

**Waterproof Gate Shaft in the North Portal
(1999-2-53)**

Project Ranking
45%

Total Estimated Cost: \$70,000



Background

The North Portal Elevator Shaft was constructed in the 1950s. The shaft extends approximately 125 feet below the control house. Water intrudes into the elevator shaft at construction joints and through cracks in the concrete structure. This moisture creates a corrosive environment for electrical and mechanical equipment.

Need for Project

The project anticipates either eliminating or reducing seepage into the elevator shaft and will protect the asset by extending its useful life and reducing maintenance costs.

Description

The work will require the retention of a contractor. Discussions with contractors have concluded the grout in all seams would be removed and a water stop polymer will be injected to eliminate water intrusion in the leaking seams and cracks. The top of the elevator car will be used as a work platform, and will require a certified elevator operator on site to move the work platform during the repair. Per contractor discussions, the work requires seepage to be visible to enable directing the polymer injection to the appropriate location in the shaft. Therefore, this work would be most successfully accomplished once the water table has increased in elevation.

Regulatory Compliance

This is a USBR Category 2 Recommendation.

| Budget & Schedule | Contractor Estimate |
|------------------------------|----------------------------|
| Fiscal Year | Cost |
| 2019-20 | \$70,000 |
| Total | \$70,000 |