San Francisco County Transportation Authority

1455 Market Street, 22nd Floor
San Francisco, California 94103
415.522.4800 FAX 415.522.4829
info@sfcta.org www.sfcta.org

AGENDA

PLANS AND PROGRAMS COMMITTEE
Meeting Notice

Date: Tuesday, March 15, 2016; 10:30 a.m.

Location: Committee Room 263, City Hall

Commissioners: Tang (Chair), Farrell (Vice Chair), Avalos, Cohen, Peskin and Wiener (Ex Officio)

Clerk: Steve Stamos

Page

1. Roll Call

2. Citizens Advisory Committee Report – INFORMATION* **5**

Consent Calendar

3. Approve the Minutes of the February 9, 2016 Meeting – ACTION* **13**

4. Recommend Approval of the Improving West Side Transit Access Strategic Analysis Report – ACTION* **17**

At the November 18, 2014 meeting of the Finance Committee, Commissioner Tang requested that we initiate a Strategic Analysis Report (SAR) to investigate options for improving access to transit on the west side of San Francisco. The purpose of the study is to recommend options for improving access to major West Side transit hubs, especially the West Portal Muni station and Daly City BART station, with the ultimate goal of encouraging alternatives to driving alone to access transit hubs or downtown. As called for in the Transportation Authority's adopted procedures governing the development of SARs, the draft SAR is brought directly to the committee on which the requestor sits for comments and guidance. In this case, we brought the draft SAR to the February Plans and Programs Committee meeting which Commissioner Tang chairs, and subsequently sought and incorporated input from relevant city agencies, the Transportation Authority's Citizens Advisory Committee, and other interested parties.

End of Consent Calendar

5. Recommend Appointment of Two Members to the Citizens Advisory Committee – ACTION* **21**

The Transportation Authority has an eleven-member Citizens Advisory Committee (CAC). CAC members serve two-year terms. Per the Transportation Authority's Administrative Code, the Plans and Programs Committee recommends and the Transportation Authority Board appoints individuals to fill any CAC vacancies. Neither Transportation Authority staff nor the CAC make any recommendations on CAC appointments, but we maintain an up-to-date database of applications for CAC membership. A chart with information about current CAC members is attached, showing ethnicity, gender, neighborhood of residence, and affiliation. There are two vacancies on the CAC requiring committee action. The vacancies are the result of the resignation of Wells Whitney and the term expiration of John Larson. Mr. Larson is seeking reappointment. Attachment 1 shows current CAC membership and Attachment 2 lists applicants.

6. Recommend Approval of the 2016 Prop AA Call for Projects Programming Recommendations Totaling $2,192,934 for Four Projects and Amendment of the Prop AA Strategic Plan – ACTION* 27

Prop AA generates revenues from a $10 vehicle registration fee on motor vehicles registered in San Francisco to fund transportation improvements consistent with a 2010 voter-approved expenditure plan. One of the features of Prop AA is a focus on quick-to-deliver projects that bring tangible benefits to neighborhoods citywide. Correspondingly, the 2012 Strategic Plan policies allow for periodic calls for projects to reprogram cost savings or funds from programmed projects that failed to request funds in a timely manner. In November we issued a call for projects to program $1,193,197 in Prop AA revenues available mainly from cost savings from recently completed projects. By the January 13, 2016 deadline we received five applications requesting about $2.6 million in Prop AA funds. In order to fund more projects, we updated the Prop AA revenue assumptions for the first five years of the Strategic Plan (Fiscal Years 2012/13–2016/17) based on actual revenues collected to date, which are about 3.9% higher than was assumed in the Strategic Plan. Revising the revenue estimates, after netting out 5% program administration costs, increases the capital reserve by $999,737, which is now available for programming. We evaluated projects using the Board-adopted screening and prioritization criteria. Our recommendation is to program $2,192,934 in Prop AA funds (comprised of $1,193,197 in cost savings and $999,737 from the capital reserve) to fully fund 3 projects and partially fund 1 project (Attachment 3). This includes full funding for San Francisco Public Works' construction requests for Broadway Chinatown ($1,029,839) and Mansell ($163,358) streetscape improvement projects, which are both One Bay Area Grant projects with funding shortfalls; and $507,980 for construction of a Muni bus layover area at the BART Daly City Station to accommodate planned service increases for the 14R-Mission Rapid; and partial funding ($491,757) of the design phase of SFMTA's Bulb-outs at WalkFirst Locations project which would upgrade up to 25 existing painted safety zones with concrete bulb-outs on pedestrian high injury corridors throughout the city. Our recommendation holds the capital reserve at $240,000 (about 5% of annual revenues), as approved by the Board in May 2014.

7. Recommend Allocation of $10,975,410 in Prop K Funds and $794,980 in Prop AA Funds, with Conditions, for Six Requests, Subject to the Attached Fiscal Year Cash Flow Distribution Schedules – ACTION* 37

As summarized in Attachments 1 and 2, we have six requests totaling $11,770,390 in Prop K and AA funds to present to the Plans and Programs Committee. The San Francisco Municipal Transportation Agency (SFMTA) has requested funding for three projects, including $706,397 in Prop K funds for construction of fall protection systems at SFMTA's Presidio Division trolleybus maintenance facility; $28,000 in District 6 Neighborhood Transportation Improvement Program capital funds for a new mid-block crosswalk on Sherman Street at Bessie Carmichael Elementary School; and, $287,000 in Prop AA funds for major system overhauls of twelve elevators at Van Ness, Church, Castro and Forest Hill Muni Metro stations. San Francisco Public Works has requested a total of $10,241,000 in Prop K funds for the construction phases of two street resurfacing projects that will improve more than 70 city blocks, including new curb ramps. Bay Area Rapid Transit (BART) has requested $507,980 in Prop AA funds to construct a bus layover area at BART's Daly City station for SFMTA's 14R-Mission Rapid line to accommodate planned service increases for the route. Our recommendation to fund the BART project is contingent upon Board approval of the proposed 2016 Prop AA programming recommendations, which is a separate item on this agenda.

8. Rail Capacity Strategy Update – INFORMATION* 45

The San Francisco Municipal Transportation Authority (SFMTA) has developed a Rail Capacity Strategy that identifies and prioritizes improvements to existing infrastructure and system expansion needed to help meet future ridership demand. Strategies include alleviating bottlenecks, improving the vehicle fleet, expanding or extending the light rail and metro systems, and building system resiliency. Initial engineering was conducted for near term improvements that can be delivered in the next five years. Long term improvements identified in the strategy will inform the Metropolitan Transportation Commission-led San Francisco Bay Area Core Capacity Transit Study, and updates of the San Francisco Transportation Plan as part of the Long Range Transportation Planning Program and Plan Bay Area (the Regional Transportation Plan/Sustainable Communities Strategy). SFMTA staff will provide an overview of the Rail Capacity Strategy at the March Plans and Programs Committee meeting.

9. Bay Area Rapid Transit Perks Program Update – INFORMATION

In partnership with BART, we are developing a pilot program – BART Perks – to reduce train crowding using incentives. Funded by BART, the Federal Highway Administration's Value Pricing Pilot Program, and Prop K, BART Perks will reward BART riders for traveling outside of the morning rush. Replicating a transit incentive model that has addressed similar challenges elsewhere, the program is being implemented to test new cost-effective ways to better use existing tube capacity and improve the customer experience while BART develops longer-term capacity-enhancing solutions. This update provides an overview of the program goals and objectives, marketing plan, and draft incentive program structure. We expect to launch the six-month pilot program this spring. For more information, contact Ryan Greene-Roesel at ryan@sfcta.org, or visit www.sfcta.org/bart-travel-incentives-pilot-program.

10. Introduction of New Items – INFORMATION

During this segment of the meeting, Committee members may make comments on items not specifically listed above, or introduce or request items for future consideration.

11. Public Comment

12. Adjournment

* Additional materials

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DRAFT MINUTES

CITIZENS ADVISORY COMMITTEE

Wednesday, February 24, 2016

1. Committee Meeting Call to Order

Chair Waddling called the meeting to order at 6:03 p.m.

CAC members present were Myla Ablog, Brian Larkin, John Larson, John Morrison, Jacqualine Sachs, Peter Sachs and Peter Tannen.

Transportation Authority staff members present were Ryan Greene-Roesel, Anna LaForte, Maria Lombardo, Mike Pickford, Steve Rehn, and Luis Zurinaga (Consultant).

2. Chair's Report – INFORMATION

Chair Waddling reported that staff was working with the San Francisco Municipal Transportation Agency (SFMTA) to organize a tour of the Transportation Management Center for CAC members. He said that there would be updates on the Late Night Transportation Study and the new Golden State Warriors arena in March or April.

There was no public comment.

Consent Calendar

3. Approve the Minutes of the January 27, 2016 Meeting – ACTION

4. State and Federal Legislative Update – INFORMATION

5. Citizens Advisory Committee Appointments – INFORMATION

Peter Tannen asked why the recommendation in the legislation matrix was to oppose Assembly Bill 1641 and Assembly Bill First Extraordinary Session 25 related to employer shuttles. Maria Lombardo, Chief Deputy Director, replied that after Board debate on the topic, there was an 8-3 vote to oppose the bills. She said that the bills appeared to clarify that local jurisdictions had the authority to determine whether a corporate shuttle could use a transit stop at a curb. She explained that a somewhat simplified answer was that those in favor of a watch position on the bills generally argued that San Francisco already had the authority that the bills would grant, making them unnecessary at best, while those opposed to the bills argued that they were not nuanced enough to capture all the ways that the city's shuttle program attempted to mitigate local concerns and could undermine those efforts in San Francisco and elsewhere in the state.

There was no public comment on the Consent Calendar.

Peter Sachs moved to approve the Consent Calendar, seconded by Peter Tannen.

The Consent Calendar was approved by the following vote:

Ayes: CAC Members Ablog, Larkin, Larson, Morrison, J. Sachs, P. Sachs, Tannen and Waddling

Absent: CAC Members Hogue and Lerma

End of Consent Calendar

6. Adopt a Motion of Support for the Approval of the 2016 Prop AA Call for Projects Programming Recommendations Totaling $2,192,934 for Five Projects and Amendment of the Prop AA Strategic Plan – ACTION

Mike Pickford, Transportation Planner, presented the item per the staff memorandum.

Peter Sachs asked why the recommended amount for the Muni Bus Layover Area at BART Daly City Station project was higher than the recommended amount for the Bulb-Outs at Walk First Locations project, even though it received a lower score. Mr. Pickford responded that different criteria were used to score projects in different Prop AA categories, and that the total score possible in the Transit Reliability and Mobility Improvements category was lower than the total score possible in the Pedestrian Safety category.

Peter Tannen said that he hiked and biked in Maclaren Park and thought that the Mansell Corridor Improvement project was a great project. Mr. Tannen asked if there was funding included in the Bulb-Outs at Walk First Locations project for streetscape elements, such as benches or landscaping. Craig Raphael, Transportation Planner at the San Francisco Municipal Transportation Agency (SFMTA), responded that SFMTA had prioritized funding to construct as many bulb-outs as possible because safety was the primary goal of the project. Mr. Raphael added that it was possible for streetscape elements to be included at certain locations, but that it was not the highest priority.

During public comment, Aaron Goodman noted that there were many pedestrian safety projects being planned and implemented in downtown areas, but not in the outer areas of the city, especially around schools and high transfer areas for transit. He said that there was an equity issue in the geographic distribution of pedestrian safety projects, and that the area around the Balboa Park BART station should be a priority area for pedestrian safety improvements. Mr. Goodman further asked why red transit only lanes do not extend all the way to the Daly City BART station for the 14-Mission Muni line. Mr. Raphael responded that there was a second phase of the project to implement rapid network transit priority red lanes on the southern half of the 14-Mission.

Edward Mason asked if Prop AA funding for the Broadway Chinatown Streetscape Improvements project was being used to fund street trees. Anna LaForte, Deputy Director for Policy and Programming, responded that as a stand-alone item, street trees were not eligible for Prop AA funding but that they were eligible as an element of a complete streets project. David Froehlich, Project Manager at San Francisco Public Works, stated that other funds were being used within the Broadway Chinatown Streetscape Improvements project for street trees.

Chair Wadding severed the Prop AA Transit Reliability and Mobility Improvement Category programming recommendations for separate consideration to avoid a conflict of interest with the Muni Bus Layover Area at BART Daly City Station.

John Larson moved to support the approval of the Prop AA Pedestrian Safety Category programming recommendations, seconded by Peter Tannen.

The Pedestrian Safety Category programming recommendations were approved by the following vote:

Ayes: CAC Members Ablog, Larkin, Larson, Morrison, J. Sachs, P. Sachs, Tannen and Waddling

Absent: CAC Members Hogue and Lerma

Peter Tannen moved to approve the Prop AA Transit Reliability and Mobility Improvement Category programming recommendations, seconded by John Larson.

The Transit Reliability and Mobility Improvement Category programming recommendations were approved by the following vote:

Ayes: CAC Members Ablog, Larkin, Larson, Morrison, J. Sachs, P. Sachs and Tannen

Abstain: CAC Member Waddling

Absent: CAC Members Hogue and Lerma

7. Adopt a Motion of Support for the Allocation of $10,975,410 in Prop K Funds and $794,980 in Prop AA Funds, with Conditions, for Six Requests, Subject to the Attached Fiscal Year Cash Flow Distribution Schedules – ACTION

Mike Pickford, Transportation Planner, presented the item per the staff memorandum.

Peter Sachs asked if the Muni Bus Layover Area at BART Daly City Station project provided space for three Muni buses to layover, and if the $507,980 in recommended funding was for striping or other work. Mr. Pickford responded that the recommended funding amount would include striping and pavement improvements to support the weight of the buses.

John Larson asked if the Elevator Safety and Reliability Upgrades project involved a total replacement of elevators, and if the elevators would be out of service during the upgrade. Craig Raphael, Transportation Planner at the San Francisco Municipal Transportation Agency, responded that the project did not involve a full replacement of elevators, but rather a major component overall to extend the useful lives of elevators. Mr. Raphael added that he would follow up on the length of time that elevators would be out of service.

Chair Wadding severed the allocation funds requested by BART for Muni Bus Layover Area at BART Daly City Station for separate consideration in order to avoid a conflict of interest.

Peter Sachs moved to support the allocation funds requested by BART for Muni Bus Layover Area at BART Daly City Station, seconded by Myla Ablog.

The allocation funds requested by BART were approved by the following vote:

Ayes: CAC Members Ablog, Larkin, Larson, Morrison, J. Sachs, P. Sachs and Tannen

Abstain: CAC Member Waddling

Absent: CAC Members Hogue and Lerma

Brian Larkin moved to approve the remaining allocations recommended by staff, seconded by Jacqualine Sachs.

The underlying item was approved by the following vote:

Ayes: CAC Members Ablog, Larkin, Larson, Morrison, J. Sachs, P. Sachs, Tannen and Waddling

Absent: CAC Members Hogue and Lerma

8. Adopt a Motion of Support for Approval of the Improving West Side Access Strategic Analysis Report – ACTION

Ryan Greene-Roesel, Senior Transportation Planner, presented the item per the staff memorandum.

Jacqualine Sachs asked if the West Side Strategic Analysis Report took into consideration commute times not during morning or afternoon peak periods, and suggested that off-peak commute hours should be considered in the study. Ms. Greene-Roesel responded that the study focused primarily on morning and afternoon peak commute times, but that staff held a focus group session where off-peak commute hours were discussed.

Chair Waddling suggested that the study should be looked at for potential connections to the upcoming BART Travel Incentives program.

Brian Larkin asked if the study took into account the section of the N-Judah around 9th Avenue, as he had observed this area to be a regular slow point of service. Ms. Greene-Roesel responded that the study did not look at the N-Judah, but rather lines that directly connected to major transit hubs.

Peter Sachs stated that he would like to see more attention paid to commuters travelling towards the South Bay, and recommended an exploration of a multi-transit agency effort focused on commutes to the south bay as a viable alternative to commuter shuttles. He added that there was a possible opportunity to connect and extend the 66-Quintara Muni line with the 29-Sunset Muni line to the West Portal station in a way that did not deprive anyone of service. Mr. Sachs said that he would like to see the 48 Muni line expedited as part of the Muni Forward project, as it would help to improve access to West Portal.

Peter Tannen asked if staff had heard if the unpleasant conditions in the areas where passengers waited for buses at the Daly City BART station had been a deterrent to people shifting modes to transit. Ms. Greene-Roesel responded that Transportation Authority staff had not heard that, but that bicycle conditions were very difficult for cyclists reaching Daly City BART, and that an additional study on this issue was recommended in the West Side Strategic Analysis Report (SAR).

During public comment, Aron Goodman suggested that the SFMTA and Transportation Authority should consider realigning the L-Taraval Muni line to eastbound on Sloat Boulevard and then northbound along West Portal Avenue. He said that this would provide additional service to the Lakeshore Mall and the Stern Grove Music Festival, further helping to reduce private vehicle use. Mr. Goodman suggested that Muni service in western San Francisco should be reconsidered in an inventive way to get commuters to Daly City BART and further south to the peninsula.

Edward Mason noted that he had boarded the 29 Muni line at the Balboa Park BART station at noon and that it had continued to be crowded to City College, and suggested further study on this issue.

Chair Wadding moved to approve the item, seconded by Peter Sachs.

The item was approved by the following vote:

Ayes: CAC Members Ablog, Larkin, Larson, Morrison, J. Sachs, P. Sachs, Tannen and Waddling

Absent: CAC Members Hogue and Lerma

9. Rail Capacity Strategy Update – INFORMATION

Grahm Satterwhite, Principal Planner at the San Francisco Municipal Transportation Agency (SFMTA), presented the item.

Brian Larkin asked what the timeframe was for the Geary Boulevard light-rail transit (LRT)

project mentioned during the presentation. Mr. Satterwhite stated that because it was a long-range conceptual investment with no concrete funding for detailed design or construction, it was targeted at 25 years or further out, along with other Tier 1 investments. Mr. Satterwhite added that hopefully this conversation would speed up the delivery of long-term investments, especially as additional funding was sought.

Peter Sachs complimented SFMTA for involving front line staff in its planning for service improvements, because they could bring ideas that other staff might not have the experience to identify. Mr. Sachs added that the Geary LRT project should be considered now, as population growth was projected along the Geary corridor. Mr. Sachs also noted that areas in eastern San Francisco where future growth was projected, specifically Hunters Point, Candlestick Point, and the Dogpatch, were not well connected to transit and needed more transit investments.

Chair Waddling asked if the Muni Metro Extension Surface Train Control System was proposed as an alternative to the Mission Bay Loop. Mr. Satterwhite responded that this was not an alternative to the Mission Bay Loop, but rather that it was entirely focused on optimizing operations along the Embarcadero and Mission Bay Area, specifically increasing resiliency and flexibility. He added that it would complement the Mission Bay Loop.

During public comment, Aaron Goodman stated that it was critical to improve transit service around the southeast Bayshore, Hunters Point, and Sunnydale neighborhoods, especially the service improvements associated with the proposed Geneva-Harney bus rapid transit line. He expressed concern that new development projects in the area, including HOPE SF projects, would add to traffic congestion along 3rd Street if transit service was not improved along Geneva Avenue. Mr. Goodman added that designated transit-only lanes were needed, or possibly light-rail service, which could result in additional growth in the area.

10. Update on 19th Avenue/M-Ocean View Project – INFORMATION

Liz Brisson, Project Manager for the 19th Avenue/M-Line Project at the San Francisco Municipal Transportation Agency (SFMTA), presented the item.

John Larson asked if the full subway alternative for the 19th Avenue/M-Ocean View Project was an alternative presented during public outreach events. Ms. Brisson responded that it was currently proposed as an alternative. Ms. Brisson noted that although the full subway alternative was an increase in scope, it would provide a substantial beneficial impact.

Mr. Larson stated that it was important to concentrate on providing connectivity to the Daly City BART station in this project, as well as to improve traffic control at the intersection of West Portal Avenue and Ulloa Street because of conflicts between modes. Ms. Brisson responded that during the feasibility study, staff identified a conceptual alignment and profile of a connection to the Daly City BART station, and that they were open to including this in the environmental review of the project. She added that her colleagues would be in touch to discuss efforts around addressing conflicts between modes at the intersection of West Portal Avenue and Ulloa Street.

Brian Larkin asked what the conceptual budget was for the second alternative. Ms. Brisson responded that she believed it was roughly $1.1 to 1.5 billion, and that she would follow up with a more specific estimate.

Peter Sachs stated that he would like to see the project reach Daly City BART, but noted that this would be challenging because of terrain and freeways. Ms. Brisson responded that the project team considered two alignments during the feasibility study, and that the more feasible alignment would require an aerial structure rather than a tunnel.

During public comment, Aaron Goodman suggested that SFMTA should consider more above

grade rail projects rather than below ground (noting that the transit rider experience may be more pleasant above ground than in tunnels). He continued to note that future transit could be routed along Sloat Avenue rather than tunneled under Ocean Avenue, and that the area around Mercy High School and Stonestown Mall could serve as a new transit hub.

11. Update on the Railyard Alternatives and I-280 Boulevard Feasibility Study – INFORMATION

Susan Gygi, Project Manager of the Railyard Alternatives and I-280 Boulevard Feasibility Study at the San Francisco Planning Department, presented the item.

Chair Wadding said he had attended the public meeting for this project the previous night and he noted that there were many people at the meeting who were concerned about possible changes to I-280. He asked if Islais Creek would hinder construction of a tunnel for Caltrain under 3rd Street, thereby avoiding I-280. Ms. Gygi responded that they had looked at a tunnel connection to the existing Caltrain tracks further south and agreed that it would be somewhat hindered by Islais Creek, but that there were also significant grade changes along the route. Chair Wadding asked how neighborhoods located in southern San Francisco would be impacted by the removal of I-280. Ms. Gygi responded that the Planning Department had been asked by partners, including Caltrans, not to propose any changes that would back traffic up onto the I-280 and US 101 corridor interchange, the San Francisco-Oakland Bay Bridge, or Market Street and Octavia Boulevard. She added that the Planning Department believed a reconnected street grid below I-280 would help to disperse traffic.

Peter Sachs asked how much extra time and cost was added to the project as a result of the exploration of alternative alignments to the Caltrain Downtown Rail Extension (DTX) that had already been cleared through environmental review. Ms. Gygi responded that alternative alignments would have to be cleared through environmental review, but that it was easier for tunnel projects to pass environmental review than the "cut-and-cover" method proposed for the DTX alignment. She added that cost and schedule implications of alternative alignments would be determined at a later date, and that recent technological advancements to tunnel boring machines had made tunnel construction easier than other construction methods. Ms. Gygi also stated that any modifications to alignments would not change the ultimate schedule of the High-Speed Rail project, the DTX project, or the Caltrain Electrification project.

Myla Ablog asked how the study took sea-level rise into account, and noted that rail alignment alternatives presented opportunities for sea-level rise mitigation and storm water retention measures. Ms. Gygi responded that sea-level rise and resilient design had been considered extensively in the study.

During public comment, Aaron Goodman requested more information on the cost of rail alignment alternatives and other major capital projects in general, especially the cost burden to tax payers and property developers.

Roland Lebrun stated that the rail alignment alternative along 3rd Street was a step in the right direction because it would provide a faster route between San Jose's Diridon Station and the Transbay Terminal. Mr. Lebrun added that a new transbay tunnel should be considered in the study.

12. Introduction of New Business – INFORMATION

Jacqualine Sachs requested an update on the Central Subway project.

13. Public Comment

Edward Mason noted that after the Commuter Shuttle Pilot Program expired in January, most shuttle providers were traveling on major and minor arterials including Castro Street, Divisadero Street and 24th Street. He expressed concern that this was slowing Muni routes, including the 48 and the J lines, and that he had counted 57 shuttles moving through the intersection of 24th and Valencia Streets one morning between 7-8:00 a.m. Mr. Mason added that a recently passed resolution stated that the San Francisco Municipal Transportation Agency and Transportation Authority should work together to construct a commuter shuttle hub or potentially more efficient zone network model. He also suggested that the Metropolitan Transportation Commission should consider a regional express bus to help eliminate the volume of commuter shuttles.

Aaron Goodman expressed concern that potential redevelopment of the current Ruth Asawa San Francisco School of the Arts site would increase traffic congestion and potentially slow the 44-O'Shaughnessy Muni line.

14. Adjournment

The meeting was adjourned at 8:16 p.m.

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DRAFT MINUTES

PLANS AND PROGRAMS COMMITTEE
Tuesday, February 9, 2016

1. Roll Call

Chair Tang called the meeting to order at 10:06 a.m. The following members were:

Present at Roll Call: Commissioners Avalos, Farrell, Peskin and Tang (4)

Absent at Roll Call: Commissioner Cohen (1)

2. Citizens Advisory Committee Report – INFORMATION

Chris Waddling, Chair of the Citizens Advisory Committee (CAC), reported that at its January 27 meeting, the CAC considered and unanimously passed Item 6 from the agenda. Regarding the procurement of the new buses, he said the CAC focused on the design of the buses, specifically the interior lighting and headlights. He noted that Peter Tannen had inquired about the warranty on the buses, as Mr. Tannen had heard that similar buses being used in Chicago had issues with the hybrid propulsion systems, but was assured by San Francisco Municipal Transportation Agency (SFMTA) staff that the warranty covered those issues. He said that Mr. Tannen also inquired about why the bike lanes on Golden Gate Avenue would not be parking buffered, but that SFMTA staff responded that the pavement quality was too poor, and that there were concerns about people blocking bike lanes and perceived threats of increased crime by shielded cars.

Consent Calendar

3. Approve the Minutes of the January 12, 2016 Meeting – ACTION

4. Recommend Adoption of the Fiscal Year 2016/17 Transportation Fund for Clean Air Local Expenditure Criteria – ACTION

There was no public comment.

The Consent Calendar was approved without objection by the following vote:

Ayes: Commissioners Avalos, Farrell, Peskin and Tang (4)

Absent: Commissioner Cohen (1)

End of Consent Calendar

5. Recommend Appointment of Two Members to the Citizens Advisory Committee – ACTION

Mike Pickford, Transportation Planner, presented the item per the staff memorandum.

Roger Kuo spoke to his interest and qualification in being appointed to the Citizens Advisory Committee.

Chair Tang stated that all applicants for the Citizens Advisory Committee were required to appear before the Plans and Programs Committee at least once before being eligible for appointment. She said that Commissioner Wiener was interested in reappointing Peter Tannen, who currently represented his district on the CAC.

Commissioner Peskin moved to recommend reappointment of Peter Tannen and continue the remaining vacancy to allow additional time for candidate recruitment, seconded by Chair Tang.

There was no public comment.

The motion to recommend reappointment of Mr. Tannen was approved without objection by the following vote:

Ayes: Commissioners Avalos, Farrell, Peskin and Tang (4)

Absent: Commissioner Cohen (1)

6. Recommend Allocation of $49,341,000 in Prop K Funds, with Conditions, Subject to the Attached Fiscal Year Cash Flow Distribution Schedule – ACTION

Mike Pickford, Transportation Planner, presented the item per the staff memorandum.

Chair Tang asked for more detail on why the timeline for the procurement of the hybrid diesel buses had been accelerated. Mr. Pickford responded that the procurement was moved up to take advantage of unexpected production capacity at the manufacturer, and that this would result in expedited delivery of new buses. Chair Tang said that she understood the buses were originally supposed to be put into service in 2019, but would now be in service in July 2017.

Chair Tang asked for more detail on how the new vehicles, both the first and second batches, would be deployed so that they were spread equally across the city. She also asked if there was a plan for particular lines, and whether the vehicles in the worst condition would be replaced first. Monique Webster, Senior Manager of Capital Finance at the San Francisco Municipal Transportation Agency (SFMTA), responded that SFMTA staff would follow up with more detail, but noted that typically the oldest vehicles were replaced first.

Commissioner Avalos requested that SFMTA staff follow up on how the new vehicles would be deployed, as well as provide an overall update on the progress of the entire fleet replacement program and any remaining funding gaps. Ms. Webster responded that SFMTA was moving forward with the replacement of buses as well as light rail vehicle replacement and expansion projects. Commissioner Avalos asked for clarification that buses meant both diesel and trolley vehicles, to which Ms. Webster responded in the affirmative.

Commissioner Avalos said that it had been about over a year since he had been briefed on the fleet replacement program and asked Transportation Authority staff to set up a briefing with SFMTA staff on the topic.

There was no public comment.

The item was approved without objection by the following vote:

Ayes: Commissioners Avalos, Farrell, Peskin and Tang (4)

Absent: Commissioner Cohen (1)

7. Improving West Side Transit Access Strategic Analysis Report – INFORMATION

Ryan Greene-Roesel, Senior Transportation Planner, presented the item per the staff presentation.

Commissioner Avalos asked which hubs the study focused on. Ms. Greene-Roesel responded that the West Portal Muni station and the Daly City BART station were the main areas of focus.

Commissioner Avalos asked about the reasons for the significant ridership growth on the 29-Sunset route. Ms. Greene-Roesel responded that the ridership growth was surprising given the relative lack of land use development along the line, and that she would need to investigate the reasons behind the growth.

Commissioner Avalos commented that lack of space at the West Portal station could make it challenging to accommodate bicyclists. Ms. Greene-Roesel agreed and noted that bicyclist access issues could be examined in the context of the upcoming West Portal Circulation Study.

Commissioner Tang commented that she looked forward to working on how to adjust the 66-Quintara to better leverage the route and thanked staff for the work on the SAR.

There was no public comment.

8. Introduction of New Items – INFORMATION

There was no public comment.

9. Public Comment

There was no public comment.

10. Adjournment

The meeting was adjourned at 10:43 a.m.

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San Francisco County Transportation Authority
1455 Market Street, 22nd Floor
San Francisco, California 94103
415.522.4800 FAX 415.522.4829
info@sfcta.org www.sfcta.org

Memorandum

Date: 03.10.2016 **RE:** Plans and Programs Committee March 15, 2016

To: Plans and Programs Committee: Commissioners Tang (Chair), Farrell (Vice Chair), Avalos, Cohen, Peskin and Wiener (Ex Officio)

From: Rachel Hiatt – Acting Deputy Director for Planning

Through: Tilly Chang – Executive Director

Subject: ACTION – Recommend Approval of the Improving West Side Transit Access Strategic Analysis Report

Summary

At the November 18, 2014 meeting of the Finance Committee, Commissioner Tang requested that we initiate a Strategic Analysis Report (SAR) to investigate options for improving access to transit on the west side of San Francisco. The purpose of the study is to recommend options for improving access to major West Side transit hubs, especially the West Portal Muni station and Daly City BART station, with the ultimate goal of encouraging alternatives to driving alone to access transit hubs or downtown. As called for in the Transportation Authority's adopted procedures governing the development of SARs, the draft SAR is brought directly to the committee on which the requestor sits for comments and guidance. In this case, we brought the draft SAR to the February Plans and Programs Committee meeting which Commissioner Tang chairs, and subsequently sought and incorporated input from relevant city agencies, the Transportation Authority's Citizens Advisory Committee, and other interested parties.

BACKGROUND

Strategic Analysis Reports (SARs) are prepared periodically by Transportation Authority staff to advise the Transportation Authority (TA) on policy issues or topics of interest to Board members. This SAR, initiated at the request of Transportation Authority Commissioner Tang, analyzes options for improving access to West Side transit hubs, particularly Daly City BART and West Portal Muni stations, primarily via bicycling, public transit or carpooling to hubs. This study uses the term "West Side" to refer to the area south of Golden Gate Park, West of the hill districts, and north of the county line.

Supporting alternatives to driving is particularly critical for West Side residents, who drive more for their daily trips than residents of most other San Francisco neighborhoods. About 62 percent of daily person-trips from the West Side are made by driving, higher than all neighborhoods except the Hill Districts, Outer Mission, and Bayshore areas. Multiple factors contribute to West Side residents' relatively higher car use. One likely factor is the lack of grade-separated transit access to major job centers, which exists only at the periphery of the area, at the Muni rail Forest Hill and West Portal Stations, and at the BART Daly City and Balboa Bark Stations. West side residents must therefore rely primarily on surface-running transit, which can be slower and subject to delays from cross traffic at intersections. Extending subways into to the West Side, or providing other forms of transit grade-separation would help address the problem, but these kinds of improvements take many years to plan and deliver. This study provides near term recommendations for improving access to existing transit

hubs while longer-term solutions are being developed.

DISCUSSION

Purpose of the SAR: The purpose of the SAR was to analyze options for improving access to West Side transit hubs, especially the West Portal Muni Station and the Daly City BART Station, with the ultimate goal of encouraging greater access by transit, bicycling, and carpooling.

Analysis Approach: We approached the study questions in three steps:

- **Existing conditions review.** We developed an inventory of known transportation challenges that may be inhibiting access to West Side transit hubs, based on reviewing previous studies and planned projects, interviewing relevant agency staff, analyzing the quality of available access modes (focusing on bicycling, pickup/drop-off, and transit), and holding a community focus group.
- **Prioritization of access improvement concepts.** To help prioritize access improvement concepts, we surveyed West Side households and intercepted transit riders at West Portal, Daly City, and Balboa Park stations to ask them about which types of investments would be most likely to encourage them to take transit or bike to West Side transit hubs rather than driving alone to the hubs or their final destination.
- **Recommendations.** Using the survey results, we prioritized improvement concepts according to what would appeal to the largest number of West Side drivers. We then prepared recommendations linking the general access challenges identified in the survey with the more specific access challenges identified as part of the existing conditions review. These recommendations reflect agency input from both BART and the San Francisco Municipal Transportation Agency. Draft recommendations have also been shared with the Transportation Authority's Citizens Advisory Committee (CAC) and West Portal community groups.

Near Term Recommendations:

- **Improve the travel time and reliability of West Side transit routes.** Surveys of West Side residents and transit users collected for this study indicated that faster transit service (e.g. shorter travel times) and improved reliability are most likely to encourage drivers to take transit to access West Side hubs. Multiple projects are underway to improve travel time and on many of the routes serving West Side transit hubs, such as the ongoing project to speed service on the L-Taraval, which connects to West Portal and directly downtown. Implementing these projects is critical to improving access to transit hubs. Beyond these efforts, the 29-Sunset stands out as a promising opportunity for additional improvement. This route serves a major West Side transit hub (Balboa Park BART), but travel times are long for most West Side residents. Ridership has grown by about 40 percent since 2007, and vehicles are experiencing crowding in some locations. All these factors suggest that additional investment is justified. Additional work is also needed to address reliability problems affecting access to transit hubs. We recommend continuing and augmenting ongoing efforts to address reliability at the West Portal Station by addressing circulation issues affecting all modes of travel and identifying strategies to reduce transit delay. A final recommendation is to develop a plan for accommodating more frequent bus service to the Daly City BART station. Our analysis found that Daly City BART station as currently configured lacks space to absorb more frequent connecting bus service.
- **Leverage Underutilized Routes to Strengthen Connections to Hubs.** Survey responses suggest that lack of nearby transit routes is not a top barrier to taking transit. However, there

are opportunities to reconfigure existing, lower-performing routes to improve performance and strengthen connections to transit hubs. Several routes on the West Side are underutilized but the 66-Quintara stands out as the least utilized route in the study area and one that lacks connections to major destinations or transit hubs. We recommend studying options to improve the 66-Quintara or other lower performing routes.

- **Pilot methods of encouraging carpooling and ridesharing to transit hubs.** Our survey found that about a third of drivers would consider taking a shared ride service to access West Side transit hubs; drivers appeared to be more interested in these services than non-drivers. Shared ride services have the potential to expand the options available to drivers interested in taking transit from a major hub, especially for those who live outside walking distance of their preferred transit route. We recommend developing a scope of work and seeking funding for a pilot project to encourage carpooling and ridesharing to hubs.
- **Increase bicyclist' safety and comfort to encourage bicycling to hubs.** Survey results suggest that improving bicycle safety, addressing challenges associated with hilly terrain, and reducing the incidence of bicycle theft should be top priorities for encouraging more bicycling by residents in the Southwest part of the city. Based on this, top recommendations include implementing planned projects to improve bicycle safety in the Geneva Corridor and on Ocean Avenue (or on parallel routes), which provide connections to the Balboa Park BART station; implementing secure bicycle parking in the West Portal area to allow commuters to leave bikes securely while they travel downtown; and identifying funding for a study to develop a plan for improved bicycle connections to the Daly City BART station.

Long Term Recommendations:

- **Explore subway extensions and creating freeway high occupancy vehicle lanes for express buses.** Expanding direct access to underground rail or other grade-separated transit has the potential to significantly improve travel times to downtown for West Side residents, especially those not currently living near a hub. Plans are already underway to underground portions of the M-Line through the M-Ocean View/19th Avenue Project, and the potential for additional subway expansions could be considered as part of the Transit Modal Concept Study in the next Long Range Transportation Planning Process. Another strategy for reducing travel times between the West Side and downtown would be to dedicate a lane to transit buses on I-280, which would allow buses from the West Side to express downtown within 20 minutes or less once on the freeway. The viability of this idea could be explored as part of developing the Freeway and Street Traffic Management Strategy in the Long Range Transportation Planning Process (LRTPP).
- **Develop a strategy for reducing reliance on single occupant vehicle driving for travel between the West Side and South Bay.** Our analysis focused on travel between the West Side and downtown San Francisco, which is the second most common commute destination. Future studies should also examine how best to reduce driving dependence for West Side workers destined for the South Bay, which is the top commute destination but more difficult to serve by transit given low employment densities and an abundance of parking relative to downtown San Francisco. Approximately 90 percent of morning peak period trips between the Sunset and South Bay are currently made by driving, compared to about 28 percent of trips between the Sunset and downtown. Future studies could examine options such as providing direct express bus services between the West Side and top South Bay commute destinations; providing more continuous dedicated high occupancy vehicle/transit lanes on US 101 or I-280; providing direct incentives for carpooling/ridesharing; or strengthening connections to Caltrain.

These ideas could be considered as part of developing the Freeway and Street Traffic Management Strategy in the LRTPP.

ALTERNATIVES

1. Recommend approval of the Improving West Side Transit Access SAR, as requested.
2. Recommend approval of the Improving West Side Transit Access SAR, with modifications.
3. Defer action, pending additional information or further staff analysis.

CITIZENS ADVISORY COMMITTEE

The CAC was briefed on this item at its February 24, 2016 meeting and unanimously adopted a motion of support for the staff recommendation.

FINANCIAL IMPACTS

None.

RECOMMENDATION

Recommend approval of the Improving West Side Transit Access SAR.

Enclosure:

1. Draft Improving West Side Transit Access Strategic Analysis Report

San Francisco County Transportation Authority

1455 Market Street, 22nd Floor
San Francisco, California 94103
415.522.4800 FAX 415.522.4829
info@sfcta.org www.sfcta.org

Memorandum

Date: 03.10.16 *RE:* Plans and Programs Committee March 15, 2016

To: Plans and Programs Committee: Commissioners Tang (Chair), Farrell (Vice Chair), Avalos, Cohen, Peskin and Wiener (Ex Officio)

From: Maria Lombardo – Chief Deputy Director

Through: Tilly Chang – Executive Director

Subject: **ACTION** – Recommend Appointment of Two Members to the Citizens Advisory Committee

Summary

The Transportation Authority has an eleven-member Citizens Advisory Committee (CAC). CAC members serve two-year terms. Per the Transportation Authority's Administrative Code, the Plans and Programs Committee recommends and the Transportation Authority Board appoints individuals to fill any CAC vacancies. Neither Transportation Authority staff nor the CAC make any recommendations on CAC appointments, but we maintain an up-to-date database of applications for CAC membership. A chart with information about current CAC members is attached, showing ethnicity, gender, neighborhood of residence, and affiliation. There are two vacancies on the CAC requiring committee action. The vacancies are the result of the resignation of Wells Whitney and the term expiration of John Larson. Mr. Larson is seeking reappointment. Attachment 1 shows current CAC membership and Attachment 2 lists applicants.

BACKGROUND

There are two vacancies on the Citizens Advisory Committee (CAC) requiring Plans and Programs Committee action. The vacancies are the result of the resignation of Wells Whitney and the term expiration of John Larson. Mr. Larson is seeking reappointment. There are currently 26 applicants to consider for the existing vacancies.

DISCUSSION

The CAC is comprised of eleven members. The selection of each member is recommended at-large by the Plans and Programs Committee (Committee) and approved by the Transportation Authority Board. Per Section 6.2(f) of the Transportation Authority's Administrative Code, the eleven-member CAC:

> "…shall include representatives from various segments of the community, including public policy organizations, labor, business, senior citizens, the disabled, environmentalists, and the neighborhoods; and reflect broad transportation interests."

An applicant must be a San Francisco resident to be considered eligible for appointment. Attachment 1 is a tabular summary of the current CAC composition. Attachment 2 provides similar information on current applicants for CAC appointment. Applicants are asked to provide residential location and areas of interest. Applicants provide ethnicity and gender information on a voluntary basis. CAC applications

are distributed and accepted on a continuous basis. CAC applications were solicited through the Transportation Authority's website, Commissioners' offices, and email blasts to community-based organizations, advocacy groups, business organizations, as well as at public meetings attended by Transportation Authority staff or hosted by the Transportation Authority.

All applicants have been advised that they need to appear in person before the Committee in order to be appointed, unless they have previously appeared before the Committee. If a candidate is unable to appear before the Committee, they may appear at the following Board meeting in order to be eligible for appointment. An asterisk following the candidate's name in Attachment 2 indicates that the applicant has not previously appeared before the Committee.

ALTERNATIVES

1. Recommend appointment of two members to the CAC.
2. Recommend appointment of one member to the CAC.
3. Defer action until additional outreach can be conducted.

CAC POSITION

None. The CAC does not make recommendations on appointment of CAC members.

FINANCIAL IMPACTS

None.

RECOMMENDATION

None. Staff does not make recommendation on appointment of CAC members.

Attachments (2):
1. Matrix of CAC Members
2. Matrix of CAC Applicants

Enclosure:
1. CAC Applications

Attachment 1

CITIZENS ADVISORY COMMITTEE [1]

Name	Gender	Ethnicity	District	Neighborhood	Affiliation	First Appointed	Term Expiration
Wells Whitney	M	C	3	Telegraph Hill	Environmental, Neighborhood, Public Policy, Senior Citizen	May 13	May 17
John Larson	M	NP	7	Miraloma Park	Environment, Neighborhood, Public Policy	Mar 14	Mar 16
Brian Larkin	M	NP	1	Richmond	Neighborhood	May 04	Sep 16
Chris Waddling, Chair	M	NP	10	Silver Terrace	Neighborhood	Dec 12	Dec 16
Santiago Lerma	M	H	9	Mission	Business, Environmental, Labor, Neighborhood, Public Policy	Dec 14	Dec 16
Myla Ablog	F	Filipina	5	Japantown/Western Addition	Disabled, Environmental, Neighborhood, Public Policy, Senior Citizen	Sep 13	Mar 17
John Morrison	M	NP	11	Crocker-Amazon	Business, Disabled, Environmental, Labor, Neighborhood, Public Policy, Senior Citizen	May 15	May 17
Jacqualine Sachs	F	C	2	Western Addition	Disabled, Neighborhood	Jun 97	Jul 17
Peter Sachs, Vice Chair	M	NP	4	Outer Sunset	Environmental, Labor, Public Policy	Jul 15	Jul 17
Becky Hogue	F	C	6	Treasure Island	Disabled, Neighborhood	Dec 15	Dec 17
Peter Tannen	M	C	8	Inner Mission	Environmental, Neighborhood, Public Policy	Feb 08	Feb 18

A – Asian AA – African American AI – American Indian or Alaska Native C – Caucasian H/L – Hispanic or Latino

NH – Native Hawaiian or Other Pacific Islander NP – Not Provided (Voluntary Information)

[1] Shading denotes open seats on the CAC.

Attachment 2 (Updated 03.09.16)

APPLICANTS

	Name	Gender	Ethnicity	District	Neighborhood	Affiliation/Interest
1	Renee Anderson*	F	C	11	Outer Mission	Disabled, Environment, Neighborhood, Public Policy, Senior Citizen
2	Charles Baird*	M	NP	6	South of Market	Business, Disabled, Environment, Labor, Neighborhood, Public Policy, Senior Citizen
3	Margaret Bonner*	F	C	5	West NOPA	Business, Disabled, Environment, Labor, Neighborhood, Public Policy, Senior Citizen
4	Virginia Calkins*	F	C	6	South of Market	Business, Environment, Neighborhood, Public Policy
5	Karwanna Dyson*	F	AA	10	Bayview Hunters Point	Business, Neighborhood
6	Peter Fortune	M	NP	2	Marina	Business, Neighborhood, Public Policy, Senior Citizen
7	Fabian Gallardo	M	H/L	7	Lakeside	Business, Disabled, Environment, Labor, Neighborhood, Public Policy, Senior Citizen
8	Hristo Gyoshev*	NP	NP	11	Mission Terrace	Business, Disabled, Environment, Labor, Neighborhood, Public Policy, Senior Citizen
9	Doreen Horstin	F	NP	6	South of Market	Environment, Labor, Neighborhood, Public Policy
10	Johnny Jaramillo*	M	NA	2	Van Ness Corridor	Business, Disabled, Environment, Labor, Neighborhood, Public Policy, Senior Citizen
11	Lee Jewell*	M	C	5	Hayes Valley	Disabled, Neighborhood, Senior Citizen
12	Jack Kleytman*	M	C	4	Outer Sunset	Business, Neighborhood
13	Roger Kuo	M	A	3	Financial District	Business, Disabled, Environment, Neighborhood, Public Policy, Senior Citizen
14	Joseph Lake	M	C	6	South of Market	Environment, Labor, Neighborhood, Public Policy
15	John Larson	M	C	7	Miraloma Park	Environment, Neighborhood, Public Policy
16	Marlo McGriff*	M	AA	8	Mission-Dolores	Business, Disabled, Environment, Neighborhood, Public Policy, Senior Citizen

	Name	Gender	Ethnicity	District	Neighborhood	Affiliation/Interest
17	Rachel Morgan*	F	NP	3	South of Market	Business, Disabled, Neighborhood, Public Policy
18	Catherine Orland	F	C	9	Mission	Business, Environment, Labor, Neighborhood, Public Policy
19	James Pierre Louis*	M	AA	3	Financial District /Embarcadero	Environment, Neighborhood
20	Steven Riess*	M	C	6	South Beach	Business, Disabled, Environment, Neighborhood, Senior Citizen
21	Glenn Savage*	M	NP	2	Pacific Heights	Business, Neighborhood, Public Policy
22	Deborah Schrimmer	F	C	5	Cole Valley	Neighborhood, Public Policy
23	Daniel Sisson	M	C/H	1	Inner Richmond	Business, Neighborhood, Public Policy
24	Elliott Talbot*	NP	NP	2	Marina	Neighborhood, Public Policy
25	Jeffrey Wood	M	NP	8	Noe Valley	Environment, Labor, Neighborhood, Public Policy
26	David Zebker*	NP	NP	6	Tenderloin	Environment

A – Asian AA – African American AI – American Indian or Alaska Native C – Caucasian H/L – Hispanic or Latino

NH – Native Hawaiian or Other Pacific Islander NP – Not Provided (Voluntary Information)

* Applicant has not appeared before the Plans and Programs Committee.

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San Francisco County Transportation Authority

1455 Market Street, 22nd Floor
San Francisco, California 94103
415.522.4800 FAX 415.522.4829
info@sfcta.org www.sfcta.org

Memorandum

Date: 03.10.16

RE: Plans and Programs Committee March 15, 2016

To: Plans and Programs Committee: Commissioners Tang (Chair), Farrell (Vice Chair), Avalos, Cohen, Peskin and Wiener (Ex Officio)

From: Anna LaForte – Deputy Director for Policy and Programming

Through: Tilly Chang – Executive Director

Subject: ACTION – Recommend Approval of the 2016 Prop AA Call for Projects Programming Recommendations Totaling $2,192,934 for Four Projects and Amendment of the Prop AA Strategic Plan

Summary

Prop AA generates revenues from a $10 vehicle registration fee on motor vehicles registered in San Francisco to fund transportation improvements consistent with a 2010 voter-approved expenditure plan. One of the features of Prop AA is a focus on quick-to-deliver projects that bring tangible benefits to neighborhoods citywide. Correspondingly, the 2012 Strategic Plan policies allow for periodic calls for projects to reprogram cost savings or funds from programmed projects that failed to request funds in a timely manner. In November we issued a call for projects to program $1,193,197 in Prop AA revenues available mainly from cost savings from recently completed projects. By the January 13, 2016 deadline we received five applications requesting about $2.6 million in Prop AA funds. In order to fund more projects, we updated the Prop AA revenue assumptions for the first five years of the Strategic Plan (Fiscal Years 2012/13–2016/17) based on actual revenues collected to date, which are about 3.9% higher than was assumed in the Strategic Plan. Revising the revenue estimates, after netting out 5% program administration costs, increases the capital reserve by $999,737, which is now available for programming. We evaluated projects using the Board-adopted screening and prioritization criteria. Our recommendation is to program $2,192,934 in Prop AA funds (comprised of $1,193,197 in cost savings and $999,737 from the capital reserve) to fully fund 3 projects and partially fund 1 project (Attachment 3). This includes full funding for San Francisco Public Works' construction requests for Broadway Chinatown ($1,029,839) and Mansell ($163,358) streetscape improvement projects, which are both One Bay Area Grant projects with funding shortfalls; and $507,980 for construction of a Muni bus layover area at the BART Daly City Station to accommodate planned service increases for the 14R-Mission Rapid; and partial funding ($491,757) of the design phase of SFMTA's Bulb-outs at WalkFirst Locations project which would upgrade up to 25 existing painted safety zones with concrete bulb-outs on pedestrian high injury corridors throughout the city. Our recommendation holds the capital reserve at $240,000 (about 5% of annual revenues), as approved by the Board in May 2014.

BACKGROUND

San Francisco voters approved Proposition AA (Prop AA) on November 2, 2010. Prop AA uses revenues collected from an additional $10 vehicle registration fee on motor vehicles registered in San Francisco for local road repairs, pedestrian safety improvements, and transit reliability and mobility improvements throughout the city consistent with the Prop AA Expenditure Plan. Given its small size – less than $5

million in annual revenues – one of Prop AA's guiding principles is to focus on small, high-impact projects that will provide tangible benefits to the public in the short-term. Thus, Prop AA only funds design and construction phases of projects and places a strong emphasis on timely use of funds.

In 2012 the Transportation Authority approved the first Prop AA Strategic Plan, which included programming of $26.4 million in Prop AA funds for 19 projects in the first five years of Prop AA (Fiscal Years 2012/13 to 2016/17). We are pleased to report that allocations are on-track with the Strategic Plan: to date approximately $21 million in Prop AA funds have been allocated and most of the projects eligible for funds through Fiscal Year 2015/16 have received allocations.

By fall 2015, we had confirmed that six projects in the Strategic Plan would not need the full amount of Prop AA funds to reach completion, resulting in $1.193 million available for programming to new projects. Consistent with Prop AA policies to deliver tangible benefits quickly to neighborhoods citywide, we issued a competitive call for projects in November 2015.

DISCUSSION

The purpose of this memorandum is to present the 2016 Prop AA call for projects draft programming recommendations to the Plans and Programs Committee, and to seek a recommendation for the approval of these programming recommendations and a corresponding amendment of the Prop AA Strategic Plan.

Call for Projects: On November 25, 2015, we issued a call for projects to program $1,193,197 in Prop AA vehicle registration fee revenues available primarily from cost savings from recently completed projects, largely from the Pedestrian Safety and Transit Reliability and Mobility categories ($680,800 and $507,980, respectively). By the January 13, 2016 deadline we had received five applications requesting approximately $2.6 million in Prop AA funds. Attachment 1 summarizes the applications received. Additional detail is provided in the project information forms included in the enclosure.

Funds Available: The call for projects was based on approximately $1.2 million in Prop AA funds available from costs savings and other un-needed funds as detailed in Table 1 on the next page. Given that the call for projects generated requests for more than twice that amount of funds and that we are in the last year of the 5-years of programming included in the 2012 Prop K Strategic Plan, we decided to revisit revenue assumptions to see if more funds could be available to program at this time.

Prop AA revenue collection began in May 2011. The 2012 Strategic Plan was the first one ever adopted for Prop AA. As shown in Attachment 2, at the time, Prop AA revenues were projected to average $387,000 per month, or about $4.64 million annually, based on the number of vehicles registered in San Francisco – a number which was expected to remain relatively flat over time. Based on actual revenues collected between March 2011 and November 2015, we are revising our revenue assumptions by about 3.9% to $402,800 per month or about $4.83 million annually. The Strategic Plan programs funds to projects in the 5-year period spanning Fiscal Years 2012/13 to 2016/17. Over that 5-year, the revised revenue assumptions makes an additional $1,052,355 million available.

Table 1. Funds Available for Reprogramming (e.g. cost savings, unneeded funds)

Project (Phase)	Amount	Prop AA Expenditure Plan Category	Reason Funds Available
Franklin and Divisadero Signal Upgrades (Design)	$564,730	Pedestrian Safety	Project costs were lower than anticipated due to efficiencies realized from best practices based on prior, similar projects. Design phase also benefitted from coordination with San Francisco Public Work's repaving project along the same corridor.
24th Street/Mission BART SW Plaza and Pedestrian Improvements (Construction)	$503,980	Transit Reliability and Mobility Improvements	Costs were lower than anticipated because of a favorable bid environment.
Franklin Street Pedestrian Signals (Design and Construction)	$88,520	Pedestrian Safety	Cost savings. Combined with Franklin and Divisadero project. See above.
Ellis/Eddy Traffic Calming (Design)	$27,550	Pedestrian Safety	Project funded via Prop K.
28th Avenue Pavement Renovation (Construction)	$4,417	Street Repair and Reconstruction	Project costs were lower than anticipated. Project completed under budget.
City College Pedestrian Connector (Construction)	$4,000	Transit Reliability and Mobility Improvements	Funds not needed. Project budget lower than anticipated at programming.
Total Funds Available	**$1,193,197**		

The table below details how the revised revenue assumptions result in increased capital reserve funds that could be available for programming to new projects now or programmed as part of next year's Strategic Plan update. It should be noted that Prop AA is a pay as you go program so the capital reserve is helpful as a buffer against fluctuations in revenues.

Table 2. Increased Prop AA Capital Reserve

Revised estimated revenues (Fiscal Year 2010/11 – Fiscal Year 2016/17)	$29,696,044
Funds programmed in the 2012 Strategic Plan	($26,658,463)
5% Program administration costs (including one-time startup costs*)	($1,797,845)
Existing Capital Reserve (~5% of annual revenue)	($240,000)
Increased Capital Reserve – currently available for programming	($999,737)

*One-time startup costs of $314,000.

Draft Programming Recommendations: We developed the draft programming recommendations based upon the project information submitted in response to the Prop AA call for projects, application of the Board-adopted prioritization criteria, and follow-up communications with sponsors to clarify and seek additional project information as needed. We first screened project submissions for eligibility and determined that all five projects were eligible for Prop AA funding. We then evaluated the projects using program-wide prioritization criteria (such as project readiness, community support, and construction coordination opportunities) and category specific criteria (such as whether projects seeking funds from the Pedestrian Safety category are located on a WalkFirst corridor or directly improve access to transit or schools). Descriptions of the evaluation criteria and the resulting project scores are detailed in the Project Evaluation table in the enclosure with one table for the Pedestrian Safety category and a second table for the Transit Reliability and Mobility Improvement category. For the latter category, we also took into consideration the special condition included in the Prop AA Strategic Plan that gives priority to San Francisco Municipal Transportation Agency (SFMTA)'s Rapid Network projects for receiving any Prop AA funds in the Transit Reliability and Mobility Improvements category that arise from cost savings, cancelled projects, etc. – provided that they meet all other requirements in the call for projects, including project readiness standards.

Attachment 3 shows our draft programming recommendations along with the evaluation score for each project as reference. Our recommendation is to program $2,192,934 in Prop AA funds (comprised of $1,193,197 in cost savings and $999,737 from the capital reserve) to fully fund 3 projects and partially fund 1 project. Only the lowest scoring project is not recommended for any funding. This includes full funding for San Francisco Public Works' construction requests for Broadway Chinatown ($1,029,839) and Mansell ($163,358) streetscape improvement projects, which are both One Bay Area Grant projects with funding shortfalls; and $507,980 for construction of a Muni bus layover area at the BART Daly City Station to accommodate planned service increases for the 14R-Mission Rapid route (this was the only project submitted for funding from the Transit Category); and partial funding ($491,757) of the design phase of SFMTA's Bulb-outs at WalkFirst Locations project which would upgrade up to 25 existing painted safety zones with concrete bulb-outs on pedestrian high injury corridors throughout the city. The SFMTA is able to scale the number of locations to be designed based on the amount of funds available. Our recommendation holds the capital reserve at $240,000 (about 5% of annual revenues), as approved by the Board in May 2014.

We are not recommending funding for the Presidio Trust's Greenwich Gate project, which would create a new 12-foot gate for pedestrians and cyclists at the Presidio boundary wall at the intersection of Greenwich and Lyon Streets, and a multi-use trail to connect the new gate at the intersection of Lombard and Letterman Streets. The primary reasons are related to project readiness and lack of additional funding after funding higher scoring projects. The project is at 10 percent design, and will need additional public outreach prior to advancing into the final design and construction phases, which are the eligible phases for Prop AA funding.

Strategic Plan Amendment: The recommended draft programming for these projects would require an amendment to the Prop AA Strategic Plan to program $999,737 from the increased Prop AA capital reserve (as described above) in addition to the funds available from recently completed projects ($1,193,197); and to add the four new recommended projects with $2,192,934 in Prop AA funds. Attachment 4 shows the proposed amendment Strategic Plan programming.

ALTERNATIVES

1. Recommend approval of the 2016 Prop AA call for projects programming recommendations and

amendment of the Prop AA Strategic Plan, as requested.

2. Recommend approval of the 2016 Prop AA call for projects programming recommendations and amendment of the Prop AA Strategic Plan, with modifications.
3. Defer action, pending additional information or further staff analysis.

FINANCIAL IMPACTS

Approval of the programming recommendations and Strategic Plan amendment does not allocate any funds to projects. Allocation approvals are the subject of separate actions by the Transportation Authority Board. Sufficient funds are included in the adopted Fiscal Year 2015/16 budget to accommodate the recommended cash flows should the Transportation Authority Board approve the Prop AA Strategic Plan amendment and subsequent allocation requests.

CAC POSITION

The CAC was briefed on this item at its February 24, 2016 meeting and adopted a motion of support for the staff recommendation.

RECOMMENDATION

Recommend approval of the 2016 Prop AA call for projects programming recommendations and amendment of the Prop AA Strategic Plan.

Attachments (4):

1. Prop AA Summary of Project Submissions
2. Prop AA Revised Revenue Projections
3. Prop AA Draft Programming Recommendations
4. Proposed Amended Prop AA Strategic Plan

Enclosure:

1. Prop AA Project Evaluation and Project Information Forms (6 documents total)

Attachment 1.
Prop AA Summary of Project Submissions

Pedestrian Safety Category.

Number	Project Name	Brief Project Description	Sponsor[2]	Phase(s)	Total Project Cost	Prop AA Requested	First Fiscal Year	District(s)	Notes
1	Greenwich Gate	The project would recreate an historic opening in the Presidio boundary wall at the intersection of Greenwich and Lyon Streets, and create a new narrow (~12ft) gate for pedestrians and cyclists. The project also includes construction of 535 linear feet of multi-use trail to connect the Greenwich Gate to the Lombard/Letterman intersection, completing one of the two remaining gaps in the Presidio Promenade multi-use trail. The project was identified in Presidio Trails and Bikeways Master Plan (July 2003).	Presidio Trust	Design, Construction	$ 905,097	$ 250,000	15/16	2	
2	Bulb-outs at WalkFirst Locations	This project funds the design phase to upgrade up to 25 existing Painted Safety Zones (PSZ) to permanent concrete bulb-outs on Pedestrian High Injury Corridors throughout the city. The SFMTA will select the highest-priority PSZs with collision patterns that warrant upgrade. Design would begin in Spring 2016 and start construction in Spring 2018. Locations were identified through WalkFirst planning process.	SFMTA	Design	$ 6,600,000	$ 600,000	15/16	Citywide	Construction phase to be funded with SFMTA Revenue Bonds.
3	Broadway Chinatown Streetscape Improvements	This project would make improvements to Broadway between Columbus and the Broadway Tunnel, including new pedestrian crossings; roadway reconfiguration and repaving; sharrows to improve cyclist visibility; and pedestrian amenities such as pedestrian lighting, tree planting, and bus shelter and seating improvements. Project includes a focus on safety improvements around Jean Parker Elementary School. Caltrans Environmental Justice Transportation Planning grant funded a community engagement process for the project in 2011 and 2012. Construction is expected to be completed by Spring 2017.	SFPW	Construction	$ 8,199,591	$ 1,029,839	15/16	3	Prop AA would leverage One Bay Area Grant (OBAG) funds programmed by the Transportation Authority in 2013, prior Prop AA and Prop K allocations, SFMTA Revenue Bonds, and state Safe Routes to School grant to fully fund the project. Project was originally advertised for bid in September 2015. Only one bid was received at 30% over engineer's estimate, which SFPW largely attributes to a very competitive bid climate. Due to lack of funds and interest in attracting additional bidders, SFPW did not accept this bid. SFPW has reworked the bid package by reducing the Water Department's scope and identifying alternate bid items such as sidewalk waterproofing, bronze alleyways name plaques, street tree irrigation, and 24 months of plant establishment. Additional Prop AA funds would fully fund project scope.
4	Mansell Streetscape Improvements	The project will reconfigure Mansell Street through McClaren Park by reducing the number of vehicular lanes from four to two (one lane each way), separating vehicular traffic and moving it to the south side of the median between Visitacion and Brazil Avenues, and creating a multi-use path on the north side of the median. Project will provide improved connections between adjacent neighborhoods, park trail systems, and three public schools located immediately adjacent to the park. Improvements were prioritized through public outreach in 2010 and 2013. Construction is expected to be completed by September 2016.	SFPW	Construction	$ 6,955,141	$ 163,358	15/16	9, 10, 11	Prop AA would leverage OBAG funds, prior Prop AA and Prop K allocations, Urban Greening grant, and Recreation and Park Department (RPD) funds to fully fund the project. SFPW awarded the construction contract in August 2015 and construction is underway. SFPW is requesting additional Prop AA funds to cover the cost of higher than anticipated bids primarily for the street lights bid item (low bid was ~$120,000 above the engineer's estimate), less RPD bond funds available than predicted (~$50,000), and for guardrail repair that was not included in the base contract. Prop AA funds would replenish the contingency budget used to award the contract.
				TOTAL	**$ 22,659,829**	**$ 2,043,197**			

[1] Projects are not listed in priority order. Projects are sorted by Sponsor, then by Project Name.
[2] Sponsor abbreviations include: San Francisco Public Works (SFPW) and the San Francisco Municipal Transportation Agency (SFMTA).

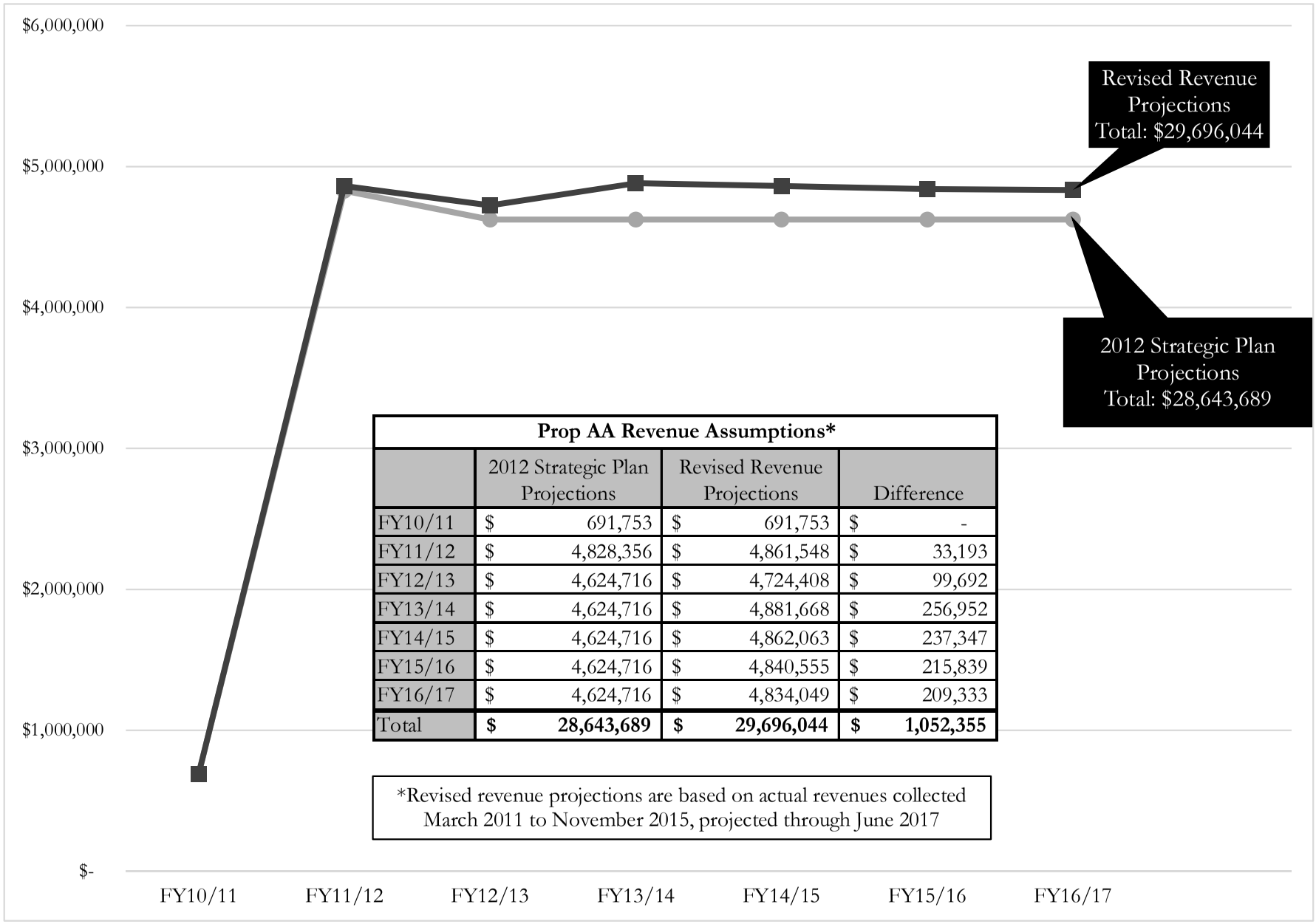
Attachment 1.
Prop AA Summary of Project Submissions

Transit Reliability and Mobility Improvement Category.

Number	Project Name	Brief Project Description	Sponsor[2]	Phase(s)	Total Project Cost	Prop AA Requested	First Fiscal Year	District(s)	Notes
1	Muni Bus Layover Area at BART Daly City Station	This project would convert up to 30 paid parking spaces within the Daly City BART parking lot into a new bus layover area to accommodate planned service increases on the Muni 14 Rapid-Mission Rapid route. The Daly City BART Station serves as the terminal of the Muni 14R. Due to existing space constraints, Muni buses are directed to layover outside the station on De Long Street. In Spring 2016, service will increase from weekday peak-only to all day weekday and weekend service, resulting in 950 additional passengers per day. Project would be completed by December 2016. Loss of BART parking revenue would be offset by increased fare revenue associated with the additional trips on the Muni 14R.	BART	Construction	$ 550,000	$ 550,000	15/16	N/A	Letter of support received from the SFMTA.
				TOTAL	**$ 550,000**	**$ 550,000**			

[1] Projects are not listed in priority order. Projects are sorted by Sponsor, then by Project Name.
[2] Sponsor abbreviations include: Bay Area Rapid Transit District (BART)

Attachment 2.
Prop AA Revised Revenue Projections



Prop AA Revenue Assumptions*

	2012 Strategic Plan Projections	Revised Revenue Projections	Difference
FY10/11	$ 691,753	$ 691,753	$ -
FY11/12	$ 4,828,356	$ 4,861,548	$ 33,193
FY12/13	$ 4,624,716	$ 4,724,408	$ 99,692
FY13/14	$ 4,624,716	$ 4,881,668	$ 256,952
FY14/15	$ 4,624,716	$ 4,862,063	$ 237,347
FY15/16	$ 4,624,716	$ 4,840,555	$ 215,839
FY16/17	$ 4,624,716	$ 4,834,049	$ 209,333
Total	**$ 28,643,689**	**$ 29,696,044**	**$ 1,052,355**

*Revised revenue projections are based on actual revenues collected March 2011 to November 2015, projected through June 2017

Attachment 3.
2016 Prop AA Call for Projects
Draft Programming Recommendations

Pedestrian Safety Category.

Evaluation Score[1]	Project Name	Sponsor[2]	Phase(s)	Total Project Cost	Prop AA Requested	Recommended Prop AA Programming	Notes
15	Broadway Chinatown Streetscape Improvements	SFPW	Construction	$ 8,199,591	$ 1,029,839	$ 1,029,839	Construction contract ready to re-advertise. Prop AA would leverage One Bay Area Grant (OBAG) funds programmed by the Transportation Authority in 2013, prior Prop AA and Prop K allocations, SFMTA Revenue Bonds, and a state Safe Routes to School grant to fully fund the project.
12	Mansell Streetscape Improvements	SFPW	Construction	$ 6,955,141	$ 163,358	$ 163,358	Project is under construction. Prop AA would leverage OBAG, prior Prop AA and Prop K allocations, Urban Greening grant, and Rec Park funds to fully fund the project.
12	Bulb-outs at WalkFirst Locations	SFMTA	Design	$ 6,600,000	$ 600,000	$ 491,757	Recommend partial funding since number of project locations designed can be scaled to funds available. Construction phase to be funded with SFMTA Revenue Bonds. Can apply for future Prop AA or Prop K.
8	Greenwich Gate	Presidio Trust	Design, Construction	$ 905,097	$ 250,000	$ -	No funds available after funding higher scoring projects. Design is 10% complete; additional public outreach is needed before project advances to final design and construction. Potential candidate for future Prop AA or Transportation Fund for Clean Air funds.
	Pedestrian Safety Category Sub-Total			**$ 22,659,829**	**$ 2,043,197**	**$ 1,684,954**	Uses all funds availabe for reprogramming in this category ($680,800) and Street Repair ($4,417), plus $999,737 from capital reserve.

Transit Reliability and Mobility Improvement Category.

Evaluation Score[1]	Project Name	Sponsor[2]	Phase(s)	Total Project Cost	Prop AA Requested	Recommended Prop AA Programming	Notes
9.5	Muni Bus Layover Area at BART Daly City Station	BART	Construction	$ 550,000	$ 550,000	$ 507,980	Project is ready to advertise for construction. Prop AA will leverage funds from BART and San Mateo County. San Mateo County will fund the difference between the requested amount and the amount available in this Prop AA category. BART has submitted a concurrent Prop AA funding request.
	Transit Reliability and Mobility Improvement Category Sub-Total			**$ 550,000**	**$ 550,000**	**$ 507,980**	Uses all funds available for reprogramming in this category.
	TOTAL			**$ 23,209,829**	**$ 2,593,197**	**$ 2,192,934**	

Amount Available for Programming		
	Available from deobligations and reprogramming	**$ 1,193,197**
	Available from (increased) Prop AA Capital Reserve	**$ 999,737**
	TOTAL AVAILABLE	**$ 2,192,934**
	REMAINING CAPITAL RESERVE	**$ 240,000** (~5% of annual revenues net of 5% for program administration)

[1] Projects are sorted by evaluation score from highest ranked to lowest.
[2] Sponsor abbreviations include: Bay Area Rapid Transit District (BART); the San Francisco Municipal Transportation Agency (SFMTA), and San Francisco Public Works (SFPW).

Attachment 4.
Prop AA Strategic Plan
Programming and Allocations (Pending Board Approval 3.22.16)

Project Name	Phase	Sponsor	Fiscal Year 2012/13	Fiscal Year 2013/14	Fiscal Year 2014/15	Fiscal Year 2015/16	Fiscal Year 2016/17	5-Year Total
Street Repair and Reconstruction								
	Funds Available in Category		**$ 4,358,888**	**$ 2,210,086**	**$ 2,210,086**	**$ 2,210,086**	**$ 2,210,086**	**$ 13,199,232**
9th Street Pavement Renovation	CON	SFPW	$ 2,216,627					$ 2,216,627
28th Ave Pavement Renovation	CON	SFPW	$ 1,174,260					$ 1,174,260
	Deobligation	SFPW	$ (4,417)					$ (4,417)
Chinatown Broadway St	DES	SFPW		$ 650,000				$ 650,000
Mansell Corridor Improvement Project	DES	SFMTA		$ 202,228				$ 202,228
	CON	SFMTA			$ 2,325,624			$ 2,325,624
McAllister St Pavement Renovation	CON	SFPW		$ 2,210,000				$ 2,210,000
Dolores St Pavement Renovation	CON	SFPW			$ 2,210,000			$ 2,210,000
Brannan St Pavement Renovation	CON	SFPW					$ 2,210,000	$ 2,210,000
Subtotal Programmed (48%)			**$ 3,386,470**	**$ 3,062,228**	**$ 4,535,624**	**$ -**	**$ 2,210,000**	**$ 13,194,322**
Pedestrian Safety								
	Funds Available in Category		**$ 2,179,444**	**$ 1,365,043**	**$ 1,105,043**	**$ 2,104,780**	**$ 1,105,043**	**$ 7,859,353**
Arguello Gap Closure	CON	Presidio		$ 350,000				$ 350,000
Mid-Block Crossing on Natoma/8th	DES	SFMTA		$ 55,000				$ 55,000
	CON	SFMTA			$ 310,000			$ 310,000
Ellis/Eddy Traffic Calming Improvement	DES	SFMTA		$ 337,450	$ -			$ 337,450
Franklin and Divisadero Signal Upgrades	DES	SFMTA		$ 825,000				$ 825,000
	Deobligation	SFMTA		$ (564,730)				$ (564,730)
	CON	SFMTA			$ 636,480			$ 636,480
Franklin St Pedestrian Signals	DES	SFMTA		$ -				$ -
	CON	SFMTA			$ -			$ -
Pedestrian Countdown Signals	CON	SFMTA	$ 1,683,000					$ 1,683,000
McAllister St Campus Streetscape	DES	UC Hastings		$ 83,000				$ 83,000
	CON	UC Hastings			$ 1,762,206			$ 1,762,206
Webster St Pedestrian Signals	DES	SFMTA			$ 260,000			$ 260,000
	CON	SFMTA				$ 104,794		$ 104,794
Gough St Pedestrian Signals	DES	SFMTA				$ 300,000		$ 300,000
	DES/CON	SFMTA				$ 37,000		$ 37,000
Broadway Chinatown Streetscape Improvements	CON	SFPW				$ 1,029,839		$ 1,029,839
Mansell Streetscape Improvements	CON	SFPW				$ 163,358		$ 163,358
Bulb-outs at WalkFirst Locations	DES	SFMTA				$ 491,757		$ 491,757
Subtotal Programmed (28%)			**$ 1,683,000**	**$ 1,085,720**	**$ 2,968,686**	**$ 2,126,748**	**$ -**	**$ 7,864,154**
Transit Reliability and Mobility Improvements								
	Funds Available in Category		**$ 2,179,444**	**$ 1,105,043**	**$ 1,105,043**	**$ 1,105,043**	**$ 1,105,043**	**$ 6,599,616**
Civic Center BART/Muni Bike Station	CON	BART		$ 248,000				$ 248,000
City College Pedestrian Connector	DES	SFMTA		$ 42,000				$ 42,000
	CON	SFMTA			$ 891,000			$ 891,000
	CON	SFMTA			$ -			$ -
Hunters View Transit Connection	DES	MOH		$ 195,000				$ 195,000
	CON	MOH		$ 1,649,994				$ 1,649,994
24th St Mission SW BART Plaza and Pedestrian Improvements	CON	BART	$ 1,217,811					$ 1,217,811
	Deobligation	BART	$ (503,980)					$ (503,980)
Rapid Network Placeholder	DES/CON	SFMTA			$ -	$ 965,000	$ 1,099,919	$ 2,064,919
Elevator Safety and Reliability Upgrades	CON	SFMTA				$ 287,000		$ 287,000
Muni Bus Layover Area at BART Daly City Station	CON	BART				$ 507,980		$ 507,980
Subtotal Programmed (24%)			**$ 713,831**	**$ 2,134,994**	**$ 891,000**	**$ 1,759,980**	**$ 1,099,919**	**$ 6,599,724**
Total Programmed			**$ 5,783,301**	**$ 6,282,942**	**$ 8,395,310**	**$ 3,886,728**	**$ 3,309,919**	**$ 27,658,200**
Total Available Funds			**$ 8,717,775**	**$ 4,680,172**	**$ 4,420,172**	**$ 5,419,909**	**$ 4,420,172**	**$ 27,658,200**

Allocated
Pending
Proposed New Programming

San Francisco County Transportation Authority

1455 Market Street, 22nd Floor
San Francisco, California 94103
415.522.4800 FAX 415.522.4829
info@sfcta.org www.sfcta.org

Memorandum

Date: 03.08.16 **RE:** Plans and Programs Committee March 15, 2016

To: Plans and Programs Committee: Commissioners Tang (Chair), Farrell (Vice Chair), Avalos, Cohen, Peskin and Wiener (Ex Officio)

From: Anna LaForte – Deputy Director for Policy and Programming

Through: Tilly Chang – Executive Director

Subject: ACTION – Recommend Allocation of $10,975,410 in Prop K Funds and $794,980 in Prop AA Funds, with Conditions, for Six Requests, Subject to the Attached Fiscal Year Cash Flow Distribution Schedules

Summary

As summarized in Attachments 1 and 2, we have six requests totaling $11,770,390 in Prop K and AA funds to present to the Plans and Programs Committee. The San Francisco Municipal Transportation Agency (SFMTA) has requested funding for three projects, including $706,397 in Prop K funds for construction of fall protection systems at SFMTA's Presidio Division trolleybus maintenance facility; $28,000 in District 6 Neighborhood Transportation Improvement Program capital funds for a new mid-block crosswalk on Sherman Street at Bessie Carmichael Elementary School; and, $287,000 in Prop AA funds for major system overhauls of twelve elevators at Van Ness, Church, Castro and Forest Hill Muni Metro stations. San Francisco Public Works has requested a total of $10,241,000 in Prop K funds for the construction phases of two street resurfacing projects that will improve more than 70 city blocks, including new curb ramps. Bay Area Rapid Transit (BART) has requested $507,980 in Prop AA funds to construct a bus layover area at BART's Daly City station for SFMTA's 14R-Mission Rapid line to accommodate planned service increases for the route. Our recommendation to fund the BART project is contingent upon Board approval of the proposed 2016 Prop AA programming recommendations, which is a separate item on this agenda.

BACKGROUND

We have received six requests for a combined total of $10,975,410 in Prop K funds and $794,980 in Prop AA funds to present to the Plans and Programs Committee at its March 15, 2016 meeting, for potential Board approval on March 22, 2016. As shown in Attachment 1, the requests come from the following Prop K and Prop AA categories:

- Prop K Rehabilitate/Upgrade Existing Facilities – MUNI
- Prop K Street Resurfacing, Rehab and Maintenance
- Prop K Pedestrian Circulation/Safety
- Prop AA Transit Reliability and Mobility Improvements

Transportation Authority Board adoption of a 5-Year Prioritization Program (5YPP) for Prop K and Prop AA programmatic categories is a prerequisite for allocation of funds from these categories.

DISCUSSION

The purpose of this memorandum is to present four Prop K requests totaling $10,975,410 and two Prop AA requests totaling $794,980 to the Plans and Programs Committee and to seek a motion of support to allocate the funds as requested. Attachment 1 summarizes the six requests, including information on proposed leveraging (i.e. stretching Prop K dollars further by matching them with other fund sources) compared with the leveraging assumptions in the Prop K Expenditure Plan. Attachment 2 provides a brief description of each project. A detailed scope, schedule, budget and funding plan for each project are included in the enclosed Allocation Request Forms.

Staff Recommendation: Attachment 3 summarizes the staff recommendations for the requests, highlighting special conditions, 5YPP amendments and other items of interest. Our recommendation to fund the BART project is contingent upon Board approval of the proposed 2016 Prop AA programming recommendations, which is a separate item on this agenda.

Transportation Authority staff and project sponsors will attend the Plans and Programs Committee meeting to provide brief presentations on some of the specific requests and to respond to any questions that the Commissioners may have.

ALTERNATIVES

1. Recommend allocation of $10,975,410 in Prop K funds and $794,980 in Prop AA funds, with conditions, for six requests, subject to the attached Fiscal Year Cash Flow Distribution Schedules, as requested.
2. Recommend allocation of $10,975,410 in Prop K funds and $794,980 in Prop AA funds, with conditions, for six requests, subject to the attached Fiscal Year Cash Flow Distribution Schedules, with modifications.
3. Defer action, pending additional information or further staff analysis.

CAC POSITION

The CAC was briefed on this item at its February 24, 2016 meeting and adopted a motion of support for the staff recommendation.

FINANCIAL IMPACTS

This action would allocate $10,975,410 in Fiscal Year (FY) 2015/16 Prop K sales tax funds, with conditions, and $794,980 in FY 2015/16 Prop AA funds, with conditions, for six requests. The allocations would be subject to the Fiscal Year Cash Flow Distribution Schedules contained in the enclosed Allocation Request Forms.

Attachment 4, Prop K/Prop AA Allocation Summaries - FY 2015/16, shows the total approved FY 2015/16 allocations to date for both programs, with associated annual cash flow commitments as well as the recommended allocations and cash flows that are the subject of this memorandum.

Sufficient funds are included in the adopted FY 2015/16 budget to accommodate the recommendation actions. Furthermore, sufficient funds will be included in future budgets to cover the recommended cash flow distribution for those respective fiscal years.

RECOMMENDATION

Recommend allocation of $10,975,410 in Prop K funds and $794,980 in Prop AA funds, with conditions, for six requests, subject to the attached Fiscal Year Cash Flow Distribution Schedules.

Attachments (4):

1. Summary of Applications Received
2. Project Descriptions
3. Staff Recommendations
4. Prop K/Prop AA Allocation Summaries – FY 2015/16

Enclosure:

Prop K/Prop AA Allocation Request Forms (6)

Attachment 1: Summary of Applications Received

Source	EP Line No./ Category [1]	Project Sponsor [2]	Project Name	Current Prop K Request	Current Prop AA Request	Total Cost for Requested Phase(s)	Leveraging: Expected Leveraging by EP Line [3]	Leveraging: Actual Leveraging by Project Phase(s) [4]	Phase(s) Requested	District
Prop K	20M	SFMTA	Fall Protection Systems - Presidio Division	$706,397		$706,397	90%	0%	Construction	5
Prop K	34	SFPW	Clayton St, Clipper St, and Portola Dr Pavement Renovation	$5,455,263		$5,455,263	79%	0% for request; 86% for SFPW's FY 15-16 paving program	Construction	8
Prop K	34	SFPW	Eureka St, Grandview Ave, and Mangels Ave Pavement Renovation	$4,785,750		$4,785,750	79%	0% for request; 86% for SFPW's FY 15-16 paving program	Construction	7, 8
Prop K	40	SFMTA	Bessie Carmichael Crosswalk [NTIP Capital]	$28,000		$28,000	25%	0%	Planning, Design, Construction	6
Prop AA	Transit	SFMTA	Elevator Safety and Reliability Upgrades		$ 287,000	$2,734,500	NA	90%	Construction	5, 6, 7, 8
Prop AA	Transit	BART	Muni Bus Layover Area at BART Daly City Station		$ 507,980	$550,000	NA	53%	Construction	n/a
		TOTAL		**$ 10,975,410**	**$ 794,980**	**$ 14,259,910**				

Footnotes

[1] "EP Line No./Category" is either the Prop K Expenditure Plan line number referenced in the 2014 Prop K Strategic Plan or the Prop AA Expenditure Plan category referenced in the 2012 Prop AA Strategic Plan, including: Street Repair and Reconstruction (Street), Pedestrian Safety (Ped), and Transit Reliability and Mobility Improvements (Transit).

[2] Acronyms: BART (Bay Area Rapid Transit District); SFMTA (San Francisco Municipal Transportation Agency); SFPW (San Francisco Public Works)

[3] "Expected Leveraging By EP Line" is calculated by dividing the total non-Prop K funds expected to be available for a given Prop K Expenditure Plan line item (e.g. Pedestrian Circulation and Safety) by the total expected funding for that Prop K Expenditure Plan line item over the 30-year Expenditure Plan period. For example, expected leveraging of 90% indicates that on average non-Prop K funds should cover 90% of the total costs for all projects in that category, and Prop K should cover only 10%.

[4] "Actual Leveraging by Project Phase" is calculated by dividing the total non-Prop K or non-Prop AA funds in the funding plan by the total cost for the requested phase or phases. If the percentage in the "Actual Leveraging" column is lower than in the "Expected Leveraging" column, the request (indicated by yellow highlighting) is leveraging fewer non-Prop K dollars than assumed in the Expenditure Plan. A project that is well leveraged overall may have lower-than-expected leveraging for an individual or partial phase.

Attachment 2: Brief Project Descriptions [1]

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Requested	Prop AA Funds Requested	Project Description
20M	SFMTA	Fall Protection Systems - Presidio Division	$ 706,397	$ -	The SFMTA is requesting funding to construct fall protection systems at the SFMTA's Presidio Division trolleybus maintenance facility. The project will increase the productivity of the facility by equipping each of the eight bus maintenance lanes with protection systems for what has become commonly performed roof-top repairs. Currently, only one lane has a fall protection system. Construction should start in Spring 2016 and be completed by December 2016.
34	SFPW	Clayton St, Clipper St, and Portola Dr Pavement Renovation	$ 5,455,263	$ -	Funds will be used to perform pavement renovation for 24 blocks of Clipper Street, Clayton Street, Portola Drive and Twin Peaks Boulevard. The project scope also includes approximately 70 new curb ramps as well as sidewalk and curb repairs. SFPW plans to begin construction in October 2016 and finish by July 2017. See page E7-35 of the enclosure for the list of locations for SFPW's FY 15/16 paving program.
34	SFPW	Eureka St, Grandview Ave, and Mangels Ave Pavement Renovation	$ 4,785,750	$ -	SFPW is requesting construction funding for pavement renovation on approximately 47 blocks of Corwin Street, Diamond Street, Douglass Street, Eureka Street, Grandview Avenue, Hiliritas Avenue, Mangels Avenue, Moreland Street, Romain Street, Miramar Avenue, and Saint Elmo Way. The project scope also includes approximately 107 new curb ramps as well as sidewalk and curb repairs. Construction should begin in September 2016 and be complete by October 2017. See page E7-35 of the enclosure for the list of locations for SFPW's FY 15/16 paving program.

Attachment 2: Brief Project Descriptions [1]

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Requested	Prop AA Funds Requested	Project Description
40	SFMTA	Bessie Carmichael Crosswalk [NTIP Capital]	$ 28,000	$ -	Requested funds will be used to open a mid-block crosswalk across Sherman Street, connecting the Bessie Carmichael Elementary school yard entrance to the pathway through the Victoria Manalo Draves Park. This project emerged from a site visit with school administrators and community members. Improvements include two new curb ramps, a painted crosswalk, and school crossing signage. The SFMTA expects to secure legislative and environmental clearances by December 2016, and complete design by June 2017. The project is expected to be open for use by December 2017. Construction would be performed by city crews.
Transit	SFMTA	Elevator Safety and Reliability Upgrades	$ -	$ 287,000	Funds will be used for implement comprehensive upgrades to improve the safety and reliablity of 12 elevators at the Van Ness (2), Castro (3), Church (3), and Forest Hill (4) Muni Metro Stations. The project will improve access to light rail stations which are a critical component of Muni's Rapid Network. Construction would begin in Summer 2016 and continue through Spring 2020.
Transit	BART	Muni Bus Layover Area at BART Daly City Station	$ -	$ 507,980	Funds will be used for construction of a bus layover area for the Muni 14R-Mission Rapid at the BART Daly City Station to accommodate planned service increases for the route. The station serves as the terminal of the 14R-Mission. Due to existing space constraints, Muni buses currently layover outside the station on De Long Street where they sometimes block the street and are subject to citation. This project would convert approximately 30 paid parking spaces within the BART parking lot into a new bus layover area. Loss of parking revenue would be offset by increased BART fare revenues from additional riders arriving via the 14R-Mission. Construction would start in October and the layover area would be open for use by December 2016.
		TOTAL	**$ 10,975,410**	**$ 794,980**	

[1] See Attachment 1 for footnotes.

Attachment 3: Staff Recommendations [1]

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Recommended	Prop AA Funds Recommended	Recommendation
20M	SFMTA	Fall Protection Systems - Presidio Division	$ 706,397	$ -	**5-Year Prioritization Program (5YPP) amendment:** The recommendation is contingent upon a concurrent amendment to the Muni Facilities 5YPP to reprogram $706,397 in Fiscal Year 2014/15 planning funds from the Woods Renovation Hoists and Bays project to the subject project. The SFMTA is reprioritizing planned facility improvements as part of its Capital Improvements Program update, anticipated to be complete in Spring 2016, and the Woods Division project is not expected to move forward. See attached 5YPP amendment for details.
34	SFPW	Clayton St, Clipper St, and Portola Dr Pavement Renovation	$ 5,455,263	$ -	**5YPP amendment:** The recommendation is contingent upon a concurrent 5YPP amendment to the Street Resurfacing, Rehabilitation and Maintenance 5YPP to program $90,033 in cumulative remaining programming capacity to the subject project. See attached 5YPP amendment for details.
34	SFPW	Eureka St, Grandview Ave, and Mangels Ave Pavement Renovation	$ 4,785,750	$ -	**5YPP amendment:** The recommendation is contingent upon a concurrent 5YPP amendment to the Street Resurfacing, Rehabilitation and Maintenance 5YPP to program $4,785,750 in cumulative remaining programming capacity to the subject project. See attached 5YPP amendment for details.
40	SFMTA	Bessie Carmichael Crosswalk [NTIP Capital]	$ 28,000	$ -	We are recommending a **multi-phase allocation** given the straightforward and non-controversial nature of the scope, and the small amount of funding requested.
Transit	SFMTA	Elevator Safety and Reliability Upgrades	$ -	$ 287,000	**Prop AA Strategic Plan Amendment:** The recommendation is contingent upon a concurrent Prop AA Strategic Plan amendment to reprogram $287,000 in Fiscal Year 2014/15 funds programmed to Rapid Network Placeholder to the subject project. See attached amendment for details.
Transit	BART	Muni Bus Layover Area at BART Daly City Station	$ -	$ 507,980	Recommendation is contingent upon approval of a prior item on this meeting agenda to amend the Prop AA Strategic Plan to program funds to the subject project.
		TOTAL	**$ 10,975,410**	**$ 794,980**	

[1] See Attachment 1 for footnotes.

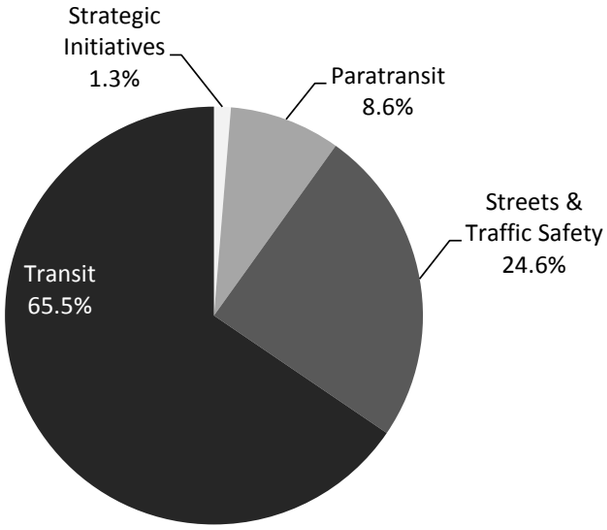
Attachment 4.
Prop K/ Prop AA Allocation Summaries - FY 2015/16

PROP K SALES TAX

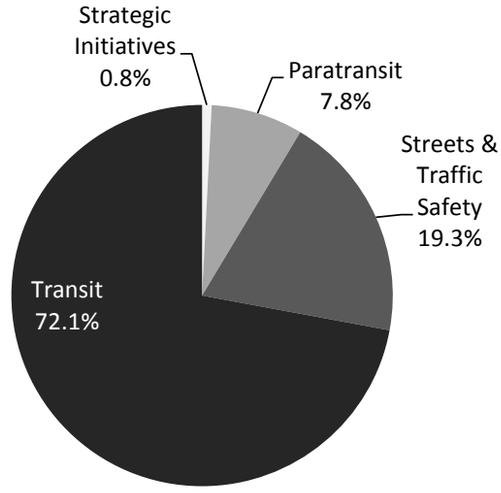
	Total	CASH FLOW				
		FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	2019/20
Prior Allocations	$ 177,921,117	$ 96,473,275	$ 71,239,568	$ 9,927,720	$ 150,577	$ 32,495
Current Request(s)	$ 10,975,410	$ -	$ 8,142,944	$ 2,832,466	$ -	$ -
New Total Allocations	$ 188,896,527	$ 96,473,275	$ 79,382,512	$ 12,760,186	$ 150,577	$ 32,495

The above table shows maximum annual cash flow for all FY 2015/16 allocations approved to date, along with the current recommended

Investment Commitments, per Prop K Expenditure Plan



Prop K Investments To Date

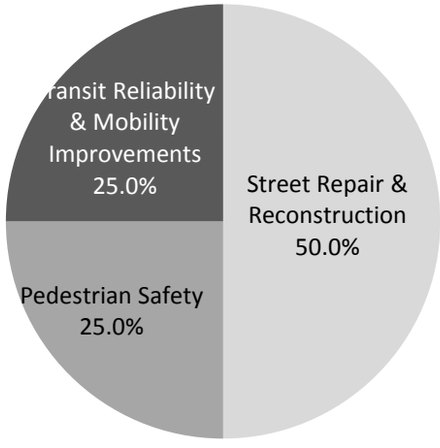


PROP AA VEHICLE REGISTRATION FEE

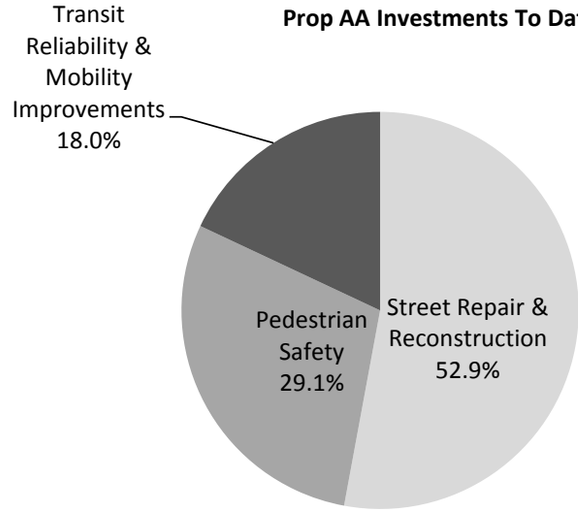
	Total	FY 2015/16	FY 2016/17	FY 2017/18
Prior Allocations	$ 300,000	$ 150,000	$ 150,000	$ -
Current Request(s)	$ 794,980	$ -	$ 579,730	$ 71,750
New Total Allocations	$ 1,094,980	$ 150,000	$ 729,730	$ 71,750

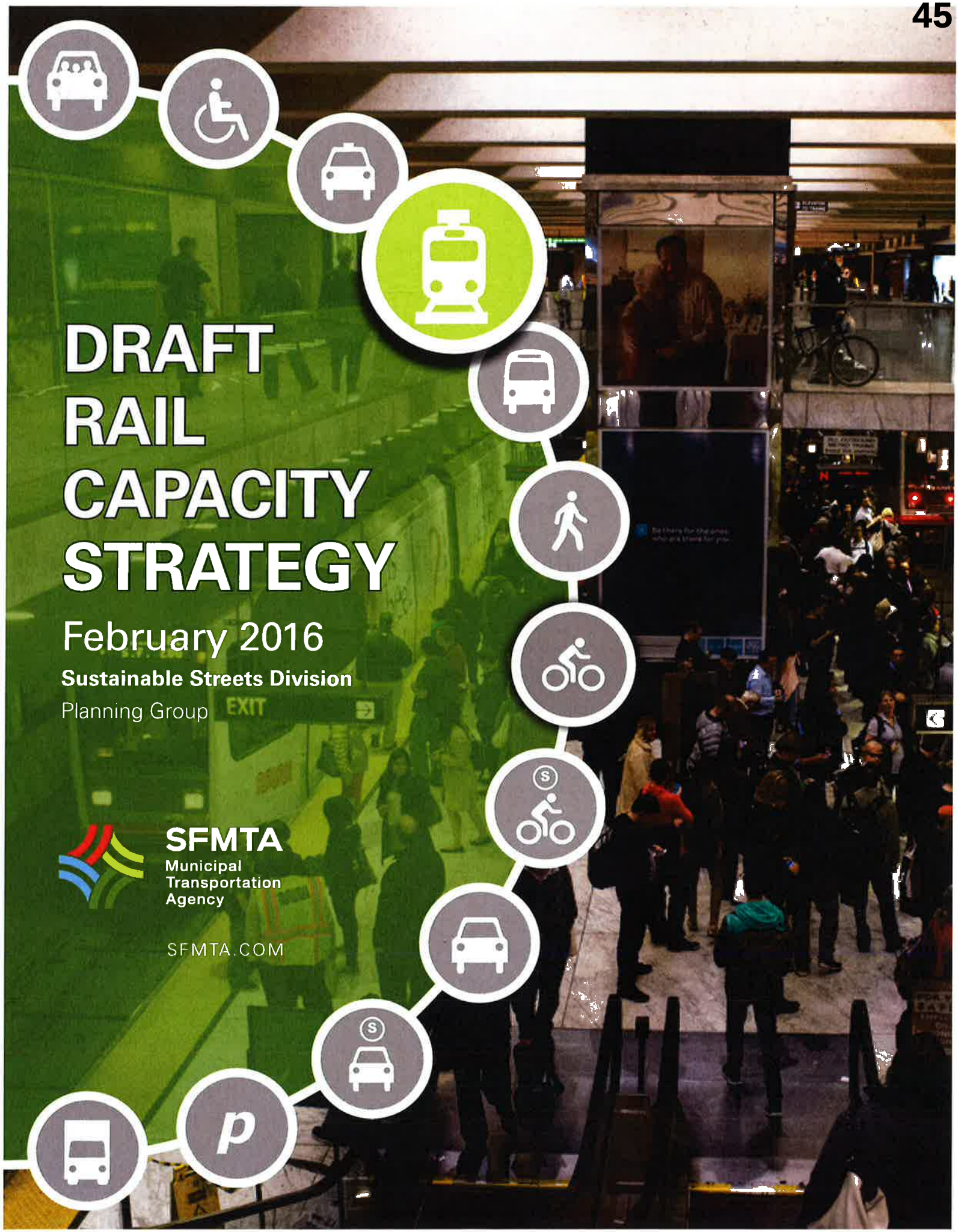
The above table shows total cash flow for all FY 2015/16 allocations approved to date, along with the current recommended allocation(s).

Investment Commitments, per Prop AA Expenditure Plan



Prop AA Investments To Date





DRAFT RAIL CAPACITY STRATEGY

February 2016

Sustainable Streets Division

Planning Group

SFMTA
Municipal Transportation Agency

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CONTENTS

ABOUT THIS REPORT

The Rail Capacity Strategy has been created by the San Francisco Municipal Transportation Agency (SFMTA) to alleviate existing crowding conditions on the San Francisco rail system, integrate and inform local and regional planning efforts on the city's investment priorities, and prioritize long term investments for further scope, schedule and budget development. The goals of the strategy are to: (1) Improve reliability of the rail transit system, (2) improve travel time consistency across the network, (3) improve in-vehicle comfort especially during peak-periods, and (4) provide San Francisco residents with high capacity rail access within a half-mile. The SFMTA will use this living document to inform and continue working in partnership with city transportation planning partners; the regional rail network operators; regional, state,w and federal agencies; and key stakeholders as part of the city's investment planning efforts.

FIGURES

TABLES

FOREWORD

If we could reinvent San Francisco's transportation system, what would we envision for the generations to come? Certainly we would design a system that could support reliable transportation connections, quicker trips from one end of the city to the other, and the ability to add capacity that allows for future growth. Like most of the world's great cities, we would create a great rail system that could move people quickly, efficiently and safely – preferably underground and out of the path of traffic.

San Francisco's rail system right now is a hybrid of the best engineering from the 1920s and the early 1980s. Evolving Muni into a modern system that works for our 21st century city is the goal. The Rail Capacity Strategy is the beginning of this conversation, and it lays a foundation for short, medium and long term actions that the SFMTA can take to modernize our transportation system.

The benefits are clear. Investing in rail capacity will alleviate the pressures of increasing ridership that we see on our system today while forging a path for expansion that creates better, smarter and more convenient connections across the city. More San Franciscans – at least 95% – will be within walking distance of a rail line, and there will be room for customers to hop on a train when it arrives. For everyday San Franciscans, this means less time getting to where they are going and more time with their family, friends and loved ones.

This sounds far-reaching, and in many ways, it is. But it's necessary to lay out a vision and begin a dialogue about the future in order to achieve progress.

We are thankful to those who participated in shaping the 2016 Rail Capacity Strategy, and we look forward to an ongoing and robust community dialogue about the future of rail transportation in San Francisco. Transportation is a public good best done in partnership with others. We hope many more will join us on this journey to create the best transportation system for our diverse, beautiful and vibrant city.

ED REISKIN
DIRECTOR OF TRANSPORTATION, SFMTA

TOM NOLAN
CHAIRMAN OF THE BOARD, SFMTA

GIANTS

EXECUTIVE SUMMARY

San Francisco has recently experienced significant demands on its transportation system due to rapid employment and population growth. This rapid growth has also brought with it changes in preferences toward multi-modal and technology-enabled travel. With this growth and innovation, peak-period travelers are placing even greater demand on the city and regional rail networks. As the city continues to grow, it will be critical to ensure this backbone network is adequately managed, maintained, enhanced and expanded to meet the current and future mobility needs of its residents, workers and visitors.

The Rail Capacity Strategy has been developed to serve three key purposes:

- Alleviate existing crowding conditions on the city rail system (fleets, facilities, rights-of-way)
- Integrate and inform local and regional planning efforts on the city's investment priorities
- Prioritize long term investments for further scope, schedule and budget development.

The Strategy's customer-focused goals aim to improve the existing customer experience now and in the future in the following ways:

1. Improve reliability of the rail transit system
2. Improve travel time consistency across the network
3. Improve in-vehicle comfort especially during peak-periods
4. Provide San Francisco residents with high capacity rail access within a half-mile.

This strategy will focus on the city rail network, primarily operated by the San Francisco Municipal Transportation Agency (SFMTA), as the Agency has the responsibility to maintain, enhance and expand this system for the city. The city rail network also includes the regional rail line operating through the center of the city served by the Bay Area Rapid Transit (BART) system and a commuter rail line on the eastern side of the city operated by Caltrain. The development of this strategy included technical groups and stakeholder input from various backgrounds including transit operators, advocacy, business, disability, and technology groups. The stakeholder process informed the three types of investments:

- **System wide Investments** that provide overall network benefits
- **Location Specific Near-Term Investments** that can be delivered in a five year time frame
- **Long-Term Corridor Investments** that mostly expand the city rail network.

The Strategy acknowledges the essential role that the regional rail partners provide in terms of service to and from the city. Their capacity investments are included and integrated in this strategy. In addition, the future high-speed rail terminal and service to San Francisco is also included as part of the long-term needs.

SFMTA will use this living document to inform and continue working in partnership with city transportation planning partners; the regional rail network operators; regional, state and federal agencies; and key stakeholders as part of the city's investment planning efforts. Funding for the long-term investments will require concerted effort to develop new funding sources and/or financing partnerships. Overall, these partnerships and investments are essential to continue to support the city's economic competitiveness and meet the SFMTA's vision of excellent transportation choices.


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1. GOALS & PURPOSE

1.1 INTRODUCTION

The SFMTA, through the San Francisco Municipal Rail way (Muni), is the largest transit operator in the San Francisco Bay Area on a ridership basis carrying over 700,000 daily transit trips, or nearly 50 percent of daily transit trips in the region. Of the 700,000 daily transit trips taken on Muni, 150,000 occur on the five-line city light rail network. In addition, the Bay Area Rapid Transit District and the Caltrain commuter rail service provide almost 320,000 trips each day to, from, and within San Francisco. Within San Francisco, nearly one-half million riders are utilizing the local and regional rail transit network each day.

However, the capacity of the Muni Metro Subway is constrained by inconsistent platform lengths, vehicle person capacity, unreliable surface operations, congestion points at subway portals, and capacity constraints at terminal locations. Due to these conditions, the Muni Metro Subway portion of the system operates at approximately 60 percent of the design capacity during the peak-period.

Looking ahead over the next few decades, the city rail network is facing a number of challenges that will impact its customers including but not limited to:

- By 2040 the number of households in San Francisco is forecast to grow by nearly 30 percent and the number of jobs by 35 percent. (Figure 1.1, 1.2, and 1.3)
- Peak-hour light rail boardings are anticipated to grow by 80 percent by 2040. (Figure 1.4)
- Much of the population and employment growth is concentrated in regionally adopted Priority Development Areas (PDAs) that are served by the existing light rail system.

This growth will directly contribute to increased peak–period crowding on the SFMTA light rail system. (Figure 1.5)

Increased rail transit capacity is essential to maintain and improve mobility today, let alone in the near future, as San Francisco continues to grow. To address these issues and develop solutions, the need for an SFMTA Rail Capacity Strategy was identified in late 2013. Specifically, the Rail Capacity Strategy identifies strategic near term investments to reduce crowding in a cost-efficient manner and long term investments to achieve the Rail Capacity Strategy goals for both existing and future customers. Additional planning for infrastructure elements that support overall system capacity has been documented in the SFMTA Fleet, State of Good Repair Report, and Real Estate Vision for the 21st Century plans. The relationship of these and other citywide and regional planning efforts are shown in Figure 1.6 and, together provide a road map to increased service capacity, flexibility, and reliability through infrastructure investment.

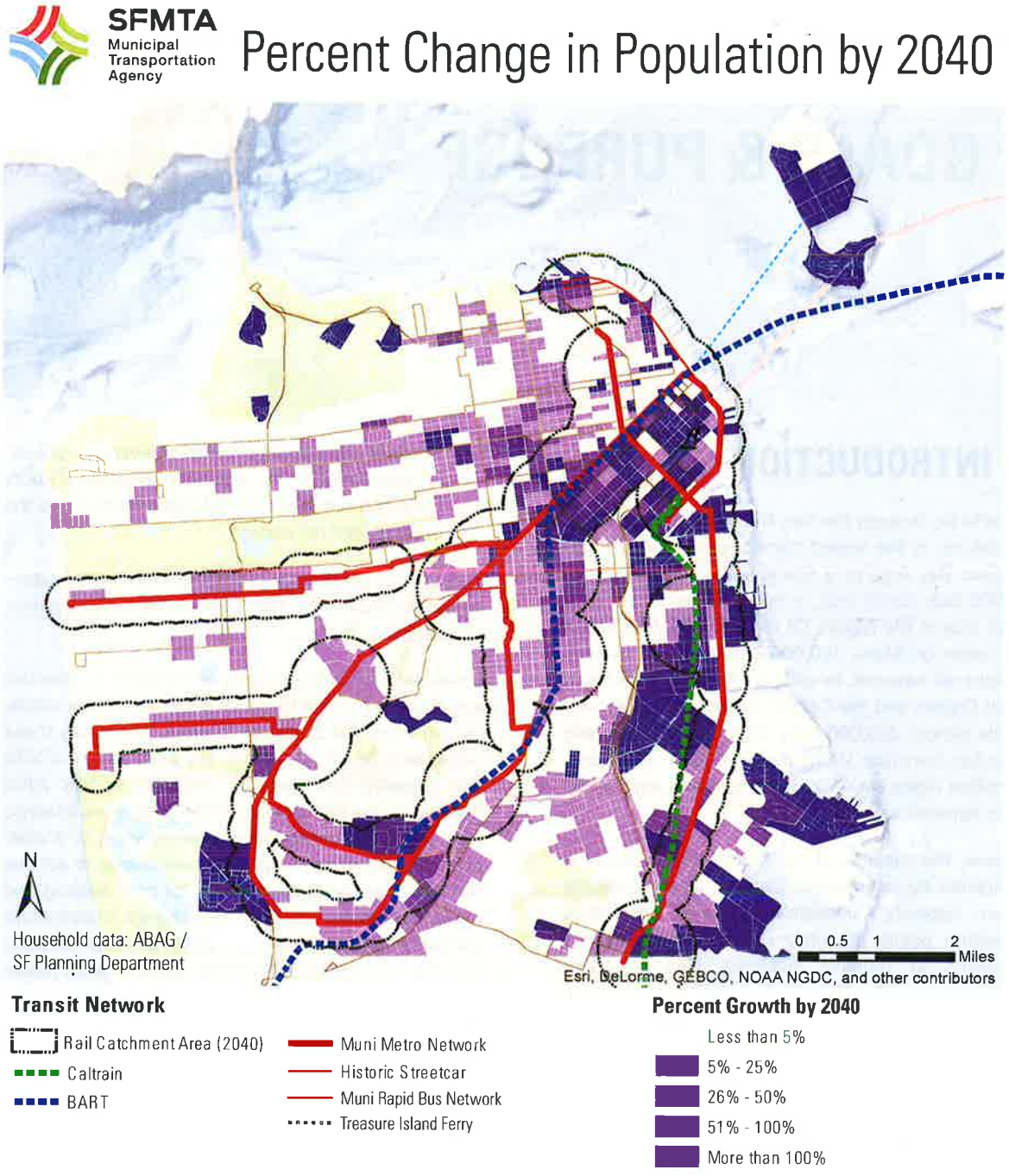

Figure 1.1 Percent Change in Population by 2040

The population of San Francisco is forecast to grow by nearly 30 percent over the next 25 years. Much of this growth is anticipated in the South of Market and eastern areas of the city, as well as along established transit corridors. While the existing system is well positioned to serve the growing population of San Francisco, improvements will be necessary to meet the mobility needs of existing and future residents and employees.

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2040 Population Density

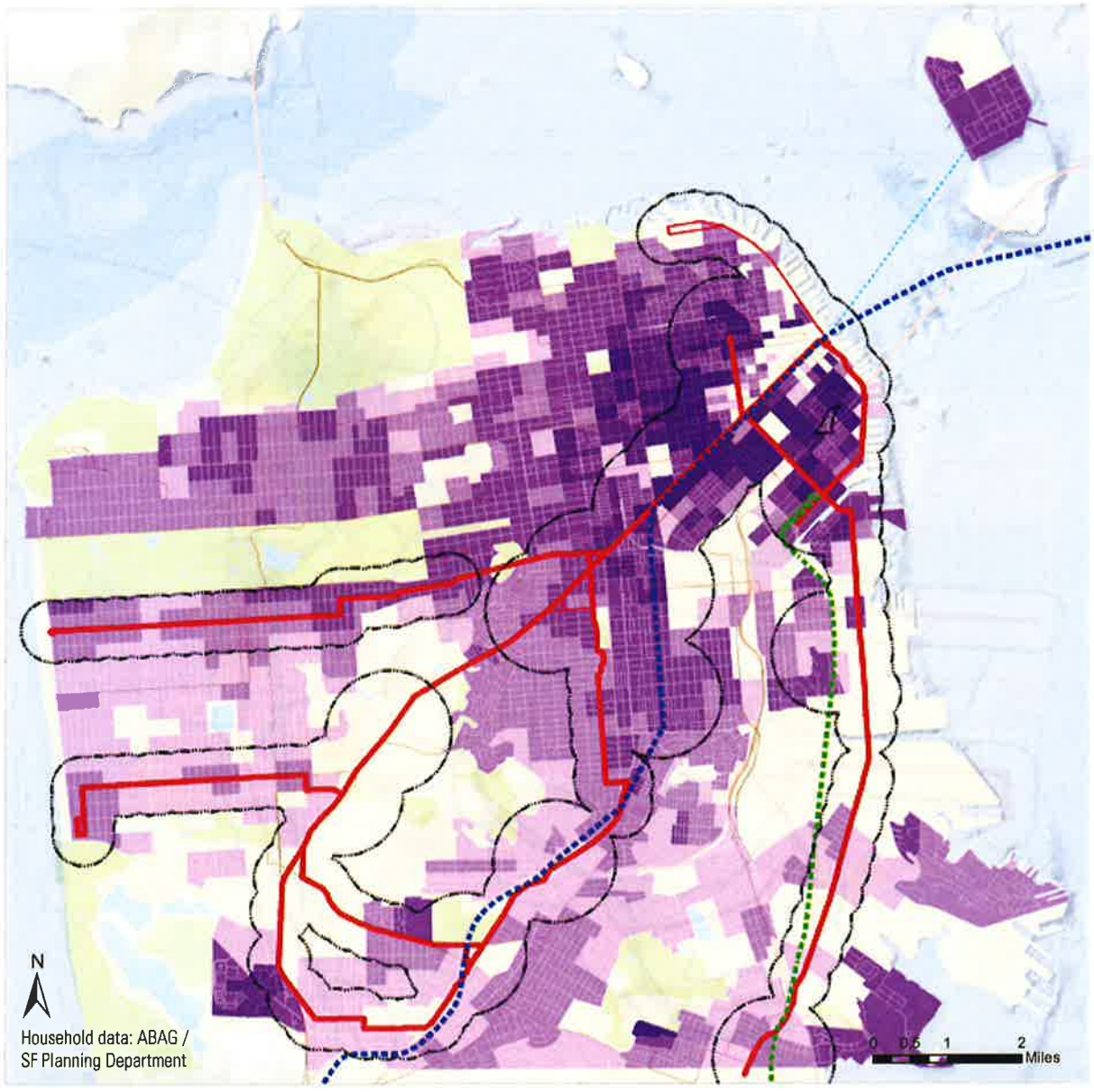

Figure 1.2 2040 Population Density

San Francisco is the second most densely populated city in the United States. Existing population centers will be maintained and intensify through 2040. Emerging population centers are forecasted to grow significantly, but existing population centers will remain the focal point of San Francisco's density.

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2040 Jobs Density

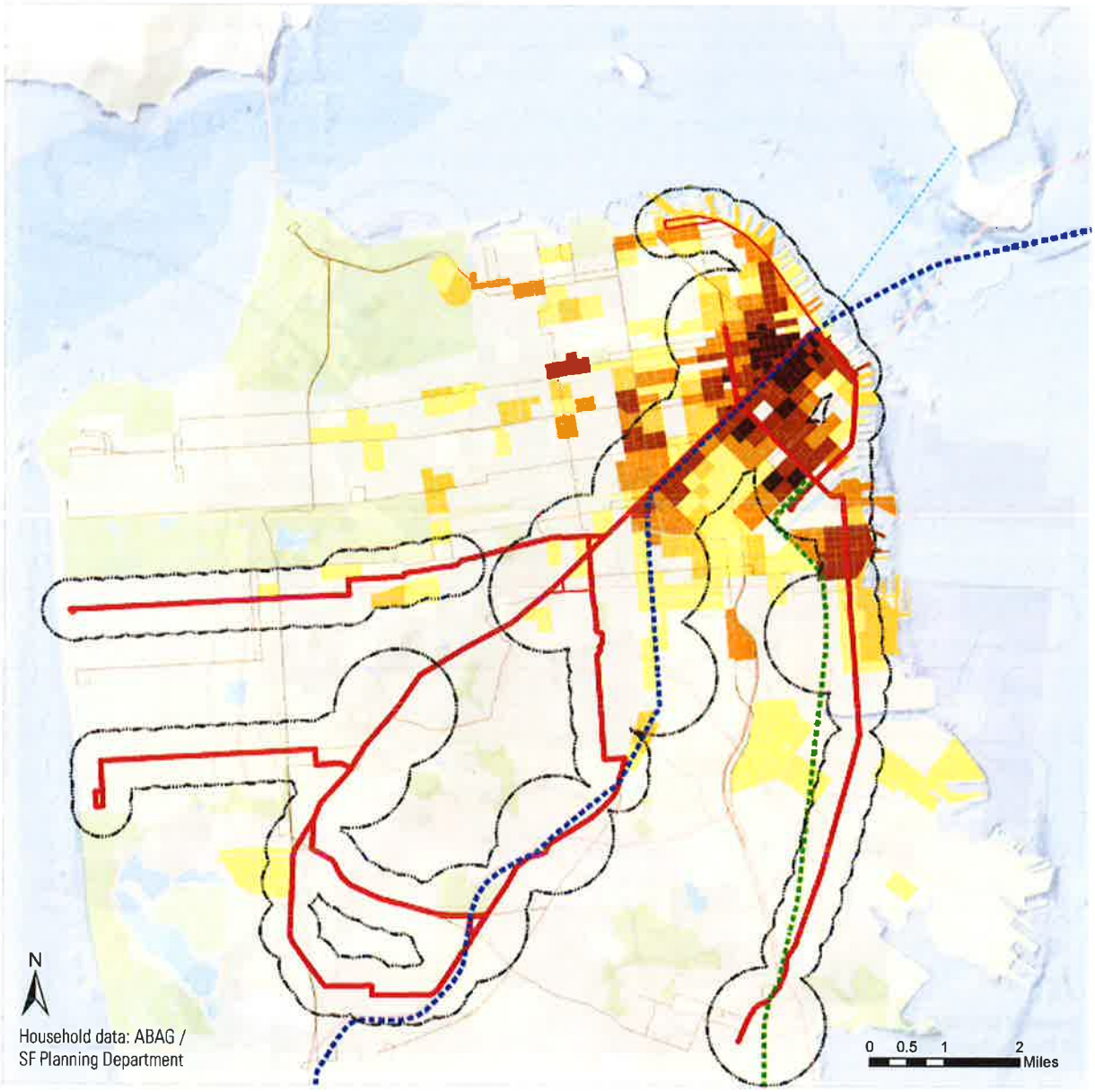

Figure 13 2040 Jobs Density

The Financial District is forecast to remain San Francisco's employment center through 2040. Employment density is anticipated to increase in the South of Market and Mission Bay areas, but would not eclipse that of the Financial District. The highest density employment centers of San Francisco will continue to be located within the catchment areas of both local and regional transit.

1.2 GOALS

The Rail Capacity Strategy has a customer-focused set of goals to improve the customer experience in the following ways:

1. Improve reliability of the rail transit system
2. Improve travel time consistency across the network
3. Improve in-vehicle comfort especially during peak-periods
4. Improve the percentage of San Francisco residents within a half-mile of high capacity rail.

The Rail Capacity Strategy is rooted in the need to address the issues of crowding, systemwide coverage, reliability and travel time. As the plan is refined and additional community input included, it is anticipated that geographic and social equity, the timing of implementation and the cost-benefit of individual projects will further prioritize projects considered for future investment.

1.3 PURPOSE

The Rail Capacity Strategy serves three key purposes:

- Alleviate existing crowding conditions
- Inform local and regional planning efforts
- Prioritize long term investments for the next phase of implementation.

Each purpose of the Rail Capacity Strategy is further discussed on the following pages.

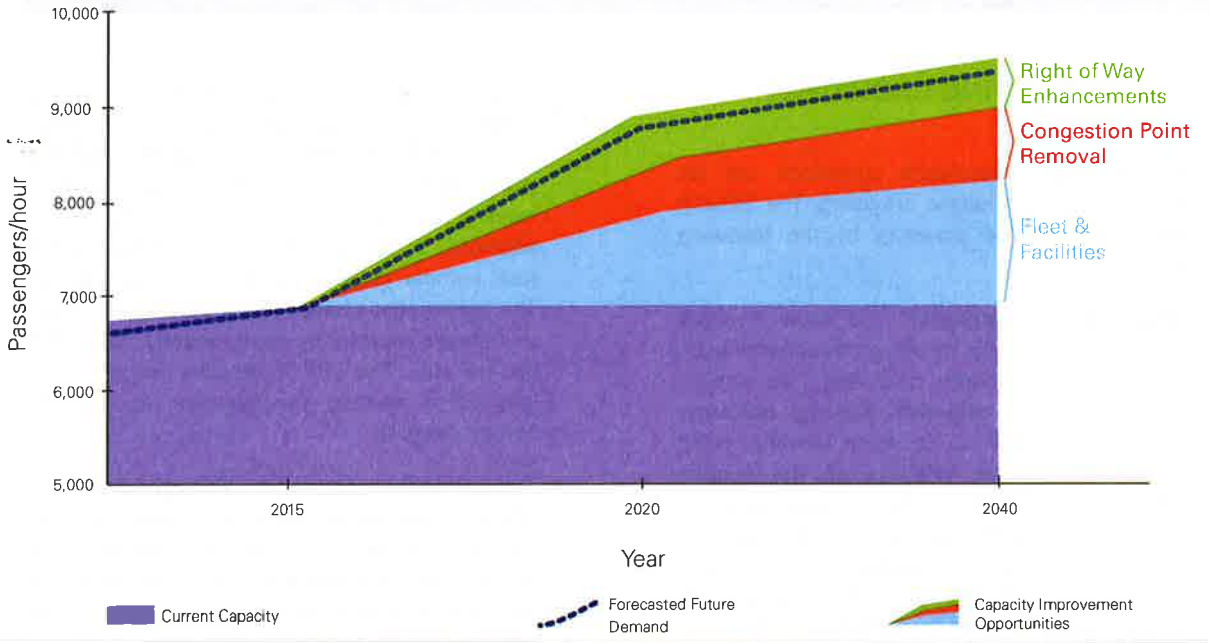

Figure 1.4 Peak Hour Light Rail Demand and Capacity Improvement Opportunities

Peak hour light rail demand is forecast to grow by up to 80 percent by 2040. Various investments in the light rail system can be improved to increase capacity of the existing system to meet this increased demand. Capital investments in the light rail fleet and supportive storage and maintenance facilities can significantly increase overall peak hour capacity. Improvements such as removing major congestion points, providing transit signal priority, and increasing the amount of dedicated right of way can also produce peak hour capacity enhancements. Restructuring of operations and associated infrastructure to optimize service delivery efficiency can provide further increase in capacity. Combined, these improvements in these areas would provide the additional capacity to meet forecasted ridership demand.

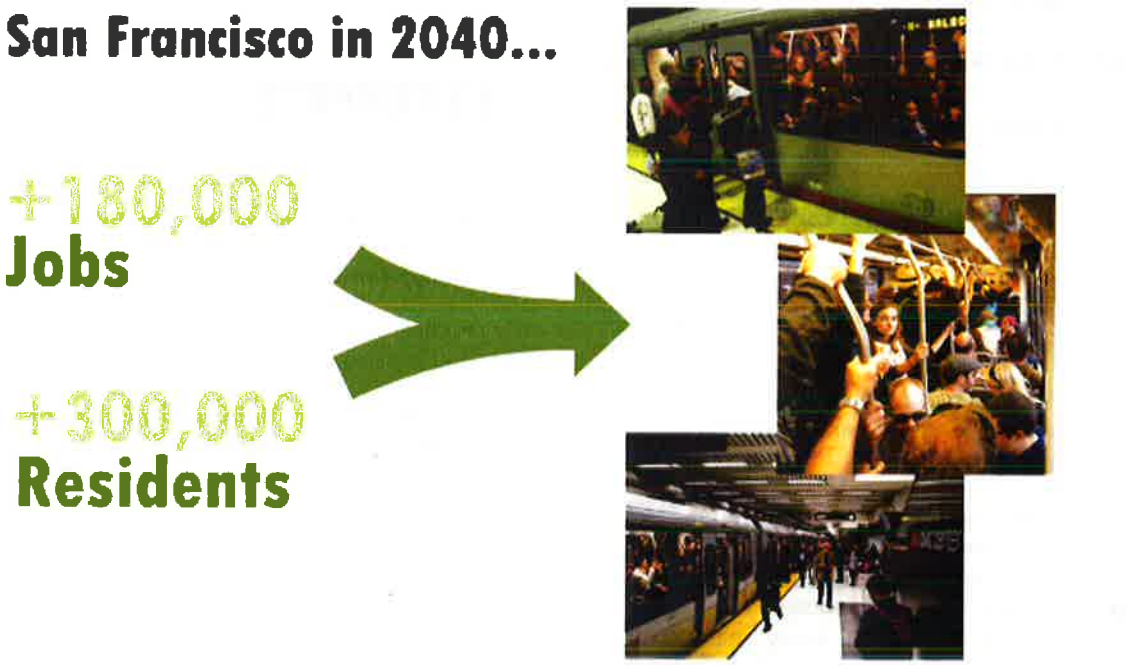

Figure 1.5 Increased Peak-Period Crowding

ALLEVIATE EXISTING CROWDING CONDITIONS

Current passenger experience conditions call for immediate actions to relieve crowding. The SFMTA is working to alleviate crowding by the following measures:

- **Muni Forward upgrades:** The Muni Forward program has a toolkit of proven treatments such as transit signal priority, dedicated "red carpet" travel lanes, and extended boarding platforms known as "bulbs" to decrease existing travel times and improve reliability on the busiest transit corridors in San Francisco. Identifying and initiating capacity improvements will provide relief to passenger crowding year-over-year in the near term. While these improvements do not provide enough capacity to meet long-term forecasted demand, they can be implemented in a relatively rapid timeline and will provide incremental capacity increases that will be leveraged by future investments.

- **Fleet improvements:** Simply put the SFMTA does not have enough rail cars to meet the current peak-period demand for service. SFMTA has purchased an additional 24 trains that will be in service by 2019 and plans to purchase 40 more trains for service by 2021. This a nearly 45 percent increase in the size of the light rail fleet over the next five years. Additionally, the internal configuration of the existing light rail fleet can be adjusted to provide additional standing space, which increases the total number of passengers on a single vehicle. The recent pilot of seat configuration has shown to increase capacity by approximately 10 percent per rail car. The LRV 4 vehicles will include a longitudinal seating configuration to optimize person capacity.

- **Transportation Demand Management:** The city and regional rail ridership is heavily skewed toward peak-period usage, an outcome of employment and education schedules and land use concentrated in the northeast portion of the city. The SFMTA with its partners will be assessing potential opportunities (like more flexible work schedules) to spread some of the customer demand to lessen the crowding conditions experienced by commuters. The SFMTA is also upgrading parallel bicycle facilities to help shift some users over to bicycling to increase capacity for potential new riders. This has already been experienced along the N Judah line with upgrades along Oak, Fell and the Wiggle to Market Street.

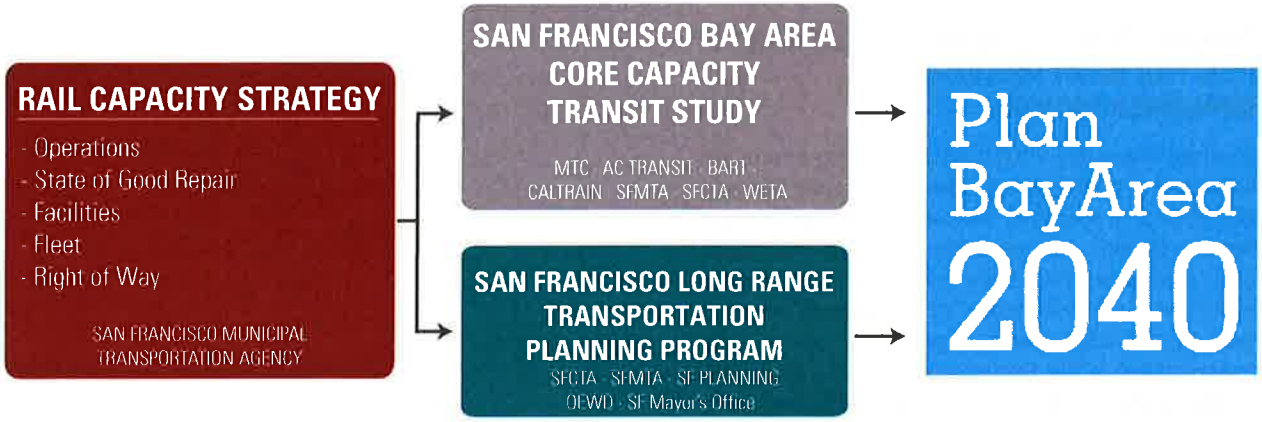

Figure 1.6 Relationship of Planning Efforts for City Rail Network

The Rail Capacity Strategy builds upon these immediate efforts with specific upgrades including relief of bottlenecks, congestion points, and capacity constraints within the SFMTA rail system that were explicitly not included within Muni Forward.

INFORM LOCAL AND REGIONAL PLANNING EFFORTS

In addition to identifying existing system barriers to increased capacity and service efficiency, the Rail Capacity Strategy serves as one of the key information sources for major planning efforts both locally and regionally. The relationship of rail planning efforts is shown in Figure 1.4.

Local Planning Efforts: The San Francisco Long Range Transportation Planning Program (SF LRTPP) is a collaborative long-term planning effort among the San Francisco County Transportation Authority, San Francisco Planning Department, and the SFMTA in coordination with the Office of Economic and Workforce Development and the Mayor's Office. The SF LRTPP includes development of a San Francisco Vision for transportation. This vision will inform an update to the Transportation Element of the San Francisco General Plan as well as development of the San Francisco Transportation Plan (SFTP) 2050. The SFTP 2050 is the County of San Francisco's blueprint for transportation system development and investment over the coming decades.

Regional Planning Efforts: The Metropolitan Transportation Commission (MTC) initiated the San Francisco Bay Area Core Capacity Transit Study (CCTS) in the spring of 2015. The purpose of this analysis is to identify infrastructure investments and policies that provide for the necessary increase in transit capacity to meet demand in the Transbay and Muni Metro travel corridors for short (~2020), medium (~2030), and long-term (~2040) planning horizons. The CCTS project team consists of AC Transit, BART, Caltrain, SFCTA, SFMTA, WETA and the outcomes will inform development of the Regional Transportation Plan (RTP) component of the region's sustainable communities strategy "Plan Bay Area". Plan Bay Area is a long-range integrated transportation and land-use/housing strategy through 2040 for the San Francisco Bay Area. The prioritized investments identified in the Rail Capacity Strategy will be considered and evaluated against other regional transportation investments in Plan Bay Area.

As previously discussed, the Rail Capacity Strategy is the initial step and provides inputs into these related studies. It is anticipated that these subsequent efforts will further inform the SFMTA's rail infrastructure investment priorities.

PRIORITIZE LONG TERM INVESTMENTS FOR THE NEXT PHASE OF IMPLEMENTATION

Multiple long range infrastructure planning efforts are underway or on the horizon. The Rail Capacity Strategy identifies and prioritizes concepts with the greatest system benefit and develops order of magnitude cost estimates. This information will be used to inform regional discussions of investment priorities through the CCTS and in establishing a vision for transportation in San Francisco through the SF LRTPP. In each case, additional analysis and documentation of project benefits will aid in identifying projects that can most efficiently address rail capacity needs for San Francisco. This prioritization of long term investments serves as an initial step in establishing a pipeline of effective rail capacity improvement projects.

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2. METHODOLOGY

The Rail Capacity Strategy utilized a three step process that identified issues, brainstormed concepts, and screened and prioritized concepts for further study. The methodology uses the Assess, Develop, Screen process as outlined in Figure 2.1.

2.1 ASSESS

A Rail Capacity Technical Panel was initiated comprising senior technical experts from all critical areas of SFMTA's light rail system as well as representatives from SFMTA teams that interact with the light rail system to identify current system needs. The primary task of the panel was to conduct a detailed line-by-line review of operational congestion points, areas of friction, and barriers, such as subway portal locations and points where lines merge. Data, plans, or research reviewed by the Rail Capacity Technical Panel included:

- Existing and Future Land Use
- Existing and Forecast Ridership
- Best Practices Research
- Travel Time & Reliability Data
- Adopted plans and policies
- System operations
- Track configurations
- Signal systems

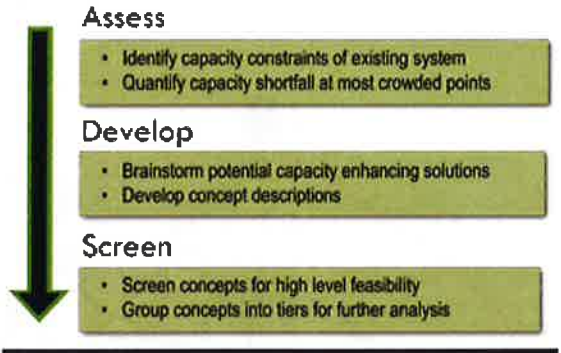

Figure 2.1 Methodological Process

Additional interviews with relevant staff who were not members of the Rail Capacity Technical Panel, including bicycle, pedestrian, and traffic operations, were also conducted. The thematic issues identified by the Rail Capacity Technical Panel drove development of both near- and long-term investment concepts.

A major cause of system friction and congestion identified by the Rail Capacity Technical Panel was the lack of dedicated right-of-way. The inherent conflicts between people driving, biking, walking, and riding transit of a surface system are compounded by a lack of dedicated transit lanes and traffic control measures that prioritize people riding transit. These issues are further exaggerated at points where rail lines merge, unique paths of travel exist, and adherence to the vehicle code is inconsistent. In addition to the general lack of dedicated right-of-way, the Rail Capacity Technical Panel identified key points of friction, which are highlighted in Figure 2.2.

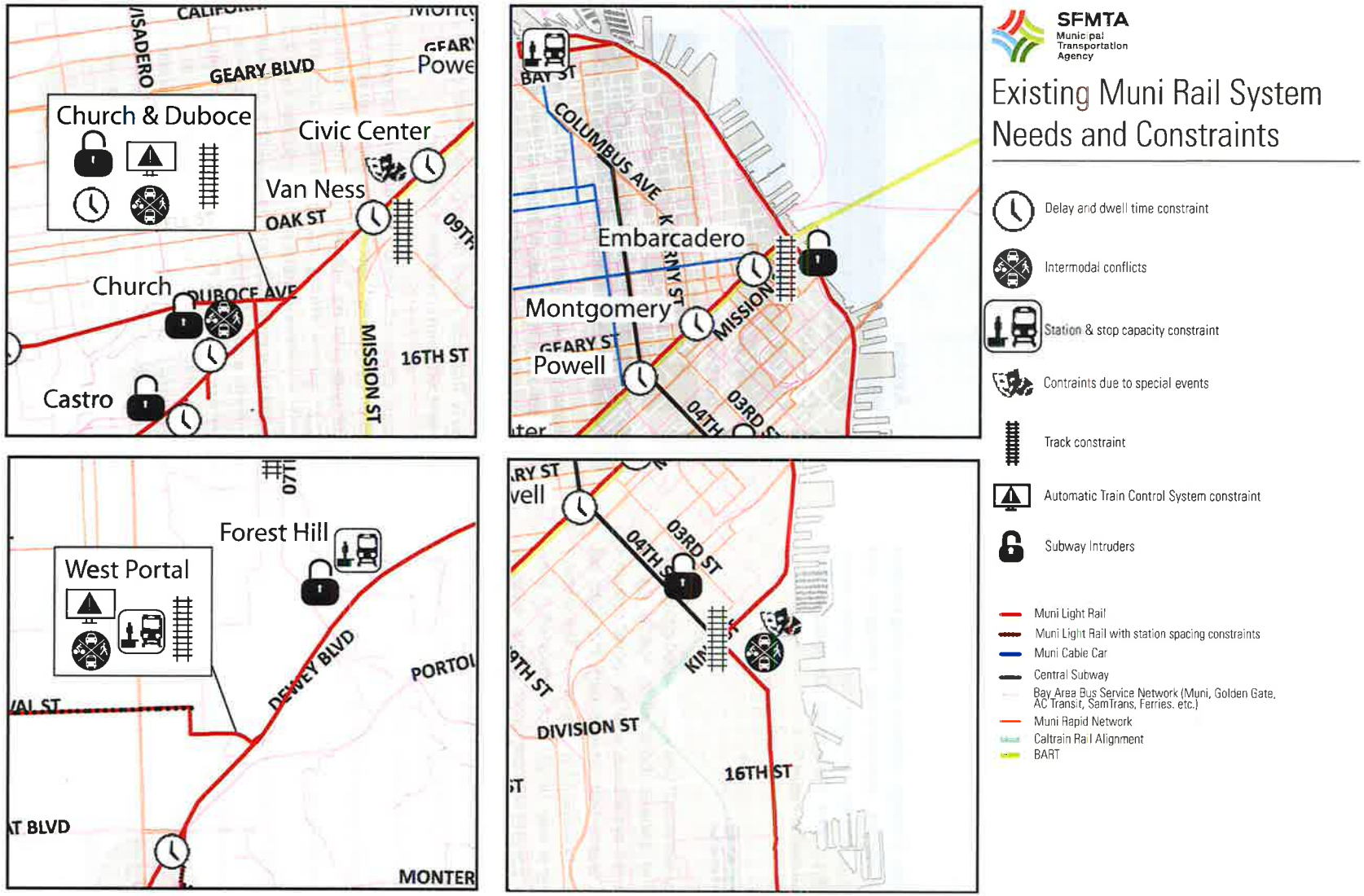

Figure 2.2 Existing System Capacity Needs & Constraints

The Rail Capacity Technical Panel identified four key areas of the muni rail system with acute and context specific constraints (clockwise from top left); Church & Duboce intersection and Duboce portal, Muni Metro Embarcadero Turnback and Folsom Portal, 4th & King intersection, and West Portal. Consistent among the four key areas is the merging/diverging of multiple lines. Areas where trains transition from Muni Metro Subway operations to surface at-grade operations were also identified as areas of system constraint.

Existing ridership trends and land use also informed identification of current system needs. The combined existing residential and employment densities were assessed against current rail system coverage. This analysis illustrated that there are major transportation corridors in San Francisco that exceed North American best practices for rail supportive land use densities, but are only served by local and rapid bus service. As shown in Figure 2.3 (next page), these corridors include:

- Inner/Outer Geary to Financial District
- Marina to Financial District/SOMA
- Van Ness/Fillmore to Mid-Market

Some of these corridors' current ridership levels on local and rapid bus service exceed that of existing rail lines and total system ridership of other Bay Area operators. The anticipated changes in density by 2040 are shown in Figure 2.4 (next page).

The design capacity of the existing system was also evaluated. The Muni Metro subway was opened in 1980 and serves five lines that carry over 150,000 passengers per day, or just over 20 percent of the entire SFMTA transit system. The potential capacity of the Muni Metro subway and Muni Metro Extension (MMX) is significantly greater than what is delivered during peak hours, primarily as a result of environmental factors and infrastructure outside the Muni Metro Subway and MMX. Based on the conditions from West Portal to Embarcadero and along the Muni Metro Extension, the available and currently scheduled capacity in terms of trains, cars, and passengers are provided in Table 2.1.

Table 2.1 Total Hourly Train Capacity (Muni Metro)

TOTAL HOURLY TRAIN MUNI METRO CAPACITY			
Total Hourly 3-car Train Capacity	20	Total Hourly 2-car Train Capacity	19
Total Hourly Person Capacity on 3-Car Trains	7,140	Total Hourly Person Capacity on 2-Car Trains	4,522
Total Car Capacity		98	
Total Hourly Person Capacity		11,662	
Scheduled Cars		58	
Scheduled Hourly Person Capacity		6,902	
Utilization of Muni Metro Capacity		59 percent	

The Muni Metro Subway and Muni Metro Extension have an estimated replacement value of $3.7 Billion. Operating conditions west of West Portal Station and the Church and Duboce portal limit the provided capacity to just under 60 percent of the design Muni Metro subway capacity based on current infrastructure. This is due to platform lengths, vehicle person capacity, unreliable surface operations, congestion points at subway portals, and capacity at terminal locations. Identifying strategic investments to utilize this untapped capacity is paramount for SFMTA to reduce passenger crowding in a cost-efficient manner.

When examining Muni Metro operations beyond just the peak period, available capacity exists in shoulder and off-peak periods. The crowded condition is a result of numerous individuals choosing to travel to work or home in a short period of time. Figure 2.5 represents the acute crowding conditions driven by commute patterns during peak periods, and available capacity just outside the peak periods. Using non-infrastructure methods (fare pricing, commute incentives, etc.), this under utilized capacity could provide substantial relief or allow continued growth without further exasperating currently crowded conditions.

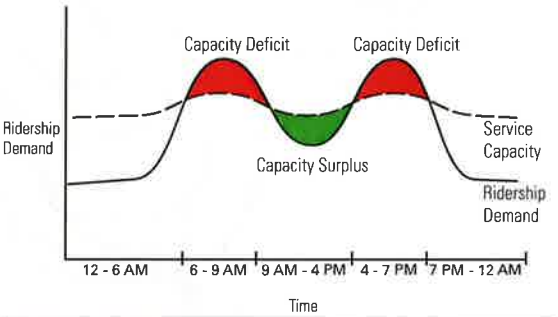

Figure 2.5 Daily Capacity Deficit and Surplus

Travel time from key points in the existing system was also analyzed. While travel time is not a direct input into delivered capacity, it does influence the resources needed to supply capacity and affects the customer experience and attractiveness of transit. Figure 2.6 provides AM peak period inbound travel times to Embarcadero Station from various points in the Muni system. What is notable is the difference in travel times experienced by residents in the outer areas depending on the rail line. For example, customers who live in West portal experience significantly shorter travel times to Embarcadero than their neighbors in the south east due to grade separation and controlled right of way conditions. In addition, the map shows

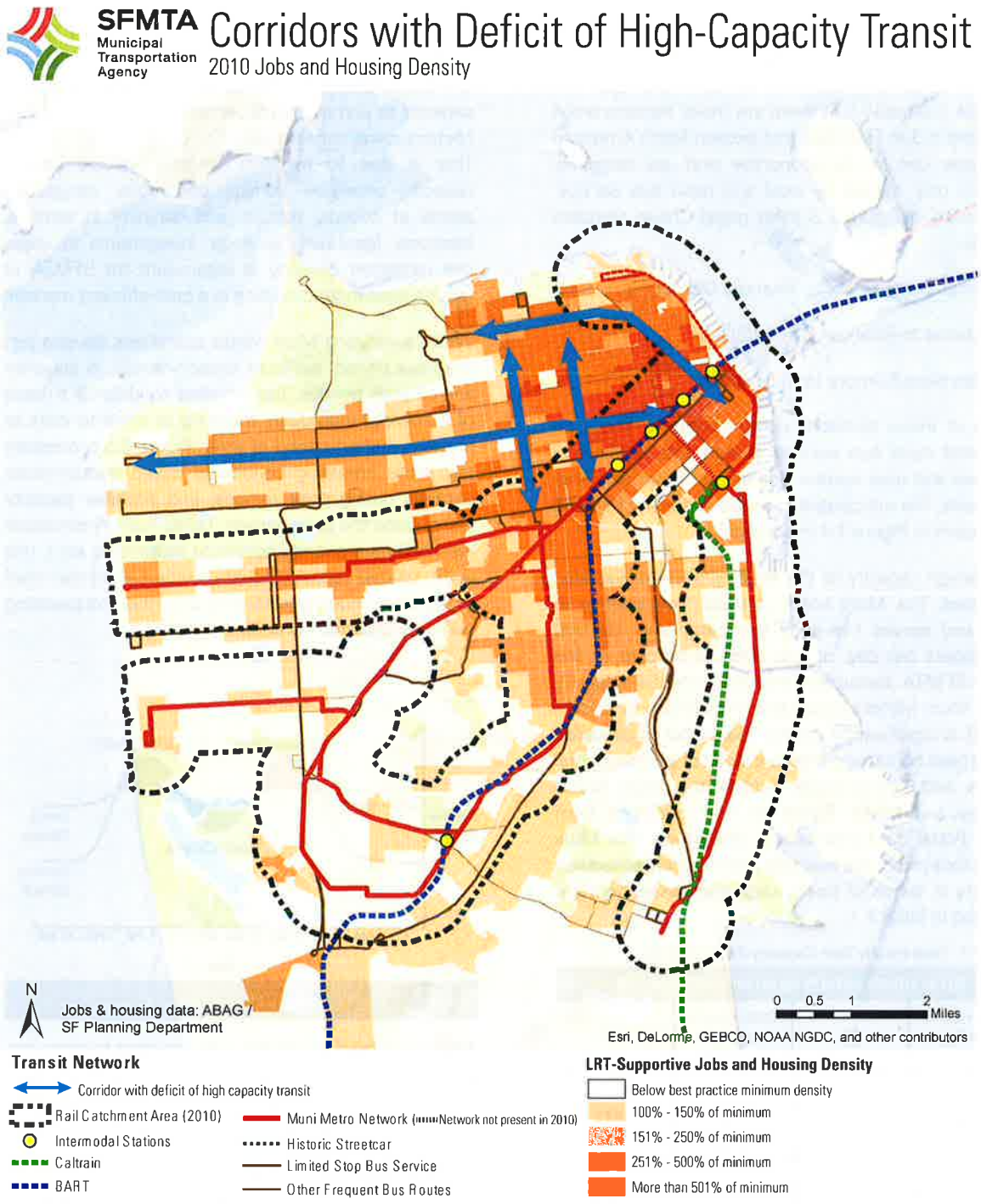

Figure 2.3 Corridors with Deficit of High-Capacity Transit

The current residential and employment density in many areas of San Francisco are at a level that, according North American best practices, supports high capacity transit. While this capacity may be provided in the form of high quality Bus Rapid Transit, the vehicle capacity and scalability of light rail are more appropriate at the lower levels of rail supportive density. At the higher levels of rail supportive density, heavy rail may be needed to address ridership demands. The existing rail system provides coverage to a large portion of the rail supportive densities in San Francisco. However, there are many rail supportive corridors where rail service does not exist and corridors or areas in the Southwest portion of San Francisco where densities do not indicate a rail supportive environment according to best practices. Corridors that currently lack rail service but have land use that would support rail service are indicated in the figure above.

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2040 Light Rail Transit Supportive Land Use

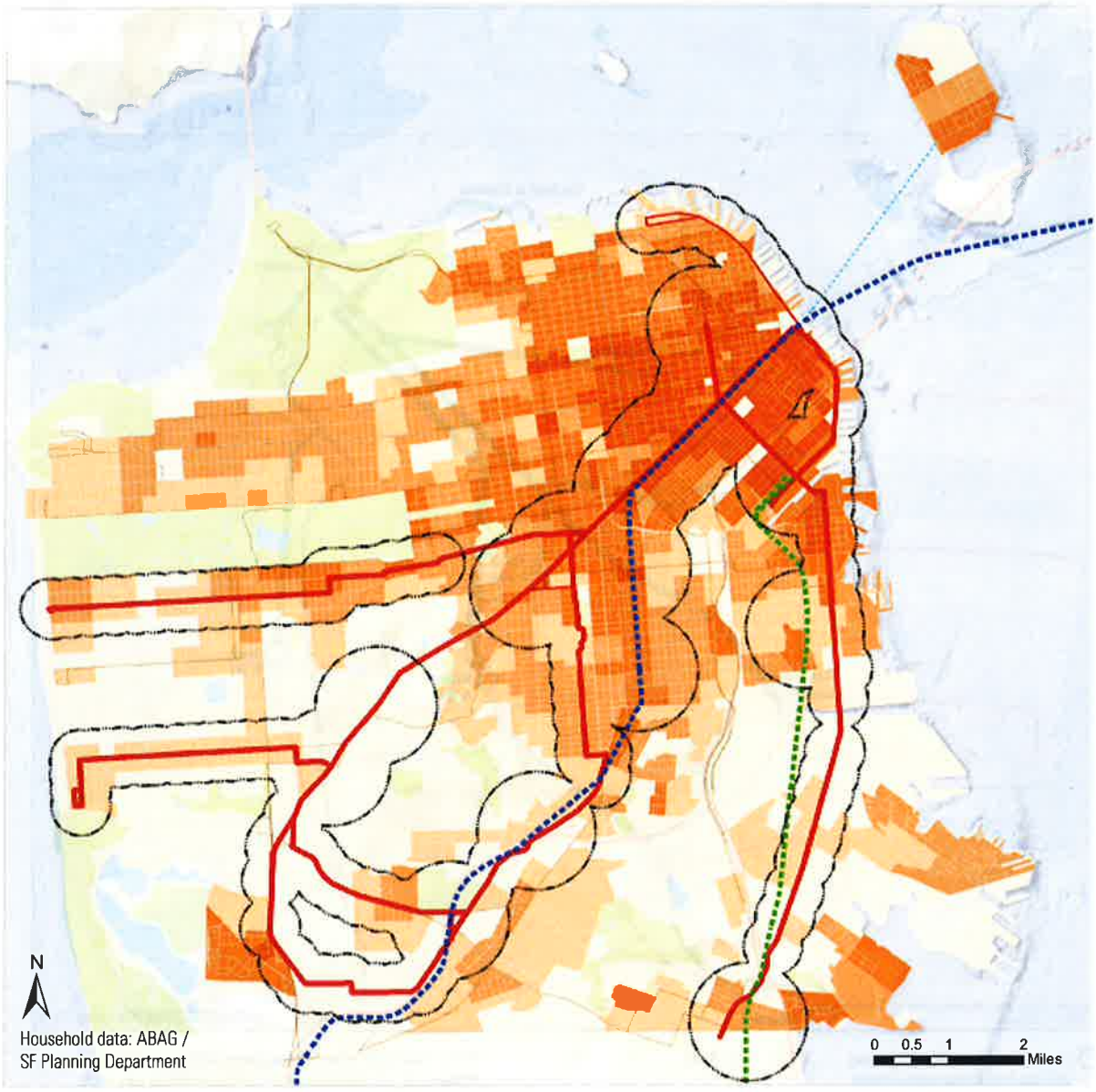


Figure 2.4 2040 Light Rail Transit Supportive Land Use

Land use along the L-Taraval and T-Third rail lines is anticipated to intensify to levels that are shown to be supportive of light rail transit in North America. However, many portions of San Francisco with even greater intensity would remain outside rail transit catchment areas.

SFMTA Municipal Transportation Agency

2014 AM Peak 30 Minute Travel Time to Embarcadero

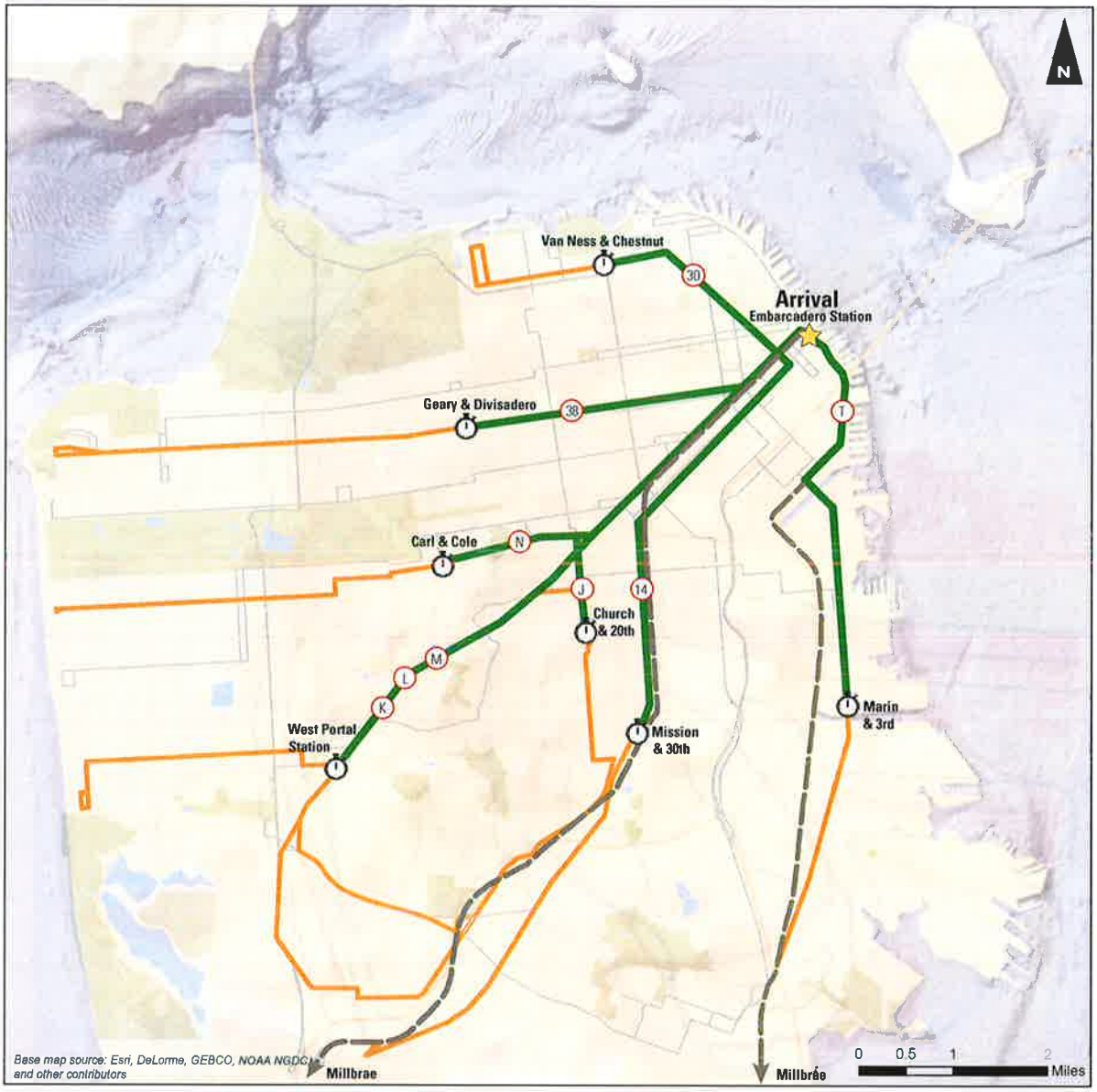


Figure 2.6 2014 AM Peak Travel Time to Embarcadero Station

The distance passengers can reliably travel is a major component of the decision to take transit, or choose another mode. When considering the AM peak period commute, passengers could travel to Embarcadero Station within 30 minutes on 85 percent of their trips from the origins depicted above. Passengers originating to the south and west of these locations would need to plan additional travel time to ensure they would reach the Embarcadero Station on time. When considering regional passengers on BART and Caltrain, trip origins as far south as Millbrae could reliably reach Embarcadero Station and 4th & King, respectively.

non-rail times at key locations where variability is even higher. As a point of reference the Bay Area Rapid Transit (BART) line runs from the Balboa Park station to the Embarcadero station in 15 minutes. For a city of seven-by-seven miles it should be conceivable that a rail network should be able to connect consistently across the outer areas of the city to the Embarcadero station in 30 minutes or less. The Rail Capacity Strategy looked at measures to ensure consistency among lines to meet a goal of the 85th percentile of trips from various points of the city reaching the Embarcadero in 30 minutes or less.

To identify future system needs, a combination of ridership forecasts for existing or planned transit service and anticipated changes in land use type and intensity were analyzed. The 2014 SFMTA Transit Fleet Management Plan (Fleet Plan) provides forecasted ridership demand for existing transit routes. For rail lines, the Fleet Plan indicates where additional capacity will be needed. For bus lines, forecasted ridership levels and changes in land use may indicate where transit ridership levels would be more appropriately served with a high capacity transit service, such as light rail. The frequency or spacing of at-grade crossings was also considered where high frequency service would require grade separation for efficient operations.

Generally, transit ridership projections follow the broader employment and population trend. However, the growth in the Muni light rail system is anticipated to outpace the rate of employment and population growth. This can be attributed to a significant portion of the employment and residential growth being located in close proximity to the Muni light rail system, as well as the opening of the Central Subway in 2019. This has the potential to result in passenger crowding conditions on the Muni light system significantly more extreme than today. Figure 2.7 indicates the passenger experience along each light rail line by 2040 without improvements in person carrying capacity.

Rail Line	Existing	2020	2040
J-Church			
KT-Ingleside/Third K-Ingleside (2019)			
L-Taraval			
M-Ocean View			
N-Judah			
T-Third/ Central Subway	Service begins 2019		

Comfortable | Approaching Uncomfortable | Uncomfortable | Extremely Uncomfortable

Figure 2.7 Passenger Experience on Muni Light Rail System

2.2 DEVELOP

Two stakeholder workshops, with approximately 25 representatives from transit operators, advocacy, business, development, disability, and technology groups, were held to both identify potential investments concepts and understand, at a high level, which concepts were priorities for the stakeholder groups. The initial stakeholder session included identifying existing system bottlenecks and constraints, developing possible solutions to existing system constraints, and identifying potential system expansion corridors. All concepts identified by the stakeholder group were considered in the screening process. Priorities identified by the stakeholder group at the second workshop were also considered when SFMTA prioritized long-term investment concepts.

An online opportunity to develop investment concepts and submit them to the Rail Capacity Strategy project team was also provided. Results of the online stakeholder feedback are presented in Figure 2.8. The online submissions were also considered by technical staff when prioritizing investment concepts. The stakeholder input met Goal 4 of ensuring high capacity rail transit within half a mile of all San Francisco residents.

In addition to major infrastructure investments, additional capacity can be delivered by increasing the length of trains operating along each line. As discussed in the current system needs assessment, the Muni Metro Subway operates at less than the design capacity. Incremental investments in the fleet, platform and terminal capacity enhancements, storage facilities, and travel time and reliability improvements, such as those proposed under Muni Forward, have the potential to greater utilize the existing system. Supporting infrastructure investments, such as overhead power, would likely also be needed with each of these enhancements.

2.3 SCREEN

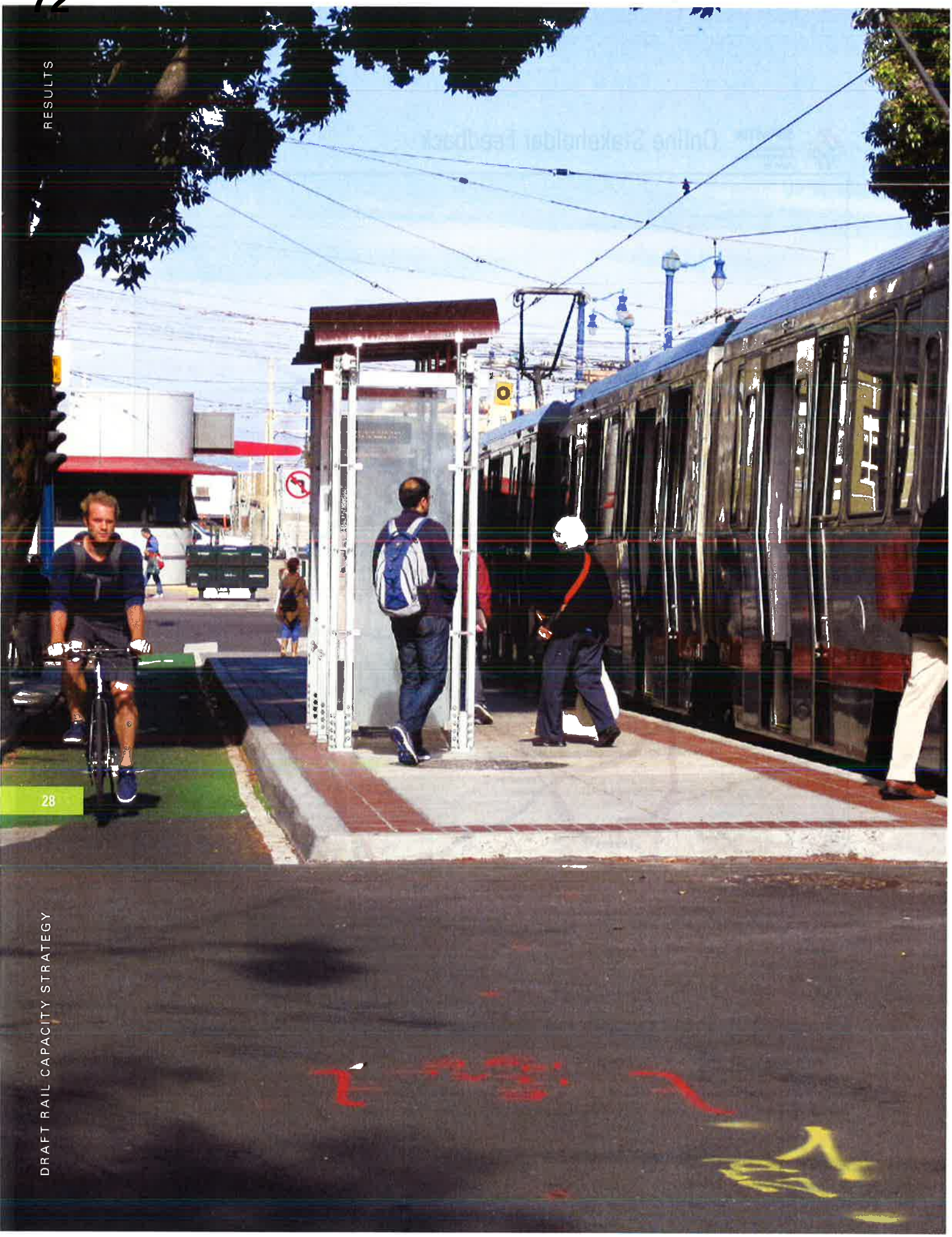
Following the development of potential solutions to existing constraints and long-term needs, the Rail Capacity Technical Panel (RCTP) conducted feasibility and redundancy screening of all concepts. Concepts with major operational barriers or constructability issues were removed from further consideration. Concepts that served similar corridors or included slight variations with one another were grouped together. The remaining concepts were then prioritized by the RCTP based on the following: amount of additional capacity provided by an improvement, independent utility, complement to other future system enhancements, land use connection, operating costs, removal of existing constraints, and implementation timeline. This prioritization process included qualitative and quantitative data as well as professional judgment. The outcomes of this prioritization process are described in the following chapter.

SFMTA Municipal Transportation Agency

Online Stakeholder Feedback

Figure 2.8 : Online Stakeholder Concepts

An online opportunity for the public to submit corridor or network concepts as created. Individuals could draw new rail lines, leave sticky notes, and explain their rail network of the future. Over 100 unique submissions were received, some including fully developed networks. These submissions were layered upon one another so that darker purple represents a concept that appeared in a greater number of submissions, and lighter colors indicating a concept that was seen less frequently in the online submissions.



3. RESULTS

Following the three step process reflected in the Methodology chapter, results were grouped into three categories:

- **System-wide Investments:** Investments that are not tied to a particular location
- **Location Specific Near-Term Investments:** Capacity improvements that can be delivered in a five-year time frame and will be recommended for consideration in the next two five-year capital improvement plan cycles
- **Long-Term Corridor Investments:** Capacity improvements that mostly expand the city rail network. Funding for these investments has not been identified and would take 15-30 years or longer to deliver, based on historic funding cycles. If new funding sources and/or financing partnerships were to be realized, these projects could be delivered much sooner.

3.1 SYSTEM-WIDE INVESTMENTS

The Rail Capacity Strategy identified investments that should be considered as part of all future SFMTA State of Good Repair investments in the rail system. These investments would each contribute to improved system flexibility, service reliability, person capacity, ability to recover from service disruptions, and passenger experience. Any improvements to the existing system will also need to examine the basic elements that support operations, such as overhead power lines and track condition. See Table 3.1 for more information.

3.2 LOCATION SPECIFIC NEAR- TERM INVESTMENTS

After identifying the various thematic issues within the existing system, the Rail Capacity Technical Panel identified the most acute locations and conditions within the thematic areas that presented barriers to existing operations. Each of these investments help relieve crowding on the existing system in a cost-efficient manner and provide utility for the system of today, as well potential systems of the future. See Table 3.2 for more information.

3.3 LONG-TERM CORRIDOR INVESTMENTS

SFMTA staff and stakeholders used ridership forecasts, anticipated population and employment growth, known system investments, and identified system constraints to develop investment concepts. Concepts with similar functionality and benefit for the existing system were grouped together. Concepts for system expansion along similar corridors were also grouped. This process recognizes that dedicated funding for further phase development of major investments is necessary to attain a greater understanding of the costs and benefits of specific corridor investments. The concepts were grouped into three categories:

- Enhancement of the existing system
- Removal of system congestion points
- Expansion of the system

Table 3.1 System-wide Investments

SYSTEM-WIDE INVESTMENT	PROGRAM DESCRIPTION	BENEFITS
 Vetag switches/crossovers	Electrify and automate switches and crossovers as part of any rail replacement or reconstruction efforts. All new crossovers and switches will be electrified and automated.	Removal of any delay associated with crossing a switch or crossover, such as visual inspection. Reduced delay when utilizing a switch due to cab activation of switch or crossover.
 Switches/crossovers	Install switches and crossovers at strategic locations to provide for greater operational flexibility and system resiliency.	Increased flexibility for repositioning trains in service to balance demand and realign service. Increased resiliency for unplanned events that remove trackway from service (collisions, disabled train, etc.)
 Terminal/Tail track	Expand/lengthen terminals and tail tracks to allow for storage of 3 or 4 car trains sets and disabled trains.	Increased terminal and layover capacity necessary for increased car count trains. Storage areas for disabled trains speeds system recovery when train is pulled from service.
 Transit "Red Carpet"/ Raised Trackway	Install red paint to delineate transit-only roadway. When replacing tracks elevate track bed to physically delineate transit-only lanes from general purpose roadway	Reduce conflicts with vehicles, reduce travel time variability and increase average travel speed.
 Station/Platform Enhancement	Extend stations and platforms to accommodate 3 or 4 car trains. Consider creating high floor platforms when working near the Muni Metro subway.	Incremental increases in station capacity allow for special event service and eventually higher capacity trains during regular service.
 Transit Signal Priority	Include any necessary signal transit priority equipment when upgrading signal controllers or replacing track.	Transit Signal Priority reduces travel time variability and increases reliability and average travel speed.

Table 3.2 Location Specific Near-Term Investments

NAME / PROJECT DESCRIPTION	BENEFITS	TIMELINE	COST
West Portal Conflict Reduction: • Restrict conflicting turn movements • Replace magnetized rail segments	• Improved Reliability • Improved Travel Time	<3 Years	$1.5m (Pilot only)
Muni Metro Extension Turnback Track: • Construct pocket track east of Harrison Street	• Improve Passenger Comfort • Improve Reliability • Improve Travel Time	4–5 Years	$8.5m
Muni Metro Extension Surface Train Control System: • Upgrade existing Transit Signal Priority along Embarcadero from Ferry Portal to 4th and King and south along 3rd Street to 16th Street	• Improved Passenger Comfort • Improved Reliability • Improved Travel Time	3–5 Years	$10.5m
Church & Duboce Portal Conflict Reduction: • Analyze vehicle or turn prohibition and improved pedestrian and bicycle circulation	• Improved Reliability • Improved Travel Time	2–5 Years	$0.5m (Planning only)

Within each of these categories, concepts were prioritized based on a high level understanding of project contribution toward achieving the four goals of the Rail Capacity Strategy. Concepts that provided synergistic benefits to both the existing system and expansion corridors tended to be prioritized higher. Concepts were then grouped into three tiers as follows:

Tier 1: Concepts should continue or initiate project development. These concepts address key system constraints and/or existing and future demand.

Tier 2: Concepts should initiate project development as planning for Tier 1 projects is completed, or additional funding become available. These concepts address future constraints and demand.

Tier 3: Concepts provide additional coverage and access and should be initiated as part of a new funding and/or financing partnership package.

The prioritized long-term investments totaling almost $17 billion and over 30 years of implementation provide a pipeline of potential investments that should be further studied. In particular, many of these concepts have the potential to reduce overall operating costs by delivering capacity more efficiently (longer trains, reduced travel time, etc.). Development of operating plans should be included in subsequent study of these concepts so a greater understanding of the costs and benefits can be understood. Table 3.3 shows long-term investments by tier, while Table 3.4 shows individual project costs and timelines. This pipeline of strategic investments will need planning level resources as the next step to:

- Further detail the costs and benefits of each investment
- Identify potential new funding sources and/or finance partnerships, and
- Identify the most streamlined and efficient project delivery methods for these capacity improvements.

Figure 3.1 indicates the potential passenger experience in 2040 based on the the long-term City rail network investments, as shown in Figure 3.2. With these investments no line would operate at an uncomfortable passenger crowding level during peak periods. Over 97 percent of San Francisco residents would be within a half mile of high capacity transit. Furthermore, travel time and reliability would be improved allowing significantly greater mobility with 30 minutes of travel time, as shown in Figure 3.3.

Achievement of the four goals defined by the Rail Capacity Strategy represents a key first step in conceptualizing a future rail network. As this network is refined and additional community input included, it is anticipated that geographic and social equity, the timing of implementation and the cost-benefit of individual projects will further prioritize projects considered for future investment

Table 3.3 Long-Term City Rail Network Investments

	ENHANCEMENT OF EXISTING SYSTEM	REMOVAL OF SYSTEM CONGESTION POINTS	EXPANSION OF THE SYSTEM
Tier 1	M-Line/19th Ave. Core Capacity (tunnel)	Geneva LRT (surface)	LRT on Geary (tunnel & surface)
			Central Subway Extension (tunnel)
Tier 2	N-Judah Subway and Three-Car Train Capacity (tunnel)	Four-car Train Capacity at West Portal & Forest Hill Stations	East/West LRT from Market & Church to Mission Bay/4th & King (surface)
Tier 3		Non-revenue L and N track	Evans Avenue T-Line Spur (surface)
			2nd & Sansome Streetcar (surface)
			Fort Mason Extension (surface)
			19th Ave LRT (surface)
			Marina to Upper Market LRT (tunnel & surface)
State/Regional Investments	CalTrain Electrification	BART Rail Cars	California High Speed Rail
			Transbay Transit Center Phase 2: Downtown Rail Extension "DTX"

Table 3.4 Long-Term City Rail Network Investments Mileage and Estimated Cost

PROJECT NAME	MILEAGE	COST (MILLIONS)#		IMPLEMENTATION*
		Low	High	
M-Line 19th Ave Grade Separation	2.0	$2,500	$3,000	2025+
Geneva LRT	3	$260	$610	
Geary LRT	6.3	$1,410	$3,030	
Central Subway Extension to Fisherman's Wharf	1	$840	$1,410	
Tier 1 Total	12.3	$5,010	$8,050	
N-Judah 3-car Operations and Underground from 9th Ave	2.3	$1,460	$3,130	2040+
4-car train Capacity at West Portal & Forest Hill	0	$80	$150	
East West LRT from Market & Church to Mission Bay/4th & King	2	$240	$520	
Tier 2 Total	4.3	$1,780	$3,800	
Non-revenue N and L Track	1.3	$100	$210	2050+
Evans Ave T-Line Spur	1.7	$140	$290	
Fort Mason Extension	1	$80	$170	
19th Ave LRT	4.7	$370	$790	
Marina to Upper Market LRT	2.1	$1,350	$2,900	
2nd & Sansome Streetcar	3	$240	$510	
Tier 3 Total	13.8	$2,280	$4,870	
TOTAL	30.4	$9,070	$16,720	

Costs based on project feasibility studies or FTA construction cost database plus 30 percent increase for regional cost adjustment and reflect at-grade vs. grade-separated alignment assumptions.

* Implementation timeline assumes 5 years per expansion project with enhancement and congestion point removal projects constructed concurrently. Alternative delivery methods, such as Public Private Partnerships, could provide additional funding and accelerated project delivery.

Each of these investments build upon the existing rail system and rely on supportive infrastructure elements, such as traction power systems and the Automated Train Control System. These supportive infrastructure elements will also require reinvestment in the coming years as part of the SFMTA Transit Fixed Guideway Capital Investment Program. It is estimated that almost $2.7 Billion will be needed for these elements over the next 20 years. This need is documented in the SFMTA 20-year Capital Plan.

Accompanying this transformation in the light rail system would be a comparable transformation in the bus network. Many of the benefits realized by customers within walking distance of a rail line would also materialize for bus customers. Bus routes may be restructured to circulate customers to rail lines that provide a more reliable and frequent service so customers can reach their destinations sooner. This analysis would be part of a detailed operating plan accompanying and major rail investment.

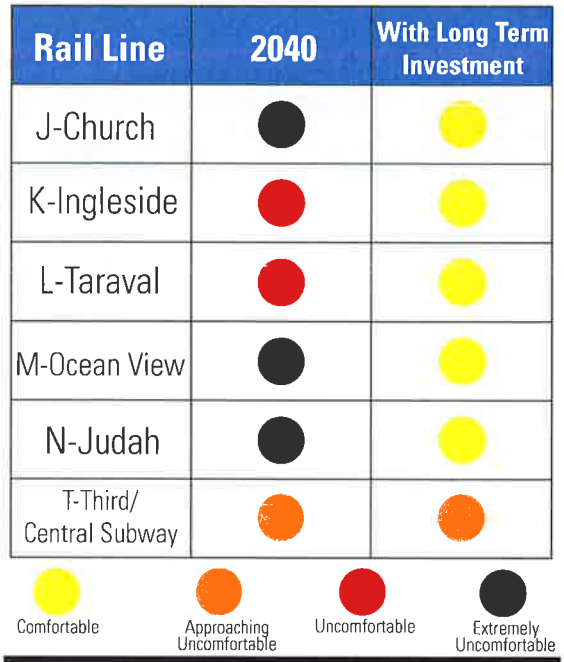


Figure 3.1 Passenger Experience with Long-Term Investments

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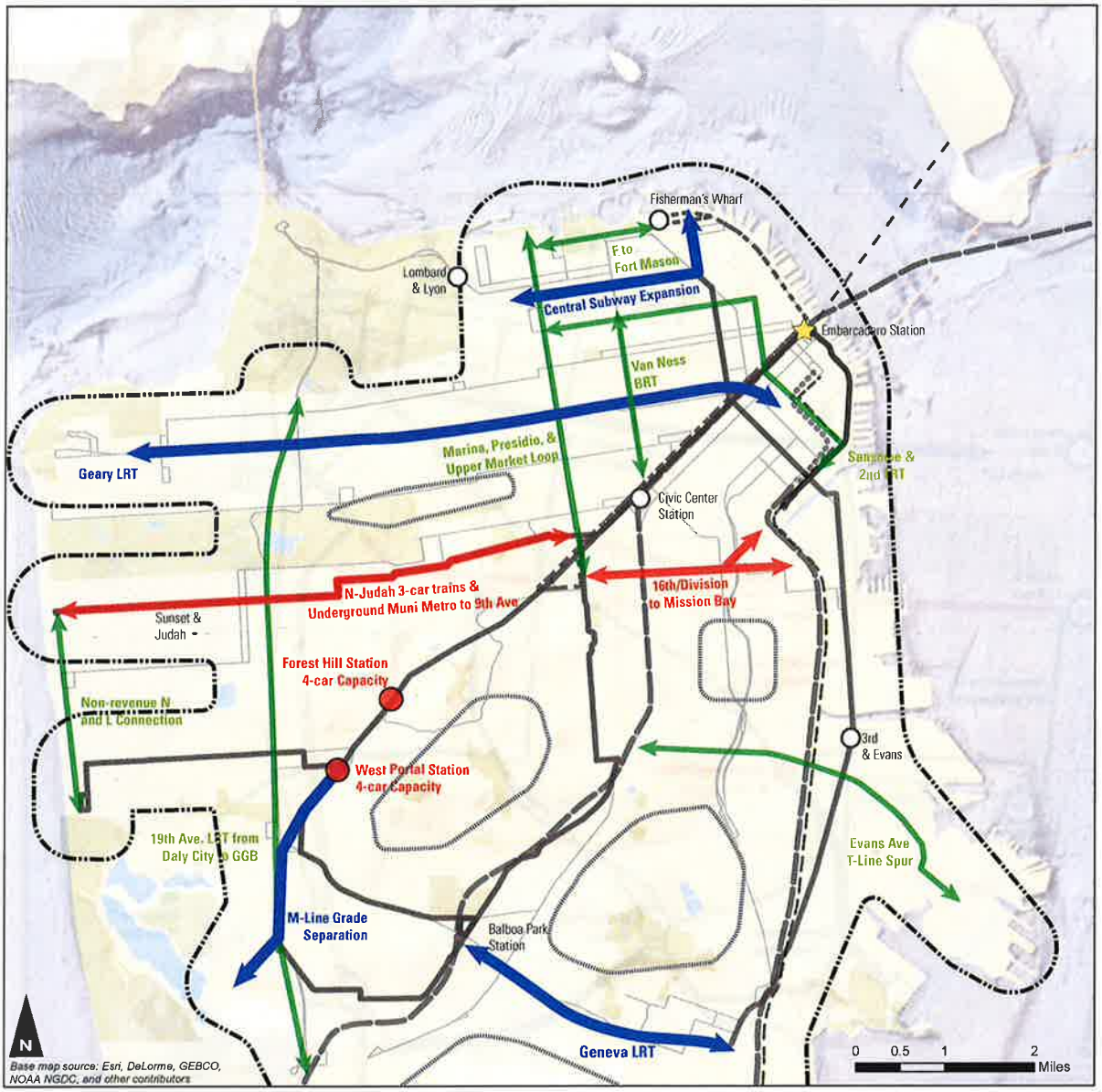
Long Term Corridor Investments



Tier 1

Tier 2

Tier 3

1/2 Mile Buffer

Current and Planned Transit System

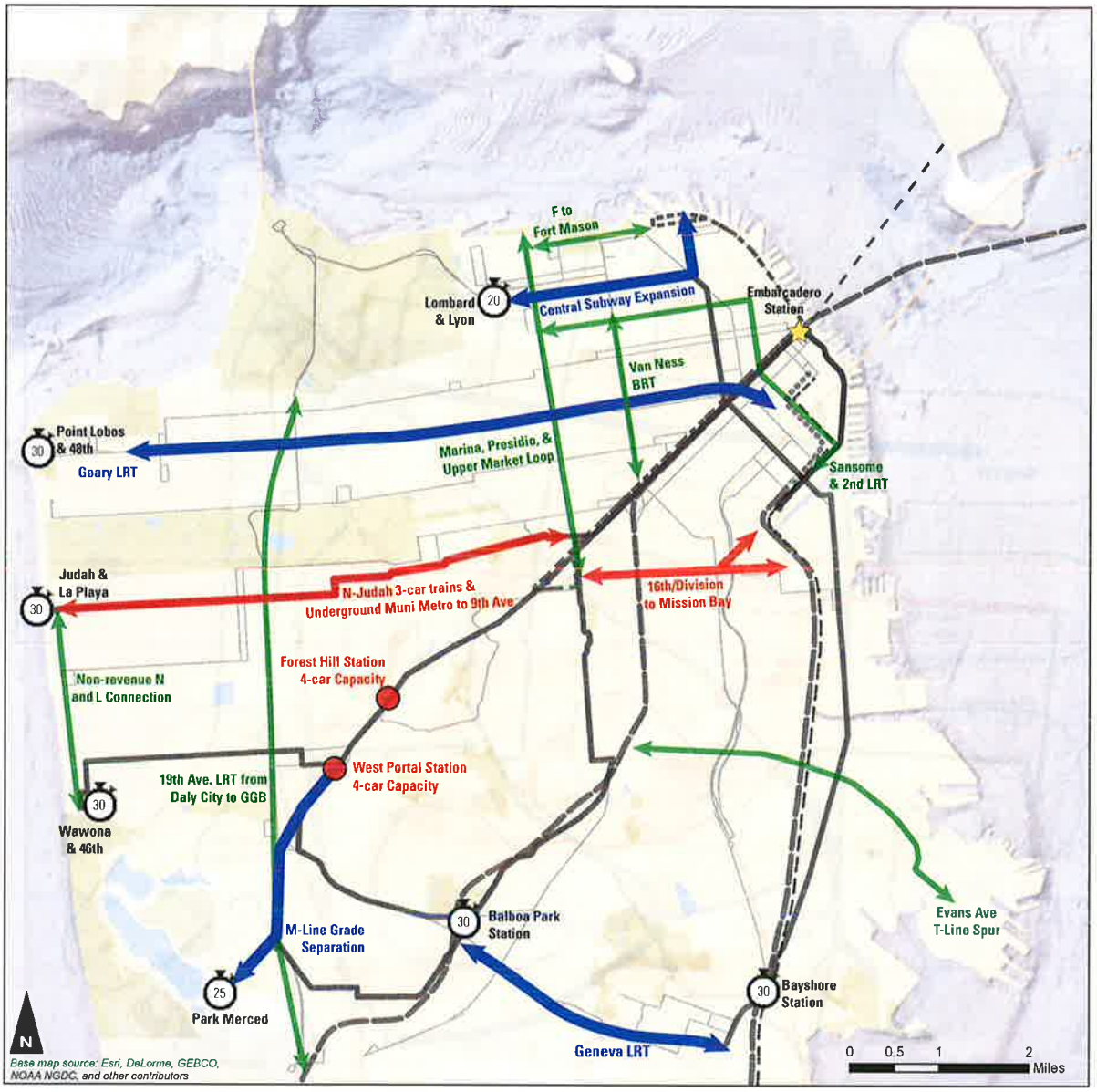
- Muni Rapid Bus Network
- Historic Streetcar
- Muni Metro Network
- Planned High Speed Rail
- Treasure Island Ferry
- Regional Rail (BART/Caltrain)
- Planned Regional Rail

Figure 3.2 Long-Term Corridor Investments

When implemented, the long term corridor investments identified in the Rail Capacity Strategy would provide high capacity rail service within a half mile of over 95% of the population of San Francisco. Vehicle capacity and travel time reliability improvements would result in a comfortable passenger experience during peak periods.

SFMTA Municipal Transportation Agency

Long Term Corridor Investments - Travel Times



Tier 1
Tier 2
Tier 3

30 Travel Time From Origin to Embarcadero

Current and Planned Transit System

- Muni Rapid Bus Network
- Historic Streetcar
- Muni Metro Network
- Planned High Speed Rail
- Treasure Island Ferry
- Regional Rail (BART/Caltrain)
- Planned Regional Rail

Figure 3.3 Long-Term Corridor Investments and Travel Times

The long term corridor investments would improve the travel time and reliability of the rail system. The number of destinations that could be accessed with 30 minutes of travel time would be greatly increased compared to the current system. Improvements in travel time and reliability would also provide passengers with reduced crowding and enhanced in-vehicle comfort.

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4. IMPLEMENTATION

To realize the benefits from these investments, an action plan was developed to not only address existing crowding, but initiate the up-front planning necessary to meet the long term mobility needs of San Francisco.

4.1 OUTCOMES

Implementation of the Rail Capacity Strategy would result in the following customer-focused outcomes:

- **Improved reliability of the rail transit system:** Implementation of the Tier 1 and 2 would eliminate the majority of service disruptions, delays and system vulnerabilities allowing for more reliable service experience.
- **Improved travel time consistency across the network:** Implementation of Tier 1 and 2 projects results in travel time of 30 minutes or less from the outer zones of the system to Embarcadero Station.
- **Improved in-vehicle comfort especially during peak-periods:** The new LRV fleet of up to 260 vehicles would allow for operation of 2, 3 and 4 car operation in peak-periods. Coupled with the new longitudinal layout, the in-vehicle experience will be significantly improved over today's conditions.
- **Improved high capacity rail access within half-mile of San Francisco residents:** Implementation of all three tiers would provide high capacity and reliable rail transit service within one-half mile of over 95 percent of San Francisco residents and employees.

4.2 FUNDING

The Rail Capacity Strategy has an estimated cost range of approximately $9.1-$16.8 billion, including significant contingency based on rough order of magnitude cost estimate technique. Further project development will be needed more detailed cost estimates.

The tiers and their funding sources are as follows:

Tier 1: The SFMTA is currently developing the 2017-2022 Capital Improvement Program. Estimated revenue for transit enhancement projects is approximately $691 million, including federal, state, regional and local fund sources. However, the identified funding need for transit enhancement projects such as Muni Forward, Bus Rapid Transit projects, spot improvements and location specific near term rail capacity improvements is upwards of $835 million. Of the Tier 1 projects, environmental planning and conceptual design for the M-Line/19th Avenue Core Capacity project and pre-environmental planning for the T-Third Phase III project are included in the $835 million of needs. Upwards of $5 billion in additional federal, state, and local funds, from either existing or new sources, need to be identified to deliver the projects in Tier 1.

Tier 2: Similarly, the estimated $2 to $4 billion necessary for delivery of projects in Tier 2 has not been identified.

Tier 3: Tier 3 projects are estimated at between $2.3 and $4.9 billion. This strategic prioritization of projects will need further study to determine and develop costs estimates and project scope schedule and budgets.

These preliminary order of magnitude cost estimates suggest that the city and the region will need to identify new funding sources in addition to development agreements for projects that have a direct nexus to development. New funding sources include but are not limited to:

- Local and/or Regional Transportation Sales Taxes
- Local and/or Regional Congestion Impact Fees, and
- Property and other municipal taxes
- Public Private Partnership financing packages

Creative approaches to infrastructure funding will need to be explored. Several agencies in the nation have been developing public private partnerships for rail capacity. These projects are bundled and tied to a new or existing revenue source. This means projects can be built in parallel and delivered sooner. Each of these packages will need to be evaluated and determined to be most effective. The Rail Strategy will inform these efforts for the rail infrastructure portion of these packages.

Overall, initiating the actions identified in the Rail Capacity Strategy would directly lead to both improved conditions for rail passengers in the near term through and increased long term capacity to accommodate projected growth and maintain economic competitiveness. The near term investments focus on cost-efficient improvements and the long term investments strategically expand or enhance corridors in a manner that provide systemwide benefits. Figure 4.1 provides the implementation roadmap for the Rail Capacity Strategy long term corridor investments.

Long-Term Corridor Investments Implementation Roadmap

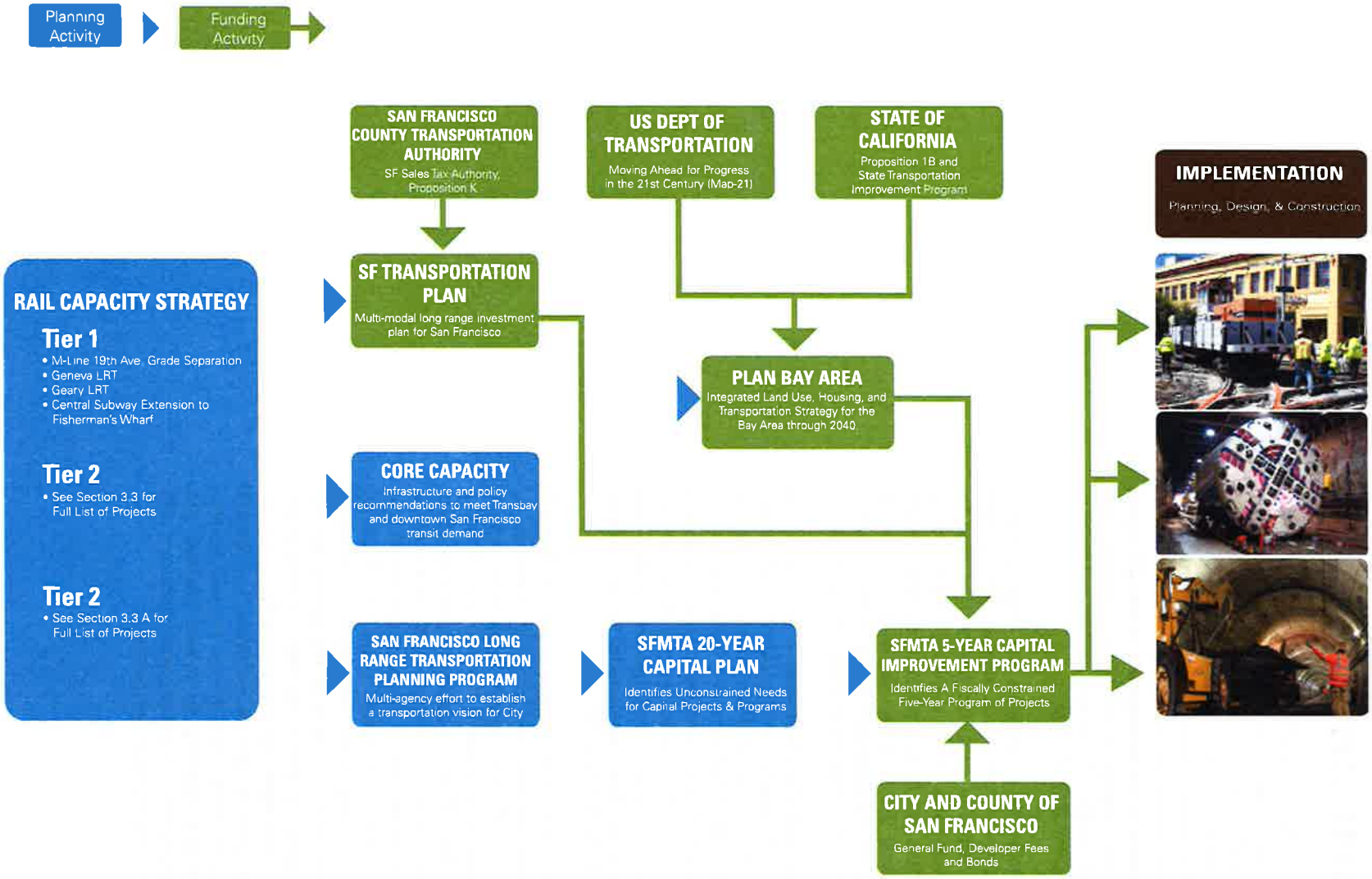


Figure 4.1 Long-Term Corridor Investments Implementation Roadmap

4.3 NEXT STEPS

In the fall of 2015 the SFMTA initiated the development of the next 5 year Capital Improvement Program (CIP). The CIP identifies the capital investments the SFMTA plans to initiate and deliver in the coming 5 years. The location specific near-term investments will be considered for funding against other SFMTA capital needs in the development of the CIP. Figure 4.2 outlines the projects proposed for inclusion in the SFMTA 2017-2022 CIP, available funding, and steps to develop a final 2017-2022 CIP.

The system-wide investments are most efficiently delivered when paired with already planned State of Good Repair or expansion projects. The need for these investments will be evaluated on a project-by-project basis, but funding would be available through the existing Transit Fixed Guideway and Transit Optimization and Expansion Capital Programs within the SFMTA 2017-2022 CIP, as shown in Figure 4.3.

The project costs for investments in tiers 1 and 2 are significant. Funding for the initial planning and concept development phases of these projects has not yet been identified. Potential funding levels are indicated in Figure 4.4. Environmental planning and conceptual design for the M-Line/19th Avenue Core Capacity project and pre-environmental planning for the T-Third Phase III project have been included for consideration in the SFMTA 2017-2022 CIP.

Additional planning for projects in tiers 1, 2 and 3 have been identified and currently underway as part of the MTC Core Capacity Transit Study and the San Francisco Long Range Transportation Planning Program (SF LRTPP). In particular, operating plans, fleet requirements, storage and maintenance facility needs, and refined operating and capital cost estimates will be developed under the SF LRTPP. The results of both efforts will also be presented as information or action items at the appropriate and relevant governing bodies. As these planning efforts provide further details on project benefits and costs, individual projects can be prioritized for discreet planning and concept development. Progress updates and milestone reporting for related planning and project development would also occur consistent with existing project management practices.

RAIL CAPACITY STRATEGY

- West Portal Conflict Reduction
- Muni Metro Extension Turnback Track
- Muni Metro Extension Transit Signal Enhancements/Embarcadero Tramways
- Church and Duboce Portal Conflict Reduction

$20M

MUNI FORWARD

- 22 Filmore: 16th St Transit Priority Project
- 14 Mission: Downtown Mission Transit Priority Project
- L Taraval: Transit and Streetscape Enhancements
- See Muni Forward Implementation Plan for additional projects

$225M

MAJOR CORRIDORS

- Van Ness Bus Rapid Transit
- Geary Bus Rapid Transit
- Better Market Street
- M-Line/19th Avenue Core Capacity Project

$475M

SPOT IMPROVEMENTS

- Transit Spot Improvements & Red Lanes
- Overhead Catenary System

$115M

Total Need: $835M

Estimated Revenue: $691M

Funding Gap: $144M

FY 2022-2026

FY 2017-2021

Figure 4.2 Near-Term Projects: Next Steps

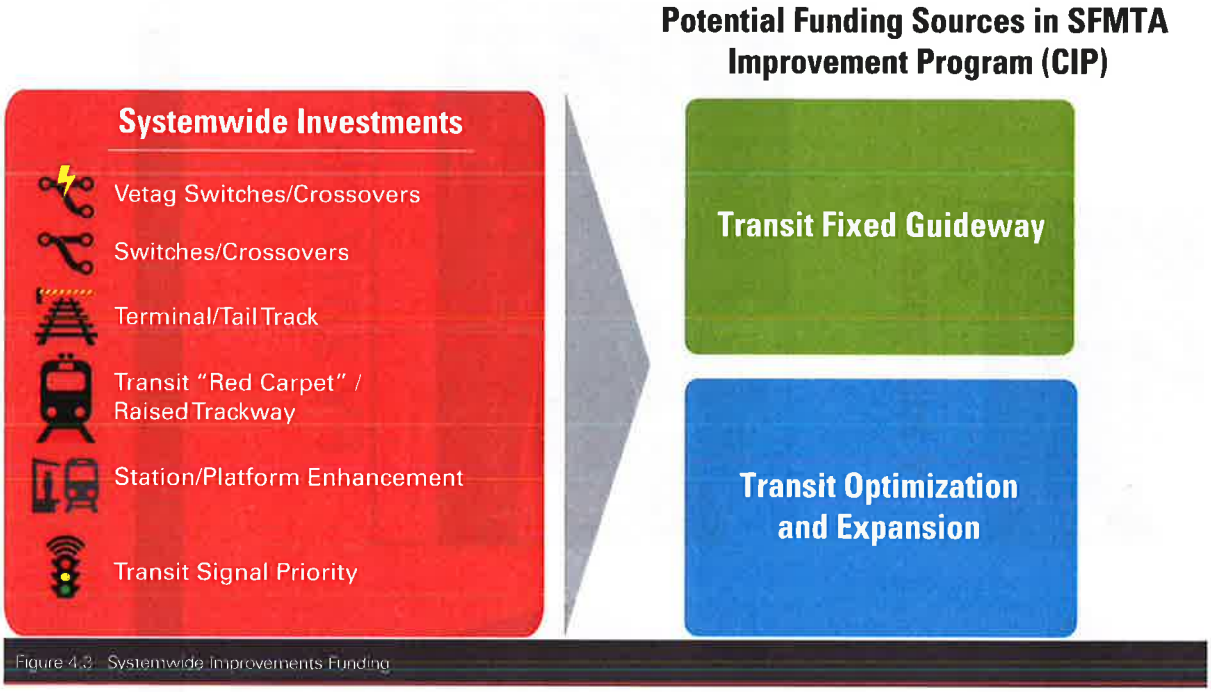


Figure 4.3 Systemwide Improvements Funding

Figure 4.4 Long-Term Project Potential Funding

ACKNOWLEDGMENTS

RAIL CAPACITY STRATEGY DEVELOPMENT TEAM

Grahm Satterwhite

Timothy Papandreou

Rachel Om

Teo Wickland

RAIL CAPACITY TECHNICAL WORKING GROUP

Scott Jefferis

Vince Harris

Jerry Robbins

Ernesto Del Barrio

Mike Ellis

Terry Fahey

Julie Kirschbaum

Jeff Flynn

Dave Harbin

Gabe Rukeyser

Fariba Mahmoudi

RAIL CAPACITY STRATEGY STAKEHOLDER WORKSHOP ORGANIZATIONS

Bay Area Rapid Transit (BART)

San Francisco County Transportation Authority (SFCTA)

Market Street Railway

San Francisco Police Department

San Francisco Chamber of Commerce

San Francisco Housing Action Coalition

Livable City

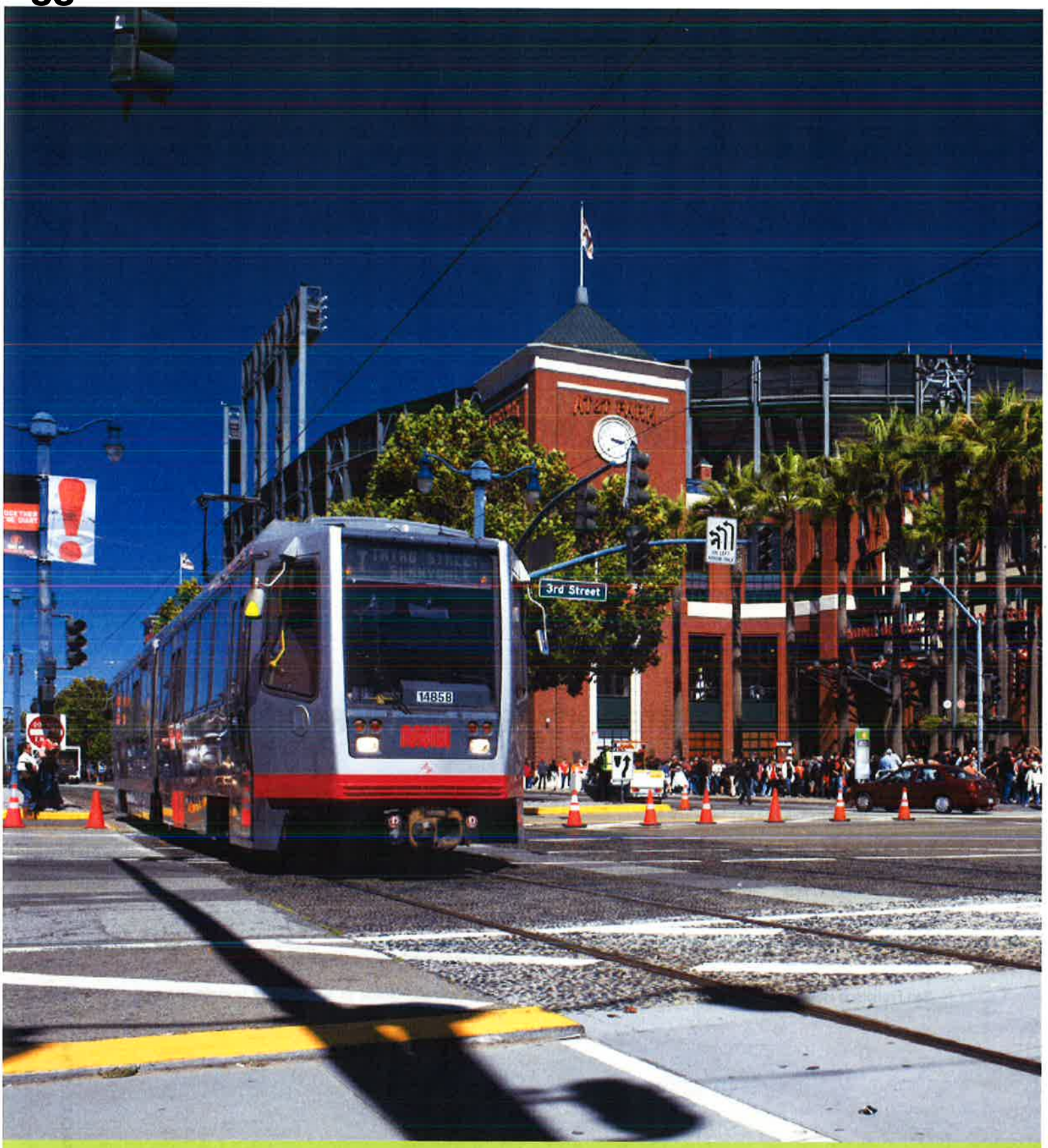
San Francisco Planning Department

San Francisco Mayor's Office

San Francisco Capital Planning

San Francisco Mayor's Office on Disability

San Francisco Office of Community Investment and Infrastructure



SFMTA MISSION

We work together to plan, build, operate, regulate and maintain the transportation network, with our partners, to connect communities.

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SFMTA Rail Capacity Strategy

March 15, 2016

SFCTA Plans and Programs Committee

Presentation Overview

- Rail Capacity Strategy
  - Purpose & Need
  - Scope
- Methodology
- System-wide Investments
- Near-Term Investments
- Workshops & Outreach
- Medium/Long-Term Investments
- Next Steps & Discussion

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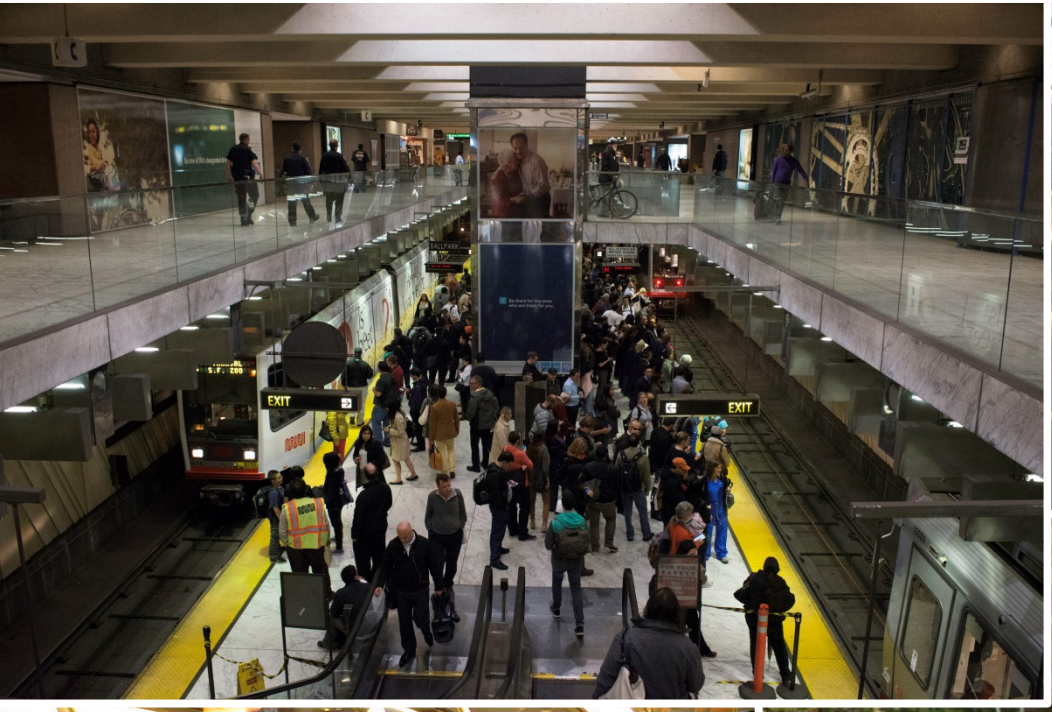
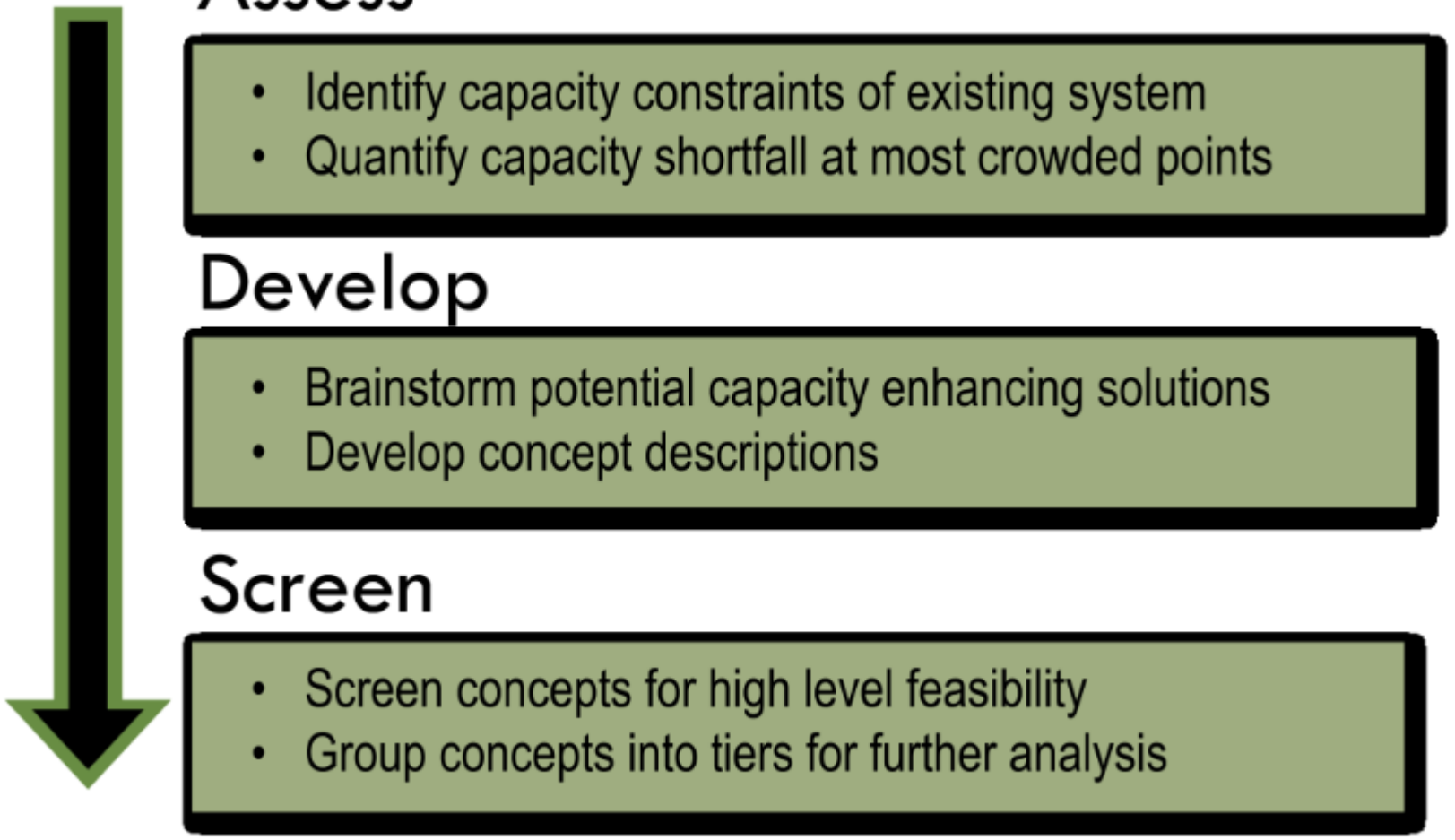


Rail Capacity Strategy Deliverables

- Prioritized over next two CIP cycles (0-10 year)
  - Specific projects (scope, schedule, budget) that leverage SOGR opportunities and can be added to CIP
- Prioritized Mid & Long Term (10-20+ year) Capacity Improvement and Expansion Corridor Concepts
  - Order of Magnitude/Unit Cost Based Cost Estimates

Methodology



System-wide Investments

Vetag switches/crossovers

Terminal/Tail track

Station/Platform Enhancement

Switches/crossovers

Transit "Red Carpet"/ Raised Trackway

Transit Signal Priority

Near-term Investments

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Church & Duboce Portal Conflict Reduction: • Analyze vehicle or turn prohibition and improved pedestrian and bicycle circulation	• Improved Reliability • Improved Travel Time	2–5 Years	$0.5m (Planning only)

Systemwide & Near-term Investments

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- Muni Metro Extension Transit Signal Enhancements/Embarcadero Tramways
- Church and Duboce Portal Conflict Reduction

$20M

MUNI FORWARD

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$115M

Total Need: $835M

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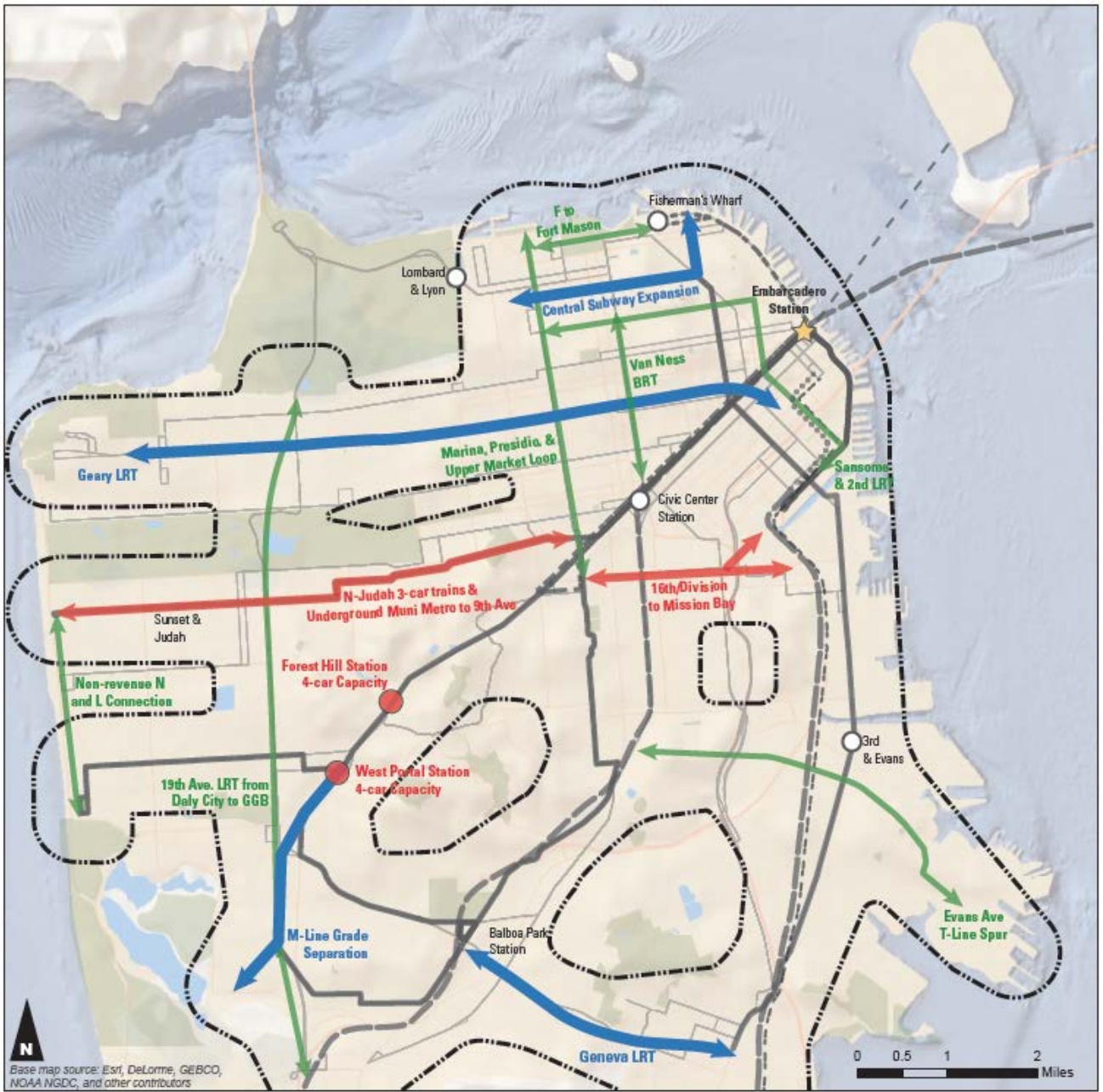
FY 2022-2026

FY 2017-2021

Workshops & Online Feedback

Long-Term Investments



Tier 1

Tier 2

Tier 3

1/2 Mile Buffer

Current and Planned Transit System

- Muni Rapid Bus Network
- Historic Streetcar
- Muni Metro Network
- Planned High Speed Rail
- Treasure Island Ferry
- Regional Rail (BART/Caltrain)
- Planned Regional Rail

Long-Term Implementation Roadmap

Planning Activity → Funding Activity

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
SF Sales Tax Authority, Proposition K

US DEPT OF TRANSPORTATION
Moving Ahead for Progress in the 21st Century (Map-21)

STATE OF CALIFORNIA
Proposition 1B and State Transportation Improvement Program

IMPLEMENTATION
Planning, Design, & Construction

RAIL CAPACITY STRATEGY

Tier 1
- M-Line 19th Ave. Grade Separation
- Geneva LRT
- Geary LRT
- Central Subway Extension to Fisherman's Wharf

Tier 2
- See Section 3.3 for Full List of Projects

Tier 2
- See Section 3.3 A for Full List of Projects

SF TRANSPORTATION PLAN
Multi-modal long range investment plan for San Francisco

CORE CAPACITY
Infrastructure and policy recommendations to meet Transbay and downtown San Francisco transit demand

PLAN BAY AREA
Integrated Land Use, Housing, and Transportation Strategy for the Bay Area through 2040.

SAN FRANCISCO LONG RANGE TRANSPORTATION PLANNING PROGRAM
Multi-agency effort to establish a transportation vision for City

SFMTA 20-YEAR CAPITAL PLAN
Identifies Unconstrained Needs for Capital Projects & Programs

SFMTA 5-YEAR CAPITAL IMPROVEMENT PROGRAM
Identifies A Fiscally Constrained Five-Year Program of Projects

CITY AND COUNTY OF SAN FRANCISCO
General Fund, Developer Fees and Bonds

Questions

Grahm Satterwhite
Principal Transportation Planner
Grahm.Satterwhite@sfmta.com