

Notable Precast Concrete in Denver and Vicinity



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Questions or comments? Please e-mail the editor, Michael Paul, at mjp@builtform2.com

Starz Encore

8900 Liberty Circle
Englewood, CO 80112



The cut-stone appearance of the precast structural panels used on the lower levels of this 300,000-plus ft² building reflect the granite design on a nearby structure. The design was produced by creating individually sculpted form liners, and panels were turned to create more diversity in the appearance. The structure is three bays wide, framed with 10 ft precast twin tees. To create the entablature at the front and rear entries, round columns were cast with horizontal joints to emulate historically correct Roman/Tuscan columns.

The project offered many challenges: matching the color, texture, and shape, while hiding joints between panels to replicate the look of stone blocks; designing and erecting the two entablatures; and delivering and erecting precast panels weighing up to 70,000 lb each.

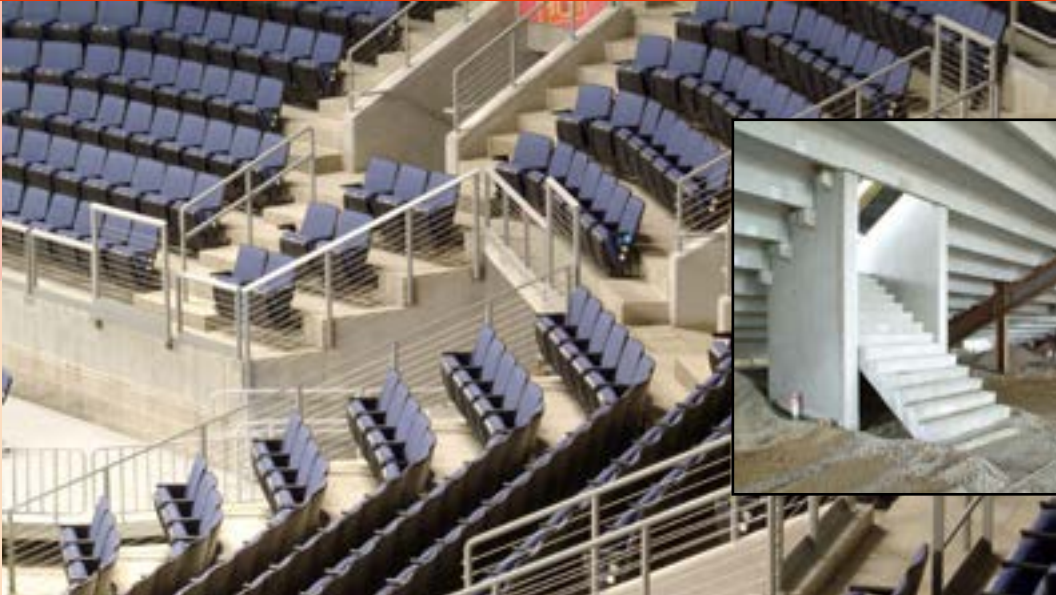
Project credits include Barber Architecture, Architect; S. A. Miro, Inc., Structural Engineer; and Rocky Mountain Prestress, Precast Supplier.

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Photograph courtesy of Barber Architecture.

1st Bank Center

11450 Broomfield Lane
Broomfield, CO 80020



The 1st Bank Center was built to accommodate events including concerts, rodeos, and community functions. The Center contains 6000 seats, 25 suites, 900 club seats, a 200-seat restaurant, two club lounges, and separate basketball and hockey facilities. Precast-prestressed concrete used in the structure included 581 pieces of single-leg risers, triple risers, walls, beams, and stairs. The precast concrete was installed by two hydraulic cranes operating inside the building to coordinate with the steel roof erection.

The 1st Bank Center hosts about 130 events each year. While owned by the city and county of Broomfield, CO, the site is managed by Peak Entertainment, a partnership of AEG Live and Kroenke Sports & Entertainment.

Project credits include Sink, Combs and Dethlefs, Architect; Martin/Martin, Structural Engineer; Stresscon Corporation, Precast Supplier; and Saunders Construction, General Contractor.

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Photography courtesy of Fred Fuhrmeister.



Circle Point

11030 Circle Point Road
Westminster, CO 80020

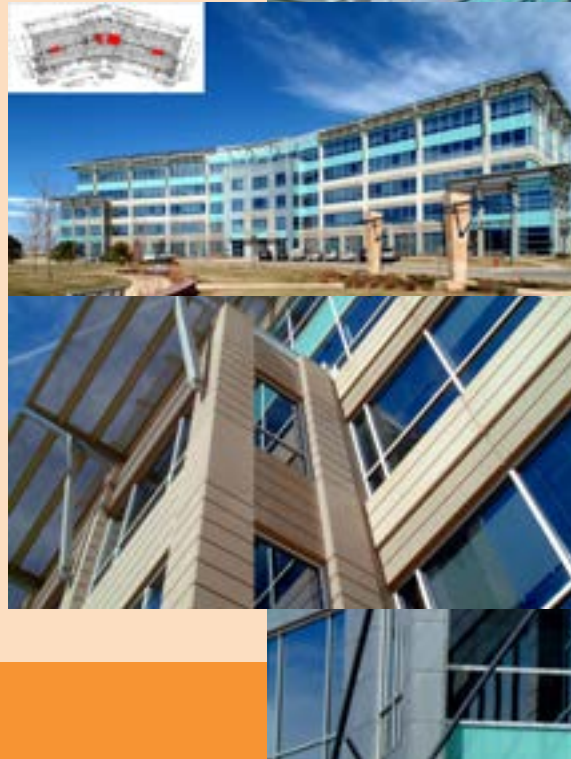
The Circle Point office building is a total precast solution with a distinctive kinked floor plate. The total gross area is 340,000 ft², with about 68,000 ft² per floor. The precast floor and roof components include double tees and prestressed beams. The lateral system is made up of four shafts (shown in red on the plan inset) with cast-in-place topping on the floor double tees serving as the diaphragm. At the roof level, the double tees are connected to act as a diaphragm without topping. The exterior walls, made up of highly accented architectural precast panels, are part of the gravity-load system.

This complex building enclosure is made up of architectural precast panels manufactured to PCI MNL 117, and a glass curtain wall system. The architectural precast concrete includes two integral colors, a stone liner, and multiple lines of reveal work. The lower spandrel panels use darker tan stone liner and an acid-etched finish. The second, third, and roof line spandrel panels are two-tone, adding a lighter buff concrete, plus dramatic relief from multiple reveals. Column panels are single-color, with a color change above the first story. Multiple horizontal reveals in the columns play off those in the spandrel panels and are finely finished with an acid etch.

Project credits include Pahl Architecture, PC, Architect; Jirsa+Hedrick and Associates, Structural Engineer; Stresscon Corporation, Precast Supplier; and PCL Construction, General Contractor.

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Photography courtesy of Fred Fuhrmeister.



Golden Park-N-Ride

605 Johnson Road
Golden, CO 80401

The Golden RTD parking structure serves as the western terminus of the W-Line of the RTD Light Rail System. Keeping the theme of the Jefferson County Judicial Center, the architectural precast concrete maintains the colors, acid-etching, and exposed aggregate textures on the campus. At the south end of the structure, the precast framing creates a tunnel for the light rail train to pass through to reach the boarding platform.

The 250,000 ft² parking structure includes three levels designed to accommodate more than 800 vehicles. The structure is configured four bays deep with the two center bays as a single-leaf ramp. Precast framing components include tees, beams, and columns, with K-frames and hammer-head shear walls for lateral stability, and a load-bearing architectural exterior.

Project credits include IBI Group, Architect; Martin/Martin, Structural Engineer; Stresscon Corporation, Precast Supplier; and Hyder Construction, General Contractor.

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Photography courtesy of William Towns.



Santa Fe and C-470 Flyover

South Santa Fe Drive (US 85) at C-470 Westbound
Littleton, CO 80120

The Colorado Department of Transportation (CDOT) added the flyover ramp at Santa Fe Drive and C-470 to reduce congestion on Santa Fe Drive and ease southbound traffic merging onto eastbound C-470. Precast concrete was used for the main structural elements of this \$23.3 million project (funded by CDOT, Douglas County, and a federal stimulus grant). The 1713 ft elevated structure is made up of 36 curved tub sections (822 ft radius) and straight trapezoidal U-girders, supported by precast pier caps, topped with precast-prestressed deck panels. Over 200 deck panels were cast directly on the U-girders in the plant to create torsionally rigid sections.

The flyover opened 4 months ahead of schedule and under budget, largely due to the use of the precast-prestressed concrete. Erection was done at night to minimize disruption to the public. EnCon Colorado, which produced the precast concrete, received the Award of Excellence for Bridge Construction in the 44th Annual Awards of the Rocky Mountain Chapter – ACI.

Project credits include Wilson & Company, Structural Engineer; EnCon Colorado, Precast Supplier; and Edward Kraemer and Sons, General Contractor.

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Photography courtesy of EnCon Colorado.



Denver Health Employee Parking Garage

601 Acoma Street
Denver, CO 80204



The Denver Health Employee Parking Garage provides 228,000 ft² of parking in five stories. The structure has an open interior created by double tees that span between “spread walls” and K-frames, which also resist lateral loads. Altogether, 927 pieces of architectural and structural precast products went into the building. The architectural concrete wall panels were cast with thin brick, and the surrounding colored concrete was lightly acid-etched.

Project credits include Fentress Architects, Architect; Martin/Martin, Structural Engineer; Stresscon Corporation, Precast Supplier; and Hensel Phelps Construction Company, General Contractor.

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Photography courtesy of Fred Fuhrmeister.

Map

Click on the map below to view the Google map.

