

Lower Monumental D/S Gate Hoist Machinery Upgrades

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Columbia-Snake River Navigation System
Spring Stakeholder Meeting



Lower Monumental D/S Gate Hoist Machinery Upgrades

- Vertical Lift Gate
- Gate Replaced in 2011
- 84 feet tall x 88 feet wide
- 690 Tons
- Most of hoist machinery and electrical components are original equipment put into service in 1969
- Refurbished gearboxes installed in 2011
- Antiquated controls difficult to maintain and obtain replacement parts



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Lower Monumental D/S Gate Hoist Machinery Upgrades

- Mechanical Upgrades
- Electrical & Controls Upgrades
- Structural Repairs & Upgrades



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Hoist Cables



Hoist Friction Sheave – 18 ft diameter



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Structural Upgrades & Repairs:

- Weld Repairs on Friction Sheaves
- New Machinery Supports
- New Machinery Room Work Platforms & Ladders
- New Tower Roof Guardrail
- Structural Upgrades for Overhead Service Crane Corbels



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Similar New Equipment Bases – John Day



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Mechanical Upgrades:

- Replace Hydraulic Power Units and Motors with Motor-Driven Gearboxes
- Install New Hoist Drive Pinion Gears, Bearings, and Brakes
- Install New Friction Sheave Bearings
- Replace Overhead Service Cranes



Existing Hydraulic Power Unit and Motor



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New Mechanical Drive Equipment at John Day – Model Design for LOMO

New Pinion Gear & Bearings



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Electrical & Controls Upgrades:

- Remove Hydraulic Control Panels and Motor Control Centers
- New Motor Control Panels
- New Variable Frequency Drives (VFD's) and Hoist Motors
- New Programmable Logic Controllers (PLC's)
- New D/S Lock-stand Operator Control Console



Existing Hydraulic Control Panel and Motor Control Center



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Schedule:

- Advertise Contract Package: Late July 2015
- Receive & Evaluate Proposals: September – November 2015
- Contract Award: December 2015
- Procure/Fabricate Long Lead Time Equipment: April – October 2016
- Pre-Outage Installation of New Overhead Service Cranes, Electrical & Control Panels, Conduit, and Wiring: October - November 2016
- Navigation Lock Outage Work Window: December 2016 – March 2017



Questions?



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