



● **Board of Directors**
Engineering, Operations, and Technology Committee

7/11/2023 Board Meeting

7-2

Subject

Authorize an increase of \$2 million to an agreement with Jacobs Engineering Group Inc. for a new not-to-exceed total amount of \$2.65 million for final design of the first stage of security upgrades for the Colorado River Aqueduct Region; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Metropolitan safeguards critical infrastructure and personnel through a multi-layered combination of physical barriers and security systems, contracted security guard services, and employee awareness. A comprehensive assessment has identified the need to enhance existing security measures at the five Colorado River Aqueduct (CRA) pumping plants and the Camino Electrical Switching Station. The planned improvements are consistent with Metropolitan's latest security and technology standards for essential facilities. The work will be conducted in two stages. This action authorizes an amendment to an existing agreement for final design services for Stage 1 upgrades to the security systems at all five CRA pumping plants and the Camino Switching Station.

Details

Background

The CRA is a 242-mile-long conveyance system that transports water from the Colorado River to Lake Mathews. It consists of five pumping plants; 124 miles of tunnels, siphons, and reservoirs; 63 miles of canals; and 44 miles of cut-and-cover conduits. The aqueduct was constructed in the 1930s and was placed into service in 1941. Metropolitan's Camino Electrical Switching Station is located in a remote area approximately 25 miles west of Needles, California. The Camino Substation transmits power from Hoover Dam via two power lines; one power line extends to the Gene and Intake pumping plants, and the other line extends to Iron Mountain, Eagle Mountain, and Hinds pumping plants.

When the CRA desert facilities were constructed over 80 years ago, the desert region was undeveloped. Since then, significant development has taken place in the vicinity of the Metropolitan's desert facilities. In 2019, a comprehensive security assessment of the five CRA pumping plants and the Camino Electrical Switching Station was completed. The assessment resulted in numerous recommendations for security upgrades at these facilities.

Examples of the issues at each of the five CRA pumping plants include security fencing and entry checkpoints. Upgraded security entry checkpoints and enhanced perimeter control are needed at each of the pump plants to properly control ingress and egress and control unauthorized public access. Additionally, the pumping plants have limited video surveillance equipment; and existing card readers at plant entrances are outdated and near the end of their service life. Security upgrades were also recommended for the Camino Electrical Switching Station, as this facility is critical for the operation of the CRA system.

In February 2022, the Board authorized a consultant agreement for preliminary design to upgrade the security infrastructure in the CRA region. Preliminary design for the security improvements is complete, and staff recommends proceeding with final design in two stages. Stage 1, which is the subject of this action, includes design activities related to the installation of cameras, motion detectors, and card readers at the five pumping plants and the Camino Substation. Additionally, Stage 1 design work at the Iron Mountain Pumping Plant will

address upgrades of perimeter fencing with access gates at patrol routes; a permanent guard station at the plant's main entrance; and physical security measures, including facility signage, access control, and roadway improvements. Stage 2 activities will include the provision of similar physical security measures at the remaining four CRA pumping plants and the Camino Substation. The approach will prioritize replacement of digital security components in the CRA region, which are rapidly approaching the end of their useful life, address the physical risks at Iron Mountain Pumping Plant, and allow staff to incorporate lessons learned at the remaining pumping plants and the Camino Switching Station. Staff will return to the Board at a later date for final design of Stage 2 security improvements at the remaining five sites. Staff will also return to the Board as necessary to award construction contract(s) for the Stage 1 and Stage 2 security improvements.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with the action described herein, pending board authorization of the increase to the existing agreement described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). An expenditure of \$3.3 million is anticipated for the Stage 1 final design phase of this project. All costs will be incurred in the current biennium and have been previously authorized. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the CRA Reliability Program.

Stage 1 Security Upgrades for the CRA Region – Final Design

Planned security upgrades for all six sites include the installation of high-resolution cameras with 24/7 video recording capabilities, radar detectors with enhanced capability of land and aerial threat detection, and card readers for improved access control. In addition, Stage 1 design work will include physical security improvements at Iron Mountain Pumping Plant, such as upgraded perimeter fencing, crash-rated entry gates with controlled ingress and egress, permanent guard stations to accommodate around-the-clock staffing, LED lighting, remote speakers, and facility signage.

Planned final design activities will be conducted by a consultant as described below. Metropolitan staff will coordinate final design with the facility's users and provide consultant oversight and project management.

A total of \$3.3 million is required for this work. Allocated funds include \$2,000,000 for the final design activities by Jacobs Engineering Group Inc., as described below; \$15,000 for review of biological and cultural resources by Socal Bio Environmental LLC, under an existing agreement; \$50,000 for potholing services to confirm the location of existing electrical ductbanks; and \$75,000 for constructability review. The potholing services and constructability review will be performed by specialty firms under contracts planned to be executed under the General Manager's Administrative Code authority to award construction contracts of \$250,000 or less. Allocated funds for Metropolitan staff activities include \$273,000 for technical oversight to review consultant's work, record drawing updates for consultant use, and constructability review activities; \$417,000 for survey and mapping, environmental documentation, project management and project controls; and \$470,000 for remaining budget. **Attachment 1** provides the allocation of the required funds.

Final design for Stage 1 work will be performed by Jacobs Engineering Group Inc. Engineering Services' performance metric target range for final design with construction more than \$3 million is 9 to 12 percent. For this project, the performance metric goal for final design is 11.7 percent of the total construction cost. The total estimated cost for design is \$2.273 million, which includes \$2 million for Jacobs Engineering and \$273,000 for Metropolitan staff. The estimated cost of construction for Stage 1 of this project is anticipated to range from \$19.5 million to \$21.5 million.

Engineering Services (Jacobs Engineering Group Inc.) – Amendment to Agreement

Jacobs Engineering will provide final design services under an existing board-authorized agreement for the Stage 1 security upgrades. The planned final design activities for Jacobs Engineering will include: (1) development of final design drawings and specifications; (2) technical assistance through bidding; (3) participation in a constructability review; and (4) preparation of an engineer's cost estimate.

Jacobs Engineering was originally prequalified to provide engineering support services via Request for Qualifications 1215 and completed the preliminary design for security upgrades in the CRA region under an existing agreement.

This action authorizes an increase of \$2 million to the existing agreement with Jacobs Engineering for a new not-to-exceed total of \$2.65 million to perform final design. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 10 percent. Jacobs Engineering has agreed to meet this level of participation. The planned subconsultants for this work are listed in **Attachment 2**.

Alternatives Considered

Alternatives considered for completing final design of the Stage 1 security upgrades for the CRA Region included assessing the availability and capability of in-house Metropolitan staff to conduct this work. Metropolitan's staffing strategy for utilizing consultants and in-house Metropolitan staff has been: (1) to assess current work assignments for in-house staff to determine the potential availability of staff to conduct this work; and (2) for long-term rehabilitation projects, when resource needs exceed available in-house staffing or require specialized technical expertise.

After assessing the current workload for in-house staff, the relative priority of this project, and the specialized technical expertise required, staff recommends the use of a professional services agreement to complete the subject project. This approach will allow for the completion of not only this program, but also other budgeted capital projects within their current schedules.

Summary

This action authorizes an increase of \$2 million to an existing agreement with Jacobs Engineering for a new not-to-exceed amount of \$2.65 million for final design of Stage 1 security upgrades at all five CRA pumping plants and the Camino Electrical Switching Station, along with final design of additional perimeter security improvements at Iron Mountain Pumping Plant. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the List of Subconsultants, and **Attachment 3** for the Location Map.

Project Milestone

March 2024 – Completion of final design for Stage 1 security upgrades for the CRA region

Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 52701, dated February 8, 2022, the Board authorized an agreement with Jacobs Engineering Group Inc. for preliminary design to improve physical security at the CRA pumping plants.

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/2023 and 2023/2024.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves only feasibility or planning studies for possible future actions which the Board has not approved, adopted or funded (Section 15262 of the State CEQA Guidelines). In addition, the proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines because the proposed action involves basic data collection and research activities which do not result in a serious or major disturbance to an environmental resource, which may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded (Class 6, Section 15306 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Authorize an increase of \$2 million to an existing agreement with Jacobs Engineering Group Inc., for a new not-to-exceed amount of \$2.65 million for final design of the first stage of security upgrades at all five CRA pumping plants and the Camino Electrical Switching Station.

Fiscal Impact: Expenditure of \$3.3 million in capital funds. All funds will be incurred in the current biennium and have been previously appropriated.

Business Analysis: This option will bring the CRA region facilities' security features up to the latest industry and Metropolitan standards.

Option #2

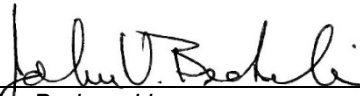
Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: This option would forego an opportunity to enhance the site security in the CRA region and improve protection for critical infrastructure and personnel.

Staff Recommendation

Option #1

	6/20/2023
_____ John Bednarski Manager/Chief Engineer Engineering Services	<i>Date</i>

	6/21/2023
_____ Adel Hagekhalil General Manager	<i>Date</i>

Attachment 1 – Allocation of Funds

Attachment 2 – Listing of Subconsultants

Attachment 3 – Location Map

Ref# es12695499

Allocation of Funds for Stage 1 Security Upgrades for the CRA Region

	Current Board Action (July 2023)
Labor	
Investigations & Conceptual Design	\$ -
Final Design	273,000
Owner Costs (Program mgmt., envir. documentation)	417,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Jacobs Engineering Group, Inc.	2,000,000
Socal Bio Environmental, LLC	15,000
Geotechnical Services Consultant	50,000
Constructability Consultant	75,000
Right-of-Way	-
Equipment Use	-
Contracts	-
Remaining Budget	470,000
Total	\$ 3,300,000

The total amount expended to date for Security Upgrades for the CRA Region is approximately \$824,000. The total estimated cost to complete the Security Upgrades for the CRA Region, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from \$40 million to \$55 million.

The Metropolitan Water District of Southern California
Subconsultants for Agreement with Jacobs Engineering Group Inc.

Subconsultant and Location	Service Category; Specialty
Gillis and Panichapan Architects Inc. Costa Mesa, California	Architectural Design
DRP Engineering Inc. Alhambra, California	Electrical and Instrumentation/Controls CAD Design

Location Map

