



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

9/14/2010 Board Meeting

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**8-1**

**Subject**

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Appropriate \$3 million; and award \$1.53 million contract to Steve P. Rados, Inc. for Stages 3 and 4 repairs of the Box Springs Feeder (Approp. 15377)

**Description**

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This action awards a construction contract to rehabilitate 12 sections of pre-stressed concrete cylinder pipe (PCCP) on the Box Springs Feeder. These sections all exhibit cracking identified as “broken backs.” This type of cracking exposes the pipe to accelerated rates of corrosion, leading to eventual leakage.

**Timing and Urgency**

Repairs to the distressed PCCP sections on the Box Springs Feeder have been planned in four stages based on the priority of repairs and to minimize the duration of pipeline shutdowns. A failure of the Box Springs Feeder could interrupt deliveries to the Mills plant for several days while costly emergency repairs are performed. Given the Box Springs Feeder’s importance in conveying water directly to the Mills plant, staff recommends proceeding with final repairs. A 6-day shutdown is scheduled for January 2011 to complete the Stages 3 and 4 repairs.

This project has been reviewed with Metropolitan’s updated Capital Investment Plan (CIP) prioritization criteria, and is categorized as an Infrastructure Rehabilitation and Replacement project. This project is budgeted within Metropolitan’s CIP for fiscal year 2010/11.

**Background**

The Box Springs Feeder is a 2.26-mile-long, 96-inch-diameter PCCP line which conveys State project water from the Department of Water Resources’ Santa Ana Valley Pipeline to Metropolitan’s Mills plant in the city of Riverside. Treated water from the Mills plant is then delivered directly to member agencies through service connections on the Mills plant site and the new Perris Valley Pipeline. The Box Springs Feeder was constructed in 1975.

In 2005, routine electromagnetic inspections conducted on the Box Springs Feeder identified a number of 20-foot sections that exhibited broken back cracks. Circumferential cracking in broken back pipe sections is caused by differential settlement of the pipeline at or near structures. This type of cracking exposes the pipe to accelerated rates of corrosion and eventual leakage. A cathodic protection system was installed in 2005 to minimize further corrosion of the broken back sections, while internal steel bands were installed as a temporary repair measure.

While the broken back pipe sections do not require urgent repair, permanent repairs have been prioritized in the order of severity and risk, and are being executed in four stages in order to minimize the duration of pipeline shutdowns and to address right-of-way and environmental issues. This approach avoids a shutdown during peak demand season. The first and second stage repairs have already been completed. This action addresses repairs to the remaining two stages: Stage 3 will repair five sections at the Mills plant and three sections near Interstate 215; while Stage 4 will repair four sections at three sites within Sycamore Canyon Park.

In April 2010, Metropolitan's Board authorized final design and fabrication for the Stages 3 and 4 repairs. The Stage 4 environmental issues were addressed during preliminary design, so that final design activities could be accelerated to take advantage of the upcoming planned shutdown. Mitigation measures required as part of the Mitigated Negative Declaration for Stage 4 repairs within Sycamore Canyon Park include biological surveys and monitoring, site restoration, and purchase of mitigation credits to offset potential impacts to sensitive habitat and species.

Staff recommends moving forward at this time to award a construction contract to complete all work for Stages 3 and 4. Replacement of the 12 sections is planned to occur during the next Mills plant shutdown in January 2011. All pipe materials for the repairs will be fabricated by Metropolitan.

### **Box Springs Feeder Repairs, Stages 3 and 4 – Construction Phase (\$3 million)**

The Stages 3 and 4 repairs will address 12 distressed pipe sections at five sites. Specifications No. 1673 for the Box Springs Feeder Repairs was advertised for bids on August 5, 2010. As shown in [Attachment 2](#), four bids were received and opened on August 26, 2010. The low bid from Steve P. Rados, Inc., in the amount of \$1.53 million, complies with the requirements of the specifications. The three higher bids ranged from approximately \$1.69 million to \$2.37 million. The engineer's estimate was \$2.2 million. For this contract, Metropolitan has established a Small Business Enterprise (SBE) participation level of 10 percent. Steve P. Rados, Inc. has committed to meet this level of participation.

This action appropriates \$3 million, and awards a \$1.53-million contract to Steve P. Rados, Inc. to repair 12 PCCP sections on the Box Springs Feeder. In addition to the amount of the contract, the requested funds include \$548,000 for Metropolitan force shutdown activities at the Mills plant and on the Box Springs Feeder. In order to minimize the shutdown duration and avoid conflicts with the contractor, Metropolitan staff will be dewatering the pipe at five sites, concurrently, resulting in costs greater than typical for Metropolitan force activities. Other construction-related activities include testing of pipe materials for potential hazardous materials, monitoring contractor for compliance with regulations, and protocol tracking of hazardous materials disposal. The total cost of construction, including previously procured materials, is \$3.2 million.

Requested funds also include: \$375,000 for construction inspection; \$140,000 for mitigation monitoring, regulatory compliance testing, and waste disposal manifests by specialty firms; \$90,000 for submittals review, technical support and record drawings by the design team; \$220,000 for environmental permitting, purchase of mitigation credits, and program management; and \$97,000 for remaining budget.

Metropolitan staff will perform inspection of the construction contract. The anticipated cost of inspection is approximately 11.6 percent of the estimated construction cost. Engineering Services' goal for inspection of contracts with construction cost more than \$3 million is 9 to 12 percent of the total construction cost.

This project has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds have been included in the fiscal year 2010/11 capital budget. See [Attachment 1](#) for the Financial Statement and [Attachment 3](#) for the Location Map.

These projects are consistent with Metropolitan's goals for sustainability by enhancing reliability of the existing conveyance and distribution system in order to maintain reliable water deliveries in the future.

### ***Project Milestone***

April 2011 – Completion of construction

### **Policy**

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Metropolitan Water District Administrative Code Section 5108: Appropriations

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

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CEQA determination for Option #1:

To comply with CEQA and the State CEQA Guidelines, Metropolitan as the Lead Agency prepared a Mitigated Negative Declaration (MND) for the Box Springs Feeder Repair Phase 3 Project. The MND was distributed for a 30-day public review period that began on January 21, 2010. The Board later adopted the MND and the Mitigation Monitoring and Reporting Program (MMRP) on April 13, 2010. The present board action is solely based on awarding a construction contract and not on any changes to the approved project itself. 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 April 13, 2010 MND and the MMRP and that no further environmental analysis or documentation is required.

CEQA determination for Option #2:

None required

**Board Options**

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**Option #1**

Adopt the CEQA determination and

- a. Appropriate \$3 million; and
- b. Award \$1.53 million contract to Steve P. Rados, Inc. for Stages 3 and 4 repairs of the Box Springs Feeder.

**Fiscal Impact:** \$3 million in budgeted funds under Approp. 15377

**Business Analysis:** Repair of the Box Springs Feeder is recommended to proceed at this time to maintain reliable delivery of water to the Mills plant. This project will protect Metropolitan’s assets, increase service reliability to member agencies, and reduce the risk of costly emergency repairs.

**Option #2**

Do not award the construction contract and re-advertise in an attempt to receive more favorable bids.

**Fiscal Impact:** None

**Business Analysis:** This option may or may not result in a lower bid, and would delay repairs to the Box Springs Feeder. Metropolitan would remain at risk for pipe leakage and interrupted deliveries to the Mills plant. Staff will continue to monitor the Box Springs Feeder for leakage, inspect the feeder when accessible, and make emergency repairs as required. This option could lead to higher costs, more extensive repairs, and additional planned system shutdowns.

**Staff Recommendation**

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Option #1

  
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 Roy L. Wolfe  
 Manager, Corporate Resources

9/1/2010  
Date

  
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 Jeffrey Kightlinger  
 General Manager

9/1/2010  
Date

**Attachment 1 – Financial Statement**

**Attachment 2 – Bid Results**

**Attachment 3 – Location Map**

### **Financial Statement for Conveyance and Distribution System Rehabilitation Program**

A breakdown of Board Action No. 33 for Appropriation No. 15377 for Stages 3 and 4 repairs of the Box Springs Feeder\* is as follows:

Submittals Review & Record Drwgs	4,000	90,000	94,000
Construction Inspection & Support	2,285,550	370,000	2,655,550
Metropolitan Force Construction	14,367,505	463,000	14,830,505
Materials and Supplies	5,896,075	25,000	5,921,075
Incidental Expenses	1,357,620	80,000	1,437,620
Professional/Technical Services	1,091,500	-	1,091,500
Environmental Monitoring	-	120,000	120,000
Hazardous Materials Testing	-	20,000	20,000
Equipment Use	917,350	40,000	957,350
Contracts	21,363,032	1,530,000	22,893,032
Remaining Budget	1,426,398	97,000	1,523,398
<b>Total</b>	<b>\$ 63,285,700</b>	<b>\$ 3,000,000</b>	<b>\$ 66,285,700</b>

### **Funding Request**

<b>Program Name:</b>	Conveyance and Distribution System Rehabilitation Program		
<b>Source of Funds:</b>	Revenue Bonds, Replacement and Refurbishment or General Funds		
<b>Appropriation No.:</b>	15377	<b>Board Action No.:</b>	33
<b>Requested Amount:</b>	\$ 3,000,000	<b>Capital Program No.:</b>	15377
<b>Total Appropriated Amount:</b>	\$ 66,285,700	<b>Capital Program Page No.:</b>	276
<b>Total Program Estimate:</b>	\$ 96,100,000	<b>Program Goal:</b>	I – Infrastructure Reliability

\*The total amount expended to date on the Box Springs Feeder Repairs is approximately \$3,608,739.

**The Metropolitan Water District of Southern California**  
**Abstract of Bids Received on August 26, 2010 at 2:00 P.M.**  
**Specifications No. 1673**  
**Box Springs Feeder Repairs Stages 3 and 4**

This project consists of construction to replace 12 PCCP sections with welded steel pipe. The work includes excavation, installation of Metropolitan-furnished steel pipes, welding, grouting, and restoration of existing surface conditions.

**Engineer's Estimate: \$2,200,000**

<b>Bidder and Location</b>	<b>Total Bid</b>	<b>SBE \$</b>	<b>SBE %</b>	<b>Met SBE*</b>
Steve P. Rados, Inc., Santa Ana, CA	1,530,000	194,000	13%	Yes
L.H. Woods & Sons, Inc., Vista, CA	1,688,888	-	-	-
J.F. Shea Construction, Inc., Walnut, CA	1,897,259	-	-	-
Mladen Buntich Construction Co., Inc., Upland, CA	2,370,000	-	-	-

\* SBE (Small Business Enterprise) participation set at 10 percent

# Box Springs Feeder

