



## Warrior in Transition, Fort Carson, Colorado

The Ft. Carson Warrior in Transition Complex project consists of four buildings, built in a series of phases, to aid and assist soldiers and their families returning from combat missions and transitioning back to civilian life. Precast was determined to be the most efficient design-build method to fast-track this project with a 365 day schedule.

The project consists of 105 insulated wall panels with cast-in thin brick and split-face concrete masonry, with an architectural banding between the two. These prestressed panels include a layer of rigid insulation for maximum energy efficiency. The wall panels have an average width of ten feet and a height of 30 feet for the Company Headquarters Building, while the Battalion Headquarters Building has an average width of ten feet and a height of 16 feet.

Load bearing progressive collapse requirements per UFC 4-023-03 state that any portion of a Department of Defense building that is three stories or more shall be designed to resist progressive collapse. Progressive collapse manages the spread of an initial local failure from element to element. Buildings designed for progressive collapse must sustain local damage with the structural system remaining stable and not being damaged beyond an extent disproportionate to the original point of damage. These structures, designed to limit the effects of local collapse, also prevent or minimize progressive collapse. The Warrior in Transition building is designed to hold abnormal loading and is built with continuity, ductility and redundancy to resist the spread of damage after a blast impact.

Precast concrete was chosen for its versatility, the benefits of energy efficiency, cost effectiveness, fire resistance, and rapid construction. The panels also provide a low maintenance facade that will retain its excellent condition and attractive appearance throughout the life of the structure.

### Project Facts:

<b>Market Segment:</b>	Military
<b>Products Used:</b>	Insulated wall panels
<b>Finishes Used:</b>	Thin brick and split-face masonry



### Project Design Team:

<b>Owner:</b>	United States Army Corps of Engineers, Ft. Worth, TX
<b>General Contractor:</b>	Mass Service and Supply, Pueblo, CO
<b>Architect of Record:</b>	DLR Group, Colorado Springs, CO
<b>Engineer of Record:</b>	MGA Structural Engineers, Inc., Colorado Springs, CO



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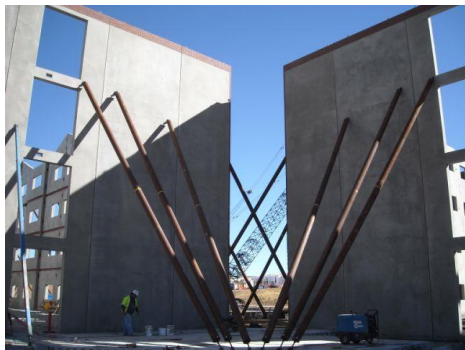




The structure's 18,249 square foot exteriors are clad with thin brick, split-face concrete masonry units with an architectural banding. The versatile precast wall panels provide lateral shear load resistance and adhere to a steel frame structure.



The wall panels are designed to house a significant number of windows to maximize daylight in the offices that line the perimeter of the buildings. Because the exterior walls are precast, the windows are simply anchored within the rough opening cast into each panel.



The precast walls contribute to sustainability and high energy performance in the buildings. The walls were cast with an insulation thickness of up to four inches.



Precast concrete was used for this project because of significant time savings and labor costs. The panels were cast at a nearby plant, shipped to the project site, and quickly erected. The significance of this unit's mission, and the rapid pace of returning soldiers, required that new facilities be erected quickly to keep pace with the demand for services.

