



# BID NO. SUB-871 FOR 15KV METALCLAD SWITCHGEAR AND WORK ORDER INCREASE FOR LA COLINA SUBSTATION IMPROVEMENT PROJECT

Riverside Public Utilities - Energy Delivery

Board of Public Utilities  
June 24, 2024

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## BACKGROUND – SUBSTATIONS

### Substations

- Transform electricity from the high voltages to lower voltages required for distribution to homes and businesses
- Critical infrastructure for service reliability
- Proactive replacement of critical, aging, obsolete substation equipment to improve system reliability, safety, operational efficiency and maintenance



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# BACKGROUND – SUBSTATIONS

## Switchgears

1. One of the most critical equipment in a substation
2. Expected service cycle is between 40 to 50 years
3. High-cost and long lead-time (Average 70 weeks)
4. Several units have exceeded, or are reaching, the end of their design life



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# BACKGROUND- LA COLINA

## **La Colina Substation**

- Commissioned in 1965, it includes four 66kV power transformers and four 15kV metalclad switchgears
- Experiencing failures over the years due to aging equipment
- Switchgears and transformers have exceeded their design life and are identified for replacement



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# BACKGROUND- LA COLINA

## La Colina Substation Improvement Project

1. Aims to replace four (4) 15kV switchgears and four (4) 66kV power transformers in the station with two (2) higher capacity 66kV power transformers and two (2) 15kV switchgears
2. Replacement of equipment will lead to modernization and significant increase in system reliability
3. On November 14, 2022, the Board approved Work Order No. 2202776 capital expenditure of \$2,500,000 for the La Colina Substation Improvement Project
4. The initial capital expenditure included the design, inspection, and fabrication Power Transformer No. 1



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# BACKGROUND- LA COLINA

## External view of Switchgear and Transformer Unit



Old Unit



New Unit



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# DISCUSSION- LA COLINA

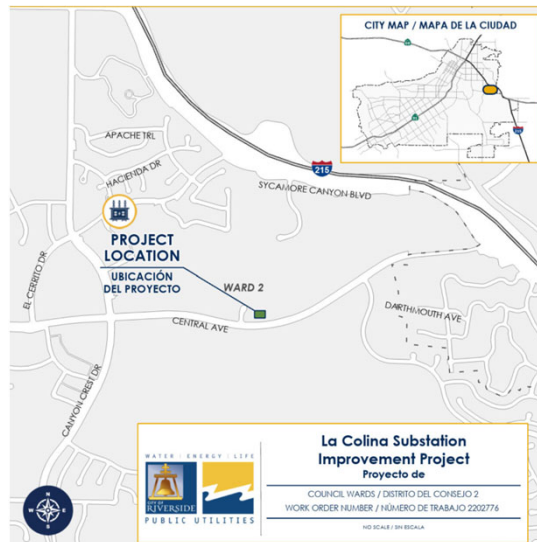
1. Construction will be completed in two phases: FY 2025/26 and FY 2027/28 to reduce field risks, customer outages, and optimize build
2. Staff is seeking approval to increase Work Order 2202776 from \$2,500,000 to \$5,400,00 to cover the costs of one 15kV metalclad switchgear and associated tasks
3. The estimated total project cost is \$20,500,000



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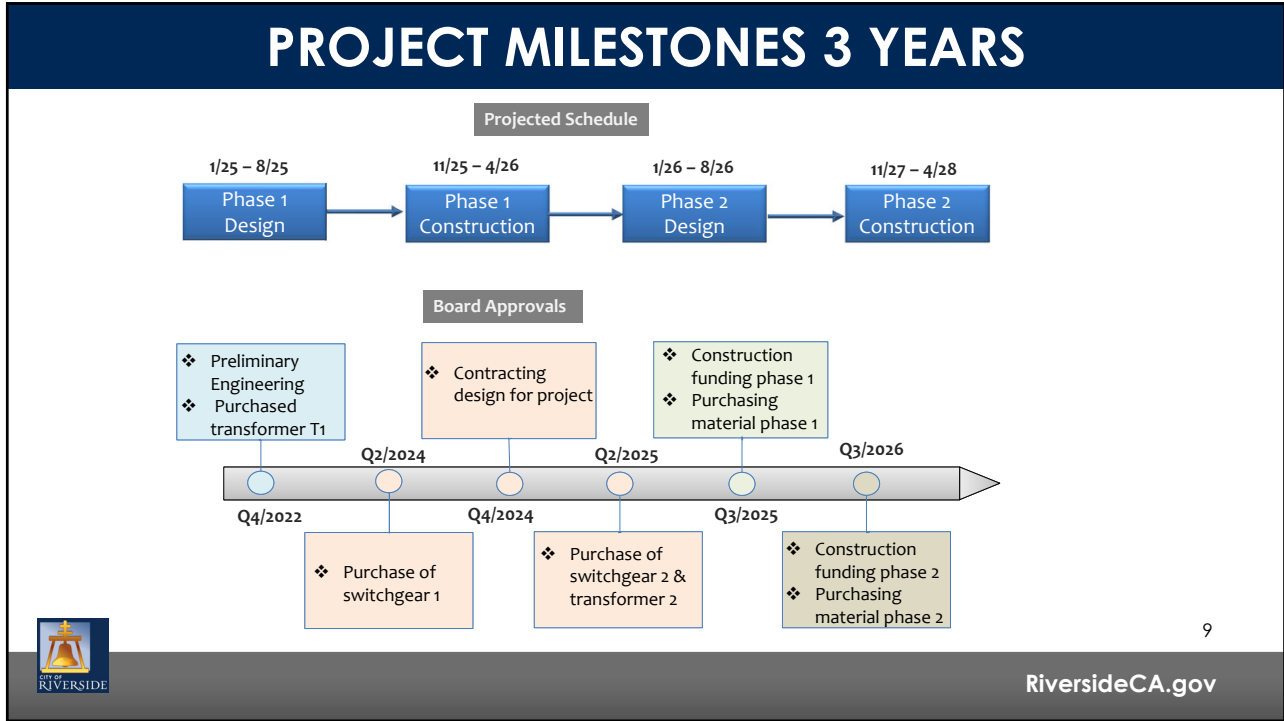
# PROJECT LOCATION



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## DISCUSSION – BID RESULTS

- RPU requested quotes for a 15KV metalclad switchgear in response to Bid No, SUB-871
- Five switchgear vendors were invited to submit bids. Three (3) submitted bids. Staff evaluated the bids based on pricing and compliance with bid requirements and deemed Avail Switchgear Systems, of Fulton, Missouri, to be the lowest responsive and responsible bidder


VENDOR	CITY LOCATION	EVALUATED BID AMOUNT	RANKING
<b>Avail Switchgear Systems</b>	<b>Fulton, MO</b>	<b>\$2,561,551.88</b>	<b>1</b>
Crown Technical Systems	Fontana, CA	\$2,719,096.74	2
Myers Power Products	Ontario, CA	\$3,176,380.88	3
Eaton	Greenwood, SC	No Response	N/A
RESA Power	Cerritos, CA	No Bid	N/A
	Engineer's Estimate	\$2,600,000	

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## PROJECT BREAKDOWN


Project and Fiscal Breakdown – WO 2202776				
Work Type:	Performed By:	Approved 11/14/2022	Proposed <b>6/24/2024</b>	Total WO Estimated Amount (\$)
Project Management and Engineering	RPU Engineering Staff	\$82,000	<b>\$82,293</b>	\$164,293
Structural Analysis and Design	Consultant	\$45,000	<b>\$0</b>	\$45,000
Factory Acceptance Testing and Transformer Design Review	Consultant	\$48,000	<b>\$0</b>	\$48,000
Construction Testing and Commissioning	RPU Field Forces	\$222,000	<b>\$0</b>	\$222,000
Fabrication/Delivery of Transformer No. 1	Virginia Transformer Corporation	\$1,676,085	<b>\$0</b>	\$1,676,085
Fabrication/Delivery of Switchgear No. 1	<b>Avail Switchgear Systems</b>	\$0	<b>\$2,561,552</b>	\$2,561,552
Contingency (10%)		\$167,000	<b>\$256,155</b>	\$423,155
<b>Work Order Total:</b>		\$2,500,000	<b>\$2,900,000</b>	<b>\$5,400,000</b>
Anticipated Start Date:				July 2024
Anticipated Completion Date:				November 2025


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## WORK ORDER INCREASE

Description	Amount (\$)
Avail Switchgear Systems	\$2,561,552
Contingency (10% of Switchgear Cost)	\$256,155
RPU Staff – Project Management and Engineering	\$82,293
<b>Work Order Additional Increase Amount Requested (Fiscal Impact)</b>	<b>\$2,900,000</b>


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## DISCUSSION

- Before the calendar year ends, staff will seek the Board's recommendation for Council and Council approval to award a professional consultant services agreement for design consulting services for this project
- The La Colina Substation Improvement Project is a comprehensive, multi-year construction project
- Staff anticipates returning to the Board for the purchase of remaining power equipment and for increasing the work order amount to finance RPU engineering and field expenses



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## ANTICIPATED BOARD APPROVAL DATES

DESCRIPTION OF WORK	FISCAL YEAR	AMOUNT (\$)
Bid No. 7927 Fabrication/Delivery of Power Transformer No. 1	Approved on 11/14/22	\$2,500,000
<b>Bid No. 871: Procurement of 15kV Switchgear No. 1</b>	<b>Proposed on 6/24/24</b>	<b>\$2,900,000</b>
Consulting Design Services Award Recommendation	Anticipated 2024/2025	\$8,550,000
Fabrication/Delivery of Power Transformer No. 2		
Fabrication/Delivery of Switchgear No. 2		
RPU Engineering (initial)		
RPU Engineering (final), Construction, Field Testing, Commissioning and Miscellaneous Material	Anticipated 2025/2026	\$6,550,000
<b>Work Order Total</b>		<b>\$20,500,000</b>



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# STRATEGIC PLAN ALIGNMENT



## Strategic Priority No. 6 Infrastructure, Mobility and Connectivity

**Goal No. 6.2** – Maintain, protect, and improve assets and infrastructure within the City’s built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

### Cross-Cutting Threads



Community Trust



Fiscal Responsibility



Sustainability & Resiliency



Equity



Innovation



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# RECOMMENDATIONS

That the Board of Public Utilities:

1. Award Bid No. SUB-871 for the procurement of one 15KV Metalclad Switchgear for La Colina Substation to Avail Switchgear Systems, in the amount of \$2,561,551.88;
2. Approve a 10% contingency or \$256,155 for Bid No. SUB-871;
3. Approve an increase to Work Order No. 2202776 in the amount of \$2,900,000, bringing the total Work Order amount from \$2,500,000 to \$5,400,000; and
4. Authorize the City Manager, or designee, to execute any documents necessary to effectuate the procurement.



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