



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

## Meeting Agenda

### Regional Network Management Council

*Robert Powers, Chair    April Chan, Vice Chair*

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Monday, April 22, 2024

11:30 AM

Bay Area Rapid Transit  
2150 Webster Street, Board Room – 1st Floor  
Oakland, CA 94612

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The Regional Network Management Council is scheduled to meet at 11:30 a.m.

Meeting attendees may opt to attend in person for public comment and observation at Bay Area Rapid Transit, Board Room – 1st Floor, 2150 Webster Street, Oakland, CA 94612. In-person attendees must adhere to posted public health protocols while in the building.

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.

Members of the public participating by Zoom wishing to speak should use the “raise hand” feature or dial \*9. When called upon, unmute yourself or dial \*6. In order to get the full Zoom experience, please make sure your application is up to date.

Attendee Link: <https://us06web.zoom.us/j/87634540704>  
iPhone One-Tap: US: +16694449171,,87634540704# US  
+16699006833,,87634540704# US (San Jose)

Join by Telephone (for higher quality, dial a number based on your current location) US:  
888 788 0099 (Toll Free) or 877 853 5247 (Toll Free)  
Webinar ID: 876 3454 0704

International numbers available: <https://us06web.zoom.us/j/87634540704>

Detailed instructions on participating via Zoom are available at:

<https://bayareametro.zoom.us/j/87634540704>

<https://mtc.ca.gov/how-provide-public-comment-board-meeting-zoom>

Members of the public may participate by phone or Zoom or may submit comments by email at [info@bayareametro.gov](mailto:info@bayareametro.gov) by 5:00 p.m. the day before the scheduled meeting date. Please include the committee or board meeting name and agenda item number 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.

Clerk: Wally Charles

## Roster

Robert Powers, Chair; April Chan, Vice Chair

Michelle Bouchard, Bill Churchill, Andy Fremier, Carolyn Gonot, Michael Hursh, Denis Mulligan, Seamus Murphy, Jeffrey Tumlin, Nancy Whelan

### 1. Call to Order / Roll Call / Confirm Quorum

*A quorum of the Regional Network Management Council shall be a majority of its voting members (6).*

### 2. Welcome

### 3. Consent Calendar

3a. [24-0419](#) Minutes of the March 25, 2024 Meeting

**Action:** Approval

**Attachments:** [3a Minutes of the March 25, 2024 Meeting](#)

### 4. Approval and Information

4a. [24-0447](#) Transit Agency Progress on Transit Priority

An update on completed and ongoing transit priority efforts throughout the Bay Area.

**Action:** Information

**Presenter:** Joel Shaffer, MTC Michael Rhodes, SFMTA and Robert del Rosario, AC Transit.

**Attachments:** [4a 24-0447 Summary Sheet Transit Agency Progress](#)  
[4ai 24-0447 Transit Agency Progress Attachment A](#)

4b. [24-0420](#) Project Funding Recommendations for Bus Accelerated Infrastructure Delivery (BusAID) Program

Approval of approximately \$18 million in funding for near-term (quick-build) transit priority projects.

**Action:** Approval

**Presenter:** Joel Shaffer, MTC

**Attachments:** [4b 24-0420 Summary Sheet BusAID Funding Recommendations](#)  
[4bi 24-0420 Attachment A BusAID Funding Recommendations](#)  
[4bii 24-0420 Attachment B BusAID Complete Project Inventory.](#)  
[4biii 24-0420 Attachment C BusAID Funding Program Guidelines](#)  
[4biv 24-0420 Attachment D Draft BusAID Funding Recommendations Presen](#)

**4c.**     [24-0425](#)           Regional Network Management Performance Measures

The Regional Network Management Council’s Charter and Work Plan call for the development of new performance measures that provide insight into the experience of transit riders and an overview of transit operations in the region, and that inform the continuous improvement of the RNM framework. This item presents a refined approach initial RNM performance measures based on feedback from the RNM Council’s March 2024 meeting

**Action:**                 Approval

**Presenter:**           Allison Quach, MTC and Hannah Lindelof, BART

**Attachments:**       [4c Summary Sheet RNM Performance Measures April 2024](#)  
[4ci AttA RNM Performance Measures March Comments Summary](#)  
[4cii AttB RNM Performance Measures](#)  
[4ciii AttC RNM Performance Measures Presentation April 2024](#)

**5. Director's Report- Choy****6. Public Comment / Other Business**

*Council members and members of the public participating by Zoom wishing to speak should use the “raise hand” feature or dial \*9. When called upon, unmute yourself or dial \*6.*

**7. Adjournment / Next Meetings**

**The next meeting of the Regional Network Management Council is scheduled to be held at 11:30 a.m. on Monday May 20, 2024 at the Bay Area Metro Center, 375 Beale Street, San Francisco, CA 94105. 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](http://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.

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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.



# Metropolitan Transportation Commission

375 Beale Street, Suite 800  
San Francisco, CA 94105

## Legislation Details (With Text)

**File #:** 24-0419      **Version:** 1      **Name:**

**Type:** Minutes      **Status:** Consent

**File created:** 3/8/2024      **In control:** Regional Network Management Council

**On agenda:** 4/22/2024      **Final action:**

**Title:** Minutes of the March 25, 2024 Meeting

**Sponsors:**

**Indexes:**

**Code sections:**

**Attachments:** [3a\\_Minutes of the March 25, 2024 Meeting](#)

Date	Ver.	Action By	Action	Result
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**Subject:**  
Minutes of the March 25, 2024 Meeting

**Recommended Action:**  
Approval

**Attachments:**



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

## Meeting Minutes - Draft

### Regional Network Management Council

*Robert Powers, Chair    April Chan, Vice Chair*

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Monday, March 25, 2024

11:30 AM

Board Room - 1st Floor

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The Regional Network Management Council is scheduled to meet at 11:30 a.m.

Meeting attendees may opt to attend in person for public comment and observation at BAMC, 375 Beale Street, San Francisco CA 94105, Board Room (1st Floor). In-person attendees must adhere to posted public health protocols while in the building.

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.

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Attendee Link: <https://bayareametro.zoom.us/j/84196024621>

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+14086380968,,84196024621# US (San Jose)

Join by Telephone (for higher quality, dial a number based on your current location) US:  
888 788 0099 (Toll Free) or 877 853 5247 (Toll Free)

Webinar ID: 841 9602 4621

International numbers available: <https://bayareametro.zoom.us/u/kQmk6YFEk>

Detailed instructions on participating via Zoom are available at:

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Clerk: Wally Charles

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## Roster

### Chair Powers and Vice Chair Chan

**Michelle Bouchard, Bill Churchill, Andrew Fremier, Carolyn Gonot, Michael Hursh, Denis Mulligan, Seamus Murphy, Jeffrey Tumlin, Nancy Whelan**

## 1. Call to Order / Roll Call / Confirm Quorum

Sam Sargent acted as a delegate and voting member of the Task Force in place of Member Bouchard. Attendance and Actions noted below as "Bouchard" were taken by Sargent.

- Present:** 10 - Council Member Bouchard, Council Member Chan, Council Member Churchill, Council Member Fremier, Council Member Hursh, Council Member Mulligan, Council Member Murphy, Council Member Powers, Council Member Tumlin, and Council Member Whelan
- Absent:** 1 - Council Member Gonot

## 2. Welcome

## 3. Consent Calendar

**Upon the motion by Council Member Mulligan and seconded by Council Member Hursh, the Consent Calendar was unanimously approved. The motion carried by the following vote:**

- Aye:** 10 - Council Member Bouchard, Council Member Chan, Council Member Churchill, Council Member Fremier, Council Member Hursh, Council Member Mulligan, Council Member Murphy, Council Member Powers, Council Member Tumlin and Council Member Whelan
- Absent:** 1 - Council Member Gonot

### 3a. [24-0152](#) Minutes of the January 22, 2024 Meeting

**Action:** Approval

**Attachments:** [3a 2024 01 22 Regional Network Management Council Draft Minutes](#)

## 4. Information

### 4a. [24-0346](#) Regional Network Management Performance Measures

The Regional Network Management Council's Charter and Work Plan call for the development of new performance measures that provide insight into the experience of transit riders and an overview of transit operations in the region, and that inform the continuous improvement of the RNM framework. This item presents a draft proposal for initial RNM performance measures.

**Action:** Information

**Presenter:** Allison Quach, MTC and Hannah Lindelof, BART

**Attachments:** [4a Summary Sheet RNM Performance Measures](#)  
[4ai AttA RNM Performance Measures Presentation](#)

The following individuals spoke on this Item:  
Aleta Dupree, Team Folds; and Adina Levin, Chair-Regional Network Management Customer Advisory Group.

**4b.**     [24-0153](#)     Accessibility Initiatives Update

Staff will present an update of ongoing activities for accessibility-related items in the Transformation Action Plan

**Action:** Information

**Presenter:** Drennen Shelton, MTC and John Sanderson, County Connection

**Attachments:** [4b Accessibility Initiatives Update](#)  
[4bi Attachment A Transformation Action Plan Accessibility Initiatives](#)  
[4bii Attachment B Transformation Action Plan One-Seat Ride Pilot Program Draft Concepts](#)  
[4biii Attachment C RNM Council Presentation](#)

The following individuals spoke on this Item:  
Aleta Dupree, Team Folds; Warren Cushman, Community Resources for Independent Living; and Adina Levin.

**4c.**     [24-0348](#)     RNM Council Work Plan Progress Report

Update on progress achieved towards the Regional Network Management Council's FY 2023-24 & 2024-25 Work Plan.

**Action:** Information

**Presenter:** Allison Quach, MTC

**Attachments:** [4c Summary Sheet RNM Council Work Plan Progress Report](#)  
[4ci AttA RNM Council Work Plan Progress Report](#)  
[4cii AttB RNM Council Work Plan March 2024 Progress Update](#)

The following individuals spoke on this Item:  
Adina Levin.

## 5. Directors Report- Choy



## **6. Public Comment / Other Business**

The following individuals spoke on this Item:  
Aleta Dupree, Team Folds; and Warren Cushman.

## **7. Adjournment / Next Meetings**

**The next meeting of the Regional Network Management Council is scheduled to be held at 11:30 a.m. on Monday, April 22, 2024, 1:30 p.m. at the Bay Area Rapid Transit, Board Room -1st Floor, 2150 Webster Street, Oakland CA 94612. Any changes to the schedule will be duly noticed to the public.**



# Metropolitan Transportation Commission

375 Beale Street, Suite 800  
San Francisco, CA 94105

## Legislation Details (With Text)

**File #:** 24-0447      **Version:** 1      **Name:**

**Type:** Report      **Status:** Informational

**File created:** 3/14/2024      **In control:** Regional Network Management Council

**On agenda:** 4/22/2024      **Final action:**

**Title:** Transit Agency Progress on Transit Priority

An update on completed and ongoing transit priority efforts throughout the Bay Area.

**Sponsors:**

**Indexes:**

**Code sections:**

**Attachments:** [4a 24-0447 Summary Sheet Transit Agency Progress](#)  
[4ai 24-0447 Transit Agency Progress Attachment A](#)

Date	Ver.	Action By	Action	Result
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**Subject:**

Transit Agency Progress on Transit Priority

An update on completed and ongoing transit priority efforts throughout the Bay Area.

**Presenter:**

Joel Shaffer, MTC Michael Rhodes, SFMTA and Robert del Rosario, AC Transit.

**Recommended Action:**

Information

**Attachments:**

# Regional Network Management Council

April 22, 2024

Agenda Item 4a

## Transit Agency Progress on Transit Priority

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### **Subject:**

An update on completed and ongoing transit priority efforts throughout the Bay Area.

### **Background:**

Average transit speeds have declined over time due to increasing traffic congestion and other delays. Transit agencies throughout the Bay Area are delivering near-term (quick-build) transit priority projects to maximize transit travel time savings and service reliability improvements, including recent examples from Alameda-Contra Costa County Transit District (AC Transit) and San Francisco Municipal Transportation Agency (SFMTA). These efforts work to improve the transit customer experience and encourage more people to use transit by making it an attractive and competitive mode choice.

In close coordination with its transit agency partners, MTC funds and supports delivery of transit priority projects in the near-term through funding programs like Bus Accelerated Infrastructure Delivery (BusAID) and technical assistance programs like Innovative Deployments to Enhance Arterials with Transit Signal Priority (IDEA TSP). MTC is also coordinating with Caltrans staff, providing input on a statewide Director's Policy on Transit Priority and Focus as well as the District 4 Bay Area Transit Plan

### **Issues:**

None identified.

### **Recommendations:**

Information only.

### **Attachments:**

- Attachment A: Presentation



TRANSIT TRANSFORMATION  
**ACTION PLAN**




# Update on Transit Priority Progress

Regional Network Management Council  
April 22, 2024 – Agenda Item 4a Attachment A

# Investing in transit priority is important

- ▶ Increases transit reliability and reduces travel times for transit customers
- ▶ More efficient operations result in cost savings that can be reinvested in more frequent service and other service improvements for customers
  - Conversely, lower reliability and longer travel times increase transit operating costs

**EXAMPLE: Cost to Provide 10-Minute Bus Frequency, 6 AM – 12 AM, daily**

Travel Time	Buses Required	Annual Cost
30 minutes		\$4 million
45 minutes		\$6 million
60 minutes		\$8 million

*Shorter travel time and higher service reliability reduce operating costs*



*Travel time and cost increase together*

*Assumes operating cost of \$200/hour per vehicle for example purposes only. Actual costs vary.*

# Muni Forward Improvements

Over **100 miles** of reliability upgrades approved or built since 2014

Toolkit of 20+ measures to improve reliability and safety, such as:

- Transit lanes
- Transit signal priority
- Transit bulbs and islands
- Updating transit stop spacing
- Turn pockets and restrictions
- Pedestrian bulbs
- Road diets



# Driving Muni's Recovery

## Lines where SFMTA made major transit priority investments are driving ridership recovery:

- Van Ness (49\*): **131%**
- 16<sup>th</sup> Street (22/55): **102%**
- Mission (14/14R): **92%**
- Geary (38/38R): **75%**
- Haight (6/7): **75%**
- 19<sup>th</sup> Ave (28/28R): **74%**
- *Systemwide* : **65%**

*Data: September 2019 vs September 2023 average weekday ridership.*

*\*The 47 Van Ness also ran on Van Ness Avenue prior to the pandemic but is no longer in service. The ridership recovery rate is 100% when including the entire 49-line and Van Ness Avenue boardings on the 47-line before the pandemic.*



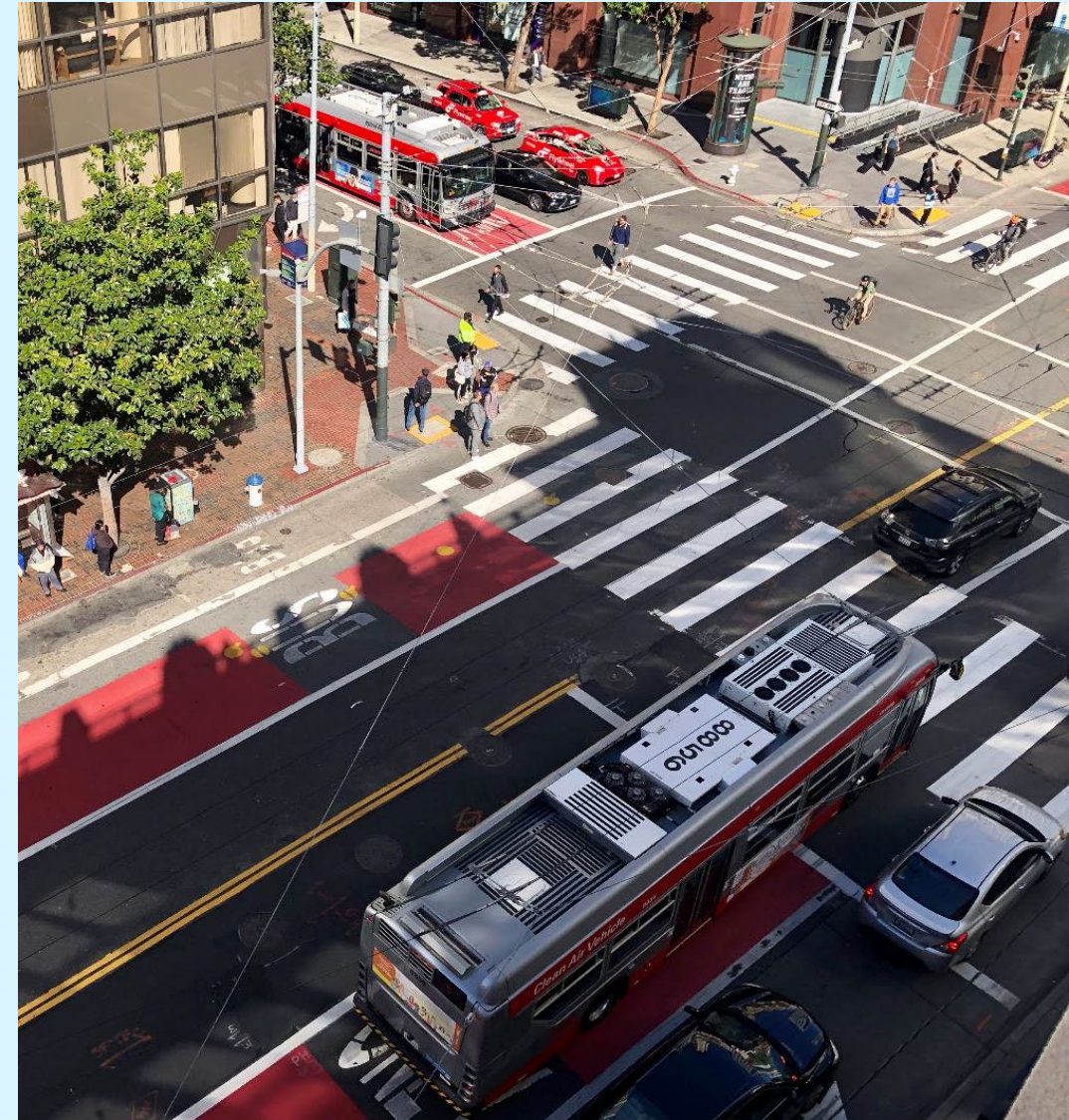
# Corridor Highlight: 14R Mission Rapid

## Improvements from 2016-2023

- Transit lanes, bus bulbs, signal priority, bus stop spacing changes
- Increased Rapid and local frequency
- Pedestrian safety upgrades

## Results

- 92% ridership recovery compared to pre-pandemic levels (2019-2023)
- 31% travel time savings in SoMa after bus lane added in 2021
- 33% fewer pedestrian injury collisions in Inner Mission since 2016





# Corridor Highlight: Geary

## Improvements from 2018-2023 (ongoing)

- Transit lanes, bus bulbs, signal priority, bus stop spacing changes
- Pedestrian safety and urban design improvements

## Results from Geary Rapid Project (first segment, completed 2021)

- Travel time decreased up to 18% on 38R
- Reliability improved up 37% on 38R
- Safety: 70-80% reduction in vehicles going >40 mph
- Equity: helps to reconnect the communities harmed by 1960s urban renewal by calming the Geary Expressway



# Corridor Highlight: HOV Lanes Pilot

- HOV-2+ lanes added on Park Presidio (SR-1), Lombard St. (US-101)
- Three-year pilot project in partnership with Caltrans
- First urban arterial HOV lanes in state

## Results

- Transit travel times reduced by up to 10%, even as traffic volumes have increased during pandemic recovery



# Traffic Signal Timing & Transit Signal Priority

## Benefits



Traffic: more efficient traffic flow



Environment: reduced emissions/pollution



Safety: speed regulation



Transit: shorter travel times, increased reliability

## Challenges



Aging signal systems at various levels of modernization



Complicated approval processes



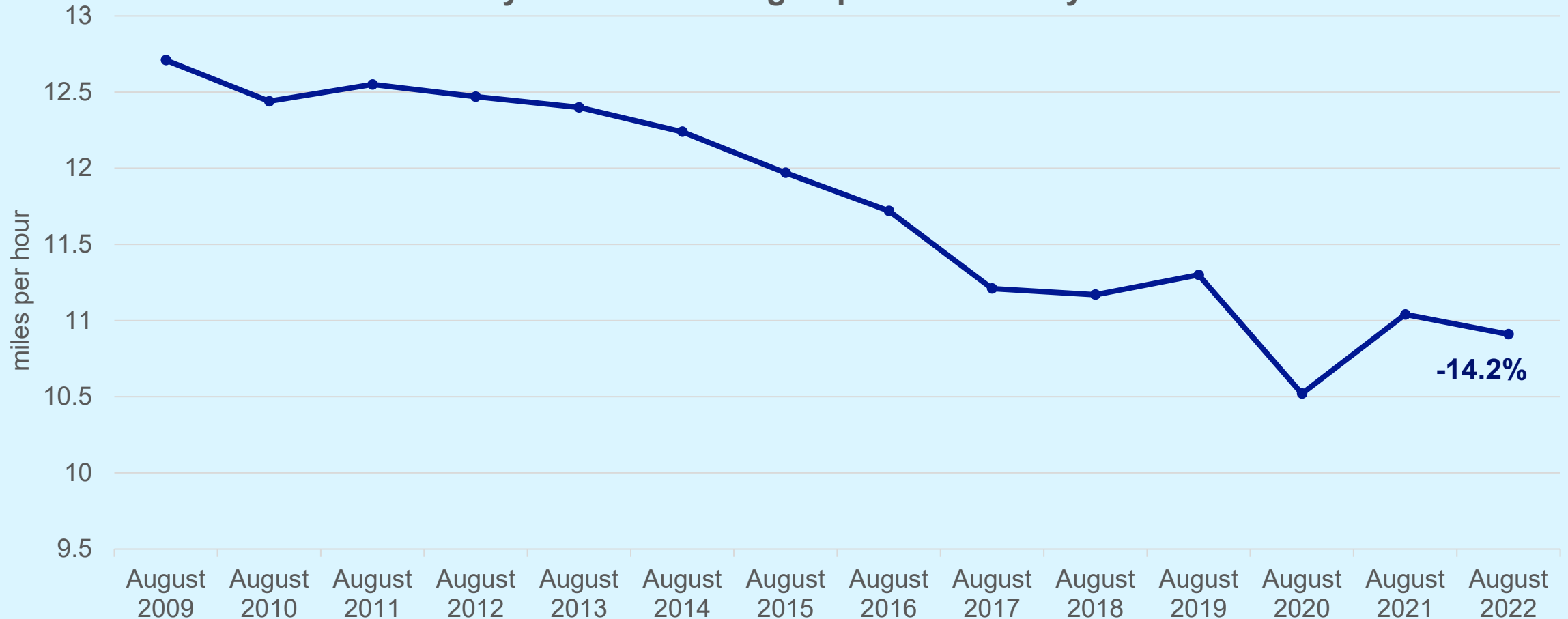
Conflicting values and policies that de-prioritize transit



Difficult data collection and analysis

# Systemwide Average Fleet Speed (2009 -2022)

Systemwide Average Speed - Weekday



# AC Transit's Transit Signal Priority Projects

## General Information

- **550 buses** equipped with TSP
- **450 traffic signals** have TSP installed, and queue jump lanes installed at **13 signals.**

## Recently Completed TSP Projects

- **Decoto Road/Dumbarton** (2023)
- **San Pablo Ave, Grand Ave, I-80** (2018/2023) – *10% travel time savings*
- **Tempo BRT** (2020)
- **Line 97 Hesperian Boulevard** (2019)
- **Line 51 Alameda-Oakland-Berkeley** (2018) – *up to 9% travel time savings*

# AC Transit's Transit Signal Priority Projects (Continued)

## In Planning, Design, or Construction

- **Mission Boulevard** (Hayward, Union City)
- **Fruitvale Avenue/Park Street** (Oakland, Alameda)
- **MacDonald Avenue** (Richmond)
- **Cutting Boulevard** (Richmond)
- **Telegraph Ave** (Berkeley, Oakland)

## Development by Others

- **Dumbarton Forward** TSP/queue jump, part-time bus lanes (MTC)
- **Powell Street** TSP/queue jump, bus lanes, HOV ramp (MTC-sponsored)
- **MacArthur/40<sup>th</sup> Smart City Corridor** TSP, queue jumps (Oakland-sponsored)
- **Shellmound/40<sup>th</sup>** TSP (Emeryville-sponsored)

# Regional-Level Work on Transit Priority

## MTC-led efforts

- Bus Accelerated Infrastructure Delivery (BusAID) Program
- Innovative Deployments to Enhance Arterials (IDEA) Program
- Transit Performance Initiative (TPI)
- Transit 2050+ (Plan Bay Area 2050)
- Forward Commute Initiatives

## Caltrans-led efforts

- Director's Policy on Transit Priority & Focus (Headquarters)
- Bay Area Transit Plan (District 4)

*California Department of Transportation*

*Director's Policy*





# Metropolitan Transportation Commission

375 Beale Street, Suite 800  
San Francisco, CA 94105

## Legislation Details (With Text)

**File #:** 24-0420      **Version:** 1      **Name:**

**Type:** Action Item      **Status:** Committee Approval

**File created:** 3/8/2024      **In control:** Regional Network Management Council

**On agenda:** 4/22/2024      **Final action:**

**Title:** Project Funding Recommendations for Bus Accelerated Infrastructure Delivery (BusAID) Program

Approval of approximately \$18 million in funding for near-term (quick-build) transit priority projects.

**Sponsors:**

**Indexes:**

**Code sections:**

- Attachments:** [4b 24-0420 Summary Sheet BusAID Funding Recommendations](#)  
[4bi 24-0420 Attachment A BusAID Funding Recommendations](#)  
[4bii 24-0420 Attachment B BusAID Complete Project Inventory](#)  
[4biii 24-0420 Attachment C BusAID Funding Program Guidelines](#)  
[4biv 24-0420 Attachment D Draft BusAID Funding Recommendations Presentation](#)

Date	Ver.	Action By	Action	Result
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**Subject:**  
Project Funding Recommendations for Bus Accelerated Infrastructure Delivery (BusAID) Program

Approval of approximately \$18 million in funding for near-term (quick-build) transit priority projects.

**Presenter:**  
Joel Shaffer, MTC

**Recommended Action:**  
Approval

**Attachments:**



# Regional Network Management Council

April 22, 2024

Agenda Item 4b

## Project Funding Recommendations for Bus Accelerated Infrastructure Delivery Program

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### Subject:

Approval of approximately \$18 million in funding for eight near-term transit priority projects as part of the Bay Area Transit Transformation Action Plan (TAP) Bus Accelerated Infrastructure Delivery (BusAID) program.

### Background:

In September 2021, the Commission adopted the TAP, which identified near-term actions to improve the region's transit system. The BusAID program is a TAP initiative to reduce transit travel times and improve transit reliability. BusAID emphasizes near-term, quick-build solutions to address problem "hotspot" locations identified by transit operators. Example projects include:

- Transit lanes and queue jump lanes to allow buses to bypass traffic congestion.
- Transit signal priority (TSP) to reduce transit vehicle red-light delay.
- Boarding islands or bus bulb to reduce pull-in/pull-out delay at transit stops.
- Optimizing transit stop placement & spacing to minimize delay, for example placing transit stops nearside at intersections with Stop signs, or farside at signals equipped with TSP.

Thirty million dollars has been set aside for the program, comprised of \$15 million in local State Transit Assistance (STA) Exchange funds and \$15 million in federal One Bay Area Grant 3 (OBAG 3) program Congestion Mitigation and Air Quality Improvement (CMAQ) or Surface Transportation Program (STP) funds.

### Project Selection Process:

Funding recommendations were informed by a two-stage project screening process (Table 1). After initial interviews with 21 transit operators, 87 projects were analyzed and scored in Stage 1: Analysis and Scoring. The 24 highest-scoring projects were invited to proceed into Stage 2: Feasibility/Readiness Assessment. Of these, 13 projects were submitted by six transit operators and evaluated to identify which projects should be awarded BusAID funding, with an emphasis

on near-term implementation. The other 11 projects were deferred by operators to continue project development.

**Table 1: BusAID Two-Stage Project Screening Process**

<b>Initial Project Inventory</b>	From May to July 2023, staff interviewed 21 transit operators and received 87 project considerations identified by 17 transit operators.
<b>Stage 1: Analysis &amp; Scoring</b>	Staff conducted an initial analysis and reviewed these 87 projects based on the following criteria: transit service characteristics (i.e., ridership and delay reduction potential); equity considerations; and Plan Bay Area 2050 Priority Development Areas. The top 24 projects from 11 transit operators were invited into Stage 2.
<b>Stage 2: Feasibility/Readiness Assessment</b>	Six transit operators submitted a total of 13 projects for the Feasibility/Readiness assessment, totaling over \$39 million in requested funding. A panel consisting of MTC, Caltrans, and BART staff assessed the projects based on the following criteria: <ul style="list-style-type: none"> <li>• project cost</li> <li>• current project phase</li> <li>• quick-build potential</li> <li>• schedule risk</li> <li>• project scalability</li> <li>• agency support and coordination</li> <li>• project sponsor and delivery agency</li> <li>• types of assistance needed</li> </ul>
<b>Project Funding Recommendations</b>	Eight projects identified by six operators are recommended for full or partial project funding (see Attachment A).

**Funding Recommendations:**

Based on the results of the feasibility/readiness assessment, eight projects identified by six operators are recommended for full or partial project funding (see Attachment A). Funded project phases are anticipated to be completed within the next one to three years. All projects include pre- and post-implementation evaluation to quantify project benefits. Approximately \$18 million of the \$30 million total BusAID program funding amount is recommended for project funding at this time. The remaining balance of \$12 million in the program will be reserved and awarded to other critical projects that are in development and design, but not yet ready for

implementation. Staff anticipates the BusAID program to provide re-occurring funding opportunities moving forward.

**Issues:**

None identified.

**Recommendations:**

Approval of BusAID Project Funding Recommendations listed in Attachment A.

**Attachments:**

- Attachment A: BusAID Project Funding Recommendations
- Attachment B: BusAID Complete Project Inventory
- Attachment C: BusAID Funding Program Guidelines
- Attachment D: Presentation

**Agenda Item 4b, Attachment A: BusAID Project Funding Recommendations**

<b>Project Sponsor</b>	<b>County</b>	<b>Project Title</b>	<b>Project Elements</b>	<b>Total Project Budget</b>	<b>BusAID Proposed Funding Amount &amp; Source</b> Local ( <i>STA Exchange</i> ) or Federal ( <i>OBAG 3 STP/CMAQ</i> )	<b>Project Sponsor Contribution</b> (11.47% match)	
AC Transit	Alameda	Park Street Transit Signal Priority & Signal Optimization (Alameda)	Transit signal priority	\$1.2M	<b>\$1.1M</b> Local	\$0.1M	
AC Transit	Alameda	International Boulevard Transit Lane Delineation (Oakland)	Bus lane delineation, bus lane red paint	\$4.4M	<b>\$3.9M</b> Federal	\$0.5M	
City of Concord <sup>1</sup>	Contra Costa	Monument Corridor Transit Speed Improvements (Concord)	Transit signal priority, stop relocation/spacing	\$0.4M	<b>\$0.4M</b> Local	\$0.1M	
SamTrans	San Mateo	El Camino Real Bus Boarding Islands & Bus Stop Balancing (Redwood City)	Bus boarding islands	\$1.6M	<b>\$1.4M</b> Federal	\$0.2M	
SFMTA (City of San Francisco)	San Francisco	K-Ingleside Rapid Project Ocean Avenue Quick Build (San Francisco)	Transit lanes, boarding islands, signal adjustments, turn restrictions	\$5.6M	<b>\$5.0M</b> Local (\$2.8M) Federal (\$2.2M)	\$0.6M	
Union City Transit (City of Union City)	Alameda	Alvarado-Niles Road Part-Time Transit Lane Pilot (Union City)	Part-time bus lane pilot	\$1.7M	<b>\$1.5M</b> Local	\$0.2M	
City of San Jose <sup>2</sup>	Santa Clara	Vision Zero East San Jose Safety Corridor Project for Senter Road (San Jose)	Bus boarding islands	\$4.5M	<b>\$4.0M</b> Federal	\$0.5M	
City of San Jose <sup>2</sup>	Santa Clara	Cloud-Based Transit Signal Priority at 174 Intersections along VTA's Frequent Network (San Jose)	Cloud-based (next generation) transit signal priority	\$1.1M	<b>\$1.0M</b> Local	\$0.1M	
				<b>TOTAL</b>	<b>\$20.5M</b>	<b>\$18.3M</b> Local (\$6.8M) Federal (\$11.5M)	<b>\$2.3M</b>

*Note: Each project sponsor was capped at a maximum of two projects and/or \$5 million total. All projects include funding through full or partial construction, except for El Camino Real (planning/design funding only). Construction projects receiving partial funding are scalable. Total project budget may not match due to rounding.*

<sup>1</sup>Project identified by County Connection but being implemented by the City of Concord.

<sup>2</sup>Project identified by VTA but being implemented by the City of San Jose.

**Agenda Item 4b, Attachment B: BusAID Complete Project Inventory**

<b>Operator that Identified Project</b>	<b>County</b>	<b>Project Title</b>	<b>Project Elements</b>	<b>Project Status</b>
AC Transit	Alameda	International Boulevard Transit Lane Delineation (Oakland)	Bus lane delineation, bus lane red paint	Recommended for funding – see Attachment A
AC Transit	Alameda	Park Street Transit Signal Priority & Signal Optimization (Alameda)	Transit signal priority	Recommended for funding – see Attachment A
AC Transit	Alameda	Fremont Boulevard Cloud-Based Transit Signal Priority (Fremont)	Cloud-based (next generation) transit signal priority	Advanced to Feasibility/Readiness Assessment – deferred by operator
AC Transit	Alameda	Shattuck/University Red Paint & Signage (Berkeley)	Bus lane red paint, signage	Did not advance to Feasibility/Readiness Assessment
AC Transit	Contra Costa	MacDonald Avenue Complete Street (Richmond)	Road diet, pedestrian and bus elements, bus/bike channelization	Did not advance to Feasibility/Readiness Assessment
BART	Contra Costa	El Cerrito del Norte BART Station Access (El Cerrito)	Bus lane, separated bike lane	Did not advance to Feasibility/Readiness Assessment
CityBus	Sonoma	Downtown Station Area Transit Signal Priority (Santa Rosa)	Transit signal priority	Advanced to Feasibility/Readiness Assessment – deferred by operator
CityBus	Sonoma	Route 2/2B Transit Signal Priority & Bus Lane (Santa Rosa)	Transit signal priority, bus lane	Advanced to Feasibility/Readiness Assessment – deferred by operator
CityBus	Sonoma	Route 1 Transit Signal Priority & Stop Improvements (Santa Rosa)	Transit signal priority, stop amenities	Advanced to Feasibility/Readiness Assessment – deferred by operator
CityBus	Sonoma	Santa Rosa Avenue Transit Signal Priority (Santa Rosa)	Transit signal priority	Did not advance to Feasibility/Readiness Assessment
CityBus	Sonoma	North SMART Station to Coddington Transit Hub Connections (Santa Rosa)	Transit signal priority, pedestrian/bike improvements	Did not advance to Feasibility/Readiness Assessment
CityBus	Sonoma	Transit Mall to SMART Station Connections (Santa Rosa)	Stop relocation and design	Did not advance to Feasibility/Readiness Assessment
CityBus	Sonoma	Montgomery Village Transit Hub Access (Santa Rosa)	Transit signal priority, bus stop design, pedestrian access improvements	Did not advance to Feasibility/Readiness Assessment
County Connection	Contra Costa	Monument Corridor Transit Speed Improvements (Concord)	Transit signal priority, stop relocation/spacing	Recommended for funding – see Attachment A
County Connection	Contra Costa	Clayton Road Service Improvements: The Alameda to Ygnacio Valley (Concord)	Transit signal priority, bus stop consolidation and relocation	Did not advance to Feasibility/Readiness Assessment
County Connection	Contra Costa	Treat Boulevard Service Improvements (Concord, Walnut Creek)	Transit signal priority, bus stop consolidation and relocation	Did not advance to Feasibility/Readiness Assessment
County Connection	Contra Costa	Salvio Street Service Improvements (Concord)	Transit signal priority, bus stop consolidation and relocation	Did not advance to Feasibility/Readiness Assessment
County Connection	Contra Costa	Clayton Road Service Improvements: Market to Fry (Concord)	Transit signal priority, bus stop consolidation and relocation	Did not advance to Feasibility/Readiness Assessment
County Connection	Contra Costa	Concord Avenue Planning Study (Concord)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment

<b>Operator that Identified Project</b>	<b>County</b>	<b>Project Title</b>	<b>Project Elements</b>	<b>Project Status</b>
County Connection	Contra Costa	Contra Costa Boulevard Planning Study (Concord)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
County Connection	Contra Costa	East Street Service Improvements (Concord)	Transit signal priority, bus stop consolidation and relocation	Did not advance to Feasibility/Readiness Assessment
County Connection	Contra Costa	Crecent Plaza Planning Study (Pleasant Hill)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
County Connection	Contra Costa	Ygnacio Valley Road Service Improvements (Walnut Creek)	Transit signal priority, bus stop consolidation and relocation	Did not advance to Feasibility/Readiness Assessment
County Connection	Contra Costa	Locust/Mount Diablo Intersection Improvements (Walnut Creek)	Transit signal priority, stop design, stop consolidation	Did not advance to Feasibility/Readiness Assessment
County Connection	Contra Costa	Railroad Avenue Planning Study (Danville)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
County Connection	Contra Costa	California Road Service Improvements (Walnut Creek)	Transit signal priority, bus stop consolidation and relocation	Did not advance to Feasibility/Readiness Assessment
Dixon Redit-Ride	Solano	First Street Planning Study (Dixon)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
FAST	Solano	Beck Avenue Planning Study (Fairfield)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
FAST	Solano	Business Center Drive Planning Study (Fairfield)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
FAST	Solano	Air Base Parkway Planning Study (Fairfield)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
FAST	Solano	West Texas Street Planning Study (Fairfield)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
Golden Gate Transit	Marin	Extension of HOV Hours on Southbound US-101 (Novato, San Rafael)	Signage extending HOV hours	Advanced to Feasibility/Readiness Assessment – deferred by operator
Golden Gate Transit	Marin	Extension of HOV Hours on Northbound US-101 (San Rafael, Larkspur, Corte Madera)	Signage extending HOV hours	Advanced to Feasibility/Readiness Assessment – deferred by operator
Golden Gate Transit	Marin	US-101/Tamalpais Interchange Design (Corte Madera)	Transit signal priority, queue jump lanes	Did not advance to Feasibility/Readiness Assessment
Golden Gate Transit	Marin	Alexander Avenue Stop Access Improvements for Pedestrians and Bicyclists (Unincorporated Marin County)	Pedestrian and bicyclist access improvements	Did not advance to Feasibility/Readiness Assessment
LAVTA	Alameda	Route 10R Transit Signal Priority (Pleasanton, Livermore)	Transit signal priority and on-board bus equipment, queue jump lane	Did not advance to Feasibility/Readiness Assessment

<b>Operator that Identified Project</b>	<b>County</b>	<b>Project Title</b>	<b>Project Elements</b>	<b>Project Status</b>
LAVTA	Alameda	Route 30R Transit Signal Priority (Dublin, Livermore)	Transit signal priority and on-board bus equipment	Did not advance to Feasibility/Readiness Assessment
LAVTA	Alameda	Route 8 Transit Signal Priority (Pleasanton)	Transit signal priority and on-board bus equipment	Did not advance to Feasibility/Readiness Assessment
Marin Transit	Marin	Lincoln Avenue Transit Priority Treatments & Stop Improvements (San Rafael)	Transit signal priority, bus islands, queue jump lanes	Advanced to Feasibility/Readiness Assessment – deferred by operator
Marin Transit	Marin	South Novato Boulevard Transit Priority Treatments & Stop Improvements (Novato)	Transit signal priority, bus islands, queue jump lanes	Did not advance to Feasibility/Readiness Assessment
Marin Transit	Marin	Southbound US-101 Part-Time Transit Lanes (Novato, San Rafael)	Part-time transit lanes	Did not advance to Feasibility/Readiness Assessment
Marin Transit	Marin	Northbound US-101 Interchange Designs (Mill Valley, Larkspur, Corte Madera, San Rafael, Unincorporated Marin County)	Stop design and configuration	Did not advance to Feasibility/Readiness Assessment
Marin Transit	Marin	Fouth Street Transit Priority Treatments & Stop Improvements (San Rafael)	Transit signal priority, bus islands, queue jump lanes	Did not advance to Feasibility/Readiness Assessment
NVTA	Napa	SR-29 Transit Signal Priority, Queue Jumps, & Stop Improvements (American Canyon)	Transit signal priority, queue jump lanes, stop design and configuration	Advanced to Feasibility/Readiness Assessment – deferred by operator
SamTrans	San Mateo	El Camino Real Bus Boarding Islands & Bus Stop Balancing (Redwood City)	Bus boarding islands and stop balancing	Recommended for funding of planning and design phases– see Attachment A
SamTrans	San Mateo	El Camino Real Transit Priority Treatments (San Mateo)	Curbside bus lanes, bus bulbs, pedestrian access improvements	Advanced to Feasibility/Readiness Assessment – deferred by operator
SamTrans	San Mateo	El Camino Real Transit Priority Treatments (Millbrae)	Curbside bus lanes, bus bulbs, pedestrian access improvements	Advanced to Feasibility/Readiness Assessment – deferred by operator
SamTrans	San Mateo	El Camino Real Transit Priority Treatments (Belmont)	Queue jump lane, bus bulbs, pedestrian access improvements	Advanced to Feasibility/Readiness Assessment – deferred by operator
SamTrans	San Mateo	El Camino Real Transit Priority Treatments (San Carlos)	Curbside bus lanes, bus bulbs, pedestrian access improvements	Advanced to Feasibility/Readiness Assessment – deferred by operator
SamTrans	San Mateo	Mission Street Transit Priority Treatments – North (Daly City)	Bus bulbs, pedestrian access improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	Mission Street Transit Priority Treatments – South (Daly City)	Bus bulbs, pedestrian access improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	El Camino Real/First Stop Improvements (South San Francisco)	Bus bulbs, pedestrian access improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	Broadway Planning Study (Burlingame)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	Millbrae Avenue Planning Study (Millbrae)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	Willow Street Planning Study (Menlo Park, East Palo Alto)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment

<b>Operator that Identified Project</b>	<b>County</b>	<b>Project Title</b>	<b>Project Elements</b>	<b>Project Status</b>
SamTrans	San Mateo	Middlefield/Oak Grove Stop Improvements (Atherton)	Stop boarding island	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	Grand Avenue Planning Study (South San Francisco)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	Serramonte Center Planning Study (Daly City)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	Mission/John Daly Planning Study (Daly City)	Study to evaluate intersection congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	Mission/San Pedro Planning Study (Daly City, Colma)	Study to evaluate intersection congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	SR-1/Rockaway Beach Stop Improvements (Pacifica)	Stop relocation, pedestrian access improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	El Camino Real Planning Study: Charter to Northumberland (Redwood City, Unincorporated San Mateo County)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	El Camino Real Planning Study: Barneson to Bovet (San Mateo)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	El Camino Real Planning Study: SR-84 to Cedar (Redwood City)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	SR-92/I-280 Interchange Improvements (Unincorporated San Mateo County)	Transit signal priority, queue jump lanes	Did not advance to Feasibility/Readiness Assessment
SamTrans	San Mateo	SR-92/Main Intersection Improvements (Half Moon Bay)	Transit signal priority, queue jump lanes	Did not advance to Feasibility/Readiness Assessment
SFMTA	San Francisco	K-Ingleside Rapid Project Ocean Avenue Quick Build (San Francisco)	Transit lanes, boarding islands, signal adjustments, turn restrictions	Recommended for funding – see Attachment A
SFMTA	San Francisco	McAllister St Transit Priority Treatments (San Francisco)	Transit lanes, transit signal priority, stop reconfiguration	Performed well in Feasibility/Readiness Assessment. Deferred by SFMTA due to \$5M total recommended funding
SolTrans	Solano	Sonoma Boulevard (SR-29) Transit Signal Priority (Vallejo)	Transit signal priority and on-board bus equipment	Advanced to Feasibility/Readiness Assessment – deferred by operator
Sonoma County Transit	Sonoma	SR-12 Planning Study (Unincorporated Sonoma County)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
Sonoma County Transit	Sonoma	Rohnert Park Expressway Planning Study (Rohnert Park)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment



<b>Operator that Identified Project</b>	<b>County</b>	<b>Project Title</b>	<b>Project Elements</b>	<b>Project Status</b>
Sonoma County Transit	Sonoma	Old Redwood Highway/Lakewood Planning Study (Windsor)	Study to evaluate intersection congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
Sonoma County Transit	Sonoma	SR-12/SR-116 Planning Study (Sebastopol)	Study to evaluate intersection congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
Tri Delta	Contra Costa	Hillcrest Avenue Signal Timing Optimization (Antioch)	Signal coordination/retiming	Did not advance to Feasibility/Readiness Assessment
Tri Delta	Contra Costa	Railroad Avenue Signal Timing Optimization (Pittsburg)	Signal coordination/retiming	Did not advance to Feasibility/Readiness Assessment
Tri Delta	Contra Costa	Bailey Road Signal Timing Optimization (Pittsburg)	Signal coordination/retiming	Did not advance to Feasibility/Readiness Assessment
Union City Transit	Alameda	Alvarado-Niles Road Part-Time Transit Lane Pilot (Union City)	Part-time bus lane pilot	Recommended for funding – see Attachment A
Union City Transit	Alameda	Whipple Road Planning Study (Union City)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
Union City Transit	Alameda	Union City Boulevard Planning Study (Union City)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
Union City Transit	Alameda	Dyer Street Planning Study (Union City)	Study to evaluate segment congestion and identify potential improvements	Did not advance to Feasibility/Readiness Assessment
Union City Transit	Alameda	Whipple/Railroad Transit Signal Priority & Queue Jump Lane (Union City)	Transit signal priority, queue jump lane	Did not advance to Feasibility/Readiness Assessment
Union City Transit	Alameda	Whipple/Central Transit Signal Priority & Traffic Regulations (Union City)	Transit signal priority, traffic regulations (bus exemption)	Did not advance to Feasibility/Readiness Assessment
VTA	Santa Clara	Vision Zero East San Jose Safety Corridor Project for Senter Road (San Jose)	Bus boarding islands	Recommended for funding – see Attachment A
VTA	Santa Clara	Cloud-Based Transit Signal Priority at 174 Intersections along VTA's Frequent Network (San Jose)	Cloud-based (next generation) transit signal priority	Recommended for funding – see Attachment A
VTA	Santa Clara	Route 61 Boarding Islands & Signal Retiming (San Jose)	Boarding islands, signal timing adjustments	Ranked lower than other VTA projects in Feasibility/Readiness Assessment, (each operator capped at two projects)
VTA	Santa Clara	MacLaughlin Boarding Islands (San Jose)	Boarding islands	Ranked lower than other VTA projects in Feasibility/Readiness Assessment, (each operator capped at two projects)
VTA	Santa Clara	King Road Complete Streets Project (San Jose)	Bus lanes, boarding islands, signal upgrades	Did not advance to Feasibility/Readiness Assessment



## **Bus Accelerated Infrastructure Delivery (BusAID)**

### Program Guidelines

#### Program Overview & Purpose

In September 2021, the Commission adopted the [Transit Transformation Action Plan \(TAP\)](#), which identified near-term actions to improve the region's transit system. The BusAID program is a TAP initiative to reduce transit travel times and improve transit reliability for the most people as quickly as possible while centering on populations that depend on transit the most. BusAID emphasizes near-term, quick-build solutions to address problem "hotspot" locations.

As of spring 2024, \$30 million dollars has been set aside for the program, comprised of \$15 million in local State Transit Assistance (STA) Exchange funds and \$15 million of federal One Bay Area Grant 3 (OBAG 3) program Congestion Mitigation and Air Quality Improvement (CMAQ) or Surface Transportation Program (STP) funds.

#### Eligible Applicants & Projects

BusAID focuses on transit priority projects that address hotspot locations with transit travel time or reliability issues, identified by transit operators or right-of-way agencies (i.e., cities, counties, Caltrans). Projects may include elements that address the specific types of delay that a transit vehicle experiences at a hotspot, such as:

- **Transit Lanes or Queue Jump Lanes:** for transit vehicles and high-occupancy vehicles (HOVs) to bypass traffic queues during times with traffic congestion.
- **Transit Signal Priority (TSP):** modified traffic signal timing so transit vehicles encounter a green light or reduced wait times at intersections with traffic signals.
- **Transit Stop Placement & Spacing:** locations for transit stops that minimize delay and optimize stop frequency (to balance convenient stop access with efficient operations).
- **Transit Stop Design:** constructing boarding islands or bus bulbs to eliminate the delays caused by buses pulling in and out of traffic while accessing transit stops.

After screening, if a project is selected for BusAID funding, the project may be sponsored and/or implemented by either a Bay Area transit operator and/or a right-of-way agency.

#### Evaluation Process

Once hotspot locations with transit travel time or reliability issues have been identified by transit operators and right-of-way agencies, BusAID funding recommendations are informed by a two-stage screening process (Table 1).

*Stage 1: Hotspot Project Analysis & Scoring*

In Stage 1, hotspot projects are analyzed and scored based on criteria related to transit service characteristics, equity considerations, and Plan Bay Area 2050 Priority Development Areas. Criteria are focused on characteristics of the transit routes that pass through the hotspot location, as opposed to the hotspot location itself. For example, the equity criterion evaluates the demographics of riders on routes passing through the hotspot and whether routes passing through the hotspot provide service to Equity Priority Communities.

The hotspot score threshold to advance to the second stage was set differently for higher-ridership and lower-ridership operators to advance projects from operators of different sizes throughout the Bay Area. The operator ridership threshold was 500,000 riders per month. Higher-ridership operators are those with more than 500,000 riders per month, and lower-ridership operators are those with fewer than 500,000 riders per month.

*Stage 2: Feasibility/Readiness Assessment*

The second stage is a feasibility/readiness assessment conducted by a panel comprised of MTC staff and external agency staff. This assessment evaluates whether a high-scoring hotspot project is appropriate for BusAID funding, given the program’s emphasis on near-term implementation (i.e., targeted project completion within 18 to 24 months of funding awards).

If the feasibility/readiness assessment panel determines that a project is appropriate for BusAID funding, funding recommendations are routed through the MTC Regional Network Management bodies for official funding approval and the MTC Programming & Allocations Committee for funding disbursement.

**Table 1: BusAID Two-Stage Project Screening Process**

<p><b>Stage 1: Analysis &amp; Scoring</b></p>	<p>Initial analysis and review based on the following criteria:</p> <ul style="list-style-type: none"> <li>● Transit Service (60%) <ul style="list-style-type: none"> <li>○ Total ridership through project location <ul style="list-style-type: none"> <li>▪ Weekday and weekend average loads at hotspot location.</li> <li>▪ Weekday and weekend number of trips at hotspot location.</li> </ul> </li> <li>○ Potential delay reduction from project <ul style="list-style-type: none"> <li>▪ Estimated delay reduction based on proposed transit priority treatment types and quantities (TCRP values).</li> <li>▪ Total potential reduction in average person-delay calculated by multiplying ridership and delay reduction figures.</li> </ul> </li> </ul> </li> <li>● Equity (30%) <ul style="list-style-type: none"> <li>○ Rider demographics data (race, income, English proficiency, zero-vehicle households, age, people with disabilities, single parent</li> </ul> </li> </ul>
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	<p>families, rent-burdened households) for census tracts served by routes passing through hotspot location.</p> <ul style="list-style-type: none"> <li>○ Presence of Equity Priority Community (EPC) census tracts served by routes passing through hotspot location, as a proportion of all census tracts served by routes passing through hotspot location.</li> <li>● Priority Development Areas (10%) <ul style="list-style-type: none"> <li>○ Number of routes passing through hotspot location that serve one or more Plan Bay Area 2050 Priority Development Areas, as a proportion of all routes passing through hotspot location.</li> </ul> </li> </ul>
<p><b>Stage 2: Feasibility/ Readiness Assessment</b></p>	<p>Assessment of the projects based on the following criteria:</p> <ul style="list-style-type: none"> <li>● project cost</li> <li>● current project phase</li> <li>● quick-build potential</li> <li>● schedule risk</li> <li>● project scalability</li> <li>● agency support and coordination</li> <li>● project sponsor and delivery agency</li> <li>● types of assistance needed</li> </ul>

Funding Targets

The BusAID program has the following targets/goals, though actual apportionments are subject to change, depending on hotspot submissions and the results of the two-stage screening process.

- **Near-term Implementation:** At least 80% of awarded funds allocated to projects at the implementation/construction phase which can be completed within 18-24 months (i.e., quick-build projects), with the remaining funds allocated to projects at the implementation/construction phase which cannot be completed within 18-24 months (i.e., non-quick-build projects) and/or projects at earlier phases of delivery. This ensures a majority of project funding is dedicated to quick-build projects that provide rider benefits sooner.
- **Operator & Sponsor Diversity:** Up to 20% of awarded funds allocated to projects at locations primarily served by lower-ridership operators, with the remaining funds allocated to projects at locations primarily served by high-ridership operators. This ensures funds are dedicated to projects that benefit lower-ridership operators.

Funding awards to any given project and/or sponsor are capped at a maximum of \$5 million and/or two projects.

- **Regional Diversity:** Award funds to projects throughout the Bay Area to ensure funds benefit transit riders throughout the region.

### BusAID Requirements

If awarded funding, a project sponsor must follow BusAID project requirements and approval processes. Note that requirements and processes differ based on the funding source awarded.

- **Provide 11.47% minimum local funding match**
- Develop BusAID supplement to MTC/agency master funding agreement
- **Federally-Funded Projects (e.g., OBAG 3 STP/CMAQ) only:**
  - Enter project into MTC's [Fund Management System \(FMS\)](#)
  - Secure [Resolution of Local Support](#)
    - *Add project to the Transportation Improvement Program (TIP)*
  - Submit [Request for Authorization \(RFA\) for an E-76 \(Obligation\)](#) to Caltrans
    - *Approve E-76*
- **Establish project single point of contact**
- Attend a project kick-off meeting
- **Develop regular progress reports and/or** attend regular check-in meetings
- **Perform pre-/post-implementation data collection and analysis to determine project effectiveness**
- **Adhere to funding expiration dates set by MTC/OBAG**
- **Adhere to standard OBAG funding requirements**

Key:

**Project Sponsor action**

Project Sponsor & MTC action

*MTC and/or Caltrans & FHWA  
action*

### Future Funding Cycles and Opportunities

BusAID recommends funding \$18.3M of projects in the 2024 BusAID cycle. Staff anticipates future BusAID funding cycles utilizing the remaining \$11.7M of the \$30M currently set aside, and/or any additional funds identified for the program.



    TRANSIT TRANSFORMATION  
**ACTION PLAN**

# **Bus Accelerated Infrastructure Delivery (BusAID): Draft Funding Recommendations**

Regional Network Management Council

April 22, 2024 – Agenda Item 4b Attachment D

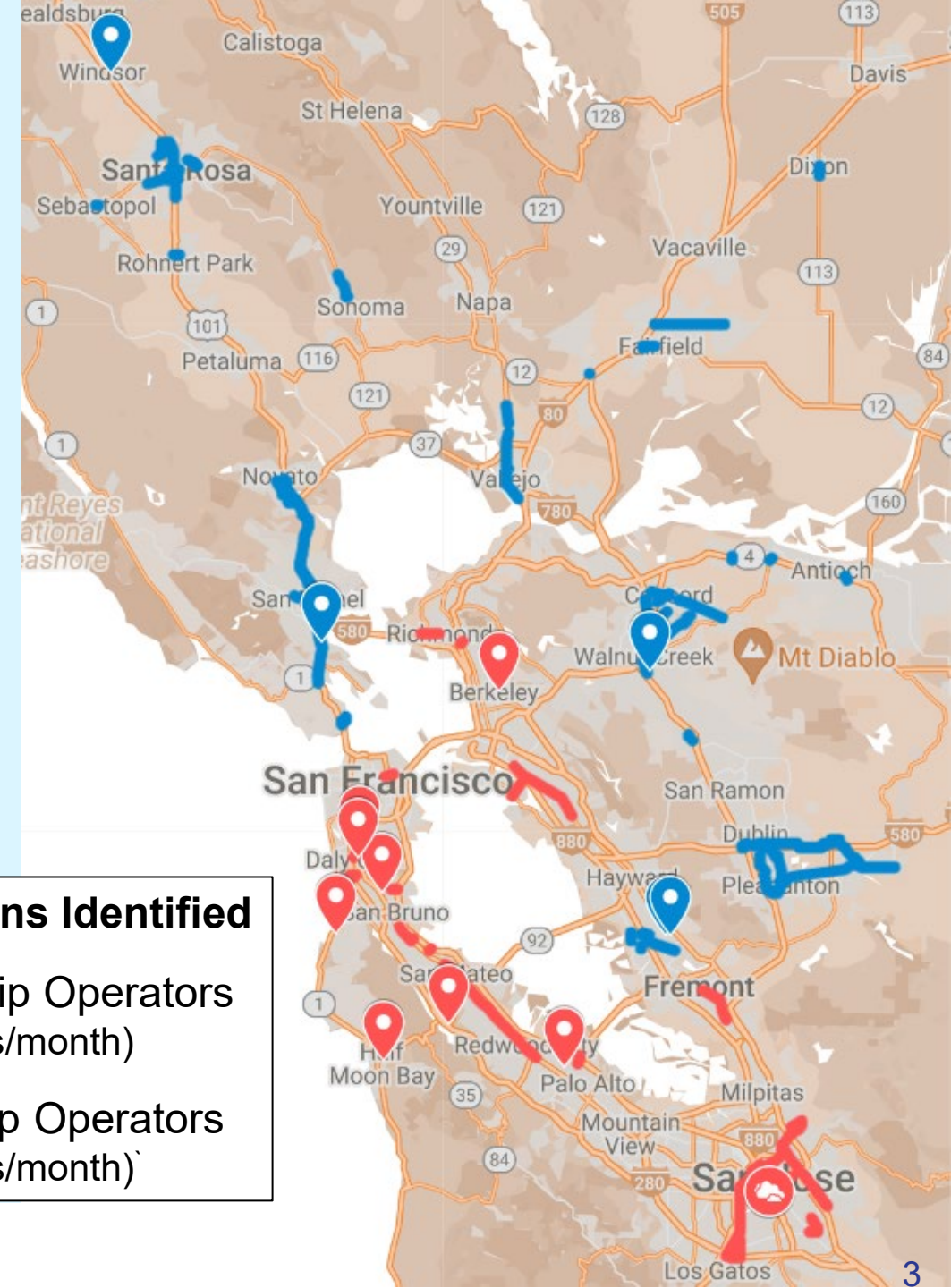
# BusAID Program Overview

- Transit Transformation Action Plan (TAP) initiative to **reduce transit travel times and improve transit reliability**.
- Emphasizes **near-term (quick-build) solutions** at problem **“hotspot” locations** identified by transit operators.
- Comprised of **\$30 million total funding**:
  - \$15 million of local funds (*STA Exchange funds*)
  - \$15 million of federal funds (*OBAG 3 STP/CMAQ funds*)



# Initial Hotspot Screening

- Interviews in summer 2023 with 21 transit operators
- 87 hotspot locations identified for potential projects



**Hotspot Locations Identified**

- Higher-ridership Operators (>500,000 riders/month)
- Lower-ridership Operators (<500,000 riders/month)

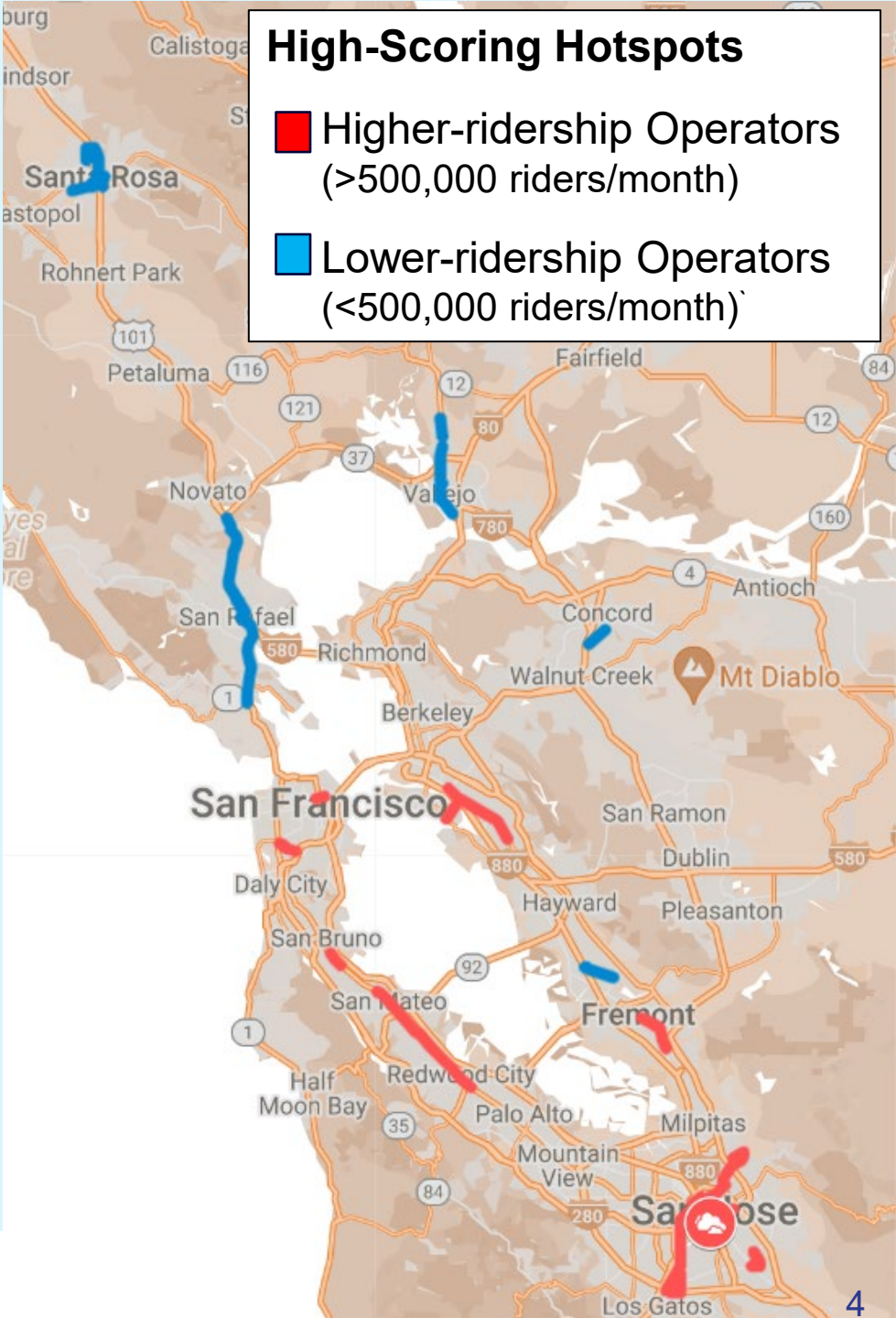


# Hotspot Project Evaluation (Stage 1)

Scoring Criteria	Metrics	Weighting
Transit Service	<ul style="list-style-type: none"> <li>Total ridership</li> <li>Potential delay reduction</li> </ul>	60%
Equity	<ul style="list-style-type: none"> <li>Rider demographics</li> <li>Presence of Equity Priority Community (EPC)</li> </ul>	30%
PDA	<ul style="list-style-type: none"> <li>Presence of Priority Development Area (PDA)</li> </ul>	10%

Projects that scored well in Stage 1 were advanced to Stage 2 (Feasibility/Readiness Assessment)

- 14 higher-ridership projects scored more than 40 points
- 10 lower-ridership projects scored more than 30 points





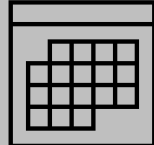


# Feasibility/Readiness Assessment (Stage 2)

- ▶ 24 projects invited to submit
  - ▶ All counties had at least one qualifying project invited to Stage 2 review
  - ▶ North Bay agencies deferred submission pending project development
- ▶ 13 project submissions:

Higher Ridership Operators	Lower Ridership Operators
AC Transit: 2 SamTrans: 3 SFMTA: 2 VTA: 4	County Connection: 1 Union City Transit: 1

- ▶ Assessment by MTC, BART, Caltrans staff

### Feasibility/Readiness Evaluation Criteria

			
Project Cost	Project Delivery Phase	Quick-Build Potential	Schedule Risk
			
Scalability	ROW Agency Support/Coordination	Project Sponsor & Delivery Agency	Type(s) of Assistance Needed

# Principles of Funding Recommendations

- ▶ **Operator Diversity:** Max of 2 projects and/or \$5 million to each operator
- ▶ **Phased Funding Approach:** Awarding approximately \$18 million now, while reserving approximately \$12 million for projects that deferred or are still in project development
- ▶ **Project Variety:** Emphasis on quick-build while also supporting some projects in planning/design phase

## Sample of Deferred Projects (North Bay)

Agency	County	Project(s)
CityBus	Sonoma	Downtown Station Area Transit Signal Priority (TSP); Route #1 TSP; Route #2/2B TSP & Bus Lane
Marin Transit	Marin	Lincoln Ave (TSP, bus islands and/or queue jump lanes)
NVTA	Napa	SR-29 TSP & Queue Jumps
Soltrans	Solano	SR-29 (Sonoma Blvd) TSP

# Draft Funding Recommendations

8 projects submitted by 6 operators

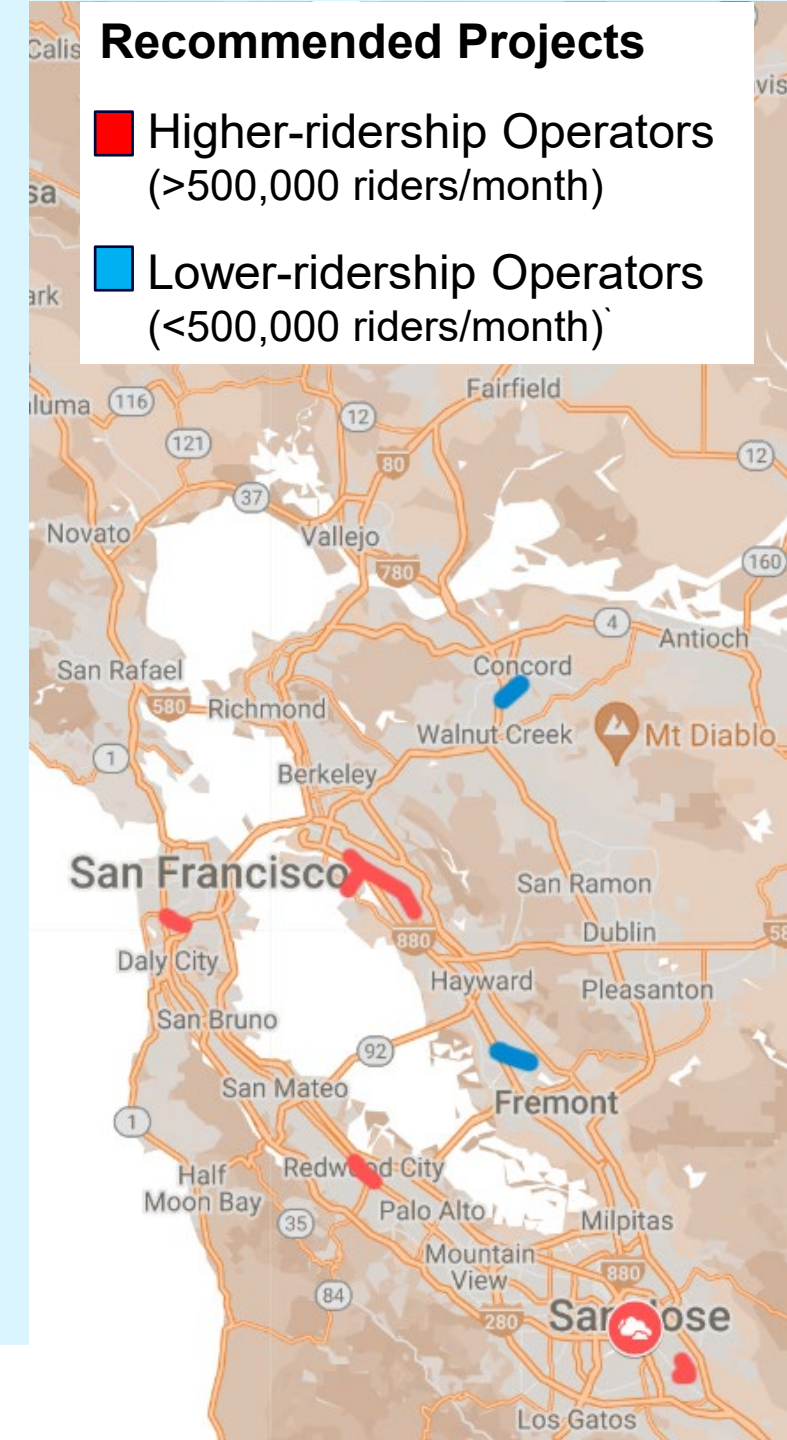
Project Sponsor	Project Title	Proposed Funding
AC Transit	Park St Transit Signal Priority & Signal Optimization	<b>\$1.1M</b>
AC Transit	International Blvd Transit Lane Delineation	<b>\$3.9M</b>
City of Concord <sup>1</sup>	Monument Corridor Transit Speed Improvements	<b>\$0.4M</b>
SamTrans	El Camino Real Bus Boarding Islands & Bus Stop Balancing in Redwood City	<b>\$1.4M</b>
SFMTA	K-Ingleside Rapid Project Ocean Ave Quick Build	<b>\$5.0M</b>
Union City Transit	Alvarado-Niles Rd Part-Time Transit Lane Pilot	<b>\$1.5M</b>
City of San Jose <sup>2</sup>	Vision Zero East San Jose Safety Corridor Project for Senter Rd ( <i>bus boarding islands</i> )	<b>\$4.0M</b>
City of San Jose <sup>2</sup>	Cloud-Based Transit Signal Priority at 174 Intersections along VTA's Frequent Network	<b>\$1.0M</b>
<b>TOTAL</b>		<b>\$18.3M</b>

<sup>1</sup> Project identified by County Connection but being implemented by the City of Concord.

<sup>2</sup> Project identified by VTA but being implemented by the City of San Jose.

## Recommended Projects

- Higher-ridership Operators (>500,000 riders/month)
- Lower-ridership Operators (<500,000 riders/month)



# Approval & Next Steps

**Requested Action Today: Staff recommends RNM Council approval of the draft BusAID funding recommendations.**

## Pending RNM Council approval:

### ▶ **Programming & Allocations Committee (5/8)**

- ▶ Approval: allocation of funds to BusAID projects  
*(consent item contingent on April RNM Council and May RNM Committee approval)*

### ▶ **RNM Committee (5/10)**

- ▶ Action: approve project funding recommendations  
*(contingent on April RNM Council approval)*

### ▶ **MTC Commission (5/22)**

- ▶ Resolution: BusAID project funding recommendations

## Next Steps:

- ▶ Funded projects anticipated to be completed in the next 1 to 3 years
  - ▶ Pre- and post-implementation evaluation will quantify project benefits
- ▶ Reserving \$12 million for future funding rounds (new projects and/or previously reviewed projects)
- ▶ Coordinating various MTC Transit Priority efforts



# Metropolitan Transportation Commission

375 Beale Street, Suite 800  
San Francisco, CA 94105

## Legislation Details (With Text)

**File #:** 24-0425      **Version:** 1      **Name:**

**Type:** Action Item      **Status:** Committee Approval

**File created:** 3/8/2024      **In control:** Regional Network Management Council

**On agenda:** 4/22/2024      **Final action:**

**Title:** Regional Network Management Performance Measures

The Regional Network Management Council’s Charter and Work Plan call for the development of new performance measures that provide insight into the experience of transit riders and an overview of transit operations in the region, and that inform the continuous improvement of the RNM framework. This item presents a refined approach initial RNM performance measures based on feedback from the RNM Council’s March 2024 meeting

**Sponsors:**

**Indexes:**

**Code sections:**

- Attachments:** [4c Summary Sheet RNM Performance Measures April 2024](#)  
[4ci AttA RNM Performance Measures March Comments Summary](#)  
[4cii AttB RNM Performance Measures](#)  
[4ciii AttC RNM Performance Measures Presentation April 2024](#)

Date	Ver.	Action By	Action	Result
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**Subject:**

Regional Network Management Performance Measures

The Regional Network Management Council’s Charter and Work Plan call for the development of new performance measures that provide insight into the experience of transit riders and an overview of transit operations in the region, and that inform the continuous improvement of the RNM framework. This item presents a refined approach initial RNM performance measures based on feedback from the RNM Council’s March 2024 meeting

**Presenter:**

Allison Quach, MTC and Hannah Lindelof, BART

**Recommended Action:**

Approval

**Attachments:**

# Regional Network Management Council

April 22, 2024

Agenda Item 4c

## Regional Network Management Performance Measures

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### **Subject:**

Staff will present initial Regional Network Management (RNM) performance measures for action by the RNM Council.

### **Background:**

In February 2023, the Commission approved the RNM framework (MTC Resolution No. 4564), which included the creation of a Regional Network Management (RNM) Council. The RNM framework calls for the development of key performance indicators (KPIs) to track performance of the RNM. During the November and December 2023 discussions with the RNM Council and RNM Committee about the RNM Council's Work Plan, the members emphasized the importance of performance measures for both tracking and also communicating progress towards achieving tangible outcomes for riders.

Staff presented draft RNM performance measures at the March 18, 2024 RNM Council meeting. RNM Council members emphasized the importance for performance measures to evolve over time, the need to contextualize performance in the larger context in which transit operates, being thoughtful about holding operators and other parties accountable, and ensuring that staff capacity exists to implement the adopted measures. In addition, Council members identified the need to work towards including additional measures of reliability or delay (such as travel times and speeds), accessibility and paratransit, and capturing other ways that operators coordinate (e.g., providing mutual aid). Staff responses to address RNM Council comments are summarized in Attachment A.

At the end of 2023, the California State Transportation Agency (CalSTA) convened a statewide Transit Transformation Task Force, supported by a Technical Working Group, to develop policy recommendations to grow transit ridership, improve the transit experience and address long-term operational needs. The Task Force and Working Group are also considering objectives, goals and

standards for transit; with numerous members from the Bay Area, staff will continue to track state-led efforts and strive for alignment where appropriate.

Attachment B summarizes the proposed types and categories of measures, initial performance measures, the long-term vision for performance measure reporting, and potential future measures.

**Next Steps:**

Following endorsement by the RNM Council, staff will present the proposed RNM performance measures to the RNM Customer Advisory Group in April for additional feedback, and subsequently to the RNM Committee in May for approval.

Moving forward, MTC and operator staff will work to collect and aggregate data, begin scoping the regional rider survey, and monitor and coordinate with state efforts.

**Issues:**

None identified.

**Recommendations:**

Approval of the initial set of RNM performance measures as presented in Attachment B, and of the proposed approach to evolve performance measure reporting moving forward.

**Attachments:**

- Attachment A: Summary of RNM Council Comments
- Attachment B: RNM Performance Measures
- Attachment C: Presentation



## Regional Network Management Performance Measures – Summary of RNM Council Comments

On March 25, 2024, staff presented draft Regional Network Management (RNM) Performance Measures to the RNM Council. The table below summarizes comments received from the RNM Council and staff responses and recommendations.

RNM Council Comments (Summarized)	Staff Response/ Recommendation
<p><b>What data will be used for on-time performance?</b></p>	<p>A variety of approaches are under consideration for reporting on-time performance at the regional level, such as compiling reporting by individual operators or using regionally-available data such as GTFS feeds. In developing this performance measure, MTC and operator staff will discuss the best approach for regional reporting to address variability in definitions of on-time performance, where headway adherence is more appropriate than schedule adherence, appropriate disaggregation, etc.</p>
<p><b>Transit delay and/or transit speeds are important measures of reliability. In addition to comparing transit speeds to average auto speeds, it may be helpful to include comparisons to roadway speed limits.</b></p>	<p>We added a transit speeds metric to the list of initial measures. Staff have been examining the feasibility of regular reporting on transit speeds, and data are generally available (for example, Cal-ITP data was used for the Transit 2050+ Existing Conditions, Needs, and Gaps analysis). Additional work is needed to identify which corridors/routes to prioritize for reporting, and to establish processes to streamline analysis.</p> <p>As staff move this measure forward, we will assess the feasibility of comparisons to both auto speeds and posted speed limits, to help contextualize reporting of transit speeds.</p>
<p><b>Transit travel time (wait times, overall travel time) and competitiveness compared to driving are important factors in influencing travel behavior.</b></p>	<p>These were identified as potential future measures since additional work is needed to develop estimates of transit and auto travel times and to define representative origin-destination pairs to prioritize for reporting. The list of potential future measures has been added to the presentation materials.</p>

RNM Council Comments (Summarized)	Staff Response/ Recommendation
<p><b>It will be important to develop more metrics for accessibility and paratransit.</b></p>	<p>Where feasible (e.g., data are available and can be collected), proposed initial metrics such as ridership and on-time performance will be disaggregated for paratransit services. MTC and operator staff focused on paratransit and accessibility will continue to work to develop additional measures – both for specific projects (e.g., one-seat ride pilots) and for paratransit more broadly.</p>
<p><b>How can we capture different perspectives on transit (e.g., riders, non-riders, new riders, etc.)?</b></p>	<p>Staff are working to develop a regional transit rider experience survey for RNM. While initial discussions have been focused on expanding existing customer satisfaction/experience surveys, this effort will also explore ways to consider other perspectives, including non-riders.</p>
<p><b>Can performance measures capture other ways that operators coordinate with each other, such as providing mutual aid (e.g., bus bridges)?</b></p>	<p>Staff will investigate how mutual aid efforts can be collected/shared in RNM performance measure reporting, or in other venues. One venue, for example, may be describing mutual aid efforts as context for the reliability category of measures.</p>
<p><b>How can we consider revenue recovery in comparison to ridership in evaluating various fare pilots (e.g. reduced fares, Clipper START, Clipper BayPass)?</b></p>	<p>Impacts on revenue are being considered in the evaluation of fare integration and coordination pilots and will help to inform how pilots evolve into permanent programs – for example, the Clipper BayPass measures includes an assessment of whether ridership changes allow for at a minimum revenue neutral pricing.</p>
<p><b>While consistency is generally good, it may not be appropriate in every situation – for example, different reliability metrics may be needed for different types of services (on-time performance vs headway adherence).</b></p> <p><b>How will we accommodate different metrics for different types of services, but also be able to pull all the information together cohesively?</b></p>	<p>Understood and agree. As MTC and operator staff work to implement reporting, we will consider how to account for slightly different measures/targets depending on service characteristics, operating context, etc.</p>

RNM Council Comments (Summarized)	Staff Response/ Recommendation
<p><b>Reporting needs to be clear on whether we are measuring individual operators or the regional network as a whole.</b></p> <p><b>How will targets be set and how can the appropriate entities (which may not necessarily be transit operators alone) be held accountable?</b></p>	<p>The goal of RNM is to look at the transit system holistically and performance measures will be reported in a way that provides that comprehensive look at transit at the regional level. Where appropriate, staff will disaggregate data to drill down into specific subregions or operators as needed. Initial reporting will be focused on documenting how the regional transit system has been functioning and where there may be gaps – either in performance or availability of data to assess performance.</p> <p>Targets will be established for a subset of measures once there is a better understanding of the regional transit system. Setting targets and holding the appropriate entities accountable for meeting targets will be established in a future phase of RNM performance reporting and as initiatives progress. (For example, RNM staff are engaging not just with operator staff but also with right-of-way owners in the development of a regional transit priority policy.)</p>
<p><b>There may be factors outside of the control of individual transit operators that affect the rider experience and transit operations. Performance measures in a vacuum do not tell a complete story about transit. For example, the impact of supply chain inflation-driven impacts should be included in future reports.</b></p>	<p>Performance measure reporting will likely include descriptions of the broader context in which transit operates – such as cost inflation, workforce shortage, operating environment, etc. – where appropriate to contextualize and explain the data.</p>
<p><b>Clarify the relationship between and timelines for RNM performance measure reporting and SB125 accountability measures.</b></p>	<p>Reporting on state accountability metrics for SB 125 was completed in December 2023. Regional accountability measures have been incorporated into Productivity Improvement Program (PIP) projects, and will be reported through the Transit Application Workbooks that operators submit when claiming TDA and STA funds. MTC’s Funding Policy and Programs (FPP) staff have sent the FY2024-25 workbooks to operator financial staff. Workbooks are typically submitted on a rolling basis to MTC. For RNM performance measures that rely on reporting that overlaps with SB 125, MTC staff will use information submitted in the Transit Application Workbooks.</p>

RNM Council Comments (Summarized)	Staff Response/ Recommendation
<p><b>We should curate a running list of future measures – that we may need to establish processes for – to work towards.</b></p>	<p>A list of potential future measures has been added.</p>
<p><b>Is it possible to report more quickly than Summer 2025?</b></p>	<p>Staff will work to establish performance measures as quickly as possible over the next year. Where data collection is currently more standardized (e.g., NTD or Clipper data), staff will be able to present interim reporting sooner than Summer 2025.</p> <p>In addition, individual initiatives will continue to provide progress updates and evaluations as they advance, and would not be limited by the formal RNM performance measure reporting timeline. As appropriate, RNM staff will work with communications and public affairs staff to communicate with the public, policy makers, and others, about progress on RNM and transit initiatives.</p>
<p><b>It's important to balance RNM performance measure reporting with staff capacity.</b></p>	<p>The approach for RNM performance measures is designed to be flexible and evolve as reporting capabilities grow. Initial measures that have been identified are based on existing and readily available data sources. Potential future measures provide a basis for evolving RNM performance measures.</p>
<p><b>Council members acknowledged and expressed support for the following additional aspects of RNM performance measures:</b></p> <ul style="list-style-type: none"> <li>• <b>Collaboration between MTC and operator staff</b></li> <li>• <b>Focusing on the rider experience and what matters to riders</b></li> <li>• <b>That this is intended to be a living document with room for performance measures to grow/evolve</b></li> </ul>	<p>Noted.</p>

## Regional Network Management Performance Measures

Performance measures will help deliver on the RNM’s Mission by measuring regional transit outcomes for riders, providing information to hold the RNM accountable for progress on regional transit initiatives, and helping to inform the continuous improvement of the RNM framework. RNM performance measures should provide a holistic picture of both regional transit and the RNM, through a combination of quantitative and qualitative measures.

An initial set of RNM performance measures based on existing and readily available data are outlined below, with plans to work towards a longer-term vision of more robust measures, common data definitions, and centralized reporting processes.

RNM performance measures are grouped into two types of measures:

Measure Type	Category	Description
Type #1: Transit Rider Outcomes	Rider Experience	The end-to-end journey and overall experience (reliability, connectivity, equity, safety & comfort) of riders on transit
	Rider Benefits from RNM Activities	The benefit of RNM initiatives for riders (e.g., ridership increases from fare integration pilots, reliability improvements from transit priority projects, easier transfers from wayfinding, etc.)
Type #2: RNM & Transit Operations	Work Plan Achievement	Progress achieved on the RNM Council’s Work Plan
	RNM Capabilities & Needs	Assessment of the RNM’s capabilities and how actions benefited from or were challenged by the RNM
	Regional Transit Operations	The overall performance of transit operations across the region (including ridership, productivity, and cost-effectiveness)

### Type #1: Transit Rider Outcomes

**Type #1: Transit Rider Outcomes** measures provide insight into the experience of riders on transit in the region and also convey the benefits of the RNM’s activities for riders. This includes measures of the rider experience across priorities such as transit reliability, connectivity, equity, and safety and comfort, as well as evaluations of individual RNM initiatives, such as ridership increases from fare integration pilots, reliability improvements from transit priority projects, and easier transfers from mapping and wayfinding prototypes and pilots.

## Rider Experience Measures

Within the “rider experience” category are four sub-categories of priorities for riders – reliability, connectivity, equity, and safety and comfort. For each of these sub-categories, the table below summarizes initial performance measures that can be derived from readily available data sources.

Subcategory	Initial Performance Measures
<p><b>Reliability</b>                      Establishing a dependable system that is on-time and predictable</p>	<ul style="list-style-type: none"> <li>• On-time performance (including headway adherence)</li> <li>• Percent of scheduled trips operated</li> <li>• Transit speeds (on key regional corridors)</li> <li>• Real-time data (GTFS-RT) availability</li> </ul>
<p><b>Connectivity</b>                      Creating an integrated network that is coordinated, convenient, and easy to use</p>	<ul style="list-style-type: none"> <li>• Quantity of interagency transfers (at key regional hubs)</li> <li>• Schedule coordination efforts (SB125 recipients)</li> </ul>
<p><b>Equity</b>                      Ensuring the transit system is inclusive, accessible, and serves diverse rider needs</p>	<ul style="list-style-type: none"> <li>• Discounted fare programs enrollment &amp; ridership (e.g., Clipper START, Clipper Access RTC)</li> </ul>
<p><b>Safety &amp; Comfort</b>                      Providing a safe, secure, and comfortable environment for riders</p>	<ul style="list-style-type: none"> <li>• Safety &amp; security efforts (SB125 recipients)</li> </ul>

Additional qualitative measures of the transit rider experience would be collected through a regional transit rider experience survey and include topics such as:

- Ease of use
- Trip timeliness and delays
- Real-time information
- Transfers (including wait times)
- Signage & wayfinding
- Cleanliness
- Safety
- Rider demographics

## Rider Benefits from RNM Activities

A second category of measures are focused specifically on benefits that result from the RNM’s activities. These measures will be tailored to each initiative or program and will be established as each initiative advances. Examples of this category of measures include:

- Increased ridership and interagency transfers for Clipper BayPass holders
- Travel time savings, mode shift, improved attitudes towards transit at prototype and pilot sites
- Improved reliability or travel time savings for routes with BusAID projects

## Type #2: RNM & Transit Operations

**Type #2: RNM & Transit Operations** measures provide insight into how well transit operations and the RNM framework are working to deliver on the TAP and RNM Council Work Plan, including the following measures:

Category	Initial Performance Measures
<b>Work Plan Achievement</b>	<ul style="list-style-type: none"> <li>Recently completed and upcoming activities</li> <li>Work Plan milestones achieved</li> </ul>
<b>RNM Capabilities &amp; Needs</b>	<ul style="list-style-type: none"> <li>List of current and planned RNM capabilities</li> <li>Recommendations/actions that benefited or were challenged by the current RNM design (e.g., collaboration, visibility, efficiency)</li> <li>Resources needed to support RNM activities</li> </ul>
<b>Regional Transit Operations</b>	<ul style="list-style-type: none"> <li>Ridership</li> <li>Passengers per revenue hour</li> <li>Total passenger miles</li> <li>Operating cost per service hour, per passenger, and per passenger mile</li> </ul>

## Reporting Frequency

Staff will prepare quarterly work plan progress reports for the RNM Council, as well as annual reports that are aligned with the fiscal year and the RNM Council’s annual work plans.

## Future RNM Performance Measures

The long-term vision for RNM performance measures includes:

- Robust measures that provide a holistic story about regional transit and RNM effectiveness;
- Establishing common data definitions and target-setting (where applicable) across operators in the region;
- Developing a central platform and automated processes for regional transit data collection, aggregation, and reporting; and
- Interactive dashboards for data reporting and visualization

Due to limitations in existing data sources, some initial measures are limited in scope (would benefit from additional context) or focus more on operator activities and rider behavior, rather than the rider experience. Staff will regularly review and update performance measures as the RNM’s reporting capabilities grow. The table below summarizes focus areas for future performance measures, and provides examples of potential future measures:

Category or Sub-Category	Future Measures Should...	Potential Future Measures
<b>Type #1 Transit Rider Outcomes – Rider Experience</b>		
<b>Reliability</b>	<ul style="list-style-type: none"> <li>• Provide broader context on transit speed and reliability</li> <li>• Go beyond real-time data availability to include accuracy</li> </ul>	<ul style="list-style-type: none"> <li>• Transit travel time reliability</li> <li>• Transit speed vs driving speed</li> <li>• Transit speed vs roadway speed</li> <li>• Real-time data (GTFS-RT) accuracy</li> </ul>
<b>Connectivity</b>	<ul style="list-style-type: none"> <li>• Shed light on where riders can travel using transit and consider competitiveness with driving</li> <li>• Go beyond rider behavior (# of transfers) and operator activities (schedule coordination) to include quality of interagency transfers</li> </ul>	<ul style="list-style-type: none"> <li>• Transit travel sheds (from select origin points)</li> <li>• Transit travel time vs driving (for select OD pairs)</li> <li>• Wait times for interagency transfers (at key regional hubs)</li> </ul>
<b>Equity</b>	<ul style="list-style-type: none"> <li>• Include disaggregation of other metrics by demographics, time of day, and/or additional geographies</li> <li>• Capture additional aspects of the paratransit rider experience</li> </ul>	<ul style="list-style-type: none"> <li>• Disaggregation by demographics</li> <li>• Disaggregation by time of day</li> <li>• Disaggregation by additional geographies (e.g., Equity Priority Communities)</li> <li>• Ease of booking paratransit trips</li> <li>• Paratransit travel times vs fixed-route</li> </ul>
<b>Safety &amp; Comfort</b>	<ul style="list-style-type: none"> <li>• Go beyond operator activities to include quantitative safety &amp; security metrics</li> </ul>	<ul style="list-style-type: none"> <li>• NTD data on fatalities, injuries, or safety events</li> </ul>
<b>Type #2: RNM &amp; Transit Operations</b>		
<b>Regional Transit Operations</b>	<ul style="list-style-type: none"> <li>• Incorporate other readily-available data from FTA's National Transit Database (NTD)</li> <li>• Consider cost, revenues, and societal benefits analyses</li> <li>• Consider other issues such as mutual aid or workforce development</li> </ul>	<ul style="list-style-type: none"> <li>• NTD data on vehicle revenue miles, vehicle revenue hours, etc.</li> <li>• Transit operating expenses vs revenues</li> </ul>
<b>[NEW: Other Regional Benefits]</b>	<ul style="list-style-type: none"> <li>• Include other regional outcomes, such as mode share and VMT reductions</li> </ul>	<ul style="list-style-type: none"> <li>• Transit mode share</li> <li>• VMT and/or GHG reductions</li> </ul>





# Regional Network Management Performance Measures

**Regional Network Management Council**

April 22, 2024

Agenda Item 4c Attachment C

# Framework for RNM Performance Measures

## RNM Mission:

*“To drive transformative improvements in the customer experience for regional Bay Area transit”*

## RNM Performance Measures should...

- Measure **progress on regional transit initiatives**, with a focus on **benefits to riders**
- Assess how well the **RNM framework** is working to deliver its intended outcomes
- Inform **continuous evolution and improvement** of the RNM
- Tell a holistic story through a combination of **quantitative and qualitative measures**
- Be **feasible** for MTC and transit operators to report on an ongoing basis
- **Evolve over time** as needed

# RNM Performance Measures: Proposed Categories

Measure Type	Category	Description
<b>Type #1: Transit Rider Outcomes</b>	<b>Rider Experience</b>	The end-to-end journey and overall experience (reliability, connectivity, equity, safety & comfort) of riders on transit
	<b>Rider Benefits from RNM Activities</b>	The benefit of RNM initiatives for riders (e.g., ridership increases from fare integration pilots, reliability improvements from transit priority projects, easier transfers from wayfinding, etc.)
<b>Type #2: RNM &amp; Transit Operations</b>	<b>Work Plan Achievement</b>	Progress achieved on the RNM Council's Work Plan
	<b>RNM Capabilities &amp; Needs</b>	Assessment of the RNM's capabilities and how actions benefited from or were challenged by the RNM
	<b>Regional Transit Operations</b>	The overall performance of transit operations across the region (including ridership, productivity, and cost-effectiveness)

# Type #1: Transit Rider Outcomes

Orange text = Added measures

Rider Experience Sub-Categories	Existing Data Sources*	Regional Rider Survey**
<b>Reliability</b> Establishing a dependable system that is on-time and predictable	<ul style="list-style-type: none"> <li>On-time performance (including headway adherence)</li> <li>Percent of scheduled trips operated</li> <li><b>Transit speeds (on key regional corridors)</b></li> <li>Real-time data (GTFS-RT) availability</li> </ul>	<ul style="list-style-type: none"> <li>Trip timeliness and delays</li> <li>Real-time information</li> </ul>
<b>Connectivity</b> Creating an integrated network that is coordinated, convenient, and easy to use	<ul style="list-style-type: none"> <li>Quantity of interagency transfers (at key regional hubs)</li> <li>Schedule coordination efforts (SB125 recipients)</li> </ul>	<ul style="list-style-type: none"> <li>Ease of use</li> <li>Transfers (including wait times)</li> <li>Signage &amp; wayfinding</li> </ul>
<b>Equity</b> Ensuring the transit system is inclusive, accessible, and serves diverse rider needs	<ul style="list-style-type: none"> <li>Discounted fare programs enrollment &amp; ridership (e.g., Clipper START, Clipper Access RTC)</li> </ul>	<i>Disaggregation of responses by demographics</i>
<b>Safety &amp; Comfort</b> Providing a safe, secure, and comfortable environment for riders	<ul style="list-style-type: none"> <li>Safety &amp; security efforts (SB125 recipients)</li> </ul>	<ul style="list-style-type: none"> <li>Cleanliness</li> <li>Safety</li> </ul>

Rider Benefits from RNM Activities***	Example Measures
<b>Clipper BayPass</b>	Increased ridership and interagency transfers for Clipper BayPass holders
<b>Mapping &amp; Wayfinding</b>	Travel time savings, mode shift, improved attitudes towards transit at prototype and pilot sites
<b>Transit Priority (BusAID)</b>	Improved reliability or travel time savings for routes with BusAID projects
<b>Improve Regional Paratransit Trips</b>	<b>Travel time savings, reduced wait times and/or improved comfort for transfer trips</b>

\* Some measures (e.g. on-time performance) to be disaggregated (including for paratransit services, where feasible)

\*\* Regional transit rider surveys are currently under development as part of the RNM Council's Work Plan

\*\*\* Measures to be established as each initiative advances

# Type #2: RNM & Transit Operations

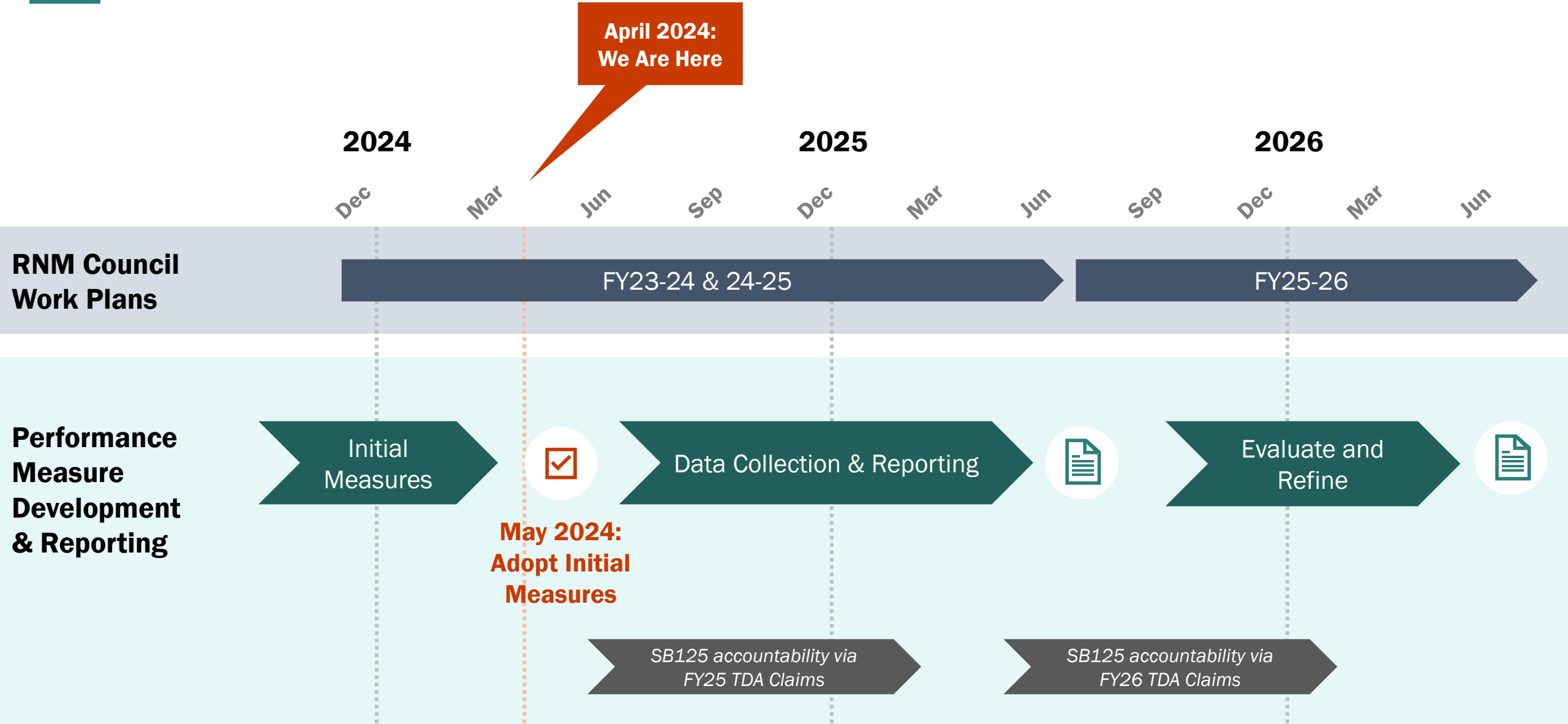
Category	Initial Measures
<b>Work Plan Achievement</b>	<ul style="list-style-type: none"><li>▪ Recently completed and upcoming activities</li><li>▪ Work Plan milestones achieved</li></ul>
<b>RNM Capabilities &amp; Needs</b>	<ul style="list-style-type: none"><li>▪ List of current and planned RNM capabilities</li><li>▪ Recommendations/actions that benefited or were challenged by the current RNM design (e.g., collaboration, visibility, efficiency)</li><li>▪ Resources needed to support RNM activities</li></ul>
<b>Regional Transit Operations</b>	<ul style="list-style-type: none"><li>▪ Ridership</li><li>▪ Passengers per revenue hour</li><li>▪ Total passenger miles</li><li>▪ Operating cost per service hour, per passenger, and per passenger mile</li></ul>

# Moving Towards a Long-Term Vision

Rider Experience	Future measures should...
<b>Reliability</b>	<ul style="list-style-type: none"> <li>Provide broader <b>context</b> on transit speed/delay (e.g. comparing transit speeds to driving or roadway speeds)</li> <li>Go beyond real-time data availability to include <b>accuracy</b></li> </ul>
<b>Connectivity</b>	<ul style="list-style-type: none"> <li>Shed light on <b>where riders can travel using transit</b> and consider competitiveness with driving</li> <li>Go beyond rider behavior (# transfers) and operator activities (schedule coordination) to include <b>quality</b> of interagency transfers (e.g. wait times)</li> </ul>
<b>Equity</b>	<ul style="list-style-type: none"> <li>Include disaggregation of other metrics by <b>demographics, time of day, and/or additional geographies</b></li> <li>Capture additional aspects of the <b>paratransit rider experience</b> (e.g. ease of booking trips)</li> </ul>
<b>Safety &amp; Comfort</b>	<ul style="list-style-type: none"> <li>Go beyond operator activities to include <b>quantitative safety &amp; security metrics</b></li> </ul>

RNM & Transit Operations	Future measures should...
<b>Regional Transit Operations</b>	<ul style="list-style-type: none"> <li>Incorporate other readily-available data from NTD</li> <li>Consider <b>cost, revenues, and societal benefits</b> analyses</li> <li>Consider other issues such as <b>mutual aid or workforce development</b></li> </ul>
<b>[NEW: Other Regional Benefits]</b>	<ul style="list-style-type: none"> <li>Include other regional outcomes, such as <b>mode share and VMT reductions</b></li> </ul>

# Timeline for RNM Performance Measures



# Next Steps

## Upcoming Meetings

TODAY

**RNM Council:** Approve initial performance measures

APR  
26

**RNM Customer Advisory Group:** Feedback on approach and initial performance measures

MAY

**RNM Committee & MTC Commission:** Adopt initial performance measures

### Next steps...

- Incorporate additional feedback from the Customer Advisory Group and RNM Committee
- Begin collecting data for initial measures and continue development of future measures (including scoping the regional transit rider survey)
- Monitor and coordinate with state performance efforts