# Subsurface Constructors

Earth Retention

# Warrenton Copper expansion

## Earth retention in low-overhead conditions for copper casting operation

When Warrenton Copper, LLC decided to expand their copper casting operations, they needed to lower the existing plant floor nearly 30 feet in one area. They turned to Subsurface Constructors to design and construct an earth retention system inside the plant, allowing the excavation to take place.

In addition, one side of the pit consisted of an exterior wall of the plant at the top of the cut. This wall acts as one side of support for a 10-ton overheard crane, which had to remain in service during the excavation. Subsurface Constructors designed and built both the shoring system for the excavation and the underpinning system for the exterior wall.

## Project details:

**Owner:** Warrenton Copper, LLC
**Geotechnical Engineer:** Shively Geotechnical, Inc.
**General Contractor:** C. Rallo Contracting, Inc.
**Structural Engineer:** Wideman and Associates, Inc.
**Services Provided:** Earth Retention
**Location:** Warrenton, Missouri