

FREEMAN-ORANGECREST SUBSTATION FIBER UPGRADE PROJECT

Public Utilities Department

Board of Public Utilities
October 22, 2018

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BACKGROUND

1. Riverside Public Utilities (RPU) operates an advanced broadband fiber optic cable based network to:
 - a) Communicate between substations
 - b) Communicate between control centers
 - c) Safely, securely, and reliably operate of the electric grid
2. Fiber network infrastructure is instrumental to the reliability and security of the electrical system

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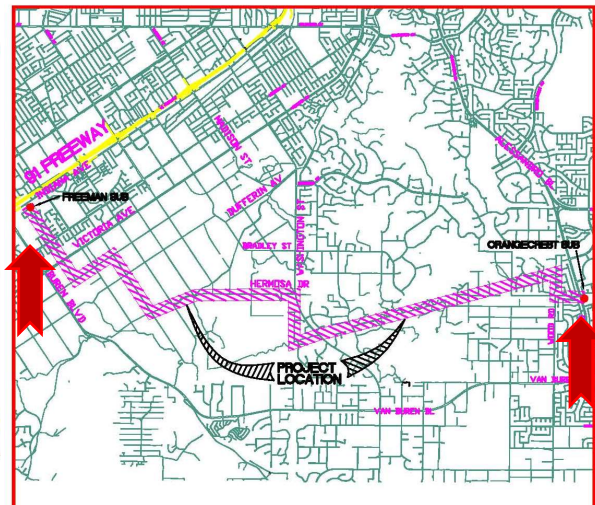
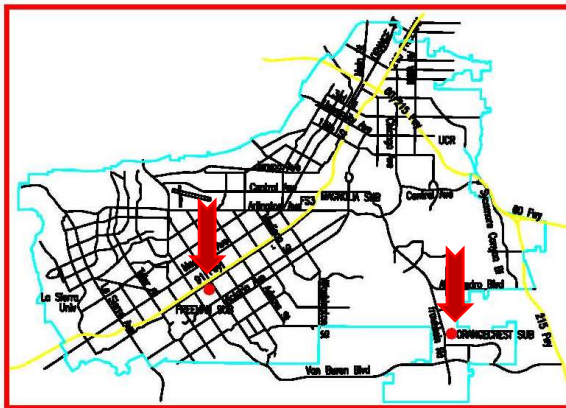


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BACKGROUND

1. Freeman Substation to Orangecrest Substation fiber
 - a) Installed in 1994
 - b) 2-strand fiber optic cable
 - c) Fiber has reached capacity
2. Staff identified path forward for upgrading using internal resources

PROJECT LOCATION



SCOPE OF WORK

1. Migration of services over to new Fiber optic cable and remove old fiber while maintaining existing services
2. Project Includes:
 - a) add 50,000 linear feet of 144-strand fiber optic cable;
 - b) 5 pull boxes;
 - c) 5 cross-connect cabinets; and
 - d) 10 fiber optic patch panels.
3. Work performed by RPU crews

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BENEFITS

1. Project replaces aged 12-strand fiber optic cable with 144-strand complying with latest standard to improve capacity and reliability
2. 144 fiber optic cable will increase capacity and provide 5 intermediary locations over 9 mile span to serve future needs in Arlington – Orangecrest neighborhoods

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FISCAL IMPACT

DESCRIPTION	AMOUNT
Equipment and Material Purchases	\$250,000
RPU Construction and Operations	\$725,000
Contractor from RPU's Contractor's Panel	\$45,000
Engineering, Management & Inspection	\$130,000
Contingency-10%	\$115,000
Total	\$1,265,000

RECOMMENDATION

That the Board of Public Utilities approve Work Order No. 1423748 in the amount of \$1,265,000 to upgrade the fiber optic cable between Freeman and Orangecrest Substations to improve capacity and reliability.