

CASE STUDY — MILITARY

CAMP PENDLETON — AREA 41

Southern California

Fabricator: Gecko Steel Truss

FINDING COMMON GROUND

Dennis Smarra, a disabled veteran, founded Gecko Steel Truss in Yuma, Arizona, in 2000 after a nine-year stint in the Marine Corps. Just 12 years later, his company supplied the largest single steel truss project in TrusSteel's 16-year history — at Camp Pendleton, the Marine Corps' largest training facility on the west coast.

This long-awaited project, built on the 125,000 acre government property, replaces many buildings that were fabricated in the 1960's. Camp Pendleton houses more than 100,000 marines and serves as the military's prime amphibious training base. While most commercial projects employ a single A/E firm, the massive Area 41 project involved five structural engineering firms and three architectural companies. The need to include each of those companies in the RFI process proved to be one of the most challenging parts of the project, and varying construction requirements called for innovative planning and design.

A special crane was fabricated to get full bundles of trusses on the roof, streamlining the process. There were also special loading requirements for many of the buildings, and no two were alike.



The more work that is done off-site allows a more streamlined process and simplifies the Click Safety Program. ” ”

— Bill Doelman, Burch Construction

Burch Construction employed 60 men on site for metal stud framing, drywall and ceilings, in addition to truss installation, yet no more than eight were ever working on trusses due to the TrusSteel product attributes.

As with many government projects, Area 41 was LEED (Leadership in Energy & Environmental Design) certified. Solar tubes are utilized in some of the buildings to bring in natural light, which saves on electricity.

BY THE NUMBERS

Linear Feet of Trusses:	TBD
# of Trusses:	TBD
Weight of Trusses:	TBD
Spacing (inches):	TBD
Sq. Ft. of Building:	TBD
Sq. Ft. Under TrusSteel:	TBD
Total Buildings:	17
Total Acreage:	125,000

The headquarters building's stairwell had a large, skewed skylight requiring trusses to be framed around the shaft in all three dimensions. Compounding the skylight were 16' cantilevers over an outside balcony that required specially designed structural fascia beams. BBD Engineering of Winter Haven, FL, designed most of the ancillary truss system, including connections to sloping bearing supports.

The trusses on certain buildings had to support solar panels while others had wet sprinkler systems running throughout the attic plenum. The massive amount of ductwork running through the trusses required close collaboration with the HVAC contractor.

The entire project was also inspected by the Reserve Office in charge of construction. The final set of trusses was delivered in November 2012 for the 17-building project; the last invoice translated to a cool \$1,000,000 truss value within the \$124,000,000 Area 41 facilities upgrade.

“...varying construction requirements called for innovative planning and design...”

“ When the ductwork created design issues, the flexibility of TrusSteel's VIEW software made adjustments significantly easier for us to make. ”

— Dennis Smarra, Founder, Gecko Steel Truss

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A knuckle boom was needed to thread Burch's men through the red iron and subsequently install the bottom chord bracing.



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