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

CITIZENS ADVISORY COMMITTEE
Special Meeting Notice

Date: Wednesday, November 30, 2016; 6:00 p.m.

Location: Transportation Authority Hearing Room, 1455 Market Street, Floor 22

Members: Chris Waddling (Chair), Peter Sachs (Vice Chair), Myla Ablog, Becky Hogue, Brian Larkin, John Larson, Santiago Lerma, Jacqualine Sachs, Peter Tannen, Shannon Wells-Mongiovi and Bradley Wiedmaier

Page

6:00 1. Committee Meeting Call to Order

6:05 2. Chair's Report – INFORMATION

6:10 Consent Calendar

3. Approve the Minutes of the October 26, 2016 Meeting – ACTION* **5**

4. Adopt a Motion of Support to Increase the Amount of the Professional Services Contract with Parsons Brinckerhoff, Inc. by $960,000, to a Total Amount Not to Exceed $1,210,000 through December 31, 2019 for System Engineering Services for the Treasure Island Mobility Management Program, and to Authorize the Executive Director to Modify Contract Payment Terms and Non-Material Contract Terms and Conditions – ACTION* **11**

On April 1, 2014, the San Francisco Board of Supervisors approved a resolution designating the Transportation Authority as the Treasure Island Mobility Management Agency (TIMMA) to implement the Treasure Island Transportation Implementation Plan in support of the Treasure Island/Yerba Buena Island Development Project. In September 2014, through Resolution 15-06, the Transportation Authority Board authorized the award of a contract to Parsons Brinckerhoff, Inc. for system engineering services for the Treasure Island Mobility Management Program (Program). The action authorized Phase I of Program, which includes preparation of the Concept of Operations and the draft System Engineering Management Plan (SEMP), for an amount not to exceed $250,000, with the option to authorize additional phases of the work at a future date. The TIMMA budget and Work Program call for completion of Phases II and III of the scope of work in Fiscal Years 2016/17 to 2018/19. The scope of work for the first year was included in the adopted Fiscal Year 2016/17 budget. This work includes completing the final SEMP supporting TIMMA in the procurement of a contractor to install the toll system and oversight of the installation and testing of the toll equipment. The toll system is scheduled to be complete and open for operations in late 2019 concurrent with the first occupancy of new housing on Treasure Island.

5. Adopt a Motion of Support for the Approval of the 2017 State and Federal Legislative Program – ACTION* **29**

Every year the Transportation Authority Board adopts a legislative program to guide the agency's transportation advocacy efforts at the state and federal levels. The proposed State and Federal Legislative Program reflects key principles, gathered from our common positions with other local transportation sales tax authorities around the state, the Metropolitan Transportation Commission, as well as our understanding of the most pressing issues facing the region, San Francisco, and our partner agencies that

deliver transportation projects in the city. The proposed program is presented in the form of principles, not specific bills or legislative initiatives, in order to allow staff the necessary flexibility to respond to legislative proposals and specific policy concerns that may arise over the course of the legislative session in Sacramento or Washington D.C. Our 2017 Legislative Program continues many of the themes from the previous legislative sessions and emphasizes issues of stabilizing and protecting existing transportation funds, authorizing new transportation revenues, securing funding for San Francisco projects, advancing high-speed rail investment, supporting allocation of state cap and trade revenues for transportation, promoting Vision Zero safety goals, engaging in the implementation of new transportation technologies, aspiring to meet environmental and greenhouse gas reduction goals and supporting increased revenues and redevelopment-like tools to help accelerate the production of affordable housing.

6. Approve the 2017 Meeting Schedule for the Citizens Advisory Committee – Action* **39**

Per Article IV, Section I of the CAC's By-Laws, the regular meetings of the CAC are held on the fourth Wednesday of the month at 6:00 p.m. at the Transportation Authority's offices. Special meetings are held as needed (e.g. due to holidays or other time constraints). The 2017 Transportation Authority meeting schedule is attached, with proposed CAC meeting dates for approval and Board and Committee meeting dates included for reference.

7. Citizen Advisory Committee Appointment – INFORMATION

The Plans and Programs Committee will consider recommending appointment of one member to the Citizens Advisory Committee (CAC) at its December 6 meeting. The vacancy is the result of the term expiration of Chris Waddling (District 10 resident), who is seeking reappointment. Neither staff nor CAC members make recommendations regarding CAC appointments. CAC applications can be submitted through the Transportation Authority's website at www.sfcta.org/cac.

End of Consent Calendar

6:20 8. Nominations for 2017 Citizens Advisory Committee Chair and Vice Chair– INFORMATION

At the November 30 CAC meeting, nominations will be made for the CAC Chairperson and Vice-Chairperson for 2017. Per the CAC's By-Laws, nominations for the Chairperson and Vice-Chairperson shall be made at the last CAC meeting of the calendar year (e.g. November 30, 2016) in order to be eligible for election at the first CAC meeting of the following year (e.g. January 25, 2017). A nomination must be accepted by the candidate. Self-nominations are allowed. Candidates are required to submit statements of qualifications and objectives to the Clerk of the Transportation Authority one week prior to the January CAC meeting to be included in the meeting packet. The due date this year is January 18, 2017. The Chairperson and Vice-Chairperson shall be elected by a majority of the appointed members at the January CAC meeting. The term of office shall be for one year. There are no term limits.

6:30 9. Commuter Shuttle Hub Study – INFORMATION* **41**

In November 2015, the San Francisco Municipal Transportation Agency (SFMTA) Board passed legislation creating the current Commuter Shuttle Program, incorporating recommendations developed after completion of the 18-month Pilot Program. In February 2016, the Board of Supervisors introduced a resolution urging, among other things, that the SFMTA explore, in collaboration with the Transportation Authority, an alternative reduced-stop, hub-based regulatory approach to the program. In response, the SFMTA Board passed Resolution No. 16-028 committing to complete the study. The Transportation Authority and the SFMTA have finished analysis and will share findings from the joint-agency Commuter Shuttle Hub Study, as well as from SFMTA's mid-year review of the current program. The presentations are included as attachments, while both reports are available on the SFMTA website at the following links:

Commuter Shuttle Hub Study:

www.sfmta.com/sites/default/files/projects/2016/Commuter_Shuttle_Hub_Report_Final.pdf

Commuter Shuttle Program Mid-Term Status Report:

www.sfmta.com/sites/default/files/projects/2016/Commuter%20Shuttle%20Program%20Mid%20Term%20Status%20Report.pdf

6:55 10. Adopt a Motion of Support for the Allocation of $6,507,592 in Prop K Funds, with Conditions, for Five Requests, Subject to the Attached Fiscal Year Cash Flow Distribution Schedules – ACTION* **71**

As summarized in Attachments 1 and 2, we have five requests from the San Francisco Municipal Transportation Agency (SFMTA) totaling $6,507,592 in Prop K funds to present to the Citizens Advisory Committee. The SFMTA has requested $4.3 million to complete the planning and environmental phases for the Geneva-Harney Bus Rapid Transit project, which was a development commitment for the Candlestick/Hunters Point Shipyard development. The SFMTA has also requested $540,000 to study the feasibility of extending the T-Third light rail line from Chinatown to North Beach and the Fisherman's Wharf area; $718,215 to replace 27 paratransit vans that have reached the end of their useful lives; and $634,600 to replace power and communications wiring in the Muni Metro subway at Van Ness Station. Finally, the SFMTA has requested $276,603 in Neighborhood Transportation Improvement Program capital funds for the first phase of street improvements recommended in the Transportation Authority's Alemany Interchange Improvement Study.

7:20 11. Findings of Child Transportation Survey Report – INFORMATION* **81**

Initiated at the request of Commissioner Tang, the Child Transportation Study research effort was led by the Transportation Authority, the Mayor's Office and the San Francisco Municipal Transportation Agency (SFMTA). The goal of the effort was to provide more in-depth and comprehensive information on school transportation issues in San Francisco and to identify potential solutions to help mitigate school commute difficulties. The issues and potential solutions were informed by an inventory and review of existing data sources, focus groups, and an in-depth survey of over 1,700 parents of Kindergarten through 5th grade children on their school commutes and preferences. This research revealed that the automobile is the dominant school commute mode, with bicycling and walking comprising less than 10% of all commutes. School commutes can be surprisingly long and complicated because they are often coordinated with other activities such as parents' or caregivers' work commutes and aftercare needs. The high share of auto usage results in congestion impacts focused around school sites at specific times of day, although the overall contribution to citywide congestion is marginal. Most critically, there was a relatively high level of dissatisfaction with school commutes, with over 60% of parents either actively seeking or being open to school commute alternatives. The study report concludes with a set of recommendations that include scoping a pilot program to offer shuttle services in a select geographic area, identification of a preferred mobile application to support carpooling to school, investment in programs that encourage bicycling and walking to school, and improving and expanding transit options to improve competitiveness with driving and reduce barriers to transit. The Study was funded by the Transportation Authority's Prop K transportation sales tax funds and the SFMTA.

7:45 12 Introduction of New Business – INFORMATION

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

7:50 13. Public Comment

8:00 14. Adjournment

* Additional materials

Next Meeting: January 25, 2017

CAC MEMBERS WHO ARE UNABLE TO ATTEND SHOULD CONTACT THE CLERK AT (415) 522-4817

The Hearing Room at the Transportation Authority is wheelchair accessible. To request sign language interpreters, readers, large print agendas or other accommodations, please contact the Clerk of the Authority at (415) 522-4800. Requests made at least 48 hours in advance of the meeting will help to ensure availability.

The nearest accessible BART station is Civic Center (Market/Grove/Hyde Streets). Accessible MUNI Metro lines are the F, J, K, L, M, N, T (exit at Civic Center or Van Ness Stations). MUNI bus lines also serving the area are the 6, 7, 9, 9R, 14, 14R, 21, 47, 49, and 90. For more information about MUNI accessible services, call (415) 701-4485.

There is accessible parking in the vicinity of City Hall at Civic Center Plaza and adjacent to Davies Hall and the War Memorial Complex. Accessible curbside parking is available on 11th Street.

In order to accommodate persons with severe allergies, environmental illnesses, multiple chemical sensitivity or related disabilities, attendees at all public meetings are reminded that other attendees may be sensitive to various chemical based products. Please help the Transportation Authority accommodate these individuals.

If any materials related to an item on this agenda have been distributed to the Citizens Advisory Committee after distribution of the meeting packet, those materials are available for public inspection at the Transportation Authority at 1455 Market Street, Floor 22, San Francisco, CA 94103, during normal office hours.

Individuals and entities that influence or attempt to influence local legislative or administrative action may be required by the San Francisco Lobbyist Ordinance [SF Campaign & Governmental Conduct Code Sec. 2.100] to register and report lobbying activity. For more information about the Lobbyist Ordinance, please contact the San Francisco Ethics Commission at 25 Van Ness Avenue, Suite 220, San Francisco, CA 94102; telephone (415) 252-3100; fax (415) 252-3112; website www.sfethics.org.

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DRAFT MINUTES

CITIZENS ADVISORY COMMITTEE

Wednesday, October 26, 2016 Meeting

1. Committee Meeting Call to Order

Chair Waddling called the meeting to order at 6:04 p.m.

CAC members present were Myla Ablog, John Larson, Santiago Lerma, Jacqualine Sachs, Peter Tannen, Chris Waddling, Shannon Wells-Mongiovi and Bradley Wiedmaier.

Transportation Authority staff members present were Andrew Heidel, Jeff Hobson, Seon Joo Kim, Anna LaForte, Maria Lombardo, Mike Pickford, Michael Schwartz and Steve Stamos.

2. Chair's Report – INFORMATION

Chair Waddling reported that at the special September CAC meeting, Myla Ablog had requested an update on the results of the California Road Charge Pilot Program but that the results would not be available until spring 2017. He said that in response to Peter Tannen's request at the May CAC meeting for a presentation on Muni bus and train bunching and potential solutions, San Francisco Municipal Transportation Agency staff would give a presentation at the November 30 CAC meeting, in addition to anticipated presentations by others on the draft The Other 9-to-5 Study, Central Subway, the Geary Bus Rapid Transit Environment Impact Report, and the Commuter Shuttle Hub Study.

Chair Waddling stated that the CAC would also hold its annual nominations for Chair and Vice Chair for the 2017 calendar year at the November 30 CAC meeting. Lastly, he noted that staff was still in the process of organizing a tour of the Transbay Transit Center likely in early December and would reach out to CAC members regarding their availability.

There was no public comment.

Consent Calendar

3. Approve the Minutes of the September 28, 2016 Meeting – ACTION

4. Adopt a Motion of Support for Acceptance of the Audit Report for the Fiscal Year Ended June 30, 2016 – ACTION

5. Internal Accounting and Investment Report for the Three Months Ending September 30, 2016 – INFORMATION

6. State and Federal Legislative Update – INFORMATION

7. San Francisco Input on the Plan Bay Area 2040 Draft Preferred Scenario – INFORMATION

8. Progress Report for the Van Ness Avenue Buss Rapid Transit Project – INFORMATION

During public comment, Edward Mason asked regarding Item 7 how different perspectives held

by other jurisdictions would impact San Francisco's position as expressed in the joint letter to the Metropolitan Transportation Commission currently being developed in collaboration with Oakland and San Jose. He continued by noting that it was difficult to get a clear understanding of some of the issues given the way the materials were presented.

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

The Consent Calendar was approved by the following vote:

Ayes: CAC Members Ablog, Larson, Lerma, J. Sachs, Tannen, Waddling and Wells-Mongiovi.

Absent: CAC Members Hogue, Larkin, P. Sachs and Wiedmaier

End of Consent Calendar

9. Adopt a Motion of Support for the Allocation of $3,149,000 in Prop K Funds, with Conditions, for Three Requests and Appropriation of $100,000 in Prop K Funds for One Request, Subject to the Attached Fiscal Year Cash Flow Distribution Schedules, and a Commitment to Allocate $325,000 in Prop K Funds – ACTION

Anna LaForte, Deputy Director for Policy and Programming, presented the item per staff memorandum.

Chair Waddling asked what outreach would be done when the cable cars were shutdown. Ms. LaForte responded that a preliminary communications plan was included in the allocation request. Craig Raphael, Senior Transportation Planner at the San Francisco Municipal Transportation Agency (SFMTA), said that the outreach plan included website and social media posts.

Shannon Wells-Mongiovi asked whether there would be revenue loss as a result of shutting down the cable cars and whether this was reflected in the allocation request. Ms. LaForte said that safety and reliability improvements would help preserve the system to the benefit of long-term revenue generation and that any change in revenues due to service disruption would be reflected in SFMTA's operating budget rather than the allocation request form.

John Larson said he was happy to see traffic calming at the intersection of Elk and Sussex Streets and asked what a speed cushion was. Ms. LaForte explained that, as distinct from speed humps, speed cushions had cuts in them that allowed buses and fire trucks to pass through more easily.

Jacqualine Sachs asked what the rational was for proposing traffic islands on streets carrying major bus lines, such as California Street and Euclid Avenue. Becca Homa, Transportation Planner at SFMTA, responded that traffic islands generally reduced vehicle speeds and provided pedestrian refuges for crossing. She said that on Euclid Avenue, the traffic islands were proposed in response to high vehicle speeds and supported by the community in the area. She said the proposed traffic islands were actually on the cross streets rather than on California Street and would not interfere with transit.

Myla Ablog expressed her support for the Vision Zero Ramps Study Phase 2. She said that Bessie Carmichael Elementary School, which was located near freeway ramps in the South of Market area, was very supportive of improving safety in the area.

Chair Waddling asked about SFMTA's plan once the traffic calming "backlog" was complete. Ms. Homa replied that the projects in this request came from prior plans that had covered the entire area and took a long time to be implemented. She said that SFMTA had developed

neighborhood traffic calming projects in smaller groups via the application-based traffic calming system and also pursued speed reduction in school zones and arterials in separate tracks. Chair Waddling asked about the application process. Ms. Homa replied that the application was a few pages and involved gathering signatures from neighboring residents, and that SFMTA analyzed and ranked the submitted applications based on multiple criteria, such as collision history and land use. She said that compared to 25-30 applications in previous years, SFMTA had received 85 applications this year, indicating a growing desire for traffic calming.

Santiago Lerma asked about the difference between a traffic island and traffic circle. Ms. Homa replied that a traffic island was smaller and often used in lieu of stop signs and could offer pedestrian refuge, where as a traffic circle was more elaborate and often included landscaping.

During public comment, Edward Mason asked whether there was a maintenance plan for the cable car equipment in place to ensure the City would not face the same situation in 15 to 30 years. He wondered how much more the City may be paying due to the lack of an ongoing (preventative) maintenance program as opposed to letting assets deteriorate so much that they need full replacement.

Ms. Sachs said that she thought cable car repairs had been rushed into service in advance of the 1984 Democratic National Convention at the Moscone Center.

Mr. Lerma asked why the cable car equipment was being overhauled rather than replaced. Ms. LaForte said that it was likely because cable cars were historic and replacement equipment was not available to procure but that staff would follow up with SFMTA.

John Larson moved to approve the item, seconded by Ms. Ablog.

The item was approved by the following vote:

Ayes: CAC Members Ablog, Larson, Lerma, J. Sachs, Tannen, Waddling and Wells-Mongiovi

Absent: CAC Members Hogue, Larkin, P. Sachs and Wiedmaier

10. Update on Freeway Corridor Management Study – INFORMATION

Andrew Heidel, Senior Transportation Planner, and Liz Rutman, Senior Engineer at the Alameda County Transportation Commission, presented the item per the staff presentation.

Chair Waddling asked whether not having to perform major construction, such as building a new lane, was the reason why San Francisco could expect a more truncated timeline than Alameda County experienced. Mr. Heidel responded that this was one of a number of reasons for the proposed timeline and added that San Francisco also had the advantage of lessons learned from other counties to expedite the process. Shannon Wells-Mongiovi expressed a concern that U.S. 101 might not be wide enough to accommodate an additional lane within the existing roadway.

Ms. Wells-Mongiovi asked whether the Waze application had an impact on how people diverged from freeways to local roads. Mr. Heidel responded that the application caused perceptible impacts on neighborhoods and that while the city could not prevent the public from utilizing it, it could plan to minimize the impacts to neighborhoods. He said that fortunately, there were fewer opportunities in San Francisco for drivers to diverge to straight stretches on local streets that would form attractive alternate routes for congested freeway segments.

Ms. Wells-Mongiovi asked how the study defined peak traffic. Mr. Heidel responded that the study defined the peak by reviewing an entire 24 hours of data for Tuesdays, Wednesdays, and

Thursdays during the spring and measured when the average speed on freeway segments was under 45 mph.

Santiago Lerma asked how much time was saved on the average trip for paid and non-paid lanes, and whether there were benefits for the general purpose lanes. Ms. Rutman said that in Alameda County the average savings was on the order of a few minutes over the 12-mile stretch. She also noted that on an express lane with continuous access, large speed differentials were not desirable because of safety concerns. She noted that some places with physically separated express lanes, such as Highway 237 in Santa Clara County, yielded larger travel time savings. She added that on Highway 680, both the general purpose and express lanes resulted in time savings, but that that after seven years some of the travel time benefits had dwindled compared to pre-construction. She also noted that over time, people had tended to explore other alternatives, including forming carpools and trying new transit options.

Chair Waddling asked if tolls were assessed on a distance basis. Ms. Rutman responded that most express lanes used a distance-based zone setup for people who traveled further to pay more. She stated that exactly how to set up that pricing should depend on the access type. She added that for a continuous access system, pricing could be based on zones of travel, whereas for a closed access system, end-to-end or entrance-to-exit pricing could be applied, though the latter could also incorporate a function of distance travelled.

Chair Waddling asked how Alameda County dealt with income inequality and if there was a low-income entry point. Ms. Rutman responded that for this type of project, an environmental justice assessment was required, and that for Alameda County those assessments had found that both low-income and high-income drivers were willing to pay additional fees to use the lane. She added that low-income travelers tended to form carpools at higher rates, so it tended to even out. She stated that one place that had identified an equity issue was in Southern California. Mr. Heidel stated that there would need to be an equity analysis. He said that most people didn't use the lanes all the time, but rather as a reliable option in the event they had a time-critical destination, such as arriving on time to work or picking up a child from day care. He added that some of the facilities in other locations allowed people to earn toll credit by riding transit.

During public comment, Edward Mason asked what the overall goal of the project was and if it included reducing greenhouse gases. He asserted that this approach would not achieve significant greenhouse gas reduction and therefore other approaches should be considered, for example installing a CO2 monitor at the San Francisco-Oakland Bay Bridge entry to help people make the connection between their actions and CO2 emissions. Chair Waddling asked what types of analysis could be undertaken to determine the greenhouse gas reduction. Mr. Heidel replied that a major factor in reducing greenhouse gas emissions was to move more people in fewer vehicles. He noted that the travel demand model would help inform those impacts at this stage of the project, while a full air quality analysis would be completed as part of the environmental review process.

Mr. Mason asked whether the commuter shuttles would be allowed to use these lanes for free, and whether the city would be undertaking a study to develop a regional public bus system that could use these facilities. Chair Waddling asked whether Samtrans was conducting a study on express buses. Mr. Heidel replied that there was a strong interest in developing an express bus system, and that these lanes would provide a platform to give those express buses a time advantage to make them more competitive.

11. Update on the Subway Master Plan – INFORMATION

Michael Schwartz, Principal Transportation Planner, and Grahm Satterwhite, Principal

Transportation Planner at the SFMTA, presented the item.

Chair Waddling asked, in the event of additional subways being built, if BART would be the main subway operator rather than the SFMTA. Mr. Satterwhite responded that governance would be one of the questions to be figured out in the next phase of ConnectSF, the inter-agency long range transportation planning program. He noted that governance was not being considered for the Subway Vision but would need to be part of future decisions. Mr. Schwartz added that one of the issues this study did not try to address was transbay service, and that overall the study was meant to be operator neutral in its analysis.

Chair Waddling asked whether the subway approach would consider underground buses as well as underground rail. Mr. Satterwhite responded that the precise technology question was beyond the scope of the Subway Vision. Mr. Schwartz noted that creative thinking of that nature was needed for visioning exercises that the city was currently undertaking.

John Larson asked whether the two concepts presented, i.e. Concepts A and B, were just for illustrative purposes, or if they were actually screened alternatives. Mr. Schwartz responded that the two networks presented were entirely for illustrative purposes and were not intended to be sample concepts of what a new subway system might look like. He added that the public should not get attached to a full network concept and that the study was primarily seeking feedback on aspects of each network.

Mr. Larson commented that Concept A appeared to place a lot of existing surface rail underground, while Concept B appeared to connect existing subways with new lines, and that Concept B seemed more attractive for that reason. Mr. Larson asked whether tunneling was still one of the most significant challenges of construction, or whether tunneling could be done faster than in the past and therefore other parts of construction would be more challenging. Mr. Satterwhite responded that all phases of subway construction would be difficult and challenging. He said there had been improvements in tunneling, but that construction approaches were not dramatically different than what had been the approach of the recent past.

Jacqualine Sachs recounted her history in being involved in decisions about Geary Boulevard, and noted that Commissioners London Breed and Eric Mar had supported to filling in the underpasses at Fillmore and Masonic Streets. She said she recently went on a site trip which highlighted three alternatives, which included an all surface line, an all subway, or a mix involving a subway line from Market to Laguna Streets and a surface line from Laguna Street all the way to Ocean Beach. She said due to politics at City Hall, the mixed subway and surface line did not get built. Ms. Sachs said that the Muni Short Range Transit Plan concluded that the only way to relieve congestion on Geary Boulevard would be through light-rail service. She recounted the history of the B-line along Geary Boulevard that existed from 1912 to 1956, until the corridor was replaced with bus service. She asked staff to look at the final reports to see that the public wanted lightrail and not bus rapid transit. She noted that Geary light-rail was the only project from the 1989 Prop B transportation sales tax that wasn't included in the 2003 Prop K sales tax. Mr. Schwartz responded that many members of the public were interested in the Geary corridor and encouraged people to participate in the ConnectSF process to ensure their input was documented. Shannon Wells-Mongiovi noted that she located a copy of the final report online that Ms. Sachs referenced and would forward it for distribution to CAC members and staff.

Bradley Wiedmaier asked whether the study looked how to connect other parts of the city independent of existing infrastructure versus following existing routes. Mr. Schwartz responded that the study used the three points of input, including previous studies, public input, and model analysis, to think outside the box of the existing system. He said that for example the

Fillmore/Divisadero to Bayview line performed well in part because it did not have existing service. Mr. Schwartz added that the goal of new subways would also be to provide travel time savings to existing riders in addition to new riders.

Mr. Wiedmaier asked whether the boring equipment from the Central Subway was owned by the SFMTA and whether it could be used widely throughout the city or had been calibrated to the specific soils as part of the Central Subway construction. Mr. Schwartz responded that the SFMTA did not own the tunnel boring machines as part of Central Subway construction and that new ones would need to be obtained to construct new subways.

Ms. Wells-Mongiovi asked whether the study considered trips to recreation centers like the Presidio. Mr. Schwartz said that the model represented destination centers like the Presidio but that it simulated a standard weekday as opposed to weekends where a destination like the Presidio would have a different trip making pattern.

Mr. Larson noted that the only areas that seemed to have higher travel times under Concept B were at San Francisco State University and Park Merced. He said that given the greatest concentration of the middle-income population and seniors, he thought that the study should look at it due to the high reliance on transit. Mr. Schwartz responded by explaining that with subways, people would make tradeoffs in that some people would end up needing to walk farther to get to a faster service when taking the subway versus surface transit.

Mr. Wiedmaier asked whether the study looked at any projected new concentrations of housing. Mr. Schwartz responded that all of the Subway Vision analysis assumed 2040 land use projections. He added that if the study were to move forward with subways, it would take a more careful look at where land use could change in response to higher-levels of transit service.

Santiago Lerma commented that he appreciated the pop-up outreach effort. He said the study did not conduct enough of them, but that he thought they were great and asked that his comments be shared with SFMTA staff.

During public comment, Edward Mason said transportation was really a real estate development project. He said that the city was nearly at one million people and asked if the Subway Vision would increase the population to two million, and said that the study should look at elevated transit in addition to subways. He added that a proposal to put a tunnel under 19th Avenue had previously been considered but that California Assemblyman Tom Ammiano actively worked to make sure the concept was not further developed.

12. Introduction of New Items – INFORMATION

Bradley Wiedmaier asked for information on the impact of the ride sourcing industry and whether 30-Stockton and 45-Union/Stockton Muni stops near the 4th and King Caltrain station had been relocated possibly to give more space to ride sourcing vehicles. Santiago Lerma added that he was also interested in the impact of the increased delivery made by ride sourcing vehicles.

There was no public comment.

13. Public Comment

During public comment, Edward Mason commented that shuttles operated by various companies, including San Francisco Airporter and Genetech, continued to violate their agreement with SFMTA to use designated locations.

14. Adjournment

The meeting was adjourned at 8:15 p.m.

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Memorandum

Date: 11.22.16

RE: Citizens Advisory Committee
November 30, 2016

To: Citizens Advisory Committee

From: Eric Cordoba – Deputy Director for Capital Projects

Subject: **ACTION** – Adopt a Motion of Support to Increase the Amount of the Professional Services Contract with Parsons Brinckerhoff, Inc. by $960,000, to a Total Amount Not to Exceed $1,210,000 through December 31, 2019 for System Engineering Services for the Treasure Island Mobility Management Program, and to Authorize the Executive Director to Modify Contract Payment Terms and Non-Material Contract Terms and Conditions

Summary

On April 1, 2014, the San Francisco Board of Supervisors approved a resolution designating the Transportation Authority as the Treasure Island Mobility Management Agency (TIMMA) to implement the Treasure Island Transportation Implementation Plan in support of the Treasure Island/Yerba Buena Island Development Project. In September 2014, through Resolution 15-06, the Transportation Authority Board authorized the award of a contract to Parsons Brinckerhoff, Inc. for system engineering services for the Treasure Island Mobility Management Program (Program). The action authorized Phase I of Program, which includes preparation of the Concept of Operations and the draft System Engineering Management Plan (SEMP), for an amount not to exceed $250,000, with the option to authorize additional phases of the work at a future date. The TIMMA budget and Work Program call for completion of Phases II and III of the scope of work in Fiscal Years 2016/17 to 2018/19. The scope of work for the first year was included in the adopted Fiscal Year 2016/17 budget. This work includes completing the final SEMP supporting TIMMA in the procurement of a contractor to install the toll system and oversight of the installation and testing of the toll equipment. The toll system is scheduled to be complete and open for operations in late 2019 concurrent with the first occupancy of new housing on Treasure Island.

BACKGROUND

The San Francisco Board of Supervisors designated the Transportation Authority Board as the Treasure Island Mobility Management Agency (TIMMA) Board through Resolution 110-14 in April 2014. Assembly Bill 141, signed in September 2014, established TIMMA as a legal entity distinct from the Transportation Authority. The purpose of TIMMA is to implement a comprehensive and integrated program to manage travel demand on the island as the Treasure Island/Yerba Buena Island Development Project (Project) develops. The centerpiece of this innovative approach to mobility is an integrated and multimodal congestion pricing demonstration program, the Treasure Island Mobility Management (TIMM) Program, that applies motorist user fees to support enhanced bus, ferry, and shuttle transit, as well as bicycling options, to reduce the traffic impacts of the Project.

The Treasure Island Development Authority (TIDA) and the Transportation Authority have signed annual operating Memorandum of Agreements (MOAs) since Fiscal Year (FY) 2011/12 to establish the budget and scope of work for TIMMA activities. Through the current period, the Transportation

Authority has advanced the scope of work encompassed by these MOAs, including securing supplemental funding through grant awards from the Federal Highway Administration and the Metropolitan Transportation Commission for planning, policy analysis, and engineering. In July 2016, through Resolution 17-01, the TIMMA Board adopted preliminary policy recommendations for the TIMM Program that will guide the work program and development of final program elements that will need to be completed prior to the scheduled launch of the program in late 2019. The FY 2016/17–2018/19 TIMMA Work Program includes, among other activities, completion of the Program's final policy recommendations and business rules and the final design, construction and testing of the congestion pricing toll system.

To meet the objectives of the TIMMA Work Program, in spring 2014 we held a targeted industry outreach and issued of a Request for Proposals (RFP) for the Treasure Island Mobility Management Program System Engineering Manager. In September 2014, through Resolution 15-06, the Transportation Authority Board awarded the System Engineering Manager contract to Parsons Brinkerhoff, Inc. and authorized execution of a contract for a not to exceed amount of $250,000 for the initial Phase of the project. The Board action provided the option to authorize additional phases of the work at a future date. The TIMMA Work Program identifies activities for Phases II & III and recommends a contract amendment for an amount not to exceed $960,000. Authorization for Phase IV of the work will be at the Transportation Authority's sole and absolute discretion and will be by amendment to the consultant contract.

DISCUSSION

The Transportation Authority, as TIMMA, is implementing a congestion pricing toll system on Treasure Island. The project will be implemented primarily through two contracts, a System Engineering contract and a System Integrator contract. The scope of work for the System Engineering contract includes initial planning for the toll system, development of system requirements, development of procurement documents for the System Integrator and oversight of the System Integrator work. The System Engineering contract with Parsons Brinkerhoff Inc. was to complete the initial planning and project development work for the toll system. The contract award allowed for a future amendment of the contract for completion of additional phases of the toll system including development of procurement documents for the toll System Integrator and oversight of the toll system installation. The scope of work for the System Integrator includes the final system design, installation, testing and maintenance of the toll system. The System Integrator contract is anticipated to be procured in summer 2017.

Scope of Services: The scope of services for the System Engineering Manager consultant is provided as Attachment 1. The scope is divided into several phases, which allows us to initiate each phase of consultant work through a Notice to Proceed, depending on the overall development schedule and identifying funding for future phases. Phase I of the project was initiated in November 2014 and is nearing completion. The TIMMA Work Program anticipates a Notice to Proceed for Phase II in early 2017. This work includes development of final civil and system design requirements and procurement of the toll system integrator. Phase III, oversight of the toll system integrator is scheduled to begin in fall 2017. If the Transportation Authority determines in its sole and absolute discretion that the selected consultant has performed Phases II and III satisfactorily and funding is available, Phase IV will immediately follow Phase III as a continuation of the TIMM Program System Engineering Project. If not, the Transportation Authority reserves the right to re-procure and to select a different consultant for Phase IV. Phase IV includes oversight of the first year of toll operations. Authorization for Phase IV will be at the Transportation Authority's sole and absolute discretion and will be by amendment to the consultant

contract.

Budget: The anticipated cost for Phase II and Phase III of the proposed Scope of Services is $960,000. Funding for this work will be from a combination of federal grant funds and funding from TIDA.

Disadvantaged Business Enterprise (DBE) Participation: Since a portion of this contract is anticipated to be funded with federal financial assistance from the Federal Highway Administration, administered by Caltrans, the Transportation Authority will adhere to federal regulations pertaining to DBEs. For this contract we have established a DBE goal of 12%. Parsons Brinckerhoff, Inc. anticipates to achieve 12% DBE participation for Phase I of the contract through Hispanic-owned sub-consultant firm, Cambria Solutions, Inc. For the scope of work proposed in Phases II and III, Parsons Brinckerhoff, Inc. proposes to meet the contract goal of 12% through Cambria Solutions, Inc.

ALTERNATIVES

1. Adopt a motion of support to increase the amount of the professional services contract with Parsons Brinckerhoff, Inc. by $960,000, to a total amount not to exceed $1,210,000 through December 31, 2019 for system engineering services for the Treasure Island Mobility Management Program, and to authorize the Executive Director to modify contract payment terms and non-material contract terms and conditions, as requested.
2. Adopted a motion of support to increase the amount of the professional services contract with Parsons Brinckerhoff, Inc. by $960,000, to a total amount not to exceed $1,210,000 through December 31, 2019 for system engineering services for the Treasure Island Mobility Management Program, and to authorize the Executive Director to modify contract payment terms and non-material contract terms and conditions, with modifications.
3. Defer action, pending additional information or further staff analysis.

FINANCIAL IMPACTS

The anticipated cost for Phase II and Phase III of the proposed Scope of Services is $960,000, of which $430,000 is included in the adopted FY 2016/17 budget for TIMMA-related work, which will be reimbursed by TIDA. The San Francisco Municipal Transportation Agency has received preliminary notice of $11 million in federal grant award for connected dynamic tolling for the Bay Bridge, of which approximately $5 million is anticipated to be passed to the Transportation Authority for the Treasure Island toll system. Formal notice of this award is anticipated in early 2017 at which time the FY 2016/17 budget for the overall TIMMA work program will be amended. Sufficient funds will be included in future budgets to cover the remaining cost of the contract.

RECOMMENDATION

Adopt a motion of support to increase the amount of the professional services contract with Parsons Brinckerhoff, Inc. by $960,000, to a total amount not to exceed $1,210,000 through December 31, 2019 for system engineering services for the Treasure Island Mobility Management Program, and to authorize the Executive Director to modify contract payment terms and non-material contract terms and conditions.

Attachment:

1. Treasure Island Mobility Management Program System Engineering Scope of Services

Attachment 1 - Scope of Services

Treasure Island Mobility Management Program System Engineering Manager

Project/Study Purpose and Background

On April 1, 2014, the San Francisco Board of Supervisors (BOS) adopted a resolution designating the Transportation Authority as the Treasure Island Mobility Management Agency (TIMMA) to implement elements of the Treasure Island Transportation Implementation Plan (TITIP) in support of the Treasure Island/Yerba Buena Island (TI/YBI) Development Project. The 2008 California State Assembly Bill No. 981 (AB 981), the Treasure Island Transportation Management Act, authorized the San Francisco BOS to designate a board or agency to act as the transportation/mobility management agency for Treasure Island. The Transportation Authority and Treasure Island Development Authority (TIDA) execute an annual operating agreement which defines the budget and work program for the fiscal year to support pre-implementation of the TITIP. The TITIP calls for, and TIMMA will be responsible for implementing, the Treasure Island Mobility Management Program: a comprehensive and integrated program to manage travel demand on Treasure Island as the development project occurs, including an integrated congestion pricing program with vehicle tolling, parking pricing, and transit pass components.

In June 2011, the Planning Commission and TIDA jointly certified the Final Environmental Impact Report for the TI/YBI Development Project, and in addition the BOS approved a Disposition and Development Agreement (DDA) between TIDA and Treasure Island Community Development, LLC (TICD) and approved the TITIP. In October 2011, through Resolution 12-16, the Transportation Authority Board and TIDA Board recommended that the BOS designate the Transportation Authority as the TIMMA and authorized a partnership Memorandum of Agreement (MOA) between the Transportation Authority and TIDA. TIDA and the Transportation Authority have signed annual operating MOAs since Fiscal Year 2011/12 to establish the budget and scope of work for TIMMA activities.

Project Organization

The various entities involved in the implementation of the TITIP and their respective roles and responsibilities are described below:

Role of the TIMMA: AB 981 provides the TIMMA with the exclusive powers necessary to implement the Transportation Program in furtherance of the goals described below:

1. Develop a comprehensive set of Transportation Demand Management (TDM) programs to encourage and facilitate transit use and to minimize the environmental and other impacts of private motor vehicles traveling to, from, and on Treasure Island.
2. Manage Treasure Island-related transportation in a sustainable manner, to the extent feasible, with the goal of reducing vehicle miles traveled and minimizing carbon emissions and impacts on air and water quality.
3. Create a flexible institutional structure that can set parking and congestion pricing rates, monitor the performance of the transportation program, collect revenues, and direct generated revenues to transportation services and programs serving Treasure Island.

4. Promote multimodal access to, from, and on Treasure Island for a wide range of local, regional, and statewide visitors by providing a reliable source of funding for transportation services and programs serving Treasure Island that will include bus transit service provided by the San Francisco Municipal Transportation Agency (SFMTA) and Alameda and Contra Costa Transit Agency (AC Transit) as well as ferry service and a local shuttle.

Key components of these goals are the ability to establish a congestion pricing and mobility enhancement program which includes:

1. Recommending to the BOS an initial fee structure for the imposition of congestion pricing fees and modifying the fee structure as necessary thereafter;
2. Administering and collecting congestion pricing fees on Treasure Island;
3. Adopting a transit voucher fee structure applicable to residents and other users of Treasure Island and administer and collect all Treasure Island transit voucher fees;
4. Expending revenues for implementation, operation, collection and enforcement, maintenance, construction, and administration activities;
5. Entering into operating contracts with AC Transit, Water Emergency Transportation Authority (WETA), and an on-Island shuttle provider for transit services for the area;
6. Applying for, accepting and administering state, federal, local agency, or other public or private funds for transportation purposes;
7. Undertaking studies, performance evaluations, and monitoring activities; and
8. Adopting and administering the transportation program, implementing rules and regulations, collecting and administering generated revenues, and taking all other steps necessary to implement the transportation program.

TIMMA will continue to conduct community outreach in support of the Mobility Management Program throughout the planning, design and implementation phases.

Role of TICD: TICD will build most of the transportation infrastructure and will provide operating subsidies to carry out the transportation program in the initial phases of the Mobility Management Program when the revenues from non-residential parking and congestion pricing are not yet at levels to sustain transit service to Treasure Island. The DDA, between TIDA and TICD, requires that TICD contribute a $30,000,000 subsidy, expressed in 2010 dollars, to the Mobility Management Program. In addition, if, after Treasure Island is 50% occupied and less than 50% of off-Island trips during the peak period are made by modes other than auto, the DDA requires that TICD contribute an additional $5,000,000 in subsidy to support the Transportation Program.

Role of TIDA: TIDA will administer the TICD subsidy, as described above, for Transportation Program activities during the occupancy period, as well as enter into contracts, either with the Transportation Authority prior to the formation of the TIMMA or with the TIMMA after its formation, to carry out pre-occupancy Transportation Program activities. TIDA will also oversee the design review, approval, and construction of transportation infrastructure, and will coordinate with the TIMMA on these plans.

Role of SFMTA: SFMTA will be responsible for activities reserved to it in Article 8A of the Charter and unaffected by AB 981, as well as activities which may be assigned to the TIMMA under AB 981 but which the parties agree are appropriate to continue being performed by SFMTA, including:

- Authority to set parking rates for on-street and off-street parking and to set parking fines and penalties.
- Authority to provide SFMTA bus service on Treasure Island and establish, collect, and enforce SFMTA transit fares.
- Authority to regulate taxi service.
- Authority to adopt regulations that control the flow and direction of motor vehicle, bicycle and pedestrian traffic, including regulations that limit the use of certain streets or traffic lanes to categories of vehicles and that limit the speed of traffic.
- Authority to design, select, locate, install, operate, maintain and remove all official traffic control devices, signs, roadway features and pavement markings that control the flow of traffic with respect to streets and highways within City jurisdiction.
- Authority to adopt regulations limiting parking, stopping, standing or loading as provided by state law, and to establish parking privileges and locations subject to such privileges for categories of people or vehicles as provided by state law.
- Authority to establish policies regarding and procure goods and services for the enforcement of regulations limiting parking, stopping, standing or loading, and the collection of parking-related revenues and, along with the Police Department, have the authority to enforce parking, stopping, standing or loading regulations.

Scope of Services

The Transportation Authority, as the TIMMA, will provide oversight of the System Engineering Manager's work. The System Engineering Manager will be responsible for conducting all the work activities listed below including providing expertise to assist TIMMA and project partners TIDA and TICD in advancing the toll technology congestion pricing element of the TITIP. Specific tasks related to the toll technology elements include refining the definition of the system, developing the operating parameters of the system and providing support toward the development of the contract / bid documents necessary to procure a system integrator. Technical input will be provided through a project Technical Advisory Committee (TAC). Partner Agencies that will be invited to participate on the TAC include the Bay Area Toll Authority (BATA), WETA, AC Transit, SFMTA and Caltrans. TAC meetings will be led by Transportation Authority staff. It is anticipated that the System Engineering Manager will present updates on deliverables at TAC meetings.

The services under this contract will build on significant community outreach, stakeholder involvement, and current and previous planning efforts.

The budget for this effort is for an amount not to exceed $1,210,000 for Phases I, II and III. Please note that this is a ceiling and not a target.

Scope of Work: Tasks will proceed in phases pending the authorization of annual TIMMA budgets. Since funding for all tasks has not been identified at this time, the scope of work will be delivered in multiple phases as funding becomes available and key decisions are confirmed by stakeholders. It is also important to note that other design and construction projects are actively being implemented on Yerba Buena and Treasure Islands which may impact the scope and schedule of Mobility Management Program implementation. Therefore, system management services for the Mobility Management Program will be delivered in the following phases:

Phases/Tasks	Budget	Schedule Start Date
Task 1*		Ongoing
Phase I: Tasks 2 and 3	$250,000	November 2014
Phase II: Tasks 4, 5 and 6	$600,000	January 2017
Phase III: Task 7	$360,000	October 2017
Phase IV: Task 8	$225,000	September 2019

*Each phase of the System Engineering Manager effort will require a new and/or updated project management plan, as needed, to ensure effective project management, budget and schedule adherence, and the delivery of quality products from this contract. Costs associated for this effort will be incorporated in each phase.

Additional Follow-on Work: If the Transportation Authority determines in its sole and absolute discretion that the selected consultant has performed Phase I satisfactorily and funding is available, Phase II will immediately follow Phase I as a continuation of the Treasure Island Mobility Management Program System Engineering Manager Project. If not, the Transportation Authority reserves the right to re-procure and to select a different contractor for Phases II, III and IV. Authorization for future phases of work will be at the Transportation Authority's sole and absolute discretion and will be by amendment to the consultant contract.

The total budget for this contract will be negotiated but not to exceed $250,000 for Phase I, $600,000 for Phase II, $360,000 for Phase III and $225,000 for Phase IV.

Specific Tasks under this contract include the following:

Task 1 – Administration and Project Management

Task 2 – Refinement of System Concept

Task 3 – Development of Concept of Operations (Con-Ops) and draft System Engineering Management Plan (SEMP) documents and support of the Transportation Authority in the development of related policy, business rules and definition of roles and responsibilities

Task 4 – Draft System Requirements, Preliminary System Design, and Finalize Systems Engineering Management Plan

Task 5 – Development of civil design requirements and coordination of final design

Task 6 – Develop the System Integrator RFP and Assist in the System Integrator Selection Process

Task 7 – System Integrator contract technical oversight

Task 8 – Provide Operations Support *(Optional Task)*

Separately from the tasks identified above, proposers may suggest changes/additions/subtractions to the task descriptions and the division of responsibility between the Transportation Authority, and the consultant team as part of their proposal, but this should be stated clearly. The Transportation Authority is interested in establishing an efficient process that utilizes both in-house and consultant

expertise. Any changes to the proposed scope and division of responsibility should result in all desired deliverables in a manner that successfully advances Mobility Management Program implementation. The specific System Engineering Manager tasks and responsibilities are detailed below.

Task 1: Administration and Project Management. The purpose of this task is to ensure a smooth workflow and timely completion of the Mobility Management Program. This task will include the following subtasks:

1.1 Project Management Plan. The purpose of this task is to develop the project management plan that will at a minimum include the following: Team organization and responsibilities; identification of contact person and schedule showing timeline for deliverables; resource and schedule management. The schedule should allow at least seven (7) working days for Transportation Authority staff to review the draft version of all deliverables. All final versions of the deliverables shall be available in electronic, editable format (native files when the software is compatible with those of the Transportation Authority's, such as Microsoft Word, PowerPoint, travel demand forecasting model, etc.)

***Deliverable**: Project Management Plan.*

1.2 Monthly Activity Reports and Invoices. The System Engineering Manager shall provide status of the work efforts in monthly activity reports and invoices submitted to the Transportation Authority. Monthly activity reports shall be prepared and attached to the invoices documenting the work effort during the billing period, tasks to be accomplished over the next thirty (30) days as well as any anticipated challenges and issues, and potential methods for resolution. If no invoice is submitted for a particular month, the contractor is still required to submit the monthly activity report.

***Deliverable**: Monthly Progress Reports and Invoices.*

1.3 Progress Meeting. The System Engineering Manager shall set-up and lead bi-weekly meetings with the Transportation Authority staff in order to ensure timely delivery of the work product and the effective coordination of all tasks.

***Deliverable**: Coordination and management of bi-weekly progress meetings and documentation of project decisions and action items in minutes.*

1.4 Project Kick-Off Meeting. The System Engineering Manager shall conduct a project kick-off meeting with Transportation Authority staff and the TIMMA team at the beginning of each phase of the project to ensure effective coordination of the work effort.

***Deliverable**: Attendance at one (1) project kick-off meeting at the initiation of each project phase and documentation of project decisions and action items in minutes.*

PHASE I

Task 2: Refinement of System Concept. The purpose of this task is to refine the definition of the tolling system, the relationship between the tolling system and the SFMTA-owned and operated parking pricing system; evaluate operating parameters for the systems that have been assumed in the preliminary planning work; and describe the level for which these systems will be integrated (both financially and technically).

This task will include the review of the planning documents developed to date including the TITIP, the Study currently underway, and the draft policy assumptions that have been developed.

Key elements of this task will be to confirm the level of integration recommended for the parking pricing system, the tolling system, and to outline the institutional and technological framework for the development, deployment, and operation of the tolling system. The current assumption for the parking system on Treasure Island is that it will be managed by SFMTA and will be modeled after the SFPark System. After a review of the existing operating parameters and system requirements for SFPark, the System Engineering Manager will assist the Transportation Authority in the development of a strategy for coordinating the tolling systems with the SFMTA's implementation of the parking pricing system on Treasure Island. The strategy will recommend a framework for assumptions about the parking system operation and coordination of the parking pricing system and the tolling system.

This task will at a minimum evaluate and perform the following:

- Evaluate the current planning level system definition for the toll system that will be implemented on Treasure Island.
- Define tolling system.
- Coordinate the parking pricing system with the tolling system.

  Deliverable: *Draft and final tolling system and recommended strategy for coordinating the tolling and pricing systems.*

Task 3: Development of Con-Ops Document and Preliminary System Development. The purpose of this task is to define the operating concepts for the toll system, documenting how the system will be designed, constructed, operated, maintained, and administered. This task will include the development of the Con-Ops document and the draft SEMP.

Systems development work on this project will build on previously approved planning and development documents as well as planning work that is currently underway. Approved program documents include the Final Environmental Impact Report, the TITIP, and the DDA. Documents to be developed as part of the current Study include the preliminary capital and operating costs, preliminary toll policy, the draft and final project description, and partnership agreements with other operating agencies. These documents will be shared with the System Engineering Manager as they become available.

3.1 Con-Ops Plan. The Con-Ops will describe the elements of the system, how it will operate and will outline the roles and responsibilities of partner agencies. Key elements of the Con-Ops will include:

- Documentation of project goals and definitions.
- A description of the project organization and management structure from the planning phase through operations (roles and responsibilities for all partners in each phase).
- Identification of key milestones and decision points for each phase of development.
- Further definition of the physical and operational characteristics of the system to support a more detailed preliminary system design.
- Proposed facility conceptual design including location of toll zones.
- Operating concept for the system.
- Roles and responsibilities of key project partners and stakeholders for each phase of the project development, deployment, and operations.

- Technical requirements of the system.
- Revised capital and operating cost estimates.
- Approach to back-office processing and customer support.
- Approach to enforcement of the tolling system.
- Documentation of final toll policy.

Deliverable: *Draft and Final Con-Ops Plan.*

3.2 Draft System Requirements and Preliminary System Design. Building on the Con-Ops document, this task will develop a more detailed definition of the system requirements. The system requirements to be defined will include the functional, performance, operational, data, administrative, maintenance, and interface requirements for the proposed system. Preliminary system design will be advanced sufficiently to define the scope of work that will be included in the System Integrator RFP. Final design will be completed by the system integrator. Preliminary design shall define approximate location of gantries and the necessary support systems including but not limited to electrical, structural, traffic and general civil engineering drawings.

Deliverable: *Draft System Requirements and Preliminary System Design Document.*

- **Draft Work and Deployment Plan.** This task will develop a work and deployment plan that includes a schedule and plan for the installation of all equipment and an assessment of project risks. The plan will include schedules that identify the anticipated timing of equipment installation, field testing, and acceptance for all equipment and software deployed at the roadside, Toll Data Center (TDC) and Transportation Management Center (TMC). The plan will identify all critical milestones and define the roles and responsibilities for oversight of the installation. The plan will also include the steps and schedule for deploying the various civil elements required to support the deployment of the system.

  Deliverable: *Draft Work and Deployment Plan.*

- **Draft Operations and Maintenance Plan.** This task will develop a conceptual operations and maintenance plan using the system requirements developed in the previous task. This plan will document the strategies to operate, administer, and maintain the system. The plan will incorporate the recommendations from the Con-Ops document to define and describe support required from Transportation Authority staff, partner agencies, interagency and private contracted services as well as financial resources that will be required to effectively operate, administer, maintain, and monitor the system. The operating and monitoring strategies will support the data collection and system evaluation requirements of the performance and evaluation plan.

  Deliverable: *Draft Operations and Maintenance Plan.*

- **Draft Enforcement Plan.** This task will develop an Enforcement Plan that evaluates both technology based automated enforcement options as well as the use of law enforcement personnel for visual enforcement of the System. The Enforcement Plan will include an evaluation of capital costs associated with the installation of any required enforcement related equipment and/or construction of enforcement zones and will also evaluate the ongoing operational costs associated with the enforcement strategy.

  Deliverable: *Draft Enforcement Plan.*

- **Draft Performance and Evaluation Plan.** The TITIP identifies project goals and principles consistent with the multi-modal and sustainable community strategies defined in the Enforcement Plan. The strategies will be monitored regularly to evaluate Mobility Management Program effectiveness based on agreed upon performance measures for the congestion pricing and travel demand strategies and to guide the management of the system to best meet the needs of residents and visitors to Treasure Island. The Performance and Evaluation Plan will identify the process and procedures for collecting and reporting the results of the monitoring activities specific to the tolling and parking elements of the program. The system should be developed to accommodate automated evaluation and monitoring capabilities to the fullest extent that is financially and operationally possible.

  Deliverable: *Draft Performance and Evaluation Plan.*

- **Stakeholder and TAC Meetings -** The Transportation Authority will seek input from key project stakeholders throughout the System Development process. This Task will include attendance at quarterly stakeholder and TAC meetings to review project status and deliverables.

  Deliverable: *Attendance at quarterly stakeholder and TAC meetings.*

Phase II

Task 4: Draft System Engineering Requirements, Preliminary System Design, and Finalize Systems Engineering Management Plan. This task will involve developing the toll system requirements, determining the overall toll system design and operations, and finalizing the System Engineering Management Plan (SEMP).

4.1 Draft System Engineering Requirements and Conceptual Design. Building on the Concept of Operations (ConOps) document, this task will develop a more detailed definition of the toll system requirements. The toll system requirements to be defined will include the functional (and testable), performance, operational, administrative, maintenance, and interface (internal and external) requirements for the proposed electronic toll system (ETS). Preliminary system design will be advanced sufficiently to define the scope of work and associated costs that will be included in the System Integrator RFP. Final toll system design will be conducted by the System Integrator. Conceptual design shall define the approximate location of all toll gantries, lane controller cabinets, dynamic message signs (DMSs), CCTV camera poles, and all necessary ETS support equipment and subsystems including, but not limited to electrical, structural, traffic and general civil engineering drawings.

Deliverable: *Draft System Engineering Requirements and Conceptual System Design Document*

4.2 Develop Final SEMP. Under this task, the draft SEMP, which was developed during Task 3, will be finalized. In addition to making required revisions to the draft SEMP, the following sections will be developed and incorporated into the final version of the SEMP:

- **System Testing.** This section of the SEMP will provide an overview of how the toll equipment and systems, which will be developed by the System Integrator, will be tested. The test plans will consist of Factory Acceptance Test (FAT), pre-Go Live Field Test, and the Systems Acceptance Test (SAT).
- **Training Plan.** This section will provide an overview of the System Integrator required training for each of the discrete major subsystems of the system, including, Toll Data Center

(TDC) operators, TDC audit, Regional Customer Service Center (RCSC) interface and data reconciliation, system enforcement (including CHP officers), and ETS maintenance.

Deliverable: *Final SEMP*

4.3 Business Rules. This Task will include the development of ETS and operational business rules that describe how various scenarios should be handled by the ETS, the RCSC, the CHP, Caltrans and other external agencies. The business rules will build on the adopted Transportation Authority toll policies and the information presented in the Con-Ops to define how day-to-day operations will be carried out including transaction processing, trip building, violation processing, RCSC customer account processing, etc. The business rules will be developed to be as consistent as possible with previously developed ETS rules by other toll agencies in the Bay area.

Deliverable**:** *Draft and final business rules*

Task 5: Development of civil design requirements and coordination of final design. For this Task the System Engineering Manager is required to develop the civil design requirements for the toll system, obtain necessary permits for the installation of the toll equipment and coordinate the toll system final design with the civil components of the project.

5.1 Coordinate with the Transportation Authority, TIDA, and their consultants and contractors. This task covers the activities associated with coordinating with the Transportation Authority, TIDA and their consultants and contractors to gather information on their designs and construction activities on YBI/TI in order to support the integration of the tolling system into the ultimate configuration of YBI/TI. This task covers the coordination and review activities associated with integrating the civil infrastructure required to support future tolling equipment into the existing Transportation Authority construction contracts and TIDA's ongoing design packages.

5.2 Prepare design requirements and specifications for the civil infrastructure to support toll equipment all toll locations. Performance specifications for the toll equipment will be provided to the design teams responsible for the design of the remaining toll locations.

Deliverable: *Design performance specifications for civil infrastructure to support toll equipment at other toll locations.*

5.3 Prepare design for YBI/TI and Bay Bridge tolling signs and obtain approved CT encroachment permit. Designs for sign panel overlays on the Bay Bridge will be prepared and an encroachment permit will be obtained by preparing final design plans that will be circulated through the Caltrans District 4 permit engineer's office. In addition, tolling sign designs will be prepared as necessary for locations on YBI and TI. The YBI/TI signs will be circulated to TIMMA, TIDA, and DPW for review and approval.

Deliverables:

- 65% Plans and Estimate (P&E) for Bay Bridge signs
- 100% P&E for Bay Bridge signs
- Approved Caltrans District 4 permit application (PEER)
- 65% P&E for City road signs
- 100% P&E for City road signs

Task 6 Develop the System Integrator RFP and Assist in the System Integrator Selection Process. This task will involve the development of the ETS RFP for the System Integrator and support the Transportation Authority during the procurement effort for this contract.

6.1 Develop the System Integrator RFP. Under this task, the approved system operating concept and system requirements, as well as the final version of the SEMP and ConOps, will be used as the foundation to define the detailed functional design of the Mobility Management Program ETS. This design will be stated in the form of functional and performance requirements and incorporated into the System Integrator RFP. The RFP will be utilized to ensure that the chosen System Integrator designs, develops, integrates, tests, installs, implements, and maintains the ETS per the RFP requirements while achieving the TITIP goals. The following are examples of the requirements that would be presented clearly to the prospective bidders in the RFP

- Interoperability requirements including recommended consistency with other regional toll systems and the RCSC;
- Toll system requirements for roadside equipment and subsystems, including toll zone controller hardware/software, FasTrak AVI equipment, violation enforcement system (VES) equipment, transaction processing, automatic vehicle detection and identification, CCTV cameras, communications equipment, dynamic message signs, etc.;
- Central processing system (TDC) requirements including data management software and hardware, account management, traffic and revenue reports, and other financial functions;
- Performance requirements including transponder and vehicle detection read accuracy, license plate image capture, and false read processing;
- Software requirements, including intellectual property (IP) ownership, rights to the delivered source code, how the Transportation Authority would be granted a perpetual license to utilize the software (or how they will become owners of the source code), software maintenance procedures, etc.;
- System design, development, integration and testing at the factory and field levels, equipment installation and technical support (operations and maintenance) during Go Live and through the Warranty Period, etc.;
- System maintenance requirements, including roadside equipment/software and off-site technical support;
- Program milestones and acceptance requirements;
- Design-Build contract drawings and specifications for all capital improvements; and
- Operational requirements, including all external interfaces with other project stakeholders.
- The RFP would also clearly specify, at a minimum, the following requirements:
- ETS procurement approach, including proposal development, RFP questions and answers, pre-bid, addenda, selection criteria, interview, BAFO, and negotiation process requirements;
- System delivery schedule;
- Project management approach;
- Bid, performance and maintenance bonds;

- System and capital improvements design and review process;
- Test requirements;
- Training requirements;
- Documentation requirements;
- Software escrow requirements;
- Liquidated damages, including program delivery specific and maintenance;
- Program milestones and system acceptance requirements; and
- Payment process.

Deliverable: *Draft and Final System Integrator RFP*

6.2 Assist in the System Integrator Selection Process. This task includes providing technical support to the Transportation Authority during the procurement process beginning with the toll industry outreach effort through to issuance of notice-to-proceed (NTP) to the selected System Integrator. This task is anticipated to include, at a minimum, the following tasks:

- Identify prospective System Integrators that should be invited to the toll industry outreach and provided with a copy of the RFP;
- Assist the Transportation Authority in the toll industry outreach activities, including developing any required outreach documentation, prior to release of the final RFP;
- Develop draft answers to RFP questions that are received from prospective bidders;
- Provide technical support to the Transportation Authority during the RFP addenda development process;
- Coordinate and, if required, lead the pre-bid conference and develop supporting materials as needed;
- Provide assistance to Transportation Authority staff in the development of objective evaluation and scoring criteria consistent with selection requirements (this process would also be clearly defined in the RFP);
- Review and evaluate the technical and cost proposals that are received, develop a proposal evaluation findings document, and advise the Transportation Authority's evaluation committee during the System Integrator shortlist process. Assist in the development of questions to be posed shortlisted firms during the interviews.;
- Assist the Transportation Authority during the pre-interview process and attend the interview as a technical and contractual resource;
- Assist the Transportation Authority during the BAFO process and participate in the contract negotiation process with the selected System Integrator; and
- Review the draft and final versions of the System Integrator contract documents and the NTP letter that will be prepared by the Transportation Authority.

Deliverable: *Technical support during the System Integrator selection process*

Phase III

Task 7 System Integrator Contract Technical Oversight. This task will involve close monitoring of the System Integrator activities during the ETS design, development, integration, testing, installation, deployment, operations support and maintenance on the project. During this task the System Engineering Manager will participate in all facets of the project, working closely with Transportation Authority and System Integrator personnel. If required, the System Engineering Manager will assume the role of contractual approver of all work that is performed by the System Integrator.

7.1 Integration Management. This task will include management of all ETS integration activities specified in the System Integrator RFP and contract performance requirements including, but not limited to, the following:

- Outline the project responsibilities and develop lines of communication with all project members.
- Schedule and coordinate routine project status meetings with the System Integrator to ensure that all project requirements are being met and they are adhering to their project schedule.
- Develop meeting agendas and minutes of each meeting.
- Review, comment, and approve System Integrator deliverables, including, at a minimum:
    - Project management plan;
    - QA/QC plan;
    - Preliminary and final ETS design documents (a detailed list of required documents will be presented in the RFP);
    - Software development and integration plan;
    - Communications plan;
    - Factory and field test plans;
    - Enforcement plan;
    - Interface requirements plan for other entities, including the RCSC, the CHP for system enforcement, the Caltrans TMC, SFPark, TIDA, and other regional toll agencies;
    - Training plan;
    - Installation plan;
    - System performance test plan; and
    - Maintenance Plan.
- Manage, prioritize, and resolve technical and contractual issues with the System Integrator.
- Manage the System Integrator contract change order process.
- Attend all System Integrator testing activities and develop test reports that will be shared with Transportation Authority and System Integrator staff.

Deliverable: *Coordinate all project activities and review and approval of all System Integrator submitted documentation*

7.2 Project Schedule Management. Complete all tasks necessary to review and maintain the System Integrator baseline schedule, including tracking the critical path, deliverables, key decision points, and evaluating potential risks to the schedule. Activities would include, at a minimum:

- Review and approve the System Integrator base project schedule;
- Periodically (perhaps on a monthly basis) review the System Integrator project schedule to ensure that they are meeting all of their scheduled activities;
- Identify key milestones and communicate these items to Transportation Authority staff and advise if there are any schedule items that are falling behind;
- Manage schedule risk. Proactively identify schedule risks, recommend mitigation strategies, and document these in the risk register;
- Implement proper corrective measures to bring the schedule back on-line, including requesting the System Integrator to allocate more (or better) resources to the project; and
- Provide a monthly written update of the System Integrator project schedule during project status meetings.

Deliverable: *Approve base project schedule, track all updates and identify schedule risks*

7.3 Risk Management. The purpose of this task is to proactively identify project risks including technical, schedule, contractual, quality and resources. For this task, the System Engineering Manager will develop a risk matrix, risk mitigation strategy and monitor and maintain a detailed risk register.

Deliverable: *Develop draft and final Risk Matrix and routinely monitor/update all project risks*

7.4 System Integrator Budget Management. This task includes the management of the System Integrator's project budget. System Engineering Manager staff will review all submitted invoices and make recommendations for payment by the Transportation Authority. The System Engineering Manager will also review all requested contract change orders and either approve them or request the Integrator to provide more detailed information until the change order request is justified. Furthermore, System Engineering Manager will perform budget control activities such as evaluation of available funding for contract changes or project delays and recommend remedies as required and becomes necessary.

Deliverable: *Track System Integrator invoices and contract change orders*

7.5 Periodic Tolling Policy Review. The System Engineering Manager will routinely coordinate with the Transportation Authority during the course of the System Integrator project and identify and institute any changes to the adopted toll and operating policies and business rules that may be required.

Deliverable: *Periodically review and update policies and business rules*

7.6 Testing Process. The System Engineering Manager will oversee, manage, and participate in all the ETS tests, including the FAT, the pre-Go Live field tests and the SAT.

Deliverable: *Review and approve all System Integrator developed test scripts*

7.7 Oversight of Equipment Installation and Integration. The System Engineering Manager will monitor the installation of all equipment/software, the integration of all subsystems and the System Integrator pre-Go Live testing prior to opening of the new toll facility. Tasks would include, at a minimum:

- Review of System Integrator's installation plans and drawings;

- On-site inspections of the actual installation work;
- Coordinate work with partner agencies and stakeholders including SFMTA, TICD, Caltrans, and BATA as appropriate;
- Work with the System Integrator to secure an encroachment permit;
- Monitor, and possibly participate in, System Integrator testing throughout the installation and integration phases of the project to ensure that all equipment and software is operating consistent with all of contract requirements;
- Coordinate with project partners and stakeholder on communications, outreach, and public education prior to the opening of the new toll facility;
- Review operations and maintenance protocols prior to Go Live;
- Develop a transition plan to ensure that Go Live is a seamless process to the motoring public and Transportation Authority staff; and
- Monitor System Integrator training of TIMMA staff to ensure that all operations staff are ready for Go Live.

Deliverable: *Oversee the System Integrator equipment installation, integration, testing and training activities*

Phase IV

Task 8 (optional): Provide Operations Support. If required by Transportation Authority, the System Engineering Manager will continue to support the project by performing this optional task which includes the following:

- Review of system operations;
- Review the pricing functionality of the system;
- Review and reconcile all transaction and financial reports that detail funds to be paid to the
- TIMMA;
- Access toll lane customer FasTrak information when issues arise that require this type of
- account investigation;
- Hold discussions with the BATA RCSC operations manager, as required;
- Using the CCTV subsystem, observe tolling and enforcement operations;
- Review and provide inputs to the law enforcement system enforcement protocol;
- Periodically check the CCTV streaming video process to the system management center;
- Participate in any marketing programs and/or activities;
- Coordinate with the system integrator maintenance supervisor and technicians to make sure that Maintenance On-Line Management System (MOMS) identified problems are resolved within the time periods presented in the RFP;
- Carefully plan with Public Works staff and closely monitor any roadway maintenance activities that may impact the system; and
- Monitor the system preventive maintenance schedules to ensure that the system equipment/ software maintenance is being conducted properly.

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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: 11.22.16

RE: Citizens Advisory Committee
November 30, 2016

To: Citizens Advisory Committee

From: Michelle Beaulieu, Senior Transportation Planner, Policy and Programming

Through: Amber Crabbe – Assistant Deputy Director for Policy and Programming AC

Subject: ACTION – Adopt a Motion of Support for the Approval of the 2017 State and Federal Legislative Program

Summary

Every year the Transportation Authority Board adopts a legislative program to guide the agency's transportation advocacy efforts at the state and federal levels. The proposed State and Federal Legislative Program reflects key principles, gathered from our common positions with other local transportation sales tax authorities around the state, the Metropolitan Transportation Commission, as well as our understanding of the most pressing issues facing the region, San Francisco, and our partner agencies that deliver transportation projects in the city. The proposed program is presented in the form of principles, not specific bills or legislative initiatives, in order to allow staff the necessary flexibility to respond to legislative proposals and specific policy concerns that may arise over the course of the legislative session in Sacramento or Washington D.C. Our 2017 Legislative Program continues many of the themes from the previous legislative sessions and emphasizes issues of stabilizing and protecting existing transportation funds, authorizing new transportation revenues, securing funding for San Francisco projects, advancing high-speed rail investment, supporting allocation of state cap and trade revenues for transportation, promoting Vision Zero safety goals, engaging in the implementation of new transportation technologies, aspiring to meet environmental and greenhouse gas reduction goals and supporting increased revenues and redevelopment-like tools to help accelerate the production of affordable housing.

BACKGROUND

The state and federal legislative programs, adopted annually by the Board, establish a general framework to guide our legislative and funding advocacy efforts at the state and federal levels. The purpose of the legislative program is to establish general policy guidance on state and federal legislative and funding issues in transportation. The proposed 2017 State and Federal Legislative Program reflects key principles, gathered from our common positions with other local transportation sales tax authorities around the state, the Metropolitan Transportation Commission (MTC), as well as our understanding of the most pressing issues facing the city and the region (drawing upon the underway Plan Bay Area update, as well as other efforts), and our partner agencies delivering transportation projects and providing service to San Francisco.

Transportation Authority staff and legislative advocacy consultants in Sacramento will use this program to communicate and plan strategy with the Mayor's Office, the City's legislative delegations in Sacramento and Washington D.C., MTC, and other transportation agencies and advocates.

DISCUSSION

The proposed 2017 State and Federal Legislative Program is presented in the form of principles rather than specific bills or legislative initiatives, in order to allow staff the necessary flexibility to respond to legislative proposals and policy concerns that may arise over the course of the session. Throughout the state legislative session, which extends into the early autumn or later if extraordinary sessions are necessary, we will be reporting on the status of bills that are of significance to the Transportation Authority, and developing recommendations for positions as appropriate.

In 2016 many important fiscal and policy agendas advanced which were consistent with the Transportation Authority's adopted State and Federal Legislative Program. The Federal Government passed the Fixing America's Surface Transportation (FAST) Act, a five-year authorization for surface transportation programs, in December of 2015. In addition to funding ongoing transit and highway formula funding programs, the FAST Act has provided funding for several competitive grants over the past year, including the Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) grant program which awarded $11 million to San Francisco for a number of projects including funds to the Treasure Island Mobility Management Program. The Transportation Authority will continue to advocate for additional funding to priority San Francisco projects and, with the new administration, work to protect anticipated federal funding such as the remaining Federal Transit Administration New Starts grant awards for the Central Subway project.

At the state level, several important bills were passed in 2016, including Assembly Bill (AB) 2374 (Chiu), legislation we sponsored to authorize us to use the Construction Manager/General Contractor (CM/GC) method for the construction of the Yerba Buena Island (YBI) West-Side Bridges Retrofit project. This construction method was identified as the most cost-effective and site-appropriate way to deliver the YBI project, which will facilitate the replacement and improvement of the complicated and critically important project. This year, the regional commuter benefits ordinance authority was extended indefinitely, allowing the successful Transportation Demand Management program to continue beyond the initial pilot authorization. The state legislature also passed AB 516 (Mullin), requiring the Department of Motor Vehicles to develop a system to provide temporary license plates at the point of sale of a vehicle, and requiring temporary license plates on all vehicles until receipt of permanent plates. This will prevent drivers from avoiding tolls and evading arrest before receiving permanent license plates after the purchase of a new vehicle.

While the 2016 legislative session ended on September 30th, the Special Session on Transportation and Infrastructure will continue until November 30th. No new bills will be introduced until the Fiscal Year 2017/18 Regular Session is convened in December 2016. The Special Session could in theory continue to focus on potential new sources of state funding for transportation, but we do not anticipate it will convene again before its authorization expires.

Our 2017 State and Federal Legislative Program (Attachment 1) continues many of the themes from the previous legislative sessions and emphasizes issues of stabilizing and protecting existing transportation funds, authorizing new transportation revenues to be put into place at the local or regional level, advancing San Francisco's priority projects and programs, supporting allocation of state cap and trade revenues for transportation, advancing high-speed rail early investment projects to bring service to the Transbay Transit Center, working to meet environmental and greenhouse gas reduction goals, engaging in the implementation of new transportation technologies, and expanding the use of pricing and other innovative project delivery and financing approaches to accommodate the growth in transportation system demands in California. It also supports increased revenues and redevelopment-like tools to help accelerate the production of affordable housing.

The proposed 2017 State and Federal Legislative Program would continue support of San Francisco's Vision Zero goals for street safety, including the San Francisco Municipal Transportation Agency's priority legislative effort to authorize the use of cameras for automated speed enforcement. MTC will be seeking authorization to place on the ballot a measure asking Bay Area voters to approve a bridge toll increase to fund improvements in bridge corridors, which would be known as Regional Measure 3 (RM3). The draft Legislative Program would support this measure, and advocates that San Francisco's priority projects be included in the expenditure plan.

ALTERNATIVES

1. Adopt a motion of support for the approval of the 2017 State and Federal Legislative Program, as requested.
2. Adopt a motion of support for the approval of the 2017 State and Federal Legislative Program, with modifications.
3. Defer action, pending additional information or further staff analysis.

FINANCIAL IMPACTS

There is no impact on the Transportation Authority's adopted Fiscal Year 2016/17 budget from the proposed action.

RECOMMENDATION

Adopt a motion of support for the approval of the 2017 State and Federal Legislative Program.

Attachment:

1. Draft 2017 State and Federal Legislative Program

Attachment 1

San Francisco County Transportation Authority Draft 2017 State and Federal Legislative Program

Last modified: November 22, 2016

STATE		
Area	**Goal**	**Strategy**
1. Funding	Protect transportation funding from diversion	• Advocate that funds dedicated to transportation not be diverted to other state budget priorities. • Support efforts to recover existing diversions (e.g. weight fee revenues) for transportation.
	Enact new revenue and financing measures for transportation	• Support efforts at the state (and regional and local levels) to raise additional transportation revenue to address ongoing funding shortfalls for both capital projects and operations. • Support efforts to raise the gas tax and index it to match inflation, to provide a more stable source of funding for transportation projects.
	Secure cap and trade revenues	• Support efforts to dedicate a significant portion of cap and trade revenues to transportation and specifically San Francisco priorities. • Advocate for a stronger role for regional and local governments in prioritizing projects for funding and for a revenue allocation process that is clear, streamlined, and flexible.
	Increase funding for affordable housing	• Support efforts to establish a new, dedicated state funding source for affordable housing. • Support legislative efforts to reduce barriers to the construction of new affordable housing.
	Gain state authorization for new regional bridge toll measure	• Support and engage in the development of the authorization legislation to allow the Metropolitan Transportation Commission's (MTC) to place a Regional Measure 3 (RM3) bridge toll proposal on the ballot. • Advocate for San Francisco priority projects in the RM3 policy and expenditure program, given the core capacity needs facing the city.

STATE		
Area	Goal	Strategy
	Lower the 2/3 supermajority voter approval requirement for transportation taxes	• Support a constitutional amendment to lower the voter approval requirement for special taxes dedicated to local transportation projects from 66.67% to 55% or a simple majority.
	Modify allocation formulas for state transportation funds	• Advocate for using factors that better tie transportation funding to the true demands placed on the system, including daytime population or transit usage. • Advocate to change the definition of disadvantaged communities (DACs) and seek opportunities to broaden the definition in statutes to better reflect those in San Francisco.
	Implement severance fees on natural resources extraction	• Support the creation of statewide severance fees to ensure a lasting public benefit from the depletion of non-renewable resources. • Advocate that severance fee revenues be allocated to sustainable transportation through allocation to local and regional agencies.
	Increase funding for the Active Transportation Program (ATP) and streamline program guidelines	• Advocate for a programming and allocation process that emphasizes flexibility and local/regional control. • Support efforts to increase the amount of funding available to support active transportation and safe routes to schools.
	Support efforts around local and regional funding for transportation	• Support MTC's work to identify and authorize new regional revenues for transportation funding and financing, including authorization for the formation of a new Regional Infrastructure Bank. • Support MTC's proposal to seek authorization to issue bonds backed by federal transit formula funds. • Support efforts to revive the authority of local governments to use tax-increment financing in support of projects consistent with sustainable communities strategies.

Attachment 1

San Francisco County Transportation Authority Draft 2017 State and Federal Legislative Program

Last modified: November 22, 2016

STATE		
Area	**Goal**	**Strategy**
2. Policy Initiatives	Advance San Francisco's Vision Zero goals, improving safety for all users	• Work with local partners to identify and secure state and federal funding for Vision Zero projects. • Support efforts to improve the overall safety for all road users such as bills that provide municipalities the flexibility to reduce speed limits. • Support the San Francisco Municipal Transportation Agency's (SFMTA's) advancement of state legislation to authorize a pilot program to test Automated Speed Enforcement on San Francisco's high injury network.
	Support the Treasure Island Mobility Management Agency's (TIMMA) work for sustainable mobility on Treasure Island	• Support funding for study, piloting, and implementation of innovative mobility management such as tolling infrastructure, transportation and housing affordability programs, bike and car share initiatives, and autonomous vehicles. • Seek legislation necessary to support TIMMA's goals and objectives.
	Authorize Caltrans to continue to carry-out National Environmental Policy Act (NEPA) review and project approval	• Support legislation to provide the limited waiver of sovereign immunity necessary for Caltrans to continue carrying-out review and approval of projects pursuant to NEPA. The current limited waiver will expire at the end of 2016, and the state will not be able to process NEPA after the expiration date resulting in project delays.
	Maintain or improve effectiveness of express lanes and other transportation demand management (TDM) strategies	• Support new legislation that promotes innovative TDM strategies including deployment of managed lanes on state highways. • Limit the number of clean air vehicle stickers allowing hybrid and electric single-occupancy vehicles use of managed lanes
	Participate in the development of legislation regarding emerging mobility innovations	• Coordinate with SFMTA to manage adoption of shared mobility innovations such as ride sourcing and commuter shuttles to balance benefits and impacts, ensure safety, and achieve access to critical data. • Participate in local and state efforts to develop policy framework for testing, deploying, and regulating autonomous vehicles and consider pursing pilot opportunities.

STATE		
Area	Goal	Strategy
	Modernize Congestion Management Program (CMP) regulations	• With other Congestion Management Agencies (CMAs), lead the development of legislation on CMP reform to support key policies and reinforce CMAs' role in state, regional, and local transportation planning and funding.
	Track and provide feedback on state road usage charge pilot program	• Support the state pilot of a road usage charge, providing technical assistance and policy support to shape the program. • Provide comments on the Caltrans report to the legislature at the conclusion of the pilot.
	Reform level of service requirements	• Support the Governor's Office of Planning and Research on CEQA (California Environmental Quality Act) rulemaking for implementation of SB743 requiring alternative traffic impact analysis measures.
3. High-Speed Rail (HSR)	Strengthen state commitment to a blended HSR and electrified Caltrain system from San Francisco to San Jose	• Work with partner agencies to advocate that the HSR early investment projects are implemented in a manner consistent with the memorandum of understanding (MOU) to develop a blended system. • Advocate for full funding of the Caltrain Downtown Extension, and advance the Caltrain Modernization Program.

Attachment 1
San Francisco County Transportation Authority Draft 2017 State and Federal Legislative Program
Last modified: November 22, 2016

FEDERAL		
Area	**Goal**	**Strategy**
4. Transportation Funding	Advance San Francisco's priorities and sustain or increase federal transportation funding	• Retain strong multi-modal focus for federal grant programs and ensure funding is spread equitably among rural and urban jurisdictions. • Partner with local, regional, state, and local stakeholders to increase funding for state of good repair, active transportation, mobility and access, and sustainability and environmental outcomes. • Support an increase in funding for transportation infrastructure, particularly for San Francisco's priority projects, focusing on transit and active transportation. • Advocate for increasing the federal gasoline tax, and for indexing it to inflation to help close the Highway Trust Fund (HTF) funding deficit. • Support study and piloting of alternate approaches to transportation solutions such as road usage charges, technology demonstration, and alternative project delivery methods.
	Federal appropriations for San Francisco Core Capacity and New and Small Starts projects	• Advocate that Congress approve annual New Starts appropriations consistent with the Full Funding Grant Agreement (FFGA) for the Central Subway, and continue to allocate Small Starts funds for the Van Ness Avenue Bus Rapid Transit (BRT) project. • Work with local and regional partners to support project applications and secure federal funding for the next set of New Starts, Small Starts and Core Capacity project priorities, including the BART Core Capacity Program, Caltrain Electrification, Better Market Street, Geary Boulevard BRT, and the Caltrain Downtown Extension.
	Increased local sales tax revenue through the Marketplace Fairness Act	• Support efforts to apply state and local sales tax rates to online purchases.
	Implementation of federal carbon pricing	• Support efforts to price carbon at the federal level. • Promote transportation investments as part of the expenditure plan.

FEDERAL		
Area	**Goal**	**Strategy**
5. Transportation Policy Initiatives	Commuter benefits for non-single occupancy vehicle travel modes at the same level as for parking	• Advocate to include pre-tax benefits for bikeshare and shared mobility options on par with parking benefits.

PROJECT DELIVERY AND ADMINISTRATION (State and Federal)		
Area	**Goal**	**Strategy**
6. Project Delivery	Expanded use of innovative project delivery strategies for transportation infrastructure	• Advocate for expanded options to use alternative delivery methods to manage risk and increase local control for transportation infrastructure projects. • Advocate for expansion of financing programs such as Transportation Infrastructure Finance and Innovation Act (TIFIA).
	Integrated state and federal environmental impact studies and streamlined permitting	• Advocate for more efficient environmental processes (both CEQA and National Environmental Policy Act (NEPA)) to reduce administrative inefficiencies.
7. General Administration	Ensure efficient and effective Transportation Authority operations	• Advocate for streamlining of administrative restrictions when multiple fund sources are used on a single project. • Oppose legislation and regulations adversely affecting our ability to efficiently and effectively contract for goods and services, conduct business and limit or transfer the risk of liability.

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Draft 2017 Transportation Authority Meeting Schedule

Subject to change.

www.sfcta.org/agendas

January

Special Citizens Advisory Committee	Wednesday	Jan. 11	6:00 p.m.
Plans & Programs Committee	Tuesday	Jan. 17	10:00 a.m.
Finance Committee	Tuesday	Jan. 17	11:30 a.m.
Transportation Authority Board	Tuesday	Jan. 24	11:00 a.m.
Citizens Advisory Committee	Wednesday	Jan. 25	6:00 p.m.

February

Plans & Programs Committee	Tuesday	Feb. 14	10:00 a.m.
Finance Committee	Tuesday	Feb. 14	11:30 a.m.
Citizens Advisory Committee	Wednesday	Feb. 22	6:00 p.m.
Transportation Authority Board	Tuesday	Feb. 28	11:00 a.m.

March

Finance Committee	Tuesday	Mar. 14	11:00 a.m.
Plans & Programs Committee	Tuesday	Mar. 21	10:30 a.m.
Citizens Advisory Committee	Wednesday	Mar. 22	6:00 p.m.
Transportation Authority Board	Tuesday	Mar. 28	11:00 a.m.
Vision Zero Committee	TBD	TBD	TBD

April

Finance Committee	Tuesday	Apr. 11	11:00 a.m.
Plans & Programs Committee	Tuesday	Apr. 18	10:30 a.m.
Transportation Authority Board	Tuesday	Apr. 25	11:00 a.m.
Citizens Advisory Committee	Wednesday	Apr. 26	6:00 p.m.

May

Finance Committee	Tuesday	May 9	11:00 a.m.
Plans and Programs Committee	Tuesday	May 16	10:30 a.m.
Transportation Authority Board	Tuesday	May 23	11:00 a.m.
Citizens Advisory Committee	Wednesday	May 24	6:00 p.m.

June

Finance Committee	Tuesday	Jun. 13	11:00 a.m.
Plans & Programs Committee	Tuesday	Jun. 20	10:30 a.m.
Transportation Authority Board	Tuesday	Jun. 27	11:00 a.m.
Citizens Advisory Committee	Wednesday	Jun. 28	6:00 p.m.
Vision Zero Committee	TBD	TBD	TBD

July*

Finance Committee	Tuesday	Jul. 11	11:00 a.m.
Plans & Programs Committee	Tuesday	Jul. 18	10:30 a.m.
Transportation Authority Board	Tuesday	Jul. 25	11:00 a.m.

*There will not be a Citizens Advisory Committee meeting in July due to the Board of Supervisors' August recess.

August

Board of Supervisors Recess from August TBD through September TBD – No Meetings

September

Special Citizens Advisory Committee	Wednesday	Sep. 6	6:00 p.m.
Finance Committee	Tuesday	Sep. 12	11:00 a.m.
Plans & Programs Committee	Tuesday	Sep. 19	10:30 a.m.
Transportation Authority Board	Tuesday	Sep. 26	11:00 a.m.
Citizens Advisory Committee	Wednesday	Sep. 27	6:00 p.m.
Vision Zero Committee	TBD	TBD	TBD

October

Plans & Programs Committee	Tuesday	Oct. 17	10:00 a.m.
Finance Committee	Tuesday	Oct. 17	11:30 a.m.
Transportation Authority Board	Tuesday	Oct. 24	11:00 a.m.
Citizens Advisory Committee	Wednesday	Oct. 25	6:00 p.m.

November

Plans & Programs Committee	Tuesday	Nov. 14	10:00 a.m.
Finance Committee	Tuesday	Nov. 14	11:30 a.m.
Transportation Authority Board	Tuesday	Nov. 28	11:00 a.m.
Special Citizens Advisory Committee	Wednesday	Nov. 29	6:00 p.m.

December

Plans & Programs Committee	Tuesday	Dec. 5	10:00 a.m.
Finance Committee	Tuesday	Dec. 5	11:30 a.m.
Transportation Authority Board	Tuesday	Dec. 12	11:00 a.m.
Vision Zero Committee	TBD	TBD	TBD

Board of Supervisors Recess from December TBD through December TBD – No Meetings

Transportation Authority General Schedule

Citizens Advisory Committee
Meets regularly every 4th Wednesday at 6:00 pm in the SFCTA Hearing Room

Finance Committee
Meets regularly every 2nd Tuesday at 11:00 am in City Hall Room 263

Plans and Programs Committee
Meets regularly every 3rd Tuesday at 10:30 am in City Hall Room 263

Transportation Authority Board
Meets regularly every 4th Tuesday at 11:00 am in City Hall Room 250

Personnel Committee
Meets at the call of the Chair in City Hall

Vision Zero Committee
Meets on an ad hoc basis in City Hall

Treasure Island Mobility Management Agency (TIMMA) General Schedule

TIMMA Board
Meets on an ad hoc basis in City Hall

TIMMA Committee
Meets on an ad hoc basis in City Hall

Commuter Shuttle Hub Study

November 30, 2016

SFCTA Citizens Advisory Committee

Background

- In November, 2015 the SFMTA Board approved the current Commuter Shuttle Program
- In February 2016, Board of Supervisors identified interest in studying a “hub” model that has fewer designated shuttle zones
- SFMTA & SFCTA agreed to study an alternative model

Study Purpose

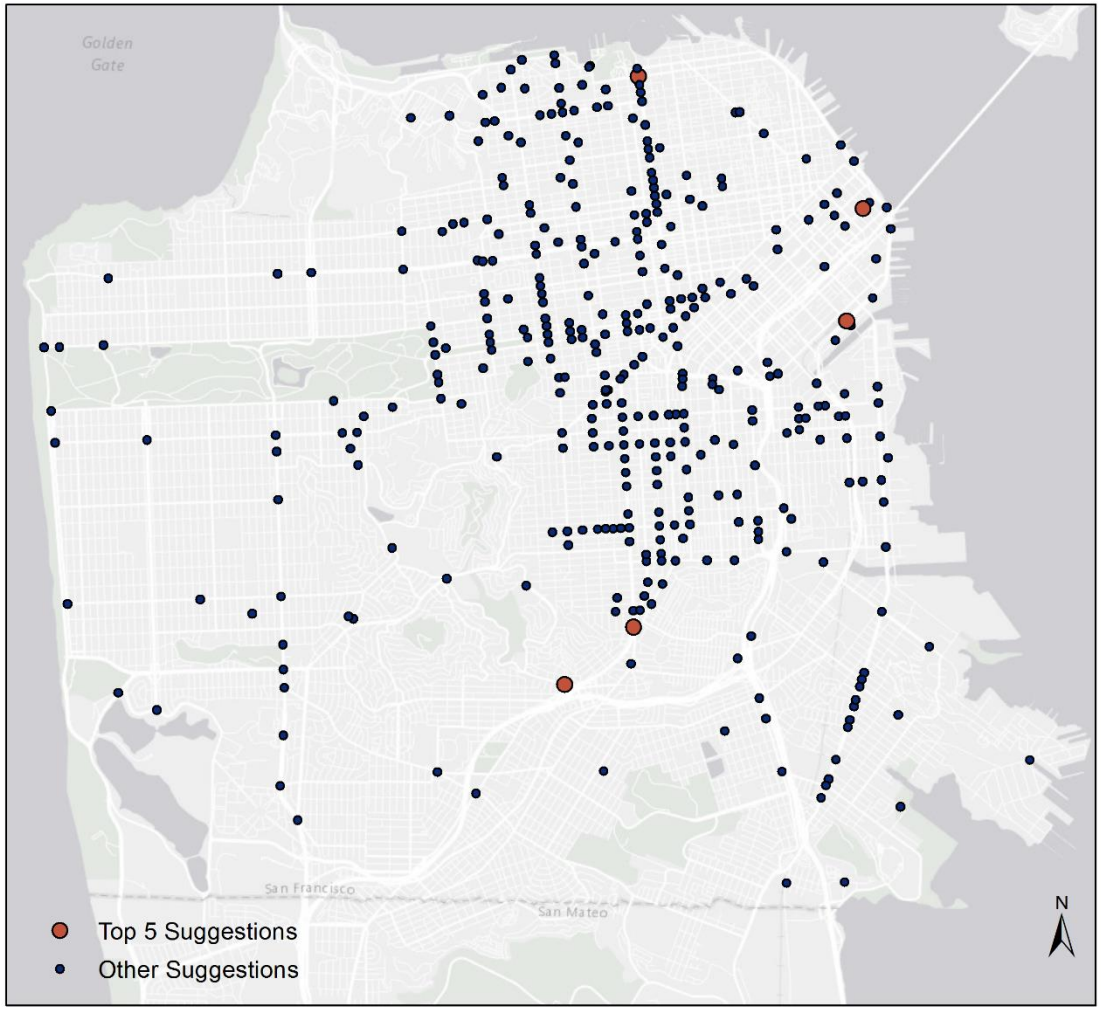
- Evaluate alternative approach
  - Limited shuttle locations
- Does a “hub” better meet the goals of a commuter shuttle program?

Hub Model Goals

- Improve quality of life in San Francisco
- Reduce the footprint of a commuter shuttle system.

Location Suggestions

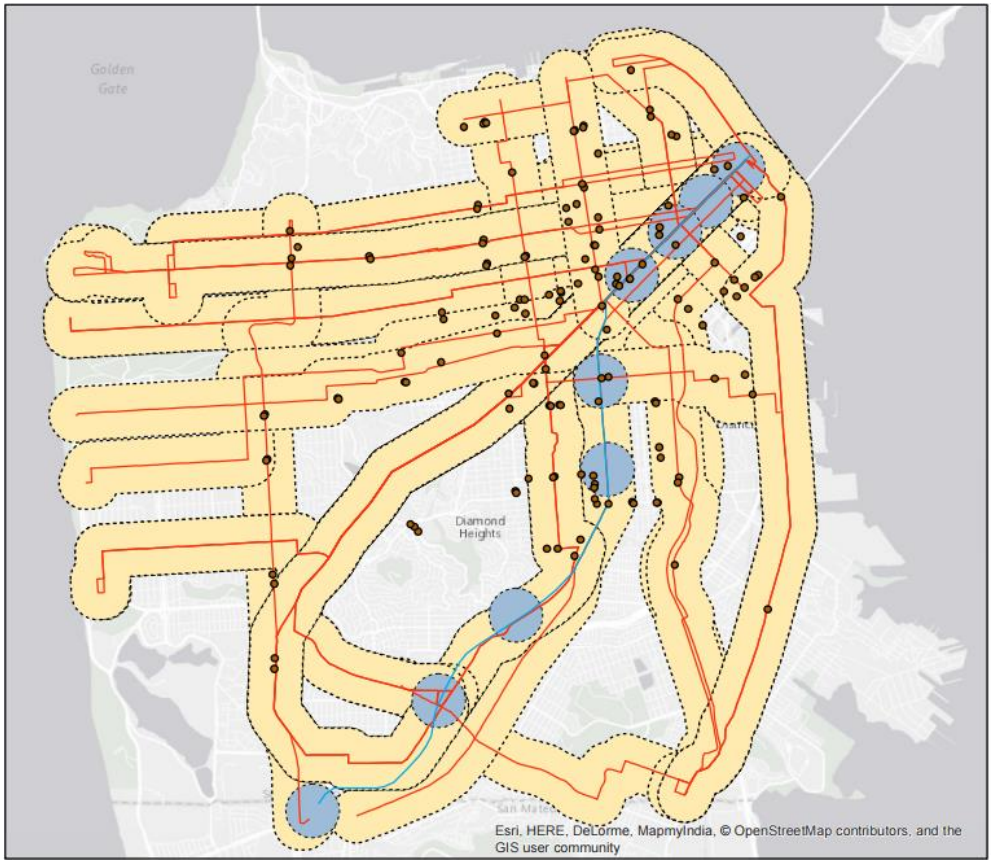
- 1,605 responses
- 378 unique locations in city limits



Location Screening

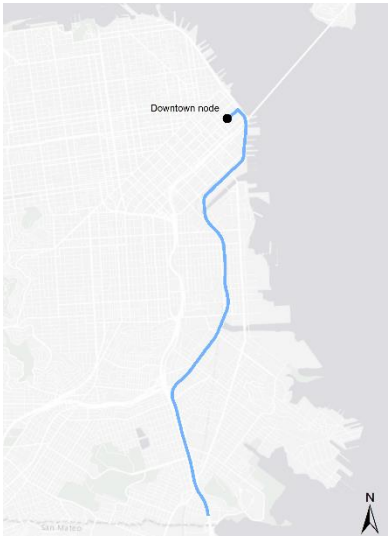
Criteria

- Physical Space
- Time of Day
- Frequent transit access
- Direct transit access
- Highway access

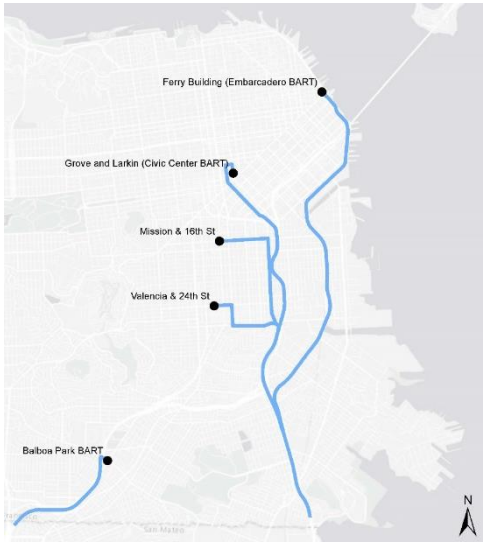


Hub locations w/in ¼ mile of frequent transit

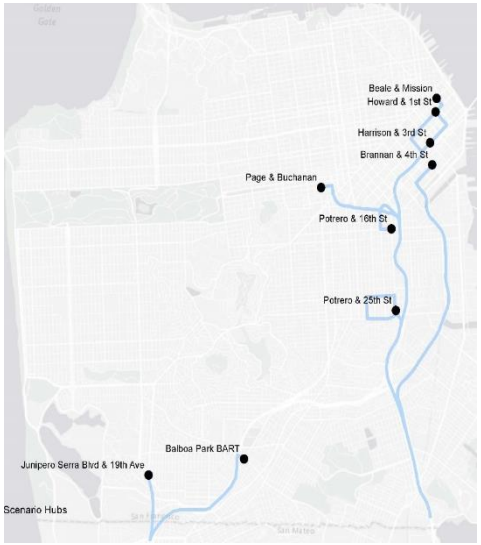
Four Scenarios



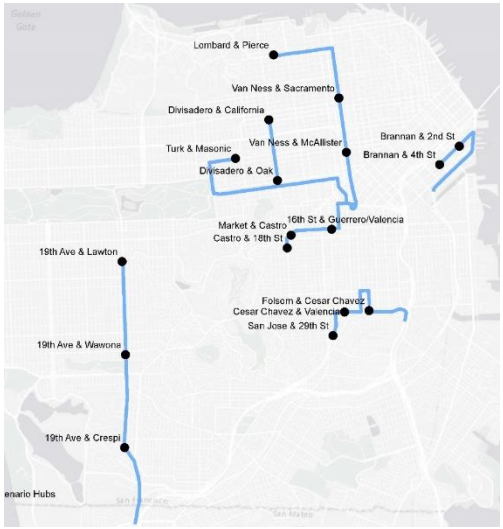
Single Hub



BART Oriented

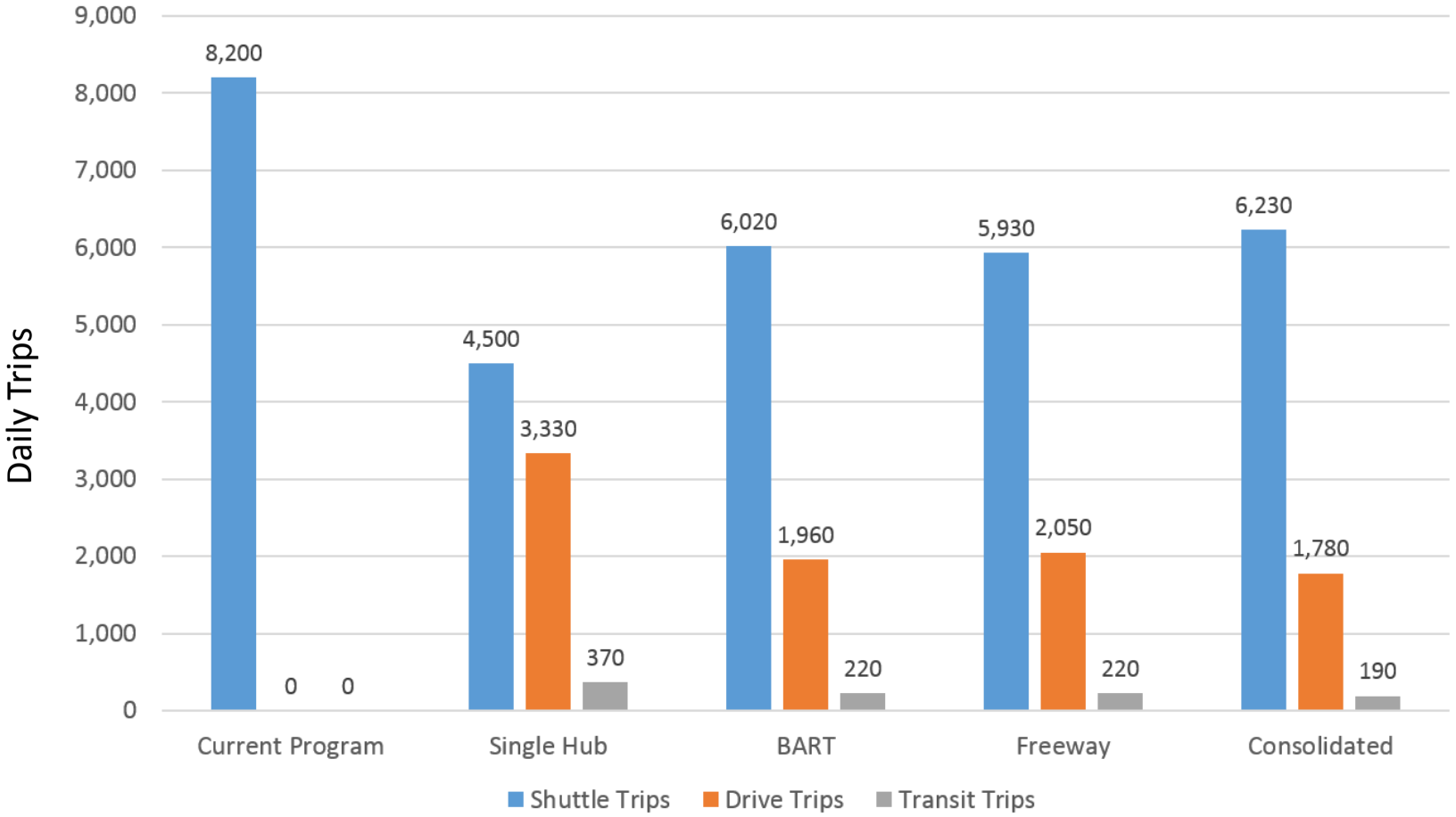


Freeway



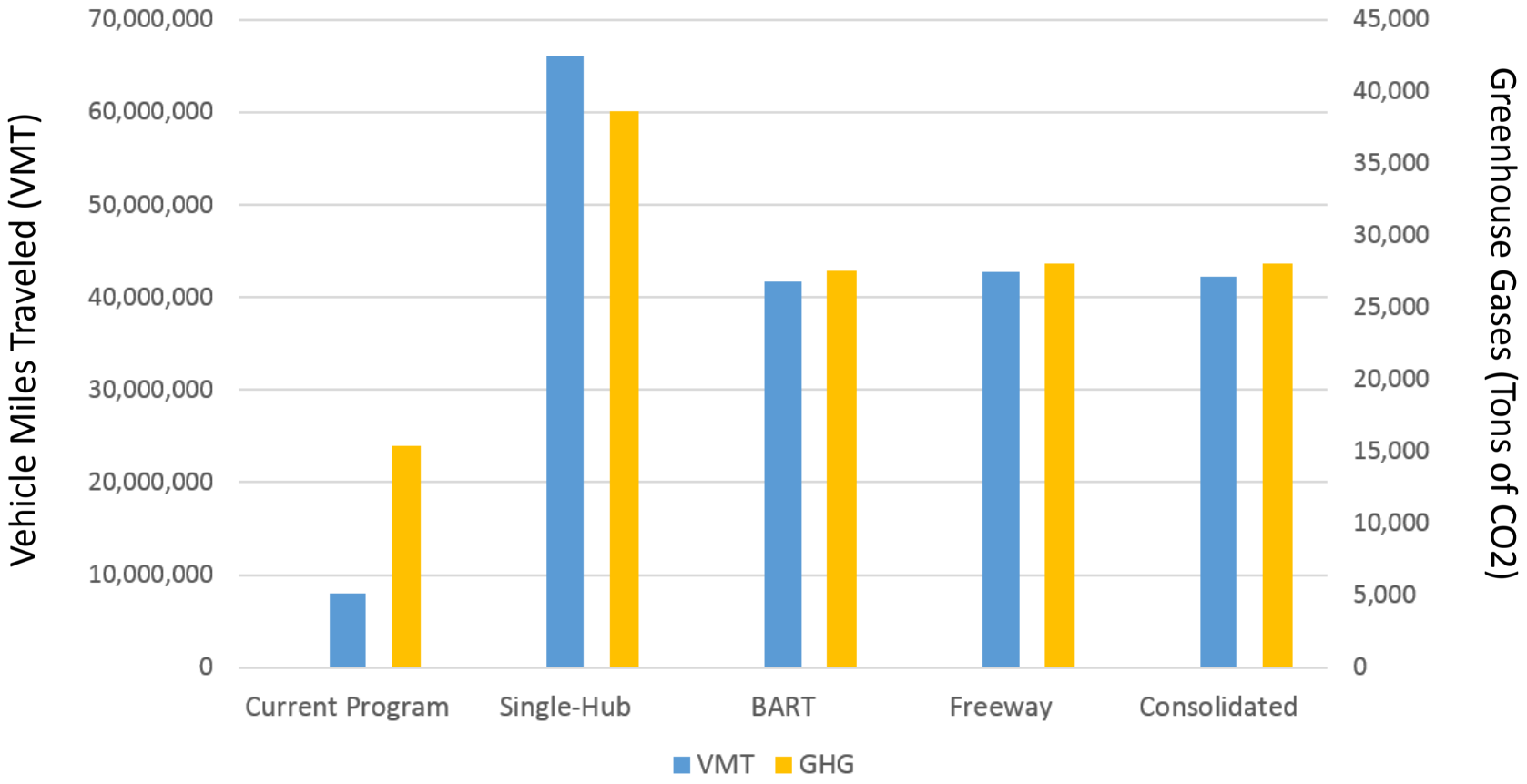
Consolidated Network

Mode Shift



- Shuttle ridership predicted to drop 24% to 45%
- 1,780-3,300 more cars on the road

Annual VMT and GHG Emissions



- 50% to 85% reduction in shuttle VMT on surface streets
- 5x-8x increase in automobile VMT due to ridership decrease

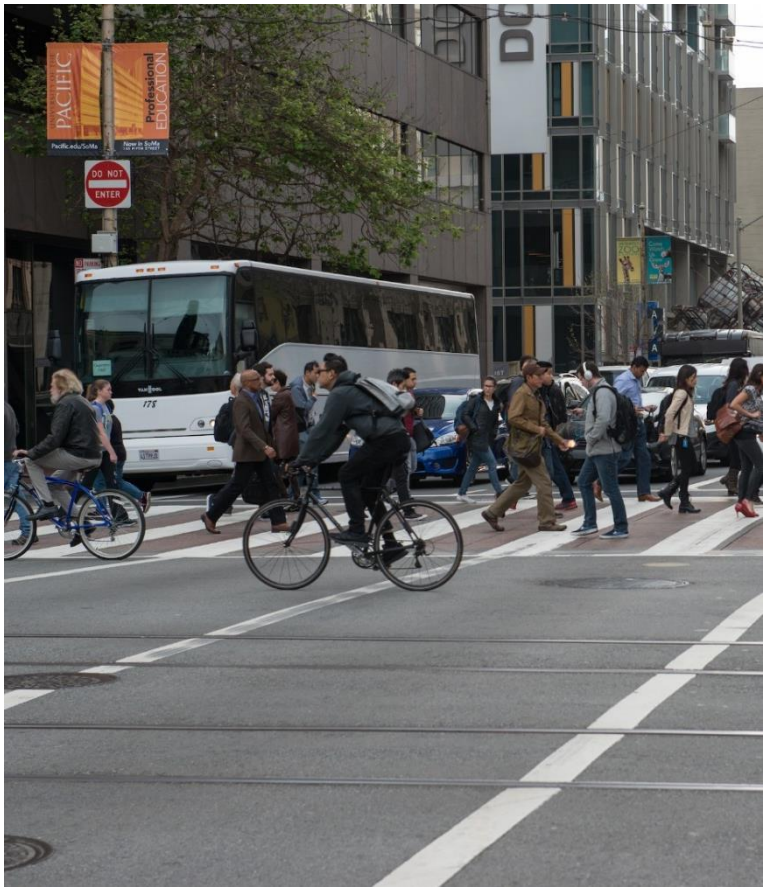
Safety & Impacts on Muni

Safety

- Increase in VMT is an indicator of increased risk of collisions
- The single-hub has the largest increase in VMT

Impacts on Muni

- All scenarios would result in fewer conflicts with between shuttles and Muni



Additional Impacts

Shuttle Travel on Non-Arterials

- All scenarios: *reduced* travel on non-arterial streets

Area Parking Impacts

- All scenarios: *more* competition for parking
- Most scenarios would require *significant removal* of parking

Unauthorized Shuttle Stops & Program Enforcement

- All scenarios: likely to result in *more* unauthorized stops
- All scenarios: require *more* enforcement

SFMTA
Municipal Transportation Agency

Commuter Shuttle Program Mid-Year Review

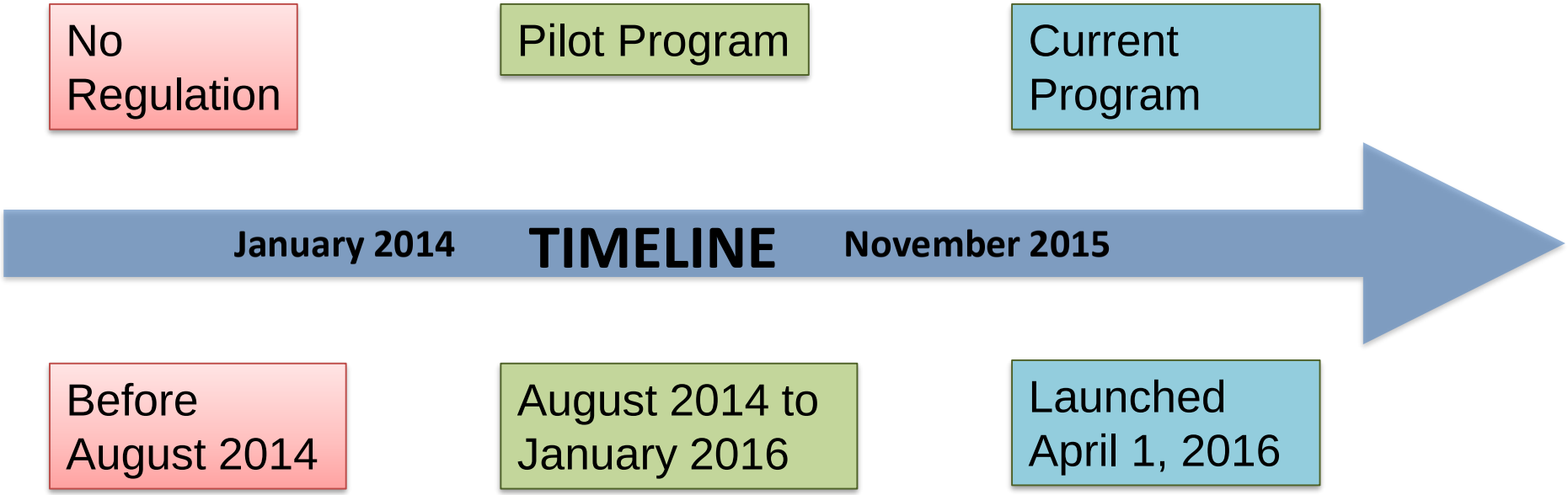
November 30, 2016

SFCTA Citizens Advisory Committee

Shuttles in San Francisco

- Around for over a decade
- Licensed at the state
- Legally allowed on San Francisco streets
- Help reduce VMT/GHG

Shuttle Program History



Why a Commuter Shuttle Program?

- Allows for regulation of shuttles
- Better operation of city streets
- Address neighborhood concerns
- Minimize conflicts between users

Commuter Shuttle Program

- Pilot helped inform current program design:
  - Large buses on Caltrans-designated arterials only
  - Cleaner vehicles
  - Increased enforcement

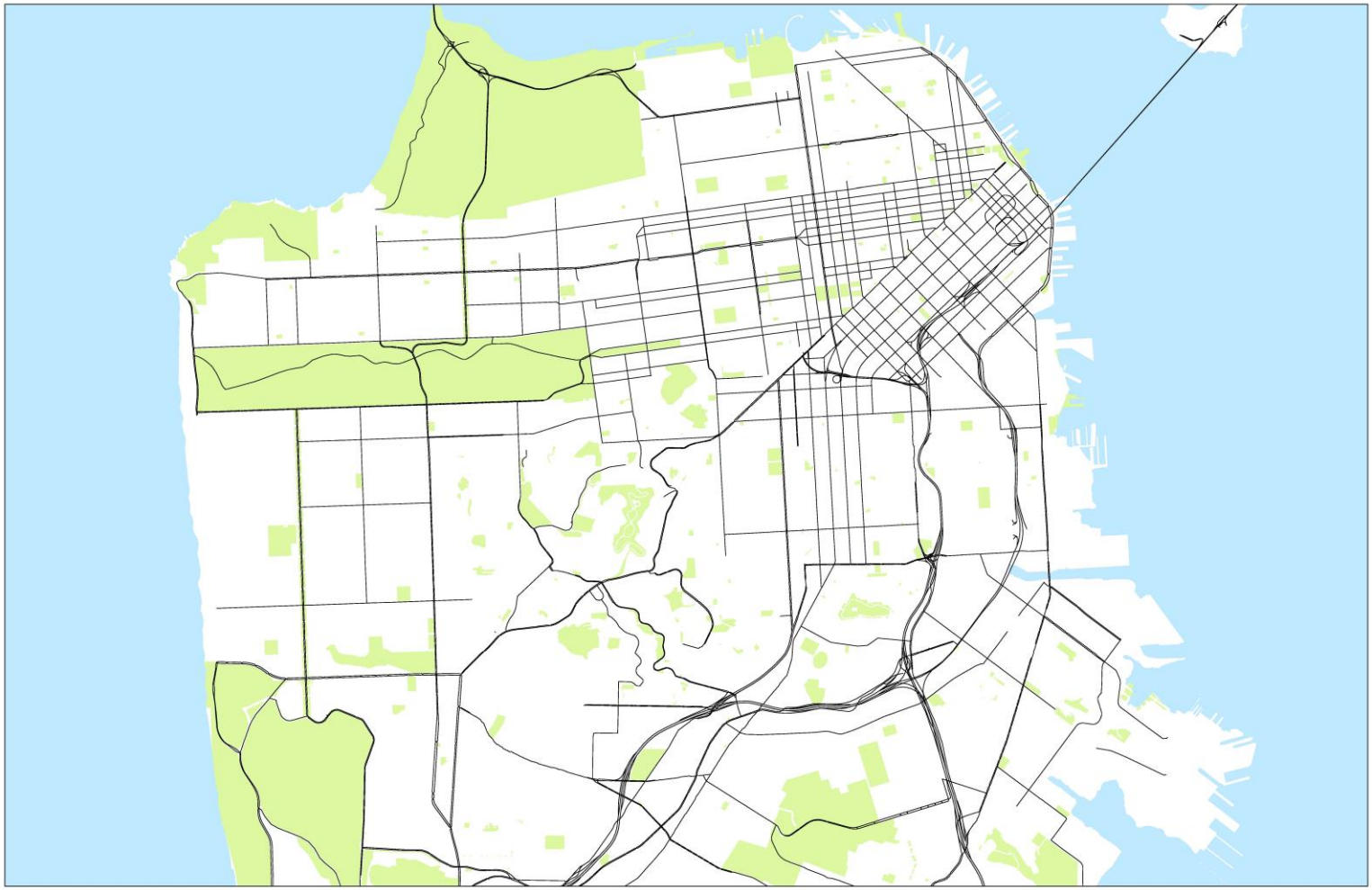
Commuter Shuttle Program

- Access to network of designated shuttle zones – 125 zones maximum
- Voluntary participation
- Cost-neutral, because state law won't allow more
  - $2.1 million in permit fees through August 2016

Pilot and Program

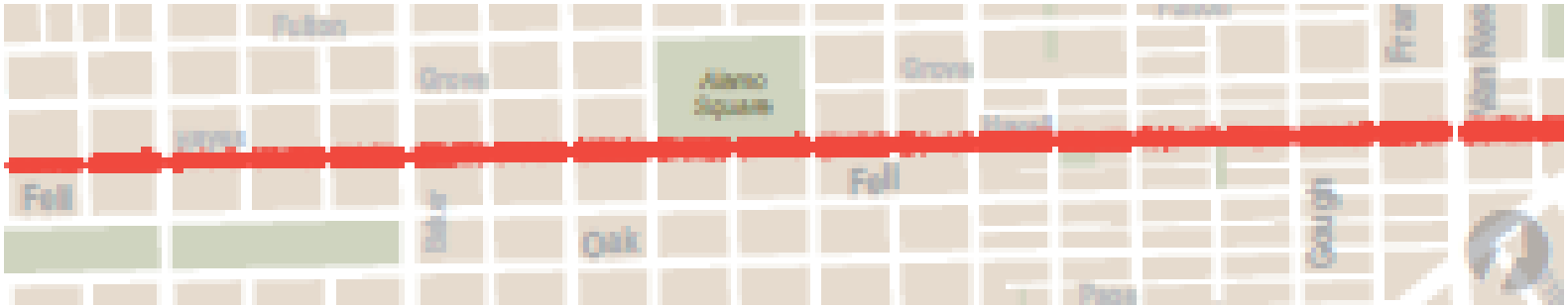
	Pilot	Program
Permitted Companies	16	17
Trips	76% intercity	86% intercity
Daily Riders	8,500	9,800
Daily Stop Events	3,200	3,200
Daily Vehicles	300	360-390
Resident Complaints	On average 30 a month	On average 30 a month

Large Vehicles Restricted to Arterials



Shuttle Travel on Non-Arterials Minimized

April 2016



August 2016

Shuttles on Hayes Street (restricted)

Loading

- 110 total zones (max of 125)
- Stops made in shared Muni zones
  - Pilot: 72%
  - Program: 57%
- Stops made on non-arterial streets
  - Pilot: 26%
  - Program: 9%

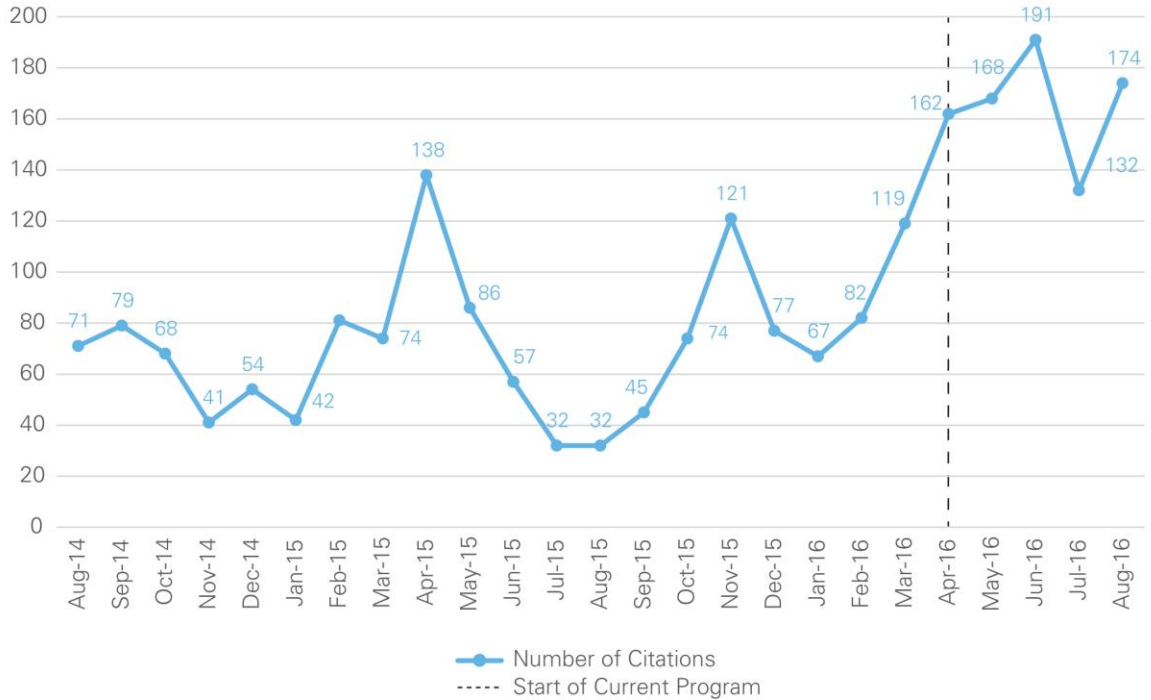
Clean Fleet Requirements

Meet 2012 emissions standards or better

- Pilot: 59%
- Program: 76%

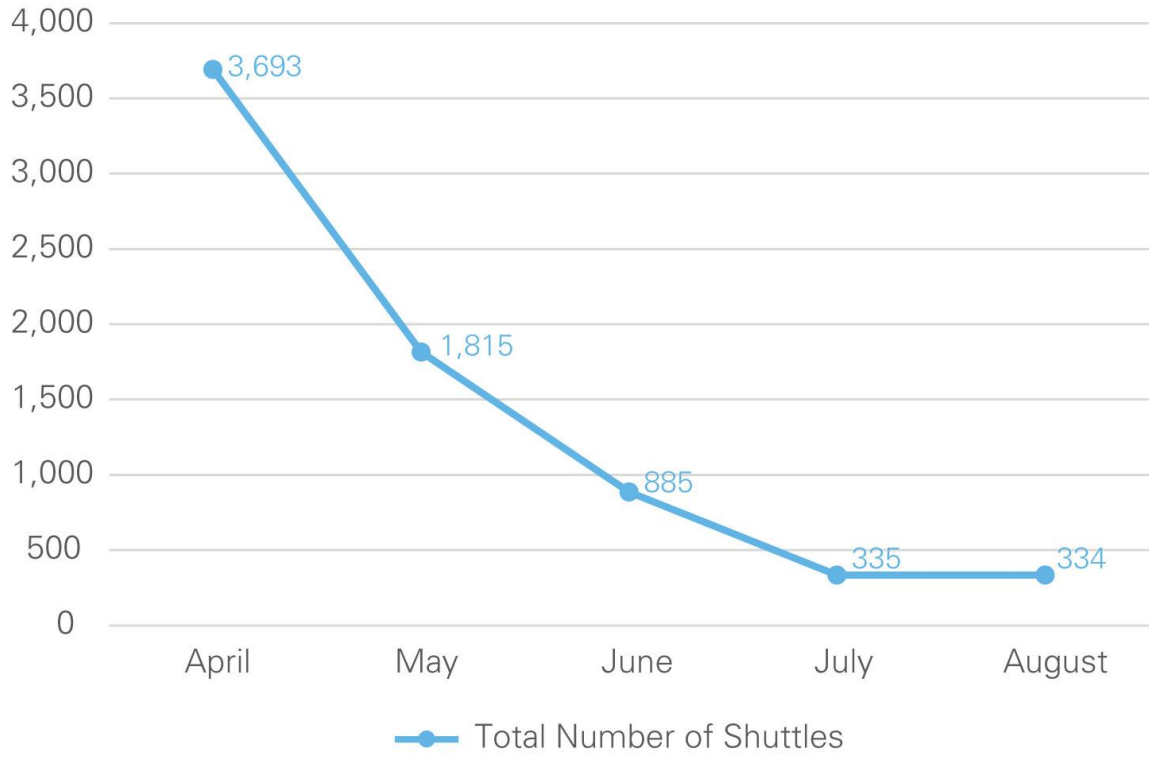
Dedicated Enforcement Team

- Dedicated team of parking control officers (PCOs)
  - Monthly average of 165 citations issued since April
  - Monthly average of $29,255 in citation revenue



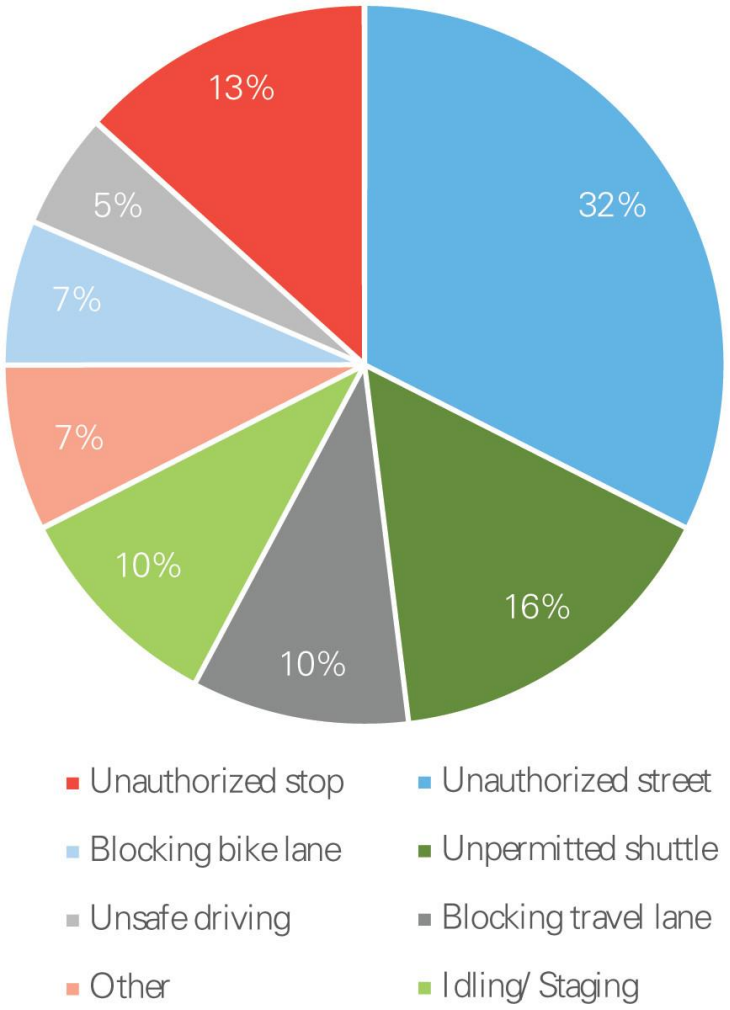
Admin Fees Collected for Travel on Restricted Streets

- $250 each
- $514,000 in penalties since April



Complaints

- 20 - 30 complaints each month
- Complaints shared with operators and PCOs
- Program adjusted based on feedback



Program Challenges

- Lack of stop coverage in select areas
- Concentrated impact on select corridors
- Discontinuity in arterial network
- Enforcement resources
- Policy maker request for consideration of a hub approach

Looking Forward

- Continued enforcement, dynamic to changing conditions
- Stop coverage
- Dispersion of shuttle volumes
- Expand data analysis capabilities

Timeline

- Current program authorized through March 31, 2017
- MTAB proposal targeted for early 2017

Impacts of the Program

- Program has succeeded in that there are:
  - Reduced Muni conflicts
  - Fewer shuttles on smaller streets
  - Cleaner vehicles
  - Reduced potential for service disruption
  - Resources dedicated to enforcement

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San Francisco County Transportation Authority
1455 Market Street, 22nd Floor
San Francisco, California 94103
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Memorandum

Date: 11.22.16

RE: Citizens Advisory Committee
November 30, 2016

To: Citizens Advisory Committee

From: Anna LaForte – Deputy Director for Policy and Programming

Subject: **ACTION** – Adopt a Motion of Support for the Allocation of $6,507,592 in Prop K Funds, with Conditions, for Five Requests, Subject to the Attached Fiscal Year Cash Flow Distribution Schedules

Summary

As summarized in Attachments 1 and 2, we have five requests from the San Francisco Municipal Transportation Agency (SFMTA) totaling $6,507,592 in Prop K funds to present to the Citizens Advisory Committee. The SFMTA has requested $4.3 million to complete the planning and environmental phases for the Geneva-Harney Bus Rapid Transit project, which was a development commitment for the Candlestick/Hunters Point Shipyard development. The SFMTA has also requested $540,000 to study the feasibility of extending the T-Third light rail line from Chinatown to North Beach and the Fisherman's Wharf area; $718,215 to replace 27 paratransit vans that have reached the end of their useful lives; and $634,600 to replace power and communications wiring in the Muni Metro subway at Van Ness Station. Finally, the SFMTA has requested $276,603 in Neighborhood Transportation Improvement Program capital funds for the first phase of street improvements recommended in the Transportation Authority's Alemany Interchange Improvement Study.

BACKGROUND

We have received five requests for a total of $6,507,592 in Prop K funds to present to the Citizens Advisory Committee (CAC) at its November 30, 2016 meeting, for potential Board approval on December 13, 2016. As shown in Attachment 1, the requests come from the following Prop K categories:

- Bus Rapid Transit/Transit Preferential Streets/MUNI Metro Network
- Other Transit Enhancements
- Vehicles – Muni
- Guideways – Muni
- Visitacion Valley Watershed
- Upgrades to Major Arterials

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

DISCUSSION

The purpose of this memorandum is to present five Prop K requests totaling $6,507,592 to the CAC

and to seek a motion of support to allocate the funds as requested. Attachment 1 summarizes the 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 attached Allocation Request Forms.

Staff Recommendation: Attachment 3 summarizes the staff recommendations for the requests, highlighting special conditions and other items of interest.

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

ALTERNATIVES

1. Adopt a motion of support for the allocation of $6,507,592 in Prop K funds, with conditions, for five requests, subject to the attached Fiscal Year Cash Flow Distribution Schedules, as requested.
2. Adopt a motion of support for the allocation of $6,507,592 in Prop K funds, with conditions, for five requests, subject to the attached Fiscal Year Cash Flow Distribution Schedules, with modifications.
3. Defer action, pending additional information or further staff analysis.

FINANCIAL IMPACTS

This action would allocate $6,507,592 in Fiscal Year (FY) 2016/17 Prop K sales tax funds, with conditions, for five requests. The allocations would be subject to the Fiscal Year Cash Flow Distribution Schedules contained in the attached Allocation Request Forms.

Attachment 4, Prop K Allocation Summary – FY 2016/17, shows the total approved FY 2016/17 allocations and appropriations to date, 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 proposed FY 2016/17 budget to accommodate the recommended actions. Furthermore, sufficient funds will be included in future budgets to cover the recommended cash flow distribution for those respective fiscal years.

RECOMMENDATION

Adopt a motion of support for the allocation of $6,507,592 in Prop K funds, with conditions, for five 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 Allocation Summary – FY 2016/17

Enclosure:

1. Prop K/Prop AA Allocation Request Forms (5)

Attachment 1: Summary of Applications Received

						Leveraging			
Source	EP Line No./ Category [1]	Project Sponsor [2]	Project Name	Current Prop K Request	Total Cost for Requested Phase(s)	Expected Leveraging by EP Line [3]	Actual Leveraging by Project Phase(s) [4]	Phase(s) Requested	District
Prop K	1, 16, 27	SFMTA	Geneva-Harney BRT	$ 4,338,174	$ 4,404,612	varies	2%	Planning, Environmental	10, 11
Prop K	16	SFMTA	T-Third Phase 3 Feasibility Study	$ 540,000	$ 1,250,000	74%	57%	Planning	3
Prop K	17M	SFMTA	Replace 27 Paratransit Vans	$ 718,215	$ 2,666,535	84%	73%	Design, Procurement	Citywide
Prop K	22M	SFMTA	Subway Wiring - Van Ness Station	$ 634,600	$ 3,173,000	78%	80%	Construction	5
Prop K	30	SFMTA	Alemany Interchange Improvement Phase 1 [NTIP Capital]	$ 276,603	$ 276,603	83%	0%	Design, Construction	9
			TOTAL	**$ 6,507,592**	**$ 11,770,750**	**50%**	**45%**		

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] Acronym: SFMTA (San Francisco Municipal Transportation Agency).

[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	Project Description
1, 16, 27	SFMTA	Geneva-Harney BRT	$ 4,338,174	The Geneva-Harney Bus Rapid Transit (BRT) line is a proposed rapid transit service between Balboa Park BART/Muni Station and Hunters Point Shipyard that will provide existing and future neighborhoods along the San Mateo-San Francisco County border with a bus connection to the border area's key regional transit system hubs. Specifically, BRT service was a development commitment for the Candlestick/Hunters Point Shipyard development. Funding is requested to finish the planning phase and complete the environmental phase of the project's Central Segment between Executive Park and the Daly City/San Francisco border near the Cow Palace. Environmental clearance is anticipated by June 2019 with the project open for use by 2023.
16	SFMTA	T-Third Phase 3 Feasibility Study	$ 540,000	Requested funds will leverage $710,000 in Prop B General Funds to study the feasibility of extending T-Third light rail transit service from Chinatown to North Beach and the Fisherman's Wharf area. Building on the findings in the T-Third Phase 3 Initial Study (2015), SFMTA will develop and analyze route alignment concepts (surface and subway), station locations, land use and economic development issues within the study area, cost estimates and funding strategies. SFMTA expects to start work in December 2016 and will conduct extensive community and stakeholder outreach as part of this project. Any decision to further advance the T-Third Phase 3 will be made within the context of a Transit Modal Study that will launch in summer 2017 as part of the multi-agency ConnectSF process (http://connectsf.org/). The goal of the modal study is to identify the City's next transit expansion priorities.

Attachment 2: Brief Project Descriptions [1]

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Requested	Project Description
17M	SFMTA	Replace 27 Paratransit Vans	$ 718,215	Funds will leverage $1.9 million in federal funds to develop specifications and procure replacements for twenty-seven Class B paratransit vans that have reached the end of their useful lives. Each new 22-foot van will provide seating for up to 12 passengers and 2 wheelchair positions. SFMTA's fleet of 112 paratransit vans are used for its SF Access service, which provides pre-scheduled, shared-ride door-to-door service to persons with disabilities who are unable to independently ride fixed-route transit. SFMTA expects to begin procuring the new vehicles by June 2017 and to have the new vehicles in service by December 2017.
22M	SFMTA	Subway Wiring - Van Ness Station	$ 634,600	Requested funds will leverage $2.5 million in federal funds to replace power and communications wiring in the Muni Metro subway at Van Ness Station. The wiring, which powers and controls critical wayside equipment (track switches, signals, and Automatic Train Control System sensors), has become unstable and must be replaced to maintain safe and reliable subway service. The project will not require interruption of subway service since most of the work will take place during non-revenue hours. SFMTA anticipates project completion by June 2018.

Attachment 2: Brief Project Descriptions [1]

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Requested	Project Description
30	SFMTA	Alemany Interchange Improvement Phase 1 [NTIP Capital]	$ 276,603	Neighborhood Transportation Improvement (NTIP) funds will be used to implement Phase 1 recommendations from the Transportation Authority's Alemany Interchange Improvement Study (also NTIP funded), including a road diet of reducing vehicle travel lanes from six to four, a buffered bike lane, painted bulb outs (at Alemany/San Bruno), a painted left turn bike box (at Alemany/Bayshore), painted conflict markers, and upgraded sharrows. This project will improve multimodal accessibility, connectivity, and safety at this dangerous interchange. Design is anticipated to be complete by December 2017 with the project open for use by March 2018.
		TOTAL	**$ 6,507,592**	

[1] See Attachment 1 for footnotes.

Attachment 3: Staff Recommendations [1]

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Recommended	Recommendation
1, 16, 27	SFMTA	Geneva-Harney BRT	$ 4,338,174	**Multi-phase allocation** is recommended to enable the SFTMA to quickly finish up the planning/preliminary engineering phase and to transition smoothly to the environmental phase. The SFMTA estimates that the environmental clearance phase needs to start in the next few months to enable the project to meet the 2023 date to start operations. **5-Year Prioritization Program (5YPP) Amendments:** The recommended allocation is contingent upon amendments to three 5YPPs as follows: 1.) Amend the Transit Enhancements 5YPP to add the subject project and program $1,983,175 in funds deobligated from an allocation made in a previous 5YPP cycle to the Automatic Fare Collection Program to the subject project. 2.) Amend the Bus Rapid Transit/Transit Preferential Streets/Muni Metro Network 5YPP to add the subject project and program $540,000 from the Muni Forward Implementation of TEP project to the subject project. SFMTA will still have sufficient programming (over $3.3 million) to advance the next generation of Muni Forward priorities in the near term. 3.) Amend the New and Upgraded Streets Visitacion Valley Watershed 5YPP to program $500,000 from the Bi-County - Interim Solutions Placeholder project to the subject project. See attached 5YPP amendments for details.
16	SFMTA	T-Third Phase 3 Feasibility Study	$ 540,000	**5YPP Amendment:** The recommended allocation is contingent upon a concurrent amendment of the Transit Enhancements 5YPP to add the project with funds deobligated from a previous 5YPP cycle. See attached 5YPP amendment for details. Prior to release of the draft final report in December 2017, SFMTA will present key findings and recommendations to the SFCTA Citizens Advisory Committee and Board of Commissioners. The SFCTA staff or a designated oversight consultant will participate in the study technical advisory committee.

Attachment 3: Staff Recommendations [1]

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Recommended	Recommendation
17M	SFMTA	Replace 27 Paratransit Vans	$ 718,215	**5YPP Amendment:** The recommended allocation is contingent upon a concurrent amendment of the Vehicles-Muni 5YPP to add the subject project and re-program $718,215 in unneeded funds deobligated from the Replace 50 40-foot Neoplan Motor Coaches project to the subject project in FY 2016/17. See attached 5YPP amendment for details.
22M	SFMTA	Subway Wiring - Van Ness Station	$ 634,600	
30	SFMTA	Alemany Interchange Improvement Phase 1 [NTIP Capital]	$ 276,603	We are recommending a **multi-phase allocation** for design and construction phases given the straightforward nature of the scope (i.e. striping) and short duration of the construction phase.
		TOTAL	**$ 6,507,592**	

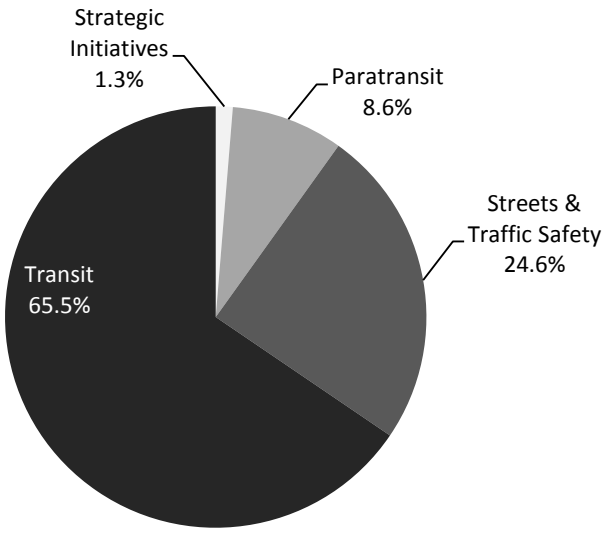
[1] See Attachment 1 for footnotes.

Attachment 4.
Prop K Allocation Summary - FY 2016/17

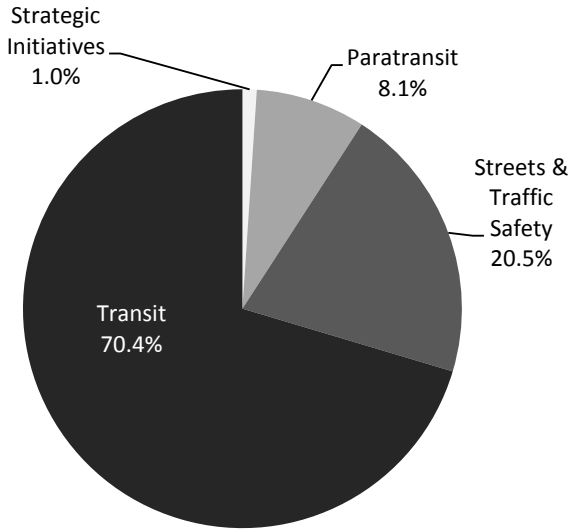
PROP K SALES TAX		CASH FLOW				
	Total	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21
Prior Allocations	$ 65,611,207	$ 39,091,305	$ 17,373,926	$ 9,145,976	$ -	$ -
Current Request(s)	$ 6,507,592	$ 1,621,388	$ 3,212,030	$ 1,674,174	$ -	$ -
New Total Allocations	$ 72,118,799	$ 40,712,693	$ 20,585,956	$ 10,820,150	$ -	$ -

The above table shows maximum annual cash flow for all FY 2016/17 allocations approved to date, along with the current recommended

Investment Commitments, per Prop K Expenditure Plan



Prop K Investments To Date



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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
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Memorandum

Date: 11.22.16

RE: Citizens Advisory Committee
November 30, 2016

To: Citizens Advisory Committee

From: Joe Castiglione – Deputy Director for Technology, Data & Analysis

Subject: INFORMATION – Findings of Child Transportation Survey Report

Summary

Initiated at the request of Commissioner Tang, the Child Transportation Study research effort was led by the Transportation Authority, the Mayor's Office and the San Francisco Municipal Transportation Agency (SFMTA). The goal of the effort was to provide more in-depth and comprehensive information on school transportation issues in San Francisco and to identify potential solutions to help mitigate school commute difficulties. The issues and potential solutions were informed by an inventory and review of existing data sources, focus groups, and an in-depth survey of over 1,700 parents of Kindergarten through 5th grade children on their school commutes and preferences. This research revealed that the automobile is the dominant school commute mode, with bicycling and walking comprising less than 10% of all commutes. School commutes can be surprisingly long and complicated because they are often coordinated with other activities such as parents' or caregivers' work commutes and aftercare needs. The high share of auto usage results in congestion impacts focused around school sites at specific times of day, although the overall contribution to citywide congestion is marginal. Most critically, there was a relatively high level of dissatisfaction with school commutes, with over 60% of parents either actively seeking or being open to school commute alternatives. The study report concludes with a set of recommendations that include scoping a pilot program to offer shuttle services in a select geographic area, identification of a preferred mobile application to support carpooling to school, investment in programs that encourage bicycling and walking to school, and improving and expanding transit options to improve competitiveness with driving and reduce barriers to transit. The Study was funded by the Transportation Authority's Prop K transportation sales tax funds and the SFMTA.

BACKGROUND

San Francisco does not offer yellow school bus transportation to most students, and as a result most parents and caregivers must arrange their own transportation to school and aftercare programs. While elected officials often hear about school commute challenges and the 2013 San Francisco Transportation Plan identified school transportation as a special market warranting further study, the extent of the school commute challenge has not been well understood. The Child Transportation Survey research was initiated in order to inventory all past research on San Francisco school commutes, conduct new research on existing school commute alternatives and preferences via focus groups and a survey, and to develop recommendations for improving school commutes.

DISCUSSION

The extent of the school commute challenge in San Francisco has not been well understood because no comprehensive data sources exist that describe the existing commute patterns, issues and preferences.

While some information is available on how public school children get to school, little is known about the transportation patterns of students in private or parochial schools, nor about parent attitudes towards the school commute. In addition, no attempts have been made to quantify the impacts of school-related driving on the city's congestion problem. Finally, despite the school commute challenges faced by parents and caregivers, no study has examined whether parents are seeking alternatives to their current choices. To fill these gaps in understanding, Commissioner Tang initiated the Child Transportation Study research effort which was led by the Transportation Authority, the Mayor's Office and the San Francisco Municipal Transportation Agency (SFMTA). The Child Transportation Study set out to identify existing information on school commutes in San Francisco, provide findings regarding critical school commute questions and to propose a set of recommendations. Four key research questions included:

1. How do parents get small children to and from school?
2. What impact does school-related driving have on the transportation system?
3. What challenges do parents face when getting children to/from school?
4. How interested are parents in alternatives to their current transportation choices?

The Study was funded by the Transportation Authority's Prop K transportation sales tax funds and the SFMTA.

EXISTING INFORMATION

The first study task was a review of existing data sources and literature relevant to school transportation, including population and demographic data; enrollment data from the San Francisco Unified School District (SFSUD), the Archdiocese of San Francisco, and from private schools and school location data. Key demographic findings included:

- About 45,000 Kindergarten through 5th grade schoolchildren are enrolled in San Francisco schools
- Most children live in the west, south, and southeast parts of the city
- Schools are distributed all over the city, but relatively few are located in South of Market and northern Potrero/Dogpatch

Other existing sources that were reviewed and guided development of the survey included the SFSUD Student Commute Study, the Bay Area Parents' Survey on Reasons for Driving to School, the San Francisco Department of Public Health/Department of Environment Parent Focus Groups on Transportation to School, and the San Francisco Transportation Plan 2013 Update.

STUDY FINDINGS

Key findings for the four primary research questions included:

How do parents get small children to and from school? Most parents drive their children to school and afterschool programs, consistent with the findings of other prior studies. In addition, it was found that rates of driving are higher among those who live farther from their school, more educated populations, and residents of the central and southwestern parts of the city.

What impact does school-related driving have on the transportation system? Parents driving their children to school contributes a small amount of overall driving mileage in San Francisco, but causes localized congestion issues around specific schools during pickup and drop-off times.

What challenges do parents face when getting children to/from school? San Francisco school commutes were surprisingly long given the city's size, with about 20% of respondents having 4+ mile school commutes. Complicating matters for most parents is that the schools are not on the way to work, and that most parents have children in aftercare and therefore are picking up during rush hour. In addition, lack of transportation options is limiting choices for aftercare and enrichment programs.

How interested are parents in alternatives to their current school transportation choices? Users of public transit and long-distance commuters are most interested in alternatives to their current commute, and those walking and biking were least interested in alternatives. This reflects the fact that public transit users and long-distance commuters are less satisfied than users of other school commute modes. Those seeking alternative commute options are most interested in other buses, shuttles, or carpools, and least interested in bicycling. Interest in shuttles is highest among those with longer commute distances and those living in the southeastern section of the city, while interest in carpooling is highest among those living in the central and northwest sections of the city.

STUDY RECOMMENDATIONS

Scope a program or public-private partnership to offer shuttle service in a select geographic area on a pilot basis: Parents were most interested in shuttles as an alternative to their current commute, and many indicated at least some willingness to pay for such services. Additional research would be needed to develop a scope for a pilot program to provide shuttle services to parents.

Consider selection of a preferred mobile application to support carpooling to school: There was strong parent interest in carpooling to school, ideally supported through a mobile application. However, in order to be successful it is likely that a preferred application would need to be identified in order to ensure a critical mass of users.

Continue investment in programs that encourage bicycling and walking to school: Parents who are already walking and bicycling to school are much more satisfied with their school commute than parents who use other modes of travel, and use of non-motorized modes should be sustained.

Improve and expand transit options to improve transit competitiveness with driving and reduce barriers to transit: Despite being the second most popular mode for school commutes, the survey revealed that transit also had the highest share of dissatisfaction. It was suggested that Muni align routes to more effectively serve schools, including more "school tripper" runs and that Muni consider "family passes" to support use of Muni for escorting children to school.

ALTERNATIVES

None. This is an information item.

FINANCIAL IMPACTS

None. This is an information item.

RECOMMENDATION

None. This is an information item.

Attachment:

1. Findings of the Child Transportation Survey Report

Findings of the Child Transportation Survey

NOVEMBER 2016

SFMTA
Municipal
Transportation
Agency

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY

ACKNOWLEDGEMENTS

David Latterman of Fall Line Analytics was the primary author of this report, and led the analysis described herein.

We wish to also thank the following individuals and organizations who contributed to the development of this report.

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Candace Sue, SFMTA
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Ana Validzic, SFDPH
Shamann Walton

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REPORT DESIGN

Bridget Smith, SFCTA

Contents

Executive Summary

The K–5 school commute in San Francisco is very difficult for parents and caregivers, and stresses San Francisco's transportation network in the mornings and afternoons. While there are some data on San Francisco Unified School District students' school commute choices, no previous studies have examined whether parents are seeking alternatives to their current commute choices, or what alternatives would be most appealing. A group of city agencies and elected officials determined that a more in-depth and comprehensive study of school transportation was needed to identify potential solutions to mitigate school transportation difficulties.

Guided by SFCTA Commissioner Katy Tang, the Mayor's Office, SFCTA and SFMTA , Fall Line Analytics led the research efforts to answer these questions for public, private, and parochial students. The research consisted of three parts:

1. Research all past San Francisco and other governmental data on school transportation, and compile a list of available data
2. Conduct three focus groups with parents and caregivers
3. Conduct an in-depth survey of parents of K–5 children on their school commutes and alternatives preferences

The research on existing governmental data was used to identify key issues to be explored in the focus group and survey. The primary focus of this report is to document the results of the survey. The child transportation survey was an online-only instrument promoted though many channels including parents' groups, listservs, school officials, paid advertisements, and news coverage. Special effort was taken to reach monolingual Chinese and Latino populations, and the African-American community.

There were 1,746 valid completed surveys that were used for analysis, divided among the three languages. Results were weighted to match proper San Francisco demographics, then cleaned and coded. The results were tabulated and analyzed by Fall Line Analytics and the SFCTA. Summary results include the following, categorized by research question.

How do parents get elementary school children to and from school and afterschool programs?

- Most parents drive their children to school and afterschool programs—57% of total respondents drive their children to school, 52% drive to pick their children up at the school bell, and 70% drive to pick their children up from afterschool programs. Rates of driving are higher among those who live farther from their school, more educated populations, and residents of the central and southwestern parts of the city. Public transit is the next most common choice, comprising between 14% and 27% of school and aftercare pickup and drop-off trips. Walking, biking, carpooling and other options all generally capture less than 10% of school commute trips.

What impact does school transportation have on the transportation system in terms of the amount of driving and congestion generated?

- Models estimate that parents driving their children to and from school generate between 60,000 and 80,000 vehicle miles per day. While this represents a relatively small amount of the approximately 9 million vehicle miles travelled in San Francisco, these trips can cause extreme congestion around schools during pickup and dropoff times.

What challenges do parents face when getting kids to school and aftercare programs?

- About 20% of respondents have school commutes longer than four miles, and approximately 30% have school commutes between two and four miles. These distances are beyond easy walk or bike commutes for most parents, forcing parents or caregivers to drive or take public transportation.
- For most parents (65%), school is not on the way to work. Many parents drive on to work after dropoff.
- Over 50% of parents have children in aftercare and the vast majority are picking up children after 5:00pm, during rush hour. Because of this difficulty, parents feel their choices are more limited for aftercare options. Many parents make aftercare decisions based solely on transportation. This suggests that aftercare transportation issues must be considered in coordination with school commute issues.

How interested are parents in alternatives to their current transportation choices, particularly choices that could reduce private automobile travel and associated congestion impacts?

- About 20% of respondents are actively interested in or currently seeking an alternative to their current commute, and 40% are open to alternatives. Users of public transit and long-distance commuters were most interested in alternatives to their current commute, and those walking and biking were least interested in alternatives.
- Those seeking alternative commute options are most interested in school buses, shuttles, or carpools, and least interested in bicycling. The survey (and focus groups) tested shuttles and carpooling extensively, as these were seen as the most likely ways to reduce traffic for longer-distance commuters. There was significant support for shuttles and carpools, as long as certain criteria are met.
- Top desired features of shuttle services included driver background checks, text upon arrival, familiarity with the driver, and serving aftercare programs. Desired features of carpools included availability of an easy-to-use app administered by the school, and that ride-matching be within each individual school community and not across multiple schools.

There was strong support among parents across all areas of the city and all demographic groups that the city should help improve school commutes. This report gives several recommendations at the end, a number of which pertain to instituting a pilot shuttle program. More research will be needed to develop such a pilot.

Finally, it is important to note that this study focused on transportation issues, and the research and subsequent recommendations pertain to the transportation network and parents' preferences. This study did not address internal public transportation protocols, or issues of school choice.

Introduction

Elected officials in San Francisco frequently hear from their constituents about the challenge of getting children to school. Like many cities around the country, San Francisco no longer offers yellow school bus transportation to many students, and as a result most parents and caregivers must arrange their own transportation to school and aftercare programs. The extent of the challenge is not well understood because no comprehensive data source exists on school transportation in San Francisco. The SFCTA's 2013 San Francisco Transportation Plan identified school transportation as a special market warranting further study."

For example, some information is available on how public school children get to school, but little is known about the transportation patterns of students in private or parochial schools, nor about parent attitudes towards the school commute. In addition, many perceive that school-related driving adds to the city's congestion problem, but no attempts have been made to quantify the impact. Finally, no previous studies have examined whether parents are seeking alternatives to their current choices, or what alternatives would be most appealing. To fill this gap in understanding, a group of city agencies and elected officials determined that more in-depth and comprehensive study of school transportation was needed to help answer the following questions:

1. How do parents get elementary school children to and from school and afterschool programs?
2. What impact does school transportation have on the transportation system in terms of the amount of driving and congestion generated?
3. What challenges do parents face when getting kids to school and aftercare programs?
4. How interested are parents in alternatives to their current transportation choices, particularly choices that could reduce private automobile travel and associated congestion impacts?

To investigate these questions, the San Francisco County Transportation Authority commissioned the Child Transportation Study in partnership with the San Francisco Mayor's Office, and at the request of District 4 Supervisor Katy Tang. A stakeholder group consisting of representatives of the San Francisco Municipal Transportation Agency (SFMTA), the San Francisco Department of Public Health (DPH), the San Francisco Department of Environment (SFE), the San Francisco Unified School District (SFSUD), the Department of Children, Youth and Families, San Francisco YMCA, and others, provided input into the study direction and products. The work was funded jointly by the SFCTA and SFMTA, and completed by Fall Line Analytics and SFCTA.

The study focused on parents of elementary school children in public, private, and parochial schools, since they have fewer transportation options than parents of older, more independent children. For younger children, parents are primarily making the decisions for them. The study included the following components:

- A brief review of previous surveys and focus groups relevant to school transportation in San Francisco;
- A review of recent school transportation work and data by several San Francisco agencies;
- Three focus groups with parents of elementary school children;
- A survey covering commute choices, opinions of the commute, and examining alternatives;
- An estimate of driving miles generated by San Francisco parents of K–5 students.

The research focused primarily on investigating parents' attitudes towards their mode of travel (car, carpool, mass transit, school bus, walk, bike, etc) to school and afterschool programs. Parent concerns regarding access issues at specific schools (e.g. localized congestion, inadequate space for pickup and dropoff, bus stop siting) were not an explicit focus, but these issues came up during focus groups.

The ultimate purpose of the survey and other components of the research was to inform whether the city should pursue additional study or partnerships to help expand school transportation options for parents of elementary school children.

The remainder of this report is organized as follows:

- Existing data and research summary
- Methodology
- Focus group summary
- Survey findings
- Recommendations

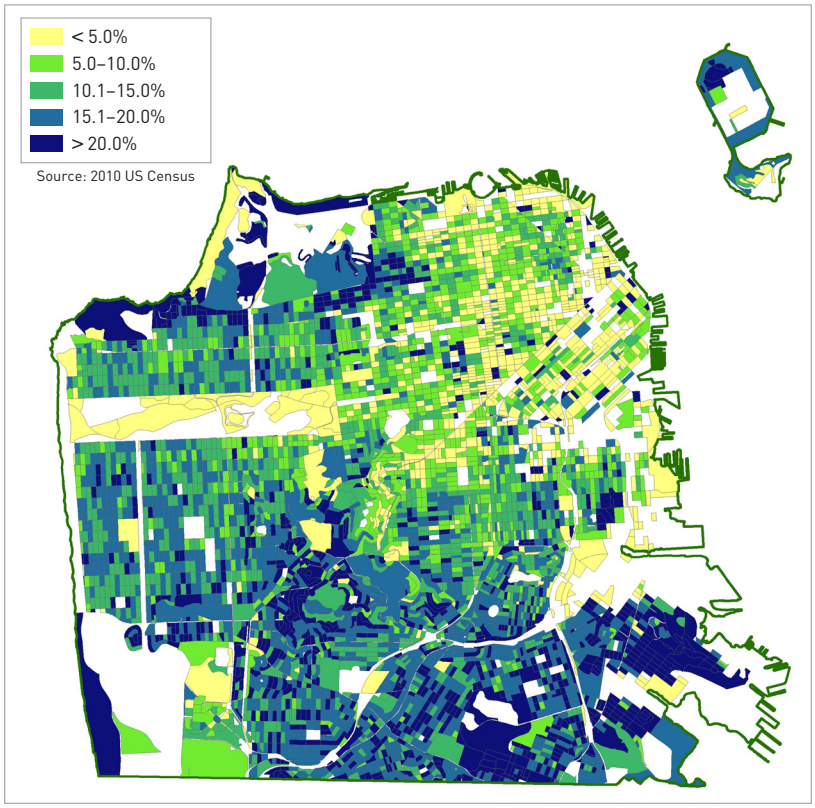
Summary of Existing Data and Research

The first study task was a brief review of existing data sources and literature relevant to school transportation in the San Francisco Bay Area, including population and demographic data from the U.S. Census; enrollment data from the SFSUD, Archdiocese of San Francisco, and from private school web sites; school location data; recent transportation survey results from San Francisco agencies; and miscellaneous other sources.

Key demographic findings include:

- About 45,000 K–5 schoolchildren are enrolled in San Francisco schools.
- Most children live in the West, South, and Southeast parts of the city (Figure 1).
- Schools are distributed all over the city, except for the South of Market (SoMa) and northern Potrero/ Dogpatch neighborhoods, which have relatively few schools (Figure 2, next page).

FIGURE 1. Percent of population age 0–18 by US Census Block



Key findings from recent, relevant surveys include:

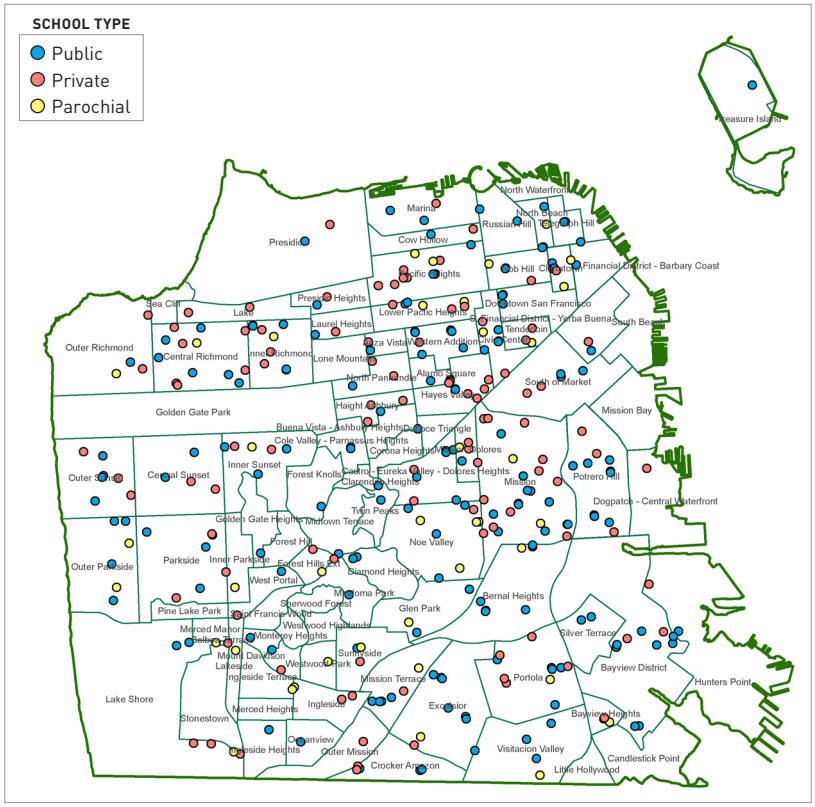
- **SFSUD Student Commute Study:** The San Francisco Unified School District regularly conducts a survey of how students in grades K, 5, 6, and 9 arrive at school. The survey results have consistently shown that a little over half of public elementary school students are driven to school by their parents, about one quarter walk to school, about 10% take public transit, and another 10% yellow school buses.[1] Very few students bicycle or carpool to school.
- **Bay Area Parents' Survey on Reasons for Driving to School:** A 2007 survey of the parents of children aged 10–14 in the East San Francisco Bay cities of Oakland, Berkeley, Albany, and Richmond found that parents who were driving their children to school a short distance (less than two miles) cited convenience and saving time as the top reason, and that rates of walking and bicycling decline with distance. The study recommended that programs to encourage walking and bicycling to school should take parental convenience and time constraints into account by providing ways children can walk to school supervised by someone other than a parent, and that schools should take a multimodal approach to pupil transportation.[2]

1 Source: http://sfsaferoutes.org/resources/commute-study/

2 Source: McDonald, N., and Aalborg, A. Why Parents Drive Children to School: Implications for Safe Routes to Schools Programs. Journal of the American Planning Association, Summer 2009, Vol. 75, No. 3.

- **San Francisco Department of Public Health / San Francisco Department of Environment Parent Focus Groups on Transportation to School.** To inform development of a new school transportation toolkit for parents, the SFDPH and SFE conducted interviews and focus groups with 33 families at five SFSUD schools. This qualitative research provided impressions of the reasons why some parents may be driving their children to school. Several parents mentioned concerns about traffic circulation around schools during pickup and dropoff, and several mentioned interest in having a mobile-phone application to support carpooling to school.

FIGURE 2. Map of San Francisco neighborhoods and locations of public, private, and parochial schools



- San Francisco Transportation Plan Update 2013. As part of the 2013 update to the county's long range transportation plan, the SFCTA and DCYF hosted a student focus group, a parent focus group, and an online survey. The survey included over 1100 completions by parents and students. Key findings from the student and parent survey mirrored those of the general population - that vehicles are often overcrowded, service can be unreliable, travel times lengthy and safety may also be concern.

Focus Groups

As part of the overall Child Transportation Survey research project, Fall Line Analytics conducted three focus groups in San Francisco to: 1) inform the design of the survey instrument and 2) better understand the detailed opinions of San Francisco parents and caregivers on the school commute. Table 1 shows the details of the three groups. The groups were moderated by David Latterman of Fall Line Analytics, in English, using a script that can be found in Appendix 1. SFCTA staff also attended the groups, which were recorded on site. The groups had four main sections: Understanding the dropoff commute, understanding the pickup commute, discussing potential alternatives, and detailing shuttles and carpools.

In all three focus groups, it was clear the participants are unhappy with their school commute. Most of the participants reported driving their children to school and from school or aftercare; a few took Muni and a couple lived close enough to walk their children to school. Drivers stated that the traffic is heavy in the morning and worse for those who have children in aftercare. In fact, the participants were making aftercare decisions based on the very difficult afternoon commute.

TABLE 1. Focus group details

LOCATION	DATE	DEMOGRAPHIC TARGET
Sunset Community Center	March 26, 2016	Chinese parents
Rooftop Elementary School	April 14, 2016	Mixed, centrally-located citywide school
Ella Hill Hutch Community Center	April 17, 2016	African-American parents and aftercare workers

Nearly all of the participants wanted to see some kind of shared transportation system to take their children to and from school/aftercare. There was

mild interest in carpooling, but the schools would need to take a large role in establishing this system. There was a lot of support for a shuttle system, especially in the Sunset and Western Addition groups, but safety was a huge concern and any system would either need to be government sponsored or provided through a public-private partnership.

Survey

The child transportation survey was intended to ascertain 1) commute modes of parents and caregivers while taking their children to and from school and afterschool programs; 2) parents attitudes towards their current mode of transportation to school and afterschool programs; and 3) parent interest in alternative transportation options. This section describes the survey methodology and key findings.

SURVEY METHODOLOGY

The survey was fielded over a period of six weeks where it was formally open from May 10, 2016 through June 24, 2016. After filtering all of the responses, there were 1,746 valid completed surveys used for analysis. The instrument can be found in Appendix 2.

Key aspects of the methodology included:

- **School type.** It was decided early on to survey parents who have kids in all school types, especially because there were limited data on the commute data and opinions of parents who send their children to private and parochial schools. As this survey was about transportation specifically and not schools themselves, it was determined that the school commute is a citywide issue and therefore affects all parents.
- **Online format supplemented by paper surveys.** There were several options available to field the survey, including telephone, live administration, online, and mail. To field this survey in Spring 2016, we determined that online was the most efficient and cost-effective mode for the survey. Moreover, it could accommodate lengthier questionnaires and more complex branching sequences. However, some paper surveys were distributed to increase response rates from under-represented populations. The survey was offered in English, Spanish, and Chinese.
- **K–5 parents only.** The survey focused on the parents of elementary school children because they face the greatest constraints when making school transportation decisions. This was limited to Kindergarten—5th grade parents only to avoid sampling parents who have children in middle schools (many San Francisco middle schools include grade 6). In the event that a parent had multiple children in elementary school, the survey instructed parents to answer questions based on their youngest child.

The study team distributed the survey via the following channels

- Facebook ads to adult San Francisco residents, including ads in English, Chinese, and Spanish
- Archidocese of San Francisco (email sent to all school principals for distribution to parents)
- Direct contacts with many public school officials with a request to distribute to parents
- Direct contact with many school Parent Teacher Associations, including the citywide PTA

In order to ensure a strong sample size from some of the harder-to-reach ethnic groups of San Francisco, the online survey was also supplemented by paper questionnaires distributed through partnerships with local community organizations such as the Bayview YMCA and other organizations in Western Addition. Project staff reached out to several non-profits serving the Latino, African-American, and Chinese communities with varying degrees of success. Dozens of elected officials were also contacted, including the Board of Supervisors and the Board of Education, to distribute the survey links to their networks.

Although over 3000 respondents began or at least opened the survey online, there were 1,746 valid completed surveys that were used for analysis, divided among the three languages. Table 2 shows the final number of valid responses were obtained.

Valid surveys were determined by several criteria, including:

- A completed instrument that included the weighting demographic variables
- Residence and a school in San Francisco
- A child in K–5
- Manual inspection for missing variables or unreliable response patterns

TABLE 2. Survey Responses by Language

LANGUAGES	TOTAL (STARTED)	VALID AFTER		
		COMPLETION AND RACE	SCHOOL AND RESIDENCE	MANUAL INSPECTION
English	3077	1763	1710	1654
Chinese	218	66	61	58
Spanish	182	34	34	34
TOTAL	3477	1863	1805	1746

The surveys were then weighted to match the demographics of San Francisco parents and residents. Results were weighted by ethnicity first (using US Census ACS 2014 5-year table of the ethnicities of children from 5–14, the age group most aligned with the students in the survey), and then by parents' level of education (US Census ACS 5-year table of education levels of San Francisco adults over age 25). A few missing values for education had to be imputed so these respondents would not be excluded. In general, the respondents who took the survey were more likely to be white and more highly educated than the normal San Francisco population, and the weights served to correct that.

Finally, the surveys were cleaned for the standardization of responses, recoded where necessary, and compiled into statistical software (SPSS) for analysis. Some variable notes:

- Home neighborhood—the survey provided 100 home neighborhood choices. Neighborhoods were defined based on a San Francisco neighborhoods map obtained from the Open Data SF web site. A neighborhood map is located in Appendix 3
- City section. The respondent's home neighborhood and school were each assigned to major geographic section of the city. See Appendix 4 for a map of city sections.
- Home to school distances. Home to school distance was estimated two ways: 1) A crow flies distance from the home neighborhood polygon centroid to the school location; and 2) using the Transportation Authority's travel modeling software. The software computed the shortest path between the center of the respondent's home neighborhood and the respondents' school location. The actual distance could vary.

FINDINGS

This section summarizes key survey findings relevant to the research questions presented earlier. Topline frequencies and selected demographic crosstabs for each question are presented in an Excel file that accompanies this report, where each question is in a separate worksheet. A full crosstab book, in pdf format, is also available upon request.

1. HOW DO PARENTS GET SMALL CHILDREN TO AND FROM SCHOOL?

Most parents drive their children to school and afterschool programs.

The survey responses indicate that the majority of respondents of school-aged children drive their children to school (57% overall). Similarly, 52% of respondents drive to pick their children up from school, and 70% from aftercare (Table 3). This number matches well with data from the San Francisco Unified School District Student

TABLE 3. Modeshare by time/place of commute

	PERCENT MODE SHARE BY PICKUP TYPE		
	DROPOFF AT SCHOOL	PICKUP FROM SCHOOL AT THE BELL	PICKUP FROM ON-SITE AFTERCARE
Driven by a family member or caregiver - only family members in the car	56.5%	52.1%	70.0%
Public transit (Muni bus, BART, or light rail)	14.0%	26.7%	18.2%
Carpool with other families	8.2%	1.6%	3.0%
Walk	7.8%	10.6%	4.1%
Other bus, like yellow school bus	7.6%	6.8%	1.9%
Bike	3.3%	0.7%	1.5%
Other (please fill in)	2.2%	0.8%	0.8%
Scooter or skateboard	0.3%	0.3%	0.0%
Taxi or rideshare service like Lyft, Uber, or Shuddle	0.1%	0.6%	0.5%
Shuttle transporting multiple children	0.1%	0.0%	0.0%

Transportation Survey,[3] which shows that 52% of public school elementary and middle school trips are made with only student and driver in the vehicle. After driving, the second most commonly selected mode to school was public transit, with 14% of respondents using this mode for dropoff and 18–27% for pickup. Nearly all other modes are under 10%.

Rates of driving are higher among those who live farther from their school, more educated populations, and residents of the central and southwestern parts of the city.

The study team used modeling software to estimate the distance of the shortest path between the center of the home neighborhood and the school site, in order to examine mode share by distance traveled. Figures 3, 4, and 5 (next page) illustrate the drive-to-school mode share by estimated distance to school, by type of commute.

Interestingly, driving rates don't linearly increase as the distance travelled get larger. For morning dropoff, distances of 3–4 miles see the largest share of driving (73%). This distance range also sees the largest share of driving for parents who pick their kids up at the school bell (82%), but for aftercare pickup the distance range with the highest driving share is 2–3 miles. This may be due to the fact that parents are likely to be coming home from work, which may influence mode choices differently than a midday pickup from school. Walking percentages are unsurprisingly the largest for the shortest distances, and public transit varies—its largest share is 30% at aftercare pickup, making for a difficult evening commute.

Rates of driving were highest in the central and southwestern parts of the city, as shown in Figure 6 (page 11) and among those with higher levels of education. Transit use also varied by city section, but walking generally did not. Other factors such as ethnicity and number of adults responsible for the school commute did not appear to be strongly related to rates of driving.

2. WHAT IMPACT DOES SCHOOL-RELATED DRIVING HAVE ON THE TRANSPORTATION SYSTEM?

Parents driving their children to school contributes a small amount of overall driving mileage in San Francisco, but causes localized congestion issues around specific schools during pickup and dropoff times.

This study was initiated in part to identify ways to reduce the need for parents driving children to school because of the perception that school-related travel is contributing significantly to congestion around the city. One desired outcome of the study was an estimate of how much driving is being generated by school related travel,

3 http://sfsaferoutes.org/resources/commute-study/

FIGURE 3. Mode share by distance for morning dropoff, 'drive alone' and 'public transit' are labeled for reference

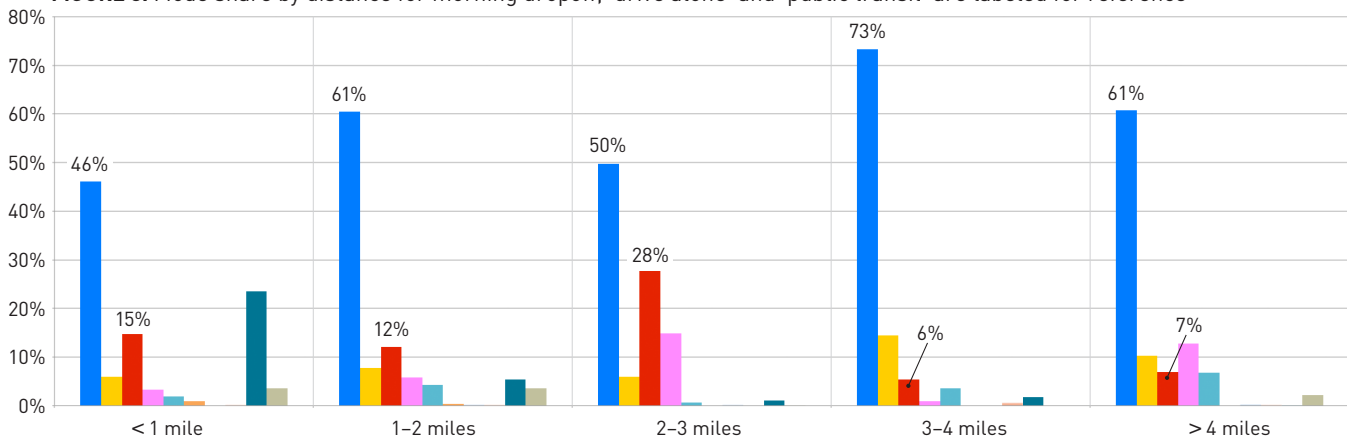


FIGURE 4. Mode share by distance for afternoon pickup at school bell, 'drive alone' and 'public transit' are labeled for reference

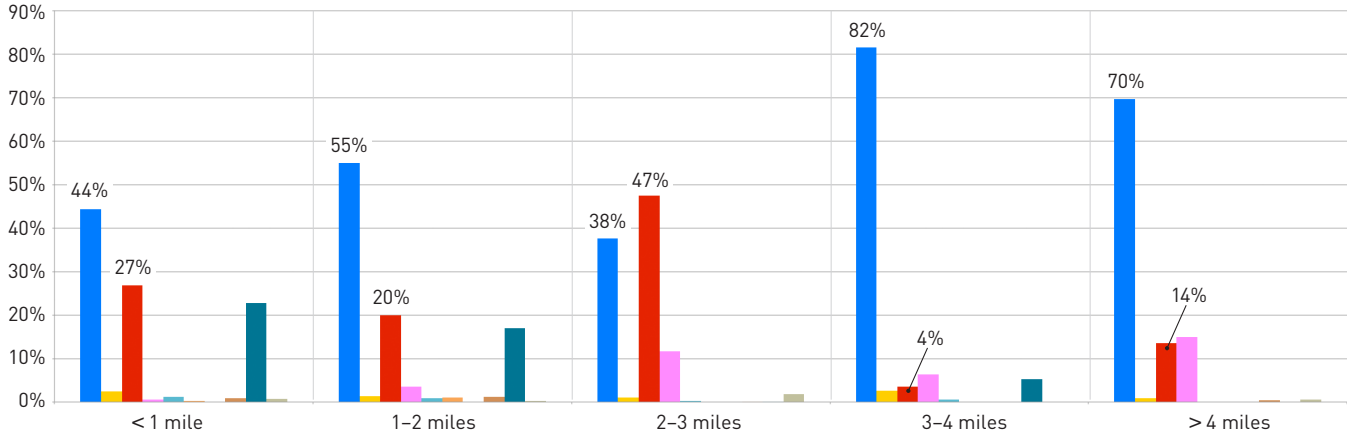


FIGURE 5. Mode share by distance for aftercare pickup at school (no aftercare), 'drive alone' and 'public transit' are labeled or reference

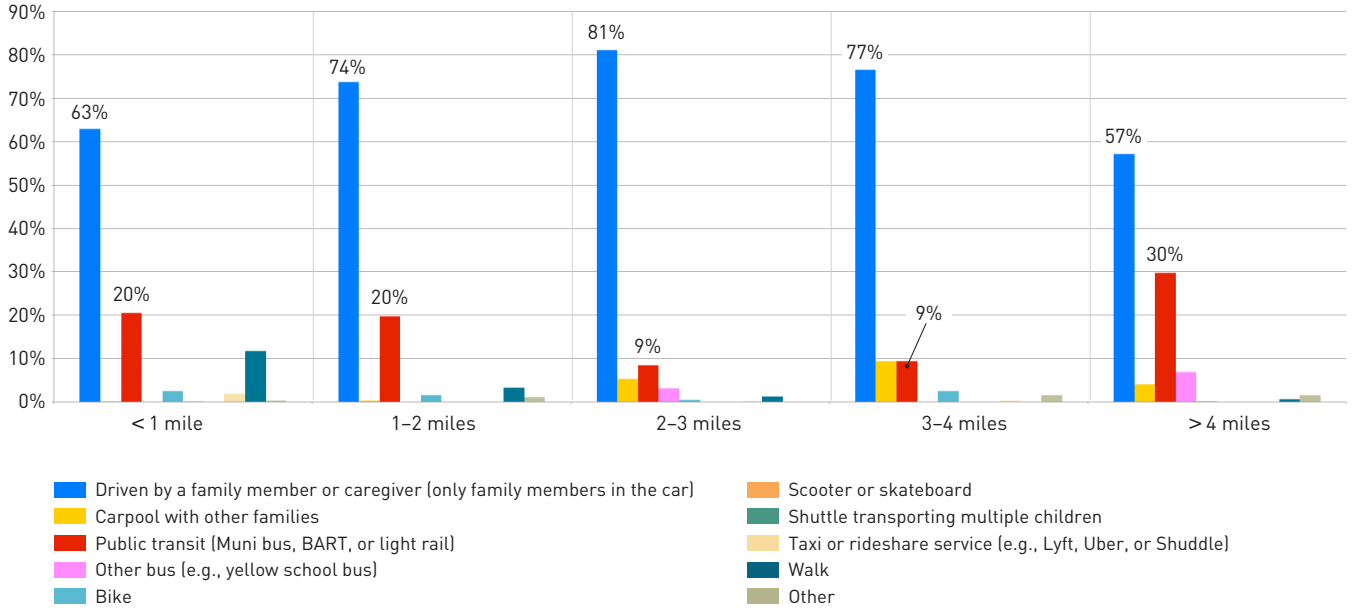
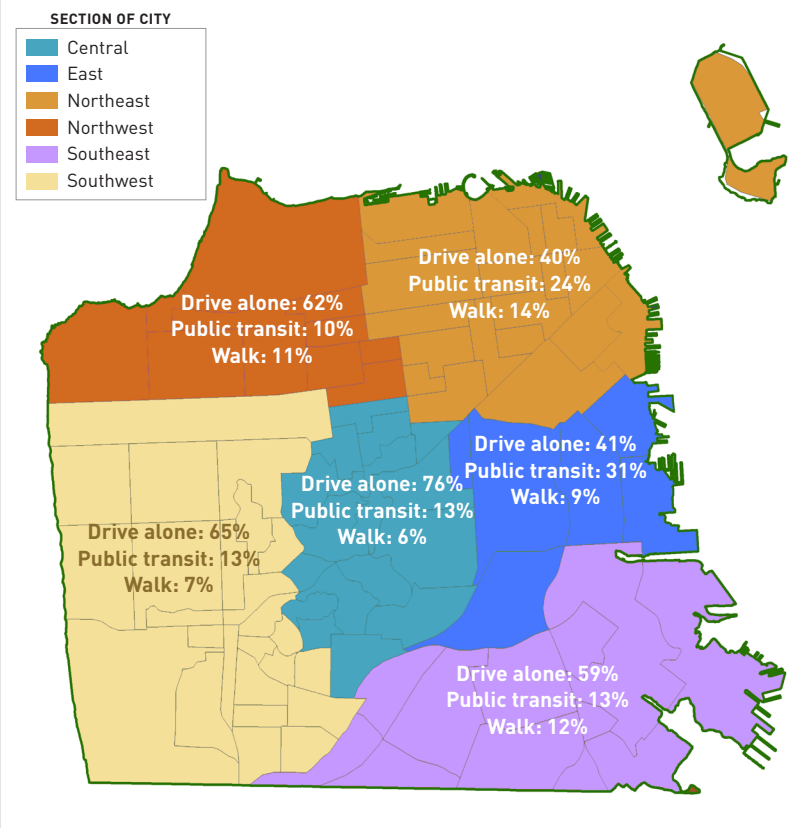


FIGURE 6. Top three modes of commuting to school by home city section



and the resulting transportation system impacts (e.g. congestion).

The study team used the survey results and other sources to estimate that approximately 60,000 miles are driven daily in San Francisco by parents taking K–5 children to and from school. See Appendix 5 for details on the assumptions used in the estimate. This is a small share of vehicle miles travelled in San Francisco, which has approximately 9 million daily vehicle miles of travel, over 3 million of which occur during morning and evening peak commute periods combined.[4]

The team did not attempt to directly model the congestion impacts of school related travel but they are likely minimal relative to other sources. However, congestion may still be significant in the immediate vicinity of different schools during pick up and dropoff times. During focus groups for this and prior studies,[5] several individuals noted frustration with congestion issues during pickup and dropoff, and a need for improved vehicle circulation around certain schools.

It is important to note, however, that most San Francisco traffic—as a rule—moves towards downtown in the morning and away from downtown in the afternoon. Children in San Francisco generally live away from downtown, and travel either to their local school or a school not located downtown. School commute traffic may therefore contribute more to localized neighborhood congestion.

Table 4 illustrates roughly where school-related travel is occurring by showing a matrix of the share of respondents by their school city section and home city section. The largest percentage of school location for every home

4 Source: Caltrans - California 2013 Public Road Data - Table 6, Daily Vehicle Miles of Travel Estimates by Jurisdiction, and SFCTA SF CHAMP Travel Forecasting Model 2012 base year estimate.

5 Including recent focus groups competed by the San Francisco DPH and San Francisco Department of Environment to inform development of a school transportation toolkit.

TABLE 4. Percentages of school city section attendance by home city section (column percentages)

	CITY SECTION FOR HOME NEIGHBORHOOD					
CITY SECTION FOR SCHOOL	CENTRAL	EAST	NORTHEAST	NORTHWEST	SOUTHEAST	SOUTHWEST
Central	50.2%	32.6%	23.8%	17.2%	11.7%	18.0%
East	18.9%	39.1%	17.1%	8.0%	25.2%	5.4%
Northeast	10.3%	7.4%	44.9%	26.6%	6.1%	6.8%
Northwest	9.0%	1.5%	12.0%	41.0%	0.4%	6.4%
Southeast	2.8%	16.1%	0.9&	0.1%	45.4%	2.6%
Southwest	8.8%	3.4%	1.3%	7.0%	11.3%	60.9%

neighborhood is the same neighborhood, meaning a lot of the travel to schools is localized. However, a large percentage of east section parents travel to the central section (33%), and many southeast parents travel to the east section (25%).

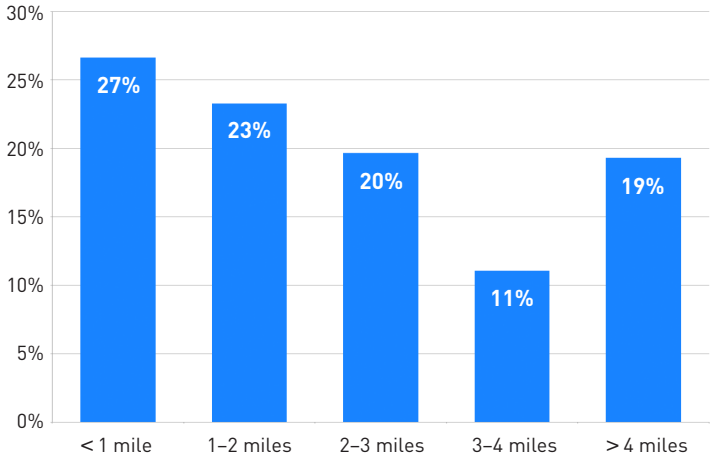
3. WHAT CHALLENGES DO PARENTS FACE WHEN GETTING CHILDREN TO/FROM SCHOOL?

Both the surveys and focus groups help illuminate some of the challenges faced by parents in transporting children to school. One clear challenge is the fact that as noted above, the majority of parents are shouldering the responsibility of taking children to school themselves in the family's private car. Additional challenges are discussed below.

About 20% of respondents have 4+ mile school commutes

As discussed above, the study team estimated the distance between the home neighborhood to school, and found that about half of respondents live within about 2 miles of their school, but a significant share—almost 20%—are living four or more miles away (Figure 7). Many of the longest-distance trips were made by individuals living in the southwestern part of the city, which has the second-highest percentage of parents driving their children to school.

FIGURE 7. Share of respondents by approximate distance between home and school site



Estimated mileage between home neighborhood and school site
Note: Mileage estimated using modeling software that computed the shortest route between the center of the home neighborhood and the school site.

Table 5 shows average distance travelled by school type and by city section, which shows private school children are traveling the farthest distance (2.7 miles). Southwest residents going to charter schools are traveling the farthest overall (4.5 miles), and the shortest distances are by Central parochial and charter parents (1.3 miles).

For most parents, school is not on the way to work .

Respondents were asked if their child's school was on the way to their workplace. About 42% reported that school was a "little out of the way" and 23% thought it was "very out of the way". These results did not vary significantly across demographic or geographic groups, and confirm that most parents are detouring to take their children to school.

Most parents have children in aftercare and therefore are picking up during rush hour.

Many respondents indicated they had children in after care either every day (46% respondents) or some days (13% of respondents). These parents contend with the additional challenge of rush hour traffic. Figure 8 (next page) shows that over two-thirds of respondents picked up their children from aftercare after 5:00 PM, in the middle of rush hour. In all of the focus groups, this was also mentioned as a particularly difficult challenge.

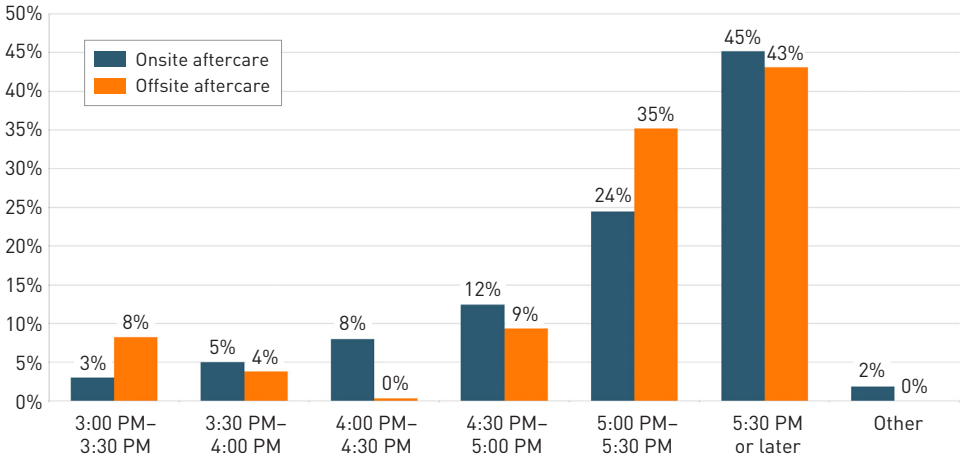
TABLE 5. Mean distance traveled by school type and home geography

TYPE OF SCHOOL	TOTAL	CENTRAL	EAST	NORTHEAST	NORTHWEST	SOUTHEAST	SOUTHWEST
Public	2.4	1.4	2.1	1.5	2.5	3.1	2.5
Private	2.7	2.7	2.4	2.3	2.9	3.2	3.0
Parochial	2.0	1.3	1.9	3.6	1.8	1.7	1.8
Southwest	2.5	1.3	1.3	2.8	5.5	3.0	4.5

Lack of transportation options is limiting parents' choices for aftercare and enrichment programs.

Survey respondents were asked whether there are aftercare options (e.g. cultural, arts, sports, or academic programs) throughout San Francisco that they would like to pursue but can't because of lack of convenient transportation. About 65% of respondents indicated at least one type of aftercare program that they would like to do but can't because of transportation constraints. The challenge of aftercare is also revealed with the responses to "How important it is that a transportation system reaches these aftercare options (as well as getting children to and from school)", where 72% responded either 'very important' or 'extremely important'.

FIGURE 8. Aftercare pickup times from onsite and offsite



4. HOW INTERESTED ARE PARENTS IN ALTERNATIVES TO THEIR CURRENT SCHOOL TRANSPORTATION CHOICES?

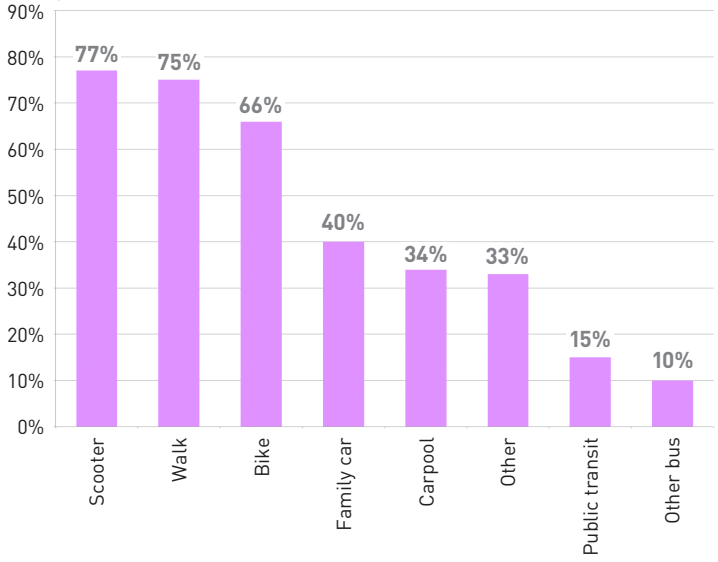
About 20% of respondents are actively interested in or currently seeking an alternative to their current commute, and 40% are open to alternatives.

When asked about their overall satisfaction with the school commute, almost 40% said that their current mode of travel is the best option for their family and probably not going to change. Another 40% said they would be open to other possibilities, and the final 20% said they were either actively interested in or currently seeking alternatives to their current commute.

Users of public transit and long-distance commuters were most interested in alternatives to their current commute, and those walking and biking were least interested in alternatives.

Figure 9 shows overall commute satisfaction, as indicated by the percentage who said that their commute mode was the best option for their family and not going to change, was highest for those who walk and bike (75% and 66% respectively), followed by drivers and carpoolers (40% and 34%), and last by public transit users (15%). Public transit users were disproportionately zero-vehicle households; in other words, the transit dependent.

FIGURE 9. Percent of respondents—by commute mode—indicating that their commute option was the best for them and not going to change



Transit users and longer distance commuters were less satisfied than others.

The median commute distance among those who said they are "actively thinking about or

currently exploring" ways to change their commute was about 2.5 miles, or about 25% longer than the overall median of 2.0 miles.

Those seeking alternative commute options are most interested in other buses, shuttles, or carpools, and least interested in bicycling.

Overall, survey respondents indicated the most interest in 'other buses' (57%), shuttles (54%), and carpooling (50%) as alternatives to their current mode of travel to school. Respondents were least interested in bicycling, with about 70% indicating that they had never tried bicycling and were not interested in doing so. This result was consistent for the sub-group of individuals who said they were either actively thinking about changing or currently exploring ways to change their commute.

Interest in shuttles is highest among those with longer commute distances and those living in the southeastern section of the city.

The survey also asked a series of questions about shuttles and carpooling specifically. This was done to provide more detailed options on these alternatives, which may be the only viable alternatives to driving for parents who live outside of a convenient walking or bicycling distance from their school.

FIGURE 10. Percent of respondents, by home city section, willing to pay something for a shuttle service

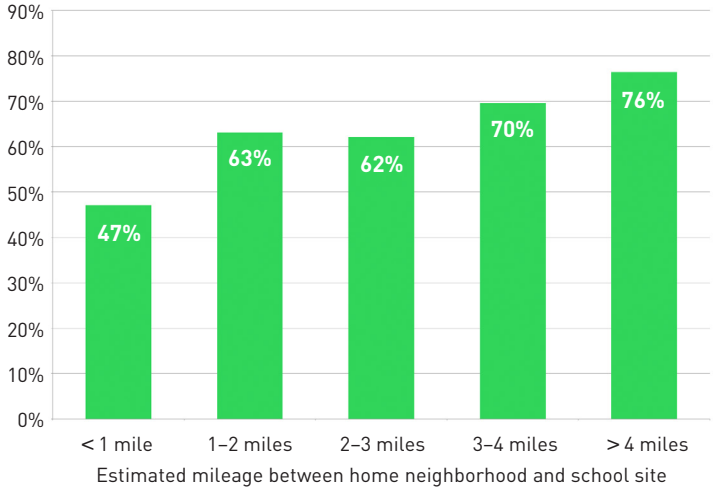
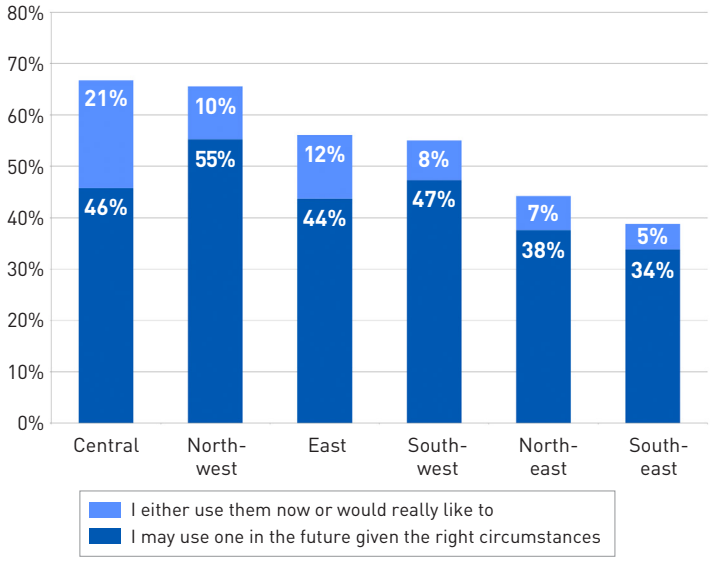


FIGURE 11. Interest in carpooling and home city section



Regarding shuttles, about 62% of respondents said that they may use or would like to use shuttles in the future, and about the same percentage indicated being willing to pay something to use a shuttle service (40% said between $1 and $25 weekly; almost 20% said between $25 and $50). Willingness to pay was highest for those with longer commutes (Figure 10) but was relatively similar geographically. The percentage of respondents willing to pay something for a shuttle service was between 55% and 63% for every home city section except the northwest, where the percentage was 47%.

Interest in carpooling is highest among those living in the central and northwest sections of the city.

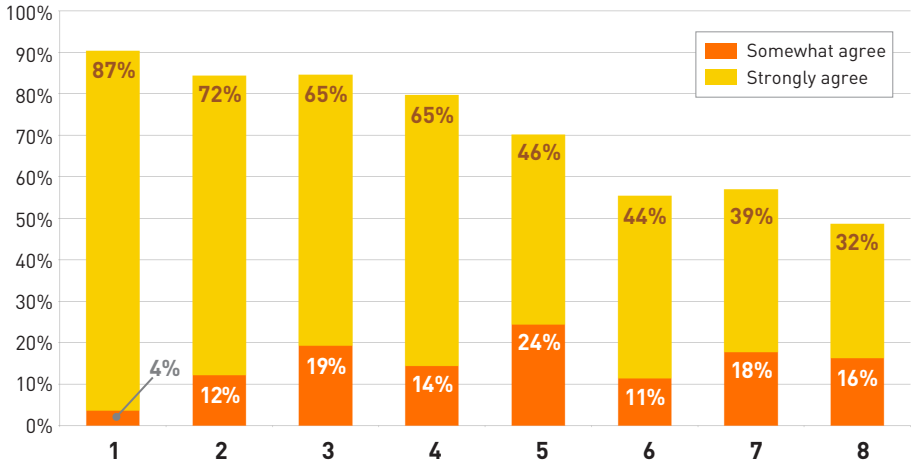
About 50% of respondents said they may use or would like to use carpooling in the future, and interest was greatest in the central and northwest sections of the city (Figure 11).

Top desired features of shuttle services included driver background checks, text upon arrival, familiarity with the driver, and serving aftercare programs.

The survey tested agree/disagree statements for specific features of shuttles and carpools, which are summarized in Figures 12 and 13 (next page), respectively. For shuttles, top desired attributes included background checks for the shuttle driver, communication with parent via texts upon the child's arrival at school, having a consistent/familiar driver, and having the shuttle provide service to aftercare in addition to school. Top desired

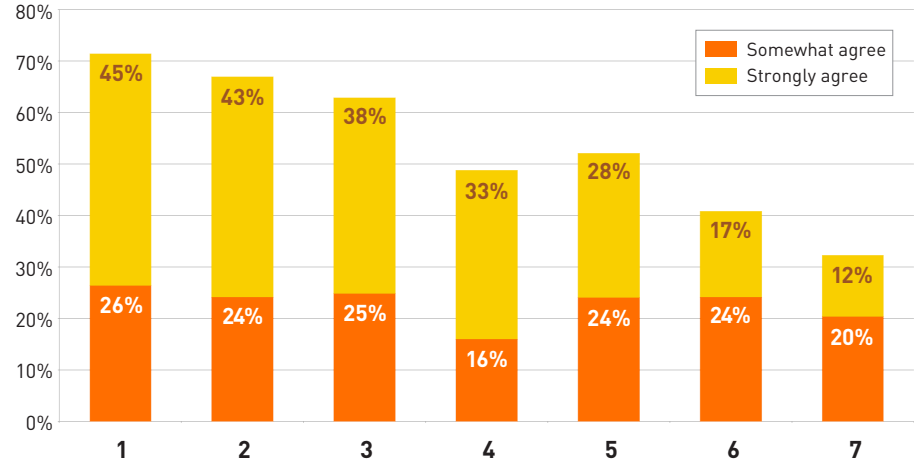
features of a carpooling program included having carpooling be available in both the morning and afternoon, including only other children from the same school (not nearby schools), and having a mobile application to help with finding carpools.

FIGURE 12. 'Somewhat' and 'strongly' agree percentages for shuttle attributes, ordered by 'total agree'



1. The driver needs to have a complete background check
2. I should get a text upon safe arrival to or from school
3. We should have the same driver every day, and have a chance to meet him/her
4. The shuttle should do an aftercare circuit from my school
5. The shuttle should come straight to my door before and after school
6. The shuttle should only transport my child(ren) to and from school
7. Children should be picked up from a nearby bus stop no more than five minutes away
8. The driver must be a government employee

FIGURE 13. 'Somewhat' and 'strongly' agree percentages for carpool attributes, ordered by 'total agree'



1. A carpool should be available for both mornings and afternoons
2. A carpool should only be with kids of my school
3. I'd like an app to help run the carpool
4. A carpool system should be managed or administered by the school
5. A carpool would be more valuable in the morning
6. I'd be willing to drive in a carpool
7. A carpool should include close-by schools, not just my own

Recommendations and next steps

The survey results and focus groups paint a picture of the difficult school commute that faces many San Francisco parents of young children. Parents must take time from busy schedules to transport children to school and aftercare programs, many travel several miles during congested periods, and most must detour out of the way to work to complete their dropoff. These results varied little by respondent demographic characteristics or geography, (with a few exceptions as noted previously), showing that the school transportation problem is affecting all types of families across the city.

Because the commute is so challenging, most parents are interested in alternatives to their current situation, with about 60% indicating that they are either interested in or actively seeking an alternative to their current mode of travel to school. Parents are most interested in shared transportation options, such as shuttles and carpools, that take the burden of the school commute off of their shoulders, and want options that will connect them not just to school but to aftercare programs. The needs of transit-dependent families also warrants special

attention. Taken together, these findings indicate that further work to explore expansion of school transportation alternatives is needed and appropriate. The recommendations below suggest how alternatives could be developed.

Scope a program or public-private partnership to offer shuttle service in a select geographic area on a pilot basis.

Parents were most interested in shuttles as an alternative to their current commute, and many indicated at least some willingness to pay for such services. Additional research would be needed to develop a scope for a pilot program to provide shuttle services to parents. This effort could include researching the experiences of other jurisdictions in providing and funding shuttle or private bus services to school. San Francisco's challenges are not unique. The UC Berkeley Center for Cities and Schools 2014 "Beyond the Yellow Bus: Promising Practices for Maximizing Access to Opportunity Through Innovations in Student Transportation" describes an overall national shift towards privatization of school transportation, and cites many examples of privately contracted school transportation services. One example is Ride- to-School, a fee-based student transportation service that is contracted through the school, but paid for by parents, that currently holds about 1,200 contracts across North America. In addition, the Bayview Moves van sharing pilot program may provide a template through which community organizations are able to pool transportation resources.

Identifying a geographic area or areas most suitable for a shuttle pilot program is also necessary. This will involve identifying the neighborhoods with the greatest likely potential demand or need (e.g. to close equity gaps) for such services. The results from this survey can be used to identify the best neighborhoods, but a second survey may be required. Also, this may require extensive demographic research of both neighborhood schoolchildren, and school data on where their students live. A pilot program needs to begin where there are enough children going to the same or nearby places.

A critical aspect of this effort will involve working with transit agencies to examine issues pertaining to transportation logistics and to avoid conflicts with other agencies, to identify either fixed transportation routes and bus stops or flexible, demand responsive solutions and to address questions such as whether school shuttles should utilize Muni bus stops. A Request for Information (RFI) from shuttle providers can be used to help gauge the degree to which shuttle providers are interested in providing school transportation and what their funding requirements would be.

Informed by the identified operational and financial considerations, an organizational and funding model can be developed. The results from the RFI and the willingness-to-pay information from this survey can help inform estimates of the degree to which subsidy (public or private) is needed for shuttle service to be viable and available to families with a range of means. This information could then inform development of one or more organizational and funding models for shuttle operation. Additionally, issues of insurance, liability, and other logistical issues would need to be addressed. Identifying funding support for the duration of the pilot program will also be required if the selected organizational model involves subsidy of the shuttle system. Finally, additional focus groups and a more specific market research survey towards targeted parents to refine the shuttle attributes required to make the program successful will be helpful. The child transportation survey documented in this report indicated some of what parents want to see in a shuttle program, like background checks and consistent drivers, but more research is needed.

Consider selection of a preferred mobile application to support carpooling to school, and enlist more direct help from the schools.

The survey results indicated strong parent interest in carpooling to school, with about half of respondents saying they were interested in trying carpooling. During focus groups, some parents suggested that a mobile application would be helpful in supporting them to carpool more frequently. This suggestion also surfaced in the recent focus groups completed by the San Francisco Department of Environment and the San Francisco Department of Public Health, as noted in the literature summary.

Many carpooling apps do exist, but one of the major problems is that there is no preferred app, or an app that is

sponsored and promoted by SFUSD or other school districts. With so many apps, each one has difficulty reaching a critical mass needed to ensure success. If one app is sponsored or selected, and then promoted appropriately, perhaps enough parents would be willing to try it. If enrollment is insufficient, parents will be unable to find carpool matches. Some previous efforts to promote carpooling among parents of schoolchildren had limited success, like SFE's School Pool, so this effort would need to be approached carefully to ensure a different result.

San Francisco already has a relationship with Google/Waze, and they have a carpooling app. A private/public partnership could be created to try to test this app and sustain a large user base for various schools.

Continue investment in programs that encourage bicycling and walking to school and further investigate barriers to bicycling and walking especially among families living close to schools.

The survey results indicated that parents who are already walking and bicycling to school are much more satisfied with their school commute than parents who use other modes of travel. At the same time, parents who are not currently walking and bicycling are largely not interested in trying. About 70% and 50% respectively reported that they had never tried bicycling or walking to school and were not interested.

The survey did not ask specifically why parents are not interested in walking or bicycling, but the research summarized at the beginning of this report and the focus group results suggest that the amount of time it takes to walk and bicycle, coupled with concerns about safety and challenging topography make bicycling and walking less attractive for parents.

San Francisco's Safe Routes to Schools program is focused on making walking and bicycling to school easier and safer, and overcoming barriers to bicycling and walking. Additionally, the San Francisco Municipal Transportation Agency has numerous capital projects underway designed to improve the safety of walking and bicycling throughout the city. The city should continue to invest in these programs and consider deeper study of barriers to bicycling and walking especially among parents who live close to their schools. Creative solutions will be needed to encourage parents to consider bicycling and walking as attractive options.

Improve and expand transit options to improve transit competitiveness with driving and reduce barriers to transit.

Despite being the second most popular mode for school commutes, the survey revealed that transit also had the highest share amongst all modes of people stating that they've tried it but it didn't work for their family. The stakeholder group and focus groups identified a number of potential reasons for this dissatisfaction, including route alignments that don't serve schools effectively, service reliability and costs. Specifically, it was suggested that Muni align routes to more effectively serve schools, including more "school tripper" runs. This school commute demand could both exploit existing offpeak transit capacity, as well as be served by rush hour transit capacity. A further suggestion was to Implement a Muni "family pass" to support use of Muni for escorting children to school. For households that use Muni for school, or perhaps don't own cars, Family passes would help alleviate the financial burden for parents who must accompany their children to school. This could be particularly effective for parents of younger children.

Findings of the Child Transportation Survey

REPORT APPENDICES

NOVEMBER 2016

SFMTA
Municipal
Transportation
Agency

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY

Appendix 1. Focus group script

1. (5 min) Introduce members
    a. Where they live
    b. # of kids, ages, and where they go to school

2. (15 min) Discuss morning commute
    a. What you typically do
    b. Opinions on it (i.e., convenience, timeliness)
    c. What do you or where you go do after dropoff

3. (20 min) Afternoon commute
    a. With or without aftercare (whether kid is in aftercare is part of this)
    b. How pickup fits into day, i.e. do you pick up from work or home
    c. Do you wish there were other aftercare options?

4. (25 min) Discussion of alternatives
    a. What would you consider
    b. What factors matter

5. (15 min) Shuttles and carpools
    a. Would you or do you use
    b. Discuss factors in deciding whether or not to use
    c. Is there another 'new' option here?
    d. Second would/do you use ask

Appendix 2. Survey instrument

Note: the actual instrument was online, but this is the paper version of the survey that was given to a few respondents. Except for a few branching options, this matches the online instrument.

Child transportation survey
The San Francisco County Transportation Authority (SFCTA) and the Mayor's Office of Transportation are conducting a San Francisco-wide survey for families whose kids are in kindergarten through fifth grade, in public, private, or parochial schools located in San Francisco. This survey should take about ten minutes, and the results will be COMPLETELY CONFIDENTIAL. If you are responsible for the commute of more than one child, please complete the survey for the youngest child. We really appreciate your responses and thanks!

Section 1 - A little bit about you. Remember, please complete only for the youngest child.
Is your child in public, private, or parochial school?

- ❍ Public
- ❍ Private
- ❍ Parochial
- ❍ Charter/Other

What school does your child attend? _____
How many children do you have at this school?

- ❍ 1
- ❍ 2
- ❍ 3
- ❍ 4

Do you have children at other schools?

- ❍ Yes
- ❍ No

What neighborhood do you live in?_____
How many adults in your household are responsible for the school commute? In other words, how many different people do dropoff, pickup, etc.?_____
Does your household own one or more cars?

- ❍ Yes
- ❍ No

Section 2 - About your morning commute. Remember, please complete only for the youngest child.

How does your child typically get to school? Think about what you do 3-5 times per week.

- ❍ Driven by a family member or caregiver - only family members in the car
- ❍ Carpool with other families
- ❍ Public transit (Muni bus, BART, or light rail)
- ❍ Other bus, like yellow school bus
- ❍ Bike
- ❍ Scooter or skateboard
- ❍ Private shuttle transporting multiple children
- ❍ Taxi or rideshare service like Lyft, Uber, or Shuddle
- ❍ Walk
- ❍ Other (please fill in) _____

What time does your child typically get to school?

- ❍ 7:00 AM
- ❍ 7:15 AM
- ❍ 7:30 AM
- ❍ 7:45 AM
- ❍ 8:00 AM
- ❍ 8:15 AM
- ❍ 8:30 AM
- ❍ 8:45 AM
- ❍ 9:00 AM
- ❍ Other _____

Where do you go after your child goes to school?

- ❍ Back home (including if you work at home)
- ❍ To work (not at home)
- ❍ Other _____

IF YOU GO WORK How do you get to work?

- ❍ Drive alone
- ❍ Public transit (Muni bus, BART, or light rail)
- ❍ Walk
- ❍ Bike
- ❍ Services like Lyft or Uber
- ❍ Carpool
- ❍ Other _____

IF YOU GO TO WORK Is your child's school generally on the way to work, or would you consider it out of the way?

- ❍ School is generally on the way to work
- ❍ School is a little out of the way
- ❍ School is very out of the way

Section 3 - About your afternoon commute. Remember, please complete only for the youngest child.

Does your child attend an aftercare program?

- ❍ Yes, everyday GO TO BLOCK 2
- ❍ Yes, but only some days per week GO TO BLOCK 2
- ❍ No, s/he is picked up from school and taken home, on errands, etc. GO TO BLOCK 1
- ❍ No, s/he is picked up from school and brought to an enrichment activity (i.e music lessons, art, karate, etc) GO TO BLOCK 1

BLOCK 1

Please answer questions in block 1 only if your previous answer was "No". If "Yes", please skip to Block 2.

What time is s/he typically picked up?

- ❍ 2:00 PM - 2:30 PM
- ❍ 2:30 PM - 3:00 PM
- ❍ 3:00 PM - 3:30 PM
- ❍ 4:00 PM or later
- ❍ Other _____

How does your child typically get home from school?

- ❍ Driven by a family member or caregiver - only family members in the car
- ❍ Carpool with other families
- ❍ Public transit (Muni bus, BART, or light rail)
- ❍ Other bus, like yellow school bus
- ❍ Bike
- ❍ Scooter or skateboard
- ❍ Private shuttle transporting multiple children
- ❍ Taxi or rideshare service like Lyft, Uber, or Shuddle
- ❍ Walk
- ❍ Other (please fill in) _____

Where is the person picking your child up coming from right before your child is picked up?

- ❍ Work
- ❍ Home
- ❍ N/A (child gets home by himself/herself)
- ❍ Other _____

Does your school offer onsite aftercare?

- ❍ Yes
- ❍ No
- ❍ Not sure

IF NO OR NOT SURE Would you use onsite aftercare if it were available?

- ❍ Yes
- ❍ No
- ❍ Not Sure

PLEASE GO TO SECTION 4

BLOCK 2

Is aftercare at your school onsite or offsite?

- ❍ Onsite
- ❍ Offsite

If onsite please answer the next three questions. If offsite, please answer the questions after those.

IF ONSITE What time is s/he typically picked up?

- ❍ 3:00 PM - 3:30 PM
- ❍ 3:30 PM - 4:00 PM
- ❍ 4:00 PM - 4:30 PM
- ❍ 4:30 PM - 5:00 PM
- ❍ 5:00 PM - 5:30 PM
- ❍ 5:30 PM - 6:00 PM
- ❍ Other _____

IF ONSITE How is your child typically picked up from aftercare?

- ❍ Driven by a family member or caregiver - only family members in the car
- ❍ Carpool with other families
- ❍ Public transit (Muni bus, BART, or light rail)
- ❍ Other bus, like yellow school bus
- ❍ Bike
- ❍ Scooter or skateboard
- ❍ Private shuttle transporting multiple children
- ❍ Taxi or rideshare service like Lyft, Uber, or Shuddle
- ❍ Walk
- ❍ Other (please fill in) _____

IF ONSITE Where is the person picking your child up coming from right before your child is picked up?

- ❍ Work
- ❍ Home
- ❍ Other

GO TO SECTION 4, IF YOUR CHILDCARE IS OFFSITE PLEASE ANSWER THE FOLLOWING QUESTIONS

IF OFFSITE Please write the neighborhood of your child's aftercare._____

IF OFFSITE How did your child get to this location from school?

- ❍ School took him/her
- ❍ You or someone else took him/her
- ❍ Children took themselves
- ❍ Other _____

108

IF OFFSITE What was the mode of transportation to this location?

- ❍ Driven by a family member or caregiver - only family members in the car
- ❍ Carpool with other families
- ❍ Public transit (Muni bus, BART, or light rail)
- ❍ Other bus, like yellow school bus
- ❍ Bike
- ❍ Scooter or skateboard
- ❍ Private shuttle transporting multiple children
- ❍ Taxi or rideshare service like Lyft, Uber, or Shuddle
- ❍ Walk
- ❍ Other _____

IF OFFSITE What time is s/he typically picked up from aftercare?

- ❍ 3:00 PM - 3:30 PM
- ❍ 3:30 PM - 4:00 PM
- ❍ 4:00 PM - 4:30 PM
- ❍ 4:30 PM - 5:00 PM
- ❍ 5:00 PM - 5:30 PM
- ❍ 5:30 PM - 6:00 PM
- ❍ Other _____

IF OFFSITE How are your children typically picked up from aftercare?

- ❍ Driven by a family member or caregiver - only family members in the car
- ❍ Carpool with other families
- ❍ Public transit (Muni bus, BART, or light rail)
- ❍ Other bus, like yellow school bus
- ❍ Bike
- ❍ Scooter or skateboard
- ❍ Private shuttle transporting multiple children
- ❍ Taxi or rideshare service like Lyft, Uber, or Shuddle
- ❍ Walk
- ❍ Other (please fill in) _____

IF OFFSITE Does your school offer onsite aftercare?

- ❍ Yes
- ❍ No
- ❍ Not sure

IF NO OR NOT SURE Would you use onsite aftercare if it were available?

- ❍ Yes
- ❍ No
- ❍ Not sure

Section 4 - Alternatives to your school commute. Remember, please complete only for the youngest child.

How would you describe your satisfaction about how you get your children to school?

- ❍ It's currently the best option for my family and me and it's probably not going to change
- ❍ It's currently most convenient for my family and me but I'd be open to other possibilities
- ❍ I'm actively thinking about changing it but I'm not yet sure how to do so
- ❍ I'm currently exploring ways to change our current commute

For each of the following commute modes of getting your child to school, please tell us your experience and your opinion of them by checking the appropriate box

	I've never tried this and I'm not interested	I've never tried this but I'd be interested in trying	I've tried it and it didn't work for my family	I've tried it and I liked it	This is what we normally do	This is our only viable option
• Driven by a family member or caregiver - only family members in the car	❍	❍	❍	❍	❍	❍
• Carpool with other families	❍	❍	❍	❍	❍	❍
• Bike	❍	❍	❍	❍	❍	❍
• Muni bus, BART, or light rail	❍	❍	❍	❍	❍	❍
• Other bus, like yellow school bus	❍	❍	❍	❍	❍	❍
• Private multi-child shuttle	❍	❍	❍	❍	❍	❍
• Taxi service like Lyft or Uber	❍	❍	❍	❍	❍	❍
• Walk	❍	❍	❍	❍	❍	❍

Section 5 - Carpool and shuttles. Remember, please complete only for the youngest child.

More and more, private shuttles are taking kids to their respective schools. We are interested if this is something that you are using or would consider for your children.

If there were a shuttle service available to you in your area, please tell us what you'd be willing to pay per week to use it? Enter whatever value you wish, and enter zero if you have no desire to use a shuttle system._____

Thinking about a shuttle service that takes your children to and from school, for each of the following statements about shuttles, please tell us how much you agree or disagree with the following statements.

	Strongly disagree	Somewhat disagree	I'm not familiar with this	Neither agree nor disagree	Somewhat agree	Strongly agree
• The shuttle should come straight to my door before and after school	❍	❍	❍	❍	❍	❍
• Children should be picked up from a nearby bus stop no more than 5 minutes away	❍	❍	❍	❍	❍	❍
• We should have the same driver every day, and I have a chance to meet her/her	❍	❍	❍	❍	❍	❍
• This driver needs to have a complete background check	❍	❍	❍	❍	❍	❍
• The driver must be a government employee	❍	❍	❍	❍	❍	❍
• The shuttle should only transport my child(ren) to and from school	❍	❍	❍	❍	❍	❍
• I need to have a real-time app on my phone so I can track the shuttle	❍	❍	❍	❍	❍	❍
• The shuttle should do an aftercare circuit from my school	❍	❍	❍	❍	❍	❍
• I should get a text upon safe arrival to or from school	❍	❍	❍	❍	❍	❍

Overall, what would you say your opinion is on private shuttles that transport children to and from school?

❍ I don't think these should be part of the school transportation system
❍ They're okay for other people but I'm not really interested
❍ I'm not really sure
❍ I may use one in the future given the right circumstances
❍ I either use them now or would really like to

Carpooling is an option for some parents who don't wish to drive every day. We are interested if this is something that you are using or would consider for your children. Of the following statements about a carpool system, please rate how strongly you agree or disagree with them (check one).

	Strongly disagree	Somewhat disagree	I'm not familiar with this	Neither agree nor disagree	Somewhat agree	Strongly agree
• A carpool system should be managed or administered by the school	❍	❍	❍	❍	❍	❍
• I'd like an app to help run the carpool	❍	❍	❍	❍	❍	❍
• A carpool should only be with kids of my school	❍	❍	❍	❍	❍	❍
• A carpool should include close-by schools, not just my own	❍	❍	❍	❍	❍	❍
• I'd be willing to drive in a carpool	❍	❍	❍	❍	❍	❍
• A carpool should be available for both mornings and afternoons	❍	❍	❍	❍	❍	❍
• A carpool would be more valuable in the morning	❍	❍	❍	❍	❍	❍

Overall, what would you say your opinion is of carpooling with other families?

❍ I don't think these should be part of the school transportation system
❍ They're okay for other people but I'm not really interested
❍ I'm not really sure
❍ I may use one in the future given the right circumstances
❍ I either use one now or would really like to

Section 6 - A little more on aftercare. Remember, please complete only for the youngest child.

Are there aftercare options throughout San Francisco that you would like to do but can't because you can't find convenient transportation (check all that apply)?

- ❑ Cultural institutions
- ❑ Arts programs
- ❑ Sports programs
- ❑ Academic programs
- ❑ None
- ❑ Other _____

How important it is that a transportation system reaches these aftercare options (as well as getting kids to and from school)?

- ❍ Extremely important
- ❍ Very important
- ❍ Moderately important
- ❍ Slightly important
- ❍ Not at all important

Section 7 - Respondent demographics

Are you Hispanic or Latino?

- ❍ Yes
- ❍ No

What is your race?

- ❍ White alone
- ❍ Black or African American alone
- ❍ American Indian and Alaska Native alone
- ❍ Asian alone
- ❍ Native Hawaiian and Other Pacific Islander alone
- ❍ Some other race alone
- ❍ Two or more races

IF ASIAN ALONE OR NATIVE HAWAIIAN/OTHER PI Are you...

- ❍ Chinese
- ❍ Korean
- ❍ Filipino
- ❍ Japanese
- ❍ Vietnamese
- ❍ South Asian
- ❍ Thai
- ❍ Samoan
- ❍ Other _____

Do you rent or own your home?

- ❍ Rent
- ❍ Own
- ❍ Other

What is the highest level of education attained by any member in your household?

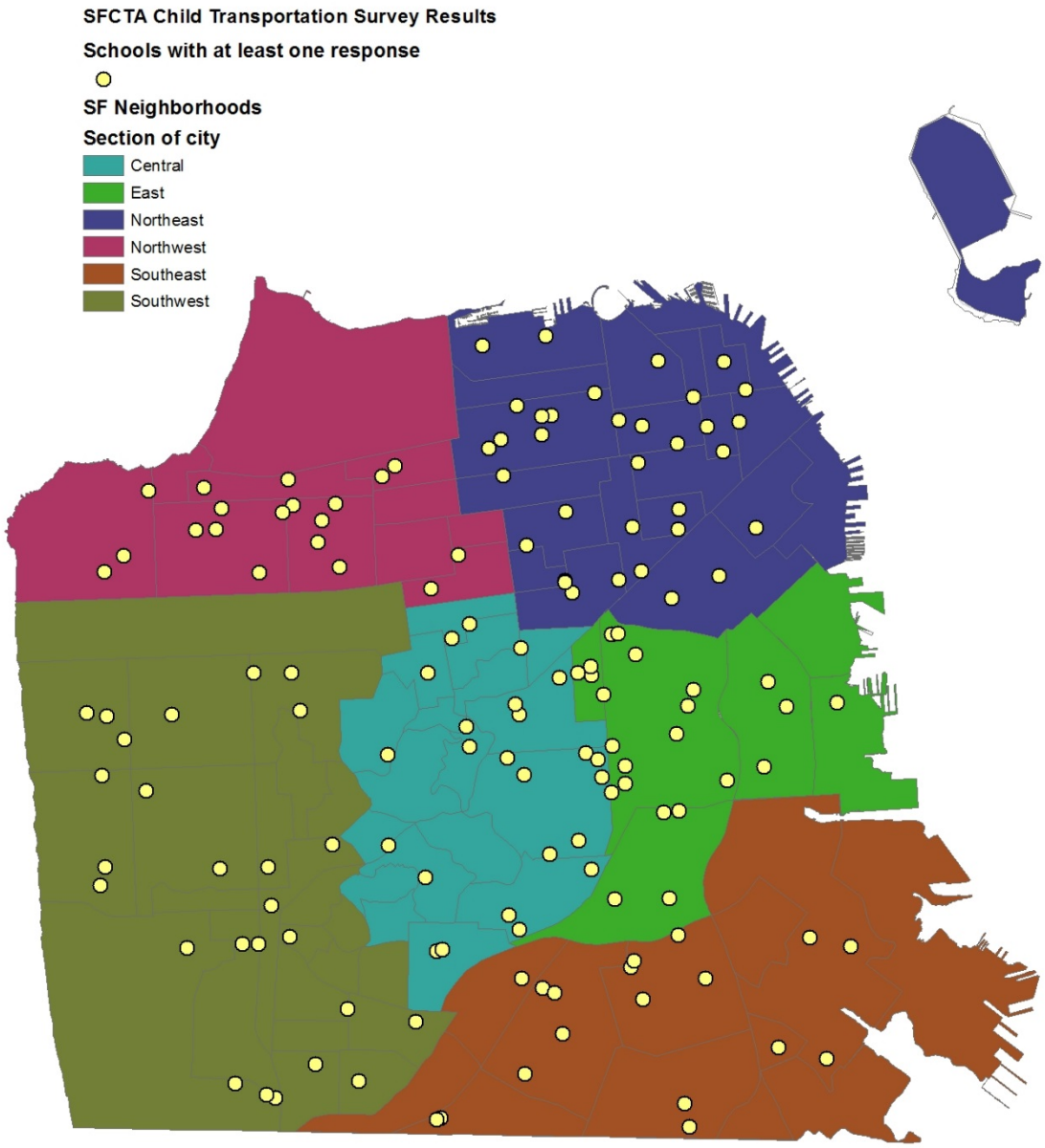
- ❍ No high school, high school degree, or GED
- ❍ Some college
- ❍ Associates or other 2-year degree
- ❍ Bachelors or other 4-year degree
- ❍ Post-graduate work or completion

What is your age range?

- ❍ Under 30
- ❍ 31-39
- ❍ 40-49
- ❍ 50-59
- ❍ 60 or over

Thank you so much for your responses! They are greatly appreciated.

Appendix 3. City section map



Appendix 4. Neighborhood map

Appendix 5. School Related Travel, Mileage Estimate Methodology

Earlier work in this project and this survey have been used to create three crude models of vehicle miles traveled per day for elementary school parents, with two of them from other data sources and one from this survey.

Data from a 2014 SFUSD survey was used to estimate that parents of *public* elementary school-aged children drove around 47,300 miles per day in the city, either via single vehicle occupancy or a carpool. If this is extended to private and parochial school children, which public school attendance is about 65% of the total school share[6], then we can estimate that parent drive children in grades K-5 nearly 73,000 miles per day in San Francisco.

NHTS data from 2009 indicate that parents drive 14-18 miles per week in the San Francisco area (2.8 to 3.6 miles per day) on schooldays. There are around 40,000 children in elementary school in San Francisco, and although it is difficult to directly calculate total number of families driving from the survey, 36% of respondents had children other schools, and 30% had multiple children at the same school. Thus 33% of respondents drove their one child to school, and another 36% had to presumably drive on to another school. We use this to reduce 40,000 children to 69%, or 27,600 families.

If 65% of families drive, according to the survey, either alone or via carpool, that yields 17,940 families driving per day. Using the NHTS driving ranges results in a range of miles driven per day by parents of elementary school children: the low end is 50,232 miles per day and the high end is 64,584 miles per day.

The survey results can be used to create a third model of vehicle miles traveled by elementary school parents who drive alone or carpool. Using the distance traveled from home (midpoint of neighborhood) to school we can calculate approximate miles traveled per day. Table 6 shows the mean values traveled by mode for dropoff and pickup.

Table 6: mean distances traveled per respondent for commute types

	Mean distance dropoff	Mean distance pickup from school	Mean distance from aftercare
Drive alone	1.95	1.91	1.79
Carpool	2.22	1.34	2.98

Percentages generated from the survey pertaining to mode share for dropoff and pickup are applied to the estimated number of families that have elementary school-aged children. From the survey, 41% of families pick their children up directly from school at least some days, and 59% of children attend aftercare. Table 7 breaks shows the percentages applied to 27,600 total families, and then uses the mean miles travel for each mode to calculate the total miles traveled.

[6] We came at this number through deduction. We have exact numbers for SFUSD and charter students and parochial students from the Archdiocese. The rest are assumed to be private school students.

Table 7: Calculation of miles driven by SOV or carpool by parents for K-5 children

		27,600 families total	Mean miles per mode	Total miles
Dropoff SOV	57% of all families	15,732	1.95	30,677
Dropoff Carpool	8% of all families	2,208	2.22	4,902
Pickup from school SOV	52% of 41% of families	5,884	1.91	11,238
Pickup from school Carpool	2% of 41% of families	226	1.34	303
Pickup from aftercare SOV	40% of 59% of families	6,514	1.79	11,660
Pickup from aftercare Carpool	3% of 59% of families	489	2.98	1,457
			Total:	**60,237**

Although the models presented here are generalized, they all give relatively similar values for total number of miles travelled per day for elementary school families, averaging 63,548 miles per day. The results are summarized below:

- Model 1: SFUSD survey: 73,000 miles per day
- Model 2: NHTS data: 50,232 - 64,584 miles per day
- Model 3: Child transportation survey: 60,237 miles per day
- Model average: 63,548 miles per day