



Case Study: University of Colorado

The University of Colorado in Boulder, CO had been experiencing problems with the deterioration of some of their concrete steps. The stairs had been compromised by cracks allowing water to penetrate and freeze-thaw to occur. Frost heaving is common in Colorado with daily temperature swings of 20 to 60 degrees Fahrenheit not unusual in the early winter and spring seasons. Constant use had also caused wear zones and uneven surfaces that were beginning to become a hazard.

They wanted to prevent further deterioration before the stairs became dangerous and started causing trips and falls. They were looking for a permanent solution that was faster and more economical than tearing out the stairs and re-pouring all the concrete.

Milamar Coatings representative, Norm Klapper, of Process Equipment Company had a proven solution that had been used successfully at several other facilities in Colorado experiencing the same problems with their concrete steps. The system is comprised of Milamar Coating's three-part epoxy patching material, ICO Gel, and fiberglass stair tread covers. ICO Gel was selected because of its unique ability to act as both a filler/ repair compound, both on the treads and risers, and as an adhesive for the tread cover. It's far less expensive than removing the old steps and re-pouring new concrete and would return the stairs back to use in only one or two days. Another added advantage of the system is that the fiberglass stair tread provides an anti-slip walking surface that concrete does not.

Contractor Accentuate Construction was chosen to do the repairs. The first step was to remove all the old failing concrete, the stairs were then cleaned and acid etched to provide a clean sound substrate for the ICO Gel to bond to. The ICO Gel was then used to fill cracks and major holes and level the stairs that have settled or have been worn uneven. Once this has set up another thin layer of gel is applied to the stair and the fiberglass tread is embedded into the gel. This set of steps have already been in service at the University of Colorado for three years and Accentuate Construction is currently under contract to fix hundreds more over the next four years.

