a hot-spot analysis as required by the Transportation Conformity Rule. Generally, POAQC are those projects that result in significant increases in, or concentrations of, emissions from diesel vehicles.

5. **Environmental Clearance.** Project sponsors are responsible for compliance with the requirements of the California Environmental Quality Act (Public Resources Code § 21000 et seq.), the State Environmental Impact Report Guidelines (14 California Code of Regulations Section § 15000 et seq.), and the National Environmental Protection Act (42 U.S.C. § 4321 et seq.) standards and procedures for all projects with federal funds.

6. **Application and Resolution of Local Support.** Once a project has been selected for funding, project sponsors must submit a completed project application for each project through MTC's Funding Management System (FMS). The project application consists of two parts: 1) a project submittal and/or TIP revision request to MTC staff through FMS, and 2) a Resolution of Local Support approved by the project sponsor's governing board or council and submitted in FMS. A template for the Resolution of Local Support can be downloaded from the MTC website using the following link: http://mtc.ca.gov/our-work/fund-invest/federal-funding/obag-2.

7. **Project Screening and Compliance with Regional and Federal Requirements.** MTC staff will perform a review of projects proposed for OBAG 2 to ensure 1) eligibility; 2) consistency with

the region's long-range plan; and 3) project readiness. In addition, project sponsors must adhere to directives such as the Complete Streets Requirements, Housing Element Requirements, and the Regional Project Funding Delivery Policy (MTC Resolution No. 3606), as outlined below, and provide the required matching funds. Project sponsors should note that fund source programs, eligibility criteria, and regulations may change as a result of the passage of new surface transportation authorization legislation. In this situation, MTC staff will work to realign new fund sources with the funding commitments approved by the Commission.

- Federal Project Eligibility: STP is the most flexible source of federal funding, with a wide range of projects that may be considered eligible. Eligible projects include roadway and bridge improvements (construction, reconstruction, rehabilitation, resurfacing, restoration), public transit capital improvements, pedestrian and bicycle facilities, transportation system management, transportation demand management, transportation control measures, mitigation related to an STP project, surface transportation planning activities, and safety. More detailed eligibility requirements can be found in 23 U.S.C § 133 and at: http://www.fhwa.dot.gov/map21/ factsheets/stp.cfm.

  CMAQ is a more targeted funding source. In general, CMAQ funds may be used for new or expanded transportation projects, programs, and operations that help reduce emissions. Eligible project categories that meet this basic criteria include: Transportation activities in an approved State Implementation Plan (SIP), Transportation Control Measures (TCMs), alternative fuels, traffic flow improvements, transit expansion projects, new bicycle and pedestrian facilities and programs, travel demand management, outreach and rideshare activities, telecommuting programs, intermodal freight, planning and project development activities, and experimental pilot projects. For more detailed information, refer to FHWA's revised guidance provided at: http://www.fhwa.dot.gov/environment/air_quality/ cmaq/policy_and_guidance/.

  MTC reserves the right to assign specific fund sources to projects based on availability and eligibility requirements. In the event that a new surface transportation authorization is enacted during implementation of OBAG 2 that materially alters these programs, MTC staff will work with the CMAs and project sponsors to match projects with appropriate federal fund programs.

- RTP Consistency: Projects funded through OBAG 2 must be consistent with the adopted Regional Transportation Plan (currently *Plan Bay Area*). Project sponsors must identify each project's relationship with meeting the goals and objectives of the RTP, including the specific RTP ID number or reference. RTP consistency will be verified by MTC staff for all OBAG 2 projects. Projects in the County program will also be reviewed by CMA staff prior to submitting selected projects to MTC.

- Complete Streets Policy: Federal, state and regional policies and directives emphasize the accommodation of bicyclists, pedestrians, and persons with disabilities when designing transportation facilities. MTC's Complete Streets Policy (MTC Resolution No. 3765) created a checklist that is intended for use on projects to ensure the accommodation of non-motorized travelers is considered at the earliest conception or design phase. The county CMAs ensure that project sponsors complete the checklist before projects are

considered by the county for OBAG 2 funding and submitted to MTC. The CMAs are required to make completed checklists available to their Bicycle and Pedestrian Advisory Committee (BPAC) for review prior to CMAs' project selection actions.

Related state policies include: Caltrans Complete Streets Policy Deputy Directive 64 R1, which stipulates pedestrians, bicyclists and persons with disabilities must be considered in all programming, planning, maintenance, construction, operations, and project development activities and products; and the California Complete Streets Act of 2008, which requires local agency general plan circulation elements to address all travel modes.

- Project Delivery and Monitoring: OBAG 2 funding is available in the following five federal fiscal years: 2017-18, 2018-19, 2019-20, 2020-21, and 2021-22. Funds may be programmed in any of these years, conditioned upon the availability of federal apportionment and obligation authority (OA), and subject to TIP financial constraint requirements. In addition, in order to provide uninterrupted funding to ongoing efforts and to provide more time to prepare for the effective delivery of capital projects, priority of funding for the first year of programming apportionment (FY 2017-18) will be provided to ongoing programs, such as regional and CMA planning, non-infrastructure projects, and the preliminary engineering phase of capital projects.

  Specific programming timelines will be determined through the development of the Annual Obligation Plan, which is developed by MTC staff in collaboration with the Bay Area Partnership technical working groups and project sponsors. Once programmed in the TIP, the funds must be obligated by FHWA or transferred to the Federal Transit Administration (FTA) within the federal fiscal year the funds are programmed in the TIP. Additionally, all OBAG 2 funds must be obligated no later than **January 31, 2024** ~~**January 31, 2023**~~.

  Obligation deadlines, project substitutions and redirection of project savings will continue to be governed by the MTC Regional Project Funding Delivery Policy (MTC Resolution No. 3606 and any subsequent revisions). All funds are subject to obligation, award, invoicing, reimbursement and project close-out requirements. The failure to meet these deadlines may result in the de-programming and redirection of funds to other projects.

  To further facilitate project delivery and ensure all federal funds in the region are meeting federal and state regulations and deadlines, every recipient of OBAG 2 funding is required to identify and maintain a staff position that serves as the single point of contact (SPOC) for the implementation of all FHWA-administered funds within that agency. The person in this position must have sufficient knowledge and expertise in the federal-aid delivery process to coordinate issues and questions that may arise from project inception to project close-out. The agency is required to identify the contact information for this position at the time of programming of funds in the TIP, and to notify MTC immediately when the position contact has changed. This person will be expected to work closely with FHWA, Caltrans, MTC and the respective CMA on all issues related to federal funding for all FHWA-funded projects implemented by the recipient.

Project sponsors that continue to miss delivery milestones and funding deadlines for any federal funds are required to prepare and update a delivery status report on all projects with FHWA-administered funds they manage, and participate, if requested, in a consultation meeting with the county CMA, MTC and Caltrans prior to MTC approving future programming or including any funding revisions for the agency in the TIP. The purpose of the status report and consultation is to ensure the local public agency has the resources and technical capacity to deliver FHWA federal-aid projects, is fully aware of the required delivery deadlines, and has developed a delivery timeline that takes into consideration the requirements and lead-time of the federal-aid process within available resources.

By applying for and accepting OBAG 2 funding, the project sponsor is acknowledging that it has and will maintain the expertise and staff resources necessary to deliver the federal-aid project within the project-funding timeframe.

- Funding Exchange: Sometimes federal funds may not be the best fit for projects being implemented to meet plan and program goals and objectives. In such cases, federal OBAG funding may be exchanged with non-federal funds. MTC staff will work with the CMAs when such opportunities arise. Such exchanges must be consistent with MTC's fund exchange policy (MTC Resolution No. 3331) and the locally-funded project must be included in the federal TIP.
- Local Match: Projects funded with STP or CMAQ funding require a non-federal local match. Although local match requirements are subject to change, the current local match requirement for STP and CMAQ funded projects in California is 11.47% of the total project cost, with FHWA providing up to 88.53% of the total project cost through reimbursements. For capital projects, sponsors that fully fund the project development or Preliminary Engineering (PE) phase with non-federal funds may use toll credits in lieu of a match for the construction phase. For these projects, sponsors must still meet all federal requirements for the PE phase.
- Fixed Program and Specific Project Selection: Projects are chosen for the program based on eligibility, project merit, and deliverability within established deadlines. The OBAG 2 program is project-specific and the funds programmed to projects are for those projects alone.

  The OBAG 2 program funding is fixed at the programmed amount; therefore, any project cost increases may not be covered by additional OBAG 2 funds. Project sponsors are responsible for securing the necessary match, and for cost increases or additional funding needed to complete the project, including contingencies.

8. **Regional STP/CMAQ Exchanges.** It is often difficult for smaller regions to fully utilize their federal funds and deliver projects through the federal-aid process. This can place these more rural regions in conflict with state and federal timely use funds provisions, such as Sections 182.6 and 182.7 of the State Streets and Highways Code which require federal apportionment to be secured (obligated) within three years of federal eligibility, or when Congress enacts

rescissions of unobligated funds. The SF Bay Area region is often in the opposite situation – more projects are ready for delivery than funds available each year.

Regions also find themselves in situations where a project or activity is ineligible for a certain federal fund source such as CMAQ, and may require STP, while another region can easily use either fund source.

To avoid the lapsing of funds and address these funding issues, regions may enter into exchange agreements, where older unused STP/CMAQ funds subject to lapse or rescission from one region are "exchanged" with future funds from a region that can use the funds by the deadline. Or a simple fund source exchange is needed. Such exchanges benefit both regions by avoiding the loss of funds in one region, while another region can advance projects that may be stalled due to a lack of eligible funding.

To facilitate such exchanges, the MTC Executive Director or designee is hereby authorized to sign letters of understanding with Caltrans and other regions for the exchange of STP/CMAQ funds with the following conditions and limitations.

- The exchange does not negatively impact the delivery of regional STP/CMAQ projects.
- The amount exchanged does not exceed $2 million per region per year, with the exception of federal fiscal year 2020-21 when the amount exchanged may not exceed $100 million in total.
- The exchange is a dollar for dollar exchange.
- The exchange is allowed under Caltrans' obligation authority management policy.
- The Letter of Understanding can be executed in time for the MTC to secure the funds prior to any lapse or rescission.
- If any timely use of funds deadlines or Caltrans processes are not met in time and therefore result in the loss of apportionment balance, MTC's apportionment shall not be negatively affected and the Letter of Understanding is null and void.

Exchanges beyond these conditions and limitations may be approved by a standing Committee of the Commission.

REGIONAL PROGRAMS

The programs below comprise the OBAG 2 Regional Programs, managed by MTC. Funding amounts for each program are included in Appendix A-1. Individual projects will be added to Attachment B-1 and B-2 as they are selected and included in the federal TIP.

1. Regional Planning Activities

This program provides funding to support regional planning and outreach activities.

Appendix A-3 details the funding amounts and distribution for planning and outreach activities.

2. Pavement Management Program

This continues the region's acclaimed Pavement Management Program (PMP) and related activities including the Pavement Technical Assistance Program (PTAP), training, and regional and statewide local streets and roads needs assessment. MTC provides grants to local jurisdictions to perform

regular inspections of their local streets and roads networks and to update their pavement management systems which is a requirement to receive certain funding. MTC also assists local jurisdictions in conducting associated data collection and analysis efforts including local roads needs assessments and inventory surveys and asset management analysis that feed into regional planning efforts. MTC provides, training, research and development of pavement and non-pavement preservation management techniques, and participates in the statewide local streets and roads needs assessment effort.

To support the collection and analysis of local roads asset conditions for regional planning efforts and statewide funding advocacy, and to be eligible for OBAG 2 funding for local streets and roads, a jurisdiction must:

- Have a certified Pavement Management Program (StreetSaver® or equivalent) updated at least once every three years (with a one-year extension allowed); and
- Fully participate in the statewide local streets and road needs assessment survey (including any assigned funding contribution); and
- Provide updated information to the Highway Performance Monitoring System (HPMS) at least once every 3 years (with a one-year grace period allowed).

3. Regional Priority Development Area (PDA) Planning & Implementation
Funding in this program implements the following:

Regional PDA Planning and Implementation: The PDA Planning Program places an emphasis on intensifying land uses at and near transit stations and along transit corridors in PDAs. The key goals of the program are to: increase supply of affordable and market rate housing, jobs and services within the PDA planning area; boost transit ridership and thereby reduce vehicle miles traveled by PDA residents, employees and visitors; increase walking and bicycling by improving multi-modal access and effectively managing parking; and locate key services and retail within the PDA planning area. Funding is available for regional planning and implementation efforts and grants to jurisdictions to provide PDA planning support, and typically fund specific plans and programmatic Environmental Impact Reports. PDA plans funded through the program focus on a range of transit-supportive elements including market demand analysis, affordable housing strategies, multi-modal connectivity including pedestrian-friendly design standards, parking demand analysis, infrastructure development, implementation planning and financing strategies and implementation of the best practices identified in the Air District's Planning Healthy Places guidelines.

The PDA Planning Program will give priority to cities with high risk of displacement in order to support the development of local policies and programs to meaningfully address identified housing issues.

Community-Based Transportation Planning: A portion of this program will be dedicated to the Community-Based Transportation Planning (CBTP) grant program. These locally-led plans address the mobility needs of low-income households in the region's 35 Communities of Concern. Grant funds will be used to update CBTPs that are in many cases more than 10 years old.

Naturally Occurring Affordable Housing (NOAH): Consistent with the OBAG 2 framework and PDA Planning Program, a NOAH revolving loan fund will be established as a complement to the existing

TOAH loan products for new construction. NOAH loans would be used to buy apartment buildings to create long-term affordability where displacement risk is high and to secure long-term affordability in currently subsidized units that are set to expire. NOAH investments will be made in PDAs or Transit Priority Areas.

4. Climate Initiatives Program

The purpose of the OBAG 2 Climate Initiatives Program is to support the implementation of strategies identified in Plan Bay Area to achieve the required CO_2 emissions reductions per SB375 and federal criteria pollutant reductions. Investments focus on projects and programs with effective greenhouse gas emission reduction results.

Spare the Air Youth: A portion of the Climate Initiatives program would be directed to the implementation of Spare the Air Youth program.

5. Regional Active Operational Management

This program is administered at the regional level by MTC to actively manage congestion through cost-effective operational strategies that improve mobility and system efficiency across freeways, arterials and transit modes. Funding continues to be directed to evolving MTC operational programs such as next generation 511, Freeway Service Patrol (FSP), incident management program, managed lanes and regional rideshare program. Funding will also be directed to new initiatives such as the Columbus Day Initiative that deploys advanced technologies and Transportation Management Systems that ensures the existing and new technology infrastructure is operational and well-maintained.

Columbus Day Initiative

The Columbus Day Initiative (CDI) builds on the proven success of its predecessor program (the Freeway Performance Initiative), which implemented traditional fixed time-of-day freeway ramp metering and arterial signal timing projects that achieved significant delay reduction and safety on Bay Area freeways and arterials at a fraction of the cost of traditional highway widening projects. The CDI aims to deliver cost-effective, technology-driven operational improvement projects such as, adaptive ramp metering, hard shoulder running lanes, queue warning signs, connected vehicle technologies, shared mobility technologies, and regional arterial operations strategies. Projects would target priority freeway and arterial corridors with significant congestion. Funding for performance monitoring activities and corridor studies is included to monitor the state of the system and to identify and assess the feasibility of operational strategies to be deployed.

Transportation Management Systems

This program includes the operations and management of highway operations field equipment; critical freeway and incident management functions; and Transportation Management Center (TMC) staff resources needed to actively operate and maintain the highway system.

Bay Bridge Forward Project

As part of the overall OBAG 2 framework, this project encompasses the implementation of several near-term, cost-effective operational improvements that offer travel time savings, reliability and lower costs for carpooling and bus/ferry transit use to increase person throughput and reduce congestion, incidents, and emissions in the San Francisco-Oakland Bay Bridge corridor.

6. Transit Priorities Program

The objective of the Transit Priorities Program is to assist transit operators to fund major fleet replacements, including the BART Car Replacement Phase 1 project, fixed guideway rehabilitation and other high-scoring capital needs, including replacement of Clipper equipment and development of Clipper 2.0, that are consistent with MTC's Transit Capital Priorities policy for programming federal transit funds (MTC Resolution 4140 or successor resolution).

The program also implements elements of the Transit Sustainability Project by making transit-supportive investments in major transit corridors that can be carried out within two years through the Transit Performance Initiative (TPI). The focus of TPI is on making cost-effective operational improvements on significant trunk lines which carry the largest number of passengers in the Bay Area including transit signal prioritization, passenger circulation improvements at major hubs, boarding/stop improvements and other improvements to improve the passenger experience.

7. Priority Conservation Area (PCA) Program

The Priority Conservation Area (PCA) Program provides funding for the development of plans and projects to assist in the preservation and enhancement of rural lands. Specifically, projects must support Plan Bay Area by preserving and enhancing the natural, economic and social value of rural lands and open space amidst a growing population across the Bay Area, for residents and businesses. The PCA program includes one approach for the North Bay counties (Marin, Napa, Solano, and Sonoma) and a second approach for the remaining five counties.

In the North Bay, each of the four CMAs will take the lead to develop a county-wide program, building on PCA planning conducted to date to select projects for funding.

For the remaining counties, MTC will partner with the Coastal Conservancy, a California State agency, to program the PCA funds. MTC will provide federal funding which will be combined with the Coastal Conservancy's own program funds in order to support a broader range of projects (i.e. land acquisition and easement projects) than can be accommodated with federal transportation dollars alone. The Coastal Conservancy, MTC, and ABAG staff will cooperatively manage the call for proposals.

The minimum non-federal match required for PCA-program funding is 2:1.

As a part of the update to *Plan Bay Area*, MTC is exploring implementing a Regional Advance Mitigation Planning (RAMP) Program. RAMP would mitigate certain environmental impacts from multiple planned transportation projects, rather than mitigating on a less-efficient per-project level. Partnering arrangements can be established to leverage multiple fund sources in order to maximize benefits of the RAMP and PCA programs. As such, PCA funds may be used to deliver net environmental benefits to a RAMP program project.

In instances where federal funds may not be used for this purpose, sponsors may exchange OBAG 2 funds with eligible non-federal funds. Such exchanges must be consistent with MTC's fund exchange policy (MTC Resolution No. 3331).

Appendix A-9 outlines the framework for this program including goals, project screening, eligibility, eligible sponsors, and project selection.

8. Housing Production Incentive

As part of the OBAG 2 framework, MTC developed a challenge grant program for the production and preservation of affordable housing. The purpose of the program is to reward local jurisdictions that produce the most housing units at the very low, low, and moderate income levels.

The funds provided for the HIP program through OBAG 2 would be STP/CMAQ, and would need to be used only for federally-eligible transportation purposes. Additional funds may be added outside of OBAG 2 to increase the size of the challenge grant program.

9. ***Safe and Seamless Mobility Quick-Strike***

The Safe and Seamless Mobility Quick-Strike program is a regional, competitive grant program to fund projects that can be implemented quickly to benefit communities. The program emphasizes bicycle/pedestrian safety and mobility, transit and transit access improvements, connected mobility, advancing equitable mobility, or other near-term strategies to advance transit recovery and connected mobility.

Appendix A-11 outlines the framework for this program including program focus areas, project eligibility, evaluation criteria, and the project nomination and selection process.

10. ***Regional Strategic Initiatives***

The Regional Strategic Initiatives program reflects regional funding commitments to projects not captured in the original OBAG 2 framework as well as projects funded through unspent STP/CMAQ balances from prior cycles and various funding exchanges.

COUNTY PROGRAMMING POLICIES

The policies below apply to the programs managed by the county Congestion Management Agencies (CMAs) or substitute agency:

- Program Eligibility: The CMA, or substitute agency, may program funds from its OBAG 2 county fund distribution to projects that meet the eligibility requirements for any of the following transportation improvement types:
    - Planning and Outreach Activities
    - Local Streets and Roads Preservation
    - Bicycle and Pedestrian Improvements
    - Transportation for Livable Communities
    - Safe Routes To School
    - Priority Conservation Areas
    - Federal Aid Secondary (FAS) Improvements
- Fund Sources & Formula Distribution: OBAG 2 is funded primarily from two federal fund sources: STP and CMAQ. The CMAs will be provided a breakdown of specific OBAG 2 fund sources, with the understanding that actual fund sources are subject to change. Should there be significant changes to federal fund sources, MTC staff will work with the

CMAs to identify and realign new fund sources with the funding commitments approved by the Commission. Furthermore, due to strict funding availability and eligibility requirements, the CMAs must adhere to the fund source limitations provided. Exceptions may be granted by MTC staff based on actual fund source availability and final federal apportionment levels.

Consistent with OBAG 1, 60% of available OBAG 2 funding is assigned to Regional Programs and 40% assigned to the base County CMA Programs. The Safe Routes to School (SRTS) and Federal Aid Secondary (FAS) programs augment the county base funding, bringing the final proportionate share to 55% regional and 45% county. The Base county funds (SRTS & FAS have their own formula distribution) are distributed to each county based on the OBAG 2 county distribution formula (see page 3). Counties are further guaranteed that the funding amount for planning purposes will not exceed 50% of their total distribution. This results in the county of Napa receiving additional funding. This planning guarantee clause results in a slight deviation in the final OBAG 2 fund distribution for each county. The base County CMA Program fund distribution after the planning guarantee adjustment is shown in Appendix A-2.

- Priority Development Area (PDA) Policies
  - PDA minimum investment: CMAs in larger counties (Alameda, Contra Costa, San Mateo, San Francisco, and Santa Clara) shall direct at least 70% of their OBAG 2 investments to PDAs. For North Bay counties (Marin, Napa, Solano, and Sonoma) this minimum target is 50% to reflect the more rural nature of these counties. CMA planning and outreach costs partially count towards PDA minimum investment targets (70% or 50%, in line with each county's PDA minimum investment target). The guaranteed minimum for Priority Conservation Area (PCA), Safe Routes to School (SRTS), and Federal Aid Secondary (FAS) do not count towards PDA targets. The PDA/non-PDA funding split is shown in Appendix A-2.
  - PDA boundary delineation: Refer to http://gis.mtc.ca.gov/interactive_maps/ which provides a GIS overlay of the PDAs in the Bay Area to exact map boundaries including transportation facilities. This map is updated as ABAG approves new PDA designations.
  - Defining proximate access to PDAs: The CMAs may determine that a project located outside of a PDA provides proximate access to the PDA, and thus counts towards the county's minimum PDA investment target. The CMA is required to map these projects along with the associated PDA(s) and provide a policy justification for designating the project as supporting a PDA through proximate access. This information should assist decision makers, stakeholders, and the public in evaluating the impact of the investment on a nearby PDA, to determine whether or not the investment should be credited towards the county's PDA minimum investment target. This information must be presented for public review when the CMA board acts on OBAG programming decisions.

- PDA Investment & Growth Strategy: Updates to each county's PDA Investment & Growth Strategy are required every four years and must be adopted by the CMA Board. The updates should be coordinated with the countywide plan and Regional Transportation Plan (RTP) updates to inform RTP development decisions. Interim status reports are required two years after each update to address needed revisions and provide an activity and progress status. The interim status report required for 2019 will be satisfied through a collaborative effort between the CMAs and MTC. See Appendix A-8 for details.

- Project Selection: County CMAs or substitute agencies are given the responsibility to develop a project selection process. The process should include solicitation of projects, identifying evaluation criteria, conducting outreach, evaluating project applications, and selecting projects.

  - Public Involvement: In selecting projects for federal funding, the decision making authority is responsible for ensuring that the process complies with federal statutes and regulations. In order to ensure that the CMA process for administering OBAG 2 is in compliance with federal regulations, CMAs are required to lead a public outreach process as directed by Appendix A-7.
  - CMAs must adopt a specific scoring methodology for funding allocation to projects within PDAs or Transit Priority Areas (TPAs) that rewards jurisdictions with the most effective housing anti-displacement policies.
  - MTC and the CMAs will conduct an analysis of the impact of this incentive-based scoring methodology on project selection and local anti-displacement and affordable housing production policy development. The findings will be used to inform future planning and funding priorities.
  - Unified Call for Projects: CMAs are requested to issue one unified call for projects for their OBAG 2 program. Final project lists are due to MTC by July 31, 2017, with all associated project information submitted to MTC using the Fund Management System (FMS) by August 31, 2017. On a case-by-case basis and as approved in advance by MTC staff, these deadlines may be waived to allow coordination with other county-wide call for projects or programming needs. The goal is to coordinate the OBAG2 call for projects, and provide project sponsors the maximum time to deliver projects.
  - Project Programming Targets and Delivery Deadlines: CMAs must program their block grant funds over the OBAG 2 period (FY 2017-18 through FY 2021-22). In general, the expectation is that on-going activities such as CMA planning, non-infrastructure projects and the Preliminary Engineering (PE) phase of projects would use capacity in the first year, followed by the capital phases of project in later years.
  - OBAG 2 funding is subject to the provisions of the Regional Project Delivery Policy (MTC Resolution 3606, or its successor) including the deadlines for Request for Authorization (RFA) submittal and federal authorization/ obligation.

Additionally, the following funding deadlines apply for each county, with earlier delivery strongly encouraged:

- At least half of the OBAG 2 funds, must be obligated (federal authorization/FTA Transfer) by January 31, 2020.
- All remaining OBAG 2 funds must be obligated by **January 31, 2024** ~~**January 31, 2023**~~.

- Performance and Accountability Policies: Jurisdictions need to comply with the following policies, as well as other requirements noted in the document, in order to be eligible recipients of OBAG 2 funds.

  - Adopt a complete streets resolution by the date the CMAs submit their OBAG 2 project recommendations to MTC, incorporating MTC's required complete streets elements as outlined in MTC's Complete Streets Guidance.

    Alternatively, to recognize local jurisdiction's efforts to update their general plan circulation element to incorporate the provisions of the 2008 Complete Streets Act in response to the provisions stated in OBAG 1, a jurisdiction may adopt a significant revision to the circulation element of the general plan that complies with the Act after January 1, 2010.

    For compliance, a substantial revision of the circulation element, passed after January 1, 2010, shall "…plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan," while complying with the other provisions of CA Government Code Section 65302 and Complete Streets Act of 2008.

    The approach above focuses on the adoption of local complete streets resolutions, while acknowledging the jurisdictions that took efforts to update their circulation element in anticipation of future OBAG requirements.

  - Jurisdictions (cities and counties) must have a general plan housing element adopted and certified by the California Department of Housing and Community Development (HCD) for 2014-2022 RHNA by May 31, 2015. Jurisdictions that have failed to meet this deadline must have their housing elements certified by HCD by June 30, 2016 in order to be eligible to receive OBAG 2 funding.

  - Furthermore, under state statute, jurisdictions are required to submit Housing Element Annual Reports by April 1 every year. All cities and counties receiving OBAG 2 funding must comply with this statute during the entire OBAG 2 funding period or risk deprogramming of OBAG 2 funding.

  - General law cities and counties must adopt a surplus land resolution by the date the CMAs submit their OBAG 2 project recommendations to MTC. The resolution must verify that any disposition of surplus land undertaken by the jurisdiction complies with the State Surplus Land Act, as amended by AB 2135, 2014. MTC will issue guidance to assist cities and counties in drafting a resolution to meet

this requirement. This guidance will be posted on the OBAG 2 website: http://mtc.ca.gov/our-work/fund-invest/federal-funding/obag-2.

Charter cities do not have to adopt a surplus land resolution unless and until a final court decision is rendered that charter cities are subject to the provisions of the Act.

- For jurisdictions with local public streets and roads, to be eligible for OBAG 2 funding, the jurisdiction must:
    - Have a certified Pavement Management Program (StreetSaver® or equivalent) updated at least once every three years (with a one-year extension allowed);
    - Fully participate in the statewide local streets and road needs assessment survey; and
    - Provide updated information to the Highway Performance Monitoring System (HPMS) at least once every 3 years (with a one-year grace period allowed).
- For a transit agency project sponsor under a Joint Powers Authority (JPA) or district (not under the governance of a local jurisdiction), or an agency where housing and complete streets policies do not apply, the jurisdiction where the project is located (such as station/stop improvements) will need to comply with the policies and other requirements specified in this attachment before funds may be programmed to the project sponsor. However, this is not required if the project is transit/rail agency property such as, track, rolling stock or a transit maintenance facility.
- OBAG 2 funds may not be programmed to any jurisdiction out of compliance with the policies and other requirements specified in this attachment.
- The CMA will be responsible for tracking progress towards all OBAG 2 requirements and affirming to MTC that a jurisdiction is in compliance prior to MTC programming OBAG 2 funds to its projects in the TIP.

  CMAs will provide the following prior to programming projects in the TIP (see Appendix A-10):

    - Documentation of the approach used to select OBAG 2 projects including outreach efforts, agency coordination, Title VI compliance, the methodology used for distributing funds within the county, and the specific scoring methodology used for allocating funds to projects within PDAs or TPAs that rewards local jurisdictions with the most effective housing anti-displacement policies;
    - The board adopted list of projects recommended for OBAG 2 funding;
    - Self-certification that all projects recommended for funding are consistent with the current RTP (including documentation) and have completed project-specific Complete Streets Checklists (including documentation);

- Identification of the Single-Point of Contact assigned by the jurisdiction for all FHWA-funded projects, including OBAG 2 projects;
- Documentation of local jurisdiction compliance with MTC's Complete Streets Policy, including a list of the status of each jurisdiction, a letter from the CMA for each jurisdiction describing how the jurisdiction meets the policy requirements, and supporting documentation for each local jurisdiction (resolutions and/or circulation elements)
- Documentation of local jurisdiction compliance with MTC's Housing Element requirements, including a list of the status of each jurisdiction's Annual Housing Element Progress Report as well as any supporting documentation for each jurisdiction (progress reports and copies of submittal letter to HCD). This documentation will be required annually from CMAs (April 30 each year) throughout the OBAG 2 programming period;
- Documentation of compliance with the State's Surplus Land Act requirements, for each applicable jurisdiction (copy of adopted resolution).
- Documentation for any projects recommended for funding that apply toward the county's minimum PDA investment target. This includes mapping of all mappable projects (projects with a physical location). For projects that are not physically located within a PDA, the CMA is required to map each project along with the associated PDA(s) and provide a policy justification for designating each project as supporting a PDA through proximate access. CMAs must also document that this information was used when presenting its program of projects to their board and the public; and
- Self-certification that the PDA Investment and Growth Strategy has been completed and adopted by the CMA Board, or will be adopted in coordination with the RTP update. The interim progress report requirement for 2019 will be satisfied through a collaborative effort between the CMAs and MTC. Documentation of subsequent required updates and interim progress reports must also be submitted by the CMAs throughout the OBAG 2 period.

COUNTY PROGRAMS

The categories below comprise the eligible OBAG 2 County Programs, administered by the nine county CMAs. The CMAs should ensure that the project selection process and selected projects meet all eligibility requirements throughout this document as well as in federal statutes and regulations. MTC staff will work with CMAs and project sponsors to resolve any eligibility issues which may arise, including air quality conformity exceptions and requirements.

County CMA Program

The base OBAG 2 County program accounts for 40% of the total funding available through OBAG 2 and is distributed to each county according to the OBAG 2 county formula after accounting for the

CMA Planning minimum guarantee (see Appendices A-2 and A-3). This program includes CMA planning and outreach as well as the various projects selected through each county's competitive call for projects. Projects selected through the base county program are subject to the PDA investment minimum requirements.

1. CMA Planning and Outreach

This category provides funding to the county Congestion Management Agency (CMA) or substitute agency to support programming, monitoring and outreach activities. Such efforts include, but are not limited to: county-based planning efforts for development of the RTP/Sustainable Communities Strategy (SCS); development of PDA growth strategies; development and implementation of a complete streets compliance protocol; establishing land use and travel forecasting process and procedures consistent with ABAG/MTC; ensuring the efficient and effective delivery of federal-aid local projects; and undertaking the programming of assigned funding and solicitation of projects.

The minimum funding level for the CMA planning and outreach program continues OBAG 1 commitments by escalating FY 2016-17 amounts at 2% per year. In addition, counties are guaranteed that the base funding level for the CMA's planning and outreach program will not exceed 50% of the county's total OBAG 2 County Program distribution. Actual CMA planning and outreach amounts for each county, are shown in Appendix A-3.

At their discretion, the CMAs may choose to designate additional funding from their County Program to augment their planning and outreach efforts.

All funding and activities will be administered through an interagency agreement between MTC and the respective CMA.

2. Local Streets and Roads Preservation

This category is for the preservation of local streets and roads on the federal-aid system. To be eligible for funding of any Local Streets and Roads (LSR) preservation project, the jurisdiction must have a certified Pavement Management Program (StreetSaver® or equivalent). In addition, selected pavement projects should be based on the needs analysis resulting from the established Pavement Management Program (PMP) for the jurisdiction. This requirement ensures that streets selected for investment are cost effective. MTC is responsible for verifying the certification status of jurisdictions. The current certification status of area jurisdictions can be found at http://www.mtc.ca.gov/services/pmp/.

Furthermore, to support the collection and analysis of local roads asset conditions for comprehensive regional planning efforts and statewide funding advocacy, a jurisdiction must fully participate in the statewide local streets and road needs assessment survey to be eligible for OBAG 2 funding for pavement rehabilitation.

Eligibility requirements for specific project types are included below:

- Pavement Rehabilitation:

  All pavement rehabilitation projects, including projects with pavement segments with a Pavement Condition Index (PCI) below 70, must be consistent with segments recommended for treatment within the programming cycle by the jurisdiction's PMP.

- Preventive Maintenance:

Only projects where pavement segments have a PCI of 70 or above are eligible for preventive maintenance. Furthermore, the local agency's PMP must demonstrate that the preventive maintenance strategy is a cost effective method of extending the service life of the pavement.

- Non-Pavement:

  Eligible non-pavement activities and projects include rehabilitation or replacement of existing features on the roadway facility, such as bridge structures, storm drains, National Pollutant Discharge Elimination System (NPDES), curbs, gutters, culverts, medians, guardrails, safety features, signals, signage, sidewalks, ramps, complete streets elements and features that bring the facility to current standards. Jurisdictions must have a certified PMP to be eligible to receive funding for improvements to non-pavement features.

Activities that are not eligible for funding include: Air quality non-exempt projects (unless granted an exception by MTC staff), new roadways, roadway extensions, right of way acquisition for future expansion, operations, routine maintenance, spot application, enhancements that are above and beyond repair or replacement of existing assets (other than bringing roadway to current standards or implementing compete streets elements) and any pavement application not recommended by the PMP unless otherwise allowed above.

Federal-Aid Eligible Facilities: Federal-aid highways as defined in 23 U.S.C. 101(a)(6) are eligible for local streets and roads preservation funding. A federal-aid highway is a public road that is not classified as a rural minor collector or local road (residential) or lower. Project sponsors must confirm the eligibility of their roadway through the Highway Performance Monitoring System (HPMS) prior to the application for funding.

3. Bicycle and Pedestrian Improvements

This category funds a wide range of bicycle and pedestrian improvements including Class I, II and III bicycle facilities; cycle tracks; bicycle education, outreach, sharing and parking; sidewalks, ramps, pathways and pedestrian bridges; user safety and supporting facilities; and traffic signal actuation. Bicycle and pedestrian projects may be located on or off the federal-aid highway system.

Additional eligibility requirements will apply to bicycle and pedestrian projects that are funded with CMAQ funds rather than STP funds, given the more limited scope of the CMAQ funding program. According to CMAQ eligibility requirements, bicycle and pedestrian facilities must not be exclusively recreational and should reduce vehicle trips resulting in air pollution reductions. Also, the hours of operation need to be reasonable and support bicycle/pedestrian needs, particularly during commute periods. For example, the policy that a trail be closed to users before sunrise or after sunset may limit users from using the facility during the portions of peak commute hours, particularly during times of the year with shorter days.

4. Transportation for Livable Communities

The purpose of Transportation for Livable Communities (TLC) projects is to support community-based transportation projects that bring new vibrancy to downtown areas, commercial cores, high-density neighborhoods, and transit corridors; enhancing their amenities and ambiance and making them places where people want to live, work and visit. The TLC program supports the RTP/SCS by

investing in improvements and facilities that promote alternative transportation modes rather than the single-occupant automobile.

General project categories include the following:

- Transit station improvements such as plazas, station access, pocket parks, and bicycle parking.
- Transit expansions serving PDAs.
- Complete Streets improvements that improve bicycle and pedestrian access and encourage use of alternative modes.
- Cost-effective, technology-driven active operational management strategies for local arterials and for highways when used to augment other fund sources or match challenge grants.
- Transportation Demand Management (TDM) projects including car sharing, vanpooling traveler coordination and information, and Clipper®-related projects.
- Transit access projects connecting high density housing/jobs/mixed land use to transit, such as bicycle/pedestrian paths and bridges and safe routes to transit.
- Streetscape projects focusing on high-impact, multi-modal improvements or associated with high density housing/mixed use and transit, such as bulb outs, sidewalk widening, crosswalk enhancements, audible signal modification, mid-block crossing and signals, new striping for bicycle lanes and road diets, pedestrian street lighting, medians, pedestrian refuges, wayfinding signage, tree grates, bollards, permanent bicycle racks, signal modification for bicycle detection, street trees, raised planters, planters, costs associated with on-site storm water management, permeable paving, and pedestrian-scaled street furniture including bus shelters, benches, magazine racks, garbage and recycling bins.
- Mobility management and coordination projects that meet the specific needs of seniors and individuals with disabilities and enhance transportation access for populations beyond those served by one agency or organization within a community. Examples include the integration and coordination of services for individuals with disabilities, seniors, and low-income individuals; individualized travel training and trip planning activities for customers; the development and operation of one-stop transportation traveler call centers to coordinate transportation information on all travel modes and to manage eligibility requirements and arrangements for customers among supporting programs; and the operation of transportation brokerages to coordinate providers, funding agencies and passengers. Selected project sponsors may need to transfer the STP/CMAQ funds received to FTA.
- PDA planning and implementation, including projects that incentivize local PDA transit oriented development housing (within funding eligibility limitations unless exchanged).
- Density incentives projects and non-transportation infrastructure improvements that include density bonuses, sewer upgrade, land banking or site assembly (these projects require funding exchanges to address federal funding eligibility limitations).

Activities that are not eligible for funding include: air quality non-exempt projects (unless granted an exception by MTC staff), new roadways, roadway extensions, right of way acquisition for future expansion, operations, and routine maintenance.

Additional County Programs

In addition to the base County CMA Program, OBAG 2 directs additional funds to the CMAs to distribute to eligible project types. These programs are the Safe Routes to School (SRTS) program, the Federal Aid Secondary Shares Continuation (FAS) program, and for the North Bay Counties, the Priority Conservation Area (PCA) program.

1. Safe Routes to School

Eligible projects for the Safe Routes to School (SRTS) program include infrastructure and non-infrastructure projects that facilitate reduction in vehicular travel to and from schools. It is important to note that this program is funded exclusively by the CMAQ funding program. Given the intent of the CMAQ program to reduce vehicular emissions, the OBAG 2 SRTS program is targeted towards air quality improvement rather than the health or safety of school-aged children. Despite this limitation, project eligibility under CMAQ largely overlaps with typical eligibility requirements for Safe Routes to School programs. Detailed examples of eligible projects are provided below:

<u>Eligible Non-Infrastructure Projects</u>

Public Education and Outreach Activities

- Public education and outreach can help communities reduce emissions and congestion by inducing drivers to change their transportation choices
- Activities that promote new or existing transportation services, developing messages and advertising materials (including market research, focus groups, and creative), placing messages and materials, evaluating message and material dissemination and public awareness, technical assistance, programs that promote the Tax Code provision related to commute benefits, and any other activities that help forward less-polluting transportation options
- Air quality public education messages: Long-term public education and outreach can be effective in raising awareness that can lead to changes in travel behavior and ongoing emissions reductions; therefore, these activities may be funded indefinitely
- Non-construction outreach related to safe bicycle use
- Travel Demand Management (TDM) activities including traveler information services, shuttle services, carpools, vanpools, parking pricing, etc.

<u>Eligible Infrastructure Projects</u>

- Constructing bicycle and pedestrian facilities (paths, sidewalks, bike racks, support facilities, etc.), that are not exclusively recreational and reduce vehicle trips
- Programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas
- New construction and major reconstructions of paths, tracks, or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest
- Traffic calming measures

<u>Exclusions found to be ineligible uses of CMAQ funds</u>

- Walking audits and other planning activities (Upon the CMA's request and availability of funds, STP funds will be provided for these purposes)
- Crossing guards, vehicle speed feedback devices, and traffic control that is primarily oriented to vehicular traffic rather than bicyclists and pedestrians
- Material incentives that lack an educational message or exceed a nominal cost

Within the SRTS program, funding is distributed among the nine Bay Area counties based on K-12 total enrollment for private and public schools as reported by the California Department of Education for FY 2013-14 (see Appendix A-5). SRTS funding distributed to CMAs based on enrollment is not subject to the PDA minimum investment requirements. However, if a CMA chooses to augment the SRTS program with additional funding from their base OBAG 2 County CMA program, this additional funding is subject to the PDA minimum investment requirements.

Before programming projects into the TIP, the CMAs shall provide the SRTS projects, recommended county program scope, budget, schedule, agency roles, and federal funding recipient(s).

In programming the funds in the TIP, project sponsors may consider using non-federal funds to fund SRTS activities ineligible for federal funding. In such instances, the sponsor is allowed to use toll credits for the federal project, conditioned upon a minimum of 11.47% in non-federal funds being dedicated for SRTS activities. Separate accounting of a federalized project and a non-federalized project to fund a single program can be challenging, so care should be taken when using this option.

CMAs with an established SRTS program may choose to program local funds for SRTS projects in lieu of OBAG 2 funds and use the OBAG 2 funding for other eligible OBAG 2 projects. In such instances the local SRTS project(s) must be identified at the time the CMA submits the county OBAG 2 program to MTC and subsequently programmed in the federal TIP.

2. Federal Aid Secondary (FAS) Shares

The Federal Aid Secondary (FAS) program, which directed funding to rural roads, was eliminated in 1991 with the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA). However, California statutes provide for the continuation of minimum funding levels to counties, guaranteeing their prior FAS shares for rural county roads.

The county CMAs are required to ensure the counties receive their guaranteed annual funding through the CMA-managed OBAG county program. The county of San Francisco has no rural roads, and therefore does not receive FAS funding. In addition, the counties of Marin, Napa, and San Mateo may exchange their annual guaranteed FAS funding with state funding from Caltrans, as permitted by state statute. Caltrans takes these federal funds "off the top" before distributing regional STP funds to MTC. The CMAs for these three counties are not required to provide FAS guaranteed funding to these three counties for years in which these counties request such an exchange, as the statutory requirement is met through this exchange with Caltrans.

Counties may access their FAS funding at any time within the OBAG 2 period for any project eligible for STP funding. Guaranteed minimum FAS funding amounts are determined by California's Federal-Aid Secondary Highways Act (California Code § 2200-2214) and are listed in Appendix A-4. This FAS funding is not subject to the minimum PDA investment requirement. Any additional

funding provided by the CMAs to the counties from the OBAG 2 county base formula distribution is subject to the minimum PDA investment requirements.

3. Priority Conservation Area (PCA)

The Priority Conservation Area (PCA) Program provides funding for the development of plans and projects to assist in the preservation and enhancement of rural lands and open space. Generally, eligible projects include PCA planning activities, bicycle and pedestrian access to open space and parklands, visual enhancements and habitat/environmental enhancements. Specifically, projects must support Plan Bay Area by preserving and enhancing the natural, economic and social value of rural lands amidst a growing population across the Bay Area, for residents and businesses.

Land acquisition for preservation purposes is not federally eligible, but may be facilitated through CMA-initiated funding exchanges.

The PCA funding program includes one approach for the North Bay program (Marin, Napa, Solano, and Sonoma) and a second for the remaining five counties. In the North Bay, each CMA will receive dedicated funding, lead a county-wide program building on PCA planning conducted to date, and select projects for funding. For the remaining counties, MTC will partner with the Coastal Conservancy, a California State agency, to program the PCA funds. Appendix A-9 outlines the framework for this program including goals, project screening eligibility, eligible sponsors, and project selection.

Any CMA may use additional funding from its base OBAG 2 County Program to expand its dedicated PCA program (North Bay counties), augment grants received from the regionally competitive PCA program (remaining counties), or develop its own county PCA program (all counties).

The North Bay program framework is to be developed by the four North Bay CMAs, building upon their PCA planning and priorities carried out to date. Project eligibility is limited by the eligibility of federal surface transportation funding; unless the CMA can exchange these funds or leverage new fund sources for their programs.

As a part of the update to *Plan Bay Area*, MTC is exploring implementing a Regional Advance Mitigation Planning (RAMP) Program. RAMP would mitigate certain environmental impacts from multiple planned transportation projects, rather than mitigating on a less-efficient per-project level. Partnering arrangements can be established to leverage multiple fund sources in order to maximize benefits of the RAMP and PCA programs. As such, PCA funds may be used to deliver net environmental benefits to a RAMP program project.

In instances where federal funds may not be used for this purpose, sponsors may exchange OBAG 2 funds with eligible non-federal funds. Such exchanges must be consistent with MTC's fund exchange policy (MTC Resolution No. 3331).

Appendix A-11: Safe and Seamless Mobility Quick-Strike Program

The Safe and Seamless Mobility Quick-Strike program is a one-time, competitive grant program within the One Bay Area Grant program (OBAG 2) framework. Federal funding is available to support local and regional projects that can be implemented quickly to benefit communities responding and adapting to the COVID-19 environment.

Available funding includes a mix of Surface Transportation Block Grant Program (STP), Congestion Mitigation and Air Quality Improvement (CMAQ) and Federal Highway Infrastructure Program (FHIP) funds, with FHIP funds exchanged with STP/CMAQ funds to the extent possible to meet federal other funding deadlines and requirements. CMAQ funds will be used for eligible projects that demonstrate air quality benefits and implement Plan Bay Area's climate initiative goals and priorities.

Project Eligibility & Focus Areas

The program emphasizes bicycle/pedestrian safety and mobility, connections to transit, and projects that advance equitable mobility. Eligible project types include:

- Quick-build bike, pedestrian, and transit improvements; including bike share enhancements.
- Local safe and seamless mobility projects, including projects that advance equitable mobility; invest in bicycle/pedestrian safety; improve connections to transit; or implement seamless strategies within a corridor.
- In addition to capital projects, programs that support safe and seamless mobility or advance equitable mobility are also eligible (ex. safe routes to school/transit programs); a limited amount of funding, (up to $200,000 per county) may also be directed towards countywide implementation of safe and seamless mobility planning and programming efforts).
- Other near-term implementation of strategies emerging from the Blue-Ribbon Transit Recovery Task Force and Partnership Board's Connected Mobility Subcommittee.

Fund commitments for specific focus areas include:

- One-quarter of the total program is targeted for bicycle/pedestrian safety (including local road safety).
- $5 million is set aside to support early implementation efforts anticipated from the Blue-Ribbon Transit Recovery Task Force.
- $15.3 million directed to regional and corridor co-nominated projects and projects of interest to the Blue-Ribbon Transit Recovery Task Force.
- $1.9 million is set aside for ongoing CTA planning and programming activities
- $1.9 million is set aside for regional planning and programming activities, including Priority Development Area (PDA) planning and implementation and the FasTrak START Pilot program evaluation

Evaluation Criteria

MTC staff will evaluate nominated projects against the following program criteria. Nominated projects should:

- Align with Connected Mobility Framework Values and Goals (see inset below)
- Be the direct result or outcome of a community engagement process
- Be within or directly connected to a Priority Development Area (PDA) or Transportation Priority Area (TPA) and/or serve a Community of Concern (CoC), Community Air Risk Evaluation (CARE) program area, or similar local designation. PDAs and TPAs may be existing or recently designated as part of the Plan Bay Area 2050 growth framework.
- Addresses transit connectivity gaps, especially in areas significantly impacted from the pandemic
- Demonstrate partnership among jurisdictions, transit agencies, and counties.
- Demonstrate ability to quickly deliver, and meet federal funding requirements, as funds must be obligated by **September 30, 2023** ~~**September 30, 2022**~~.

To ensure consistency with the implementation of county and regional plans and priorities, as well as encourage discussion and coordination in developing investment proposals, projects co-nominated by MTC and a CTA will be given extra consideration if meeting regional goals and priorities. Previously submitted co-nominated projects are to be funded out of the regional and corridor program component. New co-nominated projects may be funded out of either program.

Below are the regional connected mobility values and goals guiding these investments:

CONNECTED MOBILITY VALUES AND GOALS

Values	Goals
Think Regionally Act Locally	Be coordinated, interconnected, and contiguous
Provide Great Travel Choices	Provide choices that are better than driving alone, are viable and intuitive for all trips
Put the Traveler First	Ensure a dignified traveler experience, focusing on customer care and needs
Be Equitable & Inclusive	Address disparities and be transparent for all people and all trips
Be Sustainable	Strive for a healthy planet, people, and full-cost accounting

Project Nominations

To address local needs throughout the region, and encourage community-based project investments, each County Transportation Agency (CTA) will act on MTC's behalf and submit project nominations for their county area. County targets have been provided as a guide, for each county (see table on following page). However, final project selection by MTC will not necessarily adhere to these targets. Target amounts are based on the OBAG 2 county program distribution.

In addition to county submissions, MTC may consider projects that would be implemented regionwide or in more than one county. Where applicable, MTC staff will work with CTAs to

coordinate on co-nominations for regional projects. Previously co-nominated projects are to be funded out of the regional and corridor program component. New co-nominated projects may be funded out of either program.

As the final program of projects must reflect regional or multi-county priorities, in addition to local priorities within each county, the final programming per county will not correspond exactly to nomination targets.

To ensure each county is provided sufficient funding to have a meaningful community impact, each county's nomination target will be a minimum of $1 million.

County Nomination Targets
($ millions, rounded)

	%
Alameda	19.9%
Contra Costa	14.6%
Marin	2.8%
Napa	2.1%
San Francisco	12.5%
San Mateo	8.4%
Santa Clara	27.0%
Solano	5.5%
Sonoma	7.2%
	100.0%

Note: Final project selection and fund programming will not correspond exactly to nomination targets.

Project Selection Process
The prioritization process is designed to quickly distribute funds to competitive and impactful investments throughout the region.

- **Letters of Interest:** County Transportation Agencies (CTAs) submit Letters of Interest to nominate projects within their counties. In addition to basic project information (project description, sponsor, total cost, funding request), submittals should also describe how the project meets the program eligibility requirements and evaluation criteria, and how well the proposed project sponsor meets state and federal funding requirements.

- **Evaluation:** MTC staff evaluate CTA nominations as well as regional program considerations to develop a recommended program of projects. Program recommendations presented to Bay Area Partnership Board for review and discussion.

- **Project Applications:** MTC and CTA staff work with project sponsors to submit project applications with a detailed scope, delivery schedule, and funding plan.

- **Program Approval:** MTC Commission consideration and approval of projects and fund programming.

Programming Policies and Requirements
Unless otherwise noted within these guidelines, OBAG 2 General Programming Policies (see MTC Resolution No. 4202, Attachment A, pages 6-11), and Regional Project Funding Delivery Policy (MTC Resolution No. 3606) apply.

- **Project sponsors:** Eligible sponsors are those approved by Caltrans to receive FHWA federal-aid funds (including cities, counties, transit agencies, CTAs, and MTC). Sponsors must also have a demonstrated ability to meet timely use of funds deadlines and requirements (see Project Delivery and Monitoring, below).

- **Minimum Grant Size:** Project nominations should be consistent with OBAG 2 minimum grant size requirements per county ($500,000 grant minimum for counties with population over 1 million, and $250,000 minimum for all other counties). Final funding awards may deviate from grant minimums per county, should one or more grant awards span multiple counties or regionwide.

  Additionally, deviations from the OBAG 2 minimum grant size requirements for project nominations may be considered on a project-by-project basis. However, grant awards must be at least $100,000.

- **Local Match:** Toll credits may be requested in lieu of non-federal cash match.

- **Supplanting of Funds Prohibited**: Supplanting of existing funds on fully-funded projects is prohibited, as the program is intended to infuse transportation investment into communities responding and adapting to the COVID-19 environment. If funds are requested to address a funding shortfall on a project due to reduced local revenues, CTAs must demonstrate why the project should be a priority for regional funding, if it was not the highest priority for available local funding. In their nomination, CTAs should describe how the county and local jurisdictions determined which projects are prioritized for reduced local revenues.

- **Project Phases:** The Environmental (ENV), Plans, Specifications and Estimates (PS&E), Preliminary Engineering (PE) and Right Of Way (ROW) phases are eligible for capital projects as long as the construction (CON) phase of the project is delivered and funds obligated by **September 30, 2023** ~~**September 30, 2022**~~.

- **Project Delivery and Monitoring:** Project sponsors must have a record of consistently meeting state and federal timely use of funds deadlines and requirements, or demonstrate/identify revised/new internal processes to ensure they will meet funding deadlines and requirements moving forward at the time of project nomination. In addition to the provisions of the Regional Project Funding Delivery Policy (MTC Resolution No. 3606), the following specific funding deadlines/requirements apply:
  - Funds must be obligated (authorized in a federal E-76, or transferred to FTA) no later than **September 30, 2023** ~~**September 30, 2022**~~.
  - Funds must be encumbered or awarded in a contract within 6 months of federal obligation.
  - Funds must be invoiced against within 3 months of encumbrance/award and invoiced against and receive a federal reimbursement quarterly thereafter.
  - If there could be complications with invoicing against the construction phase within 9 months of federal obligation, then the sponsor should consider including Construction Engineering (CE) in the federal obligation so that eligible costs may be invoiced in order to meet the invoicing deadline.

- Project sponsor must meet all other timely use of funds deadlines and requirements, for all other state and federal transportation funds received by the agency, during the duration of project implementation (such as, but not limited to, project award, federal invoicing, and project reporting).
- To help ensure compliance with state and federal invoicing requirements, as part of the application submittal, the Finance/Accounting Manager/Director for the agency receiving the funds must provide written documentation on the agency's internal process and procedures for complying with FHWA federal-aid timely use of funds requirements, especially with regards to meeting federal invoicing requirements.
- CTAs nominating successful projects must monitor the project sponsors within their respective county in meeting the timely use of funds deadline requirements in MTC Resolution No. 3606 and report quarterly to MTC on the agency's status in meeting regional, state, and federal timely use of funds deadlines and requirements.

- **Additional Requirements Apply:**
  - Project sponsor must comply with MTC's Complete Street Policy and submit a Complete Streets Checklist for the project.
  - Project sponsor must adopt a Resolution of Local Support prior to adding the project into the Transportation Improvement Program (TIP).
  - Project sponsor must satisfy the OBAG 2 housing policy requirements – have a certified Housing Element, submit the Annual Progress Report for the Housing Element, and have adopted a resolution affirming compliance with the California Surplus Lands Act.
  - CTAs must make each project's Complete Streets Checklist available for review by the appropriate Bicycle and Pedestrian Advisory Committee (BPAC) prior to MTC Commission approval of projects and fund programming. Documentation this has occurred must be included with the project application.

Attachment B-1
MTC Resolution No. 4202
OBAG 2 Regional Programs
FY 2017-18 through FY 2021-22
September 2022

MTC Res. No. 4202 Attachment B-1
Adopted: 11/18/15-C
Revised: 07/27/16-C 10/26/16-C 12/21/16-C 03/22/17-C 05/24/17-C 06/28/17-C 07/26/17-C 09/27/17-C 10/25/17-C 12/20/17-C 01/24/18-C 02/28/18-C 03/28/18-C 04/25/18-C 05/23/18-C 06/27/18-C 07/25/18-C 09/26/18-C 11/28/18-C 12/19/18-C 02/27/19-C 03/27/19-C 06/26/19-C 09/25/19-C 10/23/19-C 11/20/19-C 02/26/20-C 05/27/20-C 07/22/20-C 11/20/20-C 01/27/21-C 02/24/21-C 04/28/21-C 05/26/21-C 06/23/21-C 07/28/21-C 09/22/21-C 01/26/22-C 03/23/22-C 04/27/22-C 06/22/22-C 09/28/22-C

OBAG 2 Regional Programs Project List

PROJECT CATEGORY AND TITLE	SPONSOR	Total STP/CMAQ	Other
OBAG 2 REGIONAL PROGRAMS		**$652,510,885**	**$131,433,260**
1. REGIONAL PLANNING ACTIVITIES			
Regional Planning	MTC	$9,555,000	
1. REGIONAL PLANNING ACTIVITIES	**TOTAL:**	**$9,555,000**	
2. PAVEMENT MANAGEMENT PROGRAM			
Pavement Management Program	MTC	$1,500,000	
Pavement Technical Advisory Program (PTAP)	MTC	$7,500,000	
Statewide Local Streets and Roads (LSR) Needs Assessment	MTC/Caltrans	$250,000	
2. PAVEMENT MANAGEMENT PROGRAM	**TOTAL:**	**$9,250,000**	
3. PDA PLANNING & IMPLEMENTATION			
PDA Planning and Implementation			
PDA Implementation	MTC	$2,000,000	
PDA Supportive Studies	MTC	$587,000	
PDA Planning			
Berkeley: San Pablo Avenue PDA Plan	MTC	$750,000	
Oakland: MacArthur Transit Village PDA; North Oakland/Golden Gate PDA Plan	MTC	$800,000	
Oakland: Eastmont Town Center/International Blvd; Fruitvale & Dimond; MacArthur	MTC	$800,000	
Union City: Decoto Industrial Parkway Study Area Specific Plan 2.0	MTC	$800,000	
El Cerrito: San Pablo Avenue Specific Plan and EIR Update/Amendments	MTC	$308,000	
Moraga: Moraga Center Specific Plan Implementation Project	MTC	$140,000	
Richmond: Hilltop PDA Plan	MTC	$750,000	
San Pablo: Rumrill Blvd PDA Plan	MTC	$250,000	
Marin County: Urbanized Corridor/Marin City PDA Plan	MTC	$300,000	
San Rafael: Downtown Precise Plan	MTC	$500,000	
San Francisco: HUB Area EIR	MTC	$500,000	
San Francisco: Transit Corridors Study	MTC	$500,000	
Burlingame: Broadway Planning Area PDA Plan	MTC	$400,000	
South San Francisco: Downtown Station Area PDA Plan	MTC	$500,000	
Milpitas: Midtown PDA Plan	MTC	$500,000	
Palo Alto: University Ave/Downtown PDA Plan	MTC	$800,000	
San Jose/VTA: Diridon Integrated Station Area Concept Plan	MTC	$800,000	
San Jose: SW Expressway/Race Street Light Rail Urban Village Plans	MTC	$500,000	
Santa Clara: Downtown PDA Plan	MTC	$400,000	
Vacaville: Downtown Specific Plan	MTC	$350,000	
Santa Rosa: Downtown Station Area Specific Plan Update/Amendment	MTC	$800,000	
Unprogrammed balance		$400,000	
Staffing Assistance			
Emeryville: Mitigate Regulation-Induced Displacement, Streamlined Asset Mngmt	MTC	$180,000	
Fremont: SB743 Implementation	MTC	$150,000	
Hayward: SB743 Implementation	MTC	$150,000	
Oakland: ADU Initiative	MTC	$200,000	
Oakland: Innovative Construction Initiative	MTC	$200,000	
Concord: VMT-based Transportation Impact Standards	MTC	$150,000	
Concord: Galindo Street Corridor Plan	MTC	$200,000	
Lafayette: Updated Parking Ordinance and Strategies	MTC	$150,000	
San Jose: PDA/Citywide Design Guidelines	MTC	$200,000	
Windsor: Parking Management and Pricing	MTC	$35,000	
Technical Assistance			
Marin/Sonoma VMT Implementation Group	MTC	$170,000	
Napa/Solano VMT Implementation Group	MTC	$170,000	
Various Jurisdictions: VMT Implementation Group	MTC	$140,000	
Emeryville: Developing the Highest and Best Use of the Public Curb	MTC	$65,000	
Hayward: Micro Mobility/Safety Program	MTC	$75,000	
Oakland: General Plan Framework - PDA Community Engagement Program	MTC	$65,000	
San Leandro: BayFair TOD Infrastructure Design/Finance	MTC	$150,000	
San Francisco: Mission-San Jose PDA Housing Feasibility Analysis	MTC	$65,000	
San Francisco: PDA Density Bonus Program	MTC	$65,000	

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OBAG 2 Regional Programs Project List

PROJECT CATEGORY AND TITLE	SPONSOR		Total STP/CMAQ	Other
OBAG 2 REGIONAL PROGRAMS			**$652,510,885**	**$131,433,260**
Belmont: Transportation Demand Management Program	MTC		$65,000	
San Mateo: TDM Ordinance	MTC		$150,000	
Santa Rosa/Sonoma County: Renewal Enterprise District	MTC		$150,000	
San Jose: Urban Villages District Parking & Rezoning	MTC		$120,000	
BART AB2923 Implementation	BART		$1,000,000	
Community-Based Transportation Plan (CBTP) Updates	MTC			
ACTC: CMA Planning (for Community-Based Transportation Plans)	MTC		$300,000	
CCTA: Community-Based Transportation Plans	MTC		$215,000	
TAM: Community-Based Transportation Plans	MTC		$75,000	
NVTA: Community-Based Transportation Plans	MTC		$75,000	
SFCTA: Community-Based Transportation Plans	MTC		$175,000	
C/CAG: Community-Based Transportation Plans	MTC		$120,000	
VTA: Community-Based Transportation Plans	MTC		$300,000	
STA: Community-Based Transportation Plans	MTC		$95,000	
SCTA: Community-Based Transportation Plans	MTC		$110,000	
CBTP Program Evaluation	MTC		$35,000	
3. PDA PLANNING & IMPLEMENTATION		**TOTAL:**	**$20,000,000**	
4. CLIMATE INITIATIVES				
Climate Initiatives			$9,012,406	
Spare the Air & EV Program Outreach (for Electric Vehicle Programs)	BAAQMD		$10,000,000	
Mobility Hubs Pilot Program				
Mobility Hubs Technical Assistance	MTC		$150,000	
BART: MacArthur BART Station	BART		$539,084	
San Ramon: Bishop Ranch Business Park	San Ramon		$387,600	
SFMTA: Temporary Transbay Terminal (Vacant Site)	SFMTA		$340,760	
Burlingame: Caltrain Station - Burlingame Square Transit Hub	Burlingame		$500,000	
Millbrae: BART and Caltrain Station - Millbrae Transit Center	Millbrae		$345,150	
Mountain View: Caltrain Station - Moutain View Transit Center	Moutain View		$200,000	
Vallejo: Vallejo Ferry Terminal	Vallejo		$200,000	
Targeted Transportation Alternatives	MTC		$325,000	
Spare the Air Youth Program - 2	MTC		$1,417,000	
4. CLIMATE INITIATIVES		**TOTAL:**	**$23,417,000**	
5. REGIONAL ACTIVE OPERATIONAL MANAGEMENT				
Active Operational Management				
AOM Implementation	MTC		$23,737,000	
Bay Area 511 Traveler Information				
511 Next Gen	MTC		$26,148,000	
511 Implementation	MTC		$7,450,000	
Rideshare				
Rideshare Implementation	MTC		$720,000	
Carpool Program	MTC		$7,280,000	
Vanpool Program	MTC		$2,000,000	
Commuter Benefits Implementation	MTC		$674,000	
Commuter Benefits Program	MTC		$1,111,000	
Napa Valley Transportation Demand Strategies (Fund Exchange)	MTC/NVTA			$1,100,000
Bay Bridge Forward 2018				
Transbay Higher Capacity Bus Fleet/Increased Service Frequencies	AC Transit		$1,200,000	
Pilot Transbay Express Bus Routes	AC Transit		$800,000	
Eastbay Commuter Parking	MTC		$2,500,000	
Transbay Higher Capacity Bus Fleet/Increased Service Frequencies	WestCat		$2,000,000	
Bay Bridge Forward 2020				
Preliminary Engineering	MTC		$12,000,000	
Dumbarton Forward				
SR 84 (US 101 to I-880) Dumbarton Forward	MTC		$4,375,000	
Richmond-San Rafael Bridge Forward				
Richmond-San Rafael Bridge Bikeway Access (Fund Exchange)	Richmond			$500,000

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OBAG 2 Regional Programs Project List

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OBAG 2 REGIONAL PROGRAMS		**$652,510,885**	**$131,433,260**
Richmond-San Rafael Bridge Forward (Fund Exchange)	MTC		$1,160,000
Freeway Performance Program			
Freeway Performance Program	MTC		
FPP: I-880 (I-80 to I-280)	MTC	$3,000,000	
FPP: I-880 Optimized Corridor Operations	MTC	$2,240,000	
FPP: I-580 WB HOV Lane Extension (SR 24 to I-80/SFOBB approach) PL & ENV Only	MTC	$625,000	
FPP: I-80 (Carquinez Bridge to Fremont St., SF) PL only	MTC	$3,000,000	
FPP: CC I-680 NB HOV/Express Lanes (Ala Co. to Sol Co.)	MTC	$10,000,000	
FPP: I-80 Central Ave Interchange Improvements	Richmond	$2,000,000	
FPP: SR 37 (US 101 to I-80) PL only	MTC	$1,000,000	
FPP: Napa Valley Forward Traffic Calming & Multimodal Imps.	MTC	$1,000,000	
FPP: US 101 (SR 85 to San Francisco Co. Line)	MTC	$3,000,000	
FPP: SCTA US 101/Marin Sonoma Narrows (MSN) B2 Phase 2	SCTA	$1,000,000	
Program for Arterial System Synchronization (PASS)	MTC	$5,000,000	
Innovative Deployments for Enhanced Arterials (IDEA)			
IDEA Technical Assistance	MTC	$1,532,000	
IDEA Category 1			
AC Transit: Dumbarton Express Route (SR84)	MTC	$2,300,000	
Alameda: Webster & Posey Tubes (SR 260), Park St	MTC	$276,000	
Hayward: Various Locations	MTC	$302,000	
Oakland: Bancroft Ave	MTC	$310,000	
Pleasanton: Various Locations	MTC	$290,000	
Union City: Union City Blvd & Decoto Rd	MTC	$710,000	
San Ramon: Bollinger Canyon Rd & Crow Canyon Rd	MTC	$563,000	
San Rafael: Downtown San Rafael	MTC	$830,000	
South San Francisco: Various Locations	MTC	$532,000	
San Jose: Citywide	MTC	$1,400,000	
IDEA Category 2			
LAVTA/Dublin: Citywide	MTC	$385,000	
Emeryville: Powell, Shellmound, Christie & 40th St	MTC	$785,000	
Concord: Concord Blvd, Clayton Rd & Willow Pass Rd (Fund Exchange)	MTC		$589,000
MTC Concord Blvd, Clayton Rd & Willow Pass Rd (Fund Exchange)	MTC		$30,000
Walnut Creek: Various locations (Fund Exchange)	MTC		$621,000
Los Gatos: Los Gatos Blvd	MTC	$700,000	
VTA: Veterans Admin. Palo Alto Medical Center	VTA	$845,000	
Connected Vehicles/Automated Vehicles (CAV)	MTC	$178,000	
VTA: Palo Alto Advanced Transit Passenger Management	MTC	$826,000	
SFCTA/TIMMA: Treasure Island Automated Shuttle Pilot	MTC	$828,000	
Technical Advisory Services	MTC	$268,000	
Project Evaluations	MTC	$400,000	
Shared Use Mobility	MTC	$2,500,000	
Connected Bay Area			
TMS Implementation	MTC	$2,910,000	
TMC Asset Upgrade and Replacement	MTC	$1,150,000	
I-880 Communication Upgrade and Infrastructure Gap Closures	MTC/Caltrans	$11,940,000	
Regional Communications Infrastructure Upgrade	MTC	$3,000,000	
Incident Management			
Incident Management Implementation	MTC	$4,160,000	
I-880 ICM Northern	MTC	$6,200,000	
I-880 ICM Central	MTC	$2,640,000	
~~**Unprogrammed Balance**~~ **(Revised)**	~~**TBD**~~	~~**$380,000**~~	
5. REGIONAL ACTIVE OPERATIONAL MANAGEMENT	**TOTAL:**	**$172,620,000**	**$4,000,000**
6. TRANSIT PRIORITIES			
BART Car Replacement/Expansion	BART	$99,800,000	
GGB Suicide Deterrent (for BART Car Replacement/Expansion)	GGBH&TD	$9,760,668	$30,239,332
Clipper	MTC	$34,200,000	
Unprogrammed Balance		$15,283,000	

OBAG 2 Regional Programs Project List

PROJECT CATEGORY AND TITLE	SPONSOR	Total STP/CMAQ	Other
OBAG 2 REGIONAL PROGRAMS		**$652,510,885**	**$131,433,260**
6. TRANSIT PRIORITIES	**TOTAL:**	**$159,043,668**	**$30,239,332**
7. PRIORITY CONSERVATION AREA (PCA)			
Regional Peninsula, Southern and Eastern Counties PCA Grant Program			
Bay Area GreenPrint: PCA Functionality Imps	MTC/GreenInfo Network		$30,000
PCA Grant Implementation **(Revised)**	MTC/Coastal Conservancy	**$525,000**	$500,000
Alameda County: Niles Canyon Trail, Phase 1	Alameda County		$321,000
Livermore: Arroyo Road Trail	Livermore		$400,000
WOEIP/Urban Biofilter: Adapt Oakland Urban Greening in West Oakland	WOEIP/Urban Biofilter		$300,000
EBRPD: Bay Trail at Point Molate (RSR Bridge to Point Molate Beach Park)	EBRPD		$1,000,000
JMLT: Pacheco Marsh/Lower Walnut Creek Restoration and Public Access	John Muir Land Trust		$950,000
SFCTA: Yerba Buena Island Multi-Use Pathway (PE/ENV)	SFCTA	$1,000,000	
San Francisco: McLaren Park and Neighborhood Connections Plan	SF Recreation and Parks		$194,000
San Francisco/Coastal Conservancy: Twin Peaks Trail Improvement	SF Rec and Park/Conservancy		$74,000
GGNPC/NPS: Rancho Corral de Tierra Unit Management Plan Engagement	National Parks Service		$200,000
SMCHD: Pillar Point Public Access Improvements	San Mateo Co. Harbor District		$298,000
Menlo Park: Bedwell Bayfront Park Entrance Improvements	Menlo Park		$520,000
San Mateo Co.: Colma Creek Adaptation Study (Colma Creek Connector)	San Mateo Co.		$110,000
San Mateo Co.: San Bruno Mtn. Habitat Conservation Plan Grazing Pilot	San Mateo Co.		$137,900
South San Francisco: Sign Hill Conservation and Trail Master Plan	South San Francisco		$135,100
Point Blue: Pajaro River Watershed: Habitat Restoration and Climate Resilient Imps.	Point Blue Conservation Science		$379,000
SCVOSA: Coyote Ridge Open Space Preserve Public Access, Phase 1	Point Blue Conservation Science		$400,000
SCVOSA: Tilton Ranch Acquisition	Santa Clara Valley Open Space Auth.		$1,000,000
VTA: SR17 Bicycle/Ped Trail & Wildlife Overcrossing (Fund Exchange)	VTA	$251,000	
North Bay PCA Grant Program			
Marin Co: Hicks Valley/Wilson Hill/Marshall-Petaluma Rehab. (for Corte Madera: Par	Marin County	$312,000	
Marin Co: Hicks Valley/Wilson Hill/Marshall-Petaluma Rd Rehab	Marin County	$869,000	
Novato: Nave Dr/Bell Marin Keys Rehabilitation (for Hill Recreation Area Imps.)	Novato	$104,000	
Novato: Vineyard Rd Improvements (for Hill Recreation Area Imps.)	Novato	$265,000	
National Parks Service: Fort Baker's Vista Point Trail	NPS	$500,000	
NVTA: Vine Trail - St. Helena to Calistoga	NVTA	$711,000	
Napa: Vine Trail - Soscol Ave Corridor	Napa	$650,000	
Napa County: Silverado Trail Rehabilitation - Phase L	Napa County	$689,000	
Solano County: Suisun Valley Farm-to-Market - Phase 3 Bike Imps	Solano County	$2,050,000	
Sonoma County: Crocker Bridge Bike/Pedestrian Bridge	Sonoma County	$1,280,000	
Sonoma County: Joe Rodota Trail Bridge Replacement	Sonoma County	$770,000	
7. PRIORITY CONSERVATION AREA (PCA)	**TOTAL:**	**$9,976,000**	**$6,949,000**
8. BAY AREA HOUSING INITIATIVES			
Bay Area Preservation Pilot (BAPP)	MTC		$10,000,000
Housing Incentive Pool	TBD	$25,000,000	
Sub-HIP Pilot Program			
Fairfield: Pavement Preservation/Rehabilitation (for One Lake Apts. Linear Park Trail)	Fairfield	$2,100,000	
Vacaville: Pavement Preservation/Rehabilitation (for Allison PDA Affordable Housing	Vacaville	$1,900,000	
Marin County: Marin City Pedestrian Crossing Imps.	Marin County	$300,000	
NVTA: Imola Park and Ride	NVTA	$300,000	
Santa Rosa: Downtown Multi-modal and Fiber Improvements	Santa Rosa	$400,000	
8. BAY AREA HOUSING INITIATIVES	**TOTAL:**	**$30,000,000**	**$10,000,000**
9. SAFE & SEAMLESS MOBILITY QUICK-STRIKE			
County & Local			
Alameda			
CTA planning & programming (for Youth and Adult Bicycle Promotion & Education)	ACTC	$160,000	
Alameda County Safe Routes to Schools	ACTC	$1,500,000	
CTA planning & programming	ACTC	$354,000	
AC Transit Tempo Quick Build Transit Lane Delineation	AC Transit	$300,000	
AC Transit Quick Builds Transit Lanes	AC Transit	$954,000	
Anita Avenue Safe and Accessible Route to School and Transit	Alameda County	$2,000,000	

Attachment B-1
MTC Resolution No. 4202
OBAG 2 Regional Programs
FY 2017-18 through FY 2021-22
September 2022

MTC Res. No. 4202 Attachment B-1
Adopted: 11/18/15-C
Revised: 07/27/16-C 10/26/16-C 12/21/16-C 03/22/17-C 05/24/17-C 06/28/17-C 07/26/17-C 09/27/17-C 10/25/17-C 12/20/17-C 01/24/18-C 02/28/18-C 03/28/18-C 04/25/18-C 05/23/18-C 06/27/18-C 07/25/18-C 09/26/18-C 11/28/18-C 12/19/18-C 02/27/19-C 03/27/19-C 06/26/19-C 09/25/19-C 10/23/19-C 11/20/19-C 02/26/20-C 05/27/20-C 07/22/20-C 11/20/20-C 01/27/21-C 02/24/21-C 04/28/21-C 05/26/21-C 06/23/21-C 07/28/21-C 09/22/21-C 01/26/22-C 03/23/22-C 04/27/22-C 06/22/22-C 09/28/22-C

OBAG 2 Regional Programs Project List

PROJECT CATEGORY AND TITLE	SPONSOR	Total STP/CMAQ	Other
OBAG 2 REGIONAL PROGRAMS		**$652,510,885**	**$131,433,260**
BART Fare Collection Equipment (for Oakland East Bay Greenway Segment II)	BART/Oakland		$1,000,000
Fremont Boulevard/Walnut Avenue Protected Intersection	Fremont	$1,271,000	
Fremont Boulevard/Grimmer Boulevard Protected Intersection	Fremont	$1,415,000	
LAVTA Passenger Facilities Enhancements	LAVTA		$2,000,000
Oakland 14th Street Complete Streets	Oakland		$1,000,000
Contra Costa			
CTA planning & programming	CCTA	$242,000	
BART Fare Collection Equipment (for Lafayette Town Center Pathway and BART Bike St	BART / Lafayette		$1,825,000
BART Fare Collection Equipment (for Bicycle, Pedestrian, and ADA Imps. at Pittsburg/B	BART		$1,510,000
East Downtown Concord PDA Access & Safe Routes to Transit	Concord	$2,164,000	
Richmond 13th Street Complete Streets	Richmond		$2,821,000
Marin			
CTA planning & programming	TAM	$141,000	
Marin County Bus Stop Improvements	Marin Transit	$1,200,000	
SMART Pathway - San Rafael McInnis Pkwy to Smith Ranch Road	SMART	$1,858,000	
Napa			
CTA planning & programming	NVTA	$162,000	
Napa Valley Safe Routes to School	NVTA	$100,000	
Napa Valley Forward: SR 29/Rutherford & Oakville Roundabouts	MTC	$1,000,000	
San Francisco			
CTA planning & programming	SFCTA	$180,000	
Downtown San Francisco Congestion Pricing Study	SFCTA	$200,000	
Embarcadero Station Platform Elevator Capacity & Redundancy	BART	$3,144,000	
San Francisco Folsom Streetscape	SFMTA		$5,000,000
Safe Routes to School Non-Infrastructure Program	SFMTA	$2,100,000	
San Mateo			
CTA planning & programming	C/CAG	$183,000	
Planning and Programming of safe and seamless mobility	C/CAG	$200,000	
Burlingame City-Wide Pedestrian Safe Routes and Mobility Imps	Burlingame	$200,000	
San Bruno Transit Corridor Pedestrian Connection Phase 4	San Bruno	$385,000	
Broadmoor SRTS Pedestrian Safety & Mobility Imps	San Mateo County	$1,419,000	
El Camino Real Grand Boulevard Initiative Phase III	South San Francisco	$2,120,000	
East of 101 Transit Expansion Project	South San Francisco	$49,924	$430,076
Santa Clara			
CTA planning & programming	VTA	$419,000	
Evaluating on-demand shuttle strategies for improved transit access	VTA	$200,000	
VTA Electronic Locker Upgrade and Replacement	VTA	$1,987,000	
Mountain View Stierlin Road Bicycle and Pedestrian Improvements	Mountain View	$2,521,000	$1,486,000
San Jose Julian Street & McKee Road Vision Zero Complete Streets	San Jose		$705,000
San Jose Bascom Avenue Protected Bike Lanes & Complete Street	San Jose		$690,000
En Movimiento Quick Build Network for East San Jose	San Jose		$1,325,000
San Jose - Downtown Bikeways	San Jose		$4,025,000
Saratoga Blue Hills Elementary Pedestrian Crossing at UPRR	Saratoga	$1,800,000	
Sunnyvale Bicycle, Pedestrian and SRTS Safety Improvements	Sunnyvale		$1,900,000
Solano			
CTA planning & programming	STA	$110,000	
STA Mobility Planning	STA	$200,000	
Solano Safe Routes to School Non-Infrastructure Program	STA	$600,000	
Fairfield/Vacaville Hannigan Station Capacity Improvements	Fairfield	$1,900,000	
Vallejo Springs Rd Pavement Preservation	Vallejo	$1,800,000	
Sonoma			
CTA planning & programming	SCTA	$135,000	
Countywide Active Transportation Plan	SCTA	$200,000	
Cotati Downtown- Civic Center Connectivity and Safety Improvements	Cotati	$242,000	$1,008,000
Healdsburg Bike Share	Healdsburg	$250,000	
Rohnert Park Pedestrian and Bicycle Safety Improvements	Rohnert Park	$522,000	

Attachment B-1
MTC Resolution No. 4202
OBAG 2 Regional Programs
FY 2017-18 through FY 2021-22
September 2022

MTC Res. No. 4202 Attachment B-1
Adopted: 11/18/15-C
Revised: 07/27/16-C 10/26/16-C 12/21/16-C 03/22/17-C 05/24/17-C 06/28/17-C 07/26/17-C 09/27/17-C 10/25/17-C 12/20/17-C 01/24/18-C 02/28/18-C 03/28/18-C 04/25/18-C 05/23/18-C 06/27/18-C 07/25/18-C 09/26/18-C 11/28/18-C 12/19/18-C 02/27/19-C 03/27/19-C 06/26/19-C 09/25/19-C 10/23/19-C 11/20/19-C 02/26/20-C 05/27/20-C 07/22/20-C 11/20/20-C 01/27/21-C 02/24/21-C 04/28/21-C 05/26/21-C 06/23/21-C 07/28/21-C 09/22/21-C 01/26/22-C 03/23/22-C 04/27/22-C 06/22/22-C 09/28/22-C

OBAG 2 Regional Programs Project List

PROJECT CATEGORY AND TITLE	SPONSOR	Total STP/CMAQ	Other
OBAG 2 REGIONAL PROGRAMS		**$652,510,885**	**$131,433,260**
Santa Rosa Transit Mall Roadbed Rehabilitation	Santa Rosa		$868,000
Sebastopol SR 116 and Bodega Ave Pedestrian Access and Mobility Enhancements	Sebastopol	$476,000	
SMART Pathway - Petaluma Payran to Lakeville	SMART	$806,000	
Regional & Corridor			
Regional Planning			
FasTrak START Pilot Evaluation Study	MTC	$900,000	
Diridon Station Planning & Studies	MTC	$1,000,000	
Regional and Corridor			
Bay Bridge Forward: I-580 WB HOV Lane Extension	MTC/ACTC		$7,000,000
San Pablo Giant Road Cycletrack Quick-Build	San Pablo	$700,000	
Napa Valley Forward: SR 29/Rutherford & Oakville Roundabouts	MTC	$6,000,000	
Redwood City Roosevelt Avenue Quick-Build	Redwood City	$755,000	
Transit Recovery Blue Ribbon Task Force			
East Bay Integration and Coordination Implementation Planning	CCTA	$500,000	
Solano Integration and Coordination Implementation Planning	STA	$500,000	
Accessibility: Clipper for Centralized Program Eligibility Verification	MTC	$900,000	
Bay Bridge Forward: Preliminary Engineering	MTC	$1,250,000	
Customer Information: Mapping & Wayfinding	MTC	$2,791,538	
9. SAFE & SEAMLESS MOBILITY QUICK-STRIKE	**TOTAL:**	**$54,466,462**	**$34,593,076**
10. REGIONAL STRATEGIC INVESTMENTS (RSI)			
AC Transit Bus Purchase (for Solano I-80 Express Lanes)	AC Transit	$4,667,000	
SR 84 Ardenwood Intermodal Bus Facility PA&ED (Fund Exchange)	CCJPA	$100,000	
CC I-680 NB HOV/Express Lanes Ala Co to Sol Co (Fund Exchange)	CCTA/MTC	$4,000,000	
GGB Suicide Deterrent System	GGBHTD	$7,910,000	
Pavement Rehab (for Downtown Novato SMART Station)	Novato	$617,000	
Old Redwood Highway Multi-Use Pathway	Larkspur	$1,120,000	
Grand Ave Bridge	San Rafael	$763,000	
Grand Ave Bike/Ped Imps (for SMART 2nd to Andersen Pathway)	San Rafael	$1,000,000	
US 101 Marin-Sonoma Narrows	TAM	$2,000,000	
US 101 Marin-Sonoma Narrows (MSN) B7 (Loan for RM3)	TAM	$61,708,245	$13,942,852
Diridon Station Planning & Studies	MTC	$1,000,000	
VTA: Highway 17 Bicycle/Pedestrian Trail and Wildlife Overcrossing (Fund Exchange)	VTA	$249,000	
Broadmoor SRTS Pedestrian Safety & Mobility Imps	San Mateo County	$184,000	
I-80 Express Lanes in Solano County (Loan for RM3)	STA	$63,464,510	$3,255,000
I-80 Express Lanes in Solano County (Toll System)	BAIFA		$28,454,000
US 101/Marin Sonoma Narrows (MSN) B2 Phase 2 (Fund Exchange)	SCTA	$15,400,000	
10. REGIONAL STRATEGIC INVESTMENTS (RSI)	**TOTAL:**	**$164,182,755**	**$45,651,852**
OBAG 2 REGIONAL PROGRAMS	**TOTAL:**	**$652,510,885**	**$131,433,260**

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375 Beale Street, Suite 800
San Francisco, CA 94105

Metropolitan Transportation Commission

Legislation Details (With Text)

File #:	22-1323	**Version:**	1	**Name:**	
Type:	Resolution			**Status:**	Commission Approval
File created:	8/15/2022			**In control:**	Programming and Allocations Committee
On agenda:	9/14/2022			**Final action:**	
Title:	MTC Resolution No. 4534, Revised. Amendment to Regional Program of Nominations for Senate Bill 1 Trade Corridor Enhancement Program.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	2e_22-1323_Reso_4534_Trade_Corridor_Enhancement_Program.pdf				

Date	Ver.	Action By	Action	Result

Subject:
MTC Resolution No. 4534, Revised. Amendment to Regional Program of Nominations for Senate Bill 1 Trade Corridor Enhancement Program.

Presenter:
Kenneth Kao

Recommended Action:
Commission Approval

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Metropolitan Transportation Commission
Programming and Allocations Committee

September 14, 2022 **Agenda Item 2e - 22-1323**

MTC Resolution No. 4534. Amendment to Regional Program of Nominations for Senate Bill 1 Trade Corridor Enhancement Program

Subject:

Amendment to add one project to the Regional Program of Nominations for the Senate Bill 1 (SB 1) Trade Corridor Enhancement Program.

Background:

The Road Repair and Accountability Act of 2017, commonly known as Senate Bill 1 (SB1, Beall), provides over $5 billion in new transportation revenues annually to both new and existing funding programs. Among these, MTC compiles Bay Area project nominations for the Trade Corridor Enhancement Program (TCEP) from sponsor agencies. MTC recently approved the TCEP Program of Nominations in July 2022. The California Transportation Commission adopted the TCEP Guidelines in August, and applications are due in late 2022.

Subsequent to adoption of the Bay Area TCEP program of nominations, the City of Oakland notified MTC staff of their intent to apply for TCEP funds for the Transforming Oakland's Waterfront Neighborhoods (TOWN) Rail Safety Improvements project. Staff recommends adding this project to the Bay Area TCEP program of nominations for $30.2 million. The TOWN project is consistent with the goals of the TCEP program, and is a prioritized project in the Bay Area's federal Bipartisan Infrastructure Law (BIL) Regional Strategy. More information on the project is included in Attachment 1, provided by the City of Oakland.

Issues:

None.

Recommendation:

Staff recommends the Committee refer MTC Resolution No. 4534, Revised to the Commission for approval, and direct staff to transmit the updated program of nominations to the California Transportation Commission (CTC).

Attachments:

- Attachment 1: TOWN Rail Safety Improvements Fact Sheet
- MTC Resolution No. 4534, Revised

Therese W. McMillan

Transforming
Oakland's
Waterfront
Neighborhoods

TOWN RAIL SAFETY IMPROVEMENTS

Rendering of Embarcadero West at Webster Street

BACKGROUND

Oakland is a vital transportation hub in the Bay Area, connecting the Port of Oakland—a global gateway for the Northern California Megaregion—to the rest of the nation through the National Multimodal Freight Network and the National Highway System.

Embarcadero West is a 1.5-mile city street on the National Multimodal Freight Network with railroad tracks running down its center. Approximately 80 trains a day use this corridor for freight and passenger service operated by Union Pacific Railroad (UPRR) and Amtrak/Capitol Corridor, respectively. This corridor is one of the greatest bottlenecks for both UPRR and Amtrak which see frequent delays from vehicles getting stuck on the tracks at the at-grade crossings.

Project Schedule:

Planning	2022
Environmental	2023
Design	2024
Obligation	2025
Construction	2028

Total Project Cost:

$46.5M

Total TCEP Fund Request:

$30.2M*

***TCEP funds would be leveraged to provide a match for Federal discretionary grants**

PROJECT SCOPE

The City of Oakland's Trade Corridors Enhancement Program (TCEP) grant for **TOWN Rail Safety Improvements** will reconstruct and upgrade three at-grade crossings at Market Street, Martin Luther King Jr. Way, and Clay Street to current standards, including new railroad and pedestrian crossing arms and equipment, directional signage, pavement delineation, and intersection lighting. The Project will facilitate the reinstatement of the overweight vehicle route serving the Port of Oakland, which currently travels along 7th Street through the West Oakland community. The Project will also improve segments between Embarcadero and 2nd Street along Martin Luther King Jr. Way and Clay Street, and up to 3rd Street along Market Street. These improvements will include installing new traffic signals with preemption, adding street lighting, improving multi-modal safety and accessibility, and re-grading the street to improve sight distance and accommodate improvements.

TOWN SUITE OF PROJECTS

The TCEP proposal is a component of corridor-long improvements on Embarcadero West, along with additional TOWN projects that will enhance access to the Waterfront while improving goods movement and safety for all users. The TOWN projects will address long-standing bottlenecks for freight and passenger rail, reduce greenhouse gas emissions and air pollutants, pave the way for affordable housing, and strengthen connectivity between Oaklanders and their waterfront.

Date: July 27, 2022
W.I.: 1515
Referred by: PAC
Revised: 09/28/22-C

ABSTRACT

Resolution No. 4534

This resolution adopts the program of the Bay Area's nominations for the 2022 Trade Corridors Enhancement Program (TCEP) Cycle 3 for submission to the California Transportation Commission (CTC), consistent with the provisions of Senate Bill 1 (Chapter 5, Statutes of 2017).

Attachment A – Funding Levels for 2022 Trade Corridors Enhancement Program

Attachment B – Program of Bay Area Nominations for 2022 Trade Corridors Enhancement Program – Cycle 3

This resolution was revised on September 28, 2022 via Commission action to add one project to Attachment B – Program of Bay Area Nominations for 2022 TCEP – Cycle 3.

Further discussion of these actions is contained in the Summary Sheet to the MTC Programming and Allocations Committee dated July 13, 2022 and September 14, 2022.

Date: July 27, 2022
W.I.: 1515
Referred by: PAC

RE: Adoption of Program of MTC's Nominations for the 2022 SB 1 Trade Corridors Enhancement Program (TCEP) – Cycle 3

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4534

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to Government Code Section 66500 *et seq.*; and

WHEREAS, MTC is the federally designated Metropolitan Planning Organization (MPO), pursuant to Section 134(d) of Title 23 of the United States Code (USC) for the nine-county San Francisco Bay Area region (the region); and

WHEREAS, MTC has adopted and periodically revises, pursuant to Government Code Sections 66508 and 65080, a Regional Transportation Plan (RTP); and

WHEREAS, on April 28, 2017, the Governor signed Senate Bill 1 (Chapter 5, Statutes of 2017) into law, authorizing an increase to various transportation-related taxes and fees, and directing $300 million per year to the Trade Corridor Enhancement Account to fund infrastructure improvements on corridors that have a high volume of freight movement; and

WHEREAS, on July 21, 2017, the Governor signed Senate Bill 103 (Chapter 95, Statutes of 2017) into law, which directs the California Transportation Commission to allocate Trade Corridor Enhancement Account funds and California's National Highway Freight Program formula funds (authorized by the Fixing America's Surface Transportation (FAST) Act of December 4, 2015) through the Trade Corridor Enhancement Program; and

WHEREAS, on August 17, 2022, the California Transportation Commission (CTC) is expected to approve the Guidelines for the Trade Corridors Enhancement Program, which includes two years of funding totaling roughly $1.05 billion (Attachment A); and

WHEREAS, MTC, as the MPO for the nine-county Bay Area, is responsible for compiling project nominations for the regional portion of the TCEP within the region, as defined

in section 9 of the CTC Guidelines for the Trade Corridor Enhancement Program; now, therefore, be it

RESOLVED, that MTC adopts the Program of Bay Area Nominations for the Trade Corridor Enhancement Program, attached hereto as Attachment B and incorporated herein as though set forth at length; and, be it further

RESOLVED, that MTC, as the agency responsible for compiling project nominations, shall not be expected or responsible to fund any cost increases, and the responsibility and accountability for the Bay Area's TCEP projects to stay within agreed-upon cost, scope, and schedule lies with the sponsoring and implementing agencies; and be it further

RESOLVED, that the Executive Director may make minor adjustments to Attachments A and B to respond to direction from the California Transportation Commission and/or the California Department of Transportation (Caltrans); and, be it further

RESOLVED, that MTC's adoption of the Bay Area Compilation of Project Nominations for the Trade Corridor Enhancement Program is for planning purposes only, with each project still subject to review and application approval pursuant to MTC Resolution Nos. 3115 and 3757; and, be it further

RESOLVED, that the Executive Director shall forward a copy of this resolution, and such other information as may be required to the CTC, Caltrans, and to such other agencies as may be appropriate.

METROPOLITAN TRANSPORTATION COMMISSION

Alfredo Pedroza, Chair

The above resolution was entered into by the Metropolitan Transportation Commission at a regular meeting of the Commission held in San Francisco, California and at other remote locations, on July 27, 2022.

Attachment B
MTC Resolution No. 4534
SB1 Trade Corridor Enhancement Program (TCEP)
Program of Bay Area Nominations
FY 2023-24 and FY 2024-25
September 2022

MTC Resolution No. 4534
Attachment B
Adopted: 07/27/22-C
Revised: 09/28/22-C

Project List ($millions)

SB1 Trade Corridor Enhancement Program (TCEP) Program of Bay Area Nominations	County	Sponsor	TCEP Amount
I-880 Interchange Improvements (Whipple/Industrial)	Alameda	ACTC	$42
Rail Safety Enhancement Program (Phase A)	Alameda	ACTC	$25
Green Power Microgrid Project	Alameda	Port of Oakland	$60
TOWN Rail Safety Improvements	Alameda	Oakland	$30
I-80 San Pablo Dam Road Phase 2 (Preconst.)	Contra Costa	CCTA	$24
SR-37 Sears Pt to Mare Island Improvement Project	Multi-County	MTC	$85
US-101/Woodside Interchange/Port Access (Preconst.)	San Mateo	Redwood City	$25
US-101/SR-25 Santa Teresa Extension (Preconst.)	Santa Clara	VTA	$4
I-80 Westbound Cordelia Truck Scales	Solano	STA	$109
Total			**$405**

J:\SECTION\ALLSTAFF\Resolution\TEMP-RES\MTC\Sept PAC\[tmp-4534_Attachments_A_B.xlsx]TCEP Attach B Sept 2022

375 Beale Street, Suite 800
San Francisco, CA 94105

Metropolitan Transportation Commission

Legislation Details (With Text)

File #:	22-1451	**Version:**	1	**Name:**	
Type:	Report			**Status:**	Informational
File created:	8/31/2022			**In control:**	Programming and Allocations Committee
On agenda:	9/14/2022			**Final action:**	
Title:	FY 2021-22 Federal Earmark Repurposing. Federal Highway Administration (FHWA) repurposed earmark funds under the earmark repurposing provision of the Consolidated Appropriations Act, 2022.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	2f_22-1451_Federal_Earmark_Repurposing.pdf				

Date	Ver.	Action By	Action	Result

Subject:

FY 2021-22 Federal Earmark Repurposing. Federal Highway Administration (FHWA) repurposed earmark funds under the earmark repurposing provision of the Consolidated Appropriations Act, 2022.

Presenter:

Mallory Atkinson

Recommended Action:

Information

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Metropolitan Transportation Commission
Programming and Allocations Committee

September 14, 2022 **Agenda Item 2f - 22-1451**

FY 2021-22 Federal Earmark Repurposing

Subject:

Federal Highway Administration (FHWA) repurposed earmark funds under the earmark repurposing provision of the Consolidated Appropriations Act, 2022.

Background:

The federal Consolidated Appropriations Act, 2022 includes a provision enabling states to repurpose unused earmark balances from projects that have not substantially progressed, or that are completed and closed.

FY 2021-22 Earmark Repurposing – MTC Submittal

In July, the Commission directed staff to develop and submit to Caltrans the list of Bay Area earmarks for repurposing. This agenda item is a follow-up to the Commission to report earmarks that MTC submitted to Caltrans for repurposing this year.

Staff worked with affected project sponsors, transit agencies, and County Transportation Agencies (CTAs) to verify the status of projects associated with available earmark balances. In response to the requests from CTAs and sponsors, staff submitted nearly $5.2 million in earmark balances to Caltrans for repurposing, as detailed in the table below.

Sponsor	Earmark Description	Balance	Earmark Repurposing - MTC Submittal
Alameda County	Streetscape Improvements in Cherryland/Ashland, California	$27,100	Repurpose to: **Alameda County, Anita Avenue Complete Streets Improvements**
Alameda County	Construct safe routes to school in Cherryland and Ashland	$10,921	Repurpose to: **ACTC, East Bay Greenway Multimodal - Phase 1**
Hayward	Reconstruct Interstate 880- Route 92 interchange in Hayward	$327,819	Repurpose to: **Hayward, Hayward Main Street Complete Streets**
San Francisco County	Harney Way Roadway Improvements, CA	$475,000	Repurpose to: **SFMTA, Folsom Street Streetscape**
VTA	Reconstruct Interstate 880- Route 92 interchange in Hayward	$2,082,816	Repurpose to: **VTA, US 101/SR 25/Santa Teresa Boulevard Extension**
San Jose	Construct the Silicon Valley Transportation Incident Management Center in San Jose	$146,577	Repurpose to: **San Jose, En Movimiento - Quick-Strike Improvements**
WETA	Berkeley/Albany Ferry Service in CA - vessel and terminal construction	$475,000	Repurpose to: **WETA, Vessel Mid-Life Refurbishment & Engine Overhaul – MV Pisces**

Sponsor	Earmark Description	Balance	Earmark Repurposing - MTC Submittal
WETA	Berkeley/Albany Ferry, Alameda and San Francisco Counties - construction of a ferry terminal in the Berkeley/ Albany area and construction of ferry vessels to operate in ferry service between Berkeley/Albany and San Francisco	$642,346	Repurpose to: **WETA, Vessel Mid-Life Refurbishment & Engine Overhaul – MV Pisces**
WETA	Berkeley/Albany to San Francisco Ferry Service	$1,000,000	Repurpose to: **WETA, Vessel Mid-Life Refurbishment & Engine Overhaul – MV Pisces**

Issues:

None.

Recommendation:

Information only.

Attachments:

None.

Therese W. McMillan

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Metropolitan Transportation Commission

Legislation Details (With Text)

File #:	22-1285	**Version:**	1	**Name:**	
Type:	Resolution			**Status:**	Commission Approval
File created:	8/9/2022			**In control:**	Programming and Allocations Committee
On agenda:	9/14/2022			**Final action:**	
Title:	MTC Resolution Nos. 4444, Revised, 4510, Revised, 4513, Revised, and 4169, Revised. Transit Capital Priorities Policy and Program FY2021-22 - FY2023-24 Update of Transit Capital Priorities (TCP) Process and Criteria and programming of $42.3 million in in the TCP program; including $40.0 million in FTA Formula Revenue funding for FYs 2021-22 through 2023-24, for transit operator state-of-good-repair consistent with the TCP Process and Criteria and additional programming of $2.3 million in AB 664 Bridge Tolls; a correction to the BATA Project Savings program; and discussion of financing against future FTA revenues.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	3a_22-1285_Resos_4444-4510-4513-4169_TCP_Program.pdf				

Date	Ver.	Action By	Action	Result

Subject:

MTC Resolution Nos. 4444, Revised, 4510, Revised, 4513, Revised, and 4169, Revised. Transit Capital Priorities Policy and Program FY2021-22 - FY2023-24

Update of Transit Capital Priorities (TCP) Process and Criteria and programming of $42.3 million in in the TCP program; including $40.0 million in FTA Formula Revenue funding for FYs 2021-22 through 2023-24, for transit operator state-of-good-repair consistent with the TCP Process and Criteria and additional programming of $2.3 million in AB 664 Bridge Tolls; a correction to the BATA Project Savings program; and discussion of financing against future FTA revenues.

Presenter:

Margaret Doyle

Recommended Action:

Commission Approval

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Metropolitan Transportation Commission
Programming and Allocations Committee

September 14, 2022 **Agenda Item 3a - 22-1285**

MTC Resolution Nos. 4444, Revised, 4510, Revised, 4513, Revised, and 4169, Revised.
Transit Capital Priorities Policy and Program FY2021-22 – FY2023-24

Subject:

Update of Transit Capital Priorities (TCP) Process and Criteria and programming of $42.3 million in in the TCP program; including $40.0 million in FTA Formula Revenue funding for FYs 2021-22 through 2023-24, for transit operator state-of-good-repair consistent with the TCP Process and Criteria and additional programming of $2.3 million in AB 664 Bridge Tolls; a correction to the BATA Project Savings program; and discussion of financing against future FTA revenues.

Background:

This item proposes to program $40.0 million in previously set-aside balances from Federal Transit Administration (FTA) Sections 5307 Urbanized Area Formula, 5337 State of Good Repair, and 5339 Bus and Bus Facilities Funds; in FYs 2021-22 through 2023-24 to support transit capital replacement and rehabilitation projects and maintenance and operating costs. MTC is the designated recipient of these FTA formula funds for the large Urbanized Areas (UZAs) in the region and has been authorized by Caltrans to select projects and recommend funding allocations for the small UZAs.

Following the framework proposed in March and updated in May, and as developed in cooperation with transit operators over the last several months, this action updates the TCP Process and Criteria to increase fixed guideway caps and add a zero-emission bus (ZEB) infrastructure set-aside, and programs the bulk of those set-asides for FY 2021-22. In May, the Commission directed staff to set aside $23 million annually for increased fixed guideway caps and $20 million annually for zero-emission bus infrastructure projects. Today's action will formalize that policy and program those set-asides onto specific projects. In addition, minor edits to the program are incorporated as requested by operators. Today's programming actualizes the FY 2021-22 fixed guideway cap and ZEB set-asides, with the set-asides for FYs 2022-23 and 2023-24 to be finalized in future programming actions.

FYs 2021-22 through 2023-24 Estimated Apportionments, Programming, and Balance

	FY 2022	FY 2023	FY 2024	Total
TCP Apportionments[1]	**$656**	**$668**	**$684**	**$2,008**
TCP Programming (3/2022)[2]	$465	$410	$476	$1,351
BART Car Pay-Go (5/2022)[3]	$125	$175	$25	$325
Fixed Guideway Cap Increase[4]	$20	*$23*	*$26*	*$66*
ZEB Infrastructure[5]	$18	*$19*	*$23*	*$60*
Other Policy Priorities[6]	*$28*	*$41*	*$134*	*$203*

Note: unshaded cells in the table will be programmed at a later date.

1. Actual apportionments for FY 2022, FYs 2023-2026 projected based on national FTA funding levels in BIL.
2. Initial three-year program approved in March 2022, with May 2022 updates to baseline program incorporated.
3. For FY22 and FY23, illustrative programming represents BART Replacement Car-eligible apportionments minus baseline programming (note 2) and additional programming opportunities (notes 4 and 5). For FY24, programming represents BART's anticipated actual cash flow need.
4. Set-aside that increases fixed guideway cap by 20%, actual FY 2021-22 amount net of deferrals (deferrals reflected in FY 2023-24).
5. Set-aside that provides average of $20 million annually for zero emission/bus infrastructure, actual FY 2021-22 amount net of deferrals (deferrals reflected in FY 2023-24).
6. Programming balance net of above lines; includes UZAs and funding sources for which BART Car Replacement is ineligible. Uses of this could also include fixed guideway and zero emission/bus infrastructure.

Programming Set-Asides

In May, this committee approved the concept of setting aside $23 million annually for fixed guideway projects and $20 million annually for zero-emission buses (ZEBs) and associated facility improvements. Today, staff are proposing principles to update the TCP Process and Criteria as well as specific programming recommendations.

Fixed Guideway (FG) Cap Increase: A 20% increase to the Fixed Guideway cap, rooted in increased funding levels for FTA Section 5337 State of Good Repair funds from the Bipartisan Infrastructure Law and ongoing need in the region for these projects, represents approximately $23 million per year on top of the existing $121 million Fixed Guideway Cap. Today, staff proposes updates to the TCP Process and Criteria and TCP program for FY 2021-22 (MTC

Resolution Nos. 4444 and 4510) to program the increase to the operators based on current Fixed Guideway Cap shares. Programming detail can be found in Attachment A to this memo.

Operator	**Current FG Cap: $121,000,000**	***20% Increase: $22,990,000***	***Proposed FG Cap: $143,990,000***
ACE	$1,594,000	*$302,860*	*$1,896,860*
BART	52,646,000	*10,002,740*	*62,648,740*
Caltrain	13,673,000	*2,597,870*	*16,270,870*
GGBHTD	5,350,000	*1,016,500*	*6,366,500*
SFMTA	33,324,000	*6,331,560*	*39,655,560*
VTA	8,103,000	*1,539,570*	*9,642,570*
WETA	6,310,000	*1,198,900*	*7,508,900*

ZEB Infrastructure Set-Aside: In May, staff recommended an annual $20 million commitment for FYs 2021-22 through 2023-24 for ZEB infrastructure needs. The TCP will be a critical piece of the region's transition to a zero-emission fleet, required by California Air Resources Board's Innovative Clean Transit rule. In addition to vehicles, the ZEB transition will require additional infrastructure for battery charging, hydrogen fueling, and associated elements. The TCP is typically not able to fund these needs in the large UZAs of San Francisco-Oakland, Concord, and Antioch due to an abundance of higher-priority score-16 needs. Staff held a call for projects among eligible operators for the FY 2021-22 set-aside, and today propose that specific programming. The policies and procedures governing the set-aside are proposed for incorporation into the TCP Process and Criteria (MTC Resolution No. 4444).

Below is the planned programming and deferrals. Deferrals will be prioritized for investment in zero emission infrastructure in the years noted in the table below, but the current funding capacity will be used in FY 2021-22 to meet score-16 needs within the TCP program. For FY 2021-22, amounts per operator were based on relative size of bus fleet. In coordination with operators, MTC is undertaking a regional ZEB transition strategy, and intends to use the results of this strategy to inform programming in future years. Additional detail can be found in Attachment A to this memo.

Operator	UZA	Project	ZEB Set-Aside Amount
AC Transit	SF-O	Construction of Hydrogen Fueling Infrastructure	$5,557,743
CCCTA	CON	Electric Bus Charging Infrastructure	1,478,018
GGBHTD	SF-O	ZEB Infrastructure Design	1,012,172
Marin	SF-O	ZEB Charging – Site Prep	693,184
SFMTA	SF-O	Facility Development – Battery Electric Buses	6,312,271
SamTrans	SF-O	South Base Near-Term Battery Electric Bus (BEB) Charging Infrastructure	2,907,693
Union City	SF-O	Electric Vehicle Charging Infrastructure	141,091
TOTAL FY 2021-22 ZEB Infrastructure Set-Aside Programming			**$18,102,172**
			Deferrals
ECCTA	ANT	*Deferred to FY 2023-24*	$1,011,875
LAVTA	CON	*Deferred to FY 2024-25*	530,159
WestCAT	SF-O	*Deferred to FY 2022-23*	355,794
TOTAL FY 2021-22 Set-Aside Deferrals			**$1,897,828**
TOTAL			**$20,000,000**

Updates to FYs 2021-22 through 2023-24 Programming

In addition to programming the FG/ZEB set-asides, this action includes minor updates to the FY22-FY24 TCP program:

- AB 664: In March, the Commission approved AB 664 programming to AC Transit specifically for Core Capacity Challenge Grant (CCCGP, MTC Resolution No. 4123) projects. Today's action programs the remaining $2.3 million to eligible operators as match to federal funds.
- AC Transit: AC Transit's BATA Project Savings allocation in FY 2021-22 is corrected. $1.4 million for bus replacements will instead use FTA formula funding due to BATA Project Savings program limits. The majority of this ($1.3 million) is committed in FY 2021-22, and the remainder in FY2023-24.
- Marin Transit: Programming an additional $0.2 million to a Revenue Vehicle Rehabilitation project per operator request, and $0.1 M in Preventive Maintenance to compensate for deferred replacement of revenue vehicles, per TCP Policy.
- Blue Ribbon Exchange: In October 2021, MTC programmed all remaining American Rescue Plan (ARP) funding directly to operators, including $85 million in previously-set-

aside funds for the Blue Ribbon Transit Recovery Task Force. The $85 million was set up as a fund exchange with targeted amounts for Blue Ribbon initiatives coming back to MTC from STA population-based shares, STA revenue-based shares, and TCP/FTA formula funds. $13.8 million from FYs 2022-23 and 2023-24 is moved from operator programming on to Blue Ribbon Transit Transformation Action Plan projects programmed to MTC. In the coming months and years, staff will return with recommendations on specific Action Plan projects for this funding.

- Minor re-balancing between Section 5307 and Section 5339 funding for certain projects to reflect final apportionments of Section 5339 in large UZAs.

In summary, staff is recommending the following:

1. Update the TCP Process and Criteria to include the increased FG caps and guidance for the ZEB infrastructure set-aside.
2. Program specific projects from the FG and ZEB set-asides.
3. Update the TCP based on operator requests and minor revisions.
4. Return to the Commission in future to program the remainder of the BIL authorized funding amounts to address existing and evolving transit investments.

BART Replacement Railcar Funding and Financing

The influx of FTA formula funds from the BIL provided an opportunity to meet MTC's commitments to the BART Railcar Replacement project through greatly increased pay-go funding, significantly reducing the amount of interest expense required to be paid from the TCP program, though not removing the need for some type of financing. In May 2022, the Commission programmed a total of $325 million directly to the BART Railcar Replacement program from fiscal years FY2021-22, FY2022-23, and FY2023-24. BART continues to accept new railcars from the manufacturer and cash flow projections are that proceeds from financing will be needed near the end of this fiscal year. Staff will return in the coming months to this committee and to BAIFA to recommend the adoption of the associated Tax and Regulatory Agreement, and in calendar year 2023 to recommend the approval of the financing structure.

Next Steps

Following continued discussion with transit operators through forums including the Transit Finance Working Group, any other amendments to the FYs 2021-22 through 2023-24 program will be brought to the Commission for consideration as appropriate.

Following Commission approval of the TCP program, staff will include projects and funding in upcoming administrative modifications and amendments to the regional Transportation Improvement Program (TIP) as applicable.

Issues:

None.

Recommendation:

Staff recommends referral of MTC Resolution 4444, Revised, 4510, Revised, 4513, Revised, and 4169, Revised to the Commission for approval, and regarding set-asides and unprogrammed balances, Commission direction to staff to return to this Committee in the coming months with detailed principles and programming for fixed guideway state of good repair and zero-emission/bus infrastructure as well as any additional programming.

Attachments:

Attachment A: TCP FYs 2021-22 through 2023-24 Programming Detail

MTC Resolution No. 4444, Revised (TCP Process and Criteria)

MTC Resolution No. 4510, Revised (TCP FTA Program FY22-FY24)

MTC Resolution No. 4513, Revised (FY22 AB 664 Program)

MTC Resolution No. 4169, Revised (BATA Project Savings Program)

Therese W. McMillan

Attachment A: TCP FYs 2021-22 through 2023-24 Programming Detail

Subject:

This supplemental memo provides additional detail and background on the programming of $40.0 million in FTA Formula Revenues, and $2.3 million in AB 664 Bridge Tolls for FYs 2021-22 through 2023-24.

Background:

Process

The TCP program provides FTA formula funds and other regional revenues for transit capital maintenance and rehabilitation. The main goals of the program are to fund basic capital requirements to achieve and maintain a state of good repair, to maintain reasonable fairness to all the operators in the region, and to complement the other MTC funding programs.

In May 2022, the Commission approved set-asides of approximately $23 million and $20 million annually for a fixed guideway (FG) cap increase and a Zero Emission Bus (ZEB) Infrastructure Set-Aside program, respectively. Today's item programs out those set-asides, as requested by operators via calls for projects.

Zero-Emission Bus (ZEB) Set-Aside Programming

With direction from the Commission, staff set aside $20 million for the ZEB Infrastructure Set-Aside program. The annual set-aside per UZA was calculated first, based on each UZA's proportional share of 5339 (Bus and Bus Facility) programming.

UZA	FY 2021-22	FY 2022-23	FY 2023-24	3-Year Total
SF-O	$ 16,979,947	$ 16,979,947	$ 16,979,947	$ 50,939,842
CON	$ 2,008,177	$ 2,008,177	$ 2,008,177	$ 6,024,531
ANT*			$ 3,035,628	$ 3,035,628
	$ 18,988,124	$ 18,988,124	$ 22,023,752	$ 60,000,000

**ECCTA (Tri-Delta) is the only bus operator in the ANT UZA and indicated that they would not need their share of the $20 M until FY24; thus the three-year total is shown as a lump sum in that year.*

A call for projects was released to eligible operators in July 2022, informing operators of their share of the set-aside. Each operator's share was calculated based on their share of the total bus

fleet, per the Regional Transit Capital Inventory, as a proxy for overall need. Below shows the $18.1 million of programming to operators in FY 2021-22, as well as $1.9 million in deferrals.

Operator	UZA	Project	ZEB Set-Aside Amount
AC Transit	SF-O	Construction of Hydrogen Fueling Infrastructure	$5,557,743
CCCTA	CON	Electric Bus Charging Infrastructure	1,478,018
GGBHTD	SF-O	ZEB Infrastructure Design	1,012,172
Marin	SF-O	ZEB Charging – Site Prep	693,184
SFMTA	SF-O	Facility Development – Battery Electric Buses	6,312,271
SamTrans	SF-O	South Base Near-Term Battery Electric Bus (BEB) Charging Infrastructure	2,907,693
Union City	SF-O	Electric Vehicle Charging Infrastructure	141,091
TOTAL FY 2021-22 ZEB Infrastructure Set-Aside Programming			**$18,102,172**
			Deferrals
ECCTA	ANT	*Deferred to FY 2023-24*	$1,011,875
LAVTA	CON	*Deferred to FY 2024-25*	530,159
WestCAT	SF-O	*Deferred to FY 2022-23*	355,794
		TOTAL FY 2021-22 Set-Aside Deferrals	**$1,897,828**
		TOTAL	**$20,000,000**

ECCTA, LAVTA, and WestCAT elected to defer to later years of the program. ECCTA, as the only operator in the Antioch UZA, had already indicated deferral until FY 2023-24; thus their set-aside was programmed to the BART Railcar Replacement project. WestCAT and LAVTA opted to defer their programming to FYs 2022-23 and 2024-25, respectively. The funds that would have gone toward WestCAT's San Francisco-Oakland UZA set-aside are directed to other critical programming (AC Transit bus replacements and Marin Transit vehicle rehabilitation), and LAVTA's funding remains in balance in the Concord UZA. MTC staff is closely tracking these deferrals such that they will be fully restored to the operators when the operators request to program them.

AB 664 and BATA Project Savings

$2.3 million in AB 664 funds is programmed to eligible operators for local match, based on share of the TCP program. Detail can be seen in MTC Resolution No. Additionally, staff identified that AC Transit was over-programmed for BATA Project Savings and is reducing their BATA allocation by $1.4 million. $1.3 million of that programming is re-captured in FY 2021-22

(Replace (23) 40ft Urban Buses - Diesel), and the remaining $0.1 million is in FY 2023-24, but may be moved up to an earlier program year if future capacity permits.

Fixed Guideway Cap Programming

In May, this committee approved staff's recommendation to setting aside the $23 million per year needed for an approximately 20% increase. The following table shows the original fixed guideway programming, the increase for each operator, and the final fixed guideway programming for FY 2021-22.

Operator	Project	FY 2022 FG Programming (March 2022)	*FG Cap Increase*	FY 2022 FG Programming (TOTAL)
ACE	**ACE Capitalized Maintenance**	**$1,594,000**	**$302,860**	**$1,896,860**
BART	Train Control Renovation	10,240,000	*1,080,000*	11,320,000
	Traction Power System Renovation	10,240,000	*3,920,000*	14,160,000
	Rail, Way, and Structures Program	17,406,000	*1,800,000*	19,206,000
	Fare Collection Program	6,360,000	*3,202,740*	9,562,740
	Elevator Renovation Program	7,000,000	-	7,000,000
	FY 21 Programming of FY 22 Cap[1]	*1,400,000*	-	*1,400,000*
BART		**52,646,000**	***10,002,740***	**62,648,740**
Caltrain	Systemwide Track Rehabilitation	9,038,600	*2,597,870*	11,636,740
	Comm. System/Signal Rehab.	2,554,400	-	2,554,400
	TVM Project	2,080,000	-	2,080,000
Caltrain		**13,673,000**	***2,597,870***	**16,270,870**
GGBHTD	**Ferry Dredging**	**5,350,000**	***1,016,500***	**6,366,500**
SFMTA	Cable Car Infrastructure	2,483,000	-	2,483,000
	Overhead Line Rehabilitation	2,930,000	-	2,930,000
	Muni Rail Replacement	3,639,000	*6,331,560*	9,970,560
	Wayside/Central Train Control & Trolley Signal Systems Rehabilitation	24,272,000	-	24,272,000
SFMTA		**33,324,000**	***6,331,560***	**39,655,560**
VTA	North 1st Street/Tasman Drive - EB Tack Switch Addition Proj. - TSP Enhancements	1,640,000	-	1,640,000
	Network Switch Replacement/Upgrade	3,680,000	-	3,680,000

	Rail Replacement and Rehabilitation	6,876,000	-	6,876,000
	OCS Rehab & Replacement Program	13,120,000	-	13,120,000
	Track Intrusion Abatement FY22/23	2,227,200	-	2,227,200
	FY 22 FG Cap Waiver[2]	*(19,440,200)*	*1,539,570*	*(17,900,630)*
VTA		**8,103,000**	***1,539,570***	**9,642,570**
WETA	Vessel Engine Overhaul - Pyxis Class Vessels	1,810,560	-	1,810,560
	Ferry Mid-Life Refurbishment - MV Gemini	3,590,000	-	3,590,000
	Passenger Float Rehab - Pier 9 Berthing Facility	1,089,600	-	1,089,600
	Waterjet Control System Upgrade - Pyxis Class	600,000	-	600,000
	Ferry Channel Dredging - Vallejo Terminal	2,455,920	-	2,455,920
	Programming of Deferred Cap[3]	*(3,236,080)*	-	*(3,236,080)*
	FY 22 FG Cap Increase Voluntary Deferral[4]	-	*1,198,900*	*1,198,900*
WETA		**6,310,000**	***1,198,900***	**7,508,900**

[1] BART advanced $5.6 M of FG cap funds across FYs 2020-21 to 2024-25, programming it in FY 2020-21 while keeping the 5-year total the same. This reduces the base FG cap available to BART in FYs 2021-22 through 2024-25 by $1.4 M per year.
[2] VTA is programmed 5337 funds above its $8,103,000 cap. Original programming above the cap for FY 2021-22 was $19,440,200, the FG cap increase thus reduces the size of the waiver to $17,900,630. VTA staff requested and was granted a waiver of the cap due to additional funds available in the San Jose UZA after meeting other VTA funding needs and in recognition of the Caltrain funding agreement.
[3] WETA has opted to reinstate voluntarily deferred caps from prior years in the proposed program, $3,236,080 of which is reinstated in FY 2021-22.
[4] WETA has opted to voluntarily defer the FY 2021-22 FG cap increase.

Blue Ribbon Transit Transformation Plan Funding

In October 2021, MTC programmed $85 million in American Rescue Plan (ARP) funding to transit operators, an amount that had been previously set aside for regional Blue Ribbon Transit Recovery Task Force initiatives. This was done in order to demonstrate full programming of the region's ARP funds and strengthen the case for additional need by operators in applying for the

$2.2 billion in ARP Additional Assistance funding available nationwide. The $85 million was set up as a fund swap with targeted amounts for Blue Ribbon initiatives coming back to MTC from STA population-based shares, STA revenue-based shares, and TCP/FTA formula funds, as most recently detailed at this committee in June 2022.

Today's item completes fund swaps with previously-programmed TCP projects as follows, programming funding for Blue Ribbon Transit Transformation Plan projects in FY 2022-23 and FY 2023-24. Operators are expected to cover the like amounts, either directly or indirectly, from the additional shares programmed in October 2021.

Operator	Project	FY 23	FY 24	Total
ACE	ACE Fixed Guideway (Capitalized Maintenance)	($302,860)	($32,270)	($335,130)
Caltrain	TVM Project	($1,073,000)	($846,769)	($1,919,769)
SFMTA	Motor Coach & Trolley Coach Midlife Overhauls	-	($11,534,333)	($11,534,333)
Total		**($1,375,860)**	**($12,413,372)**	**($13,789,232)**
	Reprogrammed to Blue Ribbon Transit Transformation	**$1,375,860**	**$12,413,372**	**$13,789,232**

Next Steps

Staff plan to return to the Commission with programming principles, proposed programming of remaining balances, and, if needed, amendments to the TCP Policy in the coming months. Amendments to the FYs 2021-22 through 2023-24 program will be brought to the Commission for consideration as appropriate.

Date: January 27, 2021
W.I.: 1512
Referred By: PAC
Revised: 09/28/22-C

ABSTRACT

Resolution No. 4444

This resolution approves the process and establishes the criteria for programming:

- Federal Transit Administration (FTA) Sections 5307 Urbanized Area Formula, 5337 State of Good Repair, and 5339 Bus & Bus Facilities formula funds apportioned to the San Francisco Bay Area starting in FY 2020-21
- Federal Highway Administration STP and CMAQ funds dedicated to Transit Capital Rehabilitation and Transit Priorities projects by the One Bay Area Grant Program, and
- Bridge tolls and other regional revenues dedicated to transit capital projects by the Core Capacity Challenge Grant Program (MTC Resolution 4123), and
- Proceeds of financing required to advance future FTA or STP/CMAQ revenues to fund annual TCP or CCCGP programs of projects.

This resolution includes the following attachment:

Attachment A - San Francisco Bay Area Transit Capital Priorities Process and Criteria for Development of the FY2020-21 and Future Transit Capital Priorities Project Lists

Attachment A of this resolution was revised on September 28, 2022 to add process and criteria information for the Zero Emission Bus Infrastructure Set-Aside program and update Fixed Guideway caps as directed by the Commission.

Further discussion of the Transit Capital Priorities Policy is contained in the MTC Programming and Allocations Committee Summary Sheets dated January 13, 2021 and September 14, 2022.

Date: January 27, 2021
W.I.: 1512
Referred By: PAC
Revised: 09/28/22-C

RE: San Francisco Bay Area Transit Capital Priorities Process and Criteria for Fiscal Years Starting FY2020-21

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4444

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to Government Code Sections 66500 et seq.; and

WHEREAS, MTC is the designated Metropolitan Planning Organization (MPO) for the nine-county Bay Area and is required to prepare and endorse a Transportation Improvement Program (TIP) which includes a list of priorities for transit capital projects; and

WHEREAS, MTC has worked cooperatively with the cities, counties and transit operators in the region to establish a process and a set of criteria for the selection of transit capital projects to be included in the TIP; and

WHEREAS, the process and criteria to be used in the selection and ranking of projects are set forth in Attachment A, which is incorporated herein as though set forth at length; now, therefore, be it

RESOLVED, that MTC approves the Transit Capital Priorities (TCP) Process and Criteria as set forth in Attachment A; and, be it further

RESOLVED, that MTC will use the process and criteria to program Federal Transit Administration (FTA) Sections 5307, 5337 and 5339 funds or any successor programs for fiscal years starting in FY2020-21, Federal Highway Administration STP and CMAQ funds dedicated to Transit Capital Rehabilitation and Transit Priorities projects by the One Bay Area Grant Program, bridge tolls and other regional revenues dedicated to transit capital projects by the Core Capacity Challenge Grant Program (MTC Resolution 4123), and proceeds of financing required to advance future FTA or STP/CMAQ revenues to fund annual TCP programs of projects to finance transit projects in the San Francisco Bay Area region; and, be it further

RESOLVED, that the Executive Director of MTC is authorized and directed to forward a copy of this resolution to the Federal Transit Administration (FTA), and such agencies as may be appropriate.

METROPOLITAN TRANSPORTATION COMMISSION

Scott Haggerty, Chair

The above resolution was entered into by the
Metropolitan Transportation Commission
at a regular meeting of the Commission held
in San Francisco, California and at
other remote locations, on January 27, 2021.

San Francisco Bay Area Transit Capital Priorities Process and Criteria

For Development of the FY2020-21 and Future Transit Capital Priorities Project Lists

Metropolitan Transportation Commission
Bay Area Metro Center
375 Beale Street, Suite 800
San Francisco, CA 94105

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I. BACKGROUND

The Transit Capital Priorities (TCP) Process and Criteria applies to the programming of:

- Federal Transit Administration (FTA) Sections 5307 Urbanized Area Formula, 5337 State of Good Repair, and 5339 Bus & Bus Facilities formula funds apportioned to the San Francisco Bay Area in FY2020-21 and beyond, until Commission passes a successor resolution,
- Federal Highway Administration STP and CMAQ funds dedicated to Transit Capital Rehabilitation and Transit Priorities projects by the One Bay Area Grant Program, and
- Bridge tolls and other regional revenues dedicated to transit capital projects by the Core Capacity Challenge Grant Program (MTC Resolution No. 4123), and
- Financing required to advance future FTA or STP/CMAQ revenues to fund annual TCP or CCCGP programs of projects.

The TCP Criteria are the rules, in part, for establishing a program of projects for eligible transit operators in the San Francisco Bay Area Region's large urbanized areas (UZAs) of San Francisco/Oakland, San Jose, Concord, Santa Rosa, and Antioch; and the small urbanized areas of Vallejo, Fairfield, Vacaville, Napa, Livermore, Gilroy-Morgan Hill, and Petaluma.

On December 4, 2015, President Obama signed the Fixing America's Surface Transportation (FAST) Act into law. The FAST Act provides funding authorizations for FY2016 through FY2020. The Act maintains the same FTA formula programs as the previous authorization, Moving Ahead for Progress in the 21st Century (MAP-21). The FAST Act includes few modifications to FTA programs or policies. These modifications have been included in the TCP Criteria as appropriate. As of the adoption of this TCP Process and Criteria, no successor act to the FAST Act had been passed into law; rather, a continuing resolution had been passed for FY2021 funding.

In December 2013, MTC adopted Resolution No. 4123 for the Transit Core Capacity Challenge Grant Program (CCCGP), which establishes a policy commitment of approximately $7.4 billion in federal, state, regional and local funds to high-priority transit capital projects that will improve the capacity and state of good repair of transit services in the urban core of the region. The CCCGP will determine the TCP program amounts for certain projects and sponsors. A more detailed description of the CCCGP is provided on Page 39 of Attachment A to this resolution.

II. GOALS AND OBJECTIVES

The goal of the TCP Process and Criteria is to fund transit projects that are most essential to the region and consistent with Plan Bay Area 2040, the region's current long-range Regional Transportation Plan (RTP), and Plan Bay Area 2050, the updated RTP currently under development. The TCP Process and Criteria also implements elements of the Transit Sustainability Project recommendation (MTC Resolution No. 4060). Among the region's objectives for the TCP Process and Criteria are to:

Fund basic capital requirements: All eligible projects are to be considered in TCP Process and Criteria score order, with emphasis given to the most essential projects that replace and sustain the existing transit system capital plant. MTC will base the list of eligible replacement and expansion projects on information provided by the transit operators in response to a call for projects, or on information provided through the CCCGP. Operator-proposed projects should be based on Short Range Transit Plan (SRTP) service objectives or other board-approved capital plans. Requests for replacement/rehabilitation of assets should be consistent with FTA-required Transit Asset Management (TAM) plans. All projects not identified as candidates for the TCP Program are assumed to be funded by other fund sources and are so identified in operators' SRTPs or capital plans.

Maintain reasonable fairness to all operators: Tests of reasonable fairness are to be based on the total funding available to each operator over a period of time, the level and type of service provided, timely obligation of prior year grants, and other relevant factors. A proportional share distributed to each operator is specifically not an objective.

Complement other MTC funding programs for transit: MTC has the lead responsibility in programming regional Surface Transportation Program (STP) and Congestion Mitigation-Air Quality (CMAQ) funds, and State Transportation Improvement Program (STIP) funds. Transit capital projects are also eligible for funding under these federal and state programs. Development of the TCP Program of Projects ("TCP Program") will complement the programming of STP, CMAQ, and STIP funds to maximize the financial resources available in order to fund the most essential projects for the San Francisco Bay Area's transit properties.

III. FTA FORMULA FUNDS

A. TCP Application Process

The Transit Finance Working Group (TFWG) serves as the forum for discussing the TCP Process and Criteria, the TCP Program of Projects, and other transit programming issues. Each transit operator in the MTC region is responsible for appointing a representative to staff the Transit Finance Working Group (TFWG). The TFWG serves in an advisory capacity to the MTC Partnership Technical Advisory Committee (PTAC). All major policy revisions and programming-related decisions are to be reviewed with PTAC. In general, the MTC Programming and Allocations Committee and the full Commission take action on the TCP Program and any other transit-related funding programs after the TFWG and PTAC has reviewed them.

Capital Program Submittal
For the purposes of programming, project sponsors will submit requests for funding in accordance with detailed instructions in MTC's call for projects. The level of detail must be sufficient to allow for MTC to screen and score the project.

Board Approval
MTC requires that operators seek board approval prior to programming projects in the TIP. The board resolution for FY2020-21 programming should be submitted by March 10, 2021, the planned date when the Programming and Allocations Committee will consider the proposed program. If a board resolution cannot be provided by this date due to board meeting schedule constraints, applicants should indicate in a cover memo with their application when the board resolution will be adopted. Appendix 1 is a sample resolution of board support.

Opinion of Counsel
Project sponsors have the option of including specified terms and conditions within the Resolution of Local Support as included in Appendix 1. If a project sponsor elects not to include the specified language within the Resolution of Local Support, then the sponsor shall provide MTC with a current Opinion of Counsel stating that the agency is an eligible sponsor of projects for the FTA Section 5307, 5337, 5339, and/or STP/CMAQ programs; that the agency is authorized to perform the project for which funds are requested; that there is no legal impediment to the agency applying for the funds; and that there is no pending or anticipated litigation which might adversely affect the project or the ability of the agency to carry out the project. A sample format is provided in Appendix 2.

Screening projects
MTC staff will evaluate all projects for conformance with the Screening Criteria (Section III) below. Certain requirements must be met for a project to reach the scoring stage of the Transit Capital Priorities process. Operators will be informed by MTC staff if a

project has failed to meet the screening criteria, and will be given an opportunity to submit additional information for clarification.

Scoring projects
MTC staff will only score those projects that have passed the screening process. Based on the score assignment provided in Table 6, MTC staff will inform operators of the score given to each project. Operators may be asked to provide additional information for clarification.

Programming Projects/Assigning projects to fund source
Projects passing screening and scoring criteria will be considered for programming in the TCP Program in the year proposed, however, projects will only be programmed in the Transportation Improvement Program (TIP) if the following conditions are met: 1) funding is available in the year proposed, and 2) funds can be obligated by the operator in the year proposed. Project fund sources will be assigned by MTC staff and will be based on project eligibility and the results of the Multi-County Agreement model.

FTA Public Involvement Process and the TIP
FTA Public Involvement Process: To receive an FTA grant, a grant applicant must meet certain public participation requirements in development of the FTA programs. As provided for in FTA Circular 9030.1E (revised January 16, 2014), FTA considers a grantee to have met the public participation requirements associated with the annual development of the Program of Projects when the grantee follows the public involvement process outlined in the FHWA/FTA planning regulations for the TIP. In lieu of a separate public involvement process, MTC will follow the public involvement process for the TIP.

Annual Programming in the TIP: MTC, in cooperation with the state and eligible transit operators, is required to develop a TIP for the MTC Region. The TIP is a four-year programming document, listing federally funded transportation projects, projects requiring a federal action, and projects deemed regionally significant. TCP programming in each year of the TIP will be financially constrained to the estimated apportionment level. Programming adjustments in the TIP will be done in consultation with eligible transit operators in the MTC region.

Changes to the Transit Capital Priorities Program
Each year after FTA releases apportionments for its formula funding programs, the preliminary TCP Program for the year will be revised if necessary to fit within the available revenues. The annual program revisions and corresponding amendment to the TIP is referred to as the Program of Projects (POP) Amendment, and finalizes the program for the year.

As part of the POP amendment, project sponsors may also request discretionary amendments to the preliminary program that conform to the TCP Process and Criteria

programming policies. Discretionary amendments may be allowed only in certain circumstances. The following general principles govern changes:

- Amendments are not routine. Any proposed changes will be carefully studied.
- Amendments are subject to MTC and TFWG review.
- Amendments which adversely impact another operator's project will not be included without the prior agreement of other operators to the change.
- Amendments will be acceptable only when proposed changes are within the prescribed financial constraints of the TIP.
- Emergency or urgent projects will be considered on a case-by-case basis as exceptions.

Operators proposing the change must provide relevant information to substantiate the urgency of the proposed amendment. Projects that impede delivery of other projects will be considered only if an agreement can be reached between the affected operators for deferring or eliminating the affected projects from consideration.

Following the FY2020-21 program, project sponsors will be able to make revisions to their requests for future years.

Funding Shortfalls
If final apportionments for the FTA formula programs come in lower than MTC has previously estimated, MTC staff will first redistribute programming to other urbanized areas with surplus apportionments in which the projects are eligible, and, second, negotiate with operators to constrain project costs or defer projects to a future year. If sufficient resolution is not possible, MTC will consider additional information, including project readiness, prior funding (if the project is a phased multi-year project), whether the project had been previously deferred, and the amount of federal funds that each of the concerned operators received in recent years, before making reductions to programming. As a final option for closing any shortfalls, staff may institute an across-the-board reduction in programming, proportionally allocated within each affected urbanized area.

Project Review
Each operator is expected to complete their own Federal grant application using FTA's Transit Award Management System (TrAMS). MTC staff will review grant applications and submit concurrence letters to FTA on behalf of project sponsors as needed.

Program Period
The TCP Criteria will be used to develop a program of projects for FY2020-21, aligned with the FAST Act continuing resolution in place at time of adoption. Staff will endeavor to align future updates with multi-year programming under any new surface

transportation authorization in order to help operators with multi-year capital budgeting, and to help the region take a longer-term view of capital replacement needs.

B. Project Eligibility

Federal Requirements and Eligibility

Federal and State Legislation
Projects selected will conform to the requirements of the FAST Act, Clean Air Act Amendments of 1990 (CAAA), the California Clean Air Act (CCAA), and the Americans with Disabilities Act (ADA). Project sponsors shall agree to comply with federal law, including all applicable requirements of the FAST Act, CAAA, ADA, Section 504 of the Rehabilitation Act, and Title VI of the Civil Rights Act of 1964, in implementing their Projects.

Intelligent Transportation Systems (ITS) Architecture Policy
Project sponsors will be required to meet the Federal Transit Administration's National ITS Architecture Policy as established by FTA Federal Register Notice Number 66 FR 1455 published January 8, 2001 and as incorporated by the regional architecture policy which can be accessed at: http://mtc.ca.gov/our-work/operate-coordinate/intelligent-transportation-systems-its.

1% Security Policy
Project sponsors are also required to meet the FTA 1% security set-aside provisions as established in the FY2004-05 Certifications and Assurances, FTA Federal Register Notice Number 69 FR 62521 published on October 26, 2004, and as it may be refined by FTA in future notifications. An updated circular (FTA Circular 9030.1E - January 16, 2014) includes additional certification requirement by designated recipients at the urbanized area level. As the designated recipient, MTC will review the grant applications for each appropriations year for compliance and certification to FTA. The security programming may not apply to all eligible operators in a UA, depending on need for security projects. Refer to the applicable FTA circulars for additional information.

Program Eligibility
Program eligibility is based on the statutory eligibility for the FTA Section 5307, 5337 and 5339 programs. Following are the program eligibility for each of the three funding programs authorized by the FAST Act. If revisions to eligibility for these programs are adopted as part of reauthorizing legislation of FTA circulars or other guidance issued by FTA, the region will consider conforming amendments to the TCP Process and Criteria.

FTA Section 5307 Urbanized Area Federally Defined Program Eligibility (Statutory Reference: 49USC5307): Capital projects; planning; job access and reverse commute projects; and operating costs of equipment and facilities for use in public transportation in urbanized areas with a population of fewer than 200,000, and, in certain

circumstances, in urbanized areas with a population greater than 200,000. Eligible capital projects include—

(A) acquiring, constructing, supervising, or inspecting equipment or a facility for use in public transportation, expenses incidental to the acquisition or construction (including designing, engineering, location surveying, mapping, and acquiring rights-of-way), payments for the capital portions of rail trackage rights agreements, transit-related intelligent transportation systems, relocation assistance, acquiring replacement housing sites, and acquiring, constructing, relocating, and rehabilitating replacement housing;

(B) rehabilitating a bus;

(C) remanufacturing a bus;

(D) overhauling rail rolling stock;

(E) preventive maintenance;

(F) leasing equipment or a facility for use in public transportation

(G) a joint development improvement that meet specified requirements

(H) the introduction of new technology, through innovative and improved products, into public transportation;

(I) the provision of nonfixed route paratransit transportation services in accordance with section 223 of the Americans with Disabilities Act of 1990 (42 U.S.C. 12143), under specified circumstances;

(J) establishing a debt service reserve to ensure the timely payment of principal and interest on bonds issued by a grant recipient to finance an eligible project

(K) mobility management; and

(L) associated capital maintenance.

FTA Section 5337 State of Good Repair Federally Defined Program Eligibility (Statutory Reference: 49USC5337): Capital projects to maintain fixed guideway and high intensity motorbus public transportation systems in a state of good repair, including projects to replace and rehabilitate—

(A) rolling stock;

(B) track;

(C) line equipment and structures;

(D) signals and communications;

(E) power equipment and substations;

(F) passenger stations and terminals;

(G) security equipment and systems;

(H) maintenance facilities and equipment;

(I) operational support equipment, including computer hardware and software; and

(J) development and implementation of a transit asset management plan.

The term 'fixed guideway' means a public transportation facility:

(A) using and occupying a separate right-of-way for the exclusive use of public transportation;

(B) using rail;

(C) using a fixed catenary system;

(D) for a passenger ferry system; or

(E) for a bus rapid transit system.

The term 'high intensity motorbus' means public transportation that is provided on a facility with access for other high-occupancy vehicles.

FTA Section 5339 Bus and Bus Facilities Federally Defined Program Eligibility (Statutory Reference: 49USC5339): Capital projects—

(1) to replace, rehabilitate, and purchase buses and related equipment; and

(2) to construct bus-related facilities.

Regional Requirements and Eligibility

Urbanized Area Eligibility

Transit operators are required to submit annual reports to the National Transit Database. Service factors reported in large urbanized areas partially determine the amounts of FTA Section 5307, 5337 and 5339 funds generated in the region. MTC staff will work with members of the Partnership to coordinate reporting of service factors in order to maximize the amount of funds generated in the region and to determine urbanized area eligibility. An operator is eligible to claim FTA funds only in designated urbanized areas as outlined in Table 1 below. Eligibility is based on geographical operations, NTD reporting, and agreements with operators.

Table 1. Urbanized Area Eligibility

Urbanized Area	Eligible Transit Operators
San Francisco-Oakland	AC Transit, ACE, BART, Caltrain, GGBHTD, Marin County Transit District, SFMTA, SamTrans, SMART, Union City Transit, Water Emergency Transportation Authority, WestCAT
San Jose	ACE, Caltrain, VTA
Concord	ACE, BART, CCCTA, LAVTA
Antioch	BART, ECCTA
Santa Rosa	GGBHTD, Santa Rosa City Bus, SMART, Sonoma County Transit
Vallejo	Napa Vine on behalf of American Canyon, Solano County Transit
Fairfield	Fairfield-Suisun Transit
Vacaville	Vacaville Transit
Napa	Napa VINE
Livermore	ACE, LAVTA
Gilroy-Morgan Hill	Caltrain, VTA
Petaluma	GGBHTD, Petaluma Transit, Sonoma County Transit

(i) Altamont Commuter Express (ACE) is eligible to claim funds in four of the San Francisco Bay Area's urbanized areas according to Federal Transit Administration statute. ACE has entered into an agreement with other operators eligible to claim funds in the San Jose UZA, which prevents ACE from claiming funds in that UZA. Likewise, ACE has also determined that they will be reporting their Livermore area revenue miles in the Stockton UZA and have elected not to seek funding from the Livermore UZA. The project element that the Regional Priority Model would apportion to these two urbanized areas will be deducted from the total amount of their capital request. ACE operates on track privately owned by Union Pacific. Requests for track rehabilitation, maintenance, and or upgrades for funding in the San Francisco-Oakland and Concord UZAs will be assessed for eligibility upon review of the ACE and Union Pacific agreement.

(ii) Santa Rosa City Bus, Sonoma County Transit, and SMART will apportion Santa Rosa urbanized area funding in accordance with an agreement between the three agencies, which first incorporated SMART in FY2020, updating the previous agreement between the bus operators.

(iii) Golden Gate Bridge and Highway Transportation District (GGBHTD) is eligible to claim funds in the Santa Rosa Urbanized Areas. However, as a result of an agreement between the operators and discussion with the TFWG, GGBHTD will not claim funds from the Santa Rosa UZA at this time. However, should it become advantageous to the region for GGBHTD to report revenue miles in the Santa Rosa UZA and thereby claim funds in that UZA, agreements between the operators will be re-evaluated. Golden Gate is an eligible claimant for funds in the Petaluma UZA, and in years where extensive capital needs in other urbanized areas in the region is high; Golden Gate's projects could be funded in the Petaluma UZA.

(iv) Funding agreements between operators in the San Jose and Gilroy-Morgan Hill UZAs are subject to the conditions outlined in the Caltrain Joint Powers Board Agreement and any agreements negotiated between the Board and MTC.

Eligibility for New Operators
New operators will be required to meet the following criteria before becoming eligible for TCP funding:

- The operator provides public transit services in the San Francisco Bay Area that are compatible with the region's Regional Transportation Plan.
- The operator is an FTA grantee.
- The operator has filed NTD reports for at least two years prior to the first year of programming, e.g., has filed an NTD report for 2019 services and intends to file a report for 2020 to be eligible for FY 2020-21 TCP funding.
- The operator has executed a Cooperative Planning Agreement with MTC.
- The operator has submitted a current SRTP or other board-approved capital plan to MTC.

Screening Criteria
A project must conform to the following threshold requirements before the project can be scored and ranked in the TCP Program's project list. Screening criteria envelops three basic areas. The following subheadings are used to group the screening criteria.

- Consistency Requirements;
- Financial Requirements;
- Project Specific Requirements;

Consistency Requirements: The proposed project must be consistent with the currently adopted Regional Transportation Plan (RTP). Smaller projects must be consistent with the policy direction of the RTP, as the RTP does not go into a sufficient level of detail to specifically list them.

The proposed project must be consistent with the requirements of MTC's Transit Coordination Implementation Plan as set forth in MTC Resolution 3866.

Projects near or crossing county boundaries must be consistent/complementary with the facility (or proposed facility) in the adjacent county.

Projects must be included in an operator's Short Range Transit Plan or other board-approved capital plan, or in an adopted local or regional plan (such as Congestion Management Programs, Countywide transportation plans pursuant to AB3705, the Seaport and Airport Plans, the State Implementation Plan, the Ozone Attainment Plan, the Regional Transportation Plan, and local General Plans). Requests for replacement/rehabilitation of assets should be consistent with Transit Asset

Management (TAM) plans required by the FTA TAM rule and regional TAM performance metrics.

Financial Requirements: The proposed project has reasonable cost estimates, is supported by an adequate financial plan with all sources of funding identified and a logical cash flow, and has sensible phasing. Transit operators must demonstrate financial capacity, to be documented in the adopted TIP, as required by the FTA. All facilities that require an ongoing operating budget to be useful must demonstrate that such financial capacity exists.

Project Specific Requirements: All projects must be well defined. There must be clear project limits, intended scope of work, and project concept. Planning projects to further define longer range federally eligible projects are acceptable. Examples of projects include:

- Replacement/rehab of one revenue vehicle sub-fleet or ferry vessel; a sub-fleet is defined as the same bus size, manufacturer, and year; or any portion of a train set that reaches the end of its useful life at a common time.
- Train control or traction power replacement/rehab needs for a given year.
- Fixed guideway replacement/rehab needs for a given year (e.g., track replacement and related fixed guideway costs, ferry fixed guideway connectors).

All projects must be well justified, and have a clear need directly addressed by the project. All assets that would be replaced or rehabilitated must be included in the Regional Transit Capital Inventory (RTCI), a database of all transit capital assets in the region. Vehicle replacement projects, in particular, must identify the specific vehicles being replaced as listed in the RTCI.

A proposed project includes an implementation plan that adequately provides for any necessary clearances and approvals. The proposed project must be advanced to a state of readiness for implementation in the year indicated. For this requirement, a project is considered to be ready if grants for the project can be obligated within one year of the award date; or in the case of larger construction projects, obligated according to an accepted implementation schedule.

Asset Useful Life

To be eligible for replacement or rehabilitation, assets must meet the following age requirements in the year of programming:

Table 2. Useful Life of Assets

Heavy-Duty Buses, other than Over-the-Road-Coaches*	12 years (or 500,000 miles in service)
Over-the-Road-Coaches*	14 years (or 500,000 miles in service)
Medium-Duty Buses*	10 years (or 500,000 miles in service)
* (or an additional 5 years for buses rehabilitated with TCP funding)	
Van[1]	4, 5, or 7 years, depending on type
Light Rail Vehicle (LRV)	25 years
Electric Trolleybus	15 years
Heavy Railcar[2]	25 years
(or an additional 20 years for railcars rehabilitated with TCP funding)	
Locomotive	25 years
(or an additional 20 years for locomotives rehabilitated with TCP funding)	
Heavy/Steel Hull Ferries	30 years
(or an additional 20 years for ferries rehabilitated with TCP funding)	
Lightweight/Aluminum Hull Ferries[3]	25 years
Used Vehicles[4]	Varies by type
Tools and Equipment	10 years
Service Vehicle	7 years
Non-Revenue Vehicle	7 years
Track	Varies by track type
Overhead Contact System/3rd Rail	Varies by type of OCS/3rd rail
Facility	Varies by facility and component replaced

Notes:

1) *A paratransit van is a specialized van used in paratransit service only such as service for the elderly and handicapped. Three general categories of vans are acceptable in Transit Capital Priorities: Minivans, Standard Conversion Vans, and Small Medium-Duty Coaches. The age requirements for each type are 4, 5, and 7 years respectively.*
2) *Includes Caltrain and ACE commuter rail and BART urban rail cars.*
3) *Lightweight ferries will not generally last beyond a 25-year useful life. Propulsion and major component elements of lightweight ferries can be replaced in TCP without extending the useful life beyond its anticipated useful life of 25 years.*
4) *Used vehicles are eligible to receive a proportionate level of funding based on the type of vehicle and number of years of additional service. (See "used vehicle replacement" Section IV, Definition of Project Categories).*

Early Replacement Programming Requests

Requests to program vehicle replacement funds one or two years prior to the first eligible year in order to advance procurements or to replace vehicles with higher than normal

maintenance costs will be considered if the proposal has minimal impacts on other operators and can be accommodated within the region's fiscal constraints.

Exceptions for replacement of assets prior to the end of their useful life may be considered only if an operator has secured FTA approval for early retirement, which must occur before the annual apportionment has been released.

Compensation for Deferred Replacement (Bus Replacement beyond Minimum Useful Life)

Operators that voluntarily replace buses or vans beyond the minimum federally eligible useful life specified in Table 2 will be eligible for either of two financial compensations:

> Option 1. Operators receive all of the savings, but need to apply the savings to capital replacement and rehab projects (Score 10-16).
>
> Option 2. Operators receive half of the savings to the region created by later replacement of vehicles, which may be programmed to lower scoring eligible projects.

Savings to the region are calculated based on the pricelist cost and minimum useful life of the vehicle type. For example, if replacement of a bus with a 12-year useful life and a $600,000 replacement cost (federal share) is deferred for two years, the savings to the region would be 2/12 x $600,000 = $100,000. Under Option 1, the operator would receive $100,000 for eligible Score 10-16 capital projects. Under Option 2, the operator would receive $50,000, which could be programmed for any eligible project. The region would retain the other $50,000 in savings to be programmed to other needs in accordance with the TCP policy. Operators may choose between Option 1 and Option 2.

For operators that are proposing to take advantage of the bus replacement compensation, the vehicles being replaced must be older than the age requirements listed above. It is the operator's responsibility to ensure that vehicle replacement requests beyond the minimum useful life maintain a state of good repair for the assets. Requests to activate this policy option should be noted when transmitting project applications to MTC.

Project Funding Caps

In order to prevent committing a significant portion of the programming to an operator in any one year, the following annual funding ceilings for projects are established:

Revenue vehicle replacement projects cannot exceed $20 million for buses or $30 million for rail car or ferry vessel replacement and rehabilitation projects, in the aggregate, for all funding programs. If the cost of the vehicle procurement exceeds the annual cap, the difference will be programmed in subsequent years subject to availability of funds.

Fixed guideway replacement and rehabilitation projects in the aggregate cannot exceed the amounts specified for each fixed guideway (FG) operator in Table 3. The total amount of the caps is $144 million, an approximately 20% increase from the cap prior to FY 2021-22 of $120 million, due to the increased 5337 funding availability under the Bipartisan Infrastructure Law (BIL). Each operator's cap is based on its share of the updated fixed guideway need projections included in the adopted Plan Bay Area 2040 RTP, with a floor applied so that no operator's cap is reduced by more than 5% from their prior cap.

When developing the proposed TCP programs for FY2020-21 and beyond, the fixed guideway caps may be increased or decreased proportionally, depending on the aggregate demand for Score 16 projects compared to projected revenues. Operators have the option of submitting contingent fixed guideway programming requests equal to 20% of the operator's cap, in addition to requests for programming the cap amount. The contingent requests will be programmed if the program's fiscal balance allows the region to increase the caps.

Additionally, in an attempt to better align FG needs and FG cap programming, in the call for projects for a multi-year program, operators may request more than their annual cap in a particular year if the increase is offset by a lower request in another year (i.e. as long as the total requested for FG projects over a four-year program does not exceed the annual cap times four). When developing the program, staff will attempt to program FG caps as requested. However, in order to balance needs across operators within each UZA, programming may be adjusted to match available funds and project needs.

Table 3. Fixed Guideway Caps

FG Operator	Project Category	Fixed Guideway Cap
ACE	All Eligible FG Categories	$1,896,860
BART	All Eligible FG Categories	62,648,740
Caltrain	All Eligible FG Categories	16,270,870
GGBHTD	All Eligible FG Categories	6,366,500
SFMTA	All Eligible FG Categories	39,655,560
VTA	All Eligible FG Categories	9,642,570
WETA	All Eligible FG Categories	7,508,900

The cap amount may be programmed to any projects that are eligible for FTA Section 5337 funding and that fall into one of the following categories:

- Track/Guideway Replacement/Rehabilitation
- Traction Power Systems Replacement/Rehabilitation
- Train Control/Signaling Replacement/Rehabilitation
- Dredging
- Ferry Fixed Guideway Connectors Replacement/Rehabilitation

- Ferry Major Component Replacement/Rehabilitation
- Ferry Propulsion Replacement/Rehabilitation
- Cable Car Infrastructure Replacement/Rehabilitation
- Wayside or Onboard Fare Collection Equipment Replacement/Rehabilitation for Fixed Guideway vehicles

Programming for all projects that fall within these categories must be within the operator's cap amount with the exception of fixed guideway infrastructure projects included in the CCCGP program of projects. Such projects may be funded with a combination of fixed guideway cap funds and additional TCP funds above the operator's fixed guideway cap.

Operators may request a one-year waiver to use fixed guideway cap funds for other capital needs that are not included in one of the eligible project categories listed above if the operator can demonstrate that the other capital needs can be addressed by the one-year waiver, or that the use of fixed guideway cap funds is part of a multi-year plan to address the other capital needs. The operator must also demonstrate that the waiver will have minimal impact on the operator's ability to meet its fixed guideway capital needs.

Emergency duration special protocols:
Staff will explicitly consider pandemic impacts on operating and fixed guideway capital needs when assessing these requests. Staff will prioritize FG cap funds when assessing any requests for PM/operating assistance from FG cap operators, pending FTA funding source eligibility, including applicable Emergency Relief provisions. Emergency relief requests and programming are subject to the Principles for Redirecting Funds to Transit Operators (Appendix 3).

Zero Emission Bus (ZEB) Infrastructure set-aside projects within the San Francisco-Oakland, Concord, and Antioch UZAs are exempt from the TCP scoring process and are governed by the below principles. Commission action in March 2022 set aside an average of $20 million annually specifically for bus operators as they transition to zero emission fleets. The CARB Innovative Clean Transit rule creates an extraordinary new funding demand to deliver transit service, with the need for new infrastructure in addition to typical vehicle replacement needs.

Initially, MTC will use a formula distribution system based on relative transit fleet size, according to the Regional Transit Capital Inventory, which will be presented for review at the Transit Finance Working Group.

While bus infrastructure needs exceed FTA formula funding throughout the region, this set-aside is focused on the SF-O, Concord, and Antioch UZAs, as the only UZAs in which

bus operators compete for funding with each other or with fixed guideway operators with large Score-16 needs. Eligible operators are listed in the table below.

UZA	Eligible Bus Operators
San Francisco-Oakland (SF-O)	SFMTA, AC Transit, SamTrans, GGBHTD, Marin Transit, Union City, WestCAT
Concord (CON)	LAVTA, CCCTA
Antioch (ANT)	ECCTA

Eligible Projects: The ZEB Infrastructure Set-Aside Program prioritizes the non-vehicle needs that will be required to transition the region to a zero-emission fleet. This includes additional infrastructure for battery charging, hydrogen fueling, and associated elements. Requests for operating assistance or vehicle purchases should remain part of the main TCP and not the set-aside. The following are the major project categories the ZEB Infrastructure Program will fund:

1. Purchase and installation or construction of electric charging or hydrogen fueling equipment and infrastructure
2. Rehabilitation of existing zero-emission charging or fueling infrastructure
3. Any 5307-eligible capital project phase, including planning, environmental clearance, design, and construction
4. Workforce training and development related to maintenance and operation of zero-emission charging and fueling systems.

Other replacement projects cannot exceed $5 million. This cap applies to non-vehicle and non-fixed guideway Score 16 projects, including communications systems, bus fare collection equipment (fixed guideway wayside fare collection equipment is covered under the fixed guideway caps), and bus emission reduction devices; and lower scoring replacement projects. Vehicle rehabilitation projects that are treated as Score 16 because the life of the asset is being extended (see Asset Useful Life above) are also subject to this cap. Exceptions to this cap include those projects included in the CCCGP. Replacement of Clipper® fare collection equipment that is centralized under MTC will be treated as a separate project for each operator whose Clipper® equipment is being replaced, including MTC for the replacement of back-end equipment and systems, for the purposes of applying this project funding cap. If project costs exceed the cap, the difference will not automatically be programmed in subsequent years; the region will assess its ability to program additional funding year-by-year based on projected revenues and demand for other Score 16 needs.

Expansion or enhancement projects cannot exceed $3.75 million.

Vanpool Support Program programming cannot exceed the amount of apportionments per UA generated by vanpool reporting to the NTD.

As part of the development of the program, project caps may be increased or decreased on an annual basis in order to better match programming to available revenues, subject to negotiation and agreement among operators and MTC.

Exceptions to these annual funding ceilings will be considered by MTC and the TFWG on a case-by-case basis after evaluating programming requested through the call for projects, and the region's estimated fiscal resources. For large rehabilitation programs, MTC may conduct negotiations with the appropriate sponsor to discuss financing options and programming commitments.

Bus-Van Pricelist

Requests for funding for buses and vans cannot exceed the prices in the Regional Bus-Van Pricelist for each year of the TCP program as shown in Tables 4 through 7. If an operator elects to replace vehicles with vehicles of a different fuel type, the price listed for the new fuel type vehicle applies, e.g., if an operator is replacing diesel buses with diesel-electric hybrid buses, the operator may request funds up to the amount listed for hybrid buses.

The pricelist was developed through a subcommittee of the TFWG and based on a survey of prices paid by operators in the Bay Area. Price escalation rate by year is noted in the tables.

Note that the bus prices do not include allowances for radios and fareboxes; they will be considered a separate project under the TCP policy. The price of electronic fareboxes varies approximately between $10,000 and $14,000 whereas the price of radios varies from $1,000 to $5,000. Requests for funding radios and fareboxes should be within the price range mentioned above. Requests above these ranges will require additional justification. Fareboxes for/on fixed guideway vehicles will be funded out of the operators' fixed guideway cap amounts (see Table 3). Operators are expected to include Clipper® wiring and brackets in all new buses, so the buses are Clipper®-ready without requiring additional expenses.

Compensation for Cost Effective Bus Purchases

Under this element of the TCP policy, operators that request less than the full pricelist amount for vehicle replacements would be eligible for either of two financial compensations:

> Option 1* Operators receive all of the savings, but need to apply the savings to capital replacement and rehab projects (Score 10-16).
>
> Option 2* Operators receive half of the savings to the region created by cost effective vehicle purchases, which may be programmed to lower scoring (below score 10) eligible projects, including preventive maintenance.

The intent of this policy element is to ensure that the region's limited funds can cover more of the region's capital needs while targeting funding to the vehicles most in need of replacement.

[*]If the amount of federal apportionments received does not allow us to fully program all Score 16 projects, MTC reserves the right to reduce the percentage of savings that would go back to the operator.

Table 4: Regional Bus-Van Pricelist, FY2020-21

Vehicle Type	Total	Federal/MTC	Local	Federal/MTC %	Local %
Minivan Under 22'	71,000	56,800	14,200	80%	20%
Cut-Away/Van, 4 or 5-Year, Gas	101,000	80,800	20,200	80%	20%
Cut-Away/Van, 4 or 5-Year, Diesel	114,000	91,200	22,800	80%	20%
Cut-Away/Van, 4 or 5-Year, CNG	131,000	104,800	26,200	80%	20%
Cut-Away/Van, 7-Year, Gas	114,000	91,200	22,800	80%	20%
Cut-Away/Van, 7-Year, Diesel	161,000	128,800	32,200	80%	20%
Cut-Away/Van, 7-Year, CNG	214,000	171,200	42,800	80%	20%
Transit Bus 30' Diesel	523,000	418,400	104,600	80%	20%
Transit Bus 30' CNG	597,000	477,600	119,400	80%	20%
Transit Bus 30' Hybrid	782,000	625,600	156,400	80%	20%
Transit Bus 30' Battery	900,000	720,000	180,000	80%	20%
Transit Bus 35' Diesel	578,000	462,400	115,600	80%	20%
Transit Bus 35' CNG	686,000	548,800	137,200	80%	20%
Transit Bus 35' Hybrid	835,000	668,000	167,000	80%	20%
Transit Bus 35' Battery	912,000	729,600	182,400	80%	20%
Transit Bus 40' Diesel	554,000	443,200	110,800	80%	20%
Transit Bus 40' CNG	611,000	488,800	122,200	80%	20%
Transit Bus 40' Hybrid	847,000	677,600	169,400	80%	20%
Transit Bus 40' Battery	1,088,000	870,400	217,600	80%	20%
Transit Bus 40' Fuel-Cell	1,218,000	974,400	243,600	80%	20%
Over-the-Road 45' Diesel	659,000	527,200	131,800	80%	20%
Over-the-Road 45' CNG	866,000	692,800	173,200	80%	20%
Over-the-Road 45' Battery	1,145,000	916,000	229,000	80%	20%
Articulated 60' Diesel	888,000	710,400	177,600	80%	20%
Articulated 60' Hybrid	1,265,000	1,012,000	253,000	80%	20%
Articulated 60' Battery	1,363,000	1,090,400	272,600	80%	20%
Articulated 60' Fuel-Cell	1,543,000	1,234,400	308,600	80%	20%
Double-Decker Diesel	1,049,000	839,200	209,800	80%	20%

Notes:

1. Prices escalated 1.887% over FY2019-20 Pricelist Survey responses, rounded to the nearest $1,000. If survey responses were not available for a given Vehicle Type, the adopted FY20 Pricelist Total was used as the baseline.

2. For buses with dual-side doors, add $50,000 to the total ($40,000 Federal, $10,000 Local).

3. For vehicle procurements over 20, 5% of the cost of the buses can be added to the pricelist amounts to account for soft costs.

Table 5: Regional Bus-Van Pricelist, FY2021-22

Vehicle Type	Total	Federal/MTC	Local	Federal/MTC %	Local %
Minivan Under 22'	72,000	57,600	14,400	80%	20%
Cut-Away/Van, 4 or 5-Year, Gas	103,000	82,400	20,600	80%	20%
Cut-Away/Van, 4 or 5-Year, Diesel	116,000	92,800	23,200	80%	20%
Cut-Away/Van, 4 or 5-Year, CNG	133,000	106,400	26,600	80%	20%
Cut-Away/Van, 7-Year, Gas	116,000	92,800	23,200	80%	20%
Cut-Away/Van, 7-Year, Diesel	164,000	131,200	32,800	80%	20%
Cut-Away/Van, 7-Year, CNG	218,000	174,400	43,600	80%	20%
Transit Bus 30' Diesel	533,000	426,400	106,600	80%	20%
Transit Bus 30' CNG	608,000	486,400	121,600	80%	20%
Transit Bus 30' Hybrid	797,000	637,600	159,400	80%	20%
Transit Bus 30' Battery	917,000	733,600	183,400	80%	20%
Transit Bus 35' Diesel	589,000	471,200	117,800	80%	20%
Transit Bus 35' CNG	699,000	559,200	139,800	80%	20%
Transit Bus 35' Hybrid	851,000	680,800	170,200	80%	20%
Transit Bus 35' Battery	929,000	743,200	185,800	80%	20%
Transit Bus 40' Diesel	564,000	451,200	112,800	80%	20%
Transit Bus 40' CNG	623,000	498,400	124,600	80%	20%
Transit Bus 40' Hybrid	863,000	690,400	172,600	80%	20%
Transit Bus 40' Battery	1,109,000	887,200	221,800	80%	20%
Transit Bus 40' Fuel-Cell	1,241,000	992,800	248,200	80%	20%
Over-the-Road 45' Diesel	671,000	536,800	134,200	80%	20%
Over-the-Road 45' CNG	882,000	705,600	176,400	80%	20%
Over-the-Road 45' Battery	1,167,000	933,600	233,400	80%	20%
Articulated 60' Diesel	905,000	724,000	181,000	80%	20%
Articulated 60' Hybrid	1,289,000	1,031,200	257,800	80%	20%
Articulated 60' Battery	1,389,000	1,111,200	277,800	80%	20%
Articulated 60' Fuel-Cell	1,572,000	1,257,600	314,400	80%	20%
Double-Decker Diesel	1,069,000	855,200	213,800	80%	20%

Notes:

1. Prices escalated 1.887% over FY2020-21 Pricelist Survey responses, rounded to the nearest $1,000. If survey responses were not available for a given Vehicle Type, the adopted FY20 Pricelist Total was used as the baseline.
2. For buses with dual-side doors, add $50,000 to the total ($40,000 Federal, $10,000 Local).
3. For vehicle procurements over 20, 5% of the cost of the buses can be added to the pricelist amounts to account for soft costs.

Table 6: Regional Bus-Van Pricelist, FY2022-23

Vehicle Type	Total	Federal/MTC	Local	Federal/MTC %	Local %
Minivan Under 22'	73,000	58,400	14,600	80%	20%
Cut-Away/Van, 4 or 5-Year, Gas	105,000	84,000	21,000	80%	20%
Cut-Away/Van, 4 or 5-Year, Diesel	118,000	94,400	23,600	80%	20%
Cut-Away/Van, 4 or 5-Year, CNG	136,000	108,800	27,200	80%	20%
Cut-Away/Van, 7-Year, Gas	118,000	94,400	23,600	80%	20%
Cut-Away/Van, 7-Year, Diesel	167,000	133,600	33,400	80%	20%
Cut-Away/Van, 7-Year, CNG	222,000	177,600	44,400	80%	20%
Transit Bus 30' Diesel	543,000	434,400	108,600	80%	20%
Transit Bus 30' CNG	619,000	495,200	123,800	80%	20%
Transit Bus 30' Hybrid	812,000	649,600	162,400	80%	20%
Transit Bus 30' Battery	934,000	747,200	186,800	80%	20%
Transit Bus 35' Diesel	600,000	480,000	120,000	80%	20%
Transit Bus 35' CNG	712,000	569,600	142,400	80%	20%
Transit Bus 35' Hybrid	867,000	693,600	173,400	80%	20%
Transit Bus 35' Battery	947,000	757,600	189,400	80%	20%
Transit Bus 40' Diesel	575,000	460,000	115,000	80%	20%
Transit Bus 40' CNG	635,000	508,000	127,000	80%	20%
Transit Bus 40' Hybrid	879,000	703,200	175,800	80%	20%
Transit Bus 40' Battery	1,130,000	904,000	226,000	80%	20%
Transit Bus 40' Fuel-Cell	1,264,000	1,011,200	252,800	80%	20%
Over-the-Road 45' Diesel	684,000	547,200	136,800	80%	20%
Over-the-Road 45' CNG	899,000	719,200	179,800	80%	20%
Over-the-Road 45' Battery	1,189,000	951,200	237,800	80%	20%
Articulated 60' Diesel	922,000	737,600	184,400	80%	20%
Articulated 60' Hybrid	1,313,000	1,050,400	262,600	80%	20%
Articulated 60' Battery	1,415,000	1,132,000	283,000	80%	20%
Articulated 60' Fuel-Cell	1,602,000	1,281,600	320,400	80%	20%
Double-Decker Diesel	1,089,000	871,200	217,800	80%	20%

Notes:

1. Prices escalated 1.887% over FY2021-22 Pricelist Survey responses, rounded to the nearest $1,000. If survey responses were not available for a given Vehicle Type, the adopted FY20 Pricelist Total was used as the baseline.

2. For buses with dual-side doors, add $50,000 to the total ($40,000 Federal, $10,000 Local).

3. For vehicle procurements over 20, 5% of the cost of the buses can be added to the pricelist amounts to account for soft costs.

Table 7: Regional Bus-Van Pricelist, FY2023-24

Vehicle Type	Total	Federal/MTC	Local	Federal/MTC %	Local %
Minivan Under 22'	74,000	59,200	14,800	80%	20%
Cut-Away/Van, 4 or 5-Year, Gas	107,000	85,600	21,400	80%	20%
Cut-Away/Van, 4 or 5-Year, Diesel	120,000	96,000	24,000	80%	20%
Cut-Away/Van, 4 or 5-Year, CNG	139,000	111,200	27,800	80%	20%
Cut-Away/Van, 7-Year, Gas	120,000	96,000	24,000	80%	20%
Cut-Away/Van, 7-Year, Diesel	170,000	136,000	34,000	80%	20%
Cut-Away/Van, 7-Year, CNG	226,000	180,800	45,200	80%	20%
Transit Bus 30' Diesel	553,000	442,400	110,600	80%	20%
Transit Bus 30' CNG	631,000	504,800	126,200	80%	20%
Transit Bus 30' Hybrid	827,000	661,600	165,400	80%	20%
Transit Bus 30' Battery	952,000	761,600	190,400	80%	20%
Transit Bus 35' Diesel	611,000	488,800	122,200	80%	20%
Transit Bus 35' CNG	725,000	580,000	145,000	80%	20%
Transit Bus 35' Hybrid	883,000	706,400	176,600	80%	20%
Transit Bus 35' Battery	965,000	772,000	193,000	80%	20%
Transit Bus 40' Diesel	586,000	468,800	117,200	80%	20%
Transit Bus 40' CNG	647,000	517,600	129,400	80%	20%
Transit Bus 40' Hybrid	896,000	716,800	179,200	80%	20%
Transit Bus 40' Battery	1,151,000	920,800	230,200	80%	20%
Transit Bus 40' Fuel-Cell	1,288,000	1,030,400	257,600	80%	20%
Over-the-Road 45' Diesel	697,000	557,600	139,400	80%	20%
Over-the-Road 45' CNG	916,000	732,800	183,200	80%	20%
Over-the-Road 45' Battery	1,211,000	968,800	242,200	80%	20%
Articulated 60' Diesel	939,000	751,200	187,800	80%	20%
Articulated 60' Hybrid	1,338,000	1,070,400	267,600	80%	20%
Articulated 60' Battery	1,442,000	1,153,600	288,400	80%	20%
Articulated 60' Fuel-Cell	1,632,000	1,305,600	326,400	80%	20%
Double-Decker Diesel	1,110,000	888,000	222,000	80%	20%

Notes:

1. Prices escalated 1.887% over FY2022-23 Pricelist Survey responses, rounded to the nearest $1,000. If survey responses were not available for a given Vehicle Type, the adopted FY20 Pricelist Total was used as the baseline.
2. For buses with dual-side doors, add $50,000 to the total ($40,000 Federal, $10,000 Local).
3. For vehicle procurements over 20, 5% of the cost of the buses can be added to the pricelist amounts to account for soft costs.

Table 7B: Regional Bus-Van Pricelist, FY2024-25

Vehicle Type	Total	Federal/MTC	Local	Federal/MTC %	Local %
Minivan Under 22'	75,000	60,000	15,000	80%	20%
Cut-Away/Van, 4 or 5-Year, Gas	109,000	87,200	21,800	80%	20%
Cut-Away/Van, 4 or 5-Year, Diesel	122,000	97,600	24,400	80%	20%
Cut-Away/Van, 4 or 5-Year, CNG	142,000	113,600	28,400	80%	20%
Cut-Away/Van, 7-Year, Gas	122,000	97,600	24,400	80%	20%
Cut-Away/Van, 7-Year, Diesel	173,000	138,400	34,600	80%	20%
Cut-Away/Van, 7-Year, CNG	230,000	184,000	46,000	80%	20%
Transit Bus 30' Diesel	563,000	450,400	112,600	80%	20%
Transit Bus 30' CNG	643,000	514,400	128,600	80%	20%
Transit Bus 30' Hybrid	843,000	674,400	168,600	80%	20%
Transit Bus 30' Battery	970,000	776,000	194,000	80%	20%
Transit Bus 35' Diesel	623,000	498,400	124,600	80%	20%
Transit Bus 35' CNG	739,000	591,200	147,800	80%	20%
Transit Bus 35' Hybrid	900,000	720,000	180,000	80%	20%
Transit Bus 35' Battery	983,000	786,400	196,600	80%	20%
Transit Bus 40' Diesel	597,000	477,600	119,400	80%	20%
Transit Bus 40' CNG	659,000	527,200	131,800	80%	20%
Transit Bus 40' Hybrid	913,000	730,400	182,600	80%	20%
Transit Bus 40' Battery	1,173,000	938,400	234,600	80%	20%
Transit Bus 40' Fuel-Cell	1,312,000	1,049,600	262,400	80%	20%
Over-the-Road 45' Diesel	710,000	568,000	142,000	80%	20%
Over-the-Road 45' CNG	933,000	746,400	186,600	80%	20%
Over-the-Road 45' Battery	1,234,000	987,200	246,800	80%	20%
Articulated 60' Diesel	957,000	765,600	191,400	80%	20%
Articulated 60' Hybrid	1,363,000	1,090,400	272,600	80%	20%
Articulated 60' Battery	1,469,000	1,175,200	293,800	80%	20%
Articulated 60' Fuel-Cell	1,663,000	1,330,400	332,600	80%	20%
Double-Decker Diesel	1,131,000	904,800	226,200	80%	20%

Notes:

1. Prices escalated 1.887% over FY2023-24 Pricelist Survey responses, rounded to the nearest $1,000. If survey responses were not available for a given Vehicle Type, the adopted FY20 Pricelist Total was used as the baseline.

2. For buses with dual-side doors, add $50,000 to the total ($40,000 Federal, $10,000 Local).

3. For vehicle procurements over 20, 5% of the cost of the buses can be added to the pricelist amounts to account for soft costs.

Project Definition and Scoring

Project Scoring

All projects submitted to MTC for TCP programming consideration that have passed the screening process will be assigned scores by project category as indicated in Table 8.

Table 8. Project Scores

Project Category/Description	Project Score
Debt Service	**17**
Debt service – repayment of financing issued against future FTA revenues. Debt service, including principal and interest payments, for any financing required to advance future FTA or STP revenues to fund annual TCP or CCCGP programs of projects will be treated as score 17.	
Revenue Vehicle Replacement	**16**
Vehicle Replacement - replacement of a revenue vehicle at the end of its useful life (see Asset Useful Life above). Vehicles previously purchased with revenue sources other than federal funds are eligible for FTA formula funding as long as vehicles meet the replacement age. Vehicles are to be replaced with vehicles of similar size (up to 5' size differential) and seating capacity, e.g., a 40-foot coach replaced with a 40-foot coach and not an articulated vehicle. If an operator is electing to purchase smaller or larger buses (above or below a 5' size differential), or do a sub-fleet reconfiguration, the replacement sub-fleet will have a comparable number of seats as the vehicles being replaced. Paratransit vehicles can be replaced with the next larger vehicle providing the existing vehicle is operated for the useful life period of the vehicle that it is being upgraded to. Any other significant upgrade in size will be considered as vehicle expansion and not vehicle replacement. For urgent replacements not the result of deferred maintenance and replacement of assets 20% older than the usual replacement cycle (e.g., 12 or 16 years for buses depending on type of bus), a project may receive an additional point.	
Revenue Vehicle Rehabilitation	**16**
Vehicle Rehabilitation - major maintenance, designed to extend the useful life of a revenue vehicle (+5 years for buses, +20 years for railcars, +20 years for locomotives, +20 years for heavy hull ferries). Rehabilitation of historic railcars, which have, by definition, extended useful lives, is included in this category.	
Core Capacity Challenge Grant Program Projects	**16**
Projects proposed for TCP funding in the CCCGP (MTC Resolution No. 4123) that are not otherwise Score 16.	
Used Vehicle Replacement	**16**
Used Vehicle Replacement - replacement of a vehicle purchased used (applicable to buses, ferries, and rail cars) is eligible for federal, state, and local funding that MTC administers. Funds in this category include FTA Section 5307, STP, CMAQ, STIP, and Net Toll Revenues. However, funding for replacement of the used vehicle will be limited to a proportionate share of the total project cost, equal to the number of years the used vehicle is operated beyond its standard useful life divided by its standard useful life (e.g., if a transit property retained and operated a used transit bus for 5 years, it is eligible to receive $5/12^{th}$ of the allowable programming for the project).	

Fixed Guideway Replacement / Rehabilitation	**16**
Rehabilitation/Replacement Fixed Guideway - projects replacing or rehabilitating fixed guideway equipment at the end of its useful life, including rail, guideway, bridges, traction power systems, wayside train control systems, overhead wires, cable car infrastructure, and computer/communications systems with a primary purpose of communicating with or controlling fixed guideway equipment. Projects in this category are subject to fixed guideway project caps.	
Ferry Propulsion Systems	**16**
Ferry Propulsion Replacement—projects defined as the mid-life replacement and rehabilitation of ferry propulsion systems in order that vessels are able to reach their 25-year useful life. Projects in this category are subject to fixed guideway project caps.	
Ferry Major Component	**16**
Ferry Major Components—projects associated with propulsion system, inspection, and navigational equipment required to reach the full economic life of a ferry vessel. Projects in this category are subject to fixed guideway project caps.	
Ferry Fixed Guideway Connectors	**16**
Ferry Fixed Guideway Connectors—floats, gangways, and ramps associated with the safe moorage and boarding of passengers to/from ferry vessels. Projects in this category are subject to fixed guideway project caps.	
Revenue Vehicle Communication Equipment	**16**
Communication Equipment – Includes on-board radios, radio base stations, and computer/communications systems with a primary purpose of communicating with and/or location/navigation of revenue vehicles, such as GPS/AVL systems.	
Non-Clipper® Fare Collection/Fareboxes	**16**
Revenue vehicle and wayside fare equipment are eligible for replacement as score 16. The maximum programming allowance for revenue vehicle fare equipment purchased separately from revenue vehicles is outlined in Section III, Project Funding Caps, providing the fare equipment is not replaced prior to the 12-year replacement cycle for buses. Fare equipment must be compatible with the Clipper® fare collection system.	
Clipper®	**16**
Clipper® - replacement of Clipper® fare collection equipment and systems.	
Bus Diesel Emission Reduction Devices	**16**
Bus diesel emission reduction devices or device components required to meet or exceed California Air Resources Board requirements, including first-time retrofits, upgrades, replacements and spares. Devices or components must be installed on buses that will remain in service for at least five (5) years following year programming in order to be treated as Score 16. Only spares up to 10% of the operator's current device inventory will be treated as Score 16. Bus diesel emission device projects treated as Score 16 require a 50% local match. Devices or components installed on buses scheduled to be replaced within five (5) years of programming, and spares in excess of 10% of the operator's inventory, will be treated as Preventive Maintenance (Score 9). See Section V. Programming Policies, Bus Diesel Emission Reduction Device Funding Program.	
Vanpool Support Program	**16**
Turnkey vanpool services contracted by MTC. This program is subject to funding cap at levels no greater than the projected apportionments generated by vanpool reporting in the urbanized area.	
Safety	**15**

Safety/Security - projects addressing potential threats to life and/or property. The project may be maintenance of existing equipment or new safety capital investments. Includes computer/communications systems with a primary purpose of communicating with/controlling safety systems, including ventilation fans, fire suppression, fire alarm, intruder detection, CCTV cameras, and emergency "blue light" phones. Adequate justification that the proposed project will address safety and/or security issues must be provided. The TFWG will be provided an opportunity to review proposed projects before a project is programmed funds in a final program. Projects that contribute to a 1% security requirement will be considered Score 16.	
ADA/Non Vehicle Access Improvement	**14**
ADA - capital projects needed for ADA *compliance*. Does not cover routine replacement of ADA-related capital items. Project sponsor must provide detailed justification that the project is proposed to comply with ADA. Subject to TFWG review.	
Fixed/Heavy Equipment, Maintenance/Operating Facilities	**13**
Fixed/Heavy equipment and Operations/Maintenance facility - replacement/rehabilitation of major maintenance equipment, generally with a unit value over $10,000; replacement/rehabilitation of facilities on a schedule based upon the useful life of the components.	
Station/Intermodal Stations/Parking Rehabilitation	**12**
Stations/Intermodal Centers/Patron Parking Replacement/Rehab - replacement/rehabilitation of passenger facilities. Includes computer/communications systems with a primary purpose of communicating with/controlling escalators or elevators, and public address or platform display systems at stations or platforms.	
Service Vehicles	**11**
Service Vehicles - replacement/rehabilitation of non-revenue and service vehicles based on useful life schedules.	
Tools and Equipment	**10**
Tools and Equipment - maintenance tools and equipment, generally with a unit value below $10,000.	
Administrative Computer Systems and Office Equipment	**9**
Office Equipment - computers, copiers, fax machines, etc. Includes administrative - MIS, financial, HR, scheduling, transit asset management, and maintenance management systems.	
Preventive Maintenance	**9**
Preventive Maintenance - ongoing maintenance expenses (including labor and capital costs) of revenue and non-revenue vehicles that do not extend the life of the vehicle. This includes mid-life change-out of tires, tubes, engines and transmissions that do not extend the life of the vehicle beyond the twelve years life cycle. Preventive Maintenance may be treated as Score 16 under certain circumstances; see Section V. Programming Policies, Preventive Maintenance Funding.	
Operational Improvements/Enhancements	**8**
Operational Improvement/Enhancements - any project proposed to improve and/or enhance the efficiency of a transit facility.	
Operations	**8**
Operations—costs associated with transit operations such as the ongoing maintenance of transit vehicles including the cost of salaries. See Section V, Limited Use of FTA Funds for Operating Purposes.	
Expansion	**8**
Expansion - any project needed to support expanded service levels.	

C. Programming Policies

Project Apportionment Model for Eligible Urbanized Areas

There are four elements that need to be considered to determine operators' urbanized area apportionment: multi-county agreements, high-scoring capital needs, the 10% ADA set-aside amounts, the Lifeline set-aside amounts, and the Unanticipated Costs Reserve. The Regional Priority Model, as explained in paragraph (a), establishes funding priority for apportioning high-scoring capital projects to eligible urbanized areas. Funding may be limited by multi-county agreements as explained in paragraph (b) below. Eligible programming revenues are net of the 10% ADA set-aside discussed in paragraph (c) below, and the Vehicle Procurement Reserve, if any, described at the end of this section.

a) *Regional Priority Programming Model*: The 2000 Census changes to the region's urbanized areas made numerous operators eligible to claim funds in more than one urbanized area. This has necessitated a procedure for apportioning projects to eligible urbanized areas. The *Regional Priority Model,* as described below, was fashioned to prioritize funds for the replacement of the region's transit capital plant, while minimizing the impact of the 2000 Census boundary changes. The 2010 Census did not result in any major changes to the region's urbanized areas.

   The model assumes a regional programming perspective and constrains regional capital demand to the amount of funds available to the region, prior to apportioning projects to urbanized areas. It then apportions projects to urbanized areas in the following order:

   i. Funds are apportioned first for operators that are the exclusive claimant in a single UZA (e.g., LAVTA, Fairfield, etc.)

   ii. Fund projects for operators that are restricted to receiving funds in one urbanized area (e.g., SFMTA, AC Transit, WestCAT, CCCTA, etc.)

   iii. Fund balance of operator projects among multiple urbanized areas, as eligibility allows, with the objective of fully funding as many high scoring projects as possible.

   iv. Reduce capital projects proportionately in urbanized areas where need exceeds funds available.

   v. Fund lower scoring projects (additional programming flexibility) to operators in urbanized areas where apportionments exceed project need.

b) *Multi-County Agreements*: For some operators, urbanized area (UZA) apportionments are guided by multi-county agreements. Aside from the

acknowledged agreements, funds are apportioned based on the regional priority model.

There are three specific agreements that are being honored under the negotiated multi-county agreement model: the Caltrain Joint Powers Board Agreement, the Altamont Commuter Express (ACE) Cooperative Services Agreement and the Santa Rosa UZA Agreement.

Consideration for future agreements will include representation from each interested county, interested transit property, or an appointed designee, and be approved by all operators in the affected UZA and MTC.

c) *10% ADA Paratransit Service Set-Aside*: The FAST Act caps the share of each urbanized area's Section 5307 apportionment that can be programmed for ADA paratransit service operating costs at 10%. An amount equal to 10% of each participating urbanized area's FTA Section 5307 apportionment will be set-aside to assist operators in defraying ADA paratransit operating expenses. The purpose of this set-aside is to ensure that in any one year, a transit operator can use these funds to provide ADA service levels necessary to maintain compliance with the federal law, without impacting existing levels of fixed route service. ADA set-aside programmed to small UZA operators will not impact eligible programming amounts in large UZAs.

The formula for distributing the 10% ADA operating set-aside among the eligible operators in each UA is based on the following factors:

(i) Annual Demand Response (DR) Operating Expenses (45%),
(ii) Annual Demand Response (DR) Ridership (45%), and
(iii) Annual Overall Ridership (10%)
(iv) Operators with zero DR Operating Expenses and DR Ridership will not receive ADA set-aside.

Table 7 shows the percentages by operator and urbanized area (Data Source: NTD, Year: 2018). The table may be revised based on updated NTD data in future years.

Table 7: ADA Set-aside Percentages by Operator and Urbanized Area

	Large UZAs					Small UZAs						
Operator	**San Francisco-Oakland**	**San Jose**	**Concord**	**Antioch**	**Santa Rosa**	**Vallejo**	**Fairfield**	**Vacaville**	**Napa**	**Livermore**	**Gilroy-MH**	**Petaluma**
AC Transit	35.6%											
ACE	0.0%		0.0%									
BART	12.3%		27.7%	21.1%								
Caltrain	0.0%	0.0%										
CCCTA			61.0%									
Fairfield-Suisun Transit							100%					
GGBHTD	1.9%											
LAVTA			11.2%							100%		
Marin County Transit	5.5%											
Napa VINE						19.7%			100%			
Petaluma Transit												65.0%
SamTrans	13.7%											
SFMTA	28.2%											
Santa Rosa CityBus					41.0%							
SolTrans						80.3%						
Sonoma County Transit					59.0%							35.0%
SMART	0.0%				0.0%							0.0%
Tri Delta Transit				78.9%								
Union City	1.0%											
Vacaville								100%				
WestCat	1.9%											
WETA	0.0%											
VTA		100.0%									100%	
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

1) For small UZAs of Fairfield, Vacaville, and Napa, ADA Paratransit Programming is optional, as funds may be otherwise programmed for other operating expenses.
2) Formula based on three weighted factors: a) Operator's Annual Demand Response Expenses (45%), b) Operator's Annual Demand Response Ridership (45%), and c) Operator's Overall Annual Systemwide Ridership (10%).
3) To calculate funding amounts, multiply 10% of related urbanized area revenue estimate against percentages shown for operators in that urbanized area.
4) ACE, Caltrain, SMART, and WETA do not report Demand Response service statistics to NTD, and are therefore ineligible for an ADA Set-Aside share.
5) Percent shares are based on the 2018 NTD Report.

An operator may use its share of the FTA Section 5307 set-aside for other capital projects if the operator can certify that:

- Their ADA paratransit operating costs are fully funded in its proposed annual budget;
- For jointly-funded paratransit services, operators' FTA Section 5307 ADA set-aside shares have been jointly considered in making decisions on ADA service levels and revenues.

If MTC is satisfied with the operator's certification, the operator may re-program its set-aside for any Score 16 project(s), including those projects funded under

FG caps. To ensure that the Section 5307 10% set-aside funding is duly considered for annual ADA paratransit needs, there will be no multi-year programming of the 10% ADA set-aside to capital-only purposes.

d) *Lifeline Set-Aside*: MAP-21 eliminated the Job Access and Reverse Commute (JARC) program (Section 5316) and combined JARC functions and funding with the Urbanized Area Formula (Section 5307) and the Non-urbanized Area Formula (Section 5311) programs. JARC projects were made eligible for 5307 funding, and 3.07% of 5307 appropriations are apportioned by the JARC low-income formula. However, there are no minimum or maximum amounts that can be programmed for JARC projects.

   The region has historically used JARC funds apportioned to large urbanized areas to support the Lifeline program. In recognition of the changes to the JARC program and the continued need for funding for the Lifeline program:

   - The first priority for 5307 funds apportioned by the JARC formula is the Lifeline program;
   - Funds will be set aside for the Lifeline program based on an analysis of the amount of apportionments in each UZA that is apportioned by the low-income formula;
   - Section 5307 funds programmed for JARC projects shall be subject to the Lifeline Program guidelines in effect for that year of programming, rather than to the TCP Policies, provided such projects are consistent with federal laws and regulations related to Section 5307.

Limited Use of FTA Funds for Operating Purposes

FTA permits the use of FTA Section 5307 small urbanized funds to be used for operating purposes. For operators eligible to claim in both large and small urbanized areas, the amount of funds used for operating will be deducted from the amount of capital claimed in the large UA.

MAP-21 provided new eligibility for small and medium-sized bus operators in large urbanized areas to use Section 5307 funds for operating assistance. For operators with up to 75 buses, 75% of the urbanized area's apportionment attributable to the operator (as measured by vehicle revenue hours) may be programmed for operating assistance. For operators with 76 to 100 buses, 50% of the urbanized area's apportionment attributable to the operator (as measured by vehicle revenue hours) may be programmed for operating assistance. Eligible operators may request operating assistance up to the maximum eligible amount, but operating assistance will be programmed only after higher scoring projects in the urbanized area are funded. Operating assistance requests will be treated at Score 8 in the programming process (see Table 6 Project Scores above).

Specified Urbanized Area Flexibility
In urbanized areas with only one transit operator (Fairfield, Vacaville, Napa) greater flexibility for funding lower scoring projects will be allowed, providing that other operators in the region are not impacted. These operators will also be allowed to use funds for operating, without reduction of funding for capital projects, providing that capital is adequately maintained and replaced on a reasonable schedule as outlined in each operator's SRTP or other board-approved capital plan, and in accordance with goals outlined in the RTP for maintaining the region's capital plant (maintenance of effort).

Associated Transit Improvements
The FAST act eliminated the requirement that 1% of the FTA section 5307 apportionments in large urbanized areas be programmed for Associated Transit Improvements (formerly referred to as transit enhancements). However, designated recipients must still submit an annual report listing projects carried out in the preceding year with these funds as part of the Federal fiscal year's final quarterly progress report in TrAMS. The report should include the following elements:

(A) Grantee name;
(B) UZA name and number;
(C) FTA project number;
(D) Associated transit improvement category;
(E) Brief description of improvement and progress towards project implementation;
(F) activity line item code from the approved budget; and
(G) Amount awarded by FTA for the project. The list of associated transit improvement categories and activity line item (ALI) codes may be found in the table of Scope and ALI codes in TrAMS. To assist MTC staff in preparing this report, grantees should continue to identify associated transit improvement projects that will receive funding from the Urbanized Area Formula Program.

Preventive Maintenance Funding
Preventive maintenance will be considered a Score 9 funding priority in Transit Capital Priorities, unless the conditions for one of the following four policy elements are met, in which case preventive maintenance will be treated as Score 16. For an individual operator to make use of preventive maintenance funding, other operators in the region must be able to move forward with planned capital replacement. It is the intent of this policy that funding for preventive maintenance will not increase the region's transit capital shortfall.

a) *Funding Exchange*: Operators who wish to exchange a capital project for preventive maintenance funding in order to use their local or state funds to

ease federal constraints or strictly as a financing mechanism may do so providing that the replacement asset funded with local funds is comparable to the asset being replaced and is maintained in service by the purchasing operator for its full useful life as outlined in Section V. The Funding Exchange element can be applied to lower scoring capital projects as well as preventive maintenance. Operators using the Funding Exchange element must certify in writing that the assets will be replaced with non-federal funds.

b) *Capital Exchange*: In this option, an operator could elect to remove an eligible capital project from TCP funding consideration for the useful life of the asset in exchange for preventive maintenance funding. The funding is limited to the amount of capital funding an operator would have received under the current TCP policy in a normal economic climate. If an operator elects to replace the asset - removed from regional competition for funding under these provisions – earlier than the timeline established for its useful life, the replacement will be considered an expansion project. Operators using the Capital Exchange element will be limited to two years preventive maintenance funding within a 12-year period.

c) *Negotiated Agreement within an Urbanized Area*: In the third option, an operator may negotiate with the other operators in the affected urbanized areas to receive an amount of preventive maintenance funding, providing that a firewall is established between the affected urbanized area(s) and all other urbanized areas. This will ensure that other operators' high-scoring capital replacement projects are not jeopardized.

d) *Budgetary Shortfalls*: Requests for preventive maintenance to meet budgetary shortfalls will be considered on a case-by-case basis if a fiscal need can be demonstrated by the requesting operator based on the guidelines outlined below. MTC must declare that a fiscal need exists to fund preventive maintenance where such action would displace higher scoring capital projects ready to move forward in a given fiscal year. A fiscal need can be declared if the following conditions exist:

- An operator must demonstrate that all reasonable cost control and revenue generation strategies have been implemented and that a residual shortfall remains.
- An operator can demonstrate that the shortfall, if not addressed, would result in a significant service reduction.

The Commission will consider the severity of the shortfall and the scope and impact of the service cuts in determining whether fiscal need exists. Operators establishing a fiscal need must also adhere to the following four requirements in order to be eligible to receive funding for preventive maintenance:

i. Operators must successfully show a board approved bridging strategy that will sustain financial recovery beyond the year for which preventive maintenance is requested.

ii. The bridging strategy should not rely on future preventive maintenance funding to achieve a balanced budget. In other words, should a service adjustment be required to balance the budget over the long run, preventive maintenance should not be invoked as a stopgap to inevitable service reductions.

iii. Funds programmed to preventive maintenance should not be considered as a mechanism to sustain or replenish operating reserves.

iv. Operators requesting FTA formula funds will be limited to two years preventive maintenance funding within a 12-year period.

The requesting operator will enter into an MOU with MTC or other formal agreement or action, such as Board approvals, and if applicable, with other transit properties affected by the preventive maintenance agreement. The agreement or actions will embody the four eligibility requirements outlined above as well as any other relevant terms and conditions of the agreement.

e*) Emergency duration special protocols:*
Until the Commission removes them, the following special protocols are in effect for this section due to the Covid-19 pandemic.

- Operating funding is eligible in addition to preventive maintenance funding, for those operators eligible under FTA rules, including applicable Emergency Relief provisions enacted by FTA.

Under declaration of fiscal need:

-Operator demonstration of implementation of reasonable cost control and revenue generation strategies may take into account special pandemic factors such as stopping fare collection for public safety, service levels that allow for physical distancing by passengers, and avoidance of deep service and labor cuts in anticipation of recovery.

-Operator demonstration that shortfall not being addressed would result in significant service reduction may likewise take into account pandemic factors, such as already-reduced schedules and transition schedules planned for a return to full service.

Under operator requirements for eligibility:

-Bridging strategy does not need to be approved by operator's board. However, it should still be prepared at the staff level, and will be summarized for the Commission as part of any program recommendations.

-The provision limiting two years of preventive maintenance/operations funding within a 12-year period will not apply during this emergency period.

The MOU requirement listed above in subsection (d) is waived.

Emergency relief requests and programming are subject to the Principles for Redirecting Funds to Transit Operators (Appendix 3).

Vehicle Procurement Reserves
The TCP Program may reserve funds for future programming for major vehicle replacement/procurement projects (e.g. BART, SFMTA, Caltrain). The programming of such reserves will be based on the cash-flow needs of the projects and available revenue streams.

Grant Spend-down Policy
This policy conditions new programming on the expenditure of prior year grants in order to direct the region's limited funds to the projects most in need of additional resources and accelerate the delivery of TCP projects.

The focus of this policy is on fixed guideway (FG) projects, as vehicle procurement projects are generally completed in a timely manner. Each year, MTC staff will calculate the balance of older FG grants from TrAMS data in consultation with each operator. The goal amounts will be compared against TrAMS grant balances for the appropriate grants in September of each year to determine if the goals have been met. The policy establishes a target for spending a specified percentage of the grant balance each year. Table 9 below explains the spend-down goals for each program year.

If the goals for each operator are met, the full FG cap amounts specified for that operator in the relevant section above will be programmed, subject to funding availability. However, if the target is not met, staff will defer the FG funding for those operators not meeting their goals proportionate to the percentage of the prior-year grants unexpended. If the goal is then met in subsequent years, the full FG cap would be programmed, subject to funding availability. Additionally, operators will have the opportunity to request deferred FG cap amounts in later years, subject to meeting their grant spend-down goals and availability of funding. Programming of these deferred caps will be treated as a lower priority than other Score 16 projects.

Restoration of Deferred Fixed Guideway Caps:

- Voluntarily-deferred caps: the deferred amount will be programmed in the year of the operator's choosing, programmed as a prior-year commitment.
- Involuntarily-deferred caps: in years when additional funding is available, after meeting Debt Service payment requirements, a subcommittee of the FG operators will be called to evaluate proposals to restore prior-year involuntarily

deferred caps. The recommendations of this subcommittee will be considered for programming recommendations to the Commission.

- Restoration of any deferred caps to an operator, whether voluntary or involuntary, would be rescinded if the operator does not meet their spend-down target in the same year.
- Operators who do not meet their spend-down target in the year of a proposed restoration or the immediately-prior year would not be eligible for cap restoration.

Fixed guideway programming for FY2020-21 will be based on an analysis of grant spending through September of 2020. Future programming will include the full cap amounts, but will be conditioned on meeting the grant spend-down goals in the appropriate year. Should an operator not meet its target in a given year, the FG cap amount in the preliminary program would be reduced accordingly in that year's POP amendment.

Table 9: FY2020-21 to FY2024-25 Program Grant Spend-Down Policy

Program Year	Basis for Balance	Spend-Down Target	Spend-Down Period
FY2020-21	Undisbursed balance of FG grants awarded FY2014-15 or earlier, as of 9/2017	Remaining balance, as of 9/2019	9/2019 to 9/2020
FY2021-22	Undisbursed balance of FG grants awarded FY2017-18 or earlier, as of 9/2020	1/4 of balance	9/2020 to 9/2021
FY2022-23		1/3 of remaining balance, as of 9/2021	9/2021 to 9/2022
FY2023-24		1/2 of remaining balance, as of 9/2022	9/2022 to 9/2023
FY2024-25		Remaining balance, as of 9/2023	9/2023 to 9/2024

Joint Procurements

In recognition of the policy direction of the Transit Sustainability Project Resolution No. 4060, before TCP funds are programmed for revenue vehicles, non-revenue vehicles, communications and vehicle location systems, fare collection equipment, bus emission reduction devices, computer systems, including management information systems and maintenance/asset management systems, or other equipment, operators must evaluate and pursue, as appropriate, opportunities for joint procurements and integrated operations with other operators. The "Compensation for Cost Effective Bus Purchases" that was introduced into the TCP Policy with the prior update will provide operators an extra incentive to pursue joint procurement opportunities. MTC will coordinate discussions if requested.

Transit Asset Management

FTA issued a final rule related to transit asset management and NTD reporting for transit providers in July, 2016; the effective date of the rule is October 1, 2016. The rule establishes a National Transit Asset Management (TAM) System in accordance with the Moving Ahead for Progress in the 21st Century Act (MAP-21). The National TAM System elements include the definition of "state of good repair", a requirement that providers develop and carry out a TAM plan, performance measures and targets for capital assets, reporting requirements, and the application of analytical processes and decision support tools.

Implementation Timeline & Rule Compliance

TAM Plans

A provider's initial TAM plan must be completed no later than two years after the effective date of the final rule i.e. by September 2018. A TAM Plan must cover a horizon period of at least four (4) years and must be updated at least once every four years. The Plan update should coincide with the planning cycle for the relevant Transportation Improvement Program or Statewide Transportation Improvement Program.

TAM Plan Requirements

TAM Plan Requirements apply to all direct recipients and sub-recipients of Federal financial assistance under 49 U.S.C. Chapter 53 that own, operate, or manage capital assets used for providing public transportation. The TAM Plan requirements also vary based on whether the provider is a Tier 1, or Tier 2 provider:

- Tier 1 Providers – All rail transit providers and all recipients that own, operate or manage 101 or more vehicles in revenue service during peak regular service across all fixed route modes or in any one non-fixed route mode. Tier 1 providers must develop TAM plans including elements 1 – 9 listed below.

- Tier 2 Providers – A recipient that owns, operates, or manages 100 or fewer vehicles in revenue service during peak regular service across all non-rail fixed route modes or in any one non-fixed route mode, or is a sub-recipient under the 5311 Rural Area Formula Program. Tier 2 operators may develop their own TAM plan or participate in a group TAM plan and need only include elements 1 – 4 as listed below. A sponsor must develop a group TAM plan for its Tier 2 sub-recipients, except those sub-recipients that are also direct recipients under 49 U.S.C. 5307.

  TAM Plan Elements

  i. An inventory of the number and type of capital assets owned by the provider except equipment with an acquisition value under $50,000 that is not a service vehicle. The inventory must include third-party owned or jointly procured exclusive-use maintenance facilities, administrative facilities, rolling stock, and guideway infrastructure used by a provider in the provision of public transportation. The asset inventory must be

organized at a level of detail commensurate with the level of detail in the provider's program of capital projects.

ii. A condition assessment of those inventoried assets for which a provider has direct capital responsibility.
iii. A description of the analytical processes or decision-support tools that a provider uses to estimate capital investment needs over time and develop its investment prioritization.
iv. A provider's project-based prioritization of investments
v. A provider's TAM and SGR policy
vi. A provider's TAM plan implementation strategy
vii. A description of key TAM activities that a provider intends to engage in over the TAM plan horizon period
viii. A summary or list of the resources, including personnel, that a provider needs to develop and carry out the TAM plan; and
ix. An outline of how a provider will monitor, update, and evaluate, as needed, its TAM plan and related business practices to ensure continuous improvement of TAM practices

MTC is proposing that the region take a coordinated approach in complying with the rule, in order to maximize the potential for region-wide benefits, including, but not limited to, the development of a group plan for Tier 2 operators.

Performance Targets
Additionally, recipients need to report on the condition of their system and performance targets. The final rule establishes SGR standards and four SGR performance measures. Targets for the following fiscal year must be set, for each applicable asset class, each year. To the extent practicable, a provider must coordinate with the States and MPOs in the selection of State and MPO performance targets. In addition, MTC will need to set regional performance targets for transit asset condition.

The individual operator targets will also serve as the basis of the regional performance targets. To facilitate the translation of operator to regional performance targets, MTC is proposing some parameters for operators to follow in the setting of their agency TAM targets, including:

- Consistency with Plan Bay Area and Transit Capital Priorities (TCP) Policies – With a goal of establishing a nexus between performance targets and MTC's programming and planning policies, transit operator performance targets should be as consistent as possible with Plan Bay Area investments and current programming policies.
- Limited/Consistent Asset Classes – Since targets are required to be set for each relevant asset class, MTC is proposing to limit or consolidate the number of motor bus asset classes that have associated targets to be consistent with the bus/van price list used in the TCP process and guidance from the FTA on target-

setting by asset class for facilities. Without some standardization of asset classes, the variations of asset classes among operators would result in an unwieldy number of targets.

MTC, as a designated recipient, is required to report to the Department of Transportation on the condition of its recipients' public transportation systems and performance targets. Therefore, all operators are required to report their targets to MTC prior to the end of each calendar year.

Transit Core Capacity Challenge Grant Program: Resolution No. 4123

The Transit Core Capacity Challenge Grant program (CCCGP) makes a policy commitment of approximately $7.4 billion in federal, state, regional and local funds over the FY2014-15 to FY2029-30 period to high-priority transit capital projects that will improve the capacity and state of good repair of transit services in the urban core of the region.

The $7.4 billion Core Capacity Challenge Grant program:

* Focuses on the SFMTA, BART, and AC Transit – the three transit operators that carry 80% of the region's passengers as well as more than three-quarters of the minority and low-income passengers.
* Leverages regional discretionary funds and local contributions, including proposed Cap and Trade revenue.
* Accelerates and solidifies funding for fleet replacement projects, and identifies new funding for key enhancement projects.
* Requires that the participating operators meet the performance objectives of the Transit Sustainability Project.

TCP programming for all projects identified in the CCCGP will be consistent with the funding amounts, local match requirements and other terms and conditions specified in MTC Resolution No. 4123.

All projects proposed for TCP funding in the CCCGP that are not otherwise Score 16 will be treated as Score 16. CCCGP fixed guideway infrastructure projects included in the CCCGP program of projects may be funded with a combination of fixed guideway cap funds and additional TCP funds above the operator's fixed guideway cap. Programming for CCCGP projects is based on cash flow needs, funding availability, and other policy elements.

In order to meet cash flow needs of the CCCGP and other TCP projects in years in which project funding needs exceed the region's annual FTA apportionments, financing may be required to advance future FTA/STP revenues. Debt service, including principal and interest payments, for any such financing will be treated as Score 17.

Financing

MTC staff, working with financial and legal advisors, and transit operator staff through the Partnership's Transit Finance Working Group, has been developing plans to finance one or more transit capital projects by borrowing against future Federal Transit Administration (FTA) formula funds. The projects would be funded all or in part with proceeds of the financing, rather than annual FTA apportionments programmed through the Transit Capital Priorities (TCP) program. A portion of the region's apportionments would be used to make debt service payments. The objective of financing is to accelerate the funding and delivery of critical capital projects by advancing FTA funds from future years when annual apportionments are projected to exceed high-priority needs, to the next four-year TCP programming cycle, when needs are projected to exceed annual apportionments.

The need for financing was anticipated when MTC adopted the Core Capacity Challenge Grant Program (Resolution 4123) in 2013, which established a $7.5 billion, 16-year funding framework for a set of key projects designed to increase capacity and improve the state of good repair of transit service in the urban core of the region, including fleet replacement and expansion for BART, SFMTA and AC Transit, and related infrastructure projects. The Core Capacity funding plan includes $3.5 billion in FTA and other federal funds, of which a portion would be advanced through financing to accelerate completion of the projects.

The specific terms of any financing would be subject to agreements between the operator and MTC, MTC, the operator, and FTA, and MTC and bondholders. Debt service, including principal and interest payments, will have the highest priority among programming needs and will receive a Score 17 in developing the program. Debt service will be paid from apportionments in the same urbanized area(s) in which the operator whose project(s) are being financed is eligible. It is expected that any debt would be repaid over a 10-15 year period.

Vanpool Reporting & Programming

MTC's vanpool subsidy program began November 1, 2018. MTC began reporting vanpool data to NTD in 2019 for FY2018-19. Staff may propose to include in the TCP program, starting with the FY2020-21 program, 5307 funds for the Vanpool Support Program.

The amount proposed for programming from each urbanized area will not exceed the projected apportionments generated by vanpool reporting in the urbanized area. Any apportionments that are generated by vanpool reporting but are not programmed for the Vanpool Support Program will be available for programming to transit operator projects following the TCP programming guidelines. Staff anticipates submitting its own 5307 grants to FTA to request funds programmed for the Vanpool Support Program, but may elect to ask one or more transit operators to request the funds on MTC's behalf, and enter into a pass-through agreement with MTC.

IV. ONE BAY AREA GRANT PROGRAM TRANSIT CAPITAL PROGRAM

The Commission's One Bay Area Grant Program Second Round (OBAG 2) Project Selection Criteria and Programming Policy for FY2017-18 through FY 2021-22, MTC Resolution No. 4202, Revised, includes $189 million in STP/CMAQ funding for transit priorities, including BART car replacement and expansion, replacement of Clipper equipment and development of Clipper 2.0, and the TPI Program. Specific projects are included in Attachment B-1 to MTC Resolution No. 4202, Revised.

The Commission is expected to adopt the Cycle 3 / One Bay Area Grant Program (OBAG 3) Program Project Selection Criteria and Programming Policy for FY2022-23 through FY 2026-27 in calendar year 2021.

This section specifies the programming policies for OBAG 2 funds for TCP projects, and will be updated to the extent that OBAG 3 includes funding for transit capital needs.

Transit Capital Priorities

Certain OBAG 2 funds are programmed for transit capital replacement and rehabilitation projects to supplement the FTA funds in the Transit Capital Priorities program. OBAG 2 funds for TCP projects will be programmed using the same policies and procedures as used for the FTA formula funds, as specified in Section III. FTA Formula Funds, with priority given to Score 16 projects that meet the eligibility criteria for STP or CMAQ, and that cannot be fully funded with FTA funds within the program's fiscal constraints.

APPENDIX 1 – BOARD RESOLUTION

Sample Resolution of Board Support
FTA Section 5307, 5337, and 5339, and Surface Transportation Program Project Application

Resolution No. _____

AUTHORIZING THE FILING OF AN APPLICATION FOR FTA FORMULA PROGRAM AND SURFACE TRANSPORTATION PROGRAMS FUNDING FOR (project name) AND COMMITTING THE NECESSARY LOCAL MATCH FOR THE PROJECT(S) AND STATING THE ASSURANCE OF (name of jurisdiction) TO COMPLETE THE PROJECT

WHEREAS, Fixing America's Surface Transportation (FAST, Public Law 114-94) continues and establishes new Federal Transit Administration formula programs (23 U.S.C. §53) and continues the Surface Transportation Program (23 U.S.C. § 133); and

WHEREAS, pursuant to FAST, and the regulations promulgated there under, eligible project sponsors wishing to receive Federal Transit Administration (FTA) Section 5307 Urbanized Area, Section 5337 State of Good Repair, or Section 5339 Bus and Bus Facilities (collectively, FTA Formula Program) grants or Surface Transportation Program (STP) grants for a project shall submit an application first with the appropriate metropolitan transportation planning organization (MPO), for review and inclusion in the MPO's Transportation Improvement Program (TIP); and

WHEREAS, the Metropolitan Transportation Commission is the MPO for the San Francisco Bay region; and

WHEREAS, (applicant) is an eligible project sponsor for FTA Formula Program or STP funds; and

WHEREAS, (applicant) wishes to submit a grant application to MTC for funds from the FY2020-21 FTA Formula Program or STP funds, for the following project(s):
(project description) .

WHEREAS, MTC requires, as part of the application, a resolution stating the following:

1) the commitment of necessary local matching funds (18-50% for FTA Formula Program funds, depending on project type, and 11.47% for STP funds); and
2) that the sponsor understands that the FTA Formula Program and STP funding is fixed at the programmed amount, and therefore any cost increase cannot be expected to be funded from FTA Formula Program or STP funds; and

3) the assurance of the sponsor to complete the project as described in the application, and if approved, as programmed in MTC's TIP; and
4) that the sponsor understands that FTA Formula Program funds must be obligated within three years of programming and STP funds must be obligated by January 31 of the year that the project is programmed for in the TIP, or the project may be removed from the program.

NOW, THEREFORE, BE IT RESOLVED by (governing board name) that (applicant) is authorized to execute and file an application for funding under the FTA Formula Program and/or Surface Transportation Program in the amount of ($request) for (project description); and

BE IT FURTHER RESOLVED that (governing board) by adopting this resolution does hereby state that:

1) (applicant) will provide ($ match amount) in local matching funds; and

2) (applicant) understands that the FTA Formula Program and STP funding for the project is fixed at ($ actual amount), and that any cost increases must be funded by the (applicant) from local matching funds, and that (applicant) does not expect any cost increases to be funded with FTA Formula Program and Surface Transportation Program funds; and

3) (project name) will be built as described in this resolution and, if approved, for the amount shown in the Metropolitan Transportation Commission (MTC) Transportation Improvement Program (TIP) with obligation occurring within the timeframe established below; and

4) The program funds are expected to be obligated by January 31 of the year the project is programmed for in the TIP; and

5) (applicant) will comply with FTA requirements and all other applicable Federal, State and Local laws and regulations with respect to the proposed project; and

BE IT FURTHER RESOLVED*, that (agency name) is an eligible sponsor of projects in the program for FTA Formula Program and STP funds; and

BE IT FURTHER RESOLVED*, that (agency name) is authorized to submit an application for FTA Formula Program and STP funds for (project name); and

BE IT FURTHER RESOLVED*, that there is no legal impediment to (agency name) making applications for FTA Formula Program and STP funds; and

BE IT FURTHER RESOLVED*, that there is no pending or threatened litigation which might in any way adversely affect the proposed project, or the ability of (agency name) to deliver such project; and

BE IT FURTHER RESOLVED, that (agency name) agrees to comply with the requirements of MTC's Transit Coordination Implementation Plan as set forth in MTC Resolution 3866; and

BE IT FURTHER RESOLVED that a copy of this resolution will be transmitted to the MTC prior to MTC programming the FTA Formula Program or Surface Transportation Program funded projects in the Transportation Improvement Program (TIP); and

BE IT FURTHER RESOLVED that the MTC is requested to support the application for the project described in the resolution and to program the project, if approved, in MTC's TIP**.**

*** Not required if opinion of counsel is provided instead.**

APPENDIX 2 – OPINION OF COUNSEL

Sample Opinion of Legal Counsel
FTA Section 5307, 5337, 5339 and STP Project Application

(Date)

To: Metropolitan Transportation Commission
Fr: (Applicant)
Re: Eligibility for FTA Section 5307 Program, FTA 5337 State of Good Repair Program, FTA 5339 Bus and Bus Facilities Program, and Surface Transportation Program (STP)

This communication will serve as the requisite opinion of counsel in connection with the application of (Applicant) for funding from the FTA Section 5307, 5337 or 5339 programs, or STP, made available pursuant to the Fixing America's Surface Transportation federal transportation authorization (FAST, Public Law 114-94) or successor legislation.

1. (Applicant) is an eligible sponsor of projects for the FTA Section 5307, 5337 or 5339 programs, or the STP program.
2. (Applicant) is authorized to submit an application for FTA Section 5307, 5337 or 5339 funding, or STP funding for (project).
3. I have reviewed the pertinent state laws and I am of the opinion that there is no legal impediment to (Applicant) making applications FTA Section 5307, 5337 or 5339 program funds, or STP funds. Furthermore, as a result of my examinations, I find that there is no pending or threatened litigation which might in any way adversely affect the proposed projects, or the ability of (Applicant) to carry out such projects.

Sincerely,

_____
Legal Counsel

_____
Print name

Optional Language to add to the Resolution for Local Support

Project sponsors have the option of consolidating the 'Opinion of Legal Counsel' within the Resolution of Local Support, by incorporating the following statements into the Resolution of Local Support:

Resolved, that (agency name) is an eligible sponsor of projects in the FTA Formula Program and STP Programs; and be it further

Resolved, that (agency name) is authorized to submit an application for FTA Formula Program and STP funds for (project name); and be it further

Resolved, that there is no legal impediment to (agency name) making applications for FTA Formula Program and STP funds; and be it further

Resolved, that there is no pending or threatened litigation which might in any way adversely affect the proposed project, or the ability of (agency name) to deliver such project; and be it further

If the above language is not provided within the Resolution of Local Support, an Opinion of Legal Counsel is required as provided (Appendix 2).

APPENDIX 3 – PRINCIPLES FOR REDIRECTING FUNDS TO TRANSIT OPERATIONS

(As approved by Commission on December 16, 2020)

These principles apply to fund sources that are under the direct authority of the Metropolitan Transportation Commission to program, allocate, distribute or otherwise control; and that such fund sources allow flexibility to direct to transit operations within existing statutory authorities.

1. Use funding to smooth the transition to a transit system based on service demand and available resources. – A re-direction of funding for transit operations would be intended as temporary relief, not an ongoing subsidy. The Commission seeks to aggressively pursue new funding at the federal and state levels to help catalyze a financial recovery for public transit that approaches its status prior to the COVID-19 pandemic and its devastating impacts on ridership. Until which time such aid and recovery are realized, these investment principles and any attendant actions are designed to ease the disruption.

   To ease the disruption to agency labor forces and the public, funding should provide a "glide path" to an optimized system, once the availability of future operating resources and the demand for service are better understood. An expected federal funding relief package, a proposed vaccine roll-out plan, or other similar information could be important factors to right-size the system and establish a transition glide path.

2. The benefits of redirecting funds to transit operations should outweigh the disbenefits. – The opportunity costs or trade-offs involved with re-directing funds from their intended usage to transit operations can include, but are not limited to:
   - Capital job losses
   - Safety and reliability concerns if fund source is normally directed to state of good repair purposes
   - Other pandemic recovery strategies including bicycle/pedestrian, mobility, and regional programs and projects
   - Inability to implement Plan Bay Area /Sustainable Communities Strategy goals, priorities and climate objectives, and meet multiple federal performance requirements
   - Inability to fund county priorities including congestion relief and multi-modal improvements; including loss of leveraged state and federal competitive funds
   - The ability of transit service benefitting from redirected funds to address the needs of those most dependent on its preservation, and for whom mobility options present undue burdens

   Further, the degree of impact that a redirection of a specific funding source might have, given the scale of operations funding need, should be considered. An analysis of the relevant costs and benefits should be conducted prior to the redirection of funding.

3. Specific to the federal transit formula funds programmed within the Transit Capital Priorities (TCP) process, the distribution of funds redirected from transit capital priorities to transit operations or preventive maintenance should promote fairness and balance of need across Bay Area operators. – Funds normally used to improve the state of repair of transit capital assets in the region are distributed based on capital rehabilitation and replacement need, limitations posed by federal Urbanized Area (UA) eligibility, and negotiated agreements related to the distribution of formula funds among eligible operators within UAs. Funding redirected from transit capital priorities to transit operations for any particular operator, should be treated as an advance against future funding shares for that operator.

4. Any transit operator utilizing funding subject to these principles to preserve or otherwise enable transit service during the COVID-19 recovery, commits to providing that service consistent with the Transformational Transit Action Plan emerging from the Commission's Blue Ribbon Transit Recovery Task Force. Such investment is intended not as a discrete and singular act, but as part of a suite of actions underway to stabilize transit service overall during the current pandemic crisis, and position that foundation to build a strategic recovery that better addresses the needs of Bay Area transit customers into the future.

Date: March 23, 2022
W.I.: 1512
Referred By: PAC
Revised: 05/25/22-C 09/28/22-C

ABSTRACT

Resolution No. 4510

This resolution approves the FY2021-22 through FY2023-24 Transit Capital Priorities preliminary program of projects for inclusion in the Transportation Improvement Program (TIP). The program includes projects funded with FTA Section 5307 Urbanized Area, Section 5337 State of Good Repair, and Section 5339 Bus and Bus Facilities Formula Programs. In addition, One Bay Area Grant Cycle 2 (OBAG 2) Transit Priorities funds are programmed in MTC Resolution No. 4202, and AB 664 Bridge Toll revenues and BATA Project Savings are programmed in MTC Resolution No. 4513 and Resolution No. 4169, respectively, for FYs 2021-22 through 2023-24 Transit Capital Priorities projects. This resolution will be amended to add the remainder of the FY2021-22 through FY2023-24 Transit Capital Priorities program at a future date, and to adjust for actual FTA apportionments.

This Resolution includes the following attachments:

Attachment A – FY2021-22 Program of Projects
Attachment B – FY2022-23 Program of Projects
Attachment C – FY2023-24 Program of Projects
Attachment D – FY2021-22 through FY2023-24 Programming Notes

Attachments A through D of this resolution were revised on May 25, 2022 to make revisions to the Transit Capital Priorities Program of Projects for FYs 2021-22 through 2023-24 as requested by operators, to set aside funds for fixed guideway cap increases and zero emission bus infrastructure, and to reconcile the program to final FTA apportionments in FY 2021-22.

Attachments A through D of this resolution were revised on September 28, 2022 to make revisions to the Transit Capital Priorities Program of Projects for FYs 2021-22 through 2023-24 as requested by operators and to program fixed guideway cap increases and zero emission bus infrastructure set-asides.

Further discussion of the TCP program of projects is contained in the Programming and Allocations Committee summary sheets dated March 9, 2022, May 11, 2022, and September 14, 2022.

Date: March 23, 2022
W.I.: 1512
Referred By: PAC
Revised: 05/25/22-C 09/28/22-C

RE: San Francisco Bay Area Regional Transit Capital Priorities Program

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4510

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to Government Code Sections 66500 et seq.; and

WHEREAS, MTC is the designated Metropolitan Planning Organization (MPO) for the nine-county Bay Area and is required to prepare and endorse a Transportation Improvement Program (TIP) which includes a list of priorities for transit capital projects; and

WHEREAS, MTC is the designated recipient of the Federal Transit Administration (FTA) Section 5307 Urbanized Area, Section 5337 State of Good Repair, and Section 5339 Bus and Bus Facilities funds for the large urbanized areas of San Francisco-Oakland, San Jose, Concord, Antioch, and Santa Rosa, and has been authorized by the California Department of Transportation (Caltrans) to select projects and recommend funding allocations subject to state approval for the FTA Section 5307 and Section 5339 funds for the small urbanized areas of Vallejo, Fairfield, Vacaville, Napa, Livermore, Gilroy-Morgan Hill, and Petaluma in MTC's Federal Transportation Improvement Program; and

WHEREAS, MTC has worked cooperatively with the cities, counties and transit operators in the region and with Caltrans to establish priorities for the transit capital projects to be included in the TIP; and

WHEREAS, the process and criteria used in the selection and ranking of such projects are set forth in MTC Resolution No. 4444; and

WHEREAS, the projects to be included in the TIP are set forth in the detailed project listings in Attachments A-C, which is incorporated herein as though set forth at length; now, therefore, be it

RESOLVED, that MTC adopts the FY2021-22 through FY2023-24 Transit Capital Priorities program of projects to be included in the TIP as set forth in Attachments A-C; and, be it further

RESOLVED, that the Executive Director or designee is authorized to revise Attachments A-D as necessary to reflect the programming of projects as the projects are revised in the TIP; and be it further

RESOLVED, that the Executive Director of MTC is authorized and directed to forward a copy of this resolution to FTA, and such agencies as may be appropriate.

METROPOLITAN TRANSPORTATION COMMISSION

Alfredo Pedroza, Chair

The above resolution was entered into by the
Metropolitan Transportation Commission
at a regular meeting of the Commission held in
San Francisco, California and at
other remote locations on March 23, 2022.

Date: March 23, 2022
W.I.: 1512
Referred by: PAC
Revised: 05/25/22-C
09/28/22-C

Attachment A
Resolution No. 4510

FY 2021-22 Transit Capital Priorities / Transit Capital Rehabilitation Program						
TIP ID	**Operator**	**Project Description**	**Total FTA Program**	**FTA Section 5307**	**FTA Section 5337**	**FTA Section 5339**
		Actual Apportionments	**652,980,135**	**309,591,917**	**329,005,589**	**14,382,629**
		Previous Year Carryover	**3,059,533**	**2,449,917**	**-**	**609,616**
		Funds Available for Programming	**656,039,668**	**312,041,834**	**329,005,589**	**14,992,245**
MTC Debt Service						
REG170023	MTC	Debt Service	-	-	-	-
Lifeline Set-Aside						
TBD	TBD - Lifeline	TBD - Reserved for future programming	-	-	-	-
ADA Operating Set-Aside						
VAR210003	AC Transit	ADA Paratransit Assistance	6,729,308	6,729,308	-	-
VAR210003	BART	ADA Paratransit Capital Accessibility Improvements	3,381,044	3,381,044	-	-
VAR210003	CCCTA	ADA Paratransit Assistance	1,823,750	1,823,750	-	-
VAR210003	ECCTA	ADA Operating Assistance	852,076	852,076	-	-
VAR210003	LAVTA	ADA Paratransit Operating Subsidy	546,984	546,984	-	-
VAR210003	MCTD	ADA Paratransit Assistance	1,039,640	1,039,640	-	-
VAR210003	Napa Vine	ADA Operating Assistance	442,601	442,601	-	-
VAR210003	Petaluma	ADA Set-Aside	103,359	103,359	-	-
VAR210003	SamTrans	ADA Paratransit Operating Subsidy	2,589,649	2,589,649	-	-
VAR210003	Santa Rosa	ADA Operating Assistance	313,314	313,314	-	-
VAR210003	SFMTA	ADA Paratransit Operating Support	5,330,519	5,330,519	-	-
VAR210003	SolTrans	ADA Paratransit Operating Subsidy	475,285	475,285	-	-
VAR210003	Union City	ADA Set-Aside	189,025	189,025	-	-
VAR210003	VTA	ADA Operating Set-Aside	5,224,040	5,224,040	-	-
VAR210003	Westcat	ADA Paratransit Operating Subsidy	359,148	359,148	-	-
		Total Program Set-asides and Commitments	**29,399,742**	**29,399,742**	**-**	**-**
		Funds Available for Capital Programming	**626,639,925**	**282,642,092**	**329,005,589**	**14,992,245**
Capital Projects						
ALA990052	AC Transit	ADA Operating Depreciation Costs from 3 Vendors	1,634,374	1,634,374	-	-
NEW	AC Transit	Replace (23) 40ft Urban Buses - Diesel	8,223,620	1,270,692	-	6,952,928
NEW	AC Transit	Construction of Hydrogen Fueling Infrastructure	5,557,743	5,557,743	-	-
ALA170048	ACE	ACE Fixed Guideway (Capitalized Maintenance)	1,896,860	-	1,896,860	-
NEW	ACE	ACE Railcar Replacement	3,200,000	-	3,200,000	-
ALA210008	ACE	ACE Capital Access Fee	1,426,707	1,426,707	-	-
ALA090065	BART	Fare Collection Equipment	9,562,740	-	9,562,740	-
ALA190014	BART	Elevator Renovation Program	7,000,000	-	7,000,000	-
BRT030004	BART	Train Control Renovation	11,320,000	-	11,320,000	-
BRT030005	BART	Traction Power System Renovation	14,160,000	-	14,160,000	-
BRT97100B	BART	Rail,Way, and Structures Program	19,206,000	-	19,206,000	-
REG090037	BART	Railcar Replacement Program	126,236,167	89,369,064	36,867,103	-
SM-03006B	Caltrain	Systemwide Track Rehabilitation	11,636,470	-	11,636,470	-
SM-050041	Caltrain	Comm. System/Signal Rehab.	2,554,400	-	2,554,400	-
SM-170010	Caltrain	TVM Project	2,080,000	-	2,080,000	-
NEW	CCCTA	Replace 40ft Diesel Buses - Diesel	18,048,000	17,135,568	-	912,432
NEW	CCCTA	Electric Bus Charging Infrastructure	1,478,018	1,478,018	-	-
SOL110041	Fairfield	Bus Replacement	308,398	-	-	308,398
VAR190006	Fairfield	Operating Assistance	3,550,376	3,550,376	-	-
MRN150014	GGBHTD	Ferry Major Component Rehabilitation	359,148	359,148	-	-
MRN990017	GGBHTD	Ferry Dredging	6,366,500	-	6,366,500	-
NEW	GGBHTD	ZEB Infrastructure Design	1,012,172	1,012,172	-	-
NEW	MCTD	MCTD: Revenue Vehicle Rehabilitation	484,000	484,000	-	-
NEW	MCTD	MCTD: Vehicle Replacement - 5 Paratransit Vehicles	412,000	412,000	-	-
NEW	MCTD	ZEB Charging -- Site Prep	693,184	693,184	-	-
VAR190007	MCTD	Preventive Maintenance	40,400	40,400	-	-
REG10003	MTC	Bay Area Vanpool Program	3,021,540	3,021,540	-	-
NAP170003	Napa Vine	NVTA- Vine Transit Bus Maintenance Facility	225,046	36,437	-	188,609
VAR190006	Napa Vine	Napa Vine Operating Assistance	1,770,429	1,770,429	-	-
NEW	Petaluma	Purchase (2) Replacement Fixed Route Buses	1,486,400	1,349,064	-	137,336
NEW	SamTrans	Replace 40ft Diesel Buses - Battery	26,616,000	25,771,207	-	844,793
NEW	SamTrans	Replace Paratransit Vehicles	3,845,520	3,845,520	-	-

Date: March 23, 2022
W.I.: 1512
Referred by: PAC
Revised: 05/25/22-C
09/28/22-C

Attachment A
Resolution No. 4510

FY 2021-22 Transit Capital Priorities / Transit Capital Rehabilitation Program						
TIP ID	**Operator**	**Project Description**	**Total FTA Program**	**FTA Section 5307**	**FTA Section 5337**	**FTA Section 5339**
NEW	SamTrans	South Base Near-Term Battery Electric Bus (BEB) Charging Infras	2,907,693	2,907,693	-	-
NEW	Santa Rosa	Replace (2) 40' Diesel Buses - Electric	1,774,400	884,693	-	889,707
VAR190006	Santa Rosa	Operating Assistance	1,601,036	1,601,036	-	-
VAR190007	Santa Rosa	Preventive Maintenance	345,274	345,274	-	-
NEW	SFMTA	Facility Development -- Battery Electric Buses	6,312,271	6,312,271	-	-
SF-050024	SFMTA	Wayside/Central Train Control & Trolley Signal Systems Rehabilita	24,272,000	-	24,272,000	-
SF-090012	SFMTA	Light Rail Vehicle Replacement Procurements	108,635,101	-	108,635,101	-
SF-090035	SFMTA	Paratransit Fleet Replacement Procurements	1,557,360	1,557,360	-	-
SF-170018; S	SFMTA	Motor Coach & Trolley Coach Midlife Overhauls	17,706,666	17,706,666	-	-
SF-170021	SFMTA	Historic Streetcar & Cable Car Restorations	2,293,334	-	2,293,334	-
SF-95037B	SFMTA	Muni Rail Replacement	9,970,560	-	9,970,560	-
SF-970170	SFMTA	Overhead Line Rehabilitation	2,930,000	-	2,930,000	-
SF-99T002	SFMTA	Cable Car Infrastructure	2,483,000	-	2,483,000	-
VAR190007	SMART	Preventive Maintenance	3,963,022	3,963,022	-	-
SOL090034	SolTrans	Bus Replacement Alternative Fuel	2,661,600	2,242,269	-	419,331
VAR190006	SolTrans	Operating Assistance	618,791	618,791	-	-
VAR190007	SolTrans	Preventive Maintenance	1,000,000	1,000,000	-	-
SON170006	Sonoma County	SCT Replacement Bus Purchase	889,458	686,285	-	203,173
VAR190007	Sonoma County	SCT Preventive Maintenance	1,280,000	1,280,000	-	-
NEW	Union City	Electric Vehicle Charging Infrastructure	141,091	141,091	-	-
ALA190029	Union City	Bus Purchases	953,600	953,600	-	-
VAR190006	Vacaville	Operating Assistance	1,300,000	1,300,000	-	-
SOL210004	Vacaville	Electric Bus Fleet	221,978	6,682	-	215,296
NEW	VTA	Hybrid and Electric Bus Replacement 2022	45,598,000	42,337,143	-	3,260,857
NEW	VTA	North 1st Street/Tasman Drive - EB Tack Switch Addition Proj. - T	1,640,000	-	1,640,000	-
NEW	VTA	Network Switch Replacement/Upgrade	3,680,000	-	3,680,000	-
NEW	VTA	Axle Press Replacement	1,736,300	-	1,736,300	-
SCL050002	VTA	Rail Replacement and Rehabilitation	6,876,000	-	6,876,000	-
SCL090044	VTA	OCS Rehab & Replacement Program	13,120,000	-	13,120,000	-
SCL150008	VTA	Track Intrusion Abatement FY22/23	2,227,200	-	2,227,200	-
NEW	Westcat	Revenue Vehicle Replacement	1,678,400	1,678,400	-	-
VAR190007	Westcat	Preventive Maintenance	193,600	193,600	-	-
NEW	WETA	Ferry Vessel Replacement - MV Mare Island	21,157,300	19,958,399	1,198,901	-
REG090054	WETA	Ferry Channel Dredging - Vallejo Ferry Terminal	2,455,920	-	2,455,920	-
REG090057	WETA	Vessel Engine Overhaul - Pyxis Class Vessels	1,810,560	-	1,810,560	-
REG090057	WETA	Waterjet Control System Upgrade - Pyxis Class Vessel	600,000	-	600,000	-
REG090057	WETA	Ferry Mid-Life Refurbishment - MV Gemini	3,590,000	-	3,590,000	-
REG090067	WETA	Passenger Float Rehabilitation - Pier 9 Berthing Facility	1,089,600	-	1,089,600	-
		Total Capital Projects	**598,683,327**	**267,891,918**	**316,458,549**	**14,332,860**
		Total Programmed	**628,083,069**	**297,291,660**	**316,458,549**	**14,332,860**
		Fund Balance	**27,956,599**	**14,750,174**	**12,547,040**	**659,385**

Date: March 23, 2022
W.I.: 1512
Referred by: PAC
Revised: 05/25/22-C
09/28/22-C

Attachment B
Resolution No. 4510

FY 2022-23 Transit Capital Priorities / Transit Capital Rehabilitation Program						
TIP ID	**Operator**	**Project Description**	**Total FTA Program**	**FTA Section 5307**	**FTA Section 5337**	**FTA Section 5339**
		Projected Apportionments	**667,985,722**	**317,287,826**	**336,004,067**	**14,693,829**
		Previous Year Carryover	**27,956,599**	**14,750,174**	**12,547,040**	**659,385**
		Funds Available for Programming	**695,942,321**	**332,038,000**	**348,551,107**	**15,353,214**
MTC Debt Service						
REG170023	MTC	Debt Service	-	-	-	-
Lifeline Set-Aside						
TBD	TBD - Lifeline	TBD - Reserved for future programming	-	-	-	-
ADA Operating Set-Aside						
VAR210003	AC Transit	ADA Paratransit Assistance	6,870,547	6,870,547	-	-
VAR210003	BART	ADA Paratransit Capital Accessibility Improvements	3,452,007	3,452,007	-	-
VAR210003	CCCTA	ADA Paratransit Assistance	1,862,028	1,862,028	-	-
VAR210003	ECCTA	ADA Operating Assistance	869,959	869,959	-	-
VAR210003	LAVTA	ADA Paratransit Operating Subsidy	558,463	558,463	-	-
VAR210003	MCTD	ADA Paratransit Assistance	1,061,461	1,061,461	-	-
VAR210003	Napa Vine	ADA Operating Assistance	451,890	451,890	-	-
VAR210003	Petaluma	ADA Set-Aside	105,528	105,528	-	-
VAR210003	SamTrans	ADA Paratransit Operating Subsidy	2,644,002	2,644,002	-	-
VAR210003	Santa Rosa	ADA Operating Assistance	319,581	319,581	-	-
VAR210003	SFMTA	ADA Paratransit Operating Support	5,442,399	5,442,399	-	-
VAR210003	SolTrans	ADA Paratransit Operating Subsidy	485,260	485,260	-	-
VAR210003	Union City	ADA Set-Aside	192,993	192,993	-	-
VAR210003	VTA	ADA Operating Set-Aside	5,333,674	5,333,674	-	-
VAR210003	Westcat	ADA Paratransit Operating Subsidy	366,686	366,686	-	-
		Total Program Set-asides and Commitments	**30,016,478**	**30,016,478**	**-**	**-**
		Funds Available for Capital Programming	**665,925,843**	**302,021,522**	**348,551,107**	**15,353,214**
Capital Projects						
ALA990052	AC Transit	ADA Operating Depreciation Costs from 3 Vendors	1,907,830	1,907,830	-	-
NEW	AC Transit	Replace (23) Articulated 60ft Buses - FCB	27,634,500	19,700,965	-	7,933,535
ALA170048	ACE	ACE Fixed Guideway (Capitalized Maintenance)	1,594,000	-	1,594,000	-
ALA210008	ACE	ACE Capital Access Fee	1,426,707	1,426,707	-	-
ALA090065	BART	Fare Collection Equipment	6,360,000	-	6,360,000	-
ALA190014	BART	Elevator Renovation Program	7,000,000	-	7,000,000	-
BRT030004	BART	Train Control Renovation	10,240,000	-	10,240,000	-
BRT030005	BART	Traction Power System Renovation	10,240,000	-	10,240,000	-
BRT97100B	BART	Rail,Way, and Structures Program	17,406,000	-	17,406,000	-
REG090037	BART	Railcar Replacement Program	175,466,210	95,104,308	80,361,902	-
SM-03006B	Caltrain	Systemwide Track Rehabilitation	11,500,000	-	11,500,000	-
SM-050041	Caltrain	Comm. System/Signal Rehab.	1,100,000	-	1,100,000	-
SM-170010	Caltrain	TVM Project	-	-	-	-
NEW	CCCTA	Replace 22' Vehicles	1,440,000	1,440,000	-	-
CC-070092	ECCTA	ECCTA: Transit Bus Replacements	1,499,232	566,717	-	932,515
SOL110041	Fairfield	Bus Replacement	2,820,588	2,500,000	-	320,588
VAR190006	Fairfield	Operating Assistance	1,151,476	1,151,476	-	-
MRN150014	GGBHTD	Ferry Major Component Rehabilitation	366,686	366,686	-	-
MRN990017	GGBHTD	Ferry Dredging	5,350,000	-	5,350,000	-
NEW	GGBHTD	Collision Avoidance System	840,000	840,000	-	-
NEW	GGBHTD	Replacement Ferry -- CARB Compliance	4,000,000	4,000,000	-	-
NEW	LAVTA	AVL	332,429	332,429	-	-
NEW	LAVTA	Fareboxes	205,190	205,190	-	-
NEW	LAVTA	Radios	40,128	40,128	-	-
NEW	LAVTA	Replace (4) 40'Buses - Fuel Cell	4,044,800	2,726,205	-	1,318,595
NEW	LAVTA	Replace (8) 40' Buses - Hybrid	5,625,600	5,625,600	-	-
NEW	MCTD	MCTD: Replace 2 Rural Cutaway vehicles	188,800	188,800	-	-
NEW	MCTD	MCTD: Replace 3 Demand Response Cutaways with Vans	252,000	252,000	-	-
NEW	MCTD	MCTD: Replace 4 Demand Response Vans	336,000	336,000	-	-
NEW	MCTD	MCTD: Replace 7 local 35ft Hybrid Vehicles	4,855,200	4,855,200	-	-

FY 2022-23 Transit Capital Priorities / Transit Capital Rehabilitation Program						
TIP ID	**Operator**	**Project Description**	**Total FTA Program**	**FTA Section 5307**	**FTA Section 5337**	**FTA Section 5339**
NEW	MCTD	MCTD: Replace one(1) Shuttle Vehicle	94,400	94,400	-	-
NEW	MTC	Blue Ribbon: Transit Transformation Plan	1,375,860	1,375,860	-	-
REG10003	MTC	Bay Area Vanpool Program	5,477,459	5,477,459	-	-
NAP090005	Napa Vine	NVTA ZEB Bus Procurement	225,046	28,987	-	196,059
VAR190006	Napa Vine	Napa Vine Operating Assistance	1,805,838	1,805,838	-	-
NEW	Petaluma	Purchase (2) Replacement Paratransit Vans	168,000	168,000	-	-
SON170017	Petaluma	Petaluma AVL Equipment	740,000	740,000	-	-
NEW	SamTrans	Replace 40ft Diesel Buses - Battery	36,160,000	36,160,000	-	-
SON090024	Santa Rosa	Preventive Maintenance	1,040,485	1,040,485	-	-
VAR190006	Santa Rosa	Operating Assistance	1,633,056	1,633,056	-	-
SF-050024	SFMTA	Wayside/Central Train Control & Trolley Signal Systems Rehabilita	23,740,000	-	23,740,000	-
SF-090012	SFMTA	Light Rail Vehicle Replacement Procurements	67,336,982	-	67,336,982	-
SF-090035	SFMTA	Paratransit Fleet Replacement Procurements	3,087,000	3,087,000	-	-
SF-170018; S	SFMTA	Motor Coach & Trolley Coach Midlife Overhauls	10,542,385	10,542,385	-	-
SF-170021	SFMTA	Historic Streetcar & Cable Car Restorations	11,666,666	-	11,666,666	-
SF-95037B	SFMTA	Muni Rail Replacement	3,837,000	-	3,837,000	-
SF-970170	SFMTA	Overhead Line Rehabilitation	2,500,000	-	2,500,000	-
SF-99T002	SFMTA	Cable Car Infrastructure	3,247,000	-	3,247,000	-
VAR190007	SMART	Preventive Maintenance	4,148,529	4,148,529	-	-
SOL090034	SolTrans	Bus Replacement Alternative Fuel	1,808,000	1,372,061	-	435,939
VAR190006	SolTrans	Operating Assistance	1,600,000	1,600,000	-	-
VAR190007	SolTrans	Preventive Maintenance	1,001,167	1,001,167	-	-
SON170006	Sonoma County	SCT Replacement Bus Purchase	932,847	724,136	-	208,711
VAR190007	Sonoma County	SCT Preventive Maintenance	1,280,000	1,280,000	-	-
VAR190006	Vacaville	Operating Assistance	1,400,000	1,400,000	-	-
NEW	VTA	Signal Improvements Guadalupe	12,607,300	-	12,607,300	-
NEW	VTA	North Yard Tire Awning	320,000	-	320,000	-
NEW	VTA	Guadalupe Second Entrance - Single Point of Failure	-	-	-	-
NEW	VTA	Expand VTA's Chaboya Yard for Electric Buses	-	-	-	-
SCL050001	VTA	Electric 40' Bus Replacement 2023	26,703,200	23,350,348	-	3,352,852
SCL050002	VTA	Rail Replacement and Rehabilitation	12,133,000	-	12,133,000	-
SCL110099	VTA	Bridge and Structures Repairs FY22/23	192,000	-	192,000	-
SCL150008	VTA	Track Intrusion Abatement FY22/23	407,000	-	407,000	-
SCL170050	VTA	SCADA Control Center & System Replacement	2,280,000	-	2,280,000	-
SCL190026	VTA	HVAC Replacement Project	404,450	-	404,450	-
WETA	REG090057	Ferry Mid-Life Refurbishment - MV Pisces	3,697,700	-	3,697,700	-
WETA	REG090057	Vessel Engine Injectors Replacement - MV Dorado	117,100	-	117,100	-
WETA	REG090057	Ferry Major Component Rehabilitation - MV Hydrus and MV Cetus	3,601,600	-	3,601,600	-
WETA	REG090057	Vessel Engine Overhaul - MV Carina and MV Peralta	554,800	-	554,800	-
		Total Capital Projects	**555,089,246**	**240,595,952**	**299,794,500**	**14,698,793**
Programmatic Set-Asides						
TBD	TBD	Fixed Guideway Cap Increase	22,687,140	-	22,687,140	-
TBD	TBD	Zero Emission Bus Facilities Program	18,988,124	18,988,124	-	
		Total Programmed	**626,780,988**	**289,600,554**	**322,481,640**	**14,698,793**
		Fund Balance	**69,161,334**	**42,437,446**	**26,069,468**	**654,420**

Date: March 23, 2022
W.I.: 1512
Referred by: PAC
Revised: 05/25/22-C
09/28/22-C

Attachment C
Resolution No. 4510

FY 2023-24 Transit Capital Priorities / Transit Capital Rehabilitation Program						
TIP ID	**Operator**	**Project Description**	**Total FTA Program**	**FTA Section 5307**	**FTA Section 5337**	**FTA Section 5339**
		Projected Apportionments	**684,294,742**	**325,610,252**	**343,412,309**	**15,272,181**
		Previous Year Carryover	**91,848,474**	**42,437,446**	**48,756,608**	**654,420**
		Funds Available for Programming	**776,143,215**	**368,047,698**	**392,168,916**	**15,926,601**
MTC Debt Service						
REG170023	MTC	Debt Service	-	-	-	-
Lifeline Set-Aside						
TBD	TBD - Lifeline	TBD - Reserved for future programming	-	-	-	-
ADA Operating Set-Aside						
VAR210003	AC Transit	ADA Paratransit Assistance	7,050,765	7,050,765	-	-
VAR210003	BART	ADA Paratransit Capital Accessibility Improvements	3,542,554	3,542,554	-	-
VAR210003	CCCTA	ADA Paratransit Assistance	1,910,869	1,910,869	-	-
VAR210003	ECCTA	ADA Operating Assistance	892,778	892,778	-	-
VAR210003	LAVTA	ADA Paratransit Operating Subsidy	573,111	573,111	-	-
VAR210003	MCTD	ADA Paratransit Assistance	1,089,304	1,089,304	-	-
VAR210003	Napa Vine	ADA Operating Assistance	463,742	463,742	-	-
VAR210003	Petaluma	ADA Set-Aside	108,296	108,296	-	-
VAR210003	SamTrans	ADA Paratransit Operating Subsidy	2,713,356	2,713,356	-	-
VAR210003	Santa Rosa	ADA Operating Assistance	325,972	325,972	-	-
VAR210003	SFMTA	ADA Paratransit Operating Support	5,585,157	5,585,157	-	-
VAR210003	SolTrans	ADA Paratransit Operating Subsidy	497,987	497,987	-	-
VAR210003	Union City	ADA Set-Aside	198,055	198,055	-	-
VAR210003	VTA	ADA Operating Set-Aside	5,473,567	5,473,567	-	-
VAR210003	Westcat	ADA Paratransit Operating Subsidy	376,305	376,305	-	-
		Total Program Set-asides and Commitments	**30,801,818**	**30,801,818**	**-**	**-**
		Funds Available for Capital Programming	**745,341,398**	**337,245,881**	**392,168,916**	**15,926,601**
Capital Projects						
ALA990052	AC Transit	ADA Operating Depreciation Costs from 3 Vendors	1,945,987	1,945,987	-	-
NEW	AC Transit	Replace (23) 40ft Urban Buses - Diesel	141,371	141,371	-	-
NEW	AC Transit	Replace (24) Urban Buses - Diesel	10,548,000	2,302,200	-	8,245,800
ALA170048	ACE	ACE Fixed Guideway (Capitalized Maintenance)	1,864,590	-	1,864,590	-
ALA210008	ACE	ACE Capital Access Fee	1,426,707	1,426,707	-	-
ALA090065	BART	Fare Collection Equipment	6,360,000	-	6,360,000	-
ALA190014	BART	Elevator Renovation Program	7,000,000	-	7,000,000	-
BRT030004	BART	Train Control Renovation	10,240,000	-	10,240,000	-
BRT030005	BART	Traction Power System Renovation	10,240,000	-	10,240,000	-
BRT97100B	BART	Rail,Way, and Structures Program	17,406,000	-	17,406,000	-
REG090037	BART	Railcar Replacement Program	24,252,859	-	24,252,859	-
SM-03006B	Caltrain	Systemwide Track Rehabilitation	11,500,000	-	11,500,000	-
SM-050041	Caltrain	Comm. System/Signal Rehab.	1,100,000	-	1,100,000	-
SM-170010	Caltrain	TVM Project	226,231	-	226,231	-
NEW	CCCTA	Replace (10) 30ft Urban Buses	7,616,000	6,640,790	-	975,210
NEW	CCCTA	Replacement Vans	177,600	177,600	-	-
SOL110041	Fairfield	Bus Replacement	330,739	-	-	330,739
VAR190006	Fairfield	Operating Assistance	3,747,245	3,747,245	-	-
MRN150014	GGBHTD	Ferry Major Component Rehabilitation	5,726,305	376,305	5,350,000	-
NEW	GGBHTD	Replace Conventional OTR Coaches	10,544,000	10,544,000	-	-
NEW	GGBHTD	Replace Conventional OTR Coaches with ZEBs	2,748,000	2,748,000	-	-
NEW	GGBHTD	Replacement Ferry -- CARB Compliance	12,000,000	11,403,217	596,783	-
NEW	MCTD	MCTD: Vehicle Replacement - 5 Paratransit Vehicles	428,000	428,000	-	-
NEW	MTC	Blue Ribbon: Transit Transformation Plan	12,413,372	12,413,372	-	-
REG10003	MTC	Bay Area Vanpool Program	6,586,592	6,586,592	-	-
REG170022	MTC	Clipper Next Gen Fare Collection System	3,153,905	3,153,905	-	-
NAP090005	Napa Vine	NVTA ZEB Bus Procurement	234,138	31,866	-	202,272
VAR190006	Napa Vine	Napa Vine Operating Assistance	1,841,954	1,841,954	-	-
SON170005	Petaluma	Yard and Facility Improvements	106,443	106,443	-	-
NEW	SamTrans	Replace 40ft Diesel Buses - Battery	55,248,000	55,248,000	-	-
NEW	SamTrans	Replace Paratransit Vehicles	2,420,471	2,420,471	-	-
NEW	SamTrans	Replace 35ft Diesel Buses - Battery	3,860,000	3,860,000	-	-
VAR190006	Santa Rosa	Operating Assistance	1,665,717	1,665,717	-	-

FY 2023-24 Transit Capital Priorities / Transit Capital Rehabilitation Program						
TIP ID	**Operator**	**Project Description**	**Total FTA Program**	**FTA Section 5307**	**FTA Section 5337**	**FTA Section 5339**
VAR190007	Santa Rosa	Preventive Maintenance	713,879	713,879	-	-
SF-050024	SFMTA	Wayside/Central Train Control & Trolley Signal Systems Rehabilita	18,212,000	-	18,212,000	-
SF-090012	SFMTA	Light Rail Vehicle Replacement Procurements	89,571,273	-	89,571,273	-
SF-170018; S	SFMTA	Motor Coach & Trolley Coach Midlife Overhauls	23,131,367	23,131,367	-	-
SF-170021	SFMTA	Historic Streetcar & Cable Car Restorations	13,082,666	-	13,082,666	-
SF-95037B	SFMTA	Muni Rail Replacement	6,887,000	-	6,887,000	-
SF-970170	SFMTA	Overhead Line Rehabilitation	2,225,000	-	2,225,000	-
SF-99T002	SFMTA	Cable Car Infrastructure	6,000,000	-	6,000,000	-
VAR190007	SMART	Preventive Maintenance	4,078,615	4,078,615	-	-
SOL090034	SolTrans	Bus Replacement Alternative Fuel	3,683,200	3,233,492	-	449,708
VAR190007	SolTrans	Preventive Maintenance	1,085,190	1,085,190	-	-
SON170006	Sonoma County	SCT Replacement Bus Purchase	977,104	760,178	-	216,926
VAR190007	Sonoma County	SCT Preventive Maintenance	1,280,000	1,280,000	-	-
VAR190006	Vacaville	Operating Assistance	1,450,000	1,450,000	-	-
NEW	VTA	Signal Improvements Guadalupe	4,524,670	-	4,524,670	-
SCL050001	VTA	Electric 40' bus replacement 2024	18,768,000	15,285,583	-	3,482,417
SCL050002	VTA	Rail Replacement and Rehabilitation	8,827,200	-	8,827,200	-
SCL110099	VTA	Bridge and Structures Repairs FY24	680,000	-	680,000	-
SCL170005	VTA	Paratransit Fleet Procurement	1,445,547	1,445,547	-	-
SCL090044	VTA	OCS Rehab & Replacement Program	11,400,000	-	11,400,000	-
SCL150008	VTA	Track Intrusion Abatement FY24	1,452,000	-	1,452,000	-
SCL190026	VTA	HVAC Replacement Project	765,560	-	765,560	-
SCL190024	VTA	Transit Center Park and Ride and Bus Stop Rehabilitation FY23	-	-	-	-
SCL210007	VTA	Expand Bus Charging Capacity at Cerone Yard for Electric Buses	-	-	-	-
NEW	Westcat	Revenue Vehicle Replacement	1,115,200	1,115,200	-	-
NEW	WETA	Potential FG Increase	-	-	-	-
REG090054	WETA	Ferry Channel Dredging - Vallejo Ferry Terminal	2,605,500	-	2,605,500	-
REG090057	WETA	Ferry Major Component Rehabilitation	8,062,400	-	8,062,400	-
REG090057	WETA	Ferry Mid-Life Refurbishment - MV Taurus	3,929,200	-	3,929,200	-
REG090057	WETA	Vessel Engine Injectors Replacement	222,600	-	222,600	-
REG090067	WETA	Passenger Float Rehabilitation - Oakland Ferry Terminal	2,067,000	-	2,067,000	-
		Total Capital Projects	**473,342,397**	**182,788,793**	**276,650,532**	**13,903,071**
Programmatic Set-Asides						
TBD	TBD	Fixed Guideway Cap Increase	22,719,410	-	22,719,410	-
TBD	TBD	Zero Emission Bus Facilities Program	22,023,752	22,023,752	-	
		Total Programmed	**548,887,376**	**235,614,363**	**299,369,942**	**13,903,071**
		Fund Balance	**227,255,839**	**132,433,335**	**92,798,974**	**2,023,529**

Transit Capital Priorities / Transit Capital Rehabilitation Program Notes

1	Program is based on actual apportionments for FY 2021-22 (except 5339 small UZAs, which are estimates) and estimated apportionments for FYs 2022-23 and 2023-24. Program assumes availability of financing proceeds, subject to future Commission authorization. If financing is not secured, this program will be revised accordingly.
2	AC Transit: $11,719,686 of AB 664 Bridge Toll funds and $24,493,576 of BATA Project Savings, for a total of $36,213,262, have been programmed to AC Transit as part of the Core Capacity Challenge Grant Program (CCCGP). These FY2021-22 funds will support AC Transit's purchase of 65 40ft urban buses.
3	BART: The program has assumed the need for financing proceeds of approximately $840,000,000 will be needed for the BART Railcar Replacement Project, starting in FY2021-22, with programming largely limited to debt service. Due to the influx of FTA formula funds from the BIL, there is an opportunity to provide significant pay-go funds in FYs 2021-22, 2022-23, and 2023-24. $323,931,484 in funds is programmed in May 2022 toward pay-go.
4	VTA: VTA is programmed 5337 funds above its $8,103,000 fixed guideway cap in each year of the program. The totals above the cap are $19,440,200 in FY2021-22; $20,240,750 in FY2022-23, and $19,546,430 in FY2023-24, totaling $59,227,380 over the three-year cap total of $24,309,000 and for a total of $83,536,380 in fixed guideway programming. VTA staff requested and was granted a waiver of the cap due to additional funds available in the San Jose UZA after meeting other VTA funding needs and in recognition of the Caltrain funding agreement. VTA is also provided a waiver to the $20,000,000 cap on bus replacements, as funds are available to cover the entire request. The FY2021-22 bus procurement at $40,359,250 is waived its $20,359,250 over the cap. The FY2022-23 bus procurement at $27,013,510 is waived its $7,013,510 over the cap.
5	Santa Rosa UZA: Santa Rosa CityBus, Sonoma County Transit and Sonoma-Marin Area Rail Transit District (SMART) apportion Santa Rosa urbanized area funding in accordance with an agreement first in effect for FY2020 funds. The portion of FTA 5307 funds within the Santa Rosa urbanized area to be divided by the City and the County is the prior year's subtotal apportioned to those two operators, modified by the same rate as the modification to the FTA 5307 funds nationwide (ex.a 2% increase). That modified amount is divided between the two operators per the agreement in effect starting with FY2014 (58% Santa Rosa City Bus and 42% Sonoma County). The portion of the appropriated funds not divided by Santa Rosa and Sonoma County is distributed to SMART. For FY2021-22, $2,333,370 is available to Sonoma County Transit, $3,222,272 to Santa Rosa CityBus, and $4,148,529 to SMART for 5307. For FY2022-23, $2,333,370 is available to Sonoma County Transit, $3,222,272 to Santa Rosa CityBus, and $3,969,816 to SMART for 5307. For FY2023-24, $2,394,574 is available for Sonoma County Transit, $3,306,792 for Santa Rosa CityBus, and $4,257,328 for SMART for 5307.
6	SFMTA: SFMTA's FY2021-22 request for $113,635,101for light rail vehicle replacement procurement will be partially funded with $5,000,000 in BATA Project Savings, as committed through MTC Res. 4123. The remaining funds are obligated in the 5337 program.
7	WETA: WETA has opted to reinstate deferred caps from prior years in the proposed program. WETA had previously deferred $15,313,252 in FG cap funds that is programmed across the three years of the program toward their fixed guideway needs. In FY 2021-22, WETA defers its $1.9 M FG cap increase. [note, previously, in FY2023-24, WETA borrowed $160,728 against its FY2024-25 cap of $6,310,000 -- now that the cap has gone up this should be adjusted]
8	SamTrans: SamTrans is provided a waiver to the $20,000,000 cap on bus replacements, as funds are available to cover the entire request. The FY2021-22 bus procurement at $26,616,000 is waived its $6,616,000 over the cap. The FY2022-23 bus procurement at $36,160,000 is waived its $16,160,000 over the cap. Finally, the FY2023-24 bus procurement at $59,108,000 is waived its $39,108,000 over the cap.
9	Vacaville: Vacaville Transit is programmed $221,978 in FY2021-22 funds ($215,296 in 5339 and $6,682 in 5307) toward their Electric Bus Fleet project, replacing lapsed FY2018-19 5339 funds that were programmed in the FY2020-21 TCP but did not get put into a grant in time.
10	GGBHTD: Golden Gate is programmed $4,000,000 in FY 2022-23 and $12,000,000 in FY 2023-24 for the design and construction of a replacement ferry vessel pending required compliance with CARB zero emission regulations. The funds are programmed but will not be entered in to the TIP until finalization of the CARB regulations and design and construction estimates.
11	Petaluma: Petaluma's automatic vehicle location (AVL) equipment request was for $680,000 in FY2021-22 and $80,000 in FY2022-23. With only $67,000 remaining after programming their other requests in FY2021-22, the total request of $740,000 is programmed FY2022-23.
12	CCCTA (County Connection): CCCTA's FY2021-22 bus procurement request, at $28,880,000 exceeds the Concord UZA's available funds in that fiscal year by $1,235,962; thus, that amount is programmed to the bus procurement project in FY2022-23. This request is also granted a waiver of the $20,000,000 bus replacement cap, waiving its $8,880,000 over the cap.
13	Vanpool: MTC's vanpool program is funded using 5307 funds for the first time in FY2021-22. The program receives 100% of its expected need, estimated at $400 per van per month, and going up to $600 per van per month starting in July 2022. FTA policy guiding vanpool service allows vanpool passenger fares that exceed operating expenses to be re-invested in capital equipment and to be counted toward a recipient's local match requirement. These programming amounts assume the use of this provision. Staff will reevaluate annually.

Date: March 23, 2022
W.I.: 1512
Referred By: PAC
Revised: 09/28/22-C

ABSTRACT

Resolution No. 4513

This resolution establishes the program of projects and allocates AB 664 Net Bridge Toll Revenues to eligible transit operators for FY 2021-22. The programming and allocation for FY2021-22 for AC Transit is consistent with the Transit Capital Priorities (TCP) Program (MTC Res. No. 4510) and the Core Capacity Challenge Grant Program (MTC Res. No. 4123). This resolution will be updated to provide matching funds to eligible East Bay and West Bay operators concurrent with full programming of the FY2021-22 TCP Program.

This Resolution includes the following attachments:

Attachment A – Program of AB 664 Net Bridge Toll Revenue Projects FY2021-22
Attachment B – Allocation of AB 664 Net Bridge Toll Revenues FY 2021-22

This resolution was revised on September 28, 2022 to program $2.3 million in matching funds corresponding to the FY2021-22 TCP Program, and to re-allocate $181,305 to CCCTA.

Further discussion of the allocation and programming of AB 664 Bridge Toll Revenue is contained in the Programming and Allocations Committee summary sheets dated March 9, 2022 and September 14, 2022.

Date: March 23, 2022
W.I.: 1512
Referred By: PAC
Revised: 09/28/22-C

RE: AB 664 Net Bridge Toll FY 2021-22 Program of Projects and Allocations

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4513

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to Government Code Sections § 66500 et seq.; and

WHEREAS, pursuant to Streets and Highways Code § 30892, after deduction for MTC's administrative costs, MTC shall allocate toll bridge net revenues to public entities operation public transportation systems to achieve MTC's capital planning objectives in the vicinity of toll bridges as set forth in its adopted Regional Transportation Plan (RTP) ("Net Revenues"); and

WHEREAS, pursuant to Streets and Highways Code § 30894, MTC has adopted MTC Resolution No. 4015, which sets forth MTC's bridge toll revenue allocation policies; and

WHEREAS, pursuant to Streets and Highways Code § 30895, MTC has prepared and submitted to the Legislature a report on the capital planning and ferry system objectives of MTC to be achieved through the allocation of net toll revenues; and

WHEREAS, "Claimants" have each submitted an application to MTC for an allocation of net bridge toll revenues in FY2021-22 for the projects and purposes set forth in Attachment B to this resolution, attached hereto and incorporated herein as though set forth at length; and

WHEREAS, claimants certify that their respective projects and purposes set forth in Attachment A are in compliance with the requirements of the California Environmental Quality Act (Public Resources Code§ 21000 et seq.) and the State EIR Guidelines (14 Cal. Code Regs. § 15000 et seq.).; now, therefore, be it

RESOLVED, that MTC finds that the Claimants' projects and purposes as set forth in Attachment A are in conformance with MTC's Regional Transportation Plan, MTC's bridge toll revenue allocation policies, and MTC's capital planning and ferry system objectives; and, be

it further

RESOLVED, that MTC approves the allocation of net bridge toll revenues in FY 2021-22 to Claimants, in the amounts, for the purposes, and subject to the conditions listed on Attachment B to this resolution.

METROPOLITAN TRANSPORTATION COMMISSION

Alfredo Pedroza, Chair

The above resolution was entered into by the
Metropolitan Transportation Commission
at a regular meeting of the Commission held in
San Francisco, California and at
other remote locations on March 23, 2022.

Date: March 23, 2022
W.I.: 1514
Referred by: PAC
Revised: 09/28/22-C

Attachment A
Resolution No. 4513

PROGRAM OF AB 664 NET BRIDGE TOLL REVENUE PROJECTS

FY2021-22 Program				
			East Bay	**West Bay**
	Revenue Projections		**13,319,686**	**700,000**
	Previous Year Carry-Over (if any)			
	Expirations and Rescissions			
	Total Funds Available		**13,319,686**	**700,000**
Sponsor	**Eligible Capital Projects**	**Fund Source**		
Current Year Programming				
AC Transit Core Capacity Projects				
AC Transit	Replace (25) Urban Buses - Fuel Cell	§ 5307/5339	11,719,686	
	Subtotal - Core Capacity projects		*11,719,686*	-
	Total Amount Programmed to AC Transit		**11,719,686**	**-**
Caltrain	Systemwide Track Rehabilitation	§ 5337 FG		
Caltrain	Comm. System/Signal Rehab.	§ 5337 FG		
Caltrain	TVM Project	§ 5337 FG		
	Total Amount Programmed to Caltrain			**229,444**
CCCTA	Replace 40ft Diesel Buses - Diesel	§ 5307/5339		
CCCTA	Electric Bus Charging Infrastructure	§ 5307/5339		
	Total Amount Programmed to CCCTA		**549,471**	
SamTrans	Replace 40ft Diesel Buses - Battery	§ 5307/5339		
SamTrans	Replace Paratransit Vehicles	§ 5307/5339		
SamTrans	South Base Near-Term Battery Electric Bus (BEB) Charging Infrastructure	§ 5307/5339		
	Total Amount Programmed to SamTrans			**470,556**
SolTrans	Preventive Maintenance	§ 5307/5339		
SolTrans	Bus Replacement Alternative Fuel	§ 5307/5339		
	Total Amount Programmed to SolTrans		**103,039**	
Union City	Bus Purchases	§ 5307/5339		
Union City	Electric Vehicle Charging Infrastructure	§ 5307/5339		
	Total Amount Programmed to Union City		**30,805**	
WestCAT	Revenue Vehicle Replacement	§ 5307/5339		
WestCAT	Preventive Maintenance	§ 5307/5339		
	Total Amount Programmed to WestCAT		**52,679**	
WETA	Ferry Vessel Replacement - MV Mare Island	§ 5307/5337		
WETA	Vessel Engine Overhaul - Pyxis Class Vessels	§ 5337 FG		
WETA	Ferry Mid-Life Refurbishment - MV Gemini	§ 5337 FG		
WETA	Passenger Float Rehabilitation - Pier 9 Berthing Facility	§ 5337 FG		
WETA	Waterjet Control System Upgrade - Pyxis Class Vessel	§ 5337 FG		
WETA	Ferry Channel Dredging - Vallejo Ferry Terminal	§ 5337 FG		
	Total Amount Programmed to WETA		**864,006**	
		Fund Balance	**-**	**-**

Notes:

Date: March 23, 2022
W.I.: 1512
Referred by: PAC
Revised: 09/28/22-C

Attachment B
Resolution No. 4513

ALLOCATION OF AB 664 NET BRIDGE TOLL REVENUE
FY 2021-2022

PO/Acct. Code	Project Sponsor	Project	East Bay Allocation	West Bay Allocation	Approval Date
22-4513-01/5850	AC Transit	See Attachment A List of Projects	$11,719,686		3/23/2022
22-4513-02/5850	Caltrain	See Attachment A List of Projects		$229,444	9/28/2022
22-4513-03/5850	CCCTA	See Attachment A List of Projects[1]	$730,776		9/28/2022
22-4513-04/5850	SamTrans	See Attachment A List of Projects		$470,556	
22-4513-05/5850	SolTrans	See Attachment A List of Projects	$103,039		9/28/2022
22-4513-06/5850	Union City	See Attachment A List of Projects	$30,805		9/28/2022
22-4513-07/5850	WestCAT	See Attachment A List of Projects	$52,679		9/28/2022
22-4513-08/5850	WETA	See Attachment A List of Projects	$864,006		9/28/2022
					Grand Total
		Total Allocations	$13,500,991	$700,000	$14,200,991

Notes:

1. CCCTA amount includes $549,471 in matching funds for FY22 TCP projects, and re-allocation of $181,305 in FY17-18 AB 664 funding

Date: January 28, 2015
W.I.: 1511
Referred by: PAC
Revised: 09/23/15-C 01/27/16-C
12/21/16-C 03/22/17-C
12/20/17-C 06/27/18-C
01/23/19-C 05/22/19-C
09/25/19-C 07/22/20-C
04/28/21-C 06/23/21-C
07/28/21-C 03/23/22-C
05/25/22-C 06/22/22-C
09/28/22-C

ABSTRACT

Resolution No. 4169, Revised

This resolution establishes the program of projects for BATA Project Savings and allocates these funds to eligible projects.

The following attachment is provided with this resolution:

Attachment A – Program of Projects
Attachment B – Allocations

This resolution was revised on September 23, 2015 to update the conditions associated with the programming of $84 million of BATA project savings to SFMTA's Light Rail Vehicle purchase (LRV) project, in order to reflect the updated amount of AB 664 funds programmed to the project.

This resolution was revised on January 27, 2016 to program and allocate $24,922,916 in BATA Project Savings towards AC Transit's Fleet Replacement consistent with the Core Capacity Challenge Grant Program funding plan.

This resolution was revised on December 21, 2016 to de-program $23,014,657 in BATA Project Savings funds from SFMTA's LRV project due to receipt of TIRCP funding of the same amount in FY2015-16 and update the conditions associated with the programming to reflect the updated amount of AB 664 and BATA Project Savings funds programmed to the project.

This resolution was revised on March 22, 2017 to program and allocate $5,248,522 in BATA Project Savings funds to AC Transit and program $23,040,236 and allocate $4,649,495 in BATA Project Savings funds to SFMTA towards their Fleet Replacement projects.

This resolution was revised on December 20, 2017 program and allocate $20,167,986 in BATA Project Savings funds to AC Transit and program $83,921,695 and allocate $8,091,805 in BATA Project Savings funds to SFMTA toward their Fleet Replacement projects.

This resolution was revised on June 27, 2018 to allocate $37,270,041 in BATA Project Savings funds to SFMTA toward their Fleet Replacement projects, consistent with the commitments of the Core Capacity Challenge Grant Program, and de-program $26,867,000 in BATA Project Savings funds from SFMTA's LRV project due to receipt of TIRCP funding of the same amount in FY2017-18 and update the conditions associated with the programming to reflect the updated amount of BATA Project Savings funds programmed to the project.

This resolution was revised on January 23, 2019 to update the programming conditions on SFMTA's LRV Expansion programming from FY2014-15, program an additional $24,999,671 and allocate $59,118,014 to SFMTA's LRV Expansion, and program $5 million for SFMTA projects to execute a funding exchange for their Central Subway project.

This resolution was revised on May 22, 2019 to deprogram $5 million and remove a project from SFMTA's programming to reflect changes made in the Transit Capital Priorities Program.

This resolution was revised on September 25, 2019 to allocate $45,729,959 in BATA Project Savings funds to SFMTA toward their Fleet Replacement projects, consistent with the commitments of the Core Capacity Challenge Grant Program, and remove a funding condition related to financing.

This resolution was revised on July 22, 2020 to revise AC Transit's FY2016-17 through FY2019-20 BATA Project Savings programming to match their updated fleet plan, and allocate a total of $7,890,353 in BATA Project Savings funds to AC Transit ($3,607,227) and SFMTA ($4,283,126) toward their Fleet Replacement projects, consistent with the commitments of the Core Capacity Challenge Grant Program, and remove funding conditions on SFMTA programming related to financing.

This resolution was revised on April 28, 2021 to program and allocate a total of $10,904,715 in BATA Project Savings funds to AC Transit ($4,912,063) and SFMTA ($5,992,652) toward their

Fleet Replacement projects, consistent with the commitments of the Core Capacity Challenge Grant Program.

This resolution was revised on June 23, 2021 to extend $5,248,522 in BATA Project Savings funds to AC Transit for Fleet Replacement projects, consistent with the commitments of the Core Capacity Challenge Grant Program and the Timely Use of Funds policy outlined in MTC Resolution No. 4015.

This resolution was revised on July 28, 2021 to program and allocate $1,845,000 to Solano Transportation Authority for Design Services During Construction on the Solano 80 Express Lanes Project, and to program and allocate $2,822,000 to BAIFA for the Toll System on the Solano 80 Express Lanes Project, as part of a funding exchange.

This resolution was revised on March 23, 2022 to program and allocate a total of $34,160,576 in BATA Project Savings funds to AC Transit ($29,160,576) and SFMTA ($5,000,000) toward their Fleet Replacement projects, consistent with the commitments of the Core Capacity Challenge Grant Program.

This resolution was revised on May 25, 2022 to correct AC Transit's FY 2021-22 allocation, de-allocating $4,667,000, to reflect a July 2021 funding exchange with the OBAG 2 program.

This resolution was revised on June 22, 2022 to extend $21,809,281 in BATA Project Savings funds to AC Transit for Fleet Replacement projects, consistent with the commitments of the Core Capacity Challenge Grant Program and the Timely Use of Funds policy outlined in MTC Resolution No. 4015.

This resolution was revised on September 28, 2022 to correct AC Transit's FY 2021-22 allocation, de-allocating $1,412,063 to be replaced by FTA formula funds, consistent with the commitments of the Core Capacity Challenge Grant Program.

Further discussion of this action is contained in the MTC Programming and Allocations Committee summary sheet dated January 14, 2015, September 9, 2015, January 13, 2016, December 14, 2016, March 8, 2017, December 13, 2017, June 13, 2018, January 9, 2019, May 8,

2019, September 4, 2019, July 8, 2020, April 14, 2021, June 9, 2021, July 14, 2021, March 9, 2022, May 11, 2022, June 8, 2022, and September 14, 2022.

Date: January 28, 2015
W.I.: 1511
Referred by: PAC

RE: Programming and allocation of BATA Project Savings

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4169

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to Government Code Section 66500 *et seq*.; and

WHEREAS, Streets and Highways Code Sections 30950 et seq. created the Bay Area Toll Authority ("BATA") which is a public instrumentality governed by the same board as that governing MTC; and

WHEREAS, pursuant to Streets and Highways Code (SHC) Section 31010(b), funds generated in excess of those needed to meet the toll commitments as specified by paragraph (4) of subdivision (b) of Section 188.5 of the SHC shall be available to BATA for funding projects consistent with SHC Sections 30913 and 30914; and

WHEREAS, the BATA Project Savings are bridge toll funds made available from project and financing savings on BATA's Regional Measure 1 and Toll Bridge Seismic Retrofit programs; and

WHEREAS, MTC adopted Resolution No. 4123, Revised, which established an investment plan for MTC's Transit Core Capacity Challenge Grant Program that targets federal, state, and regional funds to high-priority transit capital projects between FY2014-15 and FY2029-30, and as part of this investment plan, BATA Project Savings were assigned to certain projects; and

WHEREAS, BATA staff has determined that the Transit Core Capacity Challenge Grant Program is a bridge improvement project that improves the operations of the state-owned toll bridges; and

WHEREAS, BATA has adopted BATA Resolution No. 111, Revised, to amend the BATA budget to include the Transit Core Capacity Challenge Grant Program; and

WHEREAS, BATA has adopted BATA Resolution No. 72, Revised, to amend the BATA Long Range Plan to include the Transit Core Capacity Challenge Grant Program; now, therefore, be it

RESOLVED, that MTC approves the program of projects for BATA Project Savings, for the purposes, and subject to the conditions listed on Attachment A to this resolution, attached hereto and incorporated herein as though set forth at length; and, be it further

RESOLVED, that MTC approves the allocation and reimbursement of BATA Project Savings in accordance with the amount, conditions and reimbursement schedule for the phase, and activities as set forth in Attachment B; and, be it further

RESOLVED, that should the allocation of BATA Project Savings be conditioned on the execution of a funding agreement, that the Executive Director or his designee is authorized to negotiate and enter into a funding agreement with claimant that includes the provisions contained in Attachment A and B.

METROPOLITAN TRANSPORTATION COMMISSION

Amy Rein Worth, Chair

The above resolution was entered into by the Metropolitan Transportation Commission at a regular meeting of the Commission held in Oakland, California, on January 28, 2015.

Date: January 28, 2015
W.I.: 1511
Referred by: PAC
Revised: 09/23/15-C 01/27/16-C
12/21/16-C 03/22/17-C
12/20/17-C 06/27/18-C
01/23/19-C 05/22/19-C
09/25/19-C 07/22/20-C
04/28/21-C 07/28/21-C
03/23/22-C 05/25/22-C
09/28/22-C

Attachment A
Resolution No. 4169

PROGRAM OF BATA PROJECT SAVINGS FUND PROJECTS

FY2014-15 Program of Projects

Operator	Project	Amount	Conditions
SFMTA	Fleet Expansion - LRV Purchase	34,118,343	This programming counts toward MTC share of replacment LRVs.
	Total FY2014-15 Programming:	**34,118,343**	

FY2015-16 Program of Projects

Operator	Project	Amount	Conditions
AC Transit Projects			
	Replace 29 40-ft Artic Urban buses		
	Purchase 10 40-ft urban buses - Zero-Emission Fuel Cell		
	Purchase 10 double-decker diesel buses		
	Total AC Transit Programming	*24,922,916*	
	Total FY2015-16 Programming:	**24,922,916**	

FY2016-17 Program of Projects

Operator	Project	Amount	Conditions
AC Transit Projects			
	Purchase 36 Coach Buses (MCIs)		
	Total AC Transit Programming	*5,248,522*	
SFMTA Projects			
	Replacement of 60' Trolley Coaches		
	Total SFMTA Programming	*12,967,639*	
	Total FY2016-17 Programming:	**18,216,161**	

FY2017-18 Program of Projects

Operator	Project	Amount	Conditions
AC Transit Projects			
	Purchase 40-ft Urban Buses		
	Total AC Transit Programming	*16,560,759*	
SFMTA Projects			
	Replacement of 40-ft Trolley Coaches		
	Replacement of 60-ft Motor Coaches		
	Replacement of 30-ft Motor Coaches		
	Total SFMTA Programming	*79,638,569*	
	Total FY2017-18 Programming:	**96,199,328**	

PROGRAM OF BATA PROJECT SAVINGS FUND PROJECTS

FY2018-19 Program of Projects

Operator	Project	Amount	Conditions
AC Transit Projects			
	Replace 50 40-ft buses		
	Total AC Transit Programming	*2,321,181*	
SFMTA Projects			
	Fleet Expansion - LRV Purchase		Note: $24,999,671 programmed in January 2019. Programming counts toward MTC share of replacement LRVs.
	40-ft Motor Coach Midlife Overhaul		
	Replace 35 Paratransit Cutaway Vans		
	Total SFMTA Programming	*27,452,111*	
	Total FY2018-19 Programming:	**29,773,292**	

FY2019-20 Program of Projects

Operator	Project	Amount	Conditions
AC Transit Projects			
	Preventive Maintenance		
	Total AC Transit Programming	*1,286,046*	
SFMTA Projects			
	Muni Rail Replacment		
	40-ft Motor Coach Midlife Overhaul		
	Total SFMTA Programming	*1,830,686*	
	Total FY2019-20 Programming:	**3,116,732**	

FY2020-21 Program of Projects

Operator	Project	Amount	Conditions
AC Transit Projects			
	Replace (50) 40ft Urban Buses - Diesel		
	Total AC Transit Programming	*4,912,063*	
SFMTA Projects			
	Light Rail Vehicle Replacement Procurements		
	Total SFMTA Programming	*5,992,652*	
	Total FY2020-21 Programming:	**10,904,715**	

PROGRAM OF BATA PROJECT SAVINGS FUND PROJECTS

FY2021-22 Program of Projects

Operator	Project	Amount	Conditions
Solano Transportation Authority			
	Solano 80 Express Lanes - Design Services During Construction		Note: The programming is a part of the exchange of federal funds originally earmarked for the I-80 Managed Lanes project in Solano County.
	Total STA Programming	*1,845,000*	
BAIFA			
	Solano 80 Express Lanes - Toll System		Note: The programming is a part of the exchange of federal funds originally earmarked for the I-80 Managed Lanes project in Solano County.
	Total BAIFA Programming	*2,822,000*	
AC Transit Projects			
	Replace (25) Urban Buses - Fuel Cell	11,980,314	
	Replace (17) 40ft Urban Buses - BEB	9,472,750	
	Replace (23) 40ft Urban Buses - Diesel	1,628,449	
	Total AC Transit Programming	*23,081,513*	
SFMTA Projects			
	Light Rail Vehicle Replacement Procurements		
	Total SFMTA Programming	*5,000,000*	
Total FY2021-22 Programming:		**32,748,513**	

Date: January 28, 2015
W.I.: 1511
Referred by: PAC
Revised: 01/27/16-C 03/22/17-C
12/20/17-C 06/27/18-C
01/23/19-C 09/25/19-C
07/22/20-C 04/28/21-C
06/23/21-C 07/28/21-C
03/23/22-C 05/25/22-C
06/22/22-C 09/28/22-C

Attachment B
Resolution No. 4169

ALLOCATIONS TO BATA PROJECT SAVINGS FUNDED PROJECTS

Operator	Project	Date	Amount	Allocation No.	Notes
AC Transit	Projects Listed on Attachment A	1/27/2016	24,922,916	16-4169-01	See Notes below
AC Transit	Projects Listed on Attachment A	3/22/2017	5,248,522	17-4169-01	See Notes below
SFMTA	Projects Listed on Attachment A	3/22/2017	4,649,495	17-4169-02	See Notes below
AC Transit	Projects Listed on Attachment A	12/20/2017	16,560,759	18-4169-01	See Notes below
SFMTA	Projects Listed on Attachment A	12/20/2017	4,956,713	18-4169-02	See Notes below
SFMTA	Projects Listed on Attachment A	6/27/2018	37,270,041	18-4169-03	See Notes below
SFMTA	Projects Listed on Attachment A	1/23/2019	59,118,014	19-4169-01	See Notes below
SFMTA	Projects Listed on Attachment A	9/25/2019	45,729,959	20-4169-01	See Notes below
AC Transit	Projects Listed on Attachment A	7/22/2020	3,607,227	21-4169-01	See Notes below
SFMTA	Projects Listed on Attachment A	7/22/2020	4,283,126	21-4169-02	See Notes below
SFMTA	Light Rail Vehicle Replacement	4/28/2021	5,992,652	21-4169-03	See Notes below
AC Transit	Replace (50) 40ft Urban Buses -Diesel	4/28/2021	4,912,063	21-4169-04	See Notes below
STA	Solano 80 Express Lanes - DSDC	7/28/2021	1,845,000	22-4169-01	See Notes below
BAIFA	Solano 80 Express Lanes - Toll System	7/28/2021	2,822,000	22-4169-02	See Notes below
AC Transit	FY22 Projects Listed on Attachment A	3/23/2022	23,081,513	22-4169-03	See Notes below
SFMTA	Light Rail Vehicle Replacement	3/23/2022	5,000,000	22-4169-04	See Notes below
	Total Allocations:		**250,000,000**		

Notes:

1 Acceptance of allocations requires operator agreement to comply with the provisions of the AB 664 Net Bridge Toll Revenues section of MTC Resolution No. 4015 and that any BATA Project Savings funds received shall be subject to MTC Resolution No. 4015, unless otherwise agreed to herein.

2 Allocation 17-4169-01 shall be extended to 6/30/2022 in accordance with the Timely Use of Funds policy in MTC Resolution No. 4015. See PAC memo dated June 9, 2021 for detail.

3 Allocations 22-4169-01 and 22-4169-02 are a part of the exchange of federal funds originally earmarked for the I-80 Managed Lanes project in Solano County. See PAC memo dated July 14, 2021 for more detail.

4 Technical correction made on 8/12/2021 to correct amounts to match Attachment A which were transposed in Attachment B for allocations 21-4169-03 and 21-4169-04.

5 Allocations 17-4169-01 and 18-4169-01 shall be extended to 6/30/2023 in accordance with the Timely Use of Funds policy in MTC Resolution No. 4015. See PAC memo dated June 8, 2022 for detail.

375 Beale Street, Suite 800
San Francisco, CA 94105

Metropolitan Transportation Commission

Legislation Details (With Text)

File #:	22-1292	**Version:**	1	**Name:**	
Type:	Resolution			**Status:**	Commission Approval
File created:	8/9/2022			**In control:**	Programming and Allocations Committee
On agenda:	9/14/2022			**Final action:**	
Title:	MTC Resolution No. 4505, Revised. Revisions to the One Bay Area Grant program (OBAG 3), including programming $103 million in OBAG 3 Regional Program funds..				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	3b_22-1292_Reso-4505_OBAG3_Revisions.pdf				

Date	Ver.	Action By	Action	Result

Subject:
MTC Resolution No. 4505, Revised.

Revisions to the One Bay Area Grant program (OBAG 3), including programming $103 million in OBAG 3 Regional Program funds..

Presenter:
Mallory Atkinson

Recommended Action:
Commission Approval

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Metropolitan Transportation Commission
Programming and Allocations Committee

September 14, 2022 **Agenda Item 3b - 22-1292**

MTC Resolution No. 4505, Revised

Subject:
Revisions to the One Bay Area Grant program (OBAG 3), including programming $103 million in OBAG 3 Regional Program funds.

Background:
The OBAG 3 program adopted by the Commission establishes the policy and programming framework for investing federal Surface Transportation Block Grant Program (STP) and Congestion Mitigation and Air Quality Improvement program (CMAQ) funds for FY 2022-23 through FY 2025-26.

This month, staff recommends various revisions to the OBAG 3 Regional Program and County & Local Program, as described below and detailed in the attachments to this memo.

Regional Program
Funds programmed through the OBAG 3 Regional Program are designed to coordinate and deploy strategies at a regional level to address critical climate and focused growth goals of *Plan Bay Area 2050*. The Commission initially approved funding levels by program category in January 2022, and, through concurrent and subsequent programming actions, has directed $160 million of the $382 million available towards specific projects and programs. This month, staff recommend programming an additional $103 million in remaining OBAG 3 Regional Program balances, as detailed below by program category. A summary of adopted and proposed programming for all Regional Programs is provided as **Attachment 1**.

<u>Climate, Conservation, and Resilience</u>

- Program $14 million from the $18 million Regional Transportation Demand Management (TDM) program balance to MTC's 511 Travel Information Services.

<u>Complete Streets and Community Choice</u>

- Program $1.28 million within the Regional Safety/Vision Zero Program to specific County Transportation Agencies (CTAs) for Local Roadway Safety Plan implementation to complete required LRSPs for their jurisdictions by December 30, 2023, the OBAG 3 program deadline. This action leaves a $2.72 million balance for additional LRSP development and implementation pending further development of the Regional Safety Program.

- Program $2.5 million to Bay Trail planning and implementation projects. This action leaves a $12.5 million balance for additional Regional Active Transportation Plan (AT Plan) Implementation activities, which are pending the completion of the AT Plan.

Multimodal Systems Operations and Performance

- Program $86.9 million to various projects within the Multimodal Systems Program, including Forwards Programs, Resilient State Route 37, Connected Bay Area, and Incident Management. Staff presented additional details on many of the proposed programs to the MTC Operations Committee at their July 8, 2022 meeting.
- Assign the $7 million in Regional Multimodal Systems Operations and Performance Program funds previously programmed in June to SamTrans as part of MTC's Caltrain Right-of-Way repayment to SamTrans' Preventative Maintenance project.

County & Local Program

This month, staff recommend adding $620,000 in County Program funds to San Mateo C/CAG's existing Safe Routes to School Non-Infrastructure Program project to fulfill C/CAG's $2.12 million total nomination request.

Issues:

None.

Recommendations:

Refer MTC Resolution No. 4505, Revised to the Commission for approval.

Attachments:

Attachment 1: OBAG 3 Regional Program Overview

MTC Resolution No. 4505, Revised, Attachments B-1 and B-2

Therese W. McMillan

One Bay Area Grant (OBAG 3)

Regional Programs Overview

Program Category	Funding Adopted/ Proposed	Status	Next Steps
Planning & Program Implementation	**$49.5**		
• Regional planning, programming, *Plan Bay Area 2050* implementation, federal compliance, and performance • OBAG 3 project and program implementation • Blue Ribbon implementation	$49.5	✓ **Programmed**	• In January 2022, the Commission programmed $49.5 million for regional planning and program implementation activities. • Funds were incorporated into MTC's agency budget beginning in FY 2022-2023.
Growth Framework Implementation	**$25**		
• Priority Development Area (PDA) Planning & Technical Assistance, and Priority Production Area (PPA) Pilot • Regional Housing Technical Assistance & Local Grants • Housing preservation, priority sites pilots	$25	⋯ ***Pending***	• Programming to specific projects and programs is pending final Regional Early Action Planning (REAP) 2.0 guidelines. Staff proposes to combine OBAG 3 funds with **$58 million in REAP 2.0** funds to deliver a broad set of housing and land use strategies. • Staff anticipates bringing programming recommendations to the Commission in fall 2022.
Climate, Conservation, & Resilience	**$98**		
Climate Initiatives • Electric vehicles (EV) and charging infrastructure • Parking management planning and technical assistance, capital • Mobility Hub pilot program	$43.8	⋯ ***Pending***	• Staff propose combining OBAG 3 funds with **$60 million in Carbon Reduction Program (CRP) funds** to accelerate EV adoption and other proven emissions reductions strategies. • Staff anticipates bringing programming recommendations to the Commission in fall 2022.

Program Category	Funding	Status	Next Steps
Climate, Conservation, & Resilience (cont'd)	**$98**		
Regional Travel Demand Management (TDM) • Commuter Benefits Program • Regional Carpool Program • Bike to Work and Spare the Air Youth education and outreach activities	$18.2	✓ **Programmed**	• In June 2022, the Commission programmed $18.2 million to various Regional TDM programs. • Staff is assessing existing TDM programs for effectiveness and alignment with *PBA 2050's* vehicle miles traveled (VMT) and greenhouse gas (GHG) reduction strategies.
• 511 Traveler Information Services	$14	✓ **Programming Recommendation**	• Commission to consider programming funds for 511 with **this Agenda Item**.
• Regional TDM Balance	$4	🛠 **In Progress**	• Staff anticipates bringing programming recommendations to the Commission in fall 2022.
Priority Conservation Area (PCA) Grant program • PCA Grant program reflecting updated PCA planning framework, including resilience/sea level rise strategies	$18	⋯ ***Pending***	• Programming of funding pending completion **PCA Framework refresh** effort. Grant program guidelines and call for projects anticipated in 2024.
Complete Streets & Community Choice	**$54**		
Healthy, Safe, and Sustainable Streets • Local Roadway Safety Plan (LRSP) development, technical assistance, and implementation • Bay Area Vision Zero (BAYVIZ) System and safety program coordination and outreach • Pavement Technical Assistance Program (PTAP) grant program and Pavement Management Program (PMP)	$21	✓ **Programmed**	• In June 2022, the Commission programmed $21 million to various regional safety and roadway asset management programs.

Program Category	Funding	Status	Next Steps
Complete Streets & Community Choice (cont'd)	**$54**		
Active Transportation • Bay Trail Planning and Implementation	$2.5	✓ **Programming Recommendation**	• Commission to consider programming funds for the Bay Trail with **this Agenda Item**.
• Regional Active Transportation Plan (AT Plan) Implementation Balance	$12.5	⋯ ***Pending***	• Programming of funding to specific projects and programs pending completion of the **Regional AT Plan update**. • Staff anticipates bringing programming recommendations to the Commission in fall 2022.
Community Choice • Community-based transportation plans (CBTPs) in each county	$3	✓ **Programmed**	• In June 2022, the Commission programmed $3 million for CBTPs.
• CBTP community-based organization (CBO) outreach and engagement • Project implementation and technical assistance	$15	⋯ ***Pending***	• Programming to specific projects and programs is pending final REAP 2.0 guidelines. Staff proposes to combine OBAG 3 funds with **$8 million in REAP 2.0** funds to accelerate implementation of prioritized community projects. • Staff anticipates bringing programming recommendations to the Commission in fall 2022.
Multimodal Systems Operations & Performance	**$148.5**		
Transit Transformation Action Plan • Transit priority highway investments/Forwards and arterial investments • Mapping and wayfinding	$31.6	✓ **Programmed**	• In June 2022, the Commission programmed a total of $116.6 million for Transit Transformation projects, including $85 million in Blue Ribbon and $31.6 million in OBAG 3 funds.

Program Category	Funding	Status	Next Steps
Multimodal Systems Operations & Performance (cont'd)	**$148.5**		
Multimodal Systems Programs (cont'd) • Clipper C2 capital • SamTrans Caltrain right-of-way (ROW) repayment	$37	✓ **Programmed**	• In February 2022, the Commission programmed $30 million for Clipper C2 as part of an RM3 loan arrangement. • In June 2022, the Commission programmed $7 million to SamTrans for Caltrain ROW repayment.
• Bay Area Forwards/Resilient SR 37 • Design Alternative Assessments/Corridor Studies • Adaptive Ramp Metering Implementation • Optimized Freeway Corridor Operations • Multimodal Arterial Operations • Shared Connected/Automated Vehicles and Technology • Regional ITS Architecture • Express Lanes Studies and Pilots (Non-Infrastructure) • Connected Bay Area/Incident Management	$86.9	✓ **Programming Recommendation**	• Commission to consider programming funds for various multimodal projects and programs with **this Agenda Item**, including Bay Area Forwards, freeway and arterial operations optimization, Connected Bay Area, and Incident Management.
Regional Programs Total	**$382**		
Regional Programs Summary Status	$160.3	Programmed Previously	Amount includes programming actions from January, February, and June 2022.
	$103.4	✓ **Programming Recommendation**	Amount includes recommended programming actions described in **this Agenda Item**.
	$118.3	Remaining Balance	

Note: Funding amounts are in millions.

Date: January 26, 2022
W.I.: 1512
Referred by: PAC
Revised: 02/23/22-C 03/23/22-C 06/22/22-C
09/28/22-C

ABSTRACT

Resolution No. 4505, Revised

Adoption of the project selection and programming policies for the third round of the One Bay Area Grant program (OBAG 3). The project selection and programming policies contain the project categories that are to be funded with various fund sources, including federal surface transportation act funding assigned to MTC for programming, to implement the Regional Transportation Plan (*Plan Bay Area 2050*) and to be included in the federal Transportation Improvement Program (TIP) for the OBAG 3 funding delivery period.

The resolution includes the following attachments:

Attachment A – OBAG 3 Project Selection and Programming Policies
Attachment B – OBAG 3 Project Lists

With the adoption of the project selection and programming policies, Attachments B-1 and B-2 program $8,300,000 to Regional Planning Activities, $37,200,000 for OBAG 3 Program and Project Implementation, and $4,000,000 for Program and Project Implementation for transit transformation activities within the Planning and Program Implementation Regional Program; and $35,157,000 for CTA Planning Activities within the Planning and Program Implementation County & Local Program.

On February 23, 2022, Attachment B-1 was revised to program $30,000,000 in OBAG 3 Regional Multimodal Systems Operations and Performance Program funds to the Clipper C2 Capital project as part of an alternative funding plan for the project's Regional Measure 3 (RM3) funds.

On March 23, 2022, Appendix A-1 was added to incorporate guidelines for the County and Local Program call for projects.

On June 22, 2022, Attachments A, B-1, B-2, and Appendix A-1 were revised to further define program categories and program $80,800,000 million to various projects within the Regional Program, including $31,600,000 for Transit Transformation Action Plan programs and $7 million for future SamTrans projects as part of a Caltrain right-of-way (ROW) repayment

arrangement; program $11,762,000 for ongoing Safe Routes to School Non-Infrastructure programs within the County & Local Program; add $7,000,000 in additional anticipated revenues to the Regional Program; and clarify language related to local policy requirements and project eligibilities within the County & Local Program.

On September 28, 2022, Attachments B-1 and B-2 were revised to program $14,000,000 to 511 Traveler Information Services within the Regional Travel Demand Management (TDM) Program, $1,280,000 in the Regional Vision Zero/Safety Program for Local Roadway Safety Plan Development, $2,500,000 for Bay Trail Planning, Delivery, and Technical Assistance projects within the Regional Active Transportation Plan Implementation Program, and $86,900,000 to various projects within the Multimodal Systems Program; assign $7,000,000 in Multimodal Systems Program funds previously committed to SamTrans as part of MTC's Caltrain Right-of-Way repayment to SamTrans' Preventative Maintenance project; and add $620,000 in County & Local Program funds to San Mateo C/CAG's Safe Routes to School Non-Infrastructure Program project.

Further discussion of the project selection criteria and programming policy is contained in memorandums to the Programming and Allocations Committee dated January 12, 2022, February 9, 2022, March 9, 2022, June 8, 2022, and September 14, 2022.

Date: January 26, 2022
W.I.: 1512
Referred by: PAC

RE: One Bay Area Grant Program (OBAG 3) Project Selection and Programming Policies

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4505

WHEREAS, the Metropolitan Transportation Commission (MTC) is the Regional Transportation Planning Agency (RTPA) for the San Francisco Bay Area pursuant to Government Code Section 66500 *et seq.*; and

WHEREAS, MTC is the designated Metropolitan Planning Organization (MPO) for the nine-county San Francisco Bay Area region and is required to prepare and endorse a Transportation Improvement Program (TIP) which includes federal funds; and

WHEREAS, MTC, as the RTPA/MPO for the San Francisco Bay Area, is assigned programming and project selection responsibilities for certain state and federal funds; and

WHEREAS, state and federal funds assigned for RTPA/MPO programming discretion are subject to availability and must be used within prescribed funding deadlines; and

WHEREAS, the California Department of Transportation (Caltrans) Obligation Authority (OA) Management Policy allows RTPAs and MPOs to exchange regional Surface Transportation Block Grant Program (STP), Congestion Mitigation and Air Quality Improvement Program (CMAQ), and other federal funds assigned to the RTPA or MPO with Caltrans and other regions, when a region or Caltrans-managed local program has excess or insufficient apportionment available to deliver its annual federal program; and

WHEREAS, Title 23 CFR § 630, Subpart G, allows the advancement of federal-aid projects and expenditure of eligible costs prior to the obligation of funds (referred to as "Advance Construction" or "AC") with reimbursement of eligible expenditures permitted following conversion of the AC to a regular obligation; and

WHEREAS, MTC, in cooperation with transit operators, Caltrans, the Bay Area Air Quality Management District (BAAQMD), Bay Area County Transportation Agencies (CTAs), counties, cities, and interested stakeholders, has developed policies and procedures to be used in

the selection of projects to be funded with various funding including regional federal funds as set forth in Attachments A and B of this Resolution, incorporated herein as though set forth at length; and

WHEREAS, using the policies set forth in Attachment A of this Resolution, MTC, in cooperation with the Bay Area Partnership and interested stakeholders, will develop a program of projects to be funded with these funds for inclusion in the federal TIP, as set forth in Attachment B of this Resolution, incorporated herein as though set forth at length; and

WHEREAS the federal TIP and subsequent TIP revisions and updates are subject to public review and comment; now therefore be it

RESOLVED that MTC approves the "Project Selection and Programming Policies" for projects to be funded in the OBAG 3 program as set forth in Attachments A and B of this Resolution; and be it further

RESOLVED that the funds assigned to MTC as the RTPA/MPO for programming and project selection shall be pooled and distributed on a regional basis for implementation of project selection criteria, policies, procedures, and programming, consistent with implementation of the Regional Transportation Plan (RTP); and be it further

RESOLVED that the projects will be included in the federal TIP subject to final federal approval and requirements; and be it further

RESOLVED that the Executive Director or designee may make technical adjustments and other non-substantial revisions, including changes to project sponsor, updates to fund sources and distributions to reflect final funding criteria and availability; and be it further

RESOLVED that the Executive Director or designee is authorized to revise Attachment B as necessary to reflect the programming of projects as the projects are selected, revised, and included in the federal TIP; and be it further

RESOLVED that the Executive Director or designee is authorized to execute Advance Construction (AC) Authorizations with Caltrans and/or the Federal Highway Administration (FHWA) for federal projects sponsored or implemented by the Metropolitan Transportation Commission; and be it further

RESOLVED that the Executive Director or designee is authorized to execute agreements and Letters/Memorandums of Understanding with Caltrans and other MPOs and RTPAs for the exchange of regional Surface Transportation Block Grant Program (STP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ) and other federal funds assigned to MTC for programming discretion, consistent with Caltrans' Obligation Authority (OA) Management Policy; and be it further

RESOLVED that the Executive Director or designee shall make available a copy of this resolution, and attachments as may be required and appropriate.

METROPOLITAN TRANSPORTATION COMMISSION

Alfredo Pedroza, Chair

The above resolution was entered into
by the Metropolitan Transportation
Commission at the regular meeting
of the Commission held in San Francisco,
California and at other remote locations
on January 26, 2022.

Attachment B-1
MTC Resolution No. 4505
OBAG 3 Regional Programs
FY 2022-23 through FY 2025-26
September 2022

MTC Res. No. 4505 Attachment B-1
Adopted: 01/26/22-C
Revised: 02/23/22-C 06/22/22-C 09/28/22-C

OBAG 3 Regional Programs Project List

PROJECT CATEGORY AND TITLE	SPONSOR	Total STP/CMAQ	Total Other
OBAG 3 REGIONAL PROGRAMS		**$382,000,000**	
1. PLANNING AND PROGRAM IMPLEMENTATION			
Regional Planning Activities	MTC	$8,300,000	
Program and Project Implementation	MTC	$37,200,000	
Program and Project Implementation - Transit Transformation	MTC	$4,000,000	
1. PLANNING AND PROGRAM IMPLEMENTATION		**$49,500,000**	
2. GROWTH FRAMEWORK IMPLEMENTATION			
Growth Framework Implementation			
Growth Framework Implementation	TBD	$25,000,000	
2. GROWTH FRAMEWORK IMPLEMENTATION		**$25,000,000**	
3. CLIMATE, CONSERVATION, AND RESILIENCE			
Climate Initiatives			
Climate Initiatives	TBD	$43,800,000	
Regional Transportation Demand Management (TDM)			
Commuter Benefits Program	MTC	$10,000,000	
Regional Carpool Program	MTC	$3,400,000	
Bike to Work & Spare the Air Youth	MTC	$4,800,000	
511 Traveler Information Services (Added)	**MTC**	**$14,000,000**	
Regional TDM Balance **(Revised)**	MTC	**$4,000,000**	
Priority Conservation Area (PCA) Grant Program			
PCA Grant Program	TBD	$18,000,000	
3. CLIMATE, CONSERVATION, AND RESILIENCE		**$98,000,000**	
4. COMPLETE STREETS AND COMMUNITY CHOICE			
Healthy, Safe, and Sustainable Streets			
Regional Vision Zero/Safety Program			
Local Roadway Safety Plan Development & TA Balance **(Revised)**	MTC	**$2,720,000**	
CCTA: Local Roadway Safety Plan Development (Added)	**MTC**	**$630,000**	
NVTA: Local Roadway Safety Plan Development (Added)	**MTC**	**$250,000**	
C/CAG: Local Roadway Safety Plan Development (Added)	**MTC**	**$400,000**	
Bay Area Vision Zero Data System	MTC	$2,000,000	
Regional Safety Program Coordination and Outreach	MTC	$2,000,000	
Regional Pavement & Asset Management Program			
Pavement Technical Assistance Program (PTAP)	MTC	$10,000,000	
Pavement Management Program (PMP)	MTC	$3,000,000	
Regional Active Transportation Plan (AT Plan) Implementation			
Bay Trail Planning (Added)	**MTC**	**$1,500,000**	
Bay Trail Project Delivery (Added)	**MTC**	**$750,000**	
Bay Trail Technical Assistance (Added)	**MTC**	**$250,000**	
Regional AT Plan Implementation Balance **(Revised)**	TBD	**$12,500,000**	
Community Choice			
ACTC: Community-Based Transportation Plans	MTC	$600,000	
CCTA: Community-Based Transportation Plans	MTC	$450,000	
TAM: Community-Based Transportation Plans	MTC	$150,000	
NVTA: Community-Based Transportation Plans	MTC	$150,000	
SFCTA: Community-Based Transportation Plans	MTC	$370,000	
C/CAG: Community-Based Transportation Plans	MTC	$245,000	
VTA: Community-Based Transportation Plans	MTC	$600,000	
STA: Community-Based Transportation Plans	MTC	$190,000	
SCTA: Community-Based Transportation Plans	MTC	$245,000	
Project implemenation, technical assistance, engagement	TBD	$15,000,000	
4. COMPLETE STREETS AND COMMUNITY CHOICE		**$54,000,000**	
5. MULTIMODAL SYSTEMS OPERATIONS AND PERFORMANCE			
Transit Transformation Action Plan			
Transit Priority - Highway Investments	MTC	$13,000,000	

Attachment B-1
MTC Resolution No. 4505
OBAG 3 Regional Programs
FY 2022-23 through FY 2025-26
September 2022

MTC Res. No. 4505 Attachment B-1
Adopted: 01/26/22-C
Revised: 02/23/22-C 06/22/22-C 09/28/22-C

OBAG 3 Regional Programs Project List

PROJECT CATEGORY AND TITLE	SPONSOR	Total STP/CMAQ	Total Other
OBAG 3 REGIONAL PROGRAMS		**$382,000,000**	
Transit Priority - Arterial Investments	TBD	$15,000,000	
Mapping & Wayfinding	TBD	$3,600,000	
Multimodal Systems Programs			
Clipper C2 Capital (Loan for RM3)	MTC	$30,000,000	
Forward Programs (Added)	**MTC**	**$23,000,000**	
Resilient SR 37 (Added)	**MTC**	**$10,000,000**	
Design Alternative Assessments/Corridor Studies (Added)	**MTC**	**$4,000,000**	
Adaptive Ramp Metering Implementation (Added)	**MTC**	**$4,000,000**	
Optimized Freeway Corridor Operations (Added)	**MTC**	**$6,000,000**	
Multimodal Arterial Operations (Added)	**MTC**	**$6,500,000**	
Shared Connected/Automated Vehicles and Technology (Added)	**MTC**	**$1,000,000**	
Regional ITS Architecture (Added)	**MTC**	**$2,000,000**	
Express Lanes Studies and Pilots (Non-Infrastructure) (Added)	**MTC**	**$2,000,000**	
Connected Bay Area/Incident Management (Added)	**MTC**	**$28,400,000**	
~~**Multimodal Systems Programs Balance**~~ **(Removed)**	~~**MTC**~~	~~**$86,900,000**~~	
SamTrans Preventative Maintenance (for SamTrans ROW Repayment) **(Revised)**	SamTrans	$7,000,000	
5. MULTIMODAL SYSTEMS OPERATIONS AND PERFORMANCE		**$155,500,000**	
OBAG 3 REGIONAL PROGRAMS	**TOTAL:**	**$382,000,000**	

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Attachment B-2
MTC Resolution No. 4505
OBAG 3 County & Local Programs
FY 2022-23 through FY 2025-26
September 2022

MTC Res. No. 4505 Attachment B-2
Adopted: 01/26/22-C
Revised: 06/22/22-C 09/28/22

OBAG 3 County & Local Programs Project List

PROJECT CATEGORY AND TITLE	SPONSOR	Total STP/CMAQ
OBAG 3 COUNTY & LOCAL PROGRAMS		**$375,000,000**
ALAMEDA COUNTY		
CTA Planning Activities		
Planning Activities Base	MTC	$4,905,000
Safe Routes to School (SRTS)		
SRTS Non-Infrastructure Program	ACTC	$1,270,000
ALAMEDA COUNTY		**$6,175,000**
CONTRA COSTA COUNTY		
CTA Planning Activities		
Planning Activities Base	MTC	$4,087,000
CONTRA COSTA COUNTY		**$4,087,000**
MARIN COUNTY		
CTA Planning Activities		
Planning Activities Base	MTC	$3,446,000
MARIN COUNTY		**$3,446,000**
NAPA COUNTY		
CTA Planning Activities		
Planning Activities Base	MTC	$3,446,000
NAPA COUNTY		**$3,446,000**
SAN FRANCISCO COUNTY		
CTA Planning Activities		
Planning Activities Base	MTC	$3,624,000
Safe Routes to School (SRTS)		
SRTS Non-Infrastructure Program	SFCTA	$7,082,000
SAN FRANCISCO COUNTY		**$10,706,000**
SAN MATEO COUNTY		
CTA Planning Activities		
Planning Activities Base	MTC	$3,450,000
Safe Routes to School (SRTS)		
SRTS Non-Infrastructure Program **(Revised)**	C/CAG	**$2,120,000**
SAN MATEO COUNTY		**$5,570,000**
SANTA CLARA COUNTY		
CTA Planning Activities		
Planning Activities Base	MTC	$5,307,000
SANTA CLARA COUNTY		**$5,307,000**
SOLANO COUNTY		
CTA Planning Activities		
Planning Activities Base	MTC	$3,446,000
SOLANO COUNTY		**$3,446,000**
SONOMA COUNTY		
CTA Planning Activities		
Planning Activities Base	MTC	$3,446,000
Safe Routes to School (SRTS)		
SRTS Non-Infrastructure Program	SCTA	$1,910,000
SONOMA COUNTY		**$5,356,000**
UNPROGRAMMED BALANCE		**$327,461,000**
OBAG 3 COUNTY & LOCAL PROGRAMS	**TOTAL:**	**$375,000,000**

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375 Beale Street, Suite 800
San Francisco, CA 94105

Metropolitan Transportation Commission

Legislation Details (With Text)

File #:	22-1258	**Version:**	1	**Name:**	
Type:	Resolution			**Status:**	Commission Approval
File created:	7/25/2022			**In control:**	Programming and Allocations Committee
On agenda:	9/14/2022			**Final action:**	

Title: MTC Resolution Nos. 4544 and 4545. Adoption of the 2023 Transportation Improvement Program (TIP) and Transportation Air Quality Conformity Analysis for Plan Bay Area 2050 (Plan) and the 2023 TIP.

The federally required TIP is a comprehensive listing of all Bay Area surface transportation projects that receive federal funds, are subject to a federally required action or are regionally significant for air quality conformity purposes. MTC is required to make a positive air quality conformity determination for the TIP and Plan in accordance with EPA's transportation conformity regulations and MTC's Bay Area Air Quality Conformity Procedures.

Sponsors:

Indexes:

Code sections:

Attachments: 3c_22-1258_Resos_4544-4545_2023_TIP_and_Air_Quality_Confirmity.pdf
3c_22-1258_Reso-4544_Attachment_A.pdf

Date	Ver.	Action By	Action	Result

Subject:

MTC Resolution Nos. 4544 and 4545. Adoption of the 2023 Transportation Improvement Program (TIP) and Transportation Air Quality Conformity Analysis for Plan Bay Area 2050 (Plan) and the 2023 TIP.

The federally required TIP is a comprehensive listing of all Bay Area surface transportation projects that receive federal funds, are subject to a federally required action or are regionally significant for air quality conformity purposes. MTC is required to make a positive air quality conformity determination for the TIP and Plan in accordance with EPA's transportation conformity regulations and MTC's Bay Area Air Quality Conformity Procedures.

Presenter:

Adam Crenshaw

Recommended Action:

Commission Approval

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Metropolitan Transportation Commission
Programming and Allocations Committee

September 14, 2022 **Agenda Item 3c - 22-1258**

MTC Resolution Nos. 4544 and 4545

Subject:

Adoption of the 2023 Transportation Improvement Program (TIP) and Transportation Air Quality Conformity Analysis for Plan Bay Area 2050 (Plan) and the 2023 TIP.

Background:

The federally required Transportation Improvement Program (TIP) is a comprehensive listing of Bay Area surface transportation projects that receive federal funds, are subject to a federally required action, or are regionally significant. MTC, as the federally designated Metropolitan Planning Organization (MPO) for the nine-county San Francisco Bay Area Region, must prepare and adopt the TIP in line with the state-wide schedule.

The 2023 TIP contains approximately 300 projects with funding totaling of about $11 billion over the four-year period from FY 2022-23 through 2025-26, as well as over 250 projects shown for informational purposes. The 2023 TIP is financially constrained by year, meaning that the amount of dollars committed to the projects (or "programmed") does not exceed the amount of dollars estimated to be available. The 2023 TIP includes a financial constraint analysis and a financial plan that demonstrates that the programmed projects can be implemented with the funding available. Per federal regulations, the TIP is also designed such that, once implemented, it makes progress toward achieving established performance targets and includes a description of the anticipated effect of the TIP toward achieving those targets. The 2023 TIP performance report is included as Attachment A to this memo.

To further assist the public in assessing the equity implications of the near-term investments in the 2023 TIP, staff has conducted an investment analysis with a focus on low-income residents and people of color. A summary of the Investment Analysis is included as Attachment B. The Investment Analysis concludes that, in the aggregate, there is a relatively higher proportionate investment in transportation facilities that serve people of color and low-income populations than the proportional share of trips taken by people of color and low-income populations. However, it also suggests a variance in the share of transit investments by trips for passengers living in low-income households. As with prior TIPs, staff believes that this variance is due to the programming of funding for a handful of large capital projects within the active years of the TIP.

Under Federal law and regulation, MPOs must analyze regional transportation plans (RTPs) and TIPs to determine if they conform to federal air quality standards and plans (known as the State Implementation Plan or SIP). Staff prepared the new Transportation-Air Quality Conformity Analysis for *Plan Bay Area 2050* and the 2023 TIP in accordance with the U.S. Environmental Protection Agency's (EPA) transportation conformity regulations and MTC's Bay Area Air Quality Conformity Procedures (MTC Resolution No. 3757, Revised). These projects have been modeled in the appropriate analysis year using the latest planning assumptions. MTC staff consulted with the Air Quality Conformity Task Force throughout this process. Based on the conformity analysis, the Commission may make a positive conformity determination because the Plan and the TIP conform to the federal air quality standards and plans.

Federal regulations, including 23 CFR §630.106, and state statutes, including Streets and Highways Code Section 182, as well as California Transportation Commission (CTC) policies and guidance prescribe requirements for the timely use of state and federal funds. Sponsors with projects in the federal TIP must meet these timely use of funds requirements and comply with the regional project delivery policy, MTC Resolution 3606, Revised.

Public Comments and Responses

The 2023 TIP and accompanying Transportation-Air Quality Conformity Analysis were released for public review and comment on July 5, 2022. The documents were presented at a public meeting on July 13, 2022, and the review and comment period ended on August 3, 2022. Staff received one comment on the 2023 TIP. The comment and staff response are included as Attachment C and have been incorporated into the appendices of the TIP document.

During the comment period, staff also received updated project and funding information from sponsors. Changes resulting from those updates are listed in Attachment D.

Next Steps

Following Commission consideration later this month, if approved, staff will forward the 2023 TIP and Transportation-Air Quality Conformity Analysis to Caltrans for inclusion in the Federal-Statewide Transportation Improvement Program (FSTIP). The Federal Highway Administration and Federal Transit Administration will then review California's FSTIP and federal approval is expected in December 2022.

Issues:

None.

Recommendations:

Refer MTC Resolution No. 4544 and MTC Resolution No. 4545 to the Commission for approval.

Attachments:

- Attachment A – Performance Report
- Attachment B – Investment Analysis Key Findings
- Attachment C – Responses to public comments
- Attachment D – List of project changes in response to comments
- MTC Resolution No. 4544: Adoption of the Transportation-Air Quality Conformity Analysis for Plan Bay Area 2050 and the 2023 TIP
- MTC Resolution No. 4545: Adoption of the 2023 TIP

Therese W. McMillan

Federal Performance Report

Assessment of 2023 TIP Investments in Addressing
Federally Mandated Performance Measures

INTRODUCTION

Performance-Based Planning and Programming

The Moving Ahead for Progress in the 21st Century Act (2012), also known as MAP-21, established several performance management requirements for state departments of transportation (DOTs), metropolitan planning organizations (MPOs), and transit agencies. A performance-based approach to transportation planning and programming intends to ensure the most efficient investment of transportation funds, support improved investment decision-making, and increase accountability and transparency. MAP-21 and subsequent federal legislation require DOTs, MPOs, and transit agencies to establish performance targets for each of the following national goal areas:

- Safety
- System Reliability
- Infrastructure Condition
- Freight Movement and Economic Vitality
- Congestion Reduction
- Environmental Sustainability

MTC's Role

Under the federal performance management rules, MTC is responsible for setting short-range targets and incorporating the targets into its planning processes – most notably, the Transportation Improvement Program (TIP) and the Regional Transportation Plan (RTP).

TIP Requirements

There are two primary requirements for incorporating performance management into the TIP. For all federally-required targets, MTC must show that the TIP "makes progress towards achieving the performance targets" and that the TIP includes, "to the maximum extent practicable, a description of the anticipated effect of the TIP towards achieving the performance targets" (23 CFR § 450.326). MTC must show that the Bay Area is moving in the right direction based on the package of investments included in the TIP and must also describe how much of an effect the TIP investments are expected to have on the targets.

- ***Federal Performance Report:*** This report reflects all of the federally-required performance targets and seeks to quantify impacts to the greatest extent practicable, while at the same time focusing on consistency and accuracy across projects.
- ***2023 TIP:*** The Bay Area's 2023 TIP covers the four-year period of FY 2022-23 through FY 2025-26 and includes approximately 300 transportation projects with $11 billion in committed funding

during the four-year period. For the 2023 TIP, MTC collected self-reported data from project sponsors to complete the performance analysis.

RTP Requirements

Starting with *Plan Bay Area 2050*, MTC is required to report on the condition and performance of the transportation system in relation to its adopted performance targets (23 CFR § 450.324). MTC also complied with other federal requirements related to long-range planning.

Reporting

In addition to quantifying progress made towards performance targets in the context of its TIP and RTP, MTC is required to report regional targets to Caltrans. To meet this requirement, MTC has expanded its Vital Signs performance monitoring website (http://www.vitalsigns.mtc.ca.gov/targets) to incorporate federal performance targets, as well as additional performance indicators. Additionally, MTC publishes its regional targets as they are adopted on MTC's website (https://mtc.ca.gov/our-work/plans-projects/major-regional-projects/federal-performance-targets).

2023 TIP Federal Performance Report Structure

This report is organized by goal area and supporting performance measures.

Goal and Performance Measure Background

Each section includes an introduction to the national goal area, a description of each of the federally-required performance measures for that goal, information on the target-setting process, and a status update on the state and regional targeting-setting process. Where possible, recent trend data for the performance measures is also provided.

Regional Policies and Project Selection Procedures

Each section also includes a discussion of regional policies and procedures that direct investments to projects and programs that support achievement of performance goals. This includes an identification of which RTP strategies led to the TIP investments that support various goal areas. While the RTP includes many strategies to guide development in the Bay Area, the following strategies most closely align with federally required performance measures for transportation investments and are referenced in the discussions below related to 2023 TIP investments:

Table 1. *Plan Bay Area 2050* Strategies Supporting Achievement of Transportation Performance Targets

Reference	Strategy Title
T1	Restore, operate, and maintain the existing system
T3	Enable a seamless mobility experience
T5	Implement per-mile tolling on congested freeways and transit alternatives
T6	Improve interchanges and address highway bottlenecks
T7	Advance other regional programs and local priorities
T8	Build a Complete Streets network
T9	Advance a regional Vision Zero policy through street design and reduced speeds
T10	Enhance local transit frequency, capacity, and reliability
T11	Expand and modernize the regional rail network
T12	Build an integrated regional express lanes and express bus network
EN8	Expand clean vehicle initiatives
EN9	Expand transportation demand management initiatives

Further information about the individual strategies may be found in the Transportation and Environment Chapters of *Plan Bay Area 2050* (Chapters 4 and 5, respectively), available online at https://www.planbayarea.org/finalplan2050. The *Plan Bay Area 2050* Performance Report (2023 TIP Appendix A-8) also includes more information on the evaluation of projects included in the Plan.

2023 TIP Investments

Data collected from project sponsors for the 2023 TIP is presented for each goal area and performance measure. This includes the level of investment in projects that have identified the goal area as the project's primary purpose, as well as a summary of the performance benefits from all projects included in the 2023 TIP, regardless of project purpose. The report includes an overall assessment of the anticipated effect of the 2023 TIP on achieving performance targets and a discussion of ongoing and future efforts related to the goal area.

SAFETY

Federal performance management regulations identify two distinct areas of transportation safety – road safety from traffic collisions (including collisions involving bicyclists and pedestrians), and transit safety resulting from collisions, other safety events, or major mechanical failures. The overall goal of the transportation safety performance area is to make the nation's transportation systems safer for all users.

Road Safety

Goal: Significantly reduce traffic fatalities and serious injuries on all public roads.

Performance Measures

Five performance measures were established to identify trends and assess progress towards reducing traffic-related fatalities and serious injuries on public roads.

Goal Area	Road Safety
Performance Measures	• Number of fatalities • Rate of fatalities per 100 million vehicle miles traveled • Number of serious injuries • Rate of serious injuries per 100 million vehicle miles traveled • Number of non-motorized fatalities and non-motorized serious injuries *For all measures: 5-year rolling average; all public roads*

Performance Targets

State DOTs are required to set numerical targets each year for each safety measure to comply with the regulation. MPOs have the option of supporting State targets or setting their own region-specific numerical targets on a target-by-target basis.

Table 2. Statewide and Regional Roadway Safety Targets for 2022

Roadway Safety Performance Measures	**Caltrans Statewide Targets** 2018-2022 average	**Statewide Annual Reduction** 2018-2022	**Bay Area Regional Targets** 2018-2022 average	**Regional Annual Reduction** 2018-2022
Fatalities – total	**3,491.8**	-3.61%	**421.2**	-9%
Fatalities – per 100 million VMT	**1.042**	-2.00%	**0.672**	-9%
Serious Injuries – total	**16,704.2**	1.66%	**2,305.2**	-9%
Serious Injuries – per 100 million VMT	**4.879**	1.66%	**3.613**	-9%
Non-motorized fatalities + serious injuries – total	**4,684.4**	-3.61% fatalities; -1.66% injuries	**810.3**	-9%

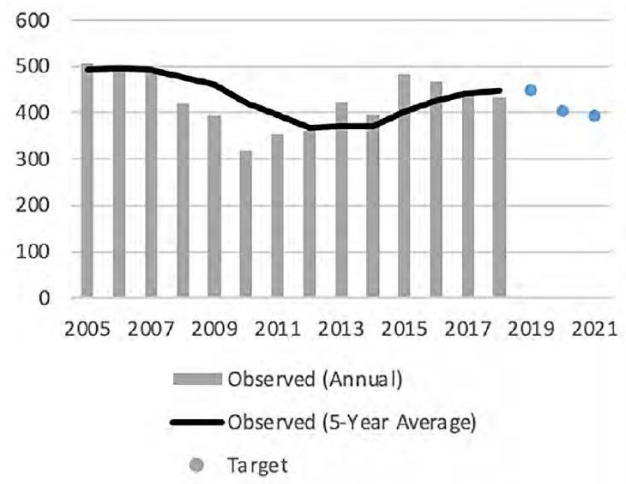
Note: Targets rely on projected data for 2020-2022. Projected annual fatalities and injuries are based on the annual reduction or increase rates noted. Projected VMT data is based on OHPI Traffic Volume Trends. Observed fatality and injury data is available for 2015-2019, Finalized annual VMT data is available for 2015-2022.

Caltrans set statewide 2022 targets in August 2021, based on observed trends in fatalities and injuries from the latest years for which data was available. This resulted in a target that reflects an increase in injuries above the baseline. In contrast, MTC set 2022 regional targets for the Bay Area in February 2022, based on a linear decline from a baseline of fatalities and serious injuries in 2019 to zero fatalities and serious injuries by 2030, in line with a full adoption of Vision Zero (described in detail in the following section regarding "Regional Policies"). Due to an expansion of the definition of serious injuries in 2018, the 2022 five-year moving average (2018-2022) for this measure was projected to be above the baseline (2015-2019). In order to not set targets for an increasing number of serious injuries when compared to the baseline, MTC revised the target number of serious injuries to be equivalent to the baseline, representing a slightly larger reduction than needed to reach zero serious injuries by 2030. The 2022 targets and corresponding anticipated annual performance changes for each measure are detailed in the table above (Table 2).

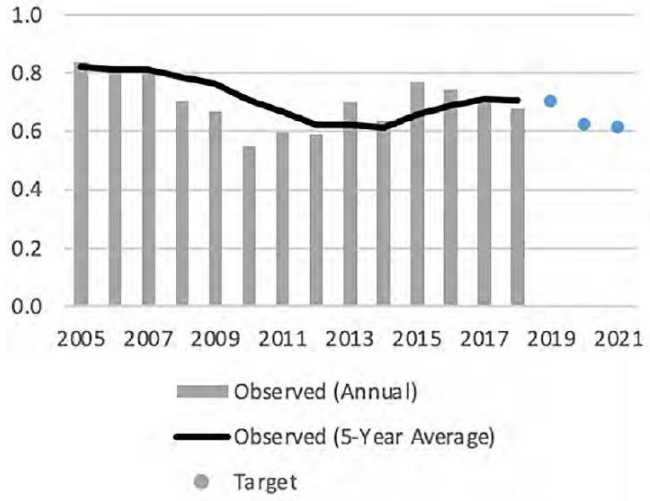
Regional trends for each roadway safety performance measure are provided in charts below. Trend lines are in black, with blue dots representing regional targets (2019, 2020, and 2021).

Bay Area Regional Road Safety Trends

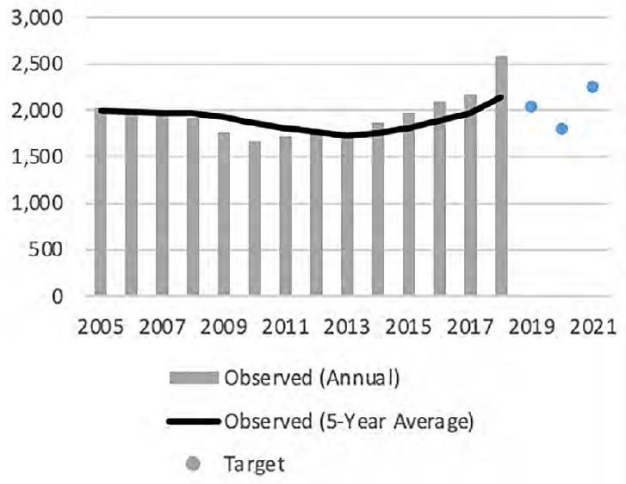
Number of Fatalities



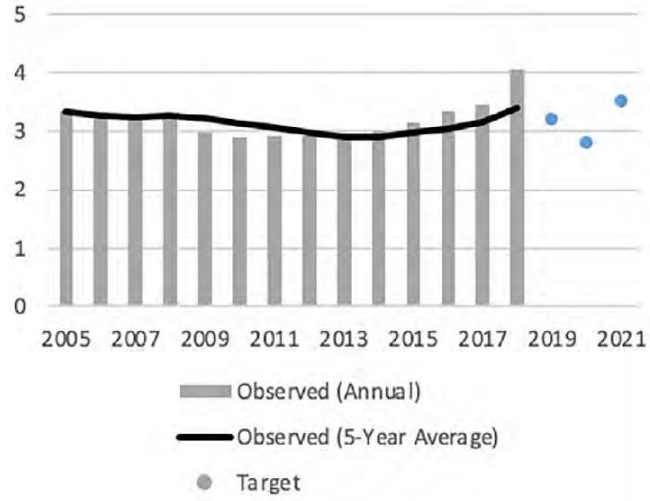
Fatalities per 100 million VMT



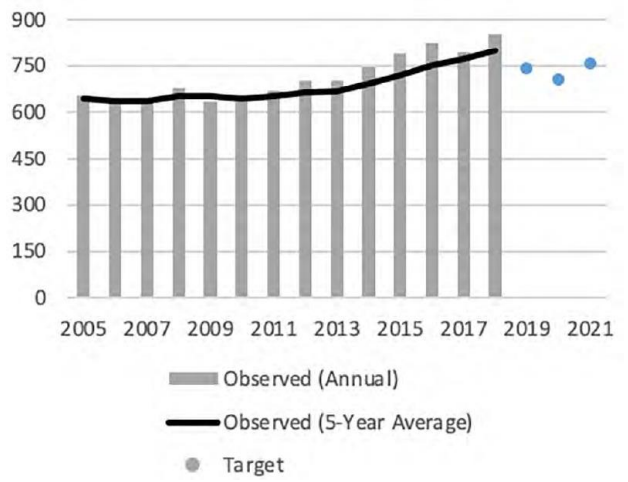
Number of Serious Injuries



Serious Injuries per 100 million VMT



Number of Non-Motorized Fatalities and Serious Injuries



Source: http://www.vitalsigns.mtc.ca.gov/targets

Regional Policies and Project Selection Procedures

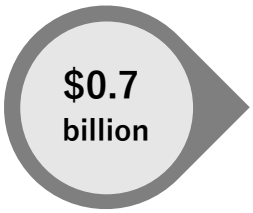
Ensuring the safety of travelers on the Bay Area's roadways has been a longstanding priority for MTC. The Commission recommitted to this principle in 2020 by adopting a Regional Safety/Vision Zero Policy (MTC Resolution No. 4400, 2023 TIP Appendix A-14) to support achievement of safety targets, and earlier this year, the Commission adopted an update to the long-standing regional Complete Streets policy (MTC Resolution No. 4493, 2023 TIP Appendix A-15). These policies explicitly support the *Plan Bay Area 2050* strategies to "build a Complete Street network" and to "advance a regional Vision Zero policy through street design and reduced speeds" (Strategies T8 and T9 respectively).

This commitment to safety is also reflected in the programs that direct funding to projects in the 2023 TIP. Prior cycles of the One Bay Area Grant (OBAG) program, the Active Transportation Program (ATP), and the Regional Transportation Improvement Program (RTIP), which fund some of the projects in 2023 TIP, required project sponsors to adopt a local Complete Streets policy or general plan circulation element that incorporates Complete Street elements as a prerequisite for receiving funding. More recent cycles of the OBAG and ATP programs require project sponsors to adopt a Local Road Safety Plan (LRSP) or a similar plan to be eligible for discretionary grant funding. Cycle 6 of the regional ATP also includes extra weighting in the project selection criteria for projects that are consistent with the Vision Zero (VZ) policy. In addition to the LRSP requirement, OBAG 3 directs funding to implement the Regional Safety/VZ policy (including investments in safety data systems, and technical support for safety plans/projects), carries forward a $25 million investment target for SRTS programs, and sets a $200 million investment target for active transportation investments. The County & Local program also gives additional points to projects that advance federal performance measures for safety, and projects that are consistent with Regional Safety/VZ policy.

2023 TIP Investments

In the 2023 TIP, nearly $654 million in federal, state, regional and local funds are directed to projects that have a primary purpose of improving roadway safety for all users (Table 3). Funding for safety-focused projects account for 6% of the dollars in the 2023 TIP, and 26% of all projects in the financially constrained 2023 TIP have a primary purpose of improving road safety.

Table 3. 2023 TIP Projects with the Primary Purpose to Improve Road Safety



County	Safety Investments *(in $ millions)*	% of TIP Investments	Safety Projects	% of TIP Projects
Alameda	$154	15%	20	34%
Contra Costa	$48	28%	10	30%
Marin	$17	11%	4	21%
Napa	$0	1%	1	10%
San Francisco	$32	3%	4	18%
San Mateo	$44	12%	13	36%
Santa Clara	$100	2%	19	33%
Solano	$29	43%	5	31%
Sonoma	$21	48%	3	18%
Regional/ Multi-County	$207	6%	3	7%
	$654	6%	82	26%

Note: Project purpose data provided by project sponsors through the 2023 TIP. Project totals include one or more "grouped listings," which combine numerous projects into a single listing in the TIP.

This significant investment in road safety projects includes $195 million from two key state-funded safety programs: the State Highway Operation and Protection Program (SHOPP) – Collision Reduction Program and the State Highway Safety Improvement Program (HSIP). In addition to the state safety investments directed to projects throughout the region, other significant road safety investments in the 2023 TIP include:

- $31 million for Oakland's Reconnecting the Town Program
- $27 million for San Carlos's US-101/Holly St. Interchange Modifications
- $27 million for Alameda County's Complete Street Improvements Program
- $17 million for Caltrain Rengstorff Grade Separation in Mountain View

Transportation projects that are primarily focused on other non-safety objectives, such as congestion reduction or operational improvements, can often contribute to a safer roadway environment. Tables 4a through 4c detail the investments in the TIP, regardless of the project's primary purpose, that are expected to reduce fatalities or serious injuries for all modes, as well as projects that result in safer travel specifically for bicyclists and pedestrians. Many of these projects have a primary objective other than road safety.

Table 4a. 2023 TIP Projects Anticipated to Result in Road Safety Benefits:

Reduction in the Number and Rate of Fatalities

County	Safety Investments *(in $ millions)*	% of TIP Investments	Projects	% of TIP Projects
Alameda	$640	63%	37	64%
Contra Costa	$102	60%	12	36%
Marin	$14	9%	4	21%
Napa	$11	31%	4	40%
San Francisco	$56	5%	5	23%
San Mateo	$47	12%	16	44%
Santa Clara	$490	10%	27	47%
Solano	$45	65%	6	38%
Sonoma	$30	66%	9	53%
Multiple	$526	16%	6	15%
	$1,961	18%	126	41%

Table 4b. 2023 TIP Projects Anticipated to Result in Road Safety Benefits:

Reduction in the Number and Rate of Serious Injuries

County	Safety Investments *(in $ millions)*	% of TIP Investments	Projects	% of TIP Projects
Alameda	$641	63%	38	66%
Contra Costa	$105	62%	13	39%
Marin	$16	10%	5	26%
Napa	$15	44%	5	50%
San Francisco	$56	5%	5	23%
San Mateo	$51	13%	17	47%
Santa Clara	$493	10%	28	48%
Solano	$45	65%	6	38%
Sonoma	$30	66%	9	53%
Multiple	$526	16%	6	15%
	$1,977	18%	132	43%

Table 4c. 2023 TIP Projects Anticipated to Result in Road Safety Benefits:

Reduction in Non-Motorized Fatalities and Serious Injuries

County	Safety Investments *(in $ millions)*	% of TIP Investments	Projects	% of TIP Projects
Alameda	$638	63%	39	67%
Contra Costa	$72	42%	12	36%
Marin	$17	11%	6	32%
Napa	$15	45%	6	60%
San Francisco	$56	5%	5	23%
San Mateo	$52	14%	18	50%
Santa Clara	$468	10%	29	50%
Solano	$45	65%	6	38%
Sonoma	$32	73%	10	59%
Multiple	$242	7%	5	12%
	$1,637	15%	136	44%

Note: Tables 4a-4c indicate the anticipated effect of projects on road safety provided by project sponsors through the 2023 TIP. Project totals include one or more "grouped listings," which combine numerous projects into a single listing in the TIP.

Combined into a single measure, more than 140 projects programmed in the financially constrained 2023 TIP, accounting for more than $2 billion in investments, are anticipated to reduce traffic fatalities and/or serious injuries (Table 5). The data in Tables 4a through 4c is not additive for Table 5, as individual projects may benefit more than one road safety performance measure.

Table 5. 2023 TIP Projects Anticipated to Result in Road Safety Benefits: Reduction in Fatalities and Serious Injuries (Including Non-Motorized)

$2.0 billion

County	Safety Investments *(in $ millions)*	% of TIP Investments	Safety Projects	% of TIP Projects
Alameda	$645	64%	40	69%
Contra Costa	$121	71%	16	48%
Marin	$17	11%	6	32%
Napa	$15	45%	6	60%
San Francisco	$56	5%	5	23%
San Mateo	$52	14%	18	50%
Santa Clara	$501	11%	32	55%
Solano	$45	65%	6	38%
Sonoma	$32	73%	10	59%
Regional/ Multi-County	$526	16%	6	15%
	$2,010	18%	145	47%

Note: Project purpose data provided by project sponsors through the 2023 TIP. Project totals include one or more "grouped listings," which combine numerous projects into a single listing in the TIP.

TRANSIT SAFETY

Goal: Improve the safety of all public transportation systems, specifically in the areas of fatalities, injuries, safety events (for example: collisions, derailments), and system reliability.

Performance Measures

The National Public Transportation Safety Plan includes seven performance measures that transit operators and MPOs will be required to track and report. These measures will be used to identify trends and assess progress towards making reductions in transit fatalities, injuries, safety events, and mechanical failures. Each performance measure is tracked and reported by mode of public transportation (i.e. bus, heavy rail).

Goal Area	Transit Safety
Performance Measure(s)	• Number of fatalities, by mode • Rate of fatalities per vehicle revenue miles, by mode • Number of injuries, by mode • Rate of injuries per vehicle revenue miles, by mode • Number of transit safety events, by mode • Rate of transit safety events per vehicle revenue miles, by mode • Mean distance between major mechanical failures, by mode

Performance Targets

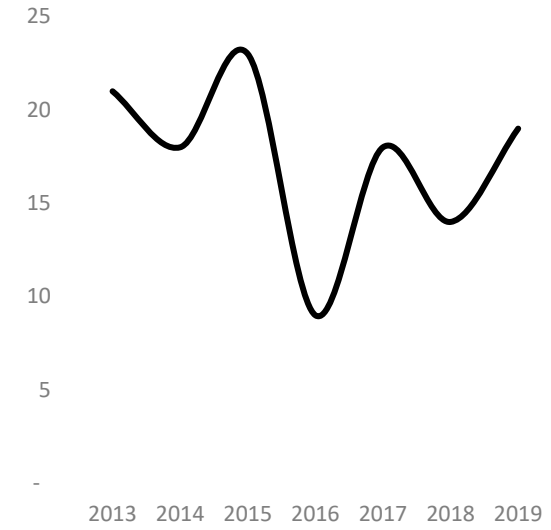
The final rule for these performance measures went into effect in July 2019, requiring transit operators to establish a Public Transportation Agency Plan, including safety performance targets, by July 2021. MTC adopted regional safety performance targets in January 2022. More information on the Transit Safety target setting process and targets for individual modes is available online at: http://mtc.legistar.com/gateway.aspx?m=l&id=/matter.aspx?key=23769.

Table 6. Regional Transit Safety Targets

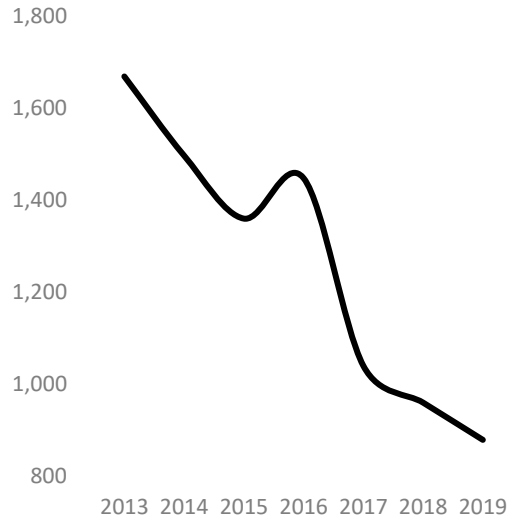
Performance Measures	*MTC Regional Targets*
Fatalities – total, all modes	0.0
Fatalities – rate per vehicle revenue miles, all modes	0.0
Injuries – total, all modes	546.4
Injuries – rate per vehicle revenue miles, all modes	0.03
Transit safety events – total, all modes	776.6
Transit safety events – rate per vehicle revenue miles, all modes	0.04
Major mechanical failures – mean distance between, all modes	35,409.8

Bay Area Regional Transit Safety Trends

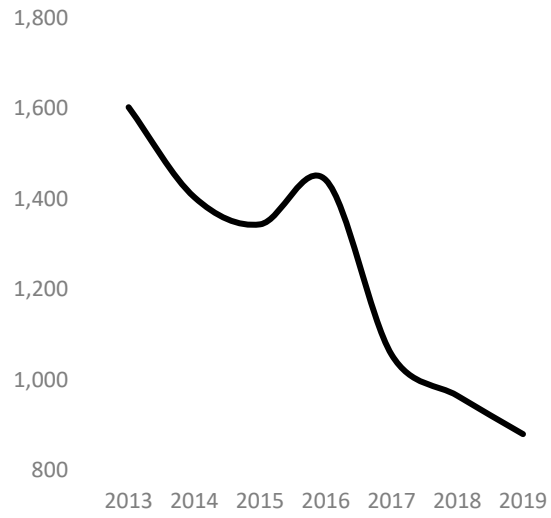
Number of Fatalities - All modes



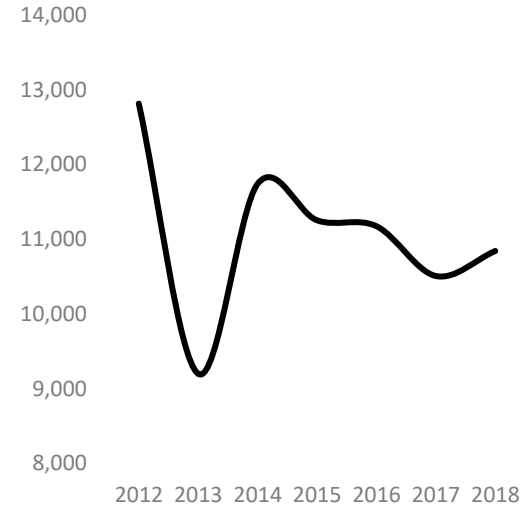
Number of Injuries – All modes



Number of Transit Safety Events - All modes



Number of Major Mechanical Failures - All modes



Source: National Transit Database

Regional Policies and Project Selection Procedures

While some projects included in the 2023 TIP address the safety of the transit system specifically, the primary means of supporting achievement of transit safety targets is ensuring that transit vehicles and facilities remain in a state of good repair. Well-maintained transit assets experience fewer major

mechanical errors and major safety events contributing to a safer ride for passengers. Further discussion of the regional policies and project selection procedures focused on maintaining the transit system is included in the Transit Asset Management section below.

2023 TIP Investments

In the 2023 TIP, $64 million is committed to projects that have a primary purpose of improving transit safety (Table 7).

Table 7. 2023 TIP Projects with the Primary Purpose to Improve Transit Safety

Bay Area	Safety Investments *(in $ millions)*	% of TIP Investments	Safety Projects	% of TIP Projects
Regional total	$64	<1%	6	2%

However, more than $2.0 billion of 2023 TIP investments are anticipated to improve performance on one or more transit safety performance measures, regardless of overall project purpose (Table 8). This accounts for 18% of the investments included in the 2023 TIP. The bulk of these investments are state of good repair and transit expansion projects that are also expected to improve the performance of one or more of the transit safety performance measures.

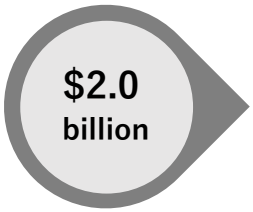


Table 8. 2023 TIP Projects Anticipated to Result in Transit Safety Benefits

Bay Area	Safety Investments *(in $ millions)*	% of TIP Investments	Safety Projects	% of TIP Projects
Regional total	$2,023	18%	75	24%

A few projects in the 2023 TIP with anticipated transit safety benefits include:

- $745 million for the Caltrain Downtown San Francisco Extension
- $219 million for BART's Railcar Procurement Program
- $101 million for Fremont's Irvington BART Station project
- $43 million for SFMTA's Core Capacity Program
- $34 million for SMART's Rail and Pathway Phase 2

INFRASTRUCTURE CONDITION

The maintenance and preservation of our existing transportation infrastructure are critical for supporting a safe and efficient transportation system. The overall goal of the infrastructure condition performance area is to improve the condition of existing pavements, bridges, and transit assets.

Pavement Condition

Goal: Maintain the condition of highway infrastructure assets in a state of good repair

Performance Measures

Four performance measures were established to identify trends and assess progress towards maintaining a state of good repair on the Interstate and Non-Interstate National Highway System (NHS).

Goal Area	Pavement Condition
Performance Measures	• Percentage of pavements on the Interstate in good condition *(lane miles)* • Percentage of pavements on the Interstate in poor condition *(lane miles)* • Percentage of pavements on the non-Interstate NHS in good condition *(lane miles)* • Percentage of pavements on the non-Interstate NHS in poor condition *(lane miles)*

Performance Targets

State DOTs are required to develop a Transportation Asset Management Plan that includes long-range investment strategies for assets on the National Highway System, including pavement condition. The plan establishes 10-year performance goals and interim two- and four-year performance targets to monitor progress. MPOs are only required to set four-year targets and may choose to adopt the statewide target or adopt quantifiable performance targets for the region.

Caltrans adopted its statewide two- and four-year targets for pavement condition in May 2018. In November 2018, MTC chose to support state targets for the four-year performance period. The state set new targets in May 2022 and MTC is expected to support state targets or adopt regional targets in November 2022.

Table 9. Regional Pavement Asset Management Targets

Performance Measure *Percentage of system total*	**Baseline Condition** 2016	**Statewide 2-Year Targets** 2019	**2-year Change**	**Statewide 4-Year Targets** 2021	**4-year Change**	**Regional 4-Year Targets** 2021
Interstate in good condition	**44.9%**	**45.1%**	+0.2%	**44.5%**	-0.5%	Support State Targets
Interstate in poor condition	**3.1%**	**3.5%**	+0.4%	**3.8%**	+0.7%	Support State Targets
Non-Interstate NHS in good condition	**25.5%**	**28.2%**	+2.7%	**29.9%**	+4.4%	Support State Targets
Non-Interstate NHS in poor condition	**7.1%**	**7.3%**	+0.2%	**7.2%**	+0.1%	Support State Targets

Regional Policies and Project Selection Procedures

MTC has maintained a Fix-it-First philosophy for many years and has recommitted to this effort through multiple plans, programs, and policies. One key to fulfilling this pledge for the region's pavement assets is the development and maintenance of the StreetSaver application that helps jurisdictions throughout the Bay Area target their pavement preservation investments in a more cost-effective manner. MTC also works with local jurisdictions to review their Pavement Management Programs (PMP) and certify that they meet regional requirements as a prerequisite to receiving regional discretionary funding.

When developing *Plan Bay Area 2050*, like other RTPs before it, MTC committed to Fix-it-First by conducting an asset management needs analysis and setting aside roughly two thirds of all transportation investments to "restore, operate, and maintain the existing system" (Strategy T1), including pavement preservation. While much of the implementation of this strategy, in particular the preservation of pavement assets on the National and Interstate Highway Systems, is implemented through the state-managed State Highway Operation and Protection Program (SHOPP), regional programs also contribute to the achievement of federal performance targets in this area. As mentioned above, to qualify for funding through the regional One Bay Area Grant (OBAG) discretionary program, project sponsors must have a certified PMP. Also, any pavement preservation project submitted for OBAG funding must be based on the local needs analysis from the PMP.

2023 TIP Investments

In the 2023 TIP, $879 million is directed to projects with a primary purpose of improving pavement condition on the NHS (Table 10). Of this total amount, $873 million is programmed to various projects in the SHOPP-Roadway Preservation program.

Table 10. 2023 TIP Projects with Primary Purpose to Improve Pavement Condition on the NHS

Bay Area	Pavement Investments *(in $ millions)*	% of TIP Investments	Pavement Projects	% of TIP Projects
Regional total	$879	8%	4	1%

Note: Project purpose data provided by project sponsors through the 2023 TIP. Project totals include the SHOPP Roadway Preservation "grouped listings," which combines numerous projects into a single listing.

A total of $1.3 billion is programmed to projects in the 2023 TIP that will improve pavement condition on the Interstate or non-Interstate NHS, regardless of the primary purpose of the projects. These investments are anticipated to bring 291.2 lane-miles of the Interstate and 670.9 lane-miles of the non-Interstate NHS from fair or poor condition into good condition (Table 11). However, the precise impact of these investments on reaching regional performance targets will be affected both by ongoing deterioration of pavement conditions throughout the TIP period as well as additional locally funded pavement preservation and rehabilitation projects that are not reflected in the TIP.

$1.3 billion

Table 11. 2023 TIP Improvements in Pavement Condition on the NHS in Lane Miles

Bay Area	From Fair to Good	% of Regional Total	From Poor to Good	% of Regional Total	Total Improved to Good	% of Regional Total
Interstate System	247.8	11.1%	43.4	1.9%	291.2	13.0
NHS	581.7	9.9%	89.2	1.5%	670.9	11.4%

Note: Pavement condition improvements data provided by project sponsors through the 2023 TIP.

Bridge Condition

Goal: Maintain the condition of bridge assets in a state of good repair

Performance Measures

Two performance measures were established to identify trends and assess progress towards maintaining a state of good repair of bridges on the National Highway System (NHS).

Goal Area	Bridge Condition
Performance Measures	• Percentage of NHS bridges classified in good condition *(deck area square meters)* • Percentage of NHS bridges classified in poor condition *(deck area square meters)*

Performance Targets

State DOTs are required to develop a Transportation Asset Management Plan that includes long-range investment strategies for assets on the National Highway System, including bridge condition. The plan establishes 10-year performance targets as well as targets for years 2 and 4 to monitor progress. MPOs are required to set four-year targets and may choose to adopt the statewide target or adopt quantifiable performance targets for the region.

Caltrans finalized the statewide bridge condition targets in May 2018. In November 2018, MTC chose to support state targets for the four-year performance period. The state also set new targets in May 2022 and MTC is expected to support state targets or adopt regional targets in November 2022.

Table 12. Regional Pavement Asset Management Targets

Performance Measure *Percentage of system total*	**Baseline Condition** 2017	**Statewide 2-Year Targets** 2019	**2-year Change**	**Statewide 4-Year Targets** 2021	**4-year Change**	**Regional 4-Year Targets** 2021
NHS bridges in good condition	**66.5%**	**69.1%**	+2.6%	**70.5%**	+4.0%	Support State Targets
NHS bridges in poor condition	**4.8%**	**4.6%**	-0.2%	**4.4%**	-0.4%	Support State Targets

Regional Policies and Project Selection Procedures

Like the discussion of pavement asset management policies above, MTC's commitment to Fix-it-First informs regional policies, plans, and programs related to bridge asset management. Furthermore, MTC, in

its role as the Bay Area Toll Authority, is required to direct a significant portion of tolls collected on the seven state-owned bridges to the upkeep of those bridges. The Golden Gate Bridge Highway and Transportation District is similarly required to direct toll revenue to the maintenance of the Golden Gate Bridge. These commitments, along with commitments to maintain other bridges throughout the region, are reflected in the "restore, operate, and maintain the existing system" strategy in *Plan Bay Area 2050* (Strategy T1).

In addition to toll revenue generated from bridges in the Bay Area, a considerable investment of state-controlled funding is directed toward the achievement of federally-required bridge condition improvement targets. The two most significant sources of these funds are the Local Highway Bridge Program (HBP) and the SHOPP.

2023 TIP Investments

The 2023 TIP includes project investments totaling $936 million on projects with a primary purpose of improving bridge conditions on the NHS (Table 13). Of this amount, $512 million is programmed to various projects through the SHOPP-Bridge Rehabilitation and Reconstruction program.

Table 13. 2023 TIP Projects with Primary Purpose to Improve Bridge Condition on the NHS

Bay Area	Bridge Investments *(in $ millions)*	% of TIP Investments	Bridge Projects	% of TIP Projects
Regional total	$936	9%	6	2%

Note: Project purpose data provided by project sponsors through the 2023 TIP. Project totals include the SHOPP Bridge Preservation and HBP "grouped listings," which combines numerous projects into a single listing.

More than $1.1 billion is directed to all projects, regardless of project purpose, that will improve bridge deck conditions on the NHS (Table 14). These investments are anticipated to bring 590,037 square meters of bridge deck area, or 1.0% of the regional total, from fair or poor condition into good condition. However, the precise impact of these investments on performance will be affected by ongoing deterioration of bridge conditions throughout the TIP period as well as other locally funded bridge projects not captured in the TIP.

Table 14. 2023 TIP Improvements in Bridge Condition on the NHS by Bridge Deck Area

$1.1 billion

Bay Area	From Fair to Good	% of Regional Total	From Poor to Good	% of Regional Total	Total Improved to Good	% of Regional Total
Bridge Deck Area (in square meters)	382,054	0.6%	207,983	0.3%	590,037	1.0%

Note: Pavement condition improvements data provided by project sponsors through the 2023 TIP.

Transit Asset Management

Goal: Maintain the condition of public transit assets in a state of good repair

Performance Measures

Four performance measures were established to identify trends and assess progress towards maintaining a state of good repair (SGR) for public transit assets, including rolling stock, equipment, infrastructure, and facilities.

Goal Area	Transit Asset Condition
Performance Measures	• Percentage of revenue vehicles that have met or exceeded their useful life benchmark *(by asset class)* • Percentage of facilities with a condition rating below fair *(by asset class)* • Percentage of rail fixed-guideway with speed restrictions *(directional route-miles)* • Percentage of non-revenue vehicles that have met or exceeded their useful life benchmark

Performance Targets

Transit operators and MPOs are required to set annual targets for each transit asset performance measure.

In the case of rolling stock and facilities, the major asset categories are further broken down into distinct asset classes. To develop regional targets, MTC consolidates the targets set by individual operators for each asset class. Targets established by operators reflect realistic forecasts for the coming fiscal year for funding that will be available for the repair or replacement of transit assets.

MTC established its latest regional transit asset performance targets in April 2022 based on an aggregation of individual targets set by operators. The regional targets anticipate modest improvements in the

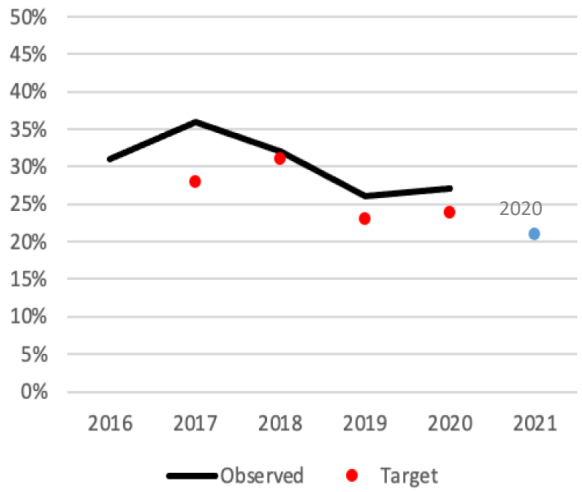
percentage of assets in a state of good repair for both revenue and non-revenue vehicles. However, state of good repair for the region's guideway assets is expected to remain constant over the coming year, while the condition of facilities is expected to worsen slightly based on current asset condition and funding levels. The targets for each measure are detailed in the table below, followed by Bay Area regional trend charts for each performance measure.

Table 15. Regional Transit Asset Management Targets

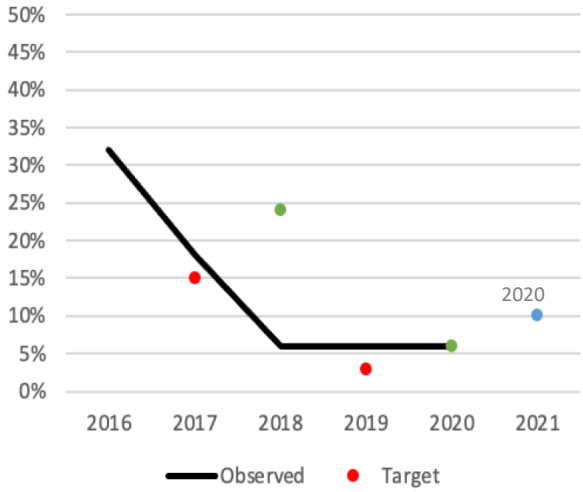
Performance Measures	Baseline Condition 2021	MTC Target 2022
Revenue Vehicles – percent exceeding useful life benchmark (ULB)	23%	22%
Articulated bus	*4%*	*0%*
Automated guideway vehicle	*0%*	*0%*
Automobile	*5%*	*5%*
Bus	*19%*	*20%*
Cable car	*70%*	*70%*
Commuter rail – locomotive	*56%*	*56%*
Commuter rail – passenger car	*41%*	*41%*
Commuter rail – self-propelled passenger coach	*0%*	*0%*
Cutaway bus	*21%*	*20%*
Double decker bus	*0%*	*0%*
Ferryboat	*15%*	*16%*
Heavy rail	*68%*	*62%*
Light rail	*10%*	*1%*
Minivan	*32%*	*28%*
Over-the-road bus	*31%*	*22%*
Trolley bus	*0%*	*0%*
Van	*2%*	*3%*
Vintage trolley	*100%*	*100%*
Facilities – percent with condition rating below fair	10%	11%
Administrative and maintenance facilities	*8%*	*10%*
Passenger facilities	*11%*	*12%*
Rail fixed-guideway – percent with speed restrictions	2%	2%
Non-Revenue Vehicles – percent exceeding ULB	49%	47%

Bay Area Transit Asset Management Trends

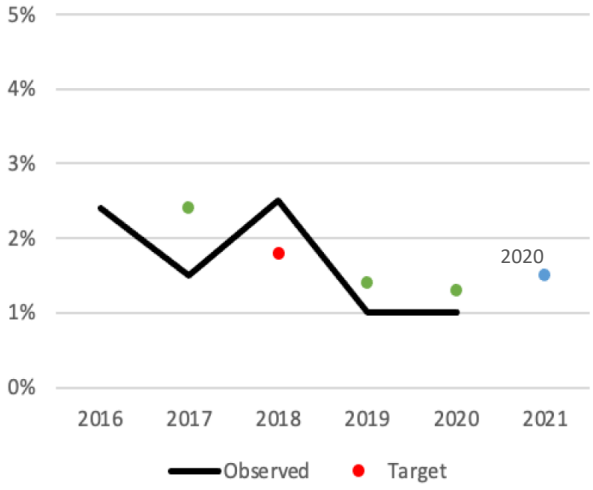
Revenue Vehicles That Have Met or Exceeded Their Useful Life Benchmark (all vehicle classes)



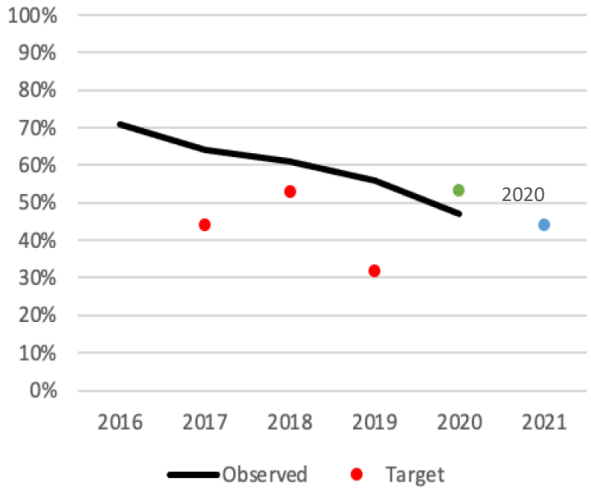
Facilities with a Condition Rating Below Fair



Guideway Route-Miles with Performance Restrictions



Non-Revenue Vehicles That Have Met or Exceeded Their Useful Life Benchmark



Note: In the charts above, green dots indicate met targets, red dots indicate missed targets and blue dots indicate future targets at the time that data was collected.

Regional Policies and Project Selection Procedures

Like other goal areas in the Infrastructure Condition category of federally-required performance measures, MTC's Fix-it-First philosophy is the primary driver of Transit Asset Management investments in the Bay Area. As such, Transit Asset Management priorities are captured in the "restore, operate, and maintain the existing system" strategy in *Plan Bay Area 2050* (Strategy T1), along with pavement, bridge, and other infrastructure preservation investments.

Furthermore, as transit is a key mobility option required to achieve many regional transportation and development goals, the Commission prioritized maintaining a state of good repair for transit assets in the urban core through the Transit Core Capacity Challenge Grant Program (CCCGP) (MTC Resolution No. 4123, 2023 TIP Appendix A-36).

Due to the importance of maintaining a state of good repair, projects that replace, rehabilitate, or otherwise preserve transit assets are given the highest priority for funding (after debt service payment) through the Transit Capital Priorities (TCP) Program (MTC Resolution Nos. 4444, 4510, 4513, and 4169; 2023 TIP Appendices A-22 through A-25), which guides the spending of FTA Section 5307 Urbanized Area Formula, FTA Section 5337 State of Good Repair, FTA Section 5339 Bus and Bus Facilities formula funds, STP and CMAQ funding for transit, and regional revenues directed to transit through the CCCGP.

2023 TIP Investments

Roughly $961 million is invested in the 2023 TIP on projects with a primary purpose of transit asset management (Table 16 on the next page).

A total of $6.3 billion is invested in transit maintenance, rehabilitation, or expansion projects regardless of the primary project purpose (Table 17 on the next page). Transit rehabilitation or replacement projects directly affect regional transit asset conditions by increasing the share of assets in a state of good repair. Adding new assets as part of a transit service expansion also has an impact on the share of transit assets in a state of good repair by increasing the total number of assets in a particular class.

Table 16. 2023 TIP Projects with Primary Purpose of Transit Asset Management

Transit Operator	Investments *(in $ millions)*	% of TIP Investments	Projects	% of TIP Projects
AC Transit	$13	100%	1	100%
BART	$537	81%	7	54%
Caltrain	$34	45%	3	75%
GGBHTD	$7	5%	1	25%
MCTD	$11	100%	7	100%
NVTA	$11	72%	1	50%
SamTrans	$122	100%	2	100%
Santa Rosa CityBus	$2	100%	1	100%
SFMTA	$39	14%	6	32%
SMART	$11	24%	1	50%
SolTrans	$9	100%	2	100%
Sonoma County Transit	$5	38%	3	50%
STA	$3	13%	1	20%
TriDelta Transit	$3	100%	2	100%
VTA	$123	3%	7	27%
WETA	$31	100%	3	100%
Total	$961	9%	50	16%

Note: Project purpose data provided by provided by project sponsors through the 2023 TIP

$6.3 billion

Table 17. 2023 TIP Projects Anticipated to Result in Transit Asset Management Benefits:

Bay Area	Investments *(in $ millions)*	% of TIP Investments	Projects	% of TIP Projects
Regional total	$6,286	57%	72	23%

Some of the largest investments in transit assets, including expansion projects, in the 2023 TIP include:

- $3.9 billion – BART Berryessa to San Jose Extension
- $248 million – VTA Eastridge to BART Regional Connector
- $219 million – BART Railcar Procurement Program
- $174 million – BART Transbay Core Capacity Improvements
- $119 million – SamTrans Bus Replacement

Rail transit accounts for the majority of the transit asset investment in the 2023 TIP, with the BART extension from Berryessa to San Jose, alone, programmed to receive 62% of the funds programmed to transit asset projects in the 2023 TIP.

The specific impact of these transit investments on annual performance will be heavily influenced by the rate of continued wear and tear on existing transit assets during the TIP period as well as additional investments made by transit operators that are not captured in the 2023 TIP.

CONGESTION REDUCTION

Goal: Achieve a significant reduction in congestion on the National Highway System

Performance Measures

Two performance measures were established to identify trends and assess progress towards reducing traffic congestion on the National Highway System in urban areas.

Goal Area	Congestion Reduction
Performance Measure	• Annual hours of peak-hour excessive delay per capita by urbanized area • Percent of non-single occupancy vehicle (non-Single-Occupant Vehicle (SOV)) travel by urbanized area

Performance Targets

State DOTs and MPOs are required to set two- and four-year targets every four years for both congestion measures. Both targets are federally-required to be fully consistent between the state DOT and the MPO for each urbanized area.

For the first performance period, targets must be set by urbanized areas (UZAs) with populations over one million that are also in nonattainment or maintenance areas for ozone, carbon monoxide or particulate matter. In the Bay Area, the San Francisco-Oakland and San Jose urbanized areas meet these thresholds. In the second performance period, beginning in 2022, three more urbanized areas in the San Francisco Bay Area will be required to set targets.

For the first round of target-setting, Caltrans and MTC are responsible for setting four-year targets (2022) for the excessive delay measure and two and four-year targets (2020 and 2022) for the mode share measure. Caltrans adopted statewide targets in May 2018. The state's targets for the delay measure in the Bay Area's urbanized areas aim to reduce peak-hour excessive delay per capita by 4% over 2017 conditions. The non-SOV share targets set by Caltrans for the Bay Area urbanized areas align with the mode shift targets adopted by MTC, at the time, through *Plan Bay Area 2040*. MTC adopted targets for urbanized areas within its region in November 2018; however, given the requirement for full consistency between the MPO and the state DOT targets for each urbanized area, the state targets below effectively serve as the regional targets.

While Caltrans is expected to set new targets in 2022, these targets were not available at the time of writing.

Table 18. Annual Peak Hour Excessive Delay per Capita Targets

Urbanized Area	Baseline Condition 2017	2-Year Targets 2019	2-year Change	4-Year Targets 2021	4-year Change
San Francisco-Oakland UZA	31.3 hours	N/A	N/A	30.0 hours	-4.0%
San Jose UZA	27.5 hours	N/A	N/A	26.4 hours	-4.0%
Concord UZA*	N/A	N/A	N/A	N/A	N/A
Santa Rosa UZA*	N/A	N/A	N/A	N/A	N/A
Antioch UZA*	N/A	N/A	N/A	N/A	N/A

* UZAs with populations under 1 million are not required to set targets this round.

Table 19. Percent Non-SOV Travel Targets

Urbanized Area	Baseline Condition 2017	2-Year Targets 2019	2-year Change	4-Year Targets 2021	4-year Change
San Francisco-Oakland UZA	44.3%	45.3%	+1.0%	46.3%	+2.0%
San Jose UZA	24.5%	25.5%	+1.0%	26.5%	+2.0%
Concord UZA*	N/A	N/A	N/A	N/A	N/A
Santa Rosa UZA*	N/A	N/A	N/A	N/A	N/A
Antioch UZA*	N/A	N/A	N/A	N/A	N/A

* UZAs with populations under 1 million are not required to set targets this round.

Regional Policies and Project Selection Procedures

MTC strives to take a holistic approach to congestion reduction. While targeted expansions of the roadway system may be necessary to reduce congestion in the near-term, they may also lead to greater vehicle miles traveled (VMT), resulting in similar levels of congestion, over time. MTC has adopted multiple policies and programs aimed not only at smoothing the travel of automobiles on the roads, but also at encouraging non-SOV travel. As mentioned in the roadway safety section above, MTC has adopted a Regional Safety/Vision Zero policy and a Complete Streets policy to make walking and biking safer and more attractive to travelers on the road. The Transit Core Capacity Challenge Grant Program referenced in the Transit Asset Management section above and MTC's Transit Sustainability Project (MTC Resolution No. 4060, 2023 TIP Appendix A-11) both aim to ensure that transit remains a viable and desirable options. MTC also adopted the Regional Transit Expansion Program (MTC Resolution No. 3434, 2023 TIP Appendix A-10) to guide transit investments for future riders. As many of the projects in this program have either been completed or are nearing completion, MTC is also set to adopt a Major Project Advancement Policy (MAP) which will focus investments for large highway as well as transit projects.

Reducing VMT is one of the overarching themes of *Plan Bay Area 2050* as this will result in fewer greenhouse gas (GHG) emissions from the transportation system. Since strategies that reduce VMT in many instances will also reduce future roadway congestion, a significant number of strategies identified in the Plan contribute to the achievement of targets set for this goal area as well. These include:

Table 20. *Plan Bay Area 2050* Strategies Supporting Achievement of Congestion Reduction Targets

Reference	Strategy Title
T3	Enable a seamless mobility experience
T5	Implement per-mile tolling on congested freeways and transit alternatives
T6	Improve interchanges and address highway bottlenecks
T7	Advance other regional programs and local priorities
T8	Build a Complete Streets network
T9	Advance a regional Vision Zero policy through street design and reduced speeds
T10	Enhance local transit frequency, capacity, and reliability
T11	Expand and modernize the regional rail network
T12	Build an integrated regional express lanes and express bus network
EN9	Expand transportation demand management initiatives

Multiple funding programs in the region support the achievement of non-SOV travel targets. The regional OBAG program includes program categories that direct money to projects that better integrate multiple modes of travel, such as the Safe and Seamless Mobility Quick Strike and the Mobility Hubs Pilot programs, and sets aside funding for projects and programs that promote the benefits of alternative modes of travel (Climate Initiatives Program). As discussed in the Transit Asset Management section above, the TCP directs funding to ensuring that transit is a viable alternative to automobile travel. The latest round of the Active Transportation Program (ATP) requires that applicants for this funding coordinate with transit operators to minimize negative impacts on the transit system in addition to requiring them to adopt Local Road Safety Plans that ensure streets remain safe for pedestrians and cyclists.

Other programs in the region seek to reduce roadway congestion directly by smoothing the flow of traffic along the system. The OBAG program directs funds to implement roadway operational improvements identified through the Bay Area Forward initiative. The Regional Transportation Improvement Program (RTIP) also includes an MTC requirement that major new freeway projects must include traffic operations system (TOS) elements to help alleviate congestion.

State-managed programs also help the region meet targets in this goal area. The SHOPP Mobility Program in particular funds projects that reduce congestion.

2023 TIP Investments

Over $6.2 billion in the 2023 TIP is invested in projects that are intended to improve congestion throughout the region (Table 21). Approximately 85% of that total amount is directed to projects located within the San Francisco-Oakland or San Jose urban areas. An additional 11% of the total is programmed on projects that aim to improve congestion in more than one urban area (Table 22).

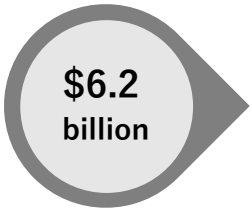


Table 21. 2023 TIP Congestion Reduction Projects

Bay Area	Investments *(in $ millions)*	% of TIP Investments	Projects	% of TIP Projects
Significant improvement	$4,998	46%	39	13%
Moderate Improvement	$1,173	11%	84	27%
	$6,171	56%	123	40%

Note: Anticipated effect of projects on congestion provided by project sponsors through the 2023 TIP. Project totals include one or more "grouped listings," which combine numerous projects into a single listing in the TIP.

Table 22. 2023 TIP Congestion Reduction Projects by Urbanized Area

Urbanized Area	Investments *(in $ millions)*	% of TIP Investments	Projects	% of TIP Projects
San Francisco-Oakland UZA	$925	8%	79	25%
San Jose UZA	$4,302	39%	30	10%
Concord UZA	$87	1%	14	5%
Santa Rosa UZA	$9	0%	9	3%
Antioch UZA	$0	0%	1	0%
Other Areas	$143	1%	26	8%
Multiple areas or regional	$685	6%	31	10%
	$6,171	56%	190	61%

Note: Location of congestion reduction projects provided by project sponsors through the 2023 TIP. Project totals include one or more "grouped listings," which combine numerous projects into a single listing in the TIP.

Projects intended to reduce congestion in the 2023 TIP include:

- $3.9 billion – BART Berryessa to San Jose Extension
- $284 million – for various projects in the SHOPP Mobility Improvements program
- $270 million – Alameda CTC's 7th St Grade Separation East

- $248 million – VTA's Eastridge to BART Regional Connector
- $163 million – for various projects in the SHOPP Collision Reduction
- $112 million – Union City's Decoto and Quarry Lakes Parkway East-West Connector

In terms of shifting travel away from single-occupancy vehicle modes, nearly $6.9 billion is invested through the 2023 TIP in projects primarily supporting non-auto modes (Table 23).

$6.9 billion

Table 23. 2023 TIP Projects with Primary Mode other than Auto

County	Investments *(in $ millions)*	% of TIP Investments	Projects	% of TIP Projects
Alameda	$374	37%	25	43%
Contra Costa	$40	24%	13	39%
Marin	$89	55%	13	68%
Napa	$16	48%	4	40%
San Francisco	$917	89%	18	82%
San Mateo	$223	58%	19	53%
Santa Clara	$4,353	93%	33	57%
Solano	$24	35%	8	50%
Sonoma	$31	69%	11	65%
Multiple Counties	$787	23%	19	46%
	$6,854	63%	163	53%

Note: Primary mode information provided by project sponsors through the 2023 TIP.

When considering all investments in the TIP, regardless of project's primary focus, a total of $7.1 billion is invested in bicycle, pedestrian, or transit travel (Table 24). An example of a project that supports multiple modes is a pavement preservation rehabilitation project that adds sidewalks, bicycle facilities or transit stop improvements. While the pavement rehabilitation is the primary focus of the scope and cost of the project, additional investments are directed to elements that support non-auto modes.

Table 24. 2023 TIP Investments in Non-Auto Modes

County	Investments *(in $ millions)*	% of TIP Investments
Alameda	$487	48%
Contra Costa	$71	42%
Marin	$90	56%
Napa	$19	55%
San Francisco	$925	89%
San Mateo	$252	66%
Santa Clara	$4,403	94%
Solano	$31	45%
Sonoma	$34	77%
Multiple Counties	$790	24%
	$7,102	65%

Note: Investments by mode provided by project sponsors through the 2023 TIP.

SYSTEM RELIABILITY

Goal: Improve the efficiency of the surface transportation system

Performance Measures

Two performance measures were established to identify trends and assess progress towards improving reliability of the Interstate system and non-Interstate National Highway System (NHS).

Goal Area	System Reliability
Performance Measures	• Percentage of person-miles traveled on the Interstate highway system that are reliable • Percentage of person-miles traveled on the non-Interstate NHS that are reliable

Performance Targets

State DOTs and MPOs are required to set two- and four-year targets every four years for each reliability measure. MPOs have the option of supporting State targets or setting their own region-specific numerical targets on a target-by-target basis.

Caltrans set their targets in May 2018, which aim for small improvements in reliability for passenger transportation on both the Interstate and non-Interstate NHS. In November 2018, MTC elected to support the state four-year targets for both measures of reliability. While Caltrans is expected to set new targets in 2022, these targets were not available at the time of writing.

Table 25. Regional System Reliability Targets

Performance Measure *Percentage of system total*	**Statewide Baseline** 2017	**Statewide 2-Year Targets** 2019	**2-year Change**	**Statewide 4-Year Targets** 2021	**4-year Change**	**Regional Baseline** 2017	**Regional 4-Year Targets** 2021
Reliable person-miles traveled on Interstate system	**64.6%**	**65.1%**	+0.5%	**65.6%**	+1.0%	63.3%	Support State Targets
Reliable person-miles traveled on non-Interstate NHS	**73.0%**	**N/A**	N/A	**74.0%**	+1.0%	64.7%	Support State Targets

Regional Policies and Project Selection Procedures

MTC undertakes a number of efforts to improve the reliability of the Interstate System. Many of the efforts involve TOS elements to smooth the flow of traffic in response to congestion or traffic incidents. Given the importance of a coordinated TOS network to achieving the region's goals, MTC lead the development of the Bay Area Regional Broadband Communications Strategic Investment Plan (2023 TIP Appendix A-16).

Plan Bay Area 2050 includes improvements aimed at achieving the targets of this goal area in multiple strategies, such as:

- Restore, operate, and maintain the existing system (T1)
- Improve interchanges and address highway bottlenecks (T6)
- Advance other regional programs and local priorities (T7)
- Build an integrated regional express lanes and express bus network (T12)

Similarly, there are multiple programs that implement the plans outlined above by directing funding to projects that improve Interstate System reliability. The OBAG2 program includes the Regional Active Operational Management program category and the OBAG3 program includes the Multimodal Systems Operations and Performance program category that both prioritize funding for projects like 511 traveler

information services, Incident Management, and various freeway Intelligent Transportation System (ITS) improvements. Also, as mentioned in the Congestion Reduction section above, major new freeway projects selected for funding through the RTIP, must include TOS elements. At the state level, projects included in the SHOPP Collision Reduction program help avoid unexpected congestion due to traffic incidents and those in the SHOPP Mobility program streamline highway travel through TOS and other operational improvements.

2023 TIP Investments

In the 2023 TIP, nearly $1.5 billion is invested in projects that are expected to improve system reliability on the Interstate system (Table 26). On the non-Interstate NHS, a slightly higher level of investment, $1.8 billion, is directed to system reliability improvements (Table 27).

Table 26. 2023 TIP Projects Anticipated to Improve Interstate System Reliability

$1.5 billion

Bay Area	Investments *(in $ millions)*	% of TIP Investments	Projects	% of TIP Projects
Significant improvement	$503	5%	13	4%
Moderate improvement	$979	9%	26	8%
	$1,482	14%	39	13%

Note: Anticipated effect of projects on reliability provided by project sponsors through the 2023 TIP. Project totals include one or more "grouped listings," which combine numerous projects into a single listing in the TIP.

Table 27. 2023 TIP Projects Anticipated to Improve Non-Interstate NHS Reliability

$1.8 billion

Bay Area	Investments *(in $ millions)*	% of TIP Investments	Projects	% of TIP Projects
Significant improvement	$649	6%	25	8%
Moderate improvement	$1,125	10%	49	16%
	$1,774	16%	74	24%

Note: Anticipated effect of projects on reliability provided by project sponsors through the 2023 TIP. Project totals include one or more “grouped listings,” which combine numerous projects into a single listing in the TIP.

Reliability projects in the 2023 TIP that support improvements in Interstate and the non-Interstate NHS system include:

- $512 million for various projects in the SHOPP Bridge Rehabilitation Program
- $284 million for various projects in the SHOPP Mobility Program
- $163 million for various projects in the SHOPP Collision Reduction Program
- $79 million – VTA's US-101/SR-25 Interchange Improvements Phase 1 Project

FREIGHT MOVEMENT AND ECONOMIC VITALITY

Goal: Improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development

Performance Measures

One performance measure was created to identify trends and assess progress towards improving reliability of the Interstate system specifically for freight trucks.

Goal Area	Freight Movement and Economic Vitality
Performance Measure	• Percentage of Interstate highway system mileage providing reliable truck travel times (Truck Travel Time Reliability Index)

Performance Targets

State DOTs and MPOs are required to set 2- and 4-year numerical targets for the freight movement target. MPOs have the option of supporting State targets or setting their own region-specific numerical targets on a target-by-target basis.

Caltrans set statewide targets in May 2018. These targets reflect a slight degradation of truck travel time reliability, with the percent of reliable Interstate miles decreasing by one tenth of a percentage point in both 2020 and 2022. In November 2018, MTC elected to support the state four-year target. While Caltrans is expected to set new targets in 2022, these targets were not available at the time of writing.

Table 28. Regional System Reliability Targets

Performance Measure *Truck Travel Reliability Index*	**Statewide Baseline** 2017	**Statewide 2-Year Targets** 2019	**2-year Change**	**Statewide 4-Year Targets** 2021	**4-year Change**	**Regional Baseline** 2017	**Regional 4-Year Targets** 2021
Reliable Interstate miles of truck travel	**1.69**	**1.68**	-0.6%	**1.67**	-1.2%	2.30	Support State Targets

Regional Policies and Project Selection Procedures

The polices, plans, and programs that guide investments intended to improve Interstate System truck reliability largely overlap with those intended to improve Interstate System reliability as a whole, as discussed in the section above. However, due to the importance of goods movement to local, regional, state and national economies, MTC periodically develops regional goods movement plans to focus efforts on improving freight efficiencies. The latest San Francisco Bay Area Goods Movement Plan was finalized in 2016 (https://mtc.ca.gov/sites/default/files/RGM_Full_Plan.pdf). MTC then developed the regional Goods Movement Investment Strategy (MTC Resolution 4244, 2023 TIP Appendix A-37), which identifies high priority goods movement projects based on this Plan and fund sources that may be used to pay for these projects.

2023 TIP Investments

Reliability improvement projects for Interstate truck travel account for $1.4 billion of investments in the 2023 TIP (Table 29). Many of the investments that improve reliability on the Interstate for all travelers also improve reliability specifically for truck travel.

Table 29. 2023 TIP Projects Anticipated to Improve Interstate System Truck Reliability

$1.4 billion

Bay Area	Investments *(in $ millions)*	% of TIP Investments	Projects	% of TIP Projects
Significant improvement	$525	5%	15	5%
Moderate improvement	$857	8%	14	4%
	$1,383	13%	29	9%

Note: Anticipated effect of projects on reliability provided by project sponsors through the 2023 TIP. Project totals include one or more "grouped listings," which combine numerous projects into a single listing in the TIP.

A few reliability projects in the 2023 TIP that target freight travel specifically include:

- $512 million for various projects in the SHOPP Bridge Rehabilitation Program
- $284 million for various projects in the SHOPP Mobility Program
- $163 million for various projects in the SHOPP Collision Reduction Program
- $64 million – Alameda CTC's Oakland/Alameda Access Project

ENVIRONMENTAL SUSTAINABILITY

Goal: Enhance the performance of the transportation system while protecting and enhancing the natural environment

Performance Measures

One performance measure was created to identify trends and assess progress towards improving emissions reductions under the Congestion Mitigation and Air Quality Improvement (CMAQ) Program,

Goal Area	Environmental Sustainability
Performance Measure	• Total emissions reductions from CMAQ-funded projects, by pollutant

Performance Targets

State DOTs and MPOs are required to set 2- and 4-year numerical targets for the emissions reduction measure for each applicable pollutant. MPOs have the option of supporting State targets or setting their own region-specific numerical targets on a target-by-target basis. Caltrans set statewide targets for emissions reductions in May 2018. These targets reflect a steady increase in the daily kilograms reduced for each pollutant for projects funded through the CMAQ program. MTC adopted regional targets in November 2018, based on the results of MTC's emissions reductions model, which accounts for projects within the CMAQ pipeline and vehicle fleet characteristics, among other factors.

While Caltrans is expected to set new targets in 2022, these targets were not available at the time of writing.

Table 30a. Total Statewide Emissions Reduction from CMAQ-Funded Projects Targets

Pollutant	Statewide Baseline 2014-17	Statewide 2-Year Targets 2018-19	2-year Change	Statewide 4-Year Targets 2018-21	4-year Change
Fine particulate matter – PM2.5 (kg/day)	904.25	**913.29**	+1%	**922.34**	+2%
Particulate matter – PM10 (kg/day)	2,431.21	**2,455.52**	+1%	**2,479.83**	+2%
Carbon monoxide – CO* (kg/day)	6,683.26	**6,931.90**	+1%	**7,000.54**	+2%
Volatile organic compounds – VOCs (kg/day)	951.83	**961.35**	+1%	**970.87**	+2%
Nitrogen oxide – NOx (kg/day)	1,753.36	**1,770.89**	+1%	**1,788.43**	+2%

Two-year target is the expected emissions reduction per day for federal fiscal years 2018 and 2019; 2021 target is expected emissions reduction per day for federal fiscal years 2018 through 2021.

Table 30b. Total Regional Emissions Reduction from CMAQ-Funded Projects Targets

Pollutant	Statewide Baseline 2014-17	Statewide 2-Year Targets 2018-19	Statewide 4-Year Targets 2018-21
Fine particulate matter – PM2.5 (kg/day)	24.5	**8.66**	**16.53**
Particulate matter – PM10 (kg/day)	31.29	**10.99**	**21.00**
Carbon monoxide – CO* (kg/day)	31,046,04	**8,373.38**	**14,963.60**
Volatile organic compounds – VOCs (kg/day)	2,248.93	**528.31**	**897.70**
Nitrogen oxide – NOx (kg/day)	2,179.66	**557.61**	**962.58**

Two-year target is the expected emissions reduction per day for federal fiscal years 2018 and 2019; 2021 target is expected emissions reduction per day for federal fiscal years 2018 through 2021.

Regional Policies and Project Selection Procedures

The OBAG 2 and OBAG 3 programs govern the programming of CMAQ funds in the 2023 TIP. OBAG 3 includes programmatic priorities to guide the investment of CMAQ funds to projects, including projects that reduce emissions through vehicle miles traveled (VMT) reduction, alternative fuel infrastructure and vehicles, traffic flow improvements, and incident management. Further information regarding the project selection processes for these funds can be found in MTC Resolutions 4202 (2023 TIP Appendix A-17) and 4505 (2023 TIP Appendix A-18).

2023 TIP Investments

Pollutant reduction calculations are performed for each CMAQ-funded project prior to project selection and programming in the TIP. For emissions benefits targets, only those projects that will obligate CMAQ funds for the first time during the current performance period can be credited towards performance achievements during the period. Projects that have obligated CMAQ funds in prior years can still be credited for performance achievements of the traffic congestion targets (peak-hour excessive delay per capita and percent of non-SOV travel).

There are 29 projects programmed to obligate $39 million in CMAQ funds for the first time during the 2023 TIP (Table 31).

Table 31. 2023 TIP Total Emissions Reductions from CMAQ Funded Projects

Pollutant	KG/Day Reduction
Fine particulate matter – PM2.5	11.36
Particulate matter – PM10	23.00
Carbon monoxide – CO	1368.70
Volatile organic compounds – VOCs	130.87
Nitrogen oxide – NOx	200.07

Note: Based on latest available emissions reduction calculations for new CMAQ projects; calculated by MTC. Does not include emissions from projects already credited in prior years.

The CMAQ-funded projects in the 2023 TIP with the largest emissions reductions for one or more pollutant include:

- $8.3 million – Alameda County Complete Streets Improvements Program
- $4.8 million - San Ramon's Iron Horse Trail Bicycle and Pedestrian Overcrossing
- $3.7 million – Santa Clara's Saratoga Creek Trail Phase 1

In the Bay Area, CMAQ funds are programmed to projects through the One Bay Area Grant (OBAG) grant program. The CMAQ projects currently programmed in the 2023 TIP include the last of the projects awarded funding through the OBAG 2 funding cycle, as well as three regional projects that received funding through preliminary programming efforts under OBAG 3. As of September 2022, the call for OBAG 3 projects is ongoing. Many of the projects selected for CMAQ funding through OBAG 3 will be added to the 2023 TIP in early calendar year 2023.

LIMITATIONS

- ***Limitations of self-reported data:*** MTC relies on self-reported data from project sponsors to compile program level effects of investments on regional targets. This approach provides a great deal of new project-level data on a range of topics and in a relatively short period of time. However, self-reported data may introduce into the analysis inaccurate data or inconsistent interpretations of the anticipated performance benefits resulting from similar project types. Staff is continuing efforts

to improve the analytical approach to evaluating performance for quantification of benefits and improved consistency across projects.

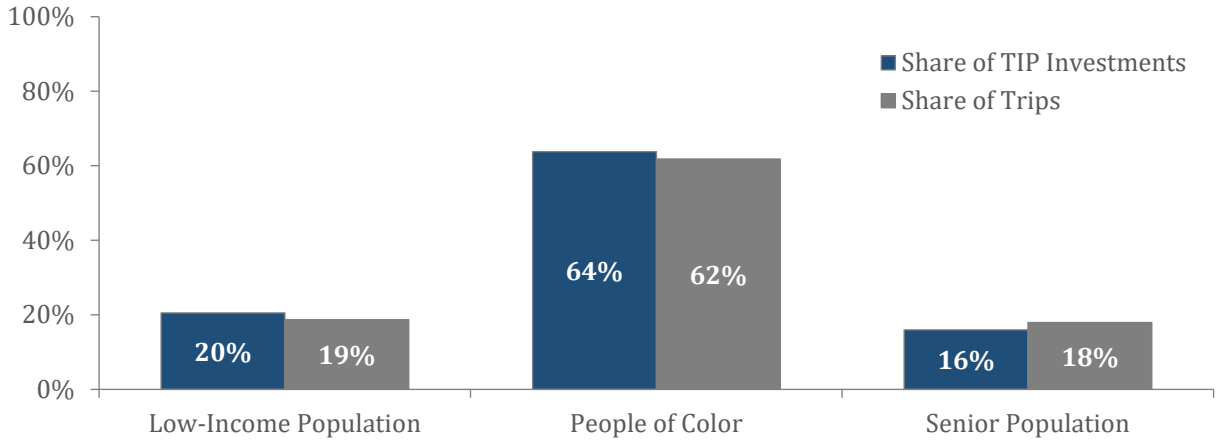
- ***External forces at play:*** Performance in each goal area is influenced by a variety of factors that are not captured in the assessment of the effect of 2023 TIP investments on regional performance. For road safety and traffic congestion, growth or decline in economic activity is directly related to the total number of traffic fatalities and serious injuries as well as levels of congestion. The COVID-19 pandemic has also had significant effects on travel behavior in the Bay Area. These changes in roadway and transit safety trends, congestion and reliability, and mode shift are anticipated to continue into the 2023 TIP period as travel conditions continue to return to a "new normal." In the case of asset management, ongoing deterioration rates, and unanticipated events (earthquakes, wildfires, or flooding) can also affect the resulting state of good repair for regional assets.

2023 TIP Investment Analysis Key Findings

Equitable distribution of investments overall

The results of the population use-based analysis indicate that overall, the investments in the 2023 TIP direct an equitable proportion of investments to projects that support the transportation of residents of low-income households, people of color, and seniors.

FIGURE 1. 2023 TIP Investments and Trips by Population

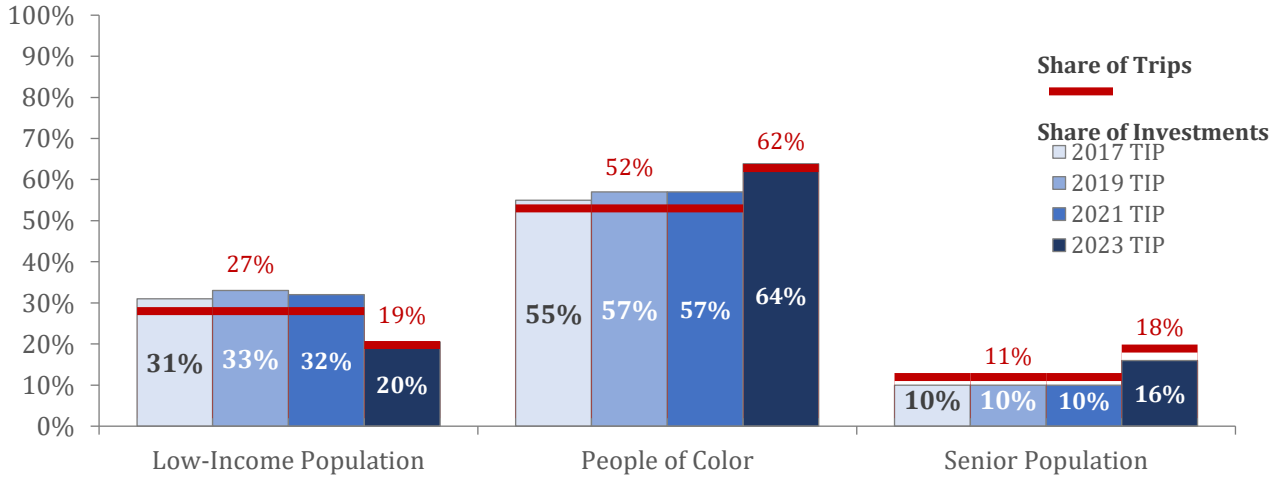


Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

Comparison with Prior Analyses

While the 2023 TIP maintains an overall equitable distribution of investments largely consistent with prior analyses, the proportion of trips and corresponding investment levels differ from prior TIP periods due to updated data used in this analysis. While prior analyses relied on the 2010-12 California Household Travel Survey for overall travel behavior by demographics, the 2023 TIP analysis used more recent data from the 2018/19 Bay Area Travel Survey (BATS).

FIGURE 2. 2023 TIP Investments: Comparison with Prior TIP Periods



Sources: 2018/19 Bay Area Travel Survey and 2023 TIP, 2010-12 California Household Travel Survey and 2017-21 TIPs

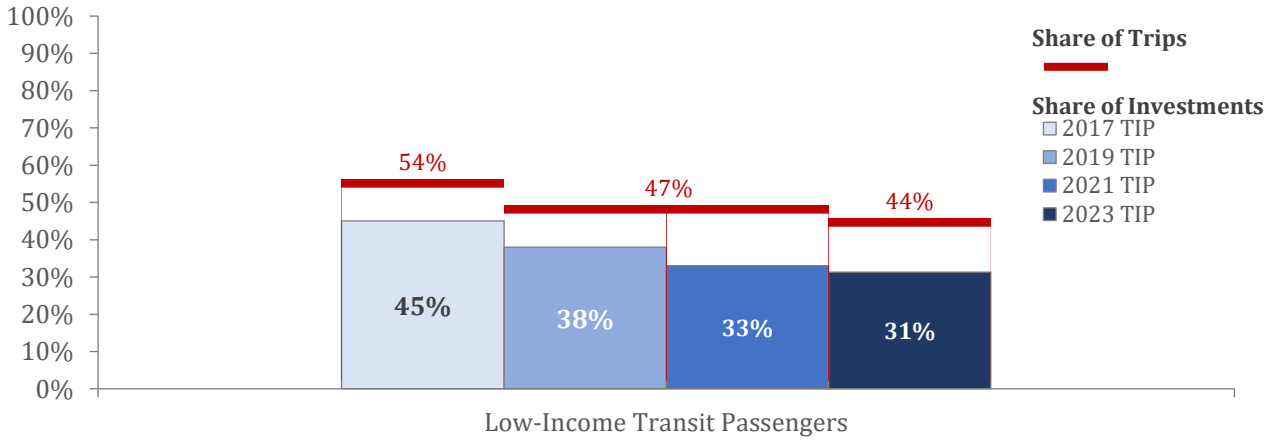
Variable results for transit

While the 2023 TIP continues to make improvements in transit per rider and per capita disparate impact metrics, the proportion of investments supporting low-income transit riders continues to be less than the share of transit trips within the same group. It is important to re-emphasize that the TIP does not reflect the full picture of transportation investments in the Bay Area. The TIP only includes four years of near-term fund programming and tends not to include operating and maintenance funds, particularly for transit.

Comparison with Prior Analyses

The share of transit investments in the 2023 TIP that support trips made by passengers in low-income households (31%) continues to be less than these passengers' relative share of transit trips (44%). Although the share of low-income trips and the corresponding proportion of TIP investments have both declined in recent analyses, the proportion of TIP investments has declined more precipitously, resulting in a growing divide between TIP investment supporting low-income transit riders and the proportion of trips by these riders. Over the past two TIP periods, the majority of TIP transit investment has been directed to a single project: BART's Berryessa to San Jose Extension. The proportion of low-income BART riders is lower than the regional average for transit riders, consequently the last two analyses have shown a greater disparity between the proportion of low-income trips and associated TIP investment levels. Declines seen in both these metrics are also driven in part by the static definition of low-income riders, which captures a decreasing share of transit passengers over each subsequent TIP analysis due to steady increases in median income over the same period.

FIGURE 3. 2023 TIP Transit Investments: Comparison with Prior TIP Periods

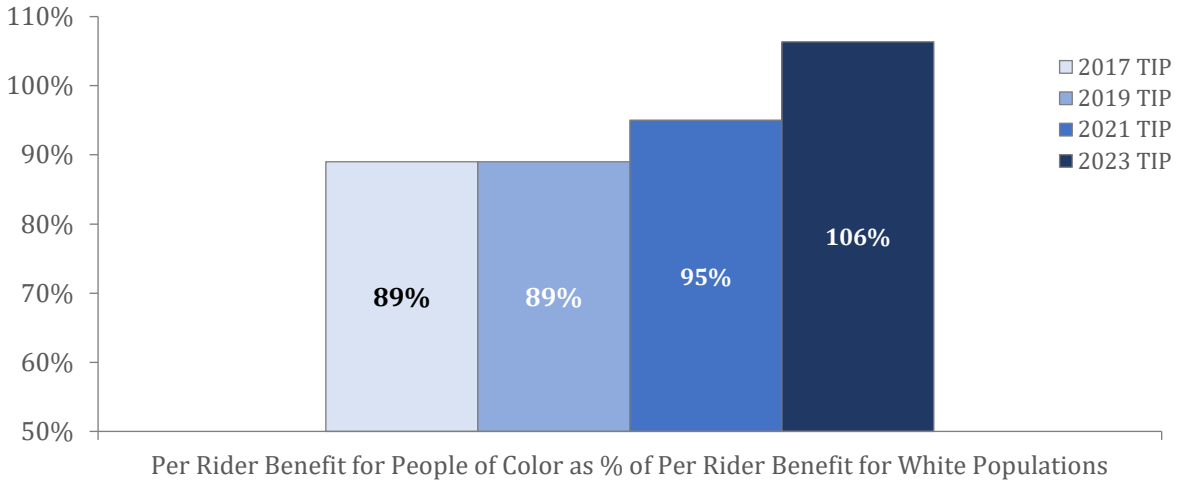


Sources: MTC Transit Passenger Demographic Survey, BART Customer Satisfaction Survey, 2017-23 TIPs

Conversely, the results of the disparate impact transit analysis have improved with the 2023 TIP, as compared to the 2021 TIP. The per transit rider investment benefit for people

of color increased from 95% of transit investment benefits for white populations in the 2021 TIP to 106% benefit in the 2023 TIP.

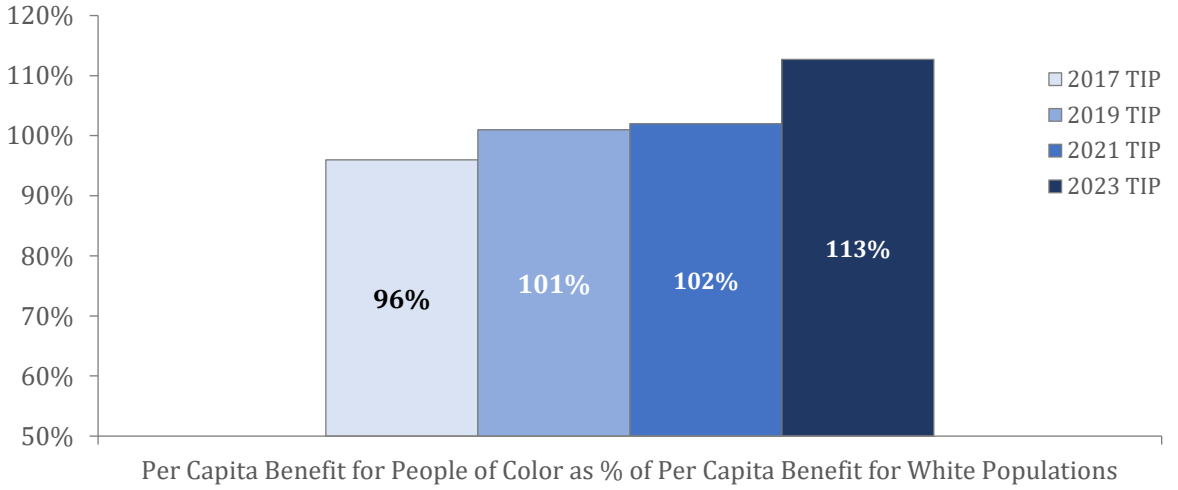
FIGURE 4. 2023 TIP Transit Investments Per Rider: Comparison with Prior TIP Periods



Sources: MTC Transit Passenger Demographic Survey, BART Customer Satisfaction Survey, 2017-23 TIPs

Similarly, the per capita transit investment benefit for people of color continues to exceed the per capita benefit for white populations (113% of the non-minority per capita benefit in 2023 TIP).

FIGURE 5. 2023 TIP Transit Investments Per Capita: Comparison with Prior TIP Periods



Sources: MTC Transit Passenger Demographic Survey, BART Customer Satisfaction Survey, 2017-23 TIPs

Addition of transportation equity measures provides opportunity for better understanding of potential equity impacts

For the 2023 TIP, additional information is provided on projects that support transportation and equity-related regional goals from in *Plan Bay Area 2050*: Maintain and Optimize the Existing System, Create Healthy and Safe Streets, Build a Next-Generation Transit Network, and Reduce Climate Emissions. Although the analysis does not identify

direct benefits and burdens resulting from individual investments, it builds upon the population use-based and disparate impact analyses to better understand the nature of the projects included in the 2023 TIP and their anticipated effects on long-term regional goals. Data for the transportation equity measures is self-reported by project sponsors, therefore the resulting information is limited by the quality and consistency of the data provided.

Where possible, projects supporting selected *Plan Bay Area 2050* goals were also mapped to illustrate the location of 2023 investments in relation to adopted Equity Priority Communities (EPCs). The geographic display of projects allows for examination and identification of any apparent systematic exclusion of communities in the spatial distribution of benefits, or any apparent systematic imbalances between the distribution of projects between EPCs and the remainder of the region. Mapped projects can also be viewed on an interactive webmap available at: https://mtc.ca.gov/funding/transportation-improvement-program-tip.

METROPOLITAN TRANSPORTATION COMMISSION
2023 Transportation Improvement Program (TIP) and Transportation-Air Quality Conformity Analysis for *Plan Bay Area 2050* and the 2023 TIP
(Conformity Analysis)
Response to Public Comments

The Draft 2023 TIP and Conformity Analysis were released for public review and comment from July 5, 2022 through August 3, 2022 and were presented at a public meeting on July 13, 2022 to receive public comment. Staff received one comment on the Draft 2023 TIP from a member of the public by email, included below, and no comments were made during the public hearing. Project listing changes requested by project sponsors are not included below. No comments were received on the Conformity Analysis.

Comments on the Draft 2023 TIP

Comment

I could find no mention of powered two-wheeled vehicles (motorcycles, scooters, etc). Nor did I find a similar comment that I made the last time this came around . . .

Wayne Phillips

Response

Investments in bicycle and automobile facilities included in the 2023 TIP are assumed to benefit motorcycles and powered scooters, since powered two-wheeled vehicles, for the most part, use the same infrastructure as their unpowered or four-wheeled counterparts. There are also specific programs, such as MTC's Mobility Hub Pilot Grant Program, that fund charging infrastructure for electric bicycles, scooters, and other micromobility options. Funding for these pilot projects is also included in the 2023 TIP.

Regarding your prior comments, staff was unable to locate records of these comments related to the TIP. If the above response does not address your prior comments, please submit them to tipinfo@bayareametro.gov.

Metropolitan Transportation Commission
2023 Federal Transportation Improvement Program (TIP)

Attachment D: Comments/Requested Changes to Draft Project Listings

Project Sponsor	TIP ID	Project Title	Program Year	Change
Alameda County				
Alameda CTC	ALA170085	7th Street Grade Separation East	Multiple	Update the funding plan to change the source for $20M from RTP-LRP to Other Local and for $25.5M from RTP-LRP to Sales Tax, remove $7.5M in RTP-LRP and reprogram funds between years and phases
Alameda CTC	ALA230008	Alameda CTC: San Pablo Avenue Bus/Bike Lanes	Multiple	Update the funding plan to change the source for $750K from Other Local to Sales Tax, reprogram Sales Tax funds between years and add $7K in Sales Tax PSE
Alameda CTC	ALA230007	East Bay Greenway Multimodal (Phase 1)	2022	Update the funding plan to add $1M in FY22 ENV Sales Tax
Alameda CTC	ALA230010	San Pablo Ave Parallel Bike Improvements	Multiple	Update the funding plan to reprogram Local PSE and ENV between years
Berkeley	ALA170067	Southside Complete Streets and Transit Improvement	N/A	Update the project description to clarify the scope of the project
Fremont	ALA170076	Centerville Complete Streets of Relinquished SR84	N/A	Update the project description to clarify the scope of the project
Marin County				
GGBHTD	MRN150014	GGBHTD Ferry Major Components Rehab	2022	Update the funding plan to add $359K in FY22 CON FTA 5307 and $88K in FY22 CON Local
San Mateo County				
CCAG	SM-190009	US-101 Managed Lanes North of I-380	N/A	Update the project description to clarify the scope of the project
Santa Clara County				
Sunnyvale	SCL170020	Bernardo Avenue Bicycle Underpass	N/A	Update the implementing agency from Sunnyvale to Caltrain
Solano County				
Caltrans	SOL150003	Rio Vista SR12 Pavement Rehab and Intersection Imp	2022	Update the funding plan to add $1M in FY22 CON-CE SHOPP and $3.7M in FY22 CON SHOPP
Vallejo	SOL210007	Vallejo Ferry Mobility Hub Improvement	2023	Update the funding plan to remove $20K in FY23 CON Local funds and reprogram $6K in Local from CON to PE
Sonoma County				
Santa Rosa City	SON210008	Santa Rosa CityBus: ZEB Replacement	2023	Update the funding plan to add $1K in FY23 5339, $329K in FY23 5307 and $82K in FY23 Local funds
Regional/Multiple County				
BART	REG170017	BART Transbay Core Capacity Improvements	2022	Update the funding plan to change the source and program year for $143M in CON from FY27 RTP-LRP to FY22 FTA5309
BART	BRT030005	BART: Traction Power System Renovation	2023	Update the funding plan to add $15K in FY23 CON FTA5337 funds
Caltrans	VAR170008	GL: Emergency Repair - SHOPP Emergency Response	Multiple	Update the funding plan and back-up listing to reflect the latest information from Caltrans including the addition of $8.7M in SHOPP funds
Caltrans	VAR170017	GL: Railroad-Highway Crossing	Multiple	Update the funding plan and back-up listing to reflect the latest information from Caltrans including the addition of $7.5M in Section 130 funds
Caltrans	VAR170009	GL: Safety Improvements - SHOPP Mandates	2023	Update the funding plan and back-up listing to reflect the latest information from Caltrans including the addition of $2.5M in SHOPP funds
Caltrans	VAR170011	GL: Safety Improvements - SHOPP Roadside Preservation	2023	Update the funding plan and back-up listing to reflect the latest information from Caltrans including the removal of $3.6M in SHOPP funds
Caltrans	VAR170006	GL: Safety Improvements - SHOPP Roadway Preservation	2023	Update the funding plan and back-up listing to reflect the latest information from Caltrans including the removal of $9.6M in SHOPP funds

Date: September 28, 2022
W.I.: 1412
Referred by: PAC

ABSTRACT

Resolution No. 4544

This resolution finds that *Plan Bay Area 2050* and the 2023 Transportation Improvement Program are in conformance with the State Implementation Plan to achieve National Ambient Air Quality Standards.

Further discussion of the Air Quality Conformity Analysis approval is contained in the Programming & Allocations Committee summary sheet dated September 14, 2022.

Date: September 28, 2022
W.I.: 1412
Referred by: PAC

Re: Approval of the Transportation-Air Quality Conformity Analysis of *Plan Bay Area 2050* and the 2023 Transportation Improvement Program to the State Implementation Plan for Achieving and Maintaining National Ambient Air Quality Standards

METROPOLITAN TRANSPORTATION COMMISSION

RESOLUTION NO. 4544

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to California Government Code Section 66500 et seq.; and

WHEREAS, MTC is the federally designated Metropolitan Planning Organization (MPO), pursuant to Section 134(d) of Title 23 of the United States Code (USC) for the nine-county San Francisco Bay Area region (the region); and

WHEREAS, Part 450 of Title 23 of the Code of Federal Regulations (CFR), require MTC as the MPO to prepare and update a long-range Regional Transportation Plan (RTP) every four years; and

WHEREAS, California Government Code § 65080 *et seq*. (Senate Bill 375) requires MTC to prepare and update a long-range RTP, including a Sustainable Communities Strategy (SCS) prepared in conjunction with the Association of Bay Area Governments (ABAG), every four years; and

WHEREAS, the current Regional Transportation Plan (RTP) is *Plan Bay Area 2050*, adopted by the Commission (MTC Resolution No. 4485) and the ABAG Executive Board (ABAG Resolution No. 09-21), both on October 21, 2021; and

WHEREAS, MTC has prepared the 2023 Transportation Improvement Program (TIP) (MTC Resolution 4545), to be approved the same day as this Resolution; and

WHEREAS, *Plan Bay Area 2050* and the 2023 TIP must conform to the federal air quality plan, which is also referred to as the State Implementation Plan (SIP); and

WHEREAS, MTC has conducted a transportation-air quality conformity analysis for *Plan Bay Area 2050* and the 2023 TIP in accordance with required U.S. Environmental Protection Agency (EPA) guidance criteria and, therefore, MTC has demonstrated conformance to the 2015 National Ambient Air Quality Standard (NAAQS) for Ozone; and

WHEREAS, the San Francisco Bay Area air basin was designated by U.S. EPA as nonattainment for the national fine particulate matter ($PM_{2.5}$) standard in December 2009, and so MTC must demonstrate conformance to this standard through an interim emission test until a $PM_{2.5}$ SIP is approved by U.S. EPA; and

WHEREAS, MTC has conducted a transportation-air quality conformity analysis for *Plan Bay Area 2050* and the 2023 TIP in accordance with U.S. EPA transportation conformity regulations and the Bay Area Air Quality Conformity Protocol (MTC Resolution No. 3757, Revised); and

WHEREAS, MTC conducted a transportation-air quality conformity analysis for *Plan Bay Area 2050* and the 2023 TIP using the latest planning assumptions, emissions model, and consultation provisions, including a quantitative regional emissions analysis that meets emissions budget requirements of the U. S. EPA transportation conformity rule, and *Plan Bay Area 2050* and the 2023 TIP contribute to all required emissions reductions; and

WHEREAS, said conformity analysis is included as Attachment A of this Resolution, and is incorporated herein as though set forth at length; and

WHEREAS, the conformity analysis has been circulated for a 30-day public review period from July 5, 2022, through August 3, 2022; now, therefore be it

RESOLVED, that MTC makes the following conformity findings for *Plan Bay Area 2050* and the 2023 Transportation Improvement Program:

(A) Conforms to the applicable provisions of the State Implementation Plan and the applicable transportation conformity budgets in the State Implementation Plan approved for the national 8-hour ozone standard, and to the interim emissions test for the national fine particulate matter standard; and

(B) Provides for the timely implementation of transportation control measures (TCMs) pursuant to the applicable State Implementation Plan;

RESOLVED, that Executive Director shall forward a copy of this Resolution to the U.S. Department of Transportation for its approval of MTC's conformity findings, along with a copy of the 2023 Transportation Improvement Program and to such other agencies as appropriate.

METROPOLITAN TRANSPORTATION COMMISSION

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Alfredo Pedroza, Chair

This resolution was entered into by the Metropolitan Transportation Commission at a meeting of the Commission held in San Francisco, California and at other remote locations, on September 28, 2022.

Date: September 28, 2022
W.I.: 1412
Referred by: PAC

Attachment A
Resolution No. 4544

Transportation-Air Quality Conformity Analysis for *Plan Bay Area 2050* and the 2023 Transportation Improvement Program

The Transportation-Air Quality Conformity Analysis for
Plan Bay Area 2050 and the
2023 Transportation Improvement Program is on file in the offices
of the Metropolitan Transportation Commission, Bay Area Metro Center,
375 Beale Street, Suite 800, San Francisco, CA 94105, or available upon request to
info@bayareametro.gov while the COVID-19 shelter-in-place orders are in effect.

Date: September 28, 2022
W.I.: 1512
Referred by: PAC

ABSTRACT

Resolution No. 4545

This resolution adopts the 2023 Transportation Improvement Program (TIP) for the San Francisco Bay Area.

Further discussion of the 2023 TIP adoption is contained in the Programming & Allocations Committee summary sheet dated September 14, 2022.

Date: September 28, 2022
W.I.: 1512
Referred by: PAC

Re: Adoption of the 2023 Transportation Improvement Program (TIP)

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4545

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to California Government Code Section 66500 et seq.; and

WHEREAS, MTC is the federally designated Metropolitan Planning Organization (MPO), pursuant to Section 134(d) of Title 23 of the United States Code (USC) for the nine-county San Francisco Bay Area region (the region); and

WHEREAS, Title 23 Code of Federal Regulations Part 450 (23 CFR §450) requires the region to carry out a continuing, cooperative and comprehensive transportation planning process as a condition to the receipt of federal assistance to develop and update at least every four years, a Transportation Improvement Program (TIP) consisting of a comprehensive listing of transportation projects that receive federal funds or that are subject to a federally required action, or that are regionally significant; and

WHEREAS, Section 65074 of the California Government Code requires all state MPOs to update their TIPs concurrently every even year; and

WHEREAS, the TIP must be consistent with the Regional Transportation Plan (RTP) adopted pursuant to Government Code Section 66508, the State Implementation Plan (SIP) as required by the federal Clean Air Act (42 U.S.C. Section 7401 et seq.); and the San Francisco Bay Area Transportation Air Quality Conformity Protocol (MTC Resolution 3757, Revised), which establish the Air Quality Conformity Procedures for MTC's TIP and RTP; and

WHEREAS, federal regulations (23 CFR §450.326(k)) require that the TIP be financially constrained, by year, to reasonable estimates of available federal and state transportation funds; and

WHEREAS, federal regulations (23 CFR §450.326) require that the TIP be designed such that once implemented, it makes progress toward achieving the performance targets established under §450.306(d) and that the TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the TIP toward achieving the performance targets identified in the metropolitan transportation plan, linking investment priorities to those performance targets; and

WHEREAS, federal regulations (23 CFR §450.316) require that the MPO develop and use a documented public participation plan that defines a process for providing citizens, affected public agencies and interested parties with reasonable opportunities to be involved in the metropolitan transportation planning process; and

WHEREAS, federal regulations (23 CFR §450.332(a)) allow MTC to move projects between years in the first four years of the TIP without a TIP amendment, if Expedited Project Selection Procedures (EPSP) are adopted to ensure such shifts are consistent with the required year by year financial constraints; and

WHEREAS, MTC, the State, and public transportation operators within the region have developed and implemented EPSP for the federal TIP as required by Federal Regulations (23 CFR 450.332(a)) and Section 134 of Title 23 United States Code (USC §134), as outlined in Attachment A to this Resolution, and MTC Resolution 3606, Revised; and

WHEREAS, MTC has found in MTC Resolution No. 4544 that the 2023 TIP, as set forth in this resolution, conforms to the applicable provisions of the SIP for the San Francisco Bay Area; and

WHEREAS, the San Francisco Bay Area air basin was designated by U.S. Environmental Protection Agency as nonattainment for the fine particulate matter (PM2.5) standard in December 2009, and MTC must demonstrate conformance to this standard through an interim emissions test until a PM2.5 SIP is approved by the federal Environmental Protection Agency (U.S. EPA); now, therefore be it

RESOLVED, that MTC adopts the 2023 TIP, attached hereto as Attachment A and incorporated herein as though set forth at length; and be it further

RESOLVED, that MTC has developed the 2023 TIP in cooperation with the Bay Area County Transportation Agencies, transit operators, the Bay Area Air Quality Management District (BAAQMD), the California Department of Transportation (Caltrans), and other partner agencies and interested stakeholders, and in consultation with the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and U.S. EPA; and, be it further

RESOLVED, that the 2023 TIP was developed in accordance with the region's Public Participation Plan and consultation process (MTC Resolution No. 4174, Revised) as required by Federal Regulations (23 CFR §450.316); and, be it further

RESOLVED, that the projects and programs included in the 2023 TIP, attached hereto as Attachment A to this resolution, and incorporated herein as though set forth at length, are consistent with the RTP; and, be it further

RESOLVED, that the 2023 TIP is financially constrained, by year, to reasonable estimates of available federal, state, and local transportation funds; and, be it further

RESOLVED, that the 2023 TIP makes progress toward achieving the performance targets established under §450.306(d); and, be it further

RESOLVED, that MTC approves the EPSP developed by MTC, the State, and public transportation operators within the region for the federal TIP as required by federal regulations (23 CFR 450.332(a)) and Section 134 of Title 23 United States Code (USC §134), as outlined in Attachment A to this Resolution, and MTC Resolution 3606, Revised; and, be it further

RESOLVED, that MTC will support, where appropriate, efforts by project sponsors to obtain letters of no prejudice or full funding agreements from FTA for projects contained in the transit element of the TIP; and, be it further

RESOLVED, that the public participation process conducted for the 2023 TIP satisfies the public involvement requirements of the FTA annual Program of Projects; and, be it further

RESOLVED, that the adoption of the TIP shall not constitute MTC's review or approval of those projects included in the TIP pursuant to Government Code Sections 66518 and 66520, or provisions in federal regulations (49 CFR Part 17) regarding Intergovernmental Review of Federal Programs; and, be it further

RESOLVED, that MTC's review of projects contained in the TIP was accomplished in accordance with procedures and guidelines set forth in the San Francisco Bay Area Transportation Air Quality Conformity Protocol (MTC Resolution 3757, Revised); and, be it further

RESOLVED, that MTC finds that the 2023 TIP conforms to the applicable provisions of the State Implementation Plan (SIP) and the applicable transportation conformity budgets in the SIP approved for the national 8-hour ozone standard and to the emissions test for the national fine particulate matter standard (MTC Resolution No. 4544); and, be it further

RESOLVED, that the projects and programs included in the 2023 TIP do not interfere with the timely implementation of the traffic control measures (TCMs) contained in the SIP; and, be it further

RESOLVED, that MTC finds all regionally significant capacity-increasing projects included in the 2023 TIP are consistent with Plan Bay Area 2050 (the Regional Transportation Plan including the Sustainable Communities Strategy for the San Francisco Bay Area) and, be it further

RESOLVED, that revisions to the 2023 TIP as set forth in Attachment B to this resolution and incorporated herein as though set forth at length, shall be made in accordance with rules and procedures established in the public participation plan and in MTC Resolution No. 4545, and that MTC’s review of projects revised in the TIP shall be accomplished in accordance with procedures and guidelines set forth in the San Francisco Bay Area Transportation Air Quality Conformity Protocol (MTC Resolution 3757, Revised) and as otherwise adopted by MTC; and, be it further

RESOLVED, that staff have the authority to make technical corrections, and the Executive Director and Deputy Executive Directors have signature authority to approve administrative modifications for the TIP and Federal Statewide Transportation Improvement Program (FSTIP) under delegated authority by Caltrans, and to forward all required TIP amendments once approved by MTC to the appropriate state and federal agencies for review and approval; and, be it further

RESOLVED, that a copy of this resolution shall be made available upon request to FHWA, the FTA, U.S. EPA, Caltrans, the Association of Bay Area Governments (ABAG), and to such other agencies and local officials as may be appropriate.

METROPOLITAN TRANSPORTATION COMMISSION

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Alfredo Pedroza, Chair

The above resolution was entered into by the
Metropolitan Transportation Commission
at a regular meeting of the Commission held in
San Francisco, California, on September 28, 2022.

Date: September 28, 2022
W.I.: 1512
Referred by: PAC

Attachment A
Resolution No. 4545
Page 1 of 1

2023 Transportation Improvement Program

The 2023 Transportation Improvement Program (TIP) for the San Francisco Bay Area, adopted September 28, 2022, is comprised of the following, incorporated herein as though set forth at length:

- A Guide to the 2023 TIP for the San Francisco Bay Area
- TIP Overview
- Expedited Project Selection Process
- TIP Revision Procedures
- Financial Capacity Assessments
- County Summaries
- Project Listings
- Appendices
- 2023 TIP Investment Analysis
- 2023 TIP Federal Performance Report

Date: September 28, 2022
W.I.: 1512
Referred by: PAC

Attachment B
Resolution No. 4545

Revisions to the 2023 Transportation Improvement Program

Revisions to the 2023 Transportation Improvement Program (TIP) will be included as they are approved.

Final Transportation-Air Quality Conformity Analysis for Plan Bay Area 2050 and the 2023 Transportation Improvement Program

September 2022

METROPOLITAN
TRANSPORTATION
COMMISSION

Association of
Bay Area Governments

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I. Introduction

The Metropolitan Transportation Commission (MTC) prepares a transportation-air quality conformity analysis ("conformity analysis") when it amends or adopts a new Regional Transportation Plan (RTP), adopts a new Transportation Improvement Program (TIP), or modifies the inclusion of regionally significant, non-exempt projects into the TIP.

The purpose of this conformity analysis is to conform the 2023 Transportation Improvement Program (TIP) and to re-conform Plan Bay Area 2050 in accordance with the latest U.S. Environmental Protection Agency (EPA) transportation conformity regulations and the Bay Area Conformity State Implementation Plan (Conformity SIP), which is also known as the Bay Area Air Quality Conformity Protocol (MTC Resolution No. 3757). This conformity analysis addresses the 2008 and 2015 national ambient air quality standard (NAAQS) for the 8-hour ozone and the 2006 national 24-hour fine particulate matter ($PM_{2.5}$) standards. This report also explains the basis for the conformity analysis and provides the results used by MTC to make a positive conformity finding for the 2023 TIP and the re-conformed Plan Bay Area 2050.

Purpose of Conformity Analysis

The Federal Clean Air Act (CAAA), as amended in 1990, outlines requirements for ensuring that federal transportation plans, programs, and projects are consistent with ("conform to") the purpose of the SIP. Conformity to the purpose of the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant national ambient air quality standards (NAAQS). A conformity finding demonstrates that the total emissions projected for a transportation plan ("RTP") or program ("TIP") are within the emissions limits ("budgets") established by the SIP, and that transportation control measures (TCMs) are implemented in a timely fashion.

Conformity requirements apply in all non-attainment and maintenance areas for transportation-related criteria pollutants and related precursor emissions (see Figure 1 for a map of the non-attainment area for the San Francisco Bay Area). For the Bay Area, the criteria pollutants to be addressed are ground-level ozone, carbon monoxide, and $PM_{2.5}$; and the precursor pollutants to be addressed include volatile organic compounds (VOC) and oxides of nitrogen (NOx) for ozone and for $PM_{2.5}$. EPA's most recent revisions to its transportation conformity regulations to implement the 1990 Federal Clean Air Act section 176 were published in the Federal Register on March 14, 2012[1].

Metropolitan Planning Organizations (MPOs) such as MTC are required to follow these regulations, and any other procedures and criteria contained in the EPA-approved Conformity SIP (also referred to as "Transportation-Air Quality Conformity Protocol" or "Protocol") for the Bay Area. In the Bay Area, procedures were first adopted in September 1994 to comply with the 1990 CAAA. Five subsequent amendments to the transportation conformity procedures in August 1995, November 1995, August 1997, July 2006, and April 2020 have been adopted by the three co-lead agencies (MTC, Association of Bay Area Governments (ABAG), and Bay Area Air Quality Management District (BAAQMD)). MTC Resolution 3757 represents the latest San Francisco Bay Area Transportation-Air Quality Conformity Protocol adopted by the three agencies in April 2020. Acting on behalf of the three agencies, the BAAQMD submitted the amended transportation conformity procedures to the California Air Resources Board (CARB) as a revision to the Bay Area Conformity SIP, whereby CARB subsequently approved the

[1] The current version of the regulations is available on EPA's Transportation Conformity website at: https://www.epa.gov/state-and-local-transportation/current-law-regulations-and-guidance-state-and-local-transportation

amended procedures on May 2021 and transmitted the procedures to EPA for final action. These regulations and resolutions state, in part, that MTC cannot approve any transportation plan, program, or project unless these activities conform to the purpose of the federal air quality plan. In this context, "transportation plan" refers to the RTP (i.e., Plan Bay Area), and "program" refers to the TIP (see following sections for more information). A "transportation project" is any highway or transit improvement, which is included in the RTP and TIP and requires funding or approval from the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA). Conformity regulations also affect regionally significant non-federally funded projects which must be included in a conforming transportation plan ("RTP") and program ("TIP"). Regionally significant project means a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs and would normally be included in the modeling of a metropolitan area's regional transportation network, including all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel.

Figure 1: Map of the Non-Attainment Area for the San Francisco Bay Area

Air Pollution and Human Health

On-road mobile source emissions have historically contributed significantly to air pollution. Over time, much progress has been made to improve engines and fuels so that emissions from on-road mobile sources have declined steeply, even as on-road travel has been growing. Despite the progress that has been made in reducing emissions, projections of ambient air quality show concentrations of pollutants, like ground-level ozone and $PM_{2.5}$, will continue to contribute to public health and environmental risks and on-road mobile source emissions remain important to consider for further improvements in air quality and public health[2].

There is a great deal of literature documenting the negative impact of air pollution on public health. Researchers use a variety of methods, including epidemiological studies and clinical studies, to analyze the health effects of specific air pollutants and the biological mechanisms or pathways as to how pollutants harm the body. On-going research continually improves understanding of the range of health effects. The respiratory effects of exposure to air pollution (including emissions from on-road mobile sources) such as disease or damage to lungs in the form of asthma, bronchitis, and emphysema, have been documented for decades. But, as the science advances, researchers are finding new evidence that links air pollution to a much wider variety of health effects, including cardiovascular disease (heart attacks and strokes), diabetes and dementia. Vulnerable populations, such as children, pregnant women, seniors, and people with existing cardiovascular or respiratory conditions, are most at risk[3].

Prepared by BAAQMD, Figure 2 depicts the general relationship between air pollution and public health, which is further described in the subsequent section.

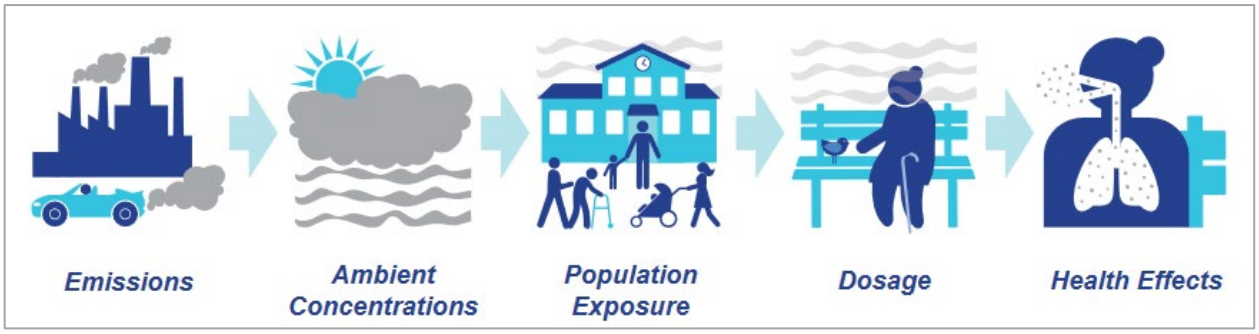

Figure 2: Relationship Between Air Pollution and Public Health

Source: BAAQMD

Emissions

Many different sources emit a wide variety of air pollutants, including PM, toxic air contaminants (TACs), and precursor compounds that react in the atmosphere to form ozone. Emission sources include stationary sources including factories, refineries, foundries, gas stations, and dry cleaners and mobile sources such as cars, trucks, locomotives, marine vessels, and farm and construction equipment. This transportation-air quality conformity analysis focuses solely on mobile source emissions.

[2] Atmospheric Environment, Mobile source contributions to ambient ozone and particulate matter in 2025, Volume 188, September 2018, Pages 129-141

[3] BAAQMD, 2017 Clean Air Plan: Spare the Air, Cool the Climate https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en

Ambient Concentrations

Ambient concentrations refer to the level of pollutants that are measured in the air. The relationship between emissions and ambient concentrations is complex and depends upon many factors, including meteorological conditions (temperature, wind speed and direction, and vertical mixing) the ratio of precursor pollutants (e.g., the VOC to NOx ratio, in the case of ozone), and regional topography. Some pollutants such as ozone are regional in scale. In the case of particulate matter and toxic air contaminants, however, ambient concentrations can vary greatly within a small geographical area.

Population Exposure

Population exposure refers to the amount of pollution that a given individual, or population is exposed to, and the frequency and duration of that exposure. From the public health perspective, the key issue is not how much pollution is present in the air, but rather how many people are exposed to the pollution.

Dosage

Dosage refers to the actual amount of pollution that an individual takes into the body. The dosage from a given level of exposure will vary by individual depending upon age, activity, and metabolic rate.

Health Effects

Air pollution can cause or contribute to a wide range of health effects and illnesses, depending upon individual exposure and tolerance to air pollution. Just as individual exposure differs, so does the ability of our bodies to tolerate exposure to pollutants.

Exposure to air pollution can cause a wide range of health effects, including short-term (acute) effects and long-term (chronic) effects, including asthma, bronchitis, cancer, heart attacks and strokes.

Status of Transportation Improvement Program

The federally required transportation improvement program, or TIP, is a comprehensive listing of surface transportation projects for the San Francisco Bay Area that receive federal funds, are subject to a federally required action, or that are regionally significant. MTC, as the federally designated MPO, prepares and adopts the TIP at least once every four years. The TIP covers a four-year period and must be financially constrained by year, meaning that the amount of funding committed to the projects (also referred as “programmed”) must not exceed the amount of funding estimated to be available. As required by federal conformity regulations, MTC must demonstrate that the TIP is consistent with ("conforms to") the SIP and that all projects included in the TIP are consistent with the RTP, Plan Bay Area 2050.

The 2023 TIP covers four years of programming, starting with fiscal years 2022-23 through 2025-26. The 2023 TIP predominantly includes projects from the Amended 2021 TIP. However, it does add in new exempt and non-exempt projects and phases. Note that all projects included in the 2023 TIP are consistent with Plan Bay Area 2050 and meet all financial constraint requirements. This conformity analysis also serves to demonstrate that the 2023 TIP (as well as Plan Bay Area 2050) conform to the SIP. Refer to Appendices A and B for detailed lists of projects included in the 2023 TIP.

Status of Regional Transportation Plan

A regional transportation plan, or RTP, is a plan which includes both long-range and short-range strategies and actions that lead to the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand. State law requires that RTPs include a Sustainable Communities Strategy (SCS)

to identify a forecasted land use development pattern that, when integrated with the future transportation system, will meet the region's greenhouse gas reduction target set by CARB. As required by federal and state planning regulations, the RTP covers a minimum planning horizon of 20 years and is updated every four years in areas which do not meet federal air quality standards ("non-attainment"). The RTP is financially constrained to ensure project costs do not exceed reasonably expected transportation revenues over the planning horizon. Once adopted, the RTP guides the development of the TIP for the region.

Plan Bay Area 2050 is the region's RTP/SCS, a 30-year regional plan that charts a course for a Bay Area that is affordable, connected, diverse, healthy, and vibrant for all residents through 2050 and beyond. The Plan expands in scope, compared to prior plans, by examining the themes of economic development and environmental resilience. As a result, the proposed Plan focuses on four interrelated elements—housing, the economy, transportation, and the environment. The proposed Plan consists of 35 integrated strategies across the four elements that provide a blueprint for how the Bay Area can accommodate future growth and make the region more equitable and resilient in the face of unexpected challenges and achieve regional GHG emissions reduction targets established by CARB pursuant to SB 375. The final Implementation Plan for Plan Bay Area 2050 transitions the Plan Bay Area 2050 process from long-range planning to near-term action. It details over 80 concrete actions that MTC, ABAG and our partners can take to advance the plan's 35 strategies over a five-year period. [4].

As part of the periodic review of the transportation modeling network assumptions in consultation with the Air Quality Conformity Task Force (per MTC Resolution No. 3757), MTC revised baseline network assumptions based on new data received from project sponsors. Refer to Appendix C for a list of regionally significant transportation projects included in Plan Bay Area 2050.

II. Bay Area Air Pollutant Designations

Background

One of the original goals of the federal Clean Air Act was to set and achieve NAAQS in every state by 1975 in order to address the public health and welfare risks posed by certain widespread air pollutants. The setting of these pollutant standards was coupled with directing the states to develop state implementation plans (SIPs), applicable to appropriate industrial sources in the state, in order to achieve these standards. EPA has four transportation-related pollutants established standards[5]:

- ground level ozone formed by volatile organic compounds (VOCs) and oxides of nitrogen (NOx);
- carbon monoxide (CO);
- particulate matter (less than 10 microns (PM_{10}) and less than 2.5 microns ($PM_{2.5}$); and,
- nitrogen dioxide (NO_2).

The standards for these pollutants are based upon EPA's assessment of the health risks associated with each of the pollutants on at-risk populations. These assessments are based upon short- and long-term scientific studies by noted health professionals and medical research institutions. At-risk groups include children, the elderly, persons with respiratory illnesses, and even healthy people who exercise outdoors. Detailed descriptions of all the above NAAQS pollutants are contained in the Glossary in Appendix G.

[4] https://www.planbayarea.org/finalplan2050
[5] National Ambient Air Quality Standards (NAAQS)

National 1-Hour Ozone Standard

The Bay Area was initially designated as nonattainment for ozone on March 3, 1978. On November 6, 1991, the EPA designated the Bay Area as a moderate ozone non-attainment area. Based on "clean" air monitoring data from 1990 to 1992, the co-lead agencies—BAAQMD, MTC, and ABAG— determined that the Bay Area was attaining the 1-hour ozone standard and requested that CARB forward a re-designation request and an ozone maintenance plan to EPA.

On May 25, 1995, after evaluating 1990-1992 monitoring data and determining that the Bay Area had continued to attain the standard, the EPA re-designated the Bay Area as an ozone maintenance area. Shortly thereafter, the area began violating the standard again and on July 10, 1998, the EPA published a Notice of Final Rulemaking re-designating the Bay Area back to an ozone non-attainment area. This action became effective on August 10, 1998.

The re-designation to nonattainment triggered an obligation for the State to submit a SIP revision designed to provide for attainment of the 1-hour ozone NAAQS by November 15, 2000. This revision (the San Francisco Bay Area Ozone Attainment Plan for the 1-hour National Ozone Standard – June 1999 or "1999 Plan") was partially approved and partially disapproved by EPA on September 20, 2001, in conjunction with a determination that the area had failed to attain by the November 2000 deadline. The attainment demonstration and its associated motor vehicle emissions budgets were among the plan elements that were disapproved.

As a result of the EPA's finding of failure to attain and partial disapproval of the 1999 Plan, the State was required to submit a SIP revision for the Bay Area to EPA by September 20, 2002, that included an updated volatile organic compounds (VOC) and nitrogen oxides (NOx) emissions inventory, new transportation conformity budgets, and provided for attainment of the 1-hour ozone standard no later than September 20, 2006. On November 1, 2001, CARB approved the San Francisco Bay Area 2001 Ozone Attainment Plan for the 1-Hour National Ozone Standard (2001 Plan) as a revision to the SIP. The BAAQMD and its co-lead agencies, (MTC and ABAG) adopted the 2001 Plan on October 26, 2001.

The 2001 Plan contains a control strategy with seven stationary source measures, five transportation control measures (TCMs), and eleven further-study measures. In the 2001 Plan, the District also committed to strengthening the then existing Smog Check program by requesting the State Bureau of Automotive Repair to implement two VOC-reducing program elements. The new measures and on-going programs provided 271 tons per day of combined VOC and NOx emission reductions between 2000 and 2006. The 2001 Plan also included an attainment assessment based on Bay Area data.

On November 30, 2001, ARB submitted the 2001 Plan, which included VOC and NOx motor vehicle emissions budgets (164.0 tons per day [tpd] and 270.3 tpd, respectively) for the 2006 attainment year, to EPA for approval as a revision to the California SIP. To support the on-road motor vehicle emission inventory and transportation conformity budgets in the Plan, CARB also transmitted the San Francisco Bay Area-EMFAC2000 model to EPA for approval for the Bay Area ozone non-attainment area. On February 14, 2002, the EPA found the motor vehicle emissions budgets in the 2001 Plan adequate for transportation conformity purposes, based on its preliminary determination that the plan provided for timely attainment of the 1-hour ozone standard.

On April 22, 2004, based on air quality monitoring data from the 2001, 2002, and 2003 ozone season, EPA determined that Bay Area had attained the national 1-hour ozone standard. Because of this determination, requirements for some of the elements of the 2001 Ozone Attainment Plan, submitted

to EPA to demonstrate attainment of the 1-hour standard, were suspended. The determination of attainment did not mean the Bay Area had been re-designated as an attainment area for the 1-hour standard. To be re-designated, the region would have had to submit a formal re-designation request to EPA, along with a maintenance plan showing how the region would continue to attain the standard for ten years. However, this re-designation request was no longer necessary upon the establishment of the new national 8-hour ozone standard.

National 8-Hour Ozone Standard

In July 1997, EPA revised the ozone standard, setting it to 80 parts per billion (ppb) in concentration based specifically on the 3-year average of the annual 4th highest daily maximum 8-hour ozone concentrations. In April 2004, EPA issued final designations for attainment and non-attainment areas. In June 2004, EPA formally designated the Bay Area as a non-attainment area for national 8-hour ozone and classified the region as "marginal" based on five classes of non-attainment areas for ozone, ranging from marginal to extreme.

In March 2008, EPA lowered the national 8-hour ozone standard from 80 ppb to 75 ppb. On March 12, 2009, CARB submitted its recommendations for area designations for the revised national 8-hour ozone standard. These recommendations were based on ozone air quality data collected during 2006 through 2008. The CARB recommended that the Bay Area be designated as non-attainment for the national 8-hour ozone standard. EPA had one year to review the recommendations and were to notify states by November 12, 2009 if they planned to modify the state-recommended areas. EPA issued final designations by March 12, 2010, based on more up to date monitoring data.

On October 1, 2015, EPA strengthened the NAAQS for ground-level ozone to 70 ppb, based on extensive scientific evidence about ozone's effects on public health and welfare. The updated standards will improve public health protection, particularly for at-risk groups including children, older adults, people of all ages who have lung diseases such as asthma, and people who are active outdoors, especially outdoor workers. They also will improve the health of trees, plants, and ecosystems. The proposed implementation rule for the 2015 ozone standard was published November 17, 2016 and proposed a framework for nonattainment area classifications and SIP requirements. In addition, the proposed rule follows the approach adopted for the previous Classifications Rule and SIP Requirements Rule (SRR) for the 2008 ozone NAAQS.

In September 2016, CARB recommended to EPA that the San Francisco Bay Area be designated in nonattainment for the 70 ppb 2015 ozone NAAQS. EPA concurred with CARB's recommendation and on April 30, 2018, EPA completed area designations for most of the United States (including the San Francisco Bay Area). On June 4, 2018, EPA published a final rule that designated 51 areas as nonattainment for the 2015 ozone NAAQS. These final designations took effect on August 3, 2018, 60 days after the notice was published in the *Federal Register*. Nonattainment areas must demonstration conformity of transportation plans and transportation improvement programs (TIPs) to the 2015 ozone NAAQS by August 3, 2019[6], the end of the grace period.

In addition, because marginal 8-hour ozone areas are not required to submit an attainment demonstration SIP (containing on-road motor vehicle emission budgets required to demonstrate

[6] Transportation Conformity Guidance for 2015 Ozone Nonattainment Areas at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UN3X.pdf

conformity), the conformity finding in this report is based on the approved 1-hour ozone on-road motor vehicle emission budgets contained in the Bay Area's 2001 Plan.

National $PM_{2.5}$ Standard

In 1987, the EPA established a standard for particle pollution equal to or smaller than 10 micrometers in diameter. A decade later, the 1997 revision to the standard set the stage for change, when a separate standard was set for fine particulate matter (particles that are 2.5 micrometers in diameter and smaller). Citing the link between serious health problems and premature death in people with heart or lung disease, the 1997 revision ultimately distinguished and set forth regulation on particle pollutants known as particulate matter 2.5 ($PM_{2.5}$) and particulate matter 10 (PM_{10}). Based on air quality monitoring data, the Bay Area was found to be attaining the 1997 $PM_{2.5}$ standards.

In 2006, the EPA revised the air quality standards for particle pollution. The 24-hour $PM_{2.5}$ standard was strengthened by lowering the level from 65 micrograms per cubic meter (µg/m³) to 35 µg/ m³. The annual fine particle standard at 15 µg/ m³ remained the same. Also, in 2006, the EPA published a final rule that established transportation conformity criteria and procedures to determine transportation projects that required analysis for local air quality impacts for $PM_{2.5}$ in non-attainment and maintenance areas. The established criteria and procedures require that those areas designated as nonattainment areas must undergo a regional conformity analysis for $PM_{2.5}$. Furthermore, the procedures also mandate areas designated as non-attainment must complete an additional project-level $PM_{2.5}$ hot-spot analysis of localized impacts for transportation projects of air quality concern.

On December 14, 2009, EPA designated the Bay Area as non-attainment for the national 24-hour $PM_{2.5}$ standard based upon violations of the standard over the three-year period from 2007 through 2009. Pursuant to the Clean Air Act, the Bay Area and MTC were subject to the requirement (beginning on December 14, 2010) to demonstrate that the RTP and TIP conformed to the SIP. In addition, beginning on December 14, 2010, certain roadway and transit projects that involve significant levels of diesel vehicle traffic needed to prepare $PM_{2.5}$ hot-spot analyses.

National 8-Hour Carbon Monoxide Standard

In April 1998, the Bay Area became a "maintenance area" for the national 8-hour carbon monoxide (CO) standard, having demonstrated attainment of the standards. As a maintenance area, the region must assure continued attainment of the CO standard.

Under 40 CFR 93.102(b)(4) of EPA's regulations, transportation conformity applies to maintenance areas through the 20-year maintenance planning period, unless the maintenance plan specifies that the transportation conformity requirements apply for a longer time period. Pursuant to the CAAA's section 176(c)(5) and as explained in the preamble of the 1993 final rule, conformity applies to areas that are designated nonattainment or are subject to a maintenance plan approved under the CAAA section 175A. The section 175A maintenance planning period is 20 years unless the applicable implementation plan specifies a longer maintenance period[7]. The EPA further clarified this conformity provision in its January 24, 2008, final rule[8].

The approved maintenance plan for the San Francisco-Oakland-San Jose Carbon Monoxide nonattainment area did not extend the maintenance plan period beyond 20 years from re-designation.

[7] See 58 FR 62188, 62206 (November 24, 1993)
[8] See 73 FR 4420, at 4434-5 (January 24, 2008)

Consequently, transportation conformity requirements for CO ceased to apply after June 1, 2018 (i.e., 20 years after the effective date of the EPA's approval of the first 10-year maintenance plan and re-designation of the area to attainment for CO NAAQS). As a result, as of June 1, 2018, transportation conformity requirements no longer apply for the CO NAAQS in the San Francisco-Oakland-San Jose CO nonattainment area for Federal Highway Administration/Federal Transit Association projects as defined in 40 CFR 93.101.

Approved Motor Vehicle Emissions Budgets and Conformity Tests

The Bay Area has conformity requirements for national ozone and $PM_{2.5}$ standards. Under the ozone standard, the Bay Area must meet an on-road motor vehicle emission "budget" test. Because the Bay Area does not have on-road motor vehicle emission budgets for $PM_{2.5}$ that have been determined to be adequate by EPA, it must meet an emission interim test for the $PM_{2.5}$ standard. To make a positive conformity finding for ozone MTC must demonstrate that the calculated on-road motor vehicle emissions in the region are lower than the approved budgets. To make a positive "interim" conformity finding for $PM_{2.5}$, MTC must meet "build not greater than no build" or "build not greater than baseline year" tests based on $PM_{2.5}$ exhaust, tire wear, and brake wear, and NO_X as a $PM_{2.5}$ precursor emissions.

On-road motor vehicle emissions budgets for VOC and NO_X, which are ozone precursors, were developed for the 2006 attainment year as part of the 2001 1-hour Ozone Attainment Plan. The VOC and NO_X budgets were found to be adequate by EPA on February 14, 2002 (67 FR 8017) and were subsequently approved by EPA on April 22, 2004 (69 FR 21717). Note that under EPA's conformity rule for the national 8-hour ozone standard, the existing 1-hour on-road motor vehicle emission budgets are to be used for conformity analyses until they are replaced.

The on-road motor vehicle emission budgets are listed below:

- VOC: 164 tons per day (2006 and beyond)
- NO_X: 270.3 tons per day (2006 and beyond)

For $PM_{2.5}$, initially the Bay Area was required to prepare a SIP by December 2012 to show how the region would attain the standard by December 2014. In addition, although the Bay Area was designated as non-attainment for the national 24-hour $PM_{2.5}$ standard based on monitoring data for the 2006-2008 period, the region exceeded the standard by only a slight margin.

Monitoring data shows that the Bay Area currently meets the national standards for both annual and 24-hour $PM_{2.5}$ levels. However, because the health effects of PM are serious and far-reaching, and no safe threshold of exposure to PM has yet been identified, it is important efforts continue to further reduce PM emissions and concentrations.[9]

Under US EPA guidelines, a region with monitoring data showing that it currently attains an air quality standard can submit a "re-designation request" and a "maintenance plan" in lieu of a SIP attainment plan. However, the BAAQMD believes that it would be premature to submit a $PM_{2.5}$ re-designation request for the Bay Area at this time. Instead, the BAAQMD has pursued another option provided by US EPA guidelines for areas with monitoring data showing that they currently meet the $PM_{2.5}$ standard. In December 2011, CARB submitted a "clean data finding" request on behalf of the Bay Area. On January 9,

[9] See BAAQMD's *2017 Clean Air Plan: Spare the Air, Cool the Climate* at: http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en

2013, EPA took final action to determine that the Bay Area attained the 2006 24-hour $PM_{2.5}$ standard. EPA's determination was based on complete, quality-assured, and certified ambient air monitoring data showing that the area monitored attainment based on the 2009-2011 monitoring period. Based on EPA's determination, the requirements for the Bay Area to submit an attainment demonstration, together with reasonably available control measures (RACMs), an RFP plan, and contingency measures for failure to meet RFP and attainment deadlines are suspended for so long as the region continues to attain the 2006 24-hour $PM_{2.5}$ standard.

Since an approved on-road motor vehicle emissions budget for $PM_{2.5}$ is not available for use in this conformity analysis, MTC must complete one of the two interim emissions tests:

- the build-no-greater-than-no-build test ("build/no-build test") found at 40 CFR 93.119(e)(1), or
- the no-greater-than-baseline year emissions test ("baseline year test"), described at 40 CFR 93.119(e)(2).

Per the interagency consultation via the Air Quality Conformity Task Force meeting dated May 28, 2015, MTC elected to use the "baseline year test". In this test, conformity is demonstrated if in each analysis year, the RTP or TIP (the "build" scenarios) on-road motor vehicle emissions are less than or equal to emissions in the "baseline year" emission inventory. The "baseline year" for the 2006 24-hour $PM_{2.5}$ standard is the year 2008[10].

Under a determination of conformity, the following criteria are applied:

1. The latest planning assumptions and emission models are used.
2. The transportation plan ("RTP") and program ("TIP") pass an emissions budget test using a budget that has been found adequate by EPA or an interim emissions test when budgets have not been established.
3. The transportation plan ("RTP") and program ("TIP") provide for the timely implementation of TCMs.
4. Interagency and public consultation is part of the process.

III. Conformity Analysis & Results

Approach to Conformity Analysis

The latest planning assumptions were used when preparing this conformity analysis. Regional estimates of future travel data were estimated using MTC's land use model (referred to as "*Bay Area UrbanSim 2, hereby referred to as BAUS2"*[11]) and MTC's activity-based travel model (referred to as "*Travel Model 1.5*" [12]). This integrated model framework allows for analysis of how transportation strategies affect the surrounding land use pattern, as well as how changes to residential and commercial activity affect transportation demand. *Travel Model 1.5* was developed for the Horizon initiative (the predecessor to Plan Bay Area 2050) and added representation for transportation demand management initiatives, commute trip reduction programs at major employers, ride-hailing (or Transportation Network

[10] Additional information is available here: https://www.epa.gov/state-and-local-transportation/baseline-year-baseline-year-test-40-cfr-93119

[11] Additional information is available here: https://github.com/BayAreaMetro/bayarea_urbansim

[12] Additional information is available here: https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_Forecasting_Modeling_Report_October_2021.pdf

Companies – TNC) and taxi modes and estimation of autonomous vehicle travel. The model forecasts travel activity on the Bay Area transportation network for a typical weekday across all modes.

This conformity analysis for the 2023 TIP and Plan Bay Area 2050 involves a sequence of modeling tools used together to create and study regional transportation investment impacts. The regional growth forecast is the first step, identifying how much the Bay Area might grow between the plan baseline year (2015) and the plan horizon year (2050), including population, jobs, households, and associated housing units. The location of these households and jobs are then projected on a more localized level throughout the Bay Area by Land Use Model (BAUS2, which represents the potential effects of land use strategies and infrastructure investments. These first two models each represent the entire sequence of years in five-year increments, starting with the plan baseline year and ending at the plan horizon year. Finally, the Travel Model is used to analyze an average weekday for a single given model year, simulating a day's worth of travel for each Bay Area resident given their daily activities and enabling staff to understand the effects of transportation strategies on daily vehicle miles traveled, transit ridership and active transportation.

BAUS2 and Travel Model 1.5 work as a system to capture the interaction between transportation and land use. Accessibility to a variety of destinations and amenities is a key driver in both household and business location choice. For instance, households often prefer locations near employment, retail, and similar households but avoid other features such as industrial land use. Business preferences vary by sector with some firms looking for locations popular with similar firms (e.g., Silicon Valley) while others desire locations near an airport or university. In all cases, the accessibility between a given location in the region (defined as a transportation analysis zone or TAZ) and all other locations/TAZs is provided to BAUS2 by the Travel Model. This data represents overall regional accessibility for future years considering changing infrastructure and policy.

Moving in the other direction, BAUS2 provides the travel model with a projected land use pattern and spatial distribution of activities for each year into the future. This pattern includes the location of housing, jobs, and other activities that serve as the start and end locations for trips predicted by the travel model. This information is provided to the travel model at a TAZ level aggregation for each future year examined. Overall, the linkages between the two models allow land use patterns to evolve in relation to changes in the transportation system and for future travel patterns to reflect dynamic shifts in land use, thus representing long-term induced demand.

Travel Model 1.5 generates spatially- and temporally- specific estimates of travel data—roadway usage and speed. This travel data is input into CARB's latest EMission FACtors (EMFAC2017) model to estimate on-road motor vehicle emissions.

The EMFAC2017 model shows how California on-road motor vehicle emissions have changed over time and are projected to change in the future. This information helps CARB evaluate prospective control programs and determine the most effective, science-based proposals for protecting the environment. EMFAC2017 includes the latest data on California's car and truck fleets and travel activity. The model also reflects the emissions benefits of CARB's recent rulemakings, including on-road diesel fleet rules, Advanced Clean Car Standards, and the Smartway/Phase I Heavy Duty Vehicle Greenhouse Gas Regulation. The model includes updates to truck emission factors based on the latest test data. More

details about the updates in emissions calculation methodologies and data are available in the EMFAC2017 Technical Support Document.[13]

On September 18, 2019, the Trump Administration announced that it would enact the Safer Affordable Fuel Efficient (SAFE) Vehicle Rule. When finalized, the rule revoked California's authority to implement the Advanced Clean Cars (I and II) and zero emission vehicles (ZEV) mandates. Consequently, it also invalidated California's tool to estimate mobile source emissions—commonly known as "EMFAC"—which assumes the clean car mandates are implemented. Planning agencies across California use EMFAC to estimate mobile source emissions to demonstrate their respective plans conform to the SIP and meet federal clean air standards. In response, CARB staff developed off-model adjustment factors to account for the impacts of this rule. On March 12, 2020, the EPA confirmed these adjustment factors to be acceptable for use in transportation conformity determinations. [14]

Under the Biden Administration in 2021, EPA[15] and National Highway Traffic Safety Administration (NHTSA) [16] issued separate notices questioning the Trump administration's legal reasoning to withdraw the waiver. In its April 2021 notice, EPA explained "there are significant issues" with the Trump administration's Part I Rule, including the time elapsed since EPA's 2013 waiver decision, the novel interpretations set forth in the Part I Rule, and the consideration of environmental conditions in California and consequences of the waiver's withdrawal. [17] In its proposal, NHTSA asserted that it does not, in fact, have authority to adopt legislative rules implementing express preemption under the Energy Policy and Conservation Act (EPCA).

On March 14, 2022, EPA issued a notice of decision to reinstate California's Clean Air Act waiver for its Advanced Clean Car program[18], restoring the state's authority to set and enforce more stringent standards than the federal government, including California's greenhouse gas emission standards and zero emission vehicle mandate. In addition, other states can legally follow and enforce California's standards again.

As a result, this conformity determination will employ EMFAC2017 and will apply the EPA approved CARB off-model adjustment factors – reporting both factored and non-factored emission inventory values.

Analysis Years

The analysis years for the budget and baseline year tests are to be within five years from the date the analysis is done, the horizon year of the RTP and intermediate years as necessary so that analysis years are not more than ten years apart. For this conformity analysis, the analysis years are 2025, 2030, 2040

[13] Additional information is available here: https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf

[14] Additional information is available here: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/final-safe-rule-frquently-asked-questions-a11y.pdff

[15] California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Opportunity for Public Comment, 86 Fed. Reg. 22,421 (notice issued Apr. 28, 2021).

[16] Corporate Average Fuel Economy (CAFE) Preemption, 86 Fed. Reg. 25,980 (proposed May 12, 2021)

[17] California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Opportunity for Public Comment, 86 Fed. Reg. at 22,422.

[18] California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Notice of Decision, 87 Fed. Reg. 14,332 (Mar. 14, 2022), https://www.federalregister.gov/documents/2022/03/14/2022-05227/california-state-motor-vehicle-pollution-control-standards-advanced-clean-car-program

and 2050 for the 2008 and 2015 ozone and 2006 $PM_{2.5}$ standards. MTC used *Travel Model 1.5* to forecast travel data for the 2025, 2030, 2040 and 2050 analysis years. The forecasted travel data for each analysis year were then input into the EMFAC2017 model to calculate on-road motor vehicle emissions.

Consultation Process

MTC has consulted on the preparation of this conformity analysis with the Bay Area's Air Quality Conformity Task Force. The Conformity Task Force is composed of representatives of EPA, CARB, FHWA, FTA, Caltrans, MTC, BAAQMD, ABAG, the nine county Congestion Management Agencies, and Bay Area transit operators. The Conformity Task Force reviews the analysis assumptions, consults on TCM implementation issues, and reviews the results of the conformity analysis. The task force meetings are open to the public. Consultation with the Air Quality Conformity Task Force related to the preparation of this conformity analysis included discussions on the following meeting dates:

April 2022

- $PM_{2.5}$ Project-Level Conformity Interagency Consultations
- Discussions on Projects with Regional Air Quality Conformity Concerns
- Presented approach to Conformity Analysis for the 2023 TIP

May 2022

- $PM_{2.5}$ Project-Level Conformity Interagency Consultations
- Discussions on Projects with Regional Air Quality Conformity Concerns
  Note: 2023 TIP Conformity Analysis being conducted during this month

June 2022

- $PM_{2.5}$ Project-Level Conformity Interagency Consultations
- Presented Draft Conformity Analysis for the 2023 TIP

July 2022

- Discussed comment responses and next steps for Draft Conformity Analysis the 2023 TIP

August 2022

- Presented Final Conformity Analysis for the 2023 TIP

Comparison of Motor Vehicle Emissions to Budgets

As explained earlier in "Approved Motor Vehicle Emissions Budgets and Conformity Tests," on-road motor vehicle emissions budgets are established in the SIP for VOCs and NO_X. To make a positive conformity finding, the regional on-road motor vehicle emissions must be equal to or less than these budgets. The results of the vehicle activity forecasts, and on-road motor vehicle emission calculations are described in the following section.

Ozone Motor Vehicle Emission Budgets

For VOC and NO_X, the on-road motor vehicle emission budgets also reflect emission reductions from five Transportation Control Measures (TCMs) incorporated in the 2001 Ozone Attainment Plan (Table 1).

Table 1: VOC and NO_X Emissions Budgets from 2001 Ozone Attainment Plan (tons/day)

VOC	
2006 On Road Motor Vehicle Emissions	168.5
2006 Mobile Source Control Measure Benefits	(4.0)
2006 TCM Benefits	(0.5)
2006 Emissions Budget	164.0

NO_X	
2006 On Road Motor Vehicle Emissions	271.0
2006 TCM Benefits	(0.7)
2006 Emissions Budget	270.3

The vehicle activity forecasts by analysis year for the 2023 TIP and Plan Bay Area 2050 (the "build" scenarios) are shown in Table 2. The regional growth forecast has the most significant effect on transportation trends over the Plan horizon. The 1.4 million new households and 1.4 million new jobs forecasted between 2015 and 2050 lead to more demand on the region's transportation systems and increases to vehicles in use, daily VMT, and daily engine starts (as reflected in Table 2).

To assist in addressing housing affordability and growth estimation uncertainty, the regional growth forecast is a more policy-conscious effort which focuses on these uncertainties, in addition to the policy linkages. The development estimation methodology for the region adopted by the ABAG Executive Board in September 2019 enables the regional growth forecast to incorporate changes in strategies affecting the level of growth in the region, while also affecting affordability, equity, economic mobility, and other critical outcomes.

Daily VMT is forecasted to increase from 2015, albeit at a rate slower than forecasted population growth. As a result, daily VMT per capita is forecasted to decrease over time because of the Plan's strategies. Travel data (from MTC's *Travel Model 1.5*) was input into CARB's EMFAC2017 emissions model, thereby generating regional vehicle activity and emissions estimates.

In addition, MTC will use the 1-hour motor vehicle emissions budget from the 2001 Ozone Attainment Plan as the 8-hour motor vehicle emissions budget to demonstrate conformity to both the 2008 and 2015 8-hour ozone standards. The ozone budgets for VOCs and NOx were compared to quantified emissions for analysis years 2025, 2030, 2040, and 2050.

Table 2: Vehicle Activity Forecasts

	2025	*2030*	*2040*	2050
Vehicles in use	5,034,656	5,344,360	6,230,804	7,057,977
Daily VMT (1000s)	171,322	172,349	187,591	202,444
Daily Engine Starts	25,093,896	26,585,277	30,861,508	34,931,373

Comparison of Estimated Regional On-Road Motor Vehicle Emissions to the Ozone Precursor Budgets

The vehicle activity forecasts for the 2023 TIP and Plan Bay Area 2050, Table 2, are converted to emission estimates by MTC using EMFAC2017. Tables 3 compare the results of the various analyses with the applicable budgets. The analyses indicate that the on-road motor vehicle emissions are substantially below the budget, due in large part to the following regulatory actions and policies:

Senate Bill 1 (SB 1). The Road Repair and Accountability Act of 2017 is intended to address the funding deficit for transportation infrastructure, and the backlog of California transportation system maintenance and rehabilitation projects. Besides addressing the funding deficit, the bill requires the Department of Motor Vehicles (DMV), starting January 1, 2020, to verify that a medium-duty or heavy-duty vehicle is compliant with or exempt from CARB's Truck and Bus Regulation (Section 2025 of Title 13 of the California Code of Regulations) before allowing registration. Following this bill, the compliance assumptions in EMFAC2017 model were updated to ensure that full compliance will be achieved by January 1, 2023.

Advanced Clean Cars (ACC). EMFAC2017 incorporates updates to assumptions on Advanced Clean Cars (ACC) regulation based on the 2017 Midterm review of ACC. These updates include:

- Updates to Zero Emission Vehicle sales forecast
- Updated CO_2 emission rate and fuel efficiency forecasts
- Updated criteria technology penetration (i.e., SULEV30, ULEV125)
- Updated in-use emission factors for vehicles certified to 3 and 1 mg/mi PM emission standards

Table 3: Emissions Budget Comparisons for Ozone Precursors – Summertime Conditions (tons/day)

Year	*VOC Budget*[1]	*On-Road Motor Vehicles Net VOC Emissions*[2]	*On-Road Motor Vehicles Net VOC Emissions with CARB Adjustment Factors*[3]
2025	164.0	26.23	25.77
2030	164.0	22.09	21.69
2040	164.0	17.98	17.73
2050	164.0	17.94	17.81
Year	*NO_X Budget*[1]	*On-Road Motor Vehicles Net NO_X*[2]	*On-Road Motor Vehicles Net NO_X Emissions with CARB Adjustment Factors*[3]
2025	270.3	37.12	36.48
2030	270.3	32.45	31.90
2040	270.3	32.21	31.86
2050	270.3	35.77	35.53

[1] 2001 Ozone Attainment Plan

[2] The transit services for TCM A Regional Express Bus Program were modeled. The emission benefits from TCM A are therefore included in the On-Road Motor Vehicles VOC and NO_X emission inventories for 2006 and beyond.

[3] TCM Reduction Benefits of (0.5) tons/day of ROG and (0.7) tons/day of NOx applied to all On-Road Motor Vehicles emission inventories in the Table 3 above

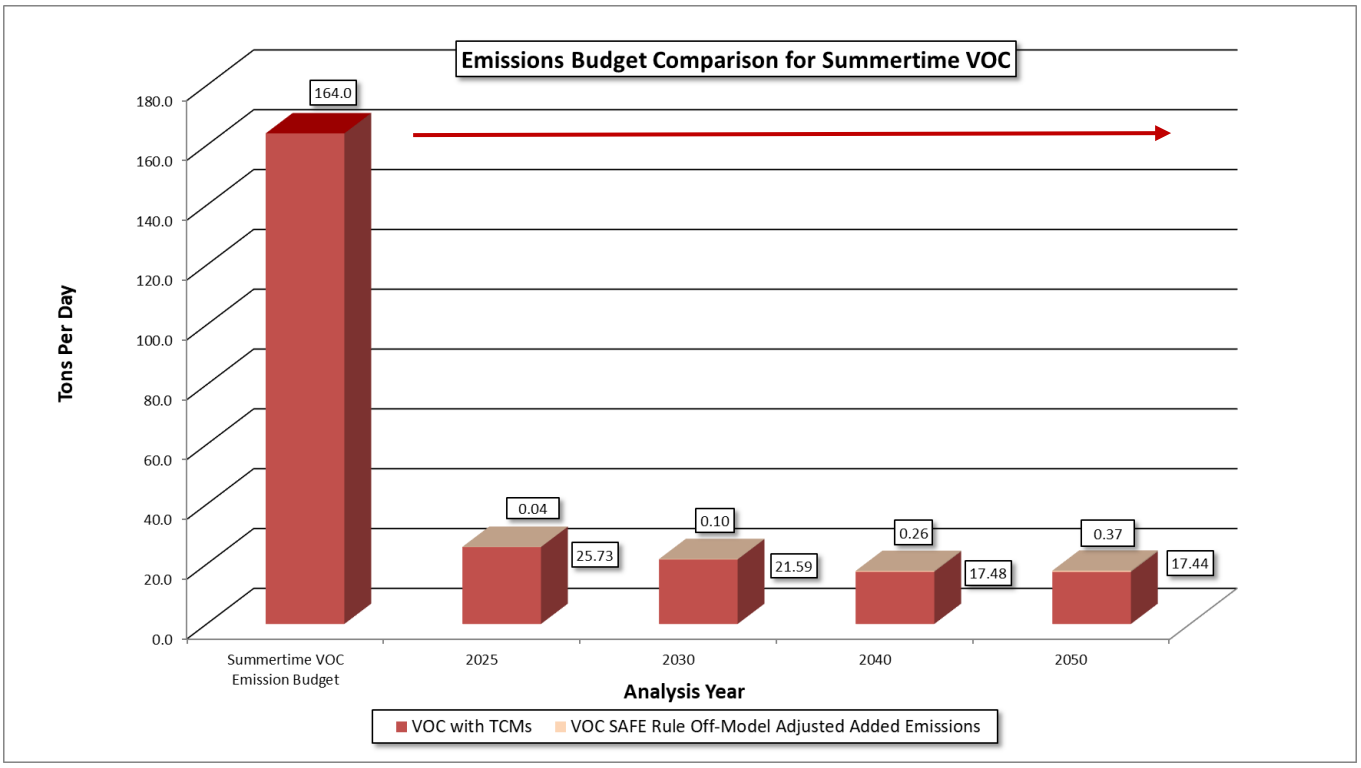

Figure 3: Emissions Budget Comparisons for Ozone Precursors (VOC)

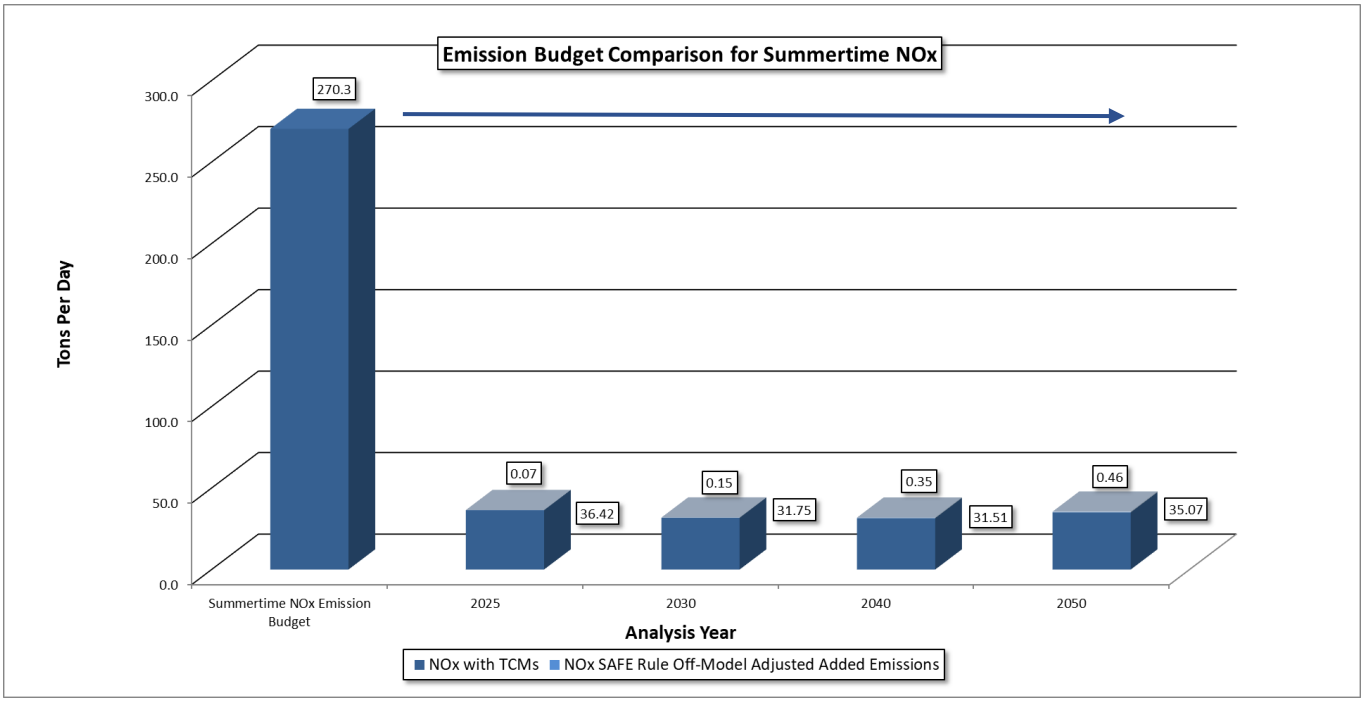

Figure 4: Emissions Budget Comparisons for Ozone Precursors (NOx)

The estimated effectiveness of the various TCMs, given their current implementation status, is shown in Table 4. TCMs A through E are fully implemented. They have achieved the required cumulative total emission reductions of 0.5 tons per day of VOC and 0.7 tons per day of NO_X by 2006.

Table 4: Emission Reductions for Transportation Control Measures A – E in State Implementation Plan (tons/day)

TCM	*VOC Emission Reductions through December 2006*	*NO_X Emission Reductions through December 2006*
TCM A: Regional Express Bus Program	0.20	0.20
TCM B: Bicycle/Pedestrian Program	0.04	0.03
TCM C: Transportation for Livable Communities	0.08	0.12
TCM D: Expansion of Freeway Service Patrol	0.10	0.25
TCM E: Transit Access to Airports	0.09	0.13
Total Reductions	**0.5**	**0.7**

Baseline Year Emissions Test for $PM_{2.5}$

For the baseline year test, emissions for both directly emitted $PM_{2.5}$ and NO_X (as the precursor to $PM_{2.5}$ emissions) were compared to the analysis years of 2025, 2030, 2040 and 2050. The Bay Area generally experiences its highest particulate matter concentrations in the winter and exceedances of the 24-hour national $PM_{2.5}$ standard almost always occur between November and February. Therefore, the inputs used for the baseline year test in the analysis for $PM_{2.5}$ and NOx were for the winter season. Note, particulate matter levels in the Bay Area can experience occasional spikes in response to wildfires that occur either within the region or in adjacent regions. [19]

The vehicle activity forecasts by analysis year for the 2023 TIP and Plan Bay Area 2050 the "build" scenarios) are shown in Table 5. Travel data (from MTC's *Travel Model 1.5*) was input into CARB's EMFAC2017 emissions model, thereby generating regional vehicle activity and emissions estimates.

Table 6 presents the results of the Baseline Year test for the $PM_{2.5}$ emissions and the NO_X precursor for the 2006 24-hour $PM_{2.5}$ standard. Regional conformity analyses must be completed for directly emitted $PM_{2.5}$ (40 CFR 93.102(b)(1)). Directly emitted $PM_{2.5}$ includes exhaust, brake and tire wear emissions.

Table 5: Vehicle Activity Forecasts for the $PM_{2.5}$ Baseline Year Test

	2008 Baseline Year	*2025*	*2030*	*2040*	*2050*
Vehicles in Use	4,503,765	5,034,656	5,344,360	6,230,804	7,057,977
Daily VMT (1000s)	154,100	171,322	172,349	187,591	202,444
Engine Starts	22,756,344	25,093,896	26,585,277	30,861,508	34,931,373

[19] See BAAQMD's *2017 Clean Air Plan: Spare the Air, Cool the Climate* at: http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en

Table 6: Emissions Comparison for the $PM_{2.5}$ Baseline Year Test[1]

	2008 Baseline Year	*2025*	***2025***[2]	*2030*	***2030***[2]	*2040*	***2040***[2]	*2050*	***2050***[2]
$PM_{2.5}$	8.21	4.16	**4.19**	4.12	**4.18**	4.41	**4.53**	4.75	**4.90**
NO_X	227.71	41.21	**41.29**	35.74	**35.91**	35.31	**35.70**	39.19	**39.70**

[1] Emissions for wintertime only

[2] **CARB Adjustment Factors** applied to years 2025 thru 2050

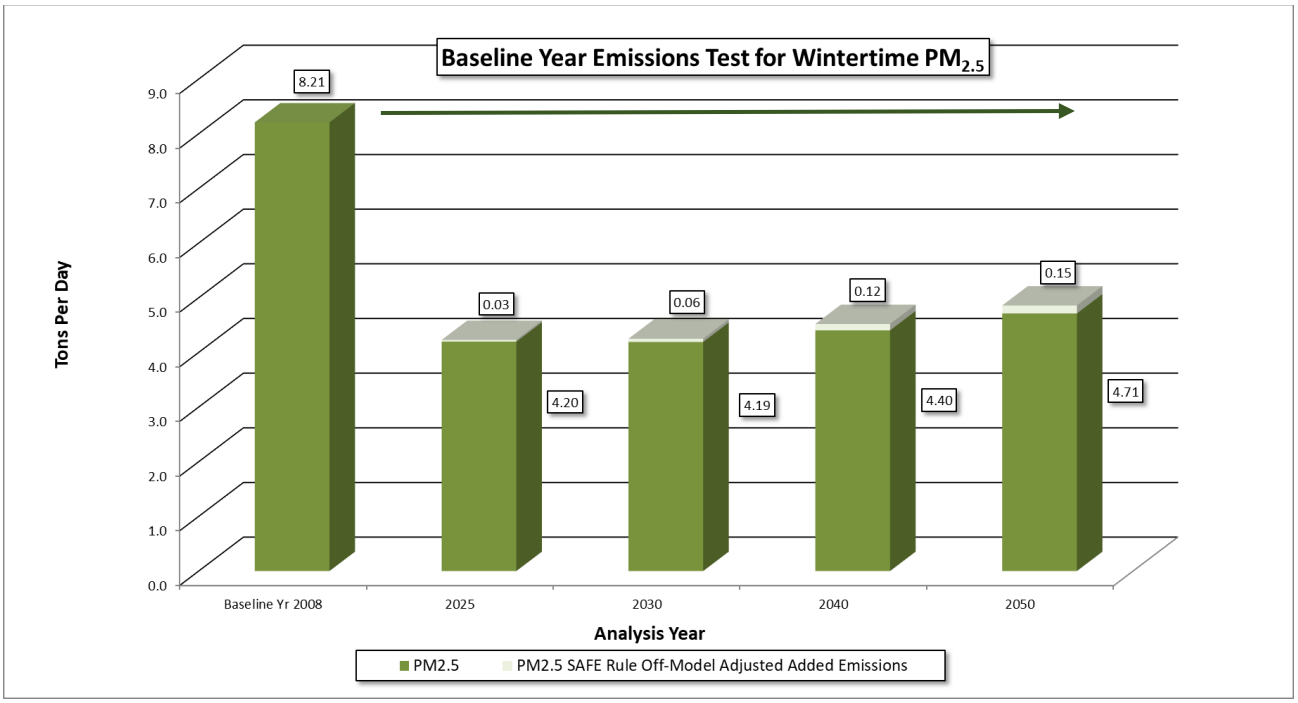

Figure 5: Baseline Year Emissions Test for $PM_{2.5}$

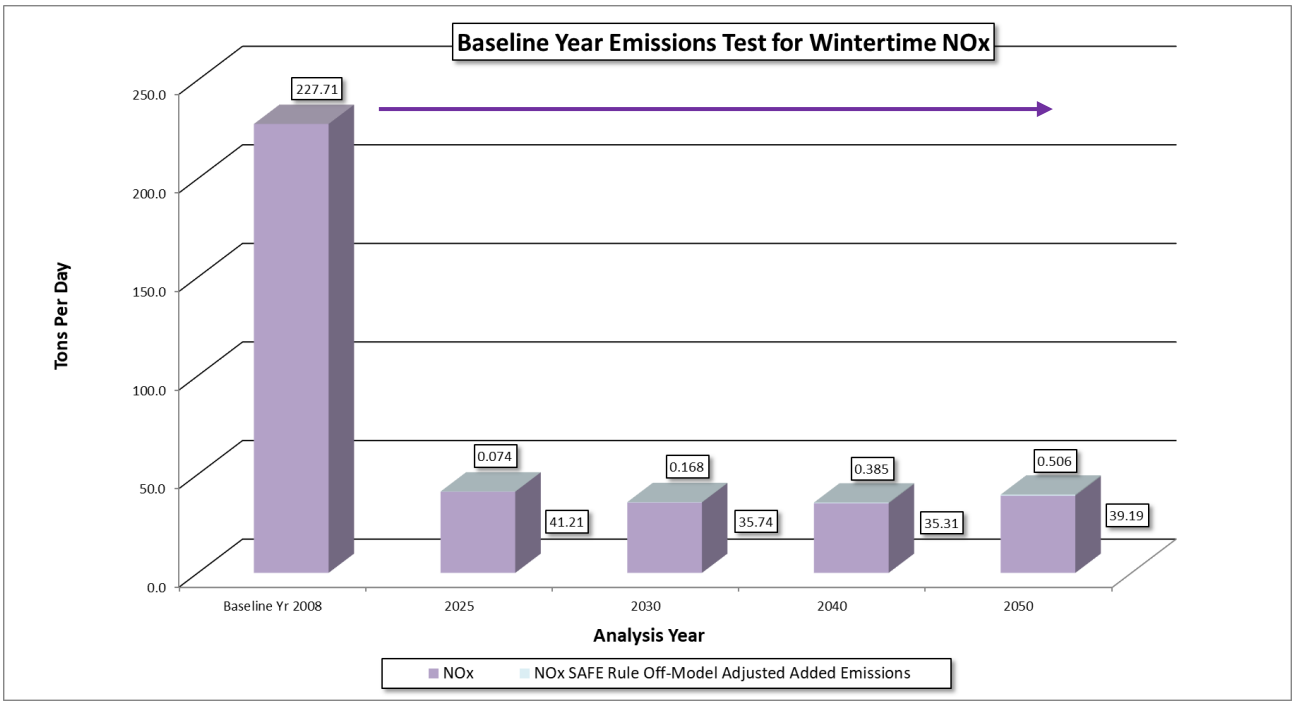

Figure 6: Baseline Year Emissions Test for Wintertime NOx

IV. Transportation Control Measures

History of Transportation Control Measures

TCMs are strategies to reduce vehicle emissions. They include such strategies as improved transit service and transit coordination, ridesharing services and new carpool lanes, signal timing, freeway incident management, and increased gas taxes and bridge tolls to encourage use of alternative modes, etc. The original set of TCMs plus the five most recent TCMs (A-E) have been fully implemented. The TCMs were added over successive revisions to the SIP (see Table 7). For more information on TCMs 1-28, which are completed, see the *Transportation-Air Quality Conformity Analysis for the 2001 Regional Transportation Plan and FY 2001 Transportation Improvement Program Amendment 01-32 (February 2002)*. This report can be found in the MTC/ABAG Library.

- Twelve (12) ozone measures were originally listed in the 1982 Bay Area Air Quality Plan.
- In response to a 1990 lawsuit in the federal District Court, sixteen (16) additional TCMs were subsequently adopted by MTC in February 1990 as contingency measures to bring the region back on the "Reasonable Further Progress" (RFP) line. The Federal District order issued on May 11, 1992, found that these contingency TCMs were sufficient to bring the region back on the RFP track anticipated in the SIP. These measures became part of the SIP when EPA approved the 1994 Ozone Maintenance Plan.
- Two (2) transportation control measures from the 1982 Bay Area Air Quality Plan apply to carbon monoxide control strategies, for which the region is in attainment with the federal standard, and primarily targeted downtown San Jose (which had the most significant CO problem at that time.) MTC also adopted a set of TCM enhancements in November 1991 to eliminate a shortfall in regional carbon monoxide emissions identified in the District Court's April 19, 1991, order. Carbon monoxide standards have been achieved primarily using oxygenated/reformulated fuels in motor vehicles and with improvements in the Smog Check program.
- As part of EPA's partial approval/partial disapproval of the 1999 Ozone Attainment Plan, four (4) TCMs were deleted from the ozone plan (but two (2) of these remain in the Carbon Monoxide Maintenance Plan).
- Five (5) new TCMs were adopted as part of the new 2001 1-Hour Ozone Attainment Plan and were fully funded in the 2001 TIP and 2001 Regional Transportation Plan.

With respect to TCM 2 from the 1982 SIP, there was a protracted debate, leading to a citizen's lawsuit in federal court, about the obligations associated with this TCM. On April 6, 2004, MTC prevailed in the U.S. Court of Appeals for the Ninth Circuit which concluded that TCM 2 does not impose any additional enforceable obligation on MTC to increase ridership on public transit ridership by 15 percent over 1982-83 levels by November 2006 (Bayview Hunters Point Community Advocates v. Metropolitan Transportation Commission, (2004 WL 728247, 4 Cal. Daily Op. Serv. 2919, 2004 Daily Journal D.A.R. 4209, 9th Cir.(Cal.), Apr 06, 2004)). Thus TCM 2 has been resolved, and there are no further implementation issues to address in this TCM.

Table 7: Transportation Control Measure in the State Implementation Plan

TCM	*Description*
Original TCMs from 1982 Bay Area Air Quality Plan	
TCM 1	Reaffirm Commitment to 28 percent Transit Ridership Increase Between 1978 and 1983
TCM 2	Support Post-1983 Improvements in the Operators' Five-Year Plans and, After Consultation with the Operators, Adopt Ridership Increase Target for the Period 1983 through 1987
TCM 3	Seek to Expand and Improve Public Transit Beyond Committed Levels
TCM 4	High Occupancy Vehicle (HOV) Lanes and Ramp Metering
TCM 5	Support RIDES Efforts
TCM 6[1]	Continue Efforts to Obtain Funding to Support Long Range Transit Improvements
TCM 7	Preferential Parking
TCM 8	Shared Use Park and Ride Lots
TCM 9	Expand Commute Alternatives Program
TCM 10	Information Program for Local Governments
TCM 11[2]	Gasoline Conservation Awareness Program (GasCAP)
TCM 12[2]	Santa Clara County Commuter Transportation Program
Contingency Plan TCMs Adopted by MTC in February 1990 (MTC Resolution 2131)	
TCM 13	Increase Bridge Tolls to $1.00 on All Bridges
TCM 14	Bay Bridge Surcharge of $1.00
TCM 15	Increase State Gas Tax by 9 Cents
TCM 16[1]	Implement MTC Resolution 1876, Revised — New Rail Starts
TCM 17	Continue Post-Earthquake Transit Services
TCM 18	Sacramento-Bay Area Amtrak Service
TCM 19	Upgrade Caltrain Service
TCM 20	Regional HOV System Plan
TCM 21	Regional Transit Coordination
TCM 22	Expand Regional Transit Connection Ticket Distribution
TCM 23	Employer Audits
TCM 24	Expand Signal Timing Program to New Cities
TCM 25	Maintain Existing Signal Timing Programs
TCM 26	Incident Management on Bay Area Freeways
TCM 27	Update MTC Guidance on Development of Local TSM Programs
TCM 28	Local Transportation Systems Management (TSM) Initiatives
New TCMs in 2001 Ozone Attainment Plan	
TCM A	Regional Express Bus Program
TCM B	Bicycle/Pedestrian Program
TCM C	Transportation for Livable Communities
TCM D	Expansion of Freeway Service Patrol
TCM E	Transit Access to Airports

[1] Deleted by EPA action from ozone plan

[2] Deleted by EPA action from ozone plan but retained in Carbon Monoxide Maintenance Plan.

Source: Bay Area Air Quality Management District, Metropolitan Transportation Commission, 2001.

Status of Transportation Control Measures

TCMs A-E were approved into the SIP as part of EPA's Finding of Attainment for the San Francisco Bay Area (April 2004). The conformity analysis must demonstrate that TCMs are being implemented on schedule (40 CFR 93.113). TCMs A-E have specific implementation steps which are used to determine progress in advancing these TCMs (see Table 8). TCMs A-E are now fully implemented.

Table 8: Implementation Status of Federal Transportation Control Measures for Ozone (A – E)

#	TCM	Description	Ozone Attainment Plan Implementation Schedule	Implementation Status
A	Regional Express Bus Program	Program includes purchase of approximately 90 low emission buses to operate new or enhanced express bus services. Buses will meet all applicable CARB standards, and will include particulate traps or filters. MTC will approve $40 million in funding to various transit operators for bus acquisition. Program assumes transit operators can sustain service for a five-year period. Actual emission reductions will be determined based on routes selected by MTC.	FY 2003. Complete once $40 million in funding pursuant to Government Code Section 14556.40 is approved by the California Transportation Commission and obligated by bus operators	$40 million for this program was allocated by the CTC in August 2001. The participating transit operators have ordered and received a total of 94 buses. All buses are currently in operations. TCM A is fully implemented.
B	Bicycle / Pedestrian Program	Fund high priority projects in countywide plans consistent with TDA funding availability. MTC would fund only projects that are exempt from CEQA, have no significant environmental impacts, or adequately mitigate any adverse environmental impacts. Actual emission reductions will be determined based on the projects funded.	FY 2004 – 2006. Complete once $15 million in TDA Article 3 is allocated by MTC.	MTC allocated over $20 million in TDA Article 3 funds during FY2004, FY2005, and FY2006. TCM B is fully implemented.
C	Transportation for Livable Communities (TLC)	Program provides planning grants, technical assistance, and capital grants to help cities and nonprofit agencies link transportation projects with community plans. MTC would fund only projects that are exempt from CEQA, have no significant environmental impacts, or adequately mitigate any adverse	FY 2004 – 2006. Complete once $27 million in TLC grant funding is approved by MTC	In December 2003, the Commission reaffirmed its commitment of $27 million annually over 25 years for the TLC program as part of Phase 1 of the Transportation 2030 Plan. MTC and the county Congestion Management Agencies (CMAs) have approved over $27 million in TLC grant funding by FY 2006. In November

		environmental impacts. Actual emission reductions will be based on the projects funded.		2004, MTC approved $500,000 for regional TLC Community Design Planning Program, and in December 2004, MTC approved $18.4 million in TLC funding for the regional TLC Capital program. As of December 2006, CMAs in Alameda, Marin and Sonoma counties approved an additional $12.4 million in their county-level TLC Capital programs for a regional total of $31.2 million. TCM C is fully implemented.
D	Additional Freeway Service Patrol	Operation of 55 lane miles of new roving tow truck patrols beyond routes which existed in 2000. TCM commitment would be satisfied by any combination for routes adding 55 miles. Tow trucks used in service are new vehicles meeting all applicable CARB standards.	FY 2001. Complete by maintaining increase in FSP mileage through December 2006	FSP continues to maintain the operation of the 55 lane miles of new roving tow truck coverage. This level of service was maintained through 2006. FSP continues to expand its service areas. TCM D is fully implemented.
E	Transit Access to Airports	Take credit for emission reductions from air passengers who use BART to SFO, as these reductions are not included in the Baseline.	BART – SFO service to start in FY 2003. Complete by maintaining service through December 2006	Service began June 2003. Service adjustments have been made since start of revenue service. The BART to SFO service has been maintained through 2006 and is continued. TCM E is fully implemented.

V. Response to Public Comments

The Final Transportation-Air Quality Conformity Analysis for the 2023 Transportation Improvement Program was released for public review and comment beginning on July 5, 2022. The document was available online at:

https://mtc.ca.gov/funding/transportation-improvement-program-tip

The close of the comment period occurred at 5:00 pm on August 3, 2022, and there were no comments submitted.

VI. Conformity Findings

Based on the analysis, the following conformity findings are made:

- This conformity analysis was conducted in accordance with EPA's transportation conformity regulations and with the Bay Area Air Quality Conformity Protocol adopted by MTC as Resolution No. 3757.
- The 2023 Transportation Improvement Program and Plan Bay Area 2050 provide for implementation of TCMs pursuant to the following federal regulation:

  (1) An examination of the specific steps and funding source(s) needed to fully implement each TCM indicates that TCMs which are eligible for funding under title 23 U.S.C. or the Federal Transit Laws are on or ahead of the schedule established in the applicable implementation plan, or, if such TCMs are behind the schedule established in the applicable implementation plan, the MPO and DOT have determined that past obstacles to implementation of the TCMs have been identified and have been or are being overcome, and that all State and local agencies with influence over approvals or funding for TCMs are given maximum priority to approval or funding to TCMs over other projects within their control, including projects in locations outside the non-attainment or maintenance area.

  (2) If TCMs in the applicable implementation plan have previously been programmed for Federal funding but the funds have not been obligated and the TCMs are behind the schedule in the implementation plan, then the TIP cannot be found to conform if the funds intended for those TCMs are reallocated to projects in the TIP other than TCMs, or if there are no other TCMs in the TIP, if the funds are reallocated to projects in the TIP other than projects which are eligible for Federal funding intended for air quality improvements projects, e.g., the Congestion Mitigation and Air Quality Improvement Program.

  (3) Nothing in the TIP may interfere with the implementation of any TCM in the applicable implementation plan. (40 CFR Part 93.113(c)).

- For the two ground-level ozone precursors (VOC and NOx), motor vehicle emissions in the 2023 Transportation Improvement Program and Plan Bay Area 2050 are lower than the applicable motor vehicle emission budgets for the 2008 and 2015 national 8- hour ozone standards.
- For $PM_{2.5}$ and NOx, the Baseline Year test shows that the motor vehicle emissions are lower under the Build scenario for the various analysis years when compared to the baseline year emissions scenario.

Appendix A

List of 2023 TIP Projects by County

County	Sponsor	Project Name	Project Descripion	TIP ID	RTP ID	Air Quality Descripion	Conformity Analysis Year
Non-Exempt Projects							
Alameda	AC Transit	AC Transit: Quick Builds Transit Lanes	Berkeley: Durant Ave between Ellsworth and College; Oakland: MacArthur Blvd between Alma Ave and 13th Ave: Design and construct bus lanes and minor bus improvements.	ALA210018	21-T10-065	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Alameda	ACE	ACE Platform Extensions	ACE System: At Fremont, Pleasanton, Livermore, Vasco, Tracy, and Manteca stations: Extend existing ACE platforms to accommodate longer train sets	ALA170042	21-T11-105	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Alameda	ACTC	7th Street Grade Separation West	Oakland: Within the Port: Implement road and rail improvements, realign and grade separate 7th St and Maritime intersection, reconstruct and widen multi-use path; Between Joint Intermodal Terminal and	ALA170086	21-T07-055	NON-EXEMPT	2030
Alameda	ACTC	East Bay Greenway Phase 2	Alameda County: Generally along the BART alignment from Fruitvale BART station to South Hayward BART station: Install a trail facility consisting of Class I & Class IV bikeway facilities. Includes 2 road diet	ALA150008	21-T08-060	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Alameda	ACTC	I-580/680 Interchange HOV/HOT Widening	Alameda County: On I-580 between Hacienda Dr. and San Ramon/Foothill Road and on I-680 between Stoneridge Dr. and Amado: Widen to add one HOV/HOT lane for WB 580 to SB 680 and NB 680 to EB	ALA170008	21-T12-116	NON-EXEMPT	2040
Alameda	ACTC	I-680 Express Lanes from SR84 to Alcosta Boulevard	Alameda and Contra Costa Counties: SB I-680 from SR-84 to north of Alcosta Blvd: express lane improvements (Phase 1); NB and SB I-680 from SR-84 to north of Alcosta Blvd: Widen for express lanes	ALA170009	21-T12-116	NON-EXEMPT	2030
Alameda	ACTC	I-680 NB HOV/HOT Lane	Route I-680: from South of Auto Mall Parkway to State Route 84 in Alameda County: Construct NB HOV/HOT Lane.	ALA130034	21-T12-116	NON-EXEMPT	2025
Alameda	ACTC	I-880 NB HOV/HOT: North of Hacienda to Hegenberger	Alameda County: I-880 in the northbound direction from north of Hacienda Ave to Hegenberger Road: Widen to provide one HOV/express lane	ALA170010	21-T12-116	NON-EXEMPT	2040
Alameda	ACTC	I-880 North Safety Improvements	Oakland: I-880 between 23rd Ave to 29th Ave: Reconfigure Interchange, including new ramps.	ALA050019	21-T06-024	NON-EXEMPT	2025
Alameda	ACTC	I-880/Whipple Rd Industrial Pkwy SW I/C Imps	Union City/Hayward: at I-880/Whipple Rd Interchange: Implement interchange improvements including widening & reconfiguration of ramps, surface street and intersection improvements, and bike/ped	ALA170005	21-T06-024	NON-EXEMPT	2030
Alameda	ACTC	Oakland/Alameda Access Project	Oakland and Alameda: Between Fallon Street and Washington Street: Reconfigure interchanges & intersections to improve connections between I-880, the Posey & Webster tubes & downtown Oakland;	ALA070009	21-T06-024	NON-EXEMPT	2030
Alameda	ACTC	Rte 84 Widening, south of Ruby Hill Dr to I-680	Alameda County: On State Route 84 from south of Ruby Hill Drive to I-680: Upgrade from 2-lane conventional highway to 4-lane expressway, make operational improvements to SR84/I-680 I/C and	ALA150001	21-T06-037	NON-EXEMPT	2025
Alameda	BART	Bay Fair Connection	BART: At and near Bay Fair Station: Modify station and approaches to add one or more additional tracks and one or more passenger platforms for improved train service and operational flexibility	ALA170044	21-T11-106	NON-EXEMPT	2030
Alameda	Dublin	Dublin Blvd. - North Canyons Pkwy Extension	Alameda County, Dublin and Livermore: Dublin Blvd-North Canyons Parkway from Fallon Rd to Croak Rd: Construct six lane extension; Dublin Blvd-North Canyons Parkway from Croak Rd to Doolan Rd:	ALA150003	21-T07-056	NON-EXEMPT	2030
Alameda	Dublin	I-580 Interchange Imps at Hacienda/Fallon Rd, Ph 2	Dublin: I580/Fallon Rd IC: Ph 2 - Reconstruct overcrossing to widen to 4 lanes in each direction, reconstruct and widen ramps, add bike/ped imps; I580 Hacienda Dr IC: Reconstruct overcrossing to add NB	ALA170045	21-T06-019	NON-EXEMPT	2040
Alameda	Dublin	Tassajara Road Widening	Dublin: Tassajara Road between North Dublin Ranch Drive and Quarry Lane School Road: Widen the existing roadway from two to four travel lanes, buffered bike lanes with an added landscaped median,	ALA210026	21-T07-056	NON-EXEMPT	2030
Alameda	Fremont	Irvington BART Station	Fremont: Along the BART corridor in the Irvington District: Construct a new BART station	ALA230004	21-T11-104	NON-EXEMPT	2030

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Alameda	Fremont	State Route 262 (Mission Blvd) Improvements	In Fremont: Mission Blvd/I-680 IC: Implement interchange improvements at I-680 and new freeway lanes between I-680 and I-880	ALA170001	21-T06-046	NON-EXEMPT	2050
Alameda	Hayward	I-880 Auxiliary lanes at Industrial Parkway	Hayward: I-880 NB between Industrial Pkwy and Alameda Creek; I-808 SB between Industrial Pkwy and Whipple Rd: Construct auxiliary lanes	ALA090020	21-T06-024	NON-EXEMPT	2030
Alameda	Hayward	I-880 I/C Improvements (Winton Ave and A St)	Hayward: I-880 from Winton Ave & A St: Reconfigure interchanges providing NB & SB auxiliary lanes between the A St and Winton Ave interchanges, complete streets features for bicyclists & pedestrians,	ALA170046	21-T06-024	NON-EXEMPT	2030
Alameda	Hayward	I-880/Industrial Parkway West Interchange	In Hayward: At I-880/Industrial Parkway West: Reconstruct interchange, replace overcrossing structure, reconfigure on/off-ramps, provide HOV bypass lanes, widen & reconfigure local streets &	ALA110002	21-T06-024	NON-EXEMPT	2030
Alameda	Hayward	Rt 92/Clawiter/Whitesell Interchange Improvements	Hayward: Rt 92/Clawiter Rd: Upgrade existing Clawiter interchange. Add ramps and overcrossing for Whitesell St. extension. Signalize ramp intersections.	ALA090016	21-T06-041	NON-EXEMPT	2030
Alameda	MTC	Bay Bridge Forward: Alameda I-580 WB HOV Lane Ext	Alameda County: On I-580 westbound approach to the San Francisco-Oakland Bay Bridge toll plaza from the SR 24/I-980 interchange to I-80: Convert one general purpose lane to an HOV lane.	ALA190018	21-T06-049	NON-EXEMPT	2025
Alameda	MTC	BBF: I-80 WB Bus Only Lane Extension	Alameda County: On I-80 westbound between SFOBB Toll Plaza and Powell Street interchange: Construct a bus only or HOV lane.	ALA210028	21-T06-049	NON-EXEMPT	2030
Alameda	Oakland	Oakland Grand Avenue Roadway Improvements	Oakland: Grand Ave between MacArthur and Mandela: Implement improvements to bus operations, walking, and biking including a bus only lane and road diet (from four lanes to two lanes)	ALA210024	21-T08-060	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Alameda	Oakland	Oakland: Telegraph Avenue Complete Streets	Oakland: on Telegraph Avenue between 20th St and 41st St: Implement complete street project inc. road diet, buffered bike lanes, ped crossing improvements, bulbouts, bus boarding islands, traffic signal	ALA150047	21-T08-060	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Alameda	Oakland	West Oakland Howard Terminal Downtown Connectivity	Oakland: Between West Oakland, Howard Terminal, and Jack London District: Provide connectivity with improvements including railroad crossings, intersection improvements, transit only lanes and a new	ALA210023	21-T08-060	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Alameda	Union City	East-West Connector: Decoto and Quarry Lakes Pkwy	Union City and Fremont: Decoto Rd from I-880 to SR-238 (Mission Blvd): Widen roadway and implement complete streets improvements; Quarry Lakes Pkwy alignment between Paseo Padre Pkwy and SR-	ALA978004	21-T07-056	NON-EXEMPT	2040
Contra Costa	Brentwood	Brentwood Boulevard Widening - North (Phase I)	Brentwood: Brentwood Boulevard from Havenwood Avenue to Homecoming Way: Phase I-Widen from 2 to 4 lanes including a new parallel bridge over Marsh Creek, traffic signal modifications, and utilities	CC-070011	21-T07-056	NON-EXEMPT	2030
Contra Costa	Brentwood	Brentwood Boulevard Widening - North (Phase II)	Brentwood: Brentwood Blvd. between Homecoming Way and Lone Tree Way: Widen existing roadway from 2 to 4 lanes	CC-170015	21-T07-056	NON-EXEMPT	2030
Contra Costa	CC County	Byron Highway - Vasco Road Connection	Contra Costa County: between Byron Highway and Vasco Road: Construct an east-west connection road	CC-070081	21-T06-047	NON-EXEMPT	2040
Contra Costa	CC County	Camino Tassajara Realignment, S of Windemere Pkwy	Contra Costa County: Camino Tassajara between Windemere Parkway and the City of Dublin: Realign curves and widen road to four lanes	CC-170016	21-T07-056	NON-EXEMPT	2030
Contra Costa	CCTA	CCTA - Carshare 4 All	Contra Costa County: Various locations: Expand carshare access at transit locations and conduct outreach	CC-150009	21-EN09-132	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Contra Costa	CCTA	I-680 NB Express Lane Completion	CC County: I680 NB from Livorna to SR-242: Widen to extend managed Lane; from SR-242 to Benicia-Martinez Bridge: Convert HOV to Express Lane; from N Main to Treat: Operational improvements;	CC-170017	21-T12-116	NON-EXEMPT	2030
Contra Costa	CCTA	I-680 Part Time Transit Lane	In Contra Costa County: On I-680 between Ygnacio Valley Rd and Alcosta Blvd: Increase bus service efficiency by implementing bus operations on shoulder (BOS)	CC-170061	21-T12-122	NON-EXEMPT	2030

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Contra Costa	CCTA	I-680/SR 4 I/C Reconstruction - Ph 1,2a,4	CContra Costa County: I680/SR4 I/C: Ph1 construct a 2-lane flyover direct connector fr NB680 to WB SR4 and remove NB680 to WB SR4 loop, construct aux lanes, a slip ramp, Ph 2A extend the SB680 CD	CC-010023	21-T06-022	NON-EXEMPT	2030
Contra Costa	CCTA	Reconstruct I-80/San Pablo Dam Rd Interchange	San Pablo: I-80/San Pablo Dam Rd I/C: Reconstruct I/C-relocating WB El Portal on-ramp to the full I/C northwards, providing access to McBryde through a new road from SPDR I/C, and replacing Riverside	CC-070035	21-T06-013	NON-EXEMPT	2030
Contra Costa	CCTA	SR 4 Integrated Corridor Management	Contra Costa County: Along SR 4 between I-80 in Hercules to the SR 4/SR 160 Interchange in the City of Antioch: Implement Integrated Corridor Management along corridor.	CC-150013	21-T07-057	NON-EXEMPT	2040
Contra Costa	CCTA	SR-4 Operational Improvements - Initial Phases	Contra Costa County: On SR-4 between I-680 and Bailey Road: Implement operational improvements including adding general purpose and auxiliary lanes at various locations	CC-170018	21-T06-031	NON-EXEMPT	2030
Contra Costa	Concord	SR 242 / Clayton Road Interchange Improvements	Concord: At the SR242/Clayton Rd Interchange: Construct NB on-ramp and SB off-ramp	CC-070024	21-T06-045	NON-EXEMPT	2040
Contra Costa	El Cerrito	El Cerrito del Norte Area TOD Complete Street Imps	El Cerrito: On roadways surrounding Del Norte BART: Improve access, circulation and safety for bicyclists, pedestrians, transit users, and motorists traveling to BART and TOD/PDA	CC-070046	21-T08-060	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Contra Costa	Hercules	Hercules Intercity Rail Station	Hercules: At future train station: Install multi-use trails, utility relocation, track improvements, construct rail station, and parking facility.	CC-030002	21-T11-115	NON-EXEMPT	2030
Contra Costa	MTC	RSR Forward: ORT and I-580 WB HOV Lane	Contra Costa County: On westbound I-580 approaching RSR Bridge beginning at Regatta Ave: Convert one of three general-purpose lanes to an HOV lane and replace existing tolling structure with toll	CC-210010	21-T06-020	NON-EXEMPT	2030
Contra Costa	Oakley	Civic Center Railroad Platform Park n Ride Complex	Oakley: Main Street between 2nd Street and O'Hara Avenue: Build 2 parking lots for multi-modal park, ride, and transit activities. Lots will serve train riders for a future train platform which includes	CC-170019	21-T11-105	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Contra Costa	Richmond	I-80/Central Avenue - Local Portion	Richmond: I-80/Central Ave Interchange: Connect Pierce St to San Mateo and relocate signal at Pierce/Central to San Mateo/Central intersection.	CC-050076	21-T06-013	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Contra Costa	San Ramon	Crow Canyon Road (Alcosta to Indian Rice) Widening	San Ramon: Crow Canyon Rd from Alcosta Blvd to Indian Rice Rd: Widen to three lanes in each direction. Work will be completed in two phases.	CC-190001	21-T07-056	NON-EXEMPT	2030
Contra Costa	SJRC	Oakley Station Platform	Oakley: North of Main Street between 2nd St and O'Hara Ave: Construct a new train station platform for the Amtrak San Joaquins inter-city rail service.	CC-190002	21-T11-115	NON-EXEMPT	2025
Marin	GGBHTD	Golden Gate Ferry: New Vessel	GGBHTD: 1 vehicle: Purchase a new, 500-passenger, high-speed ferry vessel to continue to provide expanded commute service from Larkspur and Tiburon to San Francisco.	MRN190001	21-T11-094	NON-EXEMPT	2030
Marin	MTC	Richmond-San Rafael Bridge Access Improvements	Contra Costa and Marin Counties: On I-580/Richmond-San Rafael Bridge: Convert existing shoulders to an automobile travel lane (EB) and a bike/ped path, construct bike/ped path in Contra Costa County	MRN150009	21-T06-020	NON-EXEMPT	Baseline
Marin	Novato	Novato Boulevard Widening, Diablo to Grant	Novato: Novato Blvd between Diablo and Grant Ave.: Improvements to roadway including including widening existing two/three lanes to four lanes and adding turn lanes, bike lanes, curbs, and sidewalks.	MRN070006	21-T07-056	NON-EXEMPT	2025
Marin	San Anselmo	San Anselmo - Center Blvd Bridge Replace (27C0079)	San Anselmo: Center Blvd Bridge over San Anselmo Creek, at Sycamore Ave: Replace existing 2 lane bridge with 3 lane bridge	MRN110032	21-T01-004	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Marin	TAM	US 101 HOV Lanes - Marin-Sonoma Narrows (Marin)	Marin and Sonoma Counties: From SR 37 in Novato to Old Redwood Highway in Petaluma; Convert expressway to freeway and widen to 6 lanes for HOV lanes.	MRN050034	21-T06-026	NON-EXEMPT	2025
Napa	American Canyon	Devlin Road and Vine Trail Extension	American Canyon: Devlin Road from the southern terminus 2,500 feet south to Green Island Road: Construct roadway extension and Class I multipurpose path	NAP130006	21-T08-060	NON-EXEMPT - Not Regionally Significant Project	Not Modeled

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Napa	American Canyon	Eucalyptus Drive Realignment Complete Streets	American Canyon: Eucalyptus Dr. from Theresa Rd to Hwy 29: Extend roadway and reconfigure intersection of Eucalyptus Dr and Hwy 29 and Eucalyptus Drive and Theresa Road. Create complete street	NAP110029	21-T08-060	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Napa	NVTA	NVTA- Vine Transit Bus Maintenance Facility	Napa County: At an 8 acre site in south Napa County: Construct a new transit maintenance facility for Vine Transit operations to improve reliability, service and charge electric vehicles, provide for service	NAP170003	21-T01-002	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Napa	NVTA	SR 12/29/221 Soscol Junction Interchange Imps.	In Napa County: At SR-221/SR-29 Soscol Ferry Road: Construct improvements	NAP090003	21-T06-034	NON-EXEMPT	2025
Regional/ Multi-County	BAIFA	ALA/CC-80 and Bay Bridge Approach Express Lanes	In Alameda/Contra Costa counties: On I-80 from the Carquinez Bridge to Powell and the Bay Bridge Approaches: Convert HOV lanes to express lanes. Project also references RTP ID 17-10-0045.	VAR170003	21-T12-116	NON-EXEMPT	2030
Regional/ Multi-County	BART	BART Transbay Core Capacity Improvements	BART: Systemwide: Implement communication-based train control (CBTC) system, expand rail car fleet by 306 vehicles, add traction power substations (5); At Hayward Maintenance Complex; Expand	REG170017	21-T11-106	NON-EXEMPT	2030
Regional/ Multi-County	BART	BART: Railcar Procurement Program	BART: Procure 790 Railcars (includes the replacement of 669 Railcars)	REG090037	21-T01-002	NON-EXEMPT	2040
Regional/ Multi-County	MTC	Freeway Performance Initiative (FPI)	SF Bay Area: Regionwide: Design, implement and maintain ramp metering, Traffic Operation Systems (TOS), and other Freeway Performance Initiative (FPI) projects on major congested freeways throughout	REG090003	21-T06-048	NON-EXEMPT	Multiple Years
Regional/ Multi-County	MTC	Freeway Performance Program: SR-84	Alameda and San Mateo Co: Along the Dumbarton Corridor: Deliver operational strategies including adaptive ramp metering, advanced technologies, arterial/transit priority signal upgrades, higher vehicle	VAR170023	21-T06-049	NON-EXEMPT	2030
Regional/ Multi-County	MTC	SR 37 Interim Project - Sears Point to Mare Island	Solano and Sonoma Counties: SR-37 between the Sears Point/SR 121, and Mare Island: Implement a high occupancy vehicle (HOV) lane, implement tolling.	VAR210004	21-T06-035	NON-EXEMPT	2030
Regional/ Multi-County	SMART	SMART Rail and Pathway (Phase 2)	Marin and Sonoma Counties: Sonoma County Airport Station to Windsor: Extend rail and pathway; Petaluma North at Corona Rd: Construct infill station; Various locations along SMART corridor: Construct	VAR210005	21-T11-113	NON-EXEMPT	2030
Regional/ Multi-County	WETA	Ferry Service - Berkeley	WETA: Berkeley: Provide ferry service from Berkeley to San Francisco.	MTC050027	21-T11-096	NON-EXEMPT	2030
San Francisco	Port of SF	Mission Bay Ferry Terminal	San Francisco: At the eastern terminus of 16th St: Construct new ferry landing to service San Francisco Mission Bay and Central Waterfront as a part of the Bay area ferry transit system. Project includes RTP-	SF-170001	21-T11-097	NON-EXEMPT	2030
San Francisco	SF County TA	HOV/HOT Lanes on U.S.101 and I-280 in SF	San Francisco: On US 101 from SF/SM County line to I-280 interchange and on I-280 from US 101 interchange to 6th Street offramp: Convert an existing mixed traffic lane and/or shoulder/excess ROW in	SF-130008	21-T12-116	NON-EXEMPT	2030
San Francisco	SF County TA	Quint-Jerrold Connector Road	San Francisco: From Oakdale Ave to Jerrold Ave: Provide an alternate access route between Oakdale and Jerrold Avenues and across the Caltrain tracks, to be coordinated with Caltrain's Quint Street Bridge	SF-150008	21-T07-056	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
San Francisco	SF County TA	SF Downtown Congestion Pricing	San Francisco: In the downtown area: Implement a demonstration value pricing (tolls and incentives) program	SF-130017	21-T10-091	NON-EXEMPT	2030
San Francisco	SF County TA	Treasure Island Congestion Pricing Program	San Francisco: Treasure Island: Implement Congestion Pricing Program. project is phased	SF-110049	21-T10-092	NON-EXEMPT	2040
San Francisco	SF County TA	Treasure Island Pricing Mobility Improvements	San Francisco: On Treasure Island: Pricing Program Mobility Improvements including Transit Capital and maintenance improvements. The project is phased	SF-130005	21-T10-092	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
San Francisco	SF County TA	US 101 Doyle Drive Availability Payments	San Francisco: US 101 (Doyle Drive) from Lombard Street/Richardson Avenue to Route 1 Interchange: Availability payments for roadway replacement/rehabilitation project SF-991030	SF-190011	21-T01-006	NON-EXEMPT - Not Regionally Significant Project	Not Modeled

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San Francisco	SF DPW	Harney Way Roadway Widening	San Francisco: Harney Way from US 101 to Jamestown: Improvements including right-of-way engineering, land acquisition for future widening of roadway, design, landscaping and sidewalk improvements,	SF-090004	21-T07-056	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
San Francisco	SF DPW	HOPE SF Street Network - Sunnydale and Potrero	San Francisco: Sunnydale and Potrero neighborhoods: Construct new and realigned street networks throughout the two remaining HOPE SF sites, including traffic calming pedestrian and bike network, and	SF-170013	21-T07-056	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
San Francisco	SF DPW	Hunters Pt Shipyard and Candlestick Pt Local Roads	In San Francisco: Hunters Point Shipyard and Candlestick Point: Implement new local streets to support multi-modal mixed use development. The project is phased.	SF-110006	21-T10-063	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
San Francisco	SF DPW	SF- Better Market Street Transportation Elements	In San Francisco: Market St from Steuart St to Octavia Blvd: improve roadway, including resurfacing, sidewalk and transit boarding improvements, transit connections, traffic signals, transportation	SF-130001	21-T08-060	NON-EXEMPT	2020
San Francisco	SFMTA	Geary Bus Rapid Transit	San Francisco: Along the Geary corridor between 34th Avenue and Market Street: Design and implement transit performance and safety improvements	SF-070004	21-T10-079	NON-EXEMPT	2030
San Francisco	SFMTA	Geneva Harney BRT Infrastructure - Eastern Segment	SFMTA: Bayview and Hunters Point: from Executive Park/Harney Way to Hunters Point Transit Center via Candlestick/Hunters Pt. Shipyard development: Construct extension of Geneva Harney BRT	SF-090023	21-T10-080	NON-EXEMPT	2030
San Francisco	SFMTA	Geneva Harney BRT Infrastructure: Central Segment	SFMTA: From Executive Park/Harney Way under US 101 to SF/Daly City line on Geneva Avenue: Construct bus rapid transit facilities	SF-090020	21-T10-080	NON-EXEMPT	2030
San Francisco	SFMTA	Historic Streetcar Extension to Fort Mason	San Francisco: From Fisherman''s Wharf through National Park Service lands in Aquatic Park to Fort Mason: Extend the E-line or the current F-line service.	SF-070003	21-T10-082	NON-EXEMPT	2030
San Francisco	SFMTA	Light Rail Vehicle Procurement	SFMTA: Fleet-wide: Procure 219 light rail vehicles with an option for an additional 45 vehicles to replace existing fleet and expand service	SF-090012	21-T01-002	NON-EXEMPT	2040
San Francisco	SFMTA	SF Muni Third St LRT Phase 2 - New Central Subway	San Francisco: North-south alignment under 4th St. to Market, then under Geary to Stockton & under Stockton to Clay St; Extend the Light Rail line project includes procurement of four LRVs.	SF-010037	21-T10-083	NON-EXEMPT	2025
San Francisco	SFMTA	SFMTA - Core Capacity Program	SFMTA: Along the K, J and M-Line Corridors: Implement high priority route improvements from the Muni Forward Program	SF-190012	21-T10-084	NON-EXEMPT	2030
San Francisco	SFMTA	Transit Center in Hunters Point	Muni:Transit Center in Hunters Point; Construct 10 bays, Low-level platform, Operator restroom, bus shelters,Electrical ductbank for MUNI power,etc	SF-090016	21-T10-063	NON-EXEMPT	2040
San Francisco	SFMTA	Van Ness Avenue Bus Rapid Transit	San Francisco: On Van Ness Avenue from Mission to Lombard: Design and implement a BRT project. Project is phased. Project also references RTP IDs 240745 and 240471	SF-070005	21-T10-081	NON-EXEMPT	2025
San Francisco	TBJPA	Transbay Terminal/Caltrain Downtown Ext: Ph. 2	San Francisco: From Fourth/Townsend to Salesforce Transit Center: Extend Caltrain commuter rail service	SF-050002	21-T11-110	NON-EXEMPT	2030
San Francisco	WETA	WETA: Electric Vessels and Related Infrastructure	WETA: Fleetwide: Support the purchase/construction of all-electric vessels and related charging infrastructure.	SF-190008	21-T01-002	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
San Mateo	Brisbane	US 101/Candlestick I/C Reconfiguration	In San Mateo County: U.S. 101/Candlestick Point Interchange: Planning and environmental studies for interchange reconfiguration to allow for safer and better flow of traffic	SM-090004	21-T06-027	NON-EXEMPT	Not Modeled
San Mateo	Caltrain	Peninsula Corridor Electrification Expansion	Caltrain: Electric Multiple Unit (EMU) fleet: Expand fleet through procurement of an additional 40 vehicles.	SM-190002	21-T11-107	NON-EXEMPT	2040
San Mateo	CCAG	Improve US 101 operations near Rte 92	City of San Mateo: On US 101 near Route 92: Operational improvements. SMCTA is the co-sponsor for this project.	SM-090014	21-T06-027	NON-EXEMPT	2030
San Mateo	CCAG	US-101 Managed Lanes North of I-380	San Mateo County: On US-101 from I-380 to logical termini near SF/SM County line: Install managed lane in each direction. SMCTA is co-sponsoring the project.	SM-190009	21-T12-116	NON-EXEMPT	2030
San Mateo	CCAG	US101 Managed Lanes: Santa Clara Co-S of Grand Ave	San Mateo County: On US101 from 2 mi. S. of the Santa Clara County Line to 0.3 mi. S. of Grand Ave I/C: Install Express Lanes. Use existing aux lanes where possible and add aux lanes where needed for	SM-150017	21-T12-116	NON-EXEMPT	2025

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San Mateo	Millbrae	Widen Millbrae Avenue	Millbrae: Millbrae Avenue between Rollins Road and US101 Southbound On Ramp: Widen roadway and resurface the intersection of Millbrae Avenue and Rollins Road.	SM-210001	21-T07-056	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
San Mateo	Pacifica	Manor Drive Overcrossing and Milagra On Ramp	In Pacifica: Hwy 1 and Manor Drive I/C: Widen the existing overcrossing; Hwy 1 and Milagra: Construct a new on-ramp; Both intersections: install signals	SM-170004	21-T06-030	NON-EXEMPT	2030
San Mateo	Redwood City	Blomquist Street Extension	Redwood City: On Blomquist Street from Maple Street to Bair Island Road: Extend roadway across Redwood Creek.	SM-090007	21-T07-056	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
San Mateo	Redwood City	Redwood City Ferry Service	SF Bay Area: Between Redwood City and San Francisco/Oakland: Environmental clearance and design of ferry transit service	SM-110002	21-T11-098	NON-EXEMPT	2030
San Mateo	SamTrans	SamTrans Express Bus Service	San Mateo, San Francisco and Santa Clara Counties: On the US-101 Corridor: Implement a network of four express bus routes	SM-190003	21-T12-119	NON-EXEMPT	2030
San Mateo	San Carlos	US101/Holly St I/C Mod and Bike/Ped Overcrossing	San Carlos: At Holly St/ US-101 Interchange: Widen east bound to north bound ramp to two lanes and eliminate north bound to west bound loop and construct a grade-separated multipurpose path that	SM-090008	21-T06-027	NON-EXEMPT	2030
San Mateo	San Mateo	US 101/Peninsula Avenue Interchange Improvements	San Mateo: US-101 at Peninsula Ave and East Poplar Ave: Convert a partial interchange to a full interchange by adding new southbound on- and off-ramps and closing the southbound on- and off-ramps	SM-170011	21-T06-027	NON-EXEMPT	2030
San Mateo	SMCTA	US 101 Aux lanes from Sierra Point to SF Co. Line	San Mateo County: On US 101 from Sierra Point to SF County Line: Construct auxiliary lanes or managed lanes.	SM-090009	21-T12-116	NON-EXEMPT	2030
San Mateo	SSF	US 101/Produce Avenue New Interchange	South San Francisco: On US Highway 101 from Utah Avenue on the east side to the vicinity of Produce Avenue on the west side: Construct a local interchange	SM-110003	21-T06-027	NON-EXEMPT	2030
Santa Clara	Caltrans	SCL-SM I-280 Pavement Preserv. and HOV Extension	Santa Clara and San Mateo Counties: On I-280 from Foothill Blvd(SCL County PM 11.5) to 0.5 mile north of Sand Hill Rd(SM County PM R2.1): Pavement rehabilitation; On SB I-280 from near Magdelena Ave	SCL190034	21-T06-016	NON-EXEMPT	2025
Santa Clara	Milpitas	South Milpitas Blvd Extension and Bridge	Milpitas: S. Milpitas Blvd over Penitencia Creek connecting to Tarob Ct: Extend roadway and construct bridge	SCL210035	21-T07-056	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Santa Clara	San Jose	Julian and St. James Couplet Conversion	San Jose: Along Julian St from Coleman Ave to 3rd St and St James from Market St to 4th St: Convert 1-way to 2-way traffic	SCL210026	21-T08-060	NON-EXEMPT - Not Regionally Significant Project	2030
Santa Clara	San Jose	San Jose - Autumn Street Extension	In San Jose: Autumn St between Julian Street and San Carlos Street: Widen, partially realign, and extend Autumn Street to adequately accommodate projected traffic demand.	SCL110006	21-T07-056	NON-EXEMPT	2050
Santa Clara	Santa Clara Co	Montague Expwy Widening - Trade Zone-Great Mall	Santa Clara County: Montague Expressway between Trade Zone and Great Mall Blvd: Widen roadway to 8 lanes	SCL090017	21-T07-056	NON-EXEMPT	2030
Santa Clara	VTA	US 101/Buena Vista Avenue Interchange Improvement	Gilroy: At Buena Vista Ave. overcrossing at US 101: Construct a complete interchange by widening the overcrossing structure and adding new northbound and southbound on and off ramps.	SCL190010	21-T06-028	NON-EXEMPT	2030
Santa Clara	VTA	BART - Berryessa to San Jose Extension	San Jose: From Berryessa Station to San Jose and Santa Clara: Extend BART line	BRT030001	21-T11-109	NON-EXEMPT	2030
Santa Clara	VTA	Calaveras Boulevard Improvements	Milpitas: Calaveras Blvd. overpass at UPRR tracks from Abel St to Town Center Blvd: Widen from 4 to 6 lanes and modify signing, striping and signals	SCL190009	21-T07-056	NON-EXEMPT	2040
Santa Clara	VTA	Eastridge to BART Regional Connector	San Jose: At the Eastridge Transit Center: Ph I (completed) ¿ Improve and expand transit center; Capitol Expwy Light Rail from Alum Rock Transit Center to Eastridge Transit Center: Ph II - Extend light rail,	SCL050009	21-T10-087	NON-EXEMPT	2030
Santa Clara	VTA	LRT Extension to Vasona Junction and Double Track	Campbell and San Jose: From the existing Winchester Station to a new Vasona Junction Station, near Route 85: Extend the light-rail line and double-track single-track sections of the Vasona line	SCL090040	21-T10-089	NON-EXEMPT	2040
Santa Clara	VTA	Santa Clara County - US 101 Express Lanes	In Santa Clara County: From Cochrane Rd. in Morgan Hill to San Mateo County line in Palo Alto: Implement roadway pricing on US 101 carpool lane	SCL110002	21-T12-116	NON-EXEMPT	2025
Santa Clara	VTA	SR 152 New Trade Corridor	Santa Clara/ San Benito counties: SR152 between US101 and SR156: Complete PA&ED for new alignment the highway.	SCL090016	21-T06-042	NON-EXEMPT	Not Modeled

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Santa Clara	VTA	SR 17 Congestion Relief in Los Gatos	Los Gatos: On both directions of SR 17 from Lark Ave to south of SR 9 IC: Construct aux lanes including modifications to on-ramps and off-ramps to improve operations and relieve congestion; Along SR-	SCL190014	21-T06-032	NON-EXEMPT	2030
Santa Clara	VTA	SR 85 Express Lanes	Santa Clara County: On SR 85 carpool lane from US 101 in San Jose to US 101 in Mountain View including the US 101/SR 85 HOV direct connectors and approaches: Install ETS and implement roadway	SCL090030	21-T12-116	NON-EXEMPT	2030
Santa Clara	VTA	US 101/Zanker Road-Skyport Drive-N. Fourth St. Imp	San Jose: US101 at Zanker Rd/Skyport Dr./N. 4th St: Construct a new overcrossing over US 101 connecting Zanker Rd to Skyport Dr-N. Fourth St to create a new north-south corridor parallel to N. First St	SCL190007	21-T06-028	NON-EXEMPT	2030
Solano	Dixon	Parkway Blvd/UPRR Grade Separation	Dixon: Parkway Blvd from Valley Glen Dr. to Pitt School Rd: Construct new 4 lane roadway and overcrossing of UPRR & Porter Rd with bicycle and pedestrian access	SOL050009	21-T07-056	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Solano	Fairfield	Fairfield Transportation Center - Phase 3	In Fairfield: Fairfield Transportation Center: Construct second parking structure with approximately 600 automobile parking spaces and access improvements.	SOL110007	21-T10-093	NON-EXEMPT - Not Regionally Significant Project	Not Modeled
Solano	Fairfield	Fairfield/Vacaville Hannigan Station Improvements	Fairfield: Capitol Corridor: Construct train station with passenger platforms, pedestrian undercrossing, highway overcrossing, park and ride lot,bike and other station facilities. Project is phased.	SOL030002	21-T11-115	NON-EXEMPT	2025
Solano	MTC	Solano I-80 Managed Lanes	Solano County: I-80 from Red Top Rd to I-505: Convert existing HOV to Managed Lane; I-80 from Air Base Parkway to I-505: Construct new Managed Lanes. Project also references RTP IDs 17-10-0059	SOL110001	21-T12-116	NON-EXEMPT	2025
Solano	Solano County	Redwood-Fairgrounds Dr Interchange Imps	Solano County: I-80 Redwood St. I/C and SR-37/Fairgrounds Dr. I/C: Implement I/C and safety improvements; Fairgrounds Dr. from Redwood St. to SR-37: Remove left turn lane and widen to add one lane	SOL090015	21-T06-015	NON-EXEMPT	2030
Solano	STA	I-80/I-680/SR 12 Interchange Improvements	Fairfield: I-80/I-680/Route 12 IC: Ph-1 Improve IC, including connecting I-80 to SR 12 W, I-680 NB to SR 12W (Jameson Canyon), I-80 to I-680 (+ Express Lane Direct connectors), build local IC and build	SOL070020	21-T06-015	NON-EXEMPT	2040
Solano	STA	Jepson: Leisure Town Road from Vanden to Commerce	Jepson Parkway segment: Leisure Town Road from Vanden Road to Commerce. Project is phased	SOL110005	21-T07-056	NON-EXEMPT	2030
Solano	STA	Jepson: Leisure Town Road Phase 1B and 1C	Vacaville: (Phase 1B) Leisure Town Rd from Elmira Rd to Sequoia and (Phase 1C) from Sequoia Dr to Horse Creek: Widen to 4 lanes with multiuse sidewalk and safety improvements	SOL110006	21-T07-056	NON-EXEMPT	2030
Solano	STA	Jepson: Walters Rd Ext - Peabody Rd Widening	Solano County: Jepson Parkway segment: Walters Road Extension, Peabody Widening.	SOL110004	21-T07-056	NON-EXEMPT	2030
Sonoma	Son Co TA	US 101 Marin/Sonoma Narrows (Sonoma)	Marin and Sonoma Counties (Sonoma County Portion): From SR37 in Novato to Old Redwood Highway in Petaluma: convert expressway to freeway; Between Lakeville Highway and East Washigton Street:	SON070004	21-T06-029	NON-EXEMPT	2040

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Exempt Projects							
Alameda	AC Transit	AC Transit Replacement of Transbay Buses	AC Transit: Transbay Fleet: Purchase replacement buses	ALA210007	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Alameda	AC Transit	AC Transit: COVID-19 Emergency Transit Operations	AC Transit: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and	ALA190023	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Alameda	AC Transit	AC Transit: Paratransit Van Replacement	AC Transit: Paratransit fleet: Amortized cost of replacing vans used for paratransit service. Vans are operated and replaced by paratransit contractor. FTA funds programmed annually in lieu of	ALA990052	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of support vehicles	Not Modeled
Alameda	AC Transit	AC Transit: Purchase (10) 40' Buses-Fuel Cell ZEB	AC Transit: 10 vehicles: Replace 10 40ft urban diesel buses with Zero-emission fuel cell buses	ALA150039	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Alameda	AC Transit	AC Transit: Replace 30-ft Diesel Buses	AC Transit: 30-ft Diesel Buses: Purchase replacement vehicles	ALA210010	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Alameda	AC Transit	AC Transit: Replace 40-ft Diesel Buses	AC Transit: Diesel bus fleet: Purchase replacement buses	ALA210012	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Alameda	AC Transit	AC Transit: Replace Articulated Buses	AC Transit: Articulated Bus Fleet: Replace diesel-powered buses with fuel cell-powered buses	ALA210011	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Alameda	AC Transit	AC Transit:AC Transit: Replace 50 40-ft Diesels	AC Transit: 50 40-ft Diesel Buses: Purchase replacement vehicles	ALA170081	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Alameda	AC Transit	Tempo Quick Build Transit Lane Delineation	Oakland: On International Blvd between 14th Ave and Durant Ave: Add warning features to an existing median bus lane.	ALA210017	21-T10-073	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	ACE	ACE Capital Access Fee	ACE: Along ACE Corridor: Capital Lease payments required to operate along Union Pacific corridor	ALA210008	21-T01-001	EXEMPT (40 CFR 93.126) - Operating assistance to transit agencies	Not Modeled
Alameda	ACE	ACE Fixed Guideway (Capitalized Maintenance)	ACE: Along ACE Corridor: Capitalized Maintenance with Union Pacific Railroad for track/signal maintenance.	ALA170048	21-T01-002	EXEMPT (40 CFR 93.126) - Operating assistance to transit agencies	Not Modeled
Alameda	ACE	ACE Revenue Vehicle Communication Equipment	ACE: Fleetwide: Replace and upgrade on-board communications equipment for the ACE service	ALA210009	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts,	Not Modeled
Alameda	ACE	ACE Track Improvements.	ACE: From Stockton to San Jose: Corridor improvements for signaling, grade crossing, track and other cost associated	ALA010056	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation or reconstruction of track structures, track, and trackbed in	Not Modeled
Alameda	ACE	ACE: Railcar Midlife Overhaul	ACE: System-wide: Perform midlife overhaul of existing ACE railcars to extend useful life.	ALA170079	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation of transit vehicles	Not Modeled
Alameda	ACTC	7th Street Grade Separation East	Oakland: 7th St and rail tracks between I880 and Maritime St in the Port of Oakland: Reconstruct the existing 7th St underpass on an adjacent alignment, rail tracks, and other rail infrastructure. No through	ALA170085	21-T07-055	EXEMPT (40 CFR 93.127) - Changes in vertical and horizontal alignment	Not Modeled
Alameda	ACTC	Alameda County Rail Safety Enhancement Program	Alameda County: Various at-grade rail crossings: Implement safety improvements	ALA210022	21-T07-055	EXEMPT (40 CFR 93.126) - Railroad/highway crossing	Not Modeled
Alameda	ACTC	Alameda County Safe Routes to School	Alameda County: Countywide: SR2S Program including education & outreach in various K-12 schools, ridesharing, & project development.	ALA110033	21-EN09-132	EXEMPT (40 CFR 93.126) - Grants for training and research programs	Not Modeled
Alameda	ACTC	Alameda CTC: San Pablo Avenue Bus/Bike Lanes	Oakland, Emeryville, and Berkeley: Along San Pablo Avenue from 16th Street in Downtown Oakland to Heinz Street: Install pedestrian crossing improvements and dedicated bus lanes and bike lanes	ALA230008	21-T10-077	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Alameda	ACTC	East Bay Greenway Multimodal (Phase 1)	Alameda County: Along the BART alignment following parallel arterial roadways from Lake Merritt BART Station to S. Hayward BART Station: Install Class I & Class IV bikeway facilities. Includes road diet	ALA230007	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	ACTC	Freight Intelligent Transportation System (FITS)	Oakland: In the Port of Oakland and surrounding areas: Implement ITS improvements, signal systems, and other technologies to cost-effectively manage truck arrivals and improve incident response	ALA170087	21-T07-055	EXEMPT (40 CFR 93.127) - Intersection signalization projects at individual intersections	Not Modeled
Alameda	ACTC	I-80 Gilman Interchange Improvements	Berkeley: On Gilman Ave at I-80: Reconfigure interchange providing dual roundabout at the entrance & exits from I-80 as well as the Eastshore Hwy & West Frontage Rd and bike/ped overcrossing. Project	ALA050079	21-T09-061	EXEMPT (40 CFR 93.127) - Changes in vertical and horizontal alignment	Not Modeled

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Alameda	ACTC	I-80/Ashby Avenue Interchange Improvements	Alameda County: I-80/Ashby IC: Reconstruct the interchange including constructing new bridge, stand-alone bike/ped overcrossing and other bike/ped improvements, and ramp metering.	ALA170002	21-T09-061	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Alameda	ACTC	San Pablo Ave Parallel Bike Improvements	Berkeley and Albany: Various locations along bicycle boulevard/neighborhood bikeway routes parallel to San Pablo Avenue: Install bicycle improvements including crossing safety, speed/volume control	ALA230010	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	ACTC	San Pablo Ave Safety and Bus Bulb Improvements	Berkeley and Albany: San Pablo Avenue in Berkeley and Albany from Heinz St to the Contra Costa County line: Install bus bulbs and pedestrian/bicycle crossing improvements	ALA230009	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	Alameda	Alameda Grand St Pavement Rehab and Safety Imps	Alameda: Along Grand St: Resurface and rehabilitate pavement, implement bicycle and pedestrian improvements and other complete streets improvements	ALA170074	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Alameda	Alameda	Central Avenue Safety Improvements	Alameda: On Central Ave from Main St to Sherman St: construct multimodal street improvements including reduction from 4 to 3 lanes, center turn lane, bike lanes, 2-way separated bikeway, roundabouts	ALA170049	21-T07-056	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	Alameda	Clement Avenue Complete Streets	Alameda: On Clement Avenue between Broadway and Grand St: Complete street improvements including Class IV bikeway, curb extensions, flashing beacons, sidewalk/curb ramp improvements, railroad	ALA170073	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	Alameda County	Alameda County Complete Street Improvements	Alameda County: Various locations: Bicyle and ped safety improvements	ALA190019	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	Alameda County	Alameda Co-Various Streets and Roads Preservation	Unincorporated Alameda County: Various roadways: Rehabilitate pavement	ALA130018	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Alameda	Alameda County	E14th St/Mission Blvd Corridor Improvements	Alameda County: Along E14th St/Mission Blvd between I-238 and Hayward City limits: Construct streetscape improvements for continuity along corridor	ALA190022	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	Alameda County	Estuary Bridges Seismic Retrofit and Repairs	Oakland: 3 Oakland Estuary bridges: Seismic retrofit and repairs	ALA090022	21-T01-004	EXEMPT (40 CFR 93.126) - Widening narrow pavements or reconstructing bridges (no additional travel	Not Modeled
Alameda	Alameda County	Fruitvale Ave Roadway Bridge Lifeline	Alameda County: Fruitvale Roadway Bridge: Retrofit bridge to a lifeline facility	ALA090023	21-T01-004	EXEMPT (40 CFR 93.126) - Widening narrow pavements or reconstructing bridges (no additional travel	Not Modeled
Alameda	Alameda County	Niles Canyon Trail, Phase I	Alameda County: In the vicinity of SR-84 between Niles District and Palomares Road (Phase I): Construct multi-Use trail	ALA190021	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	Albany	Ohlone Greenway Trail Safety Improvements	Albany: Various locations along the Ohlone Greenway: Install safety improvements including new protected left turn phase which would eliminate potential conflicts between trail users and vehicles turning	ALA190016	21-T09-061	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	Albany	San Pablo Ave and Buchanan St Pedestrian Imps.	Albany: Various Locations on Buchanan St and San Pablo Ave: Streetscape improvements including medians, bulb outs, signal modifications, striping of high visibility crosswalks. Project delivery is phased.	ALA170088	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	BART	19th Street BART Station Modernization-GO Uptown	In Oakland: At the 19th Street BART Station and adjacent public realm: Implement station and streetscape improvements	ALA170055	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Alameda	BART	BART: COVID-19 Emergency Transit Operations	BART: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	ALA190025	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Alameda	BART	BART: Fare Collection Equipment	BART: Systemwide: Acquire and install fare collection equipment.	ALA090065	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts,	Not Modeled
Alameda	BART	BART-Elevator Renovation program	BART: Various locations system-wide: Renovate or rehabilitate elevators	ALA190014	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Alameda	BART	DT Berkeley BART Station Elevator Modernization	Berkeley: At the Downtown Berkeley BART Station: Modernize station elevators	ALA230001	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled

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Alameda	BART	East Bay Greenway Segment II	Oakland: Along San Leandro St from Seminary Ave to 69th Ave: Construct a protected multi-use pathway. BART is the project sponsor and will pass through federal funds to the City of Oakland, which will	ALA210013	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	BART	Hayward Fleet Maintenance Facilities	BART: At the Hayward Maintenance Complex: Expand complex to accommodate additional rail vehicles; tire fleet maintenance; and support additional rail cars and new fleet preventative maintenance for	ALA230005	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Alameda	BART	Macarthur Station Mobility Hub Improvements	BART: At the MacArthur BART Station: Construct a suite of mobility hub amenities aimed at enhancing transit connectivity, promoting transit universal design, and utilizing low-carbon and renewable	ALA210030	21-T03-009	EXEMPT (40 CFR 93.126) - Directional and informational signs	Not Modeled
Alameda	Berkeley	Southside Complete Streets and Transit Improvement	Berkeley: Various locations south of UC Berkeley: Construct two-way cycle tracks, signal modifications, transit improvements, loading zone modifications, pedestrian safety improvements, and repaving	ALA170067	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	Caltrans	GL: Alameda and Marin Counties - TOS-Mobility	Alameda and Marin Counties: Various Locations: Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and 40 CFR Part 93.127 Table 3 categories	ALA170060	21-T06-048	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	CCJPA	CCJPA SR84 Intermodal Bus Facility	Fremont: On SR84 near the Ardenwood Park-n-Ride: Construct an intermodal bus facility	ALA210033	21-T11-111	EXEMPT (40 CFR 93.127) - Bus terminals and transfer points	Not Modeled
Alameda	Dublin	Dublin Blvd Rehabilitation	Dublin: Segments of Dublin Boulevard from Scarlet Drive to Hacienda Drive: Rehabilitate pavement	ALA170062	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Alameda	EB Reg Park Dis	Doolittle Drive Bay Trail	Oakland: Along Doolittle Dr. from the MLK Regional Shoreline Center near Langley Street 2,300 feet to the north end of the existing SF Bay Trail at the fishing dock, north of Swan Way: Construct SF Bay	ALA170077	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	Emeryville	40th Street Transit and Multi-Modal Enhancements	Emeryville: On 40th Street between IKEA Entrance signal and Adeline Street: Enhance and construct transit-only lanes, transit islands, transit hub, pedestrian enhancements, and a two-way class IV bike	ALA210029	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	Fremont	Centerville Complete Streets of Relinquished SR84	Fremont: Thornton Ave (Blacow Rd to Fremont Blvd), Fremont Blvd (Alder Ave to Mattos Dr) and Peralta Blvd (Fremont Blvd to Sequoia Rd): Implement complete streets improvements; On Peralta Blvd	ALA170076	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	Fremont	Fremont Blvd/Walnut Ave Protected Intersection	Fremont: At the intersection of Fremont Boulevard and Walnut Avenue: Construct a new protected intersection.	ALA210014	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	Fremont	Fremont Blvd-Grimmer Blvd Protected Intersection	Fremont: At the Fremont/Grimmer and Fremont/Eugene intersections: Construct protected intersections, as well as elevated bikeway between the two intersections along Fremont Boulevard.	ALA210015	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	Fremont	I-680/Mission Boulevard Interchange Modernization	Fremont: I-680/Mission Blvd: Redesign the interchange to reduce the steep grade of the southbound off-ramp onto Mission Boulevard and incorporate a separated bicycle and pedestrian path along	ALA230003	21-T08-060	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Alameda	Fremont	I880 Innovation Bridge and Trail (EBGW Reach 6)	Fremont: Along Fremont Blvd and Kato Rd, along Agua Caliente Creek and over I-880: Construct Class 1 multi-use trail and overcrossing	ALA210020	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	Fremont	I-880/Decoto Road Interchange Modernization	Fremont: At the I-880/Decoto Road interchange: Reconstruct the existing interchange to include a new Class I trail and a dedicated bus lane in both directions of travel through the interchange.	ALA230002	21-T07-056	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Alameda	Fremont	Kato Rd Complete Sts - Warren Ave to Milmont Dr	Fremont: Kato Road from Agua Caliente Creek to Milmont Drive: Widen to provide median turn lane or raised median island, bike/pedestrian trail on the west side of the roadway, and modify traffic signal	ALA130001	21-T07-056	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
Alameda	Fremont	Sabercat Trail: Irvington BART to Ohlone College	Fremont: Starting at Blacow Rd, crossing Osgood Rd, across I-680 to Sabercat Historical Park: Create a safe and convenient Class 1 multi-use bicycle and pedestrian path	ALA210019	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled

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Alameda	Hayward	Hayward - Main Street Complete Street	Hayward: Main St from Mc Keever to D St: Reduce roadway from 4 to 2 lanes, construct bike lanes, widen sidewalks and add complete street elements	ALA170065	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	LAVTA	LAVTA Passenger Facilities Enhancements	LAVTA: At high-ridership stops in the Rapid network: Improve passenger amenities	ALA210016	21-T01-007	EXEMPT (40 CFR 93.126) - Construction of small passenger shelters and information kiosks	Not Modeled
Alameda	LAVTA	LAVTA: COVID-19 Emergency Transit Operations	LAVTA: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	ALA190026	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Alameda	MTC	Bay Bridge Forward I-80/ Powell I/C Transit Access	Emeryville: At the I-80/Powell Street interchange: Providing bus queue jump lanes, exclusive bus-only turn lanes, transit signal priorities, new and/or improved bus stops in the interchange vicinity. Project	ALA210027	21-T06-049	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Alameda	MTC	I-880 Integrated Corridor Management - Central	Alameda County: I-880 Corridor from Davis St in San Leandro to Whipple Rd in Union City: Identify how existing and planned incident management strategies and operations can be better coordinated and	ALA170057	21-T07-057	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Alameda	MTC	Improved Bike/Ped Access to East Span of SFOBB	In Oakland: In the vicinity of the East Span of the San Francisco-Oakland Bay Bridge: Construct improved bicycle and pedestrian access. Project is phased.	ALA130030	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	MTC	Regional Planning Activities and PPM - Alameda	Alameda: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	ALA170007	21-T07-058	EXEMPT (40 CFR 93.126) - Planning and technical studies	Not Modeled
Alameda	MTC	Regional Planning Activities and PPM - Alameda	Alameda: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	ALA210031	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Alameda	Oakland	East Oakland Active Connections to Transit	Oakland: On 73rd Ave between MacArthur and Coliseum BART (Hawley Street) and on Hegenberger between International and Coliseum BART: Implement transportation safety improvements	ALA210025	21-T09-061	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	Oakland	East Oakland Neighborhood Bike Routes	Oakland: Various Streets and Roads in East Oakland: Construction bicycle improvements	ALA210002	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	Oakland	Fruitvale Alive Bike/Ped Gap Closure	In Oakland: On Fruitvale Ave between Alameda Ave and E. 12th: Install class 4 cycle tracks and landscaped buffers, widen sidewalks, improve ped crossings, add ped scale lighting, reconfigure conflicting	ALA170051	21-T08-060	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
Alameda	Oakland	Lake Merritt to Bay Trail Bike/Ped Bridge	Oakland: Over Embarcadero and UPRR tracks under I880 between the Estuary and Lake Merritt along the Channel: Construct ADA accessible bicycle pedestrian bridge to link Bay Trail to Lake Merritt.	ALA130003	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	Oakland	Lakeside Family Streets	Oakland: On Harrison St from 20th to 27th, and along Grand Ave from Harrison to Bay Place: Install cycle track, parking protected bikeways and protected intersection; On Harrison from Grand to 27th:	ALA170063	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	Oakland	Oakland - 14th Street Safe Routes in the City	Oakland: On 14th St between Brush St and Oak St: Reduce travel lanes from 4 to 2, add paved Class IV protected bicycle lanes; transit boarding islands; improve ped facilities including refuges, crossings,	ALA170043	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	Oakland	Oakland 7th Street Connection Improvements	Oakland: 7th St from Mandela Pkwy to Martin Luther King Jr Way: Complete streets improvements including road diet, protected bike lanes, intersection/signal improvements, curb ramps, sidewalk repairs,	ALA210001	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	Oakland	Oakland Various Streets Improvements	Oakland: Citywide: Implement paving Improvements including pavement resurfacing, bicycle transportation, curb, gutter, drainage, sidewalks, pedestrian safety, and ADA compliant curb ramps	ALA170064	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Alameda	Oakland	Reconnecting the Town (RAISE)	Oakland: On Broadway between Embarcadero West and 11th Street and Martin Luther King Jr. Way between 2nd and 7th: Implement bus reliability, pedestrian and bike way improvements	ALA230006	21-T10-073	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Alameda	Piedmont	Piedmont - Oakland Avenue Improvements	Piedmont: Oakland Ave between Grand Ave and western city limits: Pavement rehabilitation and installation of bicycle and pedestrian safety improvements	ALA170084	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled

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List of 2023 TIP Projects by County

County	Sponsor	Project Name	Project Descripion	TIP ID	RTP ID	Air Quality Descripion	Conformity Analysis Year
Alameda	Pleasanton	I-680/Sunol Interchange Improvements	Pleasanton: At the I-680/Sunol Blvd Interchange: Widen the SB ramp to add two lanes (1 general purpose, 1 HOV bypass) and add intersection and bike/ped improvements. Project also references RTP ID	ALA190020	21-T06-048	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Alameda	Pleasanton	W Las Positas Repair and Separated Bike Lanes	Pleasanton: Along West Las Positas: Reconstruct the roadway and contruct new separated bike lanes that would be protected from vehicle traffic	ALA210032	21-T09-061	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	San Leandro	San Leandro Washington Avenue Rehabilitation	San Leandro: Washington Ave from W. Juana Ave to Castro St: Reconstruct roadway	ALA170075	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Alameda	San Leandro	SR 185- E. 14th St/ Hesperian Blvd/150th Ave	San Leandro: 150th/E. 14th/Hesperian: Construct NB left turn Ln from Hesperian to E.14th, EB left turn Ln from E.14th to 150th Av & SB Ln from Hesperian to 150th and other traffic circulation	ALA050002	21-T07-056	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
Alameda	SJRC	ACE: COVID-19 Emergency Transit Operations	ACE: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies, and	ALA190024	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Alameda	Union C Transit	Union City Transit Electric Bus Procurement	Union City Transit: Fleet: Replace existing buses with zero-emission battery-electric buses.	ALA190029	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Alameda	Union C Transit	Union City Transit: COVID-19 Emergency Transit Ops	Union City Transit: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE	ALA190027	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Contra Costa	Antioch	Antioch - L Street Pathway to Transit	Antioch: On L Street from Hwy 4 to Antioch Marina: Widen street in various locations and restripe to provide continuous bike lanes and sidewalks, upgrade existing traffic signals, install new bus shelters	CC-170035	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	BART	Concord BART Station Modernization	Concord: In and around the Concord BART Station: Make capacity, access, placemaking, and state-of-good repair, improvements based on BART's 2016 Station Modernization Plan.	CC-170060	21-T11-115	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Contra Costa	BART	Lafayette Town Center Pathway and Bike Station	Lafayette: Between the BART station and downtown: Construct bicycle and pedestrian improvements	CC-210004	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	BART	Pittsburg/Bay Point BART Station Bike-Ped Imps	Contra Costa County: In and around the Pittsburg/Bay Point BART Station: Improve walking, ADA, and biking access to this regional transit station.	CC-210005	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	BART	Walnut Creek BART TOD Access Improvements	Walnut Creek: In the vicinity of the Walnut Creek BART Station: construct public access improvements that are part of the proposed transit-oriented development	CC-110082	21-T08-060	EXEMPT (40 CFR 93.126) - Transportation enhancement activities (except rehabilitation and operation	Not Modeled
Contra Costa	Brentwood	Brentwood Various Streets and Roads Preservation	Brentwood: Various locations: Pavement preservation	CC-170034	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Contra Costa	Brentwood	Lone Tree Way Undercrossing	Brentwood: On Lone Tree Way at the UPRR track: Construct 4-lane grade separation undercrossing.	CC-070013	21-T07-056	EXEMPT (40 CFR 93.126) - Railroad/highway crossing	Not Modeled
Contra Costa	Caltrans	Central Ave I-80 Undercrossing Ped/Bike Improve	Richmond: On Central Ave crossing I-80 between San Joaquin St/Jacuzzi St and San Luis St/Pierce St: Improve ped/bicycle access with wider sidewalks, new sidewalk-level bikeways, crossing improvements,	CC-210011	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	CC County	Bailey Road Bike and Pedestrian Improvements	Bay Point: Bailey Rd from Willow Pass Rd to SR 4: Improve bicycle and pedestrian accessibility. Improvements will expand sidewalks and construct uniform bike lanes to create a corridor conducive to all	CC-130003	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	CC County	Fred Jackson Way First Mile/Last Mile Connection	In Richmond: On Fred Jackson Way from Grove Avenue to Wildcat Creek Trail: Construct ADA accessible sidewalks with street trees; and from Wildcat Creek to Brookside Dr: Construct pedestrian path and	CC-170020	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	CC County	North Bailey Road Active Transportation Corridor	Bay Point: On Bailey Road between Willow Pass and Canal Roads: Reconfigure travel lanes and construct two-way cycle track, ADA-compliant curb ramps, ADA-accessible sidewalks, and traffic signal	CC-210001	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	CC County	Treat Boulevard Corridor Improvements	Contra Costa County: Along Treat Blvd between N Main St and Jones Rd: Implement bicycle infrastructure and pedestrian enhancements	CC-190012	21-T08-060	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled

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Contra Costa	CC County	Vasco Road Safety Improvements	Contra Costa County: Vasco Road from Walnut Blvd to the Alameda/Contra Costa County line: widen road and place concrete median barrier for 2.5 miles. Phase 1 completed a 1 mile widening segment.	CC-050030	21-T07-056	EXEMPT (40 CFR 93.126) - Truck climbing lanes outside the urbanized area	Not Modeled
Contra Costa	CCCTA	CCCTA: ADA Paratransit Assistance	CCCTA: Systemwide: ADA Paratransit Assistance to transit agency.	CC-99T001	21-T01-001	EXEMPT (40 CFR 93.126) - Operating assistance to transit agencies	Not Modeled
Contra Costa	CCCTA	CCCTA: COVID-19 Emergency Transit Operations	CCCTA: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	CC-190013	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Contra Costa	CCTA	Bay Area MOD	CCTA: In the I680 Corridor and surrounding communities: Develop an integrated and scalable platform & application (app) aimed at reducing traffic congestion	CC-190018	21-T03-009	EXEMPT (40 CFR 93.126) - Grants for training and research programs	Not Modeled
Contra Costa	CCTA	CCTA Automated Driving System	Contra Costa County: Various Locations: Implement 3 demonstration projects that will provide mobility choices to transportation-challenged and underserved communities, while guiding and advancing	CC-190017	21-T07-057	EXEMPT (40 CFR 93.126) - Grants for training and research programs	Not Modeled
Contra Costa	CCTA	East Bay Integrated Transit Plan	Contra Costa County: Countywide: Undertake a study to identify Contra Costa County transit routes and services suited for potential regional classification and operations.	CC-210012	21-T10-093	EXEMPT (40 CFR 93.126) - Planning and technical studies	Not Modeled
Contra Costa	CCTA	Innovate680:Coordinated Adaptive Ramp Metering Ph1	Contra Costa County: on NB I-680 between Alcosta Blvd to Olympic Blvd: Implement Coordinated Adaptive Ramp Metering	CC-170062	21-T07-057	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Contra Costa	CCTA	SR 239 - New State Highway Study	Contra Costa County: SR 239 between SR4 in Brentwood and I-205 in Tracy: Conduct environmental and design studies to create a new alignment for SR239 and develop corridor improvements from	CC-110066	21-T06-044	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Contra Costa	Clayton	Clayton Neighborhood Street Rehab	Clayton: On various neighborhood streets: Pavement maintenance and rehabilitation including replacing pavement markings	CC-170047	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Contra Costa	Concord	Concord Willow Pass Road Repaving SR2T	Concord: On Willow Pass Rd from Galindo St to Landana Drive: Implement complete streets improvements	CC-170037	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Contra Costa	Concord	Downtown Corridors Bike/Pedestrian Improvements	Concord: Various locations: Implement bicycle and pedestrian safety improvements to multiple corridors connecting Downtown Concord to regional transit, senior housing, and low income communities.	CC-170050	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Contra Costa	Concord	East Downtown Concord PDA Access and SR2T	Concord: Various locations in and around the Downtown Concord area: Construct new sidewalks and class 3 bicycle routes	CC-210003	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	Concord	Monument Boulevard Class I Path	In Concord: Monument Blvd from Systron Dr to Cowell Rd and Cowell Rd from Monument Blvd to Mesa St: Install a Class I path and related improvements at signalized intersections	CC-170039	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	Danville	Camino Ramon Improvements	Danville: On Camino Ramon between Kelley Lane and Fostoria Way: Rehabilitate roadway	CC-170058	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Contra Costa	Danville	San Ramon Valley Blvd Improvements	Danville: San Ramon Valley Blvd between Hartz Ave and Southern Town Limits: Pavement preservation and striping	CC-170001	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Contra Costa	EB Reg Park Dis	Martinez Bay Trail Gap Closure	East Bay Regional Parks District: Along the Carquinez Loop Trail and SF Bay Trail in the vicinity of Berrellesa St: Close a 0.5 mile gap by constructing a shared-use path along with crossing improvements	CC-230001	21-T01-003	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	EB Reg Park Dis	SF Bay Trail Point Molate	EBRPD: Along the shoreline connecting the bike/pedestrian trail over the Richmond-San Rafael bridge to the Point Molate Beach Park in the City of Richmond: Construct SF Bay Trail segment	CC-190019	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	ECCTA	ECCTA Hydrogen Fueling Maint Infrastructure Upgrad	ECCTA: Maintenance facility: Upgrade infrastructure needed for the safe maintenance of fuel cell electric buses in the same facility as diesel buses.	CC-210008	21-EN08-131	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Contra Costa	ECCTA	ECCTA: COVID-19 Emergency Transit Operations	ECCTA: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	CC-190014	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Contra Costa	ECCTA	ECCTA: Hydrogen Fueling Station	ECCTA: At the ECCTA maintenance facility: Design and construction of a hydrogen fueling station	CC-210017	21-EN08-131	EXEMPT (40 CFR 93.126) - Purchase of office, shop, and operating equipment for existing facilities	Not Modeled
Contra Costa	ECCTA	ECCTA: Transit Bus Replacements	Tri-Delta Transit: Fleetwide: Replacement Revenue Vehicles and associated farebox equipment	CC-070092	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled

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Contra Costa	Hercules	Hercules -Sycamore Pavement Rehabilitation	Hercules: Sycamore Ave from Civic Dr to Willow/Palm Ave: Pavement preservation	CC-170043	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Contra Costa	Martinez	Alhambra Avenue Downtown Resurfacing	Martinez: Alhambra Avenue from Marina Vista Avenue to Jones Street in the Downtown PDA: Resurface pavement	CC-170059	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Contra Costa	MTC	Regional Planning Activities and PPM - CC County	Contra Costa: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	CC-170004	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Contra Costa	MTC	Regional Planning Activities and PPM - CC County	Contra Costa: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	CC-210014	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Contra Costa	Pinole	Pinole - San Pablo Avenue Rehabilitation	In Pinole: On San Pablo Avenue from City Limits to Pinole Shores Dr: Rehabilitate roadway and make accessibility upgrades as warranted	CC-170048	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Contra Costa	Pinole	Safety Improvements at Appian Way and Marlesta Rd.	Pinole: On Appian Way and Marlesta Road: Intersection improvements including signalization of the intersection to provide protected crossing of roadway for pedestrians and cyclists.	CC-210009	21-T08-060	EXEMPT (40 CFR 93.127) - Intersection signalization projects at individual intersections	Not Modeled
Contra Costa	Pittsburg	City of Pittsburg Pavement Improvements	Pittsburg: On West Leland Rd from Woodhill Rd to Railroad Ave and on Loveridge Rd from Buchanan Rd to Pittsburg-Antioch Highway: Rehabilitate roadway	CC-170042	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Contra Costa	Pittsburg	Pittsburg BART Pedestrian and Bicycle Connectivity	Pittsburg: On California Ave, Bliss Ave, and Railroad Ave in the vicinity of the Pittsburg Center eBART station: Construct Class I and IV bikeways and associated improvements	CC-170040	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	Richmond	Lincoln Elementary SRTS Pedestrian Enhancements	Richmond: Along Chanslor, 5th St and 6th St near Lincoln School and at Chanslor Ave and 4th St: Pedestrian enhancements to improve the safety for school children by adding median refuges, curb	CC-170056	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Contra Costa	Richmond	Richmond 13th Street Complete Streets Imps	Richmond: Along 13th Street from Harbour Way to Costa Avenue: Implement complete streets improvements including a road diet	CC-210007	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Contra Costa	San Pablo	Giant Road Cycletrack and Pavement Rehabilitation	San Pablo: Giant Rd between Brookside Drive and Miner Avenue: Install Class IV Cycletrack, with targeted roadway and sidewalk preservation and improvements, as well as ADA curb ramp repairs.	CC-170031	21-T08-060	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Contra Costa	San Ramon	Iron Horse Trail Bike and Pedestrian Overcrossing	San Ramon: At the intersections of Bollinger Canyon Road and the Iron Horse Trail: Construct bicycle/pedestrian overcrossing. Project is phased	CC-170014	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	San Ramon	San Ramon Transit Center - Shared Mobility Hub	San Ramon: At San Ramon Transit Center/Bishop Ranch Business Park: Implement multi-modal mobility improvements	CC-210013	21-EN09-132	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Contra Costa	Walnut Creek	Ygancio Valley Road Rehabilitation	Walnut Creek: Ygnacio Valley Rd from Civic Dr to San Carlos Dr: Rehab pavement, striping, adjust covers, ADA upgrades and install video detection at select intersections.	CC-170038	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Contra Costa	WCCTA	WCCTA: COVID-19 Emergency Transit Operations	WCCTA: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	CC-190015	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Contra Costa	WCCTA	WestCat 45-foot Over the Road Coach Replacement	WestCAT: 45-foot over the road coach subfleet: Replace vehicles past their useful life	CC-210015	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Contra Costa	WCCTA	WestCAT Purchase Double Decker Vehicles	WestCAT: Fleet: Purchase double decker buses to replace vehicles past their useful life	CC-210016	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Contra Costa	WCCTA	WestCAT: Paratransit Revenue Vehicle Replacement	WestCAT: Fleet: Replace paratransit vehicles that are at or beyond there useful life and are due to be replaced	CC-210002	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Marin	GGBHTD	GGBHTD - Transit Systems Enhancements	GGBHTD: Systemwide: systems, technology and communication enhancements to transit fleet and facilites.	MRN130015	21-T01-002	EXEMPT (40 CFR 93.126) - Transportation enhancement activities (except rehabilitation and operation	Not Modeled
Marin	GGBHTD	GGBHTD Ferry Major Components Rehab	GGBHTD: Systemwide: Ferry Rehab, replace major ferry components such as navigation systems, dry-dock, hull, interior, life saving equipment, propulsion and other ferry components.	MRN150014	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation of transit vehicles	Not Modeled
Marin	GGBHTD	GGBHTD Ferry Propulsion Systems Replacement	GGBHTD: Systemwide: Ferry propulsion systems- replacement of power distribution systems, propellers, engines, generators, gear boxes, etc. for Golden Gate Ferry vessels.	MRN150015	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation of transit vehicles	Not Modeled

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Marin	GGBHTD	GGBHTD: COVID-19 Emergency Transit Operations	GGBHTD: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and	MRN190014	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Marin	GGBHTD	GGBHTD: Facilities Rehabilitation	GGBHTD: Systemwide: Rehabilitate agency's maintenance and operating facilities and replace heavy duty operating and maintenance equipment.	MRN050025	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Marin	GGBHTD	GGBHTD: Ferry Channel and Berth Dredging	Golden Gate Ferry: From San Francisco to Marin County: Dredge ferry channel and berth.	MRN990017	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Marin	GGBHTD	GGBHTD: Fixed Guideway Connectors	Golden Gate Ferry: Systemwide: Replace/rehab fixed guideway connectors such as floats, floating barges, ramps, and gangways	MRN030010	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Marin	GGBHTD	Golden Gate Bridge Seismic Retrofit, Ph: 1-3A	San Francisco /Marin Counties: Golden Gate Bridge; Seismic retrofit of the Golden Gate Bridge - construction on north and south approach viaducts, and Ft. Point Arch.	MRN970016	21-T01-005	EXEMPT (40 CFR 93.126) - Widening narrow pavements or reconstructing bridges (no additional travel	Not Modeled
Marin	GGBHTD	Golden Gate Bridge Seismic Retrofit, Phase 3B	SF/Marin County: Golden Gate Bridge; Seismic retrofit of the Golden Gate Bridge - construction of suspension span, south pier and fender.	MRN050018	21-T01-005	EXEMPT (40 CFR 93.126) - Widening narrow pavements or reconstructing bridges (no additional travel	Not Modeled
Marin	GGBHTD	Golden Gate Bridge-Suicide Deterrent SafetyBarrier	Golden Gate Bridge: Build suicide deterrent system. Including design & Environmental analysis, plus analysis of alternatives & wind tunnel tests to ensure the feasibility of designs and build deterrent	MRN050019	21-T01-007	EXEMPT (40 CFR 93.126) - Safer non-Federal-aid system roads	Not Modeled
Marin	GGBHTD	San Rafael Transit Center Relocation	San Rafael: San Rafael Transit Center: Relocate the existing San Rafael Transit Center (SRTC) to accommodate the extension of SMART service to Larkspur	MRN170013	21-T01-002	EXEMPT (40 CFR 93.127) - Bus terminals and transfer points	Not Modeled
Marin	Larkspur	Old Redwood Highway Multi-Use Path	Larkspur: Along Old Redwood Highway from the Greenbrae Pedestrian Overcrossing up to the southern terminus of the pathway in state right-of way: Construct a multi-use pathway	MRN190011	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Marin	Marin County	Hicks Valley/MarshallPetaluma/Wilson Hill Rd Rehab	Marin County: Hicks Valley Rd from Point Reyes-Petaluma Rd to Marshall-Petaluma Rd, Wilson Hill Rd from Marshall-Petaluma Rd to Chileno Valley Rd, Marshall-Petaluma Rd from Hicks Valley Rd (milepost	MRN170027	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Marin	Marin County	Marin City Pedestrian Crossing Improvements	Marin County: In the Marin City area of unincorporated Marin County: Improve pedestrian accessibility and safety	MRN190015	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Marin	Marin County	Mountain View Rd Bridge Replacement - 27C0154	Marin County: On Mountain View Rd. over San Geronimo Creek (Bridge No. 27C0154) near the intersection with Sir Francis Drake Blvd: Replace existing one-lane bridge with a new two-lane bridge. Toll	MRN110035	21-T01-004	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Marin	MCTD	Marin Transit: COVID-19 Emergency Transit Ops	Marin Transit: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and	MRN190013	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Marin	MCTD	MCTD - Relocate Transit Maintenance Facility	In North Eastern Marin County: Relocate contractor maintenance facilities in a centralized location, including bus parking and three maintenance bays.	MRN150010	21-T01-002	EXEMPT (40 CFR 93.126) - Construction of new bus or rail storage/maintenance facilities categorically	Not Modeled
Marin	MCTD	MCTD- Replace Shuttle Vehicles	MCTD: 13 shuttle buses: Purchase buses to replace ones that are beyond their useful life	MRN150011	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Marin	MCTD	MCTD: Replace 35ft Hybrid Vehicles	MCTD: 35ft Hybrid Transit buses: Replace buses	MRN210005	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Marin	MCTD	MCTD: Replace Demand Response Vans	MCTD: Demand response vans: Replace vehicles that are beyond their useful life	MRN210007	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Marin	MCTD	MCTD: Replace Paratransit Vehicles	MCTD: 24 Paratransit Vehicles: Replace vehicles	MRN170003	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Marin	MCTD	MCTD: Replace Paratransit Vehicles	MCTD: Paratransit fleet: Replace parantransit vehicle with vans	MRN210004	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Marin	MCTD	MCTD: Replace Paratransit Vehicles with Vans	MCTD: 6 vehicles: Replace five Paratransit Vehicles with Vans and purchase a third vehicle as a non-revenue support vehicle	MRN170004	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Marin	MCTD	MCTD: Replace Rural Cutaway Vehicles	MCTD: Six (6) Rural Cutaway Vehicles: Purchase replacement vehicles	MRN170005	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled

Note: Projects with a conformity analysis year of 2050 reference programmatic projects or projects with a completion date after 2040 in Plan Bay Area 2050.

County	Sponsor	Project Name	Project Descripion	TIP ID	RTP ID	Air Quality Descripion	Conformity Analysis Year
Marin	MTC	Regional Planning Activities and PPM - Marin	Marin: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	MRN170001	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Marin	MTC	Regional Planning Activities and PPM - Marin	Marin: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	MRN210003	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Marin	Natl Park Svc	Fort Baker's Vista Point Trail	Golden Gate National Recreation Area: Between the Dana Bowers Vista Point Parking Area and both Fort Baker and Sausalito: Construct the Vista Point Trail, a new multi-use segment of the Bay Trail.	MRN170028	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Marin	Various	GL: Marin County - TOS-Mobility	Marin County: Various Locations: Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and 40 CFR Part 93.127 Table 3 categories	MRN170018	21-T06-048	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Napa	American Canyon	Green Island Road Class I	American Canyon: Green Island Road in the Green Island Industrial District (GRID): Construct new Class 1 multi-use trail.	NAP170006	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Napa	MTC	Napa Valley Forward: Safety and Operational Impv	Napa: SR-29 Up Valley Corridor: Provide safety and operational improvements for multimodal corridor.	NAP190007	21-T07-056	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
Napa	MTC	Regional Planning Activities and PPM - Napa	Napa: Countywide: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	NAP170001	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Napa	MTC	Regional Planning Activities and PPM - Napa	Napa: Countywide: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	NAP210001	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Napa	Napa	Silverado Trail Five-Way Intersection Improvements	City of Napa: At the intersection of Silverado Trail, Third St, Coombsville Rd, and East Ave: Construct roundabout. Project will be constructed in phases.	NAP170009	21-T07-056	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
Napa	Napa	SR-29 Bicycle and Pedestrian Undercrossing	Napa: On the North side of Napa Creek under Highway 29: Construct a Class 1 bicycle and pedestrian path	NAP130004	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Napa	Napa County	Hardin Rd Bridge Replacement - 21C0058	Napa County: On Harding Rd at Maxwell Creek, 1.6M SE of Pope Cyn Rd: Replace existing one lane bridge with new 2-lane bridge to meet standards. Toll credits are used in lieu of match for all phases.	NAP110026	21-T01-004	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Napa	Napa County	Loma Vista Dr Bridge Replacement - 21C0080	Napa County: Loma Vista Dr over Soda Creek, 1.4 miles north of Silverado Trail: replace existing one lane bridge with new two lane bridge to meet standards. Toll credits are used in lieu of match for all	NAP110027	21-T01-004	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Napa	NVTA	Imola Park n Ride and Express Bus Stop Improvement	Napa County: At park and ride at SR 29 and Imola Ave: Make improvements including in-line passenger loading and alighting at the Imola Ave on/off ramps, improved pedestrian facilities, and safety	NAP190006	21-T12-118	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Napa	NVTA	Napa County Safe Routes to Schools	Napa County: County-wide: Safe Routes to Schools Program, Non-Infrastructure	NAP170004	21-EN09-132	EXEMPT (40 CFR 93.126) - Grants for training and research programs	Not Modeled
Napa	NVTA	Napa Valley Vine Trail Calistoga-St. Helena Seg.	In Napa County: From Calistoga to St. Helena: Construct multi-use trail	NAP150003	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Napa	NVTA	NVTA Equipment Replacement and Upgrades	NVTA: Napa Vine service area: Replacement and upgrades to transit equipment	NAP090008	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of office, shop, and operating equipment for existing facilities	Not Modeled
Napa	NVTA	NVTA: COVID-19 Emergency Transit Operations	NVTA: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	NAP190005	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Napa	NVTA	NVTA: Replace Rolling Stock	NVTA: Fleetwide: Replace rolling stock for fixed-route, paratransit, and community shuttle fleet.	NAP090005	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Napa	Saint Helena	Main Street St. Helena Pedestrian Improvements	Saint Helena: Along Main Street (SR29) from Adams Street to Pine Street: Replace and upgrade pedestrian facilities	NAP170005	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Regional/ Multi-County	ACE	ACE Positive Train Control	ACE: System-wide: Install an advanced train control system that allows for automated collision prevention, improved manual collision prevention, and improved headways.	REG110044	21-T01-002	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
Regional/ Multi-County	BART	BART Car Exchange (Preventive Maintenance)	BART: Systemwide: Preventive maintenance program, including maintenance of rail cars and other system components in exchange for local funds to the BART car replacement reserve.	REG050020	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation of transit vehicles	Not Modeled
Regional/ Multi-County	BART	BART Train Control Renovation	BART: Systemwide: Replace obsolete elements and subsystems of the train control system.	BRT030004	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled

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County	Sponsor	Project Name	Project Descripion	TIP ID	RTP ID	Air Quality Descripion	Conformity Analysis Year
Regional/ Multi-County	BART	BART: Rail, Way and Structures Program	BART: Systemwide: Replace worn out mainline rail and make other timely reinvestments in way.	BRT97100B	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation or reconstruction of track structures, track, and trackbed in	Not Modeled
Regional/ Multi-County	BART	BART: TOD Implementation	Alameda, Contra Costa, San Francisco Counties: On BART property in BART station areas: Planning assistance to support transit oriented development	VAR190002	21-T07-058	EXEMPT (40 CFR 93.126) - Planning and technical studies	Not Modeled
Regional/ Multi-County	BART	BART: Traction Power System Renovation	BART: Systemwide: Replace obsolete elements and subsystems of the traction power system to maintain and improve reliability and safety	BRT030005	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Regional/ Multi-County	Caltrain	Caltrain Positive Train Control System	Caltrain: Systemwide: Implement PTC, an advanced train control system that allows for automated collision prevention, and improved manual collision prevention.	REG110030	21-T01-002	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
Regional/ Multi-County	Caltrain	Caltrain: Revenue Vehicle Rehab Program	Caltrain: Systemwide: Provide overhauls and repairs/replacements to key components of the Caltrain rolling stock to maintain it in a state of good repair.	REG090051	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation of transit vehicles	Not Modeled
Regional/ Multi-County	Caltrain	Caltrain: Signal/Communication Rehab. & Upgrades	Caltrain: Systemwide: Rehabilitate existing signal system and upgrade/replace communication equipment.	SM-050041	21-T01-002	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
Regional/ Multi-County	Caltrans	GL: Bridge Rehab and Reconstruction - SHOPP	Regionwide: Various Locations: Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 categories - Widening narrow pavements or reconstructing bridges (no additional travel lanes).	VAR170010	21-T01-004	EXEMPT (40 CFR 93.126) - Widening narrow pavements or reconstructing bridges (no additional travel	Not Modeled
Regional/ Multi-County	Caltrans	GL: Bridge Rehab/Recon. - Local Hwy Bridge Program	GL: Local Bridge Rehab/Recon. - Local Highway Bridge Program(HBP) or Highway Bridge Replacement and Rehabilitation (HBRR). Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 categories.	VAR170012	21-T01-004	EXEMPT (40 CFR 93.126) - Widening narrow pavements or reconstructing bridges (no additional travel	Not Modeled
Regional/ Multi-County	Caltrans	GL: Emergency Repair - SHOPP Emergency Response	Regionwide: Various Locations: Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 categories	VAR170008	21-T01-006	EXEMPT (40 CFR 93.126) - Repair of damage caused by natural disasters, civil unrest, or terrorist acts,	Not Modeled
Regional/ Multi-County	Caltrans	GL: Fed Lands Highways Pgm-Tribal Transport Pgm	SF Bay Area: Various locations on federal and tribal land: Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 categories	VAR210002	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Regional/ Multi-County	Caltrans	GL: Highway Safety Improvement Program	GL: Safety Imprv - Highway Safety Improvement Program: Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories.	VAR170002	21-T01-007	EXEMPT (40 CFR 93.126) - Highway Safety Improvement Program implementation	Not Modeled
Regional/ Multi-County	Caltrans	GL: Pavement Resurf./Rehab - SHOPP Roadway Presv.	Regionwide: Various Locations: Projects consistent with 40CFR93.126 Exempt Tables 2 categories - Pavement resurfacing and/or rehabilitation, Emergency relief (23 U.S.C. 125), Widening narrow	VAR170006	21-T01-006	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Regional/ Multi-County	Caltrans	GL: Pavement Resurfacing/Rehab SHS - Highway Maint	GL: Pavement Resurf/Rehab State Highway System - Highway Maintenance. Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories - Pavement resurfacing and/or	VAR170004	21-T01-006	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Regional/ Multi-County	Caltrans	GL: Pvmt Resurf/Rehab State Hwy Sys - SHOPP Minor	GL: Pavement Resurf/Rehab State Hwy System - SHOPP Minor. Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories	VAR190001	21-T01-006	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Regional/ Multi-County	Caltrans	GL: Railroad-Highway Crossing	GL: Railroad/Highway Crossings. Projects are consistent with 40 CFR 93.126 Exempt Tables 2 categories - Railroad/highway crossing	VAR170017	21-T01-006	EXEMPT (40 CFR 93.126) - Railroad/highway crossing	Not Modeled
Regional/ Multi-County	Caltrans	GL: Recreational Trails Program	Grouped Listing: Regionwide: Projects with US Recreational Grant Program Funds. Projects are consistent with 40 CFR Part 93.126, 127, 128, Exempt Tables 2 & 3	VAR190009	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Regional/ Multi-County	Caltrans	GL: Safety Improvements - SHOPP Mandates	Regionwide: Various Locations: Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories	VAR170009	21-T01-006	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Regional/ Multi-County	Caltrans	GL: Safety Improvements - SHOPP Mobility Program	SF Bay Area: Various Locations: Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories	VAR170005	21-T01-006	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Regional/ Multi-County	Caltrans	GL: Safety Imprv. - SHOPP Collision Reduction	Regionwide: Various Locations: Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories	VAR170007	21-T01-007	EXEMPT (40 CFR 93.126) - Guardrails, median barriers, crash cushions	Not Modeled
Regional/ Multi-County	Caltrans	GL: Shoulder Imprv - SHOPP Roadside Preservation	Regionwide: Various Locations: Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 categories - Fencing,Safety roadside rest areas	VAR170011	21-T01-006	EXEMPT (40 CFR 93.126) - Plantings, landscaping, etc	Not Modeled

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List of 2023 TIP Projects by County

County	Sponsor	Project Name	Project Descripion	TIP ID	RTP ID	Air Quality Descripion	Conformity Analysis Year
Regional/ Multi-County	MTC	511 Carpool and Vanpool Programs	SF Bay Area: Regionwide: Operate Carpool and Vanpool Programs. Toll credits applied in lieu of match; non-federal funds are non-participating	REG170003	21-EN09-132	EXEMPT (40 CFR 93.126) - Continuation of ride-sharing and van-pooling promotion activities at	Not Modeled
Regional/ Multi-County	MTC	511 Next Gen	SF Bay Area: Regionwide: Provide free multi-modal traveler information via multiple media. Given the public's increasing reliance on private sector services, 511 will focus on data and wayfinding products	REG170013	21-T07-050	EXEMPT (40 CFR 93.126) - Directional and informational signs	Not Modeled
Regional/ Multi-County	MTC	Active Operations Management	SF Bay Area: Regionwide: Planning and design assessments of various multi-modal operational projects and policies.	REG170014	21-T07-057	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Regional/ Multi-County	MTC	Bay Area Commuter Benefits Program	San Francisco Bay Area: Region wide: Implement the Bay Area Commuter Benefits Program. Toll credits applied in lieu of match	MTC050001	21-EN09-132	EXEMPT (40 CFR 93.126) - Continuation of ride-sharing and van-pooling promotion activities at	Not Modeled
Regional/ Multi-County	MTC	Bay Bridge Forward Preliminary Engineering	Bay Area: Various bridge corridors and approaches: PE and studies to advance BBF projects into delivery including transit priority, corridor operations, transit routing, active transportation, other multi-	VAR210007	21-T06-049	EXEMPT (40 CFR 93.126) - Planning and technical studies	Not Modeled
Regional/ Multi-County	MTC	Bike Share Capital Program	SF Bay Area: Regionwide: Coordinate planning, outreach, policy and information sharing for bikeshare and micromobility programs. Fremont, Richmond, and Marin and Sonoma Counties, along the SMART	VAR170024	21-EN09-132	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Regional/ Multi-County	MTC	Climate Initiatives Education and Outreach	Bay Area: Regionwide: Program designed to reduce greenhouse gas emissions and vehicle miles traveled through education and encouragement programs	REG170006	21-EN09-132	EXEMPT (40 CFR 93.126) - Grants for training and research programs	Not Modeled
Regional/ Multi-County	MTC	Clipper® 2.0 Fare Payment System	SF Bay Area: Regionwide: Implement a wholesale replacement of the Clipper backend system and all customer facing fare devices, modernization of retail and customer service, and expansion of ways to	REG170022	21-T07-057	EXEMPT (40 CFR 93.126) - Purchase of office, shop, and operating equipment for existing facilities	Not Modeled
Regional/ Multi-County	MTC	Connected Bay Area	SF Bay Area: Regionwide: Implement a collective approach to freeway operations and management, including communications network building, and traffic management systems and software; Along the I-	REG170002	21-T07-053	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Regional/ Multi-County	MTC	GL: FTA 5311 Rural Area FY21-FY23	GL: FTA Section 5311 Rural Area Program, Non-ITS portion. Projects include capital and operating assistance. Projects consistent with 40 CFR Part 93.126 Exempt Table 2	VAR210001	21-T01-001	EXEMPT (40 CFR 93.126) - Operating assistance to transit agencies	Not Modeled
Regional/ Multi-County	MTC	GL: Lifeline Transportation Program Cycle 5 and 6	SF Bay Area: Region-wide: 5307 Lifeline set-aside from FY17 and FY18 Large and Small UA. Various 5307 Lifeline projects in large and small urbanized areas. Project is consistent with 40 CFR Part 93.126	VAR170025	21-T01-001	EXEMPT (40 CFR 93.127) - Bus terminals and transfer points	Not Modeled
Regional/ Multi-County	MTC	GL: Transit ADA Operating Support	SF Bay Area: Region-wide: Transit ADA operating support	VAR210003	21-T01-001	EXEMPT (40 CFR 93.126) - Operating assistance to transit agencies	Not Modeled
Regional/ Multi-County	MTC	GL: Transit Operating Assistance	GL - SF Bay Area: Region-wide: Transit Operating Assistance	VAR190006	21-T01-001	EXEMPT (40 CFR 93.126) - Operating assistance to transit agencies	Not Modeled
Regional/ Multi-County	MTC	GL: Transit Preventive Maintenance	GL - SF Bay Area: Region-wide: Transit Preventive Maintenance	VAR190007	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation of transit vehicles	Not Modeled
Regional/ Multi-County	MTC	I-880 Optimized Corridor Operations	Alameda and Santa Clara Counties: Along the I-880 corridor: Implement near-term strategies to integrate and optimize corridor operations, including data sharing platform and system integration.	VAR210008	21-T06-049	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Regional/ Multi-County	MTC	MTC: COVID-19 Emergency Transit Operations	MTC: Regionwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	REG190001	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Regional/ Multi-County	MTC	Regional Planning - PDA Implementation	SF Bay Area: Regionwide: Planning Assistance to support transportation investments and improve their performance in priority development areas.	REG170016	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Regional/ Multi-County	MTC	Regional Planning Activities and PPM - MTC	Regional: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	REG170001	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Regional/ Multi-County	MTC	Regional Planning Activities and PPM - MTC	Regional: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	REG210001	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Regional/ Multi-County	MTC	Regional Streets and Roads Program	SF Bay Area: Regionwide: Regional Streets and Roads Program including providing assistance to Bay Area agencies to implement & maintain computerized pavement management system (PMS),	REG090039	21-T01-003	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled

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List of 2023 TIP Projects by County

County	Sponsor	Project Name	Project Descripion	TIP ID	RTP ID	Air Quality Descripion	Conformity Analysis Year
Regional/ Multi-County	MTC	TCP Financing Repayment Obligations	SF Bay Area: Regionwide: Repayment of principal balance and interest costs associated with securitization of future FTA formula fund apportionments. Also references RTP IDs 17-10-0006 and 17-10-	REG170023	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Regional/ Multi-County	MTC	Technical Assistance Mobility Hub Pilot Program	SF Bay Area: Regionwide: Mobility Hubs Pilot seeks to understand implementation, operations, maintenance, partnerships & VMT reduction. Lessons learned will inform broader regional program. Technical	VAR210006	21-EN09-132	EXEMPT (40 CFR 93.126) - Planning and technical studies	Not Modeled
Regional/ Multi-County	MTC	Toll Bridge Maintenance	Region-wide: Seven state-owned toll bridges: routine maintenance of bridge facilities	REG130001	21-T01-005	EXEMPT (40 CFR 93.126) - Widening narrow pavements or reconstructing bridges (no additional travel	Not Modeled
Regional/ Multi-County	MTC	Toll Bridge Rehabilitation Program	Bay Area: On 7 state-owned toll bridges: Rehabilitation program	REG130002	21-T01-005	EXEMPT (40 CFR 93.126) - Widening narrow pavements or reconstructing bridges (no additional travel	Not Modeled
Regional/ Multi-County	WETA	WETA: COVID-19 Emergency Transit Operations	WETA: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	VAR190008	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Regional/ Multi-County	WETA	WETA: Ferry Channel and Berth Dredging	WETA: Various service areas: Dredge ferry channel, ferry basin and berth	REG090054	21-T11-095	EXEMPT (40 CFR 93.126) - Rehabilitation or reconstruction of track structures, track, and trackbed in	Not Modeled
Regional/ Multi-County	WETA	WETA: Ferry Major Component Rehab/Replacement	WETA: Fleetwide: Rehabilitate and/or replacement major ferry components including shafts, propellers, navigation systems, onboard monitoring and alarm systems, interior components, boarding	REG090057	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation of transit vehicles	Not Modeled
Regional/ Multi-County	WETA	WETA: Fixed Guideway Connectors	WETA: Various locations: This project will replace/rehab fixed guideway connectors such as floats, floating barges, ramps and gangways throughout the system.	REG090067	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
San Francisco	BART	BART/MUNI Direct Connection Platform	BART/MUNI: Powell Street Station: Provide a direct connection between BART & MUNI.	SF-050014	21-T11-115	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Francisco	BART	Embarcadero Stn: New North-Side Platform Elevator	San Francisco: Embarcadero BART: Procure and install a new elevator on the north end of the station, expand paid area to include the new elevator, dedicate existing elevator to Muni use 100%, project is	SF-170016	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of office, shop, and operating equipment for existing facilities	Not Modeled
San Francisco	MTC	Regional Planning Activities and PPM - SF County	San Francisco: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	SF-170002	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
San Francisco	MTC	Regional Planning Activities and PPM - SF County	San Francisco: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	SF-210004	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
San Francisco	Port of SF	Cargo Way and Amador Street Improvements	In San Francisco: On Cargo Way from Jennings to 3rd Street and Amador Street from Illinois Street to 2,300 ft. east: design and construct a complete street project.	SF-170012	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
San Francisco	SF County TA	Oakdale Caltrain Station	San Francisco: Oakdale near Palou: Planning, preliminary engineering, and environmental work for a new Caltrain station and transit service adjustments to serve station.	SF-090011	21-T11-115	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
San Francisco	SF County TA	Yerba Buena Island (YBI) Ramp Improvements	San Francisco: Existing on and off ramps at the Yerba Buena Island (YBI) interchange at US I-80: Reconst ramps; On the west side of the Island: Rehabilitate existing deficient bridges.	SF-070027	21-T01-004	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
San Francisco	SF County TA	Yerba Buena Island Multi-Use Pathway	San Francisco: On Yerba Buena Island along Hillcrest Rd and Treasure Island Rd: Build new two-way Class I ADA compliant pedestrian and bicycle connections	SF-210001	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Francisco	SF DPW	Great Highway Restoration	San Francisco: Great Hwy from Sloat to Skyline (Phase 1): Restore and stabilize roadway, stop bluff slides, and protect infrastructure; Sloat from Great Hwy to Skyline (Phase 2): Restore and improve ped	SF-110005	21-T01-003	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
San Francisco	SFMTA	Cable Car Traction Power & Guideway Rehab	SFMTA: Cable Car System: Traction power and guideway rehab-repair various guideway, track curves, frogs, sheaves, replace Barn 12KV, switchgear, DC Motor, mechanical and infrastructure to improve the	SF-99T002	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation or reconstruction of track structures, track, and trackbed in	Not Modeled

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List of 2023 TIP Projects by County

County	Sponsor	Project Name	Project Descripion	TIP ID	RTP ID	Air Quality Descripion	Conformity Analysis Year
San Francisco	SFMTA	San Francisco - Folsom Streetscape	San Francisco: On Folsom St from 2nd St to 11th St: Construct traffic safety improvements including a two-way separated bikeway, bike signals, lane removal, raised crosswalks, a transit only lane,	SF-210003	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
San Francisco	SFMTA	SF - Powell Street Safety Improvement	San Francisco: Powell Street from Ellis to Post: Improve pedestrian safety and reduce sidewalk crowding to encourage more people to walk, especially to jobs.	SF-170014	21-T09-061	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Francisco	SFMTA	SF Muni Rail Replacement Program	SFMTA: Systemwide: Phased design and replacement of trackway, rail replacement, grinding, ultrasonic testing, track fastener, special trackwork, and related systems serving light rail and cable car lines.	SF-95037B	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation or reconstruction of track structures, track, and trackbed in	Not Modeled
San Francisco	SFMTA	SF Safe Routes to School Non-Infrastructure	San Francisco: Citywide: Coordinate school transportation services, including planning, operations, education and outreach, and capital improvement. It will reduce automobile trips and improve the safety	SF-170023	21-T09-061	EXEMPT (40 CFR 93.126) - Grants for training and research programs	Not Modeled
San Francisco	SFMTA	SFMTA Zero Emission Bus Procurement	SFMTA: Fleet: Procure and deploy battery-electric buses into revenue service.	SF-190013	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
San Francisco	SFMTA	SFMTA: Cable Car Vehicle Renovation Program	SFMTA: Cable car fleet: Overhaul and reconstruct the cable car fleet to maintain system reliability and productivity. Project is phased.	SF-970073	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation of transit vehicles	Not Modeled
San Francisco	SFMTA	SFMTA: COVID-19 Emergency Transit Operations	SFMTA: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	SF-190007	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
San Francisco	SFMTA	SFMTA: Motor Coach Mid-Life Overhaul	SFMTA: Existing Motor Coach and Trolley Coach Mid-life overhaul	SF-170018	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation of transit vehicles	Not Modeled
San Francisco	SFMTA	SFMTA: Overhead Line Recon. & Traction Power Prog	SFMTA: Systemwide: Improve Trolley Poles, Overhead Contact System, Rail Traction Power that provides power to Muni, based on evaluation of the Muni Track and Traction Power Condition Assessment,	SF-970170	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
San Francisco	SFMTA	SFMTA: Paratransit Vehicle Replacements	SFMTA: Paratransit service across San Francisco: preserve service and replace 84 paratransit vehicles	SF-090035	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
San Francisco	SFMTA	SFMTA: Rehab Historic Streetcars	SFMTA: Fleet of historic streetcars: Rehabilitate vehicles	SF-170021	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation of transit vehicles	Not Modeled
San Francisco	SFMTA	SFMTA: Replacement of 40' Trolley Coaches	SFMTA: Systemwide: Purchase 40' replacement trolley coaches for the existing aging coaches.	SF-170004	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
San Francisco	SFMTA	SFMTA: Wayside Fare Collection Equipment	SFMTA: Systemwide: Replacement of life-expired fare collection equipment.	SF-030013	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts,	Not Modeled
San Francisco	SFMTA	SFMTA:Train Control & Trolley Signal Rehab/Replace	SFMTA: Systemwide: Rehabilitate or replace elements of the ATCS Wayside/Central Train Control & Rail/Bus Signal Systems.	SF-050024	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation or reconstruction of track structures, track, and trackbed in	Not Modeled
San Francisco	SFMTA	Transbay Terminal Mobility Hub - East Cut	San Francisco: At former temporary Transbay Terminal, block bound by Folsom, Main, Howard and Beale streets, one block east of Salesforce Transit Center: Implement Mobility Hub Pilot improvements.	SF-210005	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Francisco	TBJPA	TJPA: COVID-19 Emergency Transit Operations	TJPA: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	SF-190009	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
San Francisco	TIMMA	Treasure Island Ferry Terminal Landside Imprvmnts	San Francisco: On Treasure Island at the new Treasure Island Intermodal Terminal: Construct land-side improvements	SF-190006	21-T10-092	EXEMPT (40 CFR 93.126) - Construction of small passenger shelters and information kiosks	Not Modeled
San Francisco	WETA	WETA: Replace Ferry Vessels	WETA: All existing ferry vessels for WETA: Replace vessels when they reach the end of their useful life of 25 years	SF-110053	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
San Mateo	Belmont	Belmont Pavement Preservation	Belmont: Various streets and roads: Pavement preservation	SM-170043	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
San Mateo	Brisbane	Crocker Trail Commuter Connectivity Upgrades	Brisbane: On Crocker Trail bounded by Bayshore Blvd, S Hill Dr, W Hill Dr and Mission Blue Dr: Resurface trail and install various amenities	SM-170041	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	Burlingame	Burlingame - Broadway Grade Separation	Burlingame: Broadway Ave at the Caltrain ROW: Grade separate the roadway form the commuter rail tracks and reconstruction of the Broadway Caltrain Station	SM-210004	21-T11-103	EXEMPT (40 CFR 93.126) - Railroad/highway crossing	Not Modeled

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San Mateo	Burlingame	Burlingame Ped Safe Routes and Mobility Imp	Burlingame: Various locations near schools and access routes to transit: Implement pedestrian safety enhancements at intersections.	SM-210007	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	Burlingame	Burlingame Square Caltrain Station Mobility Hub	Burlingame: At the intersection of California Dr and Burlingame Ave, adjacent to the Burlingame CalTrain Station: Implement streetscape improvements that enhance safety and accessibility for all modes of	SM-210009	21-T03-009	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	Caltrain	Caltrain Electrification	Caltrain: From San Francisco to Gilroy: Electrification of the caltrain corridor from San Francisco to Tamien, including caternary poles, wires, power supply, track and signals, and Electric Multiple Units	SF-010028	21-T11-101	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
San Mateo	Caltrain	Caltrain TVM Rehab and Clipper Functionality	Caltrain: Systemwide: Refurbish and incorporate Clipper functionality into existing Caltrain TVM Machines and upgrade Clipper Card Readers at Caltrain Stations.	SM-170010	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of office, shop, and operating equipment for existing facilities	Not Modeled
San Mateo	Caltrain	Caltrain: COVID-19 Emergency Transit Operations	Caltrain: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	SM-190011	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
San Mateo	Caltrain	Caltrain: Systemwide Track Rehab & Related Struct.	Caltrain: Systemwide: Rehabilitate and replace existing track, track structures and related civil infrastructure	SM-03006B	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation or reconstruction of track structures, track, and trackbed in	Not Modeled
San Mateo	CCAG	ITS Improvements in San Mateo County Northern Citi	San Mateo County: Along the US 101 corridor from Smart Corridors Ph 1 limits to the SF County line, and on I-280 from I-380 to the San Francisco County Line: Implement ITS Improvements in San Mateo	SM-170046	21-T07-057	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
San Mateo	CCAG	San Mateo County SR2S Program	San Mateo County: Countywide: Provide modularized safe routes to school programs and projects that focuses on education, encouragement, evaluation and enforcement components to all interested	SM-110022	21-EN09-132	EXEMPT (40 CFR 93.126) - Grants for training and research programs	Not Modeled
San Mateo	CCAG	SM Countywide ITS Improvements - SSF Segment	San Mateo County, City of South San Francisco: County-wide: ITS improvements at various locations in the County.	SM-070002	21-T07-057	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
San Mateo	Daly City	Southgate Ave and School St Safety Improvements	Daly City: Southgate Ave from St. Francis Blvd to Sullivan Ave and School Street from Junipero Serra Blvd to Mission St: Safety improvements including surface treatments and striping to increase pedestrian	SM-210012	21-T09-061	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
San Mateo	East Palo Alto	US 101 University Ave Interchange Improvements	E. Palo Alto: On University Ave across US 101 btw Woodland Ave and Donahoe St: Construct Bike Lane, modify NB and SB off-ramps and intersections with overcrossing with no new lanes for off-ramps. HPP	SM-070006	21-T09-061	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	Half Moon Bay	Half Moon Bay - Poplar Complete Streets	Half Moon Bay: On Poplar St from Main St to Railroad Ave: Implement complete street improvements	SM-170013	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	Millbrae	Millbrae Transit Center MicroMobility Hub Pilot	Millbrae: Near the Millbrae Transit Center: Install new local mobility hub	SM-210010	21-T03-009	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	Millbrae	Park Blvd, San Anselmo Ave and Sta. Teresa Wy Imps	Millbrae: Along San Anselmo Ave, Park Blvd, and Santa Teresa Way: Installation of traffic calming, pedestrian and bicycle improvements	SM-210011	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	MTC	Regional Planning Activities and PPM - San Mateo	San Mateo: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	SM-170002	21-T07-056	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
San Mateo	MTC	Regional Planning Activities and PPM - San Mateo	San Mateo: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	SM-210013	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
San Mateo	Portola Valley	Portola Valley Street Preservation	Portola Valley: Various streets and roads: Pavement preservation	SM-170044	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
San Mateo	Redwood City	Roosevelt Ave Quick-build Traffic Calming	Redwood City: Along Roosevelt Ave: Install quick-build improvements to implement the approved, traffic calming plan with features to reduce speeding, enhance crossings, and address overall traffic	SM-210002	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
San Mateo	Redwood City	US 101 / Woodside Interchange Improvement	Redwood City: US101/Woodside Rd Interchange: Reconstruct and reconfigure interchange including direct-connect flyover ramp to Veterans Blvd; Seaport Blvd and SR84 from US101/SR84 separation to	SM-050027	21-T06-027	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled

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San Mateo	SamTrans	SamTrans Bus Replacement	SamTrans: Bus Fleet: Replace buses that have reached the end of their useful life	SM-210014	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
San Mateo	SamTrans	SamTrans Paratransit Vehicle Replacements	SamTrans: Paratransit vehicle fleet: Replace vehicles that have reached the end of their useful life	SM-210015	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
San Mateo	SamTrans	SamTrans: COVID-19 Emergency Transit Operations	SamTrans: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and	SM-190010	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
San Mateo	San Bruno	Huntington Transit Corridor Bike/Ped Improvements	San Bruno: On Huntington Ave from San Bruno Ave to Herman St: Implement pavement preservation and bike/ped facilities including construction of bicycle facilities along Huntington Ave	SM-170017	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	San Bruno	San Bruno Transit Corridor Ped Connection Ph4	San Bruno: At the intersection of San Bruno Ave and Green Ave: Implement enhancements to improve pedestrian connectivity	SM-210003	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	San Carlos	Brittan Ave. Widening	San Carlos: At the intersection of Brittan and Industrial Road: Widen to accommodate three new left turn pockets	SM-190001	21-T07-056	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
San Mateo	San Mateo	Delaware Street Safe Routes to School Corridor	San Mateo: Delaware St from 19th Ave to Pacific Blvd: Implement bicycle and pedestrian improvements including Class IV separated bike lanes and bicycle boulevard, upgrade pedestrian facilities, and	SM-210006	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	San Mateo	East Hillsdale Boulevard Ped/Bike Overcrossing	City of San Mateo: Over US 101 at the US 101/Hillsdale Boulevard Interchange: Construct pedestrian and bicycle overcrossing	SM-170006	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	San Mateo	SR92/El Camino Real (SR82) Ramp Modifications	San Mateo: At the SR92/El Camino Real (SR82) interchange: Modify existing on/off ramps to improve the ingress and egress of the interchange.	SM-110047	21-T06-048	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
San Mateo	San Mateo Co	Broadmoor Safe Routes to School Ped Impvts	San Mateo County: Various locations near Garden Village Elementary and Ben Franklin Intermediate Schools: Enhance bicycle and pedestrian safety and access	SM-210005	21-T09-061	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	San Mateo Co	Hwy 1 Congestion & Safety Improvements	San Mateo County: Highway 1 between Pacifica in the north and Half Moon Bay in the south: Various improvements such as raised medians, left turn lanes, acceleration lanes, pedestrian crossings, bike	SM-170001	21-T07-056	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
San Mateo	San Mateo Co	Midcoast Multi-Modal Trail	San Mateo County: On Highway 1 from Mirada Road in Miramar to Coronado Street in El Granada: Construct 4,537 feet of multi-use trail.	SM-130032	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	SF City/County	Southern Skyline Blvd. Ridge Trail Extension	San Mateo County: On the east side of SR-35 "Upper Skyline Blvd" between the intersection of Hwy 92 and Hwy 35 southward approximately 6 miles to the SFPUC Peninsula Watershed: Construct Southern	SM-130031	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
San Mateo	SSF	South San Francisco East of 101 Transit Expansion	South San Francisco: Various locations: Install and upgrade bus stops, enhance sidewalk and crosswalk.	SM-210008	21-T10-093	EXEMPT (40 CFR 93.126) - Construction of small passenger shelters and information kiosks	Not Modeled
San Mateo	SSF	SSF Grand Boulevard Complete Streets (Phase III)	South San Francisco: El Camino Real from Chestnut Ave to McLellan Dr: Implement Grand Boulevard Complete Streets improvements	SM-170016	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Campbell	Campbell PDA Enhancements	Campbell: Various streets in the vicinity of the Campbell PDA: Enhance pedestrian and bicycle infrastructure and calm traffic	SCL210024	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Santa Clara	Campbell	SR 17 Southbound/Hamilton Ave. Off-Ramp Widening	Campbell: Southbound Route 17 at Hamilton Ave: Widen off-ramp to improve operations	SCL210003	21-T06-048	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Santa Clara	Cupertino	Cupertino Stevens Creek Blvd Class IV Bike Lanes	Cupertino: On Stevens Creek Blvd between Wolfe and Hwy 85: Convert existing Class II bike lanes to Class IV bike lanes	SCL210034	21-T07-056	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Cupertino	McClellan Road Separated Bikeways (Phase 3)	Cupertino: McClellan Rd from De Anza Blvd to Byrne Ave and Pacifica Drive from De Anza Blvd to Torre Ave: Implement separated bike lane improvements and traffic signal modifications	SCL190036	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Los Gatos	Los Gatos Creek Trail to Hwy 9 Trailhead Connector	In Los Gatos: The Los Gatos Creek Trail to the north and south sides of Highway 9 between the Highway 17 interchange and University Ave: Construct bike and pedestrian connector	SCL170028	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Los Gatos	Shannon Road Complete Streets	Los Gatos: On both sides of Shannon Road between Los Gatos Blvd. and Cherry Blossom Lane: Construct sidewalks and Class II bike lanes.	SCL190033	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled

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Santa Clara	Mountain View	Mountain View - Stierlin Rd Bike-Ped Improvements	Mountain View: Various streets and roads in central Mountain View: Implement bicycle and pedestrian improvements	SCL210012	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Mountain View	Mountain View Mobility Hub Pilot	Mountain View: At the Mountain View Transit Center: Implement multi-modal enhancements including bicycle storage and parking, charging for electric bikes and scooters, circulation improvements and	SCL210025	21-EN09-132	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Mountain View	Mountain View Shoreline Blvd Pathway Improvements	Mountain View: Adjacent to Shoreline Blvd from Wright Ave to Villa St: Reconstruct a pathway connection to connect neighborhoods and the Transit Center and Downtown.	SCL210027	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Mountain View	Rengstorff Ave Grade Separation	Mountain View: At the intersection of Rengstroff Ave and the Caltrain right-of-way: Grade separate Caltrain at Rengstorff Avenue	SCL190032	21-T11-103	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Santa Clara	MTC	Diridon Station Planning & Studies	San Jose: Diridon Station: Planning activities to advance delivery of the Diridon Station and rail operations.	SCL210022	21-T07-058	EXEMPT (40 CFR 93.126) - Planning and technical studies	Not Modeled
Santa Clara	MTC	Regional Planning Activities and PPM - Santa Clara	Santa Clara: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	SCL170001	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Santa Clara	MTC	Regional Planning Activities and PPM - Santa Clara	Santa Clara: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	SCL210029	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Santa Clara	San Jose	Bascom Avenue - Quick Strike Improvements	San Jose: Along the existing Class 2 bikeway on Bascom Ave from Fruitdale to Hamilton: Enhance bikeway to a 1-mile Class IV protected bikeway. Bikeway project elements include painted bike lanes,	SCL210014	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	San Jose	Bay Trail Reach 9 & 9B	San Jose: From the existing San Francisco Bay Trail/HWY 237 Bikeway Trail to the Bay Trail designated parking spaces (adjacent to the publicly accessible Marriott property): Construct 1.1 miles of	SCL050082	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	San Jose	Better Bikeway San Jose - San Fernando Street	San Jose: On San Fernando St from Almaden Blvd to 11th St: Construct bicycle and pedestrian safety improvements	SCL190029	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	San Jose	Coyote Creek Trail (Hwy 237-Story Rd)	San Jose: From Highway 237 to Story Road: Master plan entire system, design and construction of the trail.	SCL050083	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	San Jose	En Movimiento - Quick Strike Improvements	San Jose: Various locations in East San Jose: Build bike boulevard corridors that will provide safe and comfortable connections to existing and planned transit, as well as many popular destinations.	SCL210015	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	San Jose	McKee-Julian Quick Strike Improvements	San Jose: Various locations along McKee Rd-Julian St: Provide safety improvements for vulnerable roadway users, pedestrians, bicyclists, and transit riders on a Vision Zero Priority Safety Corridor with a	SCL210013	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Santa Clara	San Jose	Mt Pleasant Ped & Bike Traffic Safety Improvements	San Jose: Various locations in the Mount Pleasant Area: Implement traffic safety improvements to serve student populations of seven schools	SCL170031	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Santa Clara	San Jose	San Jose Downtown Bikeways - Quick Strike	San Jose: Various locations in the downtown area: Enhance existing facilities to become a connected network of Class IV (Separated) and Class III (Bike Boulevard) all-ages-and abilities	SCL210016	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	San Jose	San Jose: Los Gatos Creek Reach 5 Underpass	In San Jose: Los Gatos Creek Trail between Auzerais Ave and Montgomery/Bird Ave: Construct Los Gatos Creek Trail (Reach 5b/c).	SCL110029	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	San Jose	US 101/Old Oakland Road Interchange improvements	Oakland Rd - Commercial St to US 101: Widen to 8 lanes; Commercial St - Oakland Rd to Berryessa Rd: Add turn lanes; Commercial St - Berryessa Rd to Mabury Rd: Extend roadway: US 101 ramps: Widen	SCL190001	21-T06-028	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Santa Clara	San Jose	W San Carlos Urban Village Streets Improvements	San Jose: West San Carlos St between I-880 and McEvoy St: Implement safety improvements	SCL170061	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Santa Clara	San Jose	Willow-Keyes Complete Streets Improvements	San Jose: At various locations on the Willow-Keyes corridor: Construct bicycle and pedestrian safety improvements including road diets to construct Class IV protected bike lanes	SCL190028	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Santa Clara	Saratoga Creek Trail Phase 1	Santa Clara: Saratoga Creek Trail between Homeridge Park and Central Park: Build a class I bicycle and pedestrian trail	SCL170045	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled

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County	Sponsor	Project Name	Project Descripion	TIP ID	RTP ID	Air Quality Descripion	Conformity Analysis Year
Santa Clara	Saratoga	Blue Hills Elementary Pedestrian Crossing at UPRR	Saratoga: Parallel to Fredericksburg Dr and Guava Ct and the Union Pacific Rail Road Vasona Branch: Reopen and construct an at-grade bike/ped crossing: At various UPRR crossings near Blue Hills	SCL210018	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Saratoga	Saratoga Village Crosswalks and Sidewalk Rehab	Saratoga: Along Big Basin Way between 6th street and the signalized intersection of Saratoga-Sunnyvale Rd/Saratoga Ave/Hwy 9: Install curb bulbouts and crosswalk and rehabilitate sidewalk.	SCL170054	21-T09-061	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Sunnyvale	Bernardo Avenue Bicycle Underpass	Sunnyvale: Between North and South Bernardo Avenue under the Caltrain tracks: Construct bicycle underpass	SCL170020	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Sunnyvale	East Sunnyvale Area "Sense of Place"	Sunnyvale: Various locations in the East Sunnyvale Sense of Place Plan Area: Implement bike, pedestrian and transit access improvements	SCL170024	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Sunnyvale	Java Dr Road Diet and Bike Lanes	Sunnyvale: On Java Dr from Mathilda to Crossman: Construct approximately 5,000 linear feet of Class II, IIB or IV bike lanes each side via a road diet	SCL170022	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Sunnyvale	Peery Park "Sense of Place" Improvements	Sunnyvale: In Peery Park Specific Area on Potrero Avenue from Maude Avenue to Central Expwy: Implement bike and pedestrian improvements	SCL170023	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Sunnyvale	Sunnyvale Bicycle, Pedestrian and SRTS Safety Imps	Sunnyvale: Near schools throughout the City: Construct quick-build bicycle, pedestrian and Safe Routes to School improvements with low-cost measures to improve multi-modal connectivity through the	SCL210023	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	Sunnyvale	Sunnyvale Safe Routes to School Improvements	Sunnyvale: In the vicinity of Bishop Elementary School: Install bike lanes, high visibility crosswalks, raised crosswalks, and curb extensions; Provide bicycle and pedestrian education and encouragement	SCL170059	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Santa Clara	Sunnyvale	Sunnyvale SNAIL Neighborhood Improvements	Sunnyvale: Various locations: Implement bike/ped improvements, close slip lanes, add bulbouts, install detection systems, ADA compliant ped signals, enhance existing bike lanes to include green bike	SCL170017	21-T08-060	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
Santa Clara	VTA	Guadalupe Signal Improvements/SCADA System Repl	VTA: Guadalupe: Improve and rehabilitate signals, replace network switch	SCL210009	21-T01-002	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
Santa Clara	VTA	Hwy. Transp Operations System/FPI Phase 1 & 2	Santa Clara County: At various locations: Implement Transportation Operations System/Freeway Performance Initiative projects	SCL190003	21-T07-056	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Santa Clara	VTA	I-280 Soundwalls - SR-87 to Los Gatos Creek Bridge	San Jose: On I-280 between SR 87 and Los Gatos Creek Bridge: Construct soundwalls	SCL170064	21-T07-056	EXEMPT (40 CFR 93.126) - Noise attenuation	Not Modeled
Santa Clara	VTA	I-280/Winchester Blvd Interchange Improvement	San Jose: I-280/Winchester Interchange: Construct improvements at the Winchester Blvd. interchange and I-280/I-880/SR 17 freeway connectors including the addition of ramps and a fly-over and the	SCL150014	21-T06-017	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Santa Clara	VTA	I-280/Wolfe Road Interchange Improvement	Cupertino: I-280/Wolfe Road Interchange: Modify to relieve congestion and improve local circulation.	SCL190011	21-T06-017	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Santa Clara	VTA	I-680 Soundwalls - Capitol Expwy to Mueller Ave	San Jose: On I-680 between Capitol Expressway and Mueller Avenue: Construct soundwalls	SCL150001	21-T07-056	EXEMPT (40 CFR 93.126) - Noise attenuation	Not Modeled
Santa Clara	VTA	N 1st/Tasman EB Track Switch Mod - TSP Enhancement	San Jose: At the Champion station In the vicinity of the North First St and Tasman Dr intersection: Modify the eastbound trackway circuit to trigger the eastbound transit signal priority (TSP) service calls	SCL210030	21-T01-002	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
Santa Clara	VTA	SR 237 Westbound On-Ramp at Middlefield Rd.	Mountain View: Along Middlefield Rd from Logue Dr to 400¿ south of the eastbound SR 237 off-ramp: Improve traffic operations and enhance safety and implement Complete Streets improvements	SCL230001	21-T06-043	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
Santa Clara	VTA	SR 237/Lawrence Expressway/Carribean Dr IC Imp	Sunnyvale: SR-237/Lawrence Expressway/Carribean Dr Interchange: Modify interchanges to relieve congestion and improve traffic operations	SCL210019	21-T06-043	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Santa Clara	VTA	SR 87/Capitol Expressway/Narvaez Ave. IC Imp	San Jose: SR 87/Capitol Expressway interchange: Modify the existing interchange with standard northbound on and off ramps that connect directly to Capitol Expressway instead of Narvaez Avenue.	SCL210020	21-T06-040	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled

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Santa Clara	VTA	SR-17 Bike/Ped Trail and Wildlife Crossing	Santa Clara County: SR-17 South of Los Gatos: Construct grade separated wildlife crossing, up to 5.4 miles of fencing, and a multi-use regional trail overcrossing	SCL210028	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	VTA	US 101/Ellis Street Interchange Improvement	Mountain View: US 101/Ellis Street Interchange Modify: Modify interchange	SCL210021	21-T06-028	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Santa Clara	VTA	US 101/San Antonio Rd/Charleston/Rengstorff IC Imp	Mountain View and Palo Alto: US 101 interchanges at San Antonio and Charleston Road/Rengstorff Avenue: Construct interchange improvements include adding new auxiliary lane.	SCL190012	21-T06-028	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Santa Clara	VTA	US 101/SR 152/10th Ramp and Intersection Imp.	Gilroy: US-101/SR-152/10th St Interchange: Widen the existing bridge, modify existing on- and off-ramp; upgrade local roadways to current standards to improve local circulation.	SCL210002	21-T06-048	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Santa Clara	VTA	US 101/SR 25 Interchange - Phase 1	Santa Clara County: US 101 and SR 25 Interchange: Phase 1 Reconfigure a portion of the overall interchange re-construction, focusing on improving the movement from southbound US 101 to southbound	SCL190013	21-T06-028	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Santa Clara	VTA	VTA Axle Press Replacement	San Jose: At the Guadalupe Division: Replace the Ajax-Ceco Axle press	SCL210032	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of office, shop, and operating equipment for existing facilities	Not Modeled
Santa Clara	VTA	VTA Electronic Locker Upgrade and Replacement	VTA: At VTA park and ride lots, Light Rail Stations and Transit Centers: Replace bicycle lockers with new, Wi-Fi enabled, electronic lockers allowing VTA to serve more customers and provide real-time	SCL210017	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	VTA	VTA Network Switch Replacement Upgrade	VTA: Throughout the VTA light rail system: Procure and install new replacement SCADA network backbone switches throughout the VTA light rail system at locations identified in the SCADA Fiber Network	SCL210031	21-T01-002	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
Santa Clara	VTA	VTA North Yard Tire Awning	Mountain View: At VTA North Yard: Build a steel frame awning with a metal roof and install lighting under the awning.	SCL210033	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Santa Clara	VTA	VTA Rail Substation Rehab/Replacement	VTA: Light Rail System: Replace Transit Power Subsystem	SCL210006	21-T01-002	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
Santa Clara	VTA	VTA Track Intrusion Abatement	VTA: Various locations along trackway: Installation of fencing, barriers, signage, flashing signs, and pavement markings.	SCL150008	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation or reconstruction of track structures, track, and trackbed in	Not Modeled
Santa Clara	VTA	VTA: COVID-19 Emergency Transit Operations	VTA: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	SCL190038	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Santa Clara	VTA	VTA: Facilities ADA Upgrades	VTA: Various passenger facilities systemwide: Modify and upgrade ADA non-compliant items to bring them into compliance with current ADA codes	SCL190039	21-T01-002	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Santa Clara	VTA	VTA: Guadalupe Steam Rack Improv & Liner Replace	VTA: At Guadalupe Division: Replace existing steam rack (light rail) track with a new liner system and overhead roof structure.	SCL190053	21-T01-001	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Santa Clara	VTA	VTA: HVAC Replacement	VTA: At various facilities system-wide: Replace heating, ventilation and cooling equipment	SCL190026	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of office, shop, and operating equipment for existing facilities	Not Modeled
Santa Clara	VTA	VTA: Light Rail Bridge and Structure - SG Repair	VTA: Various Locations: Light rail bridge and structure defect investigation and repair. Stabilization measures to address Hamilton structure settlement.	SCL110099	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation or reconstruction of track structures, track, and trackbed in	Not Modeled
Santa Clara	VTA	VTA: Light Rail Station Rehabilitation	VTA: At various light rail stations: Provide rehabilitation and repair of maintenance issues outlined in the condition assessment	SCL190048	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Santa Clara	VTA	VTA: Non-Revenue Vehicle Procurement	VTA: Systemwide: Acquire non-revenue vehicles to replace existing units that have reached the end of their useful life	SCL170047	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of support vehicles	Not Modeled
Santa Clara	VTA	VTA: Paratransit Vehicle Procurement	VTA: Paratransit Fleet: Procure vehicles and associated equipment for paratransit services.	SCL170005	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Santa Clara	VTA	VTA: Rail Replacement Program	VTA: Throughout the Light Rail system: Replace rails (no rail expansion).	SCL050002	21-T01-002	EXEMPT (40 CFR 93.126) - Rehabilitation or reconstruction of track structures, track, and trackbed in	Not Modeled

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Santa Clara	VTA	VTA: SCADA Control Center System Replacement	VTA: Systemwide: Provide upgrades to the Supervisory Control and Data Acquisition (SCADA) System hardware and software; At the Control and Data Center: Facility expansion	SCL170050	21-T01-002	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
Santa Clara	VTA	VTA: Security Enhancement at Chaboya Parking Lot	VTA: At the Chaboya Bus Yard: Security enhancements	SCL210008	21-T01-002	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Santa Clara	VTA	VTA: Standard & Small Bus Replacement	VTA: Fleetwide: Standard and Small Bus Replacement	SCL050001	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Santa Clara	VTA	VTA: TP OCS Rehab & Replacement	VTA: Systemwide: Rehabilitate and replace overhead catenary system (OCS) and associated components	SCL090044	21-T01-002	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
Solano	Benicia	Benicia - Park Road Improvements	Benicia: Park Road between I-780 and Bayshore Road: Resurface roadway and construct Class II/IV bicycle lane facilities and storm drain improvements	SOL170011	21-T08-060	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Solano	Caltrans	Rio Vista SR12 Pavement Rehab and Intersection Imp	Solano County: SR12 from Currie Rd to the County Line: Rehabilitate roadway; Rio Vista: At SR12/Church Rd. Intersection: Add Standard Shoulders, EB Left Turn Lane, WB Acceleration Lane and Deceleration	SOL150003	21-T01-003	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
Solano	Caltrans	Solano WB I-80 Cordelia Truck Scales	Solano County: WB I-80: Replace and relocate the existing Cordelia Truck Scales, expand capacity and create braided off-ramp connection to WB I-80	SOL190025	21-T07-055	EXEMPT (40 CFR 93.127) - Truck size and weight inspection stations	Not Modeled
Solano	Dixon	Dixon: COVID-19 Emergency Transit Operations	Dixon: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	SOL190018	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Solano	Fairfield	Fairfield - Cadenasso Drive Paving	Fairfield: On Cadenasso Dr: Pavement preservation	SOL210001	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Solano	Fairfield	Fairfield West Texas Street Complete Streets	Fairfield: Along West Texas St between Beck Ave and Pennsylvania Ave: Modernizes a relinquished highway to improve conditions for bicyclists and pedestrians traveling including implementing a road diet	SOL210009	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Solano	Fairfield	Fairfield: COVID-19 Emergency Transit Operations	Fairfield: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	SOL190020	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Solano	Fairfield	Fairfield-Suisun Intercity/Local Bus Replacement	Fairfield: Systemwide: Replace local/intercity buses that have exceeded their expected useful life.	SOL110041	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Solano	Fairfield	Grange Middle School SR2S and PavementPreservation	Fairfield: In the vicinity of Grange Middle School: Enhance bicycle and pedestrian safety mobility and pavement preservation.	SOL170010	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Solano	F-S Transit	Fairfield - Electric Bus Fleet and Infrastructure	Fairfield: Systemwide: Procure all-electric, zero-emission buses and supporting charging infrastructure	SOL190003	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Solano	MTC	Regional Planning Activities and PPM - Solano	Solano County: County-wide: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	SOL170001	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Solano	MTC	Regional Planning Activities and PPM - Solano	Solano County: County-wide: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	SOL210008	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Solano	Rio Vista	Rio Vista: COVID-19 Emergency Transit Operations	Rio Vista: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and	SOL190019	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Solano	Solano County	Solano County Farm to Market Phase 3	Solano County: Various locations in Suisun Valley: Construct bike lanes	SOL170016	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Solano	Solano County	Solano County Roadway Preservation	Solano County: On Midway Road from Interstate 80 to approximately 200 feet west of Porter Road: Place asphalt overlay.	SOL170015	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Solano	Solano County	Suisun Vallley Bicycle and Pedestrian Imps	Solano County: At Mankas Corner: Construct staging area with bicycle and pedestrian improvements; At Various Locations in Solano County: Add a Class II bike lane to enhance bike access to areas	SOL130007	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled

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Solano	SolTrans	SolTrans Electric Bus Charging Infrastructure	SolTrans: Systemwide: Implement core infrastructure improvements to support the charging of a 100% Zero Emissions Bus fleet.	SOL190017	21-T01-002	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
Solano	SolTrans	SolTrans: Bus Replacement (Alternative Fuel)	SolTrans: Eight 45' MCI commuter coaches: Replace vehicles as they reach their useful life.	SOL090034	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Solano	SolTrans	SolTrans: COVID-19 Emergency Transit Operations	SolTrans: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and	SOL190021	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Solano	SolTrans	SolTrans: Data Management Technology Enhancements	SolTrans: Systemwide: Procure data management systems and software	SOL170002	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of office, shop, and operating equipment for existing facilities	Not Modeled
Solano	STA	I-80/I-680/SR 12 Interchange Phase 2A	Solano County: I-80/I-680/SR-12 Interchange: Complete the construction of the I-80 connection to SR 12W that was started with the Construction Package 1.	SOL190024	21-T06-015	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Solano	STA	Solano Connected Mobility Implementation Plan	Solano County: Countywide: Develop a countywide Connected Mobility Implementation Plan to address how Solano reacts to the recommendations of Blue Ribbon Task Force	SOL210006	21-T10-093	EXEMPT (40 CFR 93.126) - Planning and technical studies	Not Modeled
Solano	STA	Solano Mobility Call Center	Solano County: County-wide: Operate call center featuring in-person assistance for customers related to transit, commuting, and mobility services, including ADA, Clipper, and ride matching, among others	SOL170009	21-T01-001	EXEMPT (40 CFR 93.126) - Operating assistance to transit agencies	Not Modeled
Solano	STA	Solano Regional Transit Improvements - TIRCP 2020	STA: Throughout Solano County and Solano Express Bus stops at various stations: Network integration planning and implementation of various transit and access improvements	SOL190023	21-T10-093	EXEMPT (40 CFR 93.126) - Construction or renovation of power, signal, and communications systems	Not Modeled
Solano	STA	Solano Safe Routes to School Program	Solano County: Countywide: Implement Countywide Solano Safe Routes to School Program, including Planning, Education, and Encouragement events and materials. Toll credits will be used in lieu of match	SOL110019	21-T09-061	EXEMPT (40 CFR 93.126) - Transportation enhancement activities (except rehabilitation and operation	Not Modeled
Solano	STA	SolanoExpress Bus Electrification	Solano County: Countywide: Purchase electric over-the-road coaches for long-haul SolanoExpress routes.	SOL190002	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Solano	Suisun City	McCoy Creek Trail - Phase 2	Suisun City: Along the west bank of the McCoy Creek canal and the north bank of the Laurel Creek canal from Pintail Dr to Blossom Avenue: Construct a Class I concrete pedestrian/bicycle trail with a bridge	SOL170007	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Solano	Suisun City	New Railroad Avenue Pavement Rehabilitation	Suisun City: Railroad Ave from Sunset Ave to Birchwood Ct: Rehabilitate roadway on eastbound lanes; Railroad Ave from Sunset Ave to Marina Blvd: Restripe existing Class 2 bicycle lanes on both sides of	SOL170014	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Solano	Vacaville	Vaca Valley/I505 Multimodal Improvements	Vacaville: On Vaca Valley Parkway at E Monte Vista Ave and I-505 ramps: Install roundabouts and construct bicycle/pedestrian facilities over I-505 connecting to existing facilities and ADA improvements	SOL170013	21-T07-056	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
Solano	Vacaville	Vacaville Pavement Preservation	Vacaville: Various Streets and Roads: Pavement preservation	SOL210002	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Solano	Vacaville	Vacaville: COVID-19 Emergency Transit Operations	Vacaville: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and	SOL190022	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Solano	Vacaville	Vacaville: Electric Bus Charging Infrastructure	Vacaville: System-wide: Implement core infrastructure improvements to support the charging of a 100% Zero Emissions Bus fleet.	SOL210003	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Solano	Vacaville	Vacaville: Electric Bus Fleet	Vacaville: Fleetwide: Purchase electric zero-emission buses.	SOL210004	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Solano	Vacaville	Vacaville: Transit Building Expansion	Vacaville: Transit building: Expand building	SOL210005	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Solano	Vallejo	Vallejo - Sacramento St Road Diet and Rehab	Vallejo: Sacramento St from Tennessee St to Capitol St: Implement road diet, rehabilitation, and bike/ped improvements	SOL190004	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled

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Solano	Vallejo	Vallejo Bay Trail / Vine Trail Gap Closure	Vallejo: Between the existing Bay Trail to the south and the Bay Trail and Napa Vine Trail in American Canyon: Build multi-use path to close the gap between the existing trail segments	SOL170008	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Solano	Vallejo	Vallejo Ferry Mobility Hub Improvement	Vallejo: In and around the Vallejo Ferry Terminal: Implement mobility hub improvements such as signage and wayfinding, sheltered waiting areas, parking and charging for electric micro-mobility vehicles,	SOL210007	21-EN09-132	EXEMPT (40 CFR 93.126) - Construction of small passenger shelters and information kiosks	Not Modeled
Solano	Vallejo	Vallejo Springs Rd Pavement Preservation	Vallejo: On Springs Rd from Humboldt St. to Maywood Dr: Pavement preservation including pavement rehabilitation, curb ramps imp., curb and gutter, and pavement striping	SOL210010	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Sonoma	Cotati	Cotati Downtown-Civic Center Connectivity Safety	Cotati: Various locations in Downtown and Civic Center: Pavement preservation and bicycle and pedestrian safety improvements	SON210002	21-T09-061	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Sonoma	Healdsburg	Healdsburg Avenue Complete Streets Improvements	Healdsburg: On Healdsburg Ave from Powell Ave to Passalaqua Rd: Implement complete streets improvements for all modes of travel including reducing travel lanes from 5 to 3	SON170024	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Sonoma	Healdsburg	Healdsburg Electric Bike Share	Healdsburg: Various locations: Establish an Electric Bike Share Program	SON210003	21-EN09-132	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Sonoma	MTC	Regional Planning Activities and PPM - Sonoma	Sonoma County: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	SON170002	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Sonoma	MTC	Regional Planning Activities and PPM - Sonoma	Sonoma County: Regional Planning Activities and Planning, Programming and Monitoring (PPM)	SON210007	21-T07-058	EXEMPT (40 CFR 93.126) - Planning activities conducted pursuant to titles 23 and 49 U.S.C	Not Modeled
Sonoma	Petaluma	Petaluma AVL Equipment	Petaluma: Systemwide: Purchase and maintain AVL system equipment for fixed route vehicle.	SON170017	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts,	Not Modeled
Sonoma	Petaluma	Petaluma: COVID-19 Emergency Transit Operations	Petaluma: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and	SON190008	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Sonoma	Petaluma	Petaluma: Purchase 2 Replacement Fixed Route Buses	Petaluma: Battery Electric Buses: Purchase Battery Electric vehicles to replace Fixed Route Diesel buses that have expended their useful life.	SON210006	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Sonoma	Petaluma	Petaluma: Transit Yard & Facilities Improvements	Petaluma: Transit Yard and Facility: Improvements to enhance security and maintain a state of good repair, including pavement repair and upgrades, video surveillance system, office security, yard lighting,	SON170005	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Sonoma	Rohnert Park	Rohnert Park Pedestrian Safety Improvements	Rohnert Park: Various street intersections, mid-block crossings, and multi-use path/street intersections throughout the City, but especially serving the Central Rohnert Park Priority Development Area:	SON210004	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Sonoma	Rohnert Park	Southwest Boulevard Complete Streets	Rohnert Park: On Southwest Blvd between Commerce Blvd and 300-feet north of Adrian Dr: Rehabilitate pavement; reconfigure lanes; install / improve on-street bike facilities, sidewalks, intersection,	SON210009	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Sonoma	Santa Rosa	Highway 101 Bicycle and Pedestrian Overcrossing	Santa Rosa: Over Highway 101 in the vicinity of the Santa Rosa Junior College and the Coddingtown Mall: Construct a Class I shared-use ADA accessible bicycle and pedestrian bridge	SON170012	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Sonoma	Santa Rosa	Jennings Ave Bike & Ped RR Crossing Corridor	In Santa Rosa: At Jennings Ave and SMART railroad tracks: Construct a bicycle and pedestrian crossing and develop a Safe Routes to School service program focusing on education and awareness for the	SON150003	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Sonoma	Santa Rosa	Santa Rosa Pavement Rehab of Various Streets	In Santa Rosa: Various locations: Pavement rehabilitation; Various locations: Restripe roadways to add Class II bike lanes	SON170023	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Sonoma	Santa Rosa	SantaRosa Downtown Comm Infrastructure Enhancement	Santa Rosa: In downtown and Railroad Square: Upgrade the existing traffic signal interconnect infrastructure from copper wire to a fiber optic backbone.	SON190011	21-T07-057	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Sonoma	Santa Rosa	US 101 Hearn Ave Interchange	Santa Rosa: US 101/Hearn Ave over-crossing/interchange: Replace the US 101/Hearn Ave over-crossing/interchange with a new over crossing/interchange including bike lanes, sidewalks, and re-aligned	SON150006	21-T06-029	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Sonoma	SantaRosa Bus	Santa Rosa CityBus: Electric Bus Replacement	Santa Rosa CityBus: Nine local transit buses: Replace with Nine electric buses and purchase/install related charging equipment	SON170026	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled

Note: Projects with a conformity analysis year of 2050 reference programmatic projects or projects with a completion date after 2040 in Plan Bay Area 2050.

List of 2023 TIP Projects by County

County	Sponsor	Project Name	Project Descripion	TIP ID	RTP ID	Air Quality Descripion	Conformity Analysis Year
Sonoma	SantaRosa Bus	Santa Rosa CityBus: ZEB Replacement	Santa Rosa CityBus: Replace two local transit clean-diesel buses with two electric buses	SON210008	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Sonoma	SantaRosa Bus	Santa Rosa Transit Mall Roadbed Rehabilitation	Santa Rosa: At the Transit Mall: Rehabilitate the roadbed	SON210001	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Sonoma	SantaRosa Bus	SR CityBus: COVID-19 Emergency Transit Operations	Santa Rosa CityBus: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE	SON190009	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Sonoma	Sebastopol	Bodega Avenue Bike Lanes and Pavement Rehab	Sebastopol: Bodega Ave from Pleasant Hill Ave to High St: Rehabilitate pavement, fill in sidewalk gaps, widen pavement, add bike lanes, and implement pedestrian safety improvements. Project is phased.	SON170021	21-T01-003	EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation	Not Modeled
Sonoma	Sebastopol	SR 116 and Bodega Ave Pedestrian Improvements	Sebastopol: Along SR-116 between Hurbut Ave and Maple Ave: Construction of ADA-compliant ramps; Along Bodega Ave at the uncontrolled crossings at Robinson Rd and Florence Ave: Implement	SON210005	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Sonoma	SMART	SMART: COVID-19 Emergency Transit Operations	SMART: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies,	SON190010	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Sonoma	Son Co Reg Park	Joe Rodota Trail Bridge Replacement	Sonoma County: On the Joe Rodota Trail near the City of Sebastopol: Remove and replace two deteriorating bicycle and pedestrian bridges	SON170025	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Sonoma	Son Co Reg Park	Sonoma County - West County Trail Gap Closures	Sonoma County: West County Trail along Green Valley Rd and Occidental Rd: Construct Class I bike path segments to close gaps in the trail	SON230001	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Sonoma	Son Co TA	Highway 116/121 Intersection Improvement Project	Sonoma County: Southwest of the City of Sonoma at the intersection of State Routes 116, and 121, and Bonneau Road: Improve intersection	SON150009	21-T07-056	EXEMPT (40 CFR 93.127) - Intersection signalization projects at individual intersections	Not Modeled
Sonoma	Son Co TA	Sonoma County - County-Wide SRTS Program	Sonoma County: Countywide: Safe Routes to Schools Education Program in schools, while encouraging schools to lead their own ongoing programs, with a goal of increasing active or shared modes of	SON170009	21-EN09-132	EXEMPT (40 CFR 93.126) - Grants for training and research programs	Not Modeled
Sonoma	Son Co Transit	Sonoma Co Transit: COVID-19 Emergency Transit Ops	Sonoma County Transit: Systemwide: Capital, planning and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of	SON190007	21-T01-001	EXEMPT (40 CFR 93.126) - Emergency relief (23 U.S.C. 125)	Not Modeled
Sonoma	Son Co Transit	Sonoma County Transit: Replace 2009 CNG Buses	Sonoma County Transit: 40-foot CNG-Fueled Bus Fleet: Purchase Replacement Buses	SON170006	21-T01-002	EXEMPT (40 CFR 93.126) - Purchase of new buses and rail cars to replace existing vehicles or for	Not Modeled
Sonoma	Sonoma City	Fryer Creek Pedestrian and Bicycle Bridge	Sonoma: At Newcomb Street over Fryer Creek: Construct a new bicycle and pedestrian bridge and path as well as circulation and accessibility improvements to Newcomb Street and Fryer Creek Drive.	SON170022	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Sonoma	Sonoma County	Crocker Bridge Bike and Pedestrian Passage	Sonoma County: On existing north piers of Crocker Bridge: Construct a Class 1 bicycle and ped facility	SON170014	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Sonoma	Sonoma County	Replace Hauser Bridge over Gualala River 20C0240	In Sonoma: Bridge No.20C0240,Hauser Road Bridge over over South Fork Gualala River, 5 Mi east of Seaview Road. Replace existing one-lane bridge with a new two-lane bridge	SON110025	21-T01-005	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Sonoma	Windsor	Windsor River Road/Windsor Road Intersection Imps	Windsor: At the Windsor River Road/Windsor Road/SMART intersection: Construct rail crossing safety improvements, multi-use path, pedestrian and vehicle traffic improvements.	SON170001	21-T09-061	EXEMPT (40 CFR 93.126) - Railroad/highway crossing	Not Modeled

Note: Projects with a conformity analysis year of 2050 reference programmatic projects or projects with a completion date after 2040 in Plan Bay Area 2050.

Appendix B

List of New Projects in the 2023 TIP by County

County	Sponsor	Project Name	Project Descripion	TIP ID	RTP ID	Air Quality Descripion	Conformity Analysis Year
Non-Exempt							
Alameda	Fremont	Irvington BART Station	Fremont: Along the BART corridor in the Irvington District: Construct a new BART station	ALA230004	21-T11-104	NON-EXEMPT	2030
Exempt							
Alameda	ACTC	Alameda CTC: San Pablo Avenue Bus/Bike Lanes	Oakland, Emeryville, and Berkeley: Along San Pablo Avenue from 16th Street in Downtown Oakland to Heinz Street: Install pedestrian crossing improvements and dedicated bus lanes and bike lanes	ALA230008	21-T10-077	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Alameda	ACTC	East Bay Greenway Multimodal (Phase 1)	Alameda County: Along the BART alignment following parallel arterial roadways from Lake Merritt BART Station to S. Hayward BART Station: Install Class I & Class IV bikeway facilities. Includes road diet	ALA230007	21-T08-060	EXEMPT (40 CFR 93.126) - Projects that correct, improve, or eliminate a hazardous location or feature	Not Modeled
Alameda	ACTC	San Pablo Ave Parallel Bike Improvements	Berkeley and Albany: Various locations along bicycle boulevard/neighborhood bikeway routes parallel to San Pablo Avenue: Install bicycle improvements including crossing safety, speed/volume control	ALA230010	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	ACTC	San Pablo Ave Safety and Bus Bulb Improvements	Berkeley and Albany: San Pablo Avenue in Berkeley and Albany from Heinz St to the Contra Costa County line: Install bus bulbs and pedestrian/bicycle crossing improvements	ALA230009	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Alameda	BART	DT Berkeley BART Station Elevator Modernization	Berkeley: At the Downtown Berkeley BART Station: Modernize station elevators	ALA230001	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Alameda	BART	Hayward Fleet Maintenance Facilities	BART: At the Hayward Maintenance Complex: Expand complex to accommodate additional rail vehicles; tire fleet maintenance; and support additional rail cars and new fleet preventative maintenance for	ALA230005	21-T01-002	EXEMPT (40 CFR 93.126) - Reconstruction or renovation of transit buildings and structures (e.g., rail	Not Modeled
Alameda	Fremont	I-680/Mission Boulevard Interchange Modernization	Fremont: I-680/Mission Blvd: Redesign the interchange to reduce the steep grade of the southbound off-ramp onto Mission Boulevard and incorporate a separated bicycle and pedestrian path along	ALA230003	21-T08-060	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Alameda	Fremont	I-880/Decoto Road Interchange Modernization	Fremont: At the I-880/Decoto Road interchange: Reconstruct the existing interchange to include a new Class I trail and a dedicated bus lane in both directions of travel through the interchange.	ALA230002	21-T07-056	EXEMPT (40 CFR 93.127) - Interchange reconfiguration projects	Not Modeled
Alameda	Oakland	Reconnecting the Town (RAISE)	Oakland: On Broadway between Embarcadero West and 11th Street and Martin Luther King Jr. Way between 2nd and 7th: Implement bus reliability, pedestrian and bike way improvements	ALA230006	21-T10-073	EXEMPT (40 CFR 93.126) - Traffic control devices and operating assistance other than signalization	Not Modeled
Contra Costa	EB Reg Park Dis	Martinez Bay Trail Gap Closure	East Bay Regional Parks District: Along the Carquinez Loop Trail and SF Bay Trail in the vicinity of Berrellesa St: Close a 0.5 mile gap by constructing a shared-use path along with crossing improvements	CC-230001	21-T01-003	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled
Santa Clara	VTA	SR 237 Westbound On-Ramp at Middlefield Rd.	Mountain View: Along Middlefield Rd from Logue Dr to 400¿ south of the eastbound SR 237 off-ramp: Improve traffic operations and enhance safety and implement Complete Streets improvements	SCL230001	21-T06-043	EXEMPT (40 CFR 93.127) - Intersection channelization projects	Not Modeled
Sonoma	Son Co Reg Park	Sonoma County - West County Trail Gap Closures	Sonoma County: West County Trail along Green Valley Rd and Occidental Rd: Construct Class I bike path segments to close gaps in the trail	SON230001	21-T08-060	EXEMPT (40 CFR 93.126) - Bicycle and pedestrian facilities	Not Modeled

Appendix C

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2] 2025	2030	2040	2050
21-T01-001	Operate & Maintain the Existing System | Baseline Public Transit Service Levels | Regional	This program includes funding to operate the Bay Area's baseline transit services. Improvements include operations, routine preventative maintenance, and investments to restore transit service hours to 2019 levels.	No					
21-T01-002	Operate & Maintain the Existing System | Public Transit Capital Assets | Regional	This program includes funding to maintain and replace the Bay Area's baseline transit capital assets. Improvements include vehicle rehabilitation or replacement; reconstruction or renovation of transit buildings and structures; and rehabilitation or reconstruction of track.	No					
21-T01-003	Operate & Maintain the Existing System | Local Streets & Roads | Regional	This program includes funding to operate and maintain the Bay Area's local streets and roads. Improvements include routine patching and pothole repair; sweeping and cleaning; signal operations; lighting; resurfacing or rehabilitation with no new capacity; preventative maintenance; and emergency repair.	No					
21-T01-004	Operate & Maintain the Existing System | Local Bridges | Regional	This program includes funding to operate and maintain the Bay Area's local bridges. Improvements include bridge rehabilitation, replacement or retrofitting with no new capacity.	No					
21-T01-005	Operate & Maintain the Existing System | Toll Bridges | Regional	This program includes funding to operate and maintain the Bay Area's seven state-owned toll bridges and generally implement the region's Toll Bridge Program. Improvements include toll bridge rehabilitation, replacement or retrofitting with no new capacity, and toll operations.	No					
21-T01-006	Operate & Maintain the Existing System | Highways | Regional	This program includes funding to operate and maintain the Bay Area's state highways and generally implement the State Highway Operation and Protection Program (SHOPP). Improvements include resurfacing and/or rehabilitation with no new capacity, preventative maintenance, and emergency repair.	No					
21-T01-007	Other Investments to Operate & Maintain the Existing System | Regional	This program includes funding to implement other programmatic investments to operate and maintain the Bay Area's transportation systems. This program generally implements county, transit agency and other local programs and initiatives to improve upon baseline transit conditions. Improvements include resurfacing and/or rehabilitation of local streets and roads; construction of new bus or rail storage/maintenance facilities; and modernization or minor expansions of transit structures and facilities outside existing right-of-way, such as stations or rail yards. Example investments include implementation of BART's Hayward Maintenance Complex, Electrical & Mechanical Infrastructure Program, and Seismic Retrofit Program; Marin Transit's Operations & Maintenance Facility; VINE's Maintenance Facility; and the Caldecott Tunnel (Bore 1 & 2) Modernization.	No					
21-T02-008	Community-Led Transportation Enhancements in Equity Priority Communities | Regional	This program includes funding to implement transportation priorities identified by the Bay Area's Equity Priority Communities. Improvements could include lighting and safety measures; improvements to transit stations and stops; and subsidies for shared mobility, like bike share or car share.	No					
21-T03-009	Seamless Mobility Enhancements | Regional	This program includes funding to deploy a smartphone app for trip planning, payment and real-time passenger information, and to implement county, transit agency and other local station access and mobility programs and initiatives. Improvements include bus stop modernization; small passenger shelters and information kiosks; transfer centers; and station access improvements, including wayfinding signage.	No					
21-T04-010	Regional Transit Fare Policy | Regional	This program includes funding to implement a streamlined fare structure across the Bay Area's transit operators and replace operator-specific fare programs with an integrated regional fare structure and means-based fare discount.	No					
21-T04-011	Local Transit Fare Policy | Regional	This program includes funding to implement county, transit agency and other local programs and initiatives to implement discount transit fare programs. This program includes funding to implement VTA's Measure B Affordable Fare Program.	No					
21-T05-012	Per-Mile Tolling | Regional	This program includes funding to implement toll infrastructure, such as toll gantries, to collect per-mile tolls charged to vehicles on the Bay Area's congested freeway corridors with transit alternatives. Toll corridors include: I-80 (ALA, CC, SOL); I-238 (ALA); I-280 (SF, SM, SCL); I-380 (SM); I-580 (ALA); I-680 (ALA, CC, SCL); I-880 (ALA, SCL); US-101 (MRN, SF, SM, SCL, SON); SR-4 (CC); SR-17 (SCL); SR-24 (ALA, CC); SR-85 (SCL); SR-87 (SCL); SR-92 (SM); SR-237 (SCL); and SR-242 (CC).	Yes	I-80 (ALA, CC); I-238 (ALA); I-280 (SF, SM, SCL); I-580 (ALA); I-680 (ALA, CC, SCL); I-880 (ALA, SCL); US-101 (SF, SM, SCL); SR-4 (CC), SR-24 (ALA, CC); SR-237 (SCL); SR-242 (CC)	x	x	x
				I-80 (CC, SOL); I-380 (SM); I-580 (ALA); US-101 (MRN, SF, SCL, SON); SR-4 (CC); SR-17 (SCL); SR-85 (SCL); SR-87 (SCL); SR-92 (SM)		x	x

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2] 2025	2030	2040	2050
21-T06-013	Corridor & Interchange Improvements | I-80 | Contra Costa County	This program includes funding to implement interchange improvements at Central Ave, San Pablo Dam Rd and Pinole Valley Rd.	Yes	at San Pablo Dam Rd	x	x	x	x
21-T06-014	Corridor & Interchange Improvements | I-80 | San Francisco	This program includes funding to implement interchange improvements at Yerba Buena Island.	Yes	at Yerba Buena Island	*	x	x	x
21-T06-015	Corridor & Interchange Improvements | I-80 | Solano County	This program includes funding to implement interchange improvements at I-680/SR-12, Redwood Pkwy and Lagoon Valley Rd.	Yes	at I-680/SR-12 (Package 2A), Lagoon Valley Rd	x	x	x	x
				at I-680/SR-12 (Packages 3-5), Redwood Pkwy			x	x
				at I-680/SR-12 (Packages 6-7)				x
21-T06-016	Corridor & Interchange Improvements | I-280 | San Francisco	This program includes funding to implement interchange improvements at the Balboa Park Station area.	Yes	at the Balboa Park Station area	x	x	x	x
21-T06-017	Corridor & Interchange Improvements | I-280 | Santa Clara County	This program includes funding to implement interchange improvements at Lawrence Expy/Stevens Creek Blvd, Winchester Blvd, Wolfe Rd, Saratoga Ave, SR 85/Homestead Rd, Bird Ave, and between 3rd St and 7th St; braided ramps between Foothill Expy and SR-85; and new HOV lanes between Magdalena Ave and the Santa Clara/San Mateo county line.	Yes	at Winchester Blvd; between 3rd St and 7th St; new HOV lanes between Magdalena Ave and the Santa Clara/San Mateo county line			x	x
21-T06-018	Corridor & Interchange Improvements | I-380 | San Mateo County	This program includes funding to implement interchange improvements at US-101 and El Camino Real and a new eastbound freeway lane between I-280 and El Camino Real.	Yes	new eastbound freeway lane between I-280 and El Camino Real			x	x
21-T06-019	Corridor & Interchange Improvements | I-580 | Alameda County	This program includes funding to implement Design Alternatives Assessments between the Bay Bridge Toll Plaza and SR-238; for interchange improvements at Hacienda Dr/Fallon Rd and Santa Rita Rd/Tassajara Rd; and funding for a planning study to scope interchange improvements at I-680.	Yes	at Hacienda Dr, Fallon Rd/El Charro Rd			x	x
21-T06-020	Corridor & Interchange Improvements | I-580 | Richmond-San Rafael Bridge	This program includes funding to implement improvements to east side bridge access. It also reserves funding to implement permanent recommendations based on the third eastbound freeway lane pilot project and the westbound bicycle/pedestrian path pilot project.	No					
21-T06-021	Corridor & Interchange Improvements | I-680 | Alameda County	This program includes funding to implement interchange improvements at Stoneridge Dr.	Yes	at Stoneridge Dr			x	x
21-T06-022	Corridor & Interchange Improvements | I-680 | Contra Costa County	This program includes funding to implement interchange improvements at SR-4, as well as and new auxiliary lanes between Rudgear Rd and El Cerro Blvd and between Bollinger Canyon Rd and Alcosta Blvd.	Yes	at SR-4 (Phases 1-2)	~~*~~	x	x	x
				at SR-4 (Phase 4)		x	x	x
				at SR-4 (Phase 5); auxiliary lanes between Rudgear Rd and El Cerro Blvd; auxilary lanes between Bollinger Canyon Rd and Alcosta Blvd			x	x
21-T06-023	Corridor & Interchange Improvements | I-680 | Santa Clara County	This program includes funding to implement interchange improvements at Montague Expy, Alum Rock Ave and McKee Rd.	Yes	at Montague Expy			x	x
21-T06-024	Corridor & Interchange Improvements | I-880 | Alameda County	This program includes funding to implement interchange improvements on I-880 at Oak St/Union St, at Whipple Rd, at Winton Ave/A St, between 23rd Ave and 29th Ave, at 42nd Ave and High St, and at 5th Ave and Washington St.	Yes	at ~~Whipple Rd~~ and ~~Industrial Pkwy~~, 23rd Ave and 29th Ave	x	x	x	x
				at Whipple Rd and Industrial Pkwy; between Oak St and Broadway, Winton Ave and A St		x	x	x
21-T06-025	Corridor & Interchange Improvements | I-880 | Santa Clara County	This program includes funding to implement interchange improvements at Montague Expy.	No					

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2] 2025	2030	2040	2050
21-T06-026	Corridor & Interchange Improvements | US-101 | Marin County	This program includes funding to implement interchange improvements at I-580 and a new southbound HOV lane between Novato and the Sonoma/Marin county line ("Marin-Sonoma Narrows").	Yes	new southbound HOV lane between Novato and the Sonoma/Marin county line ("Marin-Sonoma Narrows")	x	x	x	x
				at I-580		~~x~~	x	x
21-T06-027	Corridor & Interchange Improvements | US-101 | San Mateo County	This program includes funding to implement interchange improvements at SR-92, 3rd Ave, Holly St, Peninsula Ave, Produce Ave, Sierra Point Pkwy, University Ave, and Woodside Rd; and funding for a planning study to scope interchange improvements at Candlestick.	Yes	at ~~Holly St~~, ~~Peninsula Ave~~, ~~Produce Ave~~	~~x~~	~~x~~	~~x~~	~~x~~
				at Holly St, Peninsula Ave, Produce Ave, SR-92		x	x	x
21-T06-028	Corridor & Interchange Improvements | US-101 | Santa Clara County	This program includes funding to implement interchange improvements at SR-25, SR-237, Blossom Hill Rd, Buena Vista Ave, Ellis St, Mabury Rd/Taylor St, Moffett Blvd, Montague Expy, Old Oakland Rd, Shoreline Blvd, Trimble Rd/De La Cruz Blvd/Central Expy, Zanker Rd/Skyport Dr/Fourth St, and between San Antonio Rd and Charleston Rd/Rengstorff Ave; and ramp metering improvements in Morgan Hill and Gilroy.	Yes	at SR-25, Blossom Hill Rd, Trimble Rd/De La Cruz Blvd/Central Expy	x	x	x	x
				at Buena Vista Ave, Zanker Rd/Skyport Dr/Fourth St		x	x	x
				at SR-237, Mabury Rd/Taylor St			x	x
21-T06-029	Corridor & Interchange Improvements | US-101 | Sonoma County	This program includes funding to implement interchange improvements at Arata Ln, Hearn Ave, Railroad Ave, and Rainier Ave and new HOV lanes through Petaluma ("Marin-Sonoma Narrows").	Yes	at Arata Ln	x	x	x	x
				at Railroad Ave			x	x
21-T06-030	Corridor & Interchange Improvements | SR-1 | San Mateo County	This program includes funding to implement interchange improvements at Manor Dr and safety and operational improvements in Half Moon Bay and between Half Moon Bay and Pacifica.	Yes	at Manor Dr		x	x	x
21-T06-031	Corridor & Interchange Improvements | SR-4 | Contra Costa County	This program includes funding to implement Integrated Corridor Mobility between I-80 and SR-160 and operational improvements between Port Chicago Hwy and San Marcos Blvd/Willow Pass Rd.	Yes	EB and WB operational improvements between Port Chicago Hwy and San Marcos Blvd/Willow Pass Rd	~~x~~	x	x	x
				Integrated Corridor Mobility between I-80 and SR-160; ~~WB operational improvements between Port Chicago Hwy and San Marcos Blvd/Willow Pass Rd~~			x	x
21-T06-032	Corridor & Interchange Improvements | SR-17 | Santa Clara County	This program includes funding to implement interchange improvements at SR-9.	Yes	at SR-9		x	x	x
21-T06-033	Corridor & Interchange Improvements | SR-24 | Contra Costa County	This program includes funding to implement interchange improvements at Camino Pablo and a new eastbound auxiliary lane between Wilder Rd and Camino Pablo.	Yes	new eastbound auxiliary lane between Wilder Rd and Camino Pablo			x	x
21-T06-034	Corridor & Interchange Improvements | SR-29 | Napa County	This program includes funding to implement interchange improvements at SR-221 ("Soscol Junction"), Lincoln Ave, Madison St, Trower Ave, and Airport Blvd ("Airport Junction"); operational and multimodal improvements between Napa Junction and American Canyon Rd; and new highway lanes between SR-37 and American Canyon.	Yes	at SR-221 ("Soscol Junction")	x	x	x	x
				at Airport Blvd ("Airport Junction")			x	x
				new highway lanes between SR-37 and American Canyon.				x
21-T06-035	Corridor & Interchange Improvements | SR-37 | Multiple	This program includes funding to implement new HOV lanes between Mare Island and Sears Point and toll infrastructure to collect tolls charged to westbound vehicles.	Yes	new HOV lanes between Mare Island and Sears Point	~~x~~	x	x	x
21-T06-036	Corridor & Interchange Improvements | SR-37 | Solano County	This program includes funding to implement interchange improvements at Fairgrounds Dr.	Yes	at Fairgrounds Dr	~~x~~	x	x	x
21-T06-037	Corridor & Interchange Improvements | SR-84 | Alameda County	This program includes funding to implement interchange improvements at I-680 and new highway lanes between Ruby Hill Dr and I-680.	Yes	new highway lanes between Ruby Hill Dr and I-680	x	x	x	x
21-T06-038	Corridor & Interchange Improvements | SR-84 | Dumbarton Bridge	This program includes funding to implement the Gateway 2020 Study, including access improvements to the west side of the Dumbarton Bridge, and Dumbarton Corridor Transportation Studies at US-101, including phased implementation of near-term recommendations and environmental studies for long-term recommendations.	No					

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2] 2025	2030	2040	2050
21-T06-039	Corridor & Interchange Improvements | SR-85 | Santa Clara County	This program includes funding to implement interchange improvements at SR-237 and El Camino Real; auxiliary lane improvements between El Camino Real and SR-237; and a new eastbound auxiliary lane between SR-85 and Middlefield Rd.	No					
21-T06-040	Corridor & Interchange Improvements | SR-87 | Santa Clara County	This program includes funding to implement interchange improvements at Capitol Expy/Narvaez Ave and technology-based operational improvements between US-101 and SR-85.	No					
21-T06-041	Corridor & Interchange Improvements | SR-92 | Alameda County	This program includes funding to implement interchange improvements at Clawiter Rd.	Yes	at Clawiter Rd		x	x	x
21-T06-042	Corridor & Interchange Improvements | SR-152 | Santa Clara County	This program includes funding for a planning study to scope a new alignment between US-101 and SR-156.	No					
21-T06-043	Corridor & Interchange Improvements | SR-237 | Santa Clara County	This program includes funding to implement interchange improvements at SR-85, Great American Pkwy, Lawrence Expy/Caribbean Dr, Java Dr, Maude Ave, and Middlefield Rd; intersection improvements at El Camino Real/Grant Rd; a new westbound auxiliary lane between McCarthy to N 1st St; new eastbound auxiliary lanes between Mathilda Ave and Fair Oaks Ave; and new auxiliary lanes between Coyote Creek/Zanker Rd to N 1st St.	Yes	new westbound auxiliary lane between McCarthy to N 1st St	*	*	x	x
				new eastbound auxiliary lanes between Mathilda Ave and Fair Oaks Ave; and new auxiliary lanes between Coyote Creek/Zanker Rd to N 1st St.		x	x	x
21-T06-044	Corridor & Interchange Improvements | SR-239 | Contra Costa County	This program includes funding for a planning study to scope a new alignment between Brentwood and Tracy.	No					
21-T06-045	Corridor & Interchange Improvements | SR-242 | Contra Costa County	This program includes funding to implement interchange improvements at Clayton Rd.	Yes	at Clayton Rd			x	x
21-T06-046	Corridor & Interchange Improvements | SR-262 | Alameda County	This program includes funding to implement interchange improvements at I-680 and new freeway lanes between I-680 and I-880.	Yes	at I-680; new freeway lanes between I-680 and I-880				x
21-T06-047	Corridor & Interchange Improvements | New Freeway | Contra Costa County	This program includes funding to implement new freeway lanes and interchange improvements on SR-4/Vasco Rd between Balfour Rd and Vasco Rd and a new 2-lane expressway between Vasco Rd and Byron Hwy.	Yes	new freeway lanes and interchange improvements on SR-4/Vasco Rd between Balfour Rd and Vasco Rd; new 2-lane expressway between Vasco Rd and Byron Hwy			x	x
21-T06-048	Other Investments to Improve Interchanges & Address Highway Bottlenecks | Regional	This program includes funding to implement other programmatic investments to improve interchanges and address highway bottlenecks. This program generally implements county and other local programs and initiatives to programmatically implement highway improvements. Improvements include interchange modifications and minor lane additions or lane extensions of less than 1/4-mile (i.e., highway or freeway lane, auxiliary lane, or HOV lane). Example investments include implementation of VTA's Envision Highway Minor Projects.	Yes	Envision Highway Minor Projects (SCL)				x
21-T06-049	Bay Area Forward Program | Regional	This program includes funding to implement initiatives to maximize the efficiency of freeway and arterial systems through active traffic demand management and multi-modal strategies. Improvements include implementation of toll bridge corridor "forward" programs, adaptive ramp metering, adaptive signal timing with transit signal priority, bus on shoulder lanes, congestion pricing on toll bridge corridors, arterial first and last mile solutions, and shared mobility pilot deployments.	Yes	active traffic demand management, toll bridge corridor "forward" programs, adaptive ramp metering, adaptive signal timing with transit signal priority, bus on shoulder lanes, congestion pricing on toll bridge corridors	x	x	x	x
21-T07-050	511 Bay Area Program | Regional	This program includes funding to support the 511 Bay Area Program, which provides multi-modal traveler information.	No					

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2] 2025	2030	2040	2050
21-T07-051	All Electronic Tolling Program | Regional	This program includes funding to support the All-Electronic Tolling Program, which converts the seven state-owned toll bridges to Open Road Tolling. Improvements include procurement of a new toll system and overhead gantries, improvements to roadway infrastructure to allow for high-speed tolling, and support of a regional customer service center.	No					
21-T07-052	Carpool/Vanpool Program | Regional	This program includes funding to provide carpool-matching tools and encourage carpool behavior through outreach, education, rewards, incentives and new technology.	No					
21-T07-053	Connected Bay Area Program | Regional	This program includes funding to implement the Connected Bay Area Program, which improves and integrates system infrastructure and operations to manage the region's transportation network. Improvements include the Regional Communication Infrastructure Network, the Incident Management Program, and the Transportation Management Center & Communications.	No					
21-T07-054	Motorist Aid Services Program | Regional	The program includes funding to support the Freeway Service Patrol, Call Box programs and other motorist aid activities.	No					
21-T07-055	Minor Freight Improvements | Regional	This program includes funding to implement freight improvements throughout the Bay Area. This program generally implements programs that improve freight operations and support the Port of Oakland. Improvements include new weigh stations and rest areas and improvements to existing freight terminals and freight rail. Example projects include grade separation improvements at 7th Street at the Port of Oakland and improvements at the I-80 Westbound Truck Scales in Cordelia.	Yes	grade separation improvements at 7th Street at the Port of Oakland (ALA)	~~x~~	x	x	x
21-T07-056	Minor Roadway Improvements | Regional	This program includes funding to implement minor roadway improvements. This program generally implements projects exempt from regional air quality conformity, but it does include non-exempt local roadway widenings or extensions. Improvements include local road extensions or new lanes, and intersection improvements such as channelization and signalization. Example projects include improvements to Oakland Army Base, Quarry Lakes Pkwy, Decoto Rd, Dublin Blvd, El Charro Rd, and Auto Mall Pkwy (ALA); Newell Dr and Airport Junction (NAP); implementation of Envision Expy program, Calaveras Blvd, and Mary Ave (SCL); Hunters Point Shipyard and Candlestick Point, Alemany Rd, and Treasure Island (SF); and Farmers Ln (SON).	Yes	Dougherty Rd, ~~Dublin Blvd~~, ~~North Canyons Pkwy~~, ~~Tassajara Rd~~ (ALA); ~~Brentwood Blvd~~, ~~Crow Canyon Rd~~, Laurel Rd, Lone Tree Way, San Ramon Blvd, Willow Pass Rd (CC); Novato Blvd (MRN); SR-29 (NAP); 10th St Bridge, ~~Montague Expy~~ (SCL); Peabody Rd (SOL)	x	x	x	x
				Dublin Blvd, North Canyons Pkwy, Tassajara Rd, Union City Blvd (ALA); Brentwood Blvd, Camino Tassajara Rd, Crow Canyon Rd, E Cypress Rd, W Leland Rd (CC); Mary Ave, Montague Expy, Oakland Rd (SCL); Jepson Pkwy (SOL)		x	x	x
				Auto Mall Pkwy, Decoto Rd, El Charro Rd, Quarry Lakes Pkwy (ALA); Pittsburg-Antioch Hwy (CC); Newell Dr, Soscol Ave, Trower Ave (NAP); Brokaw Bridge, Calaveras Blvd, Lawrence Expy, San Thomas Expy, Envision Expy Program (SCL)		x	x	
21-T07-057	Technology Improvements | Regional	This program includes funding to implement technology improvements on the Bay Area's transportation systems. This program generally implements county, transit agency and other local management systems' travel demand management and emissions reduction technologies programs and initiatives. Improvements include incident management; signal coordination; Intelligent Transportation Systems; Traffic Operations Systems/Congestion Management Systems; ramp metering; Computer-Aided Dispatch/Automatic Vehicle Location; fare media; construction or renovation of power, signal and communications systems; toll management systems; toll media; car and bike share; alternative fuel vehicles and facilities; parking programs; carpool/vanpool; ridesharing activities; information, marketing and outreach; and traveler information.	Yes	Intelligent Transportation Systems (SM)				x
21-T07-058	Planning/Program | Regional	This program includes funding to support regional and local planning programs and initiatives to support implementation of Plan Bay Area 2050. Investments include planning, research, technical assistance and program implementation. Example regional projects include support for Priority Development Area (PDA) planning and implementation; the Bay Area Preservation Pilot revolving loan fund; and the Housing Incentive Pool pilot program to incentivize the production of affordable housing.	No					
21-T07-059	Financing/Reserve for Major Capital Projects | Regional	This program includes funding for financing costs of major capital projects (e.g., Caltrain Downtown Extension) and a funding reserve for projects with cost overruns.	No					
21-T08-060	Complete Streets Network | Regional	This program includes funding to implement a regional Complete Streets network with an emphasis on improvements near transit and in Equity Priority Communities. It also includes funding to implement county and local initiatives to support active transportation systems. Investments include new and extended bike and pedestrian facilities; minor bicycle and/or pedestrian facility gap closures; minor road diets (less than 1/4-mile); ADA compliance; landscaping; lighting; streetscape improvements; secure bike parking at transit stations; and support to local jurisdictions to maintain and expand car-free slow streets. Example projects include the Bay Trail (MUL), Bay Skyway (SF), Better Market Street (SF), East	Yes	Fruitvale Ave, Shattuck Ave, Telegraph Ave (ALA); Benicia Rd, West Texas Rd (SOL); Petaluma Blvd (SON)	x	x	x	x
				El Camino (SM); SR-29/Sonoma Blvd (SOL)		x	x	x
				Military West (SOL)			x	x

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2] 2025	2030	2040	2050
		expand car-free slow streets. Example projects include the Bay Trail (MTC), Bay Skyway (SF), Better Market Street (SF), East Bay Greenway (ALA), and Urban Greenways and Trails (ALA).		Bay Skyway (SF)				x
21-T09-061	Regional Vision Zero Policy through Street Design and Reduced Speeds | Regional	This program includes funding to implement and advance a regional Vision Zero policy, which includes implementation of slower highways and streets through street design and automated enforcement, and other programmatic investments to advance Vision Zero policies. This program generally implements regional, county and local programs to support Vision Zero initiatives; Safe Routes to Schools programs; and the Highway Safety Improvement Program. Improvements include railroad/highway crossing improvements; warning devices; shoulder improvements; traffic control devices other than signalization; guardrails, median barriers and crash cushions; pavement marking; fencing; skid treatments; lighting improvements; widening narrow pavements with no added capacity; changes in vertical and horizontal alignment; transit safety, communications and surveillance systems; truck climbing lanes outside urban areas; and emergency truck pullovers.	No					
21-T10-062	Multimodal Transportation Enhancements | AC Transit and WETA | Alameda Point	This program includes funding to implement improvements to existing transit service in the City of Alameda. Improvements include new bus service on Appezzato Pkwy with dedicated lanes (15 min peak headways); new bus service between Fruitvale BART and Seaplane Lagoon (20 min headways); new crosstown express bus service between Harbor Bay Ferry Terminal and Alameda Main St Ferry Terminal (20 min peak headways); and new ferry service between Seaplane Lagoon and San Francisco Ferry Building (30 min peak headways).	Yes		x	x	x	x
21-T10-063	Multimodal Transportation Enhancements | SFMTA | Southeast San Francisco	This program includes funding to implement transportation enhancements in the Candlestick/Hunters Point Shipyard project area, including improvements to existing bus service; new express bus service to downtown San Francisco; and multi-modal corridors of streets, transit facilities, pedestrian paths and dedicated bicycle lanes.	Yes				x	x
21-T10-064	Local Bus | Modernization | VTA | Systemwide	This program includes funding to implement improvements to existing bus service. Improvements include transit priority infrastructure; transit signal priority; bus lanes; queue jumps; stop improvements; faster fare collection equipment; off-board fare collection; all-door boarding; and software and hardware upgrades for improved headway management.	Yes					x
21-T10-065	Local Bus | Service Frequency Boost | AC Transit | Systemwide	This program includes funding to implement improvements to AC Transit's existing local bus service. Improvements include frequency upgrades (5-10 min peak headways along routes 72/72M/72R, 18, 51A/B, 6, 20/21, 57, 40/40L, 97, 99, Tempo BRT, NL, F-local and F-Transbay) and local/rapid service on some routes.	Yes		x	x	x	x
21-T10-066	Local Bus | Service Frequency Boost | County Connection	This program includes funding to implement improvements to existing County Connection bus service, including frequency upgrades (15 min peak headways) on routes feeding BART stations.	Yes				x	x
21-T10-067	Local Bus | Service Frequency Boost | NVTA	This program includes funding to implement improvements to existing Napa VINE regional/local bus service. Improvements include frequency upgrades (30 min peak headways); expanded service hours (from 4am-12am); and Sunday service.	Yes				x	x
21-T10-068	Local Bus | Service Frequency Boost | SFMTA | Systemwide	This program includes funding to implement improvements to existing bus service, including Muni Forward transit priority improvements along Rapid and high-frequency transit corridors; transfer and terminal investments; street improvements in support of Vision Zero; route realignments; and frequency upgrades (4-8 min peak headways on routes 1, 7, 8, 14, 14R, 22, 24, 29, 30, 38, 38R, 44, 45 and 55).	Yes				x	x
21-T10-069	Local Bus | Service Frequency Boost | VTA | Systemwide	This program includes funding to implement improvements to existing VTA bus service, including Measure B Frequent Core Network frequency upgrades (15 min peak headways on routes 22, 23, 25, 26, 57, 60, 61, 64, 66, 68, 70, 72, 73 and 77).	Yes				x	x
21-T10-070	Local Bus | Service Frequency Boost | PDAs	This program includes funding to implement improvements to existing bus service in Priority Development Areas (PDAs) without existing high-frequency rail, ferry or bus service. Improvements include frequency upgrades (30 min peak headways) and reorganization and/or expansion of bus routes.	Yes	ALA	x	x	x	x
				CC, MRN, NAP, SM, SCL, SOL, SON		x	x	x
21-T10-071	Local Bus | Service Frequency Boost | Sonoma County	This program includes funding to implement improvements to existing bus service, including frequency upgrades (15 min peak headways on Santa Rosa City Bus routes 1, 2, 3, 4, 5, 6, 8, 9, 10 and 12; 30-80 min peak headways on Sonoma County Transit routes 30, 40, 48, 56 and 60; 30 min peak headways on Golden Gate Transit route 72).	Yes		x	x	x	x

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2] 2025	2030	2040	2050
21-T10-072	Rapid Bus | Modernization | AC Transit | E 14th St/Mission St/Fremont Blvd	This program includes funding to implement new rapid bus service along E 14th St/Mission St/Fremont Blvd between the San Leandro and Warm Springs BART stations. Improvements include frequency upgrades (10 min peak headways for Route 10 and 20 min headways for Route 99), dedicated lanes and mobility hubs at BART stations.	Yes		x	x	x	x
21-T10-073	Rapid Bus | AC Transit | Modernization	This program includes funding to implement rapid transit improvements to existing bus service. Improvements include new rapid bus service; improved bus stops and stations; new/improved transit signal priority (including on-street and on-bus equipment); transit priority infrastructure; dedicated bus lanes; queue jumps; and frequency upgrades (5-12 min peak headways on routes 18, 20/21, 40, 57, 97 and NL).	Yes	Foothill Blvd (40), Fruitvale Ave (20/21), Grand Ave (NL), Shattuck Ave/Martin Luther Kind Jr Way (18)	x	x	x	x
				Broadway, Hesperian Blvd (97), MacArthur Blvd/40th St (57/NL), Telegraph Ave			x	x
21-T10-074	Rapid Bus | Modernization | VTA | El Camino Real	This program includes funding to implement rapid transit improvements to existing bus service along El Camino Real. Improvements include dedicated lanes, transit signal priority, improved stop infrastructure and new rolling stock.	Yes				x	x
21-T10-075	Rapid Bus | Contra Costa Co | Service Expansion | Antioch-Brentwood	This program includes funding to implement new bus service along SR-4 between Hillcrest eBART to Brentwood Intermodal Station. Improvements include frequency upgrades (20 min peak headways), rapid transit improvements and a new park-and-ride facility.	Yes				x	x
21-T10-076	BRT | Modernization | AC Transit | 23rd St	This program includes funding to implement new BRT service along 23rd St from Hercules to Contra Costa College, Richmond BART and the Richmond Ferry. Improvements include high-frequency service (10 min peak headways), queue jumps, transit signal priority, new vehicles, improved stops and possible bus-only lanes.	Yes			x	x	x
21-T10-077	BRT | Modernization | AC Transit | San Pablo Ave	This program includes funding to implement BRT improvements to existing bus service along San Pablo Ave from 20th St to Richmond Pkwy Transit Center. Improvements include frequency upgrades (5 min peak headways), improved stop infrastructure, merging of local/rapid stops, dedicated lanes and transit signal priority.	Yes			x	x	x
21-T10-078	BRT | Modernization | SamTrans | El Camino Real	This program includes funding to implement BRT improvements to existing bus service along El Camino Real from Daly City BART to Palo Alto Caltrain Station. Improvements include frequency upgrades (15 min peak headways), dedicated lanes (45% of route), transit priority infrastructure and transit signal priority.	Yes				x	x
21-T10-079	BRT | Modernization | SFMTA | Geary Blvd	This program includes funding to implement BRT improvements to existing bus service along Geary Blvd from Market St to 34th Ave. Improvements include frequency (5.5 min peak headways), dedicated lanes, transit signal priority and peak express service.	Yes		*	x	x	x
21-T10-080	BRT | Modernization | SFMTA | Geneva Ave/Harney Way	This program includes funding to implement BRT improvements to existing bus service along Geneva Ave/Harney Way. Improvements include dedicated lanes, transit signal priority, high-quality stations and transit priority infrastructure.	Yes		*	x	x	x
21-T10-081	BRT | Modernization | SFMTA | Van Ness Ave	This program includes funding to implement BRT improvements to existing bus service along Van Ness Ave from Mission St to Union St. Improvements include dedicated lanes, transit signal priority, high-quality stations and transit priority infrastructure.	Yes		x	x	x	x
21-T10-082	Light Rail | Service Expansion | SFMTA | Historic Streetcar	This program includes funding to extend Muni's existing E-line or F-line service from Fisherman's Wharf to Fort Mason through the historic railway tunnel between Van Ness Ave and the Fort Mason Center. Improvements include two new stations.	Yes			x	x	x
21-T10-083	Light Rail | Service Expansion | SFMTA | Chinatown ("Central Subway")	This program includes funding to extend Muni's existing T-line to Chinatown through the Central Subway. Improvements include light rail shuttles between Chinatown and Mission Bay (via the Mission Bay Loop) during peak periods and frequency upgrades (7 min peak headways, 4-5 mins with shuttle).	Yes		x	x	x	x
21-T10-084	Light Rail | Service Frequency Boost | SFMTA | Muni Forward	This program includes funding to implement improvements to Muni's existing N-line and E-line service. Improvements include Muni Forward transit priority infrastructure and frequency upgrades (N-line 4 min peak headways, and E-line 12 min peak headways).	Yes			x	x	x

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2] 2025	2030	2040	2050
21-T10-085	Light Rail | Grade Separations & Modernization | VTA | Downtown San Jose	This program includes funding to implement improvements to VTA's existing light rail service in Downtown San Jose. Improvements include grade separation to create a subway between Diridon Station and Civic Center Station and frequency upgrades (7.5 min peak headways).	Yes					x
21-T10-086	Light Rail | Grade Separations & Modernization | VTA | North San Jose	This program includes funding to implement improvements to VTA's existing light rail service. Improvements include grade separations between Civic Center Station and Baypointe and frequency upgrades (7.5 min peak headways).	Yes					x
21-T10-087	Light Rail | Service Expansion | VTA | Eastridge	This program includes funding to extend VTA's existing Orange Line service from Alum Rock Station to the Eastridge Transit Center. Improvements include two new stations and elevated structures.	Yes		*	x	x	x
21-T10-088	Light Rail | Service Expansion | VTA | Stevens Creek Blvd	This program includes funding to implement new LRT service along Stevens Creek Blvd between De Anza College and Baypointe. Improvements include eight new stations, three-car trains and frequency upgrades (10 min peak headways).	Yes					x
21-T10-089	Light Rail | Service Expansion | VTA | Vasona	This program includes funding to extend VTA's existing Green Line service from Winchester Station to Vasona Junction. Improvements include two new stations, one infill station and three-car trains.	Yes				x	x
21-T10-090	Automated People Mover | Service Expansion | VTA | Mineta San Jose International Airport Connector Automated People Mover	This program includes funding to implement a new automated people mover service between San Jose International Airport and Diridon Station (5 min all-day headways).	Yes				x	x
21-T10-091	Congestion Pricing | Downtown San Francisco	This program includes funding to implement cordon-based congestion pricing for vehicles leaving and entering downtown San Francisco. Improvements include street improvements to support transit operations and cycling and pedestrian safety; frequency improvements on various Muni/SamTrans routes; transit signal priority; and dedicated bus lanes.	Yes		*	x	x	x
21-T10-092	Congestion Pricing | Treasure Island	This program includes funding to implement cordon-based congestion pricing for vehicles leaving and entering Treasure Island. Improvements include Muni bus frequency upgrades; free shuttles; a new ferry terminal; new ferry service between Treasure Island and the San Francisco Ferry Building; and new AC Transit express bus service to Oakland.	Yes				x	x
21-T10-093	Other Investments to Enhance Local Transit Frequency, Capacity & Reliability | Regional	This program includes funding to implement other programmatic investments to enhance local transit frequency, capacity and reliability. This program generally implements county, transit agency, and other local programs and initiatives to make bus and light rail travel faster and more reliable. Improvements include fleet and facilities expansions; transit corridor improvements; and transit station improvements.	Yes	Brentwood Intermodal Transit Center (CC); SR-29/Imola Park and Ride, Transit Signal Priority (NAP); Fairgrounds Dr Park and Ride (SOL)	x	x	x	x
				Oakley Park and Ride (CC)		x	x	x
				Park and Rides (NAP)			x	x
21-T11-094	Ferry | Service Frequency Boost | GGBHTD | Larkspur-San Francisco	This program includes funding to implement new ferry service between Larkspur and San Francisco Mission Bay (80 min peak headways); and improvements to existing ferry service between Larkspur and San Francisco, including frequency upgrades (20-25 min peak headways).	Yes		x	x	x	x
21-T11-095	Ferry | Service Frequency Boost | WETA	This program includes funding to implement improvements to existing ferry service between the San Francisco Ferry Building and Alameda/Oakland, Harbor Bay, Vallejo, Richmond and South San Francisco, including frequency upgrades (15-30 min peak headways).	Yes	Alameda/Oakland and Harbor Bay (ALA); Vallejo (SOL); South San Francisco (SM)	x	x	x	x
				Richmond (CC)		x	x	x
21-T11-096	Ferry | Service Expansion | WETA | Berkeley-San Francisco	This program includes funding to implement new ferry service between San Francisco and Berkeley, including a new terminal in Berkeley (30 min peak headways).	Yes			x	x	x

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2] 2025	2030	2040	2050
21-T11-097	Ferry | Service Expansion | WETA | San Francisco Ferry Building-Mission Bay	This program includes funding to implement new ferry service between the San Francisco Ferry Building and Mission Bay, including a new terminal in Mission Bay (20 min peak headways).	Yes		*	x	x	x
21-T11-098	Ferry | Service Expansion | WETA | Redwood City-San Francisco-Oakland	This program includes funding to implement new ferry service between Oakland, San Francisco and Redwood City, including a new terminal in Redwood City (30 min peak headways).	Yes		*	x	x	x
21-T11-099	Ferry | Service Expansion | Private Service | Antioch-Martinez-Hercules-San Francisco	This program includes funding to implement new privately operated ferry service between San Francisco and Antioch, Martinez and Hercules, including new ferry terminals (2-5 peak trips per day).	Yes			x	x	x
21-T11-100	Hovercraft | Service Pilot | Private Service | Foster City-San Francisco	This program includes funding to implement new hovercraft service, as a pilot, between Foster City and San Francisco, including two basic hoverports (30 min peak headways).	Yes		x	x	x	x
21-T11-101	Rail | Modernization & Electrification | Caltrain/High Speed Rail | San Francisco to San Jose	This program includes funding to implement improvements to the Caltrain/High-Speed Rail Corridor. Improvements include corridor electrification between San Francisco and Tamien station in San Jose and frequency upgrades (6 trains per hour per direction in peak).	Yes		x	x	x	x
21-T11-102	Rail | Modernization & Electrification | Caltrain/High Speed Rail | San Jose to Pacheco Pass	This program includes funding to implement improvements to the Caltrain/High-Speed Rail Corridor. Improvements include corridor electrification south of Tamien station in San Jose and grade separations from San Jose through the Pacheco Pass.	Yes				x	x
21-T11-103	Rail | Grade Separations & Modernization | Caltrain/High Speed Rail	This program includes funding to implement improvements to the Caltrain/High-Speed Rail Corridor. Improvements include grade separations funded by Santa Clara County's Measure B and San Mateo County's Measure A, as well as future grade separations to enable High-Speed Rail service within the Bay Area's urban core.	Yes				x	x
21-T11-104	Rail | New Station | BART | Irvington Station	This program includes funding to implement a new BART rail station at Irvington in Fremont, including a park-and-ride facility and complementary route changes to existing AC Transit bus service.	Yes			x	x	x
21-T11-105	Rail | Service Frequency Boost | ACE | System	This program includes funding to implement improvements to existing ACE service between San Joaquin County and San Jose, including frequency upgrades (8 daily roundtrips).	Yes	5 daily roundtrips	x	x	x	x
				6 daily roundtrips		x	x	x
				7 daily roundtrips			x	x
				8 daily roundtrips				x
21-T11-106	Rail | Service Frequency Boost | BART | System ("Core Capacity")	This program includes funding to implement improvements to existing BART service, including frequency upgrades (12 min peak headways).	Yes			x	x	x
21-T11-107	Rail | Service Frequency Boost | Caltrain | System	This program includes funding to implement improvements to existing Caltrain rail service between San Francisco and San Jose, including frequency upgrades (8 trains per hour per direction in peak).	Yes				x	x
21-T11-108	Group Rapid Transit | Service Expansion | Redwood City-Newark ("Dumbarton Rail")	This program includes funding to implement new group rapid transit service between Redwood City and Newark, including seven new stations (1 min peak headways).	Yes				x	x

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2] 2025	2030	2040	2050
21-T11-109	Rail | Service Expansion | BART | to Santa Clara ("Silicon Valley Phase II")	This program includes funding to extend BART's existing Green Line and Orange Line rail services from Berryessa to Santa Clara, including four new stations and park-and-ride facilities.	Yes			x	x	x
21-T11-110	Rail | Service Expansion | Caltrain/High Speed Rail | to Downtown San Francisco ("DTX")	This program includes funding to extend Caltrain rail service from 4th St/Townsend St in San Francisco to the Salesforce Transit Center in downtown San Francisco, including two new stations.	Yes			x	x	x
21-T11-111	Rail | Service Expansion | Capitol Corridor | to Coast Subdivision ("South Bay Connect")	This program includes funding to implement improvements to existing Capitol Corridor rail service between Oakland and Newark/Fremont. Improvements include relocation of rail service between Oakland Coliseum and Newark from the Niles Subdivision to the Coast Subdivision and one new station.	Yes			x	x	x
21-T11-112	Rail | Service Expansion | Oakland-San Francisco ("Link21")	This program includes funding to implement Link21, providing new transbay rail service between San Francisco and Oakland, including new stations in the East Bay and San Francisco (10 trains per hour per direction in peak).	Yes					x
21-T11-113	Rail | Service Expansion | SMART | to Windsor	This program includes funding to extend SMART rail service from the Sonoma County Airport in Santa Rosa to Windsor.	Yes		*	x	x	x
21-T11-114	Rail | Service Expansion | San Joaquin County-Dublin/ Pleasanton ("Valley Link")	This program includes funding to implement new rail service between San Joaquin Valley and the Dublin/Pleasanton BART station, including three new stations within Alameda County and three-car trains (12 min peak headways).	Yes			x	x	x
21-T11-115	Other Investments to Expand & Modernize the Regional Rail Network | Regional	This program includes funding to implement other programmatic investments to expand and modernize the regional rail network. This program generally implements county, transit agency and other local programs and initiatives to make rail and ferry travel faster and more reliable. Improvements include fleet and facilities expansion; track and structures; train control; traction power; and stations or terminals.	Yes	Oakley Amtrak Train Platform (CC)	x	x	x	x
				Hercules Train Station (CC); North Petaluma, San Rafael Transit Center (MRN)		x	x	x
21-T12-116	Express Lanes | Regional	This program includes funding to implement express lanes through HOV lane conversions on I-80 (ALA, CC), I-280 (SCL), I-680 (CC), I-880 (SCL), US-101 (SCL), SR-4 (CC), SR-84 (ALA), SR-85 (SCL), SR-87 (SCL), SR-92 (ALA); partial HOV lane conversions on I-80 (SOL), I-280 (SF), I-680 (CC), US-101 (SF); freeway lane conversions on I-80 (SOL), I-280 (SCL), I-580 (ALA), I-680 (SCL), I-880 (ALA); new lanes on I-80 (SOL), I-680 (ALA), I-880 (ALA), US-101 (SM); new dual lanes with HOV lane conversions on SR-85 (SCL); and new dual lanes on US-101 (SCL).	Yes	HOV lane conversions on US-101 (SCL), SR-85 (SCL); partial HOV lane conversions on I-80 (SOL); new dual lanes on US-101 (SCL)	x	x	x	x
				HOV lane conversions on I-80 (ALA, CC), I-680 (CC), I-880 (SCL), SR-4 (CC), SR-87 (SCL); partial HOV lane conversions on I-280 (SF), I-680 (CC), US-101 (SF); new lanes on I-680 (ALA), I-880 (ALA), US-101 (SM)		x	x	x
				HOV lane conversions on I-80 (ALA), I-280 (SCL), SR-84 (ALA), SR-92 (ALA); freeway lane conversions on I-80 (SOL), I-280 (SCL), I-580 (ALA), I-680 (SCL); new lanes on I-80 (SOL), I-680 (ALA); and new dual lanes with HOV lane conversions on SR-85 (SCL); new dual lanes on US-101 (SCL)			x	x
				freeway lane conversions on I-880 (ALA)				x
21-T12-117	Express Bus | Service Expansion | GGBHTD	This program includes funding to implement improvements to existing express bus service along US-101 and I-580, including frequency upgrades (20-40 min headways on routes 4, 18, 27, 101, 40X and 56X).	Yes		x	x	x	x
21-T12-118	Express Bus | Service Expansion | NVTA	This program includes funding to implement new express bus service between Napa (Redwood Park-and-Ride) and the Vallejo Ferry Terminal. Improvements include bus-on-shoulder facilities and new rolling stock.	Yes			x	x	x
21-T12-119	Express Bus | Service Expansion | SamTrans	This program includes funding to implement new express bus service along US-101 and I-280 (on express lanes where available) from Foster City, San Mateo and Burlingame to Downtown San Francisco; from San Mateo and Palo Alto to Western San Francisco; and from San Bruno to Sunnyvale. Improvements include park-and-ride facilities, ramp improvements and bus stop improvements (20 min peak headways).	Yes		*	x	x	x

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2]			
					2025	2030	2040	2050
21-T12-120	Express Bus | Service Expansion | AC Transit | Transbay Corridor	This program includes funding to implement improvements to existing express bus service along I-80, I-580 and I-880 (on express lanes where available). Improvements include frequency upgrades (15 min peak headways on routes F, O, P, J, V and L) and planning for express bus expansion throughout the inner East Bay.	Yes					x
21-T12-121	Express Bus | Service Expansion | I-80	This program includes funding to implement new express bus service along I-80 (on express lanes where available) between Vallejo and Downtown Oakland, including park-and-ride facilities (15 min peak headways).	Yes			x	x	x
21-T12-122	Express Bus | Service Expansion | I-680	This program includes funding to implement new express bus service along I-680 (on express lanes where available) between Martinez and San Jose (20 min peak headways). Improvements include bus-on-shoulder and park-and-ride facilities.	Yes		*	x	x	x
21-T12-123	Express Bus | Service Expansion | SFMTA | US-101 & I-280	This program includes funding to implement improvements to existing express bus service along US-101 and I-280 (on express lanes where available), including frequency upgrades (10 min peak headways on routes 8BX and 14X).	Yes			x	x	x
21-T12-124	Express Bus | Modernization | US-101	This program includes funding to implement improvements to existing express bus service along US-101 between Novato and San Rafael, including bus-on-shoulder facilities.	Yes			x	x	x
21-T12-125	Express Bus | Service Expansion | SolTrans	This program includes funding to implement improvements to existing regional bus service. Improvements include frequency upgrades (15 min peak headways), transit signal priority, adaptive signal timing and ramp metering.	No					
21-T12-126	Express Bus | Service Expansion | ReX (Basic) | Blue Line (San Francisco to San Jose)	This program includes funding to implement new express bus service along US-101, SR-85 and I-280 (on express lanes where available) between San Francisco (Salesforce Transit Center) and San Jose (Diridon Station). Improvements include high-frequency service (10 min peak headways) and station area amenities like upgraded local bus stops, taxi/TNC loading zones, and improved bicycle/pedestrian infrastructure.	Yes		x	x	x	x
21-T12-127	Express Bus | Service Expansion | ReX (Basic) | Red Line (Oakland to Redwood City)	This program includes funding to implement new express bus service along I-580, I-238, I-880, SR-84 and US-101 (on express lanes where available) between Downtown Oakland (19th St BART Station) and Redwood City (Caltrain Station). Improvements include high-frequency service (10 min peak headways) and station area amenities like upgraded local bus stops, taxi/TNC loading zones, and improved bicycle/pedestrian infrastructure.	Yes				x	x
21-T12-128	Express Bus | Service Expansion | ReX (Premium) | Green Line (Vallejo to SFO Airport)	This program includes funding to implement new express bus service along I-80, I-280 and US-101 (on express lanes where available) between Vallejo and San Francisco International Airport. Improvements include high-frequency service (10 min peak headways); capital improvements such as in-line bus stations on freeways and arterials; and station area amenities like upgraded local bus stops, taxi/TNC loading zones, and improved bicycle/pedestrian infrastructure.	Yes			x	x	x
21-EN01-129	Sea Level Rise Adaptation Infrastructure | SR-37	This program includes funding to implement adaptation infrastructure along the SR-37 corridor from Novato to Vallejo. This program includes actions such as the elevation of critical infrastructure.	No					
21-EN01-130	Sea Level Rise Adaptation Infrastructure | Regional	This program includes funding to implement adaptation infrastructure in locations that are forecasted to be permanently inundated with two feet of sea level rise by 2050, providing protection from king tides and storms. This program includes actions such as the elevation of critical infrastructure and implementation of ecotone levees, traditional levees, sea walls, and marsh restoration and adaptation. Examples of adapting critical transportation infrastructure include I-880 (ALA), SR-84 (ALA), I-580/US-101/SMART (MRN), BART (MUL), SR-237/VTA (SCL), and US-101 (SM).	No					
21-EN08-131	Clean Vehicle Initiatives | Regional	This program includes funding to support the adoption and use of clean vehicles, which include more fuel-efficient vehicles and electric vehicles, through purchase incentives and deployment of charging and fueling infrastructure, in partnership with the Air District and the state. These investments would expand existing strategies in MTC's Climate Initiatives Program, which include a vehicle buyback & electric vehicle incentive program; a regional electric vehicle charger network; a clean vehicle feebate program; as well as new requirements for the electrification of Transportation Network Company vehicles and autonomous vehicles.	No					

RTPID	Title	Scope	Regionally-Significant Elements[1]	Known Regionally-Significant Elements	Analysis Years[2] 2025	2030	2040	2050
21-EN09-132	Regional Transportation Demand Management Initiatives | Regional	This program includes funding to support transportation demand management programs through MTC's Climate Initiatives Program, including a wide range of programs that discourage single-occupancy vehicle trips and support use of other travel modes. Programs include the Bay Area Commuter Benefits Program, vanpool programs, bikeshare and carshare services, targeted transportation alternatives programs, and a regional parking fee program.	No					

Notes:

(1) Regionally-significant is defined as a project which serves regional transportation needs and would normally be included in the modeling of a metropolitan area's regional transportation network.

(2) For this conformity analysis, the analysis years are 2025, 2030, 2040 and 2050 for the 2008 and 2015 ozone and 2006 PM2.5 standards.

Appendix D

PLAN BAY AREA 2050

FORECASTING AND MODELING REPORT

OCTOBER 2021

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Executive Summary

This report presents a technical overview of the forecasting and modeling processes performed in support of the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission's (MTC) Plan Bay Area 2050. The plan included several phases of modeling and analysis (described in detail in Chapter 1. This report focuses primarily on the later phases of the planning process, the Final Blueprint and Environmental Impact Report (EIR) analyses, as these phases built upon and refined work from prior phases like Horizon and the Draft Blueprint. The report includes details on each of the modeling components that are used to analyze the plan strategies.

The first step in the modeling process is the development of the **Regional Growth Forecast**, which uses the Regional Economic Models, Inc. (REMI) Policy Insight+ (or PI+) tool to forecast the growth in jobs by industry, housing units and population in the Bay Area. Custom inputs and adjustments to the model are described in detail in Chapter 2, as well as the post processes which derive household size and income distributions from this high-level Regional Growth Forecast. The second step in the modeling process is the application of the **Land Use Model**, which is used to forecast that regional growth in jobs and households at more specific geographies — jurisdictions and travel analysis zones — within the Bay Area. MTC and ABAG use Bay Area UrbanSim 2 (BAUS2) for this analysis, which is a custom variant of the UrbanSim model with additional features developed for policy priorities in the Bay Area. The third step in the modeling process is the application of the **Travel Model**, which simulates the travel of each forecasted Bay Area resident on an average weekday in a given model year as they travel to their workplace and other destinations using the planned transportation infrastructure. The travel modeling process includes a forecast of travel by different modes of transportation and analysis of greenhouse gas emissions generated from the vehicle miles traveled.

There are two additional data exchanges between these modeling components (described in more detail in the **Model System Overview**). First, staff incorporates feedback from the Land Use Model analysis into the Regional Growth Forecast to capture the effects of strategies that affect housing supply and prices as well as job locations and type; this feedback is new to the process and was not included in previous long-range plans. Second, staff incorporates feedback from the Travel Model analysis into the Land Use Model by feeding back measures of accessibility from the travel model into BAUS2. This means that transportation strategies, as well as overall traffic congestion, affecting accessibility can affect the value of commercial and residential development.

For each of these modeling tools, the respective section in the report describes the modeling methodology, including input assumptions inherent to all scenarios. Each section then includes details about how the strategies that comprise the Plan and the EIR Alternatives are represented in the modeling process. Finally, each section describes some high-level findings.

Between 2015 and 2050, the region's employment is projected to grow by 1.4 million to just over 5.4 million total jobs. Population is forecasted to grow by 2.7 million people to 10.3 million. This population will comprise over 4.0 million households, for an increase of nearly 1.4 million households from 2015. At a more local level, the Plan focuses that growth in both Transit-Rich Areas and High-Resource Areas while improving the jobs-housing balance in the region's most populous counties. The Plan also improves non-automobile mode shares, with substantial increases in transit boardings, while reducing vehicle miles traveled and greenhouse gas emissions per capita.

Chapter 1 | Introduction

Plan Bay Area 2050 modeling analysis was performed in several phases. As part of the **Horizon Initiative's Futures Planning**,[1] staff developed and studied three divergent what-if scenarios called "Futures" to identify how a range of forces could potentially shape the Bay Area. Futures Planning transcended previous scenario planning efforts by including a greater variety of political, technological, economic, and environmental challenges that will impact Bay Area residents.

Using the futures defined and modeled during Futures Planning, staff conducted the **Project Performance Assessment**[2] to understand how major transportation investments would fare in an uncertain future. By modeling major transportation projects and strategies within the context of the divergent futures, the Project Performance Assessment explored synergies between individual projects and strategies More information on the Project Performance Assessment process can be found in the Plan Bay Area 2050 Performance Report.

Before embarking on the core modeling effort of Plan Bay Area 2050, one further phase of modeling was performed: the **Incremental Progress Assessment**. Requested by the California Air Resources Board[3], the Incremental Progress Assessment enables "a normalized comparison, to the greatest degree feasible, of the previously submitted RTP/SCS [Regional Transportation Plan/Sustainable Communities Strategy] to the proposed RTP/SCS". This involved applying current exogenous variables and the updated modeling framework to the previous plan inputs – in this case, using the land use distribution and transportation networks from Plan Bay Area 2040. This assessment served to show the size of the region's greenhouse gas emissions reduction gap with respect to regional targets.

Building upon the earlier steps, the modeling team began the technical analysis for the plan, and the first step was the development of the **Regional Growth Forecast**. That is, before developing a localized growth pattern as part of the plan, a long-range regional growth forecast must be developed to identify the number of people, jobs and housing units required through 2050. The findings from this analysis — that the Bay Area must accommodate 1.5 million new homes (necessary to house the anticipated expanded population and address overcrowding) and 1.4 million new jobs — underpinned the remaining phases of modeling.

Informed by the results of the Horizon Initiative's Futures Planning and the Project Performance Assessment, 25 transportation, housing, economic and environmental strategies, alongside an expanded set of Growth Geographies, were developed and analyzed in the **Draft Blueprint**. After feedback from stakeholders and the public following findings from the Draft Blueprint analysis, these strategies were then refined and expanded into a set of 35 Plan strategies through the Final Blueprint phase. Throughout the Plan Bay Area 2050 process, a strategy is defined as a public policy or set of investments that can be implemented in the Bay Area at the city, county, regional or state level over the next 30 years. The Blueprint integrated critical strategies to address regional challenges, such as the Bay Area's severe and longstanding housing crisis. With infrastructure investments in walking, biking and public transportation — as well as critical sea level protections designed to keep most Bay Area communities from flooding through 2050 — the Blueprint made meaningful progress toward the adopted Plan Bay Area 2050 vision and advanced critical climate and equity goals. Additionally, three additional alternatives were developed for analysis in the Environmental Impact Report: the **EIR Alternatives** (including the No Project Alternative).

In the sections that follow, input assumptions and methodology primarily refer to the modeling done for the Final Blueprint, hereby referred to as the **Plan** and **EIR Alternatives**.

1 See more information about Horizon and Futures Planning: https://www.planbayarea.org/2050-plan/horizon.

2 See more information about the Horizon/Plan Bay Area 2050 Project Performance Assessment: https://mtc.ca.gov/our-work/plans-projects/horizon/project-performance-assessment.

3 See CARB's Final Sustainable Communities Strategy Program and Evaluation Guidelines: https://ww2.arb.ca.gov/sites/default/files/2019-11/Final%20SCS%20Program%20and%20Evaluation%20Guidelines%20Report.pdf.

Consistency with the Regional Housing Needs Allocation

Plan Bay Area 2050 identifies Growth Geographies and strategies for the next 30 years, whereas the Regional Housing Needs Allocation is a short-to-medium term housing allocation process, distributing growth as assigned by California Housing and Community Development. While each process is subject to a different set of objectives established by state and/or federal law, Plan Bay Area 2050 contains a range of strategies that would bolster housing production and increase zoned capacity in identified Growth Geographies. The estimated impact of the full bundle of strategies is that by 2050, the region would have an additional 1.4 million households and 1.5 million housing units (see Table 8), well above the 441,000 housing-unit need identified for the 8-year period from 2023-2031. Given that Plan Bay Area 2050 accommodates more than three times the number of new housing units required in the next eight years, staff can confirm that Plan Bay Area 2050 identifies areas within the region "sufficient to house an eight-year projection of the regional housing need for the region."

Model System Overview

Analysis for Plan Bay Area 2050 involves a sequence of modeling tools used together to create and study the scenarios of interest. The Regional Growth Forecast is the first step, identifying how much the Bay Area might grow between the plan baseline year (2015) and the plan horizon year (2050), including population, jobs, households, and associated housing units. The location of these households and jobs are then projected on a more localized level throughout the Bay Area by the Land Use Model (Bay Area UrbanSim 2, hereby referred to as BAUS2), which represents the potential effects of land use strategies and infrastructure investments. These first two models each represent the entire sequence of years in five-year increments, starting with the plan baseline year and ending at the plan horizon year. Finally, the Travel Model is used to analyze an average weekday for a single given model year, simulating a day's worth of travel for each Bay Area resident given their daily activities and enabling staff to understand the effects of transportation strategies on daily vehicle miles traveled, transit ridership and active transportation.

The strategies that comprise the Plan and the EIR Alternatives are listed below, along with the modeling tools used to quantify them. The column with the heading "Off-Model" refers to analysis done to quantify the effects of these strategies outside of the other modeling tools. More detail on the off-model processes used to estimate greenhouse gas emissions can be found in the section Off-Model Calculations. Some strategies were represented consistently across the Plan and EIR Alternatives 1 and 2; these are noted as "Included in all EIR Alternatives except No Project." Some strategies are included in the different alternatives with different details depending on the alternative; these are noted as "Variants included in all EIR Alternatives (except No Project)." Further information about how the strategies are represented in the modeling tools can be found in the Strategy Implementation section within the larger section on that modeling tool.

Table 1. Strategy modeling tools

STRATEGY	EIR ALTERNATIVES	REMI	BAUS2	TM1.5	OFF-MODEL
Housing | Protect and Preserve Affordable Housing					
H1: Further Strengthen Renter Protections Beyond State Law	Included in all EIR Alternatives except No Project	-	✓	-	-
H2: Preserve Existing Affordable Housing	Variants included in all EIR Alternatives	✓	✓	-	-
Housing | Spur Housing Production for Residents of All Income Levels					
H3: Allow a Greater Mix of Housing Densities and Types in Growth Geographies	Variants included in all EIR Alternatives except No Project	✓	✓	-	-
H4: Build Adequate Affordable Housing to Ensure Homes for All	Variants included in all EIR Alternatives	✓	✓	-	-
H5: Integrate Affordable Housing into All Major Housing Projects	Included in all EIR Alternatives except No Project	✓	✓	-	-
H6: Transform Aging Malls and Office Parks into Neighborhoods	Variants included in all EIR Alternatives except No Project	✓	✓	-	-
Housing | Create Inclusive Communities					
H7: Provide Targeted Mortgage, Rental and Small Business Assistance to Equity Priority Communities	Variants included in all EIR Alternatives except No Project	-	-	-	✓
H8: Accelerate Reuse of Public and Community Land for Mixed-Income Housing and Essential Services	Variants included in all EIR Alternatives except No Project	✓	✓	-	-

STRATEGY	EIR ALTERNATIVES	REMI	BAUS2	TM1.5	OFF-MODEL
Economy | Improve Economic Mobility					
EC1: Implement a Statewide Universal Basic Income	Included in all EIR Alternatives except No Project	✓	-	-	✓
EC2: Expand Job Training and Incubator Programs	Included in all EIR Alternatives except No Project	✓	✓	-	-
EC3: Invest in High-Speed Internet in Underserved Low-Income Communities	Not modeled	-	-	-	-
Economy | Shift the Location of Jobs					
EC4: Allow Greater Commercial Densities in Growth Geographies	Variants included in all EIR Alternatives except No Project	-	✓	-	-
EC5: Provide Incentives to Employers to Shift Jobs to Housing-Rich Areas Well Served by Transit	Included in all EIR Alternatives except No Project	-	✓	-	-
EC6: Retain and Invest in Key Industrial Lands	Included in all EIR Alternatives except No Project	-	✓	-	-
EC7: Assess Transportation Impact Fees on New Office Developments	Included in EIR Alternative 1 only	-	✓	-	-
EC8: Implement Office Development Caps in Job-Rich Cities	Included in EIR Alternative 2 only	-	✓	-	-

STRATEGY	EIR ALTERNATIVES	REMI	BAUS2	TM1.5	OFF-MODEL
Transportation | Maintain and Optimize the Existing System					
T1: Restore, Operate and Maintain the Existing System	Variants included in all EIR Alternatives	✓	-	✓	-
T2: Support Community-Led Transportation Enhancements in Equity Priority Communities	Not modeled	-	-	-	-
T3: Enable a Seamless Mobility Experience	Included in all EIR Alternatives except No Project	-	-	✓	-
T4: Reform Regional Transit Fare Policy	Variants included in all EIR Alternatives except No Project	✓	-	✓	-
T5: Implement Per-Mile Tolling on Congested Freeways with Transit Alternatives	Included in all EIR Alternatives except No Project	✓	-	✓	-
T6: Improve Interchanges and Address Highway Bottlenecks	Variants included in all EIR Alternatives	✓	-	✓	-
T7: Advance Other Regional Programs and Local Priorities	Variants included in all EIR Alternatives	✓	-	✓	-
Transportation | Create Healthy and Safe Streets					
T8: Build a Complete Streets Network	Included in all EIR Alternatives except No Project	✓	-	✓	-
T9: Advance Regional Vision Zero Policy through Street Design and Reduced Speeds	Included in all EIR Alternatives except No Project	-	-	✓	-
Transportation | Build a Next-Generation Transit Network					
T10: Enhance Local Transit Frequency, Capacity and Reliability	Variants included in all EIR Alternatives	✓	-	✓	-
T11: Expand and Modernize the Regional Rail Network	Variants included in all EIR Alternatives	✓	-	✓	-
T12: Build an Integrated Regional Express Lanes and Express Bus Network	Variants included in all EIR Alternatives	✓	-	✓	-

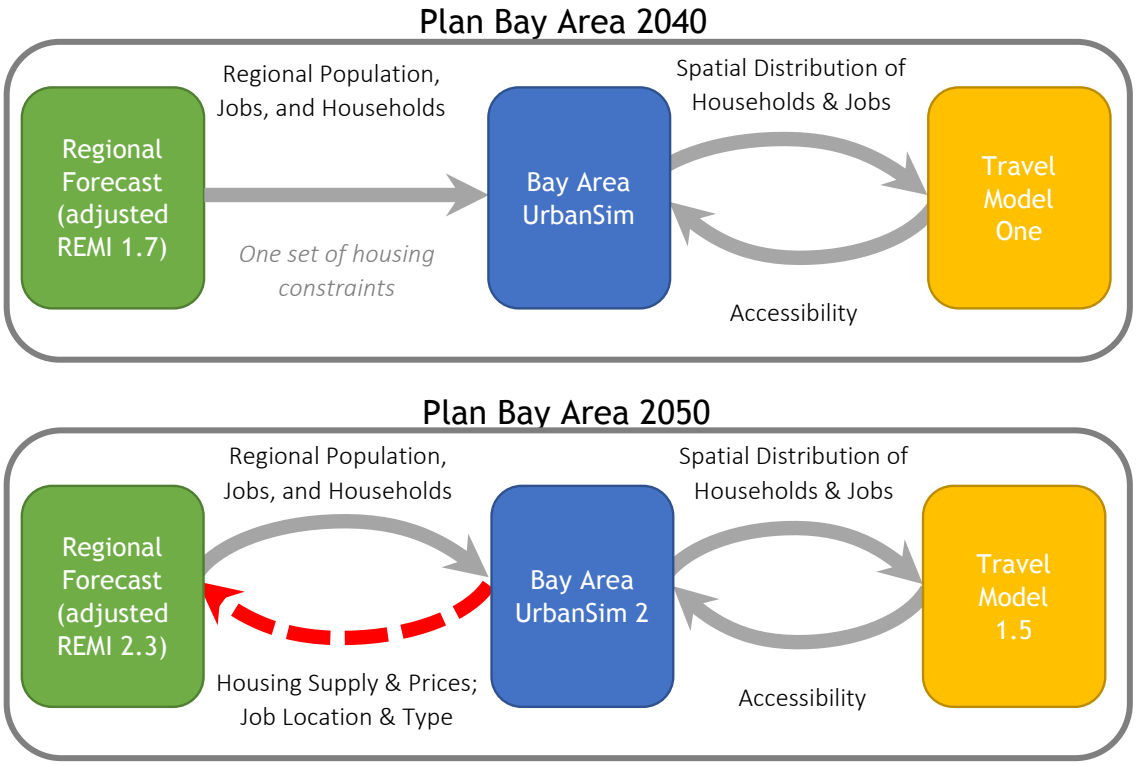
STRATEGY	EIR ALTERNATIVES	REMI	BAUS2	TM1.5	OFF-MODEL
Environment | Reduce Risks from Hazards					
EN1: Adapt to Sea Level Rise	Variants included in all EIR Alternatives	✓	✓	✓	-
EN2: Provide Means-Based Financial Support to Retrofit Existing Residential Buildings	Included in all EIR Alternatives except No Project	✓	-	-	✓
EN3: Fund Energy Upgrades to Enable Carbon-Neutrality in All Existing Commercial and Public Buildings	Included in all EIR Alternatives except No Project	-	-	-	✓
Environment | Expand Access to Parks and Open Space					
EN4: Maintain Urban Growth Boundaries	Variants included in all EIR Alternatives except No Project	-	✓		-
EN5: Protect and Manage High-Value Conservation Lands	Not modeled	-	-	-	✓
EN6: Modernize and Expand Parks, Trails and Recreation Facilities	Not modeled	-	-	-	✓
Environment | Reduce Climate Emissions					
EN7: Expand Commute Trip Reduction Programs at Major Employers	Included in all EIR Alternatives except No Project	-	✓	✓	-
EN8: Expand Clean Vehicle Initiatives	Included in all EIR Alternatives except No Project	-	-	-	✓
EN9: Expand Transportation Demand Management Initiatives	Included in all EIR Alternatives except No Project	-	-	✓	✓

Although these models are run in sequence, they are run multiple times and iteratively so that they interact with each other, and metrics produced by downstream models can factor into upstream models. For example, transportation strategies that affect travel accessibilities will affect land use outcomes because of the feedback from the Travel Model to Bay Area UrbanSim 2.

Regional Growth Forecast and Land Use Model Interaction

The Regional Growth Forecast, produced by MTC and ABAG staff using the Regional Economic Models, Inc. (REMI) demographic and economic model, and the land use model interact with each other in two ways. In previous plans, the Regional Growth Forecast identified the total amount of population, job, household, and housing unit growth, which was then forecast to grow in local areas using the Bay Area UrbanSim land use model based on strategies integrated into the plan.

Figure 1. Integrated model flow Plan Bay Area 2040 vs. Plan Bay Area 2050



The Bay Area's housing market is so far from equilibrium[4] that strategies to increase housing supply at all income levels (thereby lowering housing prices) would affect the location of firms, labor markets, households, housing markets, and city size.[5] Additionally, a housing market that is closer to equilibrium would be able to accommodate those priced out of the region into the megaregion and beyond, reducing in-commute need. To better capture the impact of changed local housing policies on regional housing prices and the overall regional growth trajectory, staff added a feedback link to the model flow, which would enable a more complete analysis of housing price outcomes. The new approach was informally referred to as the "Backward Arrow" during the Plan Bay Area 2050 process, shown in red in Figure 1 above.

To implement this feedback linkage, housing strategies were tested in Bay Area UrbanSim 2 to find a package to allow for the construction of sufficient low-income deed-restricted units and market-rate units by 2050 to drive down the housing cost to year 2000 levels. On the regional model side, staff worked within limitations of the REMI model; since it does not explicitly treat the count of housing units, the key lever used to represent the increase in housing supply was to adjust the model's representation of the region's housing prices relative to the nation. Therefore, staff adjusted the relative housing price and investment variables accordingly in REMI. Additionally, adjustments to headship rates and vacancy rates were made to reflect a healthier and more dynamic housing market to estimate household and housing unit numbers. These processes are discussed later in detail.

4 For further explanation, please see Edward Glaeser and Joseph Gyourko. "The Economic Implications of Housing Supply" NBER Working Paper No. 23833, September 2017.

5 For further explanation, please see Chang-Tai Hsieh and Enrico Moretti. "Housing Constraints and Spatial Misallocation" American Economic Journal: Macroeconomics. 2019, 11(2): 1–39.

Land Use Model and Travel Model Interaction

Bay Area UrbanSim 2 and Travel Model 1.5 work as a system to capture the interaction between transportation and land use. Accessibility to a variety of destinations and amenities is a key driver in both household and business location choice. For instance, households often prefer locations near employment, retail, and similar households but avoid other features such as industrial land use. Business preferences vary by sector with some firms looking for locations popular with similar firms (e.g., Silicon Valley) while others desire locations near an airport or university. In all cases, the accessibility between a given location in the region (defined as a transportation analysis zone or TAZ) and all other locations/TAZs is provided to BAUS2 by the Travel Model. This data represents overall regional accessibility for future years considering changing infrastructure and policy.

Moving in the other direction, BAUS2 provides the travel model with a projected land use pattern and spatial distribution of activities for each year into the future. This pattern includes the location of housing, jobs, and other activities that serve as the start and end locations for trips predicted by the travel model. This information is provided to the travel model at a TAZ level aggregation for each future year examined. Overall, the linkages between the two models allow land use patterns to evolve in relation to changes in the transportation system and for future travel patterns to reflect dynamic shifts in land use, thus representing long-term induced demand.

Forecast Modeling Suite

The Plan Bay Area 2050 Regional Growth Forecast identifies how much the Bay Area might grow between the plan baseline year (2015) and the plan horizon year (2050), including population, jobs, households, and associated housing units. The forecast also includes important components of that growth, including employment by sector, population by age and ethnic characteristics, and households by income level. These figures were then integrated into the Bay Area UrbanSim 2 land use model which explores how Plan strategies affect growth in households and employment at a local level.

The Plan Bay Area 2050 Regional Growth Forecast was primarily developed using the REMI (Regional Economic Models, Inc.) Policy Insight+ (or PI+) model version 2.3.1[6]; for the remainder of this report, REMI PI+ will be used interchangeably with REMI. The REMI PI+ model integrates into one package a dynamic accounting of the core components of the economy: industry structure and competitiveness relative to other regions, propensity to export, and population and labor market structure. The population is explicitly connected to industry growth and demand for labor, assuming that employment growth is a driving force of regional population and household growth, with migration increasing in times of strong employment growth. This is an updated version of the REMI PI+ model used to calculate the growth forecast for Plan Bay Area 2040, which used REMI PI+ version 1.7.8.

The model produces projections of population, employment, gross regional product, and labor force. To generate other key components of the Regional Growth Forecast, staff also developed a household model and a household income distribution model, built around the projections from the REMI analysis. Household projections are generated through a headship rate analysis. The household module uses the projected age and ethnic distribution of the adult population and a moving average of the percent in different age categories that are heads of household to project the number of households associated with demographic characteristics and size of the population.

The household income distribution analysis estimates the share of households in each of four mutually exclusive income groups, to coincide with analysis required in the transportation model. The share of households in low-, moderate-low-, moderate-high-, and high-income categories is estimated using a regression analysis which ties the share in each wage category with ethnic and age distribution, industry characteristics, relative housing prices, and per capita income.

Modeling Context

For decades, developing a Regional Growth Forecast has been a key element of the long-range transportation planning process for the Bay Area. However, in recent years, it has become apparent that critical issues need to be better addressed in the context of developing such a forecast.

The first is related to regional affordability. In Plan Bay Area 2040, it was estimated that the average share of lower-income household income spent on housing would rise by approximately 13 percentage points; this was due in part to the fact that regional housing strategies were limited in nature and affected only the geographic distribution of forecasted growth rather than overall level of housing growth in the Regional Growth Forecast itself. As part of this planning process, policymakers specifically asked “what it would take” to move the needle on affordability, but solutions for these affordability shortcomings were not identified in time for integration into that plan. Plan Bay Area 2050 presents an opportunity to integrate new housing strategies specifically designed to increase supply for all income levels — consistent with policymaker direction for Plan Bay Area 2050 — which will in turn contribute to a more affordable region and a slightly higher Regional Growth Forecast.

6 REMI PI+: https://www.remi.com/model/pi/.

The second is related to uncertainty. While required by statute, the creation of a single Regional Growth Forecast in prior cycles did not provide the opportunity to explore how different trajectories for regional growth would affect critical environmental, economic, and other goals. To address this gap, MTC and ABAG staff undertook the Horizon Initiative in 2018 and 2019, which explored not only how different growth trajectories would affect the region but also how the region could respond to those different trajectories through new strategies.

Both factors mean that developing the Regional Growth Forecast is a more policy-conscious effort, equally focused on contextual uncertainties as well as policy linkages and implications. Upon the kickoff of the Plan Bay Area 2050 cycle, staff accordingly worked with a technical advisory committee to make methodological refinements that incorporate lessons learned from both efforts. The methodology adopted by the ABAG Executive Board in September 2019 enables the Regional Growth Forecast to incorporate changes in strategies that would affect the level of growth in the region, while also affecting affordability, equity, economic mobility, and other critical outcomes.

MTC and ABAG staff developed a draft range for the Regional Growth Forecast forecasts based on the adopted methodology and sought feedback from technical stakeholders during winter 2020. The Final Regional Growth Forecast incorporates comments and feedback received; it also integrates the effects of key Plan strategies.

With the declaration of a public health emergency by the federal government on January 31, 2020, and shelter-in-place guidelines issued at the state- and countywide levels beginning in March 2020, it became clear that the virus would have a widespread impact on many facets of life, especially over the next one to ten years. The economic impact was recognized in February and March with stock markets declining and unemployment ticking upwards. Therefore, MTC and ABAG staff revised the forecast in April and May 2020, making changes to the employment numbers between 2020 and 2030 to reflect significant economic impacts from the coronavirus pandemic and the 2020 recession over the first ten years of the planning horizon; more details are provided below, in the section, Integrating COVID-19 Pandemic and Subsequent Recession. The revised Final Regional Growth Forecast was adopted in September 2020 with the approval of MTC Resolution No. 4437 and ABAG Resolution No. 16-2020.

REMI Modeling

The following sections first introduce the economic and demographic assumptions that underpin the Final Regional Growth Forecast, as well as adjustments made to the near-term forecast to integrate the impact of the recession spurred by the COVID-19 pandemic. This results in a "status quo" baseline forecast for the future of the Bay Area that reflects near-term economic impacts but does not fully accommodate regional growth in an affordable and equitable manner. The report then delves into how a selection of key strategies from the Plan were incorporated into the Final Regional Growth Forecast to meet the Plan's affordability goals.

Adjustments to REMI Baseline

Demographic Adjustments

Staff adjusted Hispanic international migration based on numbers from the most recent U.S. Census Bureau projections. Compared to Census projections, REMI PI+ 2.3.1 using default inputs (REMI Default) projects 42,000 more Hispanic international migrants in 2020. The difference decreases for the next 30 years, and by 2050, the REMI Default projection is just 1,000 higher than the Census (See Table 2).

Table 2. Hispanic international migration - Census vs REMI PI+ 2.3 default

	2020	2030	2040	2050
Census Hispanic	414,000	412,000	410,000	391,000
REMI Unadjusted Hispanic	456,000	431,000	415,000	392,000
Census Total	1,010,000	1,064,000	1,098,000	1,110,000
REMI Unadjusted Total	1,111,000	1,112,000	1,113,000	1,113,000

SOURCE: REMI PI+ 2.3.1; Census 2017 National Population Projections

Therefore, staff updated REMI's Hispanic international migration assumptions using Census 2020, 2030, and 2040 numbers and interpolated for the in-between years, as the Census trends more closely align with observed data in recent years. The gender and age distributions from REMI were used to produce detailed Hispanic international migration for all years between 2020 and 2050. Additionally, in conversation with the California Department of Finance (DOF) about REMI birth rates, DOF noted that REMI fertility rates are projected to be slightly higher, notably for Hispanic individuals (which could overstate births). REMI Default birth rates are higher than DOF estimates, although somewhat lower than rates found in earlier REMI versions. As a result, staff also reduced Hispanic birth rates at the national level by 20%, consistent with observations from a variety of sources that indicated slowing Hispanic birth rates throughout the country as well as in Mexico. This adjustment lowers the total national population in 2050 by less than 0.3%.

Economic Adjustments

At the national level, staff adjusted the employment growth downward for the data processing sector. Data processing (which includes data processing, hosting, and related services) is projected to grow by 136% between 2018 and 2050 in REMI Default for the nation. REMI Default projects the average annual growth rate for this sector for 2018-2028 to be 2.2%, slightly above the BLS 2018-2028 forecast (2.1%). However, after 2030, REMI Default projects an average annual growth rate of roughly 3% for the data processing sector. Staff adjusted data processing employment using the 2020-2030 annual average growth rate from REMI and assuming a constant growth rate after 2030, which lowers the national total employment slightly.

The REMI Default forecast estimates that the region's share of the U.S. employment and population will continue to grow. The share of U.S. data processing jobs was estimated to grow from 18.5% to 22.5% in 2050. However, this contrasts sharply with historic experience. Based on Bureau of Economic Analysis (BEA) data, the Bay Area's share of total U.S. employment, even at peak periods, has never been above 2.9% and has not reached that level since the early 1990s. Staff identified sector shares to adjust and their period of adjustment, and created new regional controls that keep the share of some sectors constant after 2025 and after 2040, as shown in Table 3.

Table 3. Sector share adjustments made to REMI

1. Sectors with share constant after 2025 (basic sectors):
   - Oil and gas extraction
   - Mining (except oil and gas)
   - Support activities for mining
   - Beverage and tobacco product manufacturing
   - Wholesale trade
   - Data processing, hosting, and related services; Other information services
   - Broadcasting, except Internet
   - Telecommunications
   - Professional, scientific, and technical services
   - Management of companies and enterprises
   - Administrative and support services
2. Sectors with share constant after 2040 (local serving):
   - Construction
   - Retail trade
   - Transit and ground passenger transportation
   - Monetary authorities - central bank; Credit intermediation and related activities
   - Securities, commodity contracts, other investments; Funds, trusts, other financial vehicles

SOURCE: ABAG, MTC, and Center for Continuing Study of the California Economy

Relative Housing Price Adjustment

In REMI, the relative housing price influences overall population levels because it factors into the relative wage levels of the region, net of housing costs. Higher relative prices will make the region less attractive to new workers and labor costs more expensive, all other things equal. REMI does not account for absolute levels for current and future prices but instead provides a measure of relative prices for regions compared to national levels. Staff looked at U.S. Census Bureau American Community Survey (ACS) median home prices and Zillow reported home and rental prices to determine if the REMI relative housing price index had accurately reflected the relative strength of the Bay Area housing market. Based on a review of ACS and Zillow data, staff determined that the price difference was not fully captured in the REMI index. REMI Default shows Bay Area prices ranging from 1.3 times the national level in Solano to 3.6 times the national level in San Francisco in 2018 – with a weighted average of 2.8. Using Zillow homeowner and renter indices, the weighted average of this aggregated series is 3.1, 11% above the REMI price index. Staff used this higher ratio for 2018 for each county and maintained this proportional higher price through 2050. This relative housing price was utilized for adjusting the REMI Default.

Table 4. Relative housing price comparisons - REMI, ACS, and Zillow*

	ACS RELATIVE HOME VALUE	ZILLOW ALL HOME INDEX	ZILLOW RENTAL INDEX	ZILLOW AVERAGE ALL HOME AND RENTAL	REMI	ZILLOW RELATIVE TO REMI
Alameda	4.4	3.6	1.9	2.7	2.5	1.1
Contra Costa	3.5	2.5	1.7	2.1	2.1	1.0
Marin	5.5	4.4	2.4	3.4	3.3	1.0
Napa	3.4	3.3	1.8	2.6	2.0	1.3
San Francisco	6.2	7.0	2.7	4.9	3.6	1.4
San Mateo	6.2	5.9	2.3	4.1	3.5	1.2
Santa Clara	5.7	4.7	2.1	3.4	3.1	1.1
Solano	2.3	1.8	1.3	1.5	1.3	1.2
Sonoma	3.4	2.9	1.7	2.3	2.0	1.2
Weighted Average	**4.8**	**4.0**	**2.2**	**3.1**	**2.8**	**1.1**

SOURCE: ABAG and MTC from REMI PI+ 2.3.1, calculations from data from the American Community Survey, and Zillow Home Value Index (2018, Bay Area Counties and U.S.), Zillow Rental Index (2018, Bay Area Counties and U.S.). Weighted average calculated using California Department of Finance housing unit numbers.

***NOTE:** Staff used Zillow index only because it includes detailed rental information. ACS data was shown for reference in this table.

Integrating COVID-19 Pandemic and Subsequent Recession

While there was limited data at the time of the forecast revision, staff used the available information and consulted with, or reviewed, the work of other forecasters, including but not limited to estimates from the Congressional Budget Office, the UCLA Anderson Forecast (March 16th 2020 report), and the University of Michigan Research Seminar in Quantitative Economics (RSQE) forecast report (March 2020 release). Staff determined that while employment totals would be impacted significantly in the near term, the direct impact on population and households would be more limited as COVID-19 impacts are both nationwide and global.

To represent the near-term economic impacts of the recession caused by the pandemic along with the anticipated subsequent recovery, staff made changes to employment projections in the Plan Bay Area 2050 Final Growth Forecast for the years between 2020 and 2030 in REMI. The regional forecast is meant to represent a moderate growth trend over a thirty-year period and does not typically represent economic cycles. Even recognizing the unprecedented stimulus measures that have been put into place, the recovery from this event is likely to go on for several years. Over the longer term, the Bay Area is expected to return to the previously forecasted trend line by 2030.

Strategy Implementation

The Plan integrated critical strategies to address regional challenges, including the region's longstanding affordability crisis. These strategies would have implications for the level of growth in the region. For example, making the region more affordable would attract more residents who may have otherwise been priced out of the Bay Area. Similarly, the investment associated with building more housing would create more jobs and labor demand. Recognizing these dynamics, based off the baseline forecast, staff sought to incorporate the impacts of the strategies adopted for the Final Blueprint into the Regional Growth Forecast. These strategies impact all the models used, but in this section, the focus is on the REMI PI+ model. Ultimately, not every strategy is anticipated to have significant impacts on the Regional Growth Forecast; many strategies only need to be incorporated in BAUS2 and/or Travel Model 1.5. After reviewing the 35 strategies, staff determined that the following strategies would likely influence the Regional Growth Forecast, with impacts ranging widely across strategies (Table 5).

Table 5. Strategies incorporated in Final Regional Growth Forecast

CATEGORY	STRATEGY	MODEL INPUT ADJUSTMENTS
TRANSPORTATION	Restore, Operate and Maintain the Existing System	Increase investment in construction sector and government administrative spending
	Improve Interchanges and Address Highway Bottlenecks	
	Advance Other Regional Programs and Local Priorities	
	Build a Complete Streets Network	
	Enhance Local Transit Frequency, Capacity and Reliability	
	Expand and Modernize the Regional Rail Network	
	Build an Integrated Regional Express Lanes and Express Bus Network	
	Reform Regional Transit Fare Policy	Increase disposable income (consumer spending)
	Implement Per-Mile Tolling on Congested Freeways with Transit Alternatives	Decrease disposable income
HOUSING	Allow a Greater Mix of Housing Densities and Types in Growth Geographies	Decrease housing costs, increase investment in construction sector
	Accelerate Reuse of Public and Community Land for Mixed-Income Housing and Essential Services	
	Transform Aging Malls and Office Parks into Neighborhoods	
	Preserve Existing Affordable Housing	Increase disposable income (consumer spending) and government administrative spending
	Build Adequate Affordable Housing to Ensure Homes for All	
	Integrate Affordable Housing Into All Major Housing Projects	
ECONOMY	Implement a Statewide Universal Basic Income[7]	Adjust income distribution results outside REMI model
	Expand Job Training and Incubator Programs	Increase investment in manufacturing and education sectors
ENVIRONMENT	Adapt to Sea Level Rise	Increase investment in construction sector
	Provide Means-Based Financial Support to Retrofit Existing Residential Buildings	

7 The UBI strategy replaced the Childcare Subsidy strategy after the Draft Blueprint and the latter was modeled as part of the Regional Growth Forecast. However, staff expects the net impact of the Childcare Subsidy strategy on the region's economy and demographics to be negligible.

Transportation Strategies

The economic impact of transportation investments generally fits into two categories: (1) direct effects from spending — in operations and maintenance (O&M)[8] and construction of new projects – as well as multiplier effects; (2) enhanced economic competitiveness through improved network efficiency and congestion reduction (which reduces cost for businesses), as well as improved air quality and quality of life. While staff recognized the importance of capturing the comprehensive effects of the proposed transportation strategies, the forecast only considered the impact in the first category due to limited model capacities. Therefore, the forecast reflects a more conservative estimate of the transportation spending in the plan.

Seven of the transportation strategies include major investments in transportation infrastructure. These strategies were represented in the Regional Growth Forecast as increased demand within the construction industry and increased government administrative spending. The strategies were:

- T1: Restore, Operate and Maintain the Existing System
- T6: Improve Interchanges and Address Highway Bottlenecks
- T7: Advance Other Regional and Local Transit Projects
- T8: Build a Complete Streets Network
- T10: Enhance Local Transit Frequency, Capacity and Reliability
- T11: Expand and Modernize the Regional Rail Network
- T12: Build an Integrated Regional Express Lanes and Express Bus Network.

For the transportation strategy T4: Reform Regional Transit Fare Policy, staff anticipated that a $10 billion means-based fare discount, funded through existing transportation revenues, would increase transit subsidies, and allow for consumer spending reallocation (i.e., money saved would be spent on other commodities). In contrast, staff represented strategy T5: Implement Per-Mile Tolling on Congested Freeways with Transit Alternatives as a reduction in personal income.

Housing Strategies

Housing strategies are designed to spur housing production as well as to protect and preserve affordable housing. Boosting housing capacity is addressed through strategic zoning changes, seeking to support the development of housing throughout the region where appropriate. Staff assumed these zoning change-related strategies would allow and encourage private construction investment for market rate housing, which would help the region reach the goal of driving down its 2050 average housing cost, affecting the overall regional growth trajectory significantly. As mentioned in the Regional Growth Forecast and Land Use Model Interaction section, this was modeled in REMI by adjusting the relative housing price variable downward starting in 2022 so that by 2050 Bay Area home price relative to the U.S. would be back to 2001 levels.[9] Additionally, the level of residential construction investment was increased in the model based on expected housing development. Staff estimated the set of strategies to fund affordable housing protection, preservation, and production would allow consumer spending reallocation (95% of the subsidy provided) and increase government administrative spending (remaining 5%).

Economic Strategies

Economic strategies are primarily focused on improving economic mobility and shifting the location of jobs. Two of the strategies that are designed to improve economic mobility are included in the regional economic model: EC1: Implement a Statewide Universal Basic Income (UBI); and EC2: Expand Job Training and Incubator Programs. Other strategies designed to shift location of jobs are represented in the land use and travel models, but not reflected in the Regional Growth Forecast.

8 O&M is where most of the forecasted transportation revenues will be spent. Staff considers the current level of operations and maintenance spending sufficient to maintain existing conditions of the region's transportation assets. Therefore, staff did not simulate the impacts of these baseline investments separately. However, in cases where there are additional revenues to improve the condition beyond today's levels or to fund operations and maintenance demand necessitated by new projects, staff modeled the impacts of these investments.

9 Because in REMI, historical data dates to only 2001, relative housing price index of year 2001 level was used instead of the 2000 level.

Strategy EC1: Implement a Statewide Universal Basic Income is costly but provides many benefits to low and low-to-moderate income households. While the model's ability to capture the full effects of the UBI strategy is limited, staff tested the strategy in the REMI model through an increase in both taxation and spending, which resulted in a minimal to neutral economic impact. Given that the purpose of the strategy is to improve economic mobility, in the end staff updated the income distribution results outside the REMI model to represent its impact. Strategy EC2: Expand Job Training and Incubator Programs is represented by increasing investment in the manufacturing and education industries.

Environmental Strategies

Strategy EN1: Adapt to Sea Level Rise focuses on protecting the shoreline as well as critical transportation infrastructure in areas at risk. To the extent that there would be increases in capital projects spending such as building levees and infrastructure enhancements, staff increased demand for the construction industry using the REMI model.

Strategy EN2: Provide Means-Based Financial Support to Retrofit Existing Residential Buildings is estimated to cost $15 billion, of which staff assumed that $12 billion[10] was directly invested into the construction industry in the model. This was not modeled as increased consumer spending because staff assumed that without the subsidies, homeowners would not be incentivized to retrofit existing building at all.

Revenues to Fund Plan Strategies

Staff assumed that the current levels of government funding for programs, including transportation operations, maintenance, and investment will continue. Funding for the strategies included in the REMI model would be generated by additional taxes.

For the purposes of the Regional Growth Forecast, staff assumed that:

- Additional transportation revenues would be generated by a sales tax increase;
- Additional housing revenues would be generated by a business tax increase;
- Additional economic revenues would be generated by a personal income tax increase; and
- Additional environment revenues would be generated by a property tax increase.

10 The Draft Blueprint assumed a total cost of $20 billion for this strategy, and the $12 billion investment in the construction industry was based upon this assumption. While the Final Blueprint/Plan adjusted the total down to $15 billion, the $12 billion investment in the construction industry remained unchanged.

Households

In the Regional Growth Forecast, households are closely related to the age, racial and ethnic composition of the population, reflecting important patterns of how households are formed in relation to demographic features. Typically, young adults leave the home or migrate to an area and form their own households or share housing with others. For young adults, it is common to see relatively higher average household sizes. Some will pair up and form families, often with two adults in a household. Life events, such as divorce or loss of a partner in later years will be result in fewer adults per household in the upper half of the population age distribution. While children make up a sizeable chunk of the population, they only indirectly impact the number of households formed, and units occupied. The typical accounting framework relates the number of households to the number of adults: headship rates.

Headship rates, while serving to capture the propensity for a given group of adults to form households, also reflect a larger set of behavioral and economic conditions in a region, for which reason these rates vary between regions, and over time. Some ethnic groups are more prone to multi-generational households, which will be reflected in the headship rates. Further, in regions with higher housing costs, the propensity to form households is slightly lower than in more affordable regions. To project a future number of households, accordingly, staff needs information about the future population and its age and racial/ethnic structure.

Headship rates can change over time as behavior or economics change. As housing affordability is currently at historically low levels in the Bay Area and one of the plan goals is to increase housing affordability, current headship rates were assumed to represent a constrained housing market. With a proactive state and regional housing policy framework adjusting the capacity for housing, more households would be able to form than would be the case today. To practically reflect this, headship rates were set to transition from today's constrained levels to rates observed two decades ago, in effect "rolling back" the clock on the housing market.

Headship rates were set to vary by year, starting with observed rates from ACS 2012-2016 sample, and then transitioned to the somewhat higher rates found in Census 2000 Public Use Microdata Sample (PUMS). As this change took place over more than a decade, it was assumed this transition to a more accommodating housing market and associated household formation regime would take a more than a decade and a half – with a few years to allow for policy to become effective. Rates were thusly transitioned from existing rates starting in 2022, and gradually rolled back to 2000 levels, with the transition assumed to be complete by 2038. The practical effect of this is for a given population, a slightly larger number of households would result, reflecting a healthier and more dynamic housing market.

The rates are applied to the forecasted future household population, where the household population is segmented into the four racial/ethnic groups accounted for in REMI: Hispanic/Latinx; White, Not Hispanic; Black, Not Hispanic, and Other, Not Hispanic. The household population is further broken down into 15 five-year age groups, beginning at 15, and ending at 85 and over for a total of 60 age/ethnic and racial groups. The detailed headship rates for the years 2015, 2030 and 2050 for the final forecast are provided in Table 6. For many age groups, a small increase of rates can be observed from 2015 to 2050.

Table 6. Headship rates, by year, age group, race/ethnic group

RACE / ETHNICITY	BLACK-NON-HISPANIC			HISPANIC			OTHER-NON-HISPANIC			WHITE-NON-HISPANIC		
Age Group	2015	2030	2050	2015	2030	2050	2015	2030	2050	2015	2030	2050
Ages 15-19	0.02	0.02	0.03	0.01	0.02	0.02	0.01	0.02	0.03	0.01	0.01	0.02
Ages 20-24	0.14	0.18	0.23	0.11	0.12	0.15	0.13	0.15	0.18	0.15	0.19	0.25
Ages 25-29	0.32	0.36	0.43	0.24	0.26	0.29	0.27	0.28	0.30	0.34	0.38	0.44
Ages 30-34	0.40	0.44	0.51	0.37	0.38	0.39	0.40	0.41	0.42	0.47	0.49	0.51
Ages 35-39	0.48	0.51	0.56	0.41	0.42	0.44	0.47	0.46	0.44	0.51	0.52	0.54
Ages 40-44	0.54	0.55	0.58	0.45	0.46	0.49	0.48	0.48	0.48	0.53	0.54	0.56
Ages 45-49	0.56	0.57	0.60	0.48	0.49	0.51	0.50	0.50	0.50	0.56	0.57	0.58
Ages 50-54	0.61	0.62	0.65	0.49	0.50	0.51	0.49	0.49	0.49	0.57	0.58	0.60
Ages 55-59	0.58	0.61	0.65	0.49	0.50	0.51	0.48	0.48	0.49	0.58	0.59	0.61
Ages 60-64	0.64	0.66	0.69	0.49	0.49	0.49	0.44	0.45	0.46	0.60	0.61	0.64
Ages 65-69	0.67	0.68	0.70	0.48	0.48	0.49	0.44	0.44	0.43	0.62	0.64	0.66
Ages 70-74	0.74	0.74	0.75	0.51	0.52	0.54	0.43	0.43	0.44	0.65	0.66	0.67
Ages 75-79	0.72	0.73	0.75	0.49	0.53	0.59	0.44	0.45	0.47	0.66	0.68	0.70
Ages 80-84	0.66	0.69	0.73	0.53	0.54	0.55	0.44	0.47	0.52	0.70	0.72	0.74
Ages 85+	0.68	0.69	0.70	0.54	0.54	0.54	0.48	0.48	0.49	0.75	0.76	0.77

NOTE: Headship rates vary by year, starting with observed rates from U.S. Census Bureau, American Community Survey 2014-2018 sample, and are transitioned to higher rates found in U.S. Census Bureau, Census 2000 PUMS. Transition is from 2022-2038. Data is for the nine-county San Francisco Bay Area.

Income

After household counts have been projected, they are disaggregated further into income groups. Household income is an important predictor for housing location choices as well as travel behavior and is thus important to downstream analyses. The income distribution analysis considers structural characteristics of the region including demographic factors such as the age profile and ethnic mix, and economic factors such as the predominant industries and occupations in which people work, as well as the various sources of income (retirement income, public assistance income, wage and salary income) observed in the aggregate. The core translation performed is one where such overall factors of a regional economy are related to the share of households in each of four income groups. The relationship is based on observed county-level data for the nation's largest metropolitan areas, where economic and demographic variables serve as predictors of the relative shares in different household income groups.

The income categories are defined below. They were originally defined as approximate quartiles in 2000 dollars because that is the year of currency used in the Travel Model. Over the years as income inequality has risen, they have morphed into quantiles. The income quantiles presented below are used throughout the remainder of this report.

Table 7. Income quantile definitions used in the modeling system

QUANTILE	2000 DOLLARS	2020 DOLLARS
Q1: low-income	Less than $30,000	Less than $50,000
Q2: moderate-low-income	$30,000 to $60,000	$50,000 to $100,000
Q3: moderate-high-income	$60,000 to $100,000	$100,000 to $170,000
Q4: high-income	More than $100,000	More than $170,000

The relationship between regional economic performance and the distribution of incomes is complex and dependent on not just compensation practices but also how people group together to form households, decide whether to hold a job or retire, raise children, and a host of other considerations. These decisions themselves will vary over time, but there is much than can be seen from the data available. All other things equal, for example, locations with a relatively large share of management occupations may be expected to have more upper income households, while locations with a higher proportion receiving public assistance may conversely be expected to have more low-income households.

To capture such relationships, staff specified four regression models (using data from ACS at the county level) on the relationship between demographic and economic variables and share of households in each of the four income quartiles defined above, with a generally good fit.[11] These relationships are carried forward, with data from REMI on the future economy (employment, age, industry, occupation) used to predict the relative share of households in the four income groups, and those shares are applied to the projected household counts.

11 Because ordinary least squares (OLS) regressions are not limited to the range between 0 and 1, the predicted shares from the four models are scaled to sum to 100%, and the predicted shares are indexed to 2015 observed levels. The projection then moves the observed levels up or down depending on the index.

Findings: Regional Growth Forecast Results

Table 8 shows both the baseline forecast and the Plan Bay Area 2050 Final Regional Growth Forecast. The baseline forecast does not integrate regional strategies and represents a "status quo" future where regional goals such as affordability would not be achieved, in conflict with state requirements to fully accommodate future regional growth and affordability objectives established in the adopted Plan Bay Area 2050 Guiding Principles. As discussed previously, the Final Regional Growth Forecast incorporates the impacts of regional strategies on the region's economy, demographics and households.

In the Final Regional Growth Forecast, between 2015 and 2050, the region's employment is projected to grow by 1.4 million to just over 5.4 million total jobs. Population is forecasted to grow by 2.7 million people to 10.3 million. This population will comprise over 4.0 million households, for an increase of nearly 1.4 million households from 2015. The number of housing units is projected to grow by 1.5 million units. Compared to the baseline forecast, integrating the regional strategies and fully accommodating future residents led to 300,000 more jobs, 760,000 more people, 460,000 more households, and 480,000 more housing units.

Table 8. Plan Bay Area 2050 Baseline Forecast and Final Regional Growth Forecast

	2015	2020	2025	2030	2035	2040	2045	2050
BASELINE FORECAST								
Total Population	**	**	8,130,000	8,360,000	8,700,000	9,040,000	9,330,000	9,570,000
Total Employment	**	**	4,050,000	4,530,000	4,680,000	4,850,000	4,980,000	5,110,000
Total Households	**	**	2,930,000	3,080,000	3,230,000	3,370,000	3,490,000	3,580,000
Total Housing Units	**	**	3,050,000	3,240,000	3,400,000	3,550,000	3,670,000	3,770,000
FINAL REGIONAL GROWTH FORECAST								
Total Population	7,660,000	7,940,000	8,230,000	8,560,000	9,010,000	9,490,000	9,930,000	10,330,000
Total Employment	4,010,000	4,080,000	4,150,000	4,640,000	4,830,000	5,050,000	5,230,000	5,410,000
Total Households	2,680,000	2,760,000	2,950,000	3,210,000	3,500,000	3,710,000	3,890,000	4,040,000
Total Housing Units	2,710,000	2,840,000	3,060,000	3,370,000	3,670,000	3,900,000	4,080,000	4,250,000

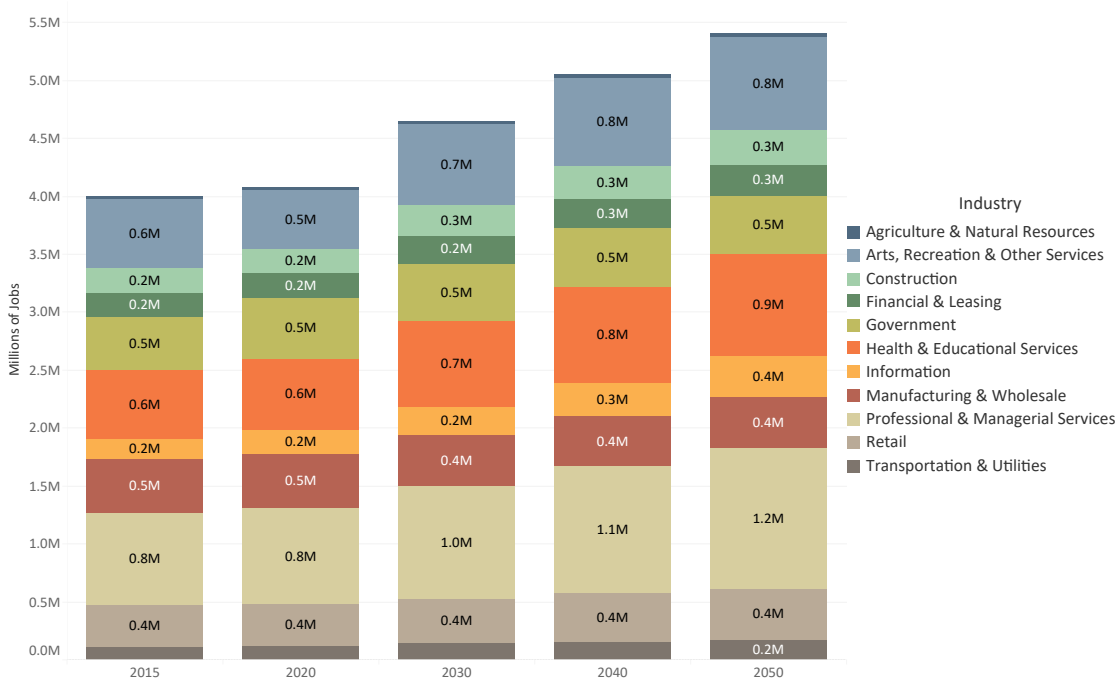
** = See Final Regional Growth Forecast below.

The Final Regional Growth Forecast projects approximately 400,000 more jobs, 200,000 fewer people, 300,000 more households and 300,000 more housing units in 2040 compared to the Plan Bay Area 2040 forecast. There are several reasons for the difference in the forecasts between Plan Bay Area 2040 and this latest forecast for the Bay Area. Differences in population are largely due to the assumption that the recent observed decline in Hispanic international migration and birth rates would continue, which is consistent with U.S. Census Bureau and California Department of Finance assumptions. Second, strong employment growth during the 2010s has resulted in adjustments to the early years of the forecast, and as a result the endpoint of the trend is also higher. Meanwhile, comparing the age composition of the population in these two forecasts, this forecast has a higher number of older adults, who usually have higher headship rates, forming more households. Finally, this forecast integrated housing strategies that would encourage more housing production and investment, resulting in higher household and housing unit numbers, as well as creating more jobs.

Employment Growth and Change

Figure 2 compares the level and distribution of employment in 2015 to projected employment in future years up to 2050. Professional and managerial services, and health and educational services are forecasted to continue dominating future employment in the San Francisco Bay Area, and the information sector more than doubles its current job numbers. Meanwhile, despite increases in both output and demand in all sectors as well as proposed strategies intended to stimulate employment in certain industries, the forecast shows declining employment in a few sectors, due to both technologically induced higher productivity and changes in economic structure, particularly in the manufacturing and wholesale industries. Finally, job forecasts both for construction as well as transportation and warehousing are boosted by the infusion of investments.

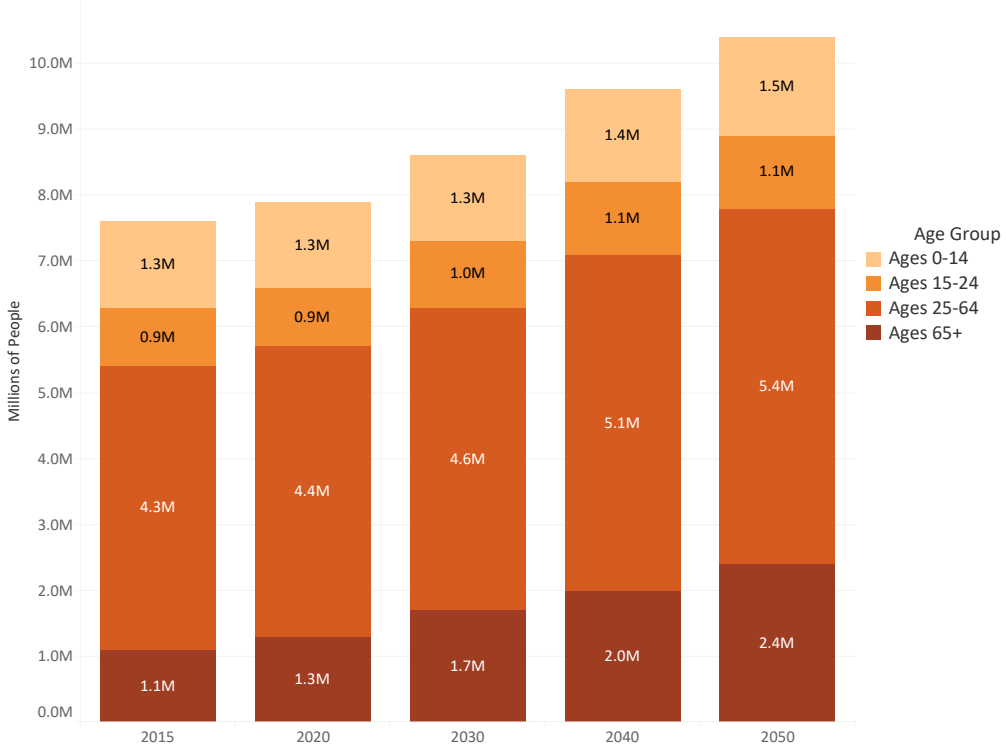
Figure 2. Employment by sector in the Regional Growth Forecast



Population Growth and Change

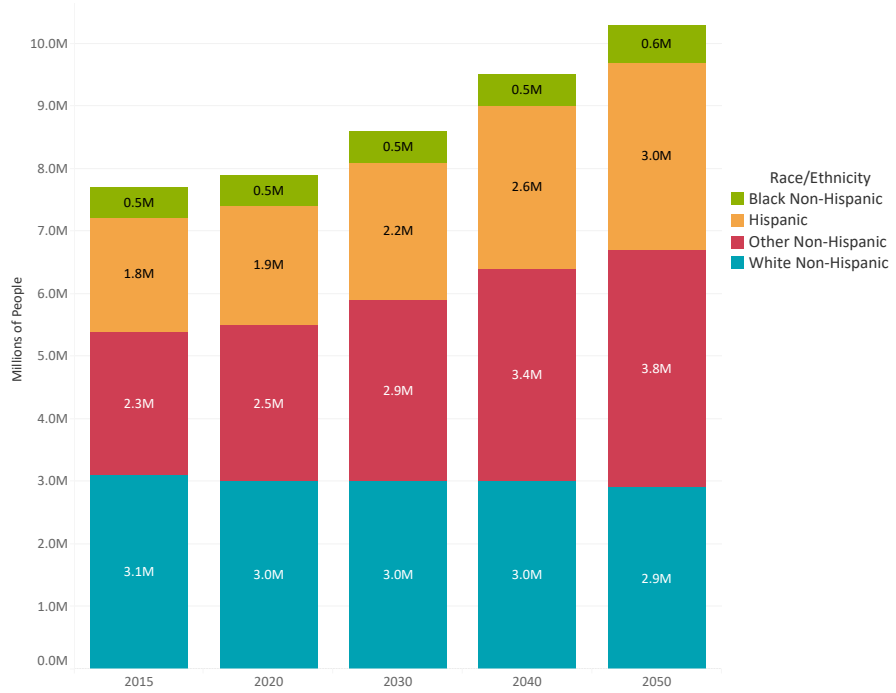
Figure 3 compares the population by age group in 2015 with that of the projections for future years up to 2050. Between 2015 and 2050, the number of working-age adults is forecasted to grow by 25%, but the share declines by 4% (from 56% to 52%). The growth in the share of people in the 65+ age group is anticipated to continue in the decades ahead from 14% of the total population in 2015 to 23 percent in 2050. While the 2050 total population is projected to be 35% higher than in 2015, growth will differ widely by age group.

Figure 3. Population by age group in the Regional Growth Forecast (in millions)



Ethnically, the region continues to diversify over time, as shown in Figure 4. Growth takes place mainly in Hispanic and Asian racial/ethnic groups (the largest group within the Other Non-Hispanic category in the figure). There is a small increase in the Black Non-Hispanic population, while the White Non-Hispanic population decreases steadily over time. By 2050, Asian, Native American, Pacific Islander, and More than One Racial group will reach 4 million people, while the Hispanic population will grow to the same level as White Non-Hispanic: around 3 million people.

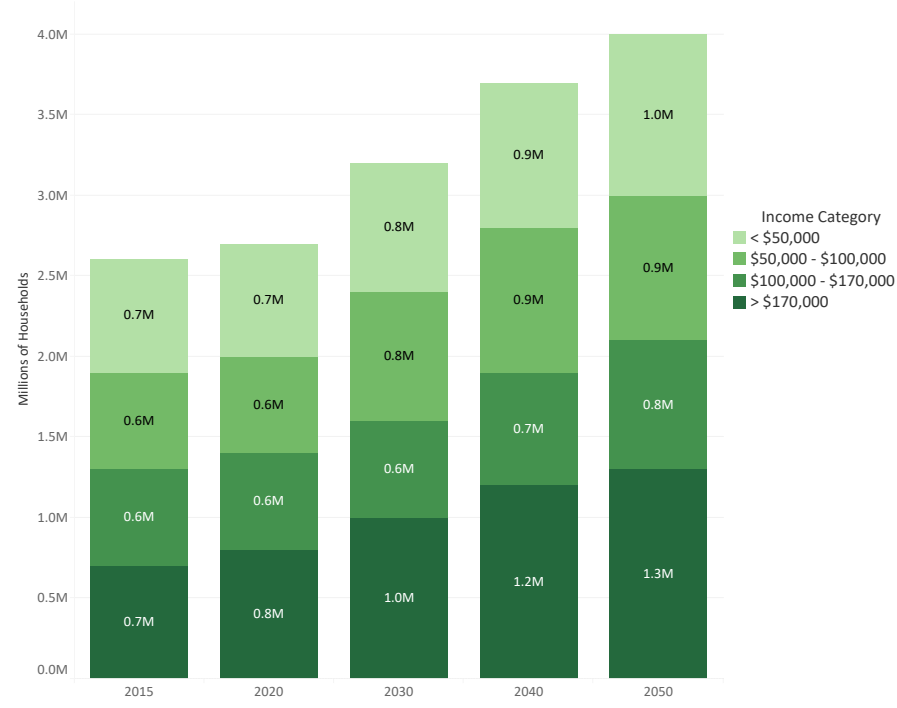
Figure 4. Population by race/ethnicity in the Regional Growth Forecast (in millions)



Household Income Distribution

Figure 5 compares the household income distribution in 2015 with the projected income distribution for future years. The amount of household growth projected (1.4 million new households between 2015 and 2050) reflects strategies that encourage both market rate and affordable housing development, increasing the number of housing units produced.

Figure 5. Projected income distribution of households in the Bay Area (in millions; income segments are in 2020 dollars[12])



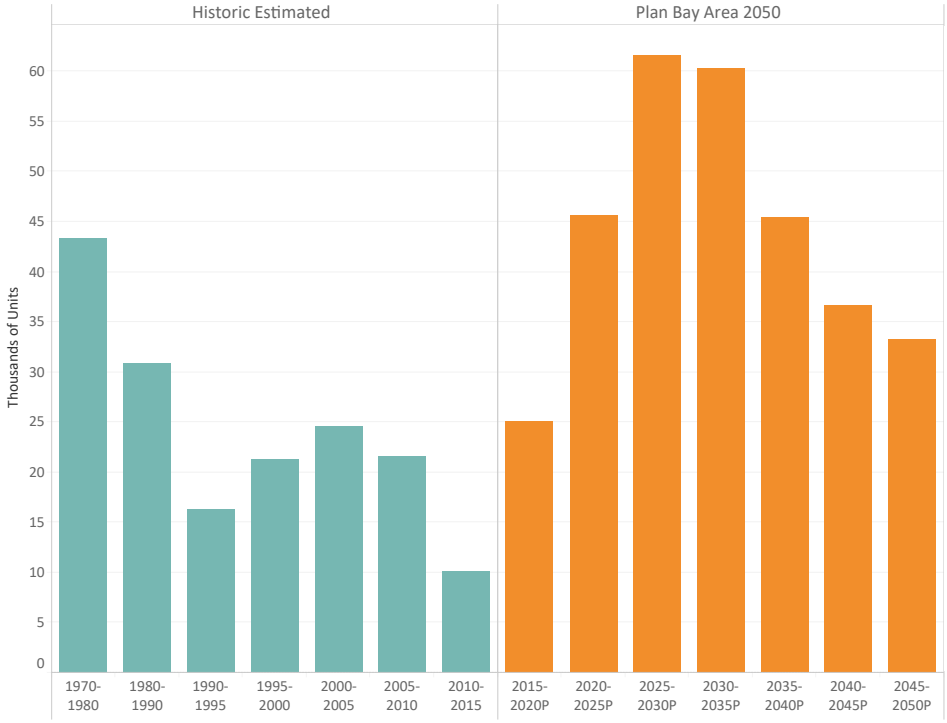
12 See Table 7: Income quantile definitions used in the modeling system.

While the number of households in all four income categories is expected to grow, household growth is anticipated to be strongest in the highest income category, reflecting the expected strength of growth in high-wage sectors combined with non-wage income (interest, dividends, capital gains, transfers). Household growth is also anticipated to be high in the lowest-income category, reflecting possible occupational shifts, wage stagnation, the retirement of seniors without pension assets, as well as the proposed affordable housing strategies. However, with the assumed implementation of a statewide Universal Basic Income strategy starting in 2025, portions of the households in the lowest-income category would be able to move up to the mid-lower income category.[13]

Housing Production

To translate growth in households to the anticipated demand for housing units, staff assumed a healthy vacancy rate for the region of five percent beginning from 2030[14] — leading to a projected increase of housing units by 1.5 million through 2050; the level of demand for new housing units follows the formation of new households. The forecast implies an annual average rate of increase of between 25,000 and 61,000 units, depending on the time period. As shown in Figure 6, this means a significant increase of production for the next three decades to a level of production above that of 1970s and 1980s, which requires the region successfully implement the housing strategies proposed in the plan.

Figure 6. Annual housing production, historic and projected (in thousands of housing units)



The Regional Housing Control Total in the Plan Bay Area 2050 Final Regional Growth Forecast, also known as the year 2050 total housing units projection, reflects the "Backward Arrow" linkage described previously which captures the impact of increasing housing supply at all income levels and lowering housing prices. The number also implies a much healthier housing market in the Bay Area compared to today's levels: higher headship rates, lower household size, healthier vacancy rate, improved job-housing ratio, and an affordable housing stock — nearly a quarter of the housing stock in 2050 would be deed-restricted affordable housing units in the Plan.

13 Although the UBI subsidies would be provided to households of all income groups, staff anticipate that the funding would come from a tax on households that not in the lowest-income category. That is to say, the net impact would only be a portion of the households in the lowest-income category would move up to mid-low-income category. According to PUMS 2014-2018 data, 11.6% of the lowest-income category households have such a level of income the UBI subsidies would push them over the income threshold to mid-low-income category. Staff assumes the ratio remains consistent, moving 11.6% lowest-income households into mid-low-income group in the pre UBI forecast results from 2025 to 2050 to simulate the impacts of the UBI.

14 California Department of Finance estimates of Bay Area vacancies have varied from 3.4% to 6.4% since 2000. Current vacancy rate stands around 3%.

Overall, the Regional Growth Forecast provides enough housing and making it affordable for the in-commuters who today are forced to live outside the region due to high housing cost or a lack of housing choices to move into the region in the future, thereby reducing the number of in-commuters. This amount is more than sufficient to preclude the need for a separate in-commute adjustment. Both the potential in-commuters and many additional potential residents who would have been excluded from living in the region or even the megaregion due to the Bay Area's high housing prices would be accommodated within the nine-county region through strategies in Plan Bay Area 2050.

This section provides a high-level overview of the Bay Area UrbanSim 2 Land Use Model application. The model provides a consistent, theoretically grounded means of forecasting land use change in the Bay Area for the Regional Forecast's household and employment totals and planning strategies that are incorporated into the Plan and EIR Alternatives. In addition, Bay Area UrbanSim 2 is integrated with Travel Model 1.5 to address the interactions between transport system changes and land use changes. This section includes an overview of the model structure, simulation sub-models and a brief introduction to the alternatives. Interactions between the BAUS2 and the other modeling components are described in the Model System Overview.

Bay Area UrbanSim 2 Land Use Model Application

UrbanSim is a modeling system developed to support the need for analyzing the potential effects of land use policies and infrastructure investments on the development and character of cities and regions. UrbanSim has been applied in a variety of metropolitan areas in the United States and abroad, including Detroit, Eugene-Springfield, Honolulu, Houston, Paris, Phoenix, Salt Lake City, Seattle, and Zürich. The application of UrbanSim for the Bay Area (i.e., Bay Area UrbanSim) was originally developed by the Urban Analytics Lab at UC Berkeley under contract to MTC and further refined (up to the current Bay Area UrbanSim 2) by MTC and ABAG modeling staff.[15]

The area included in the Bay Area model application includes all incorporated and unincorporated areas of the nine-county Bay Area.[16] This geographic area defined the scope of the data collection efforts necessary to define the modeling assumptions. Bay Area UrbanSim 2 is based on legal parcels of land drawn from 2010 data and updated with new information to match the 2015 base year used across the model system.

Within Bay Area UrbanSim 2 there are 10 sub-models simulating the real-world choices and actions of households, businesses, and real estate developers within the region, based on assumed public-sector strategies (i.e., policies or investments). Households have particular characteristics such as income that may influence preferences for housing of different types at different locations. Businesses also have preferences that vary by industry for building types and locations. Developers construct new buildings or redevelop existing ones in response to demand and planning constraints, such as zoning. Buildings are located on land parcels that have particular characteristics such as value, land use, topography, and other environmental qualities. Governments set policies that regulate the use of land, through the imposition of land use plans, urban growth boundaries, environmental regulations, or through pricing policies such as development impact fees or subsidies. Governments also build infrastructure, including transportation infrastructure, which interacts with the spatial distribution of households and businesses to generate patterns of accessibility at different locations that in turn influence the attractiveness of these sites for different consumers.

The Bay Area UrbanSim 2 model system simulates these choices through the sub-models described below and shown Figure 7, Figure 8 and Figure 9. These figures also show how the travel model and Bay Area UrbanSim 2 interact. Several of the system models include algorithms that aim to match the total number of units (e.g., jobs, households) included in the Regional Growth Forecast. These totals are checked at the end of each model year run. In each of Bay Area UrbanSim 2's five-year predictions, the model system steps through the following components:

1. The **Employment Transition Model** predicts new businesses being created within or moved to the region, and the loss of businesses in the region – either through closure or relocation out of the region. The role of this model is to keep the number of jobs in the simulation synchronized with aggregate expectations of employment in the region.

2. The **Household Transition Model** predicts new households migrating into the region, the loss of households emigrating from the region, or new household formation within the region. The Household Transition Model accounts for changes in the distribution of households by type over time, using an algorithm analogous to that used in the Employment Transition Model. In this manner, the Household Transition Model keeps Bay Area UrbanSim household counts synchronized with the aggregate household projection.

15 More information on UrbanSim is available at http://urbansim.com.

16 Technical information on Bay Area UrbanSim 2 can be found at https://github.com/BayAreaMetro/bayarea_urbansim.

3. The **Real Estate Development Model** simulates the location, type, and density of real estate development, conversion, and redevelopment events at the level of specific land parcels. This sub-model simulates the behavior of real estate developers responding to excess demand within land use policy constraints. The algorithm examines a subset of parcels each forecast year and builds pro formas comparing development costs and income. New structures are built in profitable locations.

4. The **Scheduled Development Events Model** provides an alternative means for the introduction of new buildings into the region. This component is simply a list of predetermined structures to be built in specific future years. These are from three categories: 1) recently completed development or projects under construction; 2) large, committed but unbuilt, public-private partnership projects (examples shown in Table 9); 3) special strategy-driven developments such as the mall-office park and public land strategies described below.

5. The **Employment Relocation Model** predicts the relocation of business establishments (i.e., specific branches of a firm) within the region each simulation year. The Employment Relocation Model predicts the probability that jobs of each type will move from their current location to a different location within the region or stay in place during a particular year.

6. The **Household Relocation Model** predicts the relocation of households within the region each simulation year. For households, mobility probabilities are based on the synthetic population from Travel Model 1.5. Drawn from Census data, these rates reflect the tendency for younger and lower income households to move more often.

7. The **Government Growth Model** uses a set of rules to project the employment in non-market sectors such as government and schools based on historical employment in those sectors and projected local, sub-regional, and regional population growth.

8. The **Employment Location Choice Model** predicts the location choices of new or relocating establishments. In this model, we predict the probability that an establishment that is either new (from the Employment Transition Model), or has moved within the region (from the Employment Relocation Model), will be located in a particular employment submarket. Each job has an attribute of the amount of space it needs, and this provides a simple accounting framework for space utilization within submarkets. The number of locations available for an establishment to locate within a submarket will depend mainly on the total vacant square footage of nonresidential floor space in buildings within the submarket, and on the density of the use of space (square feet per employee). This sub-model simulates the behavior of businesses moving to suitable locations within the region.

9. The **Household Location Choice Model** predicts the location choices of new or relocating households. In this model, as in the business location choice model, we predict the probability that a household that is either moving into the region (from the Household Transition Model), or has decided to move within the region (from the Household Relocation Model), will choose a particular location defined by a residential submarket. This sub-model simulates the household behavior in selecting a neighborhood based on their sociodemographic preferences.

10. The **Real Estate Price Model** predicts the price per unit of each building. UrbanSim uses real estate prices as the indicator of the match between demand and supply of land at different locations and with different land use types, and of the relative market valuations for attributes of housing, nonresidential space, and location. This role is important to the rationing of land and buildings to consumers based on preferences and ability to pay, as a reflection of the operation of actual real estate markets. Since prices enter the location choice utility functions for jobs and households, an adjustment in prices will alter location preferences. All else being equal, this will in turn cause higher price alternatives to become more likely to be chosen by occupants who have lower price elasticity of demand. Similarly, any adjustment in land prices alters the preferences of developers to build new construction by type of space, and the density of the construction.

Figure 7. UrbanSim model flow: employment focus

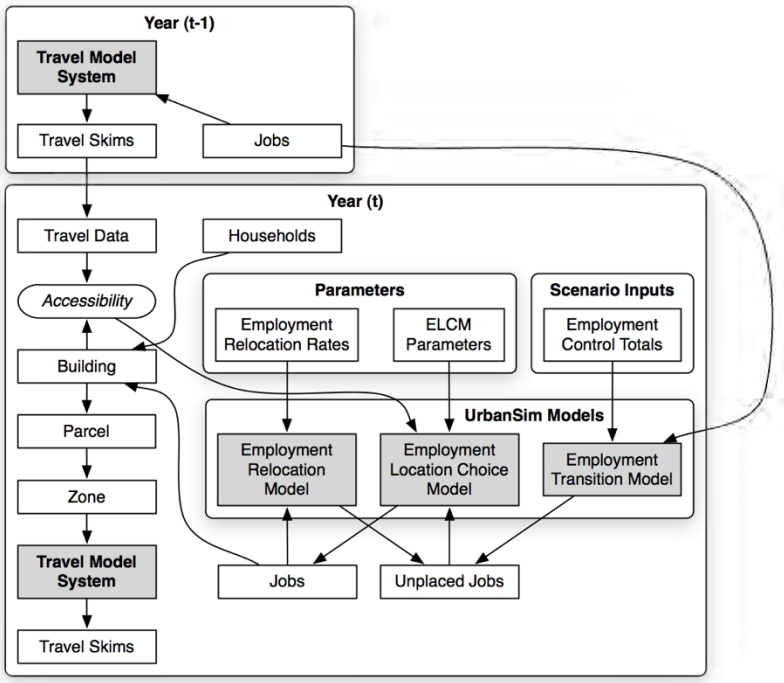


Figure 8. UrbanSim model flow: household focus

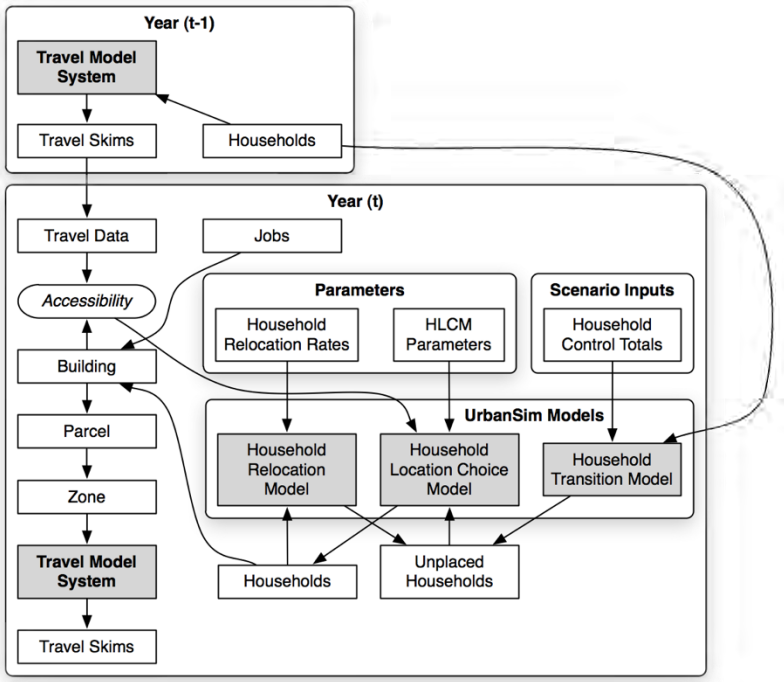


Figure 9. UrbanSim model flow: real estate focus

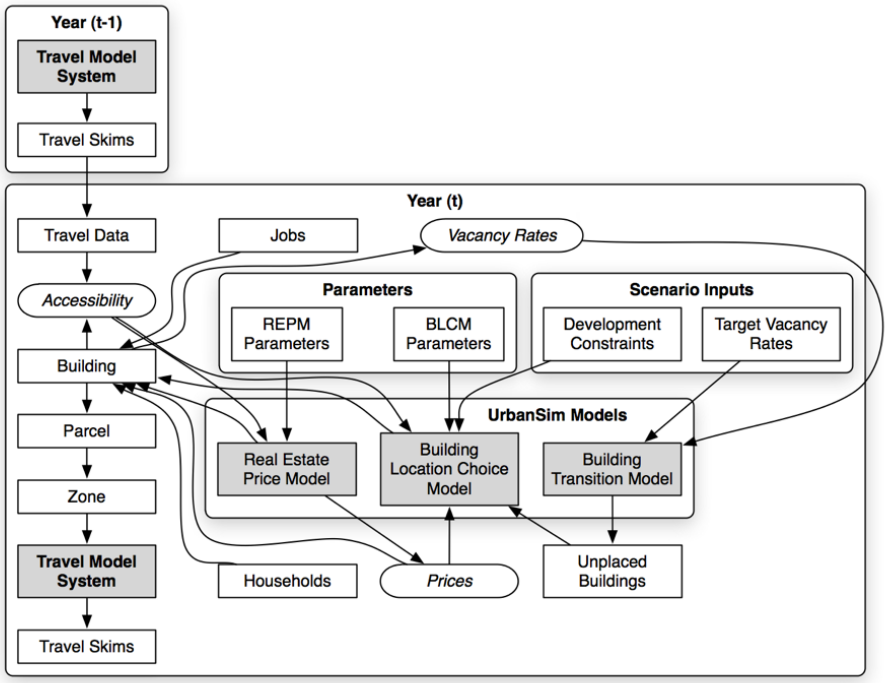


Table 9. Examples of scheduled development events

SCHEDULED DEVELOPMENT EVENT	
MacArthur BART Transit Village Construction	Park Merced Redevelopment
South Hayward BART Transit Village Construction	San Francisco General Hospital Expansion
Concord Community Reuse Construction	Transbay Terminal Redevelopment
Lawrence Berkeley Lab 2 Construction	Treasure Island Construction
Pleasant Hill BART Transit Village Construction	Bay Meadows Construction
Richmond BART Transit Village Construction	Kaiser Redwood City Expansion
Walnut Creek Transit Village Construction	Sequoia Hospital Expansion
Hunters Point Naval Shipyard Construction	Stanford Medical Center Expansion
Mission Bay Construction	Berryessa BART Transit Village Construction
Moscone Center Expansion	

Each of Bay Area UrbanSim 2's components were estimated individually and then assembled into a comprehensive system that is calibrated and reviewed. The household and employment transition models were simply an outcome of the regional totals divided into annual increments. The relocation models probabilities derived from Census and time series establishment data. The household and employment location choice models were estimated using logit models describing current locations as a function of various factors. The real estate price models are hedonic regressions that were built using recent residential transaction records and commercial rents. Finally, the real estate development model was assembled using output from the other components, industry estimates for building costs, and standard financial assumptions.

Once the components were functioning, Bay Area UrbanSim 2 was run. The forecast output was then compared to historical growth patterns and opportunities for feedback by planners at MTC and ABAG, the Regional Modeling Working Group, and local jurisdictions were provided at key points in 2020.

Input Assumptions

This section describes the Bay Area UrbanSim 2 base year database and assumptions for the various EIR Alternatives. Key variables, data sources, and processing steps are described, and selected variables are profiled or mapped to illustrate trends and assess reasonableness. While the year 2015 was selected as the base year for overall model system, the land use forecast begins from the year 2010 because both a complete parcel dataset and high-resolution census data were available for that year. Additional data updates were incorporated within the first model forecast step in 2015. The Bay Area UrbanSim 2 application operates at the level of individual households, jobs, buildings, and parcels. Jobs and households are linked to specific buildings, and buildings are linked to parcels.

In the sections below, there are tables of the base distribution of employment, population, and buildings in the Bay Area. In some cases, incomplete or inconsistent data was imputed using more-aggregate household or employment counts. The base-year database contains around 2.7 million households (not including group quarters), 4.0 million jobs, 1.9 million buildings, and 2 million parcels, based on information from the U.S. Census, Dun & Bradstreet establishment data, the CoStar commercial real estate database, and county assessor parcel files.

Base Year Spatial Database

Bay Area UrbanSim 2 uses a detailed geographic model of the Bay Area. A geographic information system was used to combine data from a variety of sources to build a representation of each building and property within the region. These detailed spatial locations are grouped into TAZs to improve model flow and provide summary output. Because this database represents the current state of the Bay Area's land use pattern, it is used as an identical starting point for all four alternatives.

Bay Area Spatial Information System (BASIS)

The Bay Area Spatial Information System (BASIS)[17], a new Data as a Service (DaaS) initiative operated by MTC and ABAG beginning in 2020, brought key regional datasets onto an industry standard DaaS platform where users internal and external to MTC and ABAG could download it, or access it via API for analysis and modeling purposes. BASIS represents an evolution of past efforts, such as the Local Policy Development Survey (2005), that sought to collect data from local jurisdictions for use in regional forecasts, and long-range planning activities for the nine county San Francisco Bay Area region.

A key component of BASIS included a robust review and feedback system that collected invaluable feedback from local jurisdictions, key regional stakeholders and staff within MTC and ABAG. BASIS presented the data for review by local jurisdictions in an inventory format that allowed local jurisdictions to select a location and retrieve a summary of the data available at that location. The summary was associated with a count of parcels that contain any one or more of the land use, transportation, or development characteristics that are tracked as part of Housing Development Tracking, Transportation and Land Use Modeling (Bay Area UrbanSim 2).

17 Bay Area Spatial Information System (BASIS): https://basis.bayareametro.gov.

The BASIS effort offered four key benefits for MTC and ABAG's understanding of development capacity:

- A secure, accessible database platform for the collection, standardization, discovery, and dissemination of key datasets used in regional planning efforts,
- A well-documented, organized, and definitive source of regional data,
- A single source of information that tracks trends associated with development conditions, land use, and environmental impacts associated with future growth and changes to the physical landscape, and
- A common framework to discuss and plan for future growth in the region.

Parcels

Parcels, or individual units of land ownership, provide a fundamental building block for the Bay Area UrbanSim 2 model: in both the real world and the model they are the entity that is owned, sold, developed, and redeveloped by households and businesses. In a given year, each parcel is associated with 0, 1, or multiple buildings that provide space for activities. The UrbanSim parcel database includes information linking the parcels to zones they are within, buildings that are on them, their size, their monetary value, and their current planning constraints.

Buildings

The base year database contains around 2 million buildings categorized into 14 different types as seen in Table 10. Households and businesses are assigned to buildings and buildings are linked to a parcel. Each building has attribute information on its size, age, and value, among other characteristics. Building attributes are primarily sourced from 2010 parcel assessor's data, updates on new construction provided by the BASIS process, and commercial real estate databases. The building database is modified by the Real Estate Development Model as it tears down buildings and constructs new buildings. Figure 10 and Figure 11 map out illustrative building attributes at the zonal level.

Table 10. Building types and 2015 counts in Bay Area UrbanSim 2

BUILDING TYPE	2015 COUNT
Single Family Detached	1,494,017
Single Family Attached	207,385
Multi-Family	103,423
Office	37,755
Hotel	2437
School	3184
Light Industrial	21,543
Warehouse	11,067
Heavy Industrial	1542
General Retail	43,328
Big-Box Retail	1840
Mixed-Use Residential	7467
Mixed-Use Retail-Focus	1379
Mixed-Use Employment-Focus	736

Figure 10. Percent single family residential buildings by TAZ

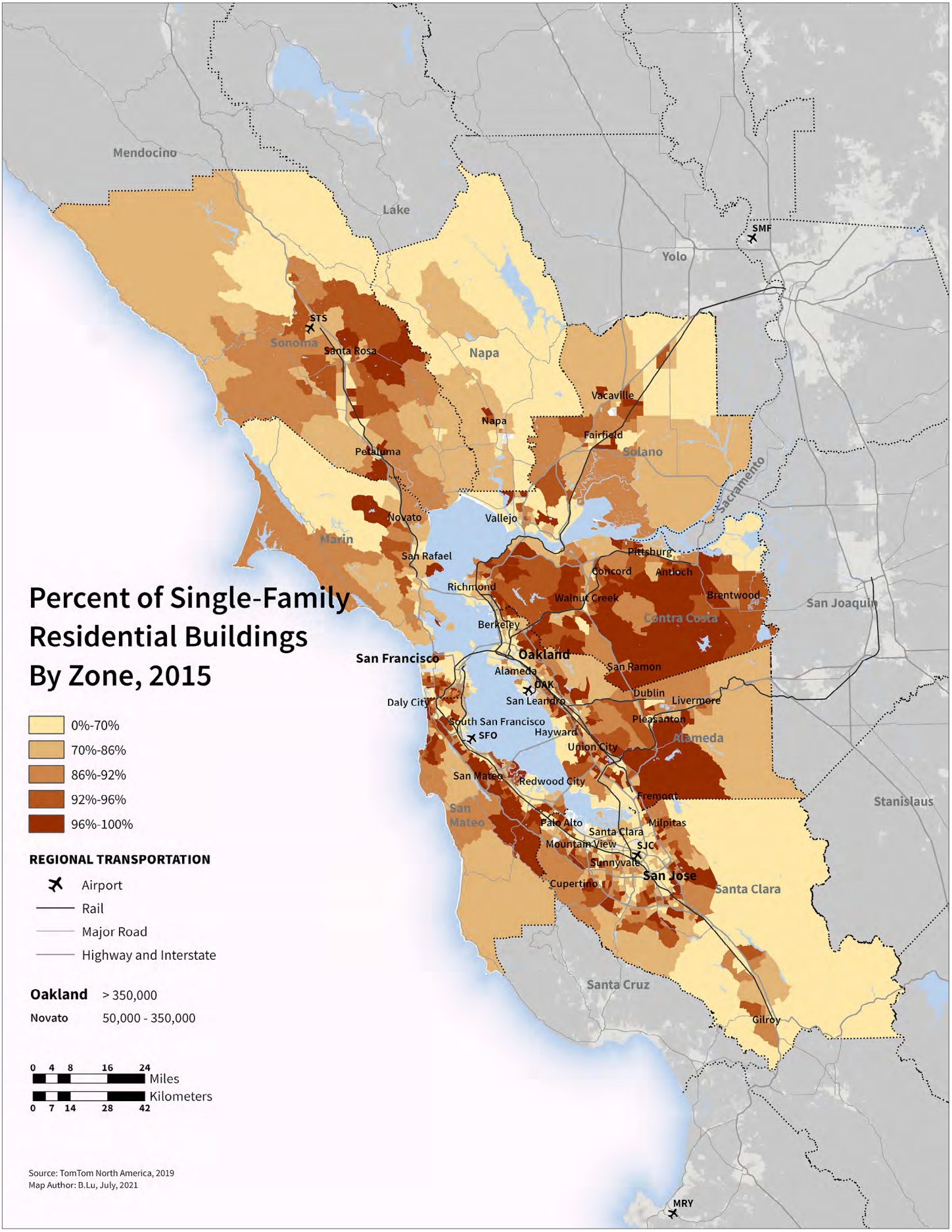


Figure 11. Buildings per acre by TAZ

Because buildings are a fundamental nexus in Bay Area UrbanSim 2 where the physical real estate market interacts with the households and employees who occupy the structures, a variety of key assumptions relate to buildings. While these assumptions greatly simplify the complexity of the region's land use market, they remain identical across EIR Alternatives allowing for consistent comparisons.

Two interrelated factors combine to determine how employees occupy buildings. First, workers in particular sectors use various types of buildings at different rates. For instance, many business service workers will use an office building, but a smaller number will occupy the same amount of light industrial space. The second step looks at the amount of square feet different types of workers use. Both use factors (types and amounts of space) were compiled on average for the entire region and assumed to be constant into the future (except for decreases in square feet per employee due to teleworking as described in the section on Strategy EN7 below). The result is an estimation of the number of jobs that could occupy a particular building, to which the model probabilistically matches employees by job sector. Household capacity, on the other hand, is directly determined by the number of residential units in a building.

Finally, Bay Area UrbanSim 2 provides flexibility in the representation of subsidized construction. Each model simulation begins with a baseline understanding of existing deed-restricted housing by zone. Various affordable housing inventory data sources and project-level data are compiled to represent the amount of deed-restricted housing which get distributed randomly within each zone. A separate component described above (the Scheduled Development Event Model) allows the construction of predetermined buildings in set future years. This list includes three types of projects: 1) buildings built between 2015 (the model forecast start year) and 2020 (the present year when the alternatives were created); 2) larger projects to be built with a mixture of public and private funding, that are currently under construction or funded; or 3) strategy representations. The same list of assumed projects for type 1 and type 2 was used for all EIR Alternatives. Type 3 projects, discussed below, were excluded from the No Project Alternative.

Development Capacity

Current zoning was obtained for all parcels in the region as a representation of the land use controls in place during the base year. Zoning or general plan data was collected for all jurisdictions through BASIS. BASIS offered cities and counties the opportunity to review the data for accuracy, which brought more transparency into the modeling process. Due to time constraints, specific plans were only collected for a limited subset of areas where such information was expected to exhibit a great deal of variation from the other planning information, and zoning and general plan data that was collected was only partially validated. To capture the latest local plans and fully incorporate local input while maintaining data accuracy, a hybrid version of current zoning was developed based on BASIS and Plan Bay Area 2040 zoning data to best represent the base year land use controls. Following the release of the Draft Blueprint, the Plan Bay Area 2050 project team conducted a series of public workshops and office hours to collect feedback from stakeholders, during which a number of jurisdictions provided additional input on BASIS development capacity data (current zoning, for example, prior to adopted strategy implementation). When accurate and appropriate, these were incorporated into the hybrid current zoning data used in Plan phase modeling. In general, constraints on new development were drawn from the information source judged most likely to represent a jurisdiction's long-term expectations for development maximums at each location.

This zoning and related information dictates the uses, residential densities, and building intensities allowed in each parcel within each jurisdiction. Adjustments to zoning were made in some locations to put protected land, government land, and transportation corridors off limits to development. Additionally, parcels containing structures built before 1930 were also deemed non-developable as a rough representation of historical protection ordinances until better data can be obtained.

Annual Business Totals

Forecasts for the region's overall rate of economic and demographic growth were developed as described in the Regional Growth Forecast section. The total number of employees by sector within the region is a result of that process and is input into Bay Area UrbanSim 2 and the resulting forecast must adhere to these totals while building and placing agents within the region. This information is used to generate new business establishments that in turn generate overall demand for commercial real estate. After new establishments are assigned locations by the Business Location Choice Model, the overall spatial distribution of employment provides input into the travel model's representation of personal travel.

Economic projections for the Bay Area are provided for the years 2015, 2020, 2025, 2035, 2040, 2045, and 2050 while intermediate years are interpolated. As seen in Table 8, the overall regional count of employment is projected to grow from around 4.0 million jobs in 2015 to almost 5.4 million jobs by 2050, or 35%. These business totals also project a changing sectoral distribution over the projection period: employment in agriculture and natural resources increases slowly over the period while the fastest growing sectors are professional services and business services.

Annual Household Totals

The total number of households by income category within the region is also forecast as part of the Regional Growth Forecast. This information is used to understand the overall demand for housing. In addition to the new households, the division of existing households into income categories is used to segment the population when considering relocation rates in the Household Transition Model. The forecasted new households and relocating households are allocated among the TAZs using the Household Location Choice Model. This spatial distribution of households is input into the Travel Model's representation of personal travel.

Working from these regional totals, Bay Area UrbanSim 2 forecasts the development of sufficient housing for all the population in the region, including all economic segments of the population. This number considers population growth, household formation, net inter-regional migration, and employment growth. The incorporation of a relaxation of local land use constraints into the regional growth forecast (as described in Findings: Regional Growth Forecast Results) results in no increase in the regional in-commute because all households supplying labor can be accommodated within the region. By forecasting the intra-regional locations for this population, Bay Area UrbanSim 2 also identifies areas within the region sufficient to house an 8-year projection of the regional housing needs under California State's Regional Housing Needs Allocation (RHNA) process.

Demographic projections for the Bay Area are provided for the years 2015, 2020, 2025, 2035, 2040, 2045, and 2050 while intermediate years are interpolated. As seen in Table 8, the overall regional count of households is projected to grow from around 2.7 million households in 2015 to over 4 million households by 2050, or 51.1%. These household totals also project a changing income distribution over the projection period: the share of households in each quartile (from lowest to highest income) is projected to shift from 26%/24%/22%/28% in 2015 to 25%/23%/19%/33% in 2050 (for the Plan and EIR Alternatives; the first two categories are slightly different in 2050 for the No Project as it lacks Strategy EC1, which envisions a statewide universal basic income).

Model Agents

Choices by key actors or agents in the region are the foundation of the Bay Area UrbanSim 2 model. The three classes of agents are households choosing places to live, business establishments choosing locations to do work, and real estate developers choosing places to build new buildings. This section discusses inputs related to each agent. Because these represent the fundamentals of the urban economy, input values are consistent across EIR Alternatives.

Households and People

Bay Area UrbanSim 2 represents each household individually. A 2015 household table with approximately 2.7 million households is synthesized for the region from Census 2010 Public Use Micro-Sample (PUMS) and Summary File 3 (SF3) tables using the PopGen population synthesizer.[18] This process creates a universe of simulated households and gives each household characteristics (such as household person count and income) so that the overall averages for those characteristics conform to the census information provided for that location. These households have a mean persons per household of 2.7, a mean number of household workers of 1.4, mean age of household head of 48.6 years, a mean household income of $81,937, and a mean number of household children of 0.5.

Establishments and Employees

Establishments are the other major class of agent in Bay Area UrbanSim 2. They represent a unique location of employment for a business. For example, a one-off barbershop is one establishment and so is one particular McDonald's restaurant location. Each establishment corresponds to a number of employees. For the Bay Area UrbanSim 2 model, the 2010 distribution of establishments and their employees are used as input. Future year projections are then made by modeling the movement of individual establishments.

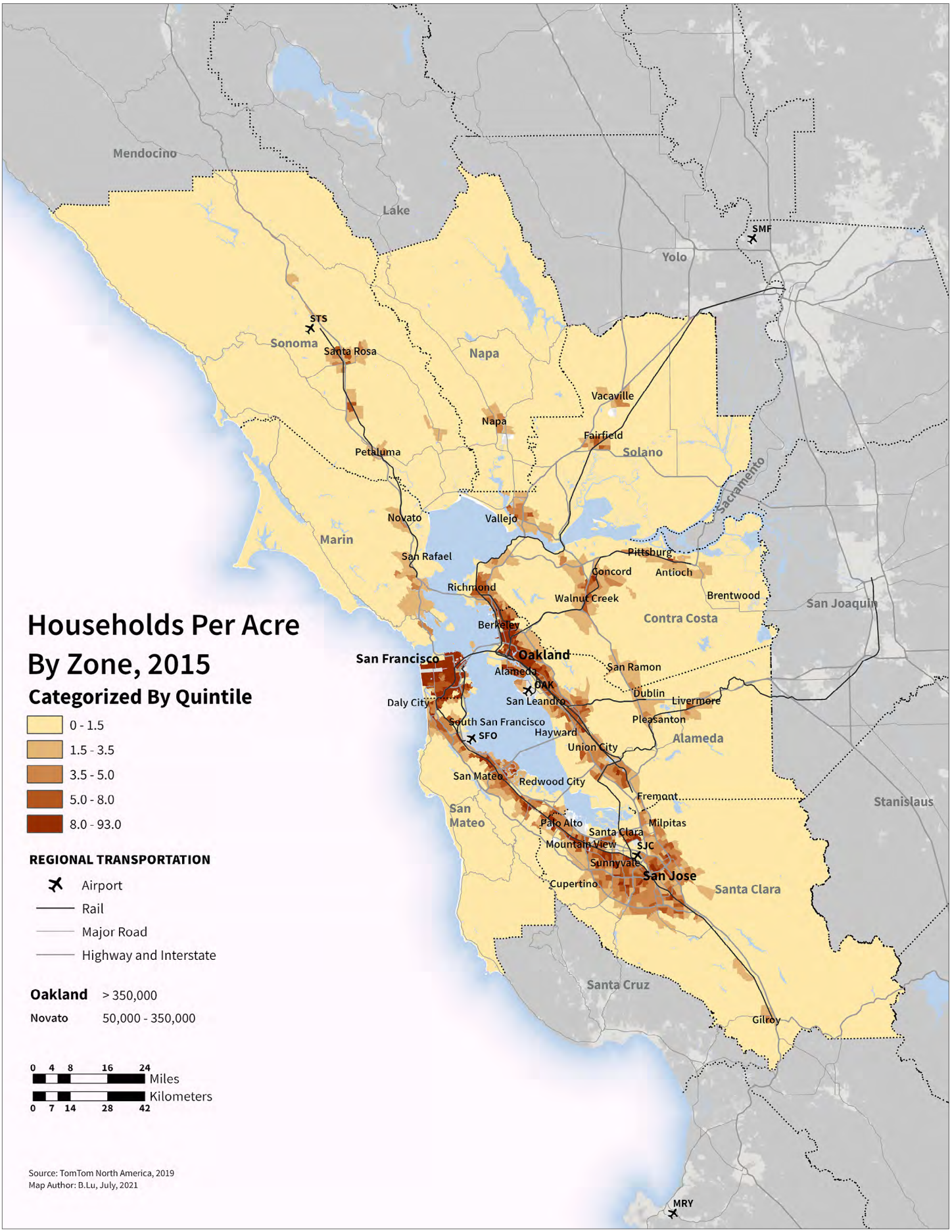
The 2010 establishment database was built by combining establishment data from the Dun & Bradstreet and California Employment Development Department (EDD)[19] datasets and then transforming it to conform to base year 2015 subregional employment totals.[20] Each establishment was assigned to one of the 6 sector classes and associated with an appropriate building. Each of these sectors is modeled separately in the Employment Location Choice Model. Because no clear relocation trends were readily observable in historic data, a 1.9% chance of relocating was assumed for employment each year, regardless of sector. All employment assumptions are the same for all EIR Alternatives.

18 PopGen: http://urbanmodel.asu.edu/popgen.html.

19 California Employment Development Department (EDD): http://www.labormarketinfo.edd.ca.gov.

20 All employment databases contain slightly different counts due to different definitions, data collection strategies, and error. For more information on the regional control totals please see the section, Regional Growth Forecast.

Figure 12. Synthesized households per acre by TAZ



Real Estate Developers

The final Bay Area UrbanSim 2 agent is a special class of business: the real estate developer. Developers monitor the relationship between supply and demand for different types of buildings across the region and attempt to build new structures in locations where they can make a profit. They are driven by market forces, so assumptions related the real estate developers are identical across the four EIR Alternatives.

Bay Area UrbanSim 2 implements the Real Estate Developer Model as a stochastic, or randomly defined, pro forma model that explicitly treats these decisions the same way they are made in the real world. The pro forma combines information on costs and income over a proposed project's lifetime, allowing an assessment of overall profitability. The model examines all parcels each year and tests various project concepts allowed under the site's zoning constraints. The developer chooses the project that maximizes profit and builds the project if it is profitable. After a construction period, these new buildings are available to households and businesses for occupation.

Environmental Factors

Traditionally, Bay Area UrbanSim 2 has focused primarily on model agents and their interaction with housing and job markets in order to study these systems. However, as the impact of the natural environment becomes increasingly apparent, it has become important that the effects on these systems be considered as well.

Prior to the official kickoff of Plan Bay Area 2050, the Horizon initiative considered a wide range of external forces to stress-test strategies amidst an uncertain future. One of these forces is an earthquake, which is likely to occur in the region within the plan's 30-year time horizon. A representative earthquake along the Hayward Fault was modeled in Horizon for the first time in MTC's and ABAG's regional planning, providing an opportunity to understand the impact of this earthquake on the Bay Area's unique housing stock and the displacement of households and jobs. However, due to an inability to pinpoint the location and timing of such an earthquake, and in recognition of the significant demonstrated impacts of the shock on the forecast, the plan does not include the simulation of an earthquake in order to avoid distorting the understanding of future conditions.

The second natural force in the region that was addressed for the first time in Horizon is the rising sea level and subsequent inundation of land. This consistently encroaching force was included in Plan Bay Area 2050. As one of the first efforts to include natural hazards in regional planning, Plan Bay Area 2050 has incorporated a model to address the impacts of sea level rise in the Bay Area.

The representation of sea level rise in Bay Area UrbanSim 2 leverages detailed sea level rise projections from the Adapting to Rising Tides[21] program at the San Francisco Bay Conservation and Development Commission for inundation along the San Francisco Bay, and the National Oceanic and Atmospheric Administration for inundation along the coast. With sea level rise inundation as an input, the land use model recognizes these parcels as locations no longer viable for existing buildings and removes these buildings. Parcels that intersect with inundation were flagged for removal from the input file, and then manually reviewed to remove the designation from parcels with minimal flooding — defined to be a location where the border touches an inundation layer but does not cover a portion of the polygon. Any existing residents or jobs in these buildings are also removed and must find new locations for housing or workspaces along with the other "movers" through the location choice sub-models. After capturing the effects on existing activities, parcels subject to sea level rise are also made ineligible for new development due to the inundation, thus removing them from the total area of potential developable space to accommodate the region's population and employment.

The sea level rise sub-model in Bay Area UrbanSim 2 can represent any future inundation scenario by changing its input files. Both the progression of sea level rise inundation and the height to which the sea level will rise and cover land area are configurable, allowing staff to analyze various futures. As part of Horizon, staff studied multiple sea level rise progression scenarios to capture the widest range of possible futures. Consistent with state guidance, Plan Bay Area 2050 posits a set of progression inputs to incorporate the effects of rising tides: the plan assumes there will be 1 foot of sea level rise by 2035 and 2 feet of sea level rise by 2050.

21 Adapting to Rising Tides: https://www.adaptingtorisingtides.org.

Baseline Policies

In addition to modeling future policy alternatives, Bay Area UrbanSim 2 includes a representation of policies which exist today and are regionally significant. Senate Bill 743 was officially adopted prior to the release of Plan Bay Area 2050 and is therefore included in all simulations; It is described further below. Other policy legislation that has been underway in California but not yet adopted may be found as a strategy in the modeling scenarios. As an example, the element of the strategy to reduce the cost of development discussed in Strategy H3: Allow a Greater Mix of Housing Densities and Types in Growth Geographies has goals similar to the reform of the California Environmental Quality Act (CEQA) development approvals process.

Senate Bill 743

California Senate Bill 743 (SB 743) is an effort to change the way the assessment of significance under CEQA is assessed. Traditionally, CEQA analysis has examined potential transportation impacts using the Level of Service (LOS) concept where impact significance occurs when highway facilities exceed a particular level of congestion. LOS assessments in dense urban areas often reveal high levels of existing congestion leading to frequent finding of significance and expensive mitigation requirements. SB 743 shifts analysis to a Vehicle Miles Traveled (VMT) method that is more likely to find transportation impacts in car-oriented suburban locations. The implementation of SB 743 is represented as having a slight (1% to 2%) increase in costs in suburban locations and a slight (again 1% to 2%) decrease in costs in urban locations with the amount of shift determined by zone level average VMT for commute trips originating in that zone.

EIR Alternatives

For the EIR analysis, Bay Area UrbanSim 2 was used to generate different alternative land use scenarios for future growth in the Bay Area. Each of these alternatives uses identical regional totals (from Table 8) representing future economic and demographic change but employs different policies constraining or promoting particular types and intensities of real estate development in particular locations.

The first alternative is called the No Project and represents the expected trajectory of the region without the implementation of the Plan or any of the alternatives. All policies in the No Project alternative are determined or extrapolated from existing base year plans and policies.

The second alternative is called the Plan, previously referred to as the Final Blueprint, and reflects the spatial distribution of future households and employment resulting from the strategies approved by the MTC and ABAG Executive Boards in fall 2020. The Plan alternative starts with base year plans and policies but modifies them as needed to represent the impacts of the strategies.

Similarly, the other two EIR Alternatives build off of the Plan while modifying existing strategies to provide a range of potential alternatives that aim to accomplish the goals pursued within the proposed plan. EIR Alternative 1 modifies strategies to minimize the development footprint by focusing on an even greater share of regional growth in low-VMT places with high-quality transit options. To a greater degree than the Plan, EIR Alternative 2 promotes housing growth in locations that are jobs-rich and/or are high-resource. Strategies in this alternative are designed to address the regional challenges of displacement and gentrification.

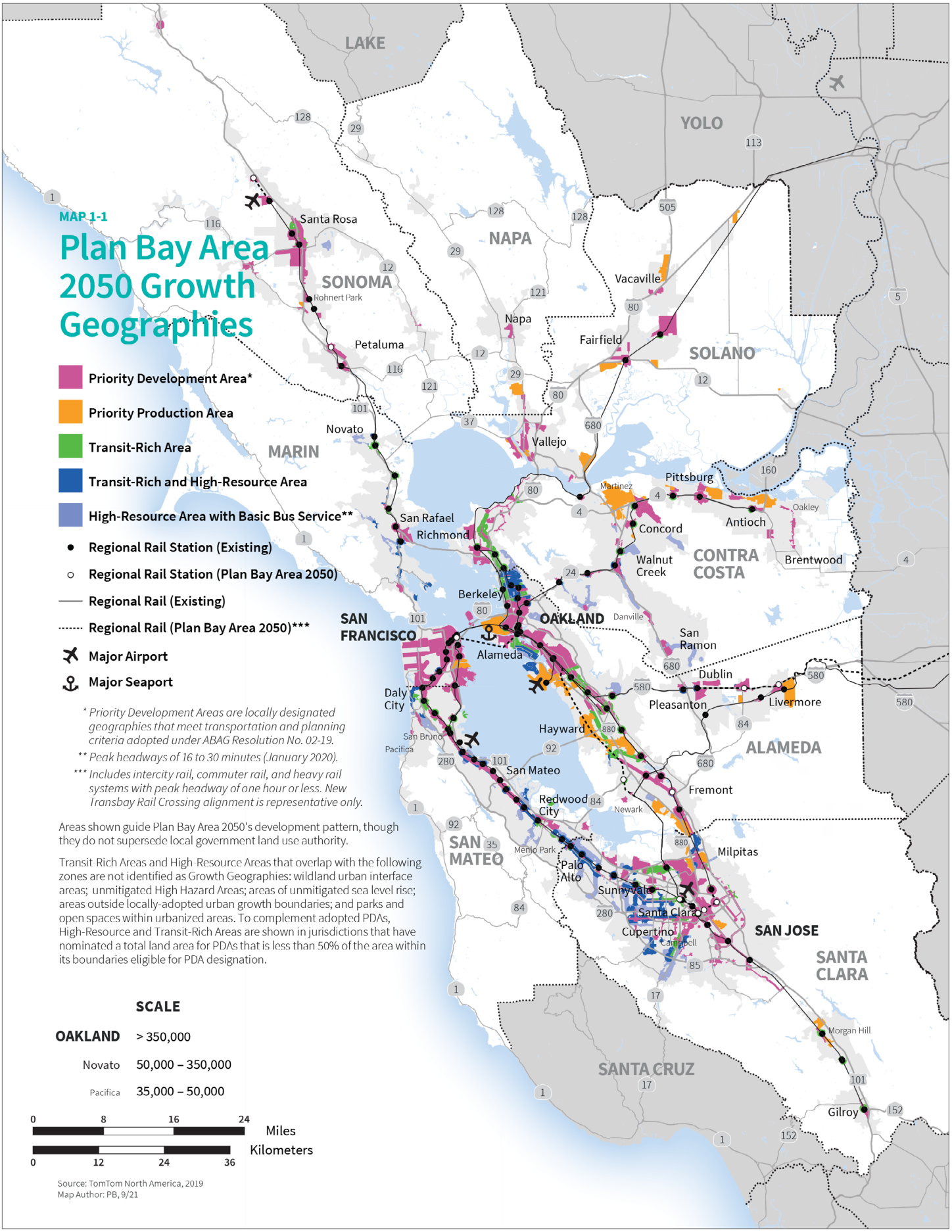
Growth Geography Framework

To advance the various goals of the EIR Alternatives, a spatial framework was established to carry out strategies and evaluate the outcomes of such strategies. The Growth Geographies are places identified for housing and/or job growth either by local jurisdictions or because of their proximity to transit or access to opportunity. For modeling purposes, a series of specific Growth Geographies were established to further define the overall definition of Growth Geographies (GG) adopted by the Commission and Executive Board in September 2020 (mapped in Figure 13). They have been identified spatially according to the following rules and used as the building blocks for several strategies.

Table 11. Growth Geography definitions

GEOGRAPHY NAME	DEFINITION
Growth Geography (GG)	In all local jurisdictions, these areas included locally designated Priority Development Areas (PDAs) and Priority Production Areas (PPAs), as well as Transit-Rich Areas (TRAs) served by BART or Caltrain Baby Bullet routes. In cities that have nominated less than 50% of the land within their boundaries eligible for designation as a PDA, these areas also include: all TRAs not included in a PDA including both High-Resource Areas (HRAs) and places outside HRAs; and HRAs that are outside of a TRA but within ¼ mile of a bus stop with 16- to 30-minute peak period headways
Priority Development Areas (PDAs)	Locally identified places for housing and job growth
Transit-Rich Areas (TRAs)	These are areas within ½ mile of transit, further distinguished by the quality of transit:
TRA1	Rail transit stop served by at least 3 BART routes or 1 BART route and 1 Caltrain Baby Bullet route
TRA2	Rail transit stop that does not meet the TRA1 definition and is served by BART or Caltrain; light rail stop; or bus stop served by a bus rapid transit route with peak headways of 1-9 minutes. Some alternatives divide this category into three sub-categories to more precisely apply the strategies:
TRA2a	Typical BART station or Baby Bullet Caltrain station
TRA2b	Typical Caltrain station or high-frequency light rail station with dedicated right-of-way (e.g., Muni Metro Castro Station)
TRA2c	High-frequency light rail (e.g., Muni Metro J-Church surface stations); moderate-frequency light rail station with dedicated right-of-way (e.g., VTA North 1st corridor); BRT stop or station
TRA3	Rail transit stop that does not meet the TRA1 or TRA2 definition; ferry terminal; or bus stop served by at least one route with a 1-15 minute peak headway
High-Resource Areas (HRAs)	Census Tracts designated “High or “Highest” Resource by the California Departments of Housing and Community Development and Finance, clipped to urban footprint
Priority Production Areas (PPAs)	Locally identified places for middle-wage job growth in industries like manufacturing, logistics, or other trades; must be zoned for industrial use or have a predominately industrial use

Figure 13. Plan Bay Area 2050 Growth Geographies



Policymakers can apply incentives or disincentives — financial or regulatory — in an effort to influence land use. These are referred to as "housing, economy and environment strategies" or "land use strategies" for short. Differences in the land use strategy inputs are the fundamental means of representing the different EIR Alternatives. The strategies represent actions that MTC, ABAG, or partner agencies such as cities and counties could take or seek legislation to allow. These input assumptions vary between alternatives and when combined with the more fundamental Model Agents described above, produce model outputs.

The land use strategies described in this section are applied in the same fashion to all alternatives except the No Project alternative, unless otherwise noted. The variation across alternatives derives mostly from the way these strategies are implemented within the region, or not implemented at all, and will be discussed in relation to each strategy.

Apart from the strategies modeled explicitly in Bay Area UrbanSim 2, economic and transportation strategies act on the land use pattern and enter through the interactions between models. Region-level economic strategies influence the level of demand for housing and job space as well as the characteristics of this demand that may be shaped by factors such as the income levels of households. Transportation strategies influence the accessibility of different locations in the region, which can increase the feasibility of housing or commercial development in these locations in the land use model.

Strategy H1 | Further Strengthen Renter Protections Beyond State Law

Strengthening renter protections across the region builds upon tenant protection laws and limits rent increases, and is thus modeled as a change in the behavior of renter households. The policy is represented as a slowing of the relocation rate of renters and increased stability. Based on PUMS 2013-2017 data, it is estimated that renter households have an 80% likelihood of relocating within five years. This is used to set the probability a modeled household will move and re-enter the search for housing. Renter protections are modeled as a 15% decrease in the rate of relocation for low-income households. The resulting relocation probability is therefore 67% within each five-year model time step. Consequently, low-income renter households remain in their homes longer than other household groups as the region continues to grow and the land use pattern evolves.

Strategy H2 | Preserve Existing Affordable Housing

To maintain the existing affordable housing in the region, funding is used over the plan period to preserve units as permanently deed-restricted housing. In the No Project alternative, only preservation funding from existing federal, state, and local sources is available. Funding levels remain relatively similar to the baseline year and are continued through the plan horizon year to preserve units. This results in 110,050 additional deed-restricted units by 2050: 22,600 in Alameda, 15,000 in Contra Costa, 3,150 in Marin, 1,650 in Napa, 14,950 in San Francisco, 13,500 in San Mateo, 28,150 in Santa Clara, 5,150 in Solano, and 5,900 in Sonoma. In all other alternatives, Bay Area UrbanSim 2 applies affordable housing funds by randomly selecting housing units for preservation. Once an affordable housing unit becomes preserved, the subsidized unit is then prioritized for low-income households in the model.

Housing in the region is selected for preservation and allocated funding if it is located within one of the three following areas: Transit-Rich Areas (TRAs), the Displacement Risk (DR) geographies,[22] or the general Growth Geography (GG) areas. The funding is further specified by county, based on the base year number of low-income households in these geographies and the number of low-income households otherwise expected to leave these areas without the preservation of housing. First, an equal or greater number of units than the number of low-income households in a given county in 2010 were preserved in the "DR+TRA" and "TRA only" geographies. Next, where a net loss in low-income households was projected in Draft Blueprint modeling results between 2010 and 2050 in "DR" geographies,

22 Displacement Risk geographies are derived from the UC Berkeley Urban Displacement Project (https://www.urbandisplacement.org/map/sf). They are within census tracts designated: "At Risk of Gentrification or Displacement (Low Income)", "Ongoing Gentrification / Displacement of Low Income Households (Low Income)", "At Risk of Exclusion (Moderate to High Income)", and "Ongoing Exclusion / Displacement of Low Income Households (Moderate to High Income)".

an equal or greater number of units than the number of low-income households in 2010 was preserved in "DR only" geographies. In counties that had a reduction in the percentage of low-income households between 2010 and 2050, and a deficit in low-income units remained, additional units were preserved to fill in the gap. Lastly, any remaining low-income units to meet the regional target were added to "GG" geographies in each county, proportional to its 2010 share of the region's low-income households. Table 12 details the resulting targets for the number of units to preserve in Bay Area UrbanSim 2 within the Growth Geography combinations in each county.

Table 12. Preservation of affordable housing by county and Growth Geography

	TOTAL PRESERVED UNITS TARGET								
	Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano	Sonoma
DR+TRA	27,500	8,500	5,000	0	27,500	7,500	38,500	500	5,000
DR only	0	0	6,000	0	500	0	0	0	0
TRA only	99,000	12,500	5,000	500	93,000	17,000	64,000	3,000	5,000
GG (any)	2,500	1,000	12,000	0	54,000	41,500	2,000	500	500

Bay Area UrbanSim 2 uses four household income categories, described in Table 7. To give low-income households priority for these units, an initial household location choice model runs which only places low-income households into deed-restricted units. Afterwards, a general household location choice model runs to place remaining households. Once a unit becomes preserved as affordable, low-income households either continue to occupy these units or relocate into them based on historical rates. The time it may take for a low-income household, or a new low-income household, to occupy a preserved unit is reflective of the transaction costs of moving.

Strategy H3 | Allow a Greater Mix of Housing Densities and Types in Growth Geographies

All alternatives start with the basic zoning classification established as the development capacity inputs. For most alternatives, zoning modifications are made for various subsets of parcels in the region. Zoning modifications act on two components: the set of building types allowed on a parcel and the maximum dwelling units per acre (if the modification is not already permitted under the local zoning). Zoning schemas are guided by the regional Growth Geographies which have been used in combination to create the detailed zoning schema. The No Project alternative assumes current land use regulations captured in the base zoning do not change between now and 2050. Further, the No Project alternative assumes that trends in the expansion of the region's urban limits (as discussed below under Maintain Urban Growth Boundaries) continue to accommodate some of the region's growth.

In the Plan, zoning is modified to broaden allowable building types and increase development density in Transit-Rich Areas (TRAs) and High-Resource Areas (HRAs) to encourage growth near transit and in high-resource neighborhoods. Table 13 provides the detail on the zoning modifications in the Plan. Zoning differs between parcels containing single family dwelling (SFD) units and parcels not containing SFD units to account for local context.

Table 13. Residential zoning modifications for the Plan

PLAN			
Zoning Alternative Geography		Maximum Dwelling Units per Acre Applied	
	Broadened Allowable Building Type	Parcels not occupied by Single Family Dwelling (SFD) Units	Parcels occupied by Single Family Dwelling (SFD) Units
GG + TRA1 + HRA	Multifamily Dwelling (MFD)	200	50
GG + TRA1 + nonHRA	MFD	150	50
GG + TRA2 + HRA	MFD	100	50
GG + TRA2 + nonHRA	MFD	75	35
GG + TRA3 + HRA	MFD	50	50
GG + TRA3 + nonHRA	MFD	35	35
GG + nonTRA + HRA	MFD	35	35
GG + nonTRA + nonHRA	n/a	25	25

EIR Alternative 1 increases zoning intensity in all TRAs to a greater amount than the proposed Plan alternative to create a more transit-supportive land use pattern. This alternative further refines the TRA categories to create a schema that enables more development around the regional transportation infrastructure providing the most service. The TRA categories used in EIR Alternative 1 are defined within the Growth Geography framework (Table 11), and the modifications to residential development capacity are detailed in Table 14.

Table 14. Residential zoning modifications for EIR Alternative 1

EIR ALTERNATIVE 1		
Zoning Alternative Geography	Broadened Allowable Building Type	Maximum Dwelling Units per Acre Applied
GG + TRA1	MFD	300
GG + TRA2a	MFD	300
GG + TRA2b	MFD	250
GG + TRA2c	MFD	250
GG + TRA3	MFD	100

EIR Alternative 2 broadens use types and increases residential densities in a selection of HRAs and TRAs in specific jurisdictions to encourage low-income housing in jobs-rich communities. Compared to the Plan, this alternative lowers upzoning for TRA1 and TRA2 to allow more growth in a greater array of jurisdictions. Additionally, within jobs-rich and high resource cities (defined below), as well as within their surrounding jurisdictions, upzoning in transit-rich and Growth Geography areas is higher where these overlap with high-resource areas. This contributes to more potential growth in HRAs to achieve a better jobs-housing balance. Importantly, there is a limitation on upzoning any parcels with multi-family development in Equity Priority Community (EPC) geographies[23], which is included to mitigate potential displacement impacts. The TRA categories used in EIR Alternative 2 are defined within the Growth Geography framework (Table 11), and the modifications to residential development capacity are detailed in Table 15.

Jobs-rich and high-resource cities are those with a job-housing ratio greater than 1.75 in addition to being identified as exclusionary in the final draft 2023-2031 RHNA allocation (via "equity adjustment" calculation). These include St. Helena, Pleasanton, Menlo Park, Palo Alto, Cupertino, and Milpitas. Adjacent cities are defined as jurisdictions within a five-mile of radius of these cities, which include Atherton, Belmont, Calistoga, Campbell, Dublin, East Palo Alto, Fremont, Hayward, Livermore, Los Altos, Los Altos Hills, Los Gatos, Monte Sereno, Mountain View, Newark, Portola Valley, Redwood City, San Carlos, San José, San Ramon, Santa Clara, Saratoga, Sunnyvale, Union City, and Woodside.

23 More information on the Equity Priority Communities framework can be found here: https://github.com/BayAreaMetro/Spatial-Analysis-Mapping-Projects/tree/master/Project-Documentation/Equity-Priority-Communities .

Table 15. Residential zoning modifications for EIR Alternative 2

EIR ALTERNATIVE 2			
Zoning Alternative Geography		Maximum Dwelling Units per Acre Applied	
	Broadened Allowable Building Type	Parcels in Job-Rich and High-Resource Cities and Adjacent Cities	Parcels in All Other Jurisdictions
GG + TRA1 + HRA	MFD	125	125
GG + TRA1 + nonHRA	MFD	125	125
GG + TRA2 + HRA	MFD	100	75
GG + TRA2 + nonHRA	MFD	55	55
GG + TRA3 + HRA	MFD	75	50
GG + TRA3 + nonHRA	MFD	35	35
GG + nonTRA + HRA	MFD	75	50
GG + nonTRA + nonHRA	n/a	35	35

Figure 16 provides an overview of zoning modifications within the Urban Growth Boundaries of incorporated areas across all alternatives.

Figure 14. Plan Bay Area 2050 Growth Geographies: Transit-Rich Area (TRA) details

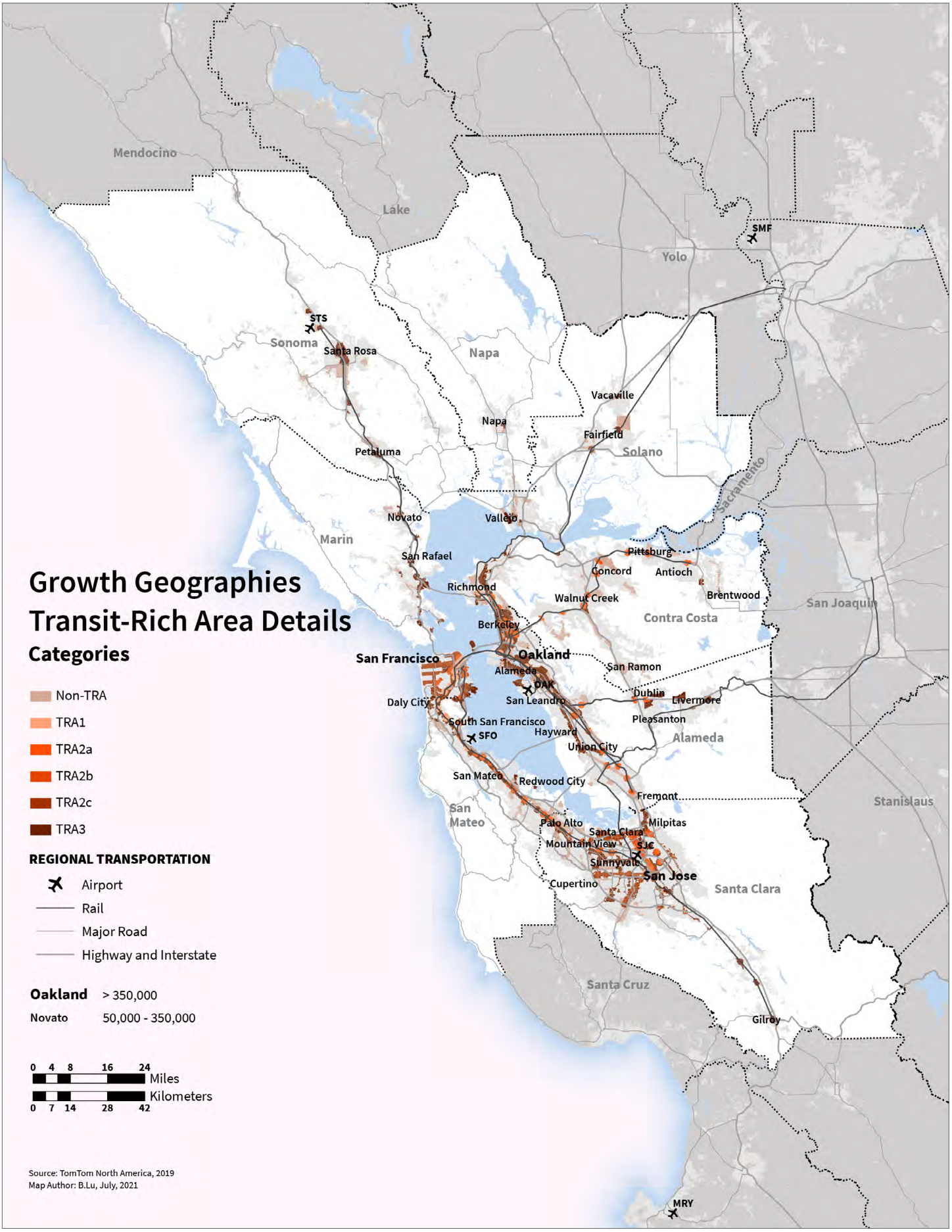


Figure 15. Plan Bay Area 2050 Growth Geographies: High-Resource Area (HRA) details

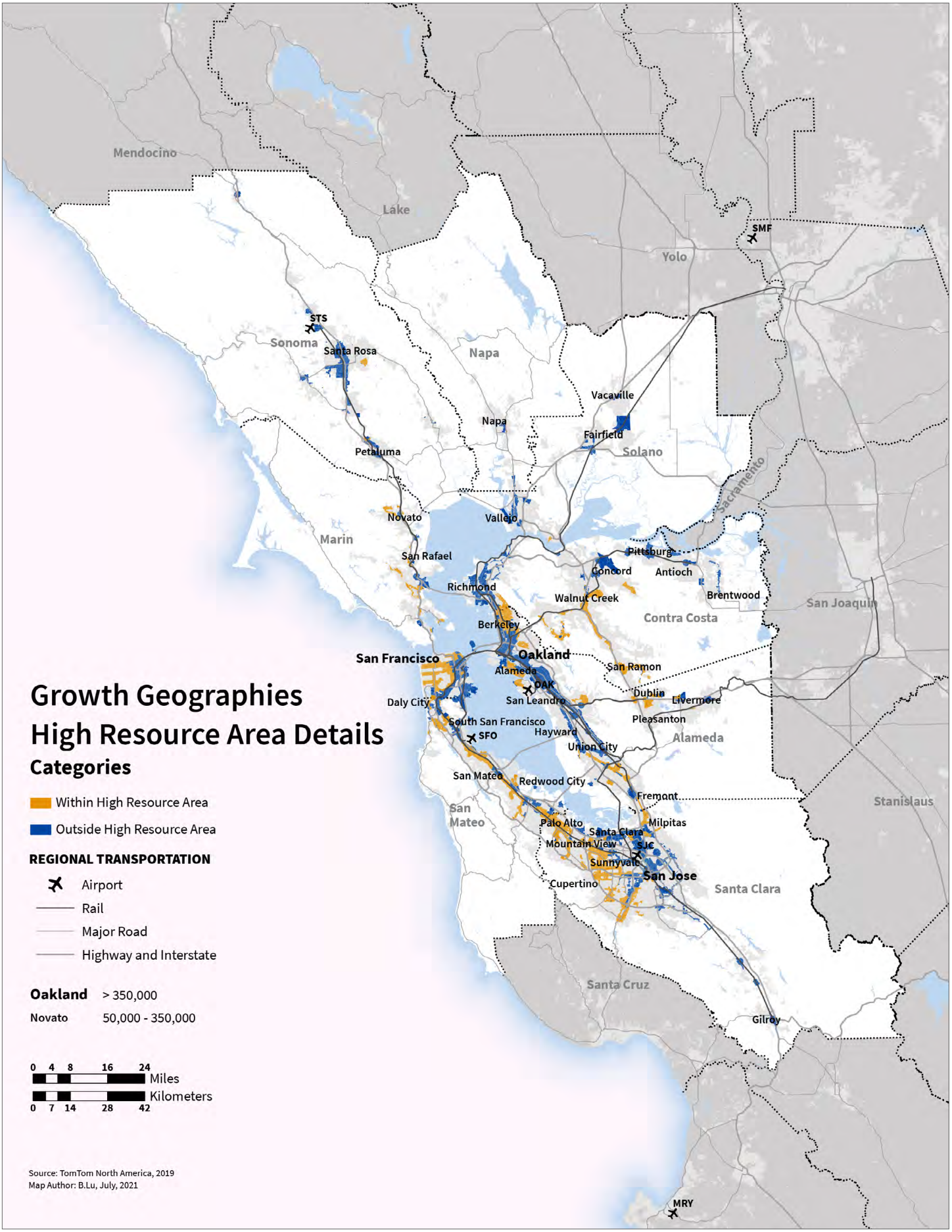
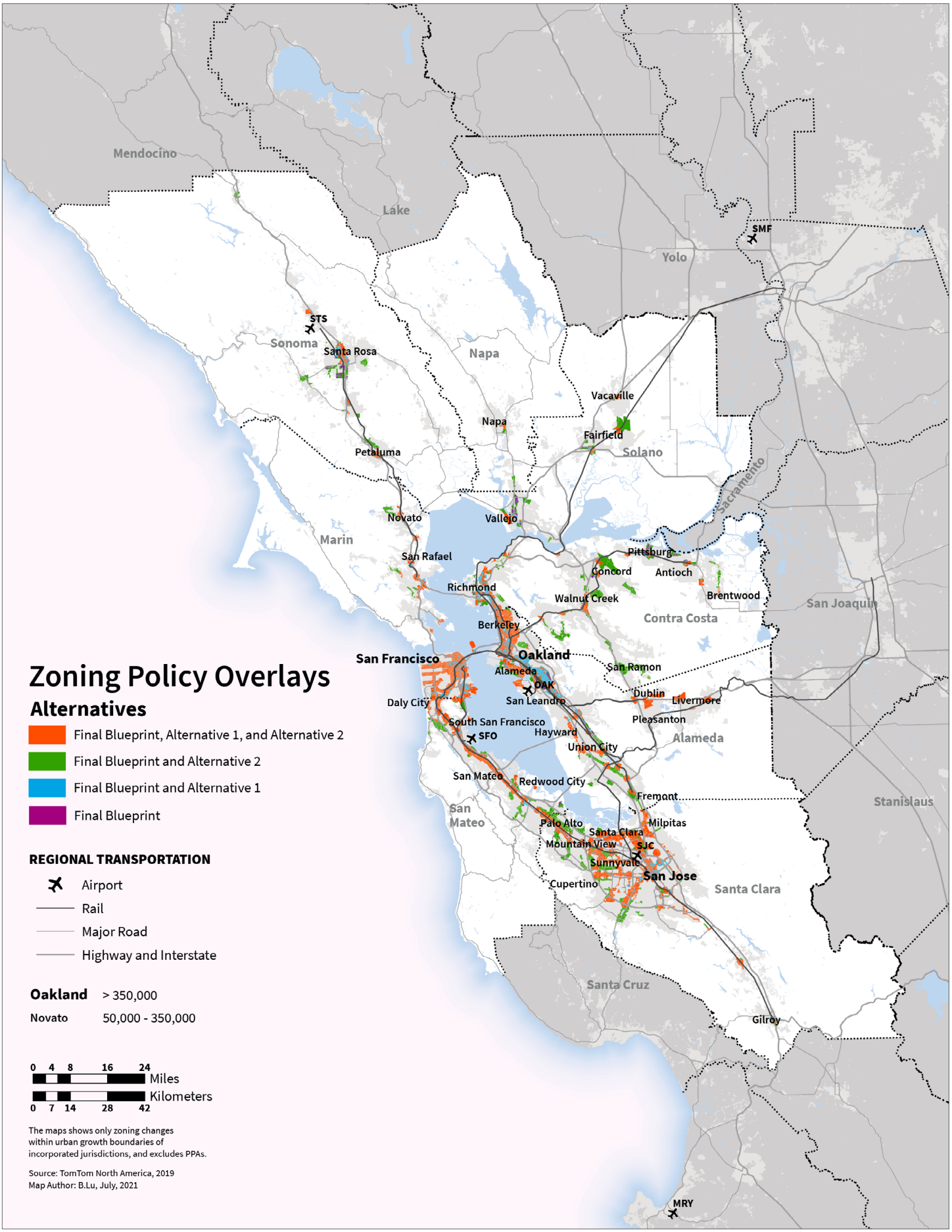


Figure 16. Zoning policy overlays across alternatives



To encourage growth in areas with access to the region's best public transit, schools, and community services, the plan also seeks to remove barriers to housing development in these locations. To do so, certain costs associated with housing development are limited, such as project review times and parking requirements. This is represented in the land use model as an increase in profit for the market-rate developer, thus increasing the feasibility of housing projects. The profit increases are applied using three tiers, determined by their levels of access to transit and resources. The profit increase levels associated with the savings are 1.3%, 1.9% and 2.5%. These amounts are based on estimates of development fees as a share of total housing costs and reflect the impact of reducing a specific share of these development costs.[24]

Strategy H4 | Build Adequate Affordable Housing to Ensure Homes for All

In addition to the preservation of affordable housing in the region, the alternatives also allow for the production of affordable housing to help meet the needs of low-income households. In the No Project alternative, only production funding from existing federal, state, and local sources is available. Funding levels remain similar to the baseline year and are continued through the plan horizon year to create deed-restricted units. This results in 117,000 additional deed-restricted units by 2050: 24,100 in Alameda, 15,900 in Contra Costa, 3,300 in Marin, 1,800 in Napa, 15,900 in San Francisco, 14,300 in San Mateo, 29,900 in Santa Clara, 5,400 in Solano, and 6,400 in Sonoma.

In all other alternatives, funding is used in the land use model to produce new deed-restricted housing over the forecast period. The funding is directed within the region according to the alternative's goals: the Plan uses production money only within the Growth Geographies, EIR Alternative 1 uses money in Transit-Rich Areas within the Growth Geographies, and EIR Alternative 2 splits funding evenly between High-Resource Areas and non-High-Resource Areas within the Growth Geographies. In the model, this production funding is made available for deed-restricted housing in individual counties based upon its share of the region's population, and existing city-and county-generated funding sources. Table 16 details the allocation of available funding by county.

Table 16. Production funding targets for affordable housing by county and Growth Geography: total production funding (millions of $)

	PLAN	EIR ALTERNATIVE 1	EIR ALTERNATIVE 2	
County	GG	GG + TRA	GG + HRA	GG + non-HRA
Alameda	4,000	4,000	2,000	2,000
Contra Costa	2,500	2,500	1,250	1,250
Marin	520	520	260	260
Napa	300	300	150	150
San Francisco	3,000	3,000	1,500	1,500
San Mateo	2,500	2,500	1,250	1,250
Santa Clara	5,000	5,000	2,500	2,500
Solano	850	850	425	425

24 12% is used as a proxy for development fees as a share of total development costs, based upon It All Adds Up: The Cost of Housing Development Fees in Seven California Cities (2018), Terner Center, which found fees in California range between 6%-18% of total development costs.

To build these units, the land use model identifies residential development projects that are close to being financially feasible under market conditions. Subsidizing these projects fills the "feasibility gap" and the financial need of projects is sorted to maximize the number of projects that can become feasible with the given funding. Building these projects creates deed-restricted units, which are only available to low-income households. This is complemented by the direct allocation of additional deed-restricted units through the Transform Aging Malls and Office Parks into Neighborhoods and the Accelerate Reuse of Public and Community-Owned Land for Mixed-Income Housing and Essential Services strategies.

Strategy H5 | Integrate Affordable Housing into All Major Housing Projects

An inclusionary zoning policy is included in Bay Area UrbanSim 2 as a requirement that new residential construction include a set percentage of units that are available exclusively to low-income residents. A default set of inclusionary zoning percentages capture the jurisdictional requirements in place today and these levels remain in place for the No Project. The default percentages came from multiple data sources, including research conducted by MTC and other entities[25], and local zoning ordinance or municipal code of Bay Area jurisdictions. The other EIR Alternatives vary these levels to tailor the requirements by location. Any new residential building must provide the percentage of affordable units required in each of the Growth Geographies, shown in Table 17.

Table 17. Minimum percent of affordable housing units in new development

	INCLUSIONARY PERCENTAGE
GG + TRA1/TRA2/TRA3 + HRA	20%
GG + TRA1/TRA2	15%
GG + HRA	15%
Other Areas	10%

Bay Area UrbanSim 2 reflects the requirement by altering the feasibility of building a new residential project. If a project remains profitable, the affordable units will be constructed. This process captures the challenges of building projects that have lower revenue but the same costs, with some otherwise feasible projects shifting to other locations. Like other affordable units, when projects are built with inclusionary units, only households in the lowest income quantile are prioritized to occupy them.

25 Data compiled by Association of Bay Area Governments in February 2017: https://mtc.maps.arcgis.com/home/item.html?id=4b-77830210d14982a3256fd7b67f68ee; Inclusionary Housing Map & Program Database maintained by InclusionaryHousing.org, a project of Grounded Solutions Network developed with support from the National Housing Conference and the Lincoln Institute for Land Policy: https://inclusionaryhousing.org/map/.

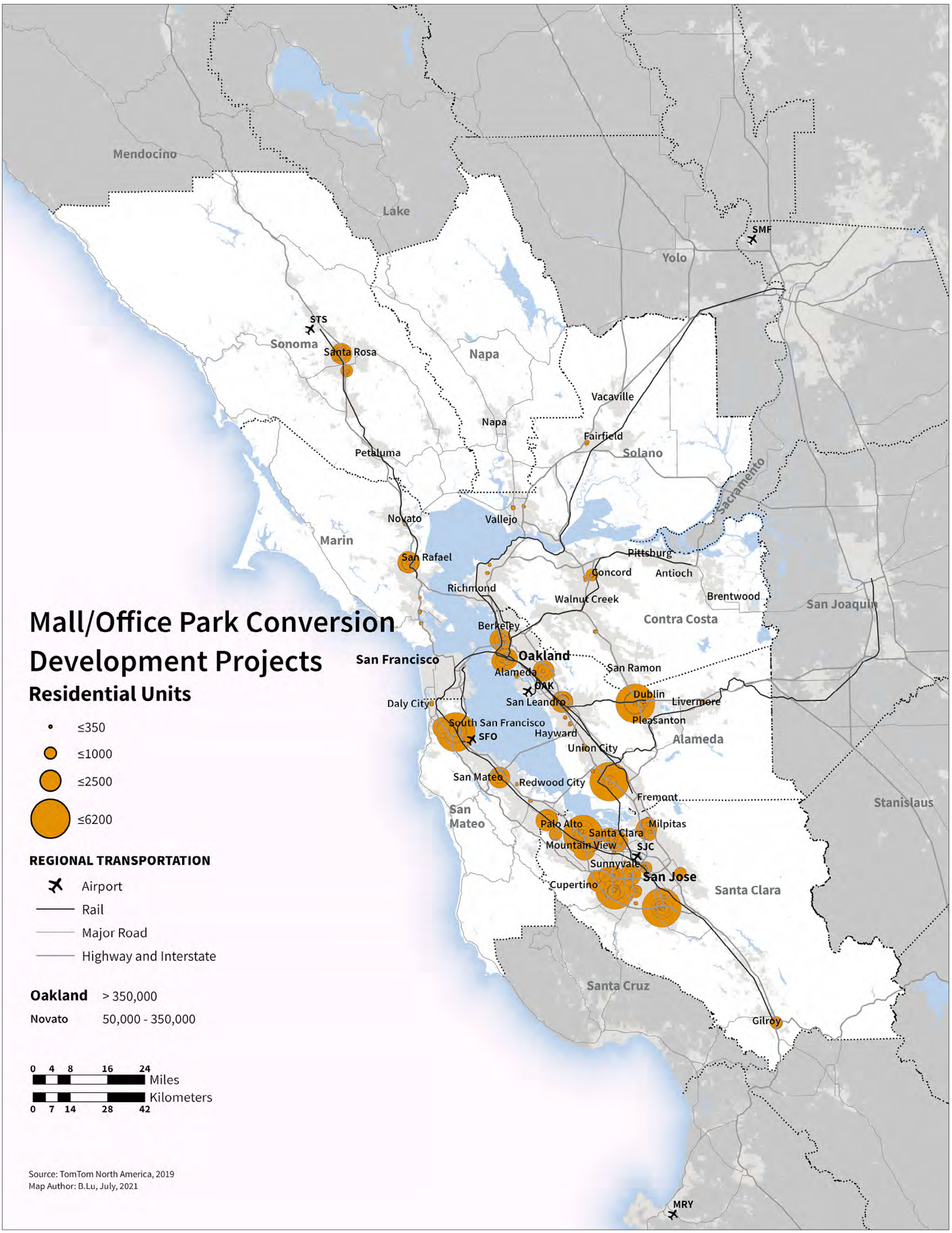
Strategy H6 | Transform Aging Malls and Office Parks into Neighborhoods

The transformation of aging malls and office parks promotes the reuse of land for critical housing, bringing new uses to these sites as neighborhoods with housing at all income levels as well as local and regional services. These projects are implemented through the Scheduled Development Events Model, where staff generate representative new projects that would comprise these sites and the model constructs them.

Malls and office parks in the region were analyzed to understand their likelihood of transitioning to new uses by assessing the age and value of existing buildings and the potential profitability under a new use. To support neighborhood-scale developments, only sites larger than 20 acres were assessed. Sites also needed to be located within a Growth Geography and required access to either transit, social resources, or both. In the Plan, the resulting set of malls and office parks were converted into new neighborhoods. In EIR Alternative 1, only projects within TRAs were built. In EIR Alternative 2, all projects within HRAs were constructed, while projects outside of HRAs were de-prioritized by random selection to achieve the focus of 50% of housing production in HRAs.

To support affordable housing production and capture the value created by rezoning particularly large sites, redeveloped malls and office parks with more than 1,000 new units are assumed to set aside adequate land for affordable housing at a ratio of 0.2:1 (or 20% of the project's housing units, in line with the upper bound of Strategy H4: Build Adequate Affordable Housing to Ensure Homes for All). Deed-restricted units above and beyond the inclusionary requirement contributed to this strategy as well. These are mall and office park transformation projects with 1,000+ dwelling units, which have a "set aside" for additional affordable housing on top of inclusionary requirements.

Figure 17. Mall/office park conversion development projects

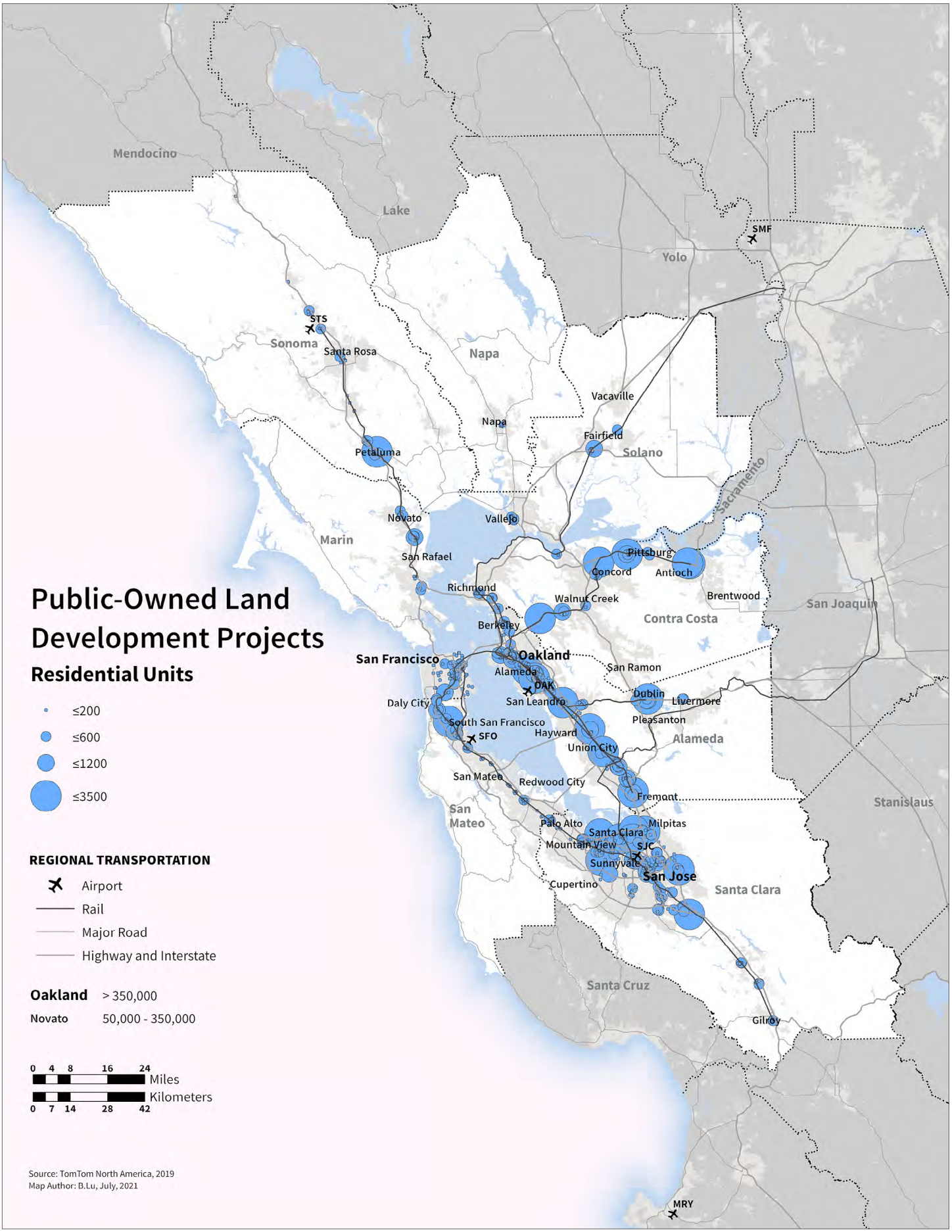


Strategy H8 | Accelerate Reuse of Public and Community-Owned Land for Mixed-Income Housing and Essential Services

Another strategy that makes effective use of land for housing is the development of public and community-owned land. This is accomplished first by identifying sites in the region owned by public agencies, community land trusts, and other non-profit landowners. By opening these sites for development, affordable housing and local services can be constructed. In the same way that mall and office park transformations are added to the development landscape, these projects are developed through the Scheduled Development Events Model. These developments were primarily 100% affordable housing projects, with some mixed-used projects to add commercial space for services. Staff generated projects to fit the building envelope of the parcels while considering appropriate scale for these sites.

All publicly owned sites identified for reuse were prioritized for development in upcoming and future years based upon size, transit proximity, and existing land use, if any. The first built were those on land owned by transit agencies within Transit-Rich Areas. These were followed by vacant sites in Transit-Rich Areas that are less than 10 acres, sites in Transit-Rich Areas that are less than 10 acres and occupied by buildings constructed before 1980, sites in Transit-Rich Areas that are larger than 10 acres and were assessed for viability of their current use, and finally other remaining sites. In the Plan, the full final set of public and community-owned lands were developed. In EIR Alternative 1, only projects in the Growth Geography area and within TRAs were built. In EIR Alternative 2, all projects within HRAs were constructed, while not all projects outside of HRAs were converted.

Figure 18. Public-owned land development projects



Strategy EC2 | Expand Job Training and Incubator Programs

Business incubators are used as an economic development catalyst for the creation of new small businesses and are designed to support training for high-growth, in-demand occupations. This strategy provides funding support for incubators and is modeled as the development of new incubator spaces. Incubators are co-located in select Priority Production Areas (PPAs) specifically in housing-rich locations to encourage job opportunities. Twenty-five jurisdictions nominated 34 PPAs around the region, which were adopted by MTC and ABAG in early 2020. Of these, PPAs with a jobs-housing ratio of less than 1.4 were assumed to receive incubator funding. The following PPAs fall under this criterion:

1. Bayside Industrial PPA
2. Pacific Commons PPA
3. Hayward PPA
4. Oakland Airport PPA
5. San Leandro PPA
6. Union City PPA
7. Northern Waterfront Industrial Corridor
8. Northern Concord PPA
9. Western Concord PPA
10. Oakley Employment Area
11. Pittsburg Northern Waterfront
12. Pacheco Manufacturing Zone
13. Baypoint Industrial Sector
14. American Canyon PPA
15. Northern Palmetto PPA
16. Morgan Hill PPA
17. Monterey Business Corridor
18. Benicia Industrial PPA
19. Dixon Northeast Quadrant
20. Fairfield PPA
21. Rio Vista PPA
22. Suisun City Gentry
23. Vacaville Industrial PPA
24. South Vallejo PPA
25. Cotati PPA

In Bay Area UrbanSim 2, these incubator spaces are represented by adding 450,000 square feet of industrial development within each PPA through the Scheduled Development Events model. Over time, the Employment Location Choice model may choose to locate jobs in these incubator buildings.

Strategy EC4 | Allow Greater Commercial Densities in Growth Geographies

As with residential zoning, commercial land use is treated in each of the alternatives to guide the region's employment growth. The zoning schemas are applied at the parcel level, allowing new building types on a parcel and/or changes to the Floor Area Ratio (FAR) (where not already permitted by local zoning). The commercial land use modifications in the alternatives are guided by the Growth Geographies previously defined in this report. In many situations, increased commercial zoning on a parcel coincides with zoning for denser residential development, meaning that these uses compete with one another, and also work to create mixed-use environments.

The No Project alternative maintains the existing commercial land use allowable intensities present in the base year model inputs. In the Plan, zoning is modified to increase development density in Transit-Rich Areas (TRAs) to encourage transit-supported commercial growth. In EIR Alternative 1, commercial development intensity is also increased in Transit-Rich Areas, with somewhat higher maximum allowed Floor Area Ratios than those in the Plan. In this alternative, TRAs in cities with three or more rail lines with frequent service are given even slightly higher FARs to encourage employment growth in locations with the most robust transit service. San Francisco, Oakland, Daly City, and San Leandro meet the requirements of having three or more rail lines as well as having peak service headways of five minutes or fewer. Since EIR Alternative 2 has a focus on creating housing opportunity in High-Resource Areas, commercial land use was not modified, and the base year zoning is maintained.

Table 18. Commercial density modifications across the alternatives

PLAN			
Zoning Alternative Geography		Maximum Floor Area Ratio (FAR) Applied	
	Broadened Allowable Building Type	Parcels not occupied by Single Family Dwelling (SFD) Units	Parcels occupied by Single Family Dwelling (SFD) Units
GG + TRA1	n/a	9	3
EIR ALTERNATIVE 1			
Zoning Alternative Geography	Broadened Allowable Building Type	Maximum Floor Area Ratio (FAR) Applied	
GG + TRA1 + three or more frequent rail lines	n/a	15	
GG + TRA1	n/a	12	
EIR ALTERNATIVE 2			
Zoning Alternative Geography	Broadened Allowable Building Type	Maximum Floor Area Ratio (FAR) Applied	
All Geographies	n/a	Local Zoning	

Strategy EC5 | Provide Incentives to Employers to Shift Jobs to Housing-Rich Areas Well-Served by Transit

To improve jobs-housing balance, this strategy uses building subsidies to encourage employers to locate in housing-rich areas near existing transit. These subsidies are used to support new office development in the land use model in a way similar to subsidizing housing: the land use model identifies office development projects that are close to being financially feasible under market conditions. Subsidizing these projects fills the "feasibility gap" and allows for office development projects that would not otherwise be built.

To meet the locational objectives of the strategy, the subsidy is only applied in select housing-rich cities, focusing on those with regional rail services (Table 19). These were the 11 cities with frequent rail services and four cities with other regional rail services such as SMART. The first group of cities has job-housing ratios lower than 1.2 at both the county and the jurisdiction levels in the base year; cities in the second group are either city centers or are linked to the New Transbay Rail Crossing. The total amount of $10 billion in subsidy is split between the two groups, with $9.5 billion going to the first group and $500 million going to the second group.

Table 19. Office development subsidies to improve jobs-housing balance

COUNTY	JURISDICTION	QUALIFICATIONS FOR SUBSIDY	SUBSIDY AMOUNT (2020$)
Alameda	Dublin	• 2015 job-housing ratios lower than 1.2 in both the county and the jurisdiction • Frequent rail services	864,000,000
Alameda	Fremont		864,000,000
Alameda	Oakland		864,000,000
Alameda	San Leandro		864,000,000
Alameda	Union City		864,000,000
Contra Costa	Antioch		864,000,000
Contra Costa	Concord		864,000,000
Contra Costa	El Cerrito		864,000,000
Contra Costa	Lafayette		864,000,000
Contra Costa	Pittsburg		864,000,000
Contra Costa	Richmond		864,000,000
Marin	San Rafael	• Other regional rail services • City center	125,000,000
Solano	Fairfield	• Other regional rail services • City center • Connected to New Transbay Rail Crossing	125,000,000
Solano	Vacaville	• Other regional rail services • Connected to New Transbay Rail Crossing	125,000,000
Sonoma	Santa Rosa	• Other regional rail services • City center	125,000,000

Strategy EC6 | Retain and Invest in Key Industrial Lands

This strategy focuses on industrial lands in order support and grow production, advanced manufacturing, distribution, and related businesses and middle-wage jobs. Priority Production Areas (PPAs) served as a basis for identifying the region's industrial land assets. Industrial zoning is maintained in the PPAs that intersect with the Growth Geographies through the allowed building types in the land use model. The zoning was modified to allow industrial use without competition from multifamily use. Development capacity in these PPAs was also increased to a maximum Floor Area Ratio (FAR) of 2 in this schema to accommodate new industrial development.

In addition, a subsidy of $4 billion was applied to allocate funding to jurisdictions with PPAs that are within the Urban Growth Boundaries. The funding is used to subsidize industrial development projects and to promote employment growth, especially in places with otherwise limited forecasted growth. To accomplish this, staff first looked at the BAUS2 model run results without integrating the industrial development subsidy and grouped the jurisdictions with PPAs into two categories based on their allocation of jobs in the manufacturing and wholesale sector as well as the transportation and utilities sector. The first group is jurisdictions with job growth in the these two sectors of over 800 jobs. These jurisdictions receive 15% of the total amount of subsidy, divided equally, and include Benicia, Fremont, Hayward, Livermore, Morgan Hill, Pacifica, San José, and Vacaville. The second group received the remaining 85%, divided equally, and includes American Canyon, Antioch, Concord, Cotati, Dixon, Fairfield, Milpitas, Oakland, Oakley, Pittsburg, Rio Vista, San Francisco, San Leandro, unincorporated Contra Costa County, Union City, and Vallejo.

Staff then converted the PPA funding for each jurisdiction into non-residential development projects using a cost factor of $50 per square foot. These projects were added to PPA parcels in their jurisdictions as scheduled development events, spread equally over 2025, 2030, 2035, 2040, 2045 and 2050. The model then constructed these projects in their respective future years.

Strategy EC7 | Assess Transportation Impact Fees on New Office Developments

This strategy is a fee on new commercial development that reflects transportation impacts associated with such development. The development fee focuses primarily on new commercial spaces anticipated to have high employment-related or residence-related vehicle miles traveled (VMT).

This strategy is used in EIR Alternative 1 to incentivize development inside low-VMT job centers. The fees are applied to new office development, set on a cost per square foot basis. The fees are further specified at the county level. The transportation impact of new development is based on the average VMT per worker by county in 2020, which is based on TAZ-level VMT data from Plan Bay Area 2040. The rationale for the different fees by county is to right-size the fee based on average county VMT. Table 20 below shows the resulting fees by VMT level.

Table 20. New office development fees (dollars per square foot)

	VERY HIGH VMT TAZ	HIGH VMT TAZ	MEDIUM-HIGH VMT TAZ	MEDIUM VMT TAZ
Alameda	40	30	15	4
Contra Costa	40	30	10	n/a
Marin	40	30	8	n/a
Napa	40	30	10	n/a
San Francisco	60	40	20	10
San Mateo	40	30	10	n/a
Santa Clara	40	30	10	4
Solano	40	30	10	n/a
Sonoma	40	30	10	n/a

This strategy is not included in any other EIR Alternatives, including the Plan.

Strategy EC8 | Implement Office Development Caps in Job-Rich Cities

Office Development Caps is a strategy applied in EIR Alternative 2 to help redistribute job growth in the region and to maximize the land availability for housing in job-rich cities. The job-housing ratio is used as a metric for understanding which cities have the greatest imbalance in their number of jobs versus housing units. In cities with at least two jobs per housing unit, or a job-housing ratio of 2 or greater, office development caps were applied in the land use model. Restricting new office development in these locations redistributes the modeled regional job demand. Jobs may move to existing vacant office space or into new office space built by the developer model in feasible locations.

The following cities had jobs-housing ratios of 2 or greater[26]:

- Emeryville
- Brisbane
- Menlo Park
- Santa Clara
- Mountain View
- South San Francisco
- Milpitas
- Burlingame
- Palo Alto
- Colma
- Cupertino

This strategy is not included in any other EIR Alternatives, including the Plan.

26 2016 jobs-housing ratios based on US Census 5-year data.

Strategy EN1 | Adapt to Sea Level Rise

As mentioned in the section on Environmental Factors, Plan Bay Area 2050 assumes a future with one foot of sea level rise by 2035 and two feet of sea level rise by 2050. To reduce the impact of associated inundation, the Plan, EIR Alternative 1 and EIR Alternative 2 include efforts to mitigate sea level rise by addressing adaptation needs. Protective measures are funded in most locations that are permanently inundated. Equity Priority Communities and areas with high benefit and low cost are prioritized for protection. In the No Project alternative, mitigation is much more limited; only committed mitigation project locations are protected from sea level rise. The committed mitigation projects are: San Francisco Airport Shoreline Protection Program, Foster City Levee Project, South Bay Shoreline Project, and Oakland Airport Sea Level Rise Adaptation.

In the land use model, protected areas become spared from inundation. This is done by altering the input files that specify inundated parcels. When a parcel is removed from the inundation set, households and jobs are no longer displaced from that parcel, and the land is available for new development that can accommodate the region's growth.

Strategy EN4 | Maintain Urban Growth Boundaries

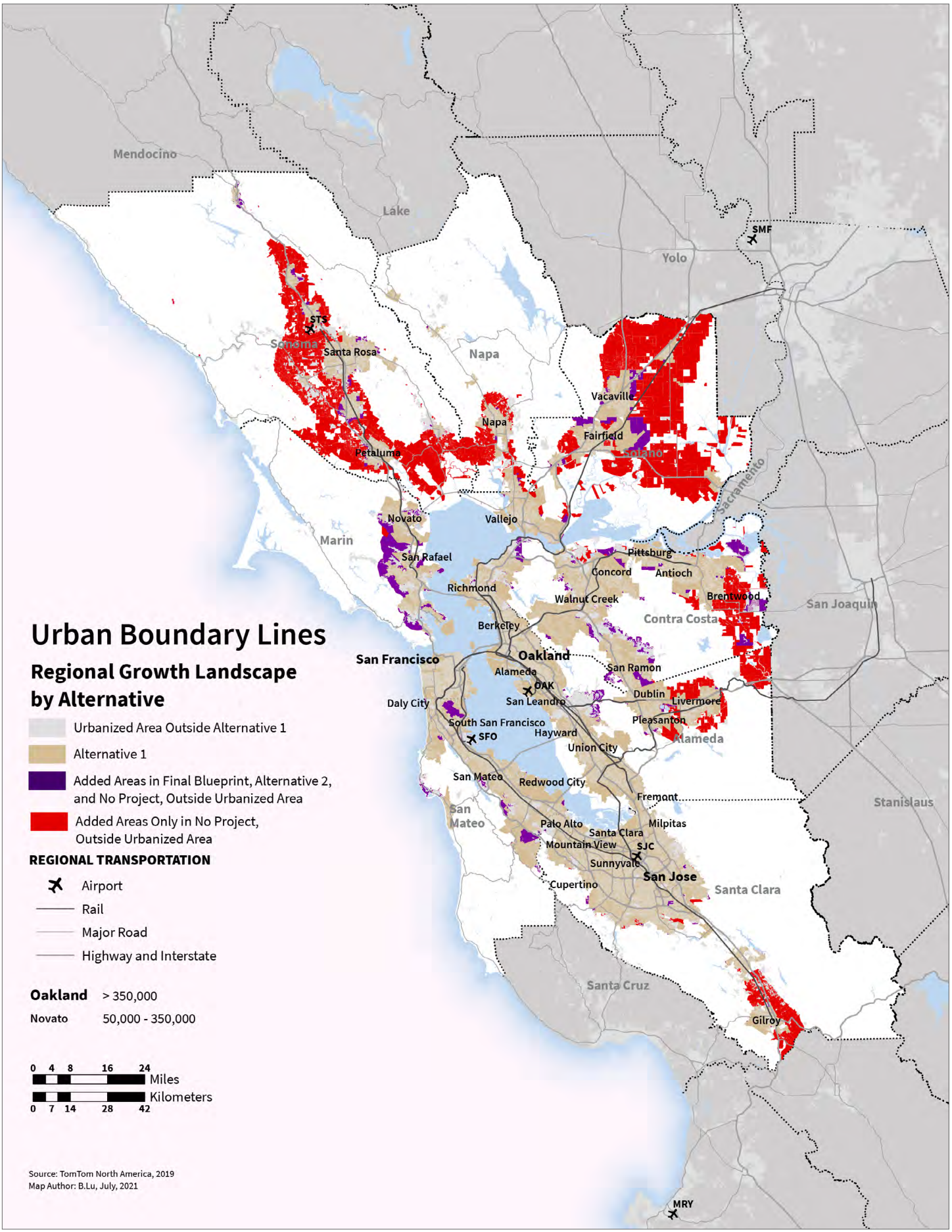
For the purpose of building EIR Alternatives, a consistent set of Urban Boundary Lines surrounding each city was established. These are meant to function like Urban Growth Boundaries in the EIR Alternatives. In some cases, the Urban Boundary Lines are drawn from true urban growth boundaries or urban service areas. In other cases, existing city boundaries are used to establish the Urban Boundary Line for EIR analysis.

The Urban Boundary Lines are treated in two different ways across EIR Alternatives. In the No Project alternative, they are assumed to be weakly enforced, meaning that suburban growth will be allowed to spill out past them. In the Plan and in EIR Alternative 2, the enforcement is assumed to be strict, meaning suburban growth is not allowed beyond them. In EIR Alternative 1, the boundaries limiting outward expansion are assumed to be the current city limits in all cases. Currently unincorporated land and any additional land within the Urban Boundary Line in each alternative is zoned to allow typical single-family development if not already permitted.

In the No Project alternative, the amount and location of growth beyond the Urban Boundary Lines must be determined. In the forecast, this can be thought of as land that is expected to become incorporated during the next three decades, either through city expansion or the formation of new cities. This is done by changing the zoning to allow suburban densities in particular locations and letting Bay Area UrbanSim 2 decide how much growth to place in those locations based on its representation of the regional land market. A total of 697 square miles of land was updated to allow typical suburban densities based the ratio of new incorporated land to population growth during the past three decades. Land was identified using a simple rule-based model that prioritized parcels that were near divided highways and had low slope within a five-mile radius (i.e., areas posited as most likely to incorporate). All land in this area was considered available in the base year.

The differential enforcement of Urban Boundary Lines across the alternatives results in different amounts of land being open for development by Bay Area UrbanSim 2's Real Estate Development sub-model. As seen in Figure 19, these potential "expansion areas" emphasize different degrees of regional compactness.

Figure 19. Urban boundary lines across alternatives



Strategy EN7 | Expand Commute Trip Reduction Programs at Major Employers

Modeling the strategy to expand commute trip reduction programs is primarily carried out through Travel Model 1.5 (see Strategy EN7: Expand Commute Trip Reduction Programs at Major Employers in that section). In the travel model, fewer trips are taken by auto and are substituted with an increase in the rate of telecommuting. Within Bay Area UrbanSim 2, the reduced number of employees going to their office on a given day results in an increase in building space efficiency. This strategy was represented in the same manner for the Plan and Alternatives 1 and 2. The resulting shift in building capacity was estimated by combining two factors at the super district zone level:

The share of workers likely to telework on a given day. Recent data on current workers was analyzed across all combinations of industry and occupation to understand the general compatibility of particular jobs (and their set of task requirements) for telework. These numbers were adjusted upward within Travel Model 1.5 to reflect the impacts of this strategy. Sub-areas of the Bay Area with larger shares of workers who were judged more likely to telework saw a larger change in this factor. By 2050 the superdistrict share of teleworkers ranged from 9% in Northwestern San Francisco to 25.5%. The largest increases in the share of teleworkers were in the Tri-Valley and the portion of the Inner East Bay from San Leandro to Hayward.

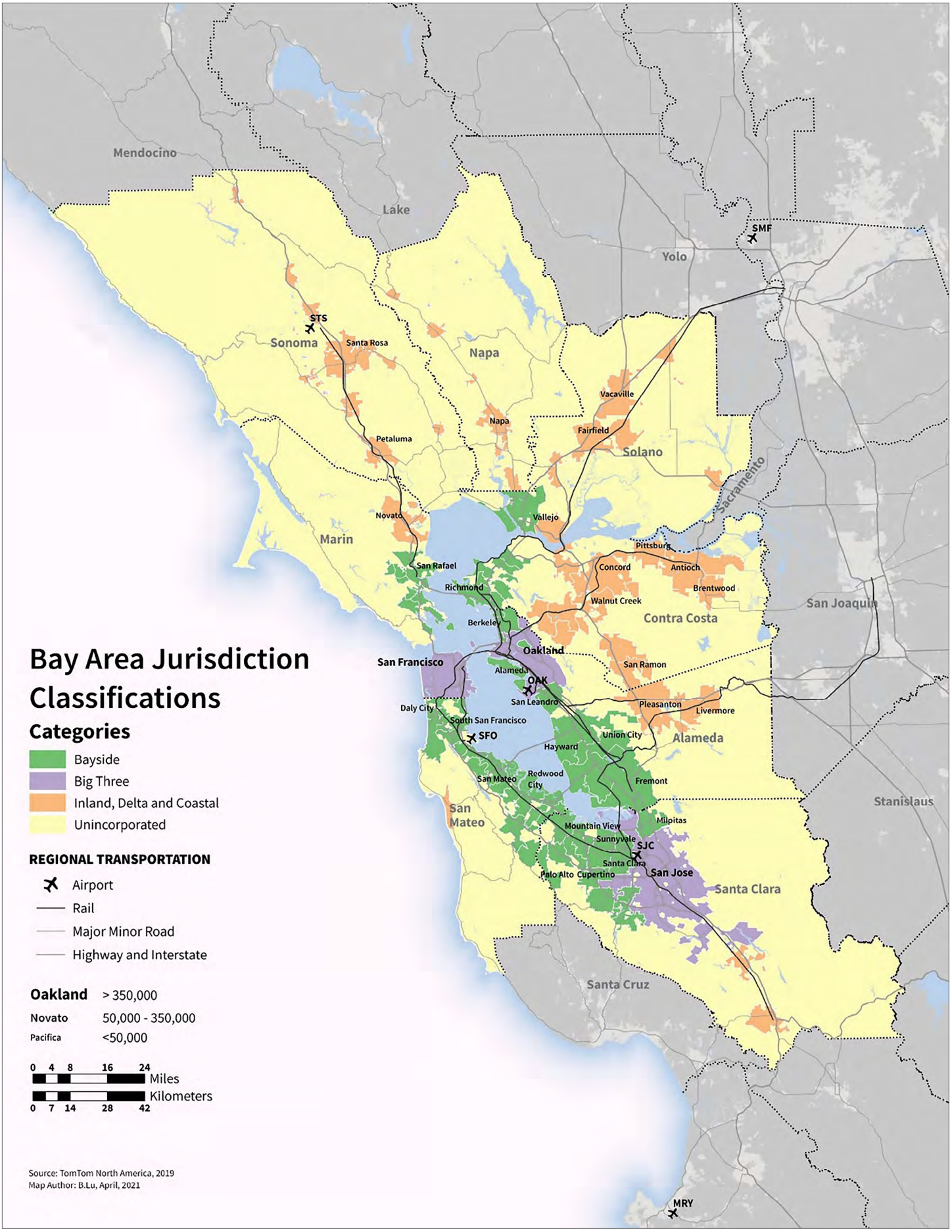
The "hoteling rate" at which it was assumed these workers could share their office workspaces. As a larger share of workers telework some days but continue to work in person on other days, firms are likely to re-arrange their offices by increasing the number of shared workspaces, often referred to as "hoteling". While some anecdotal data exists on this shift historically, it is difficult to forecast the degree to which offices will reduce their average square feet of rented space per employee. For the forecast, it is assumed that the hoteling rate (as applied to the share of workers that are teleworking) will range from 1/3 shared space in more expensive locations to no sharing in less expensive areas.

This strategy is then represented by applying each super district's hoteling rate to the share of workers expected to telework in a future year. This resulted in a reduced demand for commercial square feet of 7% by 2050 with the largest reductions occurring in San José and Oakland and very little expected change in most the North Bay. Overall, this tended to increase the tendency for employment growth in existing major job centers such as the San Francisco Central Business District and Silicon Valley because a greater number of employees can be accommodated by the large amount of existing space.

Findings

Selected land use model results are summarized and discussed here. The output presented is partial and intended to give a general sense of expected behavioral change across the alternatives and through the projection years. Emphasis is given to results that 1) influence the Travel Model, 2) affect Plan Bay Area 2050 results, and 3) provide a context for understanding the regional development change predicted by each alternative.

Figure 20. Map of Bay Area jurisdiction classification categories



Regional Land Use Outcomes

The share of regional population and employment growth provides a simple means of comparing the land use model outcomes for the four EIR Alternatives. For comparison, Figure 20 assigns the region's jurisdictions into four large categories: the Big Three Cities (San José, San Francisco, and Oakland); Bayside Cities; Inland, Delta and Coastal Cities; and Unincorporated Areas.

Table 21 shows the share of regional household growth for each alternative through 2050. Table 22 shows the share of regional employment growth for each alternative through 2050.

Table 21. Share of regional household growth across alternatives

AREA	2050 ALTERNATIVE			
	No Project	Plan	EIR Alternative 1	EIR Alternative 2
Big Three Cities	41%	43%	44%	37%
Bayside Cities	24%	34%	40%	40%
Inland, Delta and Coastal Cities	21%	18%	15%	18%
Unincorporated	15%	5%	1%	4%

NOTE: results may not total to 100% because of rounding.

Table 22. Share of regional employment across alternatives

AREA	2050 ALTERNATIVE			
	No Project	Plan	EIR Alternative 1	EIR Alternative 2
Big Three Cities	44%	39%	37%	47%
Bayside Cities	40%	45%	44%	36%
Inland, Delta and Coastal Cities	13%	13%	16%	14%
Unincorporated	3%	3%	4%	3%

Small Zone Outcomes

While the regional distribution of households and employment will influence travel behavior, a more micro-level understanding of growth is also fundamental in understanding each alternative's ability to achieve plan goals. As described above, the three small zones employed in the plan process are Priority Development Areas (PDAs), Transit-Rich Areas (TRAs), and High-Resource Areas (HRAs). Figure 13, above, shows these zones as well as additional Growth Geographies and areas of overlap. Table 23 provides the share of regional household growth in PDAs, TRAs, and HRAs for the alternatives through year 2050. Table 24 shows similar information for employment growth shares.

Table 23. Small zone share of household growth across alternatives

AREA	2050 ALTERNATIVES			
	No Project	Plan	EIR Alternative 1	EIR Alternative 2
PDAs	51%	72%	76%	66%
TRAs	63%	82%	91%	79%
HRAs	24%	28%	29%	39%

NOTE: results may not total to 100% because of rounding and/or overlapping zone definitions.

Table 24. Small zone share of employment growth across alternatives

AREA	2050 ALTERNATIVES			
	No Project	Plan	EIR Alternative 1	EIR Alternative 2
PDAs	51%	48%	50%	51%
TRAs	65%	63%	63%	63%
HRAs	18%	14%	15%	5%

NOTE: results may not total to 100% because of rounding and/or overlapping zone definitions.

Jobs-Housing Balance Outcomes

The jobs-housing balance is an ongoing topic of interest in the Bay Area, given wide variation between job-rich and housing-rich counties. The regionwide jobs-to-housing ratio decreases from 1.50 in 2015 to 1.34 by 2050, reflecting a higher ratio of housing to job production to accommodate pent-up demand for housing. Overall, the Plan results in counties converging toward the regional jobs-housing ratio of 1.34. The North Bay and East Bay subareas, while still below the regional average, are both moving closer to regional average. Similarly, the traditional jobs-rich Peninsula and South Bay subareas remain jobs-rich, but are moving closer to the regional jobs-housing ratio.

Table 25. Jobs-housing balance across alternatives

		2050 ALTERNATIVES			
COUNTY	2015	No Project	Plan	EIR Alternative 1	EIR Alternative 2
Regionwide	1.50	1.34	0.1.34	1.34	1.34
Alameda	1.58	1.40	1.40	1.37	1.43
Contra Costa	1.06	0.74	0.97	1.17	1.00
Marin	1.25	0.90	0.80	0.84	0.88
Napa	1.42	1.51	1.56	1.56	1.61
San Francisco	1.86	1.91	1.59	1.44	1.94
San Mateo	1.47	1.26	1.28	1.15	1.32
Santa Clara	1.78	1.56	1.51	1.52	1.32
Solano	0.93	0.95	1.14	1.30	1.12
Sonoma	1.18	1.21	1.14	1.14	1.12

Housing Affordability Outcomes

Housing affordability is another issue of great regional concern. As seen in Housing affordability is another issue of great regional concern. As seen in Table 26, households spend much more on housing than typically considered healthy (i.e., not more than 30% of income). Across all income categories, households have been spending 33% of income on housing while for the lowest quartile of households this figure has been around 68% in recent years. All alternatives contain higher levels of market rate construction in future years and this additional housing is forecast to decrease costs by the amount seen in the No Project results. The other alternatives also add a large amount of low-income, deed-restricted housing where subsidies cover costs above 30% of household income. These alternatives see a great deal of reduction in housing costs., households spend much more on housing than typically considered healthy (i.e., not more than 30% of income). Across all income categories, households have been spending 33% of income on housing while for the lowest quartile of households this figure has been around 68% in recent years. All alternatives contain higher levels of market rate construction in future years and this additional housing is forecast to decrease costs by the amount seen in the No Project results. The other alternatives also add a large amount of low-income, deed-restricted housing where subsidies cover costs above 30% of household income. These alternatives see a great deal of reduction in housing costs.

Table 26. Share of income spent on housing across alternatives

	ALTERNATIVE 2050				
	2015	No Project	Plan	EIR Alternative 1	EIR Alternative 2
Low-Income Households	68%	44%	29%	29%	29%
All Households	33%	25%	21%	21%	21%

Travel Modeling Suite

MTC and ABAG use an analytical tool known as a travel model (also known as a travel demand model or travel forecasting model) to first describe the reaction of travelers to transportation projects and policies and then to quantify the impact of cumulative individual decisions on the Bay Area's transportation networks and environment. MTC's and ABAG's travel modeling suite is comprised of three main analytical tools: a population synthesizer, a travel model, and a vehicle emission model. Each tool is described in turn below. While the travel model is able to represent most of the strategies and policy interventions in the plan, some elements of transportation strategies are not captured, and the calculations performed to analyze these policies are described in the section on Off-Model Calculations.

Population Synthesizer

MTC and ABAG's travel model is an agent-based simulation. The "agents" in this case are individual households, comprised of the people who form each household. In this way, the travel model attempts to simulate the behavior of the individuals and the households who carry out their daily activities in a setting described by the input land development patterns and input transportation projects and policies. To use this type of simulation, each agent must be characterized in a fair amount of detail.

Software programs that create lists of households and persons for travel model simulations are known as population synthesizers. For Plan Bay Area 2050, MTC and ABAG began using the population synthesizer, PopulationSim.[27] The population synthesizer attempts to sample households described in the 2007-2011 Census Public Micro-sample (PUMS) data in such a way that when looking at the population along specific dimensions spatially (at a level of detail below which the PUMS data is reported), the aggregate sums more or less match those predicted by other Census summary tables (when synthesizing historical populations) or the land use projections made by the Land Use Model (when forecasting populations). For example, if Bay Area UrbanSim 2 forecasts that 60 households containing 100 workers and 45 children will live in spatial unit X in the year 2035, the population synthesizer will locate 60 PUMS households in spatial unit X and will select households in such a way that, when summing across households, the number of workers is close to 100 and the number of children is close to 45.

The population synthesizer "controls" (i.e., minimizes the discrepancy between the synthetic population results and the historical Census results or the land use forecasts) at the travel analysis zone (TAZ) along the following dimensions:

1. Number of total households (individuals living in non-institutionalized group quarters, e.g. college dorms, are counted as single-person households);
2. Number of total households by size (four categories: 1, 2, 3 or 4+);
3. Number of households by income quantile (four income quantiles as defined in Table 7);
4. Number of households by number of workers (four categories: 0, 1, 2, 3+);
5. Number of persons by age (five categories: 0-4, 5-19, 20-44; 45-64; 65+) and,
6. Number of persons living in non-institutionalized group quarters by type (three categories: college dorm, military, and other non-institutional group quarters)

27 PopulationSim: https://activitysim.github.io/populationsim/.

Travel Model

Travel models are frequently updated. As such, a bit of detail as to which version of a given travel model is used for a given analysis is useful. The current analysis uses MTC's Travel Model 1.5 (version 1.5.2.3), released in December 2020, calibrated to year 2015 conditions, and validated against year 2010 and 2015 conditions.[28] Travel Model 1.5 will also be referred to as TM1.5 for the purposes of this report.

Travel Model 1.5 is of the so-called "activity-based" archetype. The model is a partial agent-based simulation in which the agents are the households and people who reside in the Bay Area. The simulation is partial because it does not include the simulation of individual behavior of passenger, commercial, and transit vehicles on roadways and transit facilities (though the model system does simulate the behavior of aggregations of vehicles and transit riders). In regional planning work, the travel model is used to simulate a typical weekday – when school is in session, the weather is pleasant, and no major collisions or incidents disrupt the transportation system.

The model system operates on a synthetic population that includes households and people representing each actual household and person in the nine-county Bay Area – in both historical and prospective years. Travelers move through a space segmented into travel analysis zones (TAZs)[29] and, in so doing, use the transportation system. The model system simulates a series of travel-related choices for each household and for each person within each household. These choices[30] are as follows (organized sequentially):

1. **Usual workplace and school location** — Each worker, student, and working student in the synthetic population selects a travel analysis zone in which to work or attend school (or, for working students, one zone to work and another in which to attend school).
2. **Household automobile ownership** — Each household, given its location and socio-demographics, as well as each member's work and/or school locations (i.e., given the preceding simulation results), decides how many vehicles to own.
3. **Daily activity pattern** — Each household chooses the daily activity pattern of each household member, the choices being (a) go to work or school, (b) leave the house, but not for work or school, or (c) stay at home.
4. Work/school tour[31] frequency and scheduling — Each worker, student, and working student decides how many round trips they will make to work and/or school and then schedules a time to leave for, as well as return home from, work and/or school.
5. **Joint non-mandatory[32] tour frequency, party size, participation, destination, and scheduling** — Each household selects the number and type (e.g., to eat, to visit friends) of "joint" (defined as two or more members of the same household traveling together for the duration of the tour) non-mandatory (for purposes other than work or school) round trips in which to engage, then determines which members of the household will participate, where, and at what time the tour (i.e., the time leaving and the time returning home) will occur.
6. **Non-mandatory tour frequency, destination, and scheduling** — Each person determines the number and type of non-mandatory (e.g., to eat, to shop) round trips to engage in during the model day, where to engage in these tours, and at what time to leave and return home.

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28 Additional information is available here: https://github.com/BayAreaMetro/modeling-website/wiki/Development.

29 Map of TAZs: https://mtc.maps.arcgis.com/home/item.html?id=b85ba4d43f9843128d3542260d9a2f1f

30 These "choices", which often are not really choices at all (the term is part of travel model jargon), are simulated in a random utility framework – background information is available here: https://en.wikipedia.org/wiki/Choice_modelling.

31 A "tour" is defined as a round trip from and back to either home or the workplace.

32 Travel modeling practice use the term "mandatory" to describe work and school travel and "non-mandatory" to refer to other types of travel (e.g., to the grocery store); this terminology is used to communicate efficiently with others in this space. Staff neither assume nor believe that all non-work/school-related travel is non-mandatory or optional.

7. Tour travel mode — The tour-level travel mode choice (e.g., drive alone, walk, take transit) decision is simulated separately for each tour and represents the best mode of travel for the round trip.

8. Stop frequency and location — Each traveler or group of travelers (for joint travel) decides whether to make a stop on an outbound (from home) or inbound (to home) leg of a travel tour, and if a stop is to be made, where the stop is made, all given the round trip tour mode choice decision.

9. Trip travel model — A trip is a portion of a tour, either from the tour origin to the tour destination, the tour origin to a stop, a stop to another stop, or a stop to a tour destination. A separate mode choice decision is simulated for each trip; this decision is made with awareness of the prior tour mode choice decision.

10. Assignment — Vehicle trips for each synthetic traveler are aggregated into time-of-day-specific matrices (i.e., tables of trips segmented by origin and destination) that are assigned via the standard static user equilibrium procedures to the highway network. Transit trips are assigned to time-of-day-specific transit networks.

Travel Model 1.5 is a major update to Travel Model One v0.6, which was used for the previous long-range plan (Plan Bay Area 2040). Developed to support the needs of Plan Bay Area 2050, Travel Model 1.5 added representation for ride-hailing (or Transportation Network Company - TNC) and taxi modes, as well as for autonomous vehicles.[33]

The Travel Model 1.5 system inherits without significant modification the representation of interregional and commercial vehicle travel from MTC's previous travel model system (commonly referred to as BAYCAST or BAYCAST-90). Specifically, commercial vehicle demand is represented using methods developed for Caltrans and Alameda County as part of the Interstate 880 Intermodal Corridor Study conducted in 1982 and the Quick Response Freight Manual developed by the United States Department of Transportation in 1996. When combined, these methods estimate four classes of commercial travel, specifically: "very small" trucks, which are two-axle/four-tire vehicles; "small" trucks, which are two-axle/six-tire vehicles; "medium" trucks, which are three-axle vehicles; and, "combination" trucks, which are truck/trailer combinations with four or more axles.

Reconciling travel demand with available transportation supply is particularly difficult near the boundaries of planning regions because little is assumed to be known (in deference to efficiency – the model must have boundaries) about the land development patterns — the primary driver of demand — or supply details beyond these boundaries. The typical approach to representing this interregional travel is to first estimate the demand at each location where a major transportation facility intersects the boundary and to then distribute this demand to locations either within the planning region (which results in so-called "internal/external" travel) or to other boundary locations ("external/external" travel). MTC uses this typical approach and informs the process with the Census Transportation Planning Product (CTPP) based on 2006-2010 5-year American Community Survey Data, which are allocated via simple method to represent flows to and from MTC's travel analysis zones and 21 boundary locations, as well as the flows between boundary locations.

The travel of air passengers to and from the Bay Area's airports is represented with static (across alternatives), year-specific vehicle trip tables. These trip tables are based on air passenger survey data collected in 2006 and planning information developed as part of MTC's Regional Airport Planning Study.

Similarly, the travel of high-speed rail (HSR) passengers to and from the Bay Area's expected HSR stations is represented with static (across those alternatives for which HSR is assumed to be implemented), year-specific vehicle trip tables. The HSR demand estimates are derived from the California High Speed Rail Authority's 2016 Business Plan[34] with modifications to delay service based on the 2020 Business Plan.[35] The update assumes that the Gilroy and San Jose stations open around 2035, and the Millbrae and San Francisco stations open by 2040 [opening years rounded to nearest five-year increment; opening contingent on high-speed rail investments in Period 2 of Plan Bay Area 2050].

33 For more detail about Travel Model 1.5, see: https://github.com/BayAreaMetro/modeling-website/wiki/TravelModel1.5.

34 https://hsr.ca.gov/docs/about/business_plans/2016_BusinessPlan.pdf.

35 https://hsr.ca.gov/docs/about/business_plans/2020_Business_Plan.pdf.

Vehicle Emissions Model

The MTC travel model generates spatially- and temporally-specific estimates of vehicle usage and speed for a typical weekday. This information is then input into an emissions model to estimate on-road mobile source criteria pollutants as well as carbon dioxide emissions (used as a proxy for all greenhouse gases). For the current plan air quality analyses, MTC and ABAG used the California Air Resource Board's EMissions FACtor (EMFAC) 2014 for SB 375 calculations, EMFAC 2017 for Plan Bay Area 2050 Equity Analysis calculations, CT-EMFAC 2017 for Plan Bay Area 2015 EIR mobile source air toxic emission inventory estimation, and EMFAC 2021 for Plan Bay Area 2050 EIR criteria pollutant emission inventory estimation.

Input Assumptions

Analysis work was done to simulate historical conditions, conditions in future years should no action be taken, and conditions in future years under a variety of planned modifications representing the Plan and EIR Alternatives. Historical scenarios are labeled by their year and include Year 2005 and Year 2015. Planned actions include varying sets of strategy packages. As described in EIR Alternatives section of Chapter 3: Land Use Model, there are three planned sets of strategy actions: the Plan as well as EIR Alternative 1 and EIR Alternative 2. These simulations were performed for 2025, 2030, 2035, 2040 and 2050. The no action alternative is referred to as No Project; No Project simulations were performed for the same years as the Plan and EIR Alternatives 1 and 2, but this report will focus on Year 2050 for the No Project, the Plan and the EIR Alternatives. The various simulation years serve different purposes: historical years demonstrate the model's ability to adequately replicate on-the-ground conditions[36] and provide the reader data for a familiar scenario; the California Air Resources Board established greenhouse gas targets for 2035; the regional plan, as guided by federal regulations, extends to 2050. Interim year (2025, 2030 and 2040) modeling is performed primarily for air quality conformity analysis.

The above strategy packages differ across four dimensions, namely land use, roadway supply, transit supply, and prices. Land use refers to the locations of households and jobs (of different types). Roadway supply is the physical network upon which automobiles, trucks, transit vehicles, bicycles, and pedestrians travel. Transit supply refers to the facilities upon which public transit vehicles travel (the roadway, along rail lines, ferry routes, and other dedicated infrastructure), as well as the stop locations, routes, and frequency of transit service. Prices include the monetary fees users are charged to board transit vehicles, cross bridges, operate and park private vehicles, and use express lanes (also known as high occupancy toll lanes).

36 Details of this "validation" process are available here: https://github.com/BayAreaMetro/modeling-website/wiki/Development.

Table 27. Travel model simulations by year and alternative

	SIMULATION YEAR						
Scenario	2005	2015	2025	2030	2035	2040	2050
Historical	✓	✓					
No Project			✓	✓	✓	✓	✓
Plan			✓	✓	✓	✓	✓
Incremental Progress Assessment					✓		
EIR Alternative 1					✓		✓
EIR Alternative 2					✓		✓

In the remainder of this chapter, each of the six scenarios (the rows in Table 27) are discussed, organized by the above four dimensions; additional notes on "other assumptions" concludes the section. This organization should allow the reader to compare the input assumptions across scenarios.

Land Use

Additional information regarding the land development patterns is available in Chapter 3: Land Use Model. Here, we provide a handful of details regarding the transformation of these land use inputs into the information needed by the travel model.

Prior to executing the travel model, the land development inputs provided by the Regional Growth Forecast (Table 8) and by Bay Area UrbanSim 2 (distribution details) are run through the population synthesizer as described above. The journey from control totals through the modeling system introduces minor inconsistencies between the estimated regional control totals, which are carried through Bay Area UrbanSim 2, and the totals implied by the synthetic population. These inconsistencies are presented in Table 28 confirm this matches final EIR runs.

Table 28. Demographic statistics of control and simulated populations

		HOUSEHOLDS				POPULATION		
Year	Alternative	Regional Forecast Households	Group Quarters	Synthetic Population	Percent Difference†	Regional Forecast Results	Synthetic Population	Percent Difference
2015	Historical	2,677,000	91,000	2,792,000	0.9%	7,656,000	7,581,000	-1.0%
2025	Plan	2,952,000	149,000	3,056,000	-1.4%	8,231,000	8,235,000	0.0%
2030	Plan	3,209,000	158,000	3,321,000	-1.4%	8,553,000	8,602,000	0.6%
2035	Incremental Progress	3,495,000	165,000	3,658,000	0.0%	9,003,000	9,009,000	0.1%
2035	No Project	3,495,000	167,000	3,613,000	-1.3%	9,003,000	9,168,000	1.8%
2035	Plan	3,495,000	167,000	3,613,000	-1.3%	9,003,000	9,167,000	1.8%
2035	EIR Alt1	3,495,000	167,000	3,613,000	-1.3%	9,003,000	9,168,000	1.8%
2035	EIR Alt2	3,495,000	167,000	3,613,000	-1.3%	9,003,000	9,170,000	1.9%
2040	Plan	3,711,000	176,000	3,836,000	-1.3%	9,487,000	9,546,000	0.6%
2050	No Project	4,043,000	176,000	4,183,000	-0.9%	10,325,000	10,367,000	0.4%
2050	Plan	4,043,000	176,000	4,183,000	-0.9%	10,325,000	10,368,000	0.4%
2050	EIR Alt1	4,043,000	176,000	4,183,000	-0.9%	10,325,000	10,367,000	0.4%
2050	EIR Alt2	4,043,000	176,000	4,183,000	-0.9%	10,325,000	10,363,000	0.4%

† – Individuals living in group quarters are considered individual households in the synthetic population and, subsequently, the travel model.

A key function of the population synthesizer is to identify each member of the representative populous with one of eight "person type" labels. Each person in the synthetic population is identified as a full- time worker, part-time worker, college student, non-working adult, retired person, driving-age student, non-driving-age student, or child too young for school. The travel model relies on these person type classifications, along with myriad other variables, to predict behavior.

Figure 21. Historical and forecasted person type distributions for Plan

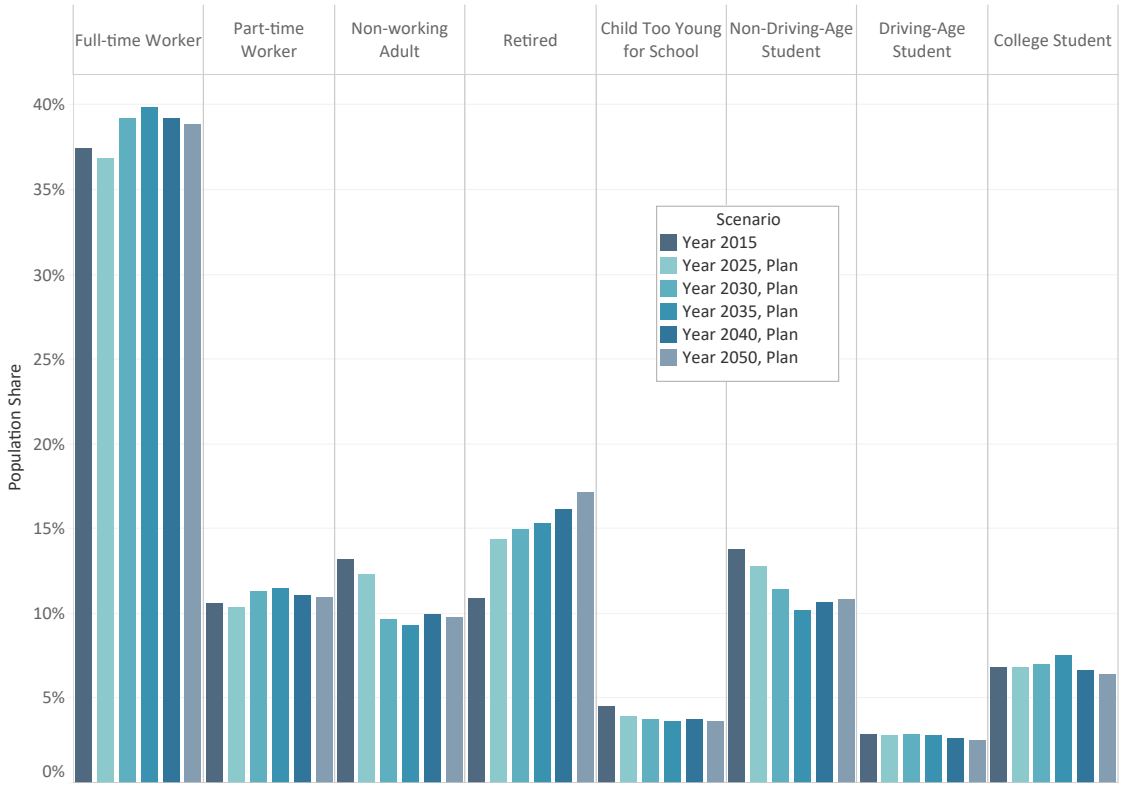
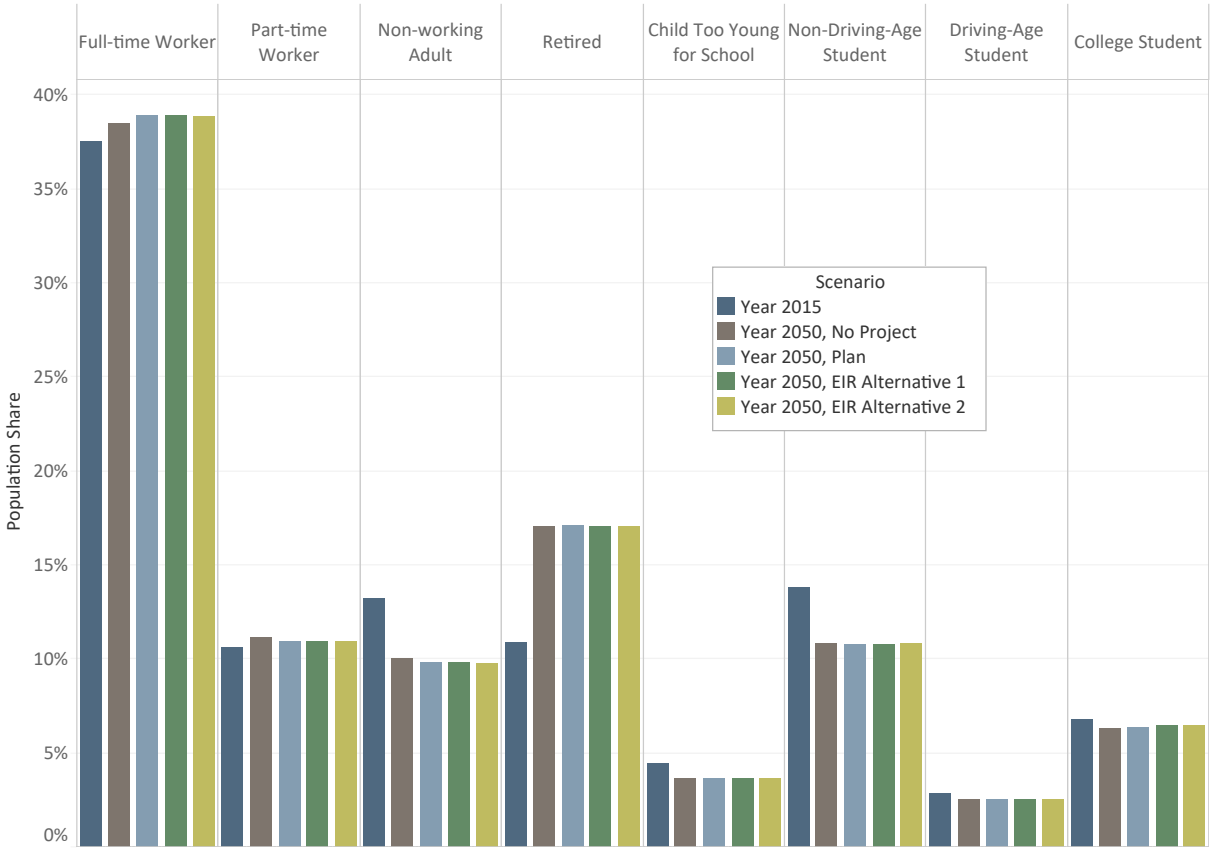


Figure 21 shows the distribution of person types for the historical scenarios and the Plan, from years 2015 to 2050. Interesting aspects of these distributions, which are driven by assumptions embedded in the regional forecast, are as follows:

1. The share of full-time workers peaks in 2035;
2. The share of retired workers steadily increases from 2015 to 2050; and
3. The person types don't change dramatically.

Figure 22 shows the distribution of person types across the four forecast year alternatives for year 2050.

Figure 22. Person type distributions across alternatives



Road Network

The historical scenarios for 2005 and 2015 have a representation of roadways that reflect infrastructure that was in place in 2005 and 2015.

The No Project alternative includes projects that are either in place in 2016 or are "committed" as defined by MTC Resolution No. 4182. The Plan (and EIR Alternatives 1 and 2) builds upon these networks, adding in the roadway projects included in the transportation investment strategies, which is discussed in more detail in Strategy Implementation. Finally, because the No Project alternative does not include EN1: Adapt to Sea Level Rise, the networks built for No Project lose some lane miles due to flooding.

A graphical depiction of the changes in the roadway network is presented Figure 23. The chart shows the change in lane-miles (e.g., a one-mile segment of a four-lane road is four lane-miles) available to automobiles in year 2050 relative to year 2015. San Francisco County shows a decrease in lane-miles, primarily due to the Market Street closure that started in 2020 as well as some conversions of roadway segments to dedicated bus ways. Figure 24 shows the change in lane-miles over time for the Plan.

Figure 23. Growth in roadway lane miles (relative to 2015) available to automobiles across alternatives

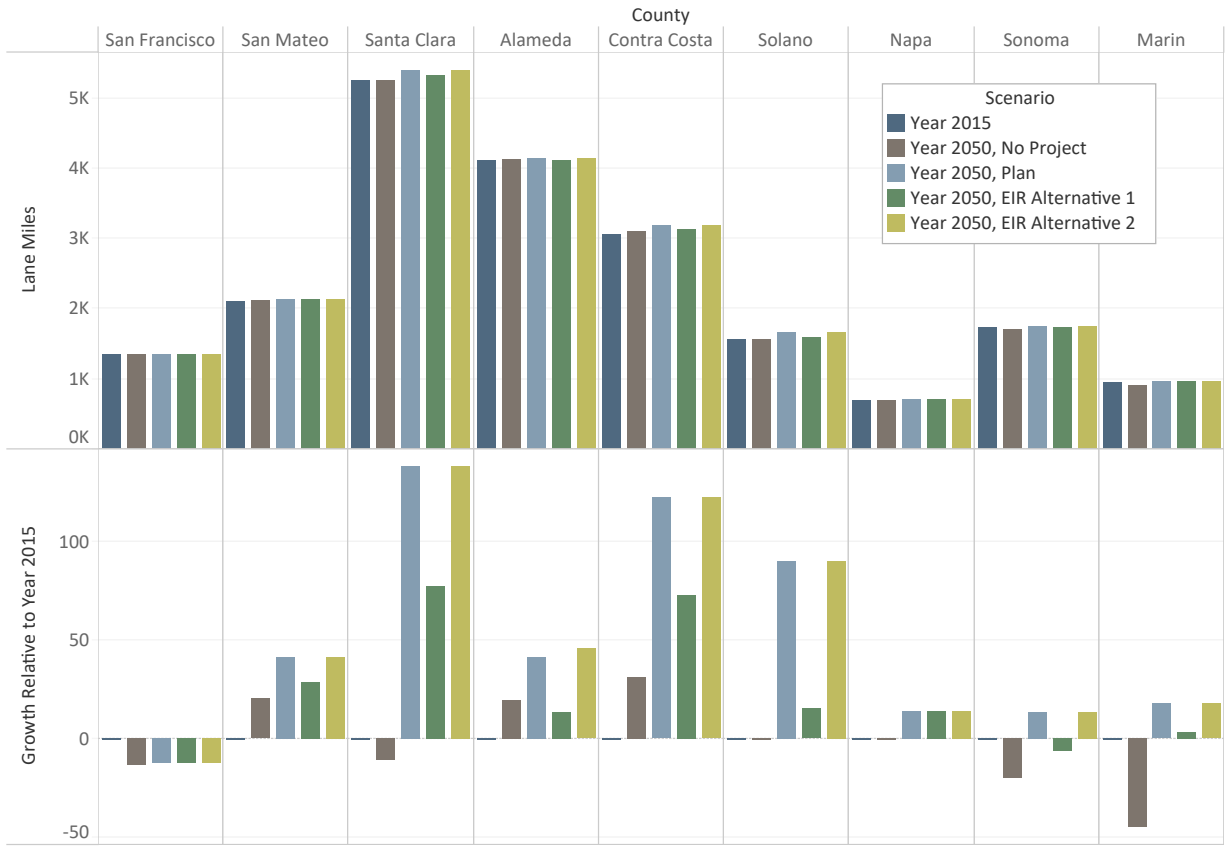
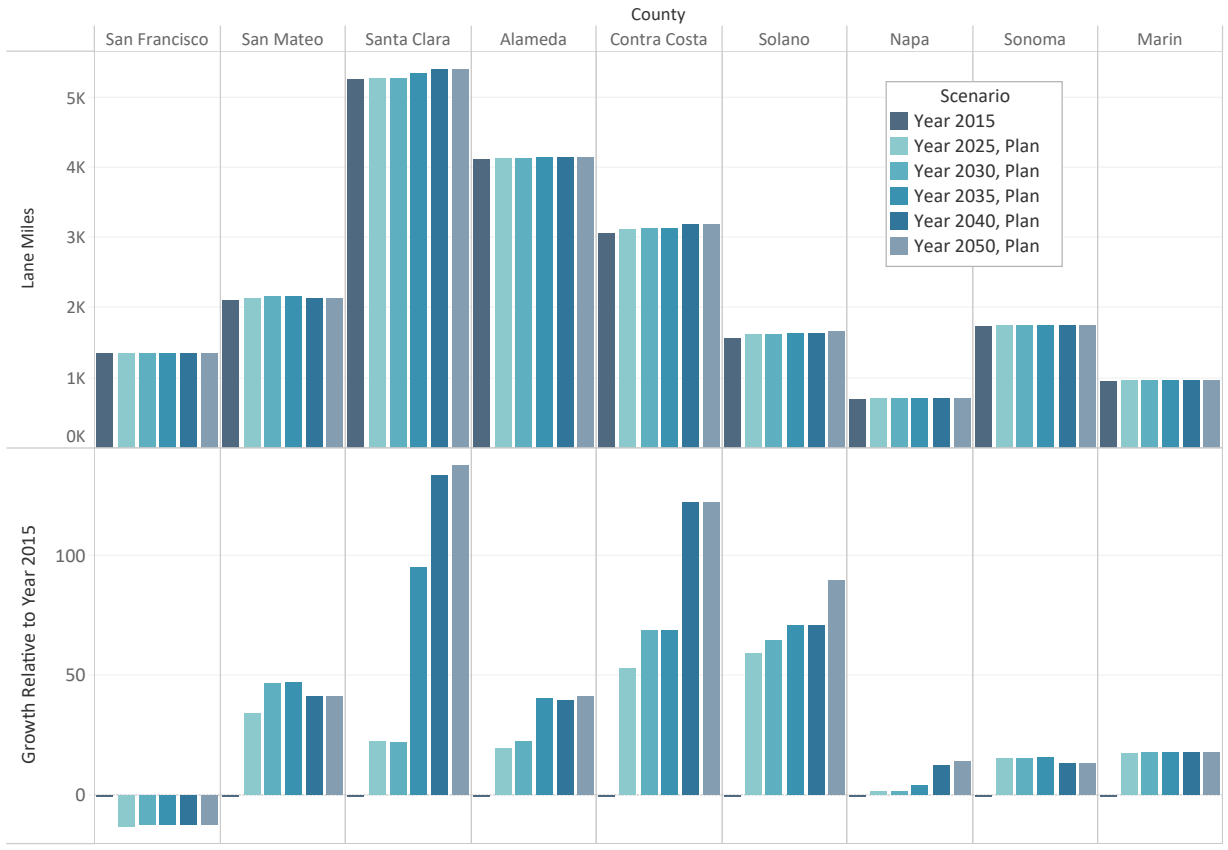


Figure 24. Growth in roadway lane miles (relative to 2015) available to automobiles in the Plan



Transit Network

The historical scenarios for 2005 and 2015 reflect service in these years.

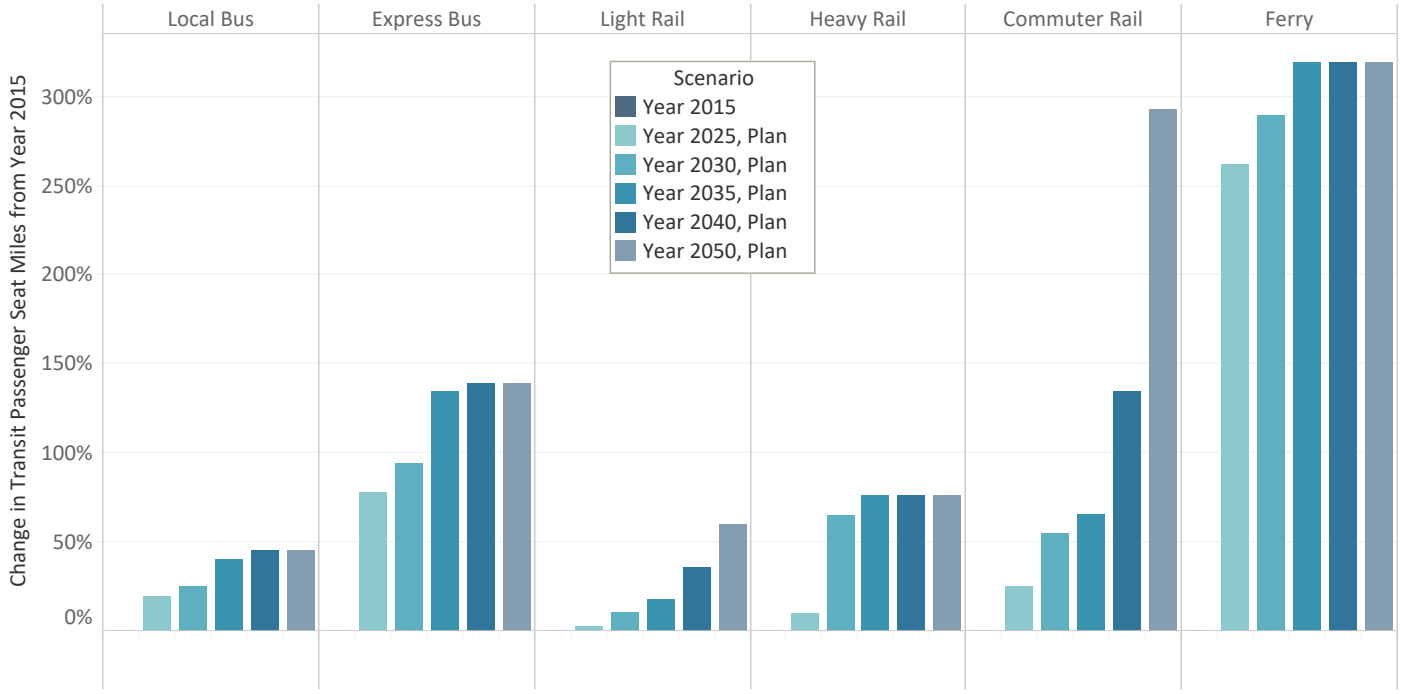
The No Project alternative begins with 2015 service levels and adds projects that are committed as defined by MTC Resolution No. 4182. The Plan alternative begins with 2015 service levels and adds both the committed projects as well as those included in the transportation investment strategies, described in more detail in the Strategy Implementation section below.

The onset of the COVID-19 pandemic in early 2020 significantly altered on-the-ground service provision and created uncertainty around the levels of transit service provision in near-term future model years (2025, 2030 and 2035). While current and future funding availability and service levels continue to evolve, modeling work for Plan Bay Area 2050 used a conservative approach to represent transit service provision in the No Project Alternative. It was assumed that transit headways would increase in 2025, 2030 and 2035 commensurate to the expected percentage decrease in future funding available for transit operations. Headways were increased across all operators by 8% in the No Project for years 2025, 2030 and 2035. As planned projects increase the total service hours in the Plan and EIR Alternatives, a smaller percentage increase was applied to all transit service so that the total service hours cut were equivalent between the No Project, Plan and EIR Alternatives in 2025 and 2030. This translated to a 6.7% increase in service hours (once planned service increases from projects were applied) in the 2025 Plan and a 6.4% increase in the 2030 Plan. The plan includes an investment to return transit service levels to 2019 levels no later than 2035, so no percentage increase in headways was modeled in the Plan and EIR Alternatives for 2035. Headways in the No Project were assumed to return to the pre-pandemic baseline starting in 2040.

A graphical depiction of the changes in transit service is presented in Figure 25 below. The chart shows the change in seat-miles (e.g., a one-mile segment of a bus with 40 seats is 40 seat-miles) by mode in year 2050 compared to year 2015 across alternatives. Figure 26 shows the change in seat-miles over time by technology for the Plan.

Figure 25. Change in transit passenger seat miles (relative to year 2015) by technology across alternatives

Figure 26. Change in transit passenger seat miles over time (relative to 2015) by technology in the Plan



Prices

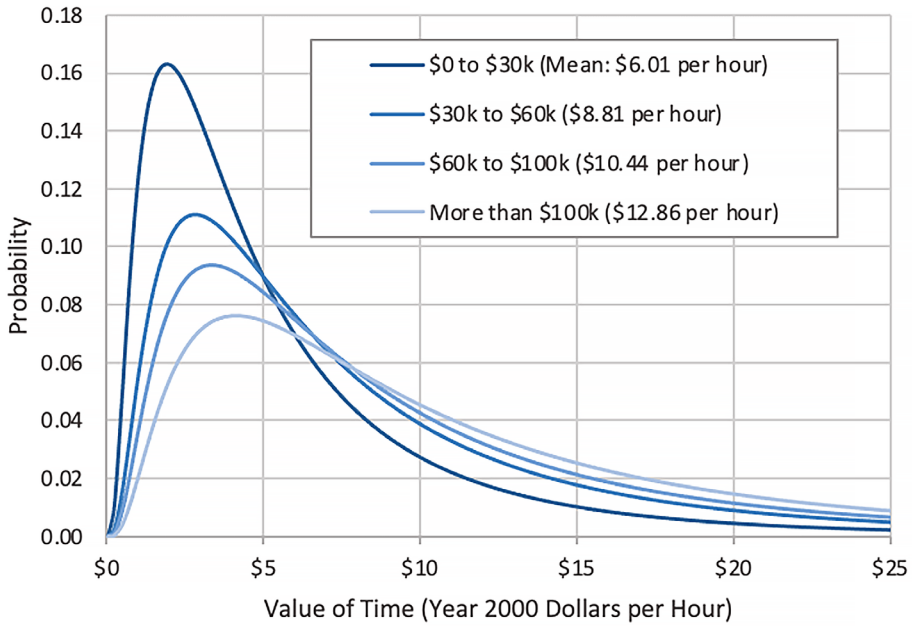
The travel model system includes probabilistic models in which travelers select the best travel mode (e.g., automobile, transit, bicycle, etc.) for each of their daily tours (round trips) and trips. One consideration of this choice is the trade-off between saving time and saving money. For example, a traveler may have two realistic options for traveling to work: (i) driving, which would take 40 minutes (round trip) and cost $10 for parking; or (ii) taking transit, which would take 90 minutes (round trip) and cost $4 in bus fare ($2 each way). The mode choice model structure, as estimated in the early 2000s, includes coefficients that dictate how different travelers in different contexts make decisions regarding saving time versus saving money. These model coefficients value time in units consistent with year 2000 dollars, i.e., the model itself – not an exogenous input to the model – values time relative to costs in year 2000 dollars. Because re-estimating model coefficients is "expensive" (in terms of staff time and/or consultant resources), it is done infrequently, which in effect "locks in" the dollar year in which prices are input to the travel model. To use the model's coefficients properly, all prices must be input in year 2000 dollars. In the remainder of this document, prices are presented both in (close to) 2020 dollars, to give the reader an intuitive sense of the magnitude of the input prices, as well as year 2000 dollars, which are the units required by the model coefficients.

Six different types of prices are explicitly represented in the travel model: (i) bridge tolls; (ii) express lane or per-mile roadway tolls; (iii) transit fares; (iv) parking fees; (v) perceived automobile operating cost; and (vi) cordon tolls. A brief discussion on how the model determines each synthetic traveler's value of time is presented next, after which the input assumptions across each of these price categories are presented.

Value of Time

The model coefficients that link the value of time with the other components of decision utilities remain constant between the baseline and forecast years, with the one exception of the coefficients on travel cost. These coefficients are a function of each synthetic individual's value of time, a number drawn, in both the historical and forecast year simulations, from one of four log-normal distributions (see Figure 27). The means of these distributions are a function of each traveler's household income (see Table 7). The value of time for children in a household is equal to two-thirds that of an adult. The means and shapes of these distributions remain constant across forecast years and scenarios.

Figure 27. Value of time distribution by household income category



Bridge Tolls

The bridge tolls assumed in 2015 and 2050 are shown below in Table 29. The bridge tolls for future years (all alternatives) follow the scheduled increase in in Regional Measure 3.[37]

Table 29. Common peak period bridge tolls in 2015 and 2050

	TOLLS IN YEAR 2015				TOLLS IN YEAR 2050			
	In 2015 Dollars		In 2000 Dollars		In 2020 Dollars		In 2000 Dollars	
Bridge	Base Toll	Carpool Toll	Base Toll	Carpool Toll	Base Toll	Carpool Toll	Base Toll	Carpool Toll
Antioch Bridge	5.00	2.50	3.50	1.75	8.00	4.00	4.29	2.15
Bay Bridge	6.00	2.50	4.20	1.75	9.00	4.00	4.83	2.15
Benicia - Martinez Bridge	5.00	2.50	3.50	1.75	8.00	4.00	4.29	2.15
Carquinez Bridge	5.00	2.50	3.50	1.75	8.00	4.00	4.29	2.15
Dumbarton Bridge	5.00	2.50	3.50	1.75	8.00	4.00	4.29	2.15
Golden Gate Bridge	6.75	4.75	4.72	3.32	8.75	6.75	4.70	3.62
Richmond - San Rafael Bridge	5.00	2.50	3.50	1.75	8.00	4.00	4.29	2.15
San Mateo - Hayward Bridge	5.00	2.50	3.50	1.75	8.00	4.00	4.29	2.15

Express Lane and Per-Mile Roadway Tolls

MTC's travel model explicitly represents the choice of travelers to pay a toll to use an express lane (i.e., a high-occupancy toll lane) in exchange for the time savings offered by the facility relative to the parallel free ("general purpose") lanes. To represent this functionality, MTC staff assigns a toll price by time of day and vehicle class on each tolled link in the network. To simulate the impacts of the tolled lanes efficiently and transparently on behavior, the tolled lane network is segmented within each scenario into logical segments, with each segment receiving a time-of-day-specific per mile fee. To illustrate the detail involved in this coding, Figure 28 (abstractly) presents the morning commute period price for the year 2050 simulations. Please note that the simulated prices are not perfectly optimal, although staff modeled the Plan iteratively to find the prices that meet a pre-defined operational goal – an average speed of 45mph or higher in any time period. The logic used in the toll optimization script is described in Table 30 below. Importantly, the prices are held constant over four-hour morning (6 to 10 a.m.) and evening (3 to 7 p.m.) commute periods. MTC's travel model makes the simplifying assumption that congestion is uniform over the entire four-hour commute periods. The peak one-hour within the four-hour commute period would require a higher toll than those simulated in the model.

37 https://mtc.ca.gov/sites/default/files/BATA%202019%20Toll%20Schedule%20Dec%202018.pdf

Figure 28 also depicts the roadways that comprise the per-mile tolling strategy in the Plan. More details are provided in the section on Strategy T5 to Strategy T5: Implement Means-Based Per-Mile Tolling on Congested Freeways with Transit Alternatives. Additionally, the figure shows the SR-37 corridor, which would be tolled to fund sea level rise adaptation measures on the corridor in the Plan.

Figure 28. Morning commute express lane tolls (in 2000$) for the No Project and Plan alternatives in 2050

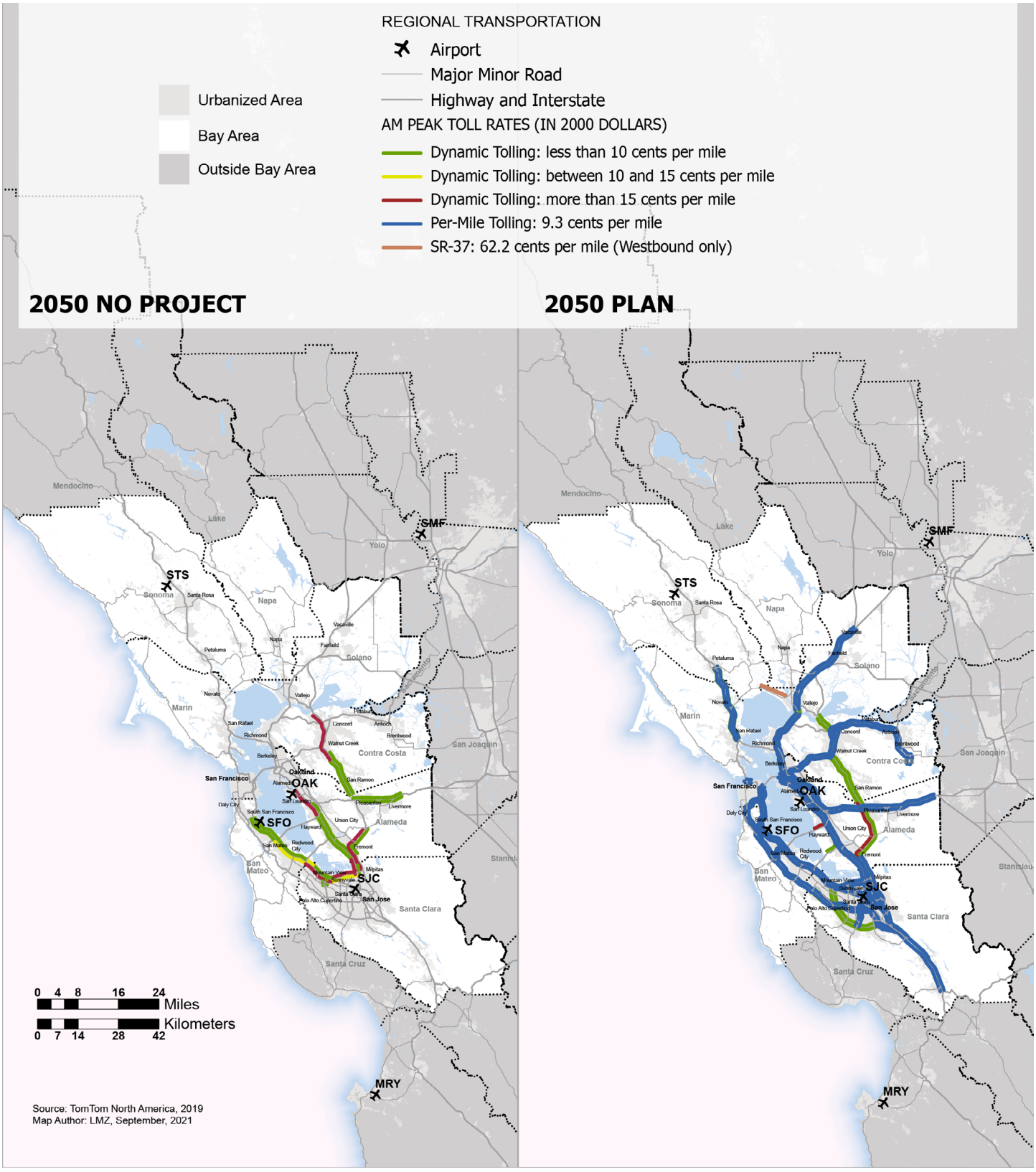


Table 30. Logic used in the toll optimization process

CASE #	EXPRESS LANE (EL) SPEED (MPH)	GENERAL PURPOSE LANE (GP) SPEED (MPH)	INTERPRETATION AND ACTION
Case 1	<=48*	any	EL too slow; increase toll rate.
Case 2	>48	<=40	GP too slow; decrease toll rate.
Case 3	48-60	40-60	OK; no change in toll rate.
Case 4	>60	40-60	GP speed can be improved; decrease toll rate.
Case 5	>48	>60	Set toll to minimum, i.e. 3 cents (2000$) per mile in morning peak, midday, and afternoon peak for drive alone

*Note: The threshold used in the toll optimization script is 48mph, which is slightly higher than the performance target of 45mph. This is because average speeds in toll optimization runs (which only execute only CTRAMP and highway assignment) can be slightly different from the full model run (which includes transit assignment). Setting the threshold slightly higher than the actual performance target makes sure the average speeds in the full model run do not go below 45mph.

Transit Fares

The forecast year transit networks pivot off a year 2015 baseline network (i.e., the alternatives begin with 2015 conditions and add/remove service to represent the various alternatives in future years). The transit fares in 2015 are assumed to remain constant (in real terms) in all forecast years. Staff are therefore explicitly assuming transit fares will keep pace with inflation and that transit fares will be as expensive in the forecast year as they are today, relative to parking prices, bridge tolls, etc. As a simplification, we assume travelers pay the cash fare to ride each transit service. Table 31 includes year 2015 fare prices expressed in both year 2000 and year 2015 dollars.

Table 31. Fare prices (in 2015$ and 2000$) by operator in 2015

OPERATOR	FARE IN 2015 DOLLARS	FARE IN 2000 DOLLARS
West Berkeley Shuttle	Free	Free
Broadway Shuttle	Free	Free
Emery Go-Round	Free	Free
Stanford Shuttles	Free	Free
Caltrain Shuttles	Free	Free
VTA Shuttles	Free	Free
Palo Alto/Menlo Park Shuttles	Free	Free
WHEELS Ace Shuttles	Free	Free
Amtrak Shuttles	Free	Free
Burlingame Shuttle	Free	Free
MUNI - Cable Cars	7.00	4.74
MUNI - Local	2.25	1.52
SamTrans Local	2.00	1.35
VTA - Community Bus	1.25	0.85
VTA - Regular and Limited	2.00	1.35
AC Transit Local	2.00	1.35
WHEELS - Local	2.10	1.42
Union City Transit	2.00	1.35
County Connection (CCCTA) - Local	2.00	1.35
Tri Delta Transit	2.00	1.35
WESTCAT Local	1.75	1.19
SolTrans - Local	1.75	1.19
Fairfield And Suisun Transit - Local	1.75	1.19

OPERATOR	FARE IN 2015 DOLLARS	FARE IN 2000 DOLLARS
American Canyon Transit	1.00	0.68
Vacaville City Coach	1.60	1.08
VINE (Napa County) - Local	1.60	1.08
Sonoma County Transit - Local	1.50	1.02
Santa Rosa CityBus	1.50	1.02
Petaluma Transit	1.50	1.02
Golden Gate Transit - Local	1.80	1.22
SamTrans - Express	2.00	1.35
VTA - Express	4.00	2.71
Dumbarton Express	2.10	1.42
AC Transit - Transbay	4.20	2.84
County Connection (CCCTA) - Express	2.25	1.52
Golden Gate Transit - Express	5.00	3.39
Golden Gate Transit - Richmond	4.40	2.98
WESTCAT - Express	5.00	3.39
SolTrans - Express	1.75	1.19
Fairfield and Suisun Transit - Express	2.75	1.86
VINE (Napa County) - Express	3.25	2.20
MUNI Metro	2.25	1.52
VTA - Light Rail	2.00	1.35

For SamTrans Express and SolTrans Express, the local fare is initially applied. An additional fare is paid as the Express lines traverse screen lines outside the service area for local bus service. For rail and ferry service, the fares vary based on posted fares between individual stations/terminals.

Parking Prices

The travel model segments space into travel analysis zones (TAZs). Simulated travelers move between TAZs and, in so doing, burden the transportation network. Parking costs are applied at the TAZ level: travelers going to zone X in an automobile must pay the parking cost assumed for zone X.

The travel model uses hourly parking rates for daily/long-term (those going to work or school) and hourly/short-term parkers. The long-term hourly rate for daily parkers represents the advertised monthly parking rate, averaged for all lots in a given TAZ, scaled by 22 days per month, then scaled by 8 hours per day; the short-term hourly rate is the advertised hourly rate — generally higher than the rate daily parkers pay — averaged for all lots in a given TAZ. Priced parking in the Bay Area generally occurs in greater downtown San Francisco, downtown Oakland, Berkeley, downtown San Jose, and Palo Alto.

When forecasting, it is assumed that parking prices change over time per a simple model: parking cost increases in line with employment density. Across the scenarios, therefore, the parking charges vary with employment density according to their land use input. For the Plan and EIR Alternatives 1 and 2, additional parking pricing is included, as described in more detail in the following Strategy Implementation section.

Perceived Automobile Operating Cost

When deciding between traveling in a private automobile or on a transit vehicle (or by walking, bicycling, etc.), the modeling process assumes travelers consider the cost of operating and maintaining, but not owning and insuring, their automobiles. The following three inputs are used to determine the perceived automobile operating cost: average fuel price, average fleet-wide fuel economy, and non-fuel related operating and maintenance costs.

To improve consistency among regional planning efforts across the state, the Regional Targets Advisory Committee (formed per Senate Bill 375) recommended that California's metropolitan planning organizations (MPOs) use consistent assumptions for fuel price and for the computation of automobile operating cost in long range planning. The assumptions for Plan Bay Area 2050 build off the multi-agency methodology developed by the four largest MPOs for the previous round of regional plans, as well as resources provided by the California Air Resources Board (CARB). The fuel price forecasts use projections generated by the United States Department of Energy (DOE) and California Energy Commission (CEC). Gas tax rates are added to base fuel price forecasts to project total fuel cost rates. The average fleet-wide fuel economy implied by CARB's EMFAC2017 model is used to represent the average fleet-wide fuel economy. Non-fuel operating and maintenance costs are based on data from AAA and forecasted using growth assumptions developed in the multi-MPO methodology. A summary of assumptions is presented in Table 32. Note that the prices in the table are presented in year 2017 dollars, year 2010 dollars (the units used in the above referenced documentation), and year 2000 dollars (the units of the travel model).

Table 32. Perceived automobile operating cost assumptions

MEASURE	ANALYSIS YEAR	
	2015	2050
Average fuel price (Year 2000 dollars per gallon)	$2.19	$3.22
Average fuel price (Year 2010 dollars per gallon)	$2.77	$4.06
Average fuel price (Year 2017 dollars per gallon)	$3.35	$4.91
EMFAC-implied fuel economy (miles per gallon)	23.48	44.23
Non-fuel-related operating cost ($2000 per mile)	$0.04	$0.10
Non-fuel-related operating cost ($2010 per mile)	$0.06	$0.13
Non-fuel-related operating cost ($2017 per mile)	$0.07	$0.16
Perceived automobile operating cost ($2000 per mile) †	$0.14	$0.17
Perceived automobile operating cost ($2010 per mile) †	$0.17	$0.22
Perceived automobile operating cost ($2017 per mile) †	$0.21	$0.27

† – Sum of the fuel-related operating cost (fuel price divided by fuel economy) and non-fuel-related operating cost.

New Model Features and Associated Assumptions

Ride-Hailing

Since Plan Bay Area 2040, a key enhancement made to the Travel Model is the explicit representation of ride-hailing modes, including Taxi and Transportation Networking Companies (TNCs) such as Uber and Lyft. Specifically, the tour and trip-based mode choice models have been modified to include a new ride-hailing nest.[38] This new nest has three sub-alternatives: traditional taxi, non-pooled TNC (e.g. UberX) and pooled TNC (e.g. UberPool).

Tour and Trip Mode Choice Utilities

For all three ride-hailing modes, the tour and trip mode choice utilities are specified as a function of in-vehicle time, wait time, cost (including fares, bridge tolls, road tolls), an alternative-specific constant, and a "TNC availability adjustment" constant. Table 33 below summarizes the assumptions used in these utility components in the Plan and EIR Alternatives.

38 The mode choice model is a nested logit model. Choices within the same "nest" in a model are closer substitutes to one another than other choices.

Table 33. Taxi and TNC utility components in Plan Bay Area 2050 modeling

UTILITY COMPONENTS	VARIABLE	COEFFICIENTS
In-vehicle time	For taxi and non-pooled TNC: travel time is generated from the network modeling component of the Travel Model. For pooled TNC: a multiplier of 1.5 is applied to the travel time of non-pooled TNC, to reflect detours taken to pick-up or drop-off additional customers.[39]	Generic in-vehicle coefficient (i.e., same coefficient used in drive alone and other modes)
Wait time	Simulated from distribution Taxi and TNC mode wait times are simulated from distributions that were estimated based on a survey of actual taxi and TNC wait times conducted in the Portland region in 2015.[40] Lognormal distributions were estimated from this observed data for each mode according to the land-use density of the tour or trip origin.	1.5 times the in-vehicle time coefficient (to represent that time spent on waiting is more onerous than time spent in vehicle)
Fares	A function of minimum cost, initial cost, cost per mile, distance, cost per minute, in-vehicle time Based on 2015 data.[41]	Generic cost coefficient (i.e., same coefficient used in drive alone and other modes)
Bridge tolls	Based on Regional Measure 3[42] Additionally, based on current TNC policies, it is assumed that TNC users are being charged bridge toll both ways.[43] For example, even though Golden Gate Bridge (Northbound) is free, TNC users who cross the bridge still must pay for the toll for the driver's return trip.	Generic cost coefficient (i.e., same coefficient used in drive alone and other modes)
Roadway tolls	Based on Plan tolling strategy inputs described in the section,	Generic cost coefficient (i.e., same coefficient used in drive alone and other modes)
Alternative-specific constant	Different constant for the three ride-hailing modes and for different household car-sufficiency level (0 car, fewer cars than workers, or more cars than workers)	Calibrated based on 2015 data. See detail in Travel Model 1.5 Calibration and Validation documentation[44]
TNC availability adjustment	A user-defined parameter to account for presumed wider availability compared to base year. Expressed in terms of minutes of "in-vehicle travel time equivalent"	Base year = calibrated Future-year (2050) = asserted to be 15 minutes of in-vehicle travel time equivalent (deducted from the utility, making TNCs more attractive)

39 For shared TNCs, an in-vehicle time multiplier of 1.5 is applied to reflect detours taken to pick-up or drop-off additional customers. The factor of 1.5 was used in the Plan run, based on data collected in Chicago between November 2017 to March 2018 (Schwieterman and Livingston (2018) available on https://las.depaul.edu/centers-and-institutes/chaddick-institute-for-metropolitan-development/research-and-publications/Documents/Uber%20Economics_Live.pdf).

40 See: https://www.portlandmercury.com/images/blogimages/2015/07/10/1436550157-uber_taxi_report.pdf). The only modification to the empirical distribution was that for the highest density area type we reduced the mean wait time slightly, from 4.7 minutes to 3 minutes, to represent presumed shorter wait time in the highest density areas in San Francisco compared to Portland.

41 See details in: https://github.com/BayAreaMetro/modelingwebsite/wiki/TravelModel1.5#Ridehailing_and_Taxi_Modes.

42 See: https://mtc.ca.gov/sites/default/files/BATA%202019%20Toll%20Schedule%20Dec%202018.pdf.

43 See the "Return Charges" section in https://help.lyft.com/hc/en-us/articles/115012927227.

44 See: https://github.com/BayAreaMetro/modeling-website/wiki/Development.

Vehicle Occupancy Assumptions and Autonomous TNCs

After mode choice and other demand model components are run, ride-hailing trips are assigned in the network modeling component of TM1.5. The total trips in each ride-hailing mode are multiplied by their vehicle occupancy factors, which determine the number of ride-hailing trips to be assigned as single-occupant, double-occupant, or 3+ occupant trips.

The vehicle occupancy factors were developed using data collected from the pilot phase of the Bay Area Transportation Study,[45] since the full survey was not available at the time of this model development work. The pilot was conducted in Fall 2018, with close to 1,300 ride-hailing trips collected.

The vehicle occupancy factors applied in the Plan are described in Table 34 below. According to data collected from the pilot of the Bay Area Transportation Study, 53% of the non-pooled TNC trips were 2-person occupancy and 47% were 3+ person occupancy in 2018 (there were no single occupancy taxi or TNC trip because each trip should have at least one driver and one passenger, except for out-of-service movement which is considered separately and will be explained in the "deadheading" section below). For future years (2035 onwards), it is assumed that TNC vehicles will become autonomous, and therefore the 53% that were 2-person occupancy are assumed to be single occupancy, and the 47% of that were 3+ person occupancy are assumed to be 2+ person occupancy. Similarly, for pooled TNC trips, the data suggests that 18% of the pooled TNC trips were 2-person occupancy (one driver plus one passenger, as the TNC did not successfully match an additional passenger for that trip) and 82% were 3+ person occupancy (one driver plus at least 2 passengers) in 2018. For future years (2035 onwards), since it is assumed that TNC vehicles will become autonomous, some percentage of the pooled TNC trips will become single occupancy. Staff assumed 9% (lower than the 18% that were 2-person occupancy in the base year) to reflect improvement in ride-matching.

45 See: https://mtc.ca.gov/our-work/plans-projects/other-plans/bay-area-transportation-study.

Table 34. TNC vehicle occupancy assumptions

		SHARE OF TRIPS BY OCCUPANCY	
Mode	Occupancy	2015	2035 and 2050
Taxi	single	0%	0%
	double	53%	53%
	three or more	47%	47%
TNC non-pooled	single	0%	53%
	double	53%	29%
	three or more	47%	18%
TNC pooled	single	0%	9%
	double	18%	29%
	three or more	82%	62%

Deadheading

Deadheading, or out-of-service movement, is the movement of a vehicle without a passenger. TNCs and taxis cruise around to look for fares and reposition before or after a paid trip. Modeling deadheading is a new area in the field of travel modeling. During the Plan Bay Area 2050 model upgrade effort, very little data about taxi and TNC deadheading behavior was available and so staff could not justify the development of a detailed deadheading model. Therefore, a simple approach was implemented, involving the application of a multiplier (a "zero-passenger vehicle-mile factor") to the transpose of the taxi and TNC trip origin-and-destination matrices to represent deadheading trips.

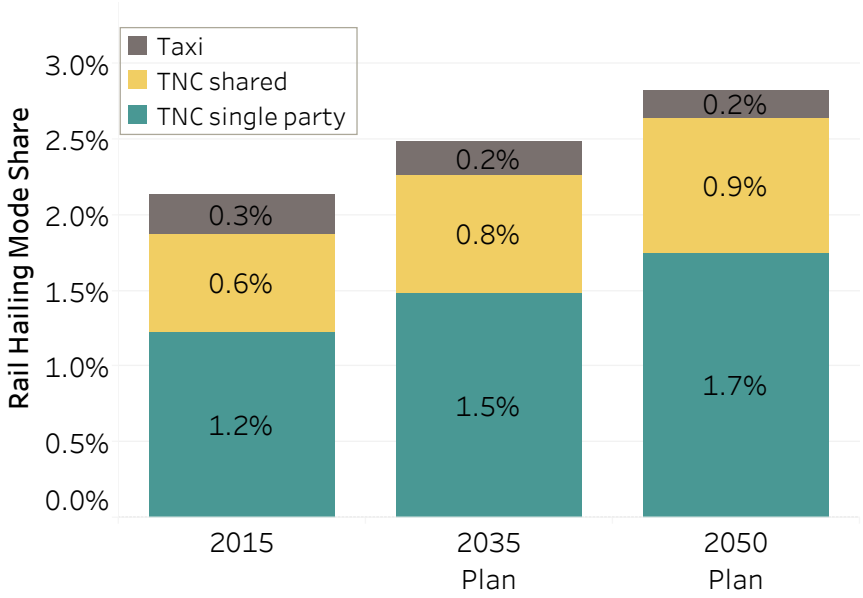
The zero-passenger vehicle-mile factor is a user-defined parameter in the model and can be easily updated when better data becomes available. Based on data from the California Public Utilities Commission (CPUC), the current assumption is that for every mile driven with passengers, a ride-hailing vehicle drives another 0.7 miles without passengers.[46] While simplistic, this method allows the model to represent the pollution and greenhouse gas emissions from the additional VMT generated from deadheading.

46 Source: aggregated statewide data released by the California Public Utilities Commission: http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Divisions/Policy_and_Planning/PPD_Work/PPD_Work_Products_(2014_forward)/Electrifying%20the%20Ride%20Sourcing%20Sector.pdf.

Modeled TNC Shares in Base and Future Years

As shown in Figure 29, future TNC mode share is expected to grow but remains a small share of the overall market, growing from 1.8% in 2015 to 2.5% in 2050 regionwide. Much of the growth is driven by the assumption that TNCs will be more widely available (via a user-defined input known as "availability adjustment" described in Table 33).

Figure 29. Modeled TNC shares



At the time of Travel Model 1.5 development for Plan Bay Area 2050, there was a dearth of available data for the calibration of TNC mode shares. Therefore, staff focused model calibration on meeting conventional calibration targets (including achieving estimated transit boardings within 10% of what is observed for each operator, and 20% percent root mean square for high volume roadway links), since reliable data about transit boardings and traffic counts exist. The underlying logic is that as long as transit boardings are within 10% of observed, then the number of TNC trips would not be too far off.

Another MTC effort, the Bay Area Transportation Study, was underway at the same time as the Plan Bay Area 2050 effort. The survey fieldwork was conducted in spring 2019. The data from the Bay Area Transportation Study was not available in time for model calibration but became available at the time of this report writing. Some key numbers from the Bay Area Transportation Study are shown in Table 35, along with a couple other key references for a retrospective model validation. Staff found that the 2015 TNC mode share erred on the high side, especially in the mode share outside San Francisco. While staff acknowledges this caveat, it is not expected to have a significant impact on the modeling GHG results since TNC represents a small share of the overall mode share. More detailed validation results (e.g., trip lengths and county-to-country trip matrices) are available in the Travel Model 1.5 Calibration and Validation documentation.

Table 35. Key references for retrospective model validation

VALIDATION DATA	VALIDATION DATA DETAIL	TM1.5	REMARK
Combined mode share for TNC and Taxi	NHTS 2017 data suggest that the combined mode share for Taxi and TNC was 0.91% on a typical weekday for the Bay Area.	2015 base year has a combined mode share for TNC and Taxi = 2.1%	Note that the NHTS data is more recent. One would expect TNC usage was lower in 2015 than 2017. Combined mode share for TNC and Taxi probably too high in the base year of TM1.5 (2015).
Vehicle trips within San Francisco	"On a typical weekday, ride-hail vehicles make more than 170,000 vehicle trips within San Francisco, approximately 12 times the number of taxi trips, representing 15 percent of all intra-San Francisco vehicle trips." (from the report TNCs Today, published in 2017, with data reflecting November and December 2016 situation)[47] CPUC data suggests that the year-on-year growth for TNC trip miles was 122% statewide between 2015 and 2016. Assuming the statewide data applies to vehicle trips within San Francisco, a rough estimate of intra-SF ride-hail trips is 77,000.	Intra-SF TNC trips = 71,000 in 2015	TNC Today's data includes TNC trips made by non-residents, and data for scaling the number to residents only is unavailable. Thus, the TNC Today number should be treated as an upper bound.
Trip mode share (San Francisco and non-SF)	San Francisco = 3.0% Non-San Francisco = 0.6% Reported in Bradley et al. (2021), Spring 2019 data. San Francisco refers to all trips to, from or within San Francisco.	San Francisco = 2.3% Non-San Francisco = 1.7%	Trip mode share for TNC in TM1.5 is probably too high outside of San Francisco.

47 SFCTA. 2017. TNCs Today — A Profile of San Francisco Transportation Network Company Activity. Draft Report. San Francisco, CA: San Francisco County Transportation Authority.

Autonomous Vehicles

One main difference between Travel Model One and the enhanced Travel Model 1.5 is the ability to incorporate different levels of autonomous vehicle (AV) market penetration. The enhancements include:

- **Auto ownership:** extended to consider ownership of both autonomous (AV) and human driven (HV) vehicles
- **AV allocation:** a simulation model was added to determine, for AV-owning households, whether an AV is allocated for a tour
- **Tour and trip mode choice:** user-defined coefficients to represent AV scenario assumptions are added
- **Zero passenger vehicle module:** a multiplier, known as the zero-passenger vehicle factor, is applied to the transpose of the AV and TNC trip matrices to represent zero passenger vehicle trips
- **Traffic assignment:** AVs (together with TNCs) are assigned as a separate vehicle class from the existing vehicle classes. This allows analysts to generate summaries specific to AVs and TNCs. Also, to represent potential increases in effective roadway capacity due to closer vehicle spacing, the traffic assignment module of TM1.5 is updated such that the passenger-car equivalent[48] of AVs is configurable by facility type.

Detailed documentation about these enhancements is available on the Travel Model 1.5 documentation wiki.[49] This report will focus on the user-defined coefficients used in Plan Bay Area 2050 modeling.

Since fully autonomous vehicles are still a nascent technology that is not available to the public yet, there is considerable uncertainty around its operational characteristics and the associated traveler behavioral responses. TM1.5 allows users to define different coefficients that represent different AV modeling assumptions. The user-defined coefficients in Plan Bay Area 2050 modeling were informed by the outcomes of a literature search, a series of presentations, a workshop and a survey of Regional Modeling Working Group[50] participants that took place in late 2018 as part of the Horizon process. These coefficients and assumptions are presented in Table 36.

Given these assumptions, the incorporation of AV use and their deadheading miles in Plan Bay Area 2050 modeling shows that the emergence of AVs has an adverse impact on the Bay Area's ability to meet its VMT and GHG reduction goals. In a test run, in which AV market penetration was set to zero while holding all else the same as the 2050 Plan scenario, the VMT per capita was 9% lower than the Plan (14.9 in the test, compared to 16.3 in the Plan).

48 PCE rates are generally determined prior to the assignment step, with values of 1.0 given to passenger vehicles and values greater than 1.0 to trucks. To simulate increase in roadway capacity due to AVs, PCEs of less than 1.0 can be assigned to the vehicles that are assumed to be autonomous.

49 Travel Model 1.5 Documentation wiki: https://github.com/BayAreaMetro/modeling-website/wiki/TravelModel1.5#Autonomous_Vehicles.

50 The Regional Modeling Working Group is comprised of planners and modelers working for transportation agencies in the San Francisco Bay Area. In 2018-2020, the working group has more than 20 active members who regularly attend the group's monthly meetings.

Table 36. Autonomous vehicle modeling assumptions

VARIABLE	VARIABLE DESCRIPTION	ASSUMPTION
Fleet Penetration	Share of total passenger vehicle fleet that is autonomous	2035: 5% 2050: 20%
Auto Ownership Likelihood by Households	Coefficients representing different likelihood of AV ownership by household types	Based on recent research for FHWA[51]
Household Use Allocation	Probability boosts representing that, for AV-owning households, AVs are more likely to be used than human-driven vehicles	The probability boost is set to 1 (i.e., the assumption was that AV and human driven vehicles are equally likely to be used within an AV owning households)
In-Vehicle Time Coefficient for Mode Choice	The marginal disutility of in-vehicle travel time	Same as human driven vehicles
Parking Cost, Per-mile Auto Operating Cost and Terminal Time	Parking and per-mile auto operating costs are self-explanatory. Terminal Time refers to the time it takes to park the vehicle and walk from the parking location to the actual destination.	Same as human driven vehicles
Zero-Passenger Vehicle Factor	Factor reflecting that every AV mile driven with passengers yields additional mileage without passengers	0.7 (i.e., for every mile driven with passengers, an AV drives another 0.7 miles without passengers)[52]
Effective Roadway Capacity	Passenger-car equivalent reflecting improved vehicle spacing	1.0 (i.e., no effective roadway capacity increased is expected given the low AV market penetration assumed in the Plan)

Telecommuting

The implementation of telecommuting was updated slightly for Travel Model 1.5 to better represent Strategy EN7: Expand Commute Trip Reduction Programs at Major Employers, described in more detail below. In the previous version of the model, telecommuting was represented by dampening the likelihood of making a mandatory tour within the Coordinated Daily Activity Pattern sub-model for workers. The Coordinated Daily Activity Pattern sub-model was estimated and calibrated for Travel Model One v0.3, which was released in April 2012. As described in that version's Calibration and Validation Technical Report,[53] the model specification was transferred from the Atlanta Regional Commission (ARC) model, and the Travel Model One calibration was based on targets from the Bay Area Travel Survey (BATS) 2000, with adjustments to offset respondents' underreporting of travel. For the modeled base year of 2015, 80.8% of full-time workers made a work tour and 19.2% of full-time workers did not make a work tour in the modeled day. When looking at all workers (including part-time), this grew to 24.2% of workers who did not make a work tour on an average workday.

51 https://www.fhwa.dot.gov/planning/tmip/publications/other_reports/model_impacts_cavs/.

52 Same factor as TNC deadheading is used. SOURCE: aggregated statewide data released by the California Public Utilities Commission: http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Divisions/Policy_and_Planning/PPD_Work/PPD_Work_Products_(2014_forward)/Electrifying%20the%20Ride%20Sourcing%20Sector.pdf.

53 Travel Model Development: Calibration and Validation - Technical Report, May 17, 2012: https://mtcdrive.box.com/s/7crr7bwhromi2au42jnpp11fqe5l24xq.

In updating the telecommuting implementation in Travel Model 1.5 for this plan, staff looked further into the data and assumptions previously made around teleworking. Workers who do not make a work tour on an average weekday may do so because they have an alternate work schedule, or because they are taking a vacation, personal or sick day, or because they are telecommuting. It is therefore necessary to assume what portion of workers who are not making work tours are doing so because they are telecommuting versus not working that day. Initially, staff looked at estimates of telecommuting from the American Community Survey's Table B08301: Means of Transportation to Work, which included data for "Worked at home." The ACS 1-year Estimates for 2015 dataset estimated that 5.6% of Bay Area workers aged 16 years and over worked at home. However, the ACS data under-represents telecommuting as defined for travel modeling, stating that the "principal means of transportation to work refers to the mode of travel used to get from home to work most frequently" (emphasis added). Therefore, this estimate does not include workers who telecommute regularly but less than the majority of the work week. Thus, staff looked at the results of the Bay Area Transportation Study[54], which surveyed Bay Area residents about their travel behavior in the fall of 2018 and the spring of 2019. This survey asked whether respondents traveled to work and/or teleworked on each day of survey participation. Using weighted data representing a "typical" (here, Monday through Thursday) weekday, the survey results of full-time workers showed dramatically higher rates of not-working, 19.9%, as well as telecommuting (with no work tours), 15.6%, with only 64.4% of workers making a work tour.

Since recalibration of the Coordinated Daily Activity Pattern sub-model was out of scope, staff did not alter the overall assumption of workers not making work tours in the 2015 base year. Therefore, staff applied the proportion from the survey: that 56.1% of full-time workers who did not go to work did not work that day, and the remainder teleworked; for part-time workers, 55.3% of workers who did not go to work did not work that day. Applying this assumption resulted in a telecommute rate assumption of 8.5% of full-time workers and 16.6% of part-time workers in the 2015 base year, and 10.3% across all full- and part-time workers. Doing a similar summary of the 2005 base year model run resulting in a telecommute rate assumption of 7.8% of full-time workers and 17.0% of part-time workers, and 9.5% across all full- and part-time workers. Staff fit an exponential curve to these two base years to extrapolate No Project telecommute rates for future years.

Table 37. Baseline telecommute rate assumption, 2005-2050, as a percentage of full- and part-time workers (including those not working on a given day)

MODEL YEAR	OVERALL TELECOMMUTE RATE ASSUMPTION
2005	9.5%
2015	10.3%
2025	11.0%
2030	11.4%
2035	11.8%
2040	12.3%
2050	13.2%

For future years, this base level of telecommute increase was represented by increasing the magnitude of a constant which would reduce the likelihood of a full-time worker making a work tour in the Coordinated Daily Activity Pattern sub-model. Because telecommuting eligibility is correlated with higher-wage occupations and occupation/industry is not attached to any individual worker in the model, this constant was applied only to workers with a household income of $50,000 or higher (in 2000 dollars). The methodology used for representing telecommuting remained unchanged from Plan Bay Area 2040; the only update made was the distinction between workers not working and workers telecommuting described above, which affected the telecommute rate estimation from model runs as well as the telecommute assumption used in future (No Project) model years.

54 https://mtc.ca.gov/our-work/plans-projects/other-plans/bay-area-transportation-study.

Several transportation strategies comprised of programmatic expenditures on projects exempt from air quality conformity analysis, such as state of good repair investments or transit stop improvements, were not evaluated in the travel model. This affected the following strategies:

- **Strategy T1:** Restore, Operate and Maintain the Existing Transportation System: the only modeled component of this strategy was the restoration of transit headways to baseline levels in the Plan after 2030 from the reduced service levels described in the Transit Network section above.
- **Strategy T2:** Support Community-Led Transportation Enhancements in Equity Priority Communities: the specific projects that would be funded under this strategy would be defined later, through a collaborative process allowing residents of Equity Priority Communities to prioritize projects. Existing community-engaged planning work at MTC and ABAG suggests that community recommendations would likely focus on improvements that do not increase transit or road capacity, such as bus shelters, sidewalk improvements or traveler information services. As such, this strategy was not modeled.
- **Strategy T7:** Advance Other Regional Programs and Local Priorities: in general, investments nested within this strategy include improvements to local streets not represented within the travel model network or ongoing programs that do not increase capacity on roads or transit systems. As such, this strategy was not modeled.

Strategy T3 | Enable a Seamless Mobility Experience

The goal of this strategy is to reduce the friction of taking multi-operator or multi-modal trips. It encompasses several different elements, such as a smartphone app for trip planning and payment, real-time passenger information, wayfinding signage and cross-operator schedule coordination. The modeling approach focuses on the cross-operator schedule coordination element.

Cross-operator schedule coordination is expected to be implemented in 15 strategic locations (see Figure 30). In the model, a maximum transfer time was applied at these locations (i.e., transit nodes in modeling terminology). The transit nodes are classified as either a regional-to-regional node or a regional-to-local node. Regional-to-regional nodes are given a maximum transfer time of 3 minutes, whereas regional-to-local nodes are given a maximum transfer time of 5 min (see summary in Table 38 below).

Transfer time is one of the travel time components in the mode choice model. Reduced transfer times make transit a more attractive choice to travelers. In TM1.5, the model coefficient for transfer time is twice the magnitude of the model coefficient for in-vehicle time, to represent travelers' perception that a minute spent on transferring is more onerous than a minute spent sitting in a vehicle.

Figure 30. Seamless nodes

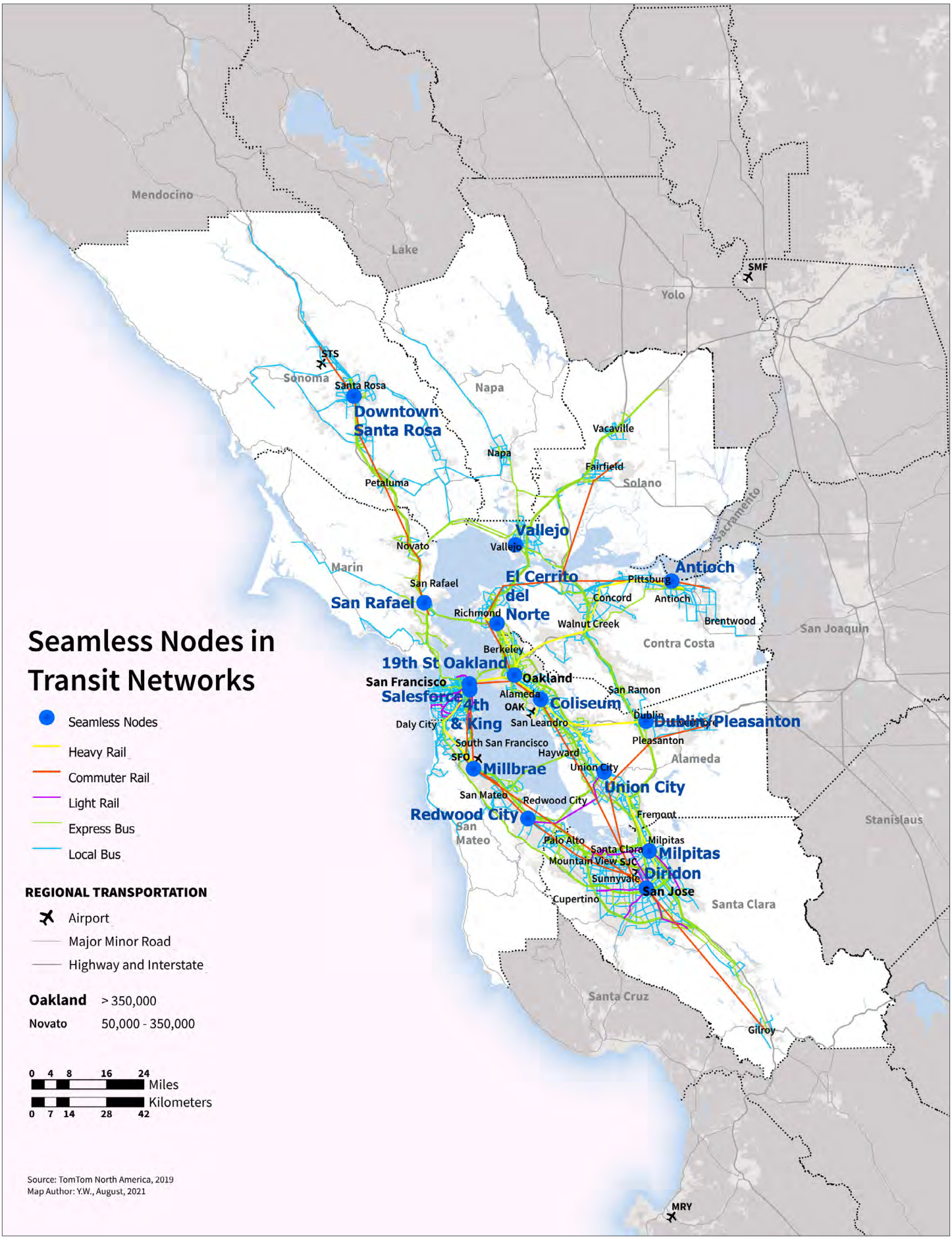


Table 38. Maximum transfer time at seamless nodes

CLASSIFICATION	TRANSIT NODE	TRANSIT SERVICE
Regional-to-local node (maximum transfer time = 5 minutes)	19th St Oakland	BART ↔ ReX, BRT
	4th and King	Caltrain ↔ Muni
	Antioch	BART ↔ BRT
	Diridon	Caltrain ↔ BART, ReX, VTA
	Downtown Santa Rosa	SMART ↔ Bus
	Milpitas	BART ↔ VTA
	Salesforce	Caltrain ↔ Muni
	Vallejo	ReX ↔ Bus
Regional-to-regional node (maximum transfer time = 3 minutes)	Coliseum	BART ↔ Bus
	Dublin/Pleasanton	BART ↔ Valley Link
	El Cerrito del Norte	BART ↔ ReX
	Millbrae	Caltrain ↔ BART
	Redwood City	Caltrain ↔ ReX, Dumbarton
	San Rafael	SMART ↔ Bus
	Union City	BART ↔ Dumbarton

Strategy T4 | Reform Regional Transit Fare Policy

The regional transit fare reform has two parts: (i) a streamlined fare structures across the region's 27 transit operators and replace existing operator-specific discount fare programs with an integrated fare structure across all transit operators; and (ii) a means-based fare discount for low-income riders.

Regional transit fare reform was implemented in Travel Model 1.5 by effectively overriding the fares calculated by the normal methods. During the normal course of a travel model run, fares are calculated from a variety of methods, including flat, operator-based fares; stop-to-stop based fares for some operators (such as BART and Caltrain); transfer fares and discounts, etc. To represent a regional integrated fare structure, these fares were calculated normally, but then swapped out with an integrated fare structure before being used by the travel model core, where simulated travelers make decisions about their travel. The integrated fares included were as follows: for travelers who used only local buses (including light rail), a flat fare of $2.55 (in 2020 dollars) was assumed. For travelers who used other modes (ferry, express bus, commuter rail or heavy rail), a fare was assumed based upon the total distance traveled on transit.

Table 39. Reform Regional Transit Fare Policy assumptions for distance-based regional transit fares

DISTANCE TRAVELED	FARE (IN 2020 DOLLARS)	FARE (IN 2000 DOLLARS)
0-10 miles	$3.62	$2.17
10-20 miles	$4.68	$2.80
20-30 miles	$5.71	$3.42
30-40 miles	$6.75	$4.04
40-50 miles	$7.78	$4.66
Over 50 miles	$8.82	$5.28

A means-based fare discount of 50% was given in the model to individuals in households with annual incomes less than $30,000 (in 2000$). Modeling of this discount was implemented through a simple change in the fare input to the mode choice component, in which lower fares make transit a more attractive choice to low-income travelers.

While the means-based fare discount is reflected in the mode choice component of TM1.5, it is not reflected in the transit route choice component of the model. This is because the transit assignment component of TM1.5 does not have income segmentation. Adding income segmentation to the transit assignment component would require a significant level of effort to upgrade the model. More importantly, adding income segmentation to transit assignment would greatly increase model run time. Given these resource constraints and potential run time issues, MTC staff decided not to pursue such an upgrade. This means discounted fares would not be a factor affecting transit route choice in the model, but MTC staff judged this a minor caveat that would not have a significant impact on the modeling results – especially since all operators/routes would have the same discount level.

This strategy was modeled consistently across the Plan and EIR Alternatives with one key exception. In EIR Alternative 2, the means-based fare discount was extended to passengers with a household income in quantile 2 (under $100,000 in 2020 dollars) to better advance equity outcomes.

Strategy T5 | Implement Means-Based Per-Mile Tolling on Congested Freeways with Transit Alternatives

This strategy involves implementing a per-mile charge on auto travel on congested freeway corridors where transit alternatives exist (BART, Caltrain, SMART, Valley Link, VTA Light Rail, and Regional Express Bus). Drivers on these corridors would pay a higher charge during the morning and evening peak periods, with discounts for off-peak travel, carpools with three or more occupants, or travelers with a qualifying disability (although disability is not modeled). Toll rates would be 15 cents per mile (9.3 cents per mile in 2000$) for solo travel in the morning (6am to 10am) and afternoon (3pm to 7pm) peak periods and 5 cents per mile (3.1 cents per mile in 2000$) for travelers in discount categories above. To support equity goals and reduce the potentially regressive impact of this pricing measure, lower-income drivers (i.e., those in households with annual income lower than $100,000 in 2020$, or $60,000 in 2000$) would be charged only half of the per-mile tolling rate. Bridge tolls would remain in effect, with no per-mile toll on the bridges. Existing express lanes on corridors without a transit alternative would continue to operate, while existing express lanes on corridors with per-mile tolling would be converted to carpool lanes on an all-lane tolling corridor. Figure 28 shows a map of the per-mile tolling corridors in the Plan (and EIR Alternatives 1 and 2) in 2050 in red. The figure also shows other priced corridors, including other express lanes that would be tolled but not part of the per-mile tolling system and the SR-37 priced corridor which would be tolled to fund sea level rise adaptation measures.

Strategy T6 | Improve Interchanges and Address Highway Bottlenecks

This strategy includes a set of capacity expansions or operational improvements on highway corridors and at interchanges throughout the region. This includes improvements at key regional interchanges like the I-80/I-680/SR-12 interchange in Solano County, the I-680/SR-4 interchange in Contra Costa County, and more. Widenings are highly limited and include the widening of SR-4, the construction of a new connector facility between SR-4 and Byron Highway, and a direct connector between US-101 and I-580. The complete set of projects included in this strategy can be found in the Draft Plan Bay Area 2050 Transportation Project List.

The Plan and the EIR Alternatives included the same projects nested under this strategy, with a few key exceptions. For EIR Alternative 1, the following projects were removed to minimize environmental impacts:

- SR-37 Interim Project
- SR-37 Ultimate Project
- SR-262 Safety and Interchange Improvements | Phase 1
- I-680/SR-4 Interchange Improvements Phases 1, 2, 4 and 5
- SR-4 Operational Improvements (Eastbound and Westbound)
- Widening of SR-4 and Vasco Road
- US-101/I-580 Direct Connector
- I-80/I-680/SR-12 Interchange and Widening Phases 3-7
- Vasco Road Byron Highway Connector Road

Strategy T8 | Build a Complete Streets Network

This strategy involves enhancing streets to promote walking, biking, and other micro-mobility by (1) building out a contiguous regional network of 10,000 miles of bike lanes or multi-use paths; (2) providing support to local jurisdictions to maintain and expand car-free slow streets; and (3) supporting other amenities like improved lighting, safer intersections, and secure bike parking at transit stations. This strategy would emphasize Complete Streets improvements near transit to improve access and in Equity Priority Communities to advance equity outcomes (although the geographical aspect of this strategy is not clearly determined yet and is not modeled).

Travel Model 1.5 does not include a detailed bike and pedestrian network, and it is not designed to represent traveler responses to improvement in safety and comfort that may result from a Complete Streets network or expanded bike infrastructure. Therefore, to predict this strategy's potential impacts, staff estimated the effect of this strategy based on available literature and integrated this effect into the modeled mode choice.

Three research studies, Dill and Carr (2003), Marshall and Garrick (2010), and Buehler and Pucher (2011), were identified by CARB in the Final Sustainable Communities Strategy Program and Evaluation Guidelines Appendices (November 2019) as providing elasticities that can be used to determine the relationship between bike infrastructure supply (e.g., miles of bike lane per square mile of land, or miles of bike) and bike usage (e.g., percent commuting by bicycle). Based on GIS analysis, MTC staff determined that the Complete Streets Network strategy is expected to add 5,600 miles of new bicycle infrastructure between 2015–2035 and another 6,000 miles between 2036-2050. Given this input, staff used the relationships inferred from the three research studies cited above and calculated the expected mode shift. The expected impact on walking is not modeled, as the existing literature does not provide enough evidence to estimate these impacts.

The bicycle mode choice constant was increased to represent improvement in several unmeasured characteristics of the mode such as perceived safety, comfort and convenience resulting from the bike infrastructure expansion. Without the constant adjustment, the cycling mode share in the Plan would have been 2.6% in both 2035 and 2050. Based on literature-based estimates of increased bicycle-trip making, the bicycle mode choice constant was calibrated to result in a cycling mode share of approximately 4.6% and 7.0% in 2035 and 2050 respectively.

EIR Alternative 2 includes an additional reserve for pedestrian improvements, which was not modeled.

Strategy T9 | Advance Regional Vision Zero Policy through Street Design and Reduced Speeds

Travel Model 1.5 represents maximum roadway speeds based on a lookup using the area type and facility type of that link.[55] For example, a link with facility type of freeway would have a maximum speed of 65 mph in rural and suburban areas, 60 mph in urban areas, and 55 mph in central business districts (CBD) and the regional core.

To represent this strategy, the lookup was modified to reduce speed limits to between 20 and 35 mph on arterials and local streets, and 55 mph on freeways. The following table shows the relationship between area type, facility type and maximum speed, with and without this strategy. Note that the maximum speed reduction for freeways is assumed to be implemented in 2030, while the maximum speed reduction for major arterials is assumed to be implemented in 2025.

Table 40. Strategy to Advance Regional Vision Zero Policy, speed reductions by facility type and area type

FACILITY TYPE	AREA TYPE	MAXIMUM SPEED, BEFORE STRATEGY	MAXIMUM SPEED, WITH STRATEGY
Freeway	Urban Business	60 mph	55 mph
	Urban	60 mph	
	Suburban, Rural	65 mph	
Major Arterial	CBD	25 mph	20 mph
	Urban Business	30 mph	20 mph
	Urban	30 mph	25 mph
	Suburban	35 mph	30 mph
	Rural	40 mph	35 mph

Strategy T10 | Enhance Local Transit Frequency, Capacity and Reliability

Projects within this strategy aim to make local bus and light rail service faster and more frequent. Network frequency boosts on AC Transit, Muni, Sonoma County Transit and more provide a more frequent baseline on some of the region's highest ridership routes. Additionally, capital projects that increase the speed and reliability of transit maximize the throughput of existing service. Example projects include light rail grade separation in downtown San Jose, BRTs on Geary Boulevard and San Pablo Avenue, and transit signal priority in Napa, among others.

Cordon Tolls

Two cordon tolls are also part of this strategy. The Plan, as well as EIR Alternatives 1 and 2, include two cordon tolls: one in downtown San Francisco, and another on Treasure Island. The downtown San Francisco scheme, which is expected to be implemented in 2025 in the Plan, requires all vehicles to pay a $6 (in 2010$, which is $7.92 in 2020$ or $4.76 in 2000$) fee to enter or leave the greater downtown San Francisco area during the evening commute period. The cordoned area is bounded by Laguna and Guerrero Streets to the west, 18th Street to the south, and San Francisco Bay to the north and east.

55 For more on Facility Type and Area Type definitions, see https://github.com/BayAreaMetro/modeling-website/wiki/MasterNetworkLookupTables#facility-type-ft.

The Treasure Island cordon toll, which is expected to be implemented in 2035 in the Plan, is set at $5 in 2021$ (which is $4.93 in 2020$ or $2.99 in 2000$) during the morning and afternoon peak, $1.50 in 2021$ (which is $1.48 in 2020$ or $0.89 in 2000$) in midday. There is not expected to be a toll in the evenings and early mornings.
The toll is charged to all vehicles entering Treasure Island from I-80 in either the westbound or eastbound direction.

Local Transit Projects

The Plan and the EIR Alternatives included the same projects nested under this strategy, with a few key exceptions.

EIR Alternative 1 further improves local transit frequencies to encourage mode shift away from driving, focusing on core bus service that was overcrowded in the Plan. This includes doubling the peak frequency of select routes on AC Transit local bus service, Muni local bus service and VTA local bus service. EIR Alternative 1 also includes a reserve for transit signal priority capital improvements, which was not modeled.

EIR Alternative 2 also improves local transit service beyond the Plan investments. The VTA Orange Line serving northern Santa Clara County receives a frequency boost to better serve jobs-rich Growth Geographies. There is also a reserve for grade separations on this line that is not modeled. Across the region, all Growth Geographies not adjacent to rail, ferry or bus service with peak headways of 15 minutes or greater see local bus frequency upgrades. Jobs-rich Growth Geographies that were identified for more intensive development in EIR Alternative 2 see even greater investments in local transit service to align with projected growth.

Strategy T11 | Expand and Modernize the Regional Rail Network

Investments nested under this strategy include key extensions to existing rail networks, including the extension of BART to downtown San Jose, the Caltrain Downtown Extension and Valley Link, among others. Additionally, a new rail link between downtown Oakland and downtown San Francisco provides additional capacity to the transbay corridor. These extensions are complemented by modernization projects that increase frequencies on rail networks, including South Bay Connect, improving Capitol Corridor service in Alameda County, BART Core Capacity, and projects boosting ACE and Caltrain frequencies. Ferry projects are also nested within this strategy, including new service to Berkeley, the Seaplane Lagoon in Alameda, Redwood City, and more. The full list of projects included in this strategy can be found in the Plan Bay Area 2050 Transportation Project List.

The Plan and the EIR Alternatives included the same projects nested under this strategy, with a few key exceptions. For EIR Alternative 2, regional rail projects are delayed one period to free up fiscal capacity for local transit improvements. The following projects are delayed to open after 2035 in EIR Alternative 2:

- Caltrain Downtown Extension
- South Bay Connect
- Valley Link

The following projects open after the year 2035 in the Plan. In EIR Alternative 2, they are delayed to open after 2050, meaning they are not modeled:

- Caltrain/High-Speed Rail Electrification and Grade Separation: Tamien to Pacheco Pass
- Dumbarton Group Rapid Transit
- Link21 New Transbay Rail Crossing

Strategy T12 | Build an Integrated Regional Express Lanes and Express Bus Network

To maximize the time-competitiveness of express bus and carpool trips in comparison to single-occupancy vehicles, this strategy includes a full build-out of the express lanes network, the introduction of new express bus routes throughout the region, and frequency increases on select existing express bus service. The full list of projects included in this strategy can be found in the Draft Plan Bay Area 2050 Transportation Project List.

The Plan and the EIR Alternatives included the same projects nested under this strategy, with a few key exceptions. For EIR Alternative 1, all express lanes projects that required the construction of a new lane were modified to instead convert a lane of general purpose travel to an express lane, except for the proposed express lane on SR-85, where there are only two lanes of travel in either direction. Staff determined that converting this facility to have just a single lane for general purpose travel was not feasible.

In EIR Alternative 2, the Plan project list is modified to include additional capital improvements and frequency boosts on AC Transit transbay routes; add express bus service along I-580 in eastern Alameda County prior to the delayed opening of Valley Link in model year 2040; to improve frequencies on ReX Green Line and Blue Line; and to implement capital upgrades to ReX Blue Line stations to provide a premium service.

Strategy EN1 | Adapt to Sea Level Rise

The plan assumes a future with two feet of sea level rise by 2050. To reduce the impact of associated inundation, the Plan, EIR Alternative 1 and EIR Alternative 2 include efforts to mitigate sea level rise by addressing adaptation needs. Protective measures are funded in most locations that are permanently inundated. Equity Priority Communities and areas with high benefit and low cost are prioritized for protection. In the No Project alternative, mitigation is much more limited; only committed mitigation project locations are protected from sea level rise. The committed mitigation projects are: San Francisco Airport Shoreline Protection Program, Foster City Levee Project, South Bay Shoreline Project, and Oakland Airport Sea Level Rise Adaptation.

This degree of sea level rise would inundate several major rail and highway corridors, removing them from the travel model network. One component of this strategy is to prevent inundation from sea level rise on SR-37, segments of US-101 on the Peninsula and in the North Bay, I-580 in Marin County, and other key facilities.

The Plan and the EIR Alternatives included the same projects nested under this strategy, with a few key exceptions. For EIR Alternative 1, the SR-37 Ultimate Project — which includes additional highway capacity and contributes to the project footprint — was removed to minimize environmental impacts, resulting in inundation and removal from the model network.

Table 41 shows the impacts of sea level rise for each alternative, listing affected alternatives and the level of future protection. The inundation levels are assumed to be 12 inches by 2035 and 24 inches by 2050, which affect mostly the No Project alternative because the other alternatives assume some inundation protection. Bus bridges were created to fill the gap between transit stations in the No Project alternative, including the following:

- between Fremont and San Jose Diridon serving Capitol Corridor,
- between Martinez and Suisun City serving the Capitol Corridor, and
- between the Marin Civic Center and downtown Petaluma stations, serving SMART.

Additionally, Tasman station is closed for VTA light rail; as a result, the Blue and Green lines stop at River Oaks, while the Orange line bypasses Tasman. All other alternatives have protection measures that will mitigate inundation through 2050, except for SR-37 which floods in EIR Alternative 1.

Table 41. Impact of sea level rise by alternative

CORRIDOR	COUNTY	FROM	TO	NO PROJECT		PLAN	EIR ALTERNATIVE 1	EIR ALTERNATIVE 2
				2035	2050			
US-101	MRN	Sir Francis Drake Blvd.	Tamalpais Drive Interchange	×	×	✓	✓	✓
I-580	MRN	Bellam Blvd.	Sir Francis Drake Blvd.	×	×	✓	✓	✓
SR-37	MRN, NAP, SOL, SON	US-101 Interchange	Mare Island Interchange	×	×	✓	×	✓
US-101	MRN	Bellam Blvd.	2nd St.	×	×	✓	✓	✓
Seaport Blvd.	SM	US-101	(Entire Road)	✓	×	✓	✓	✓
University Ave.	SM	O'Brien Dr.	Bayfront Expy.	✓	×	✓	✓	✓
N Mathilda Ave.	SCL	Lockheed Martin Way	W Caribbean Dr.	✓	×	✓	✓	✓
E Caribbean Dr.	SCL	Borregas Ave.	N Mathilda Ave.	✓	×	✓	✓	✓
Union City Blvd.	ALA	Smith St.	Alvarado Blvd.	✓	×	✓	✓	✓
Doolittle Dr.	ALA	Bay Farm Island Bridge	OAK and Island Dr.	✓	×	✓	✓	✓
Webster/ Posey Tubes	ALA	City of Alameda		✓	×	✓	✓	✓
Lakeville Hwy.	SON	Gate 9	SR-37	×	×	✓	✓	✓
Irwin St.	MRN	US-101	Woodland Ave.	×	×	✓	✓	✓
Shoreline Hwy.	MRN	Pohono St.	Almonte Blvd. and US-101	×	×	✓	✓	✓
Shoreline Hwy.	MRN	Van Pragg	Stinson Beach	×	×	✓	✓	✓
ACE	ALA, SCL	Fremont	San Jose	×	×	✓	✓	✓
Capitol Corridor	ALA, SCL	Fremont	San Jose	×	×	✓	✓	✓

CORRIDOR	COUNTY	FROM	TO	NO PROJECT		PLAN	EIR ALTERNATIVE 1	EIR ALTERNATIVE 2
				2035	2050			
Capitol Corridor	CC, SOL	Martinez	Suisun City	✗	✗	✓	✓	✓
Ferries	ALA, SF	San Francisco	Alameda/ Oakland	✓	✗	✓	✓	✓
Ferries	ALA, SM	South San Francisco	Alameda/ Oakland	✓	✗	✓	✓	✓
SMART	MRN, SON	Marin Civic Center	Downtown Petaluma	✗	✗	✓	✓	✓
VTA LRT	SCL	Tasman Station		✗	✗	✓	✓	✓

NOTE: a check mark (✓) indicates the facility was protected from inundation and an x (✗) indicates the facility was inundated. Plan Bay Area 2050 assumes 1 foot of sea level rise by 2035 and 2 feet of sea level rise by 2050.

Strategy EN7 | Expand Commute Trip Reduction Programs at Major Employers

This strategy entailed setting a sustainable commute target for all major employers, such that by the year 2035, no more than 40% of each employer's workforce would be eligible to commute by auto on an average workday. To represent the effects of this strategy in Travel Model 1.5, staff first estimated the effects of this strategy on the modeled workforce. This was done using the following steps:

1. Starting with National Establishment Time Series (NETS) dataset which includes establishment, establishment sizes and industry, staff filtered to the 2015 establishments in the Bay Area counties
2. This dataset was then joined with firm data (also from the NETS dataset) based on the headquarters ID to segment the workforce into large firms and exclude small businesses, which would not be affected by the strategy.
3. Each establishment corresponds to one industry (for example, NAICS 54110, Legal Services), but that industry consists of a mix of occupations (for example, Lawyers and Judicial Law Clerks, Computer Support Specialists, Human Resources Workers, Building Cleaning Workers, etc). Using the May 2019 National Industry-Specific Occupational Employment and Wage Estimates[56], worker tallies by industry were translated to worker tallies by occupation.
4. Each occupation was assumed to be able to telework based a crosswalk from Dingel's and Neiman's research.[57]
5. Combining the above steps, maximum telecommute rates were developed for employment in each Bay Area county based on the forecasted employment for that county by industry category. Note that staff do not forecast firm sizes, so the percentage of employees excluded due to small firm size in 2015 was carried forward into future years.

56 May 2019 National Industry-Specific Occupational Employment and Wage Estimates: https://www.bls.gov/oes/current/oessrci.htm.

57 Jonathan I. Dingel and Brent Neiman, 2020. "How many jobs can be done at home?," Journal of Public Economics, vol 189.

Using the maximum telecommute rates, staff then calibrated a telecommute constant for each employment super district using the following logic: If the commute tour auto mode share for the super district was already less than the 40% target, then no additional telecommuting was modeled beyond the baseline estimate described in the section on . If the commute tour auto mode share to the super district exceeded 40%, the telecommute constant was calibrated upwards until telecommuting approached the maximum rates described above. As staff strived to be conservative about strategy benefits, note that this resulted in many workplace super districts continuing to exceed their 40% commute mode share target. Staff assumes that many of these workplaces would institute other measures to shift workers to alternative modes to reach their targets, but these are not captured in the model. Therefore, this representation likely underestimates the effect of this strategy on travel.

Strategy EN9 | Expand Transportation Demand Management Initiatives

This strategy included several components, most of which were not represented in the Travel Model. The analysis for these initiatives is described in the Off-Model Calculations section following. However, this strategy also included a parking pricing component, which was implemented in Travel Model 1.5.

As described in the above section on Parking Prices, Travel Model 1.5 represents parking pricing based on the tour and trip destination's travel analysis zone (TAZ), as well as the tour and trip purpose and the activity duration. Additionally, Travel Model 1.5 includes a simple Free Parking model to capture the fact that some employers subsidize employee parking even in areas with non-zero long term parking pricing.

In order to model the parking pricing component of this strategy, staff expanded the set of TAZs with non-zero parking pricing, assuming that TAZs within the Growth Geographies would have a minimum hourly cost (both for long-term and for short-term parking) of $0.25 per hour (in 2000 dollars), thereby expanding the set of TAZs with non-zero parking pricing.[58] Additionally, staff assumed a parking price increase of 25% above the No Project hourly cost for all TAZs within both Growth Geographies and Transit Rich Areas. Since Travel Model 1.5 TAZs do not match well with Growth Geographies and Transit Rich Areas, qualified TAZs were determined using a threshold approach, where a TAZ was defined as being "within" the relevant geography if 20% or more of the TAZ area intersected with the geography. Finally, this strategy assumed that employer subsidy of employee parking costs has been disallowed, and the Free Parking model was disabled.

Off-Model Calculations

Travel Model 1.5 is not sensitive to the full range of policies MTC and ABAG may choose to pursue in Plan Bay Area 2050. Marketing and education campaigns, as well as non-capacity-increasing transportation investments like bikeshare programs, are examples of strategies with the potential to change behavior in ways that result in reduced vehicle emissions. Travel Model 1.5 and EMFAC do not estimate reductions in emissions in response to these types of changes in traveler behavior. As such, MTC and ABAG use "off-model" approaches to quantify the GHG reduction benefits of these important climate initiatives, which constitute most of the key subcomponents of Strategy EN8: Expand Clean Vehicle Initiatives and Strategy EN9: Expand Transportation Demand Management Initiatives.

The following are the initiatives requiring off-model analysis included in Strategy EN8: Expand Clean Vehicle Initiatives or Strategy EN9: Expand Transportation Demand Management Initiatives of Plan Bay Area 2050:

- Initiative EN8a: Regional Electric Vehicle Chargers
- Initiative EN8b: Vehicle Buyback and Electric Vehicle Incentives
- Initiative EN9a: Bike Share
- Initiative EN9b: Car Share
- Initiative EN9c: Targeted Transportation Alternatives
- Initiative EN9d: Vanpools

58 The Plan Bay Area 2050 Growth Geographies are locations prioritized for future jobs and housing growth. For more information, refer to the Draft Plan Bay Area 2050 Plan Document.

All of these initiatives were included in the previous regional plan, Plan Bay Area 2040, and the primary GHG emission calculation approaches remain unchanged. However, the calculation inputs and assumptions have been updated to reflect new data and research, where available, and travel model outputs reflecting the Plan Bay Area 2050 Plan scenario. The initiative descriptions, GHG emission quantification approaches, and results are summarized in the following section by initiative.[59]

Strategy EN8 | Initiative EN8a - Regional Electric Vehicle Chargers

Electric vehicles (EVs) have the potential to significantly reduce GHG emissions from motor vehicles. Today, the Bay Area is the leading U.S. market for EV sales, including both plug-in hybrid electric vehicles (PHEVs) and battery electric vehicles (BEVs). PHEVs have a hybridized powertrain that is fueled by chemical energy from a battery or by gasoline/diesel. BEVs are powered exclusively by the chemical energy from a battery. The focus of this initiative is on expanding the charging opportunities for the population of PHEVs in the Bay Area by establishing a regional public network of electric vehicle charging stations.

The costs of installing charging stations can be high, and there are other barriers (e.g., on-site electrical capacity) that may also limit the potential for deploying charging at workplaces. This program will be designed to help overcome some of those barriers by providing financial assistance to interested employers, retailers, parking management companies, and others that qualify. A regional network of charging infrastructure will provide drivers an opportunity to plug in while at work, which is where most vehicles spend most of their time parked when not at home. This will mean that PHEVs are able to travel more miles using electricity and fewer miles using gasoline, reducing GHG emissions.

This initiative was included in Plan Bay Area 2040 and continues in Plan Bay Area 2050. In 2017, MTC transferred a total of $10 million to the Bay Area Air Quality Management District (BAAQMD) to advance EV activities. BAAQMD currently administers the Charge! Program, providing grant funding for the purchase and installation of publicly accessible chargers for light-duty EVs. MTC continues to work with BAAQMD to monitor investments and to develop a coordinated approach to implementing charging infrastructure throughout the region.

GHG Reduction Quantification Approach

This initiative invests in charging infrastructure to expand the network of chargers available to Bay Area drivers. As a result, PHEV drivers will be able to drive a larger share of miles in electric mode, as opposed to gasoline-powered mode, reducing GHG emissions. The impacts of this initiative are not otherwise captured in MTC's emissions calculations, which rely on default EMFAC assumptions for the fraction of PHEV miles in electric vs. gasoline mode.

Inputs and Assumptions

The prior Plan Bay Area analysis was updated to account for improved fuel economy estimates, updated vehicle populations, and new vehicle sales in the Bay Area based on data included in the EMFAC2014 (v1.0.7) Emissions Inventory and the ZEV Compliance Mid-Range Scenario of the Advanced Clean Cars Mid-term Review. The analysis also updated the number of chargers to be funded by MTC and deployed to support the region's PHEV population.

In the baseline, it was assumed that 46% to 60% of miles traveled by PHEVs would be in charge-depleting mode (i.e., electric miles instead of gasoline-powered miles). This assumption comes from EMFAC2017 Technical Documentation, which indicates that:

> (CARB) staff modeled PHEVs as having a 25-mile all-electric range, which equates to a utility factor of 0.40. For the average commute, this would mean that 40 percent of the VMT could be from all-electric, and 60% would be from gasoline operations.[60]

59 Note that the off-model analysis results for the No Project alternative are not shown. Off-model strategies are excluded in the No Project alternative and thus result in zero GHG emission reductions.

60 California Air Resources Board, EMFAC2014 Volume III – Technical Documentation v1.0.7, May 2015. Available online at: http://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation- 052015.pdf.

To estimate the fraction of PHEVs that operates like pure ZEVs, EMFAC uses utility factors, which are defined as the fraction of VMT the PHEV obtains from the electrical grid. EMFAC2014 was assuming a constant utility factor of 0.4 for all model years of PHEVs, while in EMFAC2017 this fraction is more dynamic and varies by model years from 0.46 for Model Year (MY) 2018 to 0.6 for MY2025+.[61]

The electric VMT (eVMT) percentage is assumed to increase to 80% due to the Regional Charger Program. Based on a review of EV user surveys and analytics included in the Advanced Clean Cars Mid-Term Report[62], data suggest that PHEV owners can reach 80% eVMT with access to adequate supportive charging infrastructure. This analysis assumes that if the entire region has sufficient workplace and opportunity (public) charging infrastructure, then all PHEVs in the region could operate at this assumed maximum eVMT percentage.

The analysis methodology assumes:

- Each charger deployed through the Regional Charger Network serves multiple vehicles each day
- The chargers deployed are Level 2 chargers
- Each charger consists of two plugs

The National Renewable Energy Laboratory's EVI Pro Lite tool was used to determine the number of chargers required to support the forecasted PHEV population. While the ratios vary by PHEV penetration, it is approximately one charger plug for every four vehicles over the program period. For the financial analysis, the initiative assumes a $3,000 subsidy per charger is provided.[63] The table below summarizes the number of expected PHEVs, plugs, and chargers by analysis year.

Table 42. Expected PHEVs, plugs and chargers by analysis year

PARAMETER	2035	2050	SOURCE
PHEV population	363,012	458,818	EMFAC2014
Plug/PHEV ratio	0.2352	0.2352	EVI-Pro
Charging plugs needed	85,384	107,918	Calculation
Chargers needed	42,692	53,959	Calculation
Incentive amount ($/charger)	$3,000	$3,000	Investment assumption

In addition to increasing the percentage of electric miles driven in PHEVs, the increased availability of chargers could mitigate consumers' "range anxiety" concerns and increase the adoption and use of EVs and further reduce GHG emissions, but this potential effect is not included in this approach, as a conservative assumption. Further, this approach does not include any additional PHEVs incentivized through the Vehicle Buyback and EV Incentive initiative and any increased eVMT share for those PHEVs; the baseline eVMT share is applied to PHEVs realized through that initiative rather than the higher eVMT share assumed in the regional charger network scenario, also as a conservative assumption.

61 California Air Resources Board, EMFAC2017 Volume III – Technical Documentation V1.0.2, July 20, 2018. Available online at https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf.

62 California Air Resources Board, Advanced Clean Cars Mid-Term Report, Appendix G: Plug-in Electric Vehicle In-Use and Charging Data Analysis, January 18, 2017. Available online at https://ww2.arb.ca.gov/resources/documents/2017-midterm-review-report.

63 Note that the methodology uses the projected PHEV population from EMFAC and EVI-Pro to estimate the total number of chargers required across the region to meet that forecasted PHEV population; the incentive amount is used to calculate the total investment required to meet this demand.

Calculation of emissions impacts relies on the parameters shown in the table below.

Table 43. Regional electric vehicle initiative calculation inputs and assumptions

PARAMETER	VALUE	SOURCE
Fuel efficiency of PHEV gasoline engine	40 mpg	24.9 mpg for gasoline LDV, based on EPA Automotive Trends Report, 2020; 62% improvement for PHEV engine based on comparison of similar gasoline and hybrid models
Baseline eVMT share for PHEVs – pre MY2025	46%	EMFAC2017 Volume III Technical Documentation
Baseline eVMT share for PHEVs – MY2025+	60%	EMFAC2017 Volume III Technical Documentation
Initiative eVMT share for PHEVs	80%	CARB, Advanced Clean Cars Mid-Term Report, 2017
Energy density of gasoline	115.83 MJ/gallon	CA GREET 3.0
Carbon intensity of gasoline (tailpipe)	72.89 gCO_2/MJ	CA GREET 3.0

Calculation Methodology

To determine the GHG emission reductions from the Regional Charger Program, the analysis method employs the following steps:

1. Use EMFAC to obtain the forecast population of EVs in the Bay Area through 2050, by calendar year and model year.
2. Process EV population data to estimate the population of PHEVs by calendar year and model year.
3. Calculate baseline PHEV eVMT by calendar year, using assumptions in EMFAC2017 that eVMT percentage is 46% for MY2018-2024 and 60% for MY2025+.
4. Calculate baseline PHEV emissions, multiplying baseline PHEV VMT for each calendar year by average fuel efficiency, energy density, and carbon intensity.
5. Apply initiative eVMT percentage to calculate difference in eVMT between baseline and initiative scenario.
6. Calculate PHEV emissions in initiative scenario.
7. Calculate GHG emissions reduction as the difference between the baseline and initiative scenario PHEV emissions.

Results

The table below summarizes the CO_2 reductions due to the Regional Electric Vehicle Charger initiative.

Table 44. CO_2 emissions reductions due to Electric Vehicle Charger initiative

ALTERNATIVE	DAILY REDUCTION (SHORT TONS)		PER CAPITA REDUCTION FROM YEAR 2005 EMISSIONS (PERCENT)	
	Year 2035	Year 2050	Year 2035	Year 2050
Plan	-741	-792	-0.93%	-0.88%
EIR Alternative 1	-741	-792	-0.93%	-0.88%
EIR Alternative 2	-741	-792	-0.93%	-0.88%

Emission reductions are consistent across all EIR Alternatives since the analysis does not rely on inputs from the travel model.

Strategy EN8 | Initiative EN8b - Vehicle Buyback and Electric Vehicle Incentive

Despite a rapid increase in commercially available electric vehicle (EV) models, EV sales are still relatively small, representing about 8 percent of total new light-duty vehicle sales in California. While falling battery prices are expected to make EVs more attractive to consumers, there are also barriers related to EV costs and benefits. The price of new EVs is still beyond the reach of many potential new vehicle buyers, particularly lower-income consumers. To begin addressing this challenge, California's Clean Vehicle Rebate Program (CVRP) was changed in 2016 to adjust incentive amounts based on household income. HOV lane access for some EVs has been eliminated, reducing the non-financial incentives to own an EV. And without additional Congressional action, federal EV tax credits will phase out in their current format because the full tax credit applies only to the first 200,000 EVs sold per automaker; once the 200,000-unit limit is reached, the tax credit value decreases on a quarterly basis until it is phased out completely approximately one year after the automaker surpasses the threshold. Tesla was the first automaker to surpass the sales threshold in July 2018 and General Motors followed suit in December 2018. The early phase out and elimination of these tax credits could potentially have negative sales implications for the Tesla Model 3 and Chevy Bolt – two of the most popular EVs sold in California. Other EV manufacturers are expected to surpass the threshold in the coming years.

This program will provide an incentive to purchase an EV when trading in older, higher-emission vehicles. This is intended to extend the market for EVs into a broader range of income classes. Research indicates that the early adopters of EVs have been higher income individuals who own their homes, and in many cases, own or have owned a hybrid vehicle (e.g., a Toyota Prius). The higher purchase price of EVs makes it difficult for middle- and low-income consumers to purchase them. Older and wealthier individuals tend to buy more new vehicles than other cross-sections of the population. This demographic also tends to buy newer cars more frequently. Furthermore, research from IHS Markit has shown that owners of both new and used vehicles are holding on to their vehicles longer, the scrappage rate has flattened, and the average age of vehicles has increased; the researchers forecast that the population of oldest vehicles (16 or more years) will grow the fastest, increasing by 30% by 2021.[64] This will impact the turnover of the fleet significantly and may slow the purchase of new vehicles, including electric vehicles.

64 Vehicles Getting Older: Average Age of Light Cars and Trucks in U.S. Rises Again in 2016 to 11.6 Year, IHS Markit Says." Press release from IHS Markit, November 2016.

In this program, qualifying consumers can receive a subsidy to purchase a plug-in hybrid electric vehicle (PHEV) or battery electric vehicle (BEV) for scrapping a vehicle that is 15 or more years old. The incentive amount will vary with the vehicle type being purchased (e.g., PHEV or BEV). Additionally, to provide more equitable access to clean transportation options, incentive amounts will vary by household income level, with incentives phased out entirely for higher income buyers.

This initiative was included in Plan Bay Area 2040. In 2017, MTC transferred a total of $10 million to the Bay Area Air Quality Management District (BAAQMD) to advance the EV activities. MTC continues to coordinate with BAAQMD, the lead agency for electric vehicle programs in the region, to advance this initiative and track progress. In Plan Bay Area 2050, a significantly larger investment is envisioned with incentive amounts adjusted based on buyer income.

GHG Reduction Quantification Approach

The vehicle buyback program seeks to accelerate fleet turnover while also incentivizing the purchase of EVs. The combination vehicle buyback and incentive program is intended to induce demand in middle- and lower-income brackets that might otherwise delay car purchasing or purchase a new or used conventional vehicle (i.e., non-EV). The program will result in a higher fraction of EVs owned and operated in the Bay Area than assumed in default EMFAC assumptions.

Inputs and Assumptions

Plan Bay Area 2040 analysis was revised to account for improved fuel economy estimates, increased incentive amounts and program participation, and the mix of PHEVs vs. BEVs incentivized. The program is assumed to be implemented through 2035's incentive program, is assumed to be equal across the program years. The age of the vehicles being replaced is assumed to be 15 years or older.

The program incentives are assumed to range from $1,800 to $13,600, with average incentive levels of $3,600 per PHEV and $8,160 per BEV; the program incentive will vary based on income and EV type.[65] The State's primary EV incentive program, the Clean Vehicle Rebate Project (CVRP), is assumed to provide additional purchase incentive amounts on top of the plan initiative in the amount of $3,500 per PHEV and $4,500 per BEV for households with incomes below $50,000, $1,000 per PHEV and $2,000 per BEV for households earning up to $170,000, and no rebates for the highest income households.[66] The region's GHG benefits for this initiative are calculated as a proportion of the region's incentive amount relative to the total combined regional and state incentive amount. The program assumes a $5.1 billion investment through 2035, incentivizing buyback and purchase of 630,000 EVs. It is assumed that 30 percent of incentives are used for PHEVs and 70 percent for BEVs, based on the share of EV types receiving California Vehicle Rebate Project incentives over the period 2017-2019.

65 A consultant review of EV models and equivalent non-EV models (e.g., Volkswagen Golf vs eGolf) found the average difference in cost to be $13,600 The program is assumed to cover the full difference in cost for households in the lowest income quartile. Purchase subsidies for the second and third quartile households are scaled relative to income quartile thresholds; no subsidies are assumed for the highest quartile earners. It is assumed that the participation level across the three qualifying income groups will be equal.

66 California Clean Vehicle Rebate Project incentive amounts based on current (2021) program structure offering $1,000 per PHEV and $2,000 per BEV for consumers earning up to $150,000 (single filers) and an additional $2,500 for consumers earning less than $51,520 (household size 1). Rebate amounts and income eligibility information collected from CVRP website (accessed August 11, 2021): https://cleanvehiclerebate.org/eng.

Calculation of emissions impacts relies on the parameters shown in the table below.

Table 45. Vehicle Buyback and EV incentive calculation inputs and assumptions

PARAMETER	VALUE	SOURCE
Fuel efficiency of PHEV gasoline engine	40 mpg	24.9 mpg for gasoline LDV, based on EPA Automotive Trends Report, 2020; 62% improvement for PHEV engine based on comparison of similar gasoline and hybrid models
Share of incentivized EV types	70% BEV, 30% PHEV	CVRP rebate data, average 2017-19
eVMT share for PHEVs – pre MY2025	46%	EMFAC2017
eVMT share for PHEVs – MY2025+	60%	EMFAC2017
Energy density of gasoline	115.83 MJ/gallon	CA GREET 3.0
Carbon intensity of gasoline (tailpipe)	72.89 gCO_2/MJ	CA GREET 3.0

Calculation Methodology

To determine the GHG emission reductions from the Vehicle Buyback and EV Incentive initiative, the analysis method employs the following steps:

1. Calculate the number of new PHEVs and BEVs incentivized through initiative for each program year.
2. Calculate the cumulative number of incentivized PHEVs and BEVs operating in each calendar year, accounting for average vehicle turnover by vehicle age.[67]
3. Use EMFAC forecasts of vehicle populations, fuel consumption, and VMT for gasoline light-duty automobiles (LDA – Gas) in the Bay Area to calculate the average gasoline consumption per replaced vehicle (for vehicles 15 years old), by calendar year.
4. Calculate the GHG emissions impact of the program, by calendar year, as the difference between emissions from the replaced vehicles and the emissions from the incentivized EVs, using average carbon intensity values for electricity and gasoline, average energy density for electricity and gasoline, and average energy efficiency for gasoline and electric motors.
5. Calculate MPO regional incentive share of combined MPO and State incentive amount for PHEVs and BEVs.
6. Apply MPO incentive share to GHG emissions impact for each program calendar year to calculate MPO share of GHG emission reductions.

67 A share of these new EVs are assumed to be removed from operation (e.g., as a result of collisions) each year, with higher turnover rates for older model years.

Results

The table below summarizes the CO_2 reductions due to the Vehicle Buyback and EV Incentive initiative.

Table 46. CO_2 emissions reductions due to Vehicle Buyback and EV Incentive initiative

ALTERNATIVE	DAILY REDUCTION (SHORT TONS)		PER CAPITA REDUCTION FROM YEAR 2005 EMISSIONS (PERCENT)	
	Year 2035	Year 2050	Year 2035	Year 2050s
Plan	-3,271	-503	-4.12%	-0.56%
EIR Alternative 1	-3,271	-503	-4.12%	-0.56%
EIR Alternative 2	-3,271	-503	-4.12%	-0.56%

Emission reductions are consistent across all EIR Alternatives since the analysis does not rely on inputs from the travel model.

Strategy EN9 | Initiative EN9a - Bike Share

Bike share systems provide bicycles that members of the public can borrow and use for limited durations in exchange for a fee. In traditional systems, bike share bicycles must be borrowed from and returned to designated docking stations. More recently, dockless bike share systems have emerged, allowing users to leave the bicycles anywhere in the service area. Additionally, bike share providers offer electric bikes, or e-bikes, that can be both parked at a station or elsewhere. Dockless e-bikes may attract more users and replace more motorized vehicle trips by making bike trips more convenient and by expanding the trip distances that can be made by bike share. In an analysis of docked, dockless, and e-bike bike share services in San Francisco, researchers found that a dockless e-bike service was used for more bike trips per bike and for longer trips.[68]

In August 2013, in collaboration with MTC, the Bay Area Air Quality Management District implemented a bike share system in the Bay Area on a limited pilot basis called Bay Area Bike Share (BABS). BABS consisted of approximately 700 bikes deployed across 70 stations; approximately half in San Francisco and the other half in South Bay cities. This pilot program provided valuable information regarding the potential for bike share systems to reduce VMT and emissions.

Since the initial pilot program, bike share has expanded widely across the Bay Area both in the number of bikes and in the number of service areas. The system, now called Bay Wheels, is growing to 7,000 bikes and operates across San Francisco, Berkeley, Emeryville, Oakland, and San Jose. Lyft owns and operates the system with MTC serving as contract administrator. MTC has also provided grants to initiate other bike share services that will expand access in the East Bay and bring bike share to the counties of Marin and Sonoma along the SMART train corridor. MTC also manages the Clipper Card, which can also be used to access and unlock bike share bikes.

68 Lazarus, Jessica, Jean Carpentier Pourquier, Frank Feng, Henry Hammel, and Susan Shaheen. Bikesharing Evolution and Expansion: Understanding How Docked and Dockless Models Complement and Compete--A Case Study of San Francisco. No. 19-02761. 2019.

GHG Reduction Quantification Approach

Bike share reduces GHG emissions by enabling users to take short-distance trips by bicycle instead of by car, and in some cases bike share can eliminate longer trips by enabling users to connect to transit. Bike share program expansion is not captured in MTC's travel model. The mode choice models in Travel Model 1.5 were calibrated using the California Household Travel Survey from 2012-2013, before bikeshare deployment. Although MTC's travel model includes bicycling as a travel mode, it is not structured to capture the travel effects of expansion of a bike share system.

In Plan Bay Area 2040, bike share ridership was estimated based on studies of other systems. For Plan Bay Area 2050, the approach has been updated to incorporate recent ridership data collected from the regional bike share operator. Additionally, the approach now includes modeling the impacts of the rapid introduction of e-bikes into the regional bike share system.

Inputs and Assumptions

Travel and emissions impacts are calculated based on the number of Bay Wheels bike share trips and the relationship between bike share trips and VMT reduction.

Lyft reported the number of trips using the Bay Wheels system for the period May to October 2019, shown in the table below. The daily average during this period is 7,089 trips per day.

Table 47. Bike share trips using Bay Wheels system, 2019

CITY	MAY	JUNE	JULY	AUG	SEPT	OCT
Berkeley	15,854	14,173	12,738	17,985	20,324	20,307
Emeryville	1,795	1,989	1,916	2,159	2,071	1,987
Oakland	21,310	22,286	38,145	24,395	24,003	23,723
San Francisco	132,452	142,594	189,313	156,762	160,512	182,369
San Jose	10,945	12,355	17,142	9,416	11,444	11,847
Monthly Total	182,356	193,397	259,254	210,717	218,354	240,233

During this same period, there were 3,203 Bay Wheels bicycles available per day. Full deployment of the bike share system will consist of 7,000 bicycles, including 4,500 in San Francisco, 1,500 in the East Bay, and 1,000 in San Jose. Usage of the system is expected to grow in proportion of the number of bicycles available. Once the system is fully deployed, use of the bike share system is expected to grow in proportion to population; this is a conservative assumption that does not account for expansion of bike share service beyond the planned Bay Wheels program, including service provided by other private providers and service funded through more recent MTC bike share grants.

The bike share trips were then converted to VMT reductions based on results from MTC's evaluation of the Bay Area Bike Share program, which found that each bike share trip, using conventional bicycles, reduced an average of 1.3 VMT.[69] Many bike share trips do not reduce any VMT because they do not displace vehicle trips, while others only reduce short trips, but the evaluation found that a significant share of bike share trips enables users to connect to transit, eliminating longer personal vehicle trips.

69 MTC Climate Initiatives Program Evaluation: Pilot Bike-sharing Program, Prepared for MTC by Eisen-Letunic, 2015.

Over the last several years, bike share systems have begun transitioning to electric bicycles, which are popular with users and enable longer trips. In early 2020, only about 5% of Bay Wheels bicycles were electric, but the system is expected to continue the transition to electric over the next several years. By 2035, it is assumed that all bike share bicycles will electric.

Based on bike share system research conducted in the Bay Area, trips using dockless electric bicycles were 36% longer than trips using conventional bike share bicycles.[70] Using e-bikes, it is assumed that the VMT reduced per bike share trip will be 36% higher than the 1.3 VMT observed during the BABS pilot.

Table 48. Inputs and assumptions for bike share calculations

PARAMETER	VALUE	SOURCE
Planned bike share bike availability (Bay Wheels)	7,000	MTC
Daily bike share trips	15,492	May-October 2019 bike availability and trips, Lyft Bay Wheels System Data
Average VMT displaced per conventional bike share trip	1.30	MTC Climate Initiatives Program Evaluation: Pilot Bike-sharing Program, 2015.
Average VMT displaced per e-bike share trip	1.77	Calculated based on Lazarus, J. et al. Bikesharing Evolution and Expansion: Understanding How Docked and Dockless Models Complement and Compete – A Case Study of San Francisco, Paper No. 19-02761. 2019.
Assumed share of e-bikes in bike share fleet, 2035 and 2050	100%	Assumption based on market trends

Calculation Methodology

The methodology for calculating the GHG reductions from the bike share initiative is as follows:

1. Calculate or obtain average bike share trips per day for base year.
2. Calculate percentage growth of Bay Area total population relative to base year.
3. Multiply the percentage population growth by the baseline average daily bike share trips to calculate the average daily bike share trips for modeled years.
4. Multiply the percentage share of e-bikes by the average bike share trips per day to calculate the number of conventional versus e-bike share trips per day for each modeled year.
5. Multiply the average VMT displaced per conventional bike share trip by the number of conventional bike share trips per day for each modeled year.
6. Multiply the average VMT displaced per e-bike share trip by the number of e-bike share trips per day for each modeled year.
7. Sum the VMT displaced by conventional bike share and e-bike share trips per day.
8. Multiply daily VMT displaced by exhaust emission rates to calculate GHG emission reductions.

70 Lazarus, Jessica, Jean Carpentier Pourquier, Frank Feng, Henry Hammel, and Susan Shaheen. Bikesharing Evolution and Expansion: Understanding How Docked and Dockless Models Complement and Compete--A Case Study of San Francisco. No. 19-02761. 2019.

Results

The table below summarizes the CO_2 reductions due to bike share.

Table 49. CO_2 emissions reductions due to bike share

ALTERNATIVE	DAILY REDUCTION (SHORT TONS)		PER CAPITA REDUCTION FROM YEAR 2005 EMISSIONS (PERCENT)	
	Year 2035	Year 2050	Year 2035	Year 2050
Plan	-15	-17	-0.02%	-0.02%
EIR Alternative 1	-15	-17	-0.02%	-0.02%
EIR Alternative 2	-15	-17	-0.02%	-0.02%

Strategy EN9 | Initiative EN9b - Car Share

Car sharing offers individuals the opportunity to conveniently rent vehicles by the hour or less, thus giving them access to an automobile without the costs (vehicle purchase, operations and maintenance, insurance) and responsibilities of personal vehicle ownership. Car sharing offers the opportunity for users to replace making trips in their own vehicles, particularly short trips such as for errands, shopping, or airport pick-ups. Car sharing can be particularly effective in neighborhoods with bus, rail, bike share, or other alternatives to driving where cars are infrequently needed and households in these neighborhoods can shed one or more vehicles. Even in less dense neighborhoods without high-quality alternatives to driving, car sharing can allow a two- or three-car household to shed one car by making a vehicle accessible for the infrequent instances that multiple vehicles are needed at the same time. Car sharing may also help extend the trend of younger generations putting off or never owning a vehicle. Businesses can also sign up for business memberships (known as corporate car sharing) to avoid maintaining or reduce the size of a company fleet of vehicles.[71]

Car sharing has been growing in the Bay Area since 2001, with multiple car share operators offering different service models, including traditional car share requiring pick-up and return of a company-owned vehicle at a specific location (e.g., Zipcar) and one-way or free-floating car share (e.g., Gig). Traditional car sharing businesses typically operate on a membership basis, where users pay an annual fee in addition to hourly and sometimes per-mile rates. Users benefit by not having to worry about fueling, maintenance, parking, and insurance, which are included in the membership and usage rates.

One-way car sharing allows a driver to pick up a vehicle in one location and drop it off at another, either at a specific location or anywhere within a service zone. This model provides an opportunity to incorporate driving as part of a longer multimodal trip chain. For example, Gig Car Share partnered with Bay Area Rapid Transit (BART) to provide designated Gig parking spaces at six BART stations, allowing users to drive a Gig car to transit, or alternatively, drive home after arriving at the station. This model also allows for more frequent vehicle turnover and higher utilization of vehicles, as the cars are rented just to get to destinations rather than rented and parked while the user completes their activities at the destination before returning the vehicle.

71 Reed, John. 2017. Corporate Car Sharing: an innovative solution to save the cost for company employee' car and taxi work travel. https://www.sharedmobility.news/corporate-car-sharing/.

The expansion of car sharing helps reduce GHG emissions by both reducing the amount participants drive and by shifting their driving to more fuel-efficient vehicles. The cumulative effect of car sharing, from a study conducted by UC Berkeley's Transportation Sustainability Research Center, found that for each car share vehicle, nine to 13 privately owned vehicles are shed from the region's vehicle fleet.[72] Vehicle owners drive more than those who do not own their own vehicle. Additionally, car share vehicles are newer and more fuel efficient than the average vehicle and thus contribute fewer emissions.

Car sharing was included in the previous regional plans and MTC will continue implementing relevant programs. Six grants were awarded to the following agencies to implement car sharing services:

- Contra Costa Transportation Authority
- Sonoma County Transportation Authority
- City of San Mateo
- City of Oakland
- City of Hayward
- Transportation Authority of Marin

Additionally, MTC is implementing a program for mobility hubs which will include car sharing as well as other shared transportation modes. Work has started on pilot projects with full implementation to follow.

GHG Reduction Quantification Approach

Car sharing is not explicitly captured in MTC's travel model, and a car share expansion initiative accordingly is accounted for off-model. Car sharing reduces emissions in two primary ways — by lowering the average VMT of members and by allowing trips to be taken with more fuel-efficient vehicles than would have been used without car sharing.

The primary calculation approach remains unchanged from Plan Bay Area 2040, estimating GHG reductions based on the reduced VMT and use of more fuel-efficient vehicles among car share program participants. However, the approach has been updated to reflect the increasing deployment of electric vehicles in car sharing fleets.

Inputs and Assumptions

Participation in the car share initiative is based on the number of Bay Area residents who are in the age groups likely to adopt car sharing and who live in communities that are compact enough to promote shared use. Research shows that adults between the ages of 20 and 64 are most likely to adopt car sharing, with estimates that between 10% and 13% of the eligible population in more compact areas adopt the practice when car sharing is available.[73, 74] With the implementation of regional initiatives to support car sharing and the introduction of one-way car sharing, adoption rates are assumed to reach 14% of the eligible population in dense urban areas (i.e., areas with at least 10 people per residential acre) by 2035, while 3% of the eligible population could adopt car sharing by 2035 in suburban areas (i.e., areas with fewer than 10 people per residential acre). The table below summarizes the assumptions with respect to car sharing participation rates.

As one-way car sharing programs expand in the Bay Area, it is expected that participation in car sharing programs will increase. Recent research suggests that while one-way car sharing still reduces emissions, the reductions are not as large as with traditional car sharing, as discussed below. In this analysis, it is assumed that one-way car sharing comprises 20% of carshare members in 2020 and remains at this level for 2035 and 2050. The table below summarizes the participation assumptions.

72 Martin, Shaheen, and Lidicker, 2010, "Impact of Carsharing on Household Vehicle Holdings: Results from a North American Shared-Use Vehicle Survey." Transportation Research Record Volume 2143, Issue 1, Pages 150-158. URL: https://escholarship.org/uc/item/3bn9n6pq.

73 Zipcar. http://www.zipcar.com/is-it#greenbenefits. Accessed March 20, 2017.

74 Zhou, B., Kockelman, K, and Gao, R. "Opportunities for and Impacts of Carsharing: A Survey of the Austin, Texas Market." International Journal of Sustainable Transportation 5 (3): 135-152, 2011.

Table 50. Car share participation assumptions

CATEGORY	SCENARIO YEAR		
	2020	2035	2050
Participation rates in urban areas	12%	14%	14%
Participation rates in suburban areas	0%	3%	3%
Percent of car share members who participate in one-way car sharing programs	19%	20%	25%

Research by Robert Cervero indicates that on average traditional car share members drive seven fewer miles per day than non-members.[75] This is mostly due to the members who shed a vehicle after joining carsharing. Daily VMT of these car share members drops substantially and outweighs the increase in VMT from car share members that previously did not have access to a vehicle.

In addition to the reduction in VMT, when members drive in car share vehicles, their per-mile emissions are generally lower because car share vehicles are more fuel efficient than the average vehicle. Research by Martin and Shaheen found that the car share vehicles in their study used 29% less fuel per mile than the passenger vehicle fleet in general.[76] This reduction is used for year 2020 in this analysis and increases to 36% and 43% for 2035 and 2050, respectively, based on a conservative assumption of 10% to 20% of the car share fleet becoming fully electric. The same study also shows that on average, members of traditional car sharing programs drive an average of 1,200 miles in car sharing vehicles per year. MTC assumes this individual annual car share mileage will remain constant over time.

Martin and Shaheen conducted an analysis of one-way car share services in five cities across North America and estimated VMT reduction of participants.[77] Based on the study's findings, this approach assumes that one-way car share members drive an average of 104 miles in car sharing vehicles per year but overall drive 1.07 fewer miles per day than non-members. Also based on the study's findings, it is assumed that one-way car sharing fleets use 45% less fuel per mile. Furthermore, based on observed offerings from recent one-way car share providers, it is assumed that one-way car sharing service fleets will include a share of battery electric vehicles in future years. For this analysis, it is assumed that this mileage will remain constant over time.

75 Cervero, Golub, and Nee, "City CarShare: Longer-Term Travel-Demand and Car Ownership Impacts", July 2006, TRB 2007 Annual Meeting paper.

76 Martin, Elliot, and Susan Shaheen, "Greenhouse Gas Emission Impacts of Carshaing in North America," 2010, Mineta Transportation Institute. MTI Report 09-11.

77 Martin, Elliot, and Susan Shaheen, "Impacts of Car2Go on Vehicle Ownership, Modal Shift, Vehicle Miles Traveled, and Greenhouse Gas Emissions", July 2016, Working Paper.

Table 51. Car share calculation inputs and assumptions

PARAMETER	VALUE	SOURCE
VMT per member per year, traditional carshare	1,200	Estimate based on Martin and Shaheen, MTI report, 2010 (figure 7); assume constant over time
VMT per member per year, one-way carshare	104	Martin and Shaheen, July 2016
VMT reduction per member per day, traditional car share	7	Cervero, Golub, and Nee, July 2006
VMT reduction per member per day, one-way car share	1.07	Martin and Shaheen, July 2016
Average mpg, traditional car share vehicles	32.8	Average US/Canada mpg from Martin and Shaheen, MTI report, page 65; assumed constant from 2010
Average mpg, one-way car share vehicles	24.4	Martin and Shaheen, July 2016
Average mpg, cars avoided by traditional car share service members	23.3	Average US/Canada mpg from Martin and Shaheen, MTI report, page 65; assumed constant from 2010
Average mpg, cars avoided by one-way car share service members	44.0	Martin and Shaheen, July 2016
Battery electric vehicle share of fleet, traditional car share	10% (2035); 20% (2050)	Assumption based on conservative electric vehicle adoption rate
Battery electric vehicle share of fleet, one-way car share	50%	Assumption based on current 100% electric one-way Gig car share fleet in Sacramento area
Travel days per year	347	Standard State Assumption

Calculation Methodology

To calculate the GHG emission reductions due to car sharing, the individual steps were as follows:

1. Calculate the residential density of each transportation analysis zone (TAZ) during the scenario year by dividing the total population by the residential acres (from travel demand model).
2. Sum total car sharing eligible population (between the ages of 20 and 64) for urban areas (TAZs with a population density greater than 10 residents per residential acre) and for suburban areas (TAZs with a population density less than 10 residents per residential acre).
3. Multiply participation rates, urban and suburban, by the car sharing eligible population in urban and suburban areas, respectively, and sum to calculate car share program members.
4. Multiply the one-way car share participation rate to calculate the number of members in traditional and one-way car sharing services.

Number of traditional (station-based) car share members	$= [P_{>10} \times QP_{urban} + P_{<10} \times QP_{suburban}] \times (1 - QP_{1-way})$
Number of one-way car share members	$= [P_{>10} \times QP_{urban} + P_{<10} \times QP_{suburban}] \times QP_{1-way}$
Number of one-way car share members	$= [P_{>10} \times QP_{urban} + P_{<10} \times QP_{suburban}] \times QP_{1-way}$

Where:

$P_{>10}$ = the total population in TAZs with density greater than 10 persons/residential acre

QP_{urban} = the percent of qualifying urban population expected to become members

$P_{>10}$ = the total population in TAZs with density less than 10 persons/residential acre

$QP_{suburban}$ = the percent of qualifying suburban population expected to become members

$QP_{1\text{-}way}$ = the percent of car share members participating in one-way car share

5. Multiply the VMT reduced per day per member by the number of members of each service type and sum the result across both service types to calculate VMT reduction per day from car share users.

Total daily VMT reductions from car sharing members driving less	$= M_{trad} \times V_{trad} + M_{1-way} \times V_{1-way}$

Where:

M_{trad} = the number of traditional car share members

V_{trad} = the VMT reduction per traditional car share member per day

$M_{1\text{-}way}$ = the number of one-way car share members

$V_{1\text{-}way}$ = the VMT reduction per one-way car share member per day

6. Multiply daily VMT reductions by average vehicle emission rates from EMFAC2014 to calculate GHG emission reductions due to car share members driving less.
7. Multiply the number of car share members for traditional and one-way car sharing by the respective average VMT per day per member to calculate VMT per day by service type.
8. Multiply daily VMT in each car share service type by the percent vehicle efficiency improvements (based on average car share vs non-car share vehicle fuel consumption rate) for each service type and by average vehicle emission rates to calculate GHG reductions due to car share members driving more fuel-efficient vehicles.
9. Sum GHG emission reductions due to car share members driving less (Step 6) and GHG reductions due to car share members driving more fuel-efficient vehicles (Step 8) to calculate total GHG reductions due to car sharing.

Results

The table below summarizes the CO_2 reductions due to car share.

Table 52. CO_2 emissions reductions due to car share

ALTERNATIVE	DAILY REDUCTION (SHORT TONS)		PER CAPITA REDUCTION FROM YEAR 2005 EMISSIONS (PERCENT)	
	Year 2035	Year 2050	Year 2035	Year 2050
Plan	-1,928	-2,173	-2.43%	-2.42%
EIR Alternative 1	-1,928	-2,171	-2.43%	-2.42%
EIR Alternative 2	-1,926	-2,171	-2.43%	-2.42%

Strategy EN9 | Initiative EN9c - Targeted Transportation Alternatives

The Targeted Transportation Alternatives initiative employs a variety of approaches, including individual travel consultation, organized events, and distribution of outreach and informational materials to encourage people to shift from driving alone to carpooling, transit, biking, or walking for any of their trips. These programs are "targeted" because they tailor activities and materials to focus on the travel needs and transportation options that are available in specific job centers or residential neighborhoods. Several MPOs and large cities in the U.S. administer these programs, partnering with local governments, transit agencies, employers, and transportation management associations to customize projects to different communities. In several cities, these types of programs have been operating for more than 10 years with documented positive results, including Portland (Ore.) Metro's Regional Travel Options program, City of Portland's SmartTrips program, and King County (Wash.)'s InMotion program.

Several public agencies in the Bay Area have successfully implemented similar programs. Two of the Climate Initiative Innovative Grant pilot projects funded by MTC from 2011-14, GoBerkeley and Connect, Redwood City!, included targeted transportation alternatives components. The former involved working with property managers to market travel options and provide free bus passes to residents of multifamily transit-oriented developments, while the latter included focused outreach to employers with billboard and print advertising to promote alternatives to driving alone.

MTC's Targeted Transportation Alternatives Program includes both residential and employer activities. The employer portion of the program will have a particular focus on supporting smaller employers to complement a separate strategy, EN7: Expand Commute Trip Reduction Programs at Major Employers (reflected in the travel model). The program is expected to reduce drive alone trips and associated VMT by encouraging travelers to shift to using active and shared modes for their commute and non-commute trips. By reducing single occupancy vehicle trips, the program will reduce GHG emissions.

The Targeted Transportation Alternatives initiative was included in Plan Bay Area 2040. MTC is currently developing a pilot project of this approach, which will inform implementation of a broader program.

GHG Reduction Quantification Approach

Off-model analysis is necessary to capture GHG reductions from targeted transportation alternatives programs. The mode choice models in Travel Model 1.5 were calibrated using the 2012-2013 California Household Travel Survey, so they do not capture the impacts of new strategies that change travel behavior such as this one. It is possible that these strategies will be captured by a future model once they have been implemented to the extent that they influence people's behavior and can be captured by the travel surveys, and once the model framework has been altered to include inputs that represent the presence of behavior change strategies.

Since Plan Bay Area 2040, the approach has been updated with a new cost per participant assumption based on a review of more recent evaluations from a broader set of similar programs across the country; the cost per household was increased significantly from $3.11 to $18.81 per household. This results in a more conservative estimate of program benefits per dollar of investment than identified in the last plan.

Inputs and Assumptions

To estimate the impacts of this program on traveler behavior, the analysis relies on evaluation data collected for similar programs implemented in other regions. For residential-focused programs, program evaluation information was obtained for the City of Portland's SmartTrips program, King County's InMotion Program, SANDAG's Travel Encinitas pilot program, and the Community Transit (Snohomish County, Wash.) Curb the Congestion program. For employer-focused programs, evaluation information was obtained for Portland Metro's Regional Travel Options program. Some of these programs have conducted multiple rounds of evaluation, with each round covering multiple projects. Information was collected on the cost per year of marketing to an individual household/employee, the percentage of residents/employees receiving program information who change behavior (penetration rate), and the reduction in SOV mode share for those residents/employees from evaluations of these programs. These were then applied to the daily number and distance of trips for all trips (for households) and for commute trips (for employees) to estimate VMT impacts.

Evaluations of targeted transportation alternatives programs typically focus on impacts during the year after programs are implemented; however, long-term evaluations that provide information on how long behavior change persists due to marketing and outreach programs are not currently available. To account for this uncertainty, the methodology uses a conservative assumption that behavior change lasts for five years before participants revert to their previous travel patterns.

Table 53. Targeted Transportation Alternatives calculation assumptions

PARAMETER	HOUSEHOLDS	EMPLOYEES	SOURCE
Average cost per year of marketing to a household/ employee	$18.81	$4.34	Portland, OR and King and Snohomish Counties, WA program evaluations
Average penetration rate	19%	33%	Portland, OR and King and Snohomish Counties, WA program evaluations; Assumption based on discussion with Portland Metro Regional Travel Options program staff
Average reduction in SOV mode share among participants	12%	9%	Portland, OR and King and Snohomish Counties, WA program evaluations; Portland Metro, Regional Travel Options 2012 Program Evaluation
Average daily one-way driving trips affected	5.47	2	MTC, Characteristics of Rail and Ferry Station Area Residents in the SF Bay Area
Average one-way trip length (miles)	6.2 (2035); 5.8 (2050)	10.0 (2035); 9.8 (2050)	Travel Model, Plan scenario
Number of years for which behavior change persists	5	5	Assumption based on discussion with SANDAG Community Based Travel Planning program consultant

MTC's investment in this initiative is the primary input in the GHG reduction estimates. MTC anticipates investing $5 million in this initiative per year, with $3 million going to residential programs and $2 million going to employee programs. MTC is working with consultants to develop an approach to implementation beginning in 2021. Implementation of the program is expected to continue through the lifetime of the plan years due to the assumption that behavior change from program interventions is temporary. The program is applied to all households and jobs in the region for each modeled year. Based on the annual investment assumption and cost per household or employee, the program is expected to reach approximately 160,000 households and 460,000 employees.[78]

78 2018 National Establishment Time Series (NETS) data indicates that there are approximately 2.5 million people in the Bay Area who work for establishments with less than 50 employees.

Calculation Methodology

The methodology for calculating the GHG reductions from the Targeted Transportation Alternatives initiative is as follows:

1. Allocate the investment between household and employee programs.
2. Divide the respective household/employee investments by the average cost per year of marketing to a household/employee and multiply by the penetration rate to calculate the total number of participants.
3. Multiply the total number of participants by the average reduction in SOV mode share among participants and the average daily one-way driving trips affected and the average number of years that behavior change will persist to calculate the total daily number of vehicle trips reduced due to total program funding.
4. Sum the total daily vehicle trip reductions for employees and households to calculate the total daily vehicle reductions.
5. Multiply daily vehicle trips reduced by the average one-way trip length to calculate the total daily VMT reductions.
6. Sum the product of trip-end emission rates and daily vehicle trip reductions and the product of exhaust emission rates and daily VMT reductions to calculate total GHG emission reductions.

Results

The table below summarizes the CO_2 reductions due to Targeted Transportation Alternatives.

Table 54. CO_2 emissions reductions due to Targeted Transportation Alternatives

ALTERNATIVE	DAILY REDUCTION (SHORT TONS)		PER CAPITA REDUCTION FROM YEAR 2005 EMISSIONS (PERCENT)	
	Year 2035	Year 2050	Year 2035	Year 2050
Plan	-883	-861	-1.11%	-0.96%
EIR Alternative 1	-877	-847	-1.11%	-0.94%
EIR Alternative 2	-872	-862	-1.10%	-0.96%

Strategy EN9 | Initiative EN9d - Vanpools Vanpool Incentives

MTC has coordinated a vanpool program since 1981 to encourage alternative commutes and reduce congestion and emissions. To date, MTC's 511 vanpool program recruitment has consisted of online passenger and driver matching, employer outreach, up to $500 for startup fees, empty seat subsidies to encourage continued participation when a passenger is lost, free bridge tolls, discounted parking permits, and various other incentives. With this program there is an operational vanpool fleet in the Bay Area of more than 500 vans.

As defined by the 511 program, a vanpool is a group of seven to 15 people commuting together and being driven by an unpaid driver. There are a handful of options for drivers to procure a vehicle: the first is simply a vehicle that is owned by the driver, the second is a vehicle provided by an employer, and the third option is renting a vehicle from a third-party provider. MTC modified its vanpool program to be similar to programs in San Diego, Los Angeles, Denver, Arizona and elsewhere. San Diego's program began in 2001 and saw 5% to 10% growth in the vanpool fleet every year through FY 2013. Los Angeles Metro began its program in 2007 and the vanpool fleet has grown about 14% per year.

The vanpool program was included in previous regional plans and MTC will continue supporting vanpooling across the region in Plan Bay Area 2050. Through a partnership with Enterprise Rent-A-Car, groups may be eligible for a $350 monthly subsidy for vanpool vehicles rented through the Commute with Enterprise program.[79] Currently vanpool rentals cost approximately $1,300 to rent and operate per month.[80] The $350 per month subsidy would reduce these costs by 27%. MTC assumes this incentive will significantly increase the vanpool fleet. Combined with growth in Bay Area population, employment, and highway congestion, the size of the Bay Area vanpool fleet is expected to reach 1,030 vans by 2035, after which the number of vanpools is assumed to stabilize. A sustained fleet of 1,030 vans is slightly more than the 1996 peak of 900 vans. Moreover, there is significant potential to expand vanpool operations in the Bay Area. For comparison, the Puget Sound region operates more than 1,700 vanpool vans compared to the Bay Area's 515 vans, with a population that is 54% of the Bay Area's.[81] In addition to financial subsidies, MTC works with vanpool groups, both in Commute with Enterprise and other vanpools, to provide technical assistance such as ride matching tools, identification of incentives (e.g., parking and bridge toll discounts), form completion guidance, and social media promotion resources to help form and fill vanpools.

GHG Reduction Quantification Approach

Travel and emissions impacts are calculated based on the number of vanpool program vans, average vanpool occupancy, and the relationship between vehicle trip reductions and VMT reductions. The vanpool program reduces GHG emissions by encouraging groups of people to share a ride for their commute, which reduces travel by single occupancy vehicles and associated VMT. The vanpool program is not captured by MTC's travel model and thus, the emission reductions resulting from this initiative are not otherwise captured. Travel Model 1.5's mode choice models are calibrated using the 2012-2013 California Household Travel Survey (CHTS).

The overall quantification approach remains unchanged from Plan Bay Area 2040 but uses updated driving mode shares from Plan Bay Area 2050. The impacts of the vanpool program are calculated based on the difference between the number of vanpools in existence since 2005 (515 vans) and the number expected in the future with an expanded program.

Inputs and Assumptions

In this analysis, the base year vanpool fleet of 515 vans is assumed to double by 2035 and remain at this level through 2050. Average vanpool occupancy, which is used to calculate the total daily vehicle trip reductions, is determined with data gathered from MTC's 511 program and is assumed to stay consistent over time.

The emission reduction analysis assumes that vanpools have an average of 10.8 passengers and roundtrip distance of 110 miles[82], both of which are expected to remain constant over time. To account for the emissions from the vanpool van itself, the calculations account for only 9.8 passengers in the van. Reducing the vanpool size is a simplified approach to account for the emissions from the shared van.

The population that shifts to vanpools is expected to be consistent with the commute mode share of the general population. Emissions reduced from a commuter switching from a single occupancy vehicle (SOV) are assumed to be 100%. Emissions reduced from a commuter switching from a two-person carpool are assumed to be 50%. Emissions reduced from a commuter switching from a 3+ person carpool are assumed to be 33%. Shifts from other modes (walking, biking, or transit modes) are not assumed to reduce emissions.

79 MTC Bay Area Vanpool Program, Commute with Enterprise, https://511.org/vanpool/enterprise.

80 Based on MTC staff conversations with vanpool users.

81 Ennis, Michael (2010). Vanpools in the Puget Sound Region: The case for expanding vanpool programs to move the most people for the least cost. Washington Policy Center for Transportation.

82 MTC Transit Finance Working Group memo, February 2015.

Since the baseline year for the SB 375 emissions reduction target is 2005, the current vanpool fleet of 515 vans is not included in the analysis; only growth above and beyond 515 vans is included in the calculations.

Table 55. Vanpool calculation inputs and assumptions

PARAMETER	VALUE	SOURCE
Baseline number of vans, 2005	515	MTC data, 2005-2011
Average vanpool occupancy	10.8	MTC data, 2005-2011
Vanpool program vans, 2035-2050	1,030	Assume doubling of the baseline fleet by 2035 and sustained stabilized fleet after 2035

The vanpool program is expected to be self-funding. Reporting ridership mileage to the National Transit Database (NTD) returns Federal Transit Administration (FTA) funding to the region for transit. Several other cities and regional agencies, including San Diego, Los Angeles, Denver, and Arizona, have found that NTD reporting of vanpool data returns more money to a jurisdiction than the amount spent to offset vanpool costs. For example, the Northern Virginia Transportation Commission found that failure to report vanpool data in the Washington, D.C. metropolitan area resulted in a $6 million to $8 million loss per year, and that each $1 invested would have returned more than $2 in transit funds.[83] Los Angeles spends $7 million annually to offset vanpool costs and brings back $20 million in additional transit funding.[84] While the amount returned varies depending on the number of passenger miles traveled, vanpools that log more miles and carry more passengers have higher returns. MTC estimates that for every $1 spent on vanpools, it could expect a return of about $1.40 in transit funds.

Calculation Methodology

To calculate the GHG emission reductions resulting from the vanpool program, the analysis steps were as follows:

1. Multiply the projected increase in vanpools by the number of passengers (minus the driver) to obtain increased number of vanpool participants.

Number of vanpool participants	$= (V_{2035} - V_{2005}) * (Pass_{avg} - 1)$

Where:

V = number of vanpools

$Pass_{avg}$ = average number of passengers per van (10.8)

2. Estimate the number of vehicle round trips reduced by vanpools, accounting for the previous mode selection of the vanpool participants, by multiplying the number of vanpool participants by each of the vehicle mode shares and an adjustment factor that accounts for the number of passengers and summed the results.

83 Northern Virginia Transportation Commission; FTA Section 5307 Earnings Potential from Vanpools in DC Metropolitan Region; Revised: August 7, 2009.

84 MTC October 2014 interview with LA Metro program manager, Jamie Carrington.

Number of vehicle round trips reduced by vanpools	$= (P * MS_{SOV}) + (P * MS_{HOV2} * 0.5) + (P * MS_{HOV3} * 0.33)$

Where:

P = vanpool participants

MS_{SOV} = drive alone mode share

MS_{HOV2} = 2-person carpool mode share

MS_{HOV3} = 3+ person carpool mode share

3. Multiply number of vehicle round trips reduced by the round trip vanpool mileage to obtain daily VMT reduced.
4. Sum the product of trip-end emission rates and daily vehicle trip reductions and the product of exhaust emission rates and daily VMT reductions to calculate total GHG emission reductions.

Results

The table below summarizes the CO_2 reductions due to vanpool programs.

Table 56. CO_2 emissions reductions due to vanpool initiative

ALTERNATIVE	DAILY REDUCTION (SHORT TONS)		PER CAPITA REDUCTION FROM YEAR 2005 EMISSIONS (PERCENT)	
	Year 2035	Year 2050	Year 2035	Year 2050
Plan	-131	-122	-0.17%	-0.14%
EIR Alternative 1	-131	-121	-0.16%	-0.13%
EIR Alternative 2	-129	-113	-0.16%	-0.13%

Performance and Equity Analysis

The purpose of this document is to describe the response of travelers to the strategies implemented in the Plan as compared to the No Project and EIR Alternatives. Information from the travel model was also used to help assess the performance of each alternative using the adopted Plan Bay Area 2050 Guiding Principles as a framework.

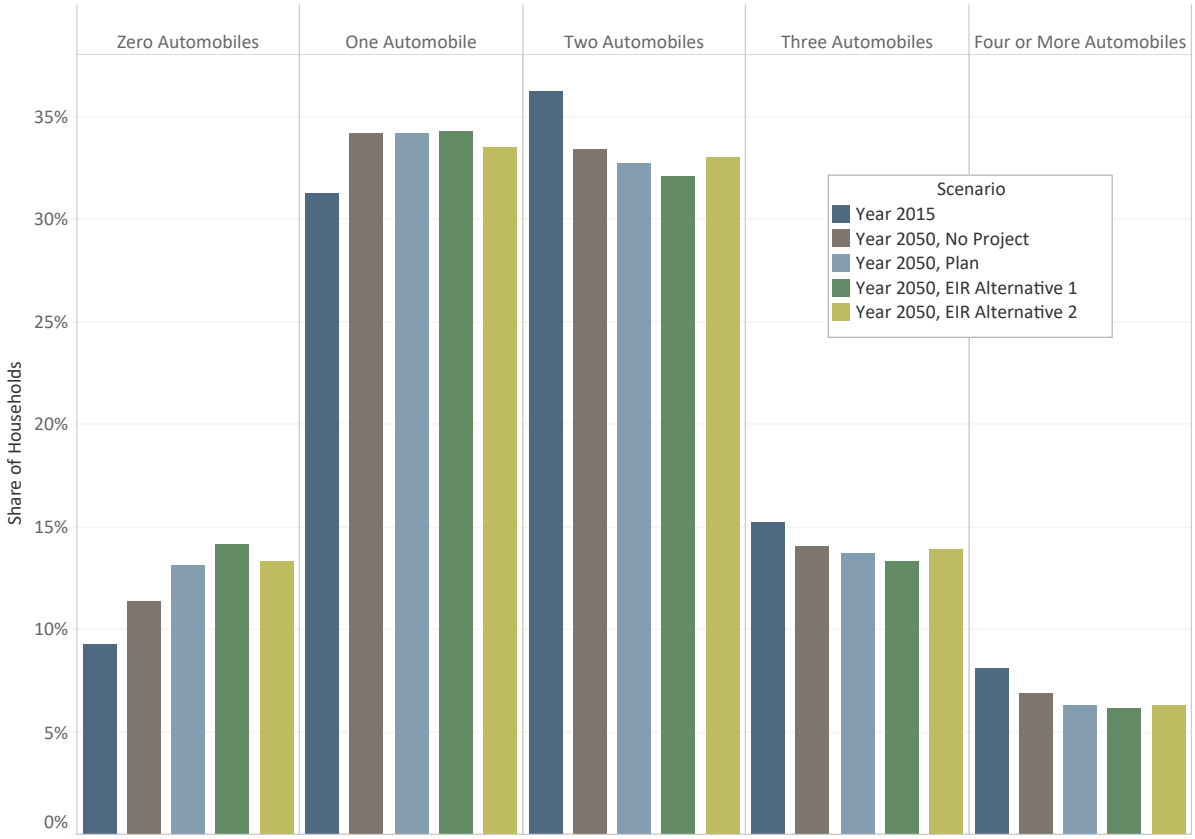
Greenhouse Gas Emissions

The above section on Off-Model Calculations describes how the Plan strategies which couldn't be represented in the travel model were estimated to contribute to the reduction of greenhouse gas emissions from transportation. More information about how the Plan achieves the Sustainable Communities and Climate Protection Act of 2008 (SB 375) 2035 targets for per-capita greenhouse gas emission reductions compared to 2005 levels can be found in the Environmental Impact Report for Plan Bay Area 2050, in Chapter 3.6: Climate Change, Greenhouse Gases, and Energy. Information about how the Bay Area achieved the 2020 greenhouse gas emissions targets can be found in MTC's Technical Methodology for the Sustainable Communities Strategy.

Automobile Ownership

Figure 31 presents the automobile ownership rates across the four alternatives in the year 2050 simulations as well as year 2015. Recall that one of the key factors affecting auto ownership between 2015 and 2050 is the assumption of some autonomous vehicle fleet penetration, which reduces the need for higher auto ownership levels per household because households with autonomous vehicles can share more easily. Beyond that, the Plan strategies enable slightly higher rates of zero automobile households, as do the land use patterns and strategies retained in the EIR Alternatives.

Figure 31. Auto ownership results in 2050 across alternatives



Activity Location Decisions

Figure 32 and Figure 33 present the average trip distance by travel mode for all travel and for trips on work tours, respectively. The key finding here is that the EIR Alternative 1 brings activities slightly closer together, when compared to 2050 Alternatives.

Figure 32. Average trip distance in 2050 across alternatives

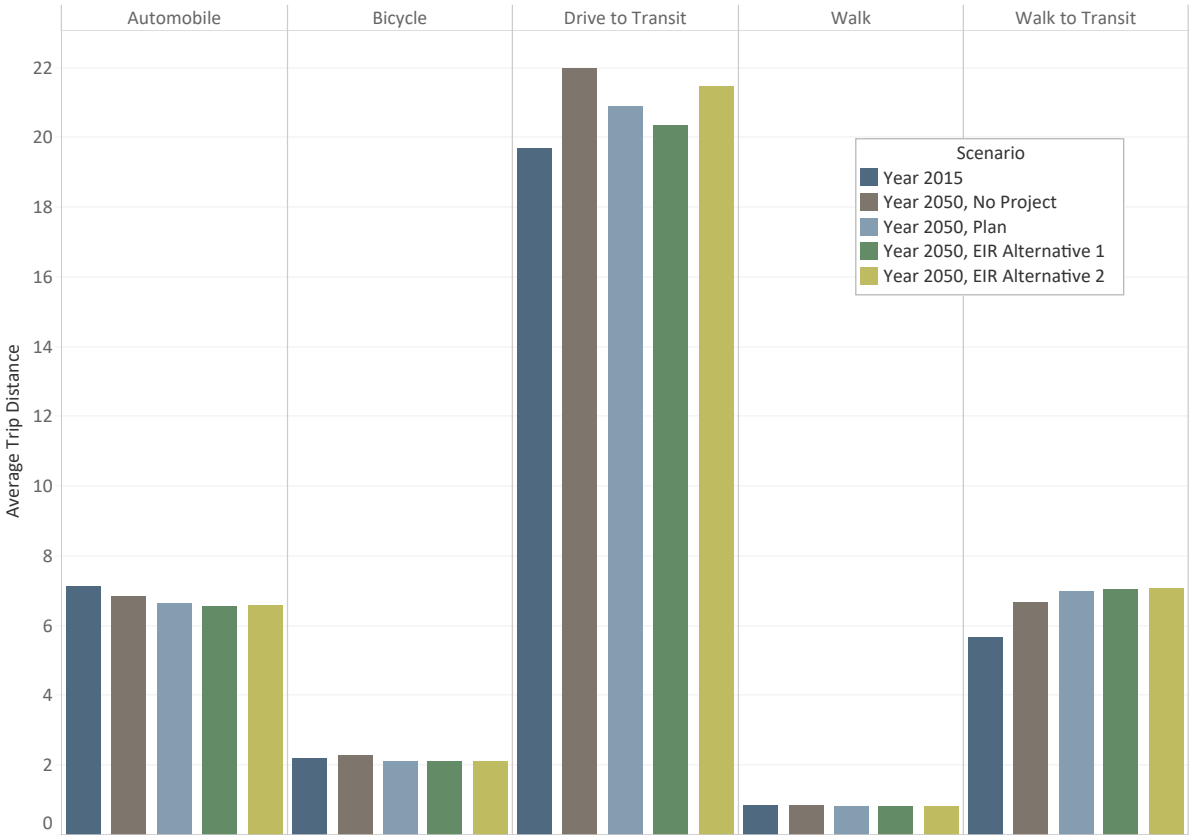
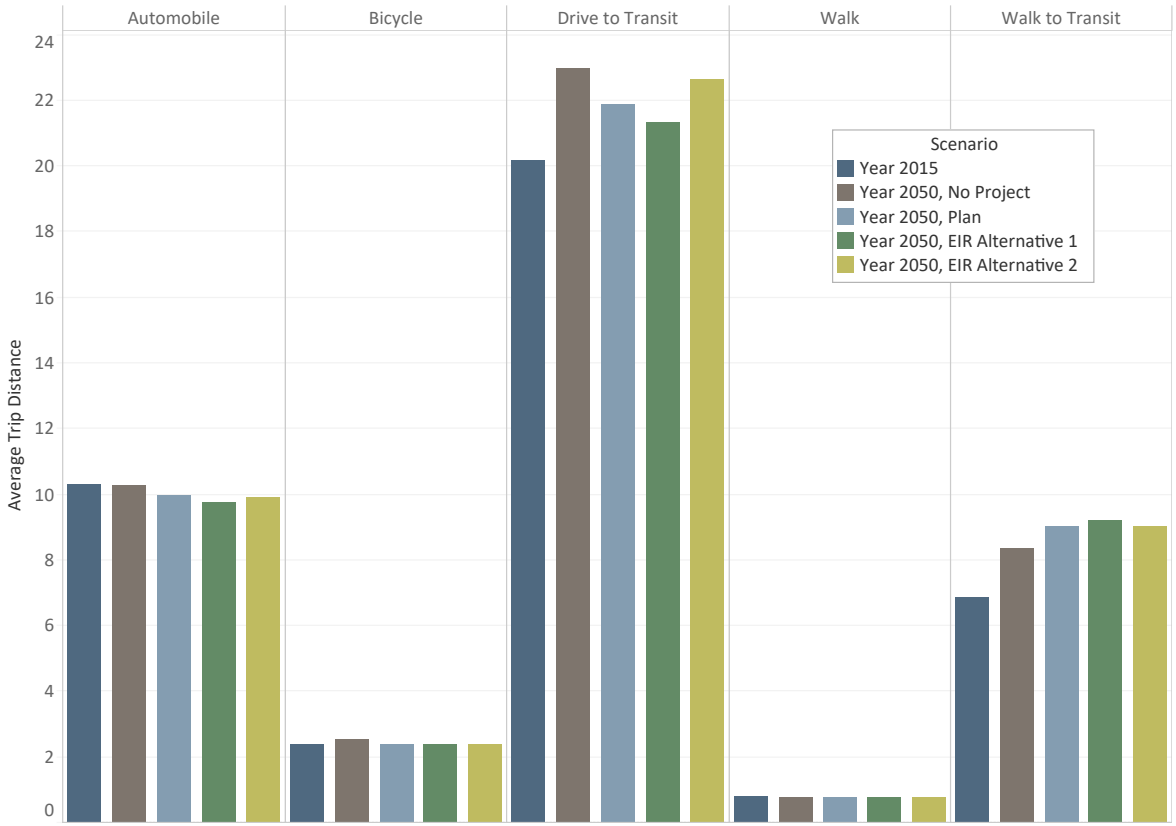


Figure 33. Average trip distance for travel on work tours in 2050 across alternatives



Travel Mode Choice Decisions

The means by which a traveler gets from point A to point B is referred to as the travel mode. Within MTC's representation of travel behavior, seven automobile-based modal options are considered, specifically:

1. traveling alone in a private automobile and opting not to pay to use a tolled lane ("Single Occupant, No Toll"), an option only available to those in households who own at least one automobile;
2. traveling alone in a private automobile and opting to pay to use a tolled lane ("Single Occupant, Paying Toll"), an option only available to those who both own a car and whose journey would benefit from using the tolled facility (e.g., this option is not available to those driving through a residential neighborhood to drop a child at school);
3. traveling with one passenger in a private automobile and opting not to pay to use a tolled lane ("Two Occupants, No Toll) (these travelers can use carpool lanes for which they are eligible), an option available to all households;
4. traveling with one passenger in a private automobile and opting to pay to use a tolled lane ("Two Occupants, Paying Toll"), an option available to all households provided they would benefit from using a tolled lane (if the tolled lane facility which benefits travelers allows two-occupant vehicles to travel for free, then these travelers are categorized as "Two Occupants, No Toll");
5. traveling with two or more passengers in a private automobile and opting not to pay to use a tolled lane ("Three or More Occupants, No Toll")
6. travelling with two or more passengers in a private automobile and opting to pay to use a tolld lane ("Three or More Occupants, Paying Toll"), an option available to all households provided they would benefit from using a tolled lane (if the tolled lane facility which benefits travelers allows three-occupant vehicles to travel for free, then these travelers are categorized as "Three Occupants, No Toll"); and
7. traveling using a taxi, transportation network company (TNC) vehicle -- either pooled with another party or as a single party; this option is available to all households.

The travel model explicitly considers numerous non-automobile options which are collapsed in these summaries into the following four options: transit, getting to and from by foot ("walk to transit"); transit, getting to or from in an automobile ("drive to transit"); walk; and bicycle.

Figure 34 and Figure 35 present the share of trips made by various travel modes. Figure 34 shows shares of travel in automobiles by occupancy category as well as by willingness to pay to use a tolled lane. The effect of Strategy T5 to Implement Means-Based Per-Mile Tolling on Congested Freeways with Transit Alternatives is clearly visible here as a large proportion of automobile trips become toll-paying trips. Overall, the shift towards the bike mode driven by Strategy T8: Build a Complete Streets Network is clearly visible in the three EIR Alternatives, as well as a slight shift towards transit.

Figure 34. Year 2050 automobile mode shares for all travel in 2050 across alternatives

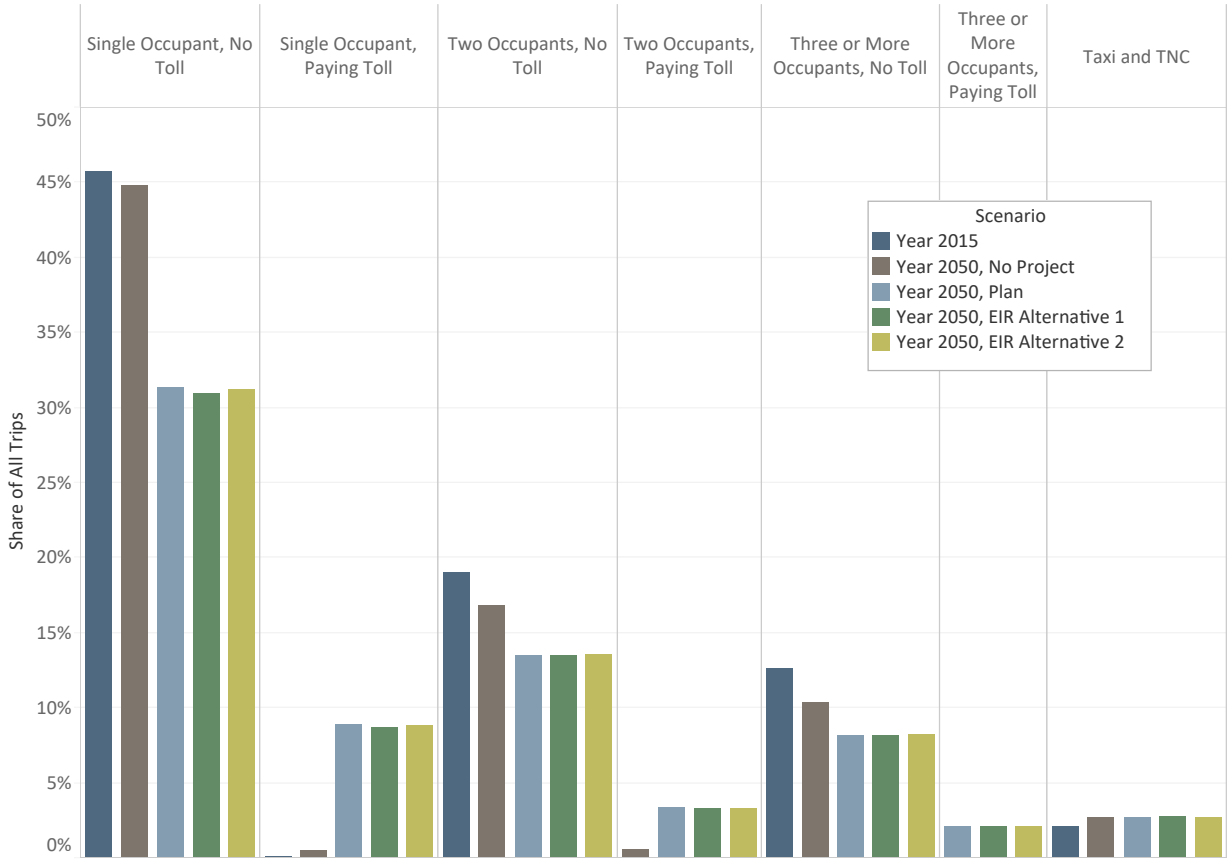
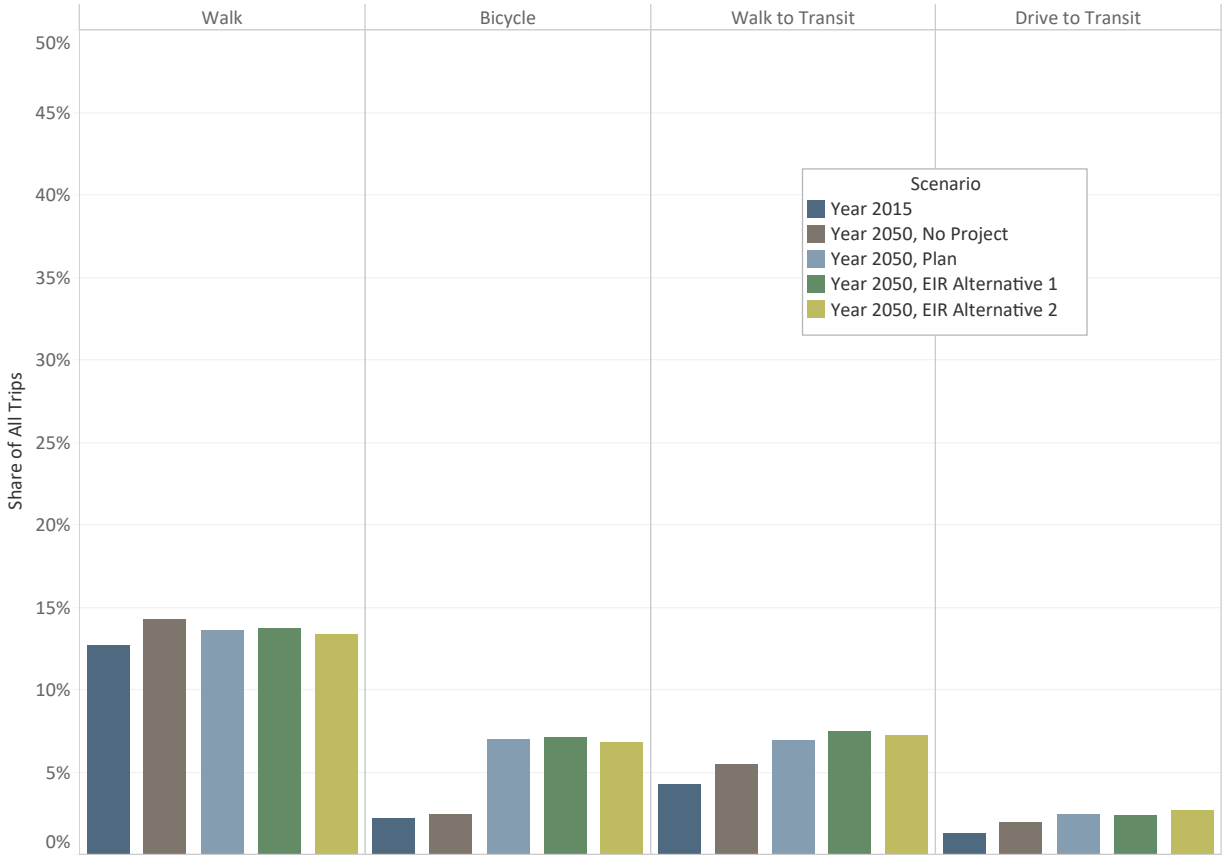


Figure 35. Non-automobile mode shares for all travel in 2050 across alternatives



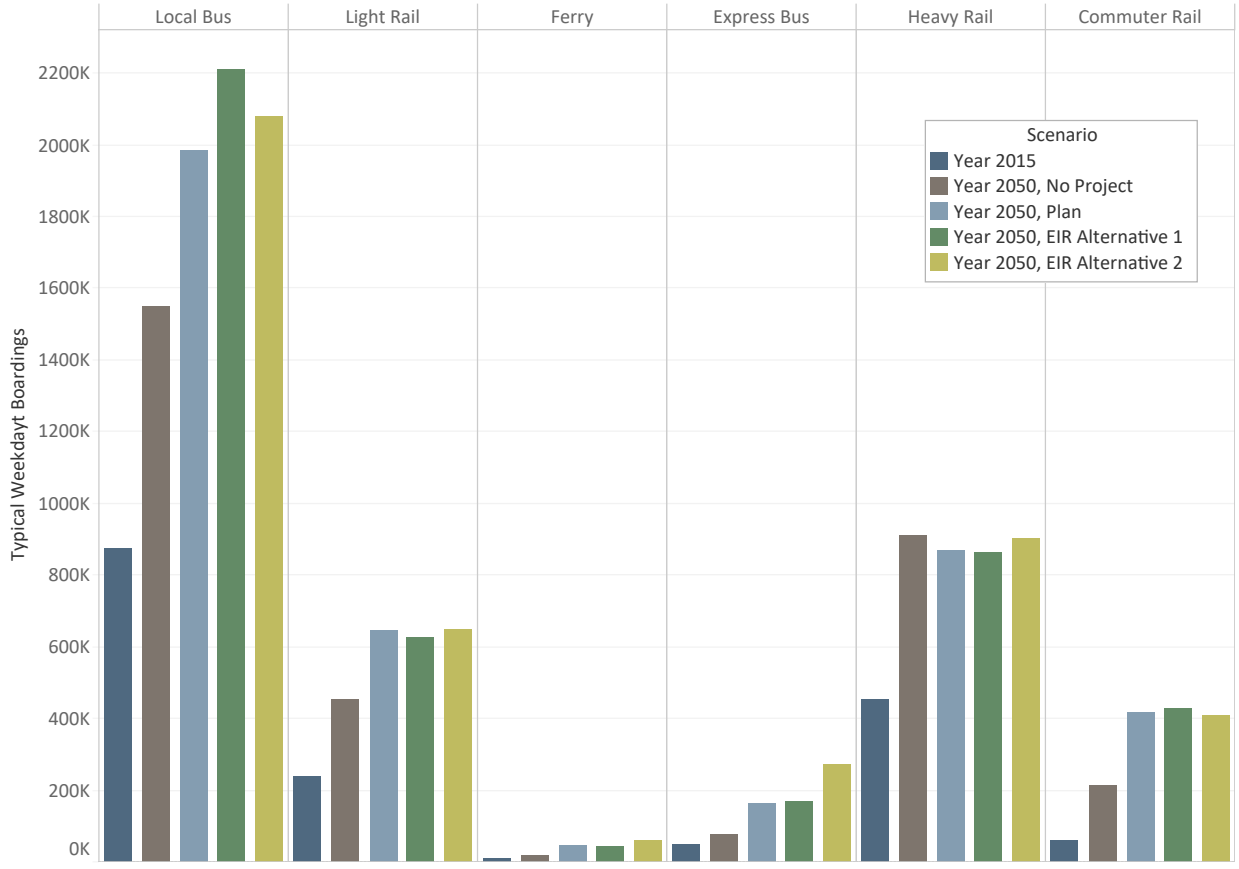
Aggregate Transit Demand Estimates

Bay Area residents choosing to travel by transit are explicitly assigned to a specific transit route. As a means of organizing the modeling results, MTC groups transit lines into the following technology- specific categories:

1. **Local bus:** standard, fixed-route bus service, of the kind a traveler may take to and from a neighborhood grocery store or to work, as well as "bus rapid transit" service. Cable cars are included in this category.
2. **Express bus:** longer distance service typically provided in over-the-road coaches. Golden Gate Transit, for example, provides express bus service between Marin County and Downtown San Francisco.
3. **Light rail:** represented in the Bay Area by San Francisco's Muni Metro and streetcar services (F- Market and E-Caltrain), as well as Santa Clara Valley Transportation Authority's light rail service.
4. **Heavy rail:** another name for the Bay Area Rapid Transit (BART) service.
5. **Commuter rail:** longer distance rail service typically operating in dedicated right-of-way, including Caltrain, Sonoma-Marin Area Rail Transit (SMART), Amtrak's Capitol Corridor, and Altamont Commuter Express.

Figure 36 presents the estimates of transit boardings by these categories on the typical weekday simulated by the travel model. Ridership increases from about 1.7 million daily boardings in 2015 to 3.1 million daily boardings in 2050 No Project, and 4 million daily boardings in all project scenarios in 2050.

Figure 36. Typical weekday transit boardings by technology in 2050 across alternatives



Roadway Utilization and Congestion Estimates

Trips made by automobile are first aggregated into matrices identifying each trip's origin and destination, and then "assigned" to a representation of the Bay Area's roadway network. The assignment process iteratively determines the shortest path between each origin-destination pair, shifting some number of trips to each iteration's shortest path, until the network reaches a certain level of equilibrium – defined as a state in which travelers cannot change to a lower "cost" route (where cost includes monetary and non-monetary (time) expenditures). Several measures of interest are generated by the assignment process, including vehicle miles traveled, delay, and average travel speed.

Please note that MTC maintains two separate estimates of the quantity of vehicle miles traveled (VMT), as follows:

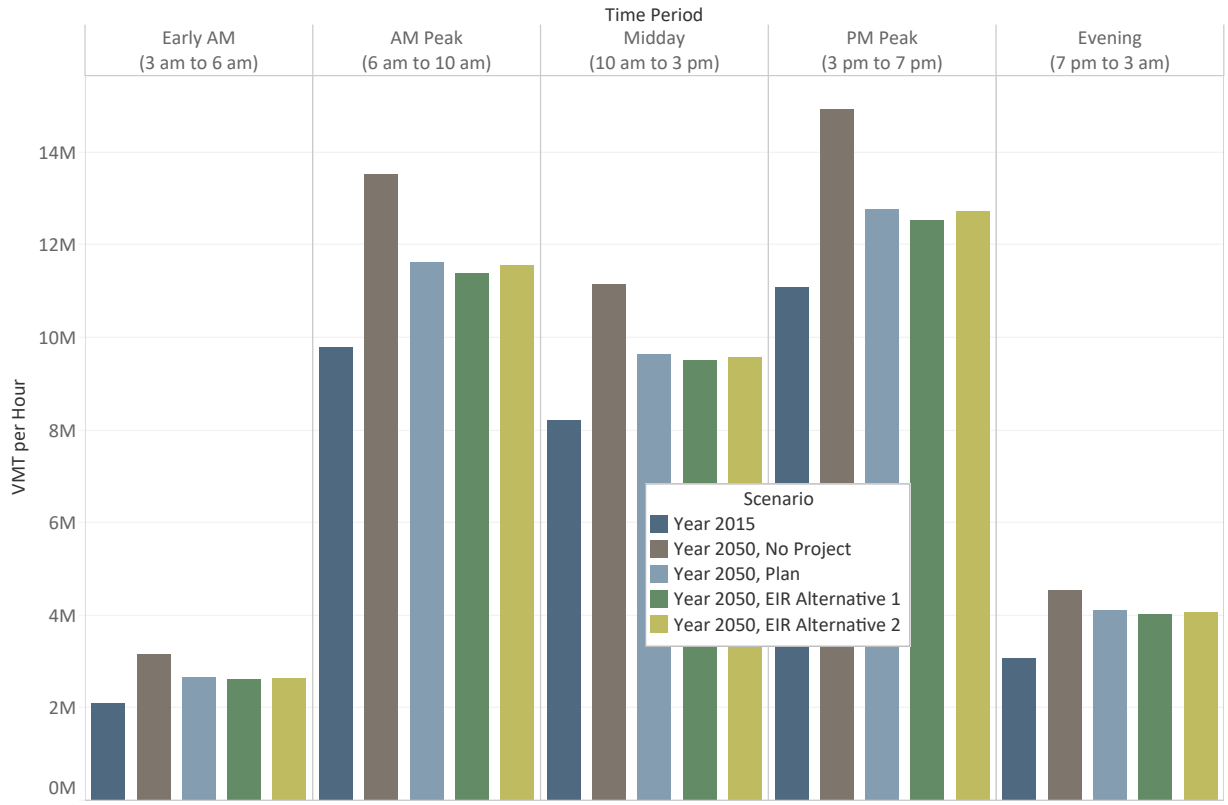
(1) the quantity assigned directly to the highway network; and

(2) the quantity (1) plus so-called "intra-zonal" VMT (i.e., travel that occurs at a geographic scale finer than the travel model's network representation), which is computed off-model

In this document, the VMT identified as (1) in the above list is presented.

Figure 37 first segments VMT into five time periods and then scales the VMT by the number of hours in each time period. The result is the intensity of VMT by time of day as well as the increase in VMT from 2015 to 2050. VMT drops significantly in the 2050 Plan and EIR Alternatives compared to 2050 No Project due to the strategies included in the Plan and EIR Alternatives, including road pricing and the commute trip reduction strategies, strategies to improve jobs/housing balance, and the other strategies included in the plan.

Figure 37. Vehicle miles traveled per hour by time period in 2050 across alternatives



Changes from Draft Forecasting and Modeling Report

Following the release of the Draft Environmental Impact Report and Draft Forecasting and Modeling Report for Plan Bay Area 2050, several assumptions underlying the Travel Modeling process were updated, and the scenarios were re-run. These fixes fell into two categories:

1) updates to modeling assumptions, and

2) network coding refinements for assorted projects to incorporate updated assumptions or correct errors

Additional detail on some of the more major updates is included below.

Refine "workers not working" assumptions

As discussed in the Draft Plan Bay Area 2050 Forecasting and Modeling Report, when staff incorporated updates to the estimate of telecommuters in the No Project scenario, staff applied data from the 2018-2019 Bay Area Transportation Study to estimate what proportion of workers who were not making a work tour (on the model simulation day) were telecommuting versus not going to work (due to alternative work schedules, or taking a vacation, sick or personal day). In reviewing this assumption, staff still considers it an appropriate assumption to apply to the 2015 model base year, but not to carry forward into future years. This is because the telecommute share is expected to rise, but the proportion of workers not going to work is not necessarily expected to change.

Therefore, staff updated the model assumption for future years to assume a fixed share of workers not working on the simulation day based upon the 2015 share: 10.8% of full-time workers and 20.6% of part-time workers. Assumptions about baseline telecommute rate (e.g., the share of workers telecommuting before the EN7 strategy was applied, described in Table 37 in the report) was not changed.

The impact on full-time workers for the No Project model runs is shown below. For the Draft EIR runs, the share of workers not working (in orange) increases slightly over time. With the implementation refinement, this share stays fixed for future years. This refinement affects all future year run, across all alternatives (No Project, Plan, EIR Alternative 1 and EIR Alternative 2).

Figure 38. Workers telecommuting, commuting, and not going to work in the Draft Plan (May 2021)

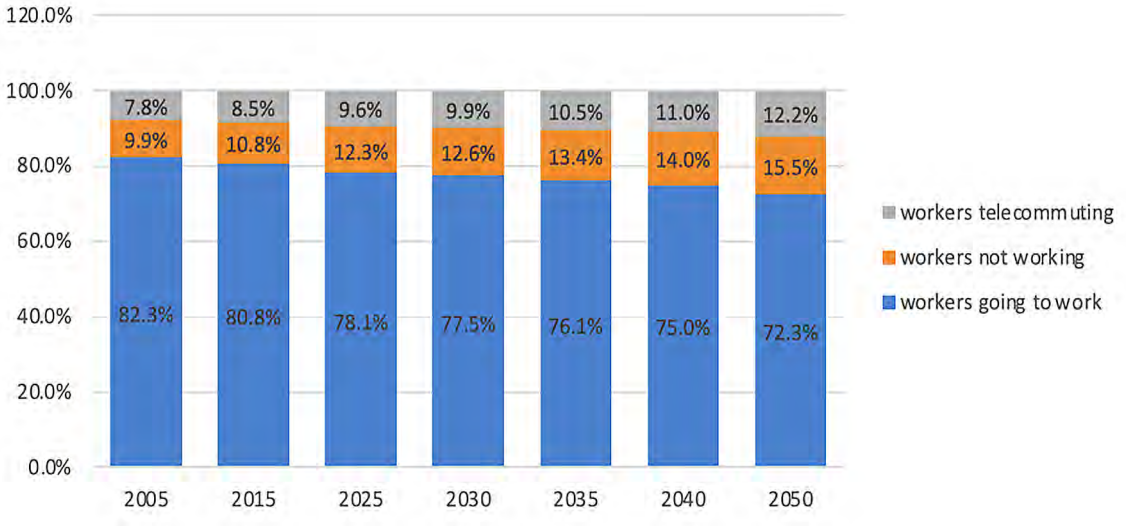
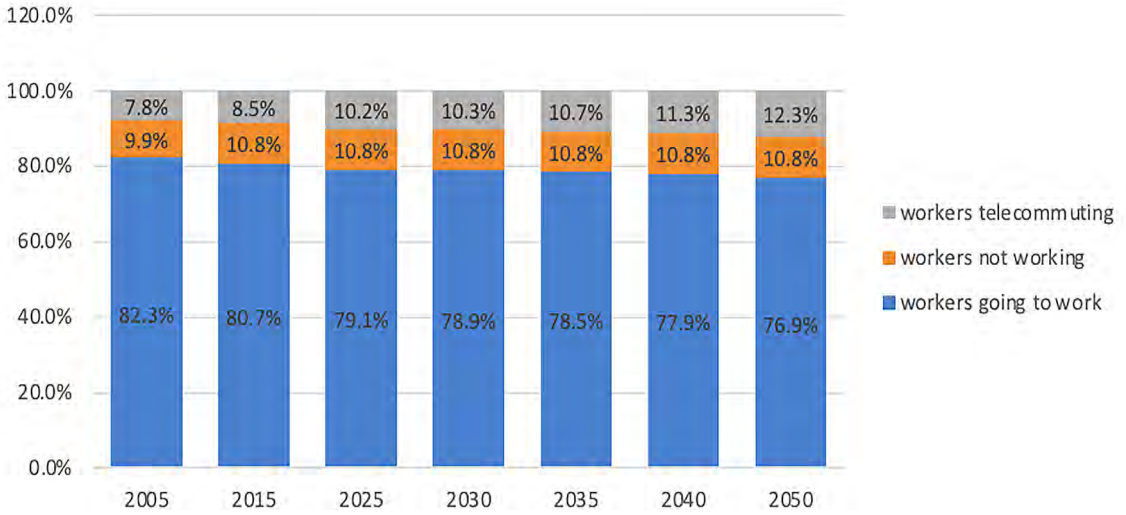


Figure 39. Workers telecommuting, commuting, and not going to work in the Plan (October 2021)



Update Transportation Network Company (TNC) wait time distribution configuration

The TNC wait time mean and standard deviation was reduced slightly in the highest density category. The wait time distribution was updated in the 2035 configuration, but not in the configuration for years after 2035; this omission has been corrected. This change has minor affects in model results because TNC trips represent a small share of trips.

Update Cube software to include fix for link-based fares which are used to represent zone-based express bus fares

For the Draft EIR travel model runs, 64-bit Cube 6.4.4 was used for transit assignment and skimming. This version does not assess link-based fares, which are used to add additional fares to the initial boarding fare when a certain link is traversed in a transit path. Link-based fares are a proxy for zone-based fares for express buses with a zone-based structure. Cube was updated to version 6.4.5, which fixed the bug in which link-based fares were not assessed. This fix had the effect of slightly decreasing express bus ridership for all model runs, but the effects were not significant. Staff verified the 2015 model run's transit ridership output was still valid with this fix.

Fix minor issues in base (2015) network

All the links in the 2015 network were scanned and the following fixes applied: a) reverse links that had different attribute values (distance, facility type, area type, city ID) b) a ramp that should be one-way instead of two-way on SR-4 in Antioch was fixed. Because the future year networks are built on top of the 2015 base network, these fixes affect the 2015 runs as well as all future year runs. However, the errors were all minor and so the effects on model results are likely insignificant.

Update internal/external travel assumptions

Travel Model 1.5 includes a representation of trips representing travel by non-residents who live outside the Bay Area and who drive into or out of the region on the typical simulated model day. For future forecast years, the traffic volumes at these gateway are assumed to be split into commute versus non-commute traffic; the assumed split is based on a comparison of Census Transportation Planning Product 2006-2010 and associated traffic volumes by subregion. For Plan Bay Area 2050, the commute share is not assumed to grow into the future, while the non-commute share of traffic is assumed to grow linearly based on past traffic volumes at the gateway. In 2019, these assumptions were updated slightly to move some forecasted growth between two gateways based on discussion with the neighboring Metropolitan Planning Organization, the Sacramento Area Council of Governments. Some model runs were found to be using the old configuration, and these were fixed. The effect of this fix is a minor change to traffic volumes at these gateways in future years.

Update Vehicle Buyback and Electric Vehicle Incentive initiative assumptions

Discussed in the Off-Model Calculations section, several updates were made to this program, which is part of Strategy, EN8: Expand Clean Vehicle Initiatives. First, the program's funding was increased, from $3.7 billion to $5.1 billion through 2035, incentivizing buyback and purchase of 630,000 electric vehicles (from 462,000 electric vehicles assumed with the lower funding amount). Second, the analysis was updated to assume electric vehicle adoptions are a result of both the regional program and the state's program, the California Clean Vehicle Rebate Project, and greenhouse gas emissions reductions are shared between the programs.

PLAN BAY AREA 2050

APPENDIX 1

PLAN BAY AREA 2050 GROWTH PATTERN

PLAN BAY AREA 2050

PLAN BAY AREA 2050 GROWTH PATTERN

Data tables below summarize the regional, county, and sub-county growth pattern for households and jobs in the Plan Bay Area 2050 Final Blueprint. Jurisdiction-level growth projections are developed solely for the 2023-2031 Regional Housing Needs Allocation (RHNA) process – for more information on RHNA, go to abag.ca.gov.

PROJECTED HOUSEHOLD AND JOB GROWTH, BY COUNTY

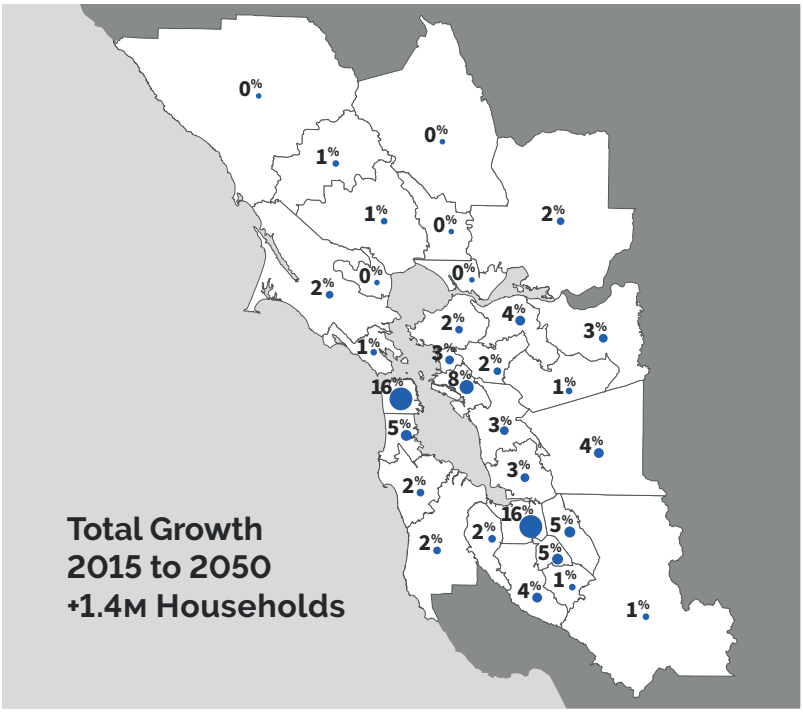
	HOUSEHOLDS					JOBS				
COUNTY	2015	2050	GROWTH	PERCENT GROWTH	SHARE OF REGIONAL GROWTH	2015	2050	GROWTH	PERCENT GROWTH	SHARE OF REGIONAL GROWTH
San Francisco	366,000	578,000	213,000	+58%	16%	682,000	918,000	236,000	+35%	17%
San Mateo	265,000	394,000	129,000	+48%	9%	393,000	507,000	114,000	+29%	8%
Santa Clara	623,000	1,075,000	453,000	+73%	33%	1,099,000	1,610,000	511,000	+46%	36%
Alameda	552,000	847,000	295,000	+54%	22%	867,000	1,182,000	315,000	+36%	22%
Contra Costa	383,000	551,000	169,000	+44%	12%	404,000	534,000	130,000	+32%	9%
Solano	142,000	177,000	35,000	+24%	3%	132,000	201,000	69,000	+53%	5%
Napa	50,000	56,000	5,000	+10%	0%	72,000	87,000	15,000	+21%	1%
Sonoma	188,000	220,000	32,000	+17%	2%	221,000	251,000	30,000	+14%	2%
Marin	109,000	146,000	37,000	+34%	3%	135,000	116,000	–19,000	–14%	–1%
REGION	2,677,000	4,043,000	1,367,000	+51%	100%	4,005,000	5,408,000	1,403,000	+35%	100%

Numbers may not always sum to 100% due to rounding.

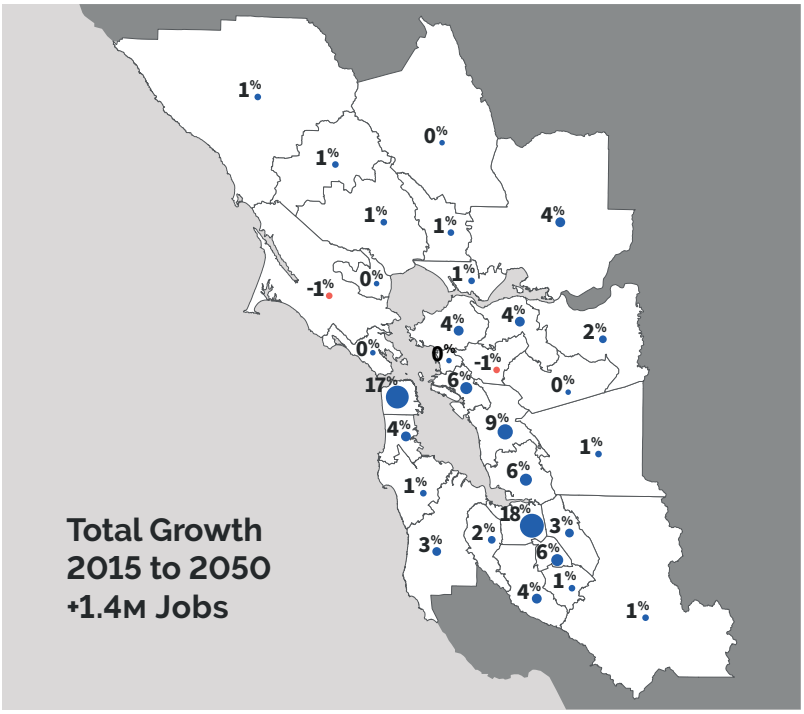
PLAN BAY AREA 2050

PLAN BAY AREA 2050 GROWTH PATTERN

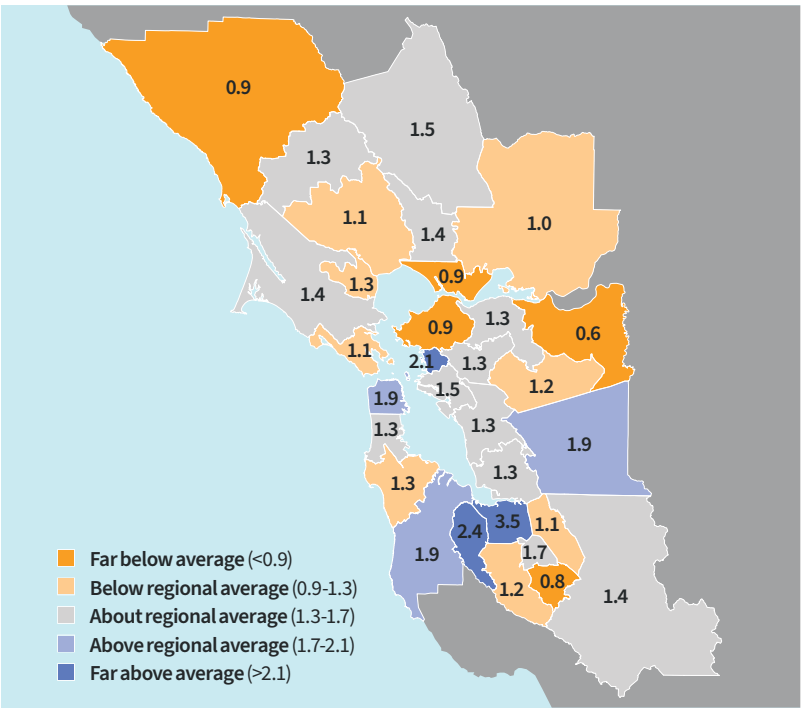
Housing Growth between 2015-2050
(as a Share of Region's Growth)



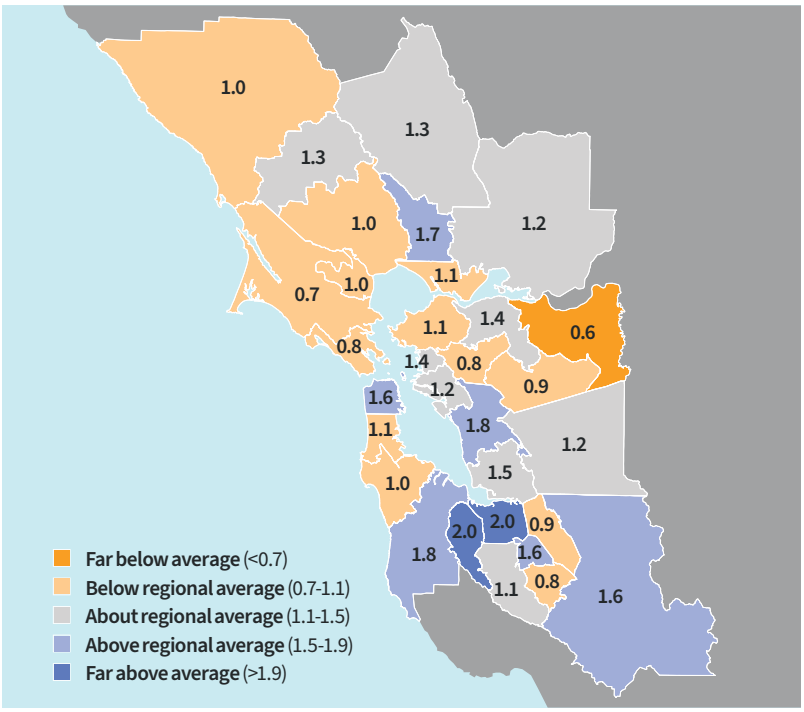
Job Growth between 2015-2050
(as a Share of Region's Growth)



Jobs/Housing Ratio 2015
(Region-Wide Average: 1.5)



Jobs/Housing Ratio 2050
(Region-Wide Average: 1.3)



The nine-county Bay Area is divided into 34 subcounty areas, called "superdistricts." Superdistricts are combinations of cities, towns and unincorporated areas that allow the public to see the more localized growth pattern in Plan Bay Area 2050. More information on the superdistricts can be found in the layer documentation.

PLAN BAY AREA 2050 GROWTH PATTERN

PROJECTED HOUSEHOLD AND JOB GROWTH, BY SUPERDISTRICT

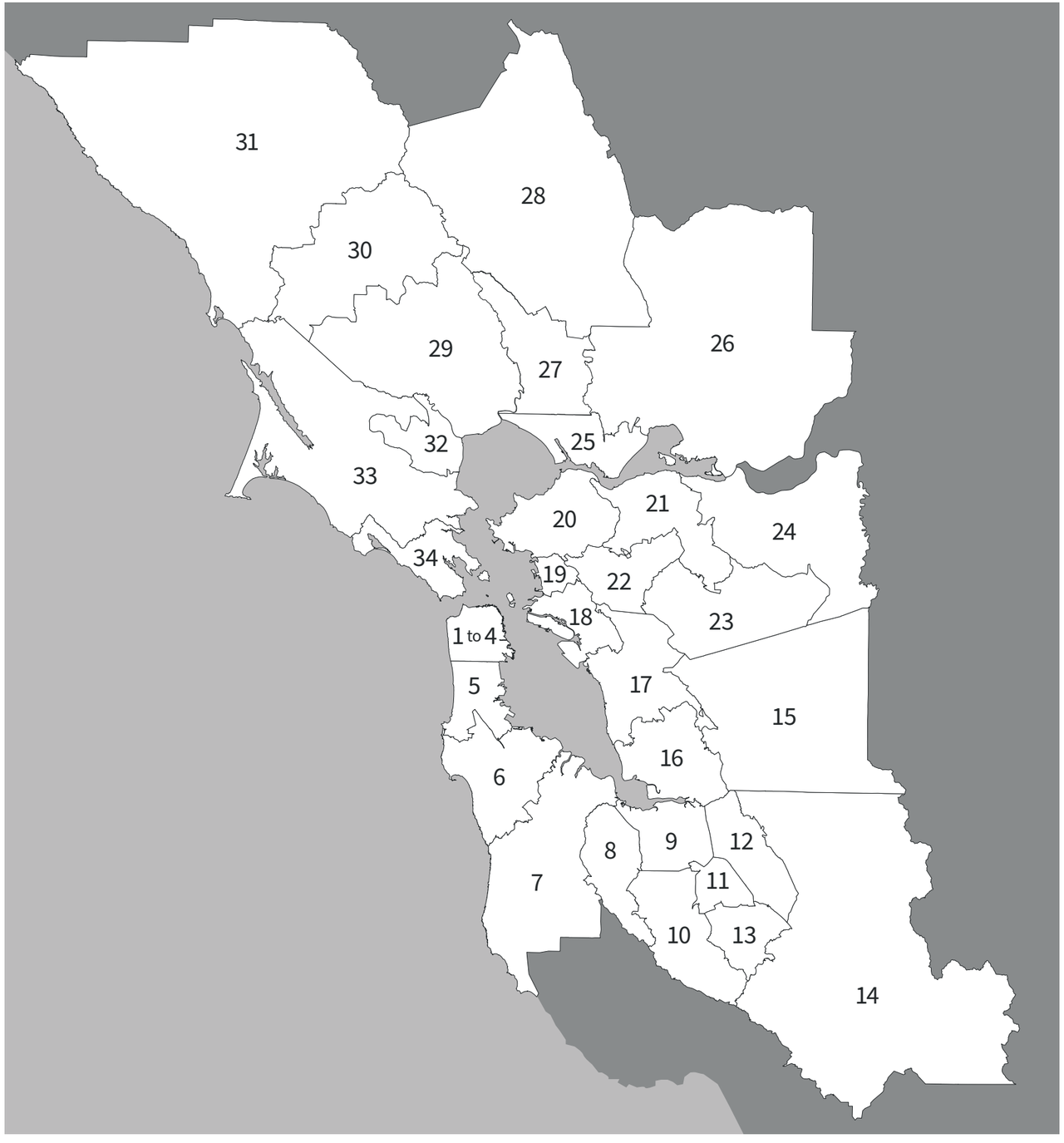
			HOUSEHOLDS					JOBS				
COUNTY	SUPER-DISTRICT	SUPERDISTRICT NAME	2015	2050	GROWTH	PERCENT GROWTH	SHARE OF REGIONAL GROWTH	2015	2050	GROWTH	PERCENT GROWTH	SHARE OF REGIONAL GROWTH
San Francisco	1 to 4	San Francisco County (Combined)	366,000	578,000	213,000	+58%	16%	682,000	918,000	236,000	+35%	17%
San Mateo	5	North San Mateo County	98,000	166,000	69,000	+70%	5%	130,000	188,000	58,000	+44%	4%
	6	Central San Mateo County	87,000	121,000	34,000	+39%	2%	110,000	123,000	13,000	+12%	1%
	7	South San Mateo County	80,000	106,000	26,000	+32%	2%	152,000	196,000	44,000	+29%	3%
Santa Clara	8	Northwest Santa Clara County	74,000	102,000	28,000	+38%	2%	180,000	207,000	27,000	+15%	2%
	9	North Santa Clara County	107,000	320,000	212,000	+199%	16%	370,000	629,000	259,000	+70%	18%
	10	West Santa Clara County	121,000	172,000	51,000	+42%	4%	145,000	197,000	52,000	+36%	4%
	11	Central Santa Clara County	105,000	168,000	63,000	+60%	5%	178,000	263,000	86,000	+48%	6%
	12	East Santa Clara County	108,000	180,000	72,000	+67%	5%	121,000	170,000	49,000	+40%	3%
	13	Central South Santa Clara County	73,000	91,000	18,000	+25%	1%	57,000	77,000	21,000	+36%	1%
	14	South Santa Clara County	35,000	43,000	8,000	+24%	1%	49,000	68,000	18,000	+37%	1%
Alameda	15	East Alameda County	72,000	132,000	60,000	+82%	4%	138,000	156,000	18,000	+13%	1%
	16	South Alameda County	105,000	152,000	47,000	+45%	3%	142,000	221,000	79,000	+56%	6%
	17	Central Alameda County	120,000	160,000	40,000	+33%	3%	157,000	285,000	128,000	+82%	9%
	18	North Alameda County	181,000	287,000	107,000	+59%	8%	275,000	358,000	83,000	+30%	6%
	19	Northwest Alameda County	73,000	115,000	42,000	+57%	3%	155,000	162,000	7,000	+5%	0%
Contra Costa	20	West Contra Costa County	89,000	123,000	34,000	+38%	2%	79,000	132,000	52,000	+66%	4%
	21	North Contra Costa County	85,000	134,000	49,000	+58%	4%	121,000	184,000	63,000	+52%	4%
	22	Central Contra Costa County	60,000	89,000	28,000	+47%	2%	81,000	74,000	-7,000	–9%	-1%
	23	South Contra Costa County	55,000	70,000	15,000	+28%	1%	66,000	60,000	-6,000	–9%	0%
	24	East Contra Costa County	94,000	136,000	42,000	+45%	3%	56,000	84,000	28,000	+51%	2%
Solano	25	South Solano County	53,000	57,000	5,000	+9%	0%	45,000	62,000	17,000	+37%	1%
	26	North Solano County	89,000	119,000	30,000	+34%	2%	87,000	139,000	53,000	+61%	4%
Napa	27	South Napa County	34,000	40,000	5,000	+15%	0%	48,000	66,000	19,000	+39%	1%
	28	North Napa County	16,000	16,000	0	+1%	0%	24,000	20,000	-3,000	–14%	0%
Sonoma	29	South Sonoma County	64,000	83,000	19,000	+30%	1%	72,000	80,000	8,000	+11%	1%
	30	Central Sonoma County	88,000	98,000	10,000	+11%	1%	118,000	131,000	14,000	+12%	1%
	31	North Sonoma County	36,000	39,000	3,000	+9%	0%	31,000	40,000	9,000	+28%	1%
Marin	32	North Marin County	23,000	30,000	7,000	+28%	0%	29,000	29,000	0	+0%	0%
	33	Central Marin County	44,000	66,000	22,000	+50%	2%	63,000	49,000	–14,000	–23%	–1%
	34	South Marin County	41,000	50,000	9,000	+21%	1%	44,000	40,000	–4,000	–10%	0%
REGION			2,677,000	4,043,000	1,367,000	+51%	100%	4,005,000	5,408,000	1,403,000	+35%	100%

Numbers may not always sum to 100% due to rounding.

PLAN BAY AREA 2050

PLAN BAY AREA 2050 GROWTH PATTERN

REGIONAL MAP – SUPERDISTRICTS



SUPER-DISTRICT	COUNTY	SUPERDISTRICT NAME	PRIMARY JURISDICTIONS INCLUDED IN SUPERDISTRICT
1 to 4	San Francisco	San Francisco County (Combined)	San Francisco
5	San Mateo	North San Mateo County	Brisbane, Colma, Daly City, Pacifica, South San Francisco, Millbrae, San Bruno, Burlingame (partial)
6	San Mateo	Central San Mateo County	Half Moon Bay, Hillsborough, San Mateo, Foster City, Belmont, Burlingame (partial)
7	San Mateo	South San Mateo County	Atherton, Menlo Park, Redwood City, Woodside, East Palo Alto, Portola Valley, San Carlos
8	Santa Clara	Northwest Santa Clara County	Los Altos Hills, Los Altos, Palo Alto (partial), Mountain View (partial)
9	Santa Clara	North Santa Clara County	Sunnyvale, Santa Clara (partial), Mountain View (partial), Milpitas (partial), San Jose (partial), Palo Alto (partial)
10	Santa Clara	West Santa Clara County	Los Gatos, Monte Sereno, Saratoga, Cupertino, Campbell (partial), Santa Clara (partial)
11	Santa Clara	Central Santa Clara County	Campbell (partial), San Jose (partial)
12	Santa Clara	East Santa Clara County	Milpitas (partial), San Jose (partial)
13	Santa Clara	Central South Santa Clara County	San Jose (partial)
14	Santa Clara	South Santa Clara County	Gilroy, Morgan Hill, San Jose (partial)
15	Alameda	East Alameda County	Dublin, Livermore, Pleasanton
16	Alameda	South Alameda County	Newark, Fremont, Union City
17	Alameda	Central Alameda County	San Leandro, Hayward
18	Alameda	North Alameda County	Alameda, Piedmont, Oakland
19	Alameda	Northwest Alameda County	Albany, Berkeley, Emeryville
20	Contra Costa	West Contra Costa County	El Cerrito, Hercules, Pinole, Richmond, San Pablo
21	Contra Costa	North Contra Costa County	Clayton, Pleasant Hill, Concord, Martinez, Lafayette (partial), Pittsburg (partial)
22	Contra Costa	Central Contra Costa County	Moraga, Orinda, Walnut Creek (partial), Lafayette (partial)
23	Contra Costa	South Contra Costa County	Danville, San Ramon, Walnut Creek (partial)
24	Contra Costa	East Contra Costa County	Antioch, Brentwood, Oakley, Pittsburg (partial)
25	Solano	South Solano County	Benicia, Vallejo
26	Solano	North Solano County	Dixon, Fairfield, Rio Vista, Suisun City, Vacaville
27	Napa	South Napa County	American Canyon, Napa
28	Napa	North Napa County	Calistoga, St. Helena, Yountville
29	Sonoma	South Sonoma County	Cotati, Petaluma, Sonoma, Rohnert Park
30	Sonoma	Central Sonoma County	Santa Rosa, Sebastopol
31	Sonoma	North Sonoma County	Cloverdale, Healdsburg, Windsor
32	Marin	North Marin County	Novato
33	Marin	Central Marin County	Fairfax, San Anselmo, San Rafael, Ross
34	Marin	South Marin County	Belvedere, Corte Madera, Mill Valley, Sausalito, Tiburon, Larkspur

Unincorporated areas included in most superdistricts outside San Francisco. Small overlap zones, representing less than 10% of any city's size, are not shown for clarity.

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Appendix E

TCM A: Regional Express Bus

Regional Express Bus Program

Vehicle Deployment Throughout the Bay Area[1]

February 18, 2009

Transit Operator	Vehicle Type	Serial Registration[2]	Funds Obligated	Operating Agency	Route	Weekday Service Hours	Weekend Service Hours
AC Transit[3]	Over-The-Road	1M8PDMPA43P055640	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA63P055641	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA83P055642	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPAX3P055643	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA33P055645	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA53P055646	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA73P055647	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA93P055648	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA73P055650	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA93P055621	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA03P055652	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA23P055653	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA43P055654	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA63P055655	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPAX3P055657	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA13P055658	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA33P055659	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPAX3P055660	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA13P055661	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA73P055664	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA83P055656	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA03P055666	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA93P055665	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA53P055663	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA33P055662	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA23P055667	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA03P055649	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPAX3P055674	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA43P055668	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA63P055669	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA23P055670	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA43P055671	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA63P055672	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA83P055673	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA33P055676	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA53P055677	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	IM8PDMPA73P055678	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA93P055679	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Over-The-Road	1M8PDMPA13P055675	3/25/2001	AC Transit	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Suburban	15GCD201531111916	1/27/2003	AC Transit - Transferred from SamTrans[4]	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Suburban	15GCD201731111917	1/27/2003	AC Transit - Transferred from SamTrans[4]	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Suburban	15GCD201931111918	1/27/2003	AC Transit - Transferred from SamTrans[4]	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
	Suburban	15GCD201031111919	1/27/2003	AC Transit - Transferred from SamTrans[4]	Transbay - Bay, San Mateo, and Dumbarton Bridges	5:00 AM - 12:45 AM	5:30 AM - 12:50 AM
CCCTA	Suburban	15GDD271X21111662	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111663	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111664	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111665	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111666	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111667	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111668	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111669	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111670	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111671	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111672	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111673	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	
	Suburban	15GDD271X21111674	3/25/2002	CCCTA	960B & 960C Mitchell Drive Park & Ride/Bishop Ranch	**960B** 5:15 AM - 7:51 PM **960C** 6:15 AM - 7:50 PM	

TCM A: Regional Express Bus

Regional Express Bus Program

Vehicle Deployment Throughout the Bay Area[1]

February 18, 2009

Transit Operator	Vehicle Type	Serial Registration[2]	Funds Obligated	Operating Agency	Route	Weekday Service Hours	Weekend Service Hours
Fairfield-Suisun	Over-The-Road	1M8PDMPA13P055949	11/14/2002	Fairfield-Suisun	40 Vacaville/Fairfield to Pleasant Hill/Walnut Creek BART	5:00 AM - 9:57 AM & 3:01 PM - 8:31 PM	
	Over-The-Road	1M8PDMPA83P055950	11/14/2002	Fairfield-Suisun	40 Vacaville/Fairfield to Pleasant Hill/Walnut Creek BART	5:00 AM - 9:57 AM & 3:01 PM - 8:31 PM	
	Suburban	15GCD201731111920	1/27/2003	Fairfield-Suisun - Transferred from SamTrans[4]	30 Fairfield to Davis/Sacramento	6:08 AM - 7:05 PM	Sat Only 8:03 AM - 4:43 PM
	Suburban	15CGD201931111921	1/27/2003	Fairfield-Suisun - Transferred from SamTrans[4]	30 Fairfield to Davis/Sacramento	6:08 AM - 7:05 PM	Sat Only 8:03 AM - 4:43 PM
Golden Gate	Over-The-Road	1M8PDMPA53PO55680	11/8/2002	Golden Gate	71 Novato/San Rafael/Marin City/San Francisco	6:35 AM - 8:27 PM	Sat Only 6:59 AM - 7:28 PM
	Over-The-Road	1M8PDMPA73PO55681	11/8/2002	Golden Gate	71 Novato/San Rafael/Marin City/San Francisco	6:35 AM - 8:27 PM	Sat Only 6:59 AM - 7:28 PM
	Over-The-Road	1M8PDMPA93PO55682	11/8/2002	Golden Gate	72 Santa Rosa/Rohnert Park/Cotati/San Francisco	3:54 AM - 8:59 AM & 2:12 PM - 8:05 PM	
	Over-The-Road	1M8PDMPAO3PO55683	11/8/2002	Golden Gate	72 Santa Rosa/Rohnert Park/Cotati/San Francisco	3:54 AM - 8:59 AM & 2:12 PM - 8:05 PM	
	Over-The-Road	1M8PDMPA23PO55684	11/8/2002	Golden Gate	75 Santa Rosa/Rohnert Park/Cotati · Petaluma /Marin Civic Center/San Rafael	5:02 AM - 8:35 AM & 2:59 PM - 7:18 PM	
	Over-The-Road	1M8PDMPA43PO55685	11/8/2002	Golden Gate	75 Santa Rosa/Rohnert Park/Cotati · Petaluma /Marin Civic Center/San Rafael	5:02 AM - 8:35 AM & 2:59 PM - 7:18 PM	
LAVTA	Suburban	15GDD271521110872	3/25/2002	LAVTA	70X Pleasanton - Walnut Creek Express	5:09 AM - 9:16 AM & 3:19 PM - 7:42 PM	
	Suburban	15GDD271721110873	3/25/2002	LAVTA	70X Pleasanton - Walnut Creek Express	5:09 AM - 9:16 AM & 3:19 PM - 7:42 PM	
	Suburban	15GDD271921110874	3/25/2002	LAVTA	70X Pleasanton - Walnut Creek Express	5:09 AM - 9:16 AM & 3:19 PM - 7:42 PM	
	Suburban	15GDD271021110875	3/25/2002	LAVTA	70X Pleasanton - Walnut Creek Express	5:09 AM - 9:16 AM & 3:19 PM - 7:42 PM	
NCTPA	Suburban	15GCD201631111911	1/27/2003	SamTrans Transfering to NCPTA on 2/28/09	June 2009 - Calistoga/Yountville/Napa/American Canyon/Baylink Ferry Terminal	5:00 AM-6:30 PM; Peak Only	
	Suburban	15GCD201831111912	1/27/2003	SamTrans Transfering to NCPTA on 2/28/09	June 2009 - Calistoga/Yountville/Napa/American Canyon/Baylink Ferry Terminal	5:00 AM-6:30 PM; Peak Only	
Tri-Delta	Over-The-Road	1M8PDMPA63P055686	11/8/2002	Tri-Delta	300 Express Commuter Service Brentwood/Pittsburg BART	4:15 AM - 9:07 PM	
	Over-The-Road	1M8PDMPA63P055687	11/8/2002	Tri-Delta	300 Express Commuter Service Brentwood/Pittsburg BART	4:15 AM - 9:07 PM	
	Over-The-Road	1M8PDMPA63P055688	11/8/2002	Tri-Delta	300 Express Commuter Service Brentwood/Pittsburg BART	4:15 AM - 9:07 PM	
	Over-The-Road	1M8PDMPA63P055689	11/8/2002	Tri-Delta	300 Express Commuter Service Brentwood/Pittsburg BART	4:15 AM - 9:07 PM	
Vallejo	Over-The-Road	1M8PDMPA13P055627	11/14/2002	Leased to Fairfield-Suisun[5]	90 Fairfield/El Cerrito Del Norte BART	4:55 AM - 10:35 PM	
	Over-The-Road	1M8PDMPA33P055628	11/14/2002	Leased to Fairfield-Suisun[5]	90 Fairfield/El Cerrito Del Norte BART	4:55 AM - 10:35 PM	
	Over-The-Road	1M8PDMPA53P055629	11/14/2002	Vallejo	78 Vallejo/Benicia/Pleasant Hill BART/Walnut Creek BART	5:00 AM - 8:38 PM	
	Over-The-Road	1M8PDMPA13P055630	11/14/2002	Leased to Fairfield-Suisun[5]	90 Fairfield/El Cerrito Del Norte BART	4:55 AM - 10:35 PM	
	Over-The-Road	1M8PDMPA33P055631	11/14/2002	Leased to Fairfield-Suisun[5]	90 Fairfield/El Cerrito Del Norte BART	4:55 AM - 10:35 PM	
	Over-The-Road	1M8PDMPA53P055632	11/14/2002	Vallejo	78 Vallejo/Benicia/Pleasant Hill BART/Walnut Creek BART	5:00 AM - 8:38 PM	
	Over-The-Road	1M8PDMPA73P055633	11/14/2002	Vallejo	78 Vallejo/Benicia/Pleasant Hill BART/Walnut Creek BART	5:00 AM - 8:38 PM	
	Over-The-Road	1M8PDMPA93P055634	11/14/2002	Vallejo	78 Vallejo/Benicia/Pleasant Hill BART/Walnut Creek BART	5:00 AM - 8:38 PM	
	Over-The-Road	1M8PDMPA03P055635	11/14/2002	Vallejo	78 Vallejo/Benicia/Pleasant Hill BART/Walnut Creek BART	5:00 AM - 8:38 PM	
	Over-The-Road	1M8PDMPA23P055636	11/14/2002	Leased to Fairfield-Suisun[5]	90 Fairfield/El Cerrito Del Norte BART	4:55 AM - 10:35 PM	
	Over-The-Road	1M8PDMPA43P055637	11/14/2002	Leased to Fairfield-Suisun[5]	90 Fairfield/El Cerrito Del Norte BART	4:55 AM - 10:35 PM	
	Over-The-Road	1M8PDMPA83P055639	11/14/2002	Leased to Fairfield-Suisun[5]	90 Fairfield/El Cerrito Del Norte BART	4:55 AM - 10:35 PM	
WestCat	Suburban	15GCD211121111974	3/7/2002	WestCat	30Z Hercules Transit Center/Martinez/BART	5:59 AM - 8:03 PM	
	Suburban	15GCD211521111975	3/7/2002	WestCat	30Z Hercules Transit Center/Martinez/BART	5:59 AM - 8:03 PM	
	Suburban	15GCD211121111976	3/7/2002	WestCat	30Z Hercules Transit Center/Martinez/BART	5:59 AM - 8:03 PM	
	Suburban	15GCD201X31111913	1/27/2003	WestCat - Transferred from SamTrans[4]	LYNX Rodeo/Hercules/San Francisco Transbay Terminal	5:00 AM - 9:45 AM & 3:30 PM - 8:33 PM	
	Suburban	15GCD201131111914	1/27/2003	WestCat - Transferred from SamTrans[4]	LYNX Rodeo/Hercules/San Francisco Transbay Terminal	5:00 AM - 9:45 AM & 3:30 PM - 8:33 PM	
	Suburban	15GCD201331111915	1/27/2003	SamTrans[4]	LYNX Rodeo/Hercules/San Francisco Transbay Terminal	5:00 AM - 9:45 AM & 3:30 PM - 8:33 PM	

1. Please note: MTC does not currently have information compiled on cumulative operating hours for all of the TCRP buses. For projects where the buses have been assigned to routes receiving operating funds that are tied to required performance measures, MTC has data compiled on the annual performance of those routes.
2. Each vehicle may be deployed on any of the approved routes listed for each operator.
3. Vehicles are deployed as needed for various routes on weekdays and weekends. All transbay service does not operate on weekends, but all vehicles may be deployed on weekend transbay service.
4. SamTrans REX service was discontinued in 2007 due to low ridership; all 11 TCRP vehicles purchased for the REX service were reallocated to AC Transit, Fairfield-Suisun Transit, WestCat, and NCTPA.
5. Route 90 service was transferred from Vallejo to Fairfield-Suisun Transit in 2006.

TCM B: Bicycle/Pedestrian Program
TDA ARTICLE 3 [Transportation Development Act Funds for Bicycle and Pedestrian Projects]

	SPONSOR	PROJECT NAME	AMOUNT
FY 2003-04	Alameda County	ADA Compliant Accessible Ramps	$ 105,767
FY 2003-04	Alameda County	Tesla Road Bicycle Lanes	$ 51,000
FY 2003-04	City of Albany	Manor Way Pedestrian Improvements	$ 22,706
FY 2003-04	City of Berkeley	Bicycle Safety Education	$ 30,000
FY 2003-04	City of Berkeley	Prepare plan for implementing future	$ 31,033
FY 2003-04	City of Fremont	Bike Detectors, Bike Logo on Pavement,	$ 128,989
FY 2003-04	City of Hayward	Installation of Wheelchair Ramps	$ 84,198
FY 2003-04	City of Livermore	Complete Portion of S. Livermore Valley	$ 97,301
FY 2003-04	City of Newark	Silliman Activity Center Pedestrian/	$ 59,158
FY 2003-04	City of Oakland	Bancroft Ave. Bike Lanes (96th - Durant)	$ 96,000
FY 2003-04	City of Oakland	Citywide Ped. Curb Ramp Program -	$ 295,266
FY 2003-04	City of Oakland	Lake Merritt 12th St. Dam Ped/Bike	$ 116,000
FY 2003-04	City of Oakland	Pedestrian Bulb Outs-Highland &	$ 100,000
FY 2003-04	City of Oakland	Walk/Bike Calif. Conf. - Alameda Co.	$ 30,000
FY 2003-04	City of Oakland	West City of Oakland Bay Trail	$ 289,000
FY 2003-04	City of Piedmont	Sidewalk Extension and Curb Cuts	$ 6,506
FY 2003-04	City of Pleasanton	ADA Compliant Wheelchair Accessible	$ 38,627
FY 2003-04	City of San Leandro	Install New Curb Cuts & Upgrade	$ 40,000
FY 2003-04	City of Brentwood	Installation of Wheelchair Ramps	$ 30,000
FY 2003-04	City of Concord	Iron Horse Trail Rte 242 Undercrossing	$ 36,000
FY 2003-04	City of Concord	Wren Avenue Ped. Improvements	$ 45,000
FY 2003-04	Contra Costa County	Bicycle/Pedestrian Safety Education	$ 21,500
FY 2003-04	Contra Costa County	Olympic Blvd. Ped. Path Phase II	$ 115,000
FY 2003-04	City of Lafayette	Hough Avenue Sidewalk	$ 37,000
FY 2003-04	City of Moraga	Rheem Blvd./Moraga Rd. Intersection	$ 66,100
FY 2003-04	City of Pittsburg	Polaris Drive Bike Facility	$ 77,500
FY 2003-04	City of San Ramon	Dougherty Road Sidewalk	$ 25,000
FY 2003-04	Marin County	Bicycle/Pedestrian Bridge	$ 140,000
FY 2003-04	Mill Valley	Signage Project	$ 7,200
FY 2003-04	City of Novato	Commuter Bikeway Connection	$ 402,286
FY 2003-04	City of Novato	Hill Road Path Connection	$ 60,000
FY 2003-04	City of San Anselmo	Purchase & Install Bicycle Racks	$ 15,000
FY 2003-04	Napa County	Yountville Cross Rd. Bike Lane	$ 150,000
FY 2003-04	Yountville	Yountville Cross Rd. Bike Lane	$ 47,000
FY 2003-04	City of Campbell	Westmont Ave. Improvement Project	$ 43,192
FY 2003-04	City of Los Altos	Fremont Ave. Sidewalk Phase III	$ 15,781
FY 2003-04	Los Altos Hills	Paseo Del Roble Pedestrian Bridge	$ 9,554
FY 2003-04	City of Milpitas	Calaveras Blvd. Sidewalk & Bike Path	$ 36,895
FY 2003-04	Mountain View	Access Ramp Installation	$ 24,905
FY 2003-04	Mountain View	Audible Ped. Signal Installations	$ 16,500
FY 2003-04	Mountain View	Bicycle Path Construction	$ 13,113
FY 2003-04	Palo Alto	Baffle Replacements: Calif. Ave.	$ 15,993
FY 2003-04	Palo Alto	Homer Ave. Ped. Bicycle Undercrossing	$ 293,000
FY 2003-04	Palo Alto	Ped. Walkway Lighted Warning System	$ 20,000
FY 2003-04	City of San Jose	ADA Wheel Chair Curb & Ramp Install.	$ 100,000
FY 2003-04	City of San Jose	Certified TDA Fiscal Audit	$ 9,000
FY 2003-04	City of San Jose	Murdock Park Bridge over San Tomas	$ 100,000
FY 2003-04	City of San Jose	Ped & Bike Facility Signing & Striping	$ 100,000
FY 2003-04	City of San Jose	Ped & Bike Safety Education	$ 50,000
FY 2003-04	City of San Jose	Pedro Street Sidewalk Improvement	$ 124,434
FY 2003-04	City of San Jose	Street Sidewalk Improvement	$ 147,435
FY 2003-04	City of Santa Clara	Certified TDA Fiscal Audit	$ 5,000
FY 2003-04	City of Santa Clara	Install Bike & Ped. Improvements	$ 61,815
FY 2003-04	City of Santa Clara	Update City's Existing Bike Plan &	$ 3,900
FY 2003-04	Santa Clara County	Bike Detector @ various Intersections	$ 58,118

TCM B: Bicycle/Pedestrian Program
TDA ARTICLE 3 [Transportation Development Act Funds for Bicycle and Pedestrian Projects]

	SPONSOR	PROJECT NAME	AMOUNT
FY 2003-04	Santa Clara County	Path along McKee Rd. bet Staples Ave.	$ 50,000
FY 2003-04	City of Saratoga	Saratoga Avenue Walkway Project	$ 17,254
FY 2003-04	City of Sunnyvale	Calabazas Creek Trail	$ 50,152
FY 2003-04	San Francisco City and County	Bicycle Projects	$ 404,000
FY 2003-04	San Francisco City and County	Pedestrian Projects	$ 300,000
FY 2003-04	City of Half Moon Bay	Construct Rt. 92 Bicycle Lanes and	$ 485,146
FY 2003-04	City of Pacifica	Milagra Drive Overcrossing at State	$ 240,000
FY 2003-04	City of San Bruno	Crystal Springs Rd. Traffic Signal	$ 20,000
FY 2003-04	City of San Mateo	Bikeway Detection Units	$ 30,000
FY 2003-04	City of San Mateo	Regional Bayfront Trail Upgrade	$ 150,000
FY 2003-04	South San Francisco	Construct San Francisco Bay Trail	$ 100,000
FY 2003-04	South San Francisco	Orange Avenue Intersection Improve.	$ 100,000
FY 2003-04	City of Benicia	Park Road Bike/Ped Improvements	$ 160,000
FY 2003-04	Solano County	Dixon to Davis Bike Route	$ 125,000
FY 2003-04	City of Suisun City	Central County Bikeway	$ 25,000
FY 2003-04	City of Healdsburg	Foss Creek Northwestern Pacific Multi-	$ 99,695
FY 2003-04	City of Petaluma	Washington Creek Multi-Use Path	$ 175,000
FY 2003-04	City of Santa Rosa	Sonoma Ave. Bike Lanes Phase II	$ 50,000
FY 2003-04	Sonoma County	Old Redwood Highway Class II Bike Lanes	$ 350,000
FY 2004-05	Alameda County	Conduct a planning study & develop	$ 38,000
FY 2004-05	Alameda County	Conduct bicycle plan study	$ 59,650
FY 2004-05	Alameda County	Sign & stripe 0.6 miles of 6-foot wide	$ 100,000
FY 2004-05	City of Berkeley	Contract with a qualified consultant	$ 34,281
FY 2004-05	City of Berkeley	Educate children about bicycle safety	$ 30,000
FY 2004-05	City of Fremont	Stripe bike lanes, modify bike lane	$ 121,168
FY 2004-05	City of Hayward	Design & construct ADA wheel chair	$ 88,925
FY 2004-05	City of Newark	Design & construct ADA wheel chair	$ 27,009
FY 2004-05	City of Piedmont	Design & construct ADA wheel chair	$ 6,852
FY 2004-05	City of Pleasanton	Preserve Golf Course	$ 75,000
FY 2004-05	City of San Leandro	Install curb ramps, accessible ped.	$ 41,438
FY 2004-05	City of San Leandro	Install curb ramps, accessible ped.	$ 50,024
FY 2004-05	City of San Leandro	Install curb ramps, accessible ped.	$ 8,000
FY 2004-05	City of Antioch	Improve curbs, ramps, crosswalk, signs	$ 80,000
FY 2004-05	City of Brentwood	Install lighted crosswalk and flashing lights	$ 31,500
FY 2004-05	City of Concord	Construct 500 ft of 4-to 6-foot wide bike/ped path	$ 45,000
FY 2004-05	City of El Cerrito	Conduct a planning study for bicycle/ped needs	$ 26,500
FY 2004-05	City of Lafayette	Construct 125 feet of 5-foot wide	$ 10,000
FY 2004-05	City of Martinez	Replace the two existing unsafe bridges	$ 90,000
FY 2004-05	City of Orinda	Develop a Lamorinda Trail Map & install	$ 28,500
FY 2004-05	City of Pittsburg	Construct Class II and Class III	$ 51,000
FY 2004-05	City of Pittsburg	Sign & stripe 3600 feet of 13-foot wide	$ 52,000
FY 2004-05	City of San Pablo	Install bike/ped friendly lighting	$ 45,100
FY 2004-05	City of Walnut Creek	Construct 2040 feet of asphalt walkway	$ 95,000
FY 2004-05	Contra Costa County	Construct 344 feet of 4.5-foot wide bike/ped path	$ 201,000
FY 2004-05	Contra Costa County	Construct 402 feet of 5-foot wide bike/ped path	$ 158,928
FY 2004-05	Contra Costa County	Provide bicycle & pedestrian safety	$ 20,000
FY 2004-05	City of San Rafael	Construct 6' wide sidewalk & stripe	$ 207,710
FY 2004-05	City of Sausalito	Construct 6' wide sidewalk & stripe	$ 186,290
FY 2004-05	City of Calistoga	Construct 1.0 miles of Class I bike-ped path	$ 270,881
FY 2004-05	City of Napa	Construct 2.0 miles of Class I bikeway	$ 149,727
FY 2004-05	City of Campbell	Construct Class II bike lockers at J.D.	$ 24,308
FY 2004-05	City of Campbell	Widen & regrade bicycle/Pedestrian	$ 515,600
FY 2004-05	City of Cupertino	Construct 1030' bike path	$ 107,622
FY 2004-05	City of Gilroy	Complete 881' of Uvas Creek Class I	$ 50,000
FY 2004-05	City of Gilroy	Refurbish & replace bikeway signs, etc	$ 10,611

TCM B: Bicycle/Pedestrian Program
TDA ARTICLE 3 [Transportation Development Act Funds for Bicycle and Pedestrian Projects]

	SPONSOR	PROJECT NAME	AMOUNT
FY 2004-05	City of Gilroy	Rehabilitate, resurface & stripe 2.5 mile path	$ 60,666
FY 2004-05	City of Los Altos	Construct approx. 300' of concrete bike path	$ 27,354
FY 2004-05	City of Los Altos	Replace approx. 2,800 lineal feet of bike path	$ 17,580
FY 2004-05	City of Los Gatos	Design & construct solution to restore path	$ 35,000
FY 2004-05	City of Morgan Hill	Install bicycle sensitive detector	$ 36,000
FY 2004-05	City of Mountain View	Install countdown pedestrian signals	$ 30,000
FY 2004-05	City of Mountain View	Install curb access ramps at Showers	$ 2,381
FY 2004-05	City of Mountain View	Install curb access ramps at various	$ 15,696
FY 2004-05	City of Mountain View	Purchase & install 14 bicycle lockers	$ 14,506
FY 2004-05	City of Palo Alto	Construct raised pavement pedestrian path	$ 50,000
FY 2004-05	City of San Jose	Construct 0.66 miles of Class I paved path	$ 712,131
FY 2004-05	City of San Jose	Design & construct ADA wheel chair improvement	$ 176,068
FY 2004-05	City of San Jose	Design & construct sidewalk for school	$ 36,000
FY 2004-05	City of San Jose	Design & install 12' wide asphalt path	$ 136,821
FY 2004-05	City of San Jose	Install median island ped. Refuge	$ 185,000
FY 2004-05	City of San Jose	Install sidewalk, ADA curb ramps	$ 90,000
FY 2004-05	City of San Jose	Provide bicycle & pedestrian safety	$ 50,000
FY 2004-05	City of San Jose	Stripe crosswalks, paint pavements	$ 100,000
FY 2004-05	City of Santa Clara	Perform an annual transportation	$ 5,000
FY 2004-05	City of Santa Clara	Stripe crosswalks & paint pavements	$ 62,148
FY 2004-05	City of Saratoga	Install continuous curb & gutter	$ 19,357
FY 2004-05	City of Sunnyvale	Provide gates, signs, fencing and ramps	$ 27,550
FY 2004-05	Santa Clara County	Construct a 3,300' by 5' walkway	$ 63,403
FY 2004-05	Santa Clara County	Sign & restripe 8" stripe on shoulders	$ 121,105
FY 2004-05	SF City/County	Bicycle safety brochures, maps, public education	$ 31,500
FY 2004-05	SF City/County	Prelim. engineering (plan & design) of bike path	$ 200,000
FY 2004-05	SF City/County	Purchase & install bicycle racks	$ 95,000
FY 2004-05	SF City/County	Repair public sidewalks at various locations	$ 115,000
FY 2004-05	SF City/County	Stripe & sign Class II bike lanes	$ 188,500
FY 2004-05	City of Benicia	Final design plans, specs & estimate	$ 124,573
FY 2004-05	City of Suisun City	Constr. 10' wide concrete bike path	$ 86,000
FY 2004-05	City of Vacaville, Transit	Construct 3400 feet of Class I bike/Ped path	$ 148,738
FY 2004-05	Solano Transportation Authority (STA)	Build bridge adjacent to existing path	$ 76,000
FY 2004-05	City of Petaluma	Construction of pedestrian & bicycle path	$ 54,876
FY 2004-05	City of Rohnert Park	Install 80' long bicycle & pedestrian path	$ 160,000
FY 2004-05	City of Santa Rosa	Install directional signage & ADA signs	$ 18,900
FY 2004-05	County of Sonoma	Construct 1.5 miles of Class I Bikeway	$ 160,000
FY 2004-05	County of Sonoma	Conduct bicycle safety education workshop	$ 10,000
FY 2004-05	County of Sonoma	Install 27 "Share Road" bicycle sign	$ 15,000
FY 2004-05	County of Sonoma	Purchase 37 front loading bicycle	$ 5,000
FY 2005-06	San Carlos	Class II bike lanes on Alameda de Las Pulgas and on Brittan Avenue; Class III bike lanes on Old County Road	$ 20,000
FY 2005-06	San Mateo	Design of a pedestrian and bicycle bridge in the vicinity of the Hillsdale interchange of highway U.S. 101	$ 100,000
FY 2005-06	South San Francisco	Bicycle and pedestrian crosswalk and signals at intersection of Spruce Ave. and South San Francisco Linear Park	$ 150,000
FY 2005-06	Half Moon Bay	Construct 6600 foot Class I trail in the right of way of Highway 1 between Highway 92 and Higgins Purisima Rd.	$ 220,000
FY 2005-06	Brisbane	Install 45 feet by 8 feet asphalt cement path adjacent to Shoreline Court; sign and restripe existing Class II bikeway	$ 25,739

TCM B: Bicycle/Pedestrian Program
TDA ARTICLE 3 [Transportation Development Act Funds for Bicycle and Pedestrian Projects]

	SPONSOR	PROJECT NAME	AMOUNT
FY 2005-06	South San Francisco	Construct 363 feet by 12 feet asphalt bicycle and pedestrian trail near the Oyster Point Marina	$ 36,000
FY 2005-06	San Bruno	Construct a Class II bike lane in both directions of Sneath Lane from El Camino Real to Skyline Boulevard	$ 60,000
FY 2005-06	Daly City	Install bike lanes on Callan Blvd from King Dr to Serramonte Blvd and along Serramonte Boulevard	$ 82,000
FY 2005-06	Burlingame	Install bike lane directional signs at 52 locations along north-south bicycle routes throughout the city	$ 17,400
FY 2005-06	Burlingame	Install an in-pavement lighted crosswalk system across Carolan Avenue at Morrell Avenue, including new push buttons	$ 30,000
FY 2005-06	Menlo Park	Install video detection for bikes at 3 intersections: Willow at Middlefield, Marsh at Bohannon, Marsh at Bay	$ 44,000
FY 2005-06	San Mateo	Install bridge railing fencing on the north side of the Nineteenth Avenue Bridge over highway U.S. 101	$ 50,000
FY 2005-06	Menlo Park	Create bicycle lanes on Bay Road between Berkeley Avenue and Willow Road, plus signage	$ 13,600
FY 2005-06	San Mateo	Install bike detection loops at: 3rd + Claremont, 3rd + Delaware, 4th + Claremont, 4th + Delaware	$ 40,000
FY 2005-06	Daly City	Install in-pavement lights and warning signs: Park Plaza Dr. north of Belmar, and Mission St. at Evergreen Ave.	$ 120,000
FY 2005-06	San Mateo	Install pedestrian countdown signal heads at 27 existing signalized intersections throughout the city	$ 50,000
FY 2005-06	Daly City	Install pedestrian countdown signal heads at 15 signalized intersections; and audible warnings at 11 of them	$ 20,000
FY 2005-06	Burlingame	Install pedestrian countdown signal heads with audible pedestrian warnings at 8 signalized intersections	$ 30,900
FY 2005-06	Menlo Park	Create bicycle lanes on Middlefield Road between Willow Road and San Francisquito Creek	$ 2,400
FY 2005-06	San Mateo	Install in-pavement lighted crosswalks: 5th Ave. at Central Park; Bovet Rd. betw. Borel Ave. and El Camino Real	$ 110,000
FY 2005-06	South San Francisco	Install pedestrian countdown signal heads at 12 existing signalized intersections throughout the city	$ 22,000
FY 2005-06	County of San Mateo	Bike detection loops, countdown signal heads with audible warnings, upgrade pedestrian signal actuators	$ 80,509
FY 2005-06	Sebastopol	Construct .5 mile Class I trail between Joe Rodota trail and Sebastopol Avenue and Morris Street intersection	$ 51,356
FY 2005-06	Santa Rosa	Construct connector ramp between Joe Rodota trail and Pierson Reach of Prince Memorial Greenway trail	$ 350,000
FY 2005-06	Windsor	Construct a 950 foot Class I trail within Keiser Park, including brdige crossing a tributary of Starr Creek	$ 112,000

TCM B: Bicycle/Pedestrian Program
TDA ARTICLE 3 [Transportation Development Act Funds for Bicycle and Pedestrian Projects]

	SPONSOR	PROJECT NAME	AMOUNT
FY 2005-06	Contra Costa County, Health Services	Provide bicycle and pedestrian safety education to low-income county residents, particularly children	$ 20,000
FY 2005-06	Concord	Constr't 500 foot Class I trail adjacent to Galindo Crk. + Ygnacio Valley Rd betw. Alberta Way + Pebble Glen Dr	$ 60,000
FY 2005-06	Lafayette	1030 feet x 5 feet sidewalk Sweet Dr. betw Walnut + Woodview; Woodview Dr. betw. St Mary's + Sweet Drive	$ 110,000
FY 2005-06	Antioch	Construct curb ramps and sidewalks at Hillcrest Avenue, Somersville Road, "G" Street, and Dallas Ranch Road	$ 110,000
FY 2005-06	Brentwood	Install pedestrian countdown signal heads + large diameter pedestrian push buttons at 12 signalized intersections	$ 66,000
FY 2005-06	Contra Costa County, Public Works	Construct 240 feet x 5 feet sidewalk and curb ramps on Camino Tassajara and on Hansen Lane	$ 20,000
FY 2005-06	Orinda	Replace 12 existing non-compliant curb ramps in downtown Orinda with ADA compliant ramps	$ 45,000
FY 2005-06	San Pablo	Install in-pavement lighted crosswalks: Market Avenue at 21st St.; 23rd St. at Wilcox Ave.; 23rd St. at Stanford Ave.	$ 180,000
FY 2005-06	Brentwood	Restripe Minnesota Ave. bike lane; install lighted crosswalk; construct 1300 feet of sidewalk, curb and gutter	$ 31,000
FY 2005-06	San Francisco	Public sidewalk repair and reconstruction	$ 180,000
FY 2005-06	San Francisco	Preliminary engineering of curb ramps	$ 270,000
FY 2005-06	San Francisco	Safety brochures, maps, public outreach concerning bicycle pavement arrows, hotline, and bicycle safety advertising	$ 45,000
FY 2005-06	San Francisco	Purchase and install bicycle racks at various locations in San Francisco as requested by the public	$ 100,000
FY 2005-06	San Francisco	Stripe and sign bike lanes: Conservatory Drive East, San Jose Avenue ramps, Townsend Street, and elsewhere	$ 305,000
FY 2005-06	Berkeley	Bicycle & Pedestrian Injury Prevention Program	$ 30,000
FY 2005-06	Berkeley	Ninth Street Bicycle Boulevard extension (Project from FY01/02)	$ 135,000
FY 2005-06	Oakland	ADA Compliant Wheelchair Accessible Ramps (Project Completed FY01/02)	$ 294,548
FY 2005-06	Oakland	Laurel Pedestrian Project, Phase I (Project Completed FY01/02)	$ 200,000
FY 2005-06	Oakland	MacArthur Blvd. Bicycle Lane Design (Project Completed FY01/02)	$ 55,000
FY 2005-06	Oakland	Grand Avenue Transit and Pedestrian Improvements (Project from FY 04/05)	$ 245,847
FY 2005-06	Oakland	ADA Compliant Wheelchair Accessible Ramps Program	$ 121,144
FY 2005-06	Oakland	Market Street Bikeway	$ 165,000
FY 2005-06	Oakland	Bancroft Bikeway Gap Closures	$ 25,000
FY 2005-06	Piedmont	ADA Wheelchair Accessible Ramps and Pedestrian enhancements at Rose/Arroyo & Grand Ave	$ 8,353
FY 2005-06	Hayward	ADA Wheelchair Accessible Ramps	$ 109,309

TCM B: Bicycle/Pedestrian Program
TDA ARTICLE 3 [Transportation Development Act Funds for Bicycle and Pedestrian Projects]

	SPONSOR	PROJECT NAME	AMOUNT
FY 2005-06	San Leandro	Pedestrian Accessibility Improvements & Sidewalk Gap Closures	$ 74,177
FY 2005-06	Fremont	Citywide ADA Compliant Wheelchair Accessible Ramps	$ 158,067
FY 2005-06	Newark	History Center Complex Sidewalks and ADA Wheelchair Accessible Ramps	$ 33,072
FY 2005-06	Union City	San Francisco Bay Trail Specific Plan (Project Completed FY01/02)	$ 63,585
FY 2005-06	Dublin	Bicycle Master Plan	$ 45,144
FY 2005-06	Livermore	Chestnut and N. P Street Bicycle Lanes	$ 113,044
FY 2005-06	Alameda Co. Congestion Management Agency	Alameda Countywide Bicycle Master Plan	$ 20,000
FY 2005-06	County of Alameda	Pedestrian Safety Improvements in the vicinity of Schools	$ 75,775
FY 2005-06	County of Alameda	Pedestrian Safety Improvement Projects - Sidewalk Improvements	$ 75,600
FY 2005-06	County of Alameda	Restriping Bicycle Lanes Along Various Roadways	$ 30,000
FY 2005-06	Benicia	Stripe and sign bike lanes: Military East between East 5th Street and Park Road	$ 25,000
FY 2005-06	Fairfield	Design McGary Road segment of Solano Bikeway Extension and complete extension feasibility study	$ 100,000
FY 2005-06	Suisun City	Construct curb ramps and sidewalks at Whispering Bay Lane and Francisco Dr.	$ 5,400
FY 2005-06	Suisun City	Replace existing non-compliant curb ramps in downtown Suisun City with ADA compliant ramps	$ 11,856
FY 2005-06	Solano County	Reconstruct deck and railings, seismic retrofit, lighting and pathways to railroad trestle bridge over Putah Creek	$ 180,000
FY 2005-06	Campbell	Implement bike lanes on Harriet Ave and Union Ave, Replace Los Gatos creek bridge, and widen Campbell Ave bridge	$ 27,859
FY 2005-06	Campbell	Design and construct sidewalk and bike lanes and edge striping, curb and gutter along Westmont Avenue	$ 39,992
FY 2005-06	Campbell	Widen Campbell Ave. bridge over Los Gatos Creek for bike lane and sidewalk; and reconstruct sidewalk under SR 17	$ 240,000
FY 2005-06	Cupertino	Construct pedestrian and bicycle bridge across Interstate 280 along Mary Avenue between Homestead Rd and Meteor Dr	$ 38,361
FY 2005-06	Los Altos Hills	Replace pedestrian bridge adjacent to the Foothill College entrance road connecting to El Monte Road	$ 11,310
FY 2005-06	Los Gatos	Replace existing College Avenue sidewalk and fencing; and repair Los Gatos Creek Trail footbridge decking	$ 20,000
FY 2005-06	Milpitas	Install ADA pedestrian ramps with truncated dome landings along suggested routes to schools	$ 47,112
FY 2005-06	Morgan Hill	Identify where additional bicycle and pedestrian trails can be established adjacent to creeks and streams	$ 32,000
FY 2005-06	Mountain View	Bicycle boulevard from Mayfield Mall area to Stevens Creek Trail, including signs, markings and signal modifications	$ 25,000

TCM B: Bicycle/Pedestrian Program
TDA ARTICLE 3 [Transportation Development Act Funds for Bicycle and Pedestrian Projects]

	SPONSOR	PROJECT NAME	AMOUNT
FY 2005-06	Mountain View	ADA Compliant Wheelchair Accessible Ramps Program	$ 17,000
FY 2005-06	Mountain View	Produce bicycle and pedestrian education and awareness materials, and a new bike map and multilingual flyers	$ 5,000
FY 2005-06	Mountain View	Install "bikes wrong way" signs on existing poles along California Street and adjacent streets	$ 5,217
FY 2005-06	Palo Alto	Bicycle boulevard along Maybell Ave and Donald Dr.: signs, markings, speed tables, & median refuge islands	$ 75,000
FY 2005-06	San Jose	Install sidewalk, curb and gutter to improve access to Lynhaven Elementary School	$ 90,000
FY 2005-06	San Jose	Install sidewalk, curb and gutter to fill gap on Borina Ave. at Saratoga Ave.	$ 70,000
FY 2005-06	San Jose	Install sidewalk, curb and gutter to improve access on both sides of Yerba Buena Road at Thompson Creek	$ 47,000
FY 2005-06	San Jose	Install sidewalk, curb, gutter and ADA ramps on Carola Avenue at Clarita Avenue	$ 110,000
FY 2005-06	San Jose	Install sidewalk, curb, gutter, pedestrian crossing and median island to provide access to Penitencia Creek County Park	$ 62,000
FY 2005-06	San Jose	Install sidewalk, curb and gutter on Senter Road at Burke Street	$ 58,000
FY 2005-06	San Jose	Install sidewalk, curb and gutter to improve access to Toyon Elementary School	$ 45,000
FY 2005-06	San Jose	Citywide ADA Compliant Wheelchair Accessible Ramps	$ 100,000
FY 2005-06	San Jose	Sign and stripe bicycle and pedestrian facilities, including bike lanes, bike routes, crosswalks, and bike paths	$ 58,397
FY 2005-06	San Jose	Provide bicycle and pedestrian safety education to elementary school children and adults, purchase educational material	$ 35,000
FY 2005-06	Santa Clara	Install and maintain bicycle and pedestrian facilities, including bike lanes, bike routes, crosswalks, and bike paths	$ 78,180
FY 2005-06	Saratoga	Acquire right-of-way to upgrade UPRR railroad crossing in a bulb configuration to allow bicycles to cross at 90 degrees	$ 95,000
FY 2005-06	Sunnyvale	Improve Calabazas Creek Trail with additional gates, signs, fences, ramp modifications, and a bridge across creek	$ 182,048
FY 2005-06	County of Santa Clara	Restripe four co. expressways' shoulders with 8 inch stripes and sign to allow functioning as bicycle shoulder	$ 50,000
FY 2005-06	Brentwood	Crosswalk and sidewalk improvements on Minnesota Avenue between Deer Creek and Sand Creek	$ 31,000
FY 2005-06	Union City	Construct 1750 feet by 15 feet textured decorative concrete sidewalks plus 5 foot bike lanes on both sides of 11th Street	$ 53,142
FY 2005-06	TAM	Update and complete bicycle and pedestrian master plans countywide and for cities and towns in Marin County	$ 160,000

TCM B: Bicycle/Pedestrian Program
TDA ARTICLE 3 [Transportation Development Act Funds for Bicycle and Pedestrian Projects]

	SPONSOR	PROJECT NAME	AMOUNT
FY 2005-06	Campbell	Construct bike lanes on Harriet Avenue north of Westmont Avenue and on Union Avenue south of Campbell Avenue	$ 24,308
FY 2005-06	Larkspur	Design + construct 13 ft wide Class I bike/pedestrian path and modify signals on Magnolia Ave. + Doherty Dr	$ 136,668
FY 2005-06	County of San Mateo	Develop bike route data for GIS, integrate into countywide GIS files, and maintain bike route GIS data	$ 40,000
FY 2005-06	City of Napa	Class I path along Napa Valley Wine Train right of way between Redwood Rd/SR 29 and Vallejo St/Soscol Av	$ 85,271
FY 2005-06	American Canyon	Construct bike lanes and Class I trail adjacent to Commerce Boulevard	$ 34,729
		Total	**$ 21,785,915**

TCM C: Transportation for Livable Communities

FY 2004-05 MTC TLC Planning Program

Project Sponsor	Project Title	TLC Grant
Alameda County		
City of Oakland	Revitalizing Foothill / Seminary: A Model for Oakland's Regional Transit Streets	$ 75,000
City of Berkeley	Downtown Berkeley BART Plaza and Transit Area	$ 75,000
Contra Costa County		
City of Lafayette	BART-Downtown Lafayette Pedestrian Linkages Project	$ 20,000
San Francisco County		
San Jose/Guerrero Coalition to Save Our Streets	The San Jose/Guerrero Neighborhood Plan	$ 75,000
San Mateo County		
Redwood City	Transit Station Sub-area Precise Plan	$ 71,760
SamTrans	Transforming the El Camino Real to Link Caltrain Stations with Vibrant Downtowns in Redwood City, San Carlos and Belmont	$ 63,840
Santa Clara County		
City of Sunnyvale	Murphy Avenue Streetscape Revitalization	$ 75,000
Sonoma County		
City of Santa Rosa	Downtown Pedestrian Linkages Study	$ 44,400
	Total	**$ 500,000**

FY 2004-05 MTC TLC Capital Program

Project Sponsor	Project Title	TLC Grant
City of Oakland, CEDA	Revive Chinatown – Phase 1	$ 2,200,000
City of Union City Public Works Dept.	Union City Intermodal Station –Pedestrian connections and New East Plaza	$ 1,124,000
Richmond Redevelopment Agency	Richmond Transit Village: Intermodal Transit Station	$ 1,581,000
County of Marin	Cal-Park Hill Tunnel Rehab and Class I Bikeway	$ 1,500,000
City of Gilroy	Monterey Streetscape Improvements – Fourth Street to Sixth Street	$ 2,500,000
City of Morgan Hill	Morgan Hill – Depot Street Capital Improvements	$ 2,627,000
Bay Area Rapid Transit District	Daly City BART- St. Charles Pedestrian & Bike Project	$ 501,000
City & Co. of San Francisco Dept. of Public Works	Broadway Streetscape Improvements Project – Phase II	$ 2,000,000
City of South San Francisco	BART Linear Park-Huntington Avenue to Orange Avenue	$ 1,933,000
City of Vallejo	Vallejo Station Pedestrian Links	$ 2,071,000
City of Petaluma/Eden Housing Inc.	Downtown River Apts Riverwalk and Streetscape Improvements	$ 358,000
	Total	***$ 18,394,000***

Contingency Projects

City of Union City Public Works Dept.	Union City Intermodal Station – West Plaza Enhancements	$ 1,713,500
City of Oakland, CEDA	MacArthur Transit Hub Streetscape Improvement Project	$ 1,918,000
Town of Los Gatos Parks & Public Works Dept.	Streetscape & Gateway	$ 2,400,000
City of San Leandro Community Dev. Dept.	East 14th Street South Area Revitalization Project – La Palma District	$ 1,600,000
County of Contra Costa Redevelopment Agency	North Richmond Third Street Upgrades	$ 1,966,000

TCM C: Transportation for Livable Communities

FY 2005-06 Marin County TLC Capital Program

Project Sponsor	Project Title	TLC Grant
Town of Fairfax	Center Boulevard Streetscape Redesign Project	$ 500,000
County of Marin	Fireside Pedestrian and Traffic Safety Project	$ 198,906
Town of Corte Madera	Bayside Trail Improvement Project	$ 371,826
	Total	**$ 1,070,732**

FY 2005-06 Alameda County TLC Capital Program

Project Sponsor	Project Title	TLC Grant
City of Oakland	Coliseum BART Streetscape	$ 500,000
City of Oakland	Oakland Coliseum Pedestrian Walkway	$ 885,000
City of Oakland	W. Oakland Transit Village Streetscape Project	$ 1,300,000
City of Oakland	MacArthur Entry Plaza & 40th Streetscape Project	$ 1,147,000
City of Berkeley	Ashby/Ed Roberts Bicycle/Pedestrian Improvements	$ 1,200,000
City of Union City	Pedestrian/Bicycle Improvements	$ 2,000,000
	Total	**$ 7,032,000**

FY 2005-06 Sonoma County TLC Capital Program

Project Sponsor	Project Title	TLC Grant
City of Petaluma	Petaluma Blvd. Pedestrian Enhancements	$ 485,000
City of Rohnert Park	Rohnert Park City Center Drive Improvements	$ 1,150,000
Town of Windsor	Windsor Pedestrian Enhancements & Traffic Calming	$ 235,000
Sonoma County Reg'l Parks	Sonoma County Santa Rosa Creek Trail	$ 550,000
Town of Windsor	Windsor Old Redwood Hwy Pedestrian Linkages	$ 338,000
Sonoma County Reg'l Parks	Sonoma County Bodega Bay Bicycle & Pedestrian Trail	$ 535,000
City of Santa Rosa	Santa Rosa Courthouse Square Off-Site Improvements & Gateway Street	$ 1,000,000
	Total	**$ 4,293,000**

	Grand Total	**$ 31,289,732**

TCM D: Additional Freeway Service Patrol

The Bay Area FSP is a joint project of the Metropolitan Transportation Commission Service Authority for Freeways and Expressways (MTC SAFE), the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). The service is provided by private tow truck companies, selected through a competitive bid process, under contract to MTC SAFE. During the hours of operation, the vehicles and drivers are exclusively dedicated to patrolling their freeway beat. The program is intended to augment the MTC SAFE network of motorist-aid call boxes in the nine Bay Area counties.

Current Profile (as of February 2009)
A fleet of 83 trucks patrols some 550 miles of the Bay Area's freeways. Patrol routes are selected based on several factors, including a high rate of traffic and congestion, frequent accidents or stalls, and lack of shoulder space for disabled vehicles.

The FSP tow trucks operate primarily during morning and afternoon commute hours, generally from 6 a.m. to 9 a.m. or 10 a.m. and from 3 p.m. to 6 p.m. or 7 p.m., Monday through Friday. Weekend service is provided in Napa, as well as seasonally along Highway 17, and in some other locations on Sunday.

FSP tow trucks are equipped for nearly any contingency. In addition to the standard auto repair and towing equipment, they carry 5 gallons of diesel fuel, 5 gallons of unleaded gasoline, and 5 gallons of water, as well as an external speaker and public address system.

Funding
The tow trucks are financed with federal, state and local moneys. Local funds come from the MTC SAFE, which is financed by a $1 annual vehicle registration fee in participating counties. The service costs approximately $7 million a year to operate. Another $2 million is invested in sophisticated communications equipment, including an automatic vehicle location system that enables CHP and Caltrans to monitor the location of the trucks and improve dispatching efficiency.

Implementation Plan
See the attached Implementation Plan, which is also available at:
http://www.fsp-bayarea.org/implementation_plan/Iplan.pdf

BAY AREA FREEWAY SERVICE PATROL PROGRAM
IMPLEMENTATION PLAN

Revised 06/01/07

BEAT ID	CONTRACTOR	LOCATION COUNTY	LOCATION ROUTE	BEAT LIMITS	CALTRANS ONE WAY LENGTH (IN MILES)	START DATE	ENDING DATE	WEEKDAYS AM SHIFT	WEEKDAYS MIDDAY SHIFT	WEEKDAYS PM SHIFT	SUNDAY PM SHIFT	# OF TOW TRUCKS	# OF PICKUP TRUCKS	# OF FLATBED TRUCKS	# OF BACKUP TRUCK	NOTES	TOTAL CONTRACT HOURS	BEAT ID
1	Redhill Towing	ALA	980	Interstate 580 to Interstate 880	2.03	07/01/07	07/26/09	6:00-10:00		15:00-18:30	13:00-19:00	2	1			b	12,395	1
		ALA	880	7th Street to Jackson Street	2.04													
		ALA	24	Interstate 580 to Contra Costa County Line	4.39													
		CC	24	Contra Costa County Line to Oak Hill Road	6.25													
		CC/ALA	*13*	*State Route 24 to Redwood Avenue*	(4.23)											e		
2	A-One Towing Service	ALA	80	Powell Street to Contra Costa County Line	4.25	07/01/07	07/26/09	6:00-10:00	10:00-15:00	15:00-19:00	13:00 - 19:00	2	1		1	a, b, c	15,755	2
		CC	80	Alameda County Line to San Pablo Dam Road	4.34													
		ALA/CC	580	Interstate 80 to Western Drive/Pt. Molate	6.01													
3	Palace Garage	ALA	880	Alvarado-Niles Road to State Route 238	7.66	06/25/07	06/26/11	06:00-10:00		15:00-19:00	13:00-19:00	2				b,c	17,132	3
		ALA	92	Interstate 880 to Clawiter Road	1.91													
4	Palace Garage	ALA	880	Broadway to State Route 238	10.55	07/01/07	07/26/09	6:00-10:00		15:00-19:00	13:00-19:00	2	1			b	13,170	4
		ALA	238	Interstate 880 to Interstate 580	2.11													
5	K&S Tow	CC	680	Stone Valley Road to Marina Vista Road	13.89	07/02/07	07/04/11	06:00-09:00		14:00-18:30		2	1		1	b	22,523	5
		CC	24	Oak Hill Road U/C to Interstate 680	2.87													
6	B&A Body Works & Towing	SM	101	State Route 92 to SF City Limit/101 to Foster City Boulevard	14.23	07/01/07	07/05/09	6:00-10:00	10:00-15:00	15:00-19:00		2	2		1	a, b	18,754	6
		SM	92	Interstate 101 to Foster City Boulevard	1.47													
7	Redhill Towing	MRN	101	Alexander to 3rd Street/Irwin Street (Central San Rafael Exit)	10.28	07/03/05	07/06/08	6:00-10:00		15:00-19:00	13:00 - 19:00	2			1	b, c	13,090	7
		MRN	580	Highway 101 to Interstate 580 San Quetin	1.60													
8	Campbell's Towing	SCL	101	Blossom Hill Road to Ellis Street	18.40	07/01/07	07/05/09	6:00-10:00		15:00-19:00	13:00 - 19:00	2	2		1	b, c	16,808	8
		SCL	237	Highway 101 to Lawrence Expressway	2.12													
9	Campbell's Towing	SCL	280	Interstate 680/Highway 101 to Foothill Exp.	11.45	06/11/07	06/10/11	6:00-10:00		15:00-19:00		3	1		1	b	32,032	9
		SCL	85	Junction Route 280 to El Camino Real	3.3													
		SCL	87	State Route 85 to Hwy. 101	9.22													
10	Sunrise Enterprise 87	SCL-SM	101	Ellis Street to State Route 92	17.44	06/11/07	06/10/11	6:00-10:00		15:00-19:00		2	1			a, b	24,024	10
		SCL	92	Junction Route 101 to El Camino Real	0.93													
11	B&A Body Works & Towing	SF	101	Cesar Chavez to San Mateo Co. Line	2.92	06/11/07	06/12/11	6:00-10:00	10:00-15:00	15:00-19:00	10:00-16:00	2				a, b,c	22,473	11
		SF	280	San Mateo Co. Line to Highway 101	4.34													
		SM	101	Harney Way to San Francisco Co. Line	0.41													
		SM	280	Geneva/Ocean Avenue to San Francisco Co. Line	1.77													
	(Bridge Tow Coverage)	*SF*	*280*	*Highway 101/Interstate 280 Interchange to Sixth Street*	(3.2)											e		
	(Bridge Tow Coverage)	*SF*	*80*	*Cesar Chavez to Interstate 80/Fourth Street*	(1.5)											e		
12	Ken Betts Towing	CC	80	San Pablo Dam Road to Cummings Skyway	8.39	07/09/07	07/10/11	6:00-10:00	10:00-15:00	15:00-19:00	13:00-19:00	2				a, b, c	22,473	12
13	Bill's Towing	MRN	101	Interstate 580 to Junction Route 37	9.13	06/25/07	06/26/11	6:00-10:00		14:30-18:30	13:30-18:30	2				b, c	17,282	13
14	All Ways Tow & Transport	ALA	880	Mowry Avenue to Alvarado Niles Road	5.84	07/01/07	07/24/09	6:00-10:00		15:00-19:00		2				b	8,272	14
		ALA	84	Thornton Avenue to Interstate 880	2.26													
15	Yarbrough Bros. Towing	SON	101	Wilfred Avenue to River Road	10.8	07/02/07	07/01/11	6:30-9:30		15:30-18:30		1					6,006	15
16	Lima Tow	SCL	17	Junction Route 9 to Summit Road	7.07	07/09/07	07/10/11	6:30-9:30		15:30-18:30	See separate beat 16/SC schedule	1				b, c, f	7,974	16
17	Sierra Hart	SOL	12	Interstate 80 to Napa Co. Line	2.95	07/23/07	07/24/11	6:00-10:00		15:00 -19:00	8:00-16:30 Sat. & Sun.	1 wkdy, 2 wknd			1 wkdy		15,573	17
		NAP	12	Napa Co. Line to Sonoma Co. Line	11.60													
		NAP	29	State Route 37 to Oakville Cross Road	24.0													
		SON	12	Sonoma Co. Line to Junction 116	4.90													
		NAP	*29*	*Oakville Cross Road to State Route 128*	(1.8)											e		
18	All Ways Tow & Transport	SCL	880	Junction Route 237 to Alameda County Line	2.08	07/01/07	07/10/09	6:00-10:00		15:00-19:00		2				b	8,112	18
		ALA	880	SCL County Line to Mowry Avenue	7.18													
19	Lima Tow	SCL	880	Junction Route 237 to Junction Route 17	8.42	07/01/07	07/10/09	6:00-9:00		15:00-19:00		2	1			b	10,647	19
		SCL	17	Junction Interstate 880 to Junction Route 9	6.88													
		SCL	237	Junction Interstate 880 to Lawrence Expressway	4.70													
20	Nelson's Tow	SM	280	*Geneva/Ocean Avenue* to Interstate 380	8.18	07/01/07	07/10/09	6:30-9:30		15:00-18:00		2				b	6,084	20
		SM	380	Interstate 280 to Highway 101	1.67													
21	Matos Towing & Transport	ALA	680	Scott Creek to Alcosta Boulevard	21.35	07/01/07	07/10/09	5:30-9:30		15:00-19:00		1	1	1	1	b	12,168	21
22	Palace Garage	ALA	580	Vasco Road to Santa Rita	8.25	07/23/07	07/24/11	5:30-9:30		15:30-19:00	13:00-19:00	2	1			b, c, d	25,685	22
		ALA	580	Grant Line Road to Vasco Road	8.23													
23	Campbell's Towing	SCL/ALA	680	Highway 101 to Scott Creek Road	10.17	07/01/07	07/10/09	5:30-9:30		15:00-19:00		2				b	8,112	23
24	Roadrunner Tow	SOL	680	Interstate 80 to Junction 780	14.30	07/23/07	07/22/11	6:00-9:00		15:30-18:30		1				g	6,036	24
		SOL	780	Junction 680 to Junction 80	6.42													
25	B&D Towing	CC	4	Hillcrest Avenue to Pacheco Blvd.	20.39	07/01/07	07/17/09	5:30-9:30		15:30-19:00		2	1			b	11,520	25
		CC	242	State Route 4 to Interstate 680	3.4													
26	A-One Tow Service	ALA	580	Harrison Street/Oakland Avenue to Junction Route 238	13.47	07/01/07	07/17/09	6:30-9:30		15:30-18:30		1		1		b	6,144	26
		ALA	*13*	*Redwood Avenue to Interstate 580*	(0.0)											e		
27	Palace Garage	ALA	580	Santa Rita Road to Junction 238	12.86	06/25/07	06/26/11	6:00-9:30		15:30-18:30	13:00-19:00	2	1			b,c	21,020	27
28	Bill's Towing	MRN/SON	101	State Route 37 to East Washington Boulevard	13.1	07/01/07	07/17/09	5:30-9:30		15:30-18:30		1				b	3,584	28
29	Roadrunner Tow	SOL	80	Magazine Street to Abernathy Road	14.04	07/09/07	07/10/11	6:00-9:00		15:30-18:30	13:00-19:00	2				b, c, h	15,020	29
					0													
30	Nelson's Tow	SM	92	State Route 1 to Highway 280	8.03	07/23/07	07/22/11	6:00-9:30		15:30-18:30		2				b	13,013	30
		SM	280	Interstate 380 to State Route 92	10.20													
		SM	92	Interstate 280 to Highway 101	4.83													
31	Campbell's Towing	SCL	101	Blossom Hill Road to East Dunne Avenue	12.6	07/01/07	07/19/09	6:00-9:00		16:00-19:00	13:00 - 19:00	2				b, c	6,900	31
32	Dick's Automotive Transport	SCL	85	Interstate 280 to Cottle Road	16.48	07/01/07	07/17/09	6:00-9:00		16:00-19:00		2				b	6,144	32
33	Yarbrough Bros. Towing	SON	101	East Washington Boulevard to Wilfred Avenue	10.26	07/24/05	07/20/08	6:00-9:00		15:30-18:30		1				b	4,482	33
34	Vacaville Tow	SOL	80	Abernathy Road to I-505 Vaca Valley Road	12.54	07/09/07	07/10/11	6:00-9:00		15:30-18:30	13:00-19:00	2				b, c, h	15,020	34
35	Palace Garage	CC	680	Alcosta Boulevard to Stone Valley Road	10.36	07/09/07	07/08/11	6:00-9:00		15:00-18:30		1				b	6,507	35
36	Ken Betts Towing	CC	4	Interstate 80 to Pacheco Blvd.	11.8	07/23/07	07/22/11	6:00-9:30		15:30-19:00		1					7,007	36
37	Vacaville Tow	SOL	80	Junction I-505 to Richards Blvd.	16.4	07/23/07	07/24/11	6:00-9:00		15:30-18:30	13:00-19:00	2				b, c, h	15,032	37
					539.67							**65 wkdy, 66 wknd**	**15**	**2**	**8 wkdy, 7 wknd**		**493,973**	

TCM E: Transit Access to Airports

BART to San Francisco International Airport:
S. San Francisco: From Colma BART station to the new SFO station; Extend BART system to the San Francisco International Airport.

BART Fares and Schedules
The latest BART fares and schedules (as of January 2008) can be found at: http://www.bart.gov/guide/brochures.aspx

Service Adjustments
See attached document for service adjustments overtime since June 2003 through December 2006.

SFO Service Changes Over Time

Below is a list and description of service changes that have been implemented since the San Francisco Extension opening on June 22, 2003 through December 31, 2006. Some of these changes are major system changes. Other changes are more minor involving train sizing.

June 22, 2003 - SFO Initial Service

Bay Point trains provide service to Millbrae during all hours of operation, all week. Dublin trains provide service to the San Francisco Airport (SFO) during all hours of operation, all week. These routes operate on 15 minute headways during the weekday, and on 20 minute headways during evenings and on weekends. A shuttle train provides service between Millbrae and SFO on 20 minute headways during all hours of operation, all week. In addition to the base 15 minute service, three AM peak period rush trains provide service from Bay Point to Daly City, then operate express from Daly City to SFO. These three trains return during the evening peak period and operate express from SFO to Daly City, then on to Bay Point.

1. Direct service to/from Millbrae and direct service to/from SFO
2. Peak rush trains provide Bay Point line passengers direct service to/from SFO during the peak periods
3. 20 minute shuttle does not synch with the 15 minute base service during the day

February 9, 2004

Bay Point trains provide direct service to SFO, then continue to Millbrae. On the return trip these trains follow the same route back to Bay Point. This service route has been called the "Reverse L" service because the shape of the service on the SFO extension resembles a backward or reverse "L" shape. During the 3-1/2 hour AM and PM peak period on weekdays, Richmond trains provide direct service to Millbrae, then continue to SFO. On the return trip these trains follow the same route back to Richmond. This service route is referred to as the "L" service. The Richmond trains do not operate on the weekend. When the Richmond trains are operating on the extension during the week the Bay Point trains terminate at SFO and do not continue to Millbrae. At all other times (off-peak, evenings and weekends) the Bay Point trains complete the "Reverse L" service pattern. There are no other direct peak period rush trains. Service during the day (and during the peak rush) is 15 minutes, while evenings and weekends operate at 20 minute headways.

1. Provides for direct service on all extension routes to Millbrae and SFO, no need to transfer
2. 20 minute shuttle (during normal 15 minute service) replaced by 15 minute direct trains
3. During off-peak, evenings and weekends, direct service to Millbrae is through the SFO station

March 8, 2004

Train sizing adjustments: Train 361 increased from 4 to 5-car train off-peak. Train 441 changed to 10-car peak size for all PM trips instead of breaking to 5-car train on last trip. Other minor adjustments were made to the 200s and 500s.

September 13, 2004

Bay Point trains provide direct service to SFO, then continue to Millbrae. This service provides "Reverse L" service and operates during all hours of operation, all week. During the 3 hour AM and PM peak period on weekdays, Richmond trains provide direct service to SFO, then continue to Millbrae in a "Reverse L" service configuration. During the 3 hour AM and PM peak period (weekdays only) the Richmond and Bay Point trains both provide service directly to and from Millbrae/SFO. The Richmond trains do not operate on the weekend. Service during the day on each route (and during the peak rush) is 15 minutes, while evenings and weekends operate at 20-minute headways.

1. Provides for direct service on all extension routes to Millbrae and SFO, no need to transfer

2. During all hours, direct service to Millbrae is through the SFO station (but is effectively every 7.5 minutes during the 3 hour AM and PM peak periods)

December 13, 2004
Train sizing adjustments were made to better match capacity with demand, generally to shorter trains.

April 23, 2005
Train sizing adjustments: The 300 series trains on Saturday were increased from 8 to 9-car trains.

June 13, 2005
Train lengths were generally shortened to an 8-car plan in two phases, in June and August, 2005, with peak size trains running all day on the Bay Point line.

August 15, 2005
Second phase of implementing the "8-car" plan.

September 12, 2005
Dublin trains provide direct service to SFO, then continue to Millbrae in a "Reverse L" service configuration. Only the Dublin trains will provide service to the extension on weekdays and weekends. Richmond and Bay Point trains will truncate at Daly City. Service during the day (and during the peak rush) is 15 minutes, while evenings and weekends operate at 20-minute headways. Although direct service from Bay Point has been replaced with this new service, the transfer time from a Bay Point base train to SFO train (from Dublin) is only 3-4 minutes in each direction.

September 22, 2005
Extend service from Richmond and lengthen trains. Up to six consists will be lengthened from 4 to 8-car trains. Richmond trains to Daly City will be extended to Colma for two hours in the morning and two hours in the evening.

October 10, 2005
The following adjustments were made:

Weekday
100s - three trains lengthened
200s - one train lengthened, Make/Break timing changed
300s - several trains lengthened with a few trains reduced in size
400s - one train lengthened
500s - No change since September 22, 2005 (Make/Break timing)

Saturday
300s - some trains lengthened

Sunday
300s - some trains lengthened

December 5, 2005
The following adjustments were made:

Weekday
100s – 115 becomes the last AM Break train
300s – Train 323 and 363 increased from 8-car to 9-car trains

Saturday
200s – All trains are now 6-car trains during the day

January 30/31, 2006e
The following adjustments were made:

Weekday
100 Series Trains (net +1)
Train 101 +1 (9 to 10 cars) peak increase
Train 115 off peak increase 4 to 5 cars

200 Series Trains (net 0)
No change

300 Series Trains (net –2)
Train 365 off peak decrease only on dispatches of 20:58, 22:19, and 23:38
Train 367 +1 (9 to 10 cars) off peak decrease only on dispatches of 21:18, 22:39, and 24:00
Train 371 –1 (10 to 9 cars)
Train 377 –1 (10 to 9 cars)
Train 381 –1 (10 to 9 cars)
Train 331 -2 (10 to 8 cars)
Train 335 +2 (8 to 10 cars)

400 Series Trains (net +2)
Train 443 –1 (9 to 8 cars) for AM peak period only
Train 445 +1 (8 to 9 cars)
Train 453 –1 (9 to 8 cars) for PM peak period only
Train 455 +2 (8 to 10 cars) and off peak increase 4 to 5 cars

500 Series Trains (net +10)
Train 501 +1 (8 to 9 cars) peak increase and off peak increase 4 to 5 cars
Train 503 +1 (8 to 9 cars) peak increase and off peak increase 4 to 5 cars
Train 505 +1 (8 to 9 cars) peak increase
Train 507 +1 (8 to 9 cars) peak increase
Train 509 +1 (8 to 9 cars) peak increase
Train 511 +1 (8 to 9 cars) peak increase
Train 513 +1 (8 to 9 cars) peak increase and off peak decrease 8 to 5 cars
Train 519 +1 (8 to 9 cars) peak increase
Train 521 +1 (8 to 9 cars) peak increase and off peak increase 4 to 5 cars
Train 523 +1 (8 to 9 cars) peak increase

Saturday
100s – no change
200s – no change
300s – All 8-car trains are now 9-car trains
400s – no change
500s – Four trains increased from 4 to 5-cars (501, 505, 511, and 515)

Sunday
200s – no change
300s – no change
500s – All trains 9-car midday and some offpeak increased from 4 to 5-cars (503, 505, and 515)

Appendix F

Winston H. Hickox
Agency Secretary

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman
1001 I Street • P.O. Box 2815 • Sacramento, California 95812 • www.arb.ca.gov

Gray Davis
Governor

November 30, 2001

Mr. Wayne Nastri
Regional Administrator
U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California 94105

Dear Mr. Nastri:

The Air Resources Board (ARB/Board) hereby transmits the Bay Area emission factor model (SF Bay Area-EMFAC 2000) to the U.S. Environmental Protection Agency (U.S. EPA) for approval and use in the 2001 San Francisco Bay Area State Implementation Plan (Bay Area SIP) and subsequent Bay Area conformity determinations.

SF Bay Area-EMFAC 2000 is tailored specifically to the San Francisco Bay Area. The emission factors contained in SF Bay Area-EMFAC 2000, along with updated activity data from the Metropolitan Transportation Commission (MTC), provide the basis for the mobile source emissions budgets in the 2001 Bay Area SIP. SF Bay Area-EMFAC 2000 will be used for subsequent Bay Area conformity determinations. At a public meeting on November 1, 2001 the ARB Board approved SF Bay Area-EMFAC 2000 for these purposes following a 30-day public notice. At the time the Bay Area SIP was being developed, this model was the most current emission factor model available. SF Bay Area-EMFAC 2000 was based on EMFAC2000. The documentation for EMFAC2000 was publicly available beginning in May 2000 and made available for use by the Bay Area Air Quality Management District when it began developing the 2001 Bay Area SIP in November 2000.

The three Bay Area co-lead agencies responsible for developing the Bay Area SIP have committed to do a mid-course review of the Bay Area SIP by December 31, 2003 and revise the 2001 SIP by March 2004. ARB has committed to submit the revised Bay Area SIP to U.S. EPA by April 15, 2004. The mid-course review will use the most current emission factor model available at that time to develop the mobile source emissions budgets. This model will be EMFAC2001 or its successor.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Website: http://www.arb.ca.gov.

This transmittal provides documentation of the emission factors and activity data used in SF Bay Area-EMFAC 2000 to develop the 2001 Bay Area SIP. In addition, it includes the methodology ARB will be using to conduct Bay Area conformity determinations.

SF Bay Area-EMFAC 2000 Emission Factor Model Documentation

Comparison between MVEI7F/7G and SF Bay Area-EMFAC 2000

The emission factors used in the SF Bay Area-EMFAC 2000 emission factor model represent a major improvement over emission factors used in older models such as MVEI7F and MVEI7G. SF Bay Area-EMFAC 2000 exhaust hydrocarbon emission rates are significantly higher than the emission rates included in the older models. The increase in exhaust hydrocarbon rates is mainly a result of the following changes:

- More accurately reflecting real-world driving by using the Unified Cycle (UC) driving cycle rather than the Federal Test Procedure (FTP);
- Using new speed adjustment factors to better reflect how emissions change as average driving speeds change;
- Representing 45 model years, rather than only 35; and
- Incorporating new vehicle test data.

Evaporative hydrocarbon emission rates in SF Bay Area-EMFAC 2000 are also significantly higher than the older models' emission rates. The most important changes causing the increase in evaporative hydrocarbon emission rates include:

- Higher hot soak emission rates, especially for older catalyst-equipped vehicles;
- Higher running loss emission rates, based on new data; and
- Including emissions for vehicles with liquid fuel leaks.

Emission rates for oxides of nitrogen (NOx) are also significantly higher in SF Bay Area-EMFAC 2000 than in the older models. The increased estimates of NOx emission rates are primarily due to the following changes:

- Inclusion of "off-cycle NOx" (i.e., NOx emissions that were not represented in the certification driving cycle); and
- Incorporation of new vehicle test data for catalyst equipped passenger cars and light trucks.

Incorporation of Latest Standards

SF Bay Area-EMFAC 2000 also includes the effects of recently adopted standards on the emissions of the on-road fleet. The future year emission rates in SF Bay Area-EMFAC 2000 reflect the adopted standards described below.

<u>Supplemental Federal Test Procedure</u>
Two supplemental test procedures to the FTP were adopted by the Board in July of 1997. These new standards are applicable to passenger cars, light-duty trucks, and medium-duty vehicles weighing 8,500 pounds or less. These standards require the

control of excess emission of hydrocarbon and oxides of nitrogen during “off-cycle” operations (high speed and hard acceleration), and excess emissions associated with the use of air conditioning. The new standards are to be phased-in between 2001 and 2005.

Low Emission Vehicles (LEVII)

The second phase of Low Emission Vehicle Standards (LEVII) was adopted by the Board in November of 1998. This action imposed more stringent hydrocarbon, carbon monoxide, NOx and exhaust particulate matter emissions standards for passenger cars, light-duty trucks and medium-duty vehicles up to 14,000 pounds sold in California beginning in 2003.

Near Zero Evaporative Standards

Also in November 1998, the Board adopted new standards for the emissions of evaporative hydrocarbons (diurnal, hot soak and resting loss). The standards were reduced from 2 grams per test (hot soak plus diurnal) for passenger cars, to 0.5 grams per test.

New On-Road Motorcycle Standards

In December of 1998, the Board adopted lower exhaust emission standards for on-road motorcycles. These standards, which may require future motorcycles to utilize catalytic converters, are applicable to new motorcycles sold in California beginning in 2004.

Off-Cycle NOx Mitigation

In a settlement reached between the federal government, the Air Resources Board and heavy-duty engine manufacturers, several mitigation measures were agreed to regarding off-cycle NOx emissions. In addition to ending the practice of defaulting to an advanced timing condition during extended cruise operation, several manufacturers have agreed to perform “low emission” rebuilds for in-use engines. These rebuilds will lower the emissions of the in-use fleet.

New Exhaust Emissions Standards for Urban Transit Buses

In February of 2000, the Board adopted a regulation that allows transit agencies the choice between either a diesel or alternative fuel “path” to lower emissions. Beginning in 2002, over the course of 10 years, this regulation requires increased introduction of

cleaner engine buses in transit agencies' fleets, use of cleaner diesel fuel, retrofits to reduce exhaust particulate matter (PM) emissions from older diesel buses, and use of zero-emission buses (ZEBs).

Public Review

The emission factors used in SF Bay Area-EMFAC 2000 were developed in a 3-year process and were subject to public review and comment during three workshops held in 1998, 1999, and 2000. Throughout the comment period, ARB received a number of written and verbal comments, which were addressed in the development of the emission factor model.

Further detail regarding the development of the SF Bay Area-EMFAC 2000 emission factor model may be found in the attached Technical Support Documentation. The Technical Support Documentation refers to broader work on the statewide EMFAC2000 emission factor model, but also applies to the region specific SF Bay Area-EMFAC2000.

Activity Data Documentation

The Bay Area vehicle miles traveled (VMT), VMT growth rates, and VMT-speed distributions incorporated into SF Bay Area-EMFAC 2000 represent the best current activity data estimates available. The derivation of these estimates are explained below.

Vehicle Miles of Travel

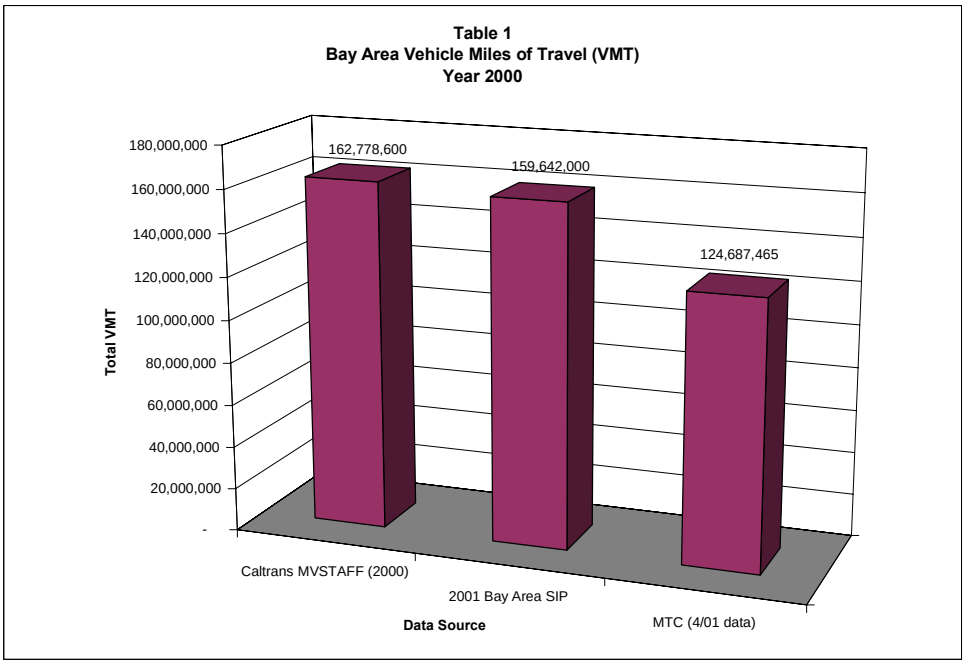
Bay Area VMT estimates for calendar year 2000 are based on the ARB VMT estimation methodology using mileage accrual rates derived from Smog Check odometer data and Department of Motor Vehicle vehicle populations (see Section 7 of the attached Technical Support Documentation for further detail on the ARB VMT estimation methodology).

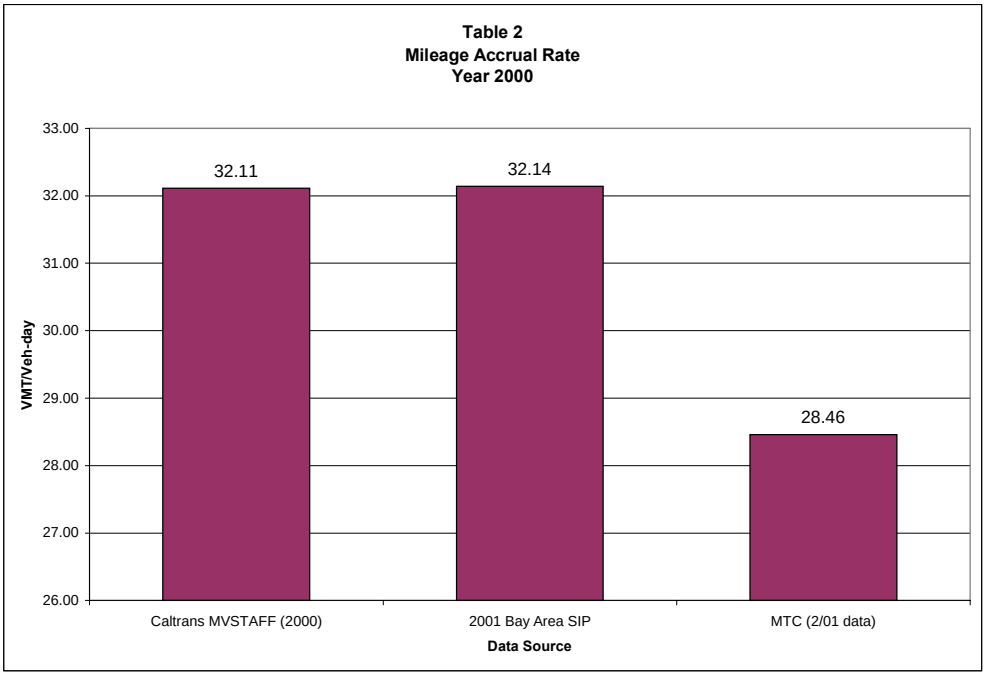
The decision to use ARB's VMT estimate instead of the VMT estimate from MTC's BAYCAST-90 travel demand model for calendar year 2000 was made in an agreement between MTC and ARB. As Table 1 illustrates, MTC's 2000 VMT estimate for the region is about 22 percent lower than both ARB and Caltrans' estimates. The ARB and Caltrans[1] methods for estimating VMT were developed independently of each other, yet fall within 1 percent of each other.
Additional justification for using the ARB VMT estimation methodology is found in the estimate of the number of miles driven by each vehicle per day (i.e., the mileage accrual

[1] Caltrans' VMT estimate was taken from the annual "Motor Vehicle Stock, Travel, and Fuel Forecast" (MVSTAFF) report. The MVSTAFF report forecasts statewide VMT based on statewide vehicle population data from the DMV, fuel consumption estimates from the Board of Equalization, and fuel economy estimates derived from the national fuel economy standards. Statewide VMT estimates are then disaggregated to the county level using county auto registration and road system mileage ratios.

rate). Table 2 compares mileage accrual rates from various data sources. MTC's estimates appear too low to be consistent with odometer readings collected in the Smog Check program. MTC's mileage accrual estimates are 11 percent lower than both Caltrans' ARB's estimates for the Bay Area.

For the purposes of the 2001 Bay Area SIP, MTC agreed to use ARB's 2000 VMT estimate. It was also agreed that the difference in VMT between ARB's and MTC's calendar year 2000 VMT estimates would be used as a "correction" for all future analysis years.





VMT Growth Rates

In the agreement between ARB and MTC, ARB agreed to use MTC's VMT growth rate as implied by the VMT estimates produced by BAYCAST-90. The rationale for this is that while ARB questions the level of travel in calendar year (CY) 2000 as estimated by MTC's travel demand model, ARB is not questioning future year growth projections included in the travel demand model.

VMT-Speed Distributions

The final pieces of activity data provided by MTC and incorporated into SF Bay Area-EMFAC 2000 are the VMT-speed distributions for two calendar years (2000 and 2005). Based on consultation between MTC and ARB staff, ARB incorporated the VMT-speed distributions into SF Bay Area-EMFAC 2000 by applying CY2000 speed distributions to CYs 2000-2003, and CY2005 speed distributions to CYs 2004+.

Methodology for Bay Area Conformity Determinations

For all Bay Area conformity determinations based on the mobile source emissions budgets set in the Bay Area SIP (using SF Bay Area-EMFAC 2000), the following step-wise methodology will be followed:

1. MTC will submit to ARB updated VMT-speed distributions and updated VMT estimates by county for all relevant analysis years. ARB will follow the procedures below for analysis years for which MTC does not submit new activity data (i.e. for which activity data does not change from MTC's original SIP submittal):
    - ARB will use the speed distributions submitted by MTC for the most recent calendar year prior to the analysis year of interest. For example, if MTC submits new VMT-speed distributions for 2005 and 2010, but not for the 2006 analysis year, the 2006 analysis year will use the speed distributions submitted for 2005. VMT-speed distributions will not be interpolated.
    - The VMT estimate for each county will be interpolated using county-specific compounded growth rates.[2] The interpolated VMT will then be used for the following steps.

2. ARB will calculate VMT for the portions of Sonoma and Solano Counties that fall in the San Francisco (S.F.) Air Basin. This is necessary since the SIP budgets are based on the S.F. Air Basin (which covers only the southern portions of Solano and Sonoma Counties), while the MTC VMT estimates include the full nine Bay Area counties. The county portions will be calculated by multiplying the full county VMT submitted by MTC by the VMT ratio (partial county/county) derived from SF Bay Area-EMFAC 2000.[3] In year 2000, about 71 percent of Solano County, and 77 percent of Sonoma County VMT occurred in the S.F. Basin.

3. ARB will calculate the year 2000 difference in VMT between the VMT estimate included in the SF Bay Area-EMFAC 2000 runs[4] and the VMT estimate submitted by MTC for conformity.[5] The resulting differences by county represent the VMT "correction" between ARB and MTC's VMT estimates.

4. The VMT correction will be added by county to the submitted VMT for all analysis years, resulting in the "target" VMT estimate that will be used for the conformity modeling runs.[6]

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[2] For example, 2006 VMT is interpolated from 2005 and 2010 VMT estimates submitted by MTC by the following equation: $VMT_{2006} = (VMT_{2010} / VMT_{2005})^{0.2} * VMT_{2005}$

[3] For the S.F. Basin portions of Solano and Sonoma County VMT:
S.F. Basin County Portion VMT_{MTC} = [S.F. Basin County Portion $VMT_{SFBayArea\text{-}EMFAC2000}$ / Total County VMT $_{SFBayArea\text{-}EMFAC2000}$] * Total County VMT_{MTC}

[4] SF Bay Area-EMFAC 2000 calculates VMT based on Smog Check odometer readings and DMV vehicle registration data for light duty vehicle classes, and instrumented truck data for the truck classes.

[5] VMT $correction_{county\ a}$ = SIP VMT_{CY2000} – MTC VMT_{CY2000}

[6] Target $VMT_{county\ a}$ = MTC $VMT_{county\ a}$ + VMT $correction_{county\ a}$

5. The county-specific target VMT in the conformity modeling runs will be achieved in SF Bay Area-EMFAC 2000 by modifying the county-specific vehicle populations in SF Bay Area-EMFAC 2000 using the What-if-Scenario (WIS) option. Since vehicle population and VMT are linearly related in SF Bay Area-EMFAC 2000, to obtain the "target" vehicle population, ARB staff will take the ratio between the SIP VMT estimates and the target VMT for each analysis year and apply them to the SIP vehicle population estimates for each respective analysis year.[7]

6. Once the target vehicle populations have been calculated, ARB staff will run SF Bay Area-EMFAC 2000 using the WIS option to adjust vehicle populations by county, and incorporate any updated speed distributions.

7. ARB staff will then apply control factors to the model output to adjust for emission reduction measures not included in the SF Bay Area-EMFAC 2000 emission factor model or changed since the model was developed.

8. Finally, ARB staff will compare the results to the SIP budgets for the conformity demonstration.

If you have questions regarding this submittal, you may contact me at (916) 445-4383, or have your staff contact Ms. Cynthia Marvin, Chief of the Air Quality and Transportation Planning Branch, at (916) 322-7236.

Sincerely,

/s/

Michael P. Kenny
Executive Officer

Enclosures

cc: See next page.

[7] Target Veh Pop = [((Target VMT – SIP VMT) / SIP VMT) * SIP Veh Pop] + SIP Veh Pop

cc: (w/o Enclosures)
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San Francisco, California 94105

Ms. Ellen Garvey, Executive Officer
Bay Area Air Quality Management District
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Mr. Steve Heminger, Executive Director
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Mr. Eugene Leong, Executive Officer
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101 Eighth Street
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Ms. Cynthia Marvin
Air Resources Board

January 2003

Recommended Methods for Use of EMFAC2002 To Develop Motor Vehicle Emissions Budgets and Assess Conformity

As the agency charged with estimating motor vehicle emissions for air quality plans, the Air Resources Board (ARB) has improved the EMFAC modeling tool for use in combination with estimates of vehicle population and activity to develop motor vehicle emissions budgets and assess transportation conformity. The most recent version of this tool, EMFAC2002, has been transmitted to the U.S. Environmental Protection Agency (U.S. EPA) for approval for use in State Implementation Plans (SIPs) and conformity assessments. This paper describes the recommended practices for ARB, air districts, metropolitan planning agencies (MPOs) and regional transportation planning agencies (RTPAs) to use vehicle activity in conjunction with EMFAC2002 emission rates to calculate emissions budgets and conduct conformity assessments.

The vehicle activity indicators commonly used to develop emissions inventories are vehicle trips and vehicle miles of travel (VMT) by speed, vehicle class and time of day. Though not a direct measure of travel activity, vehicle population may also be a variable for these purposes, as described below.

Vehicle trips. In California, MPOs and RTPAs use demographic forecasts and travel demand models to develop estimates of current and future daily VMT, daily vehicle trips and average travel speeds for links in the transportation network. ARB separately estimates daily vehicle trips, but defines trips as the number of times a vehicle is started, rather than a number of specific daily destinations. This distinction is important; ARB and U.S. EPA studies find that vehicles are started five to six times per day, while trips associated with destinations as reported through travel surveys and predicted in travel demand models occur three to four times per day. Because start emissions and the duration of time between starts are crucial to emissions estimation, ARB equates vehicle trips with vehicle starts. Though EMFAC2002 permits model users to alter estimates of vehicle trips used to estimate emissions, ARB recommends that the model's default estimates of vehicle trips (starts), developed from instrumented vehicle studies, be used for air quality planning and conformity purposes.[1] Alternatively, for vehicle classes where appropriate local data are made available for review through the interagency consultation process, use of trip factoring or other methods to fully account for vehicle starts may be employed. Such alternative approaches should be discussed in the interagency consulation process.

[1] An exception would occur when a user chooses to factor these start-based trips to account for trip reduction programs. EMFAC2002 start-based trips rather than destination-based trips should serve as the baseline for this adjustment. The adjustment would be made through the What-If Scenario (WIS) function of EMFAC2002 as follows, where TRS denotes the trip reduction scenario:

*WIS Input TRS Trips = EMFAC Default Trips * (RTPA TRS Trips / RTPA Baseline Trips)*

Vehicle speeds. Most travel demand models provide output of estimated average speed by time period and link that may be summarized for use in EMFAC2002. For each major vehicle class and up to 24 hourly time periods, total VMT is divided into 13 different speed "bins" (5 mph through 65 mph) and used as input to EMFAC2002. ARB recommends continuation of this current practice to develop emissions budgets and assess conformity. Travel from intrazonal trips should be assigned to the appropriate speed bin based on the speed assigned to that travel in the travel demand model. VMT for each speed bin and time period can be used as input through the WIS function of EMFAC2002. It is also possible to input this data specific to vehicle class if adequate and defensible local data are available.

Vehicle population. Vehicle trips (starts) in EMFAC2002 are estimated as a function of the number of vehicles, or vehicle population, by county. The population of each class of motor vehicle is estimated and forecast from Department of Motor Vehicles (DMV) registration data. EMFAC2002 assumes there is a relationship between vehicle population and VMT, carried through mileage accrual rates.[2] In the default case, the model assumes *vehicle population * mileage accrual = VMT.* ARB-preferred practice is to maintain this internal consistency, for reasons explained below.

Vehicle miles of travel. Daily VMT is both an emissions model input usually provided by MPOs/RTPAs and a model output used to estimate exhaust emissions. ARB staff reviews MPO/RTPA estimates of VMT and vehicle speeds, and supports these estimates for use in air quality plans whenever we agree they are reasonable and defensible. Use of the latest estimates of MPO/RTPA VMT and speeds in plan development facilitates the subsequent federal transportation conformity process. This is particularly important for any year for which the plan creates emissions budgets, as conformity rules allow no emissions budget exceedance, regardless of how small. As there may be some variance between default EMFAC2002 VMT and more recent MPO/RTPA estimates to be used for SIP development, we are recommending a procedure to more exactly incorporate into emissions budgets revised VMT estimates for emissions budget analysis years.

Although it is possible to directly input VMT into EMFAC2002 through the model's WIS function, it is generally not recommended to do this independent of vehicle population because of the desire to properly estimate start and evaporative emissions tied to the size of the vehicle fleet. A change in total forecasted miles of travel implies a change either in the number of vehicles traveling those miles or in mileage accrual rates. For future years, we generally recommend making vehicle population the variable, rather than mileage accrual. Thus, VMT adjustment would usually occur through vehicle population adjustment in the model's WIS function, according to this formula:

*WIS Input Population = EMFAC Default Population * (RTPA VMT / EMFAC Default VMT)*

[2] Accrual rates are miles traveled per year as a function of vehicle age, derived from the Bureau of Automotive Repair Smog Check database as described in Section 7.1 of the EMFAC2000 Technical Support Document, found via http://www.arb.ca.gov/msei/on-road/latest_revisions.htm#pcaccrual.

The result of this modification is that emissions estimates more precisely incorporate the daily VMT provided by each MPO/RTPA to calculate exhaust emissions, and vehicle population is adjusted for consistency with this assumption of higher or lower VMT, providing similarly modified start and evaporative emissions.[3] Though the emissions impact of using this approach will often be small, we believe the approach is appropriate given the desire to fully reflect the impacts of changes in travel activity on all emissions processes. Use of consistent methods in air quality plans and conformity assessments will both reduce potential conformity problems and preserve the integrity of the SIP and conformity processes.

Alternatively, local data may indicate that changes in VMT are tied more closely to changes in household or business rates of travel than to changes in vehicle ownership. Or, improved travel demand modeling may project auto ownership rates with a high degree of confidence. In such cases it may be appropriate to adjust total mileage accrual rather than vehicle population. It is also possible to derive a modified VMT forecast from adjustments to both variables in EMFAC2002. Planning agencies are encouraged to present alternative approaches for consideration in the interagency consultation process.

Recommendations

1. ARB recommends that the EMFAC2002 default estimates of vehicle trips, based on starts per day, be used for SIP development and conformity purposes. Model defaults for trips may be factored to account for trip reduction scenarios, but should not be replaced with estimates that do not account for all vehicle starts. Alternative approaches, such as the factoring of travel demand model trip outputs for appropriate classes to account for additional starts, may be considered through interagency consultation.

2. We recommend continuation of current practices for input of latest speed distributions for SIPs and conformity assessments. Travel from intrazonal trips should be assigned to the appropriate speed bin based on the speed assigned to that travel in the travel demand model.

3. To fully reflect the impacts of modified VMT forecasts on all emissions processes, in the calculation of SIP emissions budgets, and in the assessment of conformity with those budgets, vehicle population should be adjusted in EMFAC2002 proportional to the estimated VMT change. Local circumstances may alternatively support adjustment of mileage accrual rates, subject to interagency consultation.

[3] After adjusting VMT through use of the population variable in the WIS function of EMFAC, a user who desires to match VMT even more exactly (to the mile instead of the tens of miles) can then adjust VMT in the WIS without disturbing the population adjustment. This is unlikely to have a discernible impact on emissions, however.

Appendix G

CALIFORNIA
AIR RESOURCES BOARD

Gavin Newsom, Governor
Jared Blumenfeld, CalEPA Secretary
Mary D. Nichols, Chair

March 5, 2020

Elizabeth Adams
Director, Air and Radiation Division
Region 9
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105

Dear Ms. Adams:

With this letter, the California Air Resources Board (CARB) is providing to the U.S. Environmental Protection Agency (U.S. EPA) the attached EMission FACtor (EMFAC) Off-Model Adjustment Factors that account for the impacts of the Safer Affordable Fuel-Efficient (SAFE) rule. CARB is seeking U.S. EPA's concurrence that these factors are appropriate for metropolitan planning organizations and regional transportation planning agencies to use in their regional conformity determinations.

CARB has estimated the vehicle tailpipe and evaporative emissions impacts from the SAFE Vehicles Rule Part One: One National Program adopted by U.S. EPA and the National Highway Traffic Safety Administration (NHTSA). The SAFE Vehicles Rule Part One impacts some of the underlying assumptions in the EMFAC2014 and EMFAC2017 models. The attached document provides off-model adjustment factors that can be used to adjust emissions output from the EMFAC model (only EMFAC2014 and EMFAC2017) to account for the impacts of this rule.

If you have any questions or need further information, please contact Dr. Sam Pournazeri, Branch Chief, Mobile Source Analysis Branch at sam.pournazeri@arb.ca.gov or (916) 322-2022.

Sincerely,

Steven S. Cliff, Ph.D.
Deputy Executive Officer

Enclosures

cc: See next page.

cc: (via email)

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EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One

November 20, 2019

Summary

Staff at the California Air Resources Board's (CARB) have estimated the vehicle tailpipe and evaporative emissions impacts from the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program" adopted by the U.S. Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA). The SAFE Vehicle Rule Part One impacts some of the underlying assumptions in the EMFAC2014 and EMFAC2017 models. This document provides the off-model adjustment factors that can be used to adjust emissions output from EMFAC model (only EMFAC2014 and EMFAC2017) to account for the impacts of this rule.

What is the SAFE Vehicle Rule Part One?

On September 27, 2019, the United States Environmental Protection Agency (U.S. EPA) and the National Highway Traffic Safety Administration (NHTSA) published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program." (84 Fed. Reg. 51,310 (Sept. 27, 2019.) The Part One Rule revokes California's authority to set its own greenhouse gas emissions standards and set zero-emission vehicle mandates in California. California expects Part Two of these regulations to be adopted later in the Fall of 2019. We will not know the full impacts of these rules until Part Two is released.

How Does the SAFE Vehicle Rule Impact Criteria Emissions?

As CARB has previously stated[1], both the GHG emission standards and the ZEV sales standards reduce criteria pollutants. As a result of the loss of the ZEV sales requirements, there may be fewer ZEVs sold and thus additional gasoline-fueled vehicles sold in future years. This would increase criteria pollutant emissions in multiple ways. A ZEV inherently has zero evaporative emissions of hydrocarbons in the form of gasoline vapors, which escape from the tank and fuel lines during operation and while parked. A gasoline-fueled vehicle with evaporative emissions is assumed to take the place of each ZEV that will not be sold. This leads to an overall increase in hydrocarbon emissions. Additionally, tailpipe emissions of NOx, hydrocarbons, carbon monoxide, and particulate matter also increase as a result of each additional gasoline-fueled vehicle. This increase occurs for several reasons despite the presence of a criteria pollutant "fleet average" standard[2] that CARB has in place for hydrocarbons

[1] https://ww2.arb.ca.gov/carbs-comments-safe-proposal

[2] The Low Emission Vehicle III program requires manufacturers to average emissions from all vehicles in their fleet to meet the standard. In theory, the elimination of some ZEVs (which are counted in such an

and NOx. First, the fleet average does not apply to particulate matter and carbon monoxide, meaning each incremental gasoline-fueled vehicle generates additional tailpipe emissions of both pollutants. Second, because the fleet average is based on a single test cycle and does not fully capture all operating conditions, additional tailpipe emissions of all criteria pollutants occur for every incremental gasoline-fueled vehicle. Third and most significantly, both tailpipe and evaporative criteria pollutant emissions substantially increase over time due to deterioration of the emission controls on gasoline-fueled vehicles. ZEVs have no such deterioration. Thus, even with the fleet-average standard offsetting a portion of the tailpipe emissions by starting some gasoline-fueled vehicles at lower emission levels early in their life, this slight difference is overwhelmed by the increase in emissions from deterioration over the life of the vehicle.

More stringent ZEV and GHG standards are critical to reach attainment of air quality standards and meet climate needs. If standards cannot become more stringent, these mandates will be very difficult to meet. ZEV technologies, in particular, are needed in both light-duty and heavy-duty fleets to help commercialize this technology. As a result, the long-term threat to air quality is substantial as cleaner technologies, especially ZEVs, do not penetrate the fleet at the scale necessary and emissions are not reduced as needed.

What is EMFAC?

EMission FACtors (EMFAC) is California's federally-approved on-road mobile source emission inventory model that reflects California-specific driving and environmental conditions, fleet mix, and most importantly the impact of California's unique mobile source regulations such as the Low-Emission Vehicle (LEV) program including the LEV II and LEV III standards, California inspection and maintenance programs, and its in-use diesel fleet rules. The EMFAC model supports CARB's regulatory and air quality planning efforts and fulfills the federal Clean Air Act and the Federal Highway Administration's transportation planning requirements. The U.S. EPA has approved both EMFAC2014 and EMFAC2017 for use in state implementation plan (SIP) and transportation conformity analyses. For more information on EMFAC, please visit: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-modeling-tools.

How Did CARB Analyze the SAFE Vehicle Rule Part One's impact on vehicle emissions?

CARB estimated the change in vehicle emissions of the California light-duty vehicle fleet using its EMission FACtor (EMFAC) model. Both EMFAC2014 and EMFAC2017 default models, with an "annual average" setting, were run to estimate statewide vehicle emissions by calendar year, vehicle category, fuel type, and model year

average as zero emissions) would cause some of the remaining or increased number of gasoline-fueled vehicles to need to be certified to lower (cleaner) levels in order to still meet the same fleet average.

projected to occur under the existing Federal and CARB GHG standards and CARB ZEV requirements that were in place at the time of the analysis. These default results were then adjusted in a post-processing step to reflect the proposed SAFE Vehicle Rule[3]. As a result of freezing new ZEV sales at model year 2020 levels, the projected fleet for 2021 and beyond was modified to reflect a lower number of future ZEVs and a corresponding greater number of future gasoline internal combustion engine vehicles (and thus, a higher portion of vehicle miles traveled (VMT) by gasoline vehicles). The increased number of gasoline vehicles were put into appropriate criteria pollutant certification categories under CARB's Low Emission Vehicle (LEV) III criteria pollutant standards to maintain compliance with the required fleet average.

How is EMFAC impacted by the SAFE Vehicle Rule Part One?

Generally, after the SAFE Vehicle Rule Part One becomes effective on November 26, 2019, EMFAC2014 and EMFAC2017 will not accurately estimate future transportation emissions until they are updated with new assumptions reflecting the SAFE Vehicle Rule Part One in off-model adjustment factors provided by CARB.

What are Off-Model Adjustment Factors and how should they be applied?

CARB has prepared off-model adjustment factors for both the EMFAC2014 and EMFAC2017 models to account for the impact of the SAFE Vehicle Rule Part One. These adjustments provided in the form of multipliers can be applied to emissions outputs from EMFAC model to account for the impact of this rule. The adjustment factors are provided in Table 1 for EMFAC2014 and Table 2 for EMFAC2017 (Note these factors do not include upstream emissions associated with fuel demand, as EMFAC only estimates tailpipe and evaporative emissions).

[3] More details can be found in CARB's letter submitted to US EPA and NHTSA on November 6, 2019 available at: https://www.regulations.gov/document?D=NHTSA-2018-0067-12447

Table 1. Off-Model Adjustment Factors for Gasoline Light Duty Vehicle[4] Emissions in **EMFAC2014**

Adjustment Factors for **EMFAC2014** Gasoline Light Duty Vehicles					
Year	NOx Exhaust	TOG Evaporative	TOG Exhaust	PM Exhaust	CO Exhaust
2021	1.0001	1.0001	1.0001	1.0012	1.0004
2022	1.0002	1.0004	1.0001	1.0034	1.0013
2023	1.0005	1.0008	1.0003	1.0066	1.0026
2024	1.0010	1.0014	1.0005	1.0105	1.0041
2025	1.0016	1.0021	1.0009	1.0149	1.0058
2026	1.0022	1.0030	1.0012	1.0183	1.0076
2027	1.0029	1.0039	1.0016	1.0208	1.0095
2028	1.0036	1.0050	1.0020	1.0224	1.0116
2029	1.0044	1.0063	1.0025	1.0241	1.0139
2030	1.0052	1.0078	1.0030	1.0260	1.0162
2031	1.0061	1.0095	1.0036	1.0279	1.0186
2032	1.0071	1.0114	1.0042	1.0299	1.0210
2033	1.0081	1.0134	1.0050	1.0320	1.0235
2034	1.0091	1.0156	1.0059	1.0341	1.0260
2035	1.0103	1.0179	1.0070	1.0362	1.0285
2036	1.0114	1.0202	1.0082	1.0382	1.0309
2037	1.0125	1.0224	1.0096	1.0400	1.0332
2038	1.0137	1.0247	1.0111	1.0418	1.0353
2039	1.0148	1.0269	1.0126	1.0435	1.0372
2040	1.0158	1.0290	1.0141	1.0449	1.0389
2041	1.0167	1.0309	1.0154	1.0461	1.0404
2042	1.0176	1.0326	1.0168	1.0471	1.0418
2043	1.0183	1.0340	1.0180	1.0480	1.0429
2044	1.0190	1.0352	1.0190	1.0487	1.0439
2045	1.0195	1.0364	1.0199	1.0494	1.0448
2046	1.0200	1.0373	1.0206	1.0499	1.0454
2047	1.0204	1.0384	1.0213	1.0504	1.0461
2048	1.0208	1.0393	1.0218	1.0508	1.0467
2049	1.0209	1.0400	1.0221	1.0510	1.0470
2050	1.0210	1.0406	1.0224	1.0512	1.0472

[4] LDA, LDT1, LDT2 and MDV vehicle categories in EMFAC

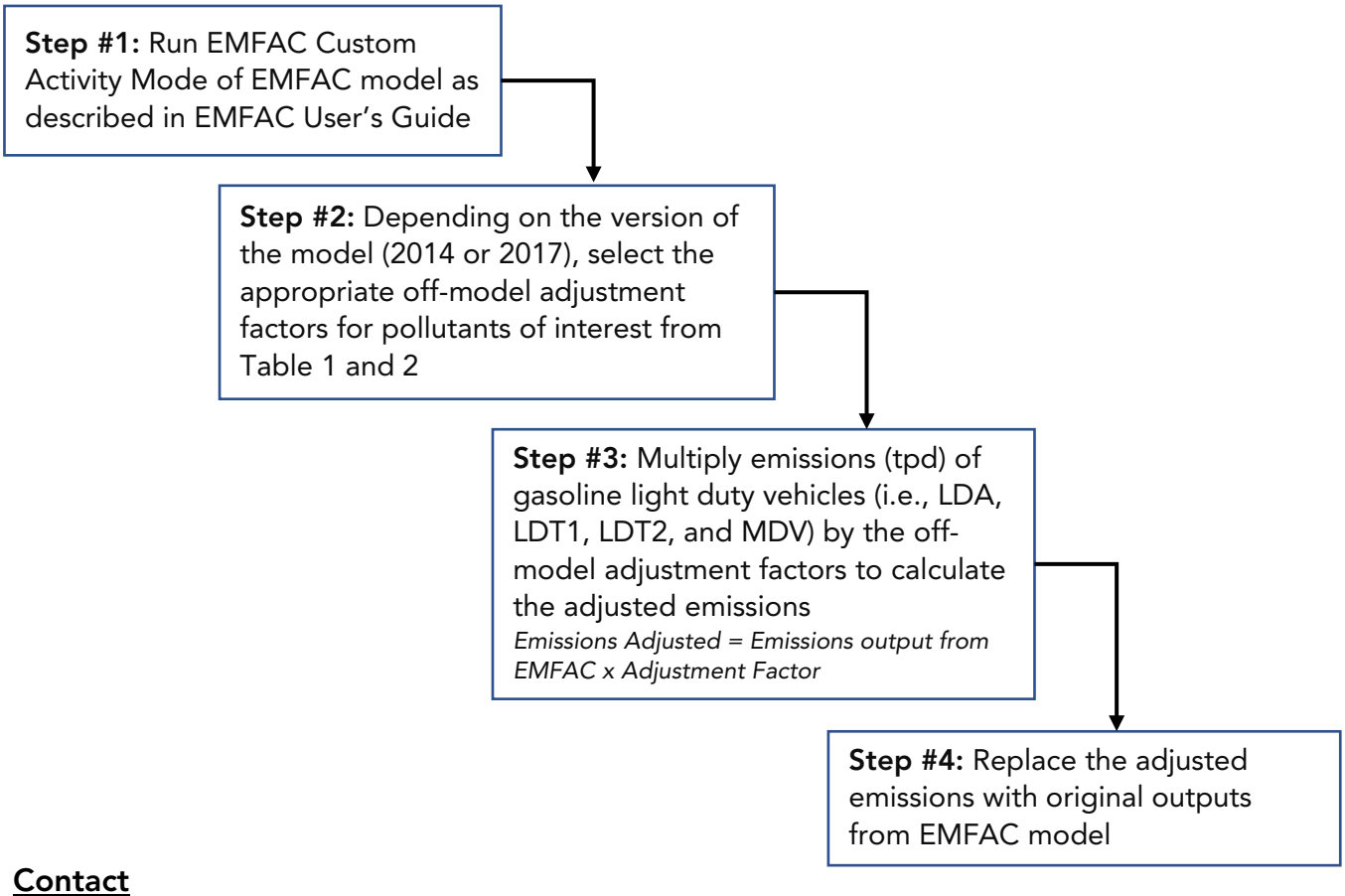
Table 2. Off-Model Adjustment Factors for Gasoline Light Duty Vehicle Emissions in **EMFAC2017**

Adjustment Factors for **EMFAC2017** Gasoline Light Duty Vehicles					
Year	NOx Exhaust	TOG Evaporative	TOG Exhaust	PM Exhaust	CO Exhaust
2021	1.0002	1.0001	1.0002	1.0009	1.0005
2022	1.0004	1.0003	1.0004	1.0018	1.0014
2023	1.0007	1.0006	1.0007	1.0032	1.0027
2024	1.0012	1.0010	1.0011	1.0051	1.0044
2025	1.0018	1.0016	1.0016	1.0074	1.0065
2026	1.0023	1.0022	1.0020	1.0091	1.0083
2027	1.0028	1.0028	1.0024	1.0105	1.0102
2028	1.0034	1.0035	1.0028	1.0117	1.0120
2029	1.0040	1.0042	1.0032	1.0129	1.0138
2030	1.0047	1.0051	1.0037	1.0142	1.0156
2031	1.0054	1.0061	1.0042	1.0155	1.0173
2032	1.0061	1.0072	1.0047	1.0169	1.0189
2033	1.0068	1.0083	1.0052	1.0182	1.0204
2034	1.0075	1.0095	1.0058	1.0196	1.0218
2035	1.0081	1.0108	1.0063	1.0210	1.0232
2036	1.0088	1.0121	1.0069	1.0223	1.0244
2037	1.0094	1.0134	1.0074	1.0236	1.0255
2038	1.0099	1.0148	1.0079	1.0248	1.0265
2039	1.0104	1.0161	1.0085	1.0259	1.0274
2040	1.0109	1.0174	1.0090	1.0270	1.0281
2041	1.0113	1.0186	1.0095	1.0279	1.0288
2042	1.0116	1.0198	1.0099	1.0286	1.0294
2043	1.0119	1.0207	1.0103	1.0293	1.0299
2044	1.0122	1.0216	1.0106	1.0299	1.0303
2045	1.0124	1.0225	1.0109	1.0303	1.0306
2046	1.0125	1.0233	1.0111	1.0308	1.0309
2047	1.0127	1.0240	1.0113	1.0311	1.0311
2048	1.0128	1.0246	1.0115	1.0314	1.0313
2049	1.0128	1.0252	1.0116	1.0316	1.0315
2050	1.0129	1.0257	1.0117	1.0318	1.0316

The off-model adjustment factors need to be applied only to emissions from gasoline light duty vehicles (LDA, LDT1, LDT2 and MDV). Please note that the adjustment factors are by calendar year and includes all model years.

For example, the Custom Activity Mode of EMFAC2014 and 2017 is designed to perform emissions assessments for determining conformity with the state implementation plan. These types of assessments are most often done by various transportation planning agencies and air districts throughout California which require the user to create custom activity data files containing vehicle miles travelled (VMT) and/or speed profile data. This customized activity data will then be used for scaling the default vehicle emissions produced by EMFAC model. The off-model adjustment factors provided in this document can be applied to gasoline light duty vehicle emissions outputs of the EMFAC Custom Activity Mode, as illustrated in Figure 1.

Figure 1. Process to apply EMFAC Off-Model Adjustment Factors



Contact

For questions regarding the EMFAC off-model adjustment factors, please contact us at: EMFAC@arb.ca.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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MAR 12 2020

Steven Cliff, Ph.D.
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Dear Dr. Cliff:

I am responding to your letter of March 5, 2020, requesting U.S. Environmental Protection Agency concurrence that EMFAC2014 and EMFAC2017 off-model adjustment factors can be used for transportation conformity determinations in California.

We understand that the EMFAC off-model adjustment factors are multipliers that would be applied to gasoline vehicle emissions modeled by EMFAC2014 and EMFAC2017. EPA considers these factors to be acceptable for use because the effect of their application is more conservative than necessary. Therefore, these factors may be used in transportation conformity determinations and state implementation plan development.

If you have any questions regarding this letter, please contact me at (415) 972-3183 or Karina O'Connor at (775) 434-8176.

Sincerely,

Elizabeth J. Adams

Elizabeth J. Adams
Director, Air and Radiation Division

cc: Richard Corey, CARB
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March 2, 2020

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Regional Administrator
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Subject: Appropriate Model for Transportation Conformity In California

Dear Mr. Busterud:

Clean Air Act (CAA) section 176(c) requires that Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) funded or approved highway and transit projects be consistent with ("conform to") the purpose of the State Implementation Plan (SIP). Under the U.S. Environmental Protection Agency's (EPA's) regulations, transportation conformity determinations must be based on the latest emission estimation model available. See 40 CFR section 93.111. The latest EPA approved California EMission FACtor (EMFAC) models are EMFAC2014 and EMFAC2017. See 84 FR 41717 (August 15, 2019).

On September 27, 2019, EPA and the National Highway Traffic Safety Administration (NHTSA) jointly issued the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program. This action withdrew the waiver EPA had previously provided to California for that State's greenhouse gas (GHG) program and Zero Emissions Vehicle (ZEV) mandate under section 209 of the Clean Air Act, and finalized regulatory text that made explicit that those State programs would also be preempted under NHTSA's authorities. *See* 84 FR 51310 (September 27, 2019).

In light of the One National Program rule, can you please confirm that FHWA and FTA should continue to use EMFAC2014 and 2017 for transportation conformity determinations in the State of California?

Sincerely yours,

Vincent Mammano
Division Administrator, California Division
Federal Highway Administration

Sincerely yours,

Ray Tellis
Regional Administrator, Region 9
Federal Transit Administration

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

MAR 12 2020

OFFICE OF THE
REGIONAL ADMINISTRATOR

Vincent Mammano
Division Administration, California Division
Federal Highway Administration
650 Capitol Mall, Suite 4-100
Sacramento, California 95814

Raymond Tellis
Regional Administrator, Region 9
Federal Transit Administration
90 7th Street
San Francisco, California 94103

Subject: Appropriate Model for Transportation Conformity in California

Dear Mr. Mammano and Mr Tellis:

I am responding to your letter of March 2, 2020, requesting the U.S. Environmental Protection Agency (EPA) to confirm that the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) should continue to use EMFAC2014 and EMFAC2017 for transportation conformity determinations in California.

Clean Air Act section 176(c)(1) requires that the latest emissions estimates be used in transportation conformity analyses. The EPA's last approval of an update to the EMFAC model was on August 15, 2019 when EPA approved EMFAC2017, the last major update to EMFAC 2014, the previous version of EMFAC.[1] In our approval action we initiated a two-year grace period for transition to EMFAC2017 for regional transportation conformity analyses and a one-year grace period for project level conformity analyses. The EPA-approved models in California continue to be EMFAC2017, and, during the EMFAC2017 conformity grace periods, EMFAC2014.

The California Air Resources Board (CARB) has developed and recently submitted to the EPA certain EMFAC adjustment factors.[2] We understand these off-model adjustment factors to be multipliers that would be applied to gasoline vehicle emissions modeled by EMFAC2014 and EMFAC2017. EPA considers these factors to be acceptable for use because the effect of their application is more conservative than necessary. Therefore, EPA has informed CARB that these factors may be used in transportation conformity determinations and state implementation plan development.

[1] 84 FR 41717.
[2] Letter dated March 5, 2020 from Steven S Cliff, Ph.D., Deputy Executive Officer, CARB to Elizabeth Adams, Director, Air and Radiation Division, EPA, Region 9.

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If you have any questions regarding this letter, please contact me at (415) 947-4235 or Elizabeth Adams at (415) 972-3183.

Sincerely,

for John W. Busterud
Regional Administrator, Region IX.

cc Richard Corey, California Air Resources Board
Steven Cliff, California Air Resources Board
Kurt Karperos, California Air Resources Board

Appendix H

Glossary

Area Source Small stationary and non-transportation pollution sources that are too small and/or numerous to be included as point sources but may collectively contribute significantly to air pollution (e.g., dry cleaners).

Attainment Area An area considered to have air quality that meets or exceeds the U.S. EPA national ambient air quality standards, which EPA establishes according to the requirements of the Clean Air Act. An area may be an attainment area for one pollutant and a nonattainment area for others. Nonattainment areas are areas designated by EPA as not meeting a standard for a pollutant.

Carbon Monoxide (CO) A colorless, odorless, tasteless gas formed in large part by incomplete combustion of fuel. Human activities (e.g., transportation or industrial processes) are largely the source for CO contamination in ambient air.

Congestion Management and Air Quality Improvement (CMAQ) Program A categorical funding program under the Federal-aid Highway Program. CMAQ directs funding to projects that contribute to meeting or maintaining national ambient air quality standards in nonattainment and maintenance areas. CMAQ funds generally may not be used for projects that result in the construction of new capacity available to SOVs (single-occupant vehicles).

Emissions Inventory A complete list of sources and amounts of pollutant emissions within a specific area and time interval.

Environmental Protection Agency (EPA) The Federal regulatory agency responsible for administering and enforcing Federal environmental laws including the Clean Air Act, the Clean Water Act, the Endangered Species Act, and others.

Federal Highway Administration (FHWA) An agency of the U.S. Department of Transportation that provides financial and technical support for constructing, improving, and preserving America's highway system.

Federal Transit Administration (FTA) An agency of the U.S. Department of Transportation that provides stewardship of combined formula and discretionary programs to support a variety of locally planned, constructed, and operated public transportation systems throughout the United States.

High Occupancy Vehicles (HOVs) Generally applied to vehicles carrying two or more people; freeways, expressways, and other large volume roads may have lanes designated for use by carpools, vanpools, and buses. The term HOV is also sometimes used to refer to high-occupancy vehicle lanes themselves.

Highway Term applies to roads, streets, and parkways, and also includes rights-of-way, bridges, railroad crossings, tunnels, drainage structures, signs, guardrails, and protective structures in connection with highways.

Hydrocarbons (HC) Colorless gaseous compounds originating from evaporation and the incomplete combustion of fossil fuels.

Inspection and Maintenance Program (I/M) An emissions testing and inspection program implemented to ensure that the catalytic or other emissions control devices on in-use vehicles are properly maintained over time.

Land Use Refers to the manner in which portions of land or the structures on them are used (i.e., commercial, residential, retail, industrial, etc.).

Lapse Means that the conformity determination for a metropolitan transportation plan or TIP has expired, and thus there is no currently conforming metropolitan transportation plan and TIP.

Maintenance Area Any geographic region of the United States previously designated nonattainment pursuant to the CAA Amendments of 1990 and subsequently re-designated to attainment subject to the requirement to develop a maintenance plan under Section 175A of the CAA, as amended.

Metropolitan Planning Organization (MPO) The policy board of an organization created and designated to carry out the metropolitan transportation planning process.

Metropolitan Transportation Plan The official multimodal metropolitan transportation plan addressing no less than a 20-year planning horizon that is developed, adopted, and updated by the MPO through the metropolitan transportation planning process.

Metropolitan Transportation Plan/TIP Amendment A revision to a metropolitan transportation plan or TIP that involves a major change to a project included in a metropolitan transportation plan or TIP including the addition or deletion of a project or a major change in project cost, project/project phase initiation dates, or a major change in design concept or design scope (e.g., changing project termini or the number of through traffic lanes). Changes to projects that are included only for illustrative purposes do not require an amendment. An amendment is a revision that requires public review and comment, re-demonstration of fiscal constraint, or a conformity determination (for those involving "non-exempt" projects in nonattainment and maintenance areas).

Metropolitan Transportation Plan/TIP Update Making current a metropolitan transportation plan or TIP through a comprehensive review. Updates require public review and comment, a 20-year horizon year for the metropolitan transportation plan, a four-year program period for TIPs, demonstration of fiscal constraint, and a conformity determination (in nonattainment and maintenance areas).

Mobile Sources Include motor vehicles, aircraft, seagoing vessels, and other transportation modes. The mobile source related pollutants are carbon monoxide, hydrocarbons or volatile organic compounds, nitrogen oxides, and particulate matter.

Mode A form of transportation such as an automobile, bus, or bicycle.

Motor Vehicle Emissions Budget (MVEB) That portion of the total allowable emissions defined in the submitted or approved control strategy implementation plan revision or maintenance plan for a certain date for the purpose of meeting reasonable further progress milestones or demonstrating attainment or maintenance of the NAAQS, for any criteria pollutant or its precursors, allocated to highway and transit vehicle use and emissions.

National Ambient Air Quality Standards (NAAQS) Those standards established pursuant to Section 109 of the CAA. Conformity applies in areas that are nonattainment or maintenance for one or more of the NAAQS of the transportation-related pollutants: ozone, carbon monoxide, nitrogen dioxide, and particulate matter.

National Environmental Policy Act (NEPA) The National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.). It is the major legislation that requires Federal actions to address potential environmental impacts.

Nitrogen Oxides (NO_x) A group of highly reactive gases that contain nitrogen and oxygen in varying amounts. Many of the nitrogen oxides are colorless and odorless. NO_x is formed when the oxygen and nitrogen in the air react with each other during combustion. The primary sources of nitrogen oxides are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuels.

Nonattainment Area Geographic region of the United States that the EPA has designated as not meeting the NAAQS.

Oxygenated Gasoline Gasoline enriched with oxygen-bearing liquids to reduce CO production by permitting more complete combustion.

Ozone (O_3) A pollutant that is not directly emitted from transportation sources. It is a secondary pollutant formed when HC and NO_x combine in the presence of sunlight. Ozone is associated with smog or haze conditions. Although the ozone in the upper atmosphere protects us from harmful ultraviolet rays, ground-level ozone produces an unhealthy environment in which to live. Ozone is created by human and natural sources.

Particulate Matter (PM, $PM_{2.5}$, PM_{10}) Any material that exists as solid or liquid in the atmosphere. Particulate matter may be in the form of fly ash, soot, dust, fog, fumes, etc. Particulate matter can be of such a small size that it cannot be filtered by the nose and lungs. PM_{10} is particulate matter that is less than 10 microns in size. $PM_{2.5}$ is particulate matter that is less than 2.5 microns in size. A micron is one millionth of a meter.

Parts Per Million (PPM) A measure of air pollutant concentrations.

Public Participation The active and meaningful involvement of the public in the development of metropolitan transportation plans and programs.

Public Transportation Generally refers to passenger service provided to the general public along established routes with fixed or variable schedules at published fares. Related terms include: public transit, mass transit, urban transit, and paratransit.

Reformulated Gasoline (RFG) Gasoline specifically developed to reduce undesirable combustion products.

State Implementation Plan (SIP) The State air quality plan for meeting the National Ambient Air Quality Standards ("NAAQS" or "air quality standards"). It is a compilation of legally enforceable rules and regulations prepared by a State or local air quality agency and submitted by the State's governor to EPA for approval. A SIP is designed to achieve better air quality by attaining, making progress toward attaining, or maintaining the NAAQS.

Stationary Source Relatively large, fixed sources of emissions (e.g., chemical process industries, petroleum refining and petrochemical operations, or wood processing).

Telecommuting The substitution, either partially or completely, of transportation to a conventional office through the use of computer and telecommunications technologies (e.g., telephones, personal computers, modems, facsimile machines, electronic mail).

Transportation Conformity Process to assess the compliance of any metropolitan transportation plan, program, or project with air quality implementation plans. The conformity process is defined by the Clean Air Act and regulated by the conformity rule.

Transportation Control Measures (TCMs) Any measure that is specifically identified and committed to in the applicable implementation plan, including a substitute or additional TCM that is incorporated into the applicable SIP through the process established in the CAA Section 176(c)(8), that is either one of the types listed in Section 108 of the CAA, or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Notwithstanding the first sentence of this definition, vehicle technology-based, fuel-based, and maintenance-based measures that control the emissions from vehicles under fixed traffic conditions are not TCMs for the purposes of transportation conformity.

Transportation Improvement Program (TIP) A prioritized listing/program of transportation projects covering a period of four years that is developed and formally adopted by an MPO as part of the metropolitan transportation planning process, consistent with the metropolitan transportation plan, and required for projects to be eligible for funding under Title 23 USC and Title 49 USC Chapter 53.

Vehicle Miles Traveled (VMT) The sum of distances traveled by all motor vehicles in a specified region.

Volatile Organic Compounds (VOCs) VOCs come from vehicle exhaust, paint thinners, solvents, and other petroleum-based products. A number of exhaust VOCs are toxic, with the potential to cause cancer.

Source: FHWA 2017

375 Beale Street, Suite 800
San Francisco, CA 94105

Metropolitan Transportation Commission

Legislation Details (With Text)

File #:	22-1287	**Version:**	1	**Name:**	
Type:	Resolution			**Status:**	Commission Approval
File created:	8/9/2022			**In control:**	Programming and Allocations Committee
On agenda:	9/14/2022			**Final action:**	
Title:	MTC Resolution No. 4504, Revised. FY 2022-23 MTC Fund Estimate Updates the FY 2022-23 MTC Fund Estimate to incorporate actual FY 2021-22 revenue for the State Transit Assistance (STA) and State of Good Repair (SGR) programs and revises FY 2022-23 revenue estimates.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	4a_22-1287_Reso-4504_FY2023_MTC_Fund_Estimate.pdf				

Date	Ver.	Action By	Action	Result

Subject:
MTC Resolution No. 4504, Revised. FY 2022-23 MTC Fund Estimate

Updates the FY 2022-23 MTC Fund Estimate to incorporate actual FY 2021-22 revenue for the State Transit Assistance (STA) and State of Good Repair (SGR) programs and revises FY 2022-23 revenue estimates.

Presenter:
William Bacon

Recommended Action:
Commission Approval

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Metropolitan Transportation Commission
Programming and Allocations Committee

September 14, 2022 **Agenda Item 4a - 22-1287**

MTC Resolution No. 4504, Revised. FY 2022-23 MTC Fund Estimate

Subject:

Updates the FY 2022-23 MTC Fund Estimate to incorporate actual FY 2021-22 revenue for the State Transit Assistance (STA) and State of Good Repair (SGR) programs and revises FY 2022-23 revenue estimates.

Background:

Reconcile Actual FY 2021-22 STA and SGR Program Revenue

In the Bay Area, final FY 2021-22 STA revenue totaled approximately $260 million, which is $15.7 million higher than previously forecast by the State Controller's Office (SCO) in August 2021. This increase is due to higher-than-expected state diesel sales tax revenues resulting primarily from elevated diesel fuel prices in California. The SGR Program revenue, which is driven by state vehicle registration fees (known formally as the Transportation Improvement Fee), totaled approximately $42.6 million, or $0.3 million below original estimates.

Update FY 2022-23 STA and SGR Program Revenue

On August 1, 2022 the SCO issued revised revenue forecasts for FY 2022-23 for the STA and SGR programs. The forecast includes a statewide $224 million increase over the original estimate from January 2022. This 30% increase is due to expectations of continued high diesel fuel prices and translates to $81.5 million more in STA funds than originally expected for the MTC region. The latest forecast for the SGR Program remained consistent with the SCO's January 2022 estimate.

Issues:

BART-East Bay Bus Operator Agreement

Discussions are ongoing between MTC, BART and four East Bay bus operators (County Connection, Tri-Delta Transit, LAVTA and WestCAT) about approaches to amend the 1997 BART-Feeder Bus Agreement that established a funding mechanism for BART to support feeder bus operators using BART's Transportation Development Act (TDA) and STA Revenue-Based funds. An agreement on a path forward between the parties has not been reached as of this writing. Until satisfactory progress towards an agreement is made, MTC will allocate no more than 50% of the feeder bus payments programmed for FY 2022-23. It is MTC staff's intent to fully allocate funds to the bus operators as soon as possible. Staff will continue to work with the bus operators and BART to make progress on this issue, which is especially important to resolve given ongoing and upcoming pandemic related financial challenges faced by transit operators.

STA Revenue-Based Funds Calculation

STA Revenue-Based funds have been calculated since FY 2020-21 using factors based on pre-pandemic revenues due to a freeze in the formula enacted by state legislation. This freeze is set to expire with the FY 2023-24 STA program year, at which point the STA Revenue-Based calculations will be made using FY 2021-22 data. As a result, MTC staff expects adverse impacts to STA Revenue-Based funding to Bay Area operators as a whole relative to other regions that have recovered from the pandemic to a greater degree, and especially to those Bay Area operators with previously high fare, parking, and toll revenues that have not rebounded as quickly as sales taxes from the impacts of the pandemic. As data becomes available, MTC staff will return to the committee with a more detailed update on the impacts.

Recommendations:

Refer MTC Resolution Nos. 4504, Revised to the Commission for approval.

Attachments: Attachment A: MTC Resolution No. 4504, Revised

Therese W. McMillan

Date: February 23, 2022
W.I.: 1511
Referred by: PAC
Revised: 7/27/2022-C
9/28/2022-C

ABSTRACT

MTC Resolution No. 4504, Revised

This resolution approves the FY 2022-23 Fund Estimate, including the distribution and apportionment of Transportation Development Act (TDA), State Transit Assistance (STA), State of Good Repair (SGR) Program, Assembly Bill (AB) 1107 sales tax, Low Carbon Transit Operations (LCTOP) cap-and-trade auction revenues, and transit-related bridge toll funds.

This resolution was revised on July 27, 2022 to reflect actual receipts for TDA and AB 1107 funds in FY 2021-22, and on September 28, 2022 to update the STA and SGR programs with actual revenues in FY 2021-22 and updated estimates for FY 2022-23.

Further discussion of this action is contained in the MTC Programming and Allocations Summary Sheets dated February 9, 2022, July 13, 2022, and September 14, 2022.

Date: February 23, 2022
W.I.: 1511
Referred by: PAC

RE: Determination of Transportation Development Act (TDA) Area Apportionments and Proposed Distribution of Operating Funds for FY 2022-23

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4504, Revised

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to Government Code Section 66500 *et seq*.; and

WHEREAS, the Transportation Development Act (TDA), Public Utilities Code (PUC) Sections 99200 et seq., provides that funds are made available from the Local Transportation Fund (LTF) for various transportation purposes; and

WHEREAS, pursuant to 21 California Code of Regulations Section 6620, the County Auditor for each of the nine counties in the Bay Area has submitted the revised and new TDA fund estimates for FY 2021-22 and FY 2022-23 as shown in Attachment A to this resolution, attached hereto and incorporated herein as though set forth at length; and

WHEREAS, MTC is required to determine and advise all prospective claimants, prior to March 1 each year, of all area apportionments from the LTF for the following fiscal year pursuant to 21 California Code of Regulations Section 6644; and

WHEREAS, all area apportionments of TDA funds for the 2022-23 fiscal year are shown in Attachment A to this resolution, attached hereto and incorporated herein as though set forth at length; and

WHEREAS, MTC has prepared a proposed distribution of operating/capital assistance funds, including TDA, State Transit Assistance (STA) pursuant to Public Utilities Code § 99310 et seq.), State of Good Repair (SGR) Program pursuant to Public Utilities Code § 99312.1, Low Carbon Transit Operations Program (LCTOP) pursuant to Health and Safety Code § 39719(b)(1)(B), the twenty-five percent (25%) of the one-half cent transaction and use tax collected pursuant to PUC Section 29142.2 (AB 1107), and estimates of certain toll bridge revenues (SHC §§ 30910 et seq.), in order to provide financial information to all prospective claimants to assist them in developing budgets in a timely manner; and

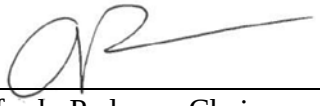
WHEREAS, the proposed distribution of such operating assistance funds is also shown in Attachment A; now, therefore, be it

RESOLVED, that MTC approves the area apportionments of TDA funds, and the proposed distribution of operating assistance funds for the 2022-23 fiscal year as shown in Attachment A, subject to the conditions noted therein; and, be it further

RESOLVED, that MTC intends to allocate operating assistance funds for the 2022-23 fiscal year, based on the area apportionments of TDA funds, the proposed distribution of operating assistance funds and upon the receipt of appropriate claims from eligible claimants; and, be it further

RESOLVED, that Attachment A may be revised by the MTC Executive Director or his designee to reflect funds returned to the Local Transportation Fund and expired capital allocations or by approval of the MTC Programming and Allocations Committee, except that any significant changes shall be submitted to the full Commission for approval.

METROPOLITAN TRANSPORTATION COMMISSION



Alfredo Pedroza, Chair

The above resolution was approved by the
Metropolitan Transportation Commission
at a regular meeting of the Commission held
in San Francisco, California, and at other remote
locations, on February 23, 2022.

FY 2022-23 FUND ESTIMATE
REGIONAL SUMMARY

TDA REGIONAL SUMMARY TABLE

Column	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H=Sum(A:G)*
	6/30/2021	FY2020-22	FY2021-22	FY2021-22	FY2021-22	FY2022-23	FY2022-23	FY2022-23
Apportionment Jurisdictions	Balance[1]	Outstanding Commitments, Refunds, & Interest[2]	Original Estimate	Revenue Adjustment	Revised Admin. & Planning Charge	Revenue Estimate	Admin. & Planning Charge	Available for Allocation
Alameda	24,803,191	(84,085,307)	84,846,744	17,387,044	(3,719,352)	101,774,961	(4,070,999)	136,936,283
Contra Costa	34,461,353	(60,734,891)	45,908,428	9,978,785	(2,095,489)	58,468,618	(2,338,745)	83,648,058
Marin	2,923,423	(14,454,328)	12,017,498	5,709,753	(709,090)	16,523,000	(660,920)	21,349,335
Napa	7,734,546	(14,572,975)	8,979,207	2,296,690	(451,036)	10,405,658	(416,226)	13,975,866
San Francisco	1,487,917	(43,506,561)	44,562,500	1,330,567	(1,835,723)	45,952,500	(1,838,101)	46,153,099
San Mateo	4,496,469	(39,097,488)	42,857,457	9,441,725	(1,901,967)	52,172,265	(2,086,890)	65,881,570
Santa Clara	7,630,267	(130,992,256)	130,850,000	8,636,658	(4,939,466)	140,649,000	(5,625,960)	146,208,243
Solano	37,790,606	(26,098,382)	22,483,483	3,041,548	(1,021,001)	25,527,409	(1,021,096)	60,702,568
Sonoma	23,582,197	(29,276,488)	26,600,000	3,677,172	(1,111,087)	32,025,000	(1,281,000)	54,215,795
TOTAL	**$144,909,969**	**($442,818,676)**	**$419,105,317**	**$61,499,943**	**($17,784,211)**	**$483,498,410**	**($19,339,937)**	**$629,070,816**

STA, AB 1107, BRIDGE TOLL, LOW CARBON TRANSIT OPERATIONS PROGRAM, & SGR PROGRAM REGIONAL SUMMARY TABLE

Column	*A*	*B*	*C*	*D*	*E=Sum(A:D)*
	6/30/2021	FY2020-22	FY2021-22	FY2022-23	FY2022-23
Fund Source	Balance (w/ interest)[1]	Outstanding Commitments[2]	Revenue Estimate	Revenue Estimate	Available for Allocation
State Transit Assistance					
Revenue-Based	31,040,545	(190,152,605)	190,834,159	256,881,538	288,603,635
Population-Based	69,456,022	(67,731,628)	69,509,562	93,145,482	164,379,439
SUBTOTAL	**100,496,567**	**(257,884,233)**	**260,343,721**	**350,027,020**	**452,983,074**
AB1107 - BART District Tax (25% Share)	**0**	**(103,571,097)**	**103,571,097**	**100,000,000**	**100,000,000**
Bridge Toll Total					
MTC 2% Toll Revenue	8,458,867	(4,137,805)	1,700,000	1,450,000	7,471,062
5% State General Fund Revenue	18,039,971	(281,706)	3,408,427	3,729,880	24,896,572
SUBTOTAL	**26,498,838**	**(4,419,511)**	**5,108,427**	**5,179,880**	**32,367,634**
Low Carbon Transit Operations Program	**0**	**0**	**59,629,152**	**66,605,301**	**126,234,453**
State of Good Repair Program					
Revenue-Based	4	(31,477,988)	31,306,951	32,422,154	32,251,123
Population-Based	18,692,026	(30,100,865)	11,361,166	11,756,303	11,708,629
SUBTOTAL	**18,692,030**	**(61,578,853)**	**42,668,117**	**44,178,457**	**43,959,752**
TOTAL	**$145,687,435**	**($427,453,695)**	**$471,320,514**	**$565,990,658**	**$755,544,913**

Please see Attachment A pages 2-20 for detailed information on each fund source.

1. Balance as of 6/30/21 is from the MTC FY2020-22 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 1/31/22.

FY 2022-23 FUND ESTIMATE
TRANSPORTATION DEVELOPMENT ACT FUNDS
ALAMEDA COUNTY

FY2021-22 TDA Revenue Estimate			**FY2022-23 TDA Revenue Estimate**		
FY2021-22 Generation Estimate Adjustment			***FY2022-23 County Auditor's Generation Estimate***		
1. Original County Auditor Estimate (Feb, 21)	84,846,744		13. County Auditor Estimate		101,774,961
2. Actual Revenue (Jul, 22)	102,233,788		***FY2022-23 Planning and Administration Charges***		
3. Revenue Adjustment (Lines 2-1)		17,387,044	14. MTC Administration (0.5% of Line 13)	508,875	
FY2021-22 Planning and Administration Charges Adjustment			15. County Administration (0.5% of Line 13)	508,875	
4. MTC Administration (0.5% of Line 3)	86,935		16. MTC Planning (3.0% of Line 13)	3,053,249	
5. County Administration (Up to 0.5% of Line 3)[4]	(283,065)		17. Total Charges (Lines 14+15+16)		4,070,999
6. MTC Planning (3.0% of Line 3)	521,611		18. TDA Generations Less Charges (Lines 13-17)		97,703,962
7. Total Charges (Lines 4+5+6)		325,481	***FY2022-23 TDA Apportionment By Article***		
8. Adjusted Generations Less Charges (Lines 3-7)		17,061,563	19. Article 3.0 (2.0% of Line 18)	1,954,079	
FY2021-22 TDA Adjustment By Article			20. Funds Remaining (Lines 18-19)		95,749,883
9. Article 3 Adjustment (2.0% of line 8)	341,231		21. Article 4.5 (5.0% of Line 20)	4,787,494	
10. Funds Remaining (Lines 8-9)		16,720,332	22. TDA Article 4 (Lines 20-21)		90,962,389
11. Article 4.5 Adjustment (5.0% of Line 10)	836,017				
12. Article 4 Adjustment (Lines 10-11)		15,884,315			

TDA APPORTIONMENT BY JURISDICTION

Column	***A***	***B***	***C=Sum(A:B)***	***D***	***E***	***F***	***G***	***H=Sum(C:G)***	***I***	***J=Sum(H:I)***
	6/30/2021	**FY2020-21**	**6/30/2021**	**FY2020-22**	**FY2021-22**	**FY2021-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**FY2022-23**
Apportionment Jurisdictions	**Balance (w/o interest)**	**Interest**	**Balance (w/ interest)[1]**	**Outstanding Commitments[2]**	**Transfers/ Refunds**	**Original Estimate**	**Revenue Adjustment**	**Projected Carryover**	**Revenue Estimate**	**Available for Allocation**
Article 3	5,213,118	59,236	5,272,354	(5,317,132)	0	1,629,057	341,231	1,925,510	1,954,079	3,879,589
Article 4.5	805,262	4,519	809,781	(4,751,554)	0	3,991,191	836,017	885,435	4,787,494	5,672,929
SUBTOTAL	**6,018,380**	**63,755**	**6,082,135**	**(10,068,686)**	**0**	**5,620,248**	**1,177,248**	**2,810,945**	**6,741,573**	**9,552,518**
Article 4										
AC Transit										
District 1	581,923	27,769	609,692	(48,597,106)	0	48,597,106	10,179,415	10,789,107	58,247,727	69,036,834
District 2	154,384	7,370	161,754	(12,980,480)	0	12,980,480	2,718,962	2,880,716	15,683,052	18,563,768
BART[3]	16,560	65	16,625	(104,953)	0	89,475	18,742	19,890	97,096	116,986
LAVTA	7,763,948	104,123	7,868,071	(18,458,315)	10,711,602	10,823,468	2,267,143	13,211,969	12,938,264	26,150,233
Union City	10,267,996	117,077	10,385,073	(4,926,370)	18,842	3,342,096	700,054	9,519,694	3,996,250	13,515,944
SUBTOTAL	**18,784,811**	**256,404**	**19,041,215**	**(85,067,224)**	**10,730,444**	**75,832,626**	**15,884,315**	**36,421,376**	**90,962,389**	**127,383,765**
GRAND TOTAL	**$24,803,191**	**$320,160**	**$25,123,350**	**($95,135,910)**	**$10,730,444**	**$81,452,874**	**$17,061,563**	**$39,232,321**	**$97,703,962**	**$136,936,283**

1. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 6/30/22.

3. Details on the proposed apportionment of BART funding to local operators are shown on page 16 of the Fund Estimate.

4. Unclaimed County Administration charges will be redistributed as carryover for apportionment jurisdictions.

FY 2022-23 FUND ESTIMATE
TRANSPORTATION DEVELOPMENT ACT FUNDS
CONTRA COSTA COUNTY

FY2021-22 TDA Revenue Estimate		
FY2021-22 Generation Estimate Adjustment		
1. Original County Auditor Estimate (Feb, 21)	45,908,428	
2. Actual Revenue (Jul, 22)	55,887,213	
3. Revenue Adjustment (Lines 2-1)		9,978,785
FY2021-22 Planning and Administration Charges Adjustment		
4. MTC Administration (0.5% of Line 3)	49,894	
5. County Administration (Up to 0.5% of Line 3)[4]	(90,106)	
6. MTC Planning (3.0% of Line 3)	299,364	
7. Total Charges (Lines 4+5+6)		259,152
8. Adjusted Generations Less Charges (Lines 3-7)		9,719,633
FY2021-22 TDA Adjustment By Article		
9. Article 3 Adjustment (2.0% of line 8)	194,393	
10. Funds Remaining (Lines 8-9)		9,525,240
11. Article 4.5 Adjustment (5.0% of Line 10)	476,262	
12. Article 4 Adjustment (Lines 10-11)		9,048,978

FY2022-23 TDA Revenue Estimate		
FY2022-23 County Auditor's Generation Estimate		
13. County Auditor Estimate		58,468,618
FY2022-23 Planning and Administration Charges		
14. MTC Administration (0.5% of Line 13)	292,343	
15. County Administration (0.5% of Line 13)	292,343	
16. MTC Planning (3.0% of Line 13)	1,754,059	
17. Total Charges (Lines 14+15+16)		2,338,745
18. TDA Generations Less Charges (Lines 13-17)		56,129,873
FY2022-23 TDA Apportionment By Article		
19. Article 3.0 (2.0% of Line 18)	1,122,597	
20. Funds Remaining (Lines 18-19)		55,007,276
21. Article 4.5 (5.0% of Line 20)	2,750,364	
22. TDA Article 4 (Lines 20-21)		52,256,912

TDA APPORTIONMENT BY JURISDICTION

Column	***A***	***B***	***C=Sum(A:B)***	***D***	***E***	***F***	***G***	***H=Sum(C:G)***	***I***	***J=Sum(H:I)***
	6/30/2021	**FY2020-21**	**6/30/2021**	**FY2020-22**	**FY2021-22**	**FY2021-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**FY2022-23**
Apportionment Jurisdictions	**Balance (w/o interest)**	**Interest**	**Balance (w/ interest)[1]**	**Outstanding Commitments[2]**	**Transfers/ Refunds**	**Original Estimate**	**Revenue Adjustment**	**Projected Carryover**	**Revenue Estimate**	**Available for Allocation**
Article 3	1,768,996	13,503	1,782,498	(2,465,818)	0	881,442	194,393	392,515	1,122,597	1,515,112
Article 4.5	798,516	1,587	800,103	(2,912,016)	0	2,159,532	476,262	523,881	2,750,364	3,274,245
SUBTOTAL	**2,567,512**	**15,090**	**2,582,602**	**(5,377,834)**	**0**	**3,040,974**	**670,655**	**916,396**	**3,872,961**	**4,789,357**
Article 4										
AC Transit										
District 1	351,997	3,145	355,142	(7,072,554)	0	7,072,554	1,559,777	1,914,918	8,977,874	10,892,792
BART[3]	89,490	620	90,110	(362,361)	0	287,090	63,315	78,153	217,708	295,861
CCCTA	21,467,243	66,542	21,533,786	(27,303,464)	0	19,194,326	4,233,105	17,657,753	24,521,140	42,178,893
ECCTA	5,785,308	31,557	5,816,865	(17,772,965)	0	12,032,800	2,653,706	2,730,406	15,435,040	18,165,446
WCCTA	4,199,803	25,968	4,225,771	(3,953,995)	965,360	2,444,348	539,075	4,220,559	3,105,151	7,325,710
SUBTOTAL	**31,893,842**	**127,832**	**32,021,673**	**(56,465,338)**	**965,360**	**41,031,117**	**9,048,978**	**26,601,789**	**52,256,912**	**78,858,701**
GRAND TOTAL	**$34,461,353**	**$142,921**	**$34,604,275**	**($61,843,173)**	**$965,360**	**$44,072,091**	**$9,719,633**	**$27,518,185**	**$56,129,873**	**$83,648,058**

1. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 6/30/22.

3. Details on the proposed apportionment of BART funding to local operators are shown on page 16 of the Fund Estimate.

4. Unclaimed County Administration charges will be redistributed as carryover for apportionment jurisdictions.

FY 2022-23 FUND ESTIMATE
TRANSPORTATION DEVELOPMENT ACT FUNDS
MARIN COUNTY

FY2021-22 TDA Revenue Estimate		
FY2021-22 Generation Estimate Adjustment		
1. Original County Auditor Estimate (Feb, 21)	12,017,498	
2. Actual Revenue (Jul, 22)	17,727,251	
3. Revenue Adjustment (Lines 2-1)		5,709,753
FY2021-22 Planning and Administration Charges Adjustment		
4. MTC Administration (0.5% of Line 3)	28,549	
5. County Administration (Up to 0.5% of Line 3)[4]	28,549	
6. MTC Planning (3.0% of Line 3)	171,293	
7. Total Charges (Lines 4+5+6)		228,391
8. Adjusted Generations Less Charges (Lines 3-7)		5,481,362
FY2021-22 TDA Adjustment By Article		
9. Article 3 Adjustment (2.0% of line 8)	109,627	
10. Funds Remaining (Lines 8-9)		5,371,735
11. Article 4.5 Adjustment (5.0% of Line 10)	0	
12. Article 4 Adjustment (Lines 10-11)		5,371,735

FY2022-23 TDA Revenue Estimate		
FY2022-23 County Auditor's Generation Estimate		
13. County Auditor Estimate		16,523,000
FY2022-23 Planning and Administration Charges		
14. MTC Administration (0.5% of Line 13)	82,615	
15. County Administration (0.5% of Line 13)	82,615	
16. MTC Planning (3.0% of Line 13)	495,690	
17. Total Charges (Lines 14+15+16)		660,920
18. TDA Generations Less Charges (Lines 13-17)		15,862,080
FY2022-23 TDA Apportionment By Article		
19. Article 3.0 (2.0% of Line 18)	317,242	
20. Funds Remaining (Lines 18-19)		15,544,838
21. Article 4.5 (5.0% of Line 20)	0	
22. TDA Article 4 (Lines 20-21)		15,544,838

TDA APPORTIONMENT BY JURISDICTION

Column	***A***	***B***	***C=Sum(A:B)***	***D***	***E***	***F***	***G***	***H=Sum(C:G)***	***I***	***J=Sum(H:I)***
	6/30/2021	**FY2020-21**	**6/30/2021**	**FY2020-22**	**FY2021-22**	**FY2021-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**FY2022-23**
Apportionment Jurisdictions	**Balance (w/o interest)**	**Interest**	**Balance (w/ interest)[1]**	**Outstanding Commitments[2]**	**Transfers/ Refunds**	**Original Estimate**	**Revenue Adjustment**	**Projected Carryover**	**Revenue Estimate**	**Available for Allocation**
Article 3	247,994	(8,755)	239,239	(478,731)	0	230,736	109,627	100,871	317,242	418,113
Article 4.5										
SUBTOTAL	**247,994**	**(8,755)**	**239,239**	**(478,731)**	**0**	**230,736**	**109,627**	**100,871**	**317,242**	**418,113**
Article 4/8										
GGBHTD	985,374	7,799	993,173	(7,416,263)	0	6,430,889	3,055,443	3,063,242	5,804,443	8,867,685
Marin Transit	1,690,054	6,849	1,696,904	(6,565,228)	0	4,875,174	2,316,292	2,323,142	9,740,395	12,063,537
SUBTOTAL	**2,675,428**	**14,649**	**2,690,077**	**(13,981,491)**	**0**	**11,306,063**	**5,371,735**	**5,386,384**	**15,544,838**	**20,931,222**
GRAND TOTAL	**$2,923,423**	**$5,894**	**$2,929,316**	**($14,460,222)**	**$0**	**$11,536,799**	**$5,481,362**	**$5,487,255**	**$15,862,080**	**$21,349,335**

1. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 6/30/22.

FY 2022-23 FUND ESTIMATE
TRANSPORTATION DEVELOPMENT ACT FUNDS
NAPA COUNTY

FY2021-22 TDA Revenue Estimate			**FY2022-23 TDA Revenue Estimate**		
FY2021-22 Generation Estimate Adjustment			***FY2022-23 County Auditor's Generation Estimate***		
1. Original County Auditor Estimate (Feb, 21)	8,979,207		13. County Auditor Estimate		10,405,658
2. Actual Revenue (Jul, 22)	11,275,897		***FY2022-23 Planning and Administration Charges***		
3. Revenue Adjustment (Lines 2-1)		2,296,690	14. MTC Administration (0.5% of Line 13)	52,028	
FY2021-22 Planning and Administration Charges Adjustment			15. County Administration (0.5% of Line 13)	52,028	
4. MTC Administration (0.5% of Line 3)	11,483		16. MTC Planning (3.0% of Line 13)	312,170	
5. County Administration (Up to 0.5% of Line 3)[4]	11,483		17. Total Charges (Lines 14+15+16)		416,226
6. MTC Planning (3.0% of Line 3)	68,901		18. TDA Generations Less Charges (Lines 13-17)		9,989,432
7. Total Charges (Lines 4+5+6)		91,867	***FY2022-23 TDA Apportionment By Article***		
8. Adjusted Generations Less Charges (Lines 3-7)		2,204,823	19. Article 3.0 (2.0% of Line 18)	199,789	
FY2021-22 TDA Adjustment By Article			20. Funds Remaining (Lines 18-19)		9,789,643
9. Article 3 Adjustment (2.0% of line 8)	44,096		21. Article 4.5 (5.0% of Line 20)	489,482	
10. Funds Remaining (Lines 8-9)		2,160,727	22. TDA Article 4 (Lines 20-21)		9,300,161
11. Article 4.5 Adjustment (5.0% of Line 10)	108,036				
12. Article 4 Adjustment (Lines 10-11)		2,052,691			

TDA APPORTIONMENT BY JURISDICTION

Column	***A***	***B***	***C=Sum(A:B)***	***D***	***E***	***F***	***G***	***H=Sum(C:G)***	***I***	***J=Sum(H:I)***
	6/30/2021	**FY2020-21**	**6/30/2021**	**FY2020-22**	**FY2021-22**	**FY2021-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**FY2022-23**
Apportionment Jurisdictions	**Balance (w/o interest)**	**Interest**	**Balance (w/ interest)[1]**	**Outstanding Commitments[2]**	**Transfers/ Refunds**	**Original Estimate**	**Revenue Adjustment**	**Projected Carryover**	**Revenue Estimate**	**Available for Allocation**
Article 3	225,982	3,028	229,011	(398,382)	0	172,401	44,096	47,126	199,789	246,915
Article 4.5	62,969	439	63,409	(300,000)	0	422,382	108,036	293,827	489,482	783,309
SUBTOTAL	**288,952**	**3,468**	**292,419**	**(698,382)**	**0**	**594,783**	**152,132**	**340,953**	**689,271**	**1,030,224**
Article 4/8										
NVTA[3]	7,445,594	53,860	7,499,455	(13,931,921)	0	8,025,256	2,052,691	3,645,481	9,300,161	12,945,642
SUBTOTAL	**7,445,594**	**53,860**	**7,499,455**	**(13,931,921)**	**0**	**8,025,256**	**2,052,691**	**3,645,481**	**9,300,161**	**12,945,642**
GRAND TOTAL	**$7,734,546**	**$57,328**	**$7,791,874**	**($14,630,303)**	**$0**	**$8,620,039**	**$2,204,823**	**$3,986,434**	**$9,989,432**	**$13,975,866**

1. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 6/30/22.

3. NVTA is authorized to claim 100% of the apporionment to Napa County.

FY 2022-23 FUND ESTIMATE
TRANSPORTATION DEVELOPMENT ACT FUNDS
SAN FRANCISCO COUNTY

FY2021-22 TDA Revenue Estimate		
FY2021-22 Generation Estimate Adjustment		
1. Original County Auditor Estimate (Feb, 21)	44,562,500	
2. Actual Revenue (Jul, 22)	45,893,067	
3. Revenue Adjustment (Lines 2-1)		1,330,567
FY2021-22 Planning and Administration Charges Adjustment		
4. MTC Administration (0.5% of Line 3)	6,653	
5. County Administration (Up to 0.5% of Line 3)[4]	6,653	
6. MTC Planning (3.0% of Line 3)	39,917	
7. Total Charges (Lines 4+5+6)		53,223
8. Adjusted Generations Less Charges (Lines 3-7)		1,277,344
FY2021-22 TDA Adjustment By Article		
9. Article 3 Adjustment (2.0% of line 8)	25,547	
10. Funds Remaining (Lines 8-9)		1,251,797
11. Article 4.5 Adjustment (5.0% of Line 10)	62,590	
12. Article 4 Adjustment (Lines 10-11)		1,189,207

FY2022-23 TDA Revenue Estimate		
FY2022-23 County Auditor's Generation Estimate		
13. County Auditor Estimate		45,952,500
FY2022-23 Planning and Administration Charges		
14. MTC Administration (0.5% of Line 13)	229,763	
15. County Administration (0.5% of Line 13)	229,763	
16. MTC Planning (3.0% of Line 13)	1,378,575	
17. Total Charges (Lines 14+15+16)		1,838,101
18. TDA Generations Less Charges (Lines 13-17)		44,114,399
FY2022-23 TDA Apportionment By Article		
19. Article 3.0 (2.0% of Line 18)	882,288	
20. Funds Remaining (Lines 18-19)		43,232,111
21. Article 4.5 (5.0% of Line 20)	2,161,606	
22. TDA Article 4 (Lines 20-21)		41,070,505

TDA APPORTIONMENT BY JURISDICTION

Column	*A*	*B*	*C=Sum(A:B)*	*D*	*E*	*F*	*G*	*H=Sum(C:G)*	*I*	*J=Sum(H:I)*
	6/30/2021	FY2020-21	6/30/2021	FY2020-22	FY2021-22	FY2021-22	FY2021-22	6/30/2022	FY2022-23	FY2022-23
Apportionment Jurisdictions	Balance (w/o interest)	Interest	Balance (w/ interest)[1]	Outstanding Commitments[2]	Transfers/ Refunds	Original Estimate	Revenue Adjustment	Projected Carryover	Revenue Estimate	Available for Allocation
Article 3	1,494,496	27,326	1,521,822	(1,621,504)	0	855,600	25,547	781,465	882,288	1,663,753
Article 4.5	0	0	0	(2,096,220)	0	2,096,220	62,590	62,590	2,161,606	2,224,196
SUBTOTAL	**1,494,496**	**27,326**	**1,521,822**	**(3,717,724)**	**0**	**2,951,820**	**88,137**	**844,055**	**3,043,894**	**3,887,949**
Article 4										
SFMTA	(6,579)	12,016	5,437	(39,828,179)	0	39,828,179	1,189,207	1,194,645	41,070,505	42,265,150
SUBTOTAL	**(6,579)**	**12,016**	**5,437**	**(39,828,179)**	**0**	**39,828,179**	**1,189,207**	**1,194,645**	**41,070,505**	**42,265,150**
GRAND TOTAL	**$1,487,917**	**$39,342**	**$1,527,259**	**($43,545,903)**	**$0**	**$42,779,999**	**$1,277,344**	**$2,038,700**	**$44,114,399**	**$46,153,099**

1. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 6/30/22.

FY 2022-23 FUND ESTIMATE
TRANSPORTATION DEVELOPMENT ACT FUNDS
SAN MATEO COUNTY

FY2021-22 TDA Revenue Estimate		
FY2021-22 Generation Estimate Adjustment		
1. Original County Auditor Estimate (Feb, 21)	42,857,457	
2. Actual Revenue (Jul, 22)	52,299,182	
3. Revenue Adjustment (Lines 2-1)		9,441,725
FY2021-22 Planning and Administration Charges Adjustment		
4. MTC Administration (0.5% of Line 3)	47,209	
5. County Administration (Up to 0.5% of Line 3)[4]	(142,791)	
6. MTC Planning (3.0% of Line 3)	283,252	
7. Total Charges (Lines 4+5+6)		187,670
8. Adjusted Generations Less Charges (Lines 3-7)		9,254,055
FY2021-22 TDA Adjustment By Article		
9. Article 3 Adjustment (2.0% of line 8)	185,081	
10. Funds Remaining (Lines 8-9)		9,068,974
11. Article 4.5 Adjustment (5.0% of Line 10)	453,449	
12. Article 4 Adjustment (Lines 10-11)		8,615,525

FY2022-23 TDA Revenue Estimate		
FY2022-23 County Auditor's Generation Estimate		
13. County Auditor Estimate		52,172,265
FY2022-23 Planning and Administration Charges		
14. MTC Administration (0.5% of Line 13)	260,861	
15. County Administration (0.5% of Line 13)	260,861	
16. MTC Planning (3.0% of Line 13)	1,565,168	
17. Total Charges (Lines 14+15+16)		2,086,890
18. TDA Generations Less Charges (Lines 13-17)		50,085,375
FY2022-23 TDA Apportionment By Article		
19. Article 3.0 (2.0% of Line 18)	1,001,707	
20. Funds Remaining (Lines 18-19)		49,083,668
21. Article 4.5 (5.0% of Line 20)	2,454,183	
22. TDA Article 4 (Lines 20-21)		46,629,485

TDA APPORTIONMENT BY JURISDICTION

Column	***A***	***B***	***C=Sum(A:B)***	***D***	***E***	***F***	***G***	***H=Sum(C:G)***	***I***	***J=Sum(H:I)***
	6/30/2021	**FY2020-21**	**6/30/2021**	**FY2020-22**	**FY2021-22**	**FY2021-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**FY2022-23**
Apportionment Jurisdictions	**Balance (w/o interest)**	**Interest**	**Balance (w/ interest)[1]**	**Outstanding Commitments[2]**	**Transfers/ Refunds**	**Original Estimate**	**Revenue Adjustment**	**Projected Carryover**	**Revenue Estimate**	**Available for Allocation**
Article 3	3,821,580	5,921	3,827,501	(2,335,200)	0	822,863	185,081	2,500,245	1,001,707	3,501,952
Article 4.5	33,745	7,443	41,187	(1,845,853)	0	2,016,015	453,449	664,798	2,454,183	3,118,981
SUBTOTAL	**3,855,325**	**13,363**	**3,868,688**	**(4,181,053)**	**0**	**2,838,878**	**638,530**	**3,165,043**	**3,455,890**	**6,620,933**
Article 4										
SamTrans	641,144	141,406	782,550	(35,071,204)	0	38,304,281	8,615,525	12,631,152	46,629,485	59,260,637
SUBTOTAL	**641,144**	**141,406**	**782,550**	**(35,071,204)**	**0**	**38,304,281**	**8,615,525**	**12,631,152**	**46,629,485**	**59,260,637**
GRAND TOTAL	**$4,496,469**	**$154,769**	**$4,651,239**	**($39,252,257)**	**$0**	**$41,143,159**	**$9,254,055**	**$15,796,195**	**$50,085,375**	**$65,881,570**

1. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 6/30/22.

3. Unclaimed County Administration charges will be redistributed as carryover for apportionment jurisdictions.

FY 2022-23 FUND ESTIMATE
TRANSPORTATION DEVELOPMENT ACT FUNDS
SANTA CLARA COUNTY

FY2021-22 TDA Revenue Estimate			**FY2022-23 TDA Revenue Estimate**		
FY2021-22 Generation Estimate Adjustment			***FY2022-23 County Auditor's Generation Estimate***		
1. Original County Auditor Estimate (Feb, 21)	130,850,000		13. County Auditor Estimate		140,649,000
2. Actual Revenue (Jul, 22)	139,486,658		***FY2022-23 Planning and Administration Charges***		
3. Revenue Adjustment (Lines 2-1)		8,636,658	14. MTC Administration (0.5% of Line 13)	703,245	
FY2021-22 Planning and Administration Charges Adjustment			15. County Administration (0.5% of Line 13)	703,245	
4. MTC Administration (0.5% of Line 3)	43,183		16. MTC Planning (3.0% of Line 13)	4,219,470	
5. County Administration (Up to 0.5% of Line 3)[4]	(596,817)		17. Total Charges (Lines 14+15+16)		5,625,960
6. MTC Planning (3.0% of Line 3)	259,100		18. TDA Generations Less Charges (Lines 13-17)		135,023,040
7. Total Charges (Lines 4+5+6)		(294,534)	***FY2022-23 TDA Apportionment By Article***		
8. Adjusted Generations Less Charges (Lines 3-7)		8,931,192	19. Article 3.0 (2.0% of Line 18)	2,700,461	
FY2021-22 TDA Adjustment By Article			20. Funds Remaining (Lines 18-19)		132,322,579
9. Article 3 Adjustment (2.0% of line 8)	178,624		21. Article 4.5 (5.0% of Line 20)	6,616,129	
10. Funds Remaining (Lines 8-9)		8,752,568	22. TDA Article 4 (Lines 20-21)		125,706,450
11. Article 4.5 Adjustment (5.0% of Line 10)	437,628				
12. Article 4 Adjustment (Lines 10-11)		8,314,940			

TDA APPORTIONMENT BY JURISDICTION

Column	***A***	***B***	***C=Sum(A:B)***	***D***	***E***	***F***	***G***	***H=Sum(C:G)***	***I***	***J=Sum(H:I)***
	6/30/2021	**FY2020-21**	**6/30/2021**	**FY2020-22**	**FY2021-22**	**FY2021-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**FY2022-23**
Apportionment Jurisdictions	**Balance (w/o interest)**	**Interest**	**Balance (w/ interest)[1]**	**Outstanding Commitments[2]**	**Transfers/ Refunds**	**Original Estimate**	**Revenue Adjustment**	**Projected Carryover**	**Revenue Estimate**	**Available for Allocation**
Article 3	6,698,078	127,681	6,825,759	(7,627,785)		2,512,320	178,624	1,888,918	2,700,461	4,589,379
Article 4.5	46,612	2,098	48,710	(6,176,706)	0	6,155,184	437,628	464,816	6,616,129	7,080,945
SUBTOTAL	**6,744,690**	**129,779**	**6,874,469**	**(13,804,491)**	**0**	**8,667,504**	**616,252**	**2,353,734**	**9,316,590**	**11,670,324**
Article 4										
VTA	885,577	39,860	925,437	(117,357,404)	0	116,948,496	8,314,940	8,831,469	125,706,450	134,537,919
SUBTOTAL	**885,577**	**39,860**	**925,437**	**(117,357,404)**	**0**	**116,948,496**	**8,314,940**	**8,831,469**	**125,706,450**	**134,537,919**
GRAND TOTAL	**$7,630,267**	**$169,639**	**$7,799,906**	**($131,161,895)**	**$0**	**$125,616,000**	**$8,931,192**	**$11,185,203**	**$135,023,040**	**$146,208,243**

1. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 6/30/22.

3. Unclaimed County Administration charges will be redistributed as carryover for apportionment jurisdictions.

FY 2022-23 FUND ESTIMATE
TRANSPORTATION DEVELOPMENT ACT FUNDS
SOLANO COUNTY

FY2021-22 TDA Revenue Estimate		
FY2021-22 Generation Estimate Adjustment		
1. Original County Auditor Estimate (Feb, 21)	22,483,483	
2. Actual Revenue (Jul, 22)	25,525,031	
3. Revenue Adjustment (Lines 2-1)		3,041,548
FY2021-22 Planning and Administration Charges Adjustment		
4. MTC Administration (0.5% of Line 3)	15,208	
5. County Administration (Up to 0.5% of Line 3)[4]	15,208	
6. MTC Planning (3.0% of Line 3)	91,246	
7. Total Charges (Lines 4+5+6)		121,662
8. Adjusted Generations Less Charges (Lines 3-7)		2,919,886
FY2021-22 TDA Adjustment By Article		
9. Article 3 Adjustment (2.0% of line 8)	58,398	
10. Funds Remaining (Lines 8-9)		2,861,488
11. Article 4.5 Adjustment (5.0% of Line 10)	0	
12. Article 4 Adjustment (Lines 10-11)		2,861,488

FY2022-23 TDA Revenue Estimate		
FY2022-23 County Auditor's Generation Estimate		
13. County Auditor Estimate		25,527,409
FY2022-23 Planning and Administration Charges		
14. MTC Administration (0.5% of Line 13)	127,637	
15. County Administration (0.5% of Line 13)	127,637	
16. MTC Planning (3.0% of Line 13)	765,822	
17. Total Charges (Lines 14+15+16)		1,021,096
18. TDA Generations Less Charges (Lines 13-17)		24,506,313
FY2022-23 TDA Apportionment By Article		
19. Article 3.0 (2.0% of Line 18)	490,126	
20. Funds Remaining (Lines 18-19)		24,016,187
21. Article 4.5 (5.0% of Line 20)	0	
22. TDA Article 4 (Lines 20-21)		24,016,187

TDA APPORTIONMENT BY JURISDICTION

Column	***A***	***B***	***C=Sum(A:B)***	***D***	***E***	***F***	***G***	***H=Sum(C:G)***	***I***	***J=Sum(H:I)***
	6/30/2021	**FY2020-21**	**6/30/2021**	**FY2020-22**	**FY2021-22**	**FY2021-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**FY2022-23**
Apportionment Jurisdictions	**Balance (w/o interest)**	**Interest**	**Balance (w/ interest)[1]**	**Outstanding Commitments[2]**	**Transfers/ Refunds**	**Original Estimate**	**Revenue Adjustment**	**Projected Carryover**	**Revenue Estimate**	**Available for Allocation**
Article 3	1,070,802	12,455	1,083,257	(1,458,247)	0	431,683	58,398	115,091	490,126	605,217
Article 4.5										
SUBTOTAL	**1,070,802**	**12,455**	**1,083,257**	**(1,458,247)**	**0**	**431,683**	**58,398**	**115,091**	**490,126**	**605,217**
Article 4/8										
Dixon	1,445,864	11,474	1,457,337	(1,489,560)	0	959,641	129,819	1,057,237	1,106,100	2,163,337
Fairfield	6,662,070	53,486	6,715,556	(7,156,520)	0	5,620,857	760,385	5,940,278	6,462,613	12,402,891
Rio Vista	754,075	6,511	760,586	(221,334)	0	479,869	64,916	1,084,037	552,037	1,636,074
Solano County	2,774,178	21,152	2,795,330	(946,523)	0	916,397	123,969	2,889,173	1,005,770	3,894,943
Suisun City	302,609	1,889	304,498	(925,550)	0	1,399,148	189,276	967,371	1,581,740	2,549,111
Vacaville	13,266,661	100,735	13,367,395	(6,473,927)	0	4,749,915	642,565	12,285,948	5,369,273	17,655,221
Vallejo/Benicia	11,514,349	89,180	11,603,528	(7,723,602)	0	7,026,636	950,558	11,857,120	7,938,655	19,795,775
SUBTOTAL	**36,719,804**	**284,426**	**37,004,230**	**(24,937,016)**	**0**	**21,152,462**	**2,861,488**	**36,081,164**	**24,016,187**	**60,097,351**
GRAND TOTAL	**$37,790,606**	**$296,881**	**$38,087,487**	**($26,395,263)**	**$0**	**$21,584,145**	**$2,919,886**	**$36,196,255**	**$24,506,313**	**$60,702,568**

1. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 6/30/22.

3. Where applicable by local agreement, contributions from each jurisdiction will be made to support the Intercity Transit Funding Agreement.

FY 2022-23 FUND ESTIMATE
TRANSPORTATION DEVELOPMENT ACT FUNDS
SONOMA COUNTY

FY2021-22 TDA Revenue Estimate		
FY2021-22 Generation Estimate Adjustment		
1. Original County Auditor Estimate (Feb, 21)	26,600,000	
2. Actual Revenue (Jul, 22)	30,277,172	
3. Revenue Adjustment (Lines 2-1)		3,677,172
FY2021-22 Planning and Administration Charges Adjustment		
4. MTC Administration (0.5% of Line 3)	18,386	
5. County Administration (Up to 0.5% of Line 3)[4]	(81,614)	
6. MTC Planning (3.0% of Line 3)	110,315	
7. Total Charges (Lines 4+5+6)		47,087
8. Adjusted Generations Less Charges (Lines 3-7)		3,630,085
FY2021-22 TDA Adjustment By Article		
9. Article 3 Adjustment (2.0% of line 8)	72,602	
10. Funds Remaining (Lines 8-9)		3,557,483
11. Article 4.5 Adjustment (5.0% of Line 10)	0	
12. Article 4 Adjustment (Lines 10-11)		3,557,483

FY2022-23 TDA Revenue Estimate		
FY2022-23 County Auditor's Generation Estimate		
13. County Auditor Estimate		32,025,000
FY2022-23 Planning and Administration Charges		
14. MTC Administration (0.5% of Line 13)	160,125	
15. County Administration (0.5% of Line 13)	160,125	
16. MTC Planning (3.0% of Line 13)	960,750	
17. Total Charges (Lines 14+15+16)		1,281,000
18. TDA Generations Less Charges (Lines 13-17)		30,744,000
FY2022-23 TDA Apportionment By Article		
19. Article 3.0 (2.0% of Line 18)	614,880	
20. Funds Remaining (Lines 18-19)		30,129,120
21. Article 4.5 (5.0% of Line 20)	0	
22. TDA Article 4 (Lines 20-21)		30,129,120

TDA APPORTIONMENT BY JURISDICTION

Column	***A***	***B***	***C=Sum(A:B)***	***D***	***E***	***F***	***G***	***H=Sum(C:G)***	***I***	***J=Sum(H:I)***
	6/30/2021	**FY2020-21**	**6/30/2021**	**FY2020-22**	**FY2021-22**	**FY2021-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**FY2022-23**
Apportionment Jurisdictions	**Balance (w/o interest)**	**Interest**	**Balance (w/ interest)[1]**	**Outstanding Commitments[2]**	**Transfers/ Refunds**	**Original Estimate**	**Revenue Adjustment**	**Projected Carryover**	**Revenue Estimate**	**Available for Allocation**
Article 3	2,353,141	20,080	2,373,220	(1,673,036)	0	510,720	72,602	1,283,506	614,880	1,898,386
Article 4.5										
SUBTOTAL	**2,353,141**	**20,080**	**2,373,220**	**(1,673,036)**	**0**	**510,720**	**72,602**	**1,283,506**	**614,880**	**1,898,386**
Article 4/8										
GGBHTD[3]	122,632	6,603	129,235	(6,322,679)	0	6,216,280	883,679	906,514	7,490,436	8,396,950
Petaluma	2,146,824	18,338	2,165,162	(1,213,618)	0	1,951,972	277,484	3,180,999	2,405,670	5,586,669
Santa Rosa	7,538,590	48,693	7,587,283	(7,735,000)	0	6,764,333	961,588	7,578,204	8,156,373	15,734,577
Sonoma County	11,421,010	56,904	11,477,914	(12,482,771)	0	10,092,695	1,434,733	10,522,572	12,076,641	22,599,213
SUBTOTAL	**21,229,057**	**130,537**	**21,359,594**	**(27,754,068)**	**0**	**25,025,280**	**3,557,483**	**22,188,289**	**30,129,120**	**52,317,409**
GRAND TOTAL	**$23,582,197**	**$150,617**	**$23,732,814**	**($29,427,104)**	**$0**	**$25,536,000**	**$3,630,085**	**$23,471,795**	**$30,744,000**	**$54,215,795**

1. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 6/30/22.

3. Apportionment to GGBHTD is based on the Sonoma County Transportation Authority's coordinated TDA claim.

4. Unclaimed County Administration charges will be redistributed as carryover for apportionment jurisdictions.

FY 2022-23 FUND ESTIMATE
STATE TRANSIT ASSISTANCE
REVENUE-BASED FUNDS (PUC 99314)

FY2021-22 STA Revenue Estimate		**FY2022-23 STA Revenue Estimate**	
1. State Estimate (Jan, 22)[3]	$179,286,505	4. Projected Carryover (Aug, 22)	$31,722,097
2. Actual Revenue (Aug, 22)	$190,834,159	5. State Estimate (Aug, 22)	$196,846,976
3. Revenue Adjustment (Lines 2-1)		6. Total Funds Available (Lines 4+5)	$228,569,073

STA REVENUE-BASED APPORTIONMENT BY OPERATOR

Column	*A*	*B*	*C*	*D=Sum(A:C)*	*E*	*F=Sum(D:E)*
	6/30/2021	**FY2020-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**Total**
Apportionment Jurisdictions	**Balance (w/interest)[1]**	**Outstanding Commitments[2]**	**Actual Revenue[3]**	**Projected Carryover[4]**	**Revenue Estimate[5]**	**Available For Allocation**
ACCMA - Corresponding to ACE	52,613	(314,304)	278,548	16,857	374,951	391,808
Caltrain	6,889,123	(14,519,900)	9,045,328	1,414,551	12,175,901	13,590,452
CCCTA	265,164	(612,000)	793,018	446,182	1,067,479	1,513,661
City of Dixon	38,515	0	7,743	46,258	10,423	56,681
ECCTA	70,973	(358,048)	383,410	96,335	516,110	612,445
City of Fairfield	26,516	(145,149)	140,716	22,083	189,416	211,499
GGBHTD	190,889	(8,396,836)	8,679,377	473,430	11,683,293	12,156,723
LAVTA	430,624	(712,236)	380,391	98,779	512,045	610,824
Marin Transit	2,185,087	(1,500,000)	1,483,331	2,168,418	1,996,710	4,165,128
NVTA	16,737	(97,408)	107,691	27,020	144,962	171,982
City of Petaluma	10,422	(43,410)	46,207	13,219	62,197	75,416
City of Rio Vista	13,973	0	2,463	16,436	3,314	19,750
SamTrans	3,657,013	(11,431,876)	9,071,874	1,297,011	12,211,635	13,508,646
SMART	352,982	(1,757,364)	1,875,170	470,788	2,524,164	2,994,952
City of Santa Rosa	28,829	(174,524)	155,264	9,569	209,001	218,570
Solano County Transit	43,917	(291,716)	330,731	82,932	445,196	528,128
Sonoma County Transit	44,626	(206,612)	216,285	54,299	291,142	345,441
City of Union City	22,171	(132,384)	117,503	7,290	158,170	165,460
Vacaville City Coach	96,894	0	25,185	122,079	33,900	155,979
VTA	604,707	(26,436,776)	27,495,896	1,663,827	37,012,180	38,676,007
VTA - Corresponding to ACE	0	(150,975)	160,701	9,726	216,319	226,045
WCCTA	93,077	(472,527)	502,960	123,510	677,036	800,546
WETA	13,947,017	(5,289,400)	2,466,507	11,124,124	3,320,161	14,444,285
SUBTOTAL	**29,081,870**	**(73,043,445)**	**63,766,299**	**19,804,723**	**85,835,705**	**105,640,428**
AC Transit	533,531	(18,707,978)	24,257,152	6,082,705	32,652,511	38,735,216
BART	49	(35,710,889)	38,010,988	2,300,149	51,166,528	53,466,677
SFMTA	1,425,094	(62,690,293)	64,799,720	3,534,520	87,226,794	90,761,314
SUBTOTAL	**1,958,675**	**(117,109,160)**	**127,067,860**	**11,917,374**	**171,045,833**	**182,963,207**
GRAND TOTAL	**$31,040,545**	**($190,152,605)**	**$190,834,159**	**$31,722,097**	**$256,881,538**	**$288,603,635**

1. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY 2021-22 allocations as of 6/30/22.

3. FY 2021-22 STA revenue generation is based on actual revenues as reported by the State Controller's Office in August 2022.

4. Projected carryover as of 6/30/22 does not include interest accrued in FY2021-22.

5. FY2022-23 STA revenue generation based on August 2022 State Controller's Office (SCO) forecast.

FY 2022-23 FUND ESTIMATE
STATE TRANSIT ASSISTANCE
POPULATION-BASED FUNDS (PUC 99313) - FY 2018-19 ONWARDS

FY2021-22 STA Revenue Estimate		**FY2022-23 STA Revenue Estimate**	
1. State Estimate (Aug, 21)	$65,303,438	4. Projected Carryover (Aug, 22)	$71,233,956
2. Actual Revenue (Aug, 22)[3]	$69,509,562	5. State Estimate[5] (Aug, 22)	$93,145,482
3. Revenue Adjustment (Lines 2-1)		6. Total Funds Available (Lines 4+5)	$164,379,438

STA POPULATION-BASED COUNTY BLOCK GRANT AND REGIONAL PROGRAM APPORTIONMENT

Column	*A*	*C*	*D*	*E=Sum(A:D)*	*F*	*G=Sum(E:F)*
	6/30/2021	**FY2020-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**Total**
Apportionment Jurisdictions	**Balance (w/interest)[1]**	**Outstanding Commitments[2]**	**Actual Revenue[3]**	**Projected Carryover[4]**	**Revenue Estimate[5]**	**Available For Allocation**
County Block Grant[6]						
Alameda	199,785	(8,245,209)	8,601,095	555,671	0	555,671
Contra Costa	243,606	(10,346,691)	10,793,283	690,198	0	690,198
Marin	65,034	(2,661,684)	2,776,568	179,918	0	179,918
Napa	320,353	(1,908,843)	1,698,434	109,944	0	109,944
San Francisco	1,077,367	(4,054,742)	4,114,159	1,136,784	0	1,136,784
San Mateo	4,730,645	(5,341,450)	2,463,254	1,852,449	0	1,852,449
Santa Clara	151,837	(6,572,999)	6,856,708	435,546	0	435,546
Solano	10,368,402	(8,968,264)	5,109,912	6,510,050	0	6,510,050
Sonoma	149,882	(5,394,061)	6,243,280	999,101	0	999,101
SUBTOTAL	**17,306,911**	**(53,493,943)**	**48,656,693**	**12,469,661**	**0**	**12,469,661**
Regional Program	17,009,857	(12,287,067)	20,653,451	25,376,240	27,943,645	53,319,885
Means-Based Transit Fare Program	34,338,673	(1,950,618)	0	32,388,055	0	32,388,055
FY22-23 Revenue - 70% of STA Pop Revenue[7]	0	0	0	0	65,201,837	65,201,837
Transit Emergency Service Contingency Fund[8]	800,582	0	199,418	1,000,000	0	1,000,000
GRAND TOTAL	**$69,456,022**	**($67,731,628)**	**$69,509,562**	**$71,233,956**	**$93,145,482**	**$164,379,438**

1. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed. Balances from the Northern County/Small Operator and Regional Paratransit programs, previously established by MTC Resolution 3837, have been transferred to the appropriate County Block Grant program.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 6/30/22.

3. FY 2021-22 STA revenue generation is based on actual revenues as reported by the State Controller's Office in August 2022.

4. The projected carryover as of 6/30/2022 does not include interest accrued in FY 2021-22.

5. FY2022-23 STA revenue generation based on forecasts from the State Controller's Office from August 2022.

6. County Block Grant adopted through MTC Resolution 4321 in February 2018, and funded through a 70% share of STA Population-Based funds.

7. The County Block Grant program will be suspended in FY23, per amendment to MTC Resolution 4321, Revised. New revenues will instead be programmed directly to operators. Additional details on p13.

8. Funds for the Transit Emergency Service Contingency Fund are taken "off the top" from the STA Population-Based program.

FY 2022-23 FUND ESTIMATE
STATE TRANSIT ASSISTANCE
POPULATION-BASED FUNDS (PUC 99313) - AMERICAN RESCUE PLAN EXCHANGE (FY 2022-23)

Apportionment Jurisdictions[1]	FY2022-23 Aug. 2022 Estimate[2]	ARP Exchange Amount[3]	Estimated FY2022-23 Revenue to Operators
Alameda	**$11,525,799**	**$6,165,689**	**$5,360,109**
AC Transit	$6,942,565	$4,807,453	$2,135,112
BART	$1,116,850	$780,570	$336,280
LAVTA	$2,484,962	$535,322	$1,949,640
Union City	$981,422	$42,344	$939,078
Contra Costa	**$14,463,415**	**$2,436,722**	**$12,026,694**
County Connection	$6,826,732	$548,920	$6,277,812
Tri Delta	$4,353,488	$178,426	$4,175,062
WestCAT	$1,099,220	$270,627	$828,593
AC Transit	$2,082,732	$1,367,989	$714,743
BART	$101,244	$70,760	$30,484
Marin	**$3,720,708**	**$1,605,529**	**$2,115,180**
GGBHTD	$1,361,916	$1,361,916	$0
Marin Transit	$2,282,007	$243,613	$2,038,394
SMART	$76,785	$0	$76,785
Napa	**$2,275,965**	**$216,814**	**$2,059,151**
NVTA	$2,275,965	$216,814	$2,059,151
San Francisco	**$5,513,132**	**$3,853,147**	**$1,659,985**
SFMTA	$5,513,132	$3,853,147	$1,659,985
San Mateo	**$3,300,855**	**$1,460,519**	**$1,840,336**
SamTrans	$3,300,855	$1,460,519	$1,840,336
Santa Clara	**$9,188,253**	**$5,202,490**	**$3,985,763**
VTA	$9,188,253	$5,202,490	$3,985,763
Solano	**$6,847,477**	**$613,192**	**$6,234,285**
Solano County Operators	$6,847,477	$613,192	$6,234,285
Sonoma	**$8,366,235**	**$868,262**	**$7,497,973**
Sonoma County Operators	$8,366,235	$118,262	$8,247,973
GRAND TOTAL	**$65,201,837**	**$21,672,364**	**$43,529,474**

1. FY 2022-23 programming amounts for each county reflect each county's share of the STA County Block Grant program established in MTC Resolution 4321, Revised.
The County Block Grant program is suspended for FY2022-23, and will resume in FY 2023-24.
2. Programming amounts by operator reflect county transportation agency adopted frameworks for FY 23 in Alameda, Contra Costa, Napa, Santa Clara, Solano and Sonoma counties, a transit operator agreement in Marin County, and a direct apportionment of funds to the local transit operator in San Francisco and San Mateo counties.
3. American Rescue Plan (ARP) exchange amounts for each operator are shown in order to fulfill the funding exchange detailed in MTC Resolution 4481, Revised.

FY 2022-23 FUND ESTIMATE
BRIDGE TOLLS[1]

BRIDGE TOLL APPORTIONMENT BY CATEGORY

Column	*A*	*B*	*C*	*D=Sum(A:C)*	*E*	*F=D+E*
	6/30/2021	**FY2020-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**Total**
Fund Source	**Balance[2]**	**Outstanding Commitments[3]**	**Programming Amount[4]**	**Projected Carryover**	**Programming Amount[4]**	**Available for Allocation**
MTC 2% Toll Revenues						
Ferry Capital	7,896,840	(3,523,771)	1,000,000	5,373,069	1,000,000	6,373,069
Bay Trail	64,034	(514,034)	450,000	0	450,000	450,000
Studies	497,993	(100,000)	250,000	647,993	0	647,993
SUBTOTAL	**8,458,867**	**(4,137,805)**	**1,700,000**	**6,021,062**	**1,450,000**	**7,471,062**
5% State General Fund Revenues						
Ferry	17,859,499	0	3,126,721	20,986,220	3,442,511	24,428,731
Bay Trail	180,472	(281,706)	281,706	180,472	287,369	467,841
SUBTOTAL	**18,039,971**	**(281,706)**	**3,408,427**	**21,166,692**	**3,729,880**	**24,896,572**

1. BATA Resolution 93 and MTC Resolution 3948 required BATA to make a payment to MTC equal to the estimated present value of specified fund transfers for the next 50 years (FY2010-11 through FY2059-60) and relieved BATA from making those fund transfers for that 50 year period. The MTC 2% Toll Revenues listed above, commencing in FY2010-11, are funded from this payment.
2. Balance as of 6/30/21 is from the MTC FY2020-21 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.
3. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 1/31/22.
4. MTC Resolution 4015 states that annual funding levels are established and adjusted through the fund estimate for 2%, and 5% bridge toll revenues.

FY 2022-23 FUND ESTIMATE
AB1107 FUNDS
AB1107 IS TWENTY-FIVE PERCENT OF THE ONE-HALF CENT BART DISTRICT SALES TAX

FY2021-22 AB1107 Revenue Estimate		**FY2022-23 AB1107 Estimate**	
1. Original MTC Estimate (Feb, 21)	$83,000,000	4. Projected Carryover (Jun, 21)	$0
2. Actual Revenue (Jul, 22)	$103,571,097	5. MTC Estimate (Feb, 22)	$100,000,000
3. Revenue Adjustment (Lines 2-1)	$20,571,097	6. Total Funds Available (Lines 4+5)	$100,000,000

AB1107 APPORTIONMENT BY OPERATOR

Column	*A*	*B*	*C=Sum(A:B)*	*D*	*E*	*F*	*G=Sum(A:F)*	*H*	*I=Sum(G:H)*
	6/30/2021	**FY2020-21**	**6/30/2021**	**FY2020-22**	**FY2021-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**FY2022-23**
Apportionment Jurisdictions	**Balance (w/o interest)**	**Interest**	**Balance (w/ interest)[1]**	**Outstanding Commitments[2]**	**Original Estimate**	**Revenue Adjustment**	**Projected Carryover**	**Revenue Estimate**	**Available for Allocation**
AC Transit	0	0	0	(51,785,549)	41,500,000	10,285,549	0	50,000,000	50,000,000
SFMTA	0	0	0	(51,785,549)	41,500,000	10,285,549	0	50,000,000	50,000,000
TOTAL	**$0**	**$0**	**$0**	**($103,571,097)**	**$83,000,000**	**$20,571,098**	**$0**	**$100,000,000**	**$100,000,000**

1. Balance as of 6/30/21 is from the MTC FY2019-20 Audit, and it contains both funds available for allocation and funds that have been allocated but not disbursed.

2. The outstanding commitments figure includes all unpaid allocations as of 6/30/21, and FY2021-22 allocations as of 6/30/22.

FY 2022-23 FUND ESTIMATE
TDA & STA FUND SUBAPPORTIONMENT FOR ALAMEDA & CONTRA COSTA COUNTIES
& IMPLEMENTATION OF OPERATOR AGREEMENTS

ARTICLE 4.5 SUBAPPORTIONMENT

Apportionment Jurisdictions	Alameda Article 4.5	Contra Costa Article 4.5
Total Available	**$5,672,929**	**$3,274,245**
AC Transit	$5,188,767	$973,938
LAVTA	$194,189	
Pleasanton	$106,732	
Union City	$183,243	
CCCTA		$1,347,218
ECCTA		$732,371
WCCTA		$220,717

IMPLEMENTATION OF OPERATOR AGREEMENTS

Apportionment of BART Funds to Implement Transit Coordination Program

Apportionment Jurisdictions	Total Available Funds (TDA and STA) FY 2021-22
CCCTA	$864,033
LAVTA	$718,570
ECCTA	$2,808,992
WCCTA	$2,789,687

Fund Source	Apportionment Jurisdictions	Claimant	Amount[1]	Program
Total Available BART STA Revenue-Based Funds[2]			**$53,466,677**	
STA Revenue-Based	BART	CCCTA	(864,033)	BART Feeder Bus
STA Revenue-Based	BART	LAVTA	(601,584)	BART Feeder Bus
STA Revenue-Based	BART	ECCTA	(2,808,992)	BART Feeder Bus
STA Revenue-Based	BART	WCCTA	(2,493,826)	BART Feeder Bus
Total Payment			**(6,768,434)**	
Remaining BART STA Revenue-Based Funds			**$46,698,243**	
Total Available BART TDA Article 4 Funds[2]			**$412,847**	
TDA Article 4	BART-Alameda	LAVTA	(116,986)	BART Feeder Bus
TDA Article 4	BART-Contra Costa	WCCTA	(295,861)	BART Feeder Bus
Total Payment			**(412,847)**	
Remaining BART TDA Article 4 Funds			**$0**	
Total Available SamTrans STA Revenue-Based Funds			**$13,508,646**	
STA Revenue-Based	SamTrans	BART	(801,024)	SFO Operating Expense
Total Payment			**(801,024)**	
Remaining SamTrans STA Revenue-Based Funds			**$12,707,622**	
Total Available Union City TDA Article 4 Funds			**$13,515,944**	
TDA Article 4	Union City	AC Transit	(116,699)	Union City service
Total Payment			**(116,699)**	
Remaining Union City TDA Article 4 Funds			**$13,399,245**	

1. Amounts assigned to the claimants in this page will reduce the funds available for allocation in the corresponding apportionment jurisdictions by the same amounts.
2. Discussions are ongoing between BART, MTC, county transportation agencies, and the four East Bay bus operators shown here regarding possible changes to the operator agreements which govern these payments. Until such time as an agreement is reached, or when there is a clear path to agreement, operators will be able to claim no more than 50% of FY 2022-23 programmed amounts.

FY 2022-23 FUND ESTIMATE
STA SPILLOVER FUNDING AGREEMENT PER RESOLUTION 3814

PROPOSITION 1B TRANSIT FUNDING PROGRAM -- POPULATION BASED SPILLOVER DISTRIBUTION

Apportionment Category	MTC Resolution 3814 Spillover Payment Schedule	%	FY 2007-08 Spillover Distribution	FY2009-20 Spillover Distribution	MTC Res-3833 (RM 1 Funding)	MTC Res-3925 (STP/CMAQ Funding)	FY2021-22 Remaining
Lifeline	10,000,000	16%	1,028,413	0	0	8,971,587	0
Small Operators / North Counties	3,000,000	5%	308,524	0	0	2,691,476	0
BART to Warm Springs	3,000,000	5%	308,524	0	0	0	0
eBART	3,000,000	5%	327,726	0	2,672,274	0	0
SamTrans[1]	43,000,000	69%	4,422,174	0	0	19,288,913	19,288,913
TOTAL	**$62,000,000**	**100%**	**$6,395,361**	**$0**	**$0**	**$30,951,976**	**$19,288,914**

1. On January 26, 2022, the MTC Commission adopted MTC Resolution No. 4509, which approved a funding commitment of $19.6 million to SamTrans to satisfy the terms of the 2007 Caltrain Right of Way settlement agreement. On June 22, 2022, the MTC Commission adopted MTC Resolution Nos. 4273, Revised, 4505, Revised, and 4520 to program $19.6 million to SamTrans with funding from the Low Carbon Transit Operations Program (LCTOP), One Bay Area Grant 3 (OBAG 3), and State Transit Assistance (STA).

FY 2022-23 FUND ESTIMATE
CAP AND TRADE LOW CARBON TRANSIT OPERATIONS PROGRAM (LCTOP)

FY2021-22 LCTOP Revenue Estimate[1]		**FY2022-23 LCTOP Revenue Estimate[2]**	
1. Estimated Statewide Appropriation (Jan, 22)	$163,139,000	5. Estimated Statewide Appropriation (Jan, 22)	$182,225,000
2. MTC Region Revenue-Based Funding	$43,708,675	6. Estimated MTC Region Revenue-Based Funding	$48,822,251
3. MTC Region Population-Based Funding	$15,920,477	7. Estimated MTC Region Population-Based Funding	$17,783,050
4. Total MTC Region Funds	**$59,629,152**	**8. Estimated Total MTC Region Funds**	**$66,605,301**

1. The FY 2021-22 LCTOP revenue generation is based on the $163 million revised estimate included in the FY 2022-23 Proposed State Budget.

2. The FY 2022-23 LCTOP revenue generation is based on the $182 million estimated in the FY 2022-23 Proposed State Budget.

FY 2022-23 FUND ESTIMATE
STATE OF GOOD REPAIR (SGR) PROGRAM
REVENUE-BASED FUNDS

FY2021-22 SGR Revenue-Based Revenue Estimate		**FY2022-23 SGR Revenue-Based Revenue Estimate**	
1. State Estimate (Aug, 21)	$31,477,988	4. Projected Carryover (Aug, 22)	($171,032)
2. Actual Revenue (Aug, 22)	$31,306,951	5. State Estimate (Aug, 22)	$32,422,154
3. Revenue Adjustment (Lines 2-1)		6. Total Funds Available (Lines 4+5)	$32,251,122

STATE OF GOOD REPAIR PROGRAM REVENUE-BASED APPORTIONMENT BY OPERATOR

Column	*A*	*B*	*C*	*D=Sum(A:C)*	*E*	*F=Sum(D:E)*
	6/30/2021	FY2020-22	FY2021-22	6/30/2022	FY2022-23	Total
Apportionment Jurisdictions	**Balance (w/interest)**	**Outstanding Commitments**	**Actual Revenue[1]**	**Projected Carryover**	**Revenue Estimate[2]**	**Available For Allocation**
ACCMA - Corresponding to ACE	0	(45,946)	45,696	(249)	47,324	47,075
Caltrain	0	(1,492,021)	1,483,915	(8,106)	1,536,774	1,528,668
CCCTA	0	(130,808)	130,097	(711)	134,731	134,020
City of Dixon	0	(1,277)	1,270	(7)	1,316	1,309
ECCTA	0	(63,244)	62,900	(344)	65,141	64,797
City of Fairfield	0	(23,211)	23,085	(126)	23,907	23,781
GGBHTD	0	(1,431,657)	1,423,879	(7,777)	1,474,600	1,466,823
LAVTA	0	(62,746)	62,405	(341)	64,628	64,287
Marin Transit	0	(244,675)	243,345	(1,329)	252,014	250,685
NVTA	0	(17,763)	17,667	(96)	18,296	18,200
City of Petaluma	0	(7,622)	7,580	(41)	7,850	7,809
City of Rio Vista	0	(406)	404	(2)	418	416
SamTrans	0	(1,496,400)	1,488,270	(8,130)	1,541,284	1,533,154
SMART	0	(309,308)	307,628	(1,680)	318,586	316,906
City of Santa Rosa	0	(25,611)	25,472	(139)	26,379	26,240
Solano County Transit	0	(54,554)	54,257	(296)	56,190	55,894
Sonoma County Transit	0	(35,676)	35,482	(194)	36,746	36,552
City of Union City	0	(19,382)	19,277	(105)	19,963	19,858
Vacaville City Coach	0	(4,154)	4,131	(23)	4,279	4,256
VTA	0	(4,535,433)	4,510,789	(24,644)	4,671,471	4,646,827
VTA - Corresponding to ACE	0	(26,508)	26,363	(144)	27,303	27,159
WCCTA	0	(82,963)	82,512	(451)	85,452	85,001
WETA	0	(406,849)	404,638	(2,211)	419,052	416,841
SUBTOTAL	**3**	**(10,518,214)**	**10,461,064**	**(57,146)**	**10,833,704**	**10,776,558**
AC Transit	0	(4,001,204)	3,979,459	(21,745)	4,121,218	4,099,473
BART	0	(6,269,892)	6,235,818	(34,074)	6,457,954	6,423,880
SFMTA	0	(10,688,678)	10,630,610	(58,067)	11,009,279	10,951,212
SUBTOTAL	**1**	**(20,959,774)**	**20,845,887**	**(113,886)**	**21,588,451**	**21,474,565**
GRAND TOTAL	**$4**	**($31,477,988)**	**$31,306,951**	**($171,032)**	**$32,422,155**	**$32,251,123**

1. FY2021-22 State of Good Repair Program revenue generation is based on actual revenues reported by the State Controller's Office (SCO) in August 2022.

2. FY2022-23 State of Good Repair Program revenue generation is based on August 2022 estimates from the SCO.

FY 2022-23 FUND ESTIMATE
STATE OF GOOD REPAIR (SGR) PROGRAM
POPULATION-BASED FUNDS

FY2021-22 SGR Population-Based Revenue Estimate		**FY2022-23 SGR Population-Based Revenue Estimate**	
1. State Estimate (Jan, 22)	$11,465,566	4. Projected Carryover (Aug, 22)	($47,674)
2. Actual Revenue (Aug, 22)	$11,361,166	5. State Estimate (Aug, 22)	$11,756,303
3. Revenue Adjustment (Lines 2-1)		6. Total Funds Available (Lines 4+5)	**$11,708,629**

SGR PROGRAM POPULATION-BASED APPORTIONMENT

Column	***A***	***B***	***C***	***D=Sum(A:C)***	***E***	***F=Sum(D:E)***
	6/30/2021	**FY2020-22**	**FY2021-22**	**6/30/2022**	**FY2022-23**	**Total**
Apportionment	**Balance (w/interest)**	**Outstanding Commitments**	**Actual Revenue[1]**	**Projected Carryover**	**Revenue Estimate[2]**	**Available For Allocation**
Clipper®/Clipper® 2.0[3]	18,692,026	(30,100,865)	11,361,166	(47,674)	11,756,303	11,708,629
GRAND TOTAL	**$18,692,026**	**($30,100,865)**	**$11,361,166**	**($47,674)**	**$11,756,303**	**$11,708,629**

1. FY2021-22 State of Good Repair Program revenue generation is based on actual revenues reported by the State Controller's Office (SCO) in August 2022.

2. FY2022-23 State of Good Repair Program revenue generation is based on August 2022 estimates from the SCO.

3. State of Good Repair Program funds are shown here according to the policy in MTC Resolution 4321.

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Metropolitan Transportation Commission

Legislation Details (With Text)

File #:	22-1402	**Version:**	1	**Name:**	
Type:	Report			**Status:**	Informational
File created:	8/29/2022			**In control:**	Programming and Allocations Committee
On agenda:	9/14/2022			**Final action:**	
Title:	California Transportation Commission (CTC) and State Funding Programs Update Staff will provide an update on the CTC's meeting of August 17-18, 2022 and state funding programs under the CTC's purview.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	5a_22-1402_PAC_CTC_Update.pdf				

Date	Ver.	Action By	Action	Result

Subject:
California Transportation Commission (CTC) and State Funding Programs Update

Staff will provide an update on the CTC's meeting of August 17-18, 2022 and state funding programs under the CTC's purview.

Presenter:
Kenneth Kao

Recommended Action:
Information

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Metropolitan Transportation Commission
Programming and Allocations Committee

September 14, 2022 **Agenda Item 5a - 22-1402**

California Transportation Commission (CTC) and State Funding Programs Update

Subject:

Update on California Transportation Commission (CTC) and state funding programs under the CTC's purview.

Background:

The California Transportation Commission (CTC) is responsible for programming and allocating certain state and federal transportation funds for the planning and implementation of highway, passenger rail, non-motorized facilities, and transit improvements throughout California. Among other transportation funding programs, the CTC approves programming and allocations for the State Transportation Improvement Program (STIP); State Highway Operations and Protection Program (SHOPP); State Active Transportation Program (ATP) and various Senate Bill 1 (SB1) programs including Solutions for Congested Corridors Program (SCCP); Trade Corridor Enhancement Program (TCEP) and the Local Partnership Program (LPP). The CTC allocates funds for projects in the Transit and Intercity Rail Capital Program (TIRCP), following project selection by the California State Transportation Agency (CalSTA).

The CTC consists of eleven voting members and two non-voting ex-officio members. The San Francisco Bay Area has three (3) CTC members residing in its geographic area: Jay Bradshaw (Executive Secretary-Treasurer, Northern California Carpenters Regional Council), Darnell Grisby, and Vice-Chair Carl Guardino (Executive Vice President of Global Government Affairs and Policy for Bloom Energy).

August CTC Meeting (August 17-18, San Jose)

The CTC met and discussed the following items of regional significance.

Final SB1 Competitive Program Guidelines

CTC approved the final guidelines for three SB1 programs: the Solutions for Congested Corridors Program (SCCP), the Trade Corridor Enhancement Program (TCEP), and the Local Partnership Program (LPP). The final guidelines are based on numerous CTC-led guideline workshops, in which MTC staff actively participated. The guidelines generally build on prior

cycle successes, and now capture additional policy directives from the Climate Action Plan for Transportation Investments (CAPTI). CTC released the call for projects upon guidelines adoption, with applications due in late 2022.

Allocations, Extensions, and Amendments.
The CTC approved the following:

Allocations. For construction phase allocations, CTC provided a 6-month deadline to award a construction contract.

- Funding allocation for one STIP project in Contra Costa County, and multiple allocations to various agencies for STIP Planning, Programming, and Monitoring activities.
- Funding allocations for three Active Transportation Program (ATP) projects in Alameda (2) and Napa Counties.
- Funding allocations for five Local Partnership Formulaic Program (LPP-F) projects sponsored by AC Transit (2), Caltrain, Santa Rosa City Bus, and one project in Alameda County.

Extensions.

- Project completion extension for one TCEP project in Alameda County.
- Project completion extension for one Transit and Intercity Rail Capital Program (TIRCP) project sponsored by Caltrain.
- Project completion extension for one jointly-funded STIP and LPP-F project in Contra Costa County.

Amendments.

- Amendment to one LPP-F project in Contra Costa County.
- Amendment to one SCCP project in Napa County.
- Amendment to add one LPP-F project located in San Mateo County.

MTC staff continue to work with project sponsors of ATP and other CTC-managed programs to ensure meeting CTC delivery deadlines and requirements.

Next Steps:

The next CTC meeting is scheduled for October 12-13, 2022, to be held in Santa Barbara and online.

Issues:

None identified.

Recommendations:

Information. No action required.

Therese W. McMillan