



Memorandum

Date: 03.15.17 **RE:** Board
March 21, 2017

To: Transportation Authority Board: Commissioners Peskin (Chair), Tang (Vice Chair), Breed, Cohen, Farrell, Fewer, Kim, Ronen, Safai, Sheehy and Yee

From: Eric Cordoba – Deputy Director for Capital Projects *EC*
Anna LaForte – Deputy Director for Policy and Programming *AL*

Through: Tilly Chang – Executive Director *TC*

Subject: **INFORMATION** – Proposed Allocation of \$4,549,675 in Prop K Funds, with Conditions for the Downtown Extension - Preliminary Engineering; \$915,000, with Conditions, for the Downtown Extension Tunneling Options Engineering Study; and Appropriation of \$200,000 for Oversight of the Downtown Extension, Subject to the Attached Fiscal Year Cash Flow Distribution Schedules

Summary

In response to feedback provided by the Board, the Transbay Joint Powers Authority (TJPA) has revised its prior \$6,774,400 request for Prop K funds for preliminary engineering of the Caltrain Downtown Extension (DTX) to a reduced scope and cost of \$4.5 million. The revised scope advances design of project segments that are common to all alignments being evaluated in the Planning Department's Railyard Alternatives and I-280 Boulevard Feasibility Study (RAB). As requested by Transportation Authority staff, the TJPA has also submitted a new request for \$915,000 for a Tunneling Options Engineering Study intended to analyze opportunities to reduce surface impacts due to construction of the DTX. With the evolution of construction technologies and methodologies since the project was environmentally cleared in 2004, there are opportunities worth exploring. TJPA expects to complete the tunneling study in about three months following issuance of a Notice to Proceed and will report back to the Board when the study is completed. We are proposing similar special conditions as were previously presented to the Board, including allowing the Transportation Authority to call for the work to be paused and renegotiated or cancelled if the Board endorses a different alignment and requiring continued compliance with the oversight protocol attached to the enclosed allocation request forms. In addition, we are requesting appropriation of \$200,000 in Prop K funds to enable us to tap into our on-call oversight and engineering services contract approved by the Board last month, to bring on independent experts in tunneling, cost estimation, right of way acquisition, and funding to assist with oversight and peer review of the DTX project during this critical preliminary engineering stage.

BACKGROUND

This item was previously considered by the Board at its January 24, 2017 meeting and continued in order to allow more time to brief Board members and to be able to consider the item after receiving a presentation by the San Francisco Planning Department on its Railyard Alternatives and I-280 Boulevard Feasibility Study (RAB). Subsequently, Chair Peskin also requested that the Peninsula Joint Powers Board provide an update on the status of the Full Funding Grant Agreement for the Peninsula Corridor Electrification Project at the same meeting as the Downtown Extension (DTX) and RAB item.

All three items are scheduled to be heard at the March 21 Board meeting.

The Prop K transportation sales tax funds being requested by the Transbay Joint Powers Authority (TJPA) and Transportation Authority staff come from the following Prop K Expenditure Plan line item:

- Downtown Extension to Rebuilt Transbay Terminal

The aforementioned category is a named project in the Prop K Expenditure Plan with its own line item and does not require a 5-Year Prioritization Program as a prerequisite for allocation of funds. TJPA is the lead for implementing the Transbay Transit Center (TTC) Program. Phase 1 includes design and construction of the above-grade portion of the TTC, the core and shell of the two below-grade levels of the train station, a new bus ramp, a bus storage facility, and a temporary bus terminal. Phase 2 includes a 1.3-mile tunnel connecting the new TTC with the current Caltrain terminus at Fourth and King Streets, completes the build-out of the below-grade train station facilities at the TTC, and builds a new underground station along the DTW alignment and an intercity bus facility.

DISCUSSION

In response to feedback provided by the Board, the Transbay Joint Powers Authority (TJPA) has revised its prior \$6,774,400 request for Prop K funds for the preliminary engineering of the Caltrain Downtown Extension project to a reduced scope and cost of \$4.5 million. The revised scope advances design of project segments that are common to all alignments being evaluated in the Planning Department's RAB study. As requested by Transportation Authority staff, the TJPA has also submitted a new request for \$915,000 for a Tunneling Options Engineering Study intended to analyze opportunities to reduce surface impacts due to construction of the DTX. With the evolution of construction technologies and methodologies since the project was environmentally cleared in 2004, there are opportunities worth exploring. The results of this study will also be used to inform the alternatives being studied under RAB and support more "apples to apples" evaluation of the DTX alignment with those being evaluated by RAB. TJPA expects to complete that study in about three months of issuing a Notice to Proceed and will report back to the Board when the study is completed.

We are also requesting appropriation of \$200,000 in Prop K funds to enable us to tap into our on-call project management oversight and general engineering services contract approved by the Board last month, to bring on independent experts in tunneling, cost estimation, right-of-way, and funding/financing to assist with oversight and peer review of the DTX project during this critical preliminary engineering stage.

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 the project. A detailed scope, schedule, budget and funding plan for the projects are included in the Allocation Request Forms (Attachment 5).

Proposed Special Conditions: Attachment 3 summarizes the proposed staff recommendations for the requests, highlighting special conditions included in the staff recommendation. We are proposing similar special conditions for the DTX allocations to TJPA as were previously presented to the Board, including allowing the Transportation Authority to call for the work to be paused and renegotiated or cancelled if the Board endorses a different alignment and requiring continued compliance with the oversight protocol attached to the enclosed allocation request forms. The oversight protocol applies to both the TTC and the DTX. It is modeled after the oversight protocol used for the Central Subway and the Caltrain Electrification project. TJPA has agreed to the oversight protocol, and it is already being

implemented.

Transportation Authority and TJPA staff will attend the Board meeting to respond to any questions that the Board members may have.

ALTERNATIVES

None. This is an information item.

CAC POSITION

The CAC was briefed on TJPA's original request for \$6,774,400 for preliminary engineering for the DTX at its September 7, 2016 special meeting and unanimously adopted a motion of support for the staff recommendation. We are scheduling updates for the CAC on these requests, the RAB Study and the Caltrain Peninsula Corridor Electrification Program Full Funding Grant Agreement.

FINANCIAL IMPACTS

There is no financial impact at this time as this is an information item. If the Board were to act on this item at a future meeting, the staff recommended action would allocate \$4,549,675 and appropriate \$200,000 in Prop K sales tax funds. The allocations and appropriations would be subject to the Fiscal Year Cash Flow Distribution Schedules contained in the Allocation Request Forms (Attachment 4).

The Downtown Extension – Preliminary Engineering request requires a Strategic Plan amendment to advance funds from Fiscal Year 2033/34 as described in Attachment 3. The resulting increase in financing costs would be insignificant consistent with the analysis presented when this item first came to the Board in September 2016.

RECOMMENDATION

None. This is an information item.

Attachments (5):

1. Summary of Applications Received
2. Project Description
3. Staff Recommendations
4. Prop K Allocation Request Forms (3)
5. Proposed Amended Strategic Plan

Attachment 1: Summary of Applications Received

Source	EP Line No./ Category ¹	Project Sponsor ²	Project Name	Current Prop K Request	Total Cost for Requested Phase(s)	Leveraging		Phase(s) Requested	District
						Expected Leveraging by EP Line ³	Actual Leveraging by Project Phase(s) ⁴		
Prop K	5	TJPA	Downtown Extension - Preliminary Engineering	\$ 4,549,675	\$ 130,297,416	86%	96%	Design	6
Prop K	5	TJPA	Downtown Extension - Tunnel Engineering Options Study	\$ 915,000	\$ 34,184,166	86%	39%	Design	6
Prop K	5	TJPA	Downtown Extension - Additional Oversight/ Peer Review	\$ 200,000	\$ 200,000	86%	0%	Design	6
TOTAL				\$ 5,664,675	\$ 164,681,582	108%	106%		

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: TJPA (Transbay Joint Powers Authority)
- 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
5	TJPA	Downtown Extension - Preliminary Engineering	\$ 4,549,675	<p>In response to feedback provided by the SFCTA Board, the current revised request will bring design of the Downtown Extension (DTX) to 30% for new elements and modified elements (per the SEIR/SEIS) that are common to all alignments being evaluated in the Planning Department's Railyard Alternatives and I-280 Boulevard Feasibility Study. The work is scheduled to be complete by December 2017. DTX is Phase 2 of the Transbay Transit Center (TTC) Program. Phase 2 is a 1.3-mile Downtown Rail Extension (DTX) tunnel that extends Caltrain commuter rail from its current terminus at Fourth and King streets to the new Transbay Transit Center (TTC). It also completes the build-out of the below-grade train facilities at the TTC, a new underground station along the DTX alignment, an intercity bus facility, and provides the tracks and northern terminus for California's future High-Speed Rail system.</p>
5	TJPA	Downtown Extension - Tunnel Engineering Options Study	\$ 915,000	<p>The subject request is for an engineering study to analyze opportunities to reduce surface impacts due to construction of DTX. The subject request to fund a Tunnel Options Engineering Study would focus on three areas: Throat cut-and-cover (west side of the Transbay Transit Center where three tracks need to fan into six tracks); Townsend Cut-and-Cover; and the Third/Townsend ventilation structure site. The work is scheduled to be complete within 3 months of issuing a Notice to Proceed.</p>

Attachment 2: Brief Project Descriptions ¹

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Requested	Project Description
5	TJPA	Downtown Extension - Additional Oversight/ Peer Review	\$ 200,000	In response to the Board's interest in increased oversight for the Transbay Transit Center, the work to be performed under this appropriation is intended to complement and enhance the SFCTA's ongoing oversight functions. It is the intent of the SFCTA staff to engage independent experts in the areas of tunneling/underground construction, cost estimating, funding, and right-of-way to participate in charrettes, workshops, peer reviews, and deliverables review to assure that the studies and design to be performed by the TJPA meet the highest standards of quality as well as the project needs. The experts will also make available their resources to provide recommendations, concepts and ideas for the consideration of the TJPA.
TOTAL			\$ 5,664,675	

¹ See Attachment 1 for footnotes.

Attachment 3: Proposed Staff Recommendations - (Note this is an information item for the 03.21.17 Board Meeting)¹

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Recommended	Recommendation
5	TJPA	Downtown Extension - Preliminary Engineering	\$ 4,549,675	<p>Special Conditions: 1.) Requires the TJPA to agree to the attached oversight protocol for Phases 1 and 2. TJPA has agreed to the oversight protocol, which is already being implemented.</p> <p>2.) If the SFCTA Board acts to endorse an alternate alignment for the DTX, the SFCTA reserves the right to pause the work funded by the current request in order to meet with TJPA, the Planning Department and the Mayor's Office to discuss any needed modifications to the scope, including potentially ceasing work on certain elements.</p> <p>3.) Strategic Plan Amendment: The recommended allocation is contingent upon a Prop K Strategic Plan amendment to the Caltrain Downtown Extension (DTX) to a Rebuilt Transbay Terminal Expenditure Plan line item. The amendment would advance \$2,840,777 programmed for the DTX in FY 2033/34. Further, the recommended action requires an exception to the Strategic Plan policy that sets aside all remaining funds not already programmed to Phase 1 for Phase 2 construction.</p>
5	TJPA	Downtown Extension - Tunnel Engineering Options Study	\$ 915,000	<p>Special Conditions: 1) The recommended action requires an exception to the Strategic Plan policy that sets aside all remaining funds not already programmed to Phase 1 for Phase 2 construction. The recommendation also includes Special Conditions 1) and 2) listed above for the DTX - Preliminary Engineering request, above.</p>
5	TJPA	Downtown Extension - Additional Oversight/ Peer Review	\$ 200,000	<p>Special Condition: Same as 1) above for the Tunnel Engineering Options Study.</p>
TOTAL			\$ 5,664,675	

¹ See Attachment 1 for footnotes.

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

FY of Allocation Action: 2016/17

Project Name: Downtown Extension - Preliminary Engineering

Grant Recipient: Transbay Joint Powers Authority

EXPENDITURE PLAN INFORMATION

Prop K EP category: Caltrain Downtown Extension to a Rebuilt Transbay Terminal: (EP-5)

Prop K EP Line Number (Primary): 5 **Current Prop K Request:** \$ 4,549,675

Prop K Other EP Line Numbers: _____

Prop AA Category: _____

Current Prop AA Request: \$ -

Supervisorial District(s): District 06

REQUEST

Brief Project Description (type below)

Phase 2 of the Transbay Transit Center Program is a 1.3-mile Downtown Rail Extension (DTX) tunnel that extends Caltrain commuter rail from its current terminus at Fourth and King streets to the new Transbay Transit Center (TTC). It also completes the build-out of the below-grade train facilities at the TTC, a new underground station along the DTX alignment, an intercity bus facility, and provides the tracks and northern terminus for California's future High-Speed Rail system.

Detailed Scope, Project Benefits and Community Outreach (type below)

Following on the SEIR/SEIS, the TJPA wishes to continue preliminary engineering of the DTX. In response to feedback provided by the SFCTA Board, the current request will bring design of the DTX to 30% for new elements and modified elements that are common to all alignments being evaluated in the Planning Department's Railyard Alternatives and I-280 Boulevard Feasibility Study. The work is scheduled to be complete by December 2017. See attached Word document for details.

Project Location (type below)

First & Mission Streets, San Francisco, CA

Project Phase (select dropdown below)

Design Engineering (PS&E)

Map or Drawings Attached? Yes

Other Items Attached? Yes

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

5YPP/STRATEGIC PLAN INFORMATION

**Type of Project in the Prop K
5YPP/Prop AA Strategic Plan?** Named Project

**Is the requested amount greater
than the amount programmed in
the relevant 5YPP or Strategic
Plan?** Greater than Programmed Amount

Prop K SP/5YPP Amount:	\$	2,623,898		Prop AA Strategic Plan Amount:	

Please describe and justify the necessary amendment:

The Prop K Strategic Plan amendment to the Caltrain Downtown Extension (DTX) to a Rebuilt Transbay Terminal category would advance \$2,840,777 programmed for DTX in FY 2033/34. The Strategic Plan establishes a policy requiring all remaining funds not currently programmed to Phase 1 to be spent on construction of Phase 2 (DTX) to reinforce the need to complete the DTX as soon as possible and to avoid using all of the Prop K funds on Phase 1. SFCTA staff supports the recommended request, which requires an exception to this policy, now that Phase 1 is fully funded and appears on track to be delivered within the revised budget. Further, the proposed scope will support TJPA's efforts to advance design and develop a solid cost estimate, both of which will facilitate TJPA's ability to secure funding for DTX.

Background and Project Benefits

The Transbay Transit Center Program (Program) is an approximately \$6 billion program to replace the former Transbay Terminal at First and Mission streets in downtown San Francisco with a modern regional transit hub that will connect eight Bay Area counties and the State of California through eleven transit systems including Caltrain commuter rail and the future California High-Speed Rail system from San Francisco to Los Angeles.

The Program is being constructed in two phases. Phase 1 includes design and construction of the above-grade portion of the Transit Center, the core and shell of the two below-grade levels of the train station, a new bus ramp, a bus storage facility, and a temporary bus terminal. Phase 2 will complete the build-out of the below-grade train station facilities at the Transit Center and build the Downtown Rail Extension (DTX) tunnel, a new underground station along the DTX alignment, and an intercity bus facility.

Phase 2 will provide the following public benefits:

- Improve access to rail services and enhance San Francisco's accessibility to a local and regional workforce
- Enhance connectivity between Caltrain and other major transit services
- Create the northern terminus for the state's future high-speed rail system
- Build a new intercity bus station next to the Transit Center for Greyhound, Amtrak and other regional bus service providers
- Contribute to improved regional air quality by attracting thousands of new transit riders and reducing the number of vehicles on Highways 101 and 280

Current Request

Preliminary engineering (PE) (30% design level) for many components of Phase 2, including the Fourth and Townsend Street Station, was completed in July 2010. Subsequently, as a result of new requirements by the California High-Speed Rail Authority (CHSRA), as well as other factors, elements have been modified or added to Phase 2. These additions and modifications are included in a draft Supplemental Environmental Impact Statement/Environmental Impact Report (SEIS/EIR) released in December 2015 for public comment. Further design work on these new or modified elements as outlined below will be required to return the full DTX design and bring all Phase 2 elements to the 30% PE level. At the TJPA's June 2016 Board of Directors meeting, the Board directed TJPA staff to move forward with the following next steps in support of Phase 2:

- Complete 30% PE drawings
- Update right-of-way estimate
- Update ridership study
- Perform risk assessment
- Peer review funding plan
- Update Program cost estimate
- Peer review 2016 cost estimate

- Complete development of funding plan
- Select delivery method
- Update budget
- Continue coordination with the City on the Railyard Alternatives and I-280 Boulevard Feasibility Study, Caltrain and CHSRA

The current request would partially fund preliminary engineering, program management/program controls, financial and right-of-way consultants, and a TJPA staff person for these next steps for Phase 2, as described in detail below. This scope only includes elements that are common to all alignments being evaluated in the Planning Department’s Railyard Alternatives and I-280 Boulevard Study (RAB).

Preliminary Engineering (PE)
Parsons Transportation Group

The Downtown Extension designer, Parsons Transportation Group, will continue preliminary engineering (PE) advancing work toward the full 30% level. This contract was renewed by the TJPA Board in 2014. This request is for **\$3,063,153**. Tasks will include the following:

A. Project Management

1. Submission of monthly status report with each monthly invoice, indicating work performed on each of the approved tasks for which payment is being requested
2. Project meetings (e.g., TJPA staff or Board meetings)
3. Scheduling
4. Quality Control and Quality Assurance
5. Other Direct Costs as requested and/or agreed by TJPA

B. Coordination with Transbay Transit Center (TTC) Designers and Train Operators

1. Continue ongoing coordination with train operators:
 - a. Provide coordination with CHSRA and Caltrain including:
 - i. Coordination on operator criteria and programmatic requirements
2. Continue ongoing coordination with other TTC team members including:
 - a. Coordination of Phase 2 train systems provisions
 - b. Coordination of DTX/TTC structural interface
 - c. Other as-needed coordination
3. Additional as-needed work could include:
 - a. Coordination meetings between project teams
 - b. Train operations planning, simulations and reviews
 - c. Analysis of Caltrain and CHSRA rolling stock impact to planned DTX infrastructure, including station platforms and clearances

- d. Identification of recommended revisions for criteria including but not limited to applicable code updates, vehicle dynamic envelope and fire-life safety
 - e. Review and comment on design criteria changes with respect to project design, construction cost and schedule implications
4. Assistance to TJPA with financing alternatives including:
 - a. Performing additional estimates
 - b. Meeting with potential financing partners
 - c. Evaluation of feasibility of financing options
- C. Federal Transit Administration (FTA), Federal Railroad Administration (FRA), Bay Area Rapid Transit (BART), California Public Utilities Commission (CPUC), Other Utilities, & SEIS/EIR Study Coordination
1. As-needed SEIS/EIR coordination with FTA and FRA
 2. Coordinate with BART on the BART/Muni Pedestrian Connector
 3. Coordinate with private utilities as necessary
- D. Other Coordination with City and County of San Francisco (City)
1. Continue ongoing coordination with the City Planning Department regarding accommodating proposed joint development at emergency ventilation/exit facility site on Second and Harrison streets
 2. Continue ongoing coordination with San Francisco Public Utilities Commission (SFPUC) for interface with new major SFPUC facilities in project area
 3. Coordinate reviews of DTX fire-life safety planning with San Francisco Fire Department and, if necessary, the State Fire Marshal
 4. Coordination with other City agencies, as needed
- E. Right-of-Way Support
1. Continue ongoing coordination with adjacent property developments and, if necessary, the City Department of Building Inspection to protect DTX from adverse impacts along its Second Street alignment
 2. Continue ongoing coordination and engineering support for DTX right-of-way along Second Street: Provide engineering support including structural engineering studies and cost estimates in support of TJPA property acquisition activities, including:
 - a. Preparation of a conceptual design technical memorandum on underpinning constructability
 - b. Preparation of geotechnical baseline memoranda
 - c. Preparation of PE underpinning design plans
- F. Preliminary Engineering Design Work and Updates for DTX

As noted above, some elements of the Phase 2 design were previously at the 30% design level. Elements below that include an asterisk (*) are elements that have been modified since 2010 and that require updating to reach the 30% design level. Elements with a double asterisk (**) are new scope items, or items that were deferred in 2010, that require

a greater design effort to achieve the 30% design level. **This scope only includes elements that are common to all alignments being evaluated in the Planning Department's RAB Study.**

1. ** Civil – Streetwork
 - a. Prepare technical memoranda on the City's street improvement plans on Second Street
 - b. Prepare PE streetwork plans
2. * Civil – Utilities
 - a. Protection planning for AT&T manholes
 - b. Prepare technical memoranda to support PE cost estimate update for non-Townsend Street elements
 - c. Support advance utility relocation package scoping for non-Townsend Street elements
 - d. Update PE utility relocation plans for non-Townsend Street elements
 - e. Define temporary utility relocations for non-Townsend Street elements
3. ** Civil – Traffic
 - a. As-needed traffic engineering support of TJPA coordination with the City
 - b. Prepare Traffic Management Plan for non-Townsend Street element
4. * Track Configuration
 - a. Update PE plans and profile reference files, as needed
 - b. Update DTX crossover arrangements
 - c. Complete PE plan and profile including precise alignment control tables
5. * Structural – Throat Cut-and-Cover
 - a. Prepare conceptual level details for the TTC interface and update typical sections in the PE plans
 - b. Prepare technical memoranda and concept for support-in-place of major utilities
 - c. Complete details to PE level
6. ** Ventilation/Emergency Exit Structures
 - a. Prepare technical memoranda to support taller superstructure at Second and Harrison site
 - b. Update structural and architectural PE plans for Second and Harrison site
7. ** Fire-Life Safety (FLS)
 - a. Update mechanical PE design plans for Second and Harrison ventilation/emergency exiting structure
 - b. Prepare technical memoranda on water/air mechanical systems to support the PE cost estimate update
8. * Systems – Tunnel Electrical
 - a. Prepare technical memoranda to support PE cost estimate update
9. * Systems – Overhead Catenary Systems (OCS)
 - a. Prepare technical memoranda to support PE cost estimate update
 - b. Complete PE design of TTC OCS
10. ** Systems - Signals
 - a. Update PE Phase 1 Conceptual Engineering single line schematic plans

- b. Coordinate latest signal equipment space provisions with tunnel design
 - c. Prepare technical memoranda to support PE cost estimate update
 - 11. ** Systems – Communications
 - a. Prepare technical memoranda to support PE cost estimate update
 - b. Coordinate with Phase 2 planning
 - 12. Preliminary Engineering Report
 - a. Update PE report and summarize technical memoranda for non-Townsend Street elements
- G. Conceptual Engineering Design Work for BART/Muni Pedestrian Connector
- 1. Prepare conceptual design memoranda to support cost estimate
 - 2. Prepare technical memoranda on streetwork, utilities, traffic, structural design, architectural design, and FLS to support cost estimate
 - 3. Prepare conceptual design plans of cut-and-cover structure and interface structure
 - 4. Prepare conceptual street reconstruction, utility relocation, structural (cut-and-cover and interface structure), and architectural (Connector, receiving structures, and mid-block emergency egress structure including electrical and lighting plans) plans
 - 5. Develop Traffic Management Plan
 - 6. Prepare geotechnical baseline memoranda
 - 7. Prepare programming document
 - 8. Perform code analysis
 - 9. Develop FLS and exiting strategy
 - 10. Perform pedestrian flow/exit analysis
 - 11. Perform CFD and SES FLS modeling
 - 12. Prepare Conceptual Engineering Report
 - a. Summarize technical memoranda in a report
- H. DTX Preliminary Engineering Cost Estimate Update for Non-Townsend Street Elements
- 1. Update the DTX cost estimate for non-Townsend Street elements based on the rate refresh update prepared in June 2016 and new quantities based on new engineering, including BART/Muni Pedestrian Connector conceptual design

Exclusions:

- 1. Final Design
- 2. Technical Specifications
- 3. Design-Build Contract Documents (in the event that Design-Build is the chosen delivery method)

Program Management/Program Controls (PMPC)

AECOM (URS)

The PMPC provides a variety of services and reports to augment TJPA staff in implementing the Transbay Transit Center Program. Specific tasks include program management services, program implementation and support, program controls management, quality assurance and control implementation, risk management program implementation, document control, administrative support, and project management for Phases 1 and 2 of the Program. The contract was awarded in 2013. This funding request is for **\$698,500** for the following tasks (total estimated cost \$1,130,000, but \$431,500 remains in Prop K Resolution 15-01):

A. Phase 2 Program Management

1. Program Management

- a. Project meetings
- b. Project controls support, including an update to the Phase 2 Budget
- c. Program coordination support
- d. Utility coordination support

2. DTX Project Management

- a. Contribute to monthly PMPC status reports
- b. Project meetings
- c. Work with estimators, technical specialists and Program Controls Manager to validate scope and develop the project budget and schedule for Phase 2, including subprojects and project components. Maintain current and accurate information regarding project scope, schedule and budget
- d. Maintain an issue-action tracking system to facilitate timely decision-making
- e. Manage the DTX design consultant including, but not limited to, invoice reviews, submittal reviews, contract negotiations, coordination with TTC design consultant, and correspondence on technical project issues
- f. Refine and validate design constraints, criteria, and standards with the engineering design team as requested by TJPA. Complete, maintain and update design criteria as necessary
- g. Provide technical, project-specific assistance to TJPA, including preparation of letters and presentations
- h. Provide support for supplemental environmental studies
- i. Coordinate with train operators and outside agencies (i.e., SFPUC for sewer interfaces, SFMTA for Central Subway interface, City Planning and Office of Community Investment and Infrastructure for potential joint development parcels and the RAB Study, BART for BART/Muni Pedestrian Connector)
- j. Coordinate with adjacent properties along the alignment to determine potential impacts to DTX and/or the properties
- k. Manage interfaces between Phase 2 components and other component projects of the Program

3. Document Management and Administrative Support
 - a. Record keeping and submittal logging
 - b. Document retrieval and issuance to support project or outside agency requests
 - c. Technical and editorial reviews of project documents, letters, and presentations
- B. Ridership Study (by Cambridge)
 - a. Update the 2008 Cambridge Systematics ridership estimates
- C. Update Phase 2 cost estimate (with TBD Consultants)
- D. Advise on and assist TJPA in selection of delivery method (with AECOM)

Right-of-Way

Tim Runde

The purpose of the right of way acquisition cost estimate is to assist the TJPA in developing an updated budget for the Downtown Extension (DTX). The scope of work includes providing estimates (based on the current market) to purchase all properties listed below that are identified for full or partial take. The TJPA will update the estimates at the time of acquisition. The scope also includes providing estimates for properties that require either easements and/or vacancy during construction, as described below.

Full Take (Red Properties)

- 181 Second Street
- 191 Second Street/594 Howard Street
- 201 Second Street
- 205-215 Second Street
- 217 Second Street
- 580 Howard Street
- 180 Townsend Street
- 689-699 Third Street

Partial Take (Orange Properties)

- 201 Mission Street
 - The valuation is of the land shown in Orange on the exhibit and the podium building.
 - The valuation should assume that the TJPA will be required to acquire the CMS strip which now connects the parking lot at 201 Mission to Howard Street and grant the fee to Parcel M3 to the owner at fair market value to replace existing parking on the CMS Strip and the midblock area. Accordingly, the scope of work includes an estimate of the value of Parcel M3, which value would be offset against the compensation to the owner, and an estimate of the value of the CMS Strip.
 - Please note that TJPA will engage the DTX designer Parsons to assess the cost of (a) demolition of the podium offices at 201 Mission, (b) the underpinning of the

201 Mission Tower, if any, (c) restoration of the façade/curtain wall of the 201 Mission Tower after removal of the podium, and (d) relocation of the loading dock and trash compactor to the east side of the 201 Mission Tower to be accessed from Main Street across Parcel M3, and (e) physical relocation of the cogeneration plant. Parsons will assume that the TJPA will grant an easement to the owner somewhere on Block 3718 for relocation of the owner's cogeneration plant. Accordingly, this scope of work includes providing an estimate of the cost to the TJPA to grant an easement for the cogeneration plant. The construction costs (a) – (e) will be part of the TJPA's construction budget rather than the ROW acquisition budget and are not included in this scope of work.

- 30 Beale Street
 - The scope of work includes investigating with the Planning Department whether the open space that would be eliminated by locating the emergency exit for the BART tunnel in the plaza of the buildings at the NE corner of Beale and Mission would require the owner of that project to replace the lost open space under its conditional use/309 permit and, if the open space must be replaced, the estimate should be equivalent to the cost to replace it and the impact on value of the plaza if the emergency exit is located in the middle of the plaza.

Vacate/Subsurface Easement (Blue Properties)

- 235 Second Street
 - This scope of work includes providing an estimate of lost rent during the TJPA's construction (assume a 7 year construction period). The valuation estimate should be based on the assumption that the landlord will receive no rent for the portion of the building demolished and that the rent for the portions of the building that can be occupied during construction of the throat structure would be reduced due to impaired access from Second Street and construction noise, vibrations, and dust.
 - This scope of work includes valuation of a permanent construction easement for the throat structure running under this property.
 - The front of the building will need to be demolished for construction of the throat structure, the building underpinned, the façade/curtain wall and front entrance temporarily reconstructed during the TJPA's construction, and a permanent façade/curtain wall and front entrance reconstructed following the completion of the TJPA's work. These costs will be part of the TJPA's construction budget rather than the ROW acquisition budget and are not included in this scope of work.
- 589 Howard Street
 - The building cannot be occupied during construction. This scope of work includes providing an estimate of lost rent during the TJPA's construction. The valuation estimate should be based on the assumption that the landlord will receive no rent from the building during construction of the throat structure.
 - This scope of work includes valuation of a permanent easement for the throat structure running under this property.

- The construction of the throat structure will require that the front entrance to the building be closed and the front of the building underpinned. These costs will be part of the TJPA's construction budget rather than the ROW acquisition budget and are not included in this scope of work.
- 165-171 Second Street
 - This scope of work includes lost rent during the TJPA's construction. The valuation estimate should be based on evidence that the owner will suffer lost rent if the building either cannot be occupied in whole or in part during construction, or tenants require a reduction in rent due to construction noise, vibrations, and dust. The TJPA shall instruct the valuation expert when the scope of the TJPA's work on this property is ascertained.
 - This scope of work *may* include valuation of a permanent easement for underpinning and/or the throat structure running under this property.
 - The construction of the throat structure will require that the southeast corner of the building be underpinned. The cost of underpinning will be part of the TJPA's construction budget rather than the ROW acquisition budget and is not included in this scope of work.

Easement Subsurface (Yellow Properties)

- 301 Brannan Street
- 634 Second Street
- 634-636 Second Street
- 640 Second Street
- 650 Second Street
- 678 Second Street
- 680 Second Street
- 130 Townsend Street
- 136 Townsend Street
- 144-146 Townsend Street
- 148-154 Townsend Street
- 164 Townsend Street
- 166-178 Townsend Street
 - This scope of work includes providing an estimate for a permanent tunnel easement under these properties.
 - This scope of work includes estimating the loss of use and/or value of these properties, if any, due to noise and vibrations that occupants of those buildings will feel (a) during the borings for the underground train tunnel, (b) during permanent train operations in the completed tunnel. A loss in use or value could result from interference with sleep and other activities in the residential buildings and with business operations in the restaurants and offices (exclude impact on occupants of light industrial buildings, which should be negligible) during the

TJPA's construction and from permanent train operations. TJPA will engage Parsons to quantify the vibrations and noise.

. Estimated cost: **\$120,000**

Phase 2 Funding Plan

Sperry Capital

TJPA's financial consultants will assist TJPA staff in completing development of the Phase 2 funding plan. In view of the federal funding uncertainties related to the current administration, the project team will revisit alternative project delivery methods, including P3, to determine which provide the best funding opportunities. Estimated cost: **\$150,000**

Phase 2 TJPA Staff

TJPA plans to hire one full-time staff person to manage Phase 2 work efforts. This would be a program manager level position, with a salary range of \$204,360 to \$257,920. TJPA's benefit rate is approximate 35% of salary. Estimated cost: \$224,016 salary plus \$78,406 benefits = **\$302,422**

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

Project Name: Downtown Extension - Preliminary Engineering

ENVIRONMENTAL CLEARANCE

Environmental Type: EIR/EIS

PROJECT DELIVERY MILESTONES

Enter dates below for ALL project phases, not just for the current request, based on the best information available. For PLANNING requests, please only enter the schedule information for the PLANNING phase.

Phase	Start		End	
	Quarter	Calendar Year	Quarter	Calendar Year
Planning/Conceptual Engineering (PLAN)		1995		2001
Environmental Studies (PA&ED)		2001	Oct-Dec	2016
Right-of-Way	Jul-Sep	2004	Oct-Dec	2019
Design Engineering (PS&E)	Jan-Mar	2005	Jul-Sep	2019
Advertise Construction	Jul-Sep	2018		
Start Construction (e.g. Award Contract)	Oct-Dec	2018		
Operations (i.e., paratransit)				
Open for Use			Oct-Dec	2025
Project Completion (means last eligible expenditure)			Oct-Dec	2025

SCHEDULE DETAILS

Provide dates for any COMMUNITY OUTREACH planned during the requested phase(s). Identify PROJECT COORDINATION with other projects in the area (e.g. paving, MUNI Forward) and relevant milestone dates (e.g. design needs to be done by DATE to meet paving schedule). List any timely use-of-funds deadlines (e.g. federal obligation deadline). If a project is comprised of MULTIPLE SUB-PROJECTS, provide milestones for each sub-project. For PLANNING EFFORTS, provide start/end dates for each task.

The schedule presented above is based on the Phase 2 schedule presented to the TJPA Board of Directors in June 2016, at which the Board provided direction to complete Phase 2 preliminary engineering. This request advances preliminary engineering, but does not complete it.

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

Project Name: Downtown Extension - Preliminary Engineering

FUNDING PLAN - FOR CURRENT REQUEST

Enter the funding plan for the phase(s) that are the subject of the CURRENT REQUEST. Totals should match those shown in the Cost Summary below.

Fund Source	Planned	Programmed	Allocated	Total
Prop K	\$ 1,925,778	\$ 2,623,898	\$ -	\$ 4,549,675
Prop AA	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -
Total:	\$ 1,925,778	\$ 2,623,898	\$ -	\$ 4,549,675

FUNDING PLAN - FOR ENTIRE PROJECT (ALL PHASES)

Enter the funding plan for all phases (planning through construction) of the project. This section may be left blank if the current request covers all project phases. Totals should match those shown in the Cost Summary below.

Fund Source	Planned	Programmed	Allocated	Total
Prop K	\$ -			\$ -
Prop AA	\$ See attached			\$ -
	\$ -	\$ -	\$ -	\$ -
Total:	\$ -	\$ -	\$ -	\$ -

COST SUMMARY

Show total cost for ALL project phases (in year of expenditure dollars) based on best available information. Source of cost estimate (e.g. 35% design, vendor quote) is intended to help gauge the quality of the cost estimate, which should improve in reliability the farther along a project is in its development.

Phase	Total Cost	Prop K - Current Request	Prop AA - Current Request	Source of Cost Estimate
Planning/Conceptual Engineering (PLAN)	\$ -	\$ -		Completed by Caltrain
Environmental Studies (PA&ED)	\$ 34,184,166	\$ -		Included in 2016 Phase 2 Cost Estimate (Programwide)
Right-of-Way	\$ 266,200,000	\$ -		2016 Phase 2 cost estimate
Design Engineering (PS&E)	\$ 130,297,416	\$ 4,549,675	\$ -	TJPA Approved Budget for Phase 2
Construction (CON)	\$ 3,504,369,982	\$ -	\$ -	2016 Phase 2 cost estimate - see attached detailed estimate
Operations (Paratransit)	\$ -	\$ -		
Total:	\$ 3,935,051,564	\$ 4,549,675	\$ -	

% Complete of Design: 58% as of 5/31/2016
Expected Useful Life: 70 Years

PROPOSED REIMBURSEMENT SCHEDULE FOR CURRENT REQUEST (instructions as noted below)

Use the table below to enter the proposed reimbursement schedule for the current request. Prop K and Prop AA policy assume these funds will not be reimbursed at a rate greater than their proportional share of the funding plan for the relevant phase unless justification is provided for a more aggressive reimbursement rate. If the current request is for multiple phases, please provide separate reimbursement schedules by phase. If the proposed schedule exceeds the years available, please attach a file with the requested information.

Fund Source	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21+	Total
Prop K	\$ 2,729,805	\$ 1,819,870	\$ -	\$ -	\$ -	\$ 4,549,675
Prop AA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

General Instructions

- Sponsor may attach budget details in sponsor agency format (Excel), which includes all required information (per phase) detailed below.
- Contingencies should be called out in each phase.

For Design Engineering Phase:

Project Name: Downtown Extension - Preliminary Engineering

PROJECT BUDGET - PRELIMINARY ENGINEERING

BUDGET SUMMARY

Agency/Consultant	Total	% of Total
Parsons (Designer)	\$ 3,063,153	67.3%
AECOM (PMPC)	\$ 698,500	15.4%
Financial Consultant	\$ 150,000	3.3%
ROW Consultant	\$ 120,000	2.6%
TJPA Staff	\$ 302,422	6.6%
Contingency	\$ 215,600	4.7%
Total	\$ 4,549,675	100.0%

DETAILED LABOR COST ESTIMATE - BY AGENCY

TJPA	Hours	Base Hourly Rate	Overhead Multiplier	Fully Burdened Hourly Cost	FTE	Total
Senior Design & Engineering Manager (Ph II)	2,080	\$ 107.70	\$ 1.35	\$ 145.40	1	\$ 302,422
Total	2,080	\$ 108	\$ 1	\$ 145	1	\$ 302,422

2016 Phase 2 Cost Estimate (in year of expenditure dollars)

		Direct Costs	Design Contingency	Total Cost
DTX				\$1,467,777,900
	Segment 10 Fourth and King Surface Station and Yard Upgrade	\$0		\$0
	Segment 9 At Grade Trackway	\$707,000		\$707,000
	Segment 8 U-Wall Segment	\$57,906,000		\$57,906,000
	Segment 7 Cut and Cover West of Fifth St	\$92,220,000		\$92,220,000
	Segment 6 Cut and Cover Fourth & Townsend Underground Station	\$123,721,000		\$123,721,000
	Segment 5 Cut and Cover East of Fourth St	\$82,069,000		\$82,069,000
	Segment 4 NATM Mined Tunnel	\$387,981,000		\$387,981,000
	Segment 3 Cut and Cover Throat Structure	\$151,037,000		\$151,037,000
	Segment 2 Transit Center	\$889,000		\$889,000
	Trackworks	\$82,775,000		\$82,775,000
	Systems	\$92,662,000		\$92,662,000
	Allowances	\$90,162,000		\$90,162,000
	Design Contingency		\$199,551,900	\$199,551,900
	Allowance for Properties Demolition	\$3,000,000		\$3,000,000
	Tunnel Stub Box	\$99,876,000	included	\$99,876,000
	DTX Vent Structures (heighting of structures)	\$3,222,000	included	\$3,222,000
	Transit Center Building (TCB)			\$247,203,907
	Transit Center Fit Out	\$150,255,780	\$7,512,576	\$157,768,356
	Allowance for RVA for above at 5%	\$7,512,789		\$7,512,789
	Train Box Extension	\$55,631,840	\$2,782,176	\$58,414,016
	Allowance for RVA for above at 5%	\$2,781,592	\$514,738	\$3,296,330
	IBF - PCPA 95% CD Estimate item 2.3 plus 16.8% for escalation to 2016	\$12,582,864	\$629,552	\$13,212,416
	Allowance for IBF Escalator and Elevator from Beale street to Below Grade Train Box	\$5,000,000		\$5,000,000
	Allowance for Main Street Utility Relocation	\$2,000,000		\$2,000,000
	Subtotal DTX and TCB Construction excluding escalation	\$1,503,991,865	\$210,990,942	\$1,714,981,807
	DTX and TCB Construction Escalation at 5% to mid construction (2023)			\$583,257,836
	Subtotal DTX and TCB Construction including escalation			\$2,298,239,643
	ROW**			\$266,200,000
	Programwide @ 22.5% of above excluding ROW			\$517,103,920
	Subtotal Program Costs			\$3,081,543,562
	Construction Contingency @ 10%			\$229,823,964
	Program Reserve @ 15% of Subtotal Program Costs			\$462,231,534
	Total Program Cost excluding BART/Muni Pedestrian Connector			\$3,773,599,061
	BART/Muni Pedestrian Connector - Direct Construction Cost	\$109,525,767	included	\$109,525,767
	BART/Muni Pedestrian Connector - Escalation			\$37,249,236
	BART/Muni Pedestrian Connector - Construction Contingency			\$14,677,500
	BART/Muni Pedestrian Connector Total Cost			\$161,452,503
	Total Program Cost including BART/Muni Pedestrian Connector	\$1,613,517,632	\$210,990,942	\$3,935,051,564

* Total Contingency/Reserves is \$903 million or 29.3% of Total Program Costs excluding BART/Muni Pedestrian Connector

** ROW number was last updated with the 2013 Phase 2 cost estimate

Phase 2 Funding

Phase 2 Potential Funding (<i>in \$ millions</i>)	Total Funds	Net Proceeds after Debt Financing
Committed Transportation Authority Sales Tax (Prop K)	\$83	\$83
Committed San Mateo County Sales Tax	\$19	\$19
Committed MTC/BATA Bridge Tolls	\$7	\$7
Committed Regional Transportation Improvement Program	\$18	\$18
Transit Center District Plan-Mello Roos	\$275 - \$375	\$275-\$375
Tax Increment Residual (After TIFIA repayment)	\$665 - \$735	\$200 - \$340
FTA New Starts	\$650	\$650
New MTC/BATA Bridge Tolls	\$300	\$300
Future San Francisco Sales Tax	\$350	\$350
Future California High-Speed Rail Funds	\$557	\$557
Land Sales (Block 4)	\$45	\$45
Passenger Facility Charges or Maintenance Contribution	\$2,510 - \$8,025	\$865 - \$1,920
TOTAL POTENTIAL FUNDS	\$5,479 - \$11,164	\$3,369 - \$4,664

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

TRANSPORTATION AUTHORITY RECOMMENDATION

This section is to be completed by Transportation Authority Staff.

Last Updated: 3/3/2017 **Res. No:** _____ **Res. Date:** _____

Project Name: Downtown Extension - Preliminary Engineering

Grant Recipient: Transbay Joint Powers Authority

	Action	Amount	Phase
Funding Recommended:	Prop K Allocation	\$ 4,549,675	Design Engineering (PS&E)
	Total:	\$ 4,549,675	

Total Prop K Funds: \$ 4,549,675 **Total Prop AA Funds:** \$ -

Justification for multi-phase recommendations and notes for multi-sponsor recommendations:

Fund Expiration Date: 6/30/2018 **Eligible expenses must be incurred prior to this date.**

	Action	Amount	Fiscal Year	Phase
Future Commitment:				

Trigger: _____

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

TRANSPORTATION AUTHORITY RECOMMENDATION

This section is to be completed by Transportation Authority Staff.

Last Updated: 3/3/2017 **Res. No:** _____ **Res. Date:** _____

Project Name: Downtown Extension - Preliminary Engineering

Grant Recipient: Transbay Joint Powers Authority

Deliverables:

- | | |
|----|--|
| 1. | Provide monthly report detailing cost and progress by task. The monthly report shall include a summary of all contracts and agreements, including agency work, showing the budgeted versus actual amounts. |
| 2. | |
| 3. | |
| 4. | |
| 5. | |

Special Conditions:

- | | |
|----|---|
| 1. | The recommended allocation is contingent upon a Prop K Strategic Plan amendment to the Caltrain Downtown Extension (DTX) to a Rebuilt Transbay Terminal category. The amendment would advance \$2,840,777 programmed for the DTX in FY 2033/34. Further, the recommended action requires an exception to the Strategic Plan policy that sets aside all remaining funds not already programmed to Phase 1 for Phase 2 construction. See attached Strategic Plan amendment for details. |
| 2. | As a condition of this allocation, the TJPA will agree to the attached oversight protocol for Phases 1 and 2 of the Transbay Transit Center Program. |
| 3. | One of the scope components of the Planning Department's Railyard Alternatives and I-280 Boulevard Feasibility Study (RAB) involves reviewing construction methods and rail alignment configurations for the DTX, and seeking opportunities to fund and build the project more cost effectively. If the SFCTA Board acts to endorse an alternate alignment for the Downtown Rail Extension, the SFCTA reserves the right to pause the work funded by the current request in order to meet with TJPA, the Planning Department and the Mayor's Office to discuss any needed modifications to the scope of work, including potentially ceasing work on certain scope elements. |
| 4. | As a condition of this allocation, the Transportation Authority intends to engage independent experts to complement its existing staff and PMO resources to participate in charrettes, workshops, peer review, and deliverables review as part of the subject scope of work. The experts will also make available their resources to provide recommendations, concepts and ideas for the consideration of the TJPA. |

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

TRANSPORTATION AUTHORITY RECOMMENDATION

This section is to be completed by Transportation Authority Staff.

Last Updated: 3/3/2017 **Res. No:** _____ **Res. Date:** _____

Project Name: Downtown Extension - Preliminary Engineering

Grant Recipient: Transbay Joint Powers Authority

Notes:

1.
2.

Metric	Prop K	Prop AA
Actual Leveraging - Current Request	0.00%	No Prop AA
Actual Leveraging - This Project	See Above	See Above

SFCTA Project

Reviewer: CP

SGA PROJECT NUMBER

Sponsor: Transbay Joint Powers Authority

SGA Project Number: 105-914028 **Name:** Downtown Extension - Preliminary Engineering

Phase: Design Engineering (PS&E) **Fund Share:** 100.00%

Cash Flow Distribution Schedule by Fiscal Year

Fund Source	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21+	Total
Prop K	\$2,729,805	\$1,819,870				\$4,549,675

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

FY of Allocation Action: 2016/17

Current Prop K Request: \$ 6,774,400

Current Prop AA Request: \$ -

Project Name: Downtown Extension - Preliminary Engineering

Grant Recipient: Transbay Joint Powers Authority

1) The requested sales tax and/or vehicle registration fee revenues will be used to supplement and under no circumstance replace existing local revenues used for transportation purposes.

<p>Required for Allocation Request Form Submission Initials of sponsor staff member verifying the above statement</p>
<p><i>sdd</i></p>

CONTACT INFORMATION

Project Manager

Grants Section Contact

Name: Brian Dykes

Sara DeBord

Title: Principal Engineer

Chief Financial Officer

Phone: 415.597.4617

415.597.4039

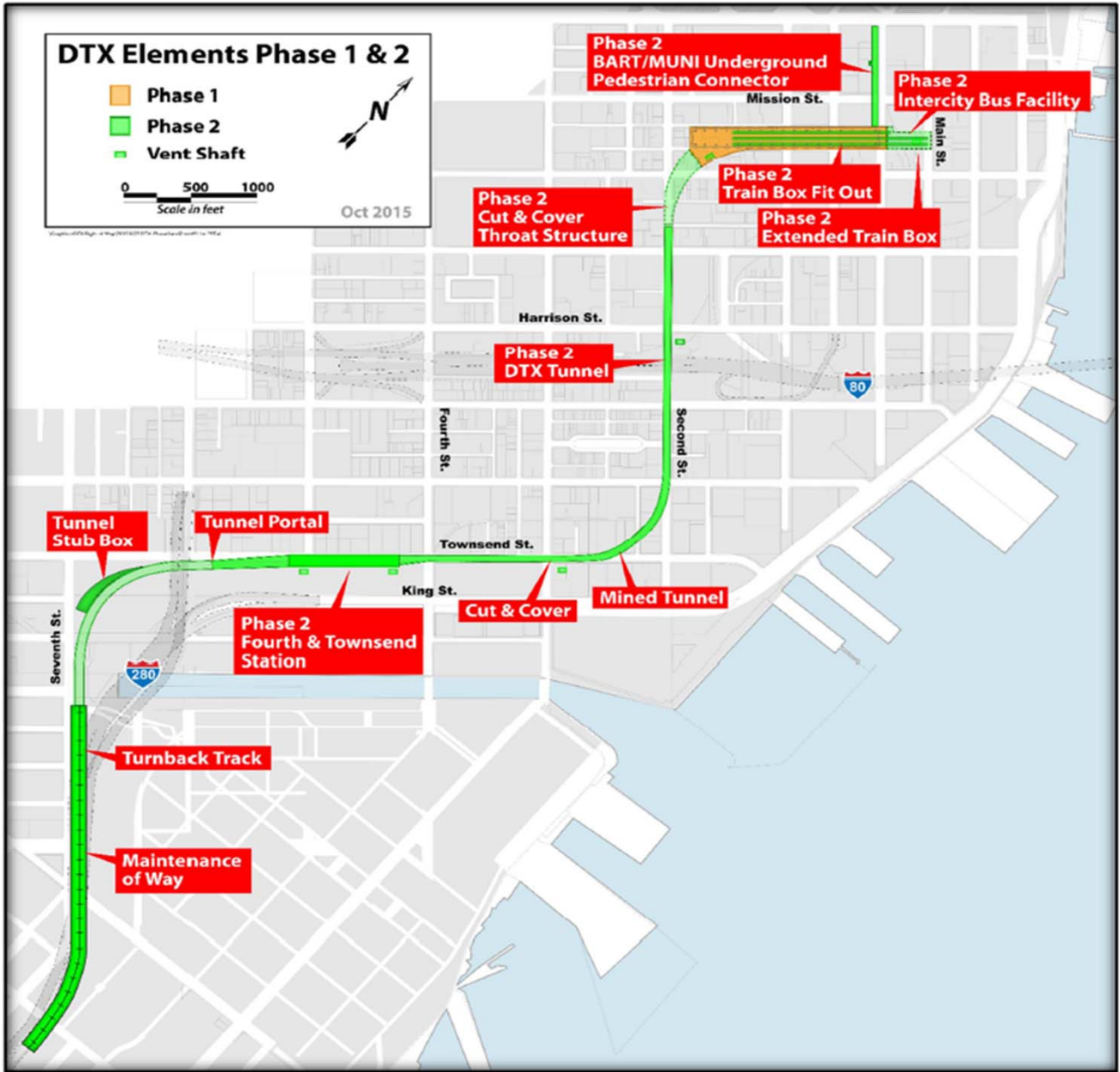
Email: bdykes@transbaycenter.org

sdebord@transbaycenter.org



Railyard Alternatives and I-280 Boulevard Feasibility Study

San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form





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**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

FY of Allocation Action: 2016/17

Project Name: Downtown Extension - Tunnel Engineering Options Study

Grant Recipient: Transbay Joint Powers Authority

EXPENDITURE PLAN INFORMATION

Prop K EP category: Caltrain Downtown Extension to a Rebuilt Transbay Terminal: (EP-5)

Prop K EP Line Number (Primary): 5 **Current Prop K Request:** \$ 915,000

Prop K Other EP Line Numbers: _____

Prop AA Category: _____

Current Prop AA Request: \$ -

Supervisorial District(s): District 06

REQUEST

Brief Project Description (type below)

Phase 2 of the Transbay Transit Center Program is a 1.3-mile Downtown Rail Extension (DTX) tunnel that extends Caltrain commuter rail from its current terminus at Fourth and King streets to the new Transbay Transit Center (TTC). It also completes the build-out of the below-grade train facilities at the TTC, a new underground station along the DTX alignment, an intercity bus facility, and provides the tracks and northern terminus for California's future High-Speed Rail system. The subject request is for an engineering study to analyze opportunities to reduce surface impacts due to construction of DTX.

Detailed Scope, Project Benefits and Community Outreach (type below)

Preliminary engineering (PE) (30% design level) for many components of Phase 2, was completed in July 2010. Subsequently, as a result of new requirements by the California High-Speed Rail Authority (CHSRA), as well as other factors, elements have been modified or added to Phase 2. These additions and modifications are included in a draft Supplemental Environmental Impact Statement/Environmental Impact Report (SEIS/EIR) released in December 2015 for public comment. Further design work on some of these new or modified elements is described in a separate request. The TJPA has also been requested by the Transportation Authority staff to study opportunities for reducing the surface impacts of the DTX construction. The subject request to fund a Tunnel Options Engineering Study would focus on three areas: Throat cut-and-cover (west side of the Transbay Transit Center where three tracks need to fan into six tracks); Townsend Cut-and-Cover; and the Third/Townsend ventilation structure site. The work is scheduled to be complete within 3 months of issuing a Notice to Proceed. See attached Word document for details.

Project Location (type below)

First & Mission Streets, San Francisco, CA

Project Phase (select dropdown below)

Design Engineering (PS&E)

Map or Drawings Attached? Yes

Other Items Attached? Yes

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

5YPP/STRATEGIC PLAN INFORMATION

**Type of Project in the Prop K
5YPP/Prop AA Strategic Plan?** Named Project

**Is the requested amount greater
than the amount programmed in
the relevant 5YPP or Strategic
Plan?** Greater than Programmed Amount

Prop K SP/5YPP Amount:	\$	<u>2,623,898</u>	Prop AA Strategic Plan Amount:	
-------------------------------	----	------------------	---	--

Please describe and justify the necessary amendment:

The Strategic Plan establishes a policy requiring all remaining funds not currently programmed to Phase 1 to be spent on construction of Phase 2 (DTX) to reinforce the need to complete the DTX as soon as possible and to avoid using all of the Prop K funds on Phase 1. SFCTA staff supports the recommended request, which requires an exception to this policy, now that Phase 1 is fully funded and appears on track to be delivered within the revised budget. Further, the proposed scope will support TJPA's efforts to advance design and develop a solid cost estimate, both of which will facilitate TJPA's ability to secure funding for DTX.

Background and Project Benefits

The Transbay Transit Center Program (Program) is an approximately \$6 billion program to replace the former Transbay Terminal at First and Mission streets in downtown San Francisco with a modern regional transit hub that will connect eight Bay Area counties and the State of California through eleven transit systems including Caltrain commuter rail and the future California High-Speed Rail system from San Francisco to Los Angeles.

The Program is being constructed in two phases. Phase 1 includes design and construction of the above-grade portion of the Transit Center, the core and shell of the two below-grade levels of the train station, a new bus ramp, a bus storage facility, and a temporary bus terminal. Phase 2 will complete the build-out of the below-grade train station facilities at the Transit Center and build the Downtown Rail Extension (DTX) tunnel, a new underground station along the DTX alignment, and an intercity bus facility.

Phase 2 will provide the following public benefits:

- Improve access to rail services and enhance San Francisco's accessibility to a local and regional workforce
- Enhance connectivity between Caltrain and other major transit services
- Create the northern terminus for the state's future high-speed rail system
- Build a new intercity bus station next to the Transit Center for Greyhound, Amtrak and other regional bus service providers
- Contribute to improved regional air quality by attracting thousands of new transit riders and reducing the number of vehicles on Highways 101 and 280

Current Request

Preliminary engineering (PE) (30% design level) for many components of Phase 2, including the Fourth and Townsend Street Station, was completed in July 2010. Subsequently, as a result of new requirements by the California High-Speed Rail Authority (CHSRA), as well as other factors, elements have been modified or added to Phase 2. These additions and modifications are included in a draft Supplemental Environmental Impact Statement/Environmental Impact Report (SEIS/EIR) released in December 2015 for public comment. Further design work on these new or modified elements is outlined in a separate request; however, the TJPA has also been requested by the Transportation Authority staff to study opportunities for reducing the surface impacts of the DTX construction.

The current request would fund an engineering study and associated program management/program controls work to evaluate opportunities for reducing the surface impacts of the construction of Phase 2, as described in detail below.

Tunneling Options Engineering Study

Parsons Transportation Group

The Downtown Extension designer, Parsons Transportation Group, will analyze opportunities to reduce surface impacts due to DTX construction. This contract was renewed by the TJPA Board in 2014. This request is for **\$790,130**. Tasks will include the following:

A. Tunneling Options Engineering Study

1. Project meetings (e.g., TJPA staff or Board meetings)
2. Scheduling
3. Quality Control and Quality Assurance
4. Other Direct Costs as requested and/or agreed by TJPA
5. Analyze opportunities to reduce the surface impacts due to Phase 2 construction
 - a. Structural – Throat Cut-and-Cover: Analyze options for reducing the cut-and-cover construction in the Throat area
 - b. Structural – Townsend Street Cut-and-Cover: Review and analyze engineering solutions to reduce the cut-and-cover construction on Townsend Street
 - c. Ventilation/Emergency Exit Structures: Determine feasible engineering options for the Third/Townsend ventilation structure site
6. Tunnel Options Engineering Study Report
 - a. Prepare a report with conceptual level cost estimates, and summarize technical calculations

Exclusions:

1. Final Design
2. Technical Specifications
3. Design-Build Contract Documents (in the event that Design-Build is the chosen delivery method)

Program Management/Program Controls (PMPC)

AECOM (URS)

The PMPC provides a variety of services and reports to augment TJPA staff in implementing the Transbay Transit Center Program. Specific tasks include program management services, program implementation and support, program controls management, quality assurance and control implementation, risk management program implementation, document control, administrative support, and project management for Phases 1 and 2 of the Program. The contract was awarded in 2013. This funding request is for **\$90,105** for the following tasks:

A. Phase 2 Program Management

1. Program Management
 - a. Project meetings
 - b. Project controls support, including an update to the Phase 2 Budget
 - c. Program coordination support
 - d. Utility coordination support

2. DTX Project Management
 - a. Contribute to monthly PMPC status reports
 - b. Project meetings
 - c. Work with estimators, technical specialists and Program Controls Manager to validate scope and develop the project budget and schedule for Phase 2, including subprojects and project components. Maintain current and accurate information regarding project scope, schedule and budget
 - d. Maintain an issue-action tracking system to facilitate timely decision-making
 - e. Manage the DTX design consultant including, but not limited to, invoice reviews, submittal reviews, contract negotiations, coordination with TTC design consultant, and correspondence on technical project issues
 - f. Refine and validate design constraints, criteria, and standards with the engineering design team as requested by TJPA. Complete, maintain and update design criteria as necessary
 - g. Provide technical, project-specific assistance to TJPA, including preparation of letters and presentations
 - h. Coordinate with train operators and outside agencies
 - i. Coordinate with adjacent properties along the alignment to determine potential impacts to DTX and/or the properties
 - j. Manage interfaces between Phase 2 components and other component projects of the Program
3. Document Management and Administrative Support
 - a. Record keeping and submittal logging
 - b. Document retrieval and issuance to support project or outside agency requests
 - c. Technical and editorial reviews of project documents, letters, and presentations

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

Project Name: Downtown Extension - Tunnel Engineering Options Study

ENVIRONMENTAL CLEARANCE

Environmental Type: EIR/EIS

PROJECT DELIVERY MILESTONES

Enter dates below for ALL project phases, not just for the current request, based on the best information available. For PLANNING requests, please only enter the schedule information for the PLANNING phase.

Phase	Start		End	
	Quarter	Calendar Year	Quarter	Calendar Year
Planning/Conceptual Engineering (PLAN)		1995		2001
Environmental Studies (PA&ED)		2001	Oct-Dec	2016
Right-of-Way	Jul-Sep	2004	Oct-Dec	2019
Design Engineering (PS&E)	Jan-Mar	2005	Jul-Sep	2019
Advertise Construction	Jul-Sep	2018		
Start Construction (e.g. Award Contract)	Oct-Dec	2018		
Operations (i.e., paratransit)				
Open for Use			Oct-Dec	2025
Project Completion (means last eligible expenditure)			Oct-Dec	2025

SCHEDULE DETAILS

Provide dates for any COMMUNITY OUTREACH planned during the requested phase(s). Identify PROJECT COORDINATION with other projects in the area (e.g. paving, MUNI Forward) and relevant milestone dates (e.g. design needs to be done by DATE to meet paving schedule). List any timely use-of-funds deadlines (e.g. federal obligation deadline). If a project is comprised of MULTIPLE SUB-PROJECTS, provide milestones for each sub-project. For PLANNING EFFORTS, provide start/end dates for each task.

The schedule presented above is based on the Phase 2 schedule presented to the TJPA Board of Directors in June 2016, at which the Board provided direction to complete Phase 2 preliminary engineering.

The subject scope is anticipated to be completed within three months of issuing the Notice to Proceed.

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

Project Name: Downtown Extension - Tunnel Engineering Options Study

FUNDING PLAN - FOR CURRENT REQUEST

Enter the funding plan for the phase(s) that are the subject of the CURRENT REQUEST. Totals should match those shown in the Cost Summary below.

Fund Source	Planned	Programmed	Allocated	Total
Prop K	\$ 915,000		\$ -	\$ 915,000
Prop AA	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -
Total:	\$ 915,000	\$ -	\$ -	\$ 915,000

FUNDING PLAN - FOR ENTIRE PROJECT (ALL PHASES)

Enter the funding plan for all phases (planning through construction) of the project. This section may be left blank if the current request covers all project phases. Totals should match those shown in the Cost Summary below.

Fund Source	Planned	Programmed	Allocated	Total
Prop K	\$ -			\$ -
Prop AA	\$ See attached		\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -
Total:	\$ -	\$ -	\$ -	\$ -

COST SUMMARY

Show total cost for ALL project phases (in year of expenditure dollars) based on best available information. Source of cost estimate (e.g. 35% design, vendor quote) is intended to help gauge the quality of the cost estimate, which should improve in reliability the farther along a project is in its development.

Phase	Total Cost	Prop K - Current Request	Prop AA - Current Request	Source of Cost Estimate
Planning/Conceptual Engineering (PLAN)	\$ -			Completed by Caltrain
Environmental Studies (PA&ED)	\$ 34,184,166			Included in 2016 Phase 2 Cost Estimate (Programwide)
Right-of-Way	\$ 266,200,000	\$ -		2016 Phase 2 cost estimate
Design Engineering (PS&E)	\$ 130,297,416	\$ 915,000	\$ -	TJPA Approved Budget for Phase 2
Construction (CON)	\$ 3,504,369,982	\$ -	\$ -	2016 Phase 2 cost estimate - see attached detailed estimate
Operations (Paratransit)	\$ -	\$ -		
Total:	\$ 3,935,051,564	\$ 915,000	\$ -	

% Complete of Design: 58% as of 5/31/2016
Expected Useful Life: 70 Years

PROPOSED REIMBURSEMENT SCHEDULE FOR CURRENT REQUEST (instructions as noted below)

Use the table below to enter the proposed reimbursement schedule for the current request. Prop K and Prop AA policy assume these funds will not be reimbursed at a rate greater than their proportional share of the funding plan for the relevant phase unless justification is provided for a more aggressive reimbursement rate. If the current request is for multiple phases, please provide separate reimbursement schedules by phase. If the proposed schedule exceeds the years available, please attach a file with the requested information.

Fund Source	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21+	Total
Prop K	\$ 915,000		\$ -	\$ -	\$ -	\$ 915,000
Prop AA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Phase 2 Funding

Phase 2 Potential Funding (<i>in \$ millions</i>)	Total Funds	Net Proceeds after Debt Financing
Committed Transportation Authority Sales Tax (Prop K)	\$83	\$83
Committed San Mateo County Sales Tax	\$19	\$19
Committed MTC/BATA Bridge Tolls	\$7	\$7
Committed Regional Transportation Improvement Program	\$18	\$18
Transit Center District Plan-Mello Roos	\$275 - \$375	\$275-\$375
Tax Increment Residual (After TIFIA repayment)	\$665 - \$735	\$200 - \$340
FTA New Starts	\$650	\$650
New MTC/BATA Bridge Tolls	\$300	\$300
Future San Francisco Sales Tax	\$350	\$350
Future California High-Speed Rail Funds	\$557	\$557
Land Sales (Block 4)	\$45	\$45
Passenger Facility Charges or Maintenance Contribution	\$2,510 - \$8,025	\$865 - \$1,920
TOTAL POTENTIAL FUNDS	\$5,479 - \$11,164	\$3,369 - \$4,664

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

General Instructions

- Sponsor may attach budget details in sponsor agency format (Excel), which includes all required information (per phase) detailed below.
- Contingencies should be called out in each phase.

For **Design Engineering Phase:**

Project Name: DTX

PROJECT BUDGET - DESIGN

BUDGET SUMMARY

Agency/Consultant	Total	% of Total
Parsons (Designer)	\$ 790,130	
AECOM (PMPC)	\$ 90,105	9.8%
Financial Consultant	\$ -	0.0%
ROW Consultant	\$ -	0.0%
TJPA Staff	\$ -	0.0%
Contingency	\$ 34,765	3.8%
Total	\$ 915,000	100.0%

2016 Phase 2 Cost Estimate (in year of expenditure dollars)

		Direct Costs	Design Contingency	Total Cost
DTX				\$1,467,777,900
	Segment 10 Fourth and King Surface Station and Yard Upgrade	\$0		\$0
	Segment 9 At Grade Trackway	\$707,000		\$707,000
	Segment 8 U-Wall Segment	\$57,906,000		\$57,906,000
	Segment 7 Cut and Cover West of Fifth St	\$92,220,000		\$92,220,000
	Segment 6 Cut and Cover Fourth & Townsend Underground Station	\$123,721,000		\$123,721,000
	Segment 5 Cut and Cover East of Fourth St	\$82,069,000		\$82,069,000
	Segment 4 NATM Mined Tunnel	\$387,981,000		\$387,981,000
	Segment 3 Cut and Cover Throat Structure	\$151,037,000		\$151,037,000
	Segment 2 Transit Center	\$889,000		\$889,000
	Trackworks	\$82,775,000		\$82,775,000
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	Allowance for Properties Demolition	\$3,000,000		\$3,000,000
	Tunnel Stub Box	\$99,876,000	included	\$99,876,000
	DTX Vent Structures (heighting of structures)	\$3,222,000	included	\$3,222,000
	Transit Center Building (TCB)			\$247,203,907
	Transit Center Fit Out	\$150,255,780	\$7,512,576	\$157,768,356
	Allowance for RVA for above at 5%	\$7,512,789		\$7,512,789
	Train Box Extension	\$55,631,840	\$2,782,176	\$58,414,016
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	IBF - PCPA 95% CD Estimate item 2.3 plus 16.8% for escalation to 2016	\$12,582,864	\$629,552	\$13,212,416
	Allowance for IBF Escalator and Elevator from Beale street to Below Grade Train Box	\$5,000,000		\$5,000,000
	Allowance for Main Street Utility Relocation	\$2,000,000		\$2,000,000
	Subtotal DTX and TCB Construction excluding escalation	\$1,503,991,865	\$210,990,942	\$1,714,981,807
	DTX and TCB Construction Escalation at 5% to mid construction (2023)			\$583,257,836
	Subtotal DTX and TCB Construction including escalation			\$2,298,239,643
	ROW**			\$266,200,000
	Programwide @ 22.5% of above excluding ROW			\$517,103,920
	Subtotal Program Costs			\$3,081,543,562
	Construction Contingency @ 10%			\$229,823,964
	Program Reserve @ 15% of Subtotal Program Costs			\$462,231,534
	Total Program Cost excluding BART/Muni Pedestrian Connector			\$3,773,599,061
	BART/Muni Pedestrian Connector - Direct Construction Cost	\$109,525,767	included	\$109,525,767
	BART/Muni Pedestrian Connector - Escalation			\$37,249,236
	BART/Muni Pedestrian Connector - Construction Contingency			\$14,677,500
	BART/Muni Pedestrian Connector Total Cost			\$161,452,503
	Total Program Cost including BART/Muni Pedestrian Connector	\$1,613,517,632	\$210,990,942	\$3,935,051,564

* Total Contingency/Reserves is \$903 million or 29.3% of Total Program Costs excluding BART/Muni Pedestrian Connector

** ROW number was last updated with the 2013 Phase 2 cost estimate

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

TRANSPORTATION AUTHORITY RECOMMENDATION

This section is to be completed by Transportation Authority Staff.

Last Updated: 3/3/2017 **Res. No:** _____ **Res. Date:** _____

Project Name: Downtown Extension - Tunnel Engineering Options Study

Grant Recipient: Transbay Joint Powers Authority

Funding Recommended:	Action	Amount	Phase
	Prop K Allocation	\$ 915,000	Design Engineering (PS&E)
	Total:	\$ 915,000	

Total Prop K Funds: \$ 915,000 **Total Prop AA Funds:** \$ -

Justification for multi-phase recommendations and notes for multi-sponsor recommendations:

Fund Expiration Date: 6/30/2018 **Eligible expenses must be incurred prior to this date.**

Future Commitment:

Action	Amount	Fiscal Year	Phase

Trigger:

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

TRANSPORTATION AUTHORITY RECOMMENDATION

This section is to be completed by Transportation Authority Staff.

Last Updated: 3/3/2017 **Res. No:** _____ **Res. Date:** _____

Project Name: Downtown Extension - Tunnel Engineering Options Study

Grant Recipient: Transbay Joint Powers Authority

Deliverables:

- | | |
|----|--|
| 1. | Provide monthly report detailing cost and progress by task. The monthly report shall include a summary of all contracts and agreements, including agency work, showing the budgeted versus actual amounts. |
| 2. | Draft and Final Tunnel Options Engineering Study Report. |
| 3. | |
| 4. | |
| 5. | |

Special Conditions:

- | | |
|----|---|
| 1. | The recommended action requires an exception to the Strategic Plan policy that sets aside all remaining funds not already programmed to Phase 1 for Phase 2 (DTX) construction. See attached Strategic Plan amendment for details. |
| 2. | As a condition of this allocation, the TJPA will agree to the attached oversight protocol for Phases 1 and 2 of the Transbay Transit Center program. |
| 3. | One of the scope components of the Planning Department's Railyard Alternatives and I-280 Boulevard Feasibility Study (RAB) involves reviewing construction methods and rail alignment configurations for the DTX, and seeking opportunities to fund and build the project more cost effectively. If the SFCTA Board acts to endorse an alternate alignment for the Downtown Rail Extension, the SFCTA reserves the right to pause the work funded by the current request in order to meet with TJPA, the Planning Department and the Mayor's Office to discuss any needed modifications to the scope of work, including potentially ceasing work on certain scope elements. |
| 4. | Following completion of the draft Tunnel Options Engineering Study Report (anticipated 3 months after the notice to proceed), TJPA staff will present the draft report findings to the Transportation Authority Board. |
| 5. | As a condition of this allocation, the Transportation Authority intends to engage independent experts to complement its existing staff and PMO resources to participate in charrettes, workshops, peer review, and deliverables review as part of the subject scope of work. The experts will also make available their resources to provide recommendations, concepts and ideas for the consideration of the TJPA. |

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

TRANSPORTATION AUTHORITY RECOMMENDATION

This section is to be completed by Transportation Authority Staff.

Last Updated: 3/3/2017 **Res. No:** _____ **Res. Date:** _____

Project Name: Downtown Extension - Tunnel Engineering Options Study

Grant Recipient: Transbay Joint Powers Authority

Notes:

1.
2.

Metric	Prop K	Prop AA
Actual Leveraging - Current Request	0.00%	No Prop AA
Actual Leveraging - This Project	See Above	See Above

SFCTA Project

Reviewer: CP

SGA PROJECT NUMBER

Sponsor: Transbay Joint Powers Authority

SGA Project Number: 105-914029 **Name:** Downtown Extension - Tunnel Engineering Options Study

Phase: Design Engineering (PS&E) **Fund Share:** 100.00%

Cash Flow Distribution Schedule by Fiscal Year

Fund Source	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21+	Total
Prop K	\$915,000					\$915,000

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

FY of Allocation Action: 2016/17

Current Prop K Request: \$ 6,774,400

Current Prop AA Request: \$ -

Project Name: Downtown Extension - Tunnel Engineering Options Study

Grant Recipient: Transbay Joint Powers Authority

1) The requested sales tax and/or vehicle registration fee revenues will be used to supplement and under no circumstance replace existing local revenues used for transportation purposes.

<p>Required for Allocation Request Form Submission Initials of sponsor staff member verifying the above statement</p>
<p><i>sdd</i></p>

CONTACT INFORMATION

Project Manager

Grants Section Contact

Name: Brian Dykes

Sara DeBord

Title: Principal Engineer

Chief Financial Officer

Phone: 415.597.4617

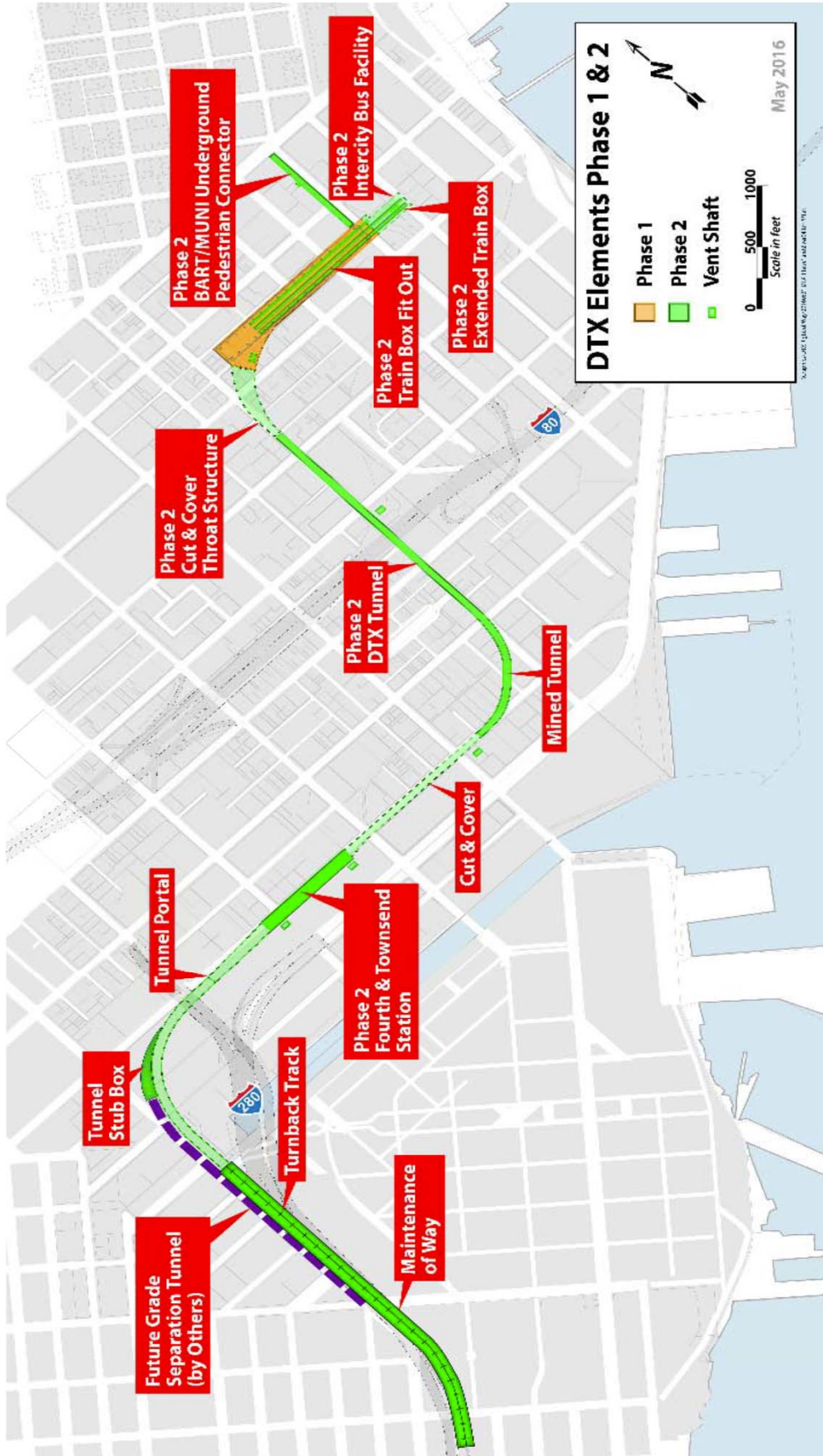
415.597.4039

Email: bdykes@transbaycenter.org

sdebord@transbaycenter.org

San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form

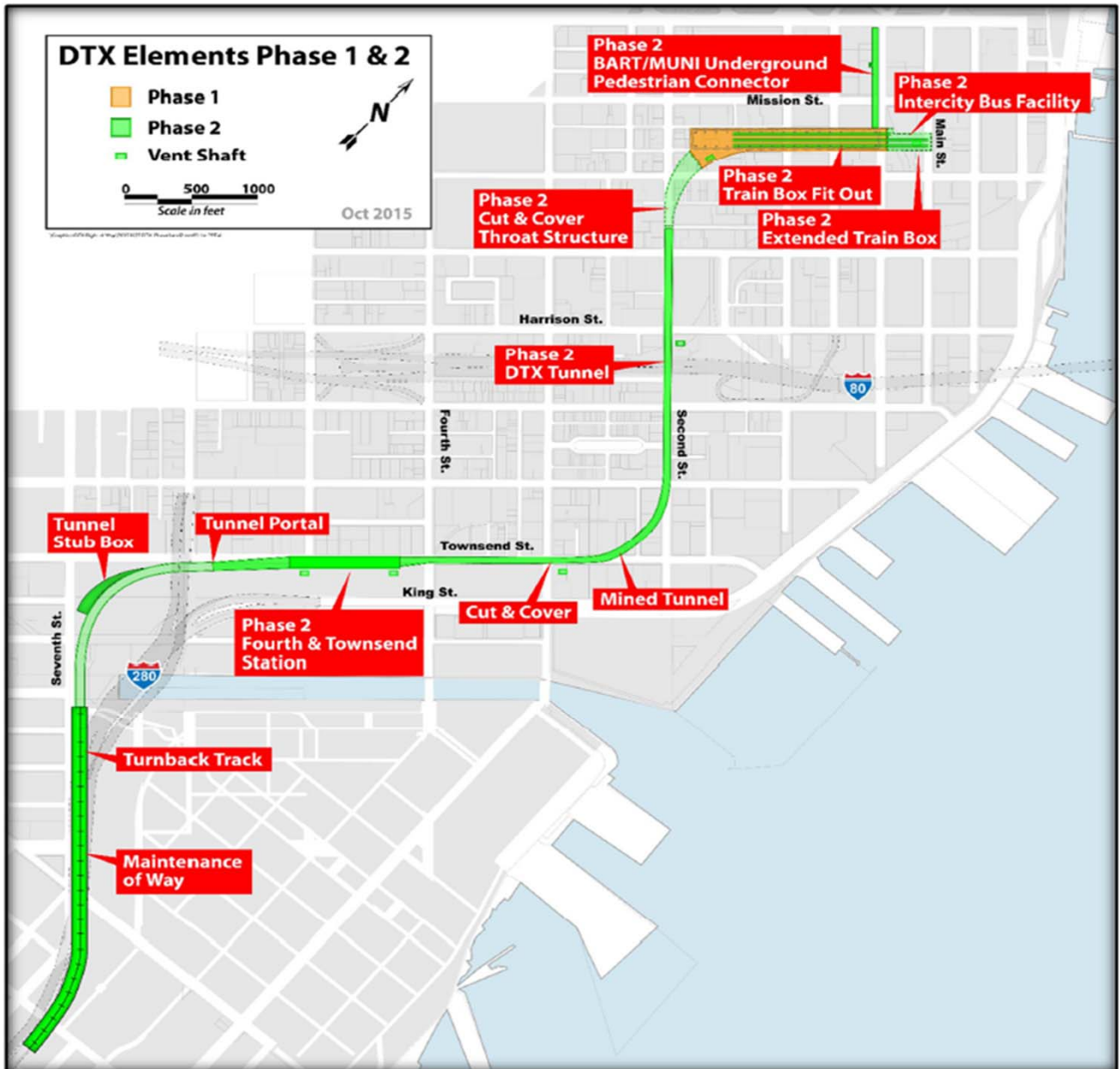
MAPS AND DRAWINGS



Please see T JPA Board Report from June 9, 2016 at:

http://transbaycenter.org/uploads/2016/06/Item13_DTX-Phase-2.pdf

San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form



**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

FY of Allocation Action: 2016/17

Project Name: Downtown Extension - Additional Oversight/Peer Review

Grant Recipient: San Francisco County Transportation Authority

EXPENDITURE PLAN INFORMATION

Prop K EP category: Caltrain Downtown Extension to a Rebuilt Transbay Terminal: (EP-5)

Prop K EP Line Number (Primary): 5 **Current Prop K Request:** \$ 200,000

Prop K Other EP Line Numbers: _____

Prop AA Category: _____

Current Prop AA Request: \$ -

Supervisorial District(s): District 06

REQUEST

Brief Project Description (type below)

Phase 2 of the Transbay Transit Center Program is a 1.3-mile Downtown Rail Extension (DTX) tunnel that extends Caltrain commuter rail from its current terminus at Fourth and King streets to the new Transbay Transit Center (TTC). It also completes the build-out of the below-grade train facilities at the TTC, a new underground station along the DTX alignment, an intercity bus facility, and provides the tracks and northern terminus for California's future High-Speed Rail system.

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

Detailed Scope, Project Benefits and Community Outreach (type below)

In response to the Board's interest in increased oversight for the Transbay Transit Center, the work to be performed under this appropriation is intended to complement and enhance the Authority's ongoing oversight functions. It is the intent of the SFCTA to engage independent experts in the areas of tunneling/underground construction, cost estimating, funding, and right-of-way to participate in charrettes, workshops, peer reviews, and deliverables review to assure that the studies and design to be performed by the TJPA meet the highest standards of quality as well as the project needs. The experts will also make available their resources to provide recommendations, concepts and ideas for the consideration of TJPA.

Of particular interest will be the tunneling options analysis. There has been concern related to the socioeconomic impacts of the proposed cut-and-cover construction methodology contemplated for Townsend Street under the project's EIS/EIR, approved in 2004. This effort will consider other construction methodologies with the goal of reducing the cut-and-cover activities on the project as much as possible. To meet this objective, TJPA will have to consider a variety of construction methodologies that may be applicable to the challenges of the project and avail themselves not only of the tried-and-true traditional methodologies, but also some of the newer techniques in underground construction developed since the EIR/EIS was approved. To this end, the tunneling /underground construction specialists to be engaged under this appropriation will participate in the charrette sessions to suggest alternatives for consideration and provide peer review of the subsequent alternative development.

Another area of focus will be the Funding Plan Update. With the federal funding uncertainties related to the current administration, alternative project delivery methods, including P3, should be revisited. Our funding specialists will work together with TJPA staff and consultants to assist in the development of realistic funding plans based on a variety of delivery methods.

Staff intends to issue Task Orders to prequalified firms from the On-Call Project Management Services/General Engineering approved consultant list recently approved by the Board. With the additional technical oversight provided under this appropriation SFCTA staff will better be able to advise the Board on decisions regarding support and funding for this critical project.

Project Location (type below)

First & Mission Streets, San Francisco, CA

Project Phase (select dropdown below)

Design Engineering (PS&E)

Map or Drawings Attached? Yes

Other Items Attached? Yes

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

5YPP/STRATEGIC PLAN INFORMATION

**Type of Project in the Prop K
5YPP/Prop AA Strategic Plan?** Named Project

**Is the requested amount greater
than the amount programmed in
the relevant 5YPP or Strategic
Plan?** Greater than Programmed Amount

Prop K SP/5YPP Amount:	\$	2,623,898		Prop AA Strategic Plan Amount:	

Please describe and justify the necessary amendment:

The Strategic Plan establishes a policy requiring all remaining funds not currently programmed to Phase 1 to be spent on construction of Phase 2 (DTX) to reinforce the need to complete the DTX as soon as possible and to avoid using all of the Prop K funds on Phase 1. The subject request for funds to enhance oversight and peer review of the DTX requires an exception to this policy.

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

Project Name: Downtown Extension - Additional Oversight/Peer Review

ENVIRONMENTAL CLEARANCE

Environmental Type: EIR/EIS

PROJECT DELIVERY MILESTONES

Enter dates below for ALL project phases, not just for the current request, based on the best information available. For PLANNING requests, please only enter the schedule information for the PLANNING phase.

Phase	Start		End	
	Quarter	Calendar Year	Quarter	Calendar Year
Planning/Conceptual Engineering (PLAN)		1995		2001
Environmental Studies (PA&ED)		2001	Oct-Dec	2016
Right-of-Way	Jul-Sep	2004	Oct-Dec	2019
Design Engineering (PS&E)	Jan-Mar	2005	Jul-Sep	2019
Advertise Construction	Jul-Sep	2018		
Start Construction (e.g. Award Contract)	Oct-Dec	2018		
Operations (i.e., paratransit)				
Open for Use			Oct-Dec	2025
Project Completion (means last eligible expenditure)			Oct-Dec	2025

SCHEDULE DETAILS

Provide dates for any COMMUNITY OUTREACH planned during the requested phase(s). Identify PROJECT COORDINATION with other projects in the area (e.g. paving, MUNI Forward) and relevant milestone dates (e.g. design needs to be done by DATE to meet paving schedule). List any timely use-of-funds deadlines (e.g. federal obligation deadline). If a project is comprised of MULTIPLE SUB-PROJECTS, provide milestones for each sub-project. For PLANNING EFFORTS, provide start/end dates for each task.

The schedule presented above is based on the Phase 2 schedule presented to the TJPA Board of Directors in June 2016, at which the Board provided direction to complete Phase 2 preliminary engineering. This request is intended to support enhanced oversight and peer review of the DTX scope of work under two concurrent TJPA allocation requests that advance preliminary engineering. That work is anticipated to be completed by December 2017.

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

Project Name: Downtown Extension - Additional Oversight/Peer Review

FUNDING PLAN - FOR CURRENT REQUEST

Enter the funding plan for the phase(s) that are the subject of the CURRENT REQUEST. Totals should match those shown in the Cost Summary below.

Fund Source	Planned	Programmed	Allocated	Total
Prop K	\$ 200,000		\$ -	\$ 200,000
Prop AA	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -
Total:	\$ 200,000	\$ -	\$ -	\$ 200,000

FUNDING PLAN - FOR ENTIRE PROJECT (ALL PHASES)

Enter the funding plan for all phases (planning through construction) of the project. This section may be left blank if the current request covers all project phases. Totals should match those shown in the Cost Summary below.

Fund Source	Planned	Programmed	Allocated	Total
Prop K	\$ -			\$ -
Prop AA	\$ See attached		\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -
Total:	\$ -	\$ -	\$ -	\$ -

COST SUMMARY

Show total cost for ALL project phases (in year of expenditure dollars) based on best available information. Source of cost estimate (e.g. 35% design, vendor quote) is intended to help gauge the quality of the cost estimate, which should improve in reliability the farther along a project is in its development.

Phase	Total Cost	Prop K - Current Request	Prop AA - Current Request	Source of Cost Estimate
Planning/Conceptual Engineering (PLAN)	\$ -	\$ -		Completed by Caltrain
Environmental Studies (PA&ED)	\$ 34,184,166	\$ -		Included in 2016 Phase 2 Cost Estimate (Programwide)
Right-of-Way	\$ 266,200,000	\$ -		2016 Phase 2 cost estimate
Design Engineering (PS&E)	\$ 130,297,416	\$ 200,000	\$ -	
Construction (CON)	\$ 3,504,369,982	\$ -	\$ -	2016 Phase 2 cost estimate - see attached detailed estimate
Operations (Paratransit)	\$ -	\$ -		
Total:	\$ 3,935,051,564	\$ 200,000	\$ -	

% Complete of Design: 58% as of 5/31/2016
Expected Useful Life: 70 Years

PROPOSED REIMBURSEMENT SCHEDULE FOR CURRENT REQUEST (instructions as noted below)

Use the table below to enter the proposed reimbursement schedule for the current request. Prop K and Prop AA policy assume these funds will not be reimbursed at a rate greater than their proportional share of the funding plan for the relevant phase unless justification is provided for a more aggressive reimbursement rate. If the current request is for multiple phases, please provide separate reimbursement schedules by phase. If the proposed schedule exceeds the years available, please attach a file with the requested information.

Fund Source	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21+	Total
Prop K	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 200,000
Prop AA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

For Design Engineering Phase:

Project Name: Downtown Extension - Additional Oversight/Peer Review

PROJECT BUDGET - DTX PE Technical Studies Enhanced Oversight Cost Estimate

BUDGET SUMMARY	Category	Unit Cost	No. Hours	Cost
1) Tunneling Concept Review				
	Project Manager	\$ 313	40	\$ 12,506
	Principal Tunnel Engineer	\$ 303	80	\$ 24,244
	Principal Geo-Structural Engineer	\$ 313	80	\$ 25,009
	Tunneling Concept Review SUB-TOTAL			\$ 61,758
2) Cost Estimate Update Review				
	Project Manager	\$ 280	60	\$ 16,774
	Cost Estimator	\$ 235	120	\$ 28,258
	Cost Estimate SUB-TOTAL			\$ 45,031
3) Funding Plan Development				
	Project Manager	\$ 300	40	\$ 12,000
	Value-for-Money Lead	\$ 275	80	\$ 22,000
	Funding Plan SUB-TOTAL			\$ 34,000
4) ROW Acquisition Cost Estimate Update Review				
	Principal Consultant	\$ 240	24	\$ 5,768
	Managing Consultant	\$ 189	40	\$ 7,542
	Appraisal	\$ 131	60	\$ 7,842
	ROW Acquisition SUB-TOTAL			\$ 21,152
	Oversight Cost SUB-TOTAL			\$ 161,942
	20% Contingency			\$ 32,388
	Oversight Cost TOTAL			\$ 194,330
			ROUNDED	\$ 200,000

2016 Phase 2 Cost Estimate (in year of expenditure dollars)

		Direct Costs	Design Contingency	Total Cost
DTX				\$1,467,777,900
	Segment 10 Fourth and King Surface Station and Yard Upgrade	\$0		\$0
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* Total Contingency/Reserves is \$903 million or 29.3% of Total Program Costs excluding BART/Muni Pedestrian Connector

** ROW number was last updated with the 2013 Phase 2 cost estimate

Phase 2 Funding

Phase 2 Potential Funding (<i>in \$ millions</i>)	Total Funds	Net Proceeds after Debt Financing
Committed Transportation Authority Sales Tax (Prop K)	\$83	\$83
Committed San Mateo County Sales Tax	\$19	\$19
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TOTAL POTENTIAL FUNDS	\$5,479 - \$11,164	\$3,369 - \$4,664

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

TRANSPORTATION AUTHORITY RECOMMENDATION

This section is to be completed by Transportation Authority Staff.

Last Updated: 3/15/2017 **Res. No:** _____ **Res. Date:** _____

Project Name: Downtown Extension - Additional Oversight/Peer Review

Grant Recipient: San Francisco County Transportation Authority

Funding Recommended:	Action	Amount	Phase
	Prop K Appropriation	\$ 200,000	Design Engineering (PS&E)
	Total:	\$ 200,000	

Total Prop K Funds: \$ 200,000

Total Prop AA Funds: \$ -

Justification for multi-phase recommendations and notes for multi-sponsor recommendations:

Fund Expiration Date: 6/30/2018 **Eligible expenses must be incurred prior to this date.**

Future Commitment:	Action	Amount	Fiscal Year	Phase

Trigger: _____

Deliverables:

1. Provide monthly report detailing cost and progress for each task order to be issued to the SFCTA's on-call PMO/general engineering services consultants to support the scope of work.
2. TBD - memos and documentation as requested to support reporting out of oversight activities and recommendations to the Board.
3. _____
4. _____
5. _____

Special Conditions:

1. The recommended action requires an exception to the Strategic Plan policy that sets aside all remaining funds not already programmed to Phase 1 for Phase 2 (DTX) construction.
2. _____
3. _____
4. _____

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

TRANSPORTATION AUTHORITY RECOMMENDATION

This section is to be completed by Transportation Authority Staff.

Last Updated: 3/15/2017 **Res. No:** _____ **Res. Date:** _____

Project Name: Downtown Extension - Additional Oversight/Peer Review

Grant Recipient: San Francisco County Transportation Authority

Notes:

1.
2.

Metric	Prop K	Prop AA
Actual Leveraging - Current Request	0.00%	No Prop AA
Actual Leveraging - This Project	See Above	See Above

SFCTA Project

Reviewer: CP

SGA PROJECT NUMBER

Sponsor: Transbay Joint Powers Authority

SGA Project Number: 105-901xxx **Name:** Downtown Extension - Additional Oversight/Peer Review

Phase: Design Engineering (PS&E) **Fund Share:** 100.00%

Cash Flow Distribution Schedule by Fiscal Year

Fund Source	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21+	Total
Prop K	\$100,000	\$100,000				\$200,000

**San Francisco County Transportation Authority
Prop K/Prop AA Allocation Request Form**

FY of Allocation Action: 2016/17

Current Prop K Request: \$ 200,000

Current Prop AA Request: \$ -

Project Name: Downtown Extension - Additional Oversight/Peer Review

Grant Recipient: San Francisco County Transportation Authority

1) The requested sales tax and/or vehicle registration fee revenues will be used to supplement and under no circumstance replace existing local revenues used for transportation purposes.

Required for Allocation Request Form Submission Initials of sponsor staff member verifying the above statement

CONTACT INFORMATION

Project Manager

Grants Section Contact

Name: Eric Cordoba

Steve Rehn

Title: Deputy Director for Capital Projects

Senior Transportation Planner

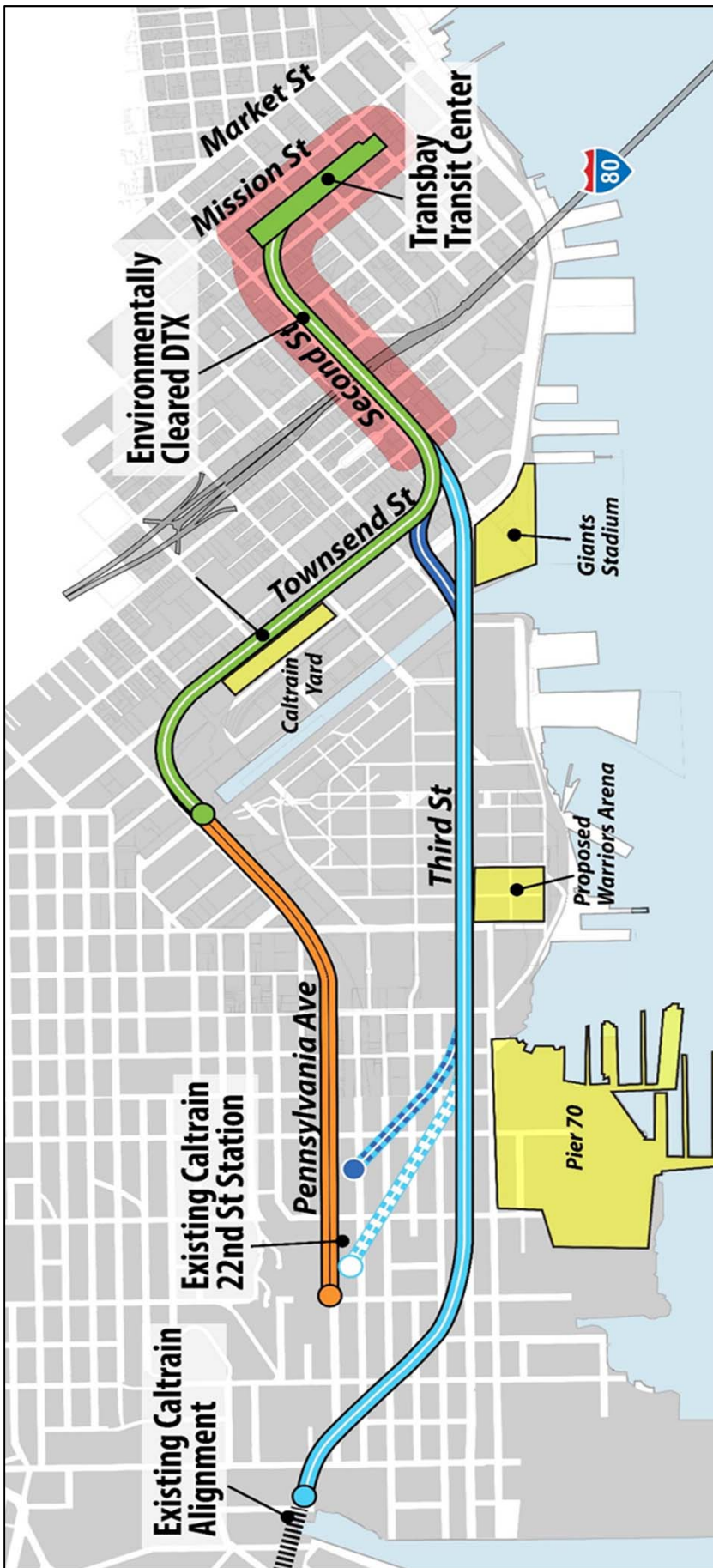
Phone: _____

Email: Eric.Cordoba@sfcta.org

Steve.Rehn@sfcta.org



Tunneling Study Scope



Railyard Alternatives and I-280 Boulevard Feasibility Study

Attachment 5. Proposed Amended Strategic Plan

Pending September 2016 Board Action

Pending January 2017 Board Action

EP No.	EP Line Item	Total Available Funds	Percent of Available Funds Spent on Financing	Total 30-year Programming & Finance Costs	FY2016/17	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23	FY2023/24
Adopted 2014 Prop K Strategic Plan - Amendment 5 (Approved)												
5	Downtown Extension to a Rebuilt Transbay Terminal	\$ 298,754,309	8.68%	Programming \$ 223,176,073 Finance Costs \$ 25,943,429 Total \$ 249,119,502	\$ 1,343,948 \$ 704,341 \$ 2,048,288	\$ - \$ 2,657,479 \$ 2,657,479	\$ - \$ 1,935,427 \$ 1,935,427	\$ - \$ 1,598,262 \$ 1,598,262	\$ - \$ 3,192,915 \$ 3,192,915	\$ - \$ 2,760,727 \$ 2,760,727	\$ - \$ 2,471,822 \$ 2,471,822	\$ - \$ 1,986,154 \$ 1,986,154
6	Electrification	\$ 25,765,517	15.25%	Programming \$ 20,260,000 Finance Costs \$ 3,929,285 Total \$ 24,189,285	\$ - \$ 83,354 \$ 83,354	\$ - \$ 319,983 \$ 319,983	\$ - \$ 239,837 \$ 239,837	\$ - \$ 205,122 \$ 205,122	\$ - \$ 427,140 \$ 427,140	\$ - \$ 388,659 \$ 388,659	\$ - \$ 370,936 \$ 370,936	\$ - \$ 324,054 \$ 324,054
17P	New and Renovated Vehicles - PCJPB	\$ 25,465,305	7.66%	Programming \$ 19,024,458 Finance Costs \$ 1,950,335 Total \$ 20,974,793	\$ 1,139,558 \$ 18,002 \$ 1,157,560	\$ 1,173,745 \$ 85,505 \$ 1,259,250	\$ 1,208,957 \$ 77,631 \$ 1,286,588	\$ 1,295,226 \$ 80,236 \$ 1,375,462	\$ 1,332,583 \$ 202,936 \$ 1,535,519	\$ 1,371,060 \$ 222,495 \$ 1,593,555	\$ 1,410,692 \$ 255,072 \$ 1,665,764	\$ - \$ 239,528 \$ 239,528
22M	Guideways - MUNI	\$ 308,337,545	3.94%	Programming \$ 291,660,626 Finance Costs \$ 12,138,267 Total \$ 303,798,893	\$ 5,680,012 \$ 178,235 \$ 5,858,247	\$ 4,231,380 \$ 631,643 \$ 4,863,023	\$ 13,392,656 \$ 471,173 \$ 13,863,829	\$ 7,800,000 \$ 507,339 \$ 8,307,339	\$ 8,034,000 \$ 1,258,775 \$ 9,292,775	\$ 8,275,020 \$ 1,170,788 \$ 9,445,808	\$ 8,523,271 \$ 1,146,727 \$ 9,669,998	\$ 8,778,969 \$ 1,029,226 \$ 9,808,195
TOTAL		\$ 658,322,675	6.68%	Programming \$ 554,121,157 Finance Costs \$ 43,961,315 Total \$ 598,082,473	\$ 8,163,518 \$ 983,932 \$ 9,147,449	\$ 5,405,125 \$ 3,694,611 \$ 9,099,736	\$ 14,601,613 \$ 2,724,067 \$ 17,325,680	\$ 9,095,226 \$ 2,390,959 \$ 11,486,185	\$ 9,366,583 \$ 5,081,766 \$ 14,448,349	\$ 9,646,080 \$ 4,542,669 \$ 14,188,749	\$ 9,933,963 \$ 4,244,558 \$ 14,178,520	\$ 8,778,969 \$ 3,578,962 \$ 12,357,931
Proposed 2014 Prop K Strategic Plan - Amendment 6 (Current request)												
5	Downtown Extension to a Rebuilt Transbay Terminal	\$ 298,751,839	9.35%	Programming \$ 223,176,073 Finance Costs \$ 27,923,238 Total \$ 251,099,311	\$ 6,774,400 \$ 761,497 \$ 7,535,897	\$ - \$ 2,742,038 \$ 2,742,038	\$ - \$ 1,993,980 \$ 1,993,980	\$ - \$ 1,651,178 \$ 1,651,178	\$ - \$ 3,379,887 \$ 3,379,887	\$ - \$ 2,942,509 \$ 2,942,509	\$ - \$ 2,660,857 \$ 2,660,857	\$ - \$ 2,179,050 \$ 2,179,050
6	Electrification	\$ 25,765,304	17.45%	Programming \$ 20,900,000 Finance Costs \$ 4,494,943 Total \$ 25,394,943	\$ 4,040,000 \$ 90,584 \$ 4,130,584	\$ - \$ 333,847 \$ 333,847	\$ - \$ 249,716 \$ 249,716	\$ - \$ 213,963 \$ 213,963	\$ - \$ 455,811 \$ 455,811	\$ - \$ 416,598 \$ 416,598	\$ - \$ 399,913 \$ 399,913	\$ - \$ 353,599 \$ 353,599
17P	New and Renovated Vehicles - PCJPB	\$ 25,465,094	8.63%	Programming \$ 19,024,458 Finance Costs \$ 2,198,194 Total \$ 21,222,652	\$ 2,109,105 \$ 22,031 \$ 2,131,136	\$ 1,173,745 \$ 111,293 \$ 1,285,038	\$ 1,208,957 \$ 97,669 \$ 1,306,626	\$ 1,295,226 \$ 98,329 \$ 1,393,555	\$ 1,332,583 \$ 247,733 \$ 1,580,316	\$ 1,371,060 \$ 266,544 \$ 1,637,604	\$ 1,411,145 \$ 289,961 \$ 1,701,106	\$ - \$ 247,128 \$ 247,128
22M	Guideways - MUNI	\$ 308,334,996	5.78%	Programming \$ 291,660,626 Finance Costs \$ 17,808,188 Total \$ 309,468,814	\$ 10,874,512 \$ 195,772 \$ 11,070,284	\$ 5,835,380 \$ 767,633 \$ 6,603,013	\$ 12,492,656 \$ 566,734 \$ 13,059,392	\$ 7,800,000 \$ 584,634 \$ 8,384,634	\$ 8,034,000 \$ 1,527,372 \$ 9,561,372	\$ 8,275,020 \$ 1,434,892 \$ 9,709,912	\$ 8,523,271 \$ 1,422,584 \$ 9,945,854	\$ 8,778,969 \$ 1,201,864 \$ 10,080,833
TOTAL		\$ 658,317,233	7.96%	Programming \$ 554,761,157 Finance Costs \$ 52,424,563 Total \$ 607,185,720	\$ 23,798,017 \$ 1,069,884 \$ 24,867,901	\$ 7,009,125 \$ 3,954,812 \$ 10,963,937	\$ 13,701,613 \$ 2,908,101 \$ 16,609,714	\$ 9,095,226 \$ 2,548,103 \$ 11,643,329	\$ 9,366,583 \$ 5,610,803 \$ 14,977,386	\$ 9,646,080 \$ 5,060,543 \$ 14,706,623	\$ 8,964,416 \$ 4,773,313 \$ 13,737,729	\$ 8,778,969 \$ 4,081,641 \$ 12,860,610
Change												
5	Downtown Extension to a Rebuilt Transbay Terminal	\$ (2,470)	0.66%	Programming \$ (1) Finance Costs \$ 1,979,809 Total \$ 1,979,809	\$ 5,430,453 \$ 57,156 \$ 5,487,608	\$ - \$ 84,559 \$ 84,559	\$ - \$ 58,553 \$ 58,553	\$ - \$ 52,916 \$ 52,916	\$ - \$ 186,972 \$ 186,972	\$ - \$ 181,781 \$ 181,781	\$ - \$ 189,035 \$ 189,035	\$ - \$ 192,896 \$ 192,896
6	Electrification	\$ (213)	2.20%	Programming \$ 640,000 Finance Costs \$ 565,658 Total \$ 1,205,658	\$ 4,040,000 \$ 7,230 \$ 4,047,230	\$ - \$ 13,864 \$ 13,864	\$ - \$ 9,879 \$ 9,879	\$ - \$ 8,841 \$ 8,841	\$ - \$ 28,671 \$ 28,671	\$ - \$ 27,939 \$ 27,939	\$ - \$ 28,977 \$ 28,977	\$ - \$ 29,545 \$ 29,545
17P	New and Renovated Vehicles - PCJPB	\$ (211)	0.97%	Programming \$ - Finance Costs \$ 247,859 Total \$ 247,859	\$ 969,547 \$ 1,029 \$ 973,576	\$ - \$ 25,788 \$ 25,788	\$ - \$ 20,039 \$ 20,039	\$ - \$ 18,093 \$ 18,093	\$ - \$ 44,797 \$ 44,797	\$ - \$ 44,049 \$ 44,049	\$ - \$ 34,888 \$ 34,888	\$ - \$ 7,600 \$ 7,600
22M	Guideways - MUNI	\$ (2,549)	1.84%	Programming \$ - Finance Costs \$ 5,669,921 Total \$ 5,669,921	\$ 5,194,500 \$ 17,537 \$ 5,212,037	\$ 1,604,000 \$ 135,990 \$ 1,739,990	\$ (900,000) \$ 95,563 \$ (804,437)	\$ - \$ 77,295 \$ 77,295	\$ - \$ 268,598 \$ 268,598	\$ - \$ 264,104 \$ 264,104	\$ - \$ 275,856 \$ 275,856	\$ - \$ 272,638 \$ 272,638

Note: At its September 27, 2016 meeting the Transportation Authority Board approved requested amendments to the Electrification, New and Renovated Vehicles - PCJPB, and Guideways - MUNI categories, but deferred the Transbay Joint Powers Authority's Prop K allocation and Strategic Plan amendment requests for the Downtown Extension project.

Proposed Amended Strategic Plan

Pending September 2016 Board Action

Pending January 2017 Board Action

EP No.	EP Line Item	Total Available Funds	Percent of Available Funds Spent on Financing	FY2024/25	FY2025/26	FY2026/27	FY2027/28	FY2028/29	FY2029/30	FY2030/31	FY2031/32	FY2032/33	FY2033/34
Adopted 2014 Prop K Strategic Plan - Amendment 5 (Approved)													
5	Downtown Extension to a Rebuilt Transbay Terminal	\$ 298,754,309	8.68%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,161,173
				\$ 1,522,761	\$ 1,153,477	\$ 857,641	\$ 438,855	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ 1,522,761	\$ 1,153,477	\$ 857,641	\$ 438,855	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,161,173
6	Electrification	\$ 25,765,517	15.25%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ 278,115	\$ 248,550	\$ 245,084	\$ 217,085	\$ 191,115	\$ 164,606	\$ 123,896	\$ 74,116	\$ -	\$ -
				\$ 278,115	\$ 248,550	\$ 245,084	\$ 217,085	\$ 191,115	\$ 164,606	\$ 123,896	\$ 74,116	\$ -	\$ -
17P	New and Renovated Vehicles - PCJPB	\$ 25,465,305	7.66%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ 197,282	\$ 166,855	\$ 151,774	\$ 119,810	\$ 85,406	\$ 41,099	\$ -	\$ -	\$ -	\$ -
				\$ 197,282	\$ 166,855	\$ 151,774	\$ 119,810	\$ 85,406	\$ 41,099	\$ -	\$ -	\$ -	\$ -
22M	Guideways - MUNI	\$ 308,337,545	3.94%	\$ 9,042,338	\$ 9,313,608	\$ 9,593,016	\$ 9,880,807	\$ 10,177,231	\$ 10,482,548	\$ 10,797,024	\$ 11,120,935	\$ 11,454,563	\$ 11,798,200
				\$ 914,167	\$ 849,303	\$ 866,464	\$ 820,660	\$ 765,258	\$ 669,086	\$ 505,061	\$ 297,903	\$ -	\$ -
				\$ 9,956,505	\$ 10,162,911	\$ 10,459,480	\$ 10,701,467	\$ 10,942,489	\$ 11,151,634	\$ 11,302,085	\$ 11,418,838	\$ 11,454,563	\$ 11,798,200
TOTAL		\$ 658,322,675	6.68%	\$ 9,042,338	\$ 9,313,608	\$ 9,593,016	\$ 9,880,807	\$ 10,177,231	\$ 10,482,548	\$ 10,797,024	\$ 11,120,935	\$ 11,454,563	\$ 41,959,373
				\$ 2,912,326	\$ 2,418,185	\$ 2,120,963	\$ 1,596,410	\$ 1,041,779	\$ 874,792	\$ 628,957	\$ 372,019	\$ -	\$ -
				\$ 11,954,664	\$ 11,731,793	\$ 11,713,979	\$ 11,477,217	\$ 11,219,010	\$ 11,357,339	\$ 11,425,981	\$ 11,492,954	\$ 11,454,563	\$ 41,959,373
Proposed 2014 Prop K Strategic Plan - Amendment 6 (Current request)													
5	Downtown Extension to a Rebuilt Transbay Terminal	\$ 298,751,839	9.35%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 26,010,670
				\$ 1,705,401	\$ 1,337,878	\$ 1,069,851	\$ 659,273	\$ 191,272	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ 1,705,401	\$ 1,337,878	\$ 1,069,851	\$ 659,273	\$ 191,272	\$ -	\$ -	\$ -	\$ -	\$ 26,010,670
6	Electrification	\$ 25,765,304	17.45%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ 306,005	\$ 276,553	\$ 277,176	\$ 249,038	\$ 225,168	\$ 208,231	\$ 173,271	\$ 139,322	\$ 107,048	\$ -
				\$ 306,005	\$ 276,553	\$ 277,176	\$ 249,038	\$ 225,168	\$ 208,231	\$ 173,271	\$ 139,322	\$ 107,048	\$ -
17P	New and Renovated Vehicles - PCJPB	\$ 25,465,094	8.63%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ 204,255	\$ 173,760	\$ 159,710	\$ 127,408	\$ 93,627	\$ 52,294	\$ -	\$ -	\$ -	\$ -
				\$ 204,255	\$ 173,760	\$ 159,710	\$ 127,408	\$ 93,627	\$ 52,294	\$ -	\$ -	\$ -	\$ -
22M	Guideways - MUNI	\$ 308,334,996	5.78%	\$ 9,042,338	\$ 9,313,608	\$ 9,593,016	\$ 9,880,807	\$ 10,177,231	\$ 10,482,548	\$ 10,797,024	\$ 11,120,935	\$ 11,454,563	\$ 5,899,700
				\$ 1,174,539	\$ 1,112,788	\$ 1,168,644	\$ 1,130,747	\$ 1,099,067	\$ 1,078,433	\$ 977,296	\$ 929,295	\$ 1,233,308	\$ 49,473
				\$ 10,216,937	\$ 10,426,396	\$ 10,761,660	\$ 11,011,554	\$ 11,276,298	\$ 11,569,981	\$ 11,774,320	\$ 12,050,280	\$ 12,687,871	\$ 5,949,172
TOTAL		\$ 658,317,233	7.96%	\$ 9,042,338	\$ 9,313,608	\$ 9,593,016	\$ 9,880,807	\$ 10,177,231	\$ 10,482,548	\$ 10,797,024	\$ 11,120,935	\$ 11,454,563	\$ 31,910,370
				\$ 3,390,260	\$ 2,900,980	\$ 2,675,382	\$ 2,166,466	\$ 1,609,135	\$ 1,338,958	\$ 1,150,566	\$ 1,068,617	\$ 1,340,356	\$ 49,473
				\$ 12,432,598	\$ 12,214,587	\$ 12,268,398	\$ 12,047,272	\$ 11,786,365	\$ 11,821,506	\$ 11,947,591	\$ 12,189,552	\$ 12,794,919	\$ 31,959,842
Change													
5	Downtown Extension to a Rebuilt Transbay Terminal	\$ (2,470)	0.66%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (4,150,503)
				\$ 182,640	\$ 184,401	\$ 212,210	\$ 220,418	\$ 191,272	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ 182,640	\$ 184,401	\$ 212,210	\$ 220,418	\$ 191,272	\$ -	\$ -	\$ -	\$ -	\$ (4,150,503)
6	Electrification	\$ (213)	2.20%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ 27,889	\$ 28,003	\$ 32,093	\$ 31,953	\$ 34,053	\$ 43,625	\$ 49,374	\$ 65,206	\$ 107,048	\$ -
				\$ 27,889	\$ 28,003	\$ 32,093	\$ 31,953	\$ 34,053	\$ 43,625	\$ 49,374	\$ 65,206	\$ 107,048	\$ -
17P	New and Renovated Vehicles - PCJPB	\$ (211)	0.97%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ 6,973	\$ 6,905	\$ 7,936	\$ 7,597	\$ 8,222	\$ 11,195	\$ -	\$ -	\$ -	\$ -
				\$ 6,973	\$ 6,905	\$ 7,936	\$ 7,597	\$ 8,222	\$ 11,195	\$ -	\$ -	\$ -	\$ -
22M	Guideways - MUNI	\$ (2,549)	1.84%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (5,898,500)
				\$ 260,432	\$ 263,485	\$ 302,180	\$ 310,087	\$ 333,809	\$ 409,346	\$ 472,235	\$ 631,392	\$ 1,233,308	\$ 49,473
				\$ 260,432	\$ 263,485	\$ 302,180	\$ 310,087	\$ 333,809	\$ 409,346	\$ 472,235	\$ 631,392	\$ 1,233,308	\$ (5,849,027)

Proposed Amended Strategic Plan

~~Pending September 2016 Board Action~~

~~Pending January 2017 Board Action~~

Prop K Total

EP No.	EP Line Item	Total Available Funds	Percent of Available Funds Spent on Financing	Total 30-year Programming & Finance Costs	
Adopted 2014 Prop K Strategic Plan - Amendment 5 (Approved)					
	Prop K	\$ 2,922,185,976	8.37%	Programming	\$ 2,536,333,768
				Finance Costs	\$ 244,701,587
				Total	\$ 2,781,035,356
Proposed 2014 Prop K Strategic Plan - Amendment 6 (Current request)					
	Prop K	\$ 2,922,163,916	8.57%	Programming	\$ 2,536,973,768
				Finance Costs	\$ 250,339,081
				Total	\$ 2,787,312,849
Change					
	Prop K	\$ (22,060)	0.19%	Programming	\$ 640,000
				Finance Costs	\$ 5,637,494
				Total	\$ 6,277,493

Amendment 6 advances programming within the following expenditure line categories: 5, 6, 17P, 22M. Please see the Prop K Allocation and the EP 22M Strategic Plan Update memos for more details.