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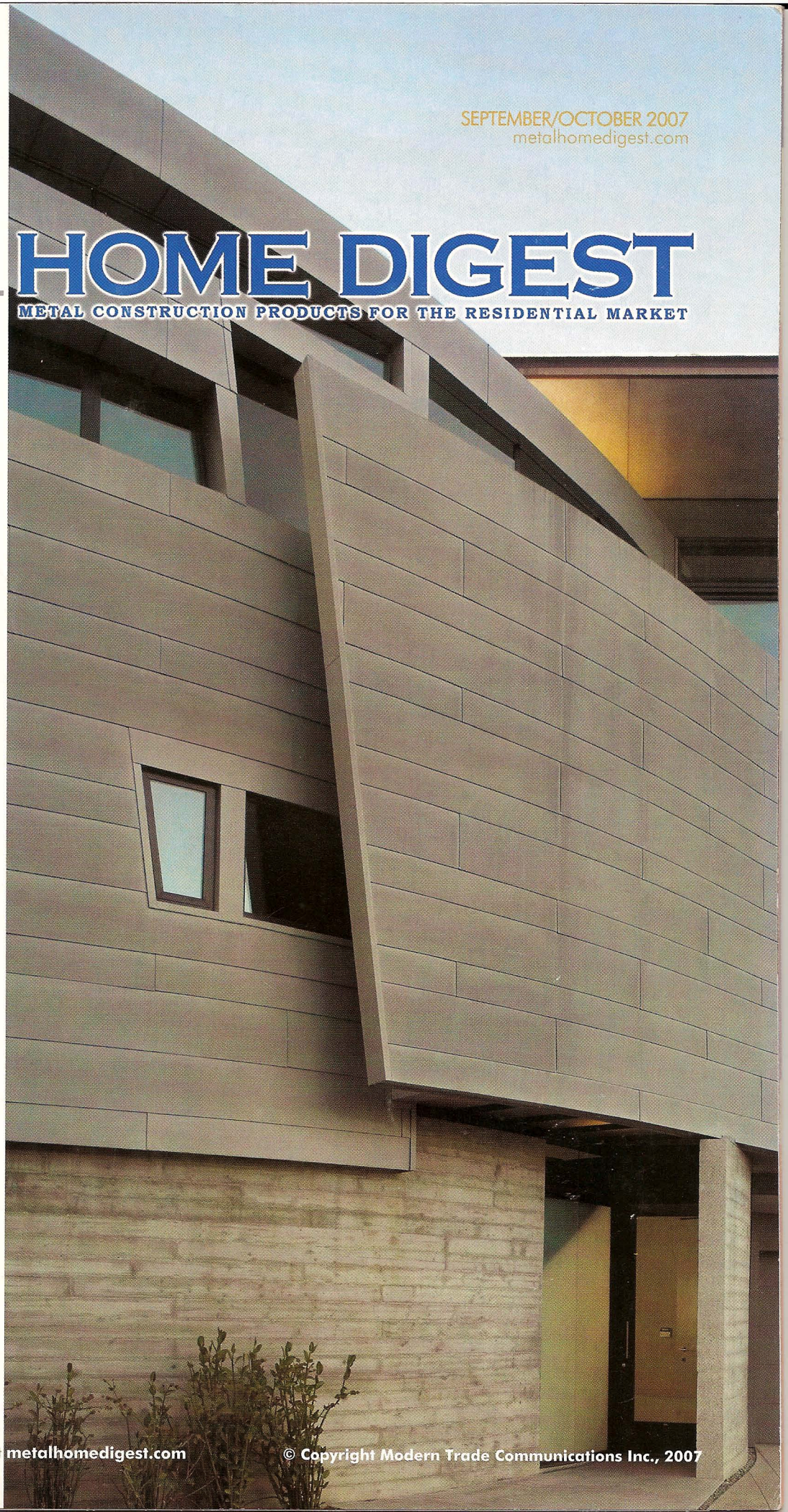

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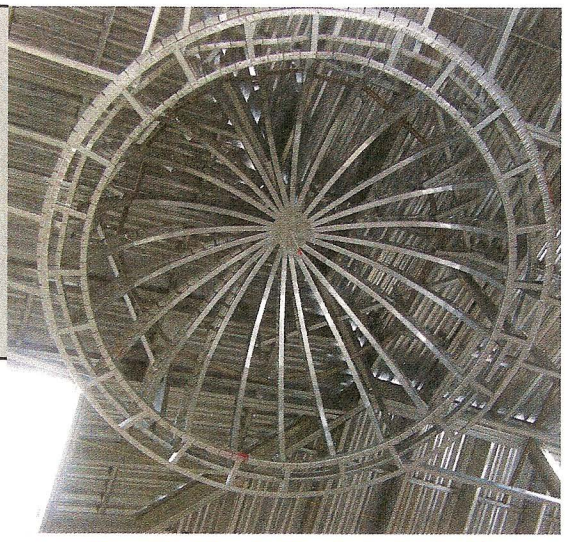

One of the things he likes best about building with steel is its design flexibility, and says it is easy to frame barrel ceilings, domes (pictured here) and other details with steel.

A FEW WORDS ABOUT STEEL

DON WHEELER: ONE BUILDER'S TRANSITION TO CUSTOM STEEL-FRAMED HOMES

WHEN DON WHEELER DECIDED TO MAKE THE SWITCH TO EXCLUSIVELY BUILD WITH STEEL BACK IN 1997, HIS REASONS WERE VERY SIMPLE. "I SWITCHED TO STEEL FRAMING TO AVOID CUTTING DOWN TREES TO FRAME HOMES," HE SAID. VISITS WITH HIS WIFE'S FAMILY IN WASHINGTON STATE, WHERE HE OBSERVED THE DAMAGE CLEAR CUTTING HAS ON LAKES, STREAMS AND THE TOTAL ENVIRONMENT, CONTRIBUTED TO HIS DECISION TO BE MORE ENVIRONMENTALLY CONSCIOUS. AND SINCE HE LIVES IN CALIFORNIA WHERE WILDFIRES ARE PREVALENT, HE ALSO LIKED THE IDEA OF BUILDING WITH STEEL SINCE IT IS NON-COMBUSTIBLE.

As a licensed general contractor and custom homebuilder since 1979, Mr. Wheeler now has extensive experience building with both wood and steel. Along the way, he has found many more benefits to building with steel, including its ease to work with, durability, sustainability, and design flexibility – something he really came to appreciate during his first steel framing project. He was hired to build a 7,200 square foot custom home for a family in Pelican Hill, Calif. The home's plans called for numerous arches and serpentine walls, and he initially thought framing the arch soffits and walls would be a difficult task.

"Steel creates many advantages to framing barrel ceilings, domes and other details," Mr. Wheeler said. "Steel framing can actually be bent to an exact radius for any detail requiring a curve. It is also easy to make any radius in the field; steel cut correctly can bend to form any shape needed."

He has enjoyed a lot of success with the custom homes he has framed with steel over the past 10 years, and points out that steel framing's advantages are visible to anyone stopping by the Pelican Hill family's home. "Their home has no plaster cracks anywhere because steel does not expand and contract like wood. Steel also makes a stronger, straighter structure, which causes less movement in a building."

For now, he stick builds all of his custom homes because of the control he feels it allows him to have over his projects. "Stick building works best for me right now," he says. "I find you don't have the same kind of control with panelizing that you do with stick building, where I have complete control. When I build a house, I'm there for every step. I'm there when the carpeting goes down."

Mr. Wheeler does admit that stick framing is much more labor intensive than panelizing, something he is looking to work toward for the future. On a 9,800 square foot home, for example, it took 82 days for a crew of eight to complete the framing. If he had arranged to instead have it panelized off site, he says it would have saved him and his crew a lot of time. "When I do decide to panelize, I will do it on-site because I like that control. If I need to change the size of something, I can easily do it because it will be on-site and I can control it."

For any builder who decides to stick-build, he encourages them to be innovative in finding the best ways to make it work for them. "There's more than one way to do things and you just need to be open to new approaches," he says. From careful planning to providing clear instructions on delivery of materials, here are a few tried and true tips that Mr. Wheeler has found make framing with steel most cost-effective and efficient for him:

PLANNING

Before he gets started with any construction project, Mr. Wheeler invests a lot of time in the planning stage. He carefully reviews his set of

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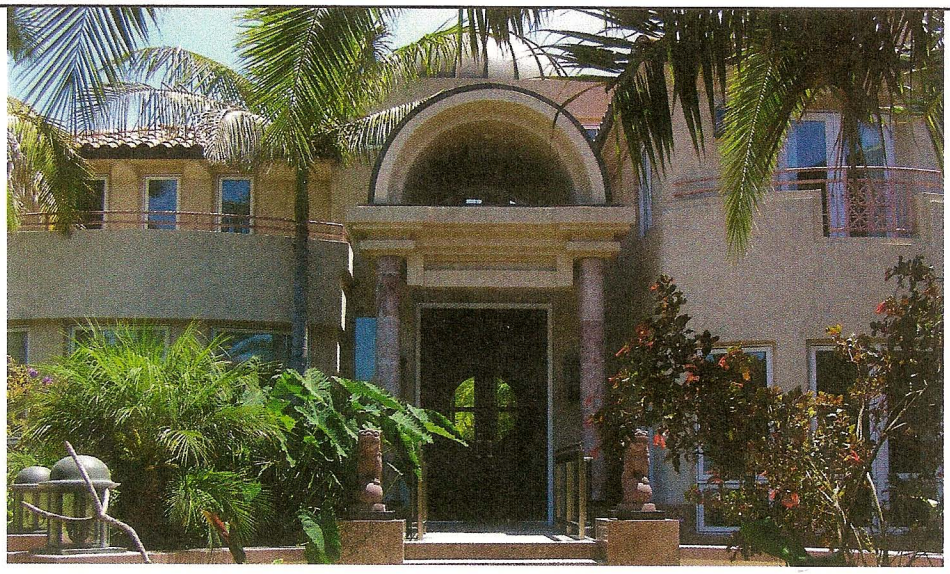
plans and looks for where he might save money. On an 11,000 square foot custom home in Santiago Canyon, Calif., the plans initially required seven moment frames. But once he switched the plans over to cold-formed steel, moment frames were no longer needed – and so no red iron. "This was a huge cost savings."

ESTIMATING MATERIAL NEEDS

Practical field experience has helped him the most with estimating and ordering his materials. Once his plans are finalized, he very methodically begins to prepare for ordering through a series of spreadsheets. First, he develops his cut list which combines all the steel lengths so that everything can be bundled the same. He then works on a material re-cap list, which makes it easier for the roll-former to roll everything out.



Mr. Wheeler's first construction project with steel framing is this 7,200 square foot home in Pelican Hill, Calif.

To save time on his job sites, Mr. Wheeler arranges for his supplier to place a label on the steel designating where it needs to be delivered in the structure.

ORDERING THE MATERIALS

When ordering his materials, Mr. Wheeler arranges to have all of his materials cut to the exact size he needs. "By taking my time to pre-plan and lay everything out, I know exactly what I need and in what size. This eliminates scrap, although all steel scrap is recyclable so it wouldn't go to waste." He also finds that it helps to be able to control how the materials are bundled and shipped. "By controlling how steel is bundled and shipped, you can have everything together in a way that is easy to find and easier for your crew to identify. It makes the process a lot easier because it's a lot more organized."

PREPARING FOR DELIVERY

Another technique that he finds makes his projects go smoother is to arrange for the supplier to place a label on the materials with instructions on where they will go once delivered, such as front entry stairs. "If you arrange to have your materials marked with this information, then you know everything is exactly where it needs to be. This saves time and money."

Mr. Wheeler has found steel framing to be an economically viable way to build homes from the beginning. By following the simple steps he explains above, he believes any builder who decides to make the switch to steel can be as successful as he has been. "When someone tells you it costs more to build with steel, you just have to look at the whole picture. By investing the time up front in careful planning, it makes everything go much more smoothly and you save a lot of time on the job."

Don Wheeler is president of Wheeler Construction Co. in Anaheim, Calif., and can be reached at donwheeler@sbcglobal.net or (714) 473-0229.

Editor's Note: Be sure to check out the November/December edition of Framework, when we talk to Danny Feazell, president of Premium Steel Building Systems in Roanoke, Va., about the success he has had building homes with panelization.

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