

CASE STUDY



**Concrete
Thinking**
for a sustainable world

World Record Recycling Project

Former Stapleton Airport recycled and revitalized

After 66 years of operations, Stapleton International Airport had grown to become one of the busiest airports in the United States, with its concrete runways and concourses sprawling over the outskirts of Denver, Colorado. In 1995, the venerable airport was replaced by ultra-modern Denver International Airport, and a massive construction project began to rebuild the Stapleton site. The ongoing transformation of old Stapleton Airport into a family-friendly residential and commercial community illustrates the durability, versatility, and sustainable properties of concrete.

Concrete can be readily recycled and reformed into a wide variety of structures, including roads, sidewalks, bridges, curbing materials, offices, retail centers, homes, and hospitals. The versatility of concrete is a particularly important factor in the revitalization of the Stapleton site. Soon after the airport closed, construction began on a massive mixed-use development, which includes commercial space, energy efficient homes, and schools. Developers are conserving resources by using the existing concrete from old Stapleton Airport and recycling it for use in the new Stapleton development and in other projects.



A study conducted by the Colorado School of Mines found that the concrete aggregate produced from the Stapleton recycling project is of equal or higher quality than virgin mixes. In the first five years of the development, two thirds of the six million tons of recycled concrete material had been sold for the new mixed-use development at Stapleton and for various other construction projects throughout the Denver metropolitan area.

As builders become more educated about its benefits, demand for recycled concrete from the project continues to be strong. The concrete being recycled is derived from 975 acres of runways, taxiways, service drives, and aprons with an average thickness of two feet. When the project is complete, enough material will have been recycled to construct a two-lane roadway roughly 1,000 miles in length.



While the challenge of redeveloping the Stapleton site is significant, developers also enjoy a major advantage by virtue of having building materials at their fingertips. With concrete as a common thread between two vastly different complexes, the transformation of the Stapleton site from airport to thriving residential and commercial community is occurring quickly and efficiently. Most importantly, construction is moving forward with a limited impact on our finite resources.

Project Team:

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Photos Courtesy of Recycled Materials Co. (RMC)