

**STAFF REPORT FOR CALENDAR ITEM NO.: 9
FOR THE MEETING OF: February 11, 2021**

TRANSBAY JOINT POWERS AUTHORITY

BRIEF DESCRIPTION:

Authorizing the Interim Executive Director to enter into a Memorandum of Agreement (MOA) between the Transbay Joint Powers Authority (TJPA) and the Peninsula Corridor Joint Powers Board (“Caltrain”), for the purpose of funding an operations analysis in support of the Downtown Rail Extension (DTX) Phasing Study, a required work task described in the San Francisco Peninsula Rail Program Memorandum of Understanding (MOU). TJPA’s funding for the operations analysis shall not exceed \$185,000.

SUMMARY:

Task 4.1 of the DTX Comprehensive Work Plan, approved by the TJPA Board of Directors at the December 2020 meeting, includes the preparation of a Project Phasing Plan with the intent of identifying an initial operating project meeting the requirements for safe and efficient rail operations within higher confidence funding sources.

In order to complete that Phasing Plan, the DTX Integrated Program Management Team (IPMT) determined that an operations analysis, evaluating the impact of the several phasing concepts on various levels and combinations of services for Caltrain and California High Speed Authority (CHSRA) rail service was required.

Caltrain, in agreement with the CHSRA, has the resources needed to perform the needed operations analysis in the form of an On-Call contract that enables access to Deutsche Bahn Engineering and Construction, USA. The cost to provide the operations analysis is \$260,000, and Caltrain requires funding to pay for same.

The San Francisco County Transportation Authority (SFCTA) has agreed to contribute \$75,000 to partially fund the Operations Analysis through execution of a separate agreement between the SFCTA and Caltrain. The remaining funding of \$185,000 is proposed to be provided by TJPA.

The source of funding for this agreement is repurposing unexpended funds from previously approved SFCTA grant funds under Grant No. 1-5-914028, DTX Preliminary Engineering. SFCTA has administratively approved this repurposing.

TJPA staff has reviewed the scope of work for the operations analysis and finds it consistent with the requirements of the DTX Phasing Plan.

RECOMMENDATION:

Staff recommends that the Board of Directors authorize the Interim Executive Director to execute the Memorandum of Agreement between the TJPA and Caltrain for the purpose of funding a DTX operations analysis for an amount not to exceed \$185,000.

ENCLOSURES:

1. Resolution
2. Memorandum of Agreement

**TRANSBAY JOINT POWERS AUTHORITY
BOARD OF DIRECTORS**

Resolution No. _____

WHEREAS, In June 2020, the TJPA and Caltrain, together with the San Francisco County Transportation Authority (SFCTA), Metropolitan Transportation Commission (MTC), California High Speed Authority (CHSRA), and the City entered into a Memorandum of Understanding (MOU), describing a new organizational structure that will support the efforts of the TJPA in the development of the DTX to a ready-for-procurement status; and

WHEREAS, The Parties, along with MTC, SFCTA, CHSRA, and the City jointly participate in the Executive Steering Committee (ESC) and Integrated Program Management Team (IPMT), charged with executing the MOU; and

WHEREAS, The MOU includes a Summary Work Program that contemplates, among other things, preparation of a preferred Phasing Plan (Task 12). As contemplated by the MOU, the ESC recommended and the TJPA Board approved, a DTX Comprehensive Work Plan that similarly contemplates preparation of a preferred Phasing Plan/Phasing Study to develop recommendations to define an initial operating phase of the DTX that meets the requirements for safe and efficient rail operations within higher-confidence revenue sources; and

WHEREAS, One of the required inputs for the Phasing Study, as determined by the IPMT, is an operations analysis to determine infrastructure requirements for a recommended service concept and an analysis of contingency operations plan scenarios for illustrative potential service interruptions; and

WHEREAS, Caltrain, in agreement with the CHSRA, has the resources needed to perform the needed Operations Analysis in the form of an On-Call contract that enables access to Deutsche Bahn Engineering and Construction, USA; and

WHEREAS, The cost to provide the operations analysis is \$260,000, and Caltrain requires funding to pay for same; and

WHEREAS, The SFCTA has agreed to contribute \$75,000 to partially fund the operations analysis through execution of a separate agreement between the SFCTA and Caltrain; now, therefore, be it

RESOLVED, That the TJPA Board of Directors authorizes the Executive Director to execute the Memorandum of Understanding substantially in the form attached, which stipulates a maximum compensation of \$185,000 and for a term to commence on the effective date and terminate May 31, 2021.

I hereby certify that the foregoing resolution was adopted by the Transbay Joint Powers Authority Board of Directors at its meeting of February 11, 2021.

Interim Secretary, Transbay Joint Powers Authority

**DTX RAIL PROGRAM
OPERATIONS ANALYSIS
MEMORANDUM OF AGREEMENT**

This Agreement dated as of _____, 2021, is between the Transbay Joint Powers Authority, a joint powers authority (“TJPA”) and the Peninsula Corridor Joint Powers Board (“Caltrain”) (collectively, the “Parties”). The Parties are entering into this Agreement in connection with provisions of the San Francisco Peninsula Corridor Memorandum of Understanding, as described in the following Recitals.

RECITALS

- A. The TJPA is a joint exercise of powers authority created by the City and County of San Francisco (“City”), the Alameda-Contra Costa Transit District, Caltrain, the California High Speed Rail Authority (“CHSRA”), and Caltrans (ex officio). The TJPA is responsible for the financing, design, development, construction, and operation of the Transbay Program (the “Program”). In particular, the Program includes (a) the design, development, construction, and operation of the Salesforce Transit Center, including open space on the roof, a bus ramp, a bus storage facility, and the core and shell of an underground train box (Phase 1); (b) the extension of rail tracks from the current Caltrain San Francisco terminus at Fourth and King Streets (the “Downtown Rail Extension” or “DTX”) to a new underground terminus beneath the transit center to accommodate Caltrain and CHSRA (Phase 2); and (3) in coordination with the Office of Community Investment and Infrastructure, the successor agency to the former San Francisco Redevelopment Agency, certain transit infrastructure activities related to implementation of the Redevelopment Plan for the Transbay Redevelopment Project Area.
- B. In June 2020, the TJPA and Caltrain, together with the San Francisco County Transportation Authority (“SFCTA”), Metropolitan Transportation Commission (“MTC”), CHSRA, and the City entered into a Memorandum of Understanding (“MOU”), describing a new organizational structure that will support the efforts of the TJPA in the development of the DTX (referred to in the MOU as the “DTX Rail Program”) to a ready-for-procurement status.
- C. The Parties, along with MTC, SFCTA, CHSRA, and the City jointly participate in the Executive Steering Committee (“ESC”) and Integrated Program Management Team (“IPMT”), charged with executing the MOU.
- D. The MOU includes a Summary Work Program that contemplates, among other things, preparation of a preferred Phasing Plan (Task 12). As contemplated by the MOU, the ESC recommended and the TJPA Board approved, a DTX Comprehensive Work Plan that similarly contemplates preparation of a preferred Phasing Plan/Phasing Study to develop recommendations to define an initial operating phase of the DTX that meets the requirements for safe and efficient rail operations within higher-confidence revenue sources.

- E. One of the required inputs for the Phasing Study is an Operations Analysis to determine infrastructure requirements for a recommended service concept and an analysis of contingency operation plan scenarios for illustrative potential service interruptions (“Operations Analysis”).
- F. Caltrain, in agreement with the CHSRA, has the resources needed to perform the needed Operations Analysis in the form of an On-Call contract that enables access to Deutsche Bahn Engineering and Construction, USA.
- G. The cost to provide the Operations Analysis is \$260,000, and Caltrain requires funding to pay for same.
- H. The SFCTA has agreed to contribute \$75,000 to partially fund the Operations Analysis through execution of a separate agreement between the SFCTA and Caltrain.
- I. The TJPA has agreed to contribute \$185,000 to partially fund the Operations Analysis through this Agreement.

AGREEMENT

ACCORDINGLY, in consideration of the public benefits and other matters described in the foregoing recitals, the obligations contained in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are mutually acknowledged, the TJPA and Caltrain agree as follows:

1. **Agreement Purpose.** The purpose of this Agreement is to outline roles and responsibilities of the TJPA and Caltrain with respect to the administration and funding of the Operations Analysis.
2. **Roles and Responsibilities.** The Parties agree to the following roles and responsibilities:
 - A. TJPA:
 - i. Provide oversight and support as reasonably necessary on matters related to the Operations Analysis.
 - ii. Fully cooperate with Caltrain and CHSRA on matters related to the Operations Analysis.
 - iii. Reimburse Caltrain invoices for services provided as described herein up to a funding limitation of \$185,000 upon receipt of appropriate documentation.
 - B. Caltrain:
 - i. Procure consultant services to perform the Operations Analysis, consistent with the scope of work described in Appendix A, “Description of Services,” attached hereto and incorporated by reference as though fully set forth herein,

and authorize the consultant to provide such services up to a total amount not to exceed \$260,000 (TJPA contribution \$185,000; SFCTA contribution \$75,000).

- ii. Manage and direct the consultant, in cooperation with CHSRA, to ensure that the Operations Analysis is delivered to the IPMT and TJPA Board in a timely and technically sound manner, with appropriate oversight and management of consultant budget.
- iii. Fully cooperate with the TJPA's Interim Project Director or designee on matters related to the Operations Analysis.
- iv. Fully cooperate with the ESC and abide by the terms of the MOU on matters related to the Operations Analysis.
- v. Seek reimbursement from the TJPA up to a funding limitation of \$185,000, and from the SFCTA up to a funding limitation of \$75,000.
- vi. Prepare and submit invoices to the TJPA for payment for the scope of work described in Appendix A up to a funding limitation of \$185,000. Invoices shall be submitted to the TJPA in a form acceptable to the TJPA CFO within 30 days after the end of each quarter during which Caltrain incurs expenditures for the Operations Analysis.

3. **Scope and Budget.** This Agreement is limited to the "Description of Services" set forth in Appendix A. In no event shall the amount of this Agreement exceed one hundred eighty-five thousand dollars (\$185,000), unless agreed to by the Parties.

4. **Term.** The term of this Agreement shall be from September 1, 2020, to May 31, 2021. Caltrain shall not incur expenses beyond May 31, 2021. The term of this Agreement may be extended only by amendment to this Agreement and by mutual agreement between the Parties.

5. **Indemnification; Insurance**

A. Caltrain shall indemnify, defend, and hold harmless the TJPA, its Board of Directors, representatives, agents, or employees from and against all claim, injury, suits, demands, liability, losses, damages and expenses, whether direct or indirect (including any and all costs and expenses in connection therewith), incurred by reason of any act or failure to act of Caltrain, its officers, employees or agents, including any consultant retained by Caltrain, in connection with this Agreement, except those arising by reason of the sole negligence or willful misconduct of the TJPA, its officers, employees and agents.

B. The TJPA shall indemnify, defend, and hold harmless Caltrain, its Board of Directors, representatives, agents or employees from and against all claim, injury, suits, demands, liability, losses, damages and expenses, whether direct or indirect (including any and all costs and expenses in connection therewith), incurred by reason of any act or failure to act of the TJPA, its officers, employees or agents in connection with this Agreement, except those arising by

reason of the sole negligence or willful misconduct of Caltrain, its officers, employees and agents.

- C. The foregoing provisions regarding indemnification are included pursuant to the provisions of Section 895.4 of the Government Code and are intended by the parties to modify and supersede the otherwise applicable provisions of Chapter 21, Part 2, Division 3.6, Title I of the Government Code.
 - D. Caltrain shall ensure that its consultant names the TJPA as an additional insured in the same form and manner as Caltrain requires the consultant to provide for Caltrain.
6. **Notices.** Unless otherwise indicated elsewhere in this Agreement, all written communications sent by the Parties may be by U.S. mail, e-mail, or fax and shall be addressed as follows:

TJPA:

Chair of the Board of Directors
Transbay Joint Powers Authority
425 Mission Street, Suite 250
San Francisco, California 94105
Fax: (415) 597-4615
E-mail: info@tjpa.org

and to:

Executive Director
Transbay Joint Powers Authority
425 Mission Street, Suite 250
San Francisco, CA 94105
Fax: (415) 597-4615
E-mail: ngonzales@tjpa.org

Caltrain:

Lawrence Leung
Rail Contract Administrator
San Mateo County Transit District
1250 San Carlos Avenue
San Carlos, California
Fax: (650) TBD
E-mail: leungl@samtrans.com

Any notice of default must be sent by registered mail.

- 7. **Modification of Agreement.** This Agreement may not be modified, nor may compliance with any of its terms be waived, except by written instrument executed and approved in the same manner as this Agreement.
- 8. **Agreement Made in California; Venue.** The formation, interpretation and performance of this Agreement shall be governed by the laws of the State of

California. Venue for all litigation relative to the formation, interpretation and performance of this Agreement shall be in San Francisco.

9. **Audit and Inspection of Records.** The Parties agree to maintain and make available to each other, during regular business hours, accurate books and accounting records relating to their work under this Agreement and the work of any third parties performing work on the Operations Analysis. The Parties will permit each other to audit, examine and make excerpts and transcripts from such books and records, and to make audits of all invoices, materials, payrolls, records or personnel and other data related to all other matters covered by this Agreement, whether funded in whole or in part under this Agreement. The Parties shall maintain such data and records in an accessible location and condition for a period of not less than three years after Caltrain receives final payment from the TJPA. The State of California or any federal agency having an interest in the subject matter of this Agreement shall have the same rights conferred upon the Parties by this Section.
10. **Termination for Convenience/Cause/or Suspension.** Either Party may for any reason (convenience or cause) terminate or suspend this Agreement, in whole or in part, at any time by written notice to the other Party. Upon termination of this Agreement, Caltrain and its consultant shall cease performing the services described in Appendix A. Caltrain's consultant shall be paid its costs for work performed up to the termination of this Agreement, plus any costs reasonably necessary to effect the termination, if termination is for convenience. If the Agreement is terminated or suspended for cause, Caltrain shall be paid expenses actually incurred by Caltrain in accordance with the terms of the Agreement as of the effective date of termination. Sections 5, 6, and 9 shall survive termination or expiration of this Agreement.
11. **Compliance with Laws.** The parties shall keep themselves fully informed of all federal, state, and local laws in any manner affecting the performance of this Agreement, and must at all times comply with such laws, as they may be amended from time to time.

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12. **Relationship of the Parties.** Caltrain shall at all times treat all persons working for or under the direction of Caltrain as agents or employees of Caltrain, and not as agents or employees of the TJPA.

IN WITNESS WHEREOF, The Parties have executed this AGREEMENT on the date set forth above:

TRANSBAY JOINT POWERS AUTHORITY

By: _____
Nila Gonzales, Interim Executive Director

APPROVED AS TO FORM:

By: _____
TJPA Legal Counsel

Transbay Joint Powers Authority
Board of Directors
Resolution No. _____
Adopted: _____
Attest:

Interim Secretary, TJPA Board

PENINSULA CORRIDOR JOINT POWERS BOARD

By: _____
Jim Hartnett, Executive Director

APPROVED AS TO FORM:

By: _____
PCJPB Legal Counsel

APPENDIX A

Description of Services

Introduction

To support the option development for the Downtown Rail Extension (DTX) to connect the Salesforce Transit Center to the Caltrain main line, Caltrain and the California High-Speed Rail Authority (CHSRA) will undertake operational planning analysis for a range of service plan alternatives to assess the impacts of various Salesforce Transit Center and DTX infrastructure configurations.

The primary objective of the analysis is to assist in the following:

- a. Develop analysis of infrastructure requirements necessary to support service plan alternatives including:
 - Track number, layout, and signal system performance for anticipated service scenarios (6 CT TPH, 6 CT+2 HSR TPH, 6CT + 4 HST TPH, 8 CT + 0 HSR TPH, 8 CT + 2 HSR TPH, and 8 CT+4 HSR TPH) over time, as appropriate and applicable; and
 - Station configuration at Fourth and Townsend; and
 - The number, height, and configuration of platforms at Salesforce Transit Center and Fourth and Townsend
- b. Develop analysis of contingency operation plan scenarios for illustrative potential service interruptions
- c. Explore the implications, both to station operations and capacity through the DTX corridor of potential future run-through operations at Salesforce Transit Center should a new Transbay crossing connect to the center in the future.

The result of this work will be a robust analysis detailing future infrastructure needs, necessary track capacity through DTX (including the number of tracks and placement of crossovers), infrastructure necessary at Fourth and Townsend, and an operational platform occupancy plan at Salesforce Transit Center for the CHSRA and Caltrain. The outputs will also align infrastructure requirements with different levels of train service.

Scope Overview

Task 1 - Initial Parameter Development

This task will develop the potential options for analysis, including service levels, operational parameters, operating concepts (including dwell times) and infrastructure configuration (including vent zones, track numbers, and platform heights). The goal of this initial development is to identify the boundary conditions within which trade-offs between service, operations, and infrastructure investments can be understood and presented to the Integrated Program Management Team (IPMT) and Executive Steering Committee (ESC).

Deliverable: A finite set of analyses to be undertaken covering the range of infrastructure configurations and service alternatives.

Task 2 – Operations Planning / Concept Refinement

Task 2 will include detailed operational analysis within the infrastructure, operations, and service parameters defined in Task 1. The work will assess how trains move through the segment, what subset of operational parameters must be true for the service plans (as defined in the Caltrain Business Plan and the CHSRA Business Plan) to operate reliably, and if necessary how and to what extent service concepts need to be refined.

Deliverable: Documentation providing details of the analysis undertaken and the conclusions to be drawn from the assessment. Supporting documentation in the form of network diagrams, stringline charts, timetables, and platform occupancy charts will also be generated.

Task 3 - Analysis of north-end needs

Based on analysis performed in Task 2 to identify feasible concepts, work will be undertaken to identify a phased service-investment program based upon (but not necessarily limited to) the alternatives identified by the DTX IPMT. This program will identify major interim investments needed for the reasonable expansion of service and development of new infrastructure with various mixes of Caltrain and high-speed train services at increments ranging between six and twelve trains per hour in the peak period (up to 8 Caltrain and 4 high-speed trains).

Deliverable: A presentation-style report to identify the infrastructure and service phasing alternatives available to achieve the operational goals of Caltrain and the CHSRA. Supporting documentation in the form of network diagrams, stringline charts, timetables, and platform occupancy charts will also be generated.

Task 4 - Contingency Planning

This task will include analysis that addresses the potential operating risks and identifies potential solutions to illustrative service disruptions. Analysis will examine resilience in the service concepts and how the identified operations plan and infrastructure assumptions are able to adapt and manage through disruptions. A set of reasonable delay scenarios (up to 5) will be developed. These scenarios will be planned and evaluated using deterministic planning methods (i.e., Viriato) rather than dynamic simulation tools.

Deliverable: Documentation detailing the results of the contingency planning analysis including network diagrams depicting train movements to illustrate the issues. Supporting documentation in the form of network diagrams, stringline charts, timetables, and platform occupancy charts will also be generated.

Task 5 - Future Run-through Options

The scope of this work is limited to operational considerations and impacts for Salesforce Transit Center and DTX. Tasks 1 to 4 as described above would look at that system in isolation with no additional regional connection. Task 5 will assess operational impacts of service concepts, developed by appropriate regional stakeholders, for future run-through operations at Salesforce Transit Center connecting to a second Transbay tube.

Deliverable: Documentation detailing the results of the run-through service option analysis. Supporting documentation in the form of network diagrams, stringline charts, timetables, and platform occupancy charts will also be generated.

Task 6 – Dynamic Simulation

If agreed, this task is to use dynamic simulation to analyze the stability of the proposed timetable on the proposed infrastructure during daily operations. The simulation result will confirm and quantify the impact of the bottlenecks identified during the conceptual planning phase of the timetable.

The methodology for the dynamic simulation will consist of three steps:

1. **Model set up:** This step is to set up the environment to simulate trains moving on the proposed infrastructure. The work includes creating links and nodes to connect stations and control points, assigning speed limits and gradients, and defining signaling systems.
2. **Operation parameters calibration:** Calibration of operation parameters to allow a more precise simulation of train movements based on agreed inputs from Caltrain and the CHSRA.
3. **Timetable set up and simulation:** After the infrastructure and operation parameters are defined, the proposed timetable will be coded into the simulation tool. Then, dynamic simulation will be conducted. Daily operation variabilities will be simulated by introducing stochastic perturbations to different variables (e.g., dwell time, trip time) to mimic the potential disruptions.

The scope for this potential task is currently being refined.

Conceptual Timeline

Task 1: October 2020

Task 2: October 2020 – November 2020

Task 3: November 2020 – December 2020

Task 4: December 2020 – January 2021

Task 5: January 2021

Task 6: To be determined

The timeline shown is indicative of and dependent upon timely provision of the inputs requested.