

Notes from the West

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On the West Coast and throughout the country, now is the time to tap into the available resources to make informed—and creative—material decisions on your next project.

IT IS TIME OF SERIOUS CHALLENGES for the domestic and global economy, which in turn creates challenges for the domestic steel construction industry. The turmoil in the financial markets, accompanied by credit freezing up, is the major risk facing the construction industry. McGraw-Hill Construction is projecting another drastic decline in the level of construction starts for 2009 nationally, following a 12% decline for 2008. This forecasted drop is directly related to the tough funding environment, cancelled/postponed construction projects, and the financial stress in the economy.

How has the steel construction industry in the U.S., and in particular the West Coast region—my region as an AISC regional engineer (RE)—reacted to the trends in the market?

Steel market share in the prime construction market that AISC tracks (non-residential and multi-residential construction greater than four stories) continues to maintain the momentum, as it was up nationally to 55% for 2008 compared to 53% for 2007. This represents an over 2:1 advantage over the closest competing construction material, concrete.

The steel market in the West Coast—which, in RE terms, includes the states of California, Oregon, Washington, Alaska, and Hawaii—mirrors the national trend of increase, being up 5% in 2008 to 41% from 36% in 2007. The interesting point of this steel statistic is that during the same time, the concrete industry experienced a dip from 25% to 22% nationally and from 34% to 28% in the West Coast region.

We are very optimistic that steel's market share is

still rising in a time of decreased construction activity. One of the largest reductions in construction remains for the 20+ story building market, which directly correlates to the residential real estate market crash. On the national scale the percentage of construction starts for this type of construction is at 3% of all projects, which is half the 2006 level of 6%. The West Coast statistics are confirming the same trend, from 6% in 2006 to 4% in 2007 to 2% in 2008. However, the schools/libraries/labs market appears to be picking up, indicated by the increase in construction starts from 9% in 2007 to 15% in 2008 for the region, and from 13% in 2007 to 16% in 2008 nationwide.



LA Live

A major, recent steel highlight

for the region was the LA Live Hotel and Residences Breakfast Presentation and Tour sponsored by AISC Member fabricator Herrick Corp., AEG, and AISC late last year. Nearly 200 people attended the event, including engineers, architects, developers, members of the steel industry, local officials, and the media.

The project's innovative steel-plate shear wall



AEG



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solution, which substituted the 30-in. concrete steel walls with ¼-in. to 3/8-in. steel-plate walls, led to a 30% reduction in building mass, lighter foundations, and elimination of multiple caissons. This helped the building gain more than 20,000 sq. ft of floor space, which equates to an additional \$20 million of real estate available for sale.

Simon Schusteman, president of the project's steel detailer, Steel Systems Engineering, Inc., called the project one of the most satisfying of his career. "It is not that often that a bold design coincides with a great execution," he said. "It was a pleasure to watch this marquee building going up—well ahead of the deadline."

For more on the project, visit www.aisc.org/LA-Live.

Tapping into the Resources

Given the current economic circumstances, selecting and designing framing systems—and properly managing the acquisition of these systems—demands even more careful attention than usual. Luckily, the steel fabrication community provides material and industry expertise to bring the greatest possible value to any building project. In addition, AISC's Steel Solution Center (SSC) can assist with developing conceptual studies of innovative steel solutions for any project and design and development team.

Exploring the use of innovative, if unfamiliar, systems is also important. For example, steel-plate shear walls (SPSW) and buckling restrained brace frames (BRBFs) have been successfully used throughout the West Coast for their unparalleled performance under moderate and severe seismic loading. Considering steel for building types that are typically framed with other materials is another option. Structures like parking garages, which are often framed in concrete, can easily benefit from steel construction and accommodate the new aggressive demands on cost, schedule, availability, and sustainability.

Regarding the latter attribute, proj-

ect designers are increasingly concerned with the impact of their work on energy use and the environment, especially as certain aspects of construction and building envelope designs are becoming mandated by government codes, such as the California Title 24 Energy Code. In addition, change is being promoted through voluntary green building guidelines, such as the U.S. Green Building Council's LEED program. Once an emerging trend, green building has become a routine—if not fully implemented—idea in today's construction industry. With the down market, it has become even more important for industry players to capture the opportunity created by the demand for more sustainable buildings. The key—on the West Coast and throughout the country—is to help building professionals realize that steel is not simply the material of choice but the *optimal* material of choice for meeting the new demands of the construction market, such as sustainability, once the economy starts turning its wheels again.

Up and Down the Coast

Another resource to consider? A visit from your RE. Over the past several months I have been visiting all of the AISC Member Fabricators in my region. I've just wrapped up California and will be concentrating on Oregon during the second quarter of 2009. Further north, in Washington, I am in the process of coordinating joint events between the Pacific Northwest Steel Fabricators Association (PNSFA) and the Structural Engineers Association of Washington (SEAOW) as a platform for establishing ongoing communication and close business relationships between the design and fabrication communities in the region. (Check my page for more updates on these events.) I am also planning to exhibit at the AIA 2009 National Convention and Design Exposition in San Francisco April 30-May 2 and the SEAOC 2009 Convention in San Diego in September.

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