



Engineering, Operations, & Technology Committee

# CRA Conveyance System Flow Monitoring Stations

Item 8-2

May 8, 2023

# Colorado River Aqueduct Conveyance System Flow Monitoring Stations

## Current Action

- Award a \$5,266,000 contract to Leed Electric Inc. to install 12 flow monitoring stations along the Colorado River Aqueduct conveyance system

# Project Location



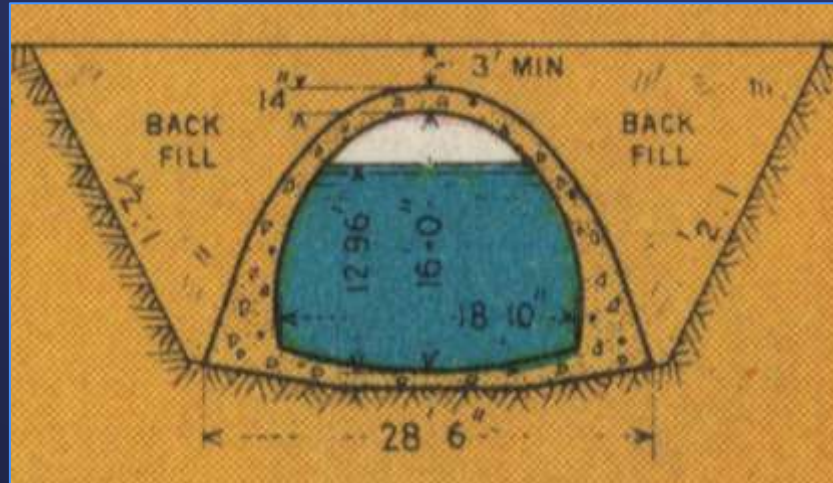
# Background

- Hydraulic capacity of CRA increased in 1990s by over 100 cfs
- Extended periods of 8-pump flow
  - Requires frequent monitoring & continuous maintenance
- Concerns & rationale for continuous monitoring
  - Pressurization of cut-and-cover conduits
  - Overflow of open sections



Canal Dragging

May 8, 2023



Cut-and-Cover Conduit

Engineering, Operations, & Technology Committee



Increased Water Elevation (Canal)

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# Colorado River Aqueduct Conveyance System Flow Monitoring Stations

## Scope of Work

- Installation of flow monitoring stations
- Provide real time data
- Continuously monitor & regulate flow
- Maintain steady state flow conditions



Existing Monitoring Station

# Colorado River Aqueduct Conveyance System Flow Monitoring Stations

## Alternatives Considered

- Install equipment in the open with shade canopies & an enclosed fence
  - Increased theft & vandalism in remote locations
- Selected Alternative – Install equipment in pre-cast buildings
  - Provides comprehensive security & protection
  - Similar set-up to existing monitoring stations

# Contractor - Scope of Work



Typical pre-cast concrete building

- Installation of pre-cast concrete buildings, antenna poles, & electrical ductbanks
- Site grading
- SCADA integration
- Rehabilitation of deteriorated accessways for conduits

# Colorado River Aqueduct Conveyance System Flow Monitoring Stations

## Metropolitan - Scope of Work

- SCADA programming
- Providing access & coordinating clearances
- Construction management & inspection
- Submittal review
- Environmental monitoring
- Project management & project controls



Typical transducer installation  
in aqueduct



# Bid Results

## Specifications No. 2042

Bids Received	March 28, 2023
No. of Bidders	2
Lowest Bidder	Leed Electric Inc.
Low Bid	\$5,266,000
Other Bid	\$6,659,550
Engineer's Estimate	\$4,270,000
SBE Participation*	100%

\* SBE (Small Business Enterprise) participation level set at 25%

# Allocation of Funds

## CRA Conveyance System Flow Monitoring Stations

Metropolitan Labor	
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	\$ 466,000
Construction Inspection & Support	650,000
Submittals Review, Tech. Support, Record Dwgs.	387,000
Force Construction	180,000
Materials & Supplies	72,000
Professional/Technical Services	
Lee & Ro, Inc.	25,000
Construction Contract	
Leed Electric Inc.	5,266,000
Remaining Budget	704,000
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	Total \$7,750,000

# Project Schedule



# Board Options

- Option #1
  - Award a \$5,266,000 contract to Leed Electric Inc. to install 12 flow monitoring stations along the CRA conveyance system.
- Option #2
  - Do not proceed with the project at this time.

# Staff Recommendation

- Option #1

