STAFF REPORT FOR CALENDAR ITEM NO.: 12
FOR THE MEETING OF: November 9, 2023

TRANSBAY JOINT POWERS AUTHORITY

BRIEF DESCRIPTION:

Approve modifications to the Downtown Rail Extension Project Delivery approach for select project elements.

EXPLANATION:

Background

At its July 2022 meeting, the TJPA Board of Directors approved the Downtown Rail Extension, also known as The Portal, Project Delivery approach in accordance with the recommendations of the Project Delivery Alternatives Study (PDAS). The PDAS described a study of various traditional and alternative contracting approaches to deliver The Portal using a risk-based assessment. Below describes the various contract packages approved by the Board for The Portal, with assigned contract numbers and delivery approaches as evaluated in the PDAS.

Contract	As approved (July 2022)
10-UR, Utility Relocation	Advance utility relocation of over twenty public and private utilities using Design Bid Build (DBB).
20-4KY, 4th and King Yard	Relocation or removal of structures, site clearing, rearrangement of track, overhead catenary, and supporting facilities using DBB.
30-BD Building Demolition	Demolition of seven buildings as required for The Portal construction using DBB.
40-CT, Civil and Tunnel	Construction of tunnel, throat, and civil structures including Fourth and Townsend station box, two ventilation structures, and certain utility temporary support and/or relocation using Progressive Design Build (PDB)
50-TS, Track and Systems	Installation of track and rail systems Potentially combine with 60-SF, Station Fit-out using Cnstruction Management General Contractor (CMGC)
60-SF, Fourth and Townsend and Salesforce Transit Center Fit-out	Mechanical, electrical, plumbing, and architectural finishes at Fourth and Townsend Station, Salesforce Transit Center, and the two ventilation structures using CMGC and potentially combine with 50-TS, Track and Systems.

Since the Board's approval of the PDAS recommendations, the project delivery team, which includes the initial operator - Caltrain, and the Integrated Project Management Team (IPMT), have continued to develop project design while continuing outreach with the construction industry and various transit agencies, to refine the project delivery approach. This additional work has identified four opportunities to optimize the delivery approach to mitigate TJPA and Caltrain risk through

better interface management, addressing concerns for safe and continuous transit service at the Fourth and King Station and Railyard, and better align with industry feedback.

Staff recommends four modifications to the previously approved Project Delivery approach. Each of the recommendations is supported by IPMT and the ESC is discussed below.

Recommendation No. 1 - The first proposed change considers the fit-out [generally Mechanical, Electrical, and Plumbing (MEP)] of the Fourth and Townsend Station and two ventilation structures. The proposal is to:

1a. Shift the Fourth and Townsend Street Station fit-out and two ventilation structures fit-out from existing Contract No. 60-SF to Contract No. 40-CT: Civil and Tunnel PDB, and accelerate the investigation of additional construction laydown areas, and

1b. Retain the design and construction of the Salesforce Transit Center fit-out with the General Engineering Consultant (GEC) and the CMGC Station Fit-Out contractor, respectively under existing Contract No. 60-SF.

The original PDAS recommendation was based on the idea that the station fit-out work for the two stations and the two ventilation structures was similar and could best be bundled together to attract contractors with the relevant project skill sets, among other considerations. As the project development progressed, and with industry feedback, interface management requirements at Fourth and Townsend and the two ventilation structures became a greater concern, specifically the risks associated with having three contractors, the Civil and Tunnel, the Track and Systems, and the Station fit-out contractors, all involved in designing, building, testing and commissioning the station and ventilation structures. The project team also discussed the issue of these three contractor teams potentially sharing the limited laydown area available to the project at this location for construction. As a result, the project team began exploring mitigating solutions. IPMT, in its discussion of 1a., also recommended accelerating investigation of additional laydown areas.

The team also considered factors that would support continuing with the PDAS approach including the potential for reduced architectural controls at the station, a potential reduction in SBE/DBE architectural scope in the existing GEC team, and the need for the Contract No. 40-CT Civil and Tunnel contractor to expand its team to address MEP and architecture scope. In IPMT's discussion of 1a., Caltrain requested that design coordination and oversight be addressed in the planned Master Cooperative Agreement with TJPA.

The risks, opportunities, and mitigations are described in the table below:

Risk	**Mitigation**
Potential for reduction in architectural control at Fourth and Townsend Street Station and ventilation structures	Clear design standards will be provided in PDB contract. Owner and operators will continue to have design milestone approval authority and frequent design progress meetings.
Reduces SBE/DBE scope in GEC contract	Require larger SBE/DBE percentage in PDB

	contract.
Potential loss of institutional knowledge	Allow eligible designers of Fourth and Townsend 30% design to bid as part of PDB teams, so long as consistent with Board Policy regarding conflicts of interest.
Design and construction conflicts between contractors and disciplines	Proposed shift would shift design and construction interface risk between structural, architectural, mechanical, electrical, plumbing, vertical circulation, and civil disciplines from TJPA to the contractor.
Limited laydown and staging areas may lead to conflict claims	Proposed shift would reduce construction contractor interface risk by reducing the interfaces between contractors working in the same locations. Additional laydown space to also be investigated.
Multiple interfaces increase owner intervention	Reduces contract interface management for the IPDT

Recommendation No. 2 - The second proposed change considers the modifications required at the existing Caltrain Fourth and King yard to facilitate the construction of the Portal and the eventual connection of The Portal to the existing Caltrain mainline. The proposal is to:

2a. Divide 4th and King Yard Preparation (existing Contract No. 20-4KY) into two packages:
- Contract No. 20-4KYA: 4th and King Yard Preparation Package A: Site Clearing
- Contract No. 21-4KYB: Yard Track and Systems

2b. Defer decision on contract delivery agency

The original PDAS recommended a single DBB contract to accomplish both the sitework required to clear the area for laydown and construction of The Portal, as well as the modifications to the yard required to connect the mainline to the Portal. As coordination with Caltrain planning, operations, and engineering staff progressed, it became clear that the two elements of the Fourth and King Yard work, i.e., site clearing and preparation, and surface track and systems modifications, presented very different risk profiles to The Portal master schedule and to Caltrain's rail operations. Additionally, the site clearing and preparation is on the critical path to allow the Contract No. 40-CT Civil and Tunnel contract to begin work, while the Yard Track and Systems can proceed with less urgency though Caltrain has indicated its Board action will also be required to implement this construction delivery approach as the work will be performed at the Fourth and King Railyard site.

The resulting recommended creation of two separate contract packages is:
Contract No. 20-4KYA, 4th and King Yard Preparation Package A: Site Clearing:
The relocation or removal of structures, utilities, signal/power/communications and storage tracks, along the northern and western portions of the 4th and King Railyard

Contract No. 21-4KYB, 4th and King Yard Preparation Package B: Yard Track and Systems
Modifications and additions to at-grade trackwork and associated systems (staged construction

during operations) to facilitate the project's u-wall construction and connection to the project below-grade trackwork and systems. The project delivery team is presently examining sequencing (staging) of construction for Contract No. 21-4KYB work and is engaged with Caltrain on how to deliver this scope element involving active transit service and operations. These discussions also include the appropriate construction contracting agency to oversee this work in the Railyard. A delivery agency recommendation will be presented in the future based on these discussions.

Recommendation No. 3 – The third proposed change considers the selection of contract delivery type for Contract No. 20-4KYA, 4th and King Yard Preparation Package A: Site Clearing, and Contract No. 21-4KYB, 4th and King Yard Preparation Package B: Yard Track and Systems contracts. The Proposal is to:

3a. Select design-bid-build contract model for:
Contract No. 20-4KYA: 4th and King Yard Preparation, Site Clearing
3b. Select CMGC contract model for:
Contract No. 21-4KYB: 4th and King Yard Preparation, Track and Systems

Assuming approval of Recommendation No. 2 above, a focused Project Delivery Analysis Study was undertaken. This study evaluated various contracting methods for executing the 4th and King Yard work. The study was undertaken in collaboration with Caltrain staff beginning with study scoping and included a two-day workshop and review of the final report. Constraints and impacts of a short-list of contracting options was evaluated for best fit against project goals such as design retention, early contractor involvement, scale and complexity, and schedule. Each was tested against the short-list of DBB and CMGC contracting models.

For Contract No. 20-4KYA, 4th and King Yard Preparation Package A: Site Clearing, the analysis indicated that DBB was the most suitable contracting approach, as shown below:

Key Constraint	Impact	Suitable Short-List Option
Design Retention	Design is currently well progressed and understood. Changing design team would be an unnecessary impact to schedule and risk of impact to design quality itself.	DBB or CMGC
Early Contractor Involvement	The design and scope are well understood and developed. The interface with the operational corridor is minimal; therefore, sequencing is not a concern. Early contractor involvement is not required.	DBB
Scale and Complexity	The scope of the 4KYA package is relatively specialized and could be considered complex; however, it is well understood by the design team. The scale, however, is very small and would be out of balance with administrative and development costs of a collaborative contract model.	DBB
Schedule	The 4KYA package is on the critical path and needs to be procured immediately should it be	DBB

Key Constraint	Impact	Suitable Short-List Option
	effective in de-risking the broader project. With the need to procure the works as soon as possible, the best option would be to finalize design and prepare to procure a DBB contract.	

For Contract No. 21-4KYB, 4th and King Yard Preparation Package B: Yard Track and Systems, a CMGC contracting approach was determined to best fit the work, as shown below:

Key Constraint	Impact	Suitable Short-List Option
Design Retention	The design is currently well progressed and understood. Changing the design team would be an unnecessary negative impact to the schedule and risk affecting the design quality itself.	DBB or CMGC
Early Contractor Involvement	Despite the design and scope being well understood, major concerns regarding implementation and sequencing and the need for a collaborative working approach with a contractor are seen as the primary challenge for the 4KYB package.	CMGC
Scale and Complexity	The 4KYB package is complex both in terms of the scope as well as the challenges around sequencing and implementing the work in an operational corridor with a number of stakeholders. The scale is small compared to the overall project and other packages; this would need to be considered when developing the approach for a collaborative procurement with early contractor involvement.	DBB or CMGC
Schedule	The 4KYB package is not currently on the critical path for the project; however, it will be a key risk to the project if not executed within the planned timelines. The TJPA has time to develop a procurement plan for a collaborative model that involves a form of early contractor involvement should this be decided immediately.	DBB or CMGC

Recommendation No. 4 – The fourth proposed change addresses an issue which was unresolved in the July 2022 PDAS. Specifically, the decision to combine or separate the Track and Systems and Station Fit-out CMGC work was deferred until additional study could be conducted by project staff and the IPMT. The proposal is to:

4. Procure two CMGC contracts:
   Contract No. 50-TS: Track and Systems
   Contract No. 60-SF: Station Fit-out, Salesforce Transit Center

In the ensuring period after the PDAS was completed, staff conducted additional contractor outreach, considered the schedule implications of separating or combining the contracts, and evaluated interface and scope risks. The additional evaluation has reached the following conclusions supporting the recommendation:

- Systems contractors have advised against mixing the Track and Systems and Station Fit-out scopes.
- CMGC for separate Salesforce Transit Center Fit-out (Recommendation No. 1b) work allows for pushing procurement out several months, reducing demands on TJPA procurement.
- Separate Track and Systems and Station Fit-out contracts provide better alignment with specialty contractor scope and experience.

It is noted that robust operator engagement and approval authorities will be built into both contracts.

RECOMMENDATION:
It is recommended that the Board approve modifications to the Project Delivery approach as follows:

1a. Shift the Fourth and Townsend Street Station fit-out and two ventilation structures fit-out to Contract No. 40-CT: Civil and Tunnel progressive design-build (PDB) and accelerate the investigation of additional construction laydown areas
1b. Retain the design and construction of the Salesforce Transit Center fit-out with the GEC and the construction manager/general contractor (CMGC) Station Fit-Out contractor, respectively

2a. Divide 4th and King Yard Preparation into two packages:
Contract No. 20-4KYA: Site Clearing
Contract No. 21-4KYB: Track and Systems
2b. Defer decision on contract delivery agency

3a. Select design-bid-build contract model for:
Contract No. 20-4KYA: 4th and King Yard Preparation, Site Clearing
3b. Select CMGC contract model for:
Contract No. 21-4KYB: 4th and King Yard Preparation, Track and Systems

4. Procure two CMGC contracts:
Contract No. 50-TS: Track and Systems
Contract No. 60-SF: Station Fit-out, Salesforce Transit Center

ATTACHMENTS:

1. Resolution
2. Comparative Summary of Approved Delivery Strategy and Proposed Changes

TRANSBAY JOINT POWERS AUTHORITY
BOARD OF DIRECTORS

Resolution No. _____

WHEREAS, The Transbay Joint Powers Authority (TJPA) is a joint powers agency organized and existing under the laws of the State of California; and

WHEREAS, Pursuant to state law and the Joint Powers Agreement creating the TJPA, dated April 4, 2001, the TJPA has primary jurisdiction over and will implement all aspects of the Transbay Program, including the portion of the Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project, also known as The Portal; and

WHEREAS, The TJPA is actively engaged in developing The Portal; and

WHEREAS, On July 14, 2022, the TJPA Board of Directors approved the Downtown Rail Extension Project Delivery approach as recommended by the Integrated Program Management Team (IPMT) and Executive Steering Committee (ESC) and based on the Project Delivery Alternatives Study; and

WHEREAS, Since the Board's approval of the Project Delivery approach, the project delivery team, which includes the initial operator - Caltrain, and IPMT, have continued to develop project design while continuing outreach with the construction industry and various transit agencies, to refine the project delivery approach; and

WHEREAS, This additional work has identified four opportunities to optimize the delivery approach to mitigate TJPA and Caltrain risk through better interface management, addressing concerns for safe and continuous transit service at the Fourth and King Station and Railyard, and better align with industry feedback; and

WHEREAS, The IPMT and ESC support the four recommended modifications to the Project Delivery approach; now, therefore, be it

RESOLVED, That the TJPA Board of Directors approves four modifications to the Project Delivery approach as described in the accompanying Board Report presented herewith.

I hereby certify that the foregoing resolution was adopted by the Transbay Joint Powers Authority Board of Directors at its meeting of November 9, 2023.

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Secretary, Transbay Joint Powers Authority

Summary of Proposed Changes

Contract	As approved	As proposed
10-UR, Utility Relocation	Advance utility relocation of over 20 public and private utilities	No change
20-4KY, 4th and King Yard	Relocation or removal of structures, site clearing, rearrangement of track, overhead catenary, and supporting facilities	Division of work into two packages, 20 -4KYA and 21-4KYB, to better protect Caltrain operations while providing for construction laydown and access needed for the Portal, addition of at grade track and systems to 21-4KYB
30-BD Building Demolition	Demolition of 7 buildings as required for Portal construction	No change
40-CT, Civil and Tunnel	Construction of tunnel, throat, and civil structures including Fourth and Townsend station box, two ventilation structures, and certain utility temporary support and/or relocation	Addition of mechanical, electrical, plumbing, and architectural finishes at Fourth and Townsend Station and the two mid -tunnel ventilation structures
50-TS, Track and Systems	a. Installation of track and rail systems b. Potentially combine with 60 -SF, Station Fit-out	a. No change to scope, except removal of at grade track and systems b. Do not combine with 60 -SF, Station Fit-out
60-SF, Fourth and Townsend and Salesforce Transit Center Fit-out	a. Mechanical, electrical, plumbing, and architectural finishes at Fourth and Townsend Station, Salesforce Transit Center, and the two ventilation structures b. Potentially combine with 50 -TS, Track and Systems	a. Deletion of the mechanical, electrical, plumbing, and architectural finishes at the Fourth and Townsend Station and two mid -tunnel ventilation structures b. Do not combine with 50 -TS, Track and Systems