

RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES

DATE: JULY 22, 2019

ITEM NO:

SUBJECT: BID NO. RPU-7662 FOR CABLE REJUVENATION IN CANYON CREST AREA WITH E.E. ELECTRIC, INC., IN THE AMOUNT OF \$1,194,856.60; AND WORK ORDER NO. 1819765 FOR A TOTAL CAPITAL EXPENDITURE OF \$1,479,000

ISSUES:

Award Bid No. RPU-7662 for Cable Rejuvenation in Canyon Crest Areas 3 and 4 to E.E. Electric, Inc., of Mira Loma, California, in the amount of \$1,194,856.60; and approve Work Order No. 1819765 for a total capital expenditure of \$1,479,000.

RECOMMENDATIONS:

That the Board of Public Utilities:

1. Award Bid No. RPU-7662 for Cable Rejuvenation in Canyon Crest Areas 3 and 4 to E.E. Electric, Inc., of Mira Loma, California, in the amount of \$1,194,856.60; and
2. Approve Work Order No. 1819765 for a total capital expenditure of \$1,479,000 for the Canyon Crest Areas 3 and 4 Cable Rejuvenation Project.

BACKGROUND:

Riverside Public Utilities (RPU) has experienced reliability issues in the Canyon Crest area for the past 15 years, due to the high failure rate of aged cable. The area is served by HMPE insulated cable (high molecular weight polyethylene) and CIC type infrastructure (cable-in-conduit). HMPE cable is responsible for 70% of RPU's system failures. The Electric System Master Plan (ESMP) recommends the planned replacement of obsolete HMPE and CIC type infrastructure in the Canyon Crest residential service area to improve system capacity and reliability. Canyon Crest neighborhoods contain the greatest concentration of high failure rate HMPE/CIC underground cable within the RPU electric system and are designated high priority for infrastructure upgrades and replacement based upon recent comprehensive engineering analysis.

In 2016, as part of the cable replacement program, RPU completed a cable rejuvenation pilot project that tested and treated underground electrical cable to extend its useful life. Cable rejuvenation technology has been successfully used by other utilities as a substitute of cable replacement, which is less intrusive and more cost efficient.

The cable rejuvenation process injects a special fluid into the cable to strengthen weak points and achieve service life extension. The process rejuvenates underground distribution cable by filling voids in the cable's insulation layer and eliminating water contamination. This alternative method complements RPU's on-going cable replacement effort. When applied to suitable cable, this process improves reliability, and

defers cable replacement for 20 additional years. Deferring the invasive construction needed to replace CIC systems saves both time and money, and dramatically reducing customer impact.

The integrity of the cable is tested as part of the process to assure it is a good candidate for the rejuvenation injection process. Cables with severely deteriorated conductors or insulation may not be suitable for treatment. Cables determined to be unsuitable for treatment will be prioritized for conventional cable replacement at a later date.

DISCUSSION:

This project will test and treat existing aging underground electrical distribution cables to extend their service life and improve the electric service to customers in the area. Replacement of aged underground infrastructure was identified as part of the Utility 2.0 Electric Infrastructure Road Map.

The project will upgrade electric distribution facilities west of Canyon Crest Drive, south of Arlington Avenue and Ransom Road, north of Via Vista Drive and east of the Hawarden Hills neighborhood. The scope of work includes the testing approximately 30,878 feet of single-phase primary cable CIC and subsequent injection/rejuvenation of passing cable, as well as minor General Order 165 repairs and upgrades of related electrical distribution facilities. Intermittent electric service disruptions will be coordinated during construction and advanced outage notifications will be issued to minimize the impact on customers.

Bid No. RPU-7662 for the Canyon Crest Areas 3 and 4 Cable Rejuvenation Project was posted on the City's Online Bid System on April 15, 2019 and closed May 29, 2019. Three (3) vendors submitted bids for the project. Staff evaluated the bids and deemed E.E. Electric, Inc., to be the lowest responsive and responsible bidder. The bid was above the engineer's estimated amount of \$716,370 due to higher labor and material costs for the civil construction work. Although the bid is higher than the original estimate, the total project cost is approximately one fifth of the cost for traditional replacement.

| Vendors | City Location | Bid Amount | Rank |
|------------------------------|----------------------|-----------------------|-------------|
| E.E. Electric, Inc. | Mira Loma, CA | \$1,194,856.60 | 1 |
| Asplundh Construction LLC | Anaheim, CA | \$1,330,214.00 | 2 |
| Southern Contracting Company | San Marcos, CA | \$1,352,163.36 | 3 |
| ➤ <i>Engineer's Estimate</i> | | <i>\$716,370.00</i> | |

The Purchasing Manager concurs that the recommended actions are in compliance with Purchasing Resolution No. 23256.

The project and fiscal breakdown is proposed as follows:

| Project and Fiscal Breakdown | | |
|---|--------------------------------|-----------------------|
| Work Type | Performed By: | Amount (\$) |
| Project Management and Engineering | RPU Engineering and Operations | \$15,874.61 |
| Civil Construction: | Contractor | \$1,194,856.60 |
| Electrical Work | RPU Field Forces | \$113,328.82 |
| Design | RPU Engineering | \$35,454.31 |
| Construction Contingency – Contract (10%) | | \$119,485.66 |
| Work Order Total: | | \$1,479,000.00 |
| Anticipated Start Date: | | August 2019 |
| Anticipated Duration: | | 12 weeks |

FISCAL IMPACT:

The total fiscal impact is \$1,479,000. Sufficient funds are available in Public Utilities Cable Replacement Account No. 6130100-470635.

Prepared by: George R. Hanson, Utilities Assistant General Manager/Energy Delivery
Approved by: Todd M. Corbin, Utilities General Manager
Approved by: Al Zelinka, FAICP, City Manager
Approved as to form: Gary G. Geuss, City Attorney

Certifies availability
of funds: Brian Seinturier, Utilities Fiscal Manager

Attachments:

1. Site Map
2. Bid Award Recommendation
3. Presentation