Eisenhower Tunnel  
**Colorado DOT Project**

**US SPEC Products:** MP Grout, FS Grout  
**Contractor:** MWH Constructors  
**Engineering Group:** Carollo Engineers  
**Date of Completion:** May 2014

Completed in 1975, the Eisenhower Memorial Tunnel is located approximately sixty miles west of Denver, Colorado. It is the highest vehicular tunnel in the world, traversing through the Continental Divide at an average elevation of 11,112 feet.

Flatirons Construction Corp. was awarded the project of replacing 2,191 ceramic tile faced concrete panels lining 1.7 miles of the tunnel walls. This project was to start in the summer and continue into the winter. With an average of 32,000+ vehicles per day, Flatirons was given only 180 days to complete the project and restore the tunnel to two lanes prior to ski-season traffic. They performed all work at night while maintaining one lane open to traffic.

Because of the changing seasons, the contractor needed to place grout in temperatures ranging from below freezing up to 90˚F. This was a Colorado Department of Transportation project, so they also needed products that were approved by the state DOT. The two products that met all the requirements for this job were US SPEC MP Grout and FS Grout.

When the job began in the summer of 2008, US SPEC worked with the contractor to determine the hot weather grouting precautions that would need to take place. MP Grout was chosen for it’s high strength, high flow and high performance properties.

As the seasons changed and the weather got colder, the contractor was running into new problems - the grout was not setting up fast enough to open both lanes back up to traffic in a reasonable time period. Fortunately, US SPEC had a fast setting grout that was C-DOT approved readily available - FS Grout. With its fast set times and workable conditions, FS Grout was a perfect solution for cold weather grouting. It allowed them to achieve a faster set and stay on schedule. Additional cold weather precautions were taken including heating the water to 110°F, heating the substrate prior to grout placement and using concrete blankets.

Flatirons, with the help of US SPEC products and services, was able to complete this project on time and within budget and won the Colorado Construction Bronze Hard Hat Award for Outstanding Renovation/Restoration Project, 2008.

**MP Grout**  
*High Flow, High Strength, Non-Shrink Grout*

**Benefits:**
- Provides maximum, uniform bearing support
- Hardens free of bleeding or segregation
- Versatile product that can join, support and anchor
- Consistent product performance
- Superior workability in damp pack, plastic and fluid consistencies

**FS Grout**  
*High Flow, Fast Setting, Non-Shrink Grout*

**Benefits:**
- Designed for grouting, anchoring and supporting in applications that require a short turnaround time
- Excellent choice for cold weather placement
- Achieves high early strengths and provides maximum, uniform bearing support.