

3D models quickly
and accurately.



Google
SketchUp
PRO

Download a free trial

Subscriptions:
 :: [Print Edition](#)
 :: [Digital Edition](#)
 :: [eNewsletters](#)

Quick Links:
 :: [Reader Service](#)
 :: [Webcasts](#)
 :: [White Papers](#)
 :: [Award Programs](#)
 :: [Store](#)



Firestone
BUILDING PRODUCTS
NOBODY COVERS YOU BETTER™



[News](#) [Projects](#) [Products](#) [Resources](#) [People/Firms](#) [Events](#) [eLearning](#) [Jobs](#)

JUNE 24, 2008

SITE SEARCH

Go Powered by



Sponsored By



SUPPLIER SEARCH

Products/Services

Companies

United States

GO

HOME

Log In

Join the BDC Network

Subscribe to eNews

Digital Edition

Issues/Archives

White Papers

Awards

Editorial Calendar

Advertise

Contacts

About Us

Site Map


Affiliate Links



[E-mail to a friend](#)



[Printer-friendly version](#)

 LexisNexis™

Showing their metal; Prefab steel housing alternatives can cut costs, construction time and waste.

Michelle Hofmann, Special to The Times

Architectural writer and music critic Thomas Small, 49, and wife Joanna Brody, 44, a public relations consultant, had outgrown their two-bedroom town house in Santa Monica.

So in 2004, they bought a "decrepit" Culver City cottage to remodel. Unable to salvage the 1,500-square-foot fixer-upper and hoping to create an affordable, custom-built home, the couple turned to Whitney Sander, principal architect and founder of Venice-based Sander Architects, who uses prefabricated steel to provide a cost-effective building option.

Construction on the new home started in December 2005 and this February, the Small-Brody brood, which includes two large, hairy Briard dogs, Calvin and Hobbes; and two infants, Joey, 1, and Lyra, 6 months, moved into their 3,800-square-foot part-prefabricated steel, part-custom home.

The Culver City residence features a main house with three bedrooms, 2 1/2 bathrooms, two offices and a separate one-bedroom rental apartment above the garage.

"From certain angles, it has an industrial look," said Small, who didn't want to hide the metal aesthetic with stucco or conventional sidings and used corrugated-metal-siding panels to finish the exteriors. "So some of the traditionalists in the neighborhood didn't know what it was when it was going up. But the way it turned out, most people really like it. And it has gotten a very warm reception."

With costs below those of conventional building methods, quick and easy assembly and no termite issues, prefabricated or pre-engineered steel buildings are finding a place in the residential home market.

For Small and Brody, metal also helped them stay true to their green theme.

"Most of the metal in this house is recycled and will be recyclable at the end of its use in this house," Small said.

"And there's also very little waste with metal. It was made at the factory and then shipped here. There was no sawdust. No cutting," he said. "And we didn't have to hire specialized builders. It was built by the contractor who built the rest of the house, and bolted together very easily."

If there's a downside, Small said, it's the roof. "You're not supposed to walk on the metal roof."

Sander's hybrid houses, as he calls them, are "part-prefab, all-custom residences" that use pre-engineered steel manufacturers to produce the frame or bones of the home in a facility off site and deliver the parts to the site on a flatbed truck.

'Like an erector set'

"It fits together like an erector set," Sander explained. "And it goes together in three weeks. The inside takes longer, but the prefabrication can save you months and thousands of dollars."

Sander has designed hybrid homes for every budget, urban homes as well as 10,000-square-foot country retreats, and found the savings over wooden structures to be significant.

Two projects completed within the last year cost about \$130 per square foot or about one-third of traditional custom residential costs, which can top \$400 per square foot, according to Sander.

Small's construction costs were about \$175 to \$200 per square foot, compared with \$120 to \$350 for traditional non-custom homes, according to construction experts.

Sander's relationship with steel began in 1991 when a contractor suggested the architect use the material for a

Committed to achieving
environmental sustainability
>> [Honeywell Specialty
Materials](#)

Minimize your environmental
impact with our Cool Zone
roofing systems
>> [Duro-Last Roofing, Inc.](#)

Choose energy efficient
workstations certified by the
EPA & EPEAT registry
>> [HP Workstations](#)

Save on energy costs with
our high performance,
sustainable rooftop design
>> [Duro-Last Roofing, Inc.](#)

More Links



**MOTOROLA
PUSH-TO-TALK**

Offers instant
connectivity that allows
you to run your
business on the go,
no matter how far
you are from the office.



MOTOROLA i570

LEARN MORE >

Nextel
direct connect™

warehouse and office project in San Francisco.

"That building was 10,000 square feet, and all the pieces arrived on a flatbed truck for \$60,000," he said. "From that point on, I started looking for opportunities to use prefabrication in residential projects."

Almost 20 years later, Sander said most people still don't think about metal with residential use. But with the growing green movement, he said, more homeowners, architects and builders are adopting the material.

"Folks are opening up to metal," he said. "Five years ago, we did one or two projects a year. Today, we have 10 projects in the works and have to turn people away."

Although metal was once largely associated with Quonset huts or industrial buildings, construction expert John Knight, who founded Santa Clarita-based Knight Building Systems in 1987, said because virtually any traditional exterior wall material -- stucco, brick and conventional sidings -- can be used on a pre-engineered frame, today's metal residential structures can look the same on the outside as conventionally framed buildings.

The majority of his work still comes from commercial projects, but Knight completes 10 to 12 projects a year for homeowners looking to add garages, accessory-use buildings, storage sheds and barns. He currently is building a garage and home office for an Agua Dulce residence.

SITE SPONSORS

Directories

[Office Furniture](#)

[Computer Desks](#)

[Canopies](#)

[Awnings](#)

[Cabanas](#)

[Easi-Set Industries](#)

[Fabric Structures](#)

[Tension Structures](#)

[Furniture Store](#)

[Honeywell](#)

[Nora@ Rubber Flooring](#)

[Office Chairs](#)

[Alcan](#)

[Flooring](#)

"The larger you go," he said, "the more cost-effective our systems become."

A two-car wooden garage costs about \$60 per square foot, Knight said. "With a pre-engineered one, you are probably closer to \$40 or \$35 per square foot."

When software engineer and Santa Clarita resident Ken Abbott, 58, priced his 1,200-square-foot, four-car garage in 2004, estimates for a traditional wood building exceeded \$100,000.

Abbott hired Knight and ended up with a metal garage for about \$35,000.

Pre-engineered steel buildings are not without limitations, however.

Because the steel is a lighter gauge and weighs less than structural steel, which can be used in large buildings, L.A. city building code design requirements limit these structures to one- and two-story structures of up to 40 feet in height.

Some impracticalities

In addition, homeowners considering small structures with cut-up rooflines may lose some of the cost advantages of metal because of the additional engineering required.

For homeowners looking to add space to their existing home, pre-engineered steel would most likely not be a viable solution, said Dick Woodworth, a Southern California district manager for pre-engineered-metal building manufacturer Varco Pruden Buildings Inc.

"If you're doing a room addition, steel is not the way to go. It doesn't work well when we try to attach it to conventional construction," Woodworth said.

"But for custom homes . . . or to increase space on a property for a garage or barn," he added, "pre-engineered steel is very practical and cost-effective."

--

Michelle Hofmann can be reached at michellehofmann@earthlink.net

Copyright © 2004 LexisNexis, a division of Reed Elsevier Inc. All rights reserved.
[Terms and Conditions](#) [Privacy Policy](#)



[Ads By Google](#)

[Metal/Steel Buildings](#)

Compare prices and features of different Metal and Steel Buildings
www.HelloMetro.com

[Prefab Building Quotes](#)

Compare Prices, Options & Save Find the Best Deal Today!

PrefabBuildings.BuyerZone.com

Metal Steel Buildings

Find Metal Steel Buildings. Search In Your Local Area Now.
Justclicklocal.com

Advertorials

Staron Surfaces by Samsung

Unique surface offerings in Solid Surfaces, Quartz and its expanded Tempest line.

Marvin Windows and Doors

Substantial proportions, sturdy hinges, and different hardware options make the Marvin Commercial door a great choice for non-residential applications.

The Venting Picture Window from Marvin combines the beauty of a picture window with the opportunity for cross ventilation.

Dayton Superior

Concrete Accessories, Chemical Systems, Forming and Shoring, Masonry Accessories and Paving Systems.

Johns Manville Insulation

Turn Architecture Concepts into Physical 3D Models 5x-10x Faster. In-house.

Request Complimentary 3D Printing for Architecture Starter Kit

© 2008 Reed Business Information

Use of BDCnetwork.com is subject to its [Terms and Conditions of Use](#) and [Privacy Policy](#)

Please visit these other Reed Business sites

Media & Publishing:

Broadcasting & Cable | ContentAgenda | LA 411 | Library Journal | Multichannel News | New York 411 | Publishers Weekly | School Library Journal | Criticas | Tradeshow Week | Variety | Video Business

Manufacturing:

Control Engineering | Design News | Industrial Distribution | Logistics Management | Kellysearch | Manufacturing Business Technology | Modern Materials Handling | Plant Engineering | Purchasing | Purchasing Data | Supply Chain Management Review

Subscriptions:

All Magazine and eNewsletter Subscriptions

Business & Printing:

Converting | DM2-DecisionMaker | Expert Business Source | Graphic Arts Blue Book | Graphic Arts Monthly | Hot Frog | Packaging Digest | The Industry Measure | Tracom Group | Zibb

Gifts & Furnishings:

Casual Living | Furniture Today | Gifts & Decorative Accessories | Home Textiles Today | Home Accents Today | Jewelers' Circular Keystone | Kids Today | Playthings

Hospitality:

Chain Leader | Foodservice Equipment & Supplies | HOTELS | R&I

Electronics:

EDN | InStat | Semiconductor International | Test & Measurement World | TWICE

Building & Construction:

Associated Construction Publications | Buildcore | Building Design & Construction | Building Team Forecast | Construction Equipment | Consulting Specifying Engineer | Custom Builder | Daily Commercial News | Housing Giants | HousingZone | Interior Design | Journal of Commerce | Professional Builder | Professional Remodeler | Reed Connect | Reed Construction Bulletin | Reed Construction Data | Reed First Source | RS Means