



- Board of Directors  
*Engineering and Operations Committee*

9/10/2019 Board Meeting

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**8-1**

## **Subject**

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Award \$3,634,250 contract to RockForce Construction, LLC for rehabilitation of the Whitewater Erosion Protection Structure; and amend an existing agreement with HELIX Environmental Planning, Inc. for a new not-to-exceed total of \$515,000 for environmental monitoring; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## **Executive Summary**

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This action awards a contract to RockForce Construction, LLC. and amends an existing agreement with HELIX Environmental Planning, Inc. to rehabilitate the Whitewater Erosion Protection Structure. This work will reduce the risk of damage to the Colorado River Aqueduct (CRA) from erosion caused by storm flows in the Whitewater River.

The CRA crosses the Whitewater River in two concrete siphons. The 2018/19 winter storms caused significant damage to the Whitewater erosion structure which protects the CRA siphons. Further erosion of the structure could result in an unplanned shutdown of the CRA for urgent repairs.

## **Details**

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### **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 55 miles of cut-and-cover conduits. The aqueduct was constructed in the late 1930s and was placed into service in 1941.

The CRA crosses the Whitewater River in a pair of buried siphons at a location north of the city of Palm Springs. The double-barreled siphons are 2,200-foot-long reinforced concrete conduits with diameters of 133 inches and 156 inches. The conduits are spaced 125 feet apart as they cross under the Whitewater River. At this crossing, the channelized portions of the river are typically about 150 feet wide during normal flow conditions. However, the river's width may grow to over 700 feet during a major storm event. At the deepest point of the river, the Whitewater Siphons are buried 15 feet below the riverbed. Along the shallower edges near the banks, the conduits are buried only four feet below the riverbed.

In November 2018, Metropolitan completed construction of an erosion protection structure in the Whitewater River to reduce the risk of damage to the siphons from erosion caused by storm flows. The erosion protection structure featured gabion berms, an access road, a gabion drop structure and mattress, and placement of cellular concrete to prevent overloading of the CRA siphon. On February 14, 2019, a significant warm-weather rainfall event in the Whitewater watershed area greatly increased river flows across the structure. The velocity and quantity of the flows mobilized very large boulders and debris, which in turn caused significant damage to the recently constructed erosion control structure. Approximately 3,200 cubic yards of gabion cages and riprap were damaged in the event. In April 2019, Metropolitan's Board authorized the design of urgent repairs and amended the Capital Investment Plan (CIP) to include the rehabilitation of the Whitewater Erosion Protection Structure. Design of the structure's repairs is now complete and the construction contract is ready to proceed before the 2019/2020 winter storm season.

In October 2018, the Board appropriated funds and authorized the General Manager to initiate or proceed with work on all capital projects identified in the CIP, subject to any limits on the General Manager's authority and CEQA requirements. This project has been reviewed with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP Evaluation Team to be included in the CRA Reliability Program.

In accordance with the October 2018 action, the General Manager will authorize staff to proceed with construction of the improvements pending board award of the contract described below. Funds for the work to be performed pursuant to the subject contract during the current biennium are available within the Capital Investment Plan Appropriation for Fiscal Years 2018/19 and 2019/20 (Appropriation No. 15509).

### **Whitewater Erosion Protection Structure Rehabilitation – Construction**

The scope of the construction contract includes removing damaged portions of the existing gabion cages; placement of boulders ranging from one ton to eight tons in the damaged areas; filling the voids between the boulders with concrete; and providing temporary diversion of the Whitewater River flows during construction.

The Whitewater erosion structure is a sacrificial structure designed to protect the upstream CRA siphons. However, it is anticipated that this scope of remediation will be sufficient to protect the CRA siphons into the foreseeable future. Replacement material will be stockpiled nearby, in the event that future storms erode some of the riprap in the erosion control structure. Staff will examine the potential benefits of constructing a more permanent erosion control structure and will return to the Board with the results of that assessment at a later date.

A total of \$4.5 million is required for this work. In addition to the amount of the contract described below, other allocated funds include: \$230,000 for construction inspection; \$74,000 for submittals review; \$50,000 for technical support during construction, responding to requests for information, and preparation of record drawings; and \$50,000 for environmental monitoring of construction activities by HELIX Environmental Planning, Inc. under an existing board-authorized agreement, as discussed below; \$100,000 for contract administration and project management; and \$361,750 for remaining budget. Hazen and Sawyer will provide technical support during construction under an existing agreement.

**Attachment 1** provides the allocation of the required funds. The total estimated cost of the Whitewater Erosion Protection Structure Rehabilitation, including the amount allocated to date and funds allocated for the work described in this action, is approximately \$4.96 million. Approximately \$460,000 has been expended on this project to date. The Federal Emergency Management Agency issued a major disaster declaration for the February 2019 storms, thereby making funds available for recovery efforts. Staff will seek federal reimbursement for the rehabilitation costs for the erosion protection structure.

### ***Award of Construction Contract (RockForce Construction LLC)***

Specifications No. 1959 for the Whitewater Erosion Protection Structure Rehabilitation was advertised for bids on July 2, 2019. As shown in **Attachment 2**, five bids were received and opened on August 6, 2019. The low bid from RockForce Construction, LLC in the amount of \$3,634,250 complies with the requirements of the specifications. The four higher bids ranged from approximately \$4.5 million to \$6.3 million, while the engineer's estimate for this project was \$6.5 million. Staff investigated the difference between the low bid and the engineer's estimate and attributes the difference to the contractor's ability to identify a local quarry to supply approximately 12,500 tons of boulders, thereby generating substantial savings in labor and transportation. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 25 percent of the bid amount. RockForce Construction, LLC has committed to meet this level of participation. The subcontractors for this contract are listed in **Attachment 3**.

This action awards a \$3,634,250 contract to RockForce Construction, LLC for the rehabilitation of the Whitewater Erosion Protection Structure along the CRA siphons at the Whitewater River crossing.

As described above, construction inspection will be performed by Metropolitan staff. Engineering Services' performance metric target range for inspection of projects with construction cost greater than \$3 million is 9 to 12 percent. For this project, the performance metric goal for inspection is 9.1 percent of the total construction cost. The total cost of construction for this project is \$3,634,250.

### **Specialized Environmental Support (HELIX Environmental Planning, Inc.) – Amendment to Agreement**

HELIX Environmental Planning, Inc. will perform environmental monitoring of construction activities during the rehabilitation of the Whitewater Erosion Protection Structure. HELIX was selected through a competitive process via RFQ No. 956 to provide project-specific environmental permitting support services. The planned scope of work includes additional biological surveys immediately prior to construction; monitoring for CEQA and regulatory compliance; preparing technical and monitoring reports; meeting with regulatory agencies; and supplying seed for restoration sites. The estimated cost for these activities is \$50,000. This action authorizes an increase of \$50,000 to the existing agreement with HELIX, for a new not-to-exceed total of \$515,000. HELIX is an SBE firm and thus achieves 100 percent SBE participation. There are no subconsultants planned for this agreement.

#### **Summary**

This action awards a \$3,634,250 contract to RockForce Construction, LLC for rehabilitation of the Whitewater Erosion Protection Structure, and amends an existing agreement with HELIX Environmental Planning, Inc. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the listing of Subcontractors for Low Bidder, and **Attachment 4** for the Location Map.

#### **Project Milestone**

December 2019 – Completion of construction of the Whitewater Erosion Protection Structure Rehabilitation

#### **Policy**

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Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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

By Minute Item 51561, dated April 9, 2019, the Board authorized final design of the Whitewater Erosion Protection Structure Rehabilitation.

By Minute Item 51353, dated October 9, 2018, the Board appropriated a total of \$290 million for projects identified in the Capital Investment Plan for Fiscal Years 2018/19 and 2019/20.

### **California Environmental Quality Act (CEQA)**

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#### **CEQA determination for Option #1:**

The CEQA determination is: Determine that pursuant to CEQA, the proposed action includes repair of an existing erosion control structure at the Whitewater River with the same purpose as the original structure. The proposed action is also subject to the Governor's Proclamation of a State of Emergency of February 21, 2019. Accordingly, the proposed action qualifies under a statutory exemption (Sections 21080(b)(2), 21080(b)(3) and 21080(b)(4) of the California Public Resources Code and Section 15269(a) and 15269(b) of the State CEQA Guidelines).

#### **CEQA determination for Option #2:**

None required

### **Board Options**

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#### **Option #1**

- a. Award \$3,634,250 contract to RockForce Construction LLC for Whitewater Erosion Protection Structure Rehabilitation; and
- b. Authorize an increase of \$50,000 to an agreement with HELIX Environmental Planning, Inc. for a new not-to-exceed total of \$515,000.

**Fiscal Impact:** \$4.5 million in capital funds

**Business Analysis:** This option will enhance the safety and reliability of the CRA delivery system, reduce the risk of damage during storm events, and provide uninterrupted delivery of water.

**Option #2**

Do not award a contract to rehabilitate the Whitewater Erosion Protection Structure.

**Fiscal Impact:** None

**Business Analysis:** This option would forego an opportunity to reduce the risk of damage from storm events to the CRA.

**Staff Recommendation**

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Option #1

  
\_\_\_\_\_  
John V. Bednarski  
Manager/Chief Engineer  
Engineering Services

8/27/2019

Date

  
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Jeffrey Nightlinger  
General Manager

8/28/2019

Date

**Attachment 1 – Allocation of Funds**

**Attachment 2 – Abstract of Bids**

**Attachment 3 – Subcontractors for Low Bidder**

**Attachment 4 – Location Map**

Ref# es12666572

### Allocation of Funds for the Whitewater Erosion Protection Structure Rehabilitation

	<b>Current Board Action (Sep. 2019)</b>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	100,000
Submittals Review	74,000
Construction Inspection & Support	230,000
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Hazen and Sawyer	50,000
HELIX Environmental Planning, Inc.	50,000
Right-of-Way	-
Equipment Use	-
Contracts	-
RockForce Construction, LLC	3,634,250
Remaining Budget	361,750
<b>Total</b>	<b>\$ 4,500,000</b>

The total amount expended to date is approximately \$460,000. The total estimated cost to complete this project, including the amount appropriated to date and funds for the work described in this action, is \$4.96 million.

**The Metropolitan Water District of Southern California**

**Abstract of Bids Received on August 6, 2019, at 2:00 P.M.**

**Specifications No. 1959**

**Whitewater Erosion Protection Structure Rehabilitation**

The work includes demolition of existing damaged gabion cages; placement of boulders ranging from one ton to eight tons; filling the voids between the boulders with concrete; erosion controls and other environmental mitigation measures to protect the surrounding environmentally sensitive area; and management of flows from the Whitewater river during construction.

Engineer's estimate: \$6,500,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE <sup>1</sup>
<b>RockForce Construction, LLC Irvine, CA</b>	<b>\$3,634,250</b>	<b>\$3,634,250</b>	<b>100%</b>	<b>Yes</b>
Elite Earthworks & Engineering Corona, CA	\$4,486,575	-	-	-
Heartland Grading Carlsbad, CA	\$5,199,500	-	-	-
Shimmick Construction Company, Inc. Irvine, CA	\$6,227,000	-	-	-
KEC Engineering Corona, CA	\$6,320,430	-	-	-

<sup>1</sup> Small Business Enterprise (SBE) participation level established at 25% for this contract.

**The Metropolitan Water District of Southern California**

**Subcontractors for Low Bidder**

**Specifications No. 1959**

**Whitewater Erosion Protection Structure Rehabilitation**

Low bidder: RockForce Construction, LLC

<b>Subcontractor and Location</b>
Hydrosprout, Inc Escondido, CA

### Location Map

