



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

8/18/2015 Board Meeting

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**7-2**

**Subject**

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Appropriate \$1.24 million; and award \$930,483 contract to Coleman Construction, Inc. to upgrade the network rooms at Metropolitan's Headquarters Building (Approp. 15487)

**Executive Summary**

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This action awards a construction contract to upgrade utilities for the network rooms in Metropolitan's Headquarters Building at Union Station. Upgrades to the cooling, power supply, and backup power systems are needed to support the ongoing telephone replacement and network hardware replacement projects.

**Timing and Urgency**

The network rooms at Metropolitan's Headquarters Building do not presently have air conditioning or backup power systems. The equipment housed in these rooms has evolved and increased over time, as technology has changed and Metropolitan moved toward internet-protocol (I/P) based communications and increased the use of multi-function fiber optic networks. As a result, upgrades are needed to the cooling, electrical, and backup power systems for these rooms to support ongoing projects, and to accommodate future networking needs as Metropolitan's computing and data requirements grow.

This project has been reviewed with Metropolitan's Capital Investment Plan (CIP) prioritization criteria, and is included in the System Reliability Program. Funds for this action are available within Metropolitan's capital expenditure plan for fiscal year 2015/16.

**Details**

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**Background**

Metropolitan's Wide Area Network (WAN) extends over a 5,200-square-mile area covering the entire distribution system and the Colorado River Aqueduct (CRA). This network interconnects 118 sites and approximately 25,000 devices in diverse locations such as Metropolitan's Headquarters Building, the Operations Control Center at Eagle Rock, the five CRA pumping plants, the five water treatment plants, and each reservoir and hydroelectric plant.

Metropolitan relies on the WAN to transmit data, voice, video, and command signals to operate the distribution system and various business systems, including the following:

- **Telephone System** – The telephone system interconnects all Metropolitan facilities and transports voice, data, and video traffic.
- **Supervisory Control & Data Acquisition (SCADA) System** – SCADA provides real-time data used to monitor and control water flows and water deliveries throughout the distribution system from the Operations Control Center at Eagle Rock.
- **Automated Meter Reading (AMR) System** – The AMR system automatically collects water consumption and status data from Metropolitan's 350 service connection meters, and transmits the data for billing purposes.

- **Disaster Recovery System** – This system backs up network servers to an off-site location for recovery of data in the event of an emergency or prolonged power outage.
- **Email, Geographical Information System (GIS), Oracle Financials, Timekeeping, and PeopleSoft Human Resources/Payroll Systems** – These business systems are used in Metropolitan’s day-to-day business activities.

The Local Area Network (LAN) within Metropolitan’s Headquarters Building relies on a data center and 12 network rooms, one on each floor of the building. The data center is a room devoted to the continuous operation of the network servers and telecommunication equipment. The data center is air-conditioned and has a backup power supply. The network rooms contain the switches and telecommunication equipment that connect the computers and telephones on each floor of the Headquarters Building to the data center. The network rooms do not have cooling equipment, are not connected to the main building heating, ventilating, and air conditioning (HVAC) system, and do not have backup power. When the Headquarters Building was completed and the network equipment was originally installed, the power usage and amount of heat generated by the network equipment did not justify installing air conditioning within the network rooms.

The equipment housed in the network rooms has evolved and increased over time, as technology has changed and Metropolitan moved toward I/P-based communications and increased the use of multi-function fiber optic networks. These changes will result in increased power usage and heat generation inside the network rooms. The upcoming replacement of Metropolitan’s telephone system will further increase the heat generated within the rooms, which will reduce the lifespan and reliability of network equipment if not addressed. Upgrades are needed to the cooling, electrical, and backup power systems for these rooms to support projects that are currently underway, and to accommodate future upgrades to the data and communications networks.

In October 2014, Metropolitan’s Board authorized final design to upgrade the network rooms at Metropolitan’s Headquarters Building. Final design has been completed, and construction is recommended to move forward at this time.

#### **Network Room Upgrades – Construction (\$1,240,000)**

Specifications No. 1801 for the Network Room Upgrades at Union Station was advertised for bids on June 15, 2015. As shown in [Attachment 2](#), four bids were received and opened on July 8, 2015. The low bid from Coleman Construction, Inc. in the amount of \$930,483 complies with the requirements of the specifications. The three higher bids ranged from \$971,000 to \$1,777,000, while the engineer’s estimate was \$764,000. Staff investigated the difference between the low bid and the engineer’s estimate, which was prepared by the design consultant, and attributes the difference to greater discounts in equipment pricing by suppliers than had been assumed and lower labor costs for installation of the electrical components. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 25 percent of the bid amount. Coleman Construction, Inc. is an SBE firm, and thus achieves 100 percent participation. The subcontractors for this contract are listed in [Attachment 3](#).

This action appropriates \$1.24 million and awards a \$930,483 contract to Coleman Construction, Inc. for upgrades to the network rooms at Metropolitan’s Headquarters Building. In addition to the amount of the contract, the requested funds include \$19,000 for Metropolitan force activities, which includes isolation of the network and building life safety systems, and equipment start-up and testing; \$139,000 for construction inspection; \$15,000 for technical support during construction by La Cañada Design Group, as discussed below; \$59,000 for permitting and project management; and \$77,517 for remaining budget.

Metropolitan staff will perform inspection of the construction. Due to the need to minimize disruption to Metropolitan’s business functions, most work will occur after working hours and on weekends. Continuous inspection is planned during these periods. For this project, the anticipated cost of inspection is approximately 14.6 percent of the total construction cost. Engineering Services’ goal for inspection of projects with construction cost less than \$3 million is 9 to 15 percent. The total cost of construction, which includes the amount of the contract and Metropolitan force activities, is \$949,483.

The total estimated cost to complete the upgrades to the network rooms, including the amount appropriated to date and current funds requested, is \$1,415,000.

### **Technical Support During Construction (La Cañada Design Group) – No Action Required**

La Cañada Design Group performed design of the network room upgrades under a board-authorized agreement. As the Engineer of Record, La Cañada Design Group will provide technical support during construction. Planned activities include responding to requests for information and advising staff on technical issues as they may arise. The estimated cost for these services is \$15,000. No amendment to the existing agreement with the La Cañada Design Group is required.

For this agreement, Metropolitan has established an SBE participation level of 18 percent. La Cañada Design Group has agreed to meet this level of participation. The planned subconsultants under this agreement are Stein Technology Consulting Group, Kocher Schirra Goharizi Consulting Engineers, Inc., and CEDG, Inc.

This project is included within capital Appropriation No. 15487, the IT Infrastructure Reliability Appropriation, which was initiated in fiscal year 2013/14. With the present action, the total funding for Appropriation No. 15487 will increase from \$7.84 million to \$9.08 million.

This project has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2015/16 capital expenditure plan. See [Attachment 1](#) for the Financial Statement, [Attachment 2](#) for the Abstract of Bids, [Attachment 3](#) for the List of Subcontractors, and [Attachment 4](#) for the Location Map.

### ***Project Milestone***

March 2016 – Completion of construction

### **Policy**

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Metropolitan Water District Administrative Code Section 5108: Appropriations

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

### **California Environmental Quality Act (CEQA)**

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#### **CEQA determination for Option #1:**

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The action involves funding for the construction of upgrades to the network rooms located at Metropolitan's Headquarters Building, with no expansion of use and no possibility of significantly impacting the physical environment. Accordingly, the proposed action qualifies under Class 1 and Class 2 Categorical Exemptions (Sections 15301, and 15302 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed action qualifies under two Categorical Exemptions (Class 1, Section 15301 and Class 2, Section 15302 of the State CEQA Guidelines).

#### **CEQA determination for Option #2:**

None required

### **Board Options**

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#### **Option #1**

Adopt the CEQA determination that the proposed action is categorically exempt from CEQA, and

- a. Appropriate \$1.24 million; and
- b. Award \$930,483 contract to Coleman Construction, Inc. for upgrades to the network rooms at Metropolitan's Headquarters Building at Union Station.

**Fiscal Impact:** \$1.24 million of capital funds under Approp. No. 15487.

**Business Analysis:** This project will enhance the reliability of Metropolitan’s wide-area and local-area networks, which support Metropolitan’s communication, business, and SCADA functions.

**Option #2**

Do not proceed with construction at this time.

**Fiscal Impact:** None

**Business Analysis:** This option would forgo an opportunity to improve the reliability of Metropolitan’s Headquarters Building network systems. Under this option the replacement of the network equipment at Headquarters could not proceed, which would impact the reliability and quality of service of the telephone replacement project.

**Staff Recommendation**

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Option #1

  
 \_\_\_\_\_ 7/24/2015  
 Gordon Johnson Date  
 Manager/Chief Engineer  
 Engineering Services

  
 \_\_\_\_\_ 8/3/2015  
 Jeffrey Lightinger Date  
 General Manager

- [Attachment 1 – Financial Statement](#)
- [Attachment 2 – Abstract of Bids](#)
- [Attachment 3 – Subcontractors for Low Bidder](#)
- [Attachment 4 – Location Map](#)

**Financial Statement for the IT Infrastructure Reliability Appropriation**

A breakdown of Board Action No. 3 for Appropriation No. 15487 to upgrade the network rooms at Metropolitan’s Headquarters Building is as follows:

|   | <b>Previous Total<br/>Appropriated<br/>Amount<br/>(Oct. 2014)</b> | <b>Current Board<br/>Action No. 3<br/>(Aug. 2015)</b> | <b>New Total<br/>Appropriated<br/>Amount</b> |
|---|---|---|--|
| Labor                                   | \$ 1,819,000  | \$ -  | \$ 1,819,000                                 |
| Owner Costs (Program mgmt., permitting) | -   | 59,000  | 59,000                                       |
| Construction Inspection & Support       | -   | 139,000   | 139,000                                      |
| Metropolitan Force Construction         | -   | 19,000  | 19,000                                       |
| Materials & Supplies                    | 4,099,000   | -   | 4,099,000                                    |
| Incidental Expenses                     | -   | -   | -  |
| Professional/Technical Services         | 466,000   | 15,000  | 481,000                                      |
| Equipment Use                           | -   | -   | -  |
| Contracts                               | 856,000   | 930,483   | 1,786,483                                    |
| Remaining Budget                        | 600,000 <sup>2</sup>  | 77,517  | 677,517                                      |
| <b>Total</b>                            | <b>\$ 7,840,000</b>   | <b>\$ 1,240,000</b>                                   | <b>\$ 9,080,000</b>                          |

**Funding Request**

|                                   |   |                                      |              |
|-----------------------------------|---|--------------------------------------|--------------|
| <b>Appropriation Name:</b>        | IT Infrastructure Reliability Appropriation                   |                                      |              |
| <b>Source of Funds:</b>           | Revenue Bonds, Replacement and Refurbishment or General Funds |                                      |              |
| <b>Appropriation No.:</b>         | 15487   | <b>Board Action No.:</b>             | 3            |
| <b>Requested Amount:</b>          | \$ 1,240,000  | <b>Budget Page No.:</b>              | 298          |
| <b>Total Appropriated Amount:</b> | \$ 9,080,000  | <b>Total Appropriation Estimate:</b> | \$10,500,000 |

<sup>1</sup> The total amount expended to date on the Network Room Upgrades project is approximately \$160,000. The total estimated cost to complete this project, including the amount appropriated to date and current funds requested, is \$1.415 million.

<sup>2</sup> Includes reallocation of \$164,000 from Remaining Budget to the Enterprise UNIX Server Upgrade project.

**The Metropolitan Water District of Southern California**

**Abstract of Bids Received on July 8, 2015 at 2:00 P.M.**

**Specifications No. 1801  
Network Room Upgrades Project**

The work consists of adding cooling and backup power systems, and upgrading the power supply to the network rooms at Metropolitan's Headquarter's Building at Union Station.

**Engineer's Estimate: \$764,000**

| <b>Bidder and Location</b>  | <b>Total</b>     | <b>SBE \$</b>    | <b>SBE %</b> | <b>Met SBE<sup>1</sup></b> |
|---|------------------|------------------|--------------|----------------------------|
| <b>Coleman Construction, Inc.,<br/>Los Angeles, CA</b>              | <b>\$930,483</b> | <b>\$930,483</b> | <b>100</b>   | <b>Yes</b>                 |
| Shefir Construction, Inc.<br>Beverly Hills, CA                      | \$971,000        | -                | -            | -                          |
| Veterans Communication Services, Inc.<br>Ontario, CA                | \$1,510,580      | -                | -            | -                          |
| Minako America Corporation dba Minco<br>Construction<br>Gardena, CA | \$1,777,000      | -                | -            | -                          |

<sup>1</sup> SBE (Small Business Enterprise) participation level was established at 25 percent for this contract.

**The Metropolitan Water District of Southern California**

**Subcontractors for Low Bidder**

**Specifications No. 1801  
Network Room Upgrades Project**

**Low Bidder: Coleman Construction, Inc.**

| <b>Subcontractor and Location</b>                      |
|--|
| Lumas Air, Inc., Los Angeles, CA                       |
| A-1 Electrical Services Company, Inc., Culver City, CA |

# Distribution System

