



# Project Profile



## Flange Connection makes fast work of stockpile escape tunnel reline

When an ore stockpile escape tunnel was beginning to show signs of distress, THE EDGE Super•Cor Flange Connection provided a unique trenchless rehabilitation solution.

### Fast, safe construction with small crew

THE EDGE represents a technological breakthrough in design and fabrication — the creation of a small diameter, but highly stiff, steel liner with flanged longitudinal seams and telescoping lapped circumferential seams fastened with blind bolts. The result is a liner that can be safely constructed entirely from the inside of an existing tunnel by a small crew using hand tools — avoiding costly closure, excavation and replacement.

### Two-flange design ideal for tighter radius

AIL Mining first developed THE EDGE Super•Cor Flange Connection on all four plate edges for larger shaft liner, protection structure or tunnel applications. However, our latest two-flange design has proven to be the best solution for small diameter liners where high structural capacity is needed.





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The liner was installed in just three days with the tunnel remaining open for ventilation and emergency access during that period. The finished liner had an inside diameter of 1.8 m and was just over 14 m long. The annulus between the liner and the existing structure was filled with grout. Brackets were easily attached to accommodate utility conduits, a cast-in place walkway was installed and the tunnel was fully rehabilitated in just a few weeks. And, because the liner was made from Super•Cor, it had ample strength for the loading requirements.

## **THE EDGE Super•Cor Flange Connection makes underground structures stronger, safer**

The Flange Connection is an exciting alternative to the traditional lapped connection that extends structural plate's application range and offers several key advantages:

- Easy to ship and install
- Accelerated assembly, easier fitting of plates
- Smaller crews needed, lower installed costs
- Added strength eliminating the need for ring beams
- Added safety, structures can be built from one side
- Facilitates deflection angles (horizontal and vertical)
- Allows for leak-resistant structures
- Ideal for remote sites resulting in fewer trucks and less handling
- Lower cost tank storage option
- Structures can be dismantled and removed

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