



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

4/12/2016 Board Meeting

8-2

Subject

Appropriate \$1.37 million; and ratify the General Manager's award of \$634,425 contract to Fibrwrap Construction Services, Inc. (Approp. 15497) **(Requires four-fifths vote of the Board)**

Executive Summary

This action authorizes emergency repairs to a leaking reach of prestressed concrete cylinder pipe (PCCP) on the Second Lower Feeder in the city of Long Beach. These repairs were performed on an emergency basis in March 2016, pursuant to Metropolitan Administrative Code Section 8122.

Timing and Urgency

In late February 2016, a leak was discovered on the Second Lower Feeder in Bixby Road within the city of Long Beach. Based on the critical role of the feeder in delivering treated water and the urgent nature of the repairs, the General Manager awarded an emergency construction contract to repair four PCCP segments using carbon fiber lining.

Under Metropolitan's Administrative Code, the General Manager has authority to execute construction contracts when such construction is determined to be for an emergency. The details of the emergency on the Second Lower Feeder were reported to the Board at the March 7, 2016 meeting of the Engineering and Operations Committee. The emergency contract was subsequently awarded by the General Manager on March 10, 2016. The repairs were completed on March 25, 2016, and the Second Lower Feeder was returned to service on April 1, 2016.

This project is included in the PCCP Rehabilitation Program within Metropolitan's Capital Investment Plan (CIP). Funds for this action are available within the capital expenditure plan for fiscal year 2015/16.

Details

Background

The Second Lower Feeder delivers treated water from the Robert B. Diemer Water Treatment Plant in the city of Yorba Linda to Palos Verdes Reservoir in the city of Rolling Hills Estates. The feeder was constructed in 1967 and is 39 miles long. Approximately 30 miles of the line are constructed of PCCP, with diameters ranging from 78 to 84 inches. The remainder of the line is constructed of welded steel pipe with a diameter of 84 inches. The Second Lower Feeder operates at pressures up to 340 pounds per square inch and passes through areas with highly corrosive soils. In addition, there are numerous underground utility lines, natural gas lines, and oil lines within the vicinity, which expose the feeder to significant stray current interference. The pipeline traverses a highly urbanized area and crosses several freeways, several flood control channels, and an airport. In addition to supplying water to the Central Pool portion of Metropolitan's distribution system, the Second Lower Feeder has 11 service connections for deliveries to the cities of Long Beach, Los Angeles, and Torrance, the Central Basin Municipal Water District, and the Municipal Water District of Orange County.

On February 24, 2016, a leak was discovered on the Second Lower Feeder in Bixby Road near Pacific Avenue in the city of Long Beach. A portion of the feeder was dewatered on February 26, 2016, to perform an internal inspection of the pipeline. Metropolitan staff identified that the likely cause of the leak was an open hairline crack

that extended circumferentially around a segment of the pipe. The repair method selected for this leak involved installation of carbon fiber lining through four consecutive PCCP segments of the feeder. This repair needed to be completed in an expedited manner so that the feeder could be returned to service by April 1, 2016. Due to the significant water delivery constraints within the distribution system caused by the large number of shutdowns already planned or underway (including the newly identified shutdown required for the Sepulveda Feeder to perform other urgent PCCP repairs) and due to the approaching summer demands, a typical project delivery process could not be followed for the repairs.

As reported to the Engineering and Operations Committee at its March 7, 2016 meeting, there was insufficient time available to complete the design, advertise for bids, return to the Board for award of a construction contract, and execute the repairs by the date needed for the Second Lower Feeder to be returned to service. Staff therefore followed an alternate approach described in Section 8122 of Metropolitan's Administrative Code. Under this alternate approach, design of the emergency repairs was completed on March 7, 2016, and a Notice Inviting Bids was issued on March 8, 2016. Three firms were invited to submit competitive bids for the repairs. These three firms either hold the patent or have a license for the use of reinforced carbon fiber for internal repairs of water pipelines. On March 10, 2016, one firm submitted a bid to perform the work. The two other firms indicated that, due to the expedited schedule and their lack of sufficient resources, they would not be able to perform the work.

The emergency repair contract was awarded by the General Manager on March 10, 2016, and the repairs were successfully completed 15 days later. Per Metropolitan's Administrative Code, the award of this emergency contract by the General Manager must be ratified by a four-fifths vote of the Board.

Emergency Repairs on the Second Lower Feeder—Design and Construction (\$1,370,000)

Specifications No. 1877 for emergency PCCP repairs in Bixby Road on the Second Lower Feeder was advertised for bids on March 8, 2016. As shown in [Attachment 2](#), one bid was received and opened on March 10, 2016. The low bid from Fibrwrap Construction Services, Inc. in the amount of \$634,425 complied with the requirements of the specifications. The engineer's estimate was \$600,000. Due to the urgent nature of the repairs, no Small Business Enterprise (SBE) participation was established for this work. The contract was awarded to Fibrwrap Construction Services, Inc. by the General Manager on March 10, 2016.

This action appropriates \$1.37 million and ratifies the General Manager's prior award of a \$634,425 contract to Fibrwrap Construction Services, Inc. for emergency repairs on the Second Lower Feeder. In addition to the amount of the contract, the appropriated funds include \$450,000 for Metropolitan force activities, which include shutting down a portion of the pipeline, establishment of clearances, leakage control, pipe disinfection, water quality testing, and return of the pipeline to service. The requested funds also include: \$72,000 for construction inspection; \$33,000 for specialized design of the carbon fiber repairs by Simpson Gumpertz & Heger, and \$23,000 for the remainder of the design activities by Metropolitan staff; \$37,000 for acquisition of traffic permits and construction noise variances, public outreach activities, submittals review, and project management; and \$120,575 for remaining budget.

Metropolitan staff performed inspection of the construction contract. The cost of inspection was approximately 6.6 percent of the total construction cost. Engineering Services' goal for inspection of construction contracts with cost less than \$3 million is 12 to 15 percent. The total cost of construction for these repairs, which included the construction contract and Metropolitan force activities, is \$1.08 million.

The total cost to complete the emergency repairs on the Second Lower Feeder is \$1.37 million. This project is included within capital Appropriation No. 15497, the Second Lower Feeder PCCP Rehabilitation Appropriation, and funds are available within the fiscal year 2015/16 capital expenditure plan. See [Attachment 1](#) for the Financial Statement, [Attachment 2](#) for the Abstract of Bids, and [Attachment 3](#) for the listing of Subcontractors for Low Bidder, and [Attachment 4](#) for the Location Map.

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 8122: General Manager's Contracting Authority in Specified Circumstances

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action was previously found to be statutorily exempt under Sections 21060.3 and 21080(b)(2) and (4) of the California Public Resources Code and Section 15269 of the State CEQA Guidelines on March 7, 2016. A Notice of Exemption (NOE) was filed on the project at that time and the statute of limitations has ended. With the current action, there is no substantial change proposed to the project since the original NOE was filed. Hence, the previous environmental documentation in conjunction with the project fully complies with CEQA and the State CEQA Guidelines.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination that the proposed action was previously determined to be statutorily exempt and that no further environmental analysis or documentation is required, and

- a. Appropriate \$1.37 million; and
- b. Ratify the General Manager's award of a \$634,425 contract to Fibrwrap Construction Services, Inc. for emergency repairs on the Second Lower Feeder.

Fiscal Impact: \$1.37 million in capital funds under Approp. 15497

Business Analysis: This project enhances delivery reliability to member agencies and reduces the risk of unplanned shutdowns of the Second Lower Feeder.

Option #2

Do not appropriate funds or ratify the action of the General Manager.

Fiscal Impact: \$250,000 in capital funds pursuant to the General Manager's authority under Administrative Code Section 8121

Business Analysis: Since the project has been completed, the direct effect of non-ratification would be non-payment of the full contract amount of \$634,425 to Fibrwrap Construction Services, Inc.

Staff Recommendation

Option #1



Gordon Johnson
Manager/Chief Engineer
Engineering Services

3/30/2016
Date



Jeffrey Knightlinger
General Manager

3/30/2016
Date

- Attachment 1 – Financial Statement**
- Attachment 2 – Abstract of Bids**
- Attachment 3 – Subcontractors for Low Bidder**
- Attachment 4 – Location Map**

Ref# es12642753

Financial Statement for Second Lower Feeder PCCP Rehabilitation Appropriation

A breakdown of Board Action No. 1 for Appropriation No. 15497 for PCCP rehabilitation on the Second Lower Feeder¹ is as follows:

	Current Board Action No. 1 (Apr. 2016)
Labor	
Studies & Investigations	\$ -
Final Design	23,000
Owner Costs (Permitting, envir doc., bidding, outreach, program mgmt)	32,000
Submittals Review & Record Drwgs	5,000
Construction Inspection & Support	72,000
Metropolitan Force Construction	400,000
Materials & Supplies	50,000
Incidental Expenses	-
Professional/Technical Services (Simpson Gumpertz & Heger)	33,000
Equipment Use	-
Contracts	634,425
Remaining Budget	120,575
Total	<u>\$ 1,370,000</u>

Funding Request

Appropriation Name:	Second Lower Feeder PCCP Rehabilitation		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15497	Board Action No.:	1
Requested Amount:	\$ 1,370,000	Budget Page No.:	N/A
Total Appropriated Amount:	\$ 1,370,000	Total Appropriation Estimate²:	\$ 606,400,000

¹ This is the initial action for emergency PCCP repairs on the Second Lower Feeder. The total estimated cost to complete the repairs is \$1.37 million.

² Currently included in the CIP Appendix for Fiscal Year 2015/16 under Appropriation No. 15471. Previously appropriated funds and expenditures for rehabilitation of the Second Lower Feeder that occurred under Appropriation No. 15471 will be transferred to Appropriation No. 15497 in a follow-up Board action.

The Metropolitan Water District of Southern California
Abstract of Bids Received on March 10, 2016 at 2:00 P.M.
Specifications No. 1877
Second Lower Feeder Carbon Fiber Repairs

The project consists of repairing four prestressed concrete cylinder pipe (PCCP) segments using carbon fiber lining on the Second Lower Feeder.

Engineer's Estimate: \$600,000

Bidder and Location	Total¹
Fibrwrap Construction Services, Inc. Walnut, CA	\$634,425

¹ Due to the urgent nature of the repairs, no SBE (Small Business Enterprise) participation was established for this contract.

The Metropolitan Water District of Southern California

Subcontractors for Low Bidder

**Specifications No. 1877
Second Lower Feeder Carbon Fiber Repairs**

Low Bidder: Fibrwrap Construction Services, Inc.

Subcontractor and Location
Jonicate Traffic Control Inc., Montclair, CA

Distribution System

