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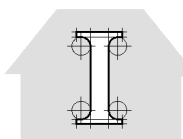


Cover Story

All-Steel House Prototype

Yucca Valley, California Home Completed from Start to Finish in Six Weeks

by Andy Larson, marketing specialist, ASC profiles, Inc.



In Yucca Valley, Calif., more than 3,000' above sea level, rests the first all-steel house prototype from Blue Sky Homes, Palm Springs, Calif. This 1,000-sq.ft., light-gauge, galvanized

steel home marks the beginning of a new movement not only for pre-fabricated residential homes, but as an answer to the environmental standards of today's sustainable building movement. The house is based on the Blue Sky Homes Building System™ and

showcases the use of metal in prefabricated residential applications, from the steel frame design, to the energy-efficient steel roof manufactured by AEP Span. "The steel utilized in the Blue Sky Homes Building System is manufactured from at least 70% recy-



**THE ALL-STEEL STRUCTURE
WAS ASSEMBLED IN
MODULES ON THE
JOBSITE.**



cled material, and is itself 100% recyclable,” said David McAdam, co-founder of Blue Sky Homes. Since steel withstands the unforgiving climate of the desert better than wood, the only wood within the house is the cabinetry and furniture.

The pre-fabricated house is built almost entirely with cold-formed, light-gauge, high-tensile galvanized steel. In addition to being substantially less expensive than structural steel, light-gauge steel can be

assembled largely by hand, with no on-site cutting, drilling, or welding. “Most of the elements of the home were pre-fabricated in a factory and then assembled at the jobsite,” said McAdam. This pre-fabrication method reduced the number of trips to the jobsite and cut labor costs, further improving the home’s environmental credentials.

Shipping pre-fabricated elements of the house, as opposed to completed modules that are restricted to the heights and widths

of the flatbed truck transporting the house, allows for more design flexibility. Due to the pre-fabricated pieces of the house, and the dependability of steel, McAdam believes the savings in labor will offset the higher cost of steel when compared to wood. The savings in labor are apparent, given that the prototype house was framed in one day, and was completely weather-tight, with the roof, walls, and floors in place at the end of

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All-Steel House Prototype

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five days. An entire home can be finished in six weeks. "We think the Blue Sky Homes Building System offers significant advantages in terms of cost, speed, and design flexibility," said McAdam.

The prototype boasts a long list of green building and sustainable building attributes. The house "floats" above the rocky desert on six steel columns that rest on small concrete footings, requiring virtually no land grading, ensuring the natural setting of the house is not disturbed. So much, in fact, that a seasonal stream is allowed to run unobstructed underneath the house. Furthermore, Blue Sky Homes employs an efficient steel framing design known as moment-resisting framing as an alternative to the labor-intensive, wasteful lumber framing commonly seen in residential construction.

The house was completed as a partnership between a variety of designers, manufacturers, and installation professionals. The firm, o2 Architecture of Palm Springs, Calif., known for its modernistic work within the residential, commercial, and institutional markets, designed the Yucca Valley proto-

type house. Solterra Development was the general contractor for the house. The Palm Springs-based company is known for combining classic designs with modern construction materials and sustainable building features.

FCP Inc., a steel design, engineering, and fabrication company based in Wildomar, Calif., developed the structural design, engineered, supplied, and installed the Blue Sky prototype home. FCP Inc. produces cold-formed mezzanine structures that have an AISI-tested system for use in seismically active areas. The Blue Sky Homes Building System Yucca Valley house is based upon this rigid frame system. This system, "will allow a lot more use of cold-formed structural sections, and will become a new standard method of construction," said Barret Hilzer, principal and chief operating officer at FCP Inc.

AEP Span, ASC Building Products, and ASC Steel Deck provided a majority of the light-gauge steel flooring, roofing, and wall material for the house. "FCP ordered many of the structural Cee Sections, wall panels,



and roofing profiles from AEP Span, ASC Steel Deck, and ASC Building Products (all Divisions of ASC Profiles)," said Hilzer. Foster Gible, vice president of AEP Span appreciated the opportunity to help supply FCP Inc. and Blue Sky Homes with some of the materials they needed. "AEP Span, ASC Building Products, and ASC Steel Deck are proud to be apart of the recently completed Blue Sky Prototype," said Gible. "This type of construction can open up new directions and new markets for metal applications," added Gible.

McAdam agrees with Gible, and believes steel is going to be the dominant building material of choice due to current economic conditions and green building practices. "Steel's time has finally come for home-building. A perfect storm of economic conditions, environmental necessity, and perfection of material (steel) is creating homes with greater lifespans," said McAdam.

