



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

8/15/2017 Board Meeting

8-2

Subject

Adopt CEQA determination and appropriate \$3.3 million; award \$1,296,091 contract to PCL Construction, Inc. to replace an expansion joint on the Upper Feeder at the Santa Ana River Bridge; and authorize agreement with Rincon Consultants, Inc. in an amount not to exceed \$400,000 (Appropriation No. 15441)

Executive Summary

This action awards a construction contract to replace an expansion joint on the Upper Feeder as it crosses the Santa Ana River on a bridge, upstream of the F. E. Weymouth Water Treatment Plant. This action also authorizes a professional services agreement to provide specialized environmental support during the construction.

Timing and Urgency

The expansion joint located on the Upper Feeder as it crosses the Santa Ana River allows for thermal expansion and contraction of the pipeline. The existing expansion joint's seals have deteriorated from continuous use over a period of 80 years. The joint has a history of leaks and has required several repairs to date. A new expansion joint has been procured that will be more durable and will significantly reduce the level of maintenance required. Due to the importance of the Upper Feeder in delivering untreated water to the Weymouth plant, staff recommends proceeding with installation of the new joint during a shutdown of the feeder scheduled for January 2018.

This project has been reviewed with Metropolitan's Capital Investment Plan (CIP) prioritization criteria and is included within the Distribution System Reliability Program. Funds for this action are available within Metropolitan's capital expenditure plan for fiscal year 2017/18.

Details

Background

The Upper Feeder was constructed in 1936 as part of Metropolitan's original water delivery system. The 116-inch-diameter welded-steel pipeline extends approximately 60 miles from Lake Mathews to the Eagle Rock Control Facility in the city of Los Angeles. The feeder conveys untreated water from Lake Mathews to the Weymouth treatment plant, and then delivers treated water to the Central Pool portion of the distribution system.

The Upper Feeder crosses the Santa Ana River with a 1,010-foot-long steel truss bridge in the cities of Jurupa Valley and Riverside. The feeder has an existing expansion joint at the mid-span of the bridge that allows for thermal expansion and contraction of the pipeline. The existing expansion joint was originally installed in the 1930s and has a history of leaks despite numerous repairs of the joint seals. In 2016, the bridge's base isolators were replaced in order to minimize lateral movement of the bridge superstructure due to seismic shaking. Under the base isolator installation contract, a new expansion joint was fabricated and delivered to Metropolitan.

Bids have been received for installation of the new expansion joint, and permits have been acquired from the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, the U.S. Fish and Wildlife Service, and the California Department of Fish and Wildlife. Staff recommends that the construction contract be awarded

at this time so the work may be completed during the upcoming shutdown season, within the constraints of the environmental permits.

Upper Feeder Expansion Joint Replacement – Construction (\$3,300,000)

The scope of the contract includes removal of bridge structural members to access the pipe and joint; removal of the existing expansion joint from the pipeline by cutting and removing an eight-foot pipe segment; installation of the new bellows-type expansion joint; construction of a steel cage to provide lateral restraint at the joint; and minor adjustments to the bridge truss isolators. Metropolitan force activities will include grading of the access road to the project site, support by divers to close the Upper Feeder gates at the Lake Mathews Forebay, dewatering of the feeder, final disinfection, and return of the line to service. Dewatering will incorporate extensive discharge provisions to comply with the project's environmental permits.

In accordance with the project's Mitigated Negative Declaration (MND), planned mitigation measures include biological surveys and continuous biological monitoring, site restoration, and purchase of mitigation credits to offset potential impacts to sensitive habitat and species.

Specifications No. 1911 for replacement of the Upper Feeder's expansion joint at the Santa Ana River Bridge was advertised for bids on June 1, 2017. As shown in [Attachment 2](#), three bids were received and opened on June 29, 2017. The low bid from PCL Construction, Inc. in the amount of \$1,296,091 complies with the requirements of the specifications. The two higher bids were \$1,334,000 and \$1,638,000, while the engineer's estimate was \$1.4 million. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 10 percent of the bid amount. PCL Construction, Inc. has committed to achieve this level of participation. The subcontractors for this contract are listed in [Attachment 3](#).

This action appropriates \$3.3 million and awards a \$1,296,091 contract to PCL Construction, Inc. for replacement of an expansion joint on the Upper Feeder at the Santa Ana River Bridge. In addition to the amount of the contract, the requested funds include \$583,000 for the Metropolitan force activities described above; \$75,000 for mitigation credits payable to the Riverside-Corona Resource Conservation District; \$285,000 for construction inspection; \$131,000 for submittals review, responding to contractor requests for information, and preparation of record drawings by Metropolitan staff; \$60,000 for technical support during construction by the design consultant, IDS Group, as discussed below; \$218,000 for permit consultations and project management; \$400,000 for environmental monitoring by Rincon Consultants, Inc., as discussed below; and \$251,909 for remaining budget.

Metropolitan staff will perform inspection of the construction. For this project, the anticipated cost of inspection is approximately 13 percent of the total construction cost. Engineering Services' goal for inspection of projects with construction less than \$3 million is 9 to 15 percent. For this project, the total cost of construction is \$2.18 million, which includes the amount of the contract (\$1,296,091); Metropolitan force activities and construction materials (\$583,000); and the previously procured bellows joint (\$300,000).

The total estimated cost to complete the replacement of the expansion joint, including the amount appropriated to date and current funds requested, is approximately \$4.07 million.

Technical Support During Construction (IDS Group, Inc.) – No Action Required

IDS Group performed final structural design of the expansion joint replacement project under a board-authorized agreement. As the engineer of record, IDS Group is recommended to provide technical support during construction related to the structural engineering aspects of the work. The estimated cost for these services is \$60,000.

No amendment is needed to the existing agreement with IDS Group for this work. IDS Group is an SBE firm, and thus achieves 100 percent SBE participation. There are no planned subconsultants under this agreement.

Environmental Monitoring (Rincon Consultants, Inc.) – New Agreement

Specialized environmental monitoring is recommended to be performed by Rincon Consultants, Inc. under a new professional services agreement. Rincon Consultants, Inc. was prequalified to provide environmental services through a competitive process, and was selected for this project based on its specific expertise with regulatory

permits and its experience with projects in environmentally sensitive locations. This work is specialized and Metropolitan has insufficient technical staff in-house to perform these activities.

The planned scope includes continuous monitoring of construction activities for compliance with the mitigation measures contained in the project's MND; providing technical expertise on air quality, biology, noise, and traffic; site restoration in compliance with permit requirements; and preparation of compliance reports. The estimated cost for these services is \$400,000. For this agreement, Metropolitan established an SBE participation level of 25 percent. Rincon Consultants, Inc. has agreed to meet this level of participation. The subconsultants planned for this agreement are R2 Resources Consultants, Inc. and Stillwater Consultants.

This action authorizes an agreement with Rincon Consultants, Inc., in an amount not to exceed \$400,000, to provide specialized environmental support for the replacement of the expansion joint at the Santa Ana River Bridge.

Summary

This action appropriates \$3.3 million, awards a construction contract for replacement of an expansion joint on the Upper Feeder, and authorizes an agreement for environmental support. This project is included within capital Appropriation No. 15441, the Conveyance and Distribution System Rehabilitation Appropriation - FY 2006/07 Through FY 2011/12, which was initiated in fiscal year 2006/07. With the present action, the total funding for Appropriation No. 15441 will increase from \$97,289,000 to \$100,589,000.

This project has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2017/18 capital expenditure plan. See [Attachment 1](#) for the Financial Statement, [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

July 2018 – Completion of construction

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

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

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

To comply with CEQA and the State CEQA Guidelines, Metropolitan as the Lead Agency prepared a MND for the Santa Ana River Bridge Seismic Retrofit and Routine Maintenance Project. The MND was distributed for a 30-day public review period that began on September 21, 2012, and ended on October 30, 2012. The Board later adopted the MND and the Mitigation Monitoring and Reporting Program (MMRP) on March 12, 2013. Subsequently, additional documentation (Addenda Nos. 1 through 3 to the approved MND) were prepared to address minor project modifications in March 6, 2015, February 23, 2016, and October 3, 2016. The present action is solely based on awarding a construction contract and not on any changes to the approved project. Hence, the previously adopted environmental documentation in conjunction with the current action fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further environmental documentation is necessary for the Board to act on with respect to the proposed action.

The CEQA determination is: Determine that the proposed action has been previously addressed in the adopted 2012 MND and MMRP, and subsequent addenda, and that no further environmental analysis or documentation is required.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination that the proposed action has been previously addressed in the adopted 2012 MND, MMRP, and subsequent addenda, and that no further environmental analysis or documentation is required, and

- a. Appropriate \$3.3 million;
- b. Award \$1,296,091 contract to PCL Construction, Inc. to replace an expansion joint on the Upper Feeder at the Santa Ana River Bridge; and
- c. Authorize agreement with Rincon Consultants, Inc., in an amount not to exceed \$400,000, for environmental support.

Fiscal Impact: \$3.3 million in capital funds under Appropriation No. 15441

Business Analysis: This project will protect Metropolitan’s assets and minimize maintenance costs associated with periodic shutdowns of the Upper Feeder to inspect and repair the expansion joint.

Option #2

Do not proceed with construction at this time.

Fiscal Impact: None

Business Analysis: Under this option, staff would continue to monitor the leaky expansion joint and repair the seals on a periodic basis during a scheduled shutdown. This option would forego an opportunity to minimize the number of shutdowns and reduce maintenance costs.

Staff Recommendation

Option #1


 _____ 7/24/2017
 Gordon Johnson Date
 Manager, Chief Engineer
 Engineering Services


 _____ 7/26/2017
 Jeffrey Nightlinger Date
 General Manager

- [Attachment 1 – Financial Statement](#)
- [Attachment 2 – Abstract of Bids](#)
- [Attachment 3 – List of Subcontractors for Low Bidder](#)
- [Attachment 4 – Location Map](#)

Financial Statement for Conveyance and Distribution System Rehabilitation Appropriation – FY 2006/07 Through FY 2011/12

A breakdown of Board Action No. 78 for Appropriation No. 15441 for replacement of the Upper Feeder’s expansion joint at the Santa Ana River Bridge¹ is as follows:

	Previous Total Appropriated Amount (Mar. 2017)	Current Board Action No. 78 (Aug. 2017)	New Total Appropriated Amount
Labor			
Studies & Investigations	\$ 4,589,914	\$ -	\$ 4,589,914
Final Design	6,374,293	-	6,374,293
Owner Costs (Environ. monitoring, permitting, program mgmt.)	8,326,123	203,000	8,529,123
Submittals Review & Record Drwgs.	1,482,670	131,000	1,613,670
Construction Inspection & Support	6,533,550	285,000	6,818,550
Metropolitan Force Construction	12,314,710	443,000	12,757,710
Materials & Supplies	3,453,040	140,000	3,593,040
Incidental Expenses	994,900	15,000	1,009,900
Mitigation credits	250,000	75,000	325,000
Professional/Technical Services	3,050,860	-	3,050,860
Rincon Consultants, Inc.	120,000	400,000	520,000
IDS Group	448,140	60,000	508,140
Right-of-Way	1,150,000	-	1,150,000
Equipment Use	330,200	-	330,200
Contracts	43,779,671	-	43,779,671
PCL Construction, Inc.	-	1,296,091	1,296,091
Remaining Budget	4,090,929 ²	251,909	4,342,838
Total	\$ 97,289,000	\$ 3,300,000	\$ 100,589,000

Funding Request

Appropriation Name:	Conveyance and Distribution System Rehabilitation Appropriation – FY 2006/07 Through FY 2011/12		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15441	Board Action No.:	78
Requested Amount:	\$3,300,000	Budget Page No.:	212
Total Appropriated Amount:	\$100,589,000	Total Appropriation Estimate:	\$182,700,000

¹ The total amount expended to date to replace the expansion joint on the Upper Feeder at the Santa Ana River Bridge is approximately \$770,000. The total estimated cost to complete this project, including the amount appropriated to date and current funds requested, is approximately \$4.07 million.

² Includes previous reallocation of \$227,000 from Remaining Budget for additional field investigations and feasibility studies to improve operational flexibility during planned shutdowns of the Lake Mathews Forebay.

The Metropolitan Water District of Southern California

Abstract of Bids Received on June 29, 2017 at 2:00 P.M.

Specifications No. 1911

Upper Feeder Expansion Joint Replacement at Santa Ana River Bridge

The work consists of removal of bridge structural members and the existing expansion joint; installation of Metropolitan-furnished expansion joint and flanges; furnishing and installing a maintenance platform and walkway; and minor adjustments to the bridge truss isolators.

Engineer's Estimate: \$1,400,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
PCL Construction, Inc. Corona, CA	\$1,296,091	\$151,130	12%	Yes
Kiewit Infrastructure West Co. Santa Fe Springs, CA	\$1,334,000	-	-	-
Mladen Buntich Construction Co. Inc. Upland, CA	\$1,638,000	-	-	-

¹ SBE (Small Business Enterprise) participation level established at 10% for this contract.

The Metropolitan Water District of Southern California

Subcontractors for Low Bidder

Specifications No. 1911

Upper Feeder Expansion Joint Replacement at Santa Ana River Bridge

Low Bidder: PCL Construction, Inc.

Subcontractor and Location
Brickley Construction Co. / San Bernardino, CA
Simpson Sandblasting / Fontana, CA
Dean's Certified Welding, Inc. / Temecula, CA

Distribution System

