

## STORIES OF STRENGTH

### Spillways

Denver CO.



### Bringing Greater Abrasive Resistance to Denver's spillways

Because of the heavy runoff and seasonal flooding Denver is famous for, spillways carry a lot more than water. They also ferry rocks, pebbles and other abrasive materials that slowly scrub away the smooth surface of concrete channels. These small impact craters become cracks and holes, allowing water to seep into the structure. The trick to making spillways and drainage systems more robust is to simply improve the abrasion resistance and permeability of the concrete surface.

That's what Metro Mix told the Contractor [CASI Concrete] of Castle Rock about EdenCrete™. The company was contracted to pour several new concrete drainage systems throughout Castle Rock and the greater Denver area, so they were open to exploring new ways to improve the longevity of their pours.

**The Results** EdenCrete™ increased **abrasion resistance of the new concrete by 70%** over the original mix design. Furthermore, EdenCrete™ increased the **tensile strength of the new concrete by 25%**. CASI Concrete also reported no negative impact on the fresh concrete properties.

*"The contractor had no idea that EdenCrete™ was in the concrete mix design because it did not influence the fresh properties or the finishability of the concrete. Test results showing enhanced abrasion and tensile strength certainly indicate that EdenCrete™ should have no problem extending the life of the concrete's [application] in-service conditions typical in a drainage basin."*

Stuart Ponting,  
Vice President of CASI Concrete



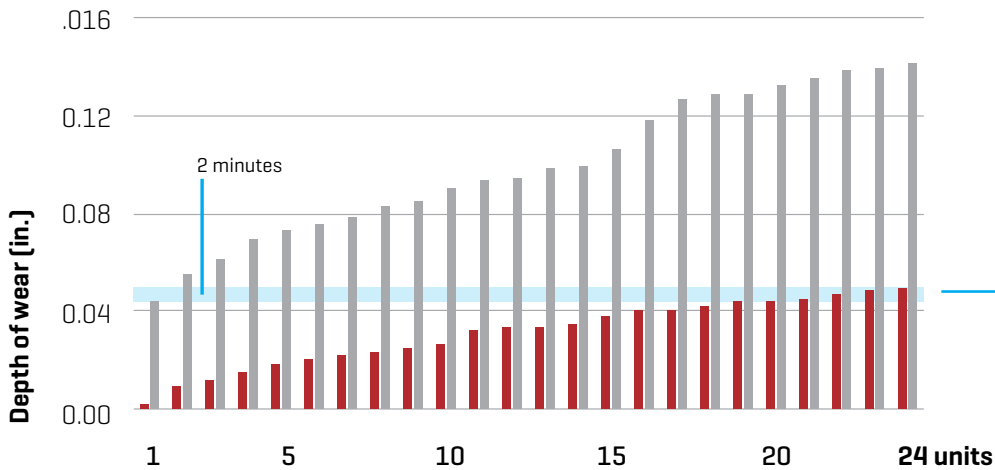
## Areas of significant improvement for this application



EdenCrete™ enhances concrete in all seven areas, but was specifically selected for abrasion, permeability and tensile strength for this project.

## 59% Increase in Abrasion Resistance

ASTM C779, Proc. C



■ EdenCrete  
■ Control

At 56-days, EdenCrete™ had reduced the depth of abrasion of the concrete mix by approximately 57%. Upon completion of the 20-minute test, the total magnitude of abrasion measured for the EdenCrete sample was lower than the level of abrasion sustained by the control in the first 2 minutes.



EdenCrete™ enhances concrete performance, but will not affect fresh properties or finish quality, making it the most “finisher-friendly” additive on the market.

### Harness the strength of carbon nanotubes for your next pour.

Developed by Eden Innovations, LLC, **EdenCrete™** is a carbon nanotube-enriched liquid additive that elevates concrete structures to new levels of strength and toughness. When added to concrete mixtures, it performs like multiple additives rolled into one: It boosts surface abrasion resistance and produces extremely low permeability while improving tensile-strength like no other product on the market today.



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