



# Metropolitan Transportation Commission

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

## Meeting Agenda

### Planning Committee

*MTC Committee Members:*

*James P. Spring, Chair   Anne W. Halsted, Vice Chair*

*Alicia C. Aguirre, Scott Haggerty,  
Steve Kinsey, Sam Liccardo, Julie Pierce*

*Non-Voting Members: Tom Azumbrado, Dorene M. Giacomini*

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Friday, June 10, 2016

9:30 AM

The Board Room - 1st Floor

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This meeting is scheduled to be webcast live on the Metropolitan Transportation Commission's Web site: <http://mtc.ca.gov/whats-happening/meetings> and will take place at 9:30 a.m..

#### 1. Roll Call / Confirm Quorum

*Quorum: A quorum of this committee shall be a majority of its regular voting members (4).*

#### 2. Pledge of Allegiance

#### 3. Compensation Announcement - Committee Secretary

#### 4. Consent Calendar

- 4a. [15-1616](#) Minutes of the May 13, 2016 Meeting

Action: Committee Approval

Attachments: [4a\\_05-13-2016\\_Draft\\_Planning\\_Minutes.pdf](#)

#### 5. Information

- 5a. [15-1620](#) Core Capacity Transit Study

Update on the Core Capacity Transit Study, a collaborative effort to prioritize investments that will improve travel on public transportation to and from the San Francisco Core.

Action: Information

Presenter: Matt Maloney

Attachments: [5a Core Capacity Transit Study](#)

## 6. Approval

- 6a. [15-1672](#) Plan Bay Area 2040 Compelling Case Process: I-80 / I-680 / SR-12 Interchange Improvements
- Overview of the case submitted by sponsors of the I-80 / I-680 / SR-12 Interchange Improvements project, as well as a recommendation for next steps in the context of Plan Bay Area 2040.
- Action: Committee Approval
- Presenter: Dave Vautin
- Attachments: [6a PBA2040.pdf](#)

## 7. Public Comment / Other Business

## 8. Adjournment / Next Meeting

The next meeting of the Planning Committee will be July 8, 2016, 9:30 a.m. at the Board Room on the first floor of the Bay Area Metro Center, 375 Beale Street, San Francisco, CA.

**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.

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



# Metropolitan Transportation Commission

101 Eighth Street,  
Joseph P. Bort MetroCenter  
Oakland, CA

## Legislation Details (With Text)

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**File #:** 15-1616      **Version:** 1      **Name:**  
**Type:** Minutes      **Status:** Consent  
**File created:** 5/3/2016      **In control:** Planning Committee  
**On agenda:** 6/10/2016      **Final action:**  
**Title:** Minutes of the May 13, 2016 Meeting  
**Sponsors:**  
**Indexes:**  
**Code sections:**  
**Attachments:** [4a\\_05-13-2016\\_Draft\\_Planning\\_Minutes.pdf](#)

Date	Ver.	Action By	Action	Result
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**Subject:**  
Minutes of the May 13, 2016 Meeting

**Recommended Action:**  
Committee Approval

### Attachments



# Metropolitan Transportation Commission

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

## Meeting Minutes - Draft

### Planning Committee

#### *MTC Committee Members:*

*James P. Spering, Chair   Anne W. Halsted, Vice Chair*

*Alicia C. Aguirre, Scott Haggerty,  
Steve Kinsey, Sam Liccardo, Julie Pierce*

*Non-Voting Members: Tom Azumbrado, Dorene M. Giacomini*

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Friday, May 13, 2016

9:40 AM

The Board Room - 1st Floor

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#### 1. Roll Call / Confirm Quorum

##### Rollcall

**Present:** 6 - Commissioner Aguirre, Commissioner Haggerty, Vice Chair Halsted, Commissioner Liccardo, Commissioner Pierce, and Chairperson Spering

**Absent:** 1 - Commissioner Kinsey

Non-Voting Member Present: Commissioner Azumbrado

Non-Voting Member Absent: Commissioner Giacomini

Ex Officio Voting Members Present: Commission Chair Cortese and  
Commission Vice Chair Mackenzie

Ad Hoc Non-Voting Members Present: Commissioner Bates, Commissioner Campos, and  
Commissioner Wiener

#### 2. Consent Calendar

Approval of the Consent Calendar

**Upon the motion by Commissioner Aguirre and second by Commissioner Liccardo, the Consent Calendar was approved as amended by the following vote:**

**Aye:** 6 - Commissioner Aguirre, Commissioner Haggerty, Vice Chair Halsted, Commissioner Liccardo, Commissioner Pierce and Chairperson Spering

**Absent:** 1 - Commissioner Kinsey

2a. [15-1456](#) Minutes of the April 8, 2016 Meeting

**Action:** Committee Approval

### 3. Approval

- 3a. [15-1458](#) Plan Bay Area 2040 Project Performance Assessment: Final Performance Results and Guidelines for Applying Results

Final results from the project performance assessment and state of good repair performance assessment, seeking action on thresholds for high- and low-performance.

**Action:** Commission Approval

**Presenter:** Kristen Carnarius and Dave Vautin

The following individuals spoke on this item:

Robert Macaulay of STA;

Roland Lebrun;

Mike Baratta; and

Amber Crabbe of SFCTA.

**Upon the motion by Commissioner Aguirre and second by Commissioner Pierce, Plan Bay Area 2040 Project Performance Assessment: Final Performance Results and Guidelines for Applying Results was adopted to be forwarded to the Commission for approval. The motion carried by the following vote:**

**Aye:** 4 - Commissioner Aguirre, Commissioner Haggerty, Commissioner Pierce and Chairperson Sperring

**Absent:** 3 - Vice Chair Halsted, Commissioner Kinsey and Commissioner Liccardo

Commissioner Halsted and Commissioner Liccardo departed before the vote on Plan Bay Area 2040 Project Performance Assessment: Final Performance Results and Guidelines for Applying Results.

#### 4. Information

4a. [15-1504](#) Plan Bay Area 2040:Scenario Evaluation

Presentation on the Plan Bay Area 2040 scenarios and their initial targets evaluation.

**Action:** Information

**Presenter:** Ken Kirkey

David Zisser of Public Advocates was called to speak.

Matt Vander Sluis of Greenbelt Alliance was called to speak.

Jerry Grace was called to speak.

4b. [15-1560](#) Update: Plan Bay Area 2040 Open Houses

Update on plans for nine open houses across the region on Plan Bay Area 2040 slated for late May and early June.

**Action:** Information

**Presenter:** Ellen Griffin

David Zisser of Public Advocates was called to speak.

#### 5. Public Comment / Other Business

#### 6. Adjournment / Next Meeting

The next meeting of the Planning Committee will be June 10, 2016, 9:30 a.m. at the Board Room on the first floor of the Bay Area Metro Center, 375 Beale Street, San Francisco, CA.



# Metropolitan Transportation Commission

101 Eighth Street,  
Joseph P. Bort MetroCenter  
Oakland, CA

## Legislation Details (With Text)

**File #:** 15-1620      **Version:** 1      **Name:**  
**Type:** Report      **Status:** Informational  
**File created:** 5/3/2016      **In control:** Planning Committee  
**On agenda:** 6/10/2016      **Final action:**  
**Title:** Core Capacity Transit Study

Update on the Core Capacity Transit Study, a collaborative effort to prioritize investments that will improve travel on public transportation to and from the San Francisco Core.

**Sponsors:**

**Indexes:**

**Code sections:**

**Attachments:** [5a Core Capacity Transit Study](#)

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

Core Capacity Transit Study

Update on the Core Capacity Transit Study, a collaborative effort to prioritize investments that will improve travel on public transportation to and from the San Francisco Core.

**Presenter:**

Matt Maloney

**Recommended Action:**

Information

**Attachments**





METROPOLITAN  
TRANSPORTATION  
COMMISSION

Agenda Item 5a

Bay Area Metro Center  
375 Beale Street  
San Francisco, CA 94105  
TEL 415.778.6700  
WEB [www.mtc.ca.gov](http://www.mtc.ca.gov)

## *Memorandum*

TO: Planning Committee

DATE: June 3, 2016

FR: Executive Director

W.I. 1519

RE: Core Capacity Transit Study

### **Background**

The Core Capacity Transit Study (CCTS) is an ongoing, multi-agency effort to evaluate and prioritize short-, medium-, and long-term transit investments and strategies to address existing and forecasted capacity constraints serving the San Francisco central business district, or Core. The investment and policy priorities of the study will be advanced for further consideration in Plan Bay Area 2040. MTC is the lead agency on the study, working in close partnership with Alameda-Contra Costa Transit District (AC Transit), San Francisco Bay Area Rapid Transit District (BART), Caltrain, San Francisco County Transportation Authority, San Francisco Municipal Transportation Agency, and the San Francisco Bay Area Water Emergency Transportation Authority (WETA).

The CCTS Study Area includes two primary transit corridors: the Transbay Corridor and the San Francisco Metro Corridor. Today, staff will focus on CCTS progress in analyzing existing and future conditions for the Transbay Corridor.

### **Transbay Corridor Existing and Future Conditions**

Over the past five years, travel through the Transbay Corridor has experienced significant growth, placing unprecedented demand on the transit network. Between 2010 and 2015, trips on the three main transit providers, AC Transit, BART, and WETA, have grown 42%, or about 8,600 new peak-hour transit riders. In 2015, transit travel in the corridor's AM peak hour reached 105% of its intended capacity.

Transit operators have a number of projects in development that will help to address capacity shortfalls over the next 5-10 years, and it is critical that these "prerequisite" projects be supported and advanced. The most prominent of them is BART's new train control system, which will enable it to run trains closer together through the Transbay Tube. Effective Bay Bridge management is also key to managing capacity, since without significant changes in bridge mode share or vehicle occupancy, nearly all future growth will need to be met by transit.

Today, passengers are experiencing crowding, diminished reliability, and limited travel flexibility in the corridor. The transportation system struggles to withstand service disruptions, both man-made and natural. Even with the implementation of the set of prerequisite projects, demand is significantly likely to outpace capacity in the corridor without additional short,

medium, and long term transit investments. To maintain corridor transportation capacity enough to meet demands in the future, the region must begin planning a coordinated path forward today.

### **Transbay Short and Medium - Term Packages**

The CCTS has identified additional short and medium term transit investments and transportation policies that can address anticipated future growth beyond the capacity increases of the prerequisite projects. These packages include a set of common projects including fleet and service expansions as well as “package-specific” projects including a dynamic bridge toll increase, surface street transit priority, and dedicated lanes providing direct, dedicated access for Transbay buses. The study team is working now to flesh out specific project definitions and service characteristics, and will evaluate these packages with the goal of informing the Plan Bay Area 2040 investment strategy in September.

### **Long Term Strategies**

The study is also working to define a set of long term strategies for 2030 and beyond. Upcoming work will focus on operator perspectives, market assessment findings for San Francisco and Oakland, and local, regional, and state policy considerations. Based on the short and medium term package evaluation, long-term investments could potentially incorporate ideas such as a potential second transit underwater crossing, the impact of emerging technologies such as autonomous vehicles, and other capital or operational improvements for the corridor.

### **Stakeholder Engagement Process**

The study is seeking input from interested groups and individuals throughout the process. The study team has conducted a series of one-on-one meetings with business, environmental, and equity groups. The study will have a display at the Plan Bay Area 2040 workshops in San Francisco and Alameda counties. Starting in December 2016, the study will work to engage community stakeholders and members of the public on long-term strategies. The final report will be complete in March 2017.



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Steve Heminger

# Core Capacity Transit Study- Progress Update

**CORE CAPACITY**

TRANSIT STUDY



Planning Committee  
June 10, 2016

# Study Purpose

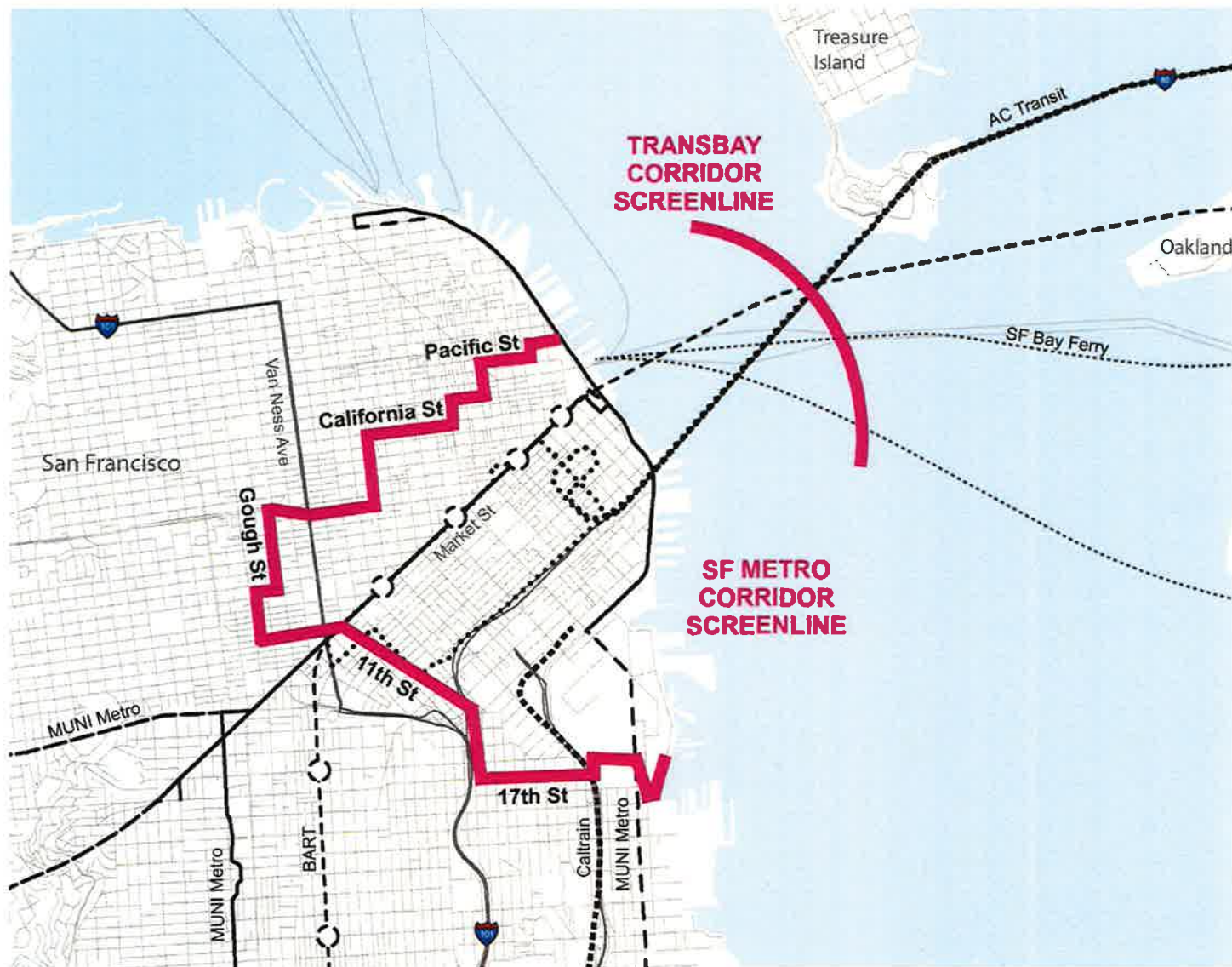
- Multi-agency effort focused on increasing transit capacity to the San Francisco Core:



- Develop and recommend projects and strategies by timeframe
  - Short term: to 2020
  - Medium term: 2020-2030
  - Long term: 2030+
- Use short and medium term projects to inform, identify and consider potential long term strategies

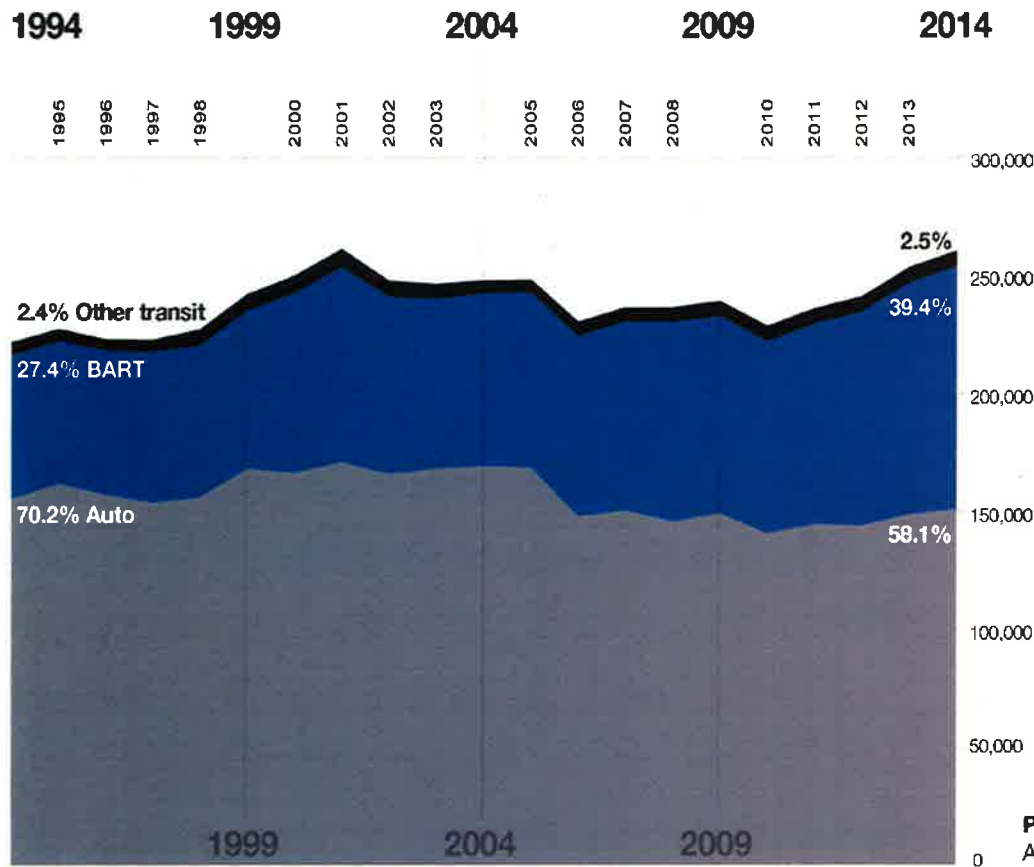


# Study Area and Corridors

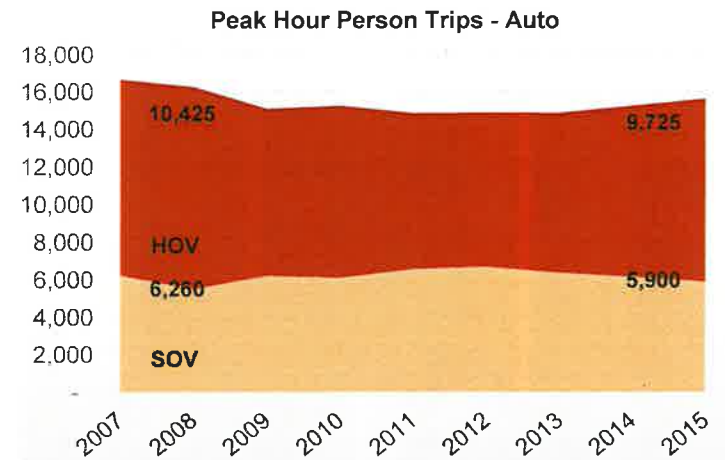


# Historical Share of Demand

Daily Travel – Transbay Corridor  
Westbound



Person Trips By Auto -  
Westbound Peak Hour



# Prerequisite Transbay Projects

Tier 1: Fully funded

Tier 2: Not Fully Funded

Tier	Timeframe	Sponsor	Project
1	Short Term	AC Transit	AC Transit Richmond Facility Reopening
1	Short Term	BART	BART Additional Cars – Fleet Transition
1	Short Term	WETA	WETA Maintenance Facilities Alameda, Vallejo
1	Short Term	WETA	WETA Richmond-SF Ferry Service
1	Short Term	WETA	WETA SF Ferry Terminal Expansion
1	Short Term	WETA	WETA SF Fleet Replacement & Expansion
1	Short Term	Caltrans	I-80 Integrated Corridor Mobility
1	Short Term	TJPA	Transbay Terminal (Phase 1)
1	Short Term	TJPA	AC Transit Bus Ramp to Transbay terminal
2	Short Term	AC Transit	AC Transit Fleet Expansion (40 buses)
2	Short Term	AC Transit	AC Transit West County Bus Facility (new)
2	Short Term	BART	BART Hayward Maintenance Complex, Phase 1
2	Medium Term	BART	BART Additional Railcars – Core Capacity
2	Medium Term	BART	BART Metro Program
2	Medium Term	BART	BART Traction Power System
2	Medium Term	BART	BART Train Control System
2	Medium Term	BART	BART Hayward Maintenance Complex, Phase 2

# Prerequisite Projects By Operator

## Transbay Corridor

**Existing Conditions**  
Westbound to SF Core  
AM Peak Hour

10,000 People in Cars  
29,000 Transit Trips

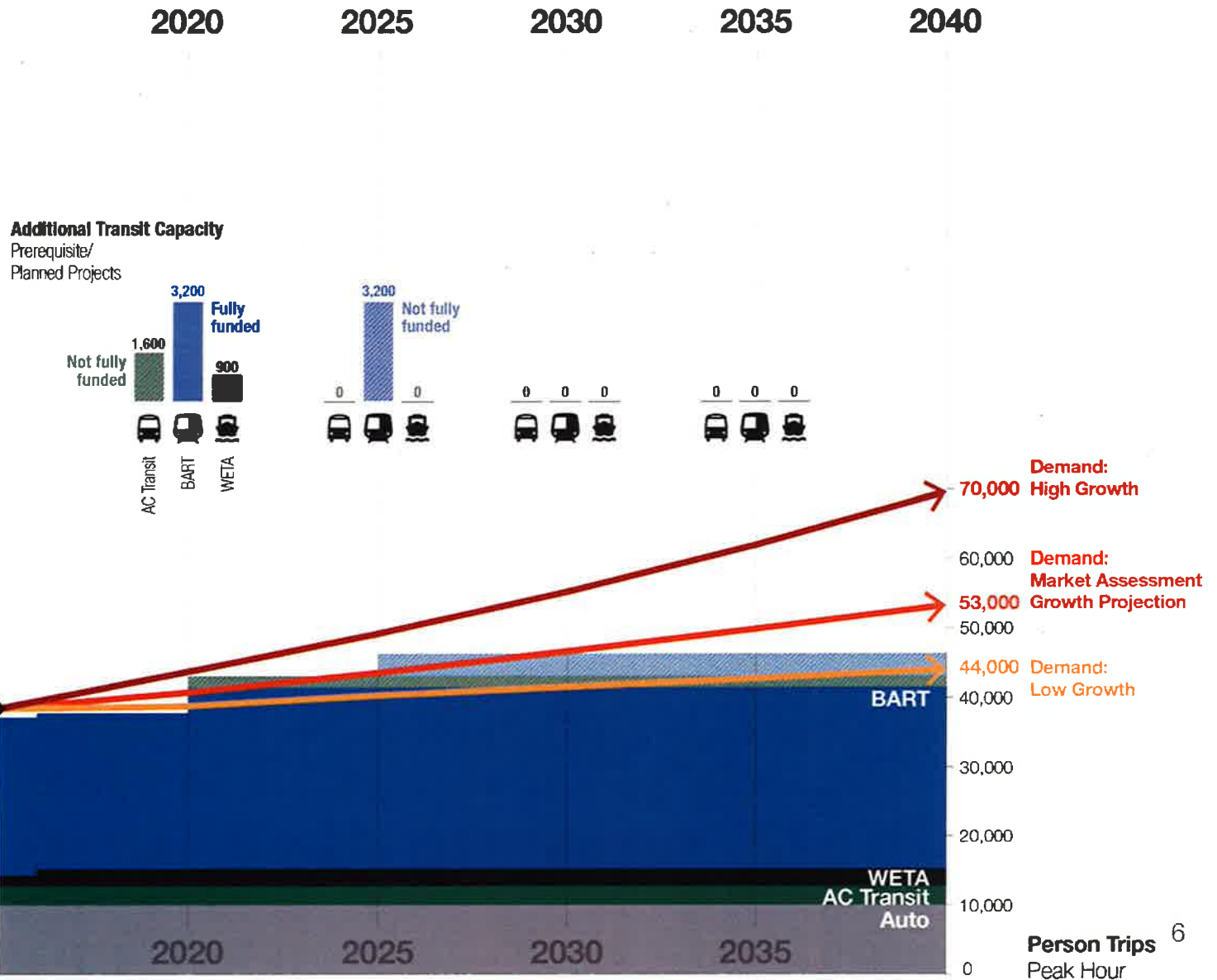
2,700 AC Transit & WestCAT bus  
25,000 BART  
1,300 WETA ferry

**2015**

37k Capacity

**105%**

39k Demand





# Transbay Corridor Demand Forecast

## Transbay Corridor

### Existing Conditions

Westbound to SF Core  
AM Peak Hour

10,000 People in Cars

29,000 Transit Trips

2,700 AC Transit & WestCAT bus

25,000 BART

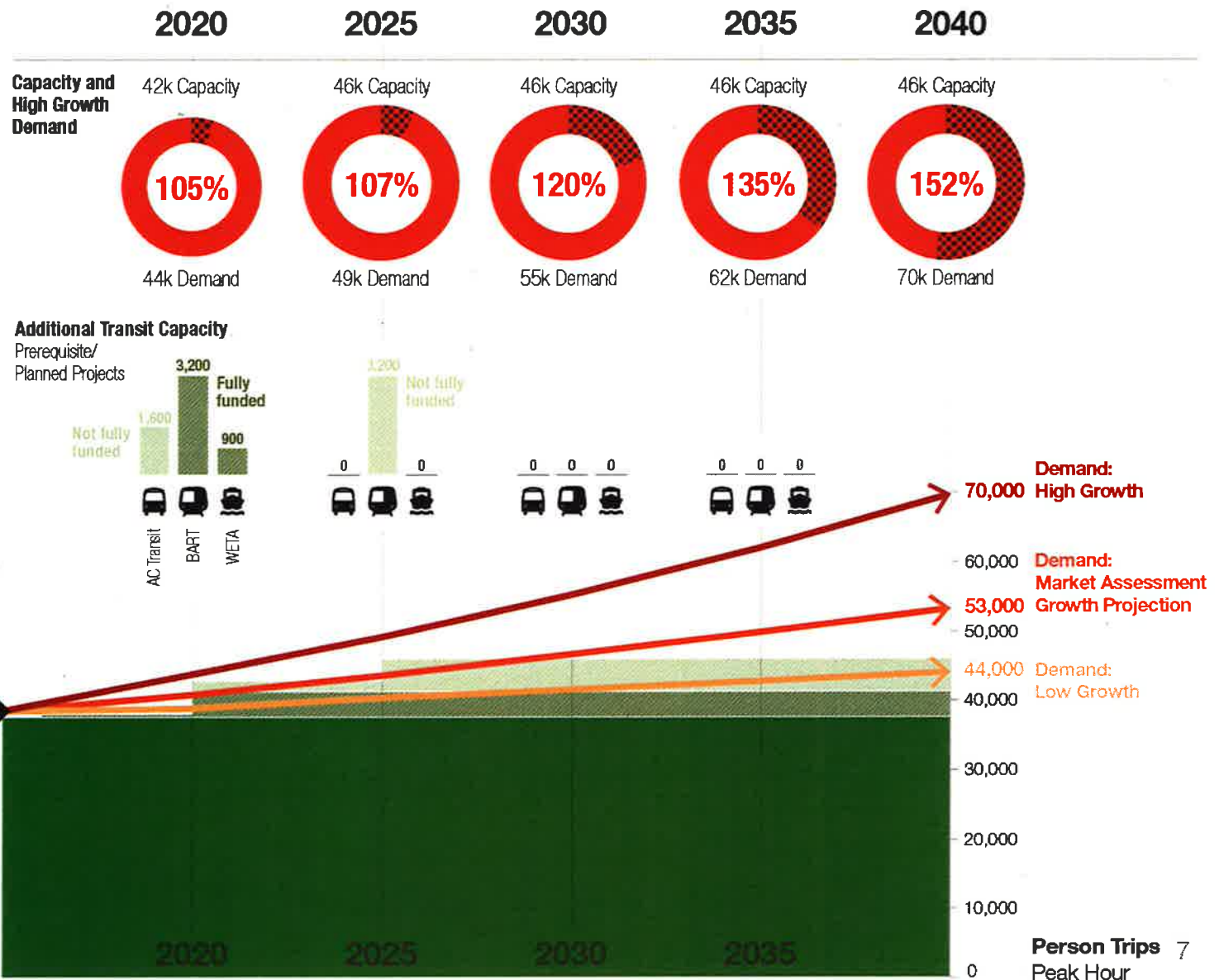
1,300 WETA ferry

2015

37k Capacity

105%

39k Demand



Person Trips  
Peak Hour

# Transbay Problem Statement - Summary

- The need to fund and implement the Tier 1 and Tier 2 prerequisite projects under all growth scenarios
- An increasing possibility that growth in demand will outpace capacity
- The need for additional investments in projects, programs and policies to address increasingly significant shortfalls in capacity
- Without significant changes in vehicle occupancy, nearly all future growth would need to be met by transit

# Transbay Packages (short & medium term)

## PREREQUISITE PROJECTS

**[PLUS]**

**Projects  
Common to  
Packages  
2, 3, 4a, 4b**

- Automated toll collection
- Fare Adjustment Policies
- Additional Transbay bus service and capital investments (50 buses)
- WETA 30-15 Plan
- BART station and system improvements (core-related)

# Transbay Packages (short & medium term)

PREREQUISITE PROJECTS					
Package Specific Projects	PROJECTS COMMON TO PACKAGES (2, 3, 4a, 4b)				
	[PLUS]				
	1 Value Pricing	2 Value Pricing	3 Value Pricing, and Infrastructure	4a Value Pricing, infrastructure and Contraflow Lane	4b Value Pricing, infrastructure and HOV Lane
	<ul style="list-style-type: none"> <li>Dynamic auto toll increase</li> </ul>	<ul style="list-style-type: none"> <li>Dynamic auto toll increase</li> </ul>	<ul style="list-style-type: none"> <li>Bus tunnel from Mandela to Bay Bridge</li> <li>Surface street transit priority connecting to I-80, I-580</li> <li>Builds on Package 2</li> </ul>	<ul style="list-style-type: none"> <li>Contraflow Lane, Westbound on Lower Deck</li> <li>Eastbound PM peak toll</li> <li>Builds on Package 2 and 3</li> </ul>	<ul style="list-style-type: none"> <li>HOV Lane, Westbound with Flow</li> <li>Eastbound PM peak toll</li> <li>Builds on Package 2 and 3</li> </ul>

# RTP Investment Strategy

## Potential “Core Capacity” Investment Strategy in PBA 2040

- Prerequisite Projects
- Placeholder for Short- and Mid-Term Package Projects
- Future Planning for Long-Term “Big Move” Projects

## Next Steps

- Identify short- and mid-term projects
- Identify list of “big moves”
- Develop funding request for high-priority CCTS projects
- Fiscally constrain CCTS projects in a PBA40 investment package

MTC adopts the preferred RTP Investment Strategy in **September 2016**

MTC adopts Plan Bay Area 2040 in **June 2017**



# Long Term Strategies – Study Activities

- Use short and medium term projects to inform, identify and consider potential **long term strategies**. Upcoming work will describe:
  - Operator perspectives and study assumptions
  - SF and Oakland market assessment findings & relationship to long term themes
  - Local, regional, and state policy considerations
  - Possibility of a second transit crossing
  - Impact of transportation trends, including impact of emerging technologies such as autonomous vehicles
- Conduct public outreach
  - Engage community stakeholders and members of the public on long term themes post November 2016

# Project Schedule

2016

2017

Apr

May

Jun

Jul

Aug

Sept

Oct

Nov

Dec

Jan

Feb

Mar

PMT meetings / ET meetings / TAC meetings

Task 6 Package Development

Task 6a Short & Medium Term  
Package Development

Task 6b Long Term  
Alternatives Development

Task 8 Long Term  
Alternatives Refinement

Task 7 Package Evaluation

Outreach

Outreach

Task 9 Implementation  
Strategy

Task 10 Final Report



# Metropolitan Transportation Commission

101 Eighth Street,  
Joseph P. Bort MetroCenter  
Oakland, CA

## Legislation Details (With Text)

<b>File #:</b>	15-1672	<b>Version:</b>	1	<b>Name:</b>	
<b>Type:</b>	Report	<b>Status:</b>		Committee Approval	
<b>File created:</b>	5/25/2016	<b>In control:</b>		Planning Committee	
<b>On agenda:</b>	6/10/2016	<b>Final action:</b>			
<b>Title:</b>	Plan Bay Area 2040 Compelling Case Process: I-80 / I-680 / SR-12 Interchange Improvements				
	Overview of the case submitted by sponsors of the I-80 / I-680 / SR-12 Interchange Improvements project, as well as a recommendation for next steps in the context of Plan Bay Area 2040.				
<b>Sponsors:</b>					
<b>Indexes:</b>					
<b>Code sections:</b>					
<b>Attachments:</b>	<a href="#">6a_PBA2040.pdf</a>				

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

Plan Bay Area 2040 Compelling Case Process: I-80 / I-680 / SR-12 Interchange Improvements

Overview of the case submitted by sponsors of the I-80 / I-680 / SR-12 Interchange Improvements project, as well as a recommendation for next steps in the context of Plan Bay Area 2040.

### Presenter:

Dave Vautin

### Recommended Action:

Committee Approval

### Attachments





METROPOLITAN  
TRANSPORTATION  
COMMISSION

Agenda Item 6a

Bay Area Metro Center  
375 Beale Street  
San Francisco, CA 94105  
TEL 415.778.6700  
WEB [www.intc.ca.gov](http://www.intc.ca.gov)

## *Memorandum*

TO: Planning Committee

DATE: June 3, 2016

FR: Executive Director

W.I. 1212

RE: Plan Bay Area 2040: Compelling Case Review for I-80/I-680/SR-12 Interchange Improvements

Last month, the Commission approved the final project performance assessment results for Plan Bay Area 2040, as well as thresholds for identifying high- and low-performing projects and eligible cases for the compelling case process. Based on the adopted thresholds, 18 major uncommitted transportation projects were identified as low-performing, meaning that those projects are subject to further review through the compelling case process.

One project – the I-80/I-680/SR-12 Interchange Improvements project – received approval to go through the compelling case process on an expedited schedule due to a pending federal funds request. As such, Solano Transportation Authority (STA) submitted its compelling case to the Commission in late May, which was subsequently reviewed on an expedited schedule in advance of the June Planning Committee meeting. Project sponsors for the remaining 17 low-performing projects are currently developing letters either rescoping or making a compelling case for those investments; staff will present recommendations for the remaining projects at the July Planning Committee meeting.

### **Compelling Case Review for I-80/I-680/SR-12 Interchange Improvements**

Staff recommends that the Planning Committee approve the compelling case submitted for this project under the following criteria: (1A) recreational travel; (1B) goods movement; and (1C) safety benefits from weaving not captured by the model. After removing the benefits and costs associated with the HOV/HOT direct connectors – per direction from STA – and considering the three criteria above, staff has determined that the benefit-cost ratio for the project could reasonably exceed 1.0 on weekends (when the corridor experiences significant recreational traffic). While not all of the arguments made by STA were ultimately approved, the arguments that were approved were sufficient to merit a staff recommendation for approval.

Refer to **Attachment A** for more information about the compelling case review and the staff recommendation and refer to **Attachment B** for the compelling case letter submitted by STA.

  
\_\_\_\_\_  
Steve Heminger

**Attachments:**

- Attachment A: Summary of Compelling Case and Justification for Staff Recommendation (I-80/I-680/SR-12 Interchange Improvements)
- Attachment B: STA Compelling Case Letter dated May 27, 2016

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SH:dv

## **Attachment A: Summary of Compelling Case and Justification for Staff Recommendation (I-80/I-680/SR-12 Interchange Improvements)**

### **Project Cost Updates Prior to the Compelling Case Review**

Prior to the review of the compelling case, staff received a request from STA to rescope the project as evaluated in the project performance assessment, omitting the HOV/HOT direct connector elements (under the assumption that such elements would be built as part of the Express Lane Network instead). The project rescoping had the following impacts:

- **Benefits:** While project benefits did decrease slightly due to the removal of the direct connectors, the decline was within the margin of error of the travel model. This is likely due to the low level of congestion forecasted in the project vicinity in year 2040, which generates minimal demand for an HOT facility as an alternative to existing and future general-purpose lanes. Given that the decline was within the margin of error, staff recommends relying on the initial model run's benefit forecast for the sake of consistency.
- **Costs:** Removing the direct connector element reduced the project costs to \$347 million (\$2017 dollars), resulting in a significant net improvement in the benefit-cost ratio.

In addition, STA submitted a more detailed estimate of net new lane-mileage from the proposed project, reducing MTC's initial estimate of 32 net new lane-miles to 11 net new lane-miles. Based on the documentation submitted, MTC staff reviewed and approved this revision as well. Combined with the updated capital costs above, the new annualized project costs are now \$18.5 million (\$17.4 million in annualized capital and \$1.1 million in annualized O&M), nearly halving the project costs from the initial submission. This results in the benefit-cost ratio increasing from 0.2 as previously presented to 0.3 using the latest assumptions.

### **Compelling Case Review**

When reviewing a compelling case under Category 1<sup>1</sup> (Benefits Not Captured by Travel Model), staff has traditionally developed its recommendation based on whether the limitations identified are significant enough to potentially move the project to a benefit-cost ratio greater than 1.0. In **Table 1** on the following page, staff has summarized the key cases submitted by STA for this project, in addition to its recommendations on whether the individual compelling case arguments have sufficient merit for further consideration.

Starting with criteria 1B (goods movement) and 1C (safety benefits from weaving), staff recognizes that Travel Model One cannot perfectly capture all benefits from these issue areas. Based on data submitted from STA staff, staff has determined that project benefits could increase from \$5.1 million to \$15.5 million if these benefits were better captured in the modeling process. However, those arguments alone are insufficient to push the benefit-cost ratio over 1.0, with the project's benefit-cost ratio for a typical weekday remaining below 1.

However, Criterion 1A (recreational travel), when considered in tandem with the previous two adjustments, is sufficient to justify a recommendation to approve the compelling case. Because most transportation projects have their highest level of cost-effectiveness on a typical weekday, the project performance assessment (and regional travel demand model) focus on simulating future weekday conditions. However, due to the project's geographical location and recreational travel destinations to the east, this project experiences peak conditions on Thursdays, Fridays, and Sundays. Based on the volume data submitted by STA, staff has determined the "typical weekend" benefit-cost ratio could reasonably exceed 1.

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<sup>1</sup> Only projects with benefit-cost ratios less than 1 are eligible for Category 1 compelling cases.

**Table 1: Compelling Case Review Sheet – I-80/I-680/SR-12 Interchange Improvements**

Plan Bay Area 2040: Compelling Case Review Sheet	
<b>1. I-80/I-680/SR-12 INTERCHANGE IMPROVEMENTS</b> <b>Staff Recommendation: Approve Compelling Case</b>	
<b>\$347 million</b> <b>in capital costs</b>	
<b>Project Purpose:</b> <i>widens I-80 and I-680 in the vicinity of the interchange and constructs improved ramps between I-80, I-680, and SR-12 (excludes HOV/HOT direct connectors).</i>	
STRONG COMPELLING CASES	COMPELLING CASE ARGUMENTS NOT APPROVED
<p><b><u>1A – RECREATIONAL TRAVEL</u></b>  Staff agree with the project sponsor that the facility has a significant number of recreational trips not captured by the travel demand model. Furthermore, staff recognizes that the facility experiences higher traffic volumes on Fridays and Sundays than during the week (which is generally rare when compared to other facilities in the region). Based on the data submitted, traffic volumes in the project area can be up to 20 percent higher on peak days due to recreational travel. In concurrence with the case made by the sponsor, staff believes project benefits would be at least 20 percent higher on weekends than reflected in the weekday forecasts used for project assessment. This scaling factor is conservative, given that benefits often increase exponentially in relation to volumes.</p> <p><b><u>1B – GOODS MOVEMENT</u></b>  Staff concurs with the project sponsor that the Interstate 80 corridor is a key freight route for the Bay Area, serving as the region's primary interregional gateway by overall traffic volumes. Sponsor data indicates that between 5 and 8.5 percent of vehicles are trucks. While truck benefits account for nearly 10 percent of project time + cost benefits already, this is partially due to the significantly higher monetary valuation for vehicles carrying goods. Staff recommends scaling truck benefits up by a factor of two to better align truck forecasts with observed data.</p> <p><b><u>1C – SAFETY BENEFITS FROM WEAVING REDUCTION</u></b>  Of the three compelling case arguments approved by staff, safety benefits not captured by the travel model is perhaps the most significant. Interchange improvements – such as this project – often feature numerous local operational improvements to existing ramps, which may provide critical safety benefits from reduced weaving. Because these elements are difficult to capture in the regional analysis, staff recommends incorporating STA's safety benefit estimate for the purposes of developing a sketch-level benefit-cost ratio for use in compelling case review.</p>	<p><b><u>1C – PHYSICAL ACTIVITY BENEFITS NOT CAPTURED</u></b>  While the compelling case letter submitted by the project sponsor clearly identifies how the project improves connectivity for active transportation, it does not adequately justify the proposed elimination of project disbenefits associated with additional automobile travel. While staff agrees that connectivity is critical, the benefit-cost analysis is focused on travel behavior – whether project implementation would increase or decrease walking and bicycling trips overall. The compelling case letter lacks any specific quantitative data in the project vicinity to justify this argument. Staff stands by the current forecast of active transportation impacts, which indicates that the net effect of the project will likely increase the attractiveness of driving at the expense of transit, walking, and bicycling modes – resulting in a net public health disbenefit.</p>
Other considerations noted by project sponsor: supports Goods Movement Plan; county priority project.	

Please refer **Table 2** below highlighting the updated benefit-cost ratio (incorporating cost revisions), as well as the sketch-level adjustments conducted solely for the purpose of the compelling case process.

**Table 2: Benefit-Cost Ratio Summary Sheet – I-80/I-680/SR-12 Interchange Improvements**  
*Values marked in green reflect changes from project performance results presented in May*

**Updated Project Performance Benefit-Cost<sup>2</sup>**

<b><u>Annualized Benefits</u></b> (in millions)	
Time + Cost (Cars)	\$11.7
Time + Cost (Trucks)	\$1.3
Vehicle Ownership	- \$0.5
Greenhouse Gas Emissions	- \$0.5
Particulate Emissions	- \$0.1
Other Air Pollutant Emissions	\$0.0
Collisions	- \$1.3
Physical Activity	- \$5.5
Noise	\$0.0
<b><u>Annualized Costs</u></b> (in millions)	
Capital Costs	\$17.4
Operating & Maintenance Costs	\$1.1
<b><u>Summary – Typical Weekday</u></b>	
Total Benefits	\$5.1
Total Costs	\$18.5
<b>Benefit-Cost Ratio</b>	<b>0.3</b>

**Compelling Case Sketch-Level Benefit-Cost<sup>3</sup>**

<b><u>Annualized Benefits</u></b> (in millions)	
Time + Cost (Cars)	\$11.7
Time + Cost (Trucks) <sup>4</sup>	\$2.6
Vehicle Ownership	- \$0.5
Greenhouse Gas Emissions	- \$0.5
Particulate Emissions	- \$0.1
Other Air Pollutant Emissions	\$0.0
Collisions <sup>5</sup>	\$7.8
Physical Activity	- \$5.5
Noise	\$0.0
<b><u>Annualized Costs</u></b> (in millions)	
Capital Costs	\$17.4
Operating & Maintenance Costs	\$1.1
<b><u>Summary – Typical Weekday</u></b>	
Total Benefits	\$15.5
Total Costs	\$18.5
<b>Benefit-Cost Ratio</b>	<b>0.8</b>
<b><u>Summary – Typical Weekend</u></b>	
Total Benefits <sup>6</sup>	\$18.6
Total Costs	\$18.5
<b>Benefit-Cost Ratio</b>	<b>1.0</b>

<sup>2</sup> Reflects project scope updates to benefits and costs discussed earlier in this memorandum.

<sup>3</sup> Sketch-level analysis is used specifically to develop a staff recommendation for compelling case submissions.

<sup>4</sup> Incorporates doubling factor to account for underestimated truck volumes and associated benefits.

<sup>5</sup> Incorporates sponsor-submitted safety estimate which reflects safety benefits from weaving.

<sup>6</sup> Benefits increased across the board by 20% to account for higher weekend traffic volumes.



Solano Transportation Authority

... working for you!

## SOLANO TRANSPORTATION AUTHORITY

Agenda Item 6a - Attachment B

Member Agencies:

Benicia • Dixon • Fairfield • Rio Vista • Suisun City • Vacaville • Vallejo • Solano County

One Harbor Center, Suite 130, Suisun City, CA 94585-2473 • Telephone (707) 424-6075 / Fax (707) 424-6074

Email: [info@sta.ca.gov](mailto:info@sta.ca.gov) • Website: [sta.ca.gov](http://sta.ca.gov)

May 27, 2016

Via Electronic & US Mail

Page 1 of 2

Mr. Steve Heminger  
Executive Director  
**Metropolitan Transportation Commission (MTC)**  
Bay Area Metro Center  
375 Beale Street, Suite 800  
San Francisco, CA 94105-2066

**Re: I-80/I-680/SR-12 Interchange Project Compelling Case**

Dear Mr. Heminger:

STA wishes to present this Compelling Case argument for the I-80/I-680/SR-12 Interchange Project, believing that the Project merits an improved Benefit to Cost (BC) rating based on three of the four criteria established by MTC, as well as justifying a higher BC assessment based upon criteria outside of the Compelling Case guidelines. The details of how each criteria is met are provided on the included attachments, but are summarized below. When all of these factors are considered together, we believe the appropriate BC rating of the I-80/I-680/SR-12 Interchange should be greater than 1.0, and that the Project should be allowed to proceed as the RTP is developed (Attachment A). The additional factors are:

Interregional and Recreational Travel (Attachment B): I-80 is one of the major corridors for traffic into/out of the Bay Area, and the most direct connector to the Sacramento and Lake Tahoe regions. On Thursday and Friday afternoon, there are substantial backups of freeway traffic on I-80 that extend into the I-80/I-680/SR-12 Interchange, although the primary congestion point is further east where the High Occupancy Vehicle (HOV) Network currently ends. On Sunday's, traffic returning to the Bay Area experiences congestion where those seeking to get on the southbound I-680 and those continuing west on I-80 interweave in the I-80/I-680/SR-12 Interchange complex. Traffic from the Sacramento area and portions of the East Bay also go through the interchange in order to access SR-12 into the Napa Valley. MTC's model does not account for this Interregional and Recreational Travel Benefit from this Project.

Goods Movement Benefits (Attachment C): The I-80 corridor is also one of the major Goods Movement corridors into/out of the Bay Area. Traffic moving through the I-80/I-680/SR-12 Interchange is headed into and out of not only the Port of Oakland, but also the Napa and Sonoma wine regions and the Central Valley. As a result of this confluence of different Goods Movement corridors, the I-80/I-680/SR-12 Interchange (including the Cordelia truck scales, which are listed separately in the RTP) is identified as a key goods movement component in the National Freight Sustainability Plan, the California Goods Movement Action Plan and the MTC San Francisco Bay Area Goods Movement Plan. Further, the next construction packages of the I-80/I-680/SR-12 Interchange project are one of only three projects statewide submitted by Caltrans for funding from the Federal Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) Grant. The I-80/I-680/SR-12 Interchange is the only Bay Area FASTLANE project; the other two projects are in Southern California. MTC's model does not account for the Goods Movement Benefit of this Project.



Benefits Accruing from Reduction in Weaving, Transit Vehicle Crowding and other Travel Behaviors not well Represented in the Travel Model (Attachment D): As noted in detail in the STA letter to MTC dated May 12, 2016 (Attachment F), the MTC model for assessing safety impacts of projects does not account for changes such as shorter traffic queues and changes to weave movements. These are exactly the sort of improvements created by the Interchange Project. A conservative assessment of the Interchange Project's monetized safety improvements shows a gross benefit of \$10.8 million per year, and a net benefit of \$7.8 million per year.

Improved Physical Activity Benefit (Attachment E): As noted in detail in the STA letter to MTC dated May 12, 2016, the Project has significant benefits to physical activity that are not captured by the assessment model. Not only does STA believe that the MTC assessment misrepresented how Solano residents choose to access Express Bus and car pool facilities, the assessment completely leaves out the beneficial impacts of new local and regional bicycle facilities that will be built as a part of the Interchange specifically eliminating gaps in the network at the I-80 and SR-12. As with the safety improvements, these increases in physical activity can be monetized. STA's analysis concludes that the increased physical activity is equal to MTC's anticipated decrease in physical activity, and that the assessment should therefore be neutral.

Cost Adjustments: Finally, again as noted in the STA letter of May 12, STA's analysis shows that several cost items for the interchange were miscalculated. These cost items are the inclusion of the direct connectors for the Express Lanes (reduction of capital costs of \$220 million) and an over estimation of both the amount of and the costs to maintain new pavement (10.8 new lane miles, O&M cost 50% of MTC estimate due to the 50-year anticipated pavement life). These two adjustments would result in a reduced cost for the interchange of \$223 million.

The I-80/I-680/SR-12 Interchange is clearly an important element of the region's transportation infrastructure. The Interchange Project supports transit, including Express Bus, carpools and vanpools. The improvements support Goods Movement and the creation and retention of jobs in both Solano County and the greater Bay Area. The Project improvements support increased physical activity and healthier transportation choices. STA therefore asks MTC to accept the arguments presented in this Compelling Case letter, adjust the BC rating for the project, and allow it to move forward in the RTP process.

Thank you for your time and consideration.

Sincerely,



Daryl K. Halls  
Executive Director

Attachments:

- A. Recommended Revised Costs and BC Calculation
- B. Interregional and Recreational Traffic
- C. Goods Movement
- D. Reduction in weaving, transit vehicle crowding and other travel behaviors not well represented in the travel model
- E. Improved Physical Activity

**ATTACHMENT A**  
**RECOMMENDED REVISED BC COST CALCULATION**

All Costs shown in Thousands of Dollars

**FACILITY COSTS**

Interchange Project Cost	347,400
Annual O&M Cost	0.1
<hr/>	
<b>ANNUAL CAPITAL and O&amp;M COST</b>	<b>17,370</b>

**MODELED COSTS**

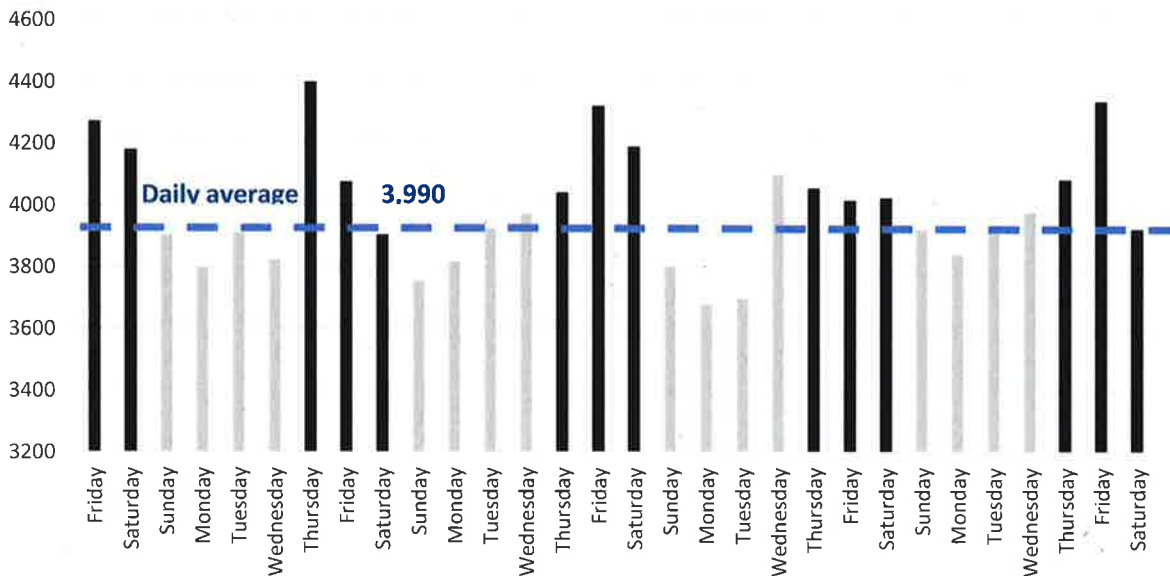
Travel Time Reduction (Benefit)	13,000
Vehicle Ownership (Cost)	-500
GHG Emission Increase (Cost)	-500
PM Emission Increase (Cost)	-100
Collisions (Benefit)	7,817
Physical Activity	0
<hr/>	
<b>ANNUAL MODELED BENEFITS AND COSTS</b>	<b>19,717</b>

**BENEFIT TO COST RATIO            1.14**

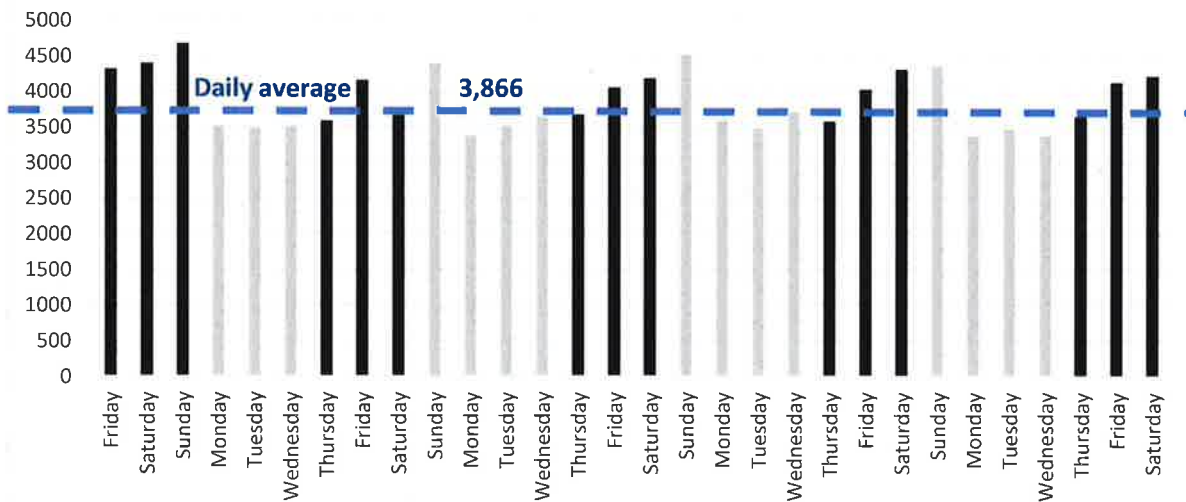


**ATTACHMENT B**  
**INTERREGIONAL AND RECREATIONAL TRAFFIC**

April 2016  
 I-80 EB at Red Top Road  
 (2 pm through 7 pm)



April 2016  
 WB I-80 at Suisun Valley Rd  
 (2 pm through 7 pm)



## **ATTACHMENT C**

### **GOODS MOVEMENT**

**The National Freight Sustainability Plan** includes all segments of the interstate freeway system. In Solano County, this covers the Interstate 80 network (including I-680 and I-780); and, I-505.

**California Goods Movement Plan.** The state plan lists a series of improvements in the Bay Area. Of the five Bay Area projects recommended for funding, four are in or adjacent to the port of Oakland. Project number five is:

- Cordelia truck scales. Improves safety; would be coordinated with I-80/I-680/SR 12 interchange improvement projects.

**San Francisco Bay Area Goods Movement Plan.** Adopted by MTC in February 2016.

- Volume of trucks moving through the interchange ranges from 5,000 to 10,000 vehicles daily.
- Truck volumes are 5% to 8.5% of total trips.
  - For SR 12 east of I-80/I-680/SR-12 Interchange, but producing many agricultural truck trips that pass through the Interchange on the way to Oakland, Napa and/or Sonoma, the percentage of trucks is in the 8.5% to 14% range.
  - I-80 east of the interchange, which likewise handles many trucks that pass through the I-80/I-680/SR-12 Interchange, also has high truck percentages in Vacaville, Dixon and at the Solano/Yolo border on I-505.
- The I-80/I-680/SR-12 Interchange, including the westbound Cordelia truck scales, is identified as a priority project in Opportunity Package 3 – Modernizing Infrastructure.

**ATTACHMENT D**  
**REDUCTION IN WEAVING, TRANSIT VEHICLE CROWDING AND OTHER**  
**TRAVEL BEHAVIORS NOT WELL REPRESENTED IN THE TRAVEL MODEL**

- MTC's project assessment includes a footnote regarding traffic collisions stating that the **MTC model cannot account for changes in weaving movements and rear end collisions** – exactly the sort of improvements that will result from the interchange project.
- **STA staff has data from the approved EIR/EIS for the Interchange** that documents expected reductions in collisions that will result from the completion of the Interchange project. The information from the EIR/EIS documents numerous road segments that exceed the state average for injury and fatality accidents. To quote directly from the environmental document,

“in particular, the total and fatality + injury actual accident rates are 1.9 to 1.4 times higher, respectively, for the west-bound off ramp to Red Top Road; the total actual accidents and fatality + injury actual accident rates are 1.7 to 2.0 times higher, respectively, for the east-bound off ramp to Green Valley Road; the actual fatality + injury accident rate is 34% higher than the average accident rate (fatality+ injury) for the eastbound onramp from Green Valley Road; the total actual accident rate is 3.9 times higher, for the westbound connector ramp from northbound I-680; and the total actual accident and fatality + injury actual accident rates are 37% and 55% higher than the average accident rate (fatality + injury) respectively for the eastbound connector ramp from northbound I-680 than average rates.”
- The environmental document safety discussion concludes with the following paragraph:

“The proposed improvements will reduce current and projected congestion as well as braid several congested weave movements. **Therefore, it is anticipated that construction of the proposed improvements will result in accident rates dropping to, or below, the state-wide average for similar facilities.**” (emphasis added)
- STA staff used road length and accident rates and numbers from the EIR/EIS and AADT rates from Caltrans (2014) to calculate the reduction in accidents that would result from the Interchange project. Specifically, STA staff focused on those segments of the interchange project with accident rates above the State average for similar facilities, and those segments with recorded fatal accidents. STA assumed those segments with accident rates above the state average would now have accident rates equal to the state average, and applied those revised rates to the recorded number of accidents as documented in the EIR/EIS.
- STA staff used the costs for fatal, injury and property damage collisions provided by MTC staff in the document titled Plan Bay Area 2040 Project Performance Assessment Approach to Benefits and Costs.
- STA staff used conservative estimates. For example, only ½ of the number of fatal accidents were assumed to be eliminated by the project improvements. Similarly, even though the environmental document stated that accident rates might drop below the state-wide average, STA staff only assumed that they would drop to the statewide average.

**ATTACHMENT E**  
**IMPROVED PHYSICAL ACTIVITY**

- MTC's modeling staff believes that reductions in traffic congestion – as would be provided by the Interchange – result solely in an increase in drive-alone commuters, and a reduction in the willingness of residents to bike or walk to transit centers in order to join a carpool or vanpool, or ride and express bus, ferry or train.
- This staff conclusion is **not consistent with the actual travel behavior of Solano County residents**. The best example of this is the Suisun City – Fairfield Capitol Corridor station. According to data provided by the Capitol Corridor and included as part of STA's recently completed Rail Facilities and Freight Study, this station has **access rates for bicyclists and pedestrians (18%) equal to those found in Emeryville and Berkeley**. The bicycle storage lockers at the Vacaville and Fairfield Express Bus / Park and Ride lots are consistently filled. The generally good weather and the constantly expanding bicycle and pedestrian networks funded by STA and implemented by cities throughout Solano County are incentives for people to use active transportation to get to a transit center. The disincentive to using transit to access the Bay Area is congestion found in a few key spots such as the Interchange. The MTC staff analysis misses this point.
- Additional active transportation benefits are provided through providing and connecting **numerous new class one and class two bicycle facilities that are integral elements of the Interchange project**. These new facilities provide local connections between single family and multifamily residential areas, nearby commercial and employment centers, and existing schools and civic facilities. They **bypass the barrier provided by I-80 and I-680** by creating new bike lanes on existing over crossings, and creating new grade-separated bike lanes.
- In addition to the local connections, the project provides a vital link to the class two facility **through Jameson Canyon that connects Fairfield and the Suisun Valley PCA to Napa County** and provides better connection for **four regional bike facilities** – North Connector, Solano Bikeway (McGary Road), Lopes Road and Jameson Canyon. The project will also improve Safe Routes to School access for students traveling to Green Valley Middle School and Rodriguez High School.
- The MTC model does not lend itself to calculating the benefit of additional student bicycle and pedestrian trips that would result from the project. STA and construction contractor staff has already observed students using the Green Valley Road overcrossing, a component of the Phase 1 construction package that has not yet even been completed. It also has trouble capturing the local transition of commute trips from automobiles to bicycles that would be provided by elimination of the interstate freeway barriers by the project.
- Finally, the MTC project assessment model is unable to capture the increased physical activity (and support for open space and agriculture in the Napa and Solano PCAs) that would be provided by the completion of the project.

May 12, 2016

Page 1 of 2

Mr. Steve Heminger  
Executive Director  
**Metropolitan Transportation Commission (MTC)**  
Bay Area Metro Center  
375 Beale Street, Suite 800  
San Francisco, CA 94105-2066

**RE: Regional Transportation Plan (RTP) Project Performance Assessment**

Dear Mr. Heminger:

On behalf of the Solano Transportation Authority (STA), we are writing to request a modification to the recent performance assessment by MTC staff of the I-80/I-680/SR 12 Interchange Project. This is a critical regional, statewide, and national freight priority project that reduces congestion, improves safety and physical activity, helps the regional economy by improving goods movement, and supports a number of regional priorities such as safe routes to schools and priority development and conservation areas.

As explained in the attached pages, STA staff has reviewed MTC staff's evaluation of the benefits and costs of the Project and have identified several areas that should be modified. Some of the errors are technical and easily fixed, such as the mis-assignment of Express Lane costs to the Interchange Project. Other modifications to the assessment are more detailed and should also occur. Specifically, MTC's assessment that the Project will result in less physical activity and more traffic collisions is inaccurate and not consistent with other more detailed and accurate data available through the Project's Environmental Document. In addition, MTC's assessment system does not take into account the economic and employment benefits of the project in the benefit to cost assessment process.

The results of these technical and factual errors and the MTC model's inability to assess a regional freight project's benefits would result in placing funding for the entire Project at risk. Millions of dollars of engineering and environmental studies, relocation of utilities and other investments would be wasted if, due to the project's evaluation, it was no longer included in the RTP.


We therefore strongly request that MTC accept STA's revisions to the I-80/I-680/SR 12 Interchange Project evaluation that are spelled out in the attached documents, and we request this change in the evaluation to be implemented prior to the regional project performance assessments being finalized by MTC.

STA Ltr. to MTC's SHeminger dated May 12, 2016 re. RTP Project Performance Assessment

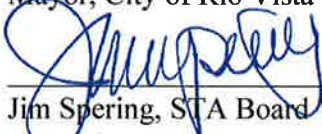
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If you or your staff have questions regarding this request, please contact STA's Executive Director, Daryl Halls or STA's Director of Planning, Robert Macaulay at (707) 424-6075. Thank you for your consideration of this request.

Sincerely,



Norman Richardson, STA Board Chair  
Mayor, City of Rio Vista



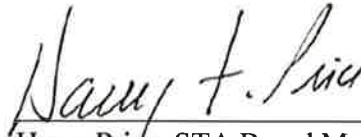
Jim Spering, STA Board Vice Chair  
Supervisor, Solano County Board of Supervisors



Elizabeth Patterson, STA Board Chair  
Mayor, City of Benicia



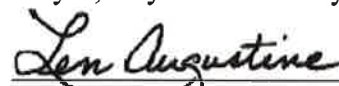
Jack Batchelor, STA Board Member  
Mayor, City of Dixon



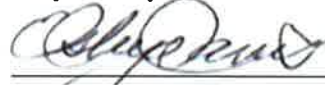
Harry Price, STA Board Member  
Mayor, City of Fairfield



Pete Sanchez, STA Board Member  
Mayor, City of Suisun City



Len Augustine, STA Board Member  
Mayor, City of Vacaville



Osby Davis, STA Board Member  
Mayor, City of Vallejo

Enclosures



Solano Transportation Authority

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## SOLANO TRANSPORTATION AUTHORITY

### Member Agencies:

Benicia • Dixon • Fairfield • Rio Vista • Suisun City • Vacaville • Vallejo • Solano County

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Email: [info@sta.ca.gov](mailto:info@sta.ca.gov) • Website: [sta.ca.gov](http://sta.ca.gov)

### MEMORANDUM

DATE: May 10, 2016  
TO: Steve Heminger, Executive Director, MTC  
FROM: Daryl K. Halls, Executive Director, STA  
SUBJECT: **Revised Benefit to Cost (BC) Calculation for the I-80 / I-680 / SR-12 Interchange**

Below are the STA's requested changes to MTC's benefit to cost (BC) calculation for the I-80 / I-680 / SR-12 Interchange. Based on utilizing more accurate calculations for projects costs and for assessing the project, the revised BC ratio should be moved from the current 0.2 up to 1.14. I look forward to discussing this project assessment in more detail with you and your staff.

**Project cost.** MTC staff incorrectly calculated the cost of the project. (All numbers below are in thousands of dollars.)

The total project capital cost is	\$567,400
MTC staff did not deduct the cost of the express lane direct connections which is	\$220,000
The net project cost is actually	\$347,400
Using MTCs 20 year project cost calculation, <b>annual project capital cost is</b>	<b>\$17,370</b>
MTC staff calculated the annual O&M cost based on 32 new lane miles	\$3,300
The project adds zero new lane miles.	\$0
Because existing, higher maintenance pavement is been replaced with new, low maintenance pavement, the actual <b>annual O&amp;M costs</b> for the 20 years of the plan are:	<b>\$0</b>
<b>THE ACTUAL TOTAL ANNUAL COST OF THE PROJECT IS</b>	<b>\$17,370</b>

**Project benefit.** MTC staff incorrectly calculated the benefits from the project. (All numbers below are in thousands of dollars.)

MTC calculated project benefits from reduced congestion totaling	\$13,000
MTC calculated project costs as follows: <ul style="list-style-type: none"> <li>Increased vehicle ownership \$500</li> <li>Increased GHG emissions \$500</li> <li>Increased PM emissions \$100</li> <li>Reduced physical activity \$5,500</li> <li>Increased collisions due to higher VMT \$1,300</li> </ul> TOTAL \$7,900	
STA does not disagree with the vehicle ownership, GHG emission and PM emission costs	\$1,100
STA staff disagrees with the physical activity cost, which is spelled out in Attachment A. <ul style="list-style-type: none"> <li>Reduced congestion will lead to increased access by bike and walking express bus carpool and vanpool sites.</li> <li>The project includes significant local and regional bike facilities and trail connections – connecting 4 regional bike routes.</li> </ul> The <b>net result</b> should be neutral – neither a cost nor a benefit.	\$0
STA staff disagrees with the collision costs estimated by MTC, as spelled out in Attachment B. <ul style="list-style-type: none"> <li>The project will reduce accidents in the project area by 18 per year.</li> <li>Based on data from the project's EIR/EIS, two fatal collisions occur in the project area annually. A conservative assumption is that the project improvements will eliminate half of these accidents. Using MTC's costs, this is a benefit of: \$10,800</li> <li>Of the remaining accidents, a conservative estimate is that 10% will result in injuries. Using MTC's costs, eliminating two injury accidents will have a benefit of: \$248</li> <li>The remaining 15 crashes will be property damage only. Using MTC's costs, eliminating 15 property damage accidents will have a benefit of: \$69</li> </ul> The <b>net benefit, using both MTC's calculated costs and the project's EIR/EIS derived benefit, totals</b>	\$7,817



End result of these changes to the total and annual project cost and project benefit is shown below:

Interchange Project	
Cost	567,400
Regional Express Lane	
Cost	220,000
Actual Interchange	
Project Cost	347,400
Annual Capital Cost	17,370
<hr/>	
Annual O&M	0
<hr/>	
TOTAL ANNUAL	
COST	17,370
TOTAL ANNUAL	
BENEFIT	19,717
REVISED FINAL BC	
CALCULATION	1.14

## ATTACHMENT A

- MTC's modeling staff believes that, in suburban communities such as those found in Solano County, reductions in traffic congestion – as would be provided by the Interchange – result solely in an increase in drive-alone commuters, and a reduction in the willingness of residents to bike or walk to transit centers in order to join a carpool or vanpool, or ride an express bus, ferry or train.
- This staff conclusion is **not consistent with the actual travel behavior of Solano County residents**. The best example of this is the Suisun City – Fairfield Capitol Corridor station. According to data provided by the Capitol Corridor and included as part of STA's recently completed Rail Facilities and Freight Study, this station has **access rates for bicyclists and pedestrians (18%) equal to those found in Emeryville and Berkeley**. The bicycle storage lockers at the Vacaville and Fairfield Express Bus / Park and Ride lots are consistently filled. The generally good weather and the constantly expanding bicycle and pedestrian networks funded by STA and implemented by cities throughout Solano County are incentives for people to use active transportation to get to a transit center. The disincentive to using transit to access the Bay Area is congestion found in a few key spots such as the Interchange. The MTC staff analysis misses this point.
- Additional active transportation benefits are provided through providing and connecting **numerous new class one and class two bicycle facilities that are integral elements of the Interchange project**. These new facilities provide local connections between single family and multifamily residential areas, nearby commercial and employment centers, and existing schools and civic facilities. They **bypass the barrier provided by I-80 and I-680** by creating new bike lanes on existing over crossings, and creating new grade-separated bike lanes.
- In addition to the local connections, the project provides a vital link to the class two facility **through Jamison Canyon that connects Fairfield and the Suisun Valley PCA to Napa County** and provides better connection for **four regional bike facilities** – North Connector, Solano Bikeway (McGary Road), Lopes Road and Jameson Canyon. The project will also improve Safe Routes to School access for students traveling to Green Valley Middle School and Rodriguez High School.
- The MTC model does not lend itself to calculating the benefit of additional student bicycle and pedestrian trips that would result from the project. It also has trouble capturing the local transition of commute trips from automobiles to bicycles that would be provided by elimination of the interstate freeway barriers by the project. Finally, it is unable to capture the increased physical activity (and support for open space and agriculture in the Napa and Solano PCAs) that would be provided by the completion of the project.

## ATTACHMENT B

- MTC's assessment includes a footnote regarding traffic collisions stating that the **MTC model cannot account for changes in weaving movements and rear end collisions** – exactly the sort of improvements that will result from the interchange project. This means that MTC staff acknowledges that they cannot accurately model the safety benefits of the project.
- **STA staff provided data from the approved EIR/EIS for the interchange to MTC staff** that documents expected reductions in collisions that will result from the completion of the Interchange project. The information from the EIR/EIS documents numerous road segments that exceed the state average for injury and fatality accidents. To quote directly from the environmental document,

“in particular, the total and fatality + injury actual accident rates are 1.9 to 1.4 times higher, respectively, for the west-bound off ramp to Red Top Road; the total actual accidents and fatality + injury actual accident rates are 1.7 to 2.0 times higher, respectively, for the east-bound off ramp to Green Valley Road; the actual fatality + injury accident rate is 34% higher than the average accident rate (fatality+ injury) for the eastbound onramp from Green Valley Road; the total actual accident rate is 3.9 times higher, for the westbound connector ramp from northbound I-680; and the total actual accident and fatality + injury actual accident rates are 37% and 55% higher than the average accident rate (fatality + injury) respectively for the eastbound connector ramp from northbound I-680 than average rates.”
- The environmental document safety discussion concludes with the following paragraph:

“The proposed improvements will reduce current and projected congestion as well as braid several congested weave movements. **Therefore, it is anticipated that construction of the proposed improvements will result in accident rates dropping to, or below, the state-wide average for similar facilities.**” (emphasis added)
- STA staff used road length and accident rates and numbers from the EIR/EIS and AADT rates from Caltrans (2014) to calculate the reduction in accidents that would result from the Interchange project. Specifically, STA staff focused on those segments of the interchange project with accident rates above the State average for similar facilities, and those segments with recorded fatal accidents. STA assumed those segments with accident rates above the state average would now have accident rates equal to the state average, and applied those revised rates to the recorded number of accidents as documented in the EIR/EIS.
- STA staff used the costs for fatal, injury and property damage collisions provided by MTC staff in the document titled Plan Bay Area 2040 Project Performance Assessment Approach to Benefits and Costs.
- STA staff used conservative estimates. For example, only ½ of the number of fatal accidents

were assumed to be eliminated by the project improvements. Similarly, even though the environmental document stated that accent rates might drop below the state-wide average, STA staff only assumed that they would drop to the statewide average.

In summary, STA staff has identified a combination of project cost reductions and project benefits that conservatively result in a project assessment for the I-80/I-680/SR 12 Interchange of 1.14.