

University of Northern Colorado

West Campus Residence Hall

Pre-fabricated Wall Panels and Trusses
Accentuate the New Student Housing

Project:

University of Northern Colorado
West Campus Residence Hall
Phases I and II
Greeley, CO

Ultra-Span® Fabricator:

TEAM Panels
Englewood, CO

Architect:

Davis Partnership
Denver, CO

Engineer:

Martin/Martin
Lakewood, CO

General Contractor:

Mortenson Construction
Minneapolis, MN (HQ)
Denver, Colorado (CO office)

Installation Contractor:

Commercial Design, Inc. (Phase I)
Fort Collins, CO

United Builders Service (Phase II)
Broomfield, CO

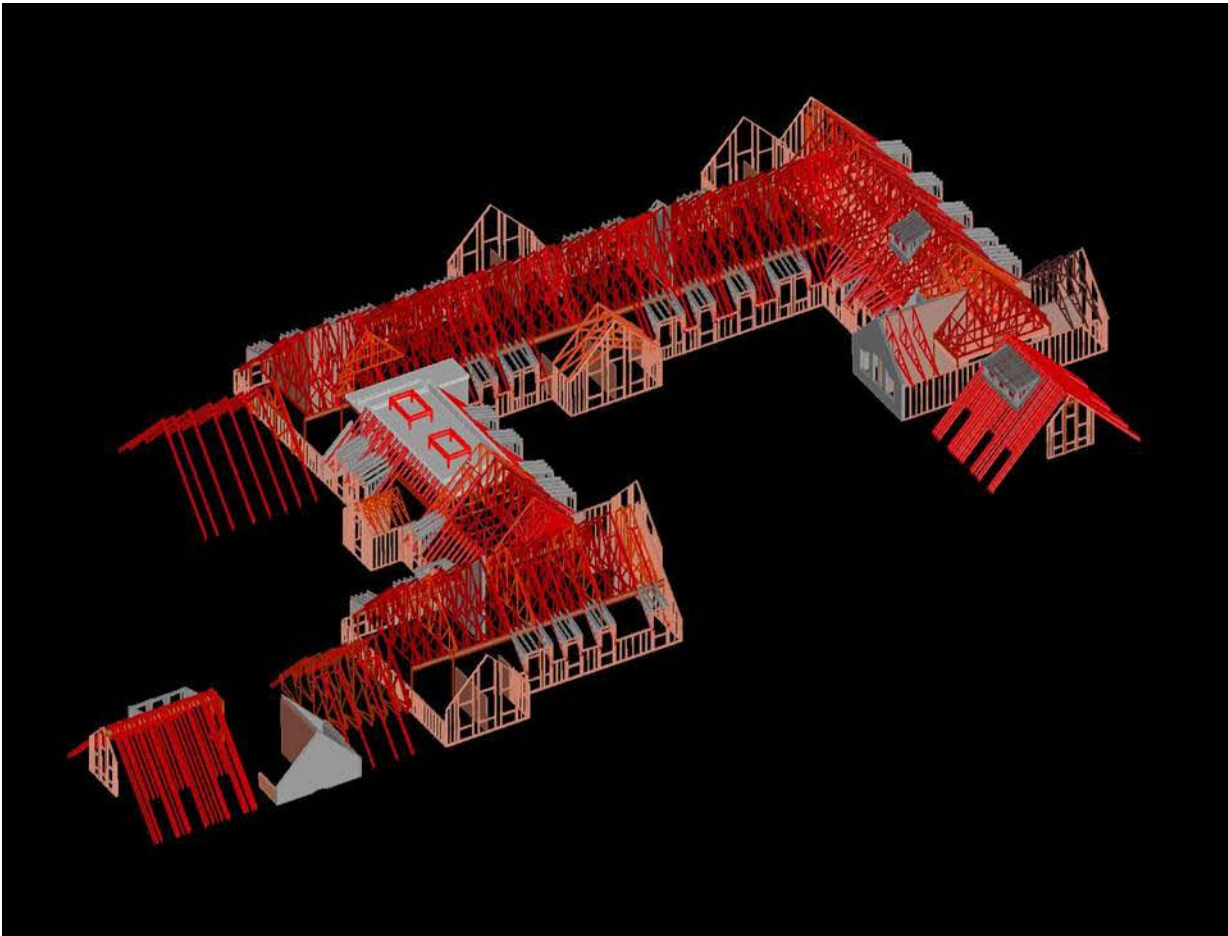


In the midst of a weak overall commercial/institutional market, construction of new student housing facilities at the nation's colleges and universities remains a relative bright spot. An aging college infrastructure and the need to attract students with new, comfortable living quarters have helped

support a sustained level of activity. The University of Northern Colorado is no exception to this trend, having undertaken an aggressive housing construction plan over the past three years at its Greeley, CO campus. Aegis fabricator TEAM Panels and their pre-fabricated, cold formed

components have played an integral role in this expansion.

Construction of Phase I of the West Campus Residence Hall commenced in late 2007. Jack Peterson, PE and Mike Goldstein, PE, principals at project engineer Martin/Martin selected cold



Above to the left:
TEAM Panels utilized Aegis Metal Framing's 3-D modeling to create the roof layout.

Above to the right:
Exposed trusses and wall panels on project site.

formed steel framing for the majority of the structural elements.

"We are big supporters of structural cold formed framing," commented Peterson. "We think it is an excellent choice for mid-rise, non-combustible structures. Its lighter weight, relative to other products like structural steel and concrete is a benefit, especially in challenging soil conditions."

"One of the other benefits of cold formed steel is the "green" properties of the product," Peterson added. "The high recycled content of cold formed helped with LEED Material credits, and the entire project is LEED Silver certified. Cold formed steel proved the ideal solution for the UNC project."

Specialty contractor Commercial Design, Inc.(CDI) was selected by general contractor Mortenson Construction to erect the cold formed structural shell of Phase I. According to Bud McMahon, co-owner of CDI:

"Originally, we planned to field assemble the cold formed wall panels for Phase I. However, we encountered some pretty difficult weather in late winter and spring of 2008, which wreaked havoc with schedules. That's when TEAM Panels suggested that they might be able to help with their factory built panels and trusses."

For more than 12 years, TEAM Panels has designed and fabricated cold formed steel trusses and

wall panels used on tens of millions of square feet of projects throughout the western US. Gregg Miller, president of TEAM, offers insight on the business model:

"TEAM Panels is essentially a partner in the design-build process. We have a staff of engineers, technicians, production personnel and project managers that specialize in the design, fabrication, and coordination of cold formed structural elements for a diverse range of projects."

Over a decade ago, we selected Aegis Metal Framing as our technology and products supplier. We utilize their full suite of software tools to design cold formed wall panels, floors, and truss systems. Our engineers



work hand in hand with Aegis' engineers to solve the most challenging design conditions. And, we use their high quality products in our fabrication facility to produce panels and trusses to the most exacting standards and specifications. Aegis is a true partner to TEAM Panels."

For Phase I of the UNC project, TEAM Panels was able to pick up in mid-stream and design, fabricate, and deliver 250 panels for the upper two-thirds of the 5-story, 348 bed structure, as well as 28,630 square feet of steel roof trusses and rafters.

On site, Shane Knutson, Senior Project Manager for general contractor Mortenson Construction, realized early on that panelization was the only way to ensure his project stayed on course.

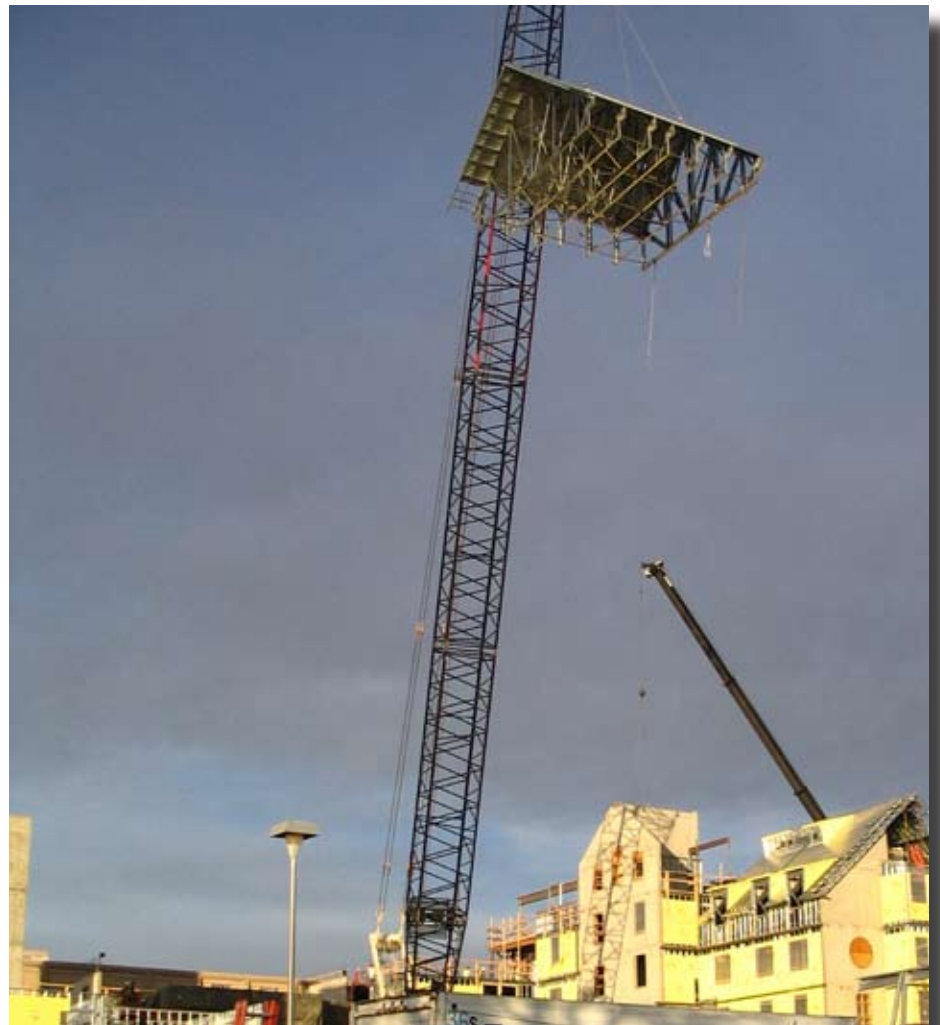
"With the amount of structural welding required to meet our design, stick building was not a feasible option," Knutson offered. "We determined panelizing the load bearing wall systems was the only viable solution to meet the aggressive project schedule. With this process came substantial improvements in safety, quality and productivity."

"Basically, you get 14 months from ground breaking to move-in to get these kind of residence halls erected," stated Marc Langlee, General Manager of TEAM Panels. "For Phase I, we had to design, fabricate, and deliver all the panels (sheathed with Georgia-Pacific DensGlass™) in about four months in order to help CDI hit their schedules. We also provided design and materials for all the ancillary components, including all connections, angles, bracing, and fascia."

"By using TEAM's packages, we have been able to overcome a difficult schedule and coordination."

The roof system capping off the five story Phase I building presented an interesting challenge for Jon Moore, Chief Engineer at TEAM Panels.

"Although the majority of the Phase I roof was trussed, there were certain areas with high ceilings and/or dormers that lent themselves to more conventional rafter framing," Moore offered. "By utilizing Aegis' layout and engineering modules, we were able to accurately model and design all the components of the roof structure, including the rafters. As is typically the case, connecting everything together was a critical element. Our design team worked "hand in glove" with Aegis' engineers to "tie it all together" so to speak."



Above Image: Roof trusses being "gang lifted" into place.



Above Image: Full scope of project.

With the combined efforts of CDI and TEAM Panels, Phase I came in on schedule, and students began occupying the new building for the 2008 fall semester.

Phase II of the West Campus Residence Hall broke ground in the summer of 2008. This larger structure is comprised of 6 stories, with 373 total beds. For this phase TEAM Panels was called upon to supply the entire structural shell, including the exterior load bearing panels, trusses and ancillary products. Installation on this second phase was provided by United Builders Service. As of this writing, all 466 panels are erected and the roof truss and

rafter framing is nearing completion, indicating the skilled folks at TEAM Panels will help bring another project in on schedule.

Bud McMahon of Commercial Design probably summed up TEAM Panel's value proposition best:

"Commercial Design Inc. has utilized the services of TEAM Panels on numerous prefabricated load bearing wall and/or truss projects with great success. By using TEAM's packages we have been able to overcome difficult schedule and coordination issues. The walls and trusses are manu-

factured to tight industry tolerances, and rarely do we have any problems with their products or delivery. The engineering and field usage drawings are of tremendous help to our foremen and installers. We look forward to working with TEAM on many future projects."

Aegis Metal Framing is proud to be TEAM Panels' technology and materials partner. ▲