



LOWER SNAKE RIVER XJ BREAKER REPLACEMENT

Project Summary

This purpose of this project was to complete XJO Breaker replacements at Ice Harbor, Lower Monumental, Little Goose and Lower Granite locks and Dams.

Equipment and Systems Overview

- XJO Vacuum Circuit Breakers
- Spare Circuit Breakers
- Voltage Transient Analysis
- Surge Capacitors
- Electrical Testing
- Isolation shutters and mechanical linkage
- 125VDC control breakers
- Wiring and terminations

Offeror Role

Subcontractor

Owner Information

USACE
 201 N 3rd Ave
 Walla Walla, WA 99362
 (509) 527-7020

Contract Amount & Type

\$479,492—firm fixed price
 W912EF18R0005

Customer Information

ABB Inc.
 2300 Mechanicsville RD
 Florence, SC 292501-1386
 Gerald Stevens, *Project Manager*
 gerald.a.stephens@us.abb.com
 843.245.7795

Project Start and Finish Dates

Fall 2018—Summer 2019 (This project was conducted over several outages)

Project Location(s)

Burke Electric Scope

- Provided a new replacement vacuum circuit breaker for XJO, as specified.
- Provided a pendant mounted, handheld device with the capability to remotely Rack-In/Rack-Out the circuit breaker from a minimum of 50' of clearance.
- Provided a spare circuit breaker with identical salient characteristics as XJO, as described herein.
- Performed a Voltage Transient Analysis on the existing XJO system.
- Contractor was allowed two work windows. The initial work window was for performing the Voltage Transient Analysis. The second work window was for installation.
- Provided and install the manufacturers recommended surge capacitors for mitigating transient voltages associated with the XJO vacuum breaker.
- Size was based on the results of the Transient Voltage Analysis.
- Perform all testing as specified and submitted test report for review prior to energizing switchgear.
- Replaced the isolation shutters and the mechanical linkage that operate the shutters for XJO. Provided new isolation shutters which close when the circuit breaker XJO is withdrawn to provided separation from the vertical bus.
- Replaced the two (2) existing 125VDC control breakers located within XJO enclosure. Circuit Breaker N2 is 35A, 125VDC, 3 pole and circuit breaker N3 is 20A, 125VDC, 2pole.
- Replaced all wiring that originated and terminated inside the XJO enclosure. Provided ring terminals for all new conductor terminations.
- Wiring as specified.
- Asbestos wiring was present and abatement took place prior to execution.

Burke Electric Project Personnel

Eric Undseth and Lee Barnsley—General Foremen
 Pete Kelly—Project Manager
 Dominic Burke—COO
 Katie Morton—Safety Manager



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Ice Harbor Lock and Dam
 Burbank, WA

Lower Granite Lake Dam
 Colton, WA

Lower Monumental Dam
 Kahlotus, WA

Little Goose Lock and Dam
 LaCross, WA