



Agenda Item No. (3)

To: Building and Operating Committee/Committee of the Whole
Meeting of February 27, 2025

From: John R. Eberle, District Engineer
Denis J. Mulligan, General Manager

Subject: **APPROVE ACTIONS RELATIVE TO EXECUTION OF PROFESSIONAL
SERVICES AGREEMENT NO. 2024-B-014, BRIDGE INSPECTION
SERVICES, WITH HDR ENGINEERING, INC.**

Recommendation

The Building and Operating Committee recommends that the Board of Directors approve the following actions relative to the Professional Services Agreement (PSA) No. 2024-B-014, *Bridge Inspection Services*:

1. Authorize execution of PSA No. 2024-B-014, with HDR Engineering, Inc., Walnut Creek, CA, in an amount not-to-exceed \$10,982,580, to perform two cycles of the Title 23 Code of Federal Regulations (CFR) Part 650 mandated bridge inspections at the Golden Gate Bridge; and,
2. Establish a 10% contingency for PSA No. 2024-B-014 in the amount of \$1,098,258;

with the understanding that sufficient funds are available in the Fiscal Year (FY) 2024/25 Bridge Division Operating Budget to finance the estimated \$1,428,000 FY 2024/25 expenses under PSA No. 2024-B-014.

This matter will be presented to the Board of Directors at its February 28, 2025, meeting for appropriate action.

Summary

Title 23 – Highways, Code of Federal Regulations, Part 650, Subpart C, National Bridge Inspection Standards (23 CFR 650), sets the national standards for the safety inspection and evaluation of all highway bridges. The Golden Gate Bridge is a part of the National Highway System and is required to comply with the bridge inspection requirements set forth in 23 CFR 650 in order to receive federal funding for Bridge projects.

In accordance with 23 CFR 650, bridge owners are required to perform inspections of all bridge structural members every 24 months, except for the underwater portions of bridges that must be inspected no more than every 60 months. There are four types of bridge inspections applicable to the existing bridges: (1) Nonredundant Steel Tension Member inspection, (2) Special Close Up (In-Depth) Bridge Inspection, (3) Routine Bridge Inspection, and (4) Complex Bridge Element Inspection.

A Nonredundant Steel Tension Member (NSTM), formerly known as Fracture Critical Member (FCM), is defined as a steel member in tension or with a tension element whose failure would probably cause a portion or the entire bridge to collapse. Inspections of NSTMs must be performed no more than an arm's length distance from the member to be inspected to properly observe any defects, such as cracks. Inspections for non-NSTMs, including Complex Bridge Elements, are also subject to biennial inspections and must be performed from such a distance that allows a visual assessment of their condition. Complex Bridge Elements of the Golden Gate Bridge include main cable bands, rocker-links, and special devices such as energy dissipation devices and force impact resisting devices. Some of the non-NSTMs can be, if needed, subjected to an in-depth Special Close-Up Inspection to provide a more detailed assessment of their condition and any required repairs.

The Golden Gate Bridge, Highway and Transportation District's (District) engineering staff have been performing the NSTM Inspections and the Special Close-Up Inspections of those bridge members that are accessible from existing bridge access platforms and maintenance travelers, and the Routine Inspections and Complex Bridge Element Inspections of those bridge members that can be assessed from a further distance, if necessary, with binoculars. In addition to the NSTMs that are not readily accessible within an arm's distance, there are a number of areas on the Bridge that are not readily accessible to perform the Special Close-Up Inspections, Complex Bridge Element Inspections, and Routine Inspections by the engineering staff, and must be inspected by qualified and certified personnel using rope climbing access techniques. In the past, the District retained a professional engineering consultant firm with personnel certified in the use of rope climbing access techniques to access and inspect these areas.

The District's engineering staff has identified the NSTMs of the Golden Gate Bridge that, every two years, must undergo inspections within arm's length, and those non-NSTMs that, for a specific inspection cycle, must undergo the Special Close-Up Inspection. A total of 616 Golden Gate Bridge members have been designated as NSTMs, which include the Suspension Bridge floor beams and the entire length of the two Main Cables; the South and North Approach Viaduct girders, floor beams and trusses; and the Fort Point Arch floor beams.

Engineering staff has also identified certain non-NSTM bridge members, which, due to lack of conventional access to assess their condition, must be inspected using rope access system as part of the Routine Inspections and, if required, Special Close-Up Inspections. These elements include the South Approach Viaduct Girder Span steel diaphragms; the Fort Point Arch steel pedestals located on top of the floor beams; Pylon S2 steel stringer and underside of steel orthotropic deck; the entire Suspension Bridge stiffening trusses, underside of steel orthotropic deck and steel pedestals located on top of the floor beams; bearing element located on top of the North Abutment; and, non-destructive testing of the Suspension Cable eye-bar pins located inside the anchorage housing.

During previous inspection cycles, engineering staff utilized the existing Suspension Bridge maintenance travelers to access and inspect the bridge members on this structure. The existing Suspension Span maintenance travelers were removed as a part of the Golden Gate Bridge Physical Suicide Deterrent System project and are no longer available for the District's use and the new maintenance travelers are not yet installed so for the next two bridge inspection cycles, all Suspension Bridge inspections must be performed by a consulting firm certified in using rope climbing access techniques, in addition to inspections of the not readily accessible areas on other structures of the Bridge. These inspections may require non-destructive testing and additional

investigation of elements, including structural analysis, to define the impact of conditions found during the inspections on load bearing capacity of the investigated members.

The District does not have in-house rope climbing expertise, non-destructive testing expertise, or computer modeling capacity to perform the complex analysis for the South Tower fender system and to assess the capacity and condition rating of any potentially unforeseen deteriorated structural members, and must contract with an outside consultant to perform the field inspections of the Bridge areas not accessible through conventional methods and other work that must be accomplished during the next two cycles, 2025/26 and 2027/28, of bridge inspections.

On November 18, 2024, the District advertised on its website and with seven bid distribution centers a Request for Statement of Qualifications and Proposals, RFQ/RFP No. 2024-B-014, *Bridge Inspection Services*, soliciting proposals from professional consultants specializing in inspections of bridges using specialized rigging and rope access techniques. A pre-proposal meeting was held on December 4, 2024, at the Bridge with representatives from the District's Engineering Department and the Manager, Disadvantaged Business Enterprise (DBE) and Workforce Inclusion Department. A total of fifteen firms downloaded the documents from the District website.

By the due date of December 18, 2024, the Office of the District Secretary received proposals from one consulting firm as follows:

1. HDR Engineering, Inc., Walnut Creek, CA

Representatives from the Engineering Department and a representative from Caltrans Structures Maintenance and Investigations/Toll Bridges, as well as the District's DBE Program Office, and District's Attorney, reviewed the proposal and determined that it was responsive to the solicitation requirements.

The District's selection committee, consisting of two Directing Civil Engineers, one Senior Civil Engineer, and a representative from Caltrans Structures Maintenance and Investigations/Toll Bridges reviewed the proposal's response to the selection criteria specified in the RFQ/RFP, including the qualifications and experience of the consultant team, the consultant's project understanding and methodology of providing the requested services, and consultant's capabilities, including their records of successfully performing similar work, and determined that HDR Engineering, Inc., has the qualifications and experience necessary to perform these services. The District Engineer concurs with this finding.

The consultant's scope of services will include two bridge inspection cycles (one to begin in 2025 and one to begin in 2027) each consisting of:

- (i) designing, furnishing, installing, and utilizing rope climbing access systems at the multiple inspection locations on the Bridge;
- (ii) Nonredundant Steel Tension Member Inspection;
- (iii) Routine Bridge Inspection;
- (iv) Special Close Up Inspection, including performing non-destructive testing of 18 main cable eye bars and pins in each anchorage house;

- (v) performing, on an as-needed basis, non-destructive testing of bridge members to be determined by the District;
- (vi) performing structural analysis of any areas of concern found during the inspections; and,
- (vii) preparing inspection reports.

Additionally, in light of the recent Francis Scott Key Bridge collapse, the scope of work includes an analysis of the South Tower fender system's structural capacity for ship collisions.

In accordance with Section V, Competitive Negotiations, of the District's Procurement Manual, in the event that the District receives only one proposal in response to an RFQ/RFP, the selection committee shall conduct a cost analysis to determine whether the compensation proposal is fair and reasonable. Following the procedures in the RFQ/RFP, staff requested a cost proposal from HDR Engineering, Inc., and conducted a cost analysis, comparing the cost proposal to the District's cost estimate for the services. After performing the analysis and reviewing the cost proposal, staff negotiated a total not-to-exceed amount of \$10,982,580 for the services. Staff has determined that this not-to-exceed amount is fair and reasonable based on the scope of work and historical cost data of bridge inspection services provided by consultants on previous Golden Gate Bridge Inspection contracts.

Although there was no contract-specific DBE or Small Business Enterprise (SBE) goal established for this RFQ/RFP, proposers were strongly encouraged to obtain DBE participation. The District's DBE Program Office have determined that approximately 8% SBE participation, including 2% DBE participation, is anticipated during the performance of this contract.

Staff recommends that the Building and Operating Committee recommend that the Board of Directors authorize execution of PSA No. 2024-B-014, *Bridge Inspection Services*, to HDR Engineering, Inc., for a not-to-exceed amount of \$10,982,580, and also recommends an establishment of a 10% contract contingency in the amount of \$1,098,258 be established for this PSA for any additional or changed scope of services that may develop while work proceeds. The consultant will be compensated based on actual time expended and expenses incurred, plus a fixed fee within the authorized not-to-exceed amount.

Fiscal Impact

The total estimated cost of services under PSA No. 2024-B-014, *Bridge Inspection Services*, is \$12,080,838, which includes the not-to-exceed authorized PSA amount of \$10,982,580 and contingency in the amount of \$1,098,258. This project is 100% District funded.

It is estimated that approximately \$1,428,000 of the project budget will be expensed in FY 2024/25, approximately \$3,515,000 will be expensed in FY 2025/26, approximately \$2,306,000 will be expensed in FY 2026/27, approximately \$3,515,000 will be expensed in FY 2027/28, and approximately \$218,580 will be expensed in FY 2028/29. The requisite funds for the services that will be performed this fiscal year are included in the FY 2024/25 Bridge Division Operating Budget. Expenses are estimated to be higher in FY 2025/26 and FY 2027/28 since these are the periods when the majority of the actual field rope climbing and field inspection activities will occur. The amounts for subsequent years will be budgeted accordingly in future years' Operating Budgets.