

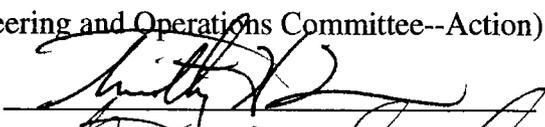


**MWD**

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

**7-1**

July 29, 1997

**To:** Board of Directors (Engineering and Operations Committee--Action)  
**From:** *for* General Manager   
**Submitted by:** Chief Engineer   
**Subject:** Award a Construction Contract for Installation of Rock Anchors at the Julian Hinds Pumping Plant

## RECOMMENDATIONS

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To install rock anchors and complete the seismic upgrade of the discharge pipelines at the Julian Hinds Pumping Plant, it is recommend your Board:

- Award a fixed price construction contract in the amount of \$1,992,757 to Mitchell Pacific Constructors, Inc.

## EXECUTIVE SUMMARY

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In February 1996, a contract was awarded for the seismic strengthening of the discharge pipelines at Hinds and Eagle Mountain pumping plants. While drilling to install rock anchors at Hinds, the contractor found the subsurface site conditions to be more difficult than those described in the contract documents and geotechnical report. The differing site conditions were significant enough to require Metropolitan to delete the rock anchor installation work from the existing contract, conduct a more detailed geotechnical investigation, prepare new bid documents, and advertise for a separate construction contract to install the rock anchors at Hinds. The total estimated cost of the seismic modifications to strengthen the pump buildings and discharge pipelines at all five CRA pumping plants remains at \$10,230,000. The appropriation has sufficient funds remaining to complete this work.

## **JUSTIFICATION**

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It is imperative that the Colorado River Aqueduct (CRA) facilities remain functional in the event of a major seismic event. Awarding of the subject construction contract will complete the seismic strengthening of the CRA facilities that started in 1990, and will alleviate concerns that a major earthquake could seriously impede Metropolitan's ability to deliver water.

## **ALTERNATIVES TO PROPOSED ACTION**

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### **Not Complete Construction**

An alternative to the proposed action would be not to complete the construction work; however, the discharge pipelines at the Hinds pumping plant would remain vulnerable to catastrophic failure from a major seismic event.

### **Reject All Bids and Readvertise Project**

An alternative is to reject all bids and readvertise the project. This would delay project completion, increase administrative costs, and not likely result in additional bidders.

## **ACTIONS AND MILESTONES**

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- Construction to install rock anchors at the Hinds pumping plant is scheduled to start in September 1997.
- All work to seismically upgrade the pump buildings and discharge pipelines at all five CRA pumping plants is scheduled to be completed in March 1998.

## **CEQA COMPLIANCE/ENVIRONMENTAL DOCUMENTATION**

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The proposed project qualifies for a categorical exemption under the California Environmental Quality Act (CEQA) in that it involves the modification of an existing public facility to meet current standards of public health and safety, involving no expansion of use beyond that previously existing (CEQA Guidelines Section 15301). No other environmental documentation required for this project.

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**CONTRACT SUMMARY - CONSTRUCTION CONTRACT**

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<b>Contract Status:</b> New	<b>Type of Selection:</b> Competitive Bid, Specifications No. 1391
<b>Contract Form:</b> Construction	<b>Contractors Requesting Plans:</b> 29
<b>Contract Type:</b> Fixed Price	<b>Proposals Submitted:</b> 1
<b>Funding:</b> Capital Appr. No. 15170	<b>Evaluation Criteria:</b> Low bid that meets the requirements of the specifications.

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**MBE/WBE - CONSTRUCTION CONTRACT**

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The Business Outreach Office reviewed the specifications and determined that there was no significant sub-contractible work associated with the contract. As a result, there were no anticipated levels of minority or women-owned business participation. However, to ensure adequate opportunities, Metropolitan sent notices inviting bids to MBE/WBE's available in the vendor database.

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**DETAILED REPORT**

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Metropolitan's Seismic Strengthening Program, involving on-site inspections and structural analyses, are conducted at key facilities which include the pump buildings and discharge pipelines at all CRA pumping plants. The CRA facilities were built in the 1930's and expanded in the 1950's. All of the pump buildings and discharge pipelines are similar in design and construction, and were identified in the 1980's as being at risk of sustaining substantial damage in the event of a major seismic event. In 1990, Metropolitan contracted with a geotechnical consultant, Dames & Moore, to provide information to establish the criteria for designing seismic strengthening to the discharge pipelines. Also, at that time, preliminary designs for seismic strengthening of the pump buildings were begun by Metropolitan staff.

In July 1994, the Board approved Appropriation No. 15171 (formerly Appropriation No. 607) to authorize funding for the construction of seismic modifications to the roofs and interiors of the pump buildings at all CRA pumping plants by Metropolitan forces, and awarded a contract for the construction of reinforced buttresses to strengthen the pump buildings at Hinds, Eagle Mountain, and Iron Mountain pumping plants. Construction of the buttresses was completed by the contractor in November 1995, and Metropolitan forces completed work to reinforce the roofs and interiors of the pumping buildings in November 1996.

In February 1996, the Board authorized award of a construction contract to seismically upgrade the discharge pipelines at Hinds and Eagle Mountain pumping plants, and for Metropolitan forces to complete the strengthening of the pipelines at Gene and Intake pumping plants. The pipelines at Iron Mountain did not require any modifications. Metropolitan forces completed the work at Gene and Intake in January 1997, and the contractor completed work at Eagle Mountain, and preliminary work at Hinds in February 1997. However, while drilling into the bedrock to install rock anchors for strengthening the discharge pipelines at Hinds pumping plant, the contractor encountered subsurface site conditions more difficult than that described in the contract documents and the consultant's geotechnical report. The differing site conditions were significant enough to require Metropolitan to delete the installation of rock anchors from the existing contract and re-bid the work under a new contract. Consequently, installation of the rock anchors at Hinds was suspended to conduct further geotechnical investigations and modify the design. A separate specification was advertised on June 3, 1997, for award of a contract to complete the work at Hinds.

Two bids were received and opened on July 10, 1997. The lower bidder, James Cushman, Inc., asked to withdraw its bid due to a bid error. The sole remaining bid from Mitchell Pacific Constructors, Inc., in the amount of \$1,992,775, was accepted as the qualifying bid. Mitchell Pacific Constructors, Inc., was the contractor on the earlier seismic strengthening contract and is very familiar with the work.

The contractor's bid is \$642,757 above the Engineer's estimate. This difference is due to the cost of drilling and the method of installing the rock anchors. Metropolitan's estimate was based on the Eagle Mountain installation cost, and did not consider the different conditions at Hinds.

**The Metropolitan Water District of Southern California**

**Abstract of Bids Received July 10, 1997, at 2:00 P.M.**

**Specifications No. 1391, as Amended**

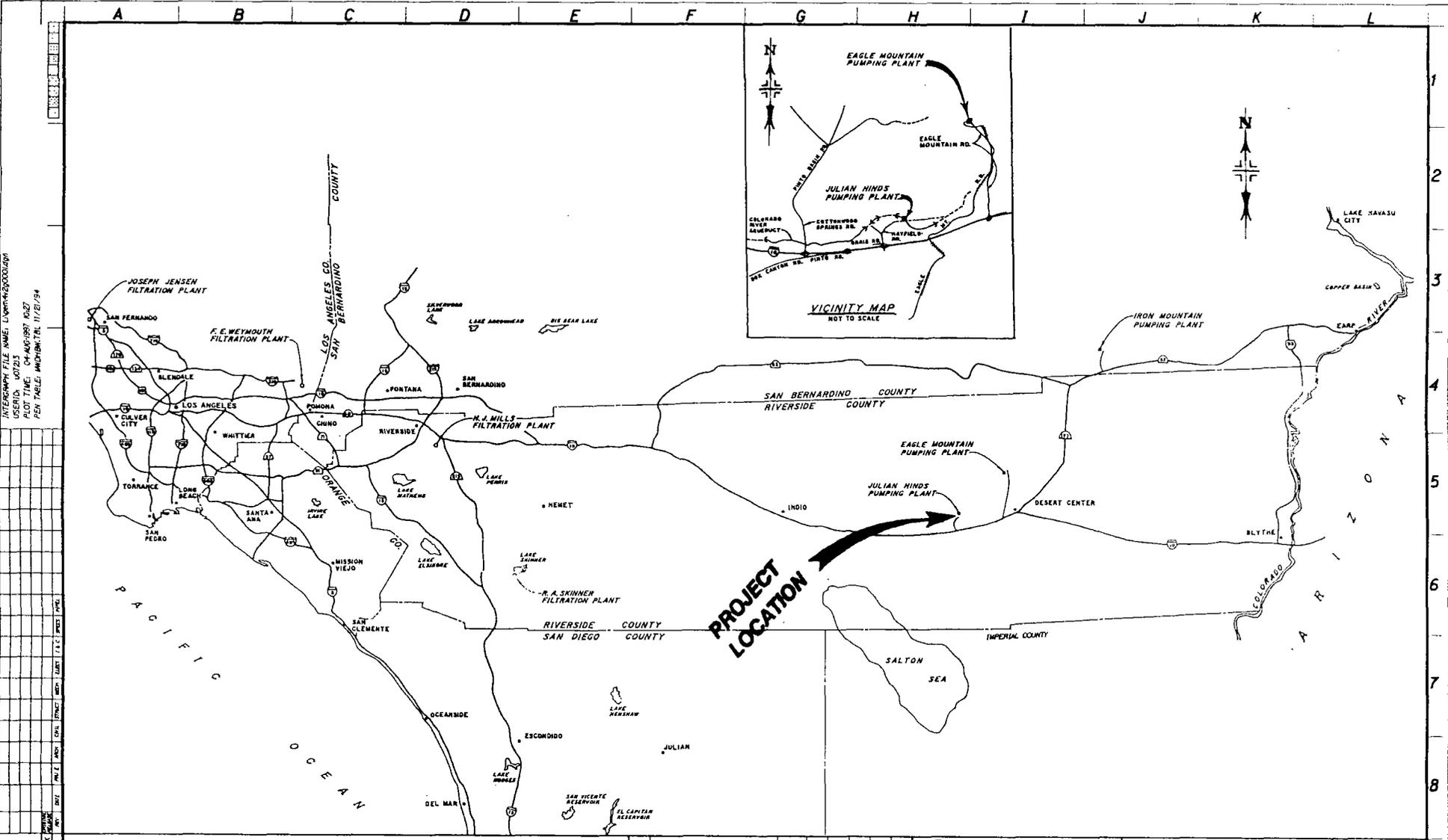
**Seismic Upgrade and Rock Anchor Installation  
of Discharge Pipelines at Hinds Pumping Plant**

This project consists of completion of items of work not completed under a previously awarded contract due to adverse subsurface conditions. The work includes construction of modifications to three existing ten-foot-diameter discharge pipelines at the Hinds Pumping Plant in Desert Center, California. Modifications include seismic upgrading by completing the installation of 151 rock anchors to restrain pipeline movement and structural framing to support such restraining. All construction is in a mountainous terrain where road access, access for installing rock anchors, and access to the pipelines may be limited.

**Engineer's Estimate:            \$1,350,000**

<b>Bidder &amp; Location</b>	<b>Item 1 Mobilization</b>	<b>Item 2 Construction</b>	<b>Total of Items 1 and 2</b>
Mitchell Pacific Constructors, Inc. Palm Springs, CA	\$50,000	\$1,942,757	\$1,992,757

James C. Cushman, Inc., the first low bidder was relieved of its bid obligations due to a bid proposal error.



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**PROJECT LOCATION**


**MWD**  
 METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

DESIGNED	RECOMMENDED	DATE
DRAWN	APPROVED	APRIL 1997
CHECKED	DATE	
DATE		

COLORADO RIVER AQUEDUCT  
**HINDS PUMPING PLANT**  
 SEISMIC UPGRADE AND ROCK ANCHOR INSTALLATION  
 OF DISCHARGE PIPELINES

GENERAL LOCATION

SPECIFICATION	139
WORK ORDER	4-6302
SHEET	G-1
DATE	B-94510

METROPOLITAN WATER DISTRICT