



PLAZA SUBSTATION 4kV to 12kV CONVERSION (CIRCUIT 454)

Riverside Public Utilities-Energy Delivery

Board of Public Utilities
January 9, 2017

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BACKGROUND

1. 4kV to 12kV conversion projects replace obsolete facilities with modern, higher capacity distribution equipment
2. 4kV facilities are outdated, inefficient, and difficult to procure
3. Voltage conversions are identified as priority projects in the Electric System Master Plan



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AGING INFRASTRUCTURE

1. 34 circuit conversions remain in distribution system today
2. Six (6) circuits currently being converted
 - a. five (5) out of Magnolia Substation
 - b. one (1) out of Plaza Substation
3. Completion of Magnolia Substation circuits will result in decommissioning of the Magnolia Substation



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AGING INFRASTRUCTURE

1. 28 circuits will remain after the current conversion projects are completed in 2017
2. 4kV to 12kV conversions are identified as part of the Utility 2.0 Electric Infrastructure Improvement Roadmap



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PROJECT LOCATION

1. West of Magnolia Avenue in the region between Linwood Place and Tequesquite Avenue
2. The project will upgrade facilities to approximately 560 customers
3. Customers will be notified in advance before work start and electric service disruptions will be coordinated to minimize impact to customers



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SCOPE OF WORK

1. Replace and upgrade wooden poles, transformers, pole switches and related facilities
2. Upgrade approximately four miles of primary overhead wires
3. Upgrade approximately one mile of secondary cable
4. Remove existing aged overhead facilities
5. 17 weeks to complete work



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BENEFITS

1. Improves system operations using standardized 12kV distribution facilities
2. Reduces overall system losses
3. Increases electric system reliability and safety
4. Improves electric services and power quality



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CONTRACT RESOURCES

1. September 18, 2015 - Board approved Work Order 1501824 in the amount of \$1,264,000
2. To expedite the construction for the project, contract resources are needed
3. Additional engineering time, construction bid documentation preparation, and bidding time is required



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CONTRACT BIDS

Bids closed on November 16, 2016

Vendors	City Location	Bid Amount	Rank
1. Asplundh Construction Corp.	Anaheim, CA	\$1,011,160.00	1
2. Hot Line Construction, Inc.	Brentwood, CA	\$1,019,651.33	2
3. E.E. Electric, Inc.	Fontana, CA	\$1,131,022.00	3
4. Henkels & McCoy, Inc.	Pomona, CA	\$1,388,249.84	4
➤ Engineer's Estimate	\$1,873,110		



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FISCAL IMPACT

Description	9/18/15 Estimate	1/9/2017 Revised Estimate	Increase to Work Order	Revised Estimate % of Total Project Cost
Design, Construction Management, Inspection	\$126,238	\$228,840	\$102,602	17%
Electrical Overhead Facilities:				
<i>RPU Field Forces</i>	\$1,028,762	\$0	(\$1,028,762)	0%
<i>Electrical Overhead Materials</i>	\$109,000	\$109,000	\$0	8%
Construction Contract	\$0	\$1,011,160	\$1,011,160	75%
Total:	\$1,264,000	\$1,349,000	\$85,000	100%



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RECOMENDATIONS

That the Board of Public Utilities:

1. Award Bid No. RPU-7437 for 4kV to 12kV Conversion Circuit 454, to Asplundh Construction Corp., Anaheim, California, in the amount of \$1,011,160; and
2. Approve additional capital expenditure of \$85,000 for Work Order1501824 for a revised total of \$1,349,000.



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