



**MWD**

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

8-1

May 19, 1998

**To:** Board of Directors (Engineering and Operations Committee--Action)

**From:** *for* General Manager

**Submitted by:** Gary M. Snyder  
Chief Engineer

*Timothy J. ...*  
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*Gary M. Snyder*  
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**Subject:** Award a Construction Contract for the Construction of the Riverside Badlands Tunnel of the Inland Feeder Program

**Reference:** Appropriation No. 15122

**RECOMMENDATION(S)**

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To construct the Riverside Badlands Tunnel of the Inland Feeder Program, it is recommended that a construction contract for the Riverside Badlands Tunnel in the amount of \$112,817,046 be awarded to Shank/Balfour Beatty, in accordance with Specifications No. 1365, as amended, and that conditioned upon execution of the contract, all other bids be rejected.

**EXECUTIVE SUMMARY**

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Approval of this recommendation will authorize the award of a contract in the amount of \$112,817,046 to Shank/Balfour Beatty, the low bidder for Specifications No. 1365, as amended, for the construction of the Riverside Badlands Tunnel which was previously planned and budgeted for the Inland Feeder Program. The total estimated cost of the program remains unchanged at \$1,188,000,000.

**JUSTIFICATION**

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The Riverside Badlands Tunnel is a vital segment of the Inland Feeder Program. The major benefits that the Inland Feeder Program offers, include: (1) ensuring supply reliability by increasing the delivery capacity from the State Water Project (SWP) to Metropolitan's service area; (2) taking advantage of potentially large quantities of SWP deliveries, which may only be available during short durations, in order to replenish storage in local groundwater basins and the Eastside Reservoir; (3) ensuring system reliability and operational flexibility by significantly increasing the linkage between the California and Colorado River aqueduct systems to protect the area against uncertainties; and (4) assisting in meeting future water-blending requirements. Award of this contract is consistent with the workplan for the Inland Feeder Program.

## ALTERNATIVE(S) TO PROPOSED ACTION

### **Reject All Bids and Re-advertise Project**

Since this tunnel is essential to the Inland Feeder Program, the only feasible alternative is to reject all bids and re-advertise the project. This would delay project completion, increase administrative costs, and may or may not result in lower bids.

## ACTIONS AND MILESTONES

- Issue a Notice-To-Proceed in August 1998
- Complete construction in late-2003

## CEQA COMPLIANCE / ENVIRONMENTAL DOCUMENTATION

All California Environmental Quality Act (CEQA) requirements have been satisfied for the proposed action. In February 1993, your Board certified the Final Environmental Impact Report for the Program. This action satisfied the provisions of CEQA, and no further environmental documentation or reviews are necessary for your Board to take action on these recommendations.

## CONTRACT SUMMARY

<b>Contract Status:</b>	New	<b>Type of Selection:</b>	Competitive Bid, Specifications No. 1365
<b>Contract Form:</b>	Construction	<b>Contractors Requesting Plans:</b>	85
<b>Contract Type:</b>	Lump sum and Unit Price	<b>Proposals Submitted:</b>	5
<b>Evaluation Criteria:</b>	Low bid that meets the requirements of the specifications. Bidders qualifications are also considered.		

## MBE / WBE

The specifications, as amended, established mandatory subcontracting requirements (MSR) and required the bidder to conduct a good-faith effort to encourage participation of minority- and women-owned business enterprises (MBE/WBE). The MSR for this project was 6 percent. The subcontractors listed for the project were at 10.29 percent. The Anticipated Levels of Participation (ALP) for MBE firms were established at 3 percent with a 1 percent ALP for WBE. The contractor's proposed MBE participation was 7.36 percent with 3.28 percent submitted for WBE.

The Business Outreach Office has reviewed the good-faith effort submitted by Shank/Balfour Beatty, and has deemed it acceptable in meeting the criteria set forth in the specifications. The MBE and WBE subcontractors are listed on Attachment A.

## **DETAILED REPORT**

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The Inland Feeder Program is an essential feature of the Metropolitan distribution system, more than doubling the water delivery capacity of the east branch of the SWP and providing the service area with up to 650 million gallons of additional water supply daily. The system will also replenish local groundwater basins, improve SWP/Colorado River Aqueduct water quality, and serve as an important source of supply for several Metropolitan reservoirs, including the Eastside Reservoir Project.

The Riverside Badlands is the longest tunnel segment on the Inland Feeder Project at approximately eight miles. The tunnel stretches from Opal Avenue in the City of Redlands to Gilman Springs Road in Riverside County. It passes beneath Highway 10 in the Crafton Hills and Highway 60 near the San Timeteo Badlands. The tunnel will be excavated through a variety of ground and geologic conditions at depths ranging from 30 to 850 feet. Work under this contract will include tunnel excavation, installation of tunnel liner, construction of access structures, protection of existing facilities and appurtenant work.

A total of five bids were received and opened under Specifications No. 1356, as amended, for the construction of the Riverside Badlands Tunnel and are shown on the Abstract of Bids (see Attachment B). The responsible low bid, from Shank/Balfour Beatty, is in the amount of \$112,817,046, and complies with the requirements of the specifications. It is \$243,454 below the next lowest bidder and \$39,582,945 below the Engineer's Estimate. The variance to the Engineer's Estimate may be due to: 1) The Engineer's Estimate was developed using known historical factors which are not always indicative of the current marketplace and 2) aggressive marketing and reduced profit margins by the contractor, subcontractors, and suppliers. The bid is based upon lump sum and unit prices for the estimated quantities set forth in the specifications. The final contract price may vary to the extent that actual quantities vary from the estimates in the specifications.

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(ShankRivBdlnds)

Attachments

**MBE/WBE PARTICIPATION**

**Specification No. 1365**

**Name of Bidder:** Shank/Balfour Beatty

**PARTICIPATION LEVELS:** 3 Percent MBE and 1 Percent WBE

<b>Name of Certified MBE/WBE Subcontractor/ Supplier</b>	<b>Work to Be Performed or Materials To Be Supplied</b>	<b><u>Participation</u></b>	
		<b><u>MBE%</u></b>	<b><u>WBE%</u></b>
<i>Mel Electric</i>	<i>Electrical</i>	.13	
<i>RC Cement Contractors</i>	<i>Curb &amp; Gutter</i>	.01	
<i>Intra-American Foundation &amp; Drilling Co., Inc.</i>	<i>Tunnel Precast Concrete Segment</i>	7.22	
<i>Hurricane &amp; Poway Fence Co.</i>	<i>Fencing</i>		.19
<i>Pacific Reinforcing Steel</i>	<i>Reinforcing Steel</i>		.21
<i>Quality Hydroseed &amp; Restoration</i>	<i>Hydroseeding for Restoration</i>		.04
<i>R. T. Construction, Inc.</i>	<i>Electrical</i>		2.50
<i>Pinnacle Petroleum</i>	<i>Petroleum Products</i>		.34
<b>Total Participation</b>		<b>7.36</b>	<b>3.28</b>

**The Metropolitan Water District of Southern California**

**ABSTRACT OF BIDS RECEIVED APRIL 28, 1998 AT 2:00 PM  
 Specifications No. 1365, as Amended**

**Inland Feeder Riverside Badlands Tunnel**

This project consists of excavation, initial support, and final lining of a 41,720-foot-long, 12-foot internal diameter water conveyance tunnel. Two final lining alternatives are acceptable: welded steel-plate pipe or reinforced concrete cylinder pipe. The tunnel is to be constructed along an approximately north-south alignment through a predominantly rural corridor comprised of several hills and valleys between a portal near Opal Avenue, one block east of the Redlands city limits in San Bernardino, California, passing beneath the Crafton Hills and San Timoteo Badlands, and exiting at a portal located southwest of the intersection of State Route 60 and Gilman Springs Road in Riverside County, California. The tunnel will be excavated through variable geologic conditions consisting of soft ground (alluvium), weak sedimentary rock, and hard metamorphic rock with a depth of ground cover ranging from about 30 feet to 850 feet. With the exception of limited reaches near the two portals, the tunnel is below the groundwater table. The contract includes construction of a tunnel access structure and 715 feet of 12-foot-diameter, welded steel-plate pipe at Opal Avenue; and a tunnel access structure and 799 feet of 12-foot-diameter, welded steel-plate pipe at Gilman Springs Road. Incidental work includes, but is not limited to, excavation and backfill of optional tunnel construction access shafts at Live Oak and San Timoteo Canyons, portal and shaft sites development, restoration and revegetation, temporary tunnel ventilation and utilities, groundwater control and disposal, and tunnel muck disposal.

Engineer's Estimate:     \$152,400,000

<b>Bidder &amp; Location</b>	<b>Total</b>
<b>Shank/Balfour Beatty - Highland, California</b>	<b>\$112,817,046</b>
<b>Traylor Bros., Inc., and Frontier-Kemper Constructors, Inc., a joint venture - Pleasanton, California</b>	<b>\$113,060,500</b>
<b>J. F. Shea Co., Inc. - Walnut, California</b>	<b>\$117,528,000</b>
<b>Obiyashi Corporation/Dillingham Construction N.A., Inc., a joint venture - San Francisco, California</b>	<b>\$118,132,000</b>
<b>Kenny/Kiewit/Granite, a joint venture - Wheeling, Illinois</b>	<b>\$127,468,000</b>