



St. Francis Medical Center, Colorado Springs, Colorado

The St. Francis Medical Center parking structure consists of 134 structural gray precast concrete spandrels, serving as the architectural envelope of the facility and providing structural support for the floor of the parking garage. In addition to the parking structure, the project encompasses an elevated drive and loading area, as well as entrance and exit ramps.

The structural floor system consists of 533 prestressed double tees, and 141 prestressed beams bearing on cast-in-place columns. Portions of the floor system are designed to allow for heavy loads from fire trucks and emergency vehicles that will drive on the parking structure.

Architecturally conceived as a representation of the surrounding landscape, the imaginatively designed spandrel panels bring decorative composition to the structure. The effect of light on the three-dimensional design of grass and hills creates the illusion of movement, adding drama and visual appeal. The result is an attractive, picturesque structure befitting of the location and purpose of the hospital facility.

Project Facts:

Market Segment:	Parking Structures
Building Type:	Parking Garage
Products Used:	Precast concrete spandrels, double tees, and beams



Project Design Team:

Owner:	Penrose – St. Francis Health Services, Colorado Springs, CO
General Contractor:	GE Johnson Construction, Colorado Springs, CO
Architect of Record:	RTA Architects, Colorado Springs, CO
Engineer of Record:	MGA Structural Engineers, Colorado Springs, CO



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The casting schedule was critical in order to limit the amount of form liner used for the project. The panels were poured from longest to shortest in order to cut the form liners to the appropriate size. Once the form liner was cut to accommodate the short panels, it could not be repurposed for a longer panel. Adherence to the casting timetable also eliminated the extra time and expense needed to manufacture additional form liners, allowing the project to remain on schedule and within budget.



Custom form liners were used to cast and finish the spandrels. Form liners were placed in curved forms to create the nine radiused panels at the medical center entry drive-up.



The spandrels were generally 7'-10" high and 27'-0" long and yielded a total panel area of 29,000 square feet. Lengths of up to 60'-0" were reached at the non-load bearing ends of the structure.



Inspired by the location of the structure, the architect designed a unique prairie motif of grass and hills. As the sun changes positions throughout the day, the details in the prairie pattern cast shadows that make the reeds of grass appear to wave.

