

## California Department of Transportation

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November 29, 2023

Mr. Tay Dam  
Federal Highway Administration  
California Division  
Senior Transportation Engineer  
888 South Figueroa St., Ste. 440  
Los Angeles, CA 90017

Dear Mr. Tay Dam:

The California Department of Transportation (Caltrans) requests approval to use the Progressive Design-Build (PD-B) delivery method on the San Diego-Coronado Bay Bridge (SDCBB) Suicide Deterrent Project. The PD-B delivery method will award the contract using a qualifications-based selection process. Special Experimental Project No. 14 (SEP-14) approval is requested to waive the 23 CFR 636.302(a)(1) requirements.

Please find the attached SEP-14 workplan for your review and approval. Please do not hesitate to contact me with any questions. I can be reached at (619) 921-3997 or by e-mail at [charles.gray@dot.ca.gov](mailto:charles.gray@dot.ca.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read 'Charles Gray'.

CHARLES GRAY  
Project Manager

### Attachment

SDCBB Suicide Deterrent Project Alternative Contracting Workplan (12 pages)

c: Lismary Gavillán, Major Project Oversight Manager, California Division – CalSouth Office, FHWA  
Sam Amen, Design Division Chief, District 11, Caltrans  
Belinda Hon, Office Chief, Office of Innovative Design & Delivery, Caltrans  
Lisa Tanaka, Alternative Delivery Engineer, Office of Innovative Design & Delivery, Caltrans

**Special Experimental Project No.14 (SEP-14)**  
**Alternative Contracting Workplan for**  
**San Diego-Coronado Bay Bridge Suicide Deterrent Project**  
**State Route 75 & Interstate 5**  
**11-SD-75 PM R20.1/R22.3 & 11-SD-5 PM R13.8/R14.3**

**1 Purpose**

The purpose of the project is to realize and evaluate the benefits of the Progressive Design Build (PD-B) project delivery method on the San Diego-Coronado Bay Bridge Suicide Deterrent Project in San Diego County in Coronado and San Diego on the State Route 75 (PM R20.1/R22.3) and Interstate 5 (PM R13.8/R14.3). The PD-B delivery methodology allows Caltrans to engage a contractor (Design-Builder) to design, collaborate, and engage with the project team to refine the project scope, optimize design, improve quality, manage costs, and share risks.

California Department of Transportation (Caltrans) expects to realize the following benefits by using PD-B on this project:

- Resolving unique complex design challenges – designing the suicide deterrent is specialty work and not typical Caltrans design work.
- Explore ways in the final design and construction methods to reduce cost or accelerate schedule while meeting the unique project purpose and need and environmental commitments.
- Refine project design schedule with greater certainty. Confirm the scope of work that can be completed in the scheduled timeframe and develop strategies or solutions to best address time constraints and goals.
- Help manage project risk and reduce the risk of schedule delays to completion. Help identify additional project risks and develop resolution options early. If any of the risks become an issue during the Design Phase or Construction Phase, having an expert consultant designer and contractor onboard would reduce the time it would take to resolve the issue.
- Ensure environmental design parameters, bridge maintenance staff requirements, and Structures Maintenance & Investigation requirements are all met in the final design.
- Help streamline environmental oversight during design and construction. The bridge is historic resource located in a historic district therefore, avoidance/minimization measures will need to be carried out during design, and construction with respect to contractor means and methods. Environmental will continue to play a significant role during the design and construction phases with regards to guidance, approvals, and monitoring to ensure we adhere to the no adverse effect determination and follow the Secretary of Interior Standards.
- Ensure the project components that are to be installed on the bridge do not

trigger the need for other bridge modifications or reduction of the bridge rating.

- Assist with public and stakeholder public relations and help resolve issues if they arise.
- Ensure the final design will not create noise issues caused by wind or typical and reoccurring structure movement/vibrations.
- Help with responding to any comments from railroad operators and facilitating the railroad agreements.
- Help with early permitting agencies coordination. Assist with obtaining the Coastal Development Permit, addressing questions regarding construction processes, types of equipment used and methods that would occur, minimizing the probability of permit amendments.
- Reduce the risk of needing Buy America Waiver(s). A PD-B entity using their expert knowledge and network may be able to identify netting that meets all requirements including Buy America to meet or exceed the current schedule. The PD-B entity may also reduce the risk of needing other possible Buy America Waivers regarding other stainless-steel components using their expert knowledge, network, and through their final design.
- Reduce the risk of needing sole source approval(s). A PD-B entity may be able to identify multiple netting manufactures that meet all requirements to help avoid the need for additional approvals. The PD-B entity may also be able to design the final suicide deterrent system in such a way that avoids the need for other potential sole source approvals regarding other components such as turn buckles, etc.
- Facilitate the efficient development of the unique specifications that will be needed beyond typical Caltrans work. A PD-B entity is recommended to develop the numerous special specifications that will be needed due to the unique nature of the project. Furthermore, by having the contractor involved in the development of the unique specifications, there will be less risk of delay during construction.
- Allow for and identify early work package opportunities to accelerate the completion of the project. Identify material availability and options including estimated acquisition time frames. Utilize early work packages if determined prudent.
- Allow for and identify severable work package opportunities to accelerate the completion of the project. Utilize severable work packages if determined prudent.
- Improve the accuracy of the estimated construction schedule. The construction scope of work is unique, and the constraints are specific to the project location and bridge which affects Caltrans' ability to accurately estimate the construction schedule. Being able to discuss the many complexities, unique requirements, and constraints with the designer and contractor would lead to a more accurate planned construction schedule and support cost estimate and higher confidence level for planning and budgeting

proposes.

- Refine the estimated capital construction cost with greater certainty. The accuracy of estimated capital cost on this project is less than a typical highway transportation project. Caltrans does not have historical bid information or production rates regarding furnishing or installing the specialty items such as the stainless-steel netting and vertical deterrent support system. Furthermore, being able to discuss the many complexities, unique requirements, and constraints with the consultant designer and contractor would lead to a more accurate construction capital cost estimate and higher confidence level for planning and budgeting proposes.
- Allow for the potential opportunity of showcasing bridge construction innovation techniques/methods to reduce cost, schedule, and impacts.
- Assistance with local coordination providing input on impacts to locals in terms of schedule, traffic impacts, noise of construction operations, and duration of work.
- Assessment of the most effective type of traffic lane closures including considering the effects of the existing moveable barrier.
- Allow for early field reviews and coordination with the consultant designer and contractor, reducing the risk of construction delay. Construction constraints, needs, and challenges can be more accurately identified and addressed during design. Some known challenges and constraints include the age of the bridge, the height of the bridge, construction access limitations, high traffic volumes, high speed traffic, and limited closure windows. There are no shoulders on the bridge and the construction will take place over water and developed land. No access from the bay or the land under the bridge will be permitted. All construction must occur from the superstructure which has a center movable barrier that is repositioned twice during each weekday to accommodate peak directional traffic demand. Daytime lane closure windows are extremely short due to traffic volumes.
- Reduce risk of construction delays due to protected species work windows. The bridge regularly hosts a nesting peregrine falcon. The peregrine falcon is a California fully protected species while nesting, and it is also protected by the federal Migratory Bird Treaty Act. Enclosure of the substructure bays and operations and maintenance (O&M) activities under the bridge deck shall, to the extent feasible, avoid the nesting season of the peregrine falcon (February 1 through August 30) to minimize disruption of nesting behavior.
- Reduce risk of construction delays due to conflicts with existing necessary maintenance activities such as ongoing painting of the bridge. The San Diego – Coronado Bay Bridge paint crew continuously work on the bridge. Their work utilizes existing temporary platforms anchored to the bottom of the bridge superstructure (QuikDeck and Safespan). PD-B would allow for improved coordination and improved management between the bridge paint crews work and the construction project. This would allow for the opportunity of reducing impacts the CT bridge paint staff and improve contractor efficiencies.

- Reduce probability of claims and change orders during construction.

### **1.1 Waiver:**

Under 23 CFR 636.302(a)(1), evaluation of price is required in the selection of a design-build team (DBT) if the contract is awarded after the National Environmental Policy Act (NEPA) process is complete. The approved environmental documents are CEQA – Initial Study with Mitigated Negative Declaration (IS/MND), and NEPA – Categorical Exclusion (CE). The project NEPA Categorical Exclusion was signed on June 27, 2022. Caltrans intends to undertake this project using the recently executed California Law: SECTION 1. Article 6.7 (commencing with Section 10215) is added to Chapter 1 of Part 2 of Division 2 of the Public Contract Code authorizes the use of Progressive Design-Build delivery method and procure the Design-Builder after the completion of the NEPA process.

Caltrans typically uses the design-bid-build method; however, Caltrans has used Design-Build and Construction Manager/General Contractor procurement methods with positive results.

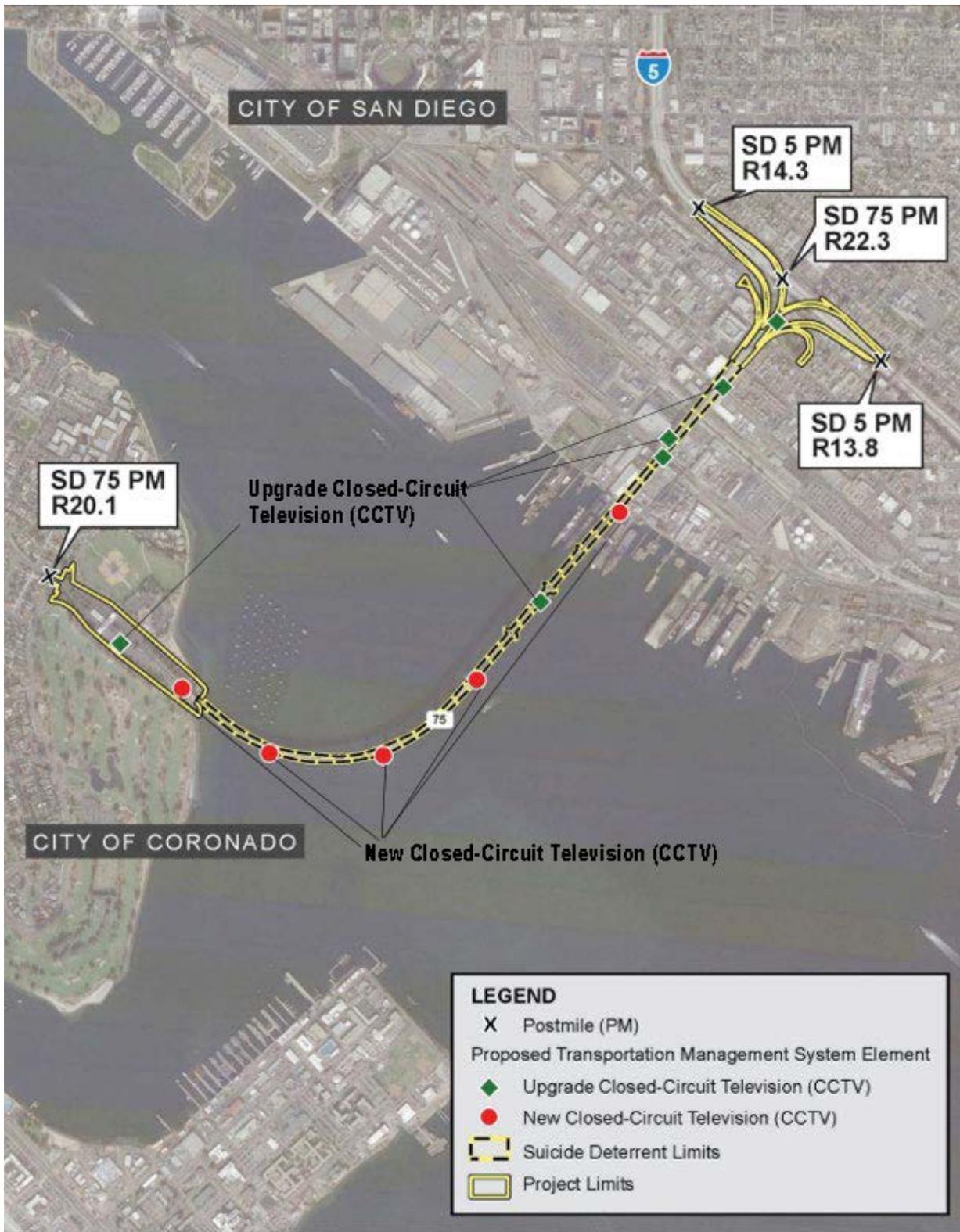
## **2 Project Scope**

The San Diego-Coronado Bay Bridge was completed in 1969, though official figures have not been maintained since, it is widely believed that there have been approximately 400 deaths by suicide that have occurred from the San Diego-Coronado Bridge on State Route 75. Per the San Diego County Medical Examiner's Website, there were 18 fatalities in 2017, 17 fatalities in 2018, and 15 fatalities in 2019. After the Golden Gate Bridge, it is recognized as the second most frequently used bridge for suicide in the states. The bridge does not have a permanent physical suicide deterrent system. The standard operating procedure for suicide attempts is closure of the bridge. The bridge has the highest concentration of fatalities for a spot location on the state highway system in Caltrans District 11 (San Diego and Imperial Counties) due to deaths by suicide.

The purpose of this project is to install a suicide deterrence system in the most timely manner in order to reduce suicides and suicide attempts as soon as is practicable, while also reducing the closures of the bridge due to these events.

The project will construct improvements to the bridge that will stem future loss of life and improve the health of the community. The project will also reduce motorist delays and congestion relating to these events. Bridge closures create impacts to local communities including the underserved community of Barrio Logan. Reduction in bridge closures will reduce community impacts, improve air quality, and increase the transportation reliability of the bridge crossing.

The selected alternative consists of a vertical net barrier (vertical net) that will be affixed to the outside of the existing bridge railing. The vertical net is composed of an 8- to 10-foot-tall stainless-steel net affixed to top and bottom perimeter tension cables. The vertical net will be offset 4 to 8 inches behind the existing bridge rail. Six existing closed-circuit television (CCTV) cameras will be upgraded, and five new CCTV cameras will be installed to provide full coverage of the bridge.



**Project Location Map**



**Rendering of the Vertical Net Looking East**

The project will also require the enclosure of several superstructure bays beneath the bridge deck to allow for continued maintenance and inspections of bridge locations that will no longer be accessible by the Under Bridge Inspection Truck (UBIT) due to the vertical net. The enclosures will consist of a grating "floor" and intermittent supports that will connect to the existing superstructure.



**Existing Bridge Without Bay Enclosures**



**Visual Simulation of the Bridge Bay Enclosures**

The total estimated project cost is approximately \$130M, of this amount, \$94.8M is for the Construction Capital component.

### **3 Procurement Plan**

#### **3.1 Independent Cost Estimator**

Caltrans will procure a separate A&E Consultant Service Contract for an Independent Cost Estimator (ICE). The ICE will provide an independent cost estimate to aid Caltrans in price negotiations with the Design-Builder to ensure the Guaranteed Maximum Price (GMP) is reasonable and fair for the Final Design and Construction Contract of the Project. The ICE will also advise Caltrans on scheduling and method of construction.

#### **3.2 Progressive Design-Build Contract**

Procurement of the PB-D contract is based on a best value selection process. Caltrans will use a single-phase procurement process to select a Design-Builder to deliver the Project. The Request for Qualifications (RFQ) is issued to solicit information, in the form of a Statement of Qualifications (SOQ) followed by proposer interviews that Caltrans will evaluate to determine which proposers are qualified to successfully deliver the Project in a two-part contract:

- Part one: A “Preconstruction Services Contract” which includes the design effort of the Project. The design-builder, ICE, and Caltrans will work together to

develop the schedule, cost model, and risk profile for the project. This phase will involve an ongoing cost reconciliation process to ultimately agree on a GMP that is validated by ICE.

- Part two: A “Final Design and Construction Contract” to complete the design and build the Project if a GMP is reached.

Exhibit A shows the typical process for a PDB contract procurement.

### 3.2.1 Preconstruction Services Contract

Caltrans will publicly advertise a Request for Qualifications (RFQ) outlining the minimum and desired Design-Builder qualifications. The Caltrans project evaluation team evaluates the qualitative technical proposals according to the criteria published in the RFQ. The top ranked proposers will be short-listed and interviewed. The Preconstruction Services Contract will be awarded to the responsive and responsible proposer with the highest score.

#### *3.2.1.1 RFQ Development*

The RFQ will identify the evaluation criteria, evaluation process, and scoring criteria. The scoring evaluation criteria will include:

- a) Proposer Experience and Past Performance: Proposers will be asked to demonstrate experience, expertise, competence, capability, and capacity in, and a record of producing quality work on projects similar to the Project.
- b) Proposer’s Key Personnel: Proposers will be asked to identify the qualified personnel for key positions with demonstrated experience and expertise and a record of producing quality work on projects of a similar nature to this Project.
- c) Project Understanding and Approach: Proposers will be asked to demonstrate an understanding of and approach to the management, technical aspects, and maintenance of traffic issues and risks associated with the Project. Proposers will need to show an understanding of and approach to how the Progressive Design-Build process and the proposer’s organization will contribute to the success of the Project and meet the Project goals. Proposers will need to have an understanding of the risk sharing and the team relationship between the Design-Builder and Caltrans.
- d) Quality Management Program: Proposers will be asked to demonstrate their approach in implementing a Quality Management Program under a Progressive Design-Build project in which Caltrans will manage and perform its construction and design owner verification functions, while the proposer is responsible for design Quality Control (QC)/Quality Validation (QV) and construction QC/QV plans and functions.
- e) Price Proposal: Proposer’s will be asked to submit the preconstruction services fee and the final design and construction markup.
- f) Interview for Short-Listed Proposers: Short-listed proposers will be asked to interview to demonstrate their ability to perform as the Design-Builder on the Project.

Other criteria that are evaluated but not scored include:

- a) Legal Structure: Proposers are asked to provide documents demonstrating that Proposer's organization, legal structure, team members, and history demonstrate an ability to remain stable and viable for the duration of the Project and be contractually bound to Caltrans.
- b) Financial Capacity: Proposers are asked to provide documents demonstrating their financial capacity to enter into the Final Design and Construction Contract with Caltrans and possess the resources to successfully complete the Project.
- c) Safety Program. Proposers will be asked to describe their past safety record and demonstrate an understanding of an effective safety program.

#### 3.2.1.2 *Proposer Evaluation*

The following is a summary of evaluation procedure of the proposers:

- a) Caltrans forms an evaluation team consisting of a Qualifications Review Committee (QRC), Project Scoring Committee (PSC), Executive Review Committee (ERC), and Process Oversight Committee (POC).
- b) The proposer's SOQ will be evaluated to determine the responsiveness to the RFQ. The Proposers who substantially comply with the requirements of the RFQ will be given a passing rating in this portion of the evaluation. Failure to address a particular requirement or failure to include or deliver an important item of information that is required by the RFQ may be grounds for failing the proposer on that item.
- c) The QRC will individually review the SOQs. They will then meet and evaluate the SOQs by providing a consensus of the strength and weakness findings for each SOQ based on each RFQ criteria. The QRC will also conduct a project and/or key personnel reference check. The QRC's assessment and reference check is given to the PSC.
- d) The PSC will individually review the SOQs and the consensus of the strength and weakness findings, and independently score. The PSC will meet and determine the consensus score for each SOQ.
- e) A ranking of the proposers will be determined, and a short-list identified. The short-list is submitted to the ERC for review and approval of the short-list.
- f) Short-listed proposers are notified of their interview date, time, location, and interview format.
- g) The PSC conducts interviews with the short-listed proposers and determines the consensus scores.
- h) ERC will review and approve the final ranking of the proposers.
- i) Final ranking of the proposers is determined and sent to the short-listed proposers and posted on the Caltrans web site.
- j) The top ranked proposer submits required information to Caltrans to proceed with the Preconstruction Services Contract execution.

#### 3.2.1.3 *Preconstruction Activities*

The following is an overview of the activities associated with the preconstruction phase of a PD-B project:

- a) The PD-B preconstruction phase begins with a Project Team Kick-off Meeting and Partnering Workshop. The Project Kick-off Meeting is used to review the project team's roles and responsibilities, preliminary schedule, Scope of Work, and project goals. The Partnering Workshop is often facilitated by a third party experienced in partnering, with the goal to develop trust, respect, and cooperation among all key players.
- b) The project team meets to prepare a Risk Management Plan/Risk Register. The Risk Register is a tool used to identify, assess, mitigate, retire, and monitor project risks. The Risk Register is updated throughout the preconstruction phase.
- c) The Design-Builder prepares a project Cost Model with input from the project team. The Cost Model is an open and transparent document that defines the Design-Builder's pricing assumptions and will be used by the ICE and the District estimator. The Cost Model is updated throughout the preconstruction phase.
- d) A review set of plans and specifications are developed for each pricing milestone.
- e) At each pricing milestone a Design Review Workshop is held to review and discuss the current design to ensure a constructible and cost-effective design.
- f) At each pricing milestone a Risk Workshop is held to discuss and agree upon how risks and contingencies are quantified and assigned, and how risk is influencing the estimate.
- g) At each pricing milestone a Quality Reconciliation Meeting is held to come to agreement on the bid items and quantities that will be used to develop the project estimate.
- h) At each pricing milestone the Design-Builder, ICE, and Caltrans prepare independent cost estimates for the Project.
- i) At each pricing milestone a Price Reconciliation Meeting is held to reconcile pricing differences between the Design-Builder's estimate and ICE's independent cost estimate.
- j) When it is decided that a GMP should be determined for the project or work package the Design-Builder, ICE, and Caltrans submit their final estimate.
- k) If the Design-Builder's final estimate is acceptable to Caltrans, Caltrans proceeds with awarding the Final Design and Construction Contract.

### 3.3.2 Off Ramp

If Caltrans is unable to enter into the Final Design and Construction Contract or the Design-Builder, ICE and Caltrans fail in the price negotiations, Caltrans will have the following options:

- a) Amend the Preconstruction Services Contract to have the Design-Builder complete the design. Caltrans would complete construction of the project as Design-Bid-Build.
- b) Complete the design in-house. Caltrans would complete construction of the project as Design-Bid-Build.
- c) Re-Advertise for a new Design-Builder and complete the project using Design-Build contracting.

### 3.2.2 Final Design and Construction Contract

If the project or work package has 100 percent design, the construction contract will be similar to a design-bid-build project. If the project or work package is less than 100 percent design, the Final Design and Construction Contract will be similar to a design-build contract which will include project specific specifications.

## **4 Schedule**

The current Design-Bid-Build project schedule is shown below. The anticipated timelines for PD-B project delivery method for this project is also shown below. Caltrans expects PD-B to be significantly faster than DBB. Caltrans will measure the project duration against the expected DBB schedule and report accordingly in the final report submitted to FHWA.

| <b>Project Milestones<br/>Design-Bid-Build vs Progressive Design Build</b> |                               |  |
|--|-------------------------------|--|
| <b>Project Delivery Milestone</b>  | <b>Design-Bid-Build (DBB)</b> | <b>Progressive Design Build (PD-B)</b> |
| Environmental Document Certification                                       | June 2022 (Completed)         | June 2022 (Completed)                  |
| Begin Design   | May 2023 (Actual)             | May 2023 (Actual)                      |
| Advertise RFQ  | --                            | March 2024                             |
| FHWA Review – CA Division  | --                            | June 2024                              |
| Award Preconstruction Services Contract                                    | --                            | July 2024                              |
| Final PS&E   | January 2026                  | --                                     |
| Ready to List  | March 2026 <sup>1</sup>       | --                                     |
| FHWA Review and Authorization (E-76)– CA Division                          | --                            | December 2025 <sup>2</sup>             |
| Contract Award (For PD-B: Final Design and Construction Contract)          | August 2026 <sup>1</sup>      | January 2026 <sup>2</sup>              |
| Begin Construction   | September 2026 <sup>1</sup>   | March 2026 <sup>2</sup>                |
| Construction Completion/Contract Acceptance                                | October 2029 <sup>1</sup>     | October 2028 <sup>2</sup>              |

<sup>1</sup>Assumes construction support and construction capital components will be funded without causing a schedule delay.

<sup>2</sup>Assumes PD-B final design and construction services will be funded without causing a schedule delay.

## **5 Measures for Evaluation of Progressive Design-Build**

### **5.1 Schedule**

Section 4 shows the anticipated timelines for design-bid-build (DBB) and PD-B project delivery methods for this Project. Caltrans expects PD-B to be significantly faster than DBB. Caltrans will measure the project duration against the expected DBB schedule and report accordingly in the final report submitted to FHWA.

## **5.2 Cost**

The PD-B delivery method enables Caltrans to engage the Design-Builder early in the project development process to design and construct, optimize the schedule, mitigate risks, and other construction-related processes that ultimately result in project savings. Caltrans will track Project costs against the programmed costs to measure the cost savings benefits of PD-B. The 11-page cost estimate was prepared at PA/ED in 2022 to determine the “programmed cost”. The cost savings results will be included in the final report to FHWA.

## **6 FHWA Review and Reporting**

Caltrans will request review for the Preconstruction Services Contract and the Final Design and Construction Contract from FHWA – CA Division and provide initial, intermediate, and final reports on this Project to FHWA – California Division’s assigned Transportation Engineer/Project Oversight Manager for District 11.

### **6.1 Initial Report**

Caltrans will submit an initial report no later than 3 months after contract award. The initial report will include the number of proposers and identify the selected proposer with agreed to fee and escalation.

### **6.2 Intermediate Report**

The intermediate report will be submitted no later than 3 months after award of each work package. The interim report will include innovations, if Caltrans is awarding a single or multiple work packages and if design is 100% complete or less than 100% complete.

### **6.3 Final Reporting**

No later than 6 months after the completion and acceptance of all contracted work on the Project (Construction Contract Acceptance), Caltrans will prepare and submit a final report to FHWA. The final report will include a comprehensive assessment on the effectiveness of the PD-B project delivery method relative to project cost and time savings and will discuss lessons learned.

Off Ramp Report - If Caltrans exercises the off-ramp option, the final report will be prepared and submitted to FHWA no later than 3 months after the selection of the new procurement method starts. This report will discuss lessons learned, reasons for using the off-ramp, and considerations for selecting the new procurement method.

# **EXHIBIT A**

