



Engineering, Operations, & Technology Committee

CRA Main Pump Access Improvements

Item 7-2

October 9, 2023

Colorado River
Aqueduct
Main Pump
Access
Improvements

Current Action

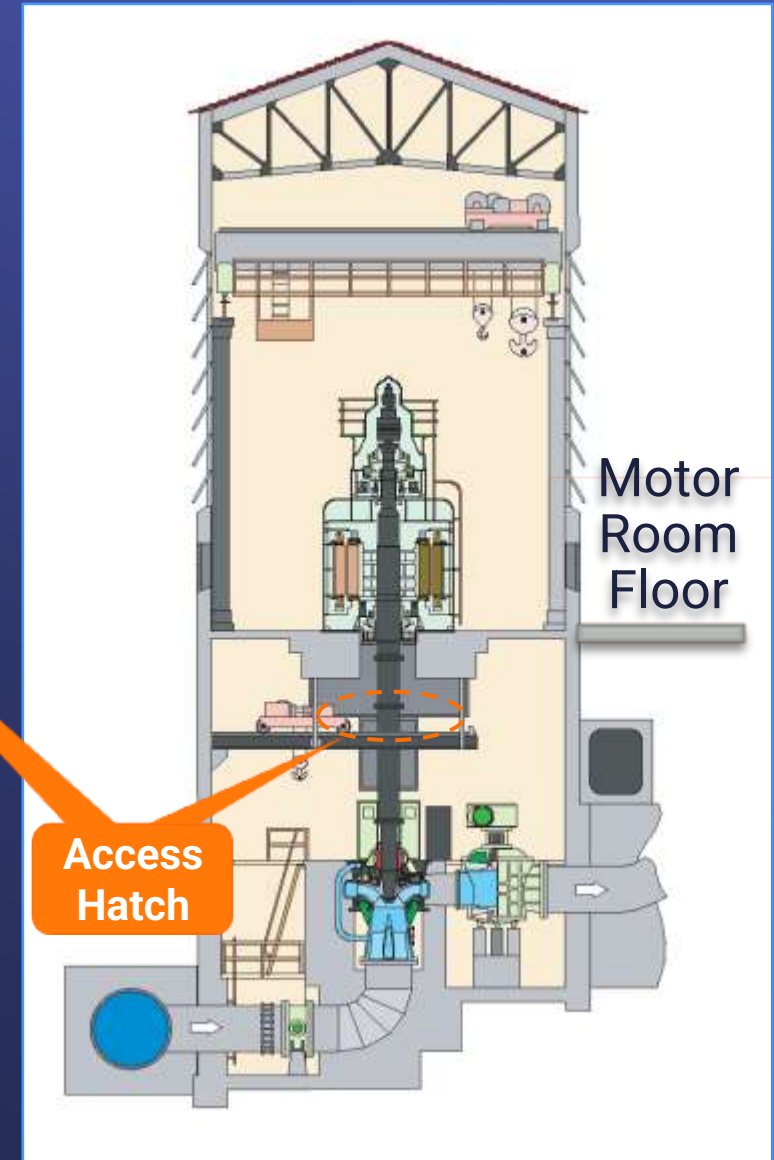
- Authorize an agreement with Black & Veatch Corporation in an amount not to exceed \$750,000 for design of new access platforms to facilitate maintenance activities on the main pumps at the five Colorado River Aqueduct pumping plants

Project Location



Background

- Multi-level pumphouse building
- Nine main pumps per plant
- Routine inspection & maintenance performed on main pumps
- Pump access via small hatch in ceiling
 - 20-feet above floor



CRA Pumphouse Configuration
(Typ.)

Current Configuration

- Temporary platform erected to facilitate maintenance
- Labor-intensive process to assemble & disassemble
- Comprised of wood deck boards clamped together with steel cross beams
- Temporary guard rails around platform



Temporary Platform System

Planned Work

- Install platforms, ladders, & associated support structures to facilitate maintenance
 - Allow for quick assembly & removal
 - Accommodate 4-ft pump shaft opening
 - Provide fall protection support
 - Comply with all applicable safety standards



Concept of New Platform System

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Alternatives Considered

1. Considered Option

- Design 45 individual platforms for each pump bay
 - Not feasible due to space & operational limitations
- Selected Option
 - Utilize one platform per plant (5 total)
 - Enhance efficiency and safety within limited space

2. Considered Option

- Metropolitan staff to complete all design activities
 - Resource needs exceed staff availability
- Selected Option
 - Staff & consultant work as a team
 - Consultant to complete structural design
 - Metropolitan staff to perform technical oversight of the consultant's work

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New Agreement – Black & Veatch Corporation

- Selected through RFP No. 1341
- Scope of Work
 - Conduct detailed field investigations
 - Evaluate alternative configurations & materials
 - Prepare conceptual design
 - Develop 3-D model
 - Prepare cost estimates
 - Prepare procurement package
 - Develop final design drawings & specifications
 - Bidding support
- NTE amount: \$750,000
- SBE participation level: 25%

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Metropolitan Scope

- Prepare environmental documentation
- Participate in value engineering & constructability review workshops
- Provide technical oversight & review consultant work
- Perform project controls & project management

Allocation of Funds

Colorado River Aqueduct Main Pump Access Improvements

Metropolitan Labor

Studies & Investigations \$ 155,000

Final Design 75,000

Owners Costs (Proj. Mgmt., Envir. Support) 105,000

Professional /Technical Services

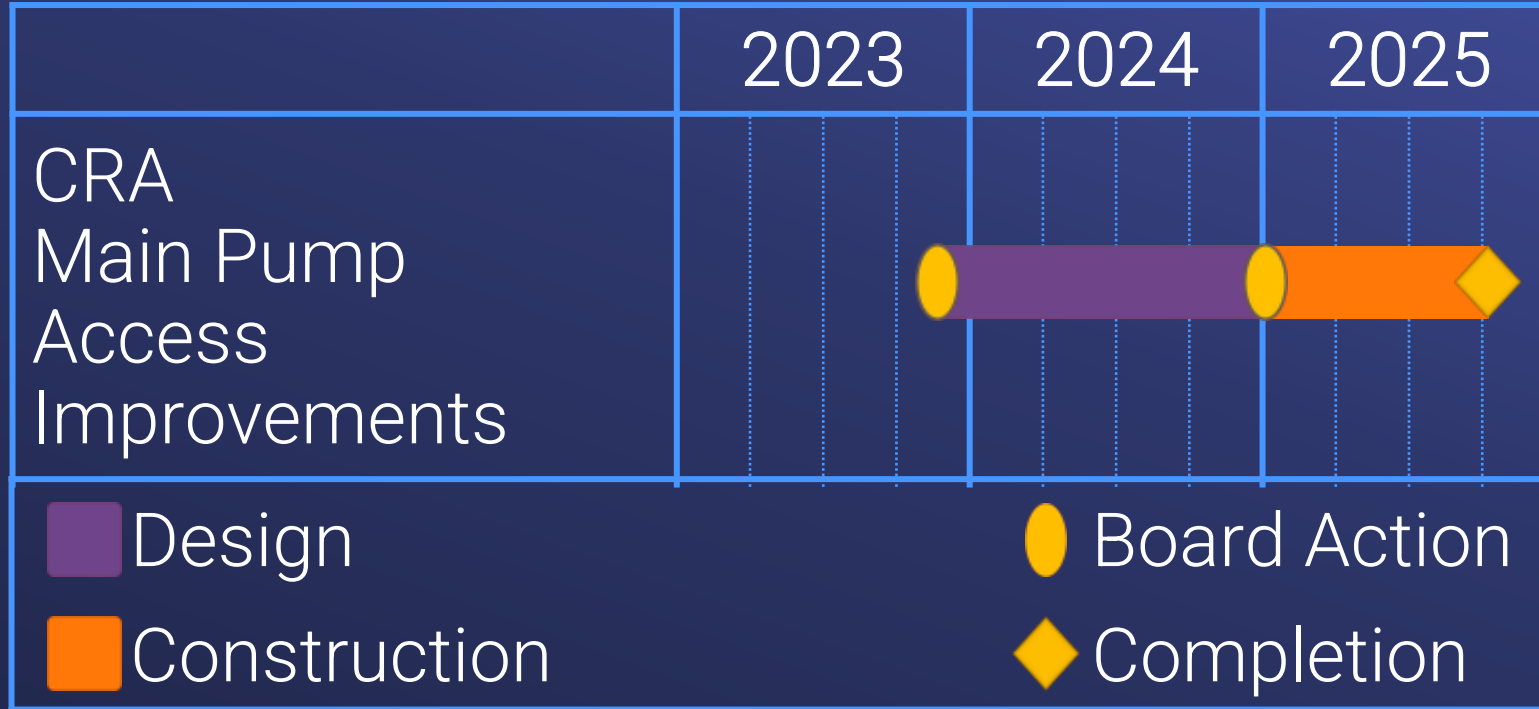
Black & Veatch Corporation 750,000

Value Engineering & Constructability Consultant 75,000

Remaining Budget 60,000

Total \$ 1,220,000

Project Schedule



Board Options

- Option #1
Authorize an agreement with Black & Veatch in an amount not to exceed \$750,000 for design services for access platform improvements to facilitate maintenance activities on the main pumps at the five CRA pumping plants.
- Option #2
Do not proceed with the project at this time.

Staff Recommendation

- Option #1

