

The Metropolitan Water District of Southern California

Agenda

The mission of the Metropolitan Water District of Southern California is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

EOT Committee

D. Erdman, Chair
M. Petersen, Vice Chair
D. Alvarez
M. Camacho
A. Chacon
B. Dennstedt
S. Faessel
L. Fong-Sakai
R. Lefevre
J. McMillan
C. Miller
J. Morris
G. Peterson
T. Quinn
K. Seckel
T. Smith

Engineering, Operations, and Technology Committee - Final - Revised

1

Meeting with Board of Directors *

July 10, 2023

8:30 a.m.

Agendas, live streaming, meeting schedules, and other board materials are available here: <https://mwdh2o.legistar.com/Calendar.aspx>. A listen only phone line is available at 1-877-853-5257; enter meeting ID: 862 4397 5848. Members of the public may present their comments to the Board or a Committee on matters within their jurisdiction as listed on the agenda via in-person or teleconference. To participate via teleconference (833) 548-0276 and enter meeting ID: 815 2066 4276 or click <https://us06web.zoom.us/j/81520664276?pwd=a1RTQWh6V3h3ckFhNmDsUWpKR1c2Zz09>

Monday, July 10, 2023 Meeting Schedule

08:30 a.m. EOT
10:30 a.m. LC
12:30 p.m. Break
01:00 p.m. LRAC
03:00 p.m. OWS

MWD Headquarters Building • 700 N. Alameda Street • Los Angeles, CA 90012

Teleconference Locations:

3008 W. 82nd Place • Inglewood, CA 90305

Cedars Sinai Medical Center • 8700 Beverly Blvd • Los Angeles, CA 90048

* The Metropolitan Water District's meeting of this Committee is noticed as a joint committee meeting with the Board of Directors for the purpose of compliance with the Brown Act. Members of the Board who are not assigned to this Committee may participate as members of the Board, whether or not a quorum of the Board is present. In order to preserve the function of the committee as advisory to the Board, members of the Board who are not assigned to this Committee will not vote on matters before this Committee.

1. Opportunity for members of the public to address the committee on matters within the committee's jurisdiction (As required by Gov. Code Section 54954.3(a))

2. SUBCOMMITTEE REPORTS

- a. Report from Subcommittee on Pure Water Southern California and Regional Conveyance

**** CONSENT CALENDAR ITEMS -- ACTION ****

3. CONSENT CALENDAR OTHER ITEMS - ACTION

- a. Approval of the Minutes of the Engineering, Operations, and Technology Committee for June 12, 2023 (Copies have been submitted to each Director, Any additions, corrections, or omissions) [21-2329](#)

Attachments: [07112023 EOT \(06122023\) Minutes](#)

4. CONSENT CALENDAR ITEMS - ACTION

- 7-1 Authorize an increase of \$950,000 in change order authority for the contract with W.A. Chester, LLC to terminate 6.9 kV power cables at all five Colorado River Aqueduct pumping plants; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA [21-2456](#)

Attachments: [07112023 EOT 7-1 B-L](#)
[07112023 EOT 7-1 Presentation](#)

- 7-2 Authorize an increase of \$2 million to an agreement with Jacobs Engineering Group, Inc. for a new not-to-exceed total amount of \$2.65 million for final design of the first stage of security upgrades for the Colorado River Aqueduct Region; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA [21-2457](#)

Attachments: [07112023 EOT 7-2 B-L](#)
[07112023 EOT 7-2 Presentation](#)

- 7-3 Award a \$452,886 contract to Best Contracting Services, Inc. for replacement of the administration and warehouse building roofs at the Lake Mathews site; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA [21-2458](#)

Attachments: [07112023 EOT 7-3 B-L](#)
[07112023 EOT 7-3 Presentation](#)

- 7-4 Award a \$349,527.80 procurement contract to TechnoFlo Systems Inc. for 50 magnetic flowmeters to comply with surface water diversion regulations on Metropolitan's Delta Island properties; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA [21-2459](#)

Attachments: [07112023 EOT 7-4 B-L](#)
[07112023 EOT 7-4 Presentation](#)

**** END OF CONSENT CALENDAR ITEMS ****

5. OTHER BOARD ITEMS - ACTION

- 8-1 Award a \$3,740,792 contract to M.S. Construction Management Group, Inc. for replacement of a portion of the existing fire sprinkler system's piping and network components at Metropolitan's Headquarters Building; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA [21-2455](#)

Attachments: [07112023 EOT 8-1 B-L](#)
[07112023 EOT 8-1 Presentation](#)

- 8-3 Award a \$16,490,000 contract to J. F. Shea Construction Inc. to replace equipment storage buildings at three Colorado River Aqueduct pumping plants; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA. [ADDED SUBJECT 7/6/2023] [21-2532](#)

Attachments: [07112023 EOT 8-3 B-L](#)
[07112023 EOT 8-3 Presentation](#)

6. BOARD INFORMATION ITEMS

NONE

7. COMMITTEE ITEMS

- a. Update on Water Quality Laboratory Upgrades [21-2460](#)

Attachments: [07102023 EOT 7a Presentation](#)

- b. Emergency Management Program Update [21-2462](#)

Attachments: [07102023 EOT 7b Presentation](#)

8. MANAGEMENT REPORTS

- a. Water System Operations Manager's Report [21-2330](#)

Attachments: [07102023 EOT 8a Presentation](#)

- b. Engineering Services Manager's Report [21-2331](#)

Attachments: [07102023 EOT 8b Presentation](#)

- c. Information Technology Manager's Report [21-2332](#)

Attachments: [07102023 EOT 8c Presentation](#)

9. FOLLOW-UP ITEMS

NONE

10. FUTURE AGENDA ITEMS

11. ADJOURNMENT

NOTE: This committee reviews items and makes a recommendation for final action to the full Board of Directors. Final action will be taken by the Board of Directors. Committee agendas may be obtained on Metropolitan's Web site <https://mwdh2o.legistar.com/Calendar.aspx>. This committee will not take any final action that is binding on the Board, even when a quorum of the Board is present.

Writings relating to open session agenda items distributed to Directors less than 72 hours prior to a regular meeting are available for public inspection at Metropolitan's Headquarters Building and on Metropolitan's Web site <https://mwdh2o.legistar.com/Calendar.aspx>.

Requests for a disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting should be made to the Board Executive Secretary in advance of the meeting to ensure availability of the requested service or accommodation.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

MINUTES

ENGINEERING, OPERATIONS & TECHNOLOGY COMMITTEE

June 12, 2023

Chair Erdman called the meeting to order at 8:31 a.m.

Members present: Directors Camacho, Dennstedt (entered after rollcall), Erdman, Faessel, Fong-Sakai, McMillan, Miller, Morris, Petersen, Peterson (entered after rollcall), Quinn (entered after rollcall), Seckel, and Smith.

Members absent: Directors Alvarez, Chacon, and Lefevre.

Other Board Members present: Directors Armstrong, Dick, Garza, Kurtz, and Ortega.

Committee staff present: Chapman, Chaudhuri, Coffey, Eckstrom, Hattar, Linares, and Parsons.

1. OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE COMMITTEE ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION (as required by Gov. Code Section 54954.3(a))

Tom Williams – Member of Citizens' Coalition for Safe Communities, Sierra Club Angeles Chapter Water Committee – In opposition to item 7-1

Caty Wagner – Sierra Club California – In opposition to item 7-1

Ray Hiemstra – Orange County Coast Keepers – In opposition to item 7-1

Jan Warren – Interface Climate Action Network – In opposition to item 7-1

Charming Evelyn – Chair, Water Committee, Sierra Club – In opposition to item 7-1

Justin Breck – Law Fellow at Los Angeles Waterkeeper – In opposition to item 7-1

Connor Everts – Desal Response Group, Southern California – In opposition to item 7-1

Mark Gold – Director, Water Scarcity Solutions for Natural Resources Defense Council – In opposition to item 7-1

Wilfried Chong – Resident of Los Angeles – In opposition to item 7-1

Ryan Lutzien – Resident of Orange County – In opposition to item 7-1

Directors Peterson, Dennstedt, and Quinn entered the room.

2. SUBCOMMITTEE REPORTS

None

CONSENT CALENDAR ITEMS -- ACTION

3. CONSENT CALENDAR OTHER ITEMS - ACTION

- A. Approval of the Minutes of the Engineering, Operations, and Technology Committee for May 8, 2023

4. CONSENT CALENDAR ITEMS - ACTION

- 7-1 Subject: Authorize agreements with AECOM Technical Services, Inc. and CDM Smith Inc., each in an amount not to exceed \$800,000, for water desalination studies in Metropolitan's service area; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Item 7-1 was deferred.

General Manager Hagekhalil and Chair Ortega provided comments.

- 7-2 Subject: Amend the Capital Investment Plan for fiscal years 2022/2023 and 2023/2024 to include three projects: (1) Jensen Administration Building column panel replacement; (2) Skinner chemical storage tanks replacement; and (3) Auld Valley and Red Mountain Control Structures upgrade; and award a \$281,900 contract to MMJ Contracting Inc. to replace the existing entrance column panels at the Jensen Administration Building; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

- Motion:
 - a. Amend the Capital Investment Plan for fiscal years 2022/2023 and 2023/2024 to include the Jensen Administration Building Column Panel Replacement, Skinner Chemical Storage Tank Replacement, and the upgrades to the Auld Valley and Red Mountain Control Structures; and
 - b. Award a \$281,900 contract to MMJ Contracting Inc. to replace the GFRC panels in the entrance columns of the Jensen Administration Building.

No presentations were given, Director Peterson made a motion, seconded by Director Morris, to approve the consent calendar consisting of items 3A and 7-2

The vote was:

Ayes: Directors Camacho, Dennstedt, Erdman, Faessel, Fong-Sakai, McMillan, Miller, Morris, Petersen, Peterson, Quinn, Seckel, and Smith.
Noes: None
Abstentions: Fong-Sakai (Item 3A)
Absent: Director Alvarez, Chacon, and Lefevre.

The motion for Item 3A passed by a vote of 12 ayes, 0 noes, 1 abstention, and 3 absent.
The motion for Item 7-2 passed by a vote of 13 ayes, 0 noes, 0 abstentions, and 3 absent.

**** END OF CONSENT CALENDAR ITEMS ****

5. OTHER BOARD ITEMS ACTION

Director Morris recused himself from Item 8-1 as his son is employed by Kennedy Jenks Consultants Inc.

8-1 Subject: Authorize on-call agreements with Kennedy Jenks Consultants Inc., Lee & Ro Inc., and Stantec Consulting Services Inc., in amounts not to exceed \$10 million each, for a maximum of five years for engineering services; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Presented by: Francisco Becerra, Section Manager, Engineering Services Group

Motion: Authorize on-call agreements with Kennedy Jenks Consultants Inc., Lee & Ro Inc., and Stantec Consulting Services Inc., in amounts not to exceed \$10 million each, for a maximum period of five years for engineering services.

The following Directors provided comments or asked questions

1. Seckel
2. Dennstedt
3. Erdman
4. Ortega

Staff responded to Directors' questions and comments.

After completion of the presentation, Director Faessel made a motion, seconded by Director Peterson, to approve item 8-1.

The vote was:

Ayes: Directors Camacho, Dennstedt, Erdman, Faessel, Fong-Sakai, McMillan, Miller, Petersen, Peterson, Quinn, Seckel, and Smith
Noes: None
Abstentions: None
Not Voting: Director Morris
Absent: Directors Alvarez, Chacon, Lefevre

The motion for Item 8-1 passed by a vote of 12 ayes, 0 noes, 0 abstentions, 1 not voting, and 3 absent.

8-2 Subject: Award a \$16,490,000 contract to J. F. Shea Construction Inc. to replace equipment storage buildings at three Colorado River Aqueduct pumping plants; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA
Presented by: Cathy Lou, Engineer, Engineering Services Group
Motion: Award a \$16,490,000 contract to J. F. Shea Construction Inc. for furnishing and installation of pre-engineered storage buildings at the Hinds, Eagle Mountain, and Iron Mountain pumping plants.

The following Directors provided comments or asked questions

1. Faessel
2. Fong-Sakai
3. Camacho
4. Miller
5. McMillan
6. Erdman
7. Dick
8. Morris
9. Dennstedt
10. Peterson

Staff responded to Directors' questions and comments.

After completion of the presentation, Director Morris made a motion, seconded by Director Seckel, to approve item 8-2

The vote was:

Ayes: Directors Camacho, Dennstedt, Erdman, Faessel, Fong-Sakai, McMillan, Morris, Petersen, Peterson, Quinn, Seckel, and Smith
Noes: Director Miller
Abstentions: None
Absent: Directors Alvarez, Chacon, Lefevre

The motion for Item 8-2 passed by a vote of 12 ayes, 1 no, 0 abstentions, and 3 absent

6. BOARD INFORMATION ITEMS

NONE

7. COMMITTEE ITEMS

a. Subject: Metropolitan's Dam Safety Program
Presented by: Bashar Sudah, Program Manager, Dam Safety Initiatives, Engineering Services

Mr. Sudah reported on the following:

- Updates on dam safety regulations, including inundation maps and Emergency Action Plans (EAPs)
- Update on dam monitoring systems upgrades at DVL & Garvey Reservoirs
- Metropolitan's continued work on EAPs, dam monitoring and reporting

The following Director provided comments or asked questions

1. Erdman

Staff responded to the Director's questions and comments.

b. Subject: Capital Investment Plan Quarterly Report for Period Ending March 2023
Presented by: Jeffrey Nikolas, Engineer, Engineering Services Group

Mr. Nikolas reported on the following:

- FY 22/23, Q3 Summary and CIP Performance
- Update on Etiwanda Pipeline Lining Replacement – Stage 3 Project
- Update on Second Lower Feeder PCCP Rehabilitation – Reach 3A Project
- Updates on Construction Contracts, Minor Capital Projects

- c. Subject: Information Technology Manager's Report
 Presented by: Charles Eckstrom, Information Technology Group Manager

 No report given

9. FOLLOW-UP ITEMS

None

10. FUTURE AGENDA ITEMS

None

The next meeting will be held on July 10, 2023.

Meeting adjourned at 10:36 am.

Dennis Erdman
Chair



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

7/11/2023 Board Meeting

7-1

Subject

Authorize an increase of \$950,000 in change order authority for the contract with W.A. Chester LLC to terminate 6.9 kV power cables at all five Colorado River Aqueduct pumping plants; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The 6.9 kV power cables are a critical infrastructure component that provides electrical power from the main switchgear buildings to the Colorado River Aqueduct (CRA) main pumps. In February 2019, Metropolitan’s Board awarded a construction contract to remove and replace the original power cables at the five CRA pumping plants. During the first stage of the construction contract, staff determined that the contractor was not able to successfully perform the cable terminations to connect the cables to the pumps and power source for Pump Units 1 through 5 at each plant. Metropolitan subsequently directed the contractor to install “temporary” power cables for these pumps to ensure operation of the pump plants, deleted the remaining contract work, and terminated the contract. Metropolitan staff have successfully repaired 46 of the original 110 terminations for Pump Units 1 through 5 during 2020-2022. However, Metropolitan staff is focused on operation and maintenance activities and can no longer support the cable termination efforts. On January 13, 2023, Metropolitan solicited bids from skilled contractors to perform additional terminations and awarded a \$250,000 contract under the General Manager’s authority to test a selected contractor’s ability to perform the terminations. The contractor successfully completed an additional 24 terminations during the recent 2023 CRA shutdown. Based on this success, staff recommends that the change order authority for this construction contract be increased by \$950,000 so the contractor can complete the remaining work.

Details

Background

The CRA is a 242-mile-long conveyance system that transports water from the Colorado River to Lake Mathews. It consists of five pumping plants; 124 miles of tunnels, siphons, and reservoirs; 63 miles of canals; and 55 miles of conduits. The aqueduct was constructed in the late 1930s and was placed into service in 1941.

Each of the five CRA pumping plants has nine pumps and motors. Power is transmitted to the motors via 3-inch-diameter 6.9 kV cables, which run through a tunnel that connects each switch house to each pump house. The quantity of cables varies from nine to twenty-seven per plant and varies in length from approximately 200 to 650 feet. The 6.9 kV power cables are paper insulated lead covered (PILC) cables which consist of a copper core wrapped with oil-soaked paper strips, covered with a lead jacket. The oil-soaked paper provides the insulating properties for the cable. Hence the retention of oil in the cables is necessary to ensure the safe operation of the cables over many years of service. These cables were installed in four phases from 1939 through 1959. After 60-80 years of continuous service, regular cable testing by staff indicates that the power cables have deteriorated and require replacement.

After completion of a comprehensive study of rehabilitation options, replacement of the PILC cables in-kind was selected because of its excellent cable service life. Also, its smaller size allows the cable to be pulled through existing conduits within the pump house walls, greatly simplifying construction and reducing the duration that the pumps would be out of service. Other cables, sized to carry an equivalent amount of power to the pumps, have a

reduced service life, typically 40 years, and are larger in diameter, which would have required extensive modification to the existing pump house to route the cables to the pumps. As part of the study, staff compiled a list of successful recent work by both PILC cable and termination manufacturers. In addition, the contract documents required bidders have recent work experience installing PILC cable.

In February 2019, Metropolitan's Board awarded a \$16,452,832 construction contract to Baker Electric Inc. to remove and replace the 6.9 kV PILC power cables for all nine pump units at the five CRA pumping plants and rehabilitate the cable tunnels with improved lighting, ventilation, and cooling systems. The construction contract work was sequenced so that the contractor had to complete the removal, installation, and start-up of the first five pump units before the contractor could proceed to work on the remaining units. This sequence ensured a minimum 5-pump flow availability for water deliveries at all times during construction.

As the contractor began terminating the new cables at the pumps and switchgear locations for the first five pump units, oil was detected to be leaking from the terminated cables. The specification for the terminations required a leak-free final product based on the use of specified materials and installation practices. Metropolitan informed the contractor that their work on the terminations was defective. In an attempt to resolve the issue, Metropolitan worked collaboratively with the contractor to identify an approach to the termination methodology that would allow the contractor to correct the deficiencies. After numerous attempts, the contractor failed to successfully install any leak-free terminations. To ensure that Metropolitan would have power to operate the CRA pumps, Metropolitan directed the contractor to install temporary power cables while a solution was implemented. Metropolitan continued to work closely with the contractor; however, due to the contractor's inability to repair the leaking terminations, Metropolitan deleted the remaining work and terminated the contract. Baker Electric Inc. subsequently filed a lawsuit against Metropolitan, which is currently ongoing.

Following the contract termination, Metropolitan brought a consultant on-board to determine the cause of the failures. After an assessment, the consultant concluded that the leaks were likely due to installation error. To minimize delays, Metropolitan decided to perform the terminations using its own forces under the supervision of a trained installer with experience in such terminations. To date, Metropolitan forces have successfully completed terminations of the pump units at Iron Mountain, Gene, and Intake pumping plants with a 74 percent success rate.

Staff assessed the option of continuing the termination work with in-house staff. However, Metropolitan staff is focused on operation and maintenance activities and can no longer support the cable termination efforts. Therefore, a specialized contractor was needed to perform the outstanding terminations at Hinds and Eagle Mountain pumping plants and repair the leaks observed at the other three plants. Staff prepared contract specifications to solicit bids for the remaining work.

Specification No. 2061 for the termination of cables was advertised on January 13, 2023. Two bids were received and opened on January 20, 2023. The bid from The Hild Corporation dba Industrial High Voltage did not meet the qualification requirements detailed in the specifications and was deemed nonresponsive. The bid from W.A. Chester LLC (Chester) complied with the requirements of the specification. A contract was awarded under the General Manager's authority to Chester for an amount not to exceed \$250,000. The initial contract was structured as a pilot effort to allow Chester to demonstrate that they could successfully perform the PILC terminations. Chester successfully completed the first two units at Hinds Pumping Plant during the recent 2023 CRA shutdown. Based on these successful results, Metropolitan directed Chester to terminate the remaining two units at the Hinds Pumping Plant by exercising the General Manager's change order authority of \$250,000 on this contract. To date, approximately \$330,000 has been expended under this contract with Chester, and power cables for four pump units at Hinds Pumping Plant have been terminated with a 96 percent success rate.

Staff now recommends moving forward with Chester to complete the PILC power cable terminations for the remaining pump units at Eagle Mountain Pumping Plant as well as repairing any minor leaks on terminations that were previously completed by Metropolitan forces. In total, 64 terminations will be either installed or repaired by Chester under this expanded contract.

Budget Impacts

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with repairing and terminating 6.9 kV power cables at all five CRA pumping plants. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for work to

be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15508). This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the CRA Reliability Program. Approval of this board action to increase the contract's change order authority will lead to the expenditure of \$1.49 million in budgeted capital funds. All expenditures will be incurred in the current biennium and have been previously authorized.

As previously reported, the original contract for performance of this work is the subject of litigation in the matter of *Baker Electric, Inc. v. Metropolitan Water District of Southern California*. Metropolitan has filed a cross-complaint against Baker Electric and will seek recovery of costs incurred in connection with this repair work.

CRA 6.9 kV Power Cables Termination – Increase in Change Order Authority (Contract No. 2061)

The original value of this contract was \$250,000. Per Metropolitan's Administrative Code, the General Manager has the authority to execute change orders for this contract up to a maximum of \$250,000. To date, \$250,000 in change orders have been executed, for a total contract amount value of \$500,000; approximately \$330,000 has been expended under this contract. To complete the remaining work, staff recommends that the change order authority be increased by \$950,000 for a new maximum change order amount of \$1,200,000. With the increase in change order authority, the total contract value will be \$1,450,000.

The scope of the additional work consists of terminating the power cables on four pump units (24 cable terminations) at Eagle Mountain Pumping Plant and repair of approximately 16 leaking cable terminations which are located at other plants. The planned work includes: (1) removal of the leaking terminations; (2) preparation of the cable; and (3) installation of Metropolitan-furnished termination kits. Metropolitan force activities will include shutting down and isolating the pumps to be worked on, providing safe access for the contractor by de-energizing and grounding existing electrical equipment, and testing and start-up of the new equipment. The remaining work will start in fall 2023 with completion in spring 2024 since the termination of these cables is not recommended in extremely hot summer weather.

This action authorizes an increase in the General Manager's authority to execute change orders from \$250,000 to an aggregate amount not to exceed \$1,200,000 for repairing and terminating 6.9kV power cables at all five pumping plants.

A total of \$1.49 million has been budgeted for this work. In addition to the amount of the added contract work described above, other funds to be allocated include \$190,000 for Metropolitan force activities as described above; \$175,000 for construction management and inspection; \$100,000 for procurement of cable termination kits; \$15,000 for technical support during construction and responding to requests for information; and \$60,000 for contract administration, project controls, and project management. **Attachment 1** provides the allocation of the required funds.

Alternatives Considered

Staff considered several alternatives for the re-termination of the 6.9 kV power cables, including training of additional Metropolitan staff or hiring temporary employees to perform the work. However, the skills required to perform this work are highly specialized, making it challenging to find experienced, qualified individuals to perform the work successfully. The selected alternative will ensure completion of the work by qualified specialists in the most cost-effective and expeditious manner.

Summary

This action authorizes an increase of \$950,000 in the General Manager's authority to execute change orders for Contract No. 2061 with W.A. Chester LLC for repairing and terminating 6.9 kV pump motor power cables at all five CRA pumping plants. See **Attachment 1** for the Allocation of Funds and **Attachment 2** for the Location Map.

Project Milestone

May 2024 – Construction completion

Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 51494, dated February 12, 2019, the Board awarded a \$16,452,832 contract to Baker Electric, Inc. to replace the 6.9 kV power cables at all five CRA pumping plants.

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/2023 and 2023/2024.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is in furtherance of a project that was previously determined to be exempt under Class 1 (Section 15301) and Class 2 (Section 15302) of the State CEQA Guidelines on February 12, 2019. With the current board action, there is no substantial change proposed since the original project was first approved in 2019. Hence, the project fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further CEQA documentation is necessary for the Board to act on the proposed action.

CEQA determination for Option #2:

None required

Board Options

Option #1

Authorize an increase of \$950,000 in change order authority for the contract with W.A. Chester LLC to terminate 6.9 kV power cables at all five CRA pumping plants.

Fiscal Impact: Expenditure of \$1.49 million in capital funds. All funds will be incurred in the current biennium and have been previously authorized.

Business Analysis: This option will allow the timely completion of all remaining cable termination work and removal of the temporary power cables which interfere with pump house maintenance activities.

Option #2

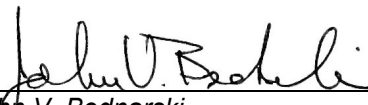
Do not authorize an increase in change order authority.

Fiscal Impact: Additional costs would likely be incurred in the future as additional contract(s) will be needed to complete the work.

Business Analysis: This option is unlikely to result in lower costs for the extra work performed and would delay the project's completion.

Staff Recommendation

Option #1



John V. Bednarski
Manager/Chief Engineer
Engineering Services

6/20/2023
Date



Adel Hagekhalil
General Manager

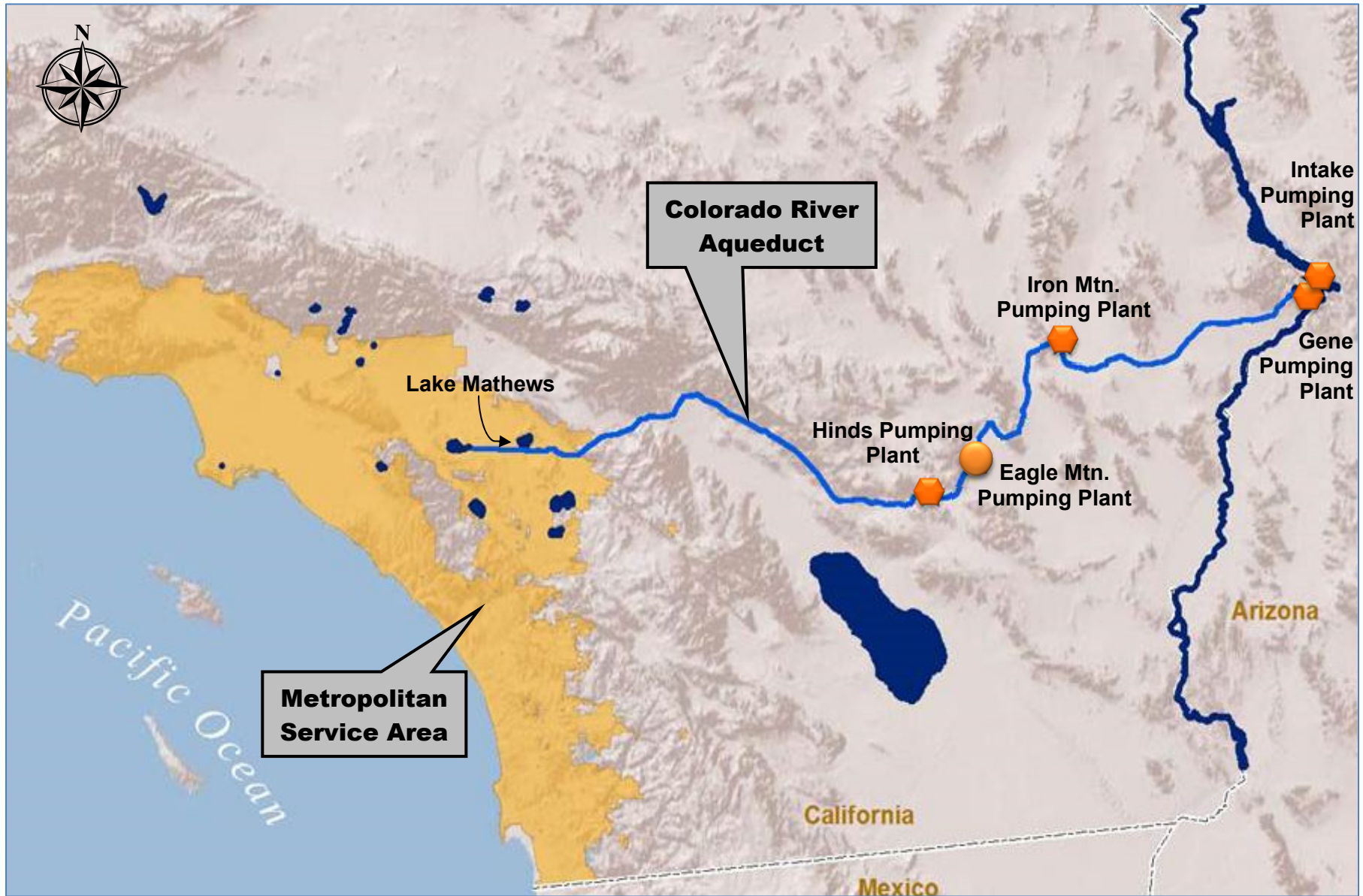
6/29/2023
Date

Attachment 1 – Allocation of Funds

Attachment 2 – Location Map

Ref# es12686500

Location Map





Engineering, Operations, & Technology Committee

Change Order Authority Increase for Termination of CRA Motor Power Cables

Item 7-1

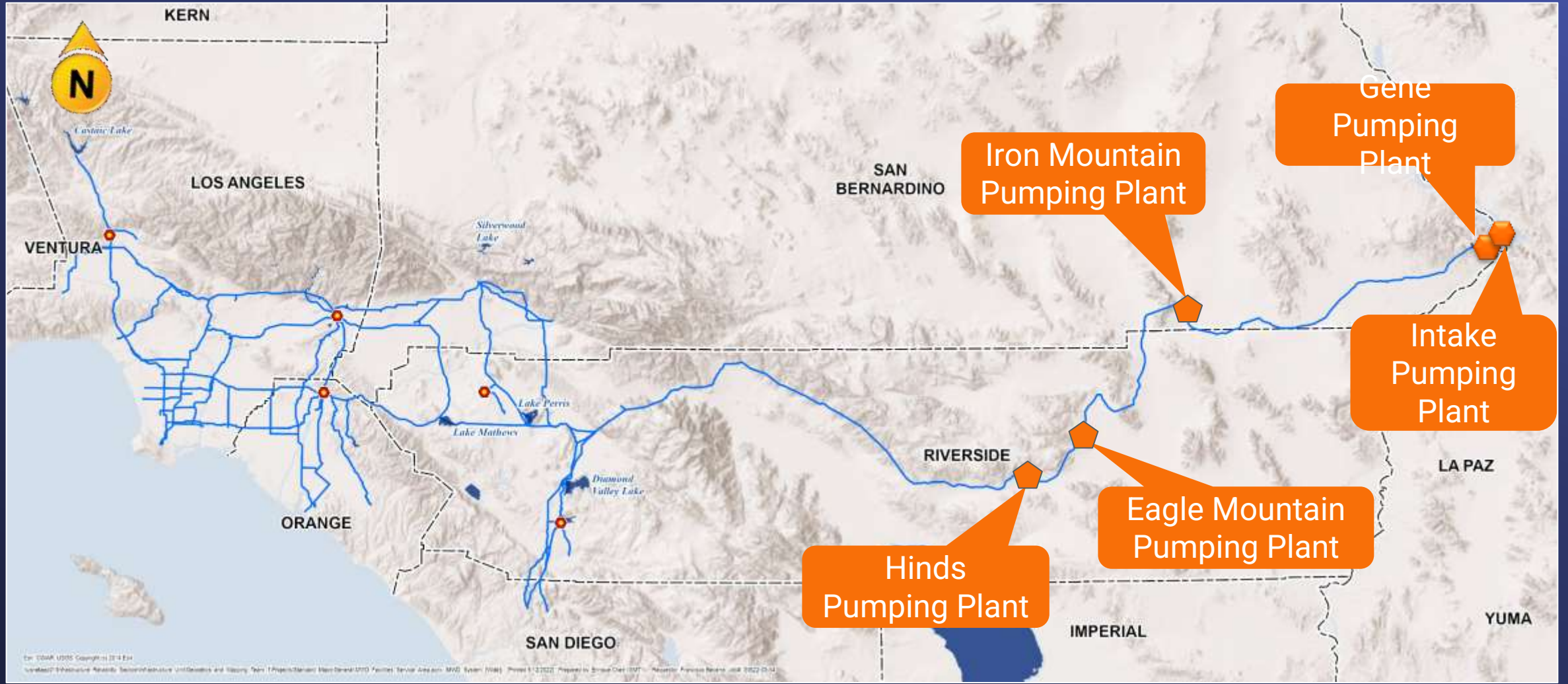
July 10, 2023

Change Order
Authority
CRA 6.9kV Motor
Power Cables
Termination

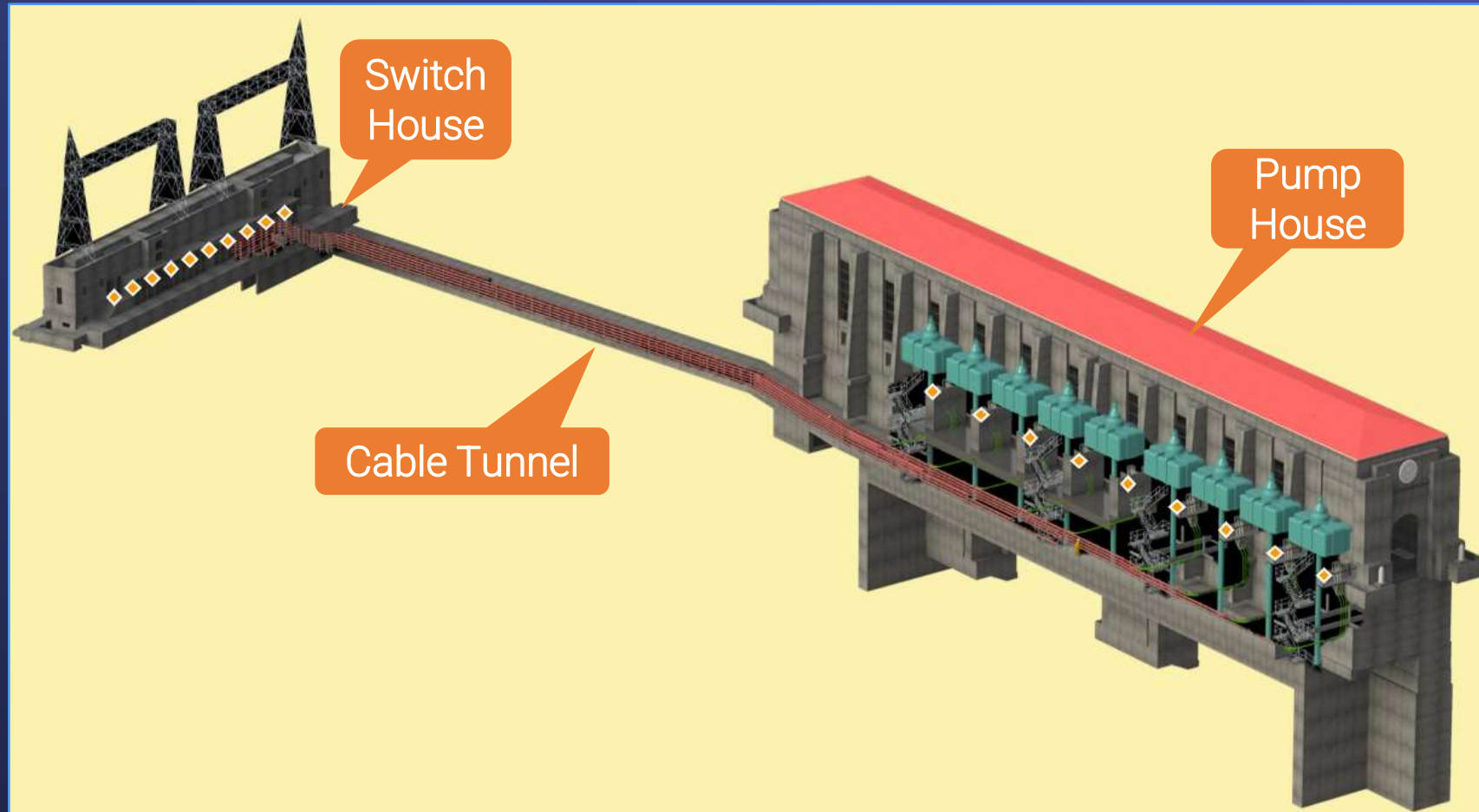
Current Action

- Authorize an increase of \$950,000 in change order authority for the contract to terminate 6.9kV power cables at all five Colorado River Aqueduct pump plants

Project Location



Background



- Installed in the 1930s
- Provide power to main pump motors
- Cables have begun to deteriorate & lose insulative properties

CRA 6.9kV Motor Power Cables Termination



Leaking Termination

Background

- February 2019 – Contract awarded to Baker Electric Inc.
 - Remove & replace power cables
 - Rehabilitate cable tunnels
- Completed 110 of 198 terminations
 - Oil leaks detected in all terminations
 - 0% success rate
- Metropolitan worked closely with contractor to resolve the leaks
- Contractor directed to install temporary cables to power the pumps
- Contract terminated

CRA 6.9kV Motor Power Cables Termination



Temporary cables

Background

- Metropolitan staff began terminating the cables
- Completed 62 of 110 terminations
 - 46 terminations successful (74% success rate)
- Staff redeployed to focus on O&M activities
- Multiple options considered to find qualified termination contractors
 - Proceeded with bid solicitation

CRA 6.9kV Motor Power Cables Termination



W.A. Chester LLC
Terminated Cable

Contract Scope

- Jan. 2023 - Contract awarded to W.A. Chester LLC
- Contract amount - \$250,000
- Contract scope
 - De-termination of existing leaking terminations
 - Re-termination of cables using Metropolitan furnished termination kits
- Contract structured as a pilot project

Change Order Authority
CRA 6.9kV Motor
Power Cables
Termination

Change Order Authority Limits

- Change order authority determined by Admin. Code (Section 8123)
- GM authority to execute change orders is the larger of:
 - 5% of the original contract amount
 - \$250,000
- Board approves any increase in authority
- Change Order Authority – CRA termination of motor power cables project
 - Remaining work for units 1 to 5 exceeds current change order authority



Application of heat to the termination kit



Switch house cable installation

Current Contract Status

- February 2023 – 24 cable terminations completed by W.A. Chester LLC at Hinds Plant
 - 23 terminations successful (96% success rate)
- Upcoming Work
 - October 2023 – Terminate 24 cables at Eagle Mountain Plant
 - January to March 2024 – Repair approx. 16 cable terminations at all five CRA pump plants

Change Order Authority Increase

Contract No. 2061

- Original contract value: \$250,000
- Current change order authority: \$250,000
- Change orders executed to date: \$80,000
- Amount expended to date under contract \$330,000

Requested Action





- Increase change order authority by: \$950,000
- New change order authority: \$1,200,000

CRA 6.9kV Motor Power Cables Termination

Alternatives

- Alternatives to execute the work
 - Train additional Metropolitan staff to perform the terminations
 - Hire temporary employees to perform the terminations
 - Re-advertise to get competitive bids for work
- Selected Alternative
 - Use current contractor to complete change order work
 - Work completed in a timely & cost-effective manner
 - Takes advantage of reduced CRA flows in 2023/2024

Project Schedule

Project	2023	2024
CRA 6.9 kV Motor Power Cables Termination		
 Construction	 Board Action	 Completion

CRA 6.9kV Motor Power Cables Termination

Approach for Units 6-9

- Evaluate performance of cable termination of Units 1-5 over two summers
- Advertise contract for Units 6-9 in late 2024
 - Pull out old cables/pull in new cables
 - Install temporary cables to allow operation of units
- Issue specialty contract for cable terminations
 - Prequalified contractor
 - Likely a time & materials contract

Board Options

- Option #1
Authorize an increase of \$950,000 in change order authority for the contract with W.A. Chester LLC to terminate 6.9 kV power cables at all five CRA pumping plants.
- Option #2
Do not authorize an increase in change order authority.

Staff Recommendation

- Option #1





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

7/11/2023 Board Meeting

7-2

Subject

Authorize an increase of \$2 million to an agreement with Jacobs Engineering Group Inc. for a new not-to-exceed total amount of \$2.65 million for final design of the first stage of security upgrades for the Colorado River Aqueduct Region; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Metropolitan safeguards critical infrastructure and personnel through a multi-layered combination of physical barriers and security systems, contracted security guard services, and employee awareness. A comprehensive assessment has identified the need to enhance existing security measures at the five Colorado River Aqueduct (CRA) pumping plants and the Camino Electrical Switching Station. The planned improvements are consistent with Metropolitan's latest security and technology standards for essential facilities. The work will be conducted in two stages. This action authorizes an amendment to an existing agreement for final design services for Stage 1 upgrades to the security systems at all five CRA pumping plants and the Camino Switching Station.

Details

Background

The CRA is a 242-mile-long conveyance system that transports water from the Colorado River to Lake Mathews. It consists of five pumping plants; 124 miles of tunnels, siphons, and reservoirs; 63 miles of canals; and 44 miles of cut-and-cover conduits. The aqueduct was constructed in the 1930s and was placed into service in 1941. Metropolitan's Camino Electrical Switching Station is located in a remote area approximately 25 miles west of Needles, California. The Camino Substation transmits power from Hoover Dam via two power lines; one power line extends to the Gene and Intake pumping plants, and the other line extends to Iron Mountain, Eagle Mountain, and Hinds pumping plants.

When the CRA desert facilities were constructed over 80 years ago, the desert region was undeveloped. Since then, significant development has taken place in the vicinity of the Metropolitan's desert facilities. In 2019, a comprehensive security assessment of the five CRA pumping plants and the Camino Electrical Switching Station was completed. The assessment resulted in numerous recommendations for security upgrades at these facilities.

Examples of the issues at each of the five CRA pumping plants include security fencing and entry checkpoints. Upgraded security entry checkpoints and enhanced perimeter control are needed at each of the pump plants to properly control ingress and egress and control unauthorized public access. Additionally, the pumping plants have limited video surveillance equipment; and existing card readers at plant entrances are outdated and near the end of their service life. Security upgrades were also recommended for the Camino Electrical Switching Station, as this facility is critical for the operation of the CRA system.

In February 2022, the Board authorized a consultant agreement for preliminary design to upgrade the security infrastructure in the CRA region. Preliminary design for the security improvements is complete, and staff recommends proceeding with final design in two stages. Stage 1, which is the subject of this action, includes design activities related to the installation of cameras, motion detectors, and card readers at the five pumping plants and the Camino Substation. Additionally, Stage 1 design work at the Iron Mountain Pumping Plant will

address upgrades of perimeter fencing with access gates at patrol routes; a permanent guard station at the plant's main entrance; and physical security measures, including facility signage, access control, and roadway improvements. Stage 2 activities will include the provision of similar physical security measures at the remaining four CRA pumping plants and the Camino Substation. The approach will prioritize replacement of digital security components in the CRA region, which are rapidly approaching the end of their useful life, address the physical risks at Iron Mountain Pumping Plant, and allow staff to incorporate lessons learned at the remaining pumping plants and the Camino Switching Station. Staff will return to the Board at a later date for final design of Stage 2 security improvements at the remaining five sites. Staff will also return to the Board as necessary to award construction contract(s) for the Stage 1 and Stage 2 security improvements.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with the action described herein, pending board authorization of the increase to the existing agreement described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). An expenditure of \$3.3 million is anticipated for the Stage 1 final design phase of this project. All costs will be incurred in the current biennium and have been previously authorized. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the CRA Reliability Program.

Stage 1 Security Upgrades for the CRA Region – Final Design

Planned security upgrades for all six sites include the installation of high-resolution cameras with 24/7 video recording capabilities, radar detectors with enhanced capability of land and aerial threat detection, and card readers for improved access control. In addition, Stage 1 design work will include physical security improvements at Iron Mountain Pumping Plant, such as upgraded perimeter fencing, crash-rated entry gates with controlled ingress and egress, permanent guard stations to accommodate around-the-clock staffing, LED lighting, remote speakers, and facility signage.

Planned final design activities will be conducted by a consultant as described below. Metropolitan staff will coordinate final design with the facility's users and provide consultant oversight and project management.

A total of \$3.3 million is required for this work. Allocated funds include \$2,000,000 for the final design activities by Jacobs Engineering Group Inc., as described below; \$15,000 for review of biological and cultural resources by Socal Bio Environmental LLC, under an existing agreement; \$50,000 for potholing services to confirm the location of existing electrical ductbanks; and \$75,000 for constructability review. The potholing services and constructability review will be performed by specialty firms under contracts planned to be executed under the General Manager's Administrative Code authority to award construction contracts of \$250,000 or less. Allocated funds for Metropolitan staff activities include \$273,000 for technical oversight to review consultant's work, record drawing updates for consultant use, and constructability review activities; \$417,000 for survey and mapping, environmental documentation, project management and project controls; and \$470,000 for remaining budget. **Attachment 1** provides the allocation of the required funds.

Final design for Stage 1 work will be performed by Jacobs Engineering Group Inc. Engineering Services' performance metric target range for final design with construction more than \$3 million is 9 to 12 percent. For this project, the performance metric goal for final design is 11.7 percent of the total construction cost. The total estimated cost for design is \$2.273 million, which includes \$2 million for Jacobs Engineering and \$273,000 for Metropolitan staff. The estimated cost of construction for Stage 1 of this project is anticipated to range from \$19.5 million to \$21.5 million.

Engineering Services (Jacobs Engineering Group Inc.) – Amendment to Agreement

Jacobs Engineering will provide final design services under an existing board-authorized agreement for the Stage 1 security upgrades. The planned final design activities for Jacobs Engineering will include:

- (1) development of final design drawings and specifications; (2) technical assistance through bidding;
- (3) participation in a constructability review; and (4) preparation of an engineer's cost estimate.

Jacobs Engineering was originally prequalified to provide engineering support services via Request for Qualifications 1215 and completed the preliminary design for security upgrades in the CRA region under an existing agreement.

This action authorizes an increase of \$2 million to the existing agreement with Jacobs Engineering for a new not-to-exceed total of \$2.65 million to perform final design. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 10 percent. Jacobs Engineering has agreed to meet this level of participation. The planned subconsultants for this work are listed in **Attachment 2**.

Alternatives Considered

Alternatives considered for completing final design of the Stage 1 security upgrades for the CRA Region included assessing the availability and capability of in-house Metropolitan staff to conduct this work. Metropolitan's staffing strategy for utilizing consultants and in-house Metropolitan staff has been: (1) to assess current work assignments for in-house staff to determine the potential availability of staff to conduct this work; and (2) for long-term rehabilitation projects, when resource needs exceed available in-house staffing or require specialized technical expertise.

After assessing the current workload for in-house staff, the relative priority of this project, and the specialized technical expertise required, staff recommends the use of a professional services agreement to complete the subject project. This approach will allow for the completion of not only this program, but also other budgeted capital projects within their current schedules.

Summary

This action authorizes an increase of \$2 million to an existing agreement with Jacobs Engineering for a new not-to-exceed amount of \$2.65 million for final design of Stage 1 security upgrades at all five CRA pumping plants and the Camino Electrical Switching Station, along with final design of additional perimeter security improvements at Iron Mountain Pumping Plant. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the List of Subconsultants, and **Attachment 3** for the Location Map.

Project Milestone

March 2024 – Completion of final design for Stage 1 security upgrades for the CRA region

Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 52701, dated February 8, 2022, the Board authorized an agreement with Jacobs Engineering Group Inc. for preliminary design to improve physical security at the CRA pumping plants.

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/2023 and 2023/2024.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves only feasibility or planning studies for possible future actions which the Board has not approved, adopted or funded (Section 15262 of the State CEQA Guidelines). In addition, the proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines because the proposed action involves basic data collection and research activities which do not result in a serious or major disturbance to an environmental resource, which may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded (Class 6, Section 15306 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Authorize an increase of \$2 million to an existing agreement with Jacobs Engineering Group Inc., for a new not-to-exceed amount of \$2.65 million for final design of the first stage of security upgrades at all five CRA pumping plants and the Camino Electrical Switching Station.

Fiscal Impact: Expenditure of \$3.3 million in capital funds. All funds will be incurred in the current biennium and have been previously appropriated.

Business Analysis: This option will bring the CRA region facilities' security features up to the latest industry and Metropolitan standards.

Option #2

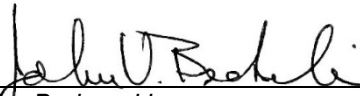
Do not proceed with the project at this time.

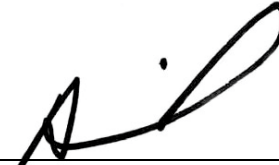
Fiscal Impact: None

Business Analysis: This option would forego an opportunity to enhance the site security in the CRA region and improve protection for critical infrastructure and personnel.

Staff Recommendation

Option #1

	6/20/2023
_____ John Bednarski Manager/Chief Engineer Engineering Services	Date

	6/21/2023
_____ Adel Hagekhalil General Manager	Date

Attachment 1 – Allocation of Funds

Attachment 2 – Listing of Subconsultants

Attachment 3 – Location Map

Ref# es12695499

Allocation of Funds for Stage 1 Security Upgrades for the CRA Region

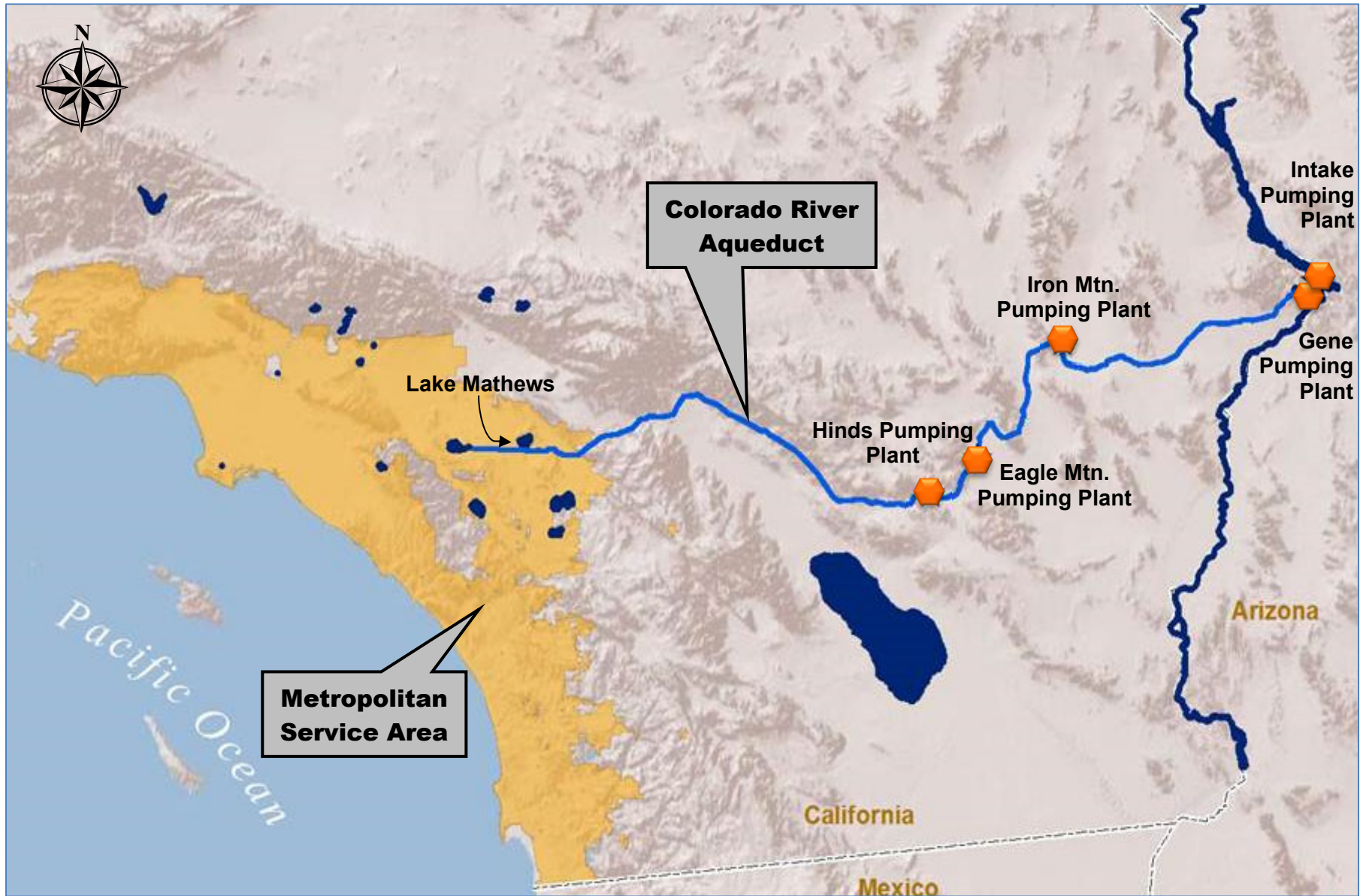
	Current Board Action (July 2023)
	<hr/>
Labor	
Investigations & Conceptual Design	\$ -
Final Design	273,000
Owner Costs (Program mgmt., envir. documentation)	417,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Jacobs Engineering Group, Inc.	2,000,000
Socal Bio Environmental, LLC	15,000
Geotechnical Services Consultant	50,000
Constructability Consultant	75,000
Right-of-Way	-
Equipment Use	-
Contracts	-
Remaining Budget	470,000
Total	<u><u>\$ 3,300,000</u></u>

The total amount expended to date for Security Upgrades for the CRA Region is approximately \$824,000. The total estimated cost to complete the Security Upgrades for the CRA Region, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from \$40 million to \$55 million.

The Metropolitan Water District of Southern California
Subconsultants for Agreement with Jacobs Engineering Group Inc.

Subconsultant and Location	Service Category; Specialty
Gillis and Panichapan Architects Inc. Costa Mesa, California	Architectural Design
DRP Engineering Inc. Alhambra, California	Electrical and Instrumentation/Controls CAD Design

Location Map





Engineering, Operations, & Technology Committee

Colorado River Aqueduct Region Security Improvements

Item 7-2

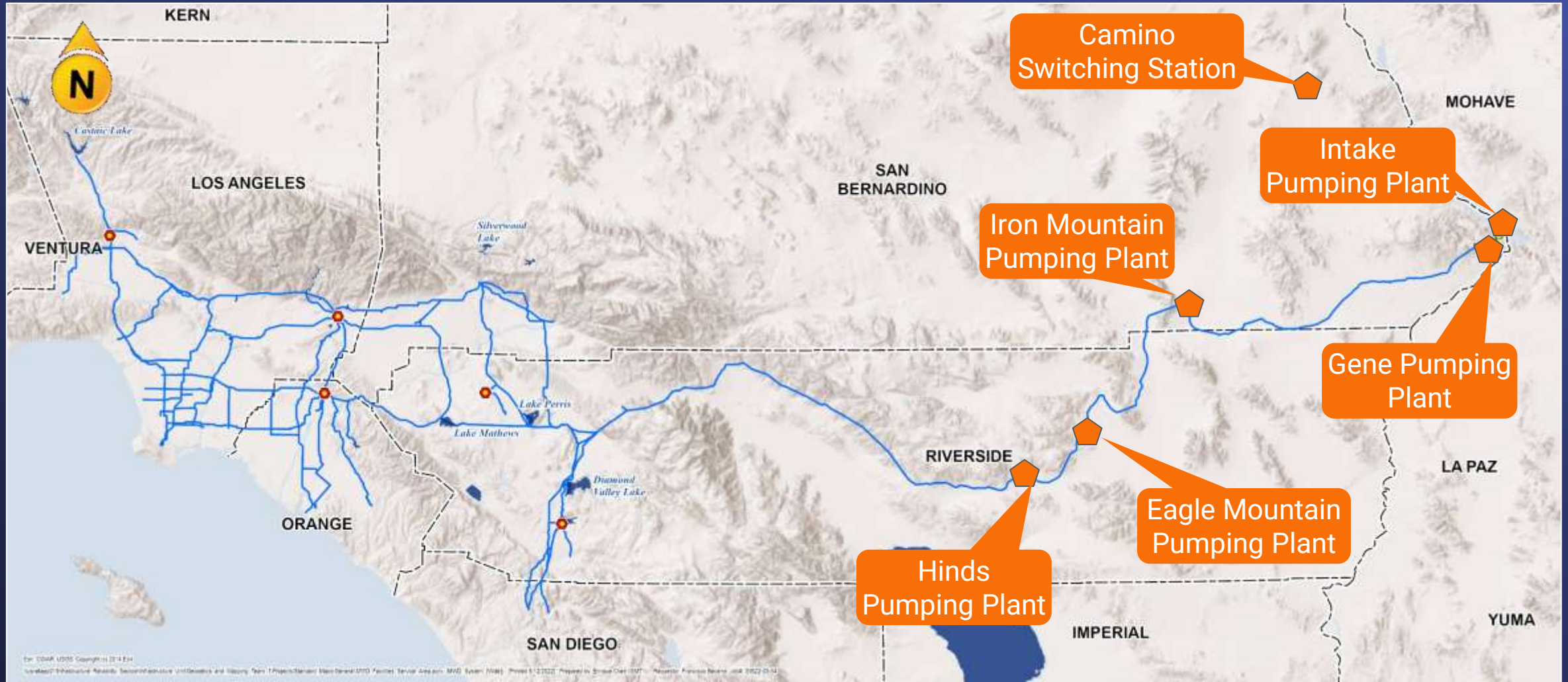
July 10, 2023

CRA Region Security Improvements

Current Action

- Authorize an increase of \$2 million to an agreement with Jacobs Engineering Group Inc. for new not-to-exceed total amount of \$2.65 million for final design of the first stage of security upgrades for the Colorado River Aqueduct Region

Project Location



Background

- Desert facilities constructed in remote locations over 80 years ago
 - Existing security infrastructure needs to be upgraded at six facilities
- Recommended Security Improvements
 - Enhance entry checkpoints & perimeter security at each facility
 - Upgrade security cameras & card readers to meet current security standards



Iron Mountain Pumping Plant



Camino Electrical Switching Station

Approach to Implementation

- Conduct final design in 2 stages
- Stage 1 design activities
 - Installation of cameras, motion detectors & card readers at the 5 pumping plants & Camino Switching Station
 - Improvements to physical security measures at Iron Mtn. pumping plant
 - Perimeter fencing, entry checkpoint, guard station, roadway improvements & signage
- Stage 2 design activities
 - Physical security measures at remaining four pumping plants

CRA Region Security Improvements

Alternatives Considered

- Utilize in-house Metropolitan staff to conduct final design activities
 - Limited availability of staff to conduct work
 - Work requires specialized technical expertise
- Selected Alternative – Use consultant to develop final design
 - Consultant retained for security expertise
 - Metropolitan staff to provide technical input

Jacobs Engineering Group Inc. Agreement



Guard Station (Example)



Crash-rated Gate (Example)

- Prequalified under RFQ 1215
 - Completed preliminary design
- Scope of Work:
 - Develop final design drawings & specifications
 - Prepare cost estimate
 - Permitting & bidding support
- Amendment amount: \$2,000,000
- NTE amount: \$2,650,000
- SBE participation level: 10%

CRA Region Security Improvements

Metropolitan – Scope of Work

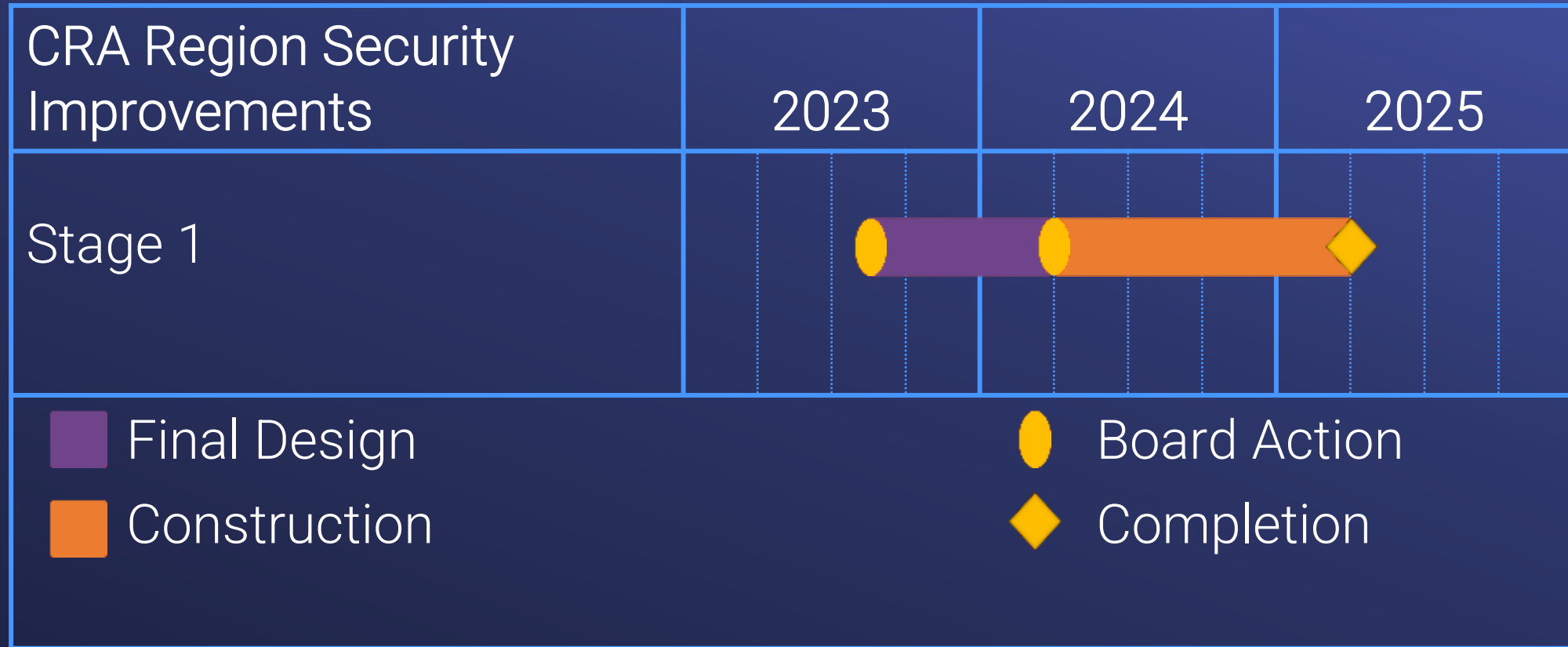
- Perform site survey & mapping
- Provide technical input & review consultant design work
- Conduct constructability review & support activities
- Perform project management & environmental assessment oversight

Allocation of Funds

CRA Region Security Improvements

Metropolitan Labor	
Final Design	\$ 273,000
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	417,000
Professional/Technical Services	
Jacobs Engineering Group Inc.	2,000,000
SoCal Bio Environmental LLC	15,000
Geotechnical Services Consultant	50,000
Constructability Consultant	75,000
Remaining Budget	470,000
<hr/>	
	Total \$ 3,300,000

Project Schedule



Board Options

- Option #1

Authorize an increase of \$2 million to an existing agreement with Jacobs Engineering Group Inc., for a new not-to-exceed amount of \$2.65 million for final design of the first stage of security upgrades at all five CRA pumping plants and the Camino Electrical Switching Station.

- Option #2

Do not proceed with the project at this time.

Staff Recommendation

- Option #1





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

7/11/2023 Board Meeting

7-3

Subject

Award a \$452,886 contract to Best Contracting Services Inc. for replacement of the administration and warehouse building roofs at the Lake Mathews site; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Metropolitan regularly maintains and repairs the roofs at its facilities to ensure that the buildings' interior workspaces remain in safe conditions during inclement weather and are suitable for their intended functions. The administration and warehouse buildings at the Lake Mathews Reservoir site have been in operation since the 1970s, and the original metal roofing system at each of these buildings has deteriorated and needs to be replaced. This action awards a construction contract to replace the existing roofing systems of the administration and warehouse buildings at the Lake Mathews site.

Details

Background

The Lake Mathews site serves as the central location for Metropolitan force construction staff, equipment, and supplies. These resources provide construction and maintenance capabilities for projects requiring rapid response or specialized expertise throughout Metropolitan's service area. Several buildings support these efforts. The administration building provides essential offices, breakroom, and restrooms, while the warehouse building provides central storage of materials and equipment to support Metropolitan's construction activities. The current administration and warehouse buildings have been in operation since the 1970s. The existing metal roofing systems, installed on each building at the time of their original construction, have exceeded their service life and show significant signs of deterioration and leakage. Staff regularly makes repairs to the roofs of each building following weather events. Staff recommends replacement of the roofs on these two buildings.

Final design to replace both building roofing systems is now complete, and staff recommends moving forward with award of a construction contract at this time.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager authorized staff to proceed with the roof replacement of the administration and warehouse buildings at the Lake Mathews Reservoir site, pending board award of the construction contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates an expenditure of \$770,000 in capital funds. All expenditures will be incurred in the current biennium and have been previously authorized. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP Evaluation Team to be included in the System Reliability Program.

Lake Mathews Administration and Warehouse Building Roof Replacement – Construction

The scope of the construction contract consists of the replacement of approximately 8,000 square feet of roofing material on the administration and warehouse buildings combined. The work includes removing the existing

metal roofing system, installing a new metal roofing system, and replacing ventilators. Metropolitan staff will relocate roof-mounted equipment and provide support during construction.

A total of \$770,000 has been budgeted for this work. In addition to the amount of the contract described below, other funds to be allocated include \$64,000 for construction inspection; \$50,000 for Metropolitan construction activities as described above; \$63,000 for submittals review, technical support during construction, responding to requests for information, and preparation of record drawings; \$71,000 for contract administration, environmental monitoring, and project management; and \$69,114 for the remaining budget.

Attachment 1 provides the allocation of the required funds. The total estimated cost of the Administration and Warehouse Building Roof Replacement project, including the amount allocated to date and funds allocated for the work described in this action, is \$1,010,000.

Award of Construction Contract (Best Contracting Services Inc.)

Specification No. 2051 to replace the administration and warehouse building roofing systems at Lake Mathews was advertised for bids on May 5, 2023. As shown in **Attachment 2**, three bids were received and opened on June 8, 2023. The low bid from Best Contracting Services Inc. in the amount of \$452,886 complies with the requirements of the specifications. The other two bids were \$510,000 and \$883,000, while the engineer's estimate for this project was \$450,000. For this contract, Metropolitan established a Small Business Enterprise participation level of at least 25 percent of the bid amount. Best Contracting Services Inc. has agreed to meet this level of participation. The subcontractors for this contract are listed in **Attachment 3**.

This action awards a \$452,886 contract to Best Contracting Services Inc. to replace the roofing systems on the administration and warehouse buildings at the Lake Mathews Reservoir site. As described above, Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric target range for construction management and inspection of projects with construction less than \$3 million is 12 to 15 percent. For this project, the performance metric goal for inspection is 12.7 percent of the total construction cost (\$502,886), which includes the construction contract (\$452,886) and Metropolitan construction (\$50,000).

Alternatives Considered

Staff considered continuing to make temporary repairs to portions of the roofs where leakage was observed. However, past repairs have not prevented the development of new leaks in subsequent rainy seasons. The recurrence of leaks is an indication that the nearly 50-year-old roof systems are beyond their service life. The current approach replaces the entire roof systems in order to maintain long-term operational reliability and provide the best value to Metropolitan.

Summary

This action awards a \$452,886 contract to Best Contracting Services Inc. to replace the roofing systems of the administration and warehouse buildings at the Lake Mathews Reservoir site. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the listing of Subcontractors for Low Bidder, and **Attachment 4** for the Location Map.

Project Milestone

March 2024 – Completion of construction

Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 8140: Competitive Procurement

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/23 and 2023/24.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action involves repair, maintenance, permitting, leasing, or minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use, or replacement or reconstruction of existing structures and facilities that will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structures replaced. Accordingly, the proposed action qualifies for Class 1 and Class 2 (Sections 15301 and 15302 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Award a \$452,886 contract to Best Contracting Services Inc. to replace the roofs of the administration and warehouse buildings at the Lake Mathews site.

Fiscal Impact: Expenditure of \$770,000 in capital funds. All expenditures will be incurred in the current biennium and have been previously authorized.

Business Analysis: This option will protect Metropolitan's assets and sustain the operations of Lake Mathews site facilities.

Option #2

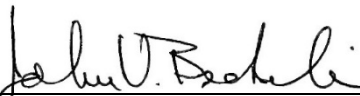

Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: Under this option, staff would continue with temporary localized repairs to the existing roof and interior damage as needed prior and subsequent to inclement weather events, which may lead to increased annual repair costs.

Staff Recommendation

Option #1

	6/16/2023
_____ John V. Bednarski Manager/Chief Engineer Engineering Services	Date
	6/27/2023
_____ Adel Hagekhalil General Manager	Date

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Subcontractors for Low Bidder

Attachment 4 – Location Map

Ref# es12695334

Allocation of Funds for Lake Mathews Administration and Warehouse Building Roof Replacement

	Current Board Action (July 2023)
	<hr/>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	71,000
Submittals Review & Record Drwgs.	63,000
Construction Inspection & Support	64,000
Metropolitan Force Construction	50,000
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
Best Contracting Services Inc.	452,886
Remaining Budget	69,114
Total	<u><u>\$ 770,000</u></u>

The total amount expended to date for the roof replacements of the administration and warehouse buildings at the Lake Mathews site is approximately \$240,000. The total estimated cost to complete the roof replacements, including the amount appropriated to date and funds allocated for the work described in this action, is \$1,010,000.

The Metropolitan Water District of Southern California

Abstract of Bids Received on June 8, 2023, at 2:00 P.M.

Specifications No. 2051

Lake Mathews Administration and Warehouse Roof Replacement

The scope of work consists of replacing approximately 8,000 square feet of roofing material on the Lake Mathews administration and warehouse buildings, which includes removal of the existing metal roofing system and installation of a new metal roofing system, insulation, and ventilators.

Engineer’s estimate: \$450,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
Best Contracting Services Inc. Gardena, CA	\$452,886	\$119,222	26.3%	Yes
AME Builders Inc. Pomona, CA	\$510,100	-	-	-
Facility Builders & Erectors Inc. Anaheim, CA	\$883,476	-	-	-

¹ Small Business Enterprise (SBE) participation level established at 25% for this contract.

The Metropolitan Water District of Southern California
Subcontractors for Low Bidder
Specifications No. 2051
Lake Mathews Administration and Warehouse Building Roof Replacement

Low bidder: Best Contracting Services Inc.

Subcontractor	Service Category; Specialty
Klondike Roof Construction Service Ontario, CA	Demolition/Abatement
G & C Equipment Corporation Gardena, CA	Roofing Material Supplier

Distribution System





Engineering, Operations, & Technology Committee

Lake Mathews Administration and Warehouse Building Roof Replacement

Item 7-3

July 10, 2023

Lake Mathews
Administration
and Warehouse
Roof Replacement

Current Action

- Award a \$452,886 contract to Best Contracting Services Inc. for replacement of the administration and warehouse building roofs at the Lake Mathews site

Distribution System

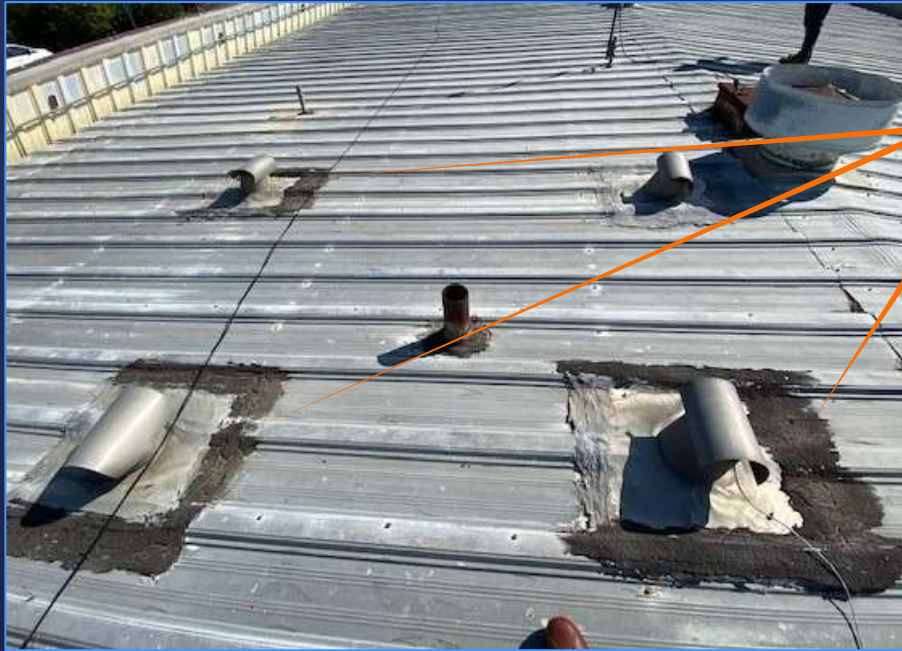


Lake Mathews Site



Background

- Lake Mathews is the central location for Metropolitan's force construction staff, equipment, & materials to support construction activities
- Metal roofing systems nearly 50 years old
- Roof deterioration & leakage observed



Deteriorating Metal Roof & Temporary Roof Repairs

Temporary
Localized
Repairs



Deteriorating Metal Roof & Temporary Roof Repairs

Lake Mathews
Administration
and Warehouse
Roof Replacement

Alternatives Considered

- Perform localized roof repairs when leakage occurs
 - Past repairs have not prevented new leaks in subsequent inclement weather events
- Selected alternative
 - Replace the entire roof on the two buildings to maintain long-term operational reliability

Scope of Work

- Contractor
 - Replace approximately 8,000 sq. ft. of existing metal roofing system
 - Remove & replace ventilators
- Metropolitan
 - Relocate roof-mounted equipment
 - Provide construction inspection, technical review of submittals, & project management



Remove & Replace Warehouse Building
Metal Roof & Ventilators



Metropolitan Force Construction

Bid Results

Specifications No. 2051

Bids Received	June 8, 2023
No. of Bidders	3
Lowest Responsible Bidder	Best Contracting Services Inc.
Low Bid	\$452,886
Range of Other Bids	\$510,000 to \$883,000
Engineer's Estimate	\$450,000
SBE Participation*	26.3%

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

Allocation of Funds

Lake Mathews Administration & Warehouse Roof Replacement

Metropolitan Labor

Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	\$ 71,000
Construction Inspection & Support	64,000
Construction	50,000
Submittals Review, Tech. Support, Record Dwgs.	63,000

Contracts

Best Contracting Services Inc.	452,886
--------------------------------	---------

Remaining Budget	69,114
------------------	--------

Total	\$ 770,000
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Project Schedule



Board Options

- Option #1

Award a \$452,886 contract to Best Contracting Services Inc. to replace the roofs of the administration and warehouse buildings at the Lake Mathews site.

- Option #2

Do not proceed with the project at this time.

Staff Recommendation

- Option #1





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

7/11/2023 Board Meeting

7-4

Subject

Award a \$349,527.80 procurement contract to TechnoFlo Systems Inc. for 50 magnetic flowmeters to comply with surface water diversion regulations on Metropolitan's Delta Island properties; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Surface water is diverted for agricultural use on several islands that Metropolitan owns in the Sacramento-San Joaquin Bay Delta. California Senate Bill 88 requires these surface diversions to be accurately measured. This action will award a \$349,527.80 procurement contract to purchase 50 magnetic flowmeters for the surface water diversion points on four Delta Island properties. Installation of this equipment, under a future contract, will bring Metropolitan into full compliance with surface water diversion measurement regulations.

Details

Background

In 2016, Metropolitan purchased five islands in the Sacramento-San Joaquin Bay Delta (Delta). Metropolitan currently owns Bouldin Island, Bacon Island, Webb Tract, and a portion of Holland Tract. These islands are currently leased for agricultural use.

At numerous locations along the Delta Islands' perimeter, pipeline siphons divert water to the islands' interior for various uses. California Senate Bill 88 (CA SB-88) requires water rights holders who divert ten acre-feet of water per year or more under a permit or license to install and maintain a device or employ a method capable of measuring the rate of direct surface water diversion, rate of collection to storage, and rate of withdrawal or release from storage. As owner of the Delta properties, Metropolitan must comply with this regulation.

From 2016 through 2021, Metropolitan participated in a meter device experimentation phase of this project under the Office of the Delta Watermaster Consortium with other Delta water diverters. For five years, Metropolitan, the four local Reclamation Districts overseeing the Delta Islands, and the Office of the Delta Watermaster Consortium tested and experimented with various flow meters for accuracy and reliable measurements of flows within the gravity siphons. Through this work, it was determined that TechnoFlo Systems Inc. (TechnoFlo) is the only vendor that supplies the meters approved by the Office of the Delta Watermaster for accurate flow measurement under siphon gravity flow conditions. TechnoFlo's pricing includes free technical support, troubleshooting, and low-cost replacement parts.

Metropolitan received approval from the Office of the Delta Watermaster and is implementing a 5-year plan for a Phased Measurement Implementation (PPMI) to install flow measurement devices at unmeasured active diversion points on the Delta Island properties. Four phases have previously been completed under the PPMI, and approximately 38 flow meters have been installed. Phase 5, the project's final phase, will install an additional 50 flow meter devices on the remaining siphons on the Delta properties, bringing Metropolitan into full compliance with CA SB-88 regulations. The meters supplied by TechnoFlo under this board action for Phase 5 are the same type of meter that was installed under Phases 3 and 4 of the project.

Since only a single flow meter supplier is approved by the Office of the Delta Watermaster, a sole source procurement contract is recommended to be awarded to TechnoFlo. Metropolitan Administrative Code

Section 8140(1)d states the competitive bidding requirements may be waived if competitive procurement could not produce an advantage or it is impracticable to obtain what is required subject to the competitive procurement provisions because of the unique, exploratory, or experimental nature of the work. A sole source memorandum has been certified by the General Manager's designee for the contract and signed by Metropolitan Executive Management. Staff recommends proceeding with the meter procurement for Phase 5 at this time.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager authorized staff to proceed with Delta Infrastructure Phase 5 project, pending board approval of the contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates an expenditure of \$516,000 in capital funds. All project expenditures will be incurred in the current biennium and have been previously authorized. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP Evaluation Team to be included in the System Flexibility/Supply Reliability Program.

Delta Properties Infrastructure Improvements Phase 5 - Procurement

Planned activities include procurement of the new flow meters. Metropolitan staff will review submittals from the vendor and provide technical support, administer the procurement contract, and provide project management. Metropolitan staff will return to the Board at a later date to award a contract to install the flowmeters.

A total of \$516,000 has been budgeted for this work. In addition to the amount of the contract described below, other funds to be allocated include \$61,000 for contract administration, technical support, and project management; \$105,000 for procurement of flow meter telemetry (to be provided by separate vendor); and \$472.20 in remaining budget. **Attachment 1** provides the allocation of the required funds. The total estimated cost of the project, including the amount allocated to date and funds allocated for the work described in this action, is approximately \$900,000 to \$1.2 million.

Award of Procurement Contract (TechnoFlo)

This action awards a sole source procurement contract to TechnoFlo in the amount of \$349,527.80 to supply 50 flow meters. TechnoFlo is the only vendor that can supply the needed flow meters to comply with current surface water diversion regulations as approved by the Office of the Delta Watermaster. As a procurement contract, there are no subcontracting opportunities.

Alternatives Considered

Metropolitan worked with the Delta Measurement Experimentation Consortium (Consortium), the Reclamation Districts (RD), and RD Engineers in testing various alternative water measuring devices on Delta agricultural siphons on its four islands/tracts. Metropolitan tested various equipment, including different meter types, power sources, data loggers, water level and internal pressure sensors, telemetry communication devices, installation approaches, security/protection fencing, and maintenance techniques.

The equipment was tested for accuracy, ease of installation, operational compatibility, maintenance issues, power considerations, and other matters essential to the certification of each flow device. A total of 22 flow meters from nine different manufacturers were tested. TechnoFlo was the only meter supplier approved by the Office of the Delta Watermaster to meet the regulatory requirements of Senate Bill CA SB-88 for fixed meter installations. The recommended alternative will bring Metropolitan into compliance with the regulations.

Summary

This action awards a \$349,527.80 procurement contract to TechnoFlo for the procurement of 50 flow meters for the Delta Islands. See **Attachment 1** for the Allocation of Funds and **Attachment 2** for the Location Map.

Project Milestone

October 2023 – Delivery of flow meters and components

Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

Metropolitan Water District Administrative Code Section 8140(1)d: Sole Source Procurement

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/2023 and 2023/2024.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. In particular, the proposed action consists of procurement and modification of existing public facilities consisting of the future installation of meters with negligible or no expansion of existing or former use and no possibility of significantly impacting the physical environment. Accordingly, this proposed action qualifies as a Class 1 Categorical Exemption (Section 15301 of the State CEQA Guidelines).

CEQA determination for Option #1:

None required

Board Options

Option #1

Award a \$349,527.80 procurement contract to TechnoFlo Systems Inc. for 50 flow meters to comply with surface water diversion regulations on Metropolitan’s Delta Island properties.

Fiscal Impact: Expenditure of \$516,000 in capital funds. All expenditures will be incurred in the current biennium and have been previously authorized.

Business Analysis: This option is needed to meet current surface water diversion regulations.

Option #2

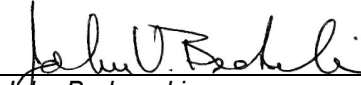
Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: This option will forgo an opportunity to bring Metropolitan into compliance with current surface water diversion regulations.

Staff Recommendation

Option # 1



John Bednarski
Manager/Chief Engineer
Engineering Services

6/16/2023
Date



Adel Hagekhalil
General Manager

6/27/2023
Date

Attachment 1 – Allocation of Funds

Attachment 2 – Location Map

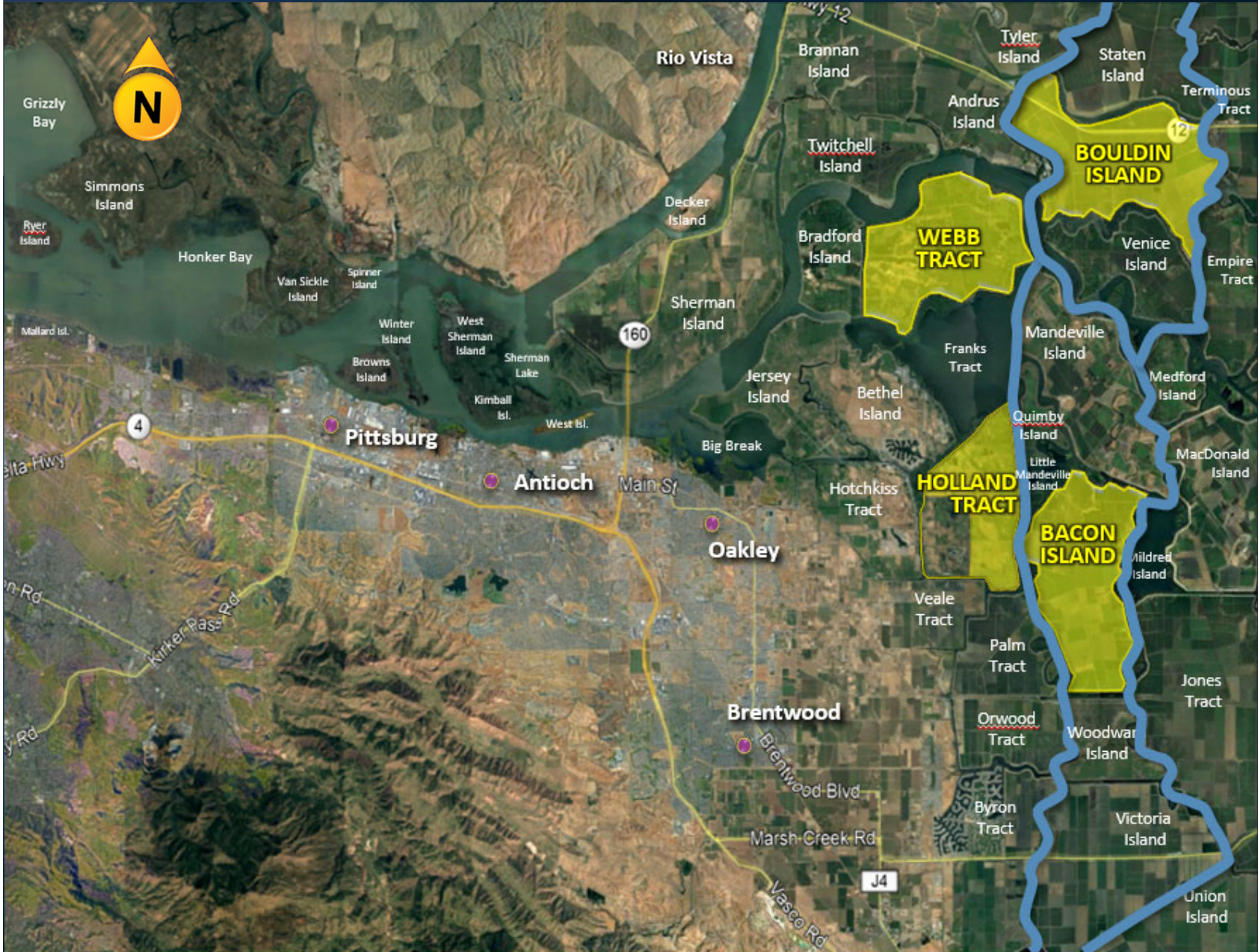
Ref# es12691191

Allocation of Funds for Delta Properties Infrastructure Improvements

	Current Board Action (Jul. 2023)
	<hr/>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., contract admin.)	61,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	105,000
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
TechnoFlo Systems Inc.	349,527.80
Remaining Budget	472.20
Total	<u><u>\$ 516,000</u></u>

The total amount expended to date on the Delta Properties Infrastructure Improvements is approximately \$75,000. The total estimated cost to complete the installation of the meters, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from \$900,000 to \$1.2 million.

Location Map





Engineering, Operations, & Technology Committee

Delta Infrastructure Improvements

Item 7-4

July 10, 2023

Delta Infrastructure Improvements

Current Action

- Award a \$349,527.80 procurement contract to TechnoFlo Systems Inc. for 50 magnetic flowmeters to comply with surface water diversion regulations on Metropolitan's Delta Island properties

Delta Islands

Delta Infrastructure Improvements

- 2016 purchase
- 31 sq. mi.; 20,400 acres
- Bouldin/Bacon Islands
- Webb/Holland Tracts

July 10, 2023



Delta Infrastructure Improvements

Background

- California Senate Bill 88
- SWRCB Process
 - Introduced (2015)
 - Regulation Adopted (Jan-2016)
 - Office of Administrative Law Approved (Mar-2016)
- Bill Requirements
 - Measure both diversions & water use at the prescribed frequency & accuracy
 - Annual measurement reporting to SWRCB

Delta Infrastructure Improvements

Project Background

- Meter Diversion Installation Phases
 - Experiment/Phases 1 – 4 (38 meters, 2016 – 2022)
 - Phase 5 – Remaining 50 meters (Subject to Board Action)
- Prequalified
 - TechnoFlo Systems Flange Magnetic (3” – 24” diameters)

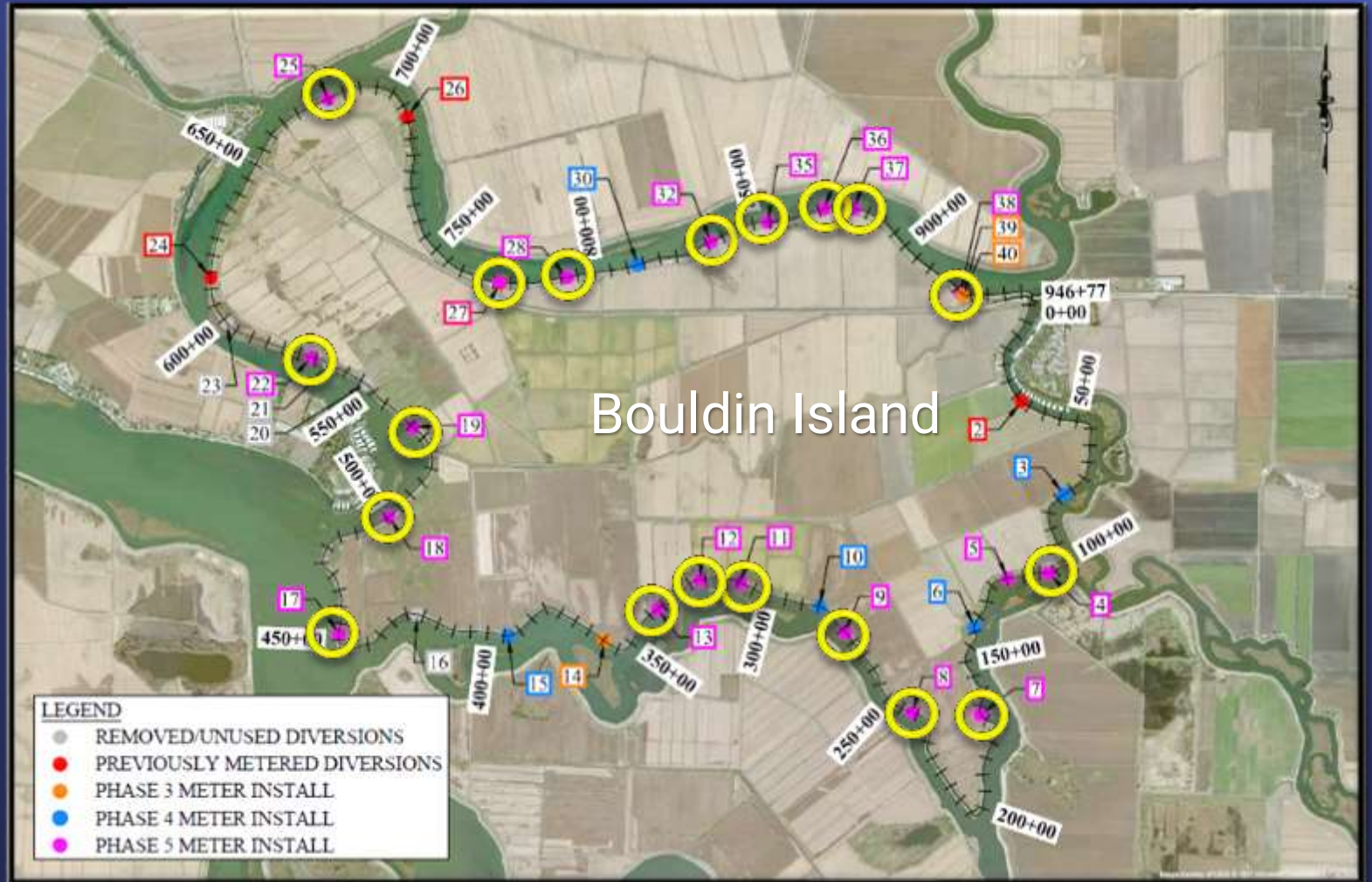
Bouldin Island

Delta Infrastructure Improvements

Siphon (water side)



Siphon (land side)



Phases

Experiment/ Phases 1 - 4

Phase 5

Meter Status

12 meters (Installation Completed)

19 meters (Subject Board Approval)

Bacon Island

Delta Infrastructure Improvements



Phases

Experiment/Phases 1 - 4

Phase 5

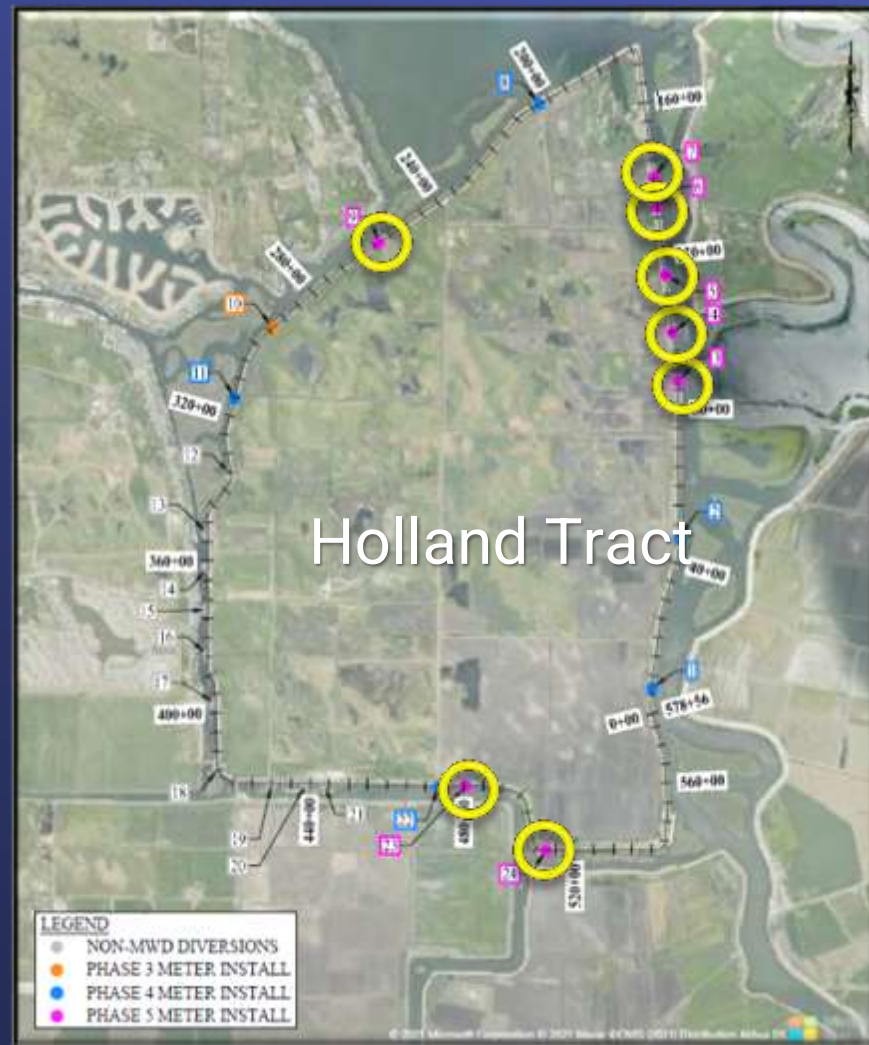
Meter Status

13 meters (Installation Completed)

18 meters (Subject Board Approval)

Holland Tract

Delta Infrastructure Improvements



Phases

Experiment/Phases 1 - 4

Phase 5

Meter Status

6 meter (Installation Completed)

8 meters (Subject Board Approval)

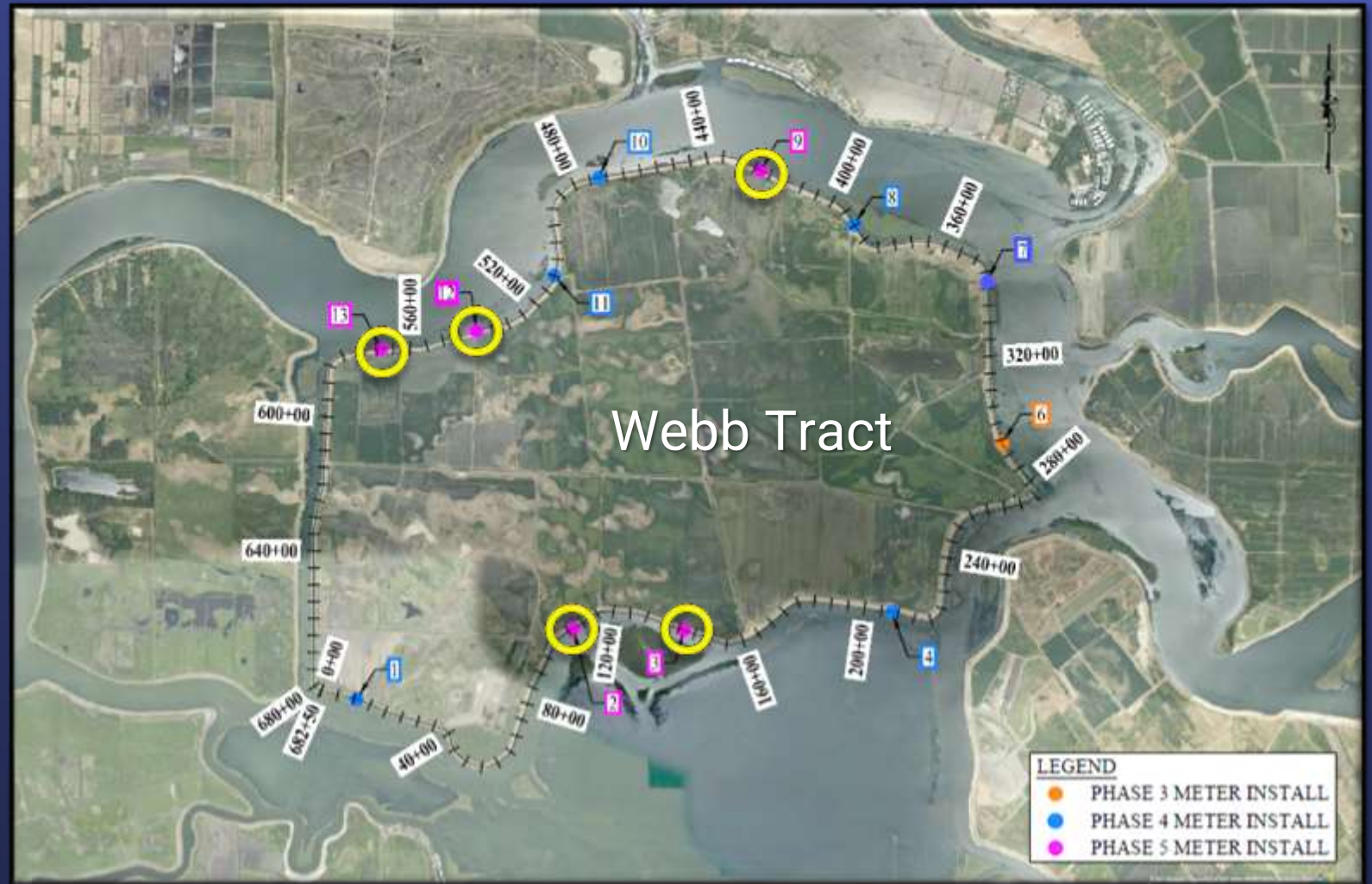
Webb Tract

Delta Infrastructure Improvements

Siphon (water side)



Siphon (land side)



Phases

Experiment/ Phases 1 - 4

Phase 5

Meter Status

7 meters installed

5 meters (Pending Board Approval)

Delta Infrastructure Improvements

Alternatives Considered

- Various equipment tested for accuracy, ease of installation/maintenance, & operational compatibility
- Including meter types, power sources, data loggers, sensors, telemetry communication devices
- 22 flow meters from 9 manufacturers tested
- Selected option – Award procurement contract to TechnoFlo Systems Inc.
 - Only supplier that meets regulatory requirements of Senate Bill CA SB-88
 - Brings Metropolitan into full compliance with current regulations

Delta Infrastructure Improvements



Flange Magnetic Meter
(typical)

Award of Procurement Contract

- Sole source procurement
- Negotiated with TechnoFlo Systems Inc.
- No advantage in competitive procurement
- Metropolitan Admin. Code Section 8140(1)(d)
- Contract amount: NTE \$349,527.80
- Consistent with unit price paid for earlier phases
- Includes technical support & troubleshooting

Allocation of Funds

Delta Infrastructure Improvements Phase 5

Procurement Contract – TechnoFlo Systems	\$349,527.80
Metropolitan Labor	
Program Mgmt. & Contract Admin.	\$ 61,000.00
Additional Materials - Telemetry	\$105,000.00
Remaining Budget	\$ 472.20
Total	\$ 516,000.00

Project Schedule



Board Options

- Option #1

Award a \$349,527.80 procurement contract to TechnoFlo Systems Inc. for 50 flow meters to comply with surface water diversion regulations on Metropolitan's Delta Island properties.

- Option #2

Do not proceed with the project at this time.

Staff Recommendation

- Option #1





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

7/11/2023 Board Meeting

8-1

Subject

Award a \$3,740,792 contract to M.S. Construction Management Group Inc. to replace a portion of the existing fire sprinkler system’s piping and network components at Metropolitan’s Headquarters Building; the General Manager has determined that the proposed action is exempt from CEQA

Executive Summary

Metropolitan regularly performs assessments of the Headquarters Building fire sprinkler system to ensure that the 25-year-old system provides reliable fire/life safety protection for all building occupants and facility infrastructure. A recently completed series of assessments determined that a large portion of the fire sprinkler piping in the building’s parking garage level P1 has deteriorated and needs to be replaced. This action awards a construction contract to replace a portion of the fire sprinkler piping network components in level P1 of the Headquarters Building.

Details

Background

Metropolitan’s Headquarters Building is a 522,682 square-foot, concrete-frame structure with a 12-story high-rise tower attached to a five-story wing. The Headquarters Building was constructed by a developer in the 1990s under a development agreement with Metropolitan. The business functions located in this building are critical for maintaining the continuity of Metropolitan’s day-to-day operations. The occupants of the Headquarters Building include Metropolitan staff and frequent visitors such as the Board of Directors and members of the public. The building has a fire sprinkler system which was part of the original building’s construction. The fire sprinkler system is an integral part of the fire/life safety protection system for building occupants and facility infrastructure. The fire sprinkler piping network distributes fire water to the building parking garage levels P1 and P2 and each of the stories on the high-rise tower and the wing.

The fire sprinkler system in the building is the type referred to as a “wet pipe” system which means that the piping system is continuously pressurized with water. This type of system is potentially susceptible to corrosion due to the continuous presence of stagnant water in the pipe. This potential corrosive condition is mitigated by conducting periodic piping inspections, performing drain tests to measure the sprinkler system’s water pressure, and early identification of corrosion indicators like plugged sprinklers and pinhole leaks.

Despite regular maintenance, the main fire sprinkler piping in level P1 developed pinhole-sized leaks that led to the replacement of approximately 350 feet of piping over the last several years. In August 2020, Metropolitan staff performed a comprehensive assessment of the building fire sprinkler system with the support of technical experts in the field. The inspections involved video capture of selected fire sprinkler piping mains and collecting and testing water samples and piping material. The investigation revealed significant corrosion of the fire sprinkler piping in level P1 due to iron-related bacteria in the fire-protection water. This condition, known as microbiologically-induced corrosion, causes the rapid development of pinhole-sized leaks and highly obstructive pipe interior biological growths. Other floors in the building were found to be in good condition with no significant leak risk at this time.

Final design to replace fire sprinkler piping network components in level P1 is now complete, and staff recommends moving forward with award of a construction contract at this time. The design of the replacement

piping and equipment will ensure longer life of the system due to improved design and maintenance capabilities. For example, the improved design capabilities include increased wall pipe thickness, additional air vents at high points to remove trapped air in the piping (reduces corrosion), and installation of additional isolation valves that will allow isolation/maintenance activities without draining the entire system. The scope of work for this project has been coordinated with the ongoing construction of the fire alarm and smoke control systems upgrades at the Headquarters Building.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with the replacement of fire sprinkler piping network components in level P1 of the Headquarters Building, pending board award of the contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates an expenditure of \$5.7 million in capital funds. All expenditures will be incurred in the current biennium and have been previously authorized. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the System Reliability Program.

Headquarters Building Fire Sprinkler Level P1 Replacement – Construction

The scope of the construction contract consists of replacement of approximately 2,300 linear feet of the existing horizontal fire sprinkler piping in level P1 of the Headquarters Building. This represents approximately 50 percent of the fire sprinkler piping on the P1 level. The work also includes replacement of ancillary isolation valves and fire hydrant connections, as well as installation of new control valves, air vents at high points of the system, and domestic water piping to the existing stairwell sump pumps. Metropolitan forces will perform equipment start-up and testing, fire alarm system integration support for isolation valves, and dewatering and refilling of fire water piping during replacement. Construction work will be performed during non-business hours to maintain Metropolitan's day-to-day operations at the Headquarters building. An enhanced level of on-site security services will be provided during outage of the fire sprinkler system.

A total of \$5.7 million is required for this work. In addition to the construction contract amount, allocated funds for professional services include: \$170,000 for enhanced security services, which will be provided by Securitas under an existing board-authorized agreement; and \$120,000 for technical support during construction by Carollo Engineers Inc. under an existing professional services agreement. Allocated funds for Metropolitan staff include: \$216,000 for Metropolitan construction, as described above; \$473,000 for construction management and inspection; \$206,000 for submittal review and record drawings preparation; \$378,000 for permitting, contract administration, and project management; and \$396,208 for the remaining budget.

Attachment 1 provides the allocation of the required funds. The total estimated cost to complete the project, including the amount allocated to date and funds allocated for the work described in this action, is \$6.46 million.

Award of Construction Contract (M.S. Construction Management Group Inc.)

Specification No. 2007 for replacement of fire sprinkler piping network components in level P1 of the Headquarters Building was advertised for bids on April 6, 2023. As shown in **Attachment 2**, two bids were received and opened on May 24, 2023. The low bid from M.S. Construction Management Group Inc., in the amount of \$3,740,792, complies with the requirements of the specifications. The second bid was \$6.66 million, while the engineer's estimate for this project was \$4.2 million. For this contract, Metropolitan established a Small Business Enterprise participation level of at least 25 percent of the bid amount. M.S. Construction Management Group Inc. has committed to meet this level of participation. The subcontractors for this contract are listed in **Attachment 3**.

This action awards a \$3,740,792 contract to M.S. Construction Management Group Inc. to replace existing fire sprinkler piping network components in level P1 of the Headquarters Building. As described above, Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric target range for construction management and inspection of projects with construction greater than \$3 million is 9 to 12 percent. For this project, the performance metric goal for inspection is 11.5 percent of the total construction

cost. The total cost of construction for this project is \$4,126,792, which includes the amount of the contract (\$3,740,792), Metropolitan construction activities (\$216,000), and on-site security services (\$170,000).

Alternatives Considered

During the design process, staff considered replacing portions of the fire sprinkler piping as failures occurred. However, this method is not cost-effective since the fire sprinkler piping is deteriorating at a rapid pace, and potential failures are unpredictable. The selected alternative involves replacing a portion of the existing fire sprinkler network components, including main piping in level P1, isolation valves and appurtenant equipment, along with installing new isolation valves and air vents to prevent the development of microbiologically-induced corrosion in the replaced piping. This approach was preferred as it will maintain the long-term operational reliability of the Headquarters' fire/life protection system and provide the best value to Metropolitan.

Summary

This action awards a \$3,740,792 contract to M.S. Construction Management Group Inc. to replace existing fire sprinkler piping network components in level P1 at Metropolitan's Headquarters Building. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the listing of Subcontractors for Low Bidder, and **Attachment 4** for the Location Map.

Project Milestone

June 2024 – Completion of construction

Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 8140: Competitive Procurement

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 21997, dated April 11, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/23 and 2023/24.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action involves repair, maintenance, permitting, leasing, or minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use, or replacement or reconstruction of existing structures and facilities that will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structures replaced. Accordingly, the proposed action qualifies for Class 1 and Class 2 (Sections 15301 and 15302 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Award a \$3,740,792 contract to M.S. Construction Management Group Inc. to replace a portion of the existing fire sprinkler system's piping and network components at Metropolitan's Headquarters Building.

Fiscal Impact: Expenditure of \$5.7 million in capital funds. All expenditures will be incurred in the current biennium and have been previously authorized.

Business Analysis: This option will enhance reliability of the fire/life safety protection system for building occupants and facility infrastructure at the Headquarters building.

Option #2

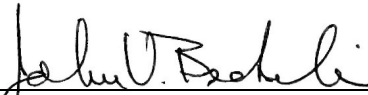
Do not proceed with the project at this time.


Fiscal Impact: None

Business Analysis: Under this option, staff would continue to replace portions of the fire sprinkler system as failures occur. This approach would lead to further deterioration of the fire sprinkler piping and potential building-wide shutdowns.

Staff Recommendation

Option #1

	6/16/2023
_____ John V. Bednarski Manager/Chief Engineer Engineering Services	Date

	6/27/2023
_____ Adel Hagekhalil General Manager	Date

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Subcontractors for Low Bidder

Attachment 4 – Location Map

Ref# es12684449

Allocation of Funds for Headquarters Building Fire Sprinkler Level P1 Replacement

	Current Board Action
	(Jul. 2023)
Labor	
Investigations & Conceptual Design	\$ -
Final Design	-
Owner Costs (Program mgmt., permitting, envir. monitoring)	378,000
Submittals Review & Record Drwgs.	206,000
Construction Inspection & Support	473,000
Metropolitan Force Construction	186,000
Materials & Incidentals	30,000
Professional/Technical Services	-
Carollo Engineers Inc.	120,000
Securitas	170,000
Right-of-Way	-
Equipment Use	-
Contracts	-
M.S. Construction Management Inc.	3,740,792
Remaining Budget	396,208
Total	\$ 5,700,000

The amount expended to date for the Headquarters Fire Sprinkler Level P1 Replacement is approximately \$760,000. The total estimated cost to complete this project, including the amount appropriated to date and funds allocated for the work described in this action, is \$6.46 million.

The Metropolitan Water District of Southern California

Abstract of Bids Received on May 24, 2023, at 2:00 P.M.

**Specifications No. 2007
Headquarters Building Fire Sprinkler Level P1 Replacement**

The work consists of replacement of existing horizontal fire main piping, ancillary isolation valves, and fire hydrant connections from the parking-level P1 fire pump room to the stairwell vertical risers piping connections; installation of new control valves, and 2-inch domestic water piping to the existing stairwell sump pumps; and coordination of fire watch to meet Los Angeles Fire Department requirements, as specified and shown on the drawings.

Engineer's estimate: \$4,200,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
M.S. Construction Management Group Inc. Dana Point, CA	\$3,740,792	\$1,952,220	52%	Yes
Pro-Craft Construction Inc. Redlands, CA	\$6,656,000	-	-	-

¹ Small Business Enterprise (SBE) participation level established at 25% for this contract.

The Metropolitan Water District of Southern California
Subcontractors for Low Bidder
Specifications No. 2007
Headquarters Building Fire Sprinkler Level P1 Replacement

Low bidder: M.S. Construction Management Group Inc.

Subcontractor	Service Category; Specialty
Streamline Fire Protection Inc. Signal Hill, CA	Fire Sprinkler System
K.E. Rodgers Inc. Redlands, CA	Plumbing
PMK Professional Inc. Irvine, CA	Electrical/Fire Alarm
Commerce Coating Services Torrance, CA	Painting/Coating

Distribution System



Headquarters Building



Engineering, Operations, & Technology Committee

Headquarters Building Fire Sprinkler Level P1 Replacement

Item 8-1

July 10, 2023

Headquarters Fire Sprinklers

Current Action

- Award a \$3,740,792 contract to M.S. Construction Management Group Inc. to replace a portion of the existing fire sprinkler system's piping and network components at Metropolitan's Headquarters Building

Headquarters Fire Sprinklers

Background

- Headquarters Building Fire Sprinkler System
 - Constructed in the 1990s
 - Provides fire/life safety protection for all building occupants & facility infrastructure
 - A large portion of the fire sprinkler piping in the building's parking garage level P1 has deteriorated



Background

- Wet Pipe fire sprinkler system is susceptible to microbiological-induced corrosion (MIC)
- Approx. 350 feet of piping in level P1 has been replaced after developing pinhole-sized leaks
- Other floors were found to be in good condition with no significant leak risk

Headquarters Fire Sprinklers



Pipe End Condition



Positive
Indication of
MIC



Externally-
presenting
corrosion
buildup on
existing fire
sprinkler
piping

Headquarters Fire Sprinklers

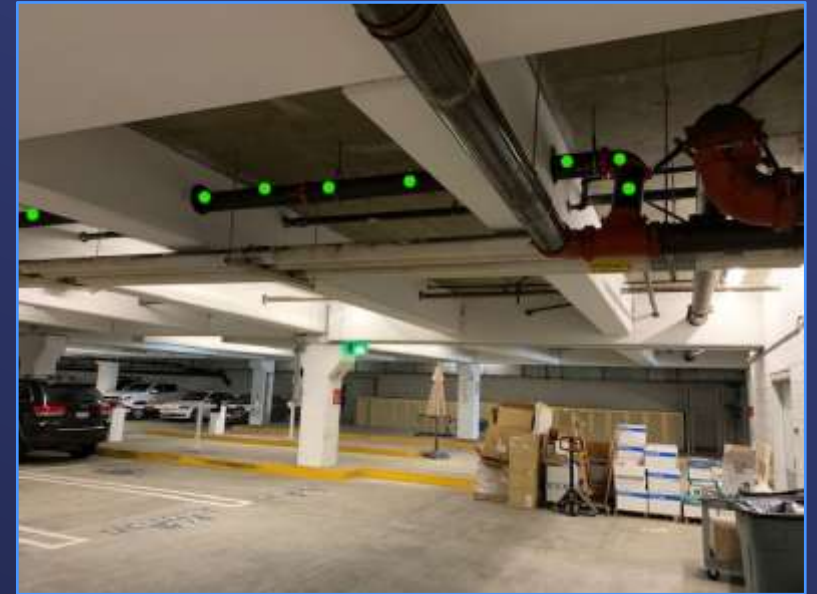
Alternatives Considered

- Replace portions of the fire sprinkler piping as failure occurs
 - Not cost-effective
- Selected Alternative – Replace a portion of the existing fire sprinkler main piping in level P1
 - Includes new isolation valves & air vents to minimize & limit the development of corrosion
 - Maintains the long-term operational reliability of the fire/life protection system

Headquarters Fire Sprinklers

Scope of Work – Contractor

- Replace approx. 2,300 ft of horizontal fire sprinkler piping in level P1
- Install new control valves & air vents at high points of the system
- Replace isolation valves & fire hydrant connections
- Install domestic water piping to existing stairwell sump pumps



Parking Garage Level P1

Headquarters Fire Sprinklers

Scope of Work – Metropolitan

- Construction management & inspection
- Contract admin., outreach & PM
- Force Construction
 - Equipment start-up & testing
 - Fire Alarm system integration support for isolation valves
 - Dewatering & refilling of fire water piping during replacement

Headquarters Fire Sprinklers

Carollo Engineers Inc. – No Action Required

- Engineer of Record
- Provide technical support during construction
- NTE amount: \$120,000

Securitas – No Action Required

- Provide enhanced level of on-security services during outage of the fire sprinkler system
- NTE amount: \$170,000

Bid Results

Specifications No. 2007

Bids Received	May 24, 2023
No. of Bidders	2
Lowest Responsible Bidder	M.S. Construction Management Group Inc.
Low Bid	\$3,740,792
Other Bid	\$6,660,000
Engineer's Estimate	\$4,200,000
SBE Participation*	52%

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

Allocation of Funds

Headquarters Fire Sprinklers

Metropolitan Labor	
Owner Costs (Proj. Mgmt., Contract Admin.)	\$ 378,000
Construction Inspection & Support	473,000
Construction	186,000
Submittals Review, Tech. Support, Record Dwgs.	206,000
Materials & Incidentals	30,000
Professional/Technical Services	
Carollo Engineers Inc.	120,000
Securitas	170,000
Contract – M.S. Construction Management Inc.	3,740,792
Remaining Budget	396,208
<hr/>	
	Total \$ 5,700,000

Project Schedule



Board Options

- Option #1

Award a \$3,740,792 contract to M.S. Construction Management Group Inc. to replace a portion of the existing fire sprinkler system's piping and network components at Metropolitan's Headquarters Building.

- Option #2

Do not proceed with the project at this time.

Staff Recommendation

- Option #1





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

7/11/2023 Board Meeting

8-3

Subject

Award a \$16,490,000 contract to J. F. Shea Construction Inc. to replace equipment storage buildings at three Colorado River Aqueduct pumping plants; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Storage buildings at the Colorado River Aqueduct (CRA) pumping plants are used to protect and secure supplies and equipment from the extreme desert environment. The original 70-year-old storage buildings at three pumping plants (Hinds, Eagle Mountain, and Iron Mountain) have deteriorated due to corrosion and structural deficiencies and are no longer usable. Replacement of these original buildings is needed to protect equipment, parts, and other mechanical/electrical supplies which are stored at each site from premature deterioration due to weather damage. This action awards a construction contract to furnish and install a total of six new pre-engineered metal buildings, two each at three pumping plants.

Details

Background

The CRA is a 242-mile-long conveyance system that transports water from the Colorado River to Lake Mathews in Riverside County. The CRA was placed into service in 1941. It consists of five pumping plants, 124 miles of tunnels, 63 miles of canals, and 55 miles of conduits, siphons, and reservoirs.

Between 1950 and 1955, several metal storage buildings with timber frames and a storage capacity of less than 2,000 square feet each were built at the Gene, Hinds, Eagle Mountain, and Iron Mountain pumping plants to store, protect, and secure CRA-related material and maintenance equipment from the extreme desert environment. Items stored at these buildings include portable equipment; large mechanical and electrical parts such as circuit breakers, disconnect switches, and pumps; spooled wire and cable; lifting fixtures used for maintenance of motors and valves; and general tools and supplies for various maintenance specialties such as plumbing, electrical, carpentry, paint, welding, construction, and vehicle/equipment maintenance.

The storage buildings have deteriorated after 70 years of service. The wooden frames have decayed due to fungal dry rot, and the metal walls and roof panels are significantly rusted. The storage buildings no longer seal properly to prevent rain and dust from entering the interiors and are not insulated. These buildings are not equipped with lights, fans, or electrical service. Following a comprehensive assessment of CRA storage needs, it was determined that refurbishment of the existing buildings is impractical, and staff recommends the replacement of these original storage buildings with new prefabricated, code-compliant buildings.

In October 2014, Metropolitan's Board authorized the replacement of two of these existing storage buildings at Gene Pumping Plant, which at the time were the most deteriorated structures, and construction was completed in 2015. The current project will replace the remaining deteriorated storage buildings with two new storage buildings at each of the three CRA pumping plants: Hinds, Eagle Mountain, and Iron Mountain. The new prefabricated buildings will be constructed of steel and installed on concrete slab foundations. The new buildings will have a total of approximately 27,700 square feet of interior storage space. The improved storage space will support ongoing maintenance activities along the CRA and upcoming capital rehabilitation work at the pumping plants. Buildings are located at each site to minimize the time required to retrieve spare parts.

Design of the new storage buildings is complete, and staff recommends award of a construction contract at this time.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager authorized staff to proceed with installation of the storage buildings, pending board award of the construction contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates an expenditure of \$20.8 million in capital funds. Approximately \$4.0 million will be incurred in the current biennium and has been previously authorized. The remaining funds from this action will be accounted for in the next biennial budget. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the CRA Reliability Program.

Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings – Construction

The scope of the contract includes: (1) site work, including grading of the sites to provide access and improve drainage, asphalt paving around the new buildings, replacement of security fencing near the building sites, and new concrete foundation pads; (2) installation of a firewater line and fire hydrant at each building for fire protection; (3) demolition of existing storage buildings at the Hinds and Eagle Mountain pumping plants to provide space for the new buildings; and (4) procurement and installation of six pre-engineered metal storage buildings, two at each pumping plant. Metropolitan forces will perform site clearing in advance of the contract; integrate the fire alarm system into the Supervisory Control and Data Acquisition system; and procure and install ventilation exhaust fans in each building to accommodate the desert environment.

A total of \$20.8 million is required to perform this work. In addition to the amount of the contract described below, other funds to be allocated include \$159,000 for Metropolitan force activities as described above; \$1,830,000 for construction management and inspection; \$617,000 for submittal review, technical support during construction, responding to requests for information, and preparation of record drawings; \$680,000 for environmental monitoring, contract administration, Project Labor Agreement (PLA) administration, and project management; and \$1,024,000 for remaining budget.

Attachment 1 provides the allocation of the required funds. The total estimated cost to complete the storage buildings installation, including the amount allocated to date and funds allocated for the work described in this action, is approximately \$22.8 million.

Award of Construction Contract (J. F. Shea Construction Inc)

Specifications No. 2000A for the furnishing and installation of storage buildings at Hinds, Eagle Mountain, and Iron Mountain was advertised for bids on March 10, 2023. As shown in **Attachment 2**, two bids were received and opened on April 20, 2023. The low bid from J. F. Shea Construction Inc. in the amount of \$16,490,000 complies with the requirements of the specifications. The other bid was approximately \$19.7 million, while the engineer's estimate for this project was \$17,500,000. For this contract, Metropolitan established a Small Business Enterprise participation level of at least 25 percent of the bid amount. J. F. Shea Construction Inc. has committed to meet this level of participation. The subcontractors for this contract are listed in **Attachment 3**. This contract will be conducted under the terms of Metropolitan's PLA.

As described above, Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric target range for construction management and inspection of projects with construction greater than \$3 million is 9 to 12 percent. For this project, the performance metric goal for construction management and inspection is 11.0 percent of the total construction cost. The total cost of construction for this project is \$16,649,000, which includes the amount of the contract (\$16.49 million), and Metropolitan force activities and supplies (\$159,000).

Alternatives Considered

In the conceptual design phase of this project, staff considered various building types, including tilt-up concrete, concrete masonry unit (CMU), and prefabricated steel buildings, to use in the building construction. Multiple factors were considered before selecting a construction method and building type, including the purpose of the

building, building size, life span, construction duration, and costs. During the conceptual design phase of the project, a value engineering (VE) assessment of many project factors, including the type of building construction, was conducted. The VE process confirmed that for the intended purpose of the buildings as warehouses, the use of prefabricated metal buildings was an appropriate choice when compared to other building construction methods.

Overall, prefabricated steel buildings are preferred for equipment and material storage at CRA facilities because of their lower cost and versatility. Due to their relatively lightweight construction, prefabricated steel buildings do not require an overly complex foundation system and have a superior spanning capacity than concrete. Prefabricated steel buildings are the better option for structures that require longer bays and spans. Metal construction is also a much more flexible and durable construction material than concrete. This means steel structures are much more resistant to natural disasters such as earthquakes. In comparison, both CMU and tilt-up buildings require a more robust foundation and greater number of internal support columns due to their greater weight to resist seismic loading conditions. These required design features create limitations in terms of usable interior square footage.

The expected service life of all three of these types of buildings are comparable as long as the building are maintained properly. CMU and tilt-up construction is expected to last approximately 100 years, while prefabricated buildings have an expected service life of 70 years. Key maintenance differences between the buildings include the roofing systems. The prefabricated buildings will typically have a standing seam metal roof, while the CMU and tilt-up buildings will have built-up roofing systems. Metropolitan's recent experience with roof systems is that standing seam roofs have life expectancies of more than 50 years, while built-up roof systems typically need to be replaced every 30 years.

The VE and conceptual engineering processes also determined that tilt-up and CMU buildings are more expensive options (approximately \$13 and \$11 million more, respectively) than prefabricated steel buildings when taking into account the location of the construction activities at Metropolitan's remote desert CRA facilities. The primary driver for this cost differential is the relative increase in on-site construction labor required for both CMU and tilt-up construction when compared to prefabricated buildings. Prior experience with desert construction at Metropolitan facilities has demonstrated that labor costs for desert construction are significantly higher when compared to labor costs for similar projects that are located close to metropolitan development. Consequently, the costs for prefabricated buildings are lower, in part because they require less on-site construction effort to erect.

Based on bids received for this project, the CRA desert prefabricated metal storage buildings have a cost of \$8 million for 27,700 square feet of enclosed storage area (the remainder of the contractor's bid amount is for site preparation and infrastructure development to support the buildings). This equates to a building cost of approximately \$291 per square foot. By comparison, and based on conceptual engineering estimates, the per square foot costs for the tilt-up and CMU buildings of an equivalent configuration and enclosed storage area are \$477 and \$442 per square foot, respectively. This equates to the prefabricated metal buildings being more than 33 percent less expensive to construct than the other two building types.

Staff recommends proceeding with pre-engineered metal buildings because they are cost-effective and are consistent with the intended purpose of the structures. Furthermore, additional costs would be incurred for site investigations and design for alternative structure types. The storage buildings are necessary to support planned capital projects, such as the CRA Main Pump Rehabilitation and Sump System Replacement projects, as well as for efficiently performing CRA maintenance activities.

Summary

This action awards a \$16,490,000 contract to J. F. Shea Construction Inc. for furnishing and installation of pre-engineered metal storage buildings at the Hinds, Eagle Mountain, and Iron Mountain pump plants. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the Listing of Subcontractors for Low Bidder, and **Attachment 4** for the Location Map.

Project Milestone

January 2026 – Completion of construction

Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/2023 and 2023/2024.

By Minute Item 50554, dated August 16, 2016, the Board authorized preliminary design to replace storage buildings at the Hinds, Eagle Mountain, and Iron Mountain Pumping Plants.

California Environmental Quality Act (CEQA)

Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action involves operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use and no possibility of significantly impacting the physical environment. In addition, the proposed action includes the replacement and reconstruction of existing structures and facilities where the new structure will be located on the same site and as the structure replaced and will have the same purpose and capacity as the structure replaced. Further, the proposed action includes construction of limited numbers of new, small facilities or structures. Finally, the proposed action includes minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes. Accordingly, the proposed action qualifies under Class 1, Class 2, Class 3, and Class 4 (Sections 15301, 15302, 15303, and 15304 of the State CEQA Guidelines).

Option #2:

None required

Board Options

Option #1

Award a \$16,490,000 contract to J. F. Shea Construction Inc. for furnishing and installation of pre-engineered storage buildings at the Hinds, Eagle Mountain, and Iron Mountain pumping plants.

Fiscal Impact: Expenditure of \$20.8 million in capital funds. Approximately \$4.0 million will be incurred in the current biennium and has been previously authorized. The remaining funds from this action will be accounted for in the next biennial budget.

Business Analysis: This option will protect important CRA maintenance equipment and supplies from premature deterioration. Recent supply chain issues have demonstrated the importance of stocking critical maintenance material and equipment spares near the operating facility.

Option #2

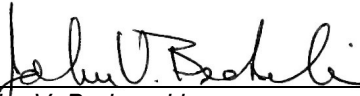
Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: This option would forgo an opportunity to protect Metropolitan's assets and may result in premature deterioration of equipment and increased replacement costs.

Staff Recommendation

Option #1



John V. Bednarski
Manager/Chief Engineer
Engineering Services

7/6/2023

Date



Adel Hagekhalil
General Manager

7/7/2023

Date

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Listing of Subcontractors

Attachment 4 – Location Map

Ref# es12694785

Allocation of Funds for Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings

	Current Board Action (Jul. 2023)
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	680,000
Submittals Review & Record Drwgs.	617,000
Construction Inspection & Support	1,830,000
Metropolitan Force Construction	128,000
Materials & Supplies	20,000
Incidental Expenses	11,000
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
J. F. Shea Construction, Inc.	16,490,000
Remaining Budget	1,024,000
Total	\$ 20,800,000

The total amount expended to date for the Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings Project is approximately \$2.0 million. The total estimated cost to complete, including the amount appropriated to date and funds allocated for the work described in this action, is \$22.8 million.

The Metropolitan Water District of Southern California

Abstract of Bids Received on April 20, 2023, at 2:00 P.M.

Specifications No. 2000A

Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings

The work includes furnishing and constructing six prefabricated buildings, two at each pumping plant, on new slab foundations; demolition of existing storage buildings; grading; utility installation; installation of fire sprinkler systems; asphalt paving; and replacement of security fencing.

Engineer's estimate: \$17,460,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
J. F. Shea Construction Inc. Walnut, CA	\$16,490,000	\$5,462,384	33%	Yes
Catrac Construction Inc Fontana, CA	\$19,668,656	-	-	-

¹ Small Business Enterprise (SBE) participation level established at 25% for this contract.

The Metropolitan Water District of Southern California

Subcontractors for Low Bidder

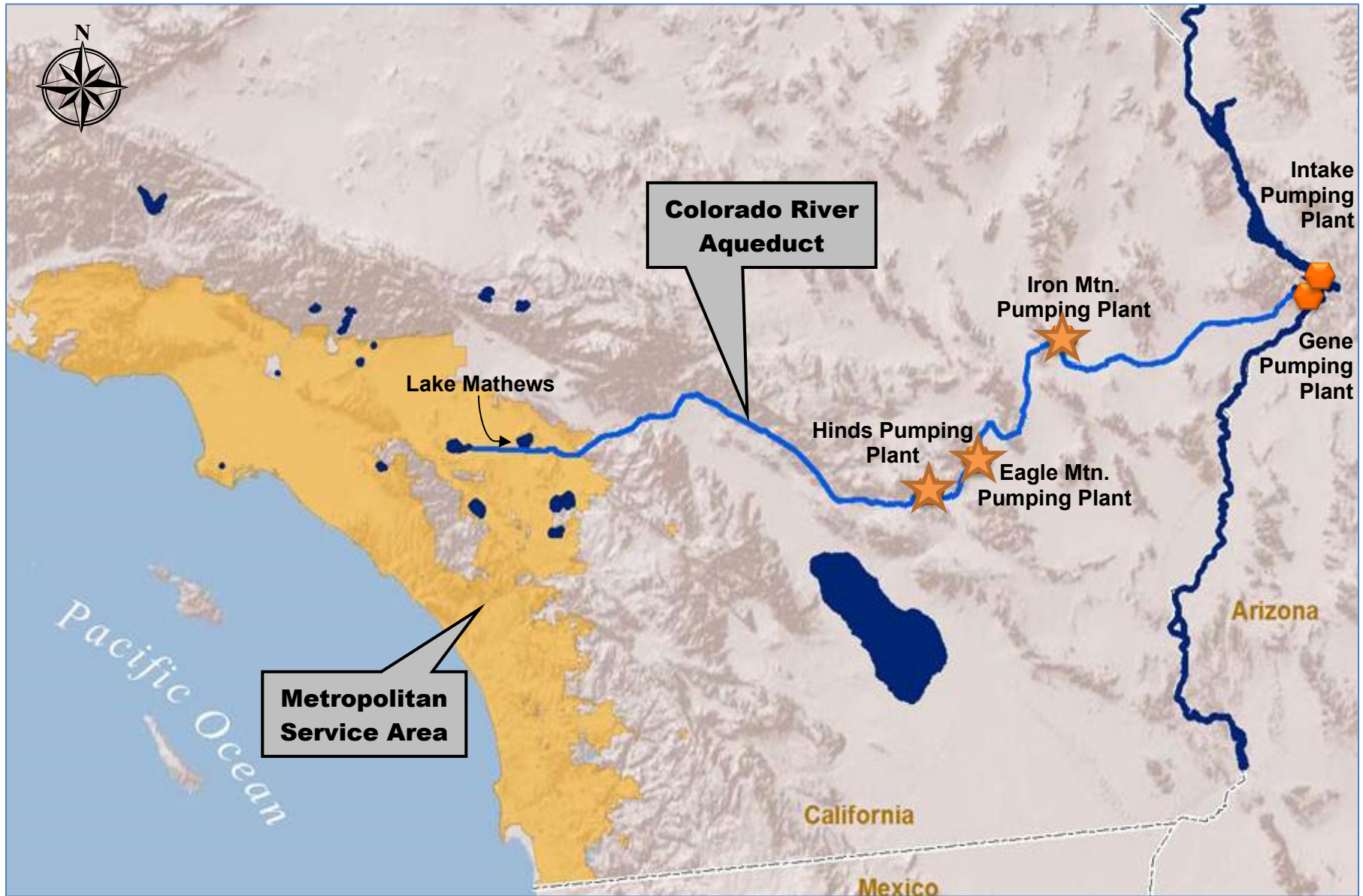
Specifications No. 2000A

Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings

Low bidder: J. F. Shea Construction Inc.

Subcontractor	Service Category; Specialty
Hardy & Harper Inc. Lake Forest, CA	Paving
Environmental Construction Group Inc. Signal Hill, CA	Demo & Abatement
MDB General Engineering Inc Irvine, CA	Earthwork
Crown Fence Santa Fe Springs, CA	Fencing
EBS General Engineering Inc. Corona, CA	Sitework Concrete
Southwest V-Ditch Inc. Riverside, CA	Gunite
Qualco Fire Protection Inc. Santa Fe Springs, CA	Fire Protection
K&S Excavating Inc. Anaheim, CA	Trenching & Backfill
South Valley Construction and Develop. Inc. Murrieta, CA	Pre-Engineered Metal Building
Overhead Door Company of Inland Empire Colton, CA	Overhead Doors
Techno Coatings Anaheim, CA	Paint
LA Steel Services Corona, CA	Rebar
Leed Electric Inc. Santa Fe Springs, CA	Electrical

Location Map





Engineering, Operations, & Technology Committee

Colorado River Aqueduct Pumping Plants Storage Buildings

Item 8-3

July 10, 2023

Colorado River
Aqueduct
Equipment
Storage
Buildings

Current Action

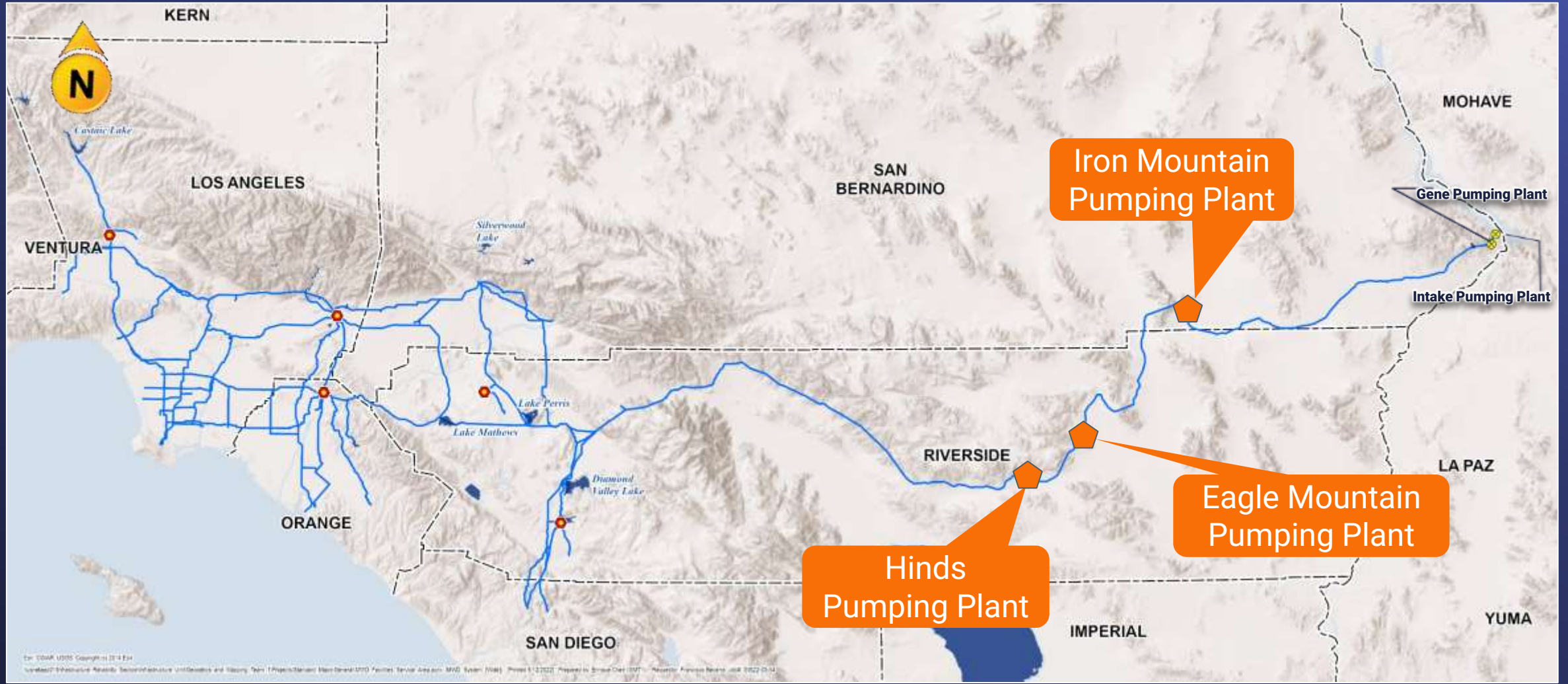
- Award a \$16,490,000 contract to J. F. Shea Construction Inc. to replace storage buildings at Hinds, Eagle Mountain, & Iron Mountain pumping plants

Colorado River Aqueduct Equipment Storage Buildings

Agenda

- Background
- Design Process & Criteria
- Alternatives Considered
- Action
 - Scope
 - Allocation of Funds
 - Schedule
 - Options

Project Location



Background

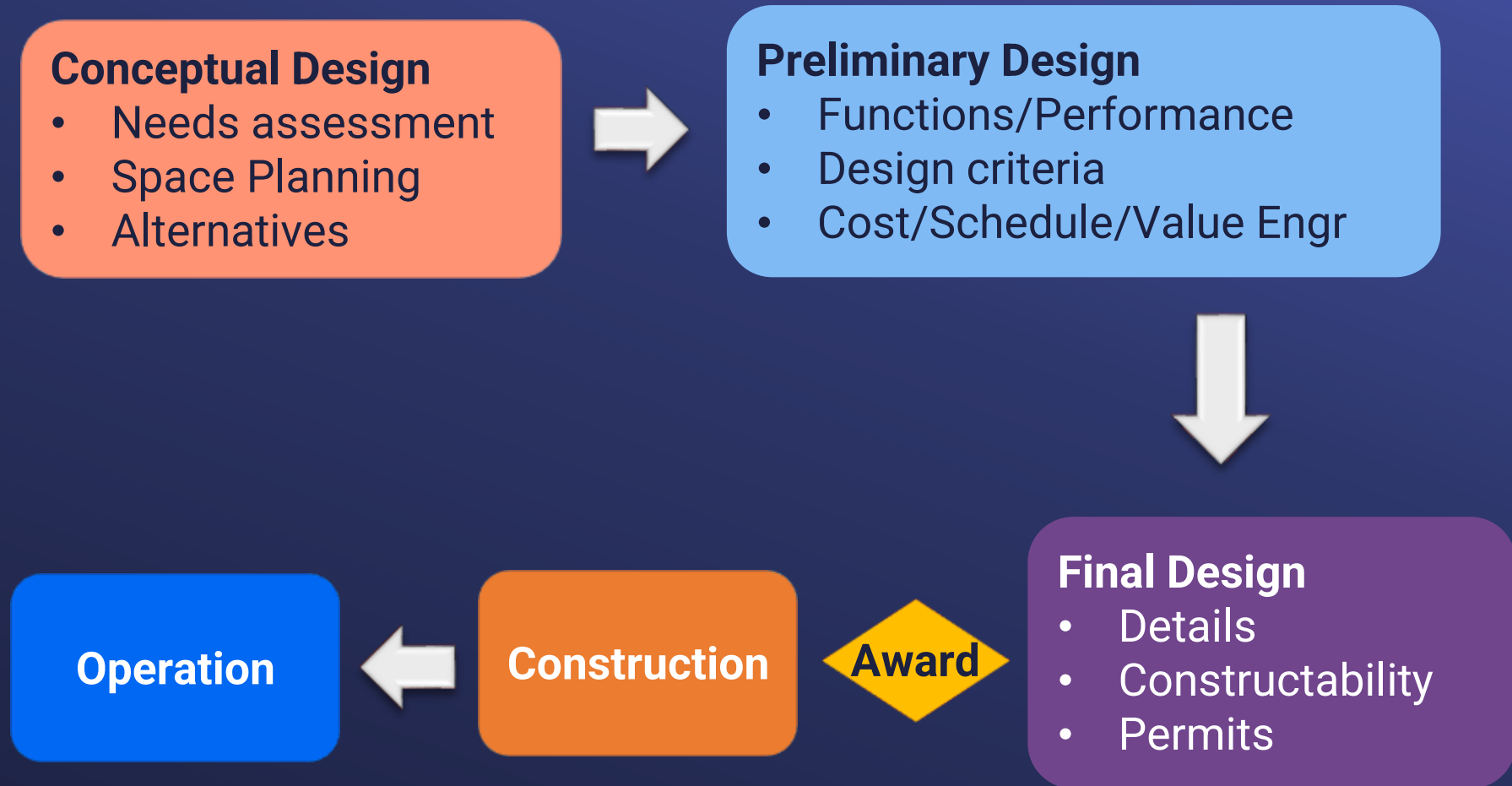
- Metal storage buildings built in 1950s
 - Decayed wooden frames
 - Metal walls & roof panels deteriorated
 - Limited storage capacity
- Gene Pumping Plant storage buildings were replaced in 2015
- Replacement of storage buildings at Hinds, Eagle & Iron Mtn. pumping plants needed



Iron Mtn. Storage Building (Existing)

Colorado River
Aqueduct
Equipment
Storage
Buildings

Engineering Design Process



Colorado River Aqueduct Equipment Storage Buildings

Building Evaluation Criteria

- Site selection
- Functions & Space
 - Building occupancy (conveyance, treatment, workshop, administration, or storage)
 - Area & height requirements
- Design criteria
 - Building code & fire requirements
 - Seismic/geotechnical design
- Heating, ventilation & air conditioning requirements
- Environmental, sustainability & aesthetics
- Balance of functional needs, code, cost & schedule

Metropolitan Building Types

Colorado River Aqueduct Equipment Storage Buildings

- La Verne Shops: Tilt-up Concrete
- Mills Warehouse: Concrete Masonry
- Lake Mathews Storage: Pre-Engineered Metal Building
- CRA Electrical Aux. System: Cast-In-Place Concrete



La Verne Machine Shops



Mills Warehouse



Lake Mathews Storage

CRA Storage Needs

- Maintain inventories & supplies critical to CRA operation & maintenance
- Store equipment & parts to support operations:
 - Circuit breakers, disconnect switches, portable generators, pumps, motors, valves, & piping
 - Custom-built lifting frames for maintenance of motors & valves
- Provide equipment storage for CIP projects
 - CRA Main Pump Reliability Program
 - Sump System Replacement Project
 - Motor Cable Replacement Project

Colorado River Aqueduct Equipment Storage Buildings



Sumps Equipment
Delivery at Iron Mtn

Colorado River Aqueduct Equipment Storage Buildings

CRA Storage Building Requirements

- Seismic resilient structures: San Andreas Fault is 20 to 25 miles from 3 sites
- Maximum interior volume for storage flexibility
 - Forklift & vehicle drive-thru access
 - Clear height (18 ft)
 - Open floor space up to 4,800 sq ft
- Adjacency requirements
 - Proximity to pumping plants to minimize parts retrieval time
 - Separate maintenance & pump crew buildings
- Insulation & ventilation requirements for better energy efficiency & environment control

Colorado River Aqueduct Equipment Storage Buildings

Site Selection

- Project team partnered with Desert staff to locate new storage buildings
 - Space constraints considered
 - Located to minimize time to retrieve equipment & parts
 - Coordinated with future projects
 - 6 buildings across 3 separate facilities
- Site work required for CRA buildings
 - Site grading & erosion control
 - Roadway & pavement
 - Electrical & water line extension from main plant
 - Fire protection systems & hydrants needed



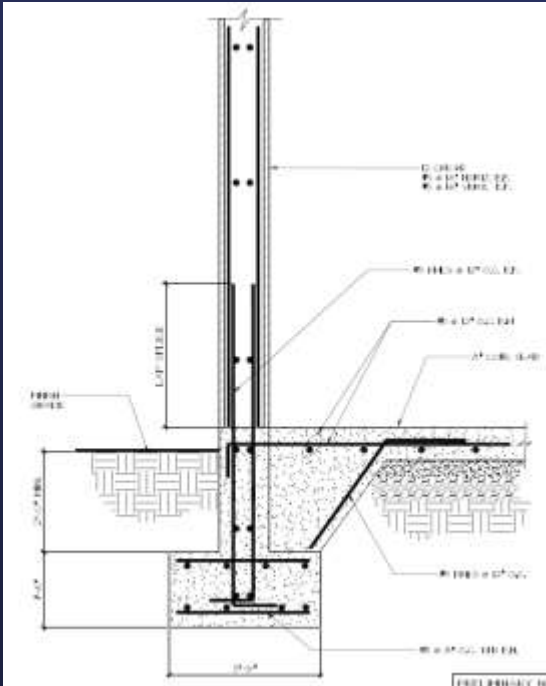
Eagle Mtn. Pumping Plant
Storm Inundation

July 10, 2023

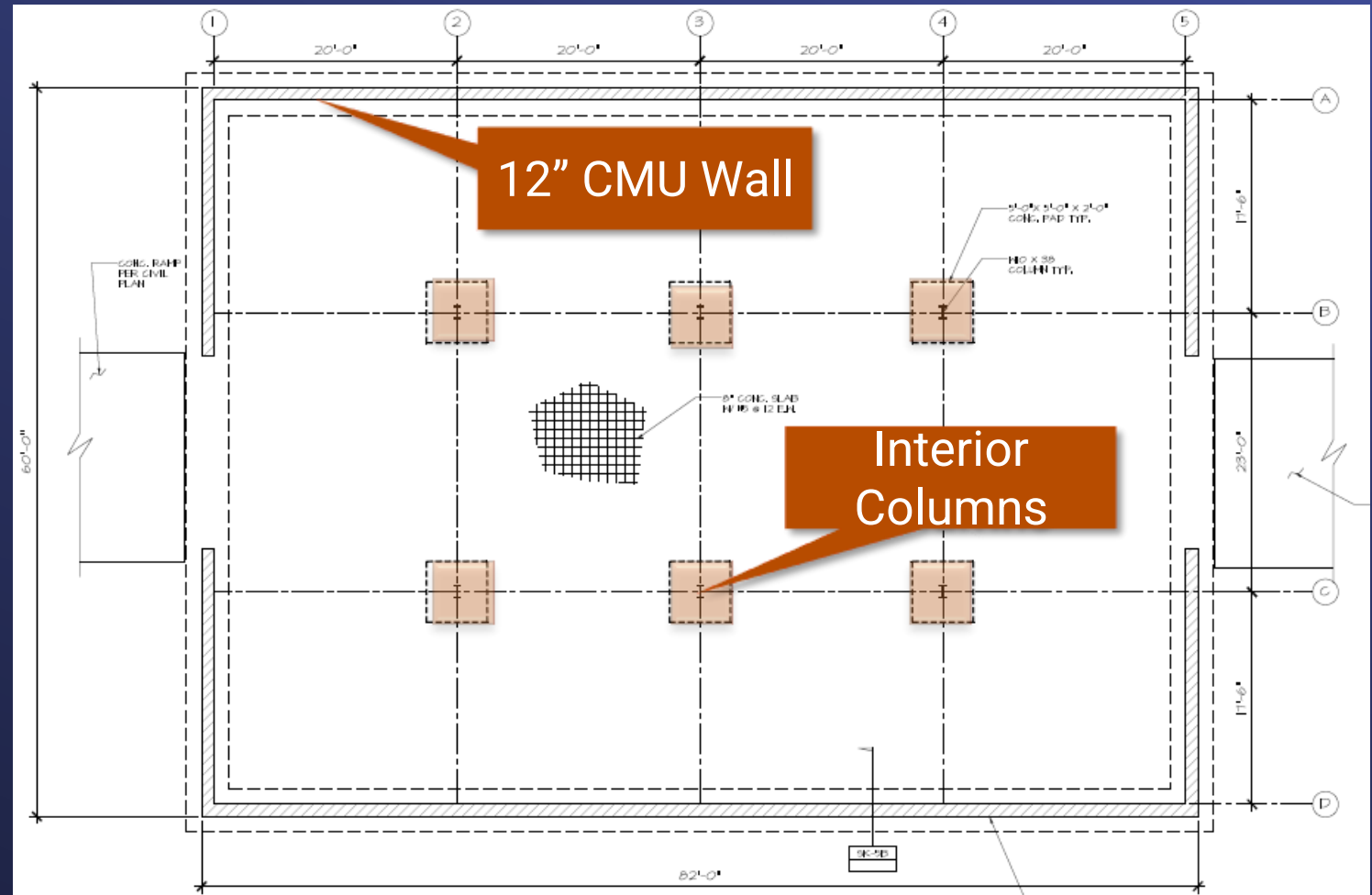
Colorado River Aqueduct Equipment Storage Buildings

Building Alternative 1 – Concrete masonry

- Description: Concrete masonry units (CMU) filled w/grout, mortar joints & reinforcement



Wall Foundation



Colorado River Aqueduct Equipment Storage Buildings

Building Alternative 1 – Concrete masonry

- Pros
 - Life span – 100 years (except roofing)
- Cons
 - Heavier structure with increased seismic loads
 - Higher labor & material costs
 - Interior columns required for cost-effective construction which limits space flexibility
- Estimated contract amount – \$24 to 26 M
 - \$32 to 34 M for design, bidding, & construction costs
- Estimated construction duration:
 - 3.5 years

Colorado River Aqueduct Equipment Storage Buildings

Building Alternative 2 – Tilt-Up concrete

- Pros
 - Life span – 100 years (except roofing)
- Cons
 - Heavier structure with increased seismic loads
 - High labor & material costs
 - Interior columns required for cost-effective construction which limits space flexibility
- Estimated contract amount – \$26 to 28 M
 - \$34 to \$36 M for design, bidding, & construction costs
- Estimated construction duration:
 - 3 years
- Precast concrete: special transportation permit required

Colorado River Aqueduct Equipment Storage Buildings



Lake Mathews
Storage Building

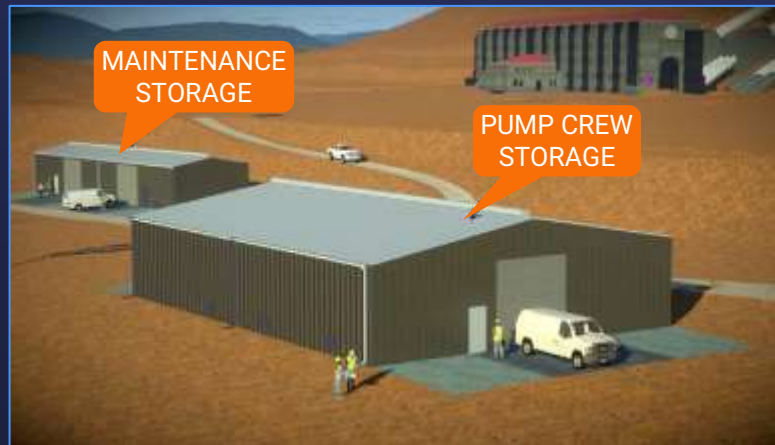
July 10, 2023

Building Alternative 3 – PE Metal Building

- Description: Pre-engineered by P.E. per MWD criteria, & assembled on site with Metropolitan inspection
- Pros
 - Steel moment frame is seismic/wind resilient while meeting clear span & height requirements
 - High quality shop fabrication (IAS certified)
 - Efficient construction sequence (less on-site labor)
 - Shortest construction duration (2 years)
 - Lowest cost when compared to alternatives
- Cons
 - Life span – 70 years (except roofing)
- Selected Alternative
 - Value engineering conducted to identify & implement cost saving measures

Contractor – Scope of Work

- Demolish existing storage buildings
- Procure & install six pre-engineered metal storage buildings
- Grading for access & drainage improvements
- Construct concrete foundation pads, asphalt paving & fencing
- Install fire protection system – new firewater lines & hydrants



Hinds Storage Buildings



Eagle Mtn. Storage Buildings



Iron Mtn. Storage Buildings

Bid Results

Specifications No. 2000A*

Bids Received	April 20, 2023
No. of Bidders	2
Lowest Responsible Bidder	J. F. Shea Construction Inc.
Low Bid	\$16,490,000
Other Bid	\$19,668,656
Engineer's Estimate	\$17,460,000
SBE Participation**	33%

* This contract will be conducted under the terms of Metropolitan's project labor agreement

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

Colorado River Aqueduct Equipment Storage Buildings

Metropolitan - Scope of Work

- Integration of fire alarm system with SCADA
- Installation of ventilation exhaust fans
- Construction management & inspection
- Submittals review & preparation of record drawings
- Environmental monitoring
- Project management, project labor agreement administration & project controls

Allocation of Funds

CRA Storage Buildings at Hinds, Eagle Mtn. & Iron Mtn. Pumping Plants

Metropolitan Labor

Owners Costs (Proj. Mgmt., Contract Admin., Envir. Support) \$ 680,000

Construction Inspection & Support 1,830,000

Force Construction 128,000

Submittals Review, Tech. Support, Record Dwgs. 617,000

Materials & Incidentals 31,000

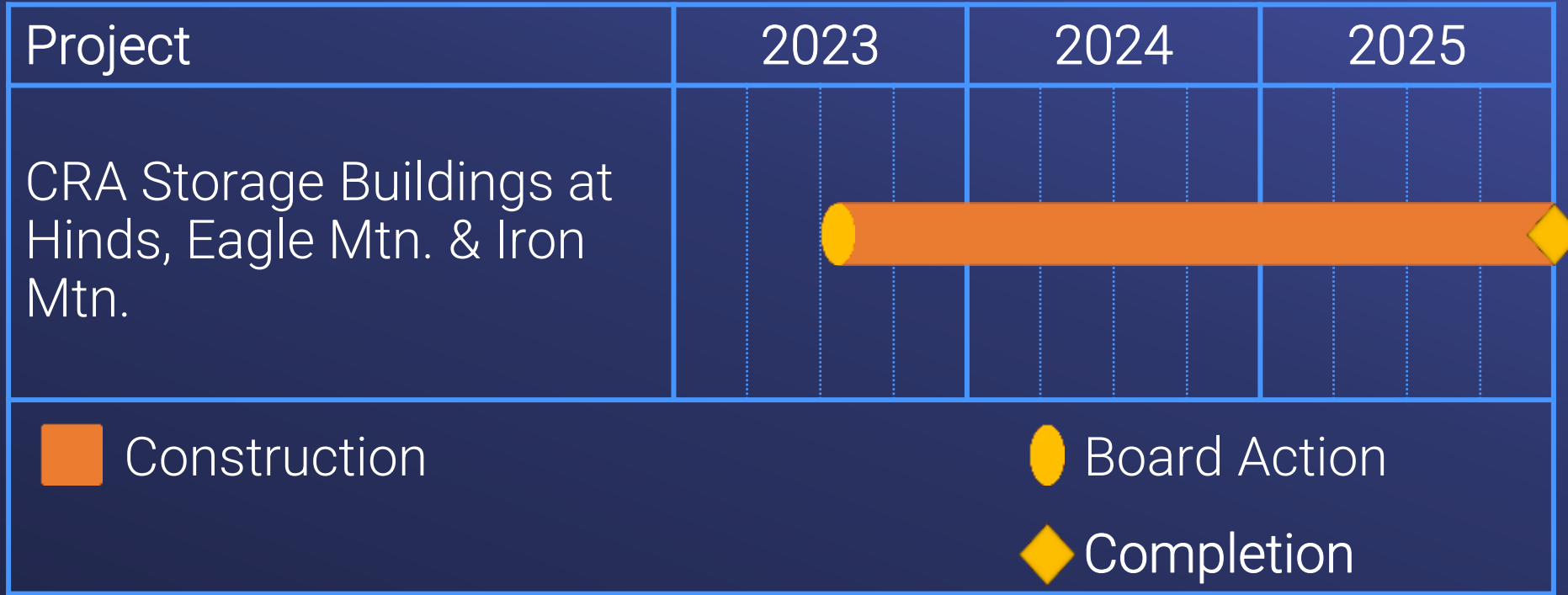
Contracts

J. F. Shea Construction Inc. 16,490,000

Remaining Budget 1,024,000

Total \$ 20,800,000

Project Schedule



Board Options

- Option #1

Award a \$16,490,000 contract to J. F. Shea Construction Inc. for furnishing and installation of pre-engineered storage buildings at the Hinds, Eagle Mountain, and Iron Mountain pumping plants.

- Option #2

Do not proceed with the project at this time.

Staff Recommendation

- Option #1





Engineering, Operations, & Technology Committee

Update on Water Quality Laboratory Upgrades

Item 7a

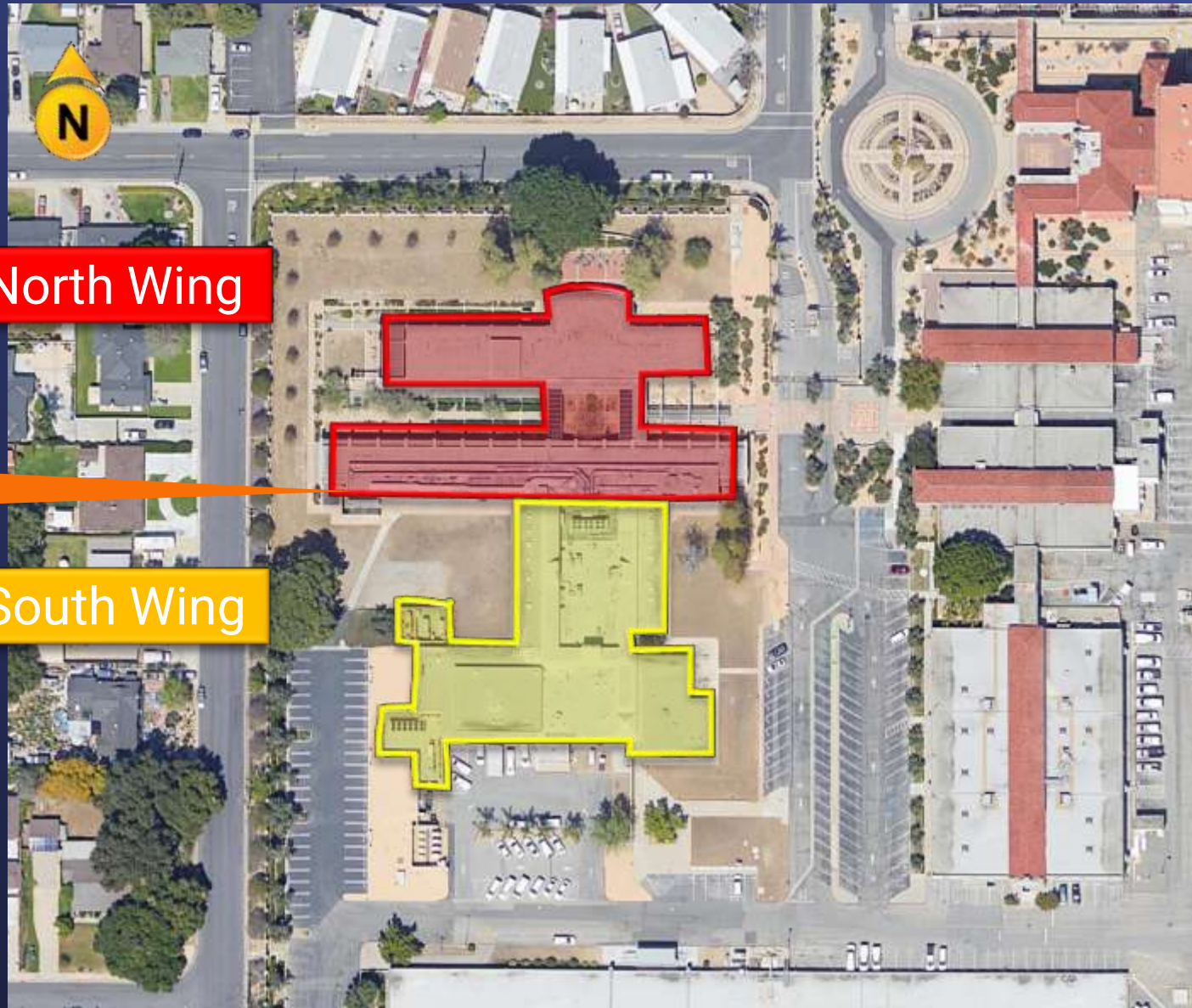
July 10, 2023

Water Quality Laboratory Upgrades

Project Update Agenda

- Background
- Design Update
- Interim Cost Update
- Schedule

Project Location at the Weymouth Facility

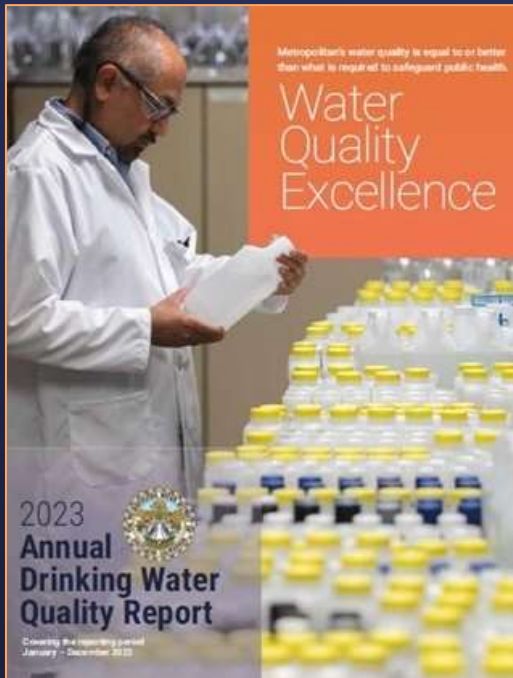


North Wing

Water Quality Laboratory

South Wing

Water Quality Laboratory An Essential Facility



Water Quality At-A-Glance

- Regulatory compliance monitoring & testing
 - ~70,000 samples per year
 - >250,000 analytical results
- Source water monitoring & management
- Distribution system integrity
- Shutdowns & repairs/maintenance
- Customer satisfaction (T&O)
- Applied research
 - PWSC, emerging contaminants, treatment processes, analytical methods, alternative source waters

Laboratory No Longer Meets Requirements

- Laboratory requirements
 - Maintain regulatory compliance
 - New regulations, emerging issues and contaminants
- Need dedicated spaces and equipment for reuse research, PFAS, and microplastics, etc.
 - Clean rooms, pathogen containment, specialized instruments
- Workflow improvements within the building
 - Redesign lab spaces to accommodate expanded functions
 - Need better separation between lab and office areas
 - Improved records and document storage



Storage room converted into microplastics lab



Repurposing Available Space

Water Quality Laboratory Building Limitations



Microscope room and
sample bottle storage



Lab supplies stored
in office cubicles



Documents and
printer in lab hallway

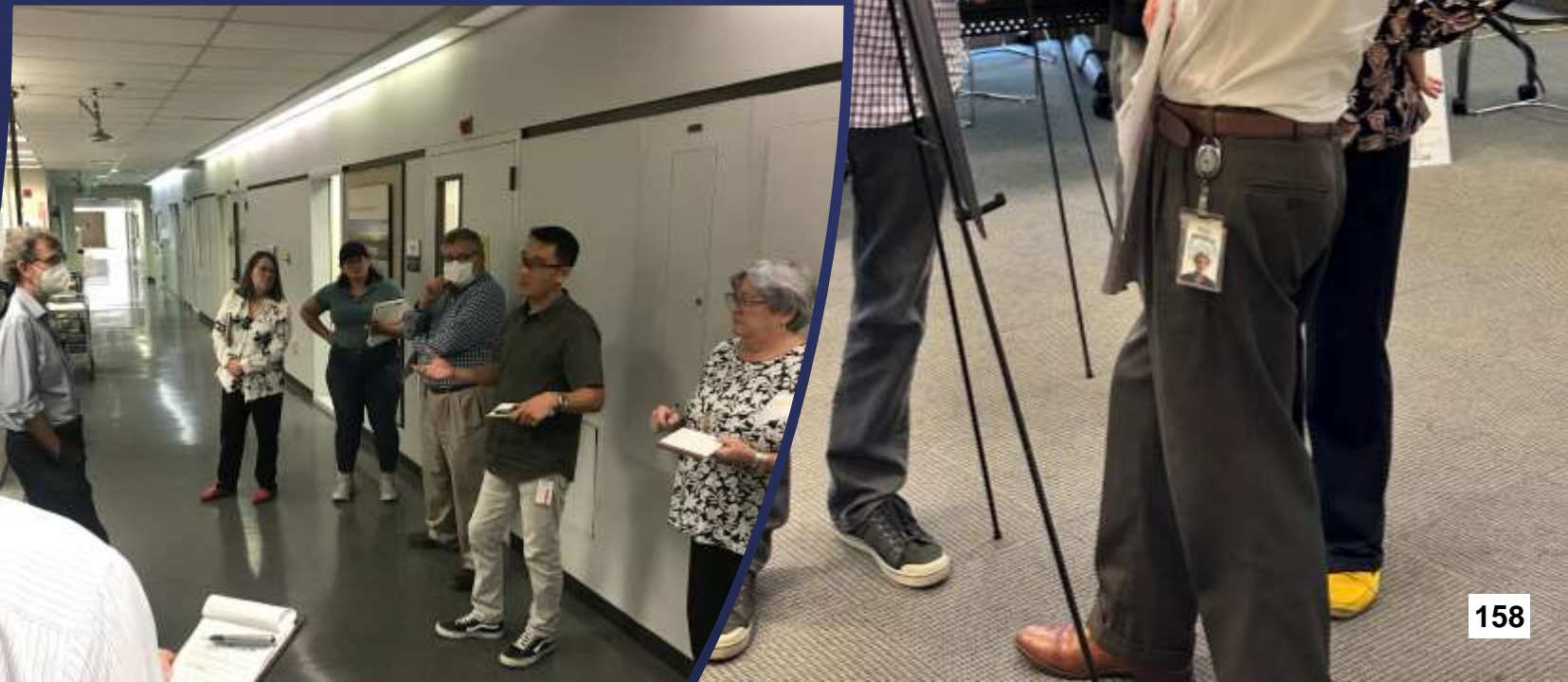


Office cubicle and
documents in hallway

Background – Activity Timeline



Design Update



July 10, 2023

Site Visits and Workshops to Inform Design Decisions



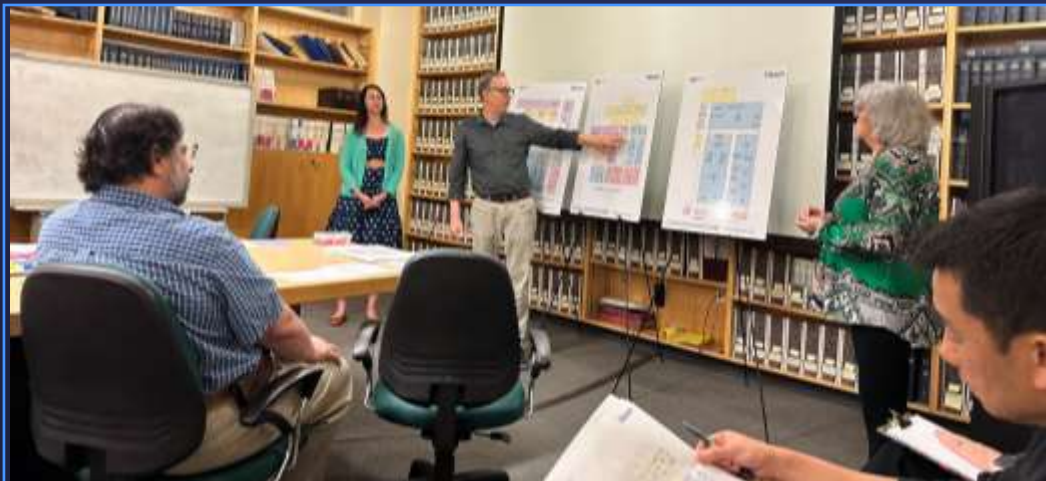
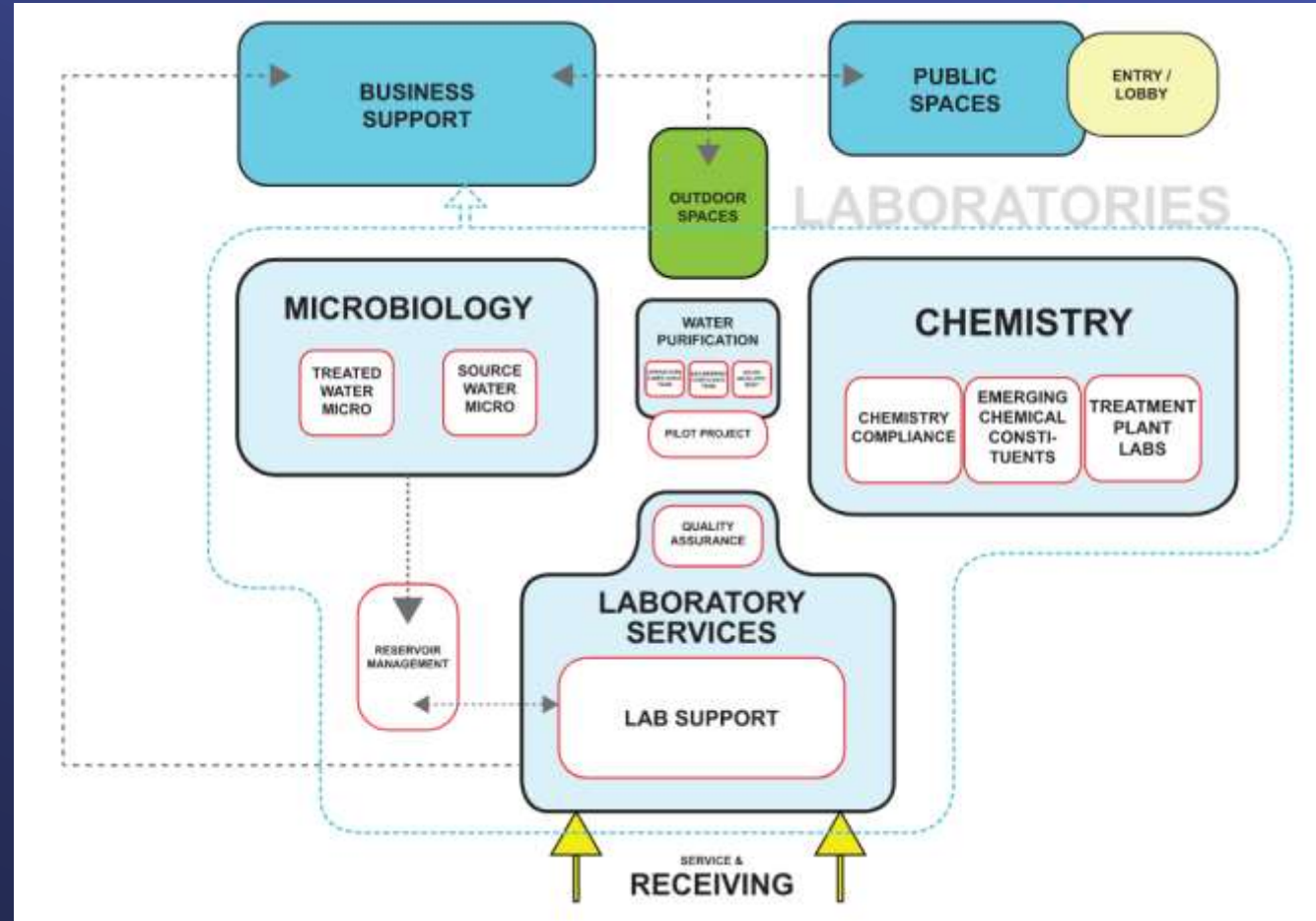
WRD Albert Robles Center



Santa Monica City Hall Annex

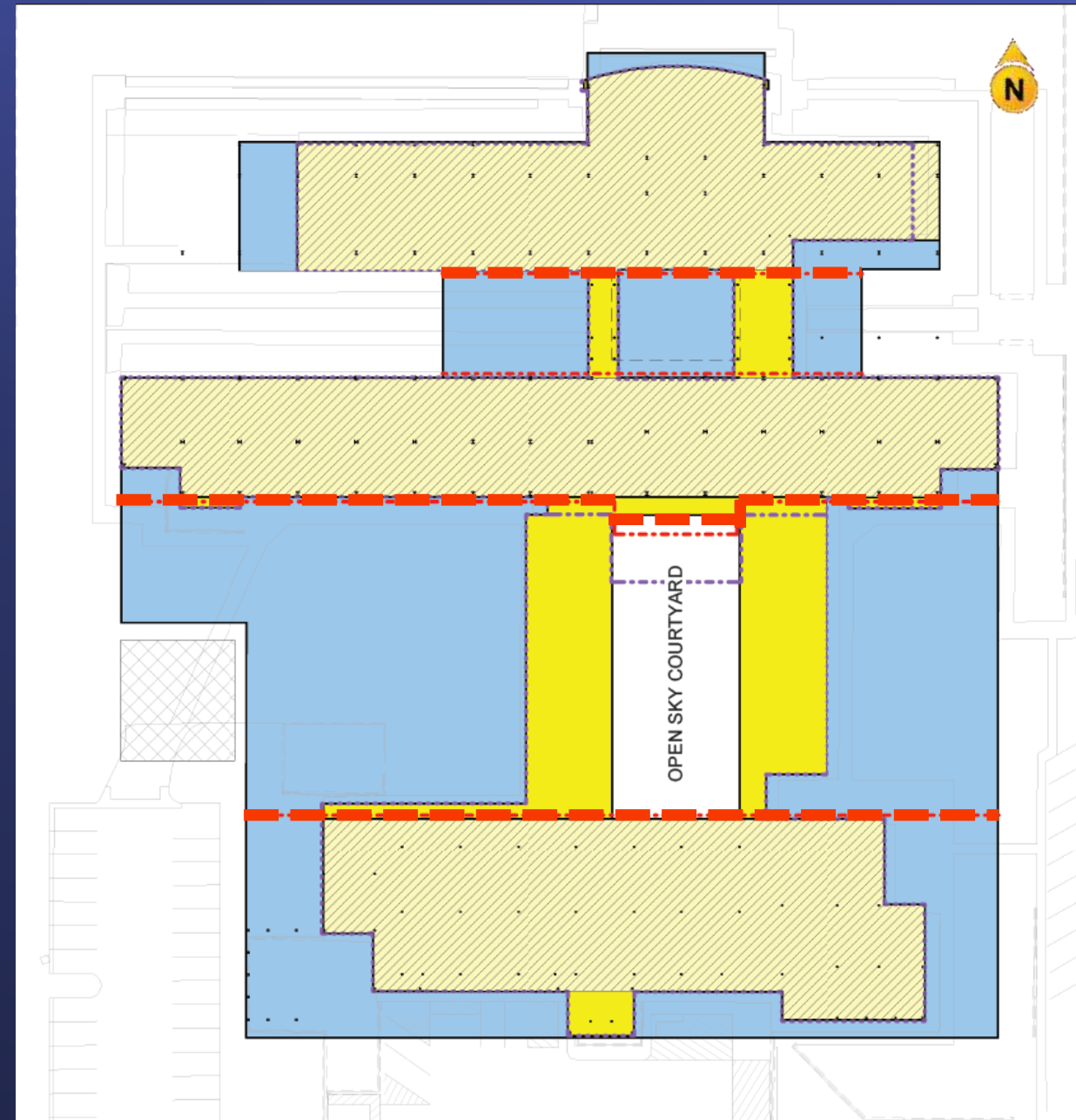
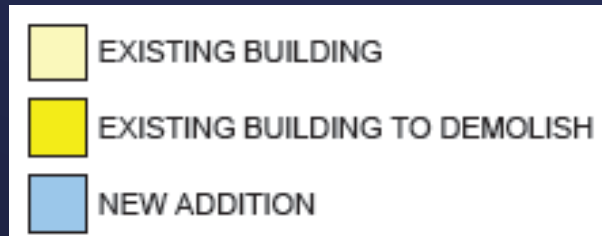
Space Planning Development

- Laboratory needs analysis
 - Overall laboratory flow & interaction
 - Considerations for sample handling, waste pathways & material delivery



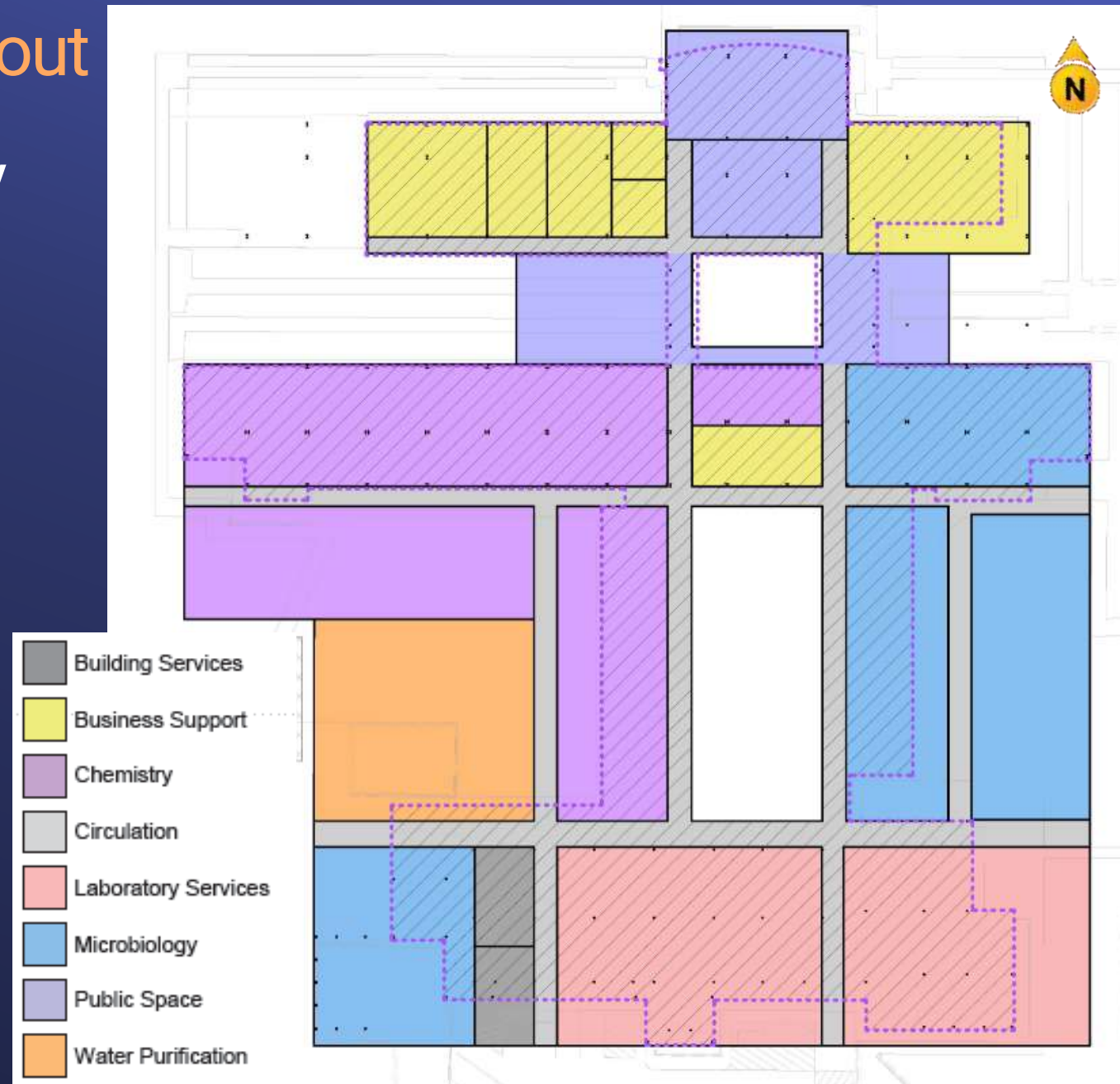
Key Design Criteria – Footprint

- 30,000 SF addition established
- Expanded entrance with improved traffic management
- Improved access to parking & staff entrance locations
- Strategy established to integrate structural improvements between existing & new structures



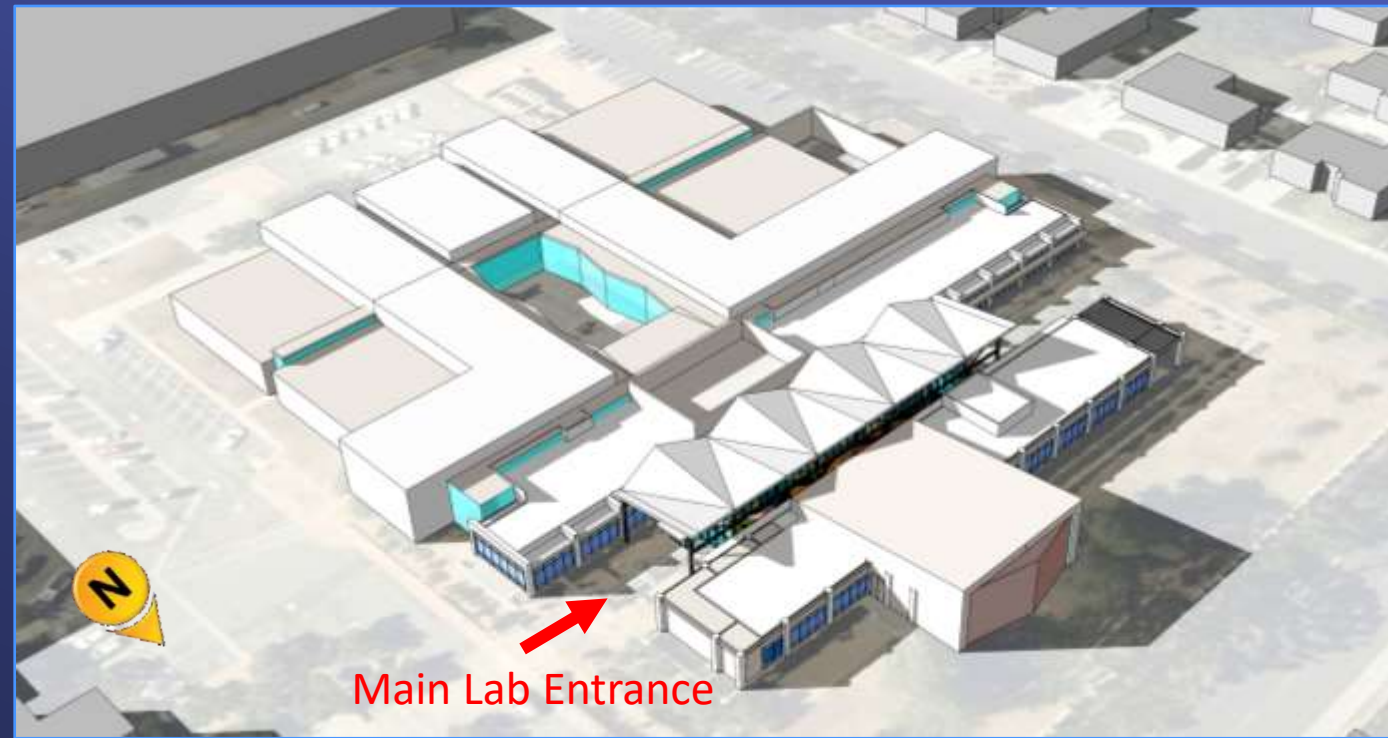
Key Design Criteria – New Layout

- Dedicated, modular laboratory space with clear separation
- Reconfigured laboratory adjacency for improved workflow
- Improved sample handling, waste management, public access, common areas & meeting spaces



Integration into La Verne Site

- La Verne 10-Year Master Plan
 - Maximize use of available space
- Repurpose foundation and key structural members to reduce building cost



New Proposed Water Quality Lab

Existing Water Quality Lab



Initial Concept Renderings

- New entrance and lobby maximizes public interaction and improves building traffic management and security
 - Lab Tours
 - Board
 - Industry
 - Public
 - Staff access
 - Deliveries



Laboratory Lobby/Entrance

Sustainable Building Features

- Target LEED Gold building status
- Renewable energy capture
- Water efficient landscaping
 - Solar, charging stations
- Water efficient landscaping
 - Reduce dust pollution, minimize water demand
- Water capture and reuse
 - Innovative technologies for rain and process water recycling

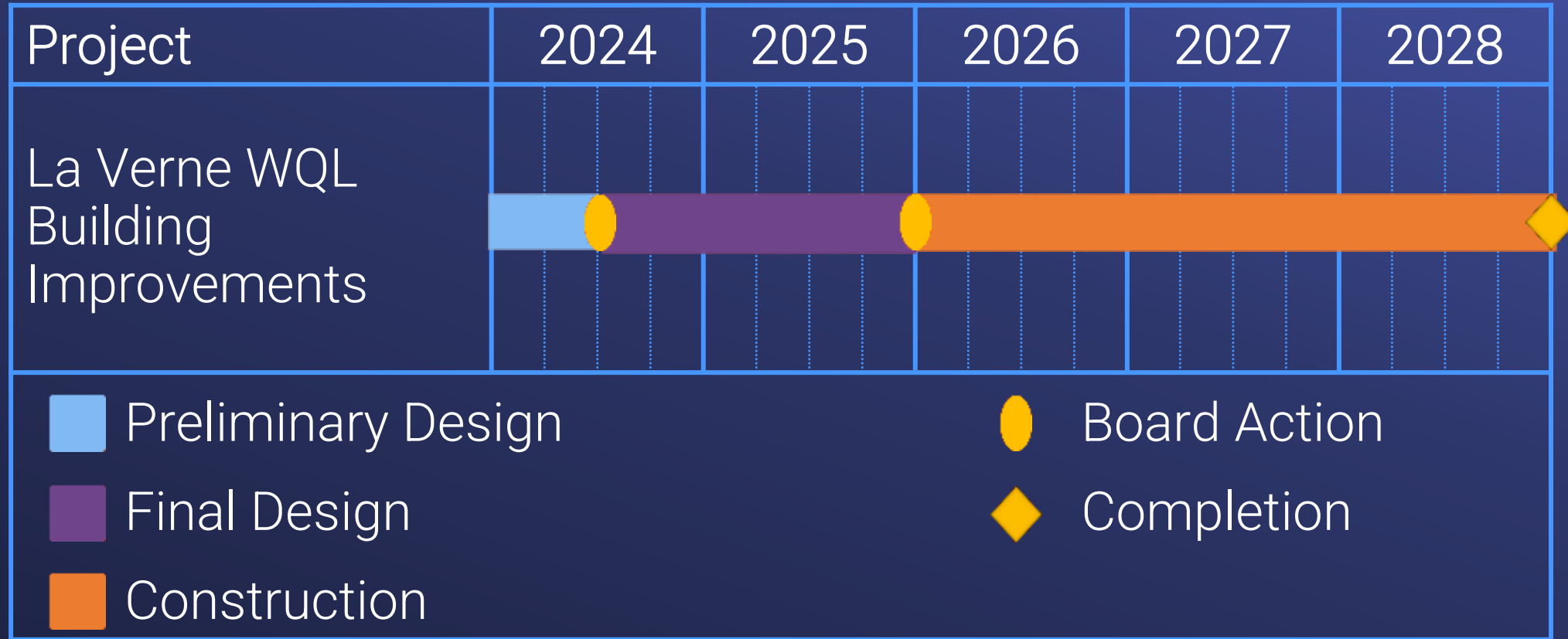


Update on Water Quality Laboratory Upgrades

Interim Cost Update

- Construction Contract: \$100M to \$130M
- Cost contributors requiring further development
 - Escalation and Inflation
 - Structural design for essential facility
 - HVAC requirements
- Other Construction Costs:
 - Laboratory Equipment
 - Staff Relocation and Support

Project Schedule



PFAS
Microplastics
Manganese
DBPs
Nitrification
Low alkalinity
PWSC
DPR
Cyanotoxins
T&O
Lake anoxia
Quagga mussels
New
contaminants

A Water Quality Lab for the Future

- 2024 – Water Quality will celebrate 50 years
- Metropolitan needs a state-of-the-art facility to meet all current and future requirements
- Need an upgraded lab to last another 50 years







Engineering, Operations and Technology Committee

Emergency Management Program Update

Item 7b

July 10, 2023

Emergency Management Program Update

Presentation Outline

- Program Overview
 - Authority
 - Response
 - Recovery
 - Planning/Preparedness
- Real-World Responses
- Future Actions



Authority



Operating Policy A-06

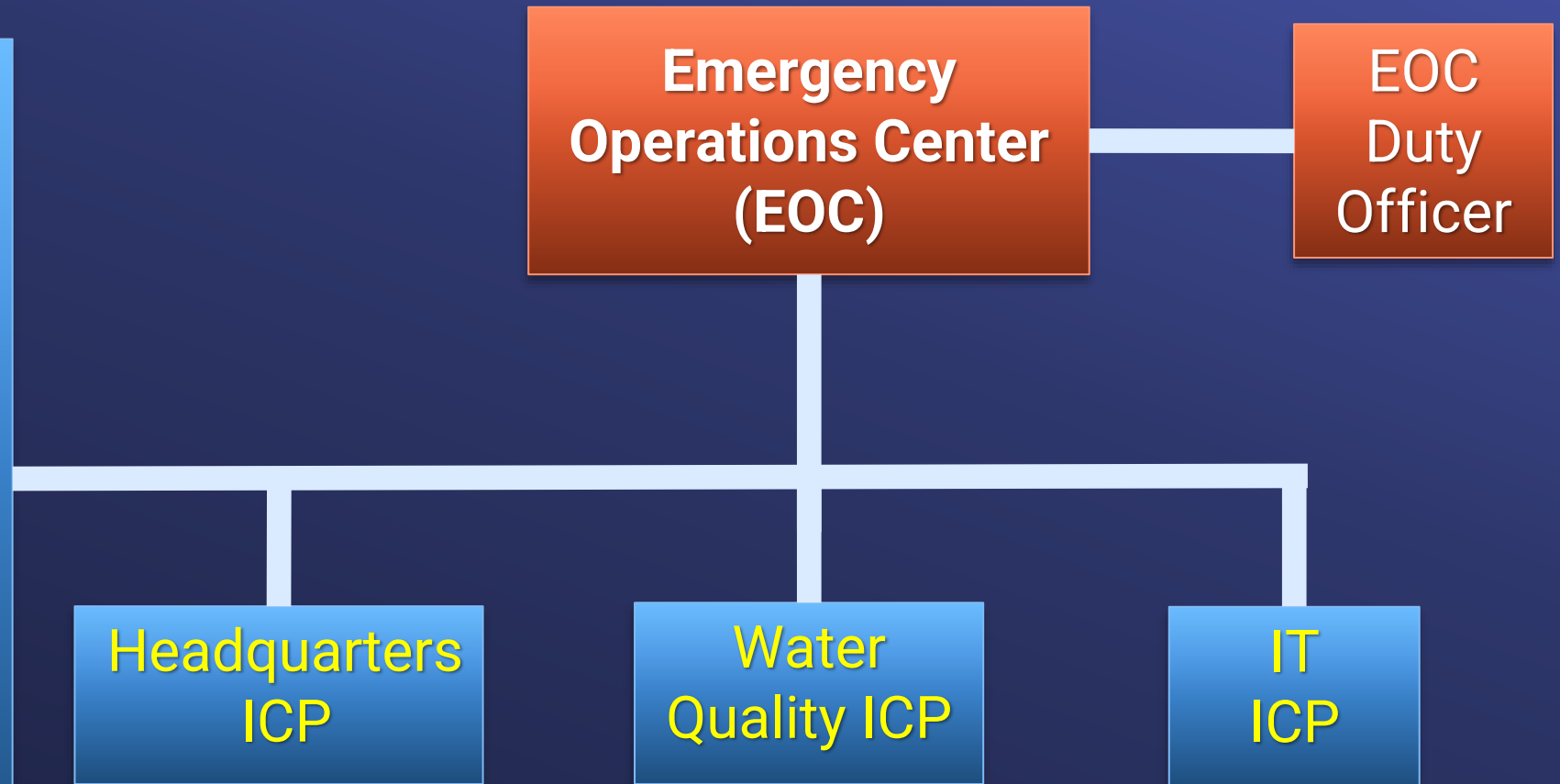
- Addresses how Metropolitan organizes and deploys resources to manage emergencies and ensure continuity of operations and critical business processes
- General Manager delegates authority for:
 - Emergency Management Program
 - IT Disaster Recovery
 - Business Continuity Program
- Establishes policies and responsibilities for Emergency Management Program

Emergency Response Organization

Response

Incident Command Posts (ICPs)

- Diemer
- Jensen
- Mills
- Skinner
- Weymouth
- Western Distribution
- Eastern Distribution
- Desert Distribution
- Lake Mathews



Manages District-wide emergencies

Follows State and Federal guidelines



Response Emergency Operations Center

Fixed-site, remote,
virtual, hybrid

Brings key managers
and staff together

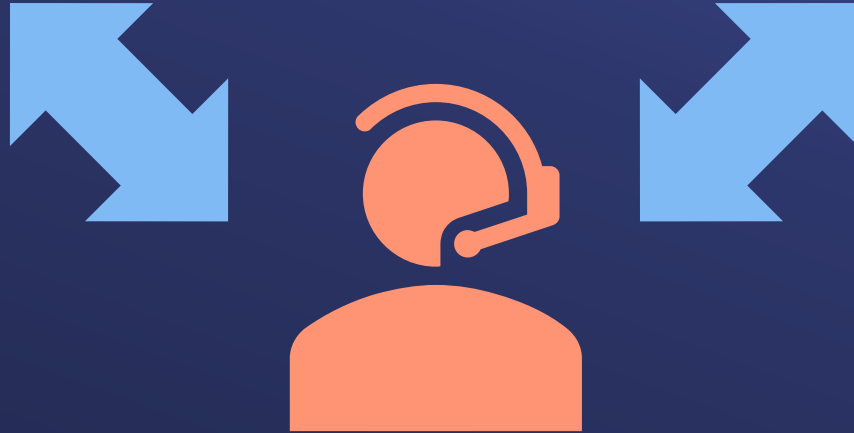


Response Incident Command Posts

- Manage local incidents
- 12 located throughout Metropolitan
- Follow State and Federal guidelines

External
Agencies

Metropolitan
Management



EOC Duty Officer

Member
Agencies

Metropolitan
Staff

Response

EOC Duty Officer

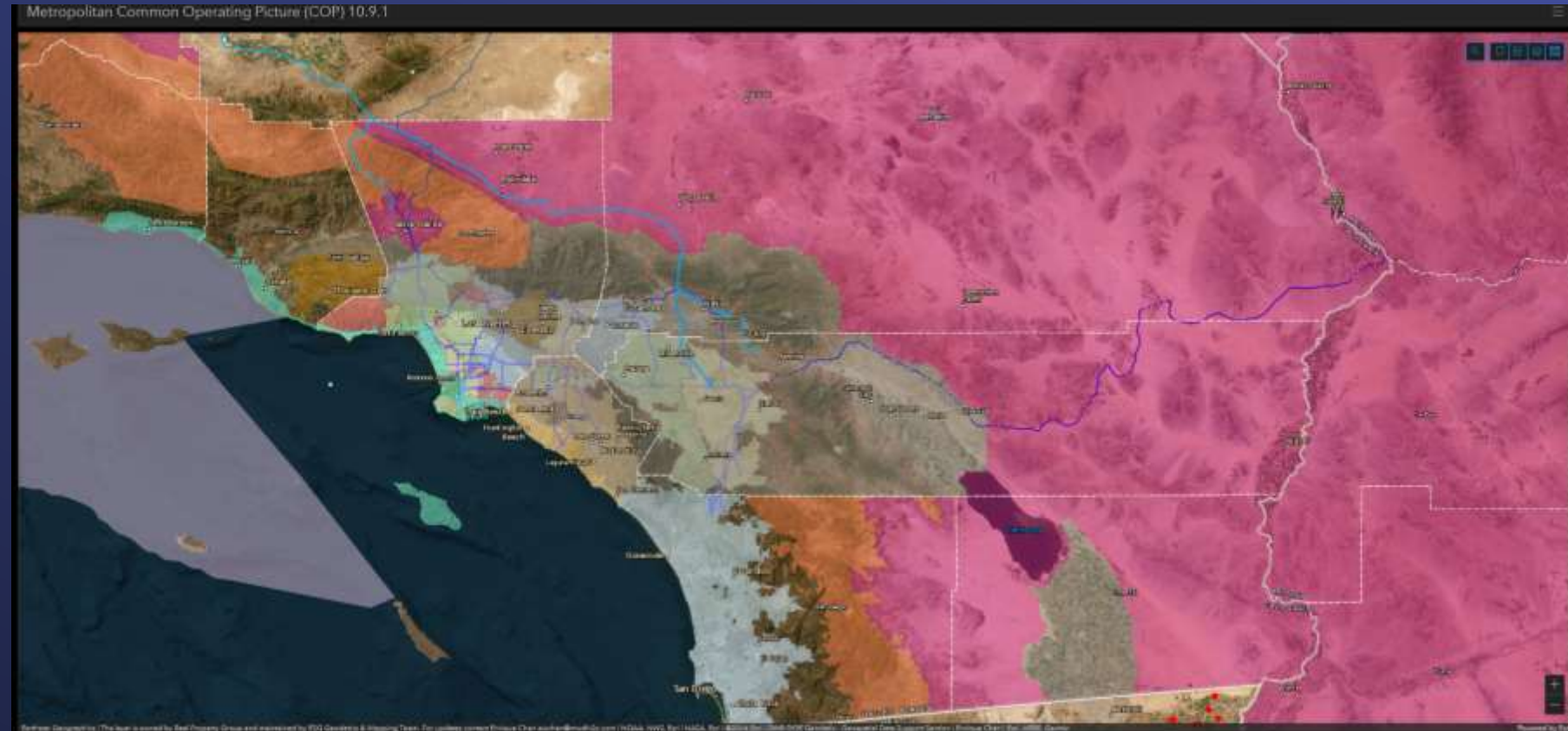
- On Call 24/7
- Covers EOC when not activated
- Monitors potential threats
- Connects all Metropolitan groups
- One-stop emergency point of contact

Response

Everything in One Place

- Weather alerts
- Duty Officer updates
- Earthquakes
- Fire thermal imagery
- Fire cameras
- Aqueducts
- Member Agency boundaries

Common Operating Picture Map



WebEOC | Ian Whyte | EOC - Management EOC Coordinator | Exercise - 2022 Shake Out Exercise | Log Out

Dashboard | File Library

Incident: Exercise - 2022 Shake Out Exercise

MWD EOC Activated Yes Details

Metropolitan EOC Events (32)

Warehouse Shelving Collapsed	Details
Influent capacity reduced 20%	Details
State of Emergency in 8 counties	Details
Injured Employee	Details
WQ POC request	Details
Route 5 (Team Yellow) Weymouth Patrol Route - 9:20am	Details
Route 4 (Team Green) Weymouth Patrol Route - 9:20am	Details
Route 3 (Team Red) Weymouth Patrol Route - 9:20am	Details
Route 2 (Team Orange) Weymouth Patrol Route - 9:20am	Details

ICPs Activated

Jensen		
Diemer	Yes	Details
Skinner		
Mills		
Weymouth	No	Details
Lake Mathews	No	Details
Desert C/D	No	Details
Western C/D	No	Details
Eastern C/D		
IT ICP		
Headquarters		
Water Quality		

Metropolitan EOC Dashboard

Incident Summary

This is an Exercise Message:
 EARTHQUAKE - A major earthquake happened this morning at approximately 0830 hours in the San Gabriel Mountains, approximately 8 miles north of the City of Azusa. The earthquake preliminary magnitude was 5.9 and it occurred in the San Gabriel Fault Zone. Shaking was felt throughout the Los Angeles County area, with the strongest shaking felt 20 miles of the epicenter. The shaking intensity lasted for up to 40 seconds in some areas. Caltech and the USGS advise that generally there could be at least one magnitude 5.5 up to magnitude 6.4 aftershocks along with hundreds of smaller magnitude aftershocks in the near future.
 CalOES reports that at 10:20am Los Angeles area felt a 5.5 magnitude aftershock along the Santa Susana fault line, that lasted approximately 20 seconds.

Member Agency Significant Events (0)

EOC Emergency GIS Map

©2023 ESI Acquisition, Inc. WebEOC

Example from 2022 ShakeOut Exercise

Response

Metropolitan's WebEOC System

- Connects the EOC to the ICPs in real-time
- Separate from Metropolitan's business network
- Can track multiple events at once
- Customized to meet the needs of Metropolitan
- Can incorporate Member Agency updates as well

Ensuring Emergency Readiness



Response

Training and Exercises



- Standardized training
- Minimum of 3 exercises per unit, per year
 - Over 40 exercises annually
- Recent exercises include:
 - ShakeOut 2022
 - Diemer Full-Scale Exercise 2022
- Monthly communication drills

Pursuing Damage Recovery Funding After Emergencies

Recovery



- Seeking public assistance and reimbursement
 - FEMA and Cal OES
- Coordinating with outside partners
- Transitioning from Response to Business Continuity

Comprehensive Overall Emergency Response Plan

Planning / Preparedness



- Metropolitan's Emergency Response Plan meets criteria set in the 2018 American Water Infrastructure Act (AWIA)
- The plan follows a multi-hazard approach, and lays out how Metropolitan will respond to an emergency
- Requires Risk and Resilience Assessment, as well as Emergency Response Plan
- Updated plan is due mid-2025

New Plans Under Development

Planning / Preparedness



- Local Hazard Mitigation Plan
 - Identifies potential hazards and mitigation strategies
 - Provides framework for future project funding
- Dam Emergency Action Plans
 - Approved by Cal OES
 - Requires outreach to local jurisdictions
 - Requires annual exercises and updates

Coordination Required for Effective Plan Implementation

Planning /
Preparedness



- Emergency Response Plan
- Local Hazard Mitigation Plan
- Dam EAPs
- Safety and Regulatory Plans
- Business Continuity Plans
- Crisis Communications Plan

Fairview Fire

Real-World Responses

- Metropolitan EOC, Eastern C&D and Skinner ICPs activated
 - Supported fire suppression operations
- September 5-11, 2022
 - Near Diamond Valley Lake and Skinner Plant
 - 28,307 acres burned



January 2023 Storms

- High turbidity into Jensen Plant due to heavy rains over Castaic watershed
- Jensen ICP activated
- Effectively managed high solids loading
- Met all water quality compliance goals

Real-World Responses



Castaic Lake Boat Ramp (Jan 12, 2023)



Real-World Responses



Malibu Earthquake

- Magnitude 4.2 earthquake offshore near Malibu
- ShakeCast alerted of possible damage
- Outreach to local Member Agencies
- Patrollers responded, confirmed no damage



From USGS

Preparing for Wildfires

Real-World Responses

- Coordinate with local and state firefighting agencies
- Duty officer monitors local brushfires
- Staff prepared to participate at fire department command posts



Future Actions



Next Steps

- Enhance EOC/ICP operations, including mobile response capabilities
- Expand planning and exercises with first responders and other partners to improve readiness
- Participate in planning for 2028 Olympics







Engineering, Operations, & Technology Committee

Water System Operations Manager's Report

Item 8a
July 10, 2023

Managing Surplus Conditions

Current Operational Conditions



Lake Oroville Full

- 2023 SWP Allocation at 100%
- CRA at 5-pump flow
- SWP blend targets are 60% at Weymouth and Diemer; Skinner blend currently 50% and increasing
- Maximizing Colorado River water delivery to DWCV storage
- June 2023 deliveries of 97 TAF were 51 TAF lower than June 2022; lowest June demand since 1979

Maximizing SWP Supplies

100%
SWP
Allocation



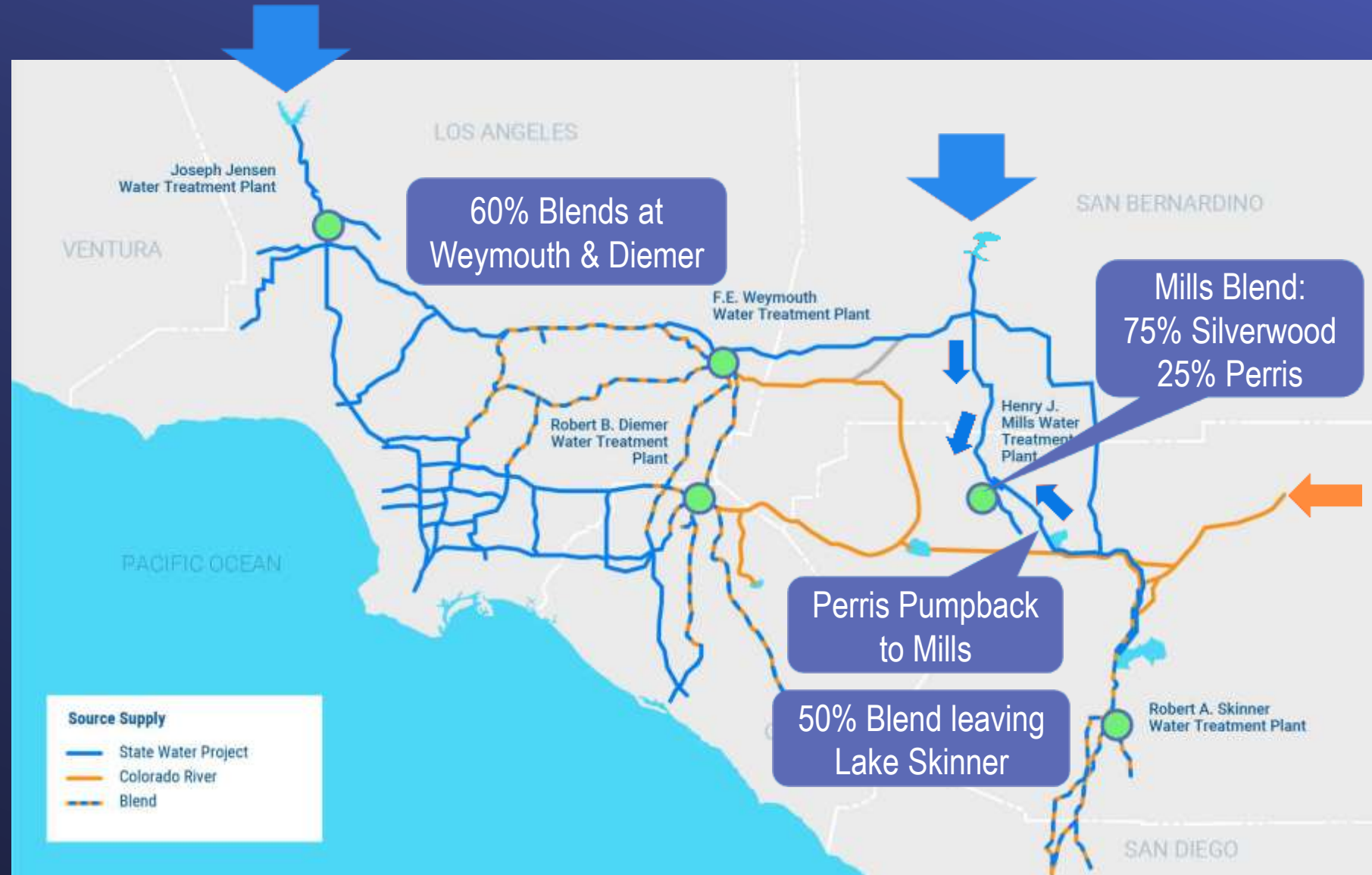
USG-03 Replenishment
Delivery

- Maximizing SWP West and East Branch deliveries
 - Managing blends while balancing system and water quality constraints
- Prioritizing storage for SWP Dependent Area
 - Maximizing SWP Carryover
 - Filled Perris and Castaic Flex
 - Refilling DVL; currently ~75%
- Coordinating with member agencies on CUP and Cyclic programs
 - Started delivering at USG-03 on June 20

Maximizing SWP Supplies

Current Surplus Operations

Balancing water supply, quality, and system constraints



Managing Multiple Blooms in Reservoirs

Diamond Valley Lake

- Rapidly developing bloom producing cyanotoxins
 - Recreational water issue only; *drinking water not impacted*
- Following State voluntary guidance for monitoring and posting recreational advisory notices
 - “Warning” signs posted on July 5



Lake Skinner

- Managing taste & odor (geosmin) event
 - Tier selection, 50% lake bypass, ozone and peroxide
 - Copper sulfate treatment on July 7

Cyanobacteria Blooms Summer 2023

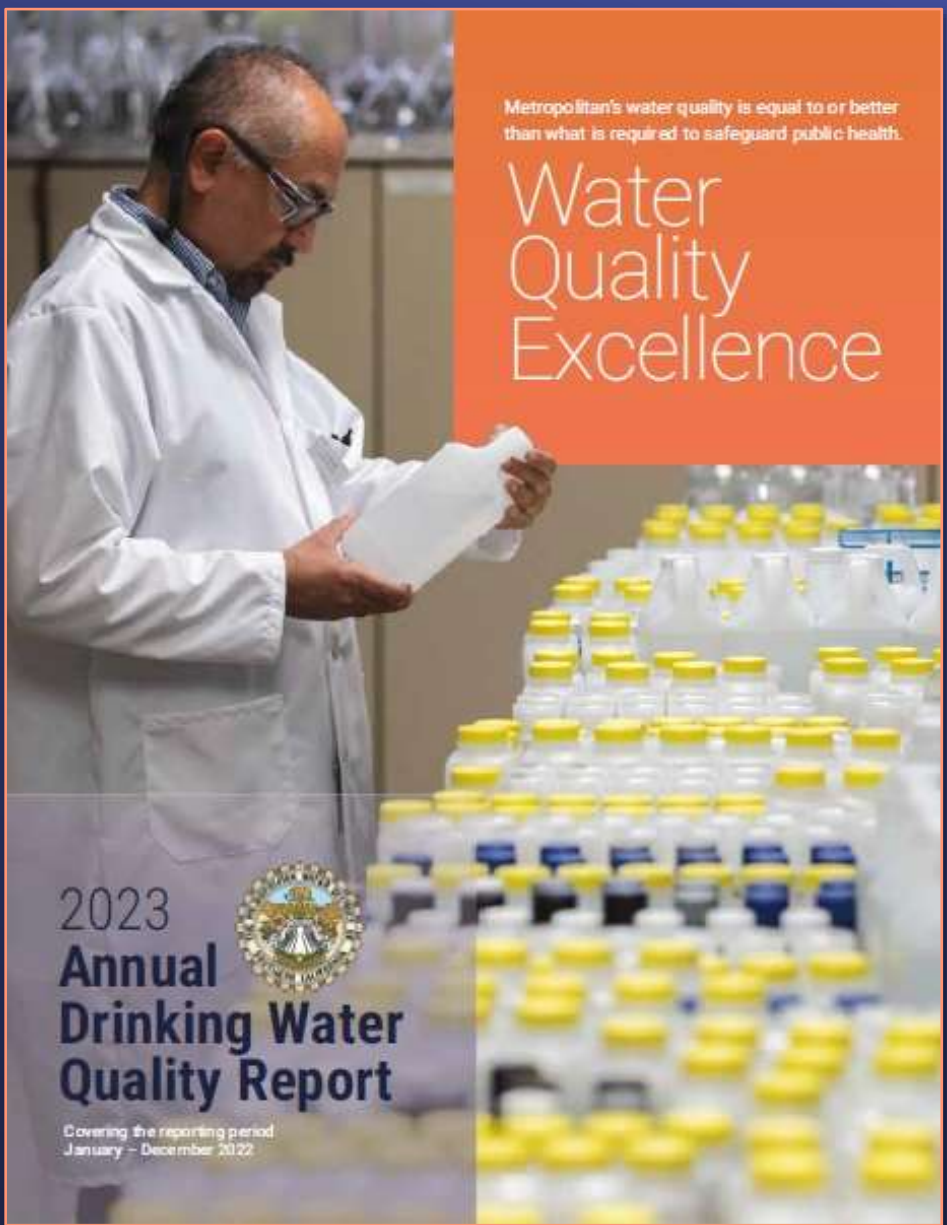


DVL Marina – July 3

Comprehensive Reservoir Management update will be provided in August EO&T Committee meeting

Annual Water Quality Report

Metropolitan's water quality is equal to or better than what is required to safeguard public health



Metropolitan's water quality is equal to or better than what is required to safeguard public health.

Water Quality Excellence

2023 Annual Drinking Water Quality Report



Covering the reporting period January - December 2022


2023 WATER QUALITY TABLE

Parameter	Units	State (Federal) MCL	PHG	Treatment Plant Effluents and Distribution System					Major Sources in Drinking Water	
				Range Average	Olemer Plant	Jensen Plant	Mills Plant	Skinner Plant		Weymouth Plant
Percent State Water Project	%	NA	NA	Range	0-7	100	100	0-43	0-100	Not Applicable
PRIMARY STANDARDS - Mandatory Health-Related Standards										
CLARITY										
Combined Filter Effluent (CFE) Turbidity*	NTU %	TT	NA	Highest % ± 0.3	0.03	0.05	0.06	0.05	0.04	Soil runoff
MICROBIOLOGICAL⁵										
Total Coliform Bacteria ⁴	% Positive Monthly Samples	5.0	MCLG = 0	Range Average	Distribution Systemwide: 0 - 0.3					Naturally present in the environment
Heterotrophic Plate Count (HPC) Bacteria ⁴	CFU/mL	TT	NA	Median Range Median	ND-1	ND	ND	ND	ND	Naturally present in the environment
INORGANIC CHEMICALS										
Aluminum ⁶	ppb	1,000	600	Range Highest RAA	85-210	ND-81	ND-150	ND-230	58-240	Residue from water treatment process; runoff and leaching from natural deposits
Arsenic	ppb	10	0.004	Range Average	ND	2.4	ND	ND	ND	Natural deposits erosion, glass and electronics production wastes
Barium	ppb	1,000	2,000	Range Average	111	ND	ND	ND	110	Oil and metal refineries discharge; natural deposits erosion
Fluoride ⁷	ppm	2.0	1	Range Average	0.7-0.8	0.4-0.8	0.6-0.8	0.6-0.8	0.6-0.8	Runoff and leaching from natural deposits; water additive that promotes strong teeth; discharge from fertilizers and aluminum facilities

DRINKING WATER AND YOUR HEALTH

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791) or by visiting the U.S. Environmental Protection Agency's website at www.epa.gov/ground-water-and-drinking-water.



<https://www.mwdh2o.com/your-water/water-quality-and-treatment/>

Advice and Advocacy



Engaging in Federal Regulatory Development

Staff engage in workgroups and committees that provide recommendations, comments, and guidance on regulatory development

- EPA Science Advisory Board
- National Drinking Water Advisory Council Working Group
- American Water Works Association
- Association of California Water Agencies
- Association of State Drinking Water Administrators
- Association of Metropolitan Water Agencies



Member Agency Support

Engaging Member Agencies on Water Quality Issues in 2023

- Microplastics Workshop, *April 12*
- Nitrification Workshop, *June 22*
- Regulatory Developments Update, *late summer/fall*
- Survey Member Agency water quality managers on forming topic-specific workgroups, *June/July*
 - Workgroup topics may include PFAS, microplastics, lab accreditation, nitrification, emerging contaminants, reservoir management, etc.
- Update EO&T Committee on key water quality matters and workgroup activities



April Member Agency
Microplastics Workshop

Training Tomorrow's Workforce

Water Quality Co-Op Education

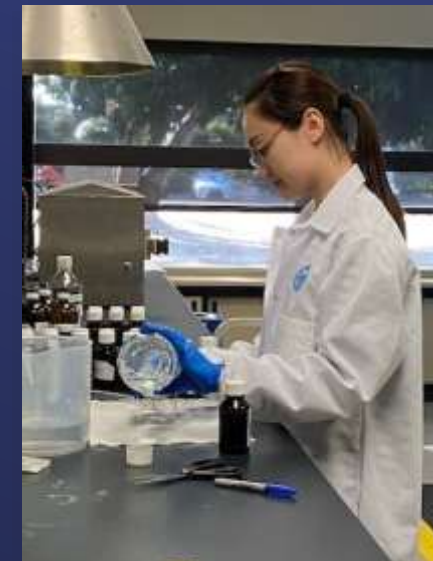


Alijah Navalta

- Cal Poly Foundation paid internship program started in early 1980s
 - Science and engineering students from accredited universities
 - Bridging gap between theoretical study and professional world
- Over 300 students since inception
 - Over 30 became full-time employees, several as managers
- Opportunity for Metropolitan staff to develop leadership and management skills



Jessica Coronel



Nguyen Thao Ngan Tran





Engineering, Operations, & Technology Committee

Engineering Services Manager's Report

Item 8b

July 10, 2023

Construction and Procurement Contracts May 2023

Construction and Procurement Contracts Through May 2023

Number of Active Contracts at end of month	53
Total Bid Amount of Contracts in Progress at end of month	\$587.1 M
Contracts Awarded in month	3
Contracts With Notice To Proceed Issued in month	2
Contracts Completed in month	1
Contract Gross Earnings in month	\$14.6 M

Correction Reporting

Correction Reporting

- Due to an inadvertent clerical error, a recent Board letter has erroneously referenced RFQ 1215 rather than RFQ 1287:
 - Lake Skinner Outlet Tower
 - Detailed Seismic Analysis; Item 7-3 approved on April 11, 2023

Eastside Drought Projects – Update

- **Wadsworth P.P. Intertie**
 - Contract awarded January 2023
 - Excavation for valve structure under way
 - Construction completion April 2024
- **IF/RP Intertie**
 - Final design completed
 - Advertised for bids June 2, 2023
 - Award contract August 15, 2023
- **Badlands Tunnel Surge Protection**
 - Final design 98% complete
 - Advertise for bids July 24, 2023
 - Award contract October 12, 2023



Wadsworth Pumping Plant Intertie:
Excavation for valve structure

Integration of Pure Water & Operation NEXT Conveyance Systems



Hyperion AWT

Operation NEXT Tie-In

Potential Upsize of Pipe Diameter (~12 miles)

Pump station locations and Operation NEXT tie-in location are approximate

USEPA Grant for Pure Water Site Remediation

June 30, 2023 press event



- \$1.8 M USEPA grant to LA County Sanitation Districts
- Supports continued site remediation in advance of Pure Water So. CA
 - \$6-8M overall effort
 - Addresses soil contaminants more than 30 feet below ground surface
 - 4 to 5-year effort

Tour of Sacramento's EchoWater and Harvest Water Programs



Backwashing Tertiary Filters



Discussing the Plant's
\$1.5B Modification Projects



Enhanced Biological Process for
Nitrogen Removal

2023 Engineering Services Group – College Intern Program



Universities represented with this year's intern cohort:

- Cal Poly Pomona
- Cal State Los Angeles
- UC Riverside





Engineering, Operations, and Technology Committee

IT Manager's Report

Item 8c

July 10, 2023

IT PMO Status Overview



Information Technology
Project Management Office

June 2023

4th Thu of the month

Portfolio Overview

Active Capital **51**

Active O&M **21**
No Budget Assigned

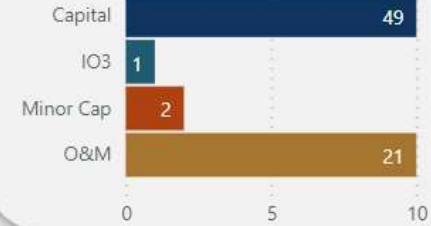
Total Active **73**
Includes IO3

Sources:
PMO Monthly Status Reports
Prioritization Managers Meeting

Active Capital Projects - General Health



Active Projects by Funding Classification



Projects Over 90%



Projects Over 80%



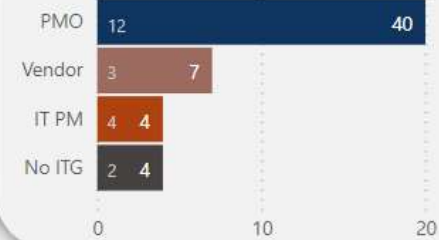
Ending Next 3 Months



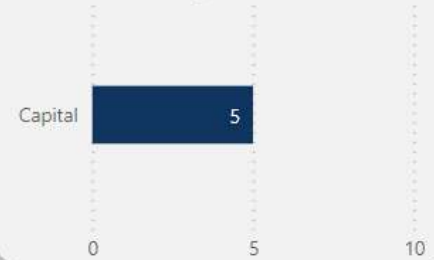
90% Project Name

90% Project Name	%
Real Property Group Business System Replacement	90.00%
Incident Reporting (Risk Management, Legal & Security Reporting)	95.00%
SOC - IBM QRADAR, SIEM Implementation	95.00%
SOC - Yubikey / MFA	95.00%

Active Project Managers Distribution



Completed 2023



Completed since 2019



IT PMO Financial Overview



Portfolio Financial Overview

Active Capital **51**

Active O&M **21**
No Budget Assigned

Total Active **73**
Includes IO3

Sources:
PMO Monthly Status Reports
Prioritization Managers Meeting

Information Technology Project Management Office

June 2023

4th Thu of the month

FYs 2018 - 2020

FYs 2020 - 2022

FYs 2022 - 2024

Including METCON

Not Including METCON

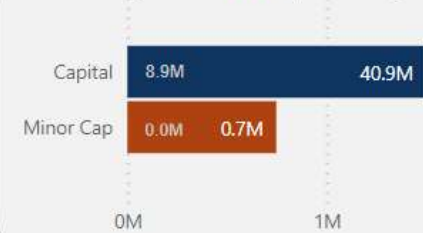
Active Capital Projects - General Health



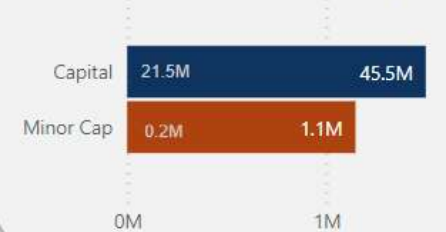
O&M and other status



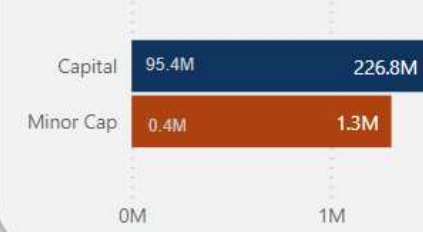
Active Projects - Biennium Spent / Budget



Biennium - Spent to date / CIP Budget



All IT Projects - Spent to date / Total CIP Budget



METCON - SCADA



Project Overview, Focus 80%+



Look Ahead

June 2023

80%+

All



Capital O&M 1 10

Project Status	Project Name	% Completed	Est End Date	General Status	PM / Responsible
Active	CRA Pumping Plants SCADA Network Main Switches Replacement	100.00%	06/30/2023	Yellow	B. Brenhaug
Active	Boardroom (Fire Alarm for Cafeteria to Boardroom)	99.00%	06/30/2024	Green	V. Konanur
Active	Microsoft Azure Commercial move from San Jose to Phoenix	99.00%	01/31/2022	Yellow	Z. Kasilag
Active	SOC - WorkspaceOne - VMWare WorkspaceOne MDM implemen...	99.00%	06/30/2023	Green	C. Parada
Active	AMR System Radio Modem Upgrade (Phase 1 of 2)	97.00%	01/31/2023	Green	R. Kolodji
Active	Incident Reporting (Risk Management, Legal & Security Reporting)	95.00%	05/15/2023	Yellow	V. Konanur
Active	SOC - IBM QRADAR, SIEM Implementation	95.00%	06/30/2023	Green	C. Parada
Active	SOC - Yubikey / MFA	95.00%	09/30/2022	Yellow	Z. Kasilag
Active	Real Property Group Business System Replacement	90.00%	09/29/2023	Yellow	J. Wingate

Description

- Deploy Yubico YubiKey's to entire district
- Enforce Domain and O-365 Two-Factor Authentication with YubiKey
- Part of Cybersecurity Security Operations Center CIP

Purchase, configure, and install replacement network switches for Metropolitan's control system network at the desert pumping plants to replace 13 existing network switches for which support has recently ended.

Replace existing Real Property application for lease management with a new application covering both Acquisitions and Property Management. Build Cognos based dashboard reports.

Replace the current MWDH2o.com with a new innovative website and design. Emphasize Metropolitan's past, present and future role in Southern California.

Replace the existing Incident Reporting system.

4204

IT Priority

105019-X2

CIP Project No

9.61M

Budget

1415-56

CIP Index No

12.55M

Budget Total CIP

15378

Appropriation

Capital


Funding Source



Cost Efficiency & Productivity

Business Operations Improvements

IT Projects - Procurements Overview

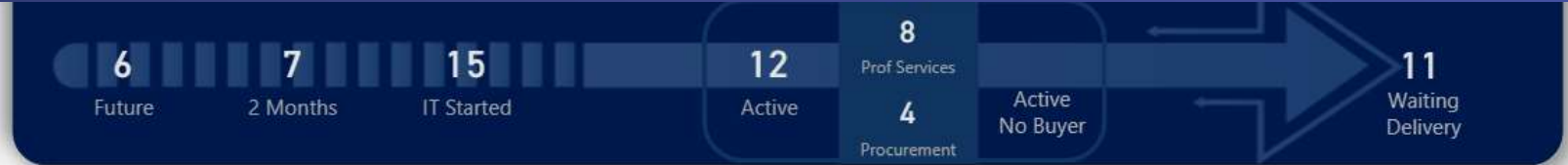


Procurement Activities

Project Status

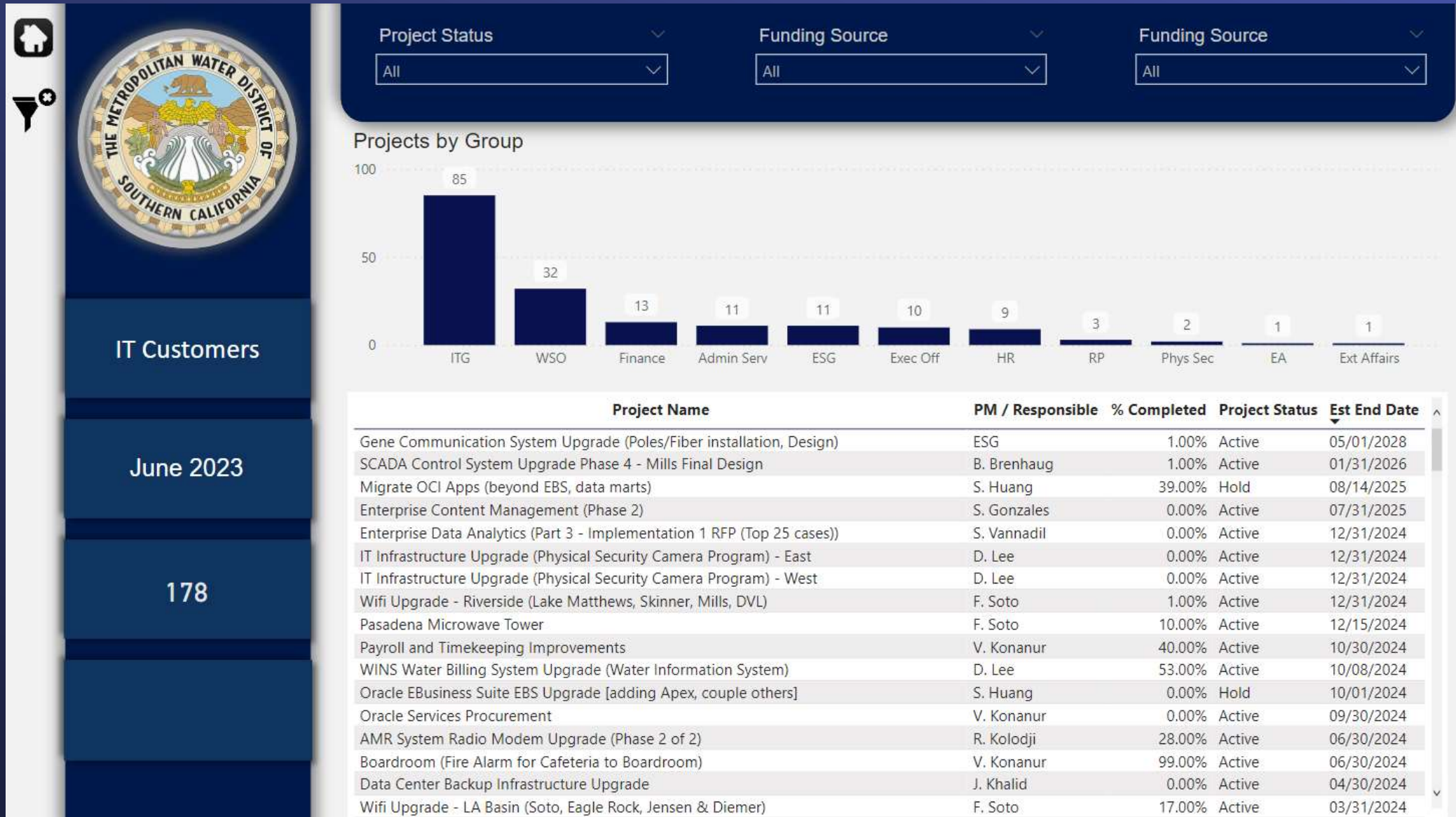
Buyer

PM



Priority	Team	AssocProject	Title	Buyer	Sourcing Strategy	Status
1.0	Procurement		LV.NET		Other (see notes)	04- Procurement
1.0	Prof Services	105150 - Datacenter Backup Infrastructur...	Datacenter Backup Infrastructure Upgrade	Martin Dun	RFP	04- Procurement
2.0	Procurement	105042 - Desert Tower Microwave Project	Storage Containers at Gene Camp		Other (see notes)	04- Procurement
3.0	Prof Services	105044 - Security Operations Center	Cybersecurity Operations Center Co-Managed Supp...		RFP	04- Procurement
4.0	Prof Services	Maximo Mobile Interface Software	RFP for Maximo Mobile Interface Software		RFP	04- Procurement
7.0	Prof Services	101C - ECM Phase II	ECM Phase II RFP (Design)		RFP	04- Procurement
8.0	Prof Services	105116 Wi-Fi Upgrade	Wi-Fi -RFP for Design of Riverside Sites		RFP	04- Procurement
9.0	Prof Services	CIP Budget Sys Improvements	CIP Budget Sys Improvements RFP		RFP	04- Procurement
12.0	Prof Services	Windows (2003/2008) Applications and S...	RFP for Legacy app upgrade vendor		RFP	04- Procurement
14.0	Prof Services	Data Analytics	RFP Request for Data Analytics Phase 4		RFP	04- Procurement
18.0	Procurement	Services Procurement	Oracle Module for Services Procurement for ESG		RFP	04- Procurement
19.0	Procurement	Windows (2003/2008) Applications & Serv...	Bentley Nevada Support (Vibration Systems)		Direct Purchase	04- Procurement
41.0	--EMPTY--	Emergency Radio Communications Upgra...	Batteries and Newmar Battery Rectifier and Panel wit...		--EMPTY--	03- IT Started
42.0	--EMPTY--	105042 - Desert Tower Microwave Project	Fiber Optic cable installation at Eagle Mtn Head Gate		Direct Purchase	03- IT Started
43.0	--EMPTY--	105053 - AMR RF Upgrade Project Ph 2	Antenna cables and lightning arrestors		--EMPTY--	03- IT Started
45.0	Procurement	105234 - Pasadena Microwave Tower	Pasadena Microwave Tower Structure only	Martin Dun	Sole Source	03- IT Started
49.0	--EMPTY--	105053 - AMR RF Pilot Project	Enhanced Upgraded Enterprise licenses for 900 MHz ...		Sole Source	03- IT Started
50.0	Prof Services	105044 - Security Operations Center	RFQ 1303 On-Call Services (1Cyber)		RFQ	03- IT Started
50.0	Procurement	105053 - AMR System RTUs & Radio Mod...	Network switches and firewalls for four AMR master ...		RFB	03- IT Started
50.0	Prof Services	RFQ1303 On-Call PM Services	RFQ1303 - Z Consulting		RFQ	03- IT Started
51.0	--EMPTY--	EGIS Disaster Recovery	Support VDI DR		RFB	03- IT Started
52.0	Procurement	105116 - Wifi Upgrade	Network Hardware for Riverside Sites		RFB	03- IT Started
53.0	Procurement	105116 - Wifi Upgrade	Network Hardware for WiFi CIP (LA Basin, Riverside, ...		RFB	03- IT Started
55.0	Procurement	IT Infrastructure Upgrade for Security Ca...	IT Infrastructure for Security Cameras			03- IT Started
56.0	Procurement		Field Network Refresh		RFP	03- IT Started
58.0	--EMPTY--	105042-Desert Tower Microwave Project	Redundant Cisco Routers for Desert Sites		--EMPTY--	03- IT Started
59.0	--EMPTY--	105042 - Desert Tower Microwave Project	Western Region twelve sites microwave equipment r...		--EMPTY--	03- IT Started
70.0	Prof Services	104851 - System-wide Control System Up...	Owner's Engineer (CH2M/Hatch) Amendmen...		RFP	05- Delivery Sta...

IT Projects Distribution by Customers



IT Customers

June 2023

178

IT Projects Distribution by Customers

