Steel Framing Alliance™

FRAMEWORK

YOUR GATEWAY TO THE STEEL FRAMING INDUSTRY

presented in metal HOME DIGEST

SSMA IS THE LEADER IN:
SUPPORTING THE DEVELOPMENT AND MAINTENANCE OF QUALITY PRODUCT STANDARDS AND SPECIFICATIONS
CREATING GROWTH OPPORTUNITIES FOR COLD-FORMED STEEL THROUGH RESEARCH, MARKETING AND EDUCATION.

A FEW WORDS ABOUT STEEL

RUNNING A DEFRAG ON THE INDUSTRY

BY DAN DRY

WHEN YOUR COMPUTER GETS SLUGGISH, WHEN IT'S NOT WORKING QUITE RIGHT, AND WHEN PROGRAMS DON'T SEEM TO FUNCTION EFFICIENTLY ANYMORE, THE FIRST THING YOU USUALLY DO IS "RUN A DEFRAG."

Running a defrag means to eliminate the fragmentation of the system, to keep everything working in sync. I am excited to relate how the cold-formed steel industry is running a defrag on itself, with the Steel Stud Manufacturer's Association and the Steel Framing Alliance's recent decision to partner to maximize efficient use of time, resources and money.

When elected president of SSMA a few months ago, I vowed not to keep things status quo. SSMA had done good work with the nomenclature standardization initiative, the publication of a comprehensive Product Technical Information Catalog, the maintenance of its ICC Evaluation Report and the acquisition of a City of LA report. The latter two reports are vital to doing business on the West Coast. But what had SSMA done to grow the market for the steel framing industry?

SSMA was keeping in step with technical matters, but was not growing the market nor generating new business for the industry. Recognizing the huge commitment in time and money which members have made to SSMA, it was time for the organization to set about generating a return on their investments. Not only that, but SSMA needed a new purpose and direction—reasons to attract and maintain roll formers as active members of SSMA.

SSMA was having difficulty in finding a coordinated program. We could come up with projects and programs, but they were hit and miss. There was duplication of efforts between SSMA and other groups within the industry, groups that in some cases were better organized to perform specific functions but needed input from manufacturers.

Facing this situation, SSMA formed a planning task group from the membership. The group met, and reviewed

YOU DON'T TYPE INFORMATION INTO YOUR COMPUTER WITHOUT EXPECTING TO BE ABLE TO HIT THE PRINT COMMAND AND RECEIVE OUTPUT. LIKEWISE, YOU DON'T JOIN AN ASSOCIATION AND CONTRIBUTE FUNDS, TIME AND EFFORT AND NOT EXPECT TO GET SOMETHING IN RETURN.

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SSMA MISSION STATEMENT:
THE STEEL STUD MANUFACTURERS ASSOCIATION IS THE UNIFIED VOICE OF THE STEEL FRAMING MANUFACTURING INDUSTRY.

what SSMA had done right, and where it was unsuccessful. We identified other industry groups that were already active in doing things SSMA hoped to accomplish.

The emphasis on market growth that came out of the planning session directed our attention toward the Steel Framing Alliance. SSMA already had some alignment with the SFA, sharing a technical director, Don Allen, staff-to-staff liaison and having exchanged complimentary memberships.

In addition, several SSMA members are active members of SFA, where they have been involved in SFA's regional alliances and, shared materials and labor at various SFA sponsored functions such as Stud U, trade shows, and in training of building inspectors, engineers and architects. SSMA and SFA have cooperated in funding joint research projects to benefit industry development.

SSMA's new strategic plan calls for a formalized relationship with SFA. This will be accomplished as SSMA becomes actively involved in SFA as an industry partner with representation on the SFA Board of Directors and its Operating and working teams. SSMA's increased financial support of SFA will result in greater leveraging of dollars, participation research, marketing, and training programs/projects, and supplemental staff support for such activities.

SSMA will remain a stand-alone association of manufacturers. It will maintain a separate membership and continue to represent the roll-forming segment of the industry.

THE EMPHASIS ON MARKET GROWTH THAT CAME OUT OF THE PLANNING SESSION DIRECTED OUR ATTENTION TOWARD THE STEEL FRAMING ALLIANCE.

NEW SFA WEB ADDRESS

NOW THERE ARE TWO WAYS TO PUT YOUR FINGER ON THE LATEST IN STEEL FRAMING INFORMATION AND RESOURCES:
WWW.STEELFRAMINGALLIANCE.COM
OR THE NEW, EASIER-TO-REMEMBER DOMAIN WWW.STEELFRAMING.ORG.

There's a temptation to suspect that this new channel for SSMA funding of initiatives will add another layer of bureaucracy and prolong research. On the contrary. In the past, delays experienced in completing projects were often to a point at which SSMA was concerned that they would never be completed. Now, by pooling resources with SFA, SSMA can direct funds to specific projects and speed up their completion.

You don't type information into your computer without expecting to be able to hit the print command and receive output. Likewise, you don't join an association and contribute funds, time and effort and not expect to get something in return. With the new cooperative arrangement between SSMA and SFA, we can be assured that both groups will receive the best return possible: more steel framing moving into the marketplace.

Dan Dry is general manager for Steel Construction Systems Inc., a joint venture between Rinker Materials, Florida, and International Steel Group, Ohio, and president of the Steel Stud Manufacturers Association.

MHD

Steel Framing Alliance™

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RESEARCH

Fire Research Results Favorable to Steel

By Jonathan Humble

Within the steel industry are many steel-sponsored organizations, committees and task groups dedicated to the development and future of steel within the marketplace. One of those entities is the Fire Sound and Thermal Task Group.

FST has participated in two research projects. The first with the National Research Council of Canada, and second as a joint venture with the Gypsum Association. In both cases, the ultimate goal was to develop additional new fire endurance tested designs that could be listed in code-recognized documents for use by engineers and architects. This article reports on both achievements.

Before specifically addressing those studies, we must first have an understanding of fire research and testing. Although steel is considered non-combustible by definition in the national model building codes, this recognition does not permit exemptions from the fire endurance provisions of those building code requirements. In North America the national model building codes recognize basically two methods for testing of individual components or assemblies for their assumed fire endurance, in the United States the ASTM E119 test method and in Canada the CAN/ULC-S101 fire test method.

Both are effectively comparable in their requirements for conducting a fire endurance test, as are UL 263, NFPA 251 and ISO 834 test methods. The fire resistance ratings of a tested assembly are normally expressed in hourly designations. These designations can be found in publications such as UL Fire Resistance Directory, ULC Fire Resistance Directory, Gypsum Association GA-600 Fire Resistance Design Manual, and other related documents that are commonly recognized by building officials.

A Guide to Fire & Acoustic Data for Floor & Wall Assemblies, jointly produced by the Alliance and the Canadian Steel Construction Council, was created to simplify the selection process of fire and sound assemblies by amalgamating all fire and sound data available from the above groups for cold-formed-steel assemblies relevant to residential and light-commercial construction.

Mission Statement of the Fire Sound and Thermal Task Group:

To support the goals and objectives of the AISI Committee on Framing Standards and Steel Framing Alliance by serving as a focal point for handling technical issues related to fire, sound and thermal aspects of cold-formed steel framing.

National Research Council of Canada

The first report is about a project that the steel industry participated in titled, "Joint Research Project on the Fire and Acoustics Performance of Floor Assemblies—Phase II." The intent of the project was to bring together both government (in this case the National Research Council of Canada—Institute for Research in Construction) and industry (e.g., steel industry, wood industry, gypsum industry, insulation industry, etc.) to investigate issues that have not been considered in previous NRCC projects or outside of the NRCC. The focus of the Phase II floors project was to research floor assemblies. The parameters of the fire research project were to investigate further the effects of changing components and methods of constructions on the resulting fire resistance of the assembly.

A report of the entire project will soon be available to the general public entitled "Fire and Acoustic Performance of Floor Assemblies—Phase II." In brief, based on the results of the fire endurance tests, the findings suggest that:

- The effect of steel or wood framing type was found to be insignificant for design assemblies that employed a wood panel subfloor, identical center-to-center framing spacing, glass fiber insulation, resilient channels spaced at 16 inches on center, and two layers of gypsum board ceiling membrane.
- The effect of cold-formed steel framing spacing (16-inch [406 mm] vs. 24-inch [610 mm] joist on-center spacing) is significant. The comparative tests conducted illustrated that for assemblies with wood panel subfloor, two layers of gypsum board membrane directly applied to the framing, and no insulation in the cavity, the assembly with the 16-inch-on-center spacing performed better than the assembly with framing spaced at 24 inches on center.
- The number of layers of gypsum board on the ceiling side of a floor assembly has a greater significance to the fire resistance than does the number of layers of wood panel subflooring. Test assemblies containing a single layer of wood panel subfloor and single layer of gypsum board ceiling demonstrated that the addition of a second layer of gypsum board provided greater fire resistance than did the test assembly with the addition of

a second layer of wood panel sub flooring.

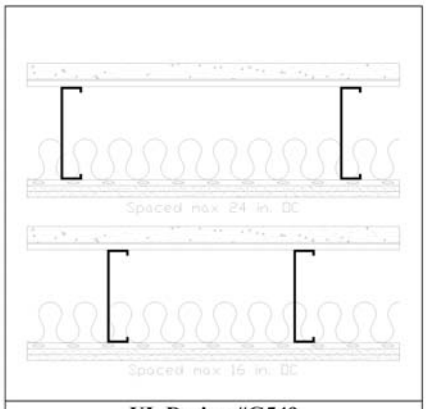
- The type of insulation can have an effect on the tested fire resistance rating. The fire test results suggest that rock fiber insulation and cellulose insulation increased the fire resistance over that of a joist cavity containing glass fiber insulation or joist cavity containing no insulation at all.
- The type of subfloor does have an effect. In this case, two fire tests were conducted, one with an assembly containing a wood panel subfloor and one with an assembly containing a metal deck and concrete subfloor. The tests demonstrated that the floor assembly with the concrete metal deck subfloor performed better in time than the assembly with the wood panel subfloor.

It should be pointed out that when choosing a particular tested assembly design one should be aware of both the fire endurance and acoustic qualities of that design. In most cases the benefits attributed to the success of an assembly for fire resistance design may diminish the ability of that same design in achieving a desired or required acoustic rating (STC and/or IIC). Acoustic tests completed as part of this Phase II project illustrated that this was the case.

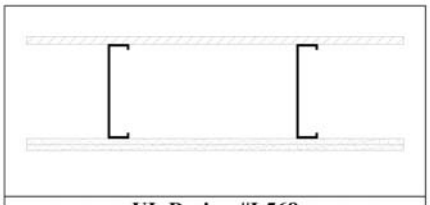
The complete reports by the NRCC are available to the general public at www.irc-cnrc.gc.ca/fulltext/rr184/

Tested assemblies containing cold-formed steel framing from this research project have been listed in the following directories:

- UL Fire Resistance Directory designs #G549 and #L568, which can be found on line at www.ul.com
- ULC Fire Resistance Directory designs #I523 and #M511, which can be found on line at www.ulc.ca



UL Design #G549
ULC Design I523
1 Hour Non-Combustible Design



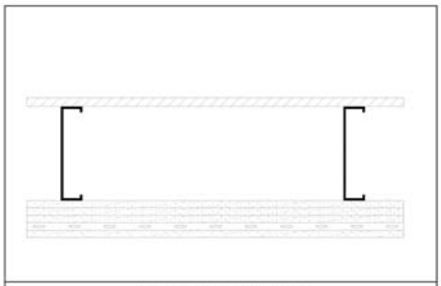
UL Design #L568
ULC Design #M511
1 Hour Combustible Design

Joint Project

Our second research project was conducted as a joint venture with the Gypsum Association. The goal of this project was to develop and test a floor assembly containing cold-formed steel framing that would obtain a two-hour fire resistance designation. This designation would be useful in the field for applications in buildings containing mixed occupancies (e.g., uses) where the separation between uses requires an assembly with a fire resistance rating of two hours. In national model building codes there are provisions that require a fire separation when a building contains mixed occupancies. One example where this may be applicable is the separation of a business use on the first floor of a building with residential use in the stories above.

The listed design requires four layers of gypsum board to achieve its desired fire resistance rating. This tested assembly is listed in the following fire resistance directories:

- Gypsum Association Fire Resistance Design Manual design #FC 4750, which can be found on line at www.gypsum.org
- UL Fire Resistance Directory designs #L556, which can be found on line at www.ul.com



UL Design #L556
2 Hours Combustible Design

Fire and Acoustic Data Guide

As a result of this activity in fire endurance testing, and in response to inquiries to the steel industry, "A Guide to Fire and Acoustic Data for Steel Floor & Wall Assemblies" has been compiled in order to assist design professionals, builders and code officials in locating listed fire resistance assemblies containing cold-formed steel framing. This guide contains information for both fire resistance ratings and acoustic properties (STC and IIC ratings). It is a live document, and therefore is updated regularly. This document can be viewed at the following website:

- www.cisc-icca.ca
- www.steelframingalliance.com

Acknowledgement

The American Iron and Steel Institute, the Steel Framing Alliance and the Steel Stud Manufacturers Association all must be recognized for their financial support of these projects, and the Canadian Steel Construction Council and the American Iron and Steel Institute for their input and guidance.

Jonathan Humble AIA is a regional director for the American Iron and Steel Institute.

MHD

Truth in Materials: The Streamlined Steel Home

Anyone who calls into question the lasting durability of steel for residential construction need only take a look at one of the first truly steel homes, which still stands in Chesterton, Ind.

Jim Morrow offers tours of his "All Steel Historic Home."

The home was one of about 2,500 built in 35 states between 1948 and 1950 by the Lustron Corp. Taking its cue from the automotive industry, and indeed emulating the style of an automobile, the homes' components were manufactured in a factory and assembled on site.

"It has not only endured, it looks like it was made yesterday. It shines like a brand-new car," says owner Jim Morrow. Also like a car, "You can clean it and wax it and it shines in the sunlight."

Morrow, a second-generation veteran of the building-products industry and an aficionado of Art Deco, Bauhaus and International styles, says he is dedicated to the preservation of structures that are considered of architectural or historical significance. He has restored the home to its original appearance and furnished it with Art Moderne décor appropriate to its era.

While the steel-framed homes of today are not constructed with their own built-in steel furniture, radiant ceiling heat, 2-foot-by-2-foot porcelain-enameled metal squares, and metal ceilings like Lustron's were, there are similarities in building methods and materials. Non-load-bearing partition walls were built with individual studs 2 feet on center. And each home used steel trusses. Studs and panels were fastened with screws.

Cabinets and fixtures were built into the home.

"It's remarkable engineering done on this, even by today's standards," says Morrow.

However, excellent engineering, as well as exploding public demand, were not enough to keep the homes in production. Lustron, plagued with manufacturing problems, distribution issues and a resistance from the industry, folded before reaching its full potential.

"The home building industry is probably the slowest industry we have in the United States in terms of change," Morrow says. "We're continually fighting this all the time. If Lustron had been successful in the next three or four years, it probably would have accelerated steel framing 30 or 40 years."

Morrow's home is a rare three-bedroom model that includes a two-and-a-half-car Lustron garage. He guesses about 150 Lustron homes still stand, most in the states where the largest numbers were built, Indiana, Ohio and Illinois.

The home has been restored and redecorated to fit match the style of the era.

While Morrow, a self-proclaimed preservationist, concedes the structure is ill-suited to the look of the rest of the street where it sits, he appreciates its looks, as well as its history. A preservationist, he points out, is not a historian; a preservationist saves history.

Saving this house, he says, is "part of saving our heritage."

To tour the All Steel Historic Home, call (219) 874-5322.

MHD

FROM THE FORUM

CABINETS WITH STEEL FRAMING

What is the best way to install cabinets with cold-formed steel framing?

Thank you for your question. When planning construction for cabinet attachment to steel framing, it is best to install a continuous strap or segment of track along the top and bottom of the areas where the cabinets are to be supported. These shown in the details on the SSMA Web site (www.SSMA.com) on pages 41 and 42; they are called "backing." Or you can purchase a product like Danback from Dietrich, which is made specifically for cabinet backing.

When attaching the backing, use #10 screws. The SSMA tech catalog gives shear values for these screws in steel-to-steel connections, so use as many screws as you need from the track or strap to each stud. Note that for the type of loads you are talking about, I recommend a track rather than a strap; preferrably 43-mil steel or thicker. Of course, this depends on how many fasteners you will be using to attach the cabinets to the track; the more fasteners you have, the lighter the load will be on any one fastener.

If the wall is already up, it is a bit more difficult to plan your cabinet supports, but it still may be done. The shear and pullout capacity of fasteners in 18 mil material is much less than it would be in 43 mil material: strength of the screw connection is directly related to thickness. A sample load value for a #8 screw would be 66 pounds of shear and 39 pounds of pullout. (Values are from the SSMA Product Technical Information catalog, also found on the SSMA Web site, and are calculated based on the American Iron and Steel Institute's North American Specification for the Design of Cold-Formed Steel Structural Members.)

Based on the loads, screws of this diameter may not be the best option, unless you are able to get multiple screws in each stud. Pre-drilling and installing some sort of expansion anchors, such as molly-bolts, can be done, but holes larger than ¼ inch can reduce the bending and axial capacity of a stud when drilled through the flange. For interior curtain-wall framing, this is usually not a big issue unless the walls are really tall.

I personally have used both methods successfully in my own home. Be

CABINETS WITH STEEL FRAMING... CONTINUED FROM PAGE 29

careful when using the hardened screws for steel framing to support wall loads like this. Because the screws are hardened to make the driller point strong enough to cut through steel, the screws have little capacity to bend, and can fracture suddenly when overloaded. Therefore, you won't get any warning signs such as sagging connections when someone puts too much heavy stuff in them, or tries to use them as a ladder to replace a light bulb!

Finally, a long-time steel-framing colleague adds another point. He says that when it comes to cabinet install, he always tries to make sure he has a minimum 30-mil wall behind the cabinets and he uses wood 2-by-6 horizontal blocking (with a shallow saw curf to allow for stud lip at one end). This allows the cabinet guy to use the same screws and tools he would use in a wood house to install cabinets. It has always been his theory that the easier he makes it for his subs to deal with the framing material he's chosen, the more likely he will get the house built at or below budget.

Thanks again for your inquiry!

Don Allen, P. E.
Steel Framing Alliance director of engineering development, and LEED 2.0 accredited professional

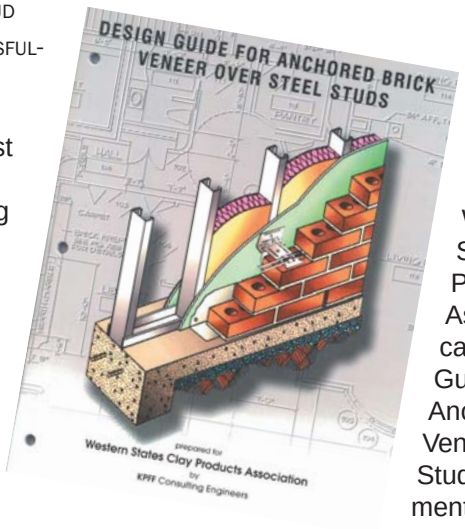
ASK YOUR QUESTION ON THE FORUM!
LOG ON AT
www.steelframingalliance.com.

Resources for Brick Veneer on Steel Framing

BY DON ALLEN PE

AS THE INDUSTRY MOVES FORWARD WITH NEW SYSTEMS, STANDARDS, DESIGN TOOLS AND APPLICATIONS, THERE ARE MANY DESIGNERS, SPECIFIERS AND BUILDERS NEW TO THE INDUSTRY. THEY MIGHT NOT KNOW THAT A VERY ATTRACTIVE AND DURABLE FINISH SYSTEM, BRICK-VENEER-ON-STEEL-STUD BACKUP, HAS BEEN USED SUCCESSFULLY FOR MANY DECADES.

In the last 20 years, vast advancements have been made in the understanding of permeability, moisture flow and insulation, and how these characteristics affect the performance of a building envelope. It's a fact that most building repair costs are caused not by structural failure, but by water infiltration and the resultant damage. Therefore, designing good roof and wall systems, including brick veneer, is an important part of good, safe, energy-efficient design. Thankfully, there are some excellent design resources that have been recently published, to help engineers and architects design and specify these systems.



Publications

The newest is a publication from the Western States Clay Products Association called Design Guide for Anchored Brick Veneer over Steel Studs. The document gives a good series of definitions of the system, concept and design approaches, and provides two different styles of design for the specifier and owner. A key concept clearly explained is that the system is designed for the veneer to crack; the key to preventing moisture in the wall is controlling the crack size and proper design and

RESOURCES FOR BRICK VENEER.. CONTINUED FROM PAGE 30

application of the elements of the system. It describes the brick system as a "rain screen" system, and secondary elements are required to handle water and moisture that does make it into the cavity between the brick and the exterior sheathing. It includes a sample calculation of not only the stud, but also the required design load on the brick tie and fasteners.

The latest document from AISI, the Steel Stud Brick Veneer Design Guide, does a similar job of researching the issues and gives good definitions and explanations of terms such as air barrier, vapor retarder and moisture barrier, and helps explain the difference between them. The author describes several design approaches, but in the end gives a clear set of recommendations for the designer and installer. These include suggestions about the bracing of the stud system, the type of brick ties and what design load must be used for them, the amount of movement that is safely permitted for crack control, and even insulating techniques in different climates to help prevent condensation within the wall and help encourage drying of wall cavities that may experience some moisture.


Technical Notes on Brick Construction

28B REVISED

November 1999

BRICK VENEER BRICK VENEER/STEEL STUD WALLS

The reader of the AISI design guide may become skeptical of the practicality when seeing details of corner air baffles to reduce air flow, but that is just in the preliminary background discussion. There are good, rational, cost-effective recommendations starting in section 3 on page 18.

Recommendations

Note that there are some key areas where the documents differ, but in many respects they are the same. Both documents refer to the Brick Industry Association tech note. In the section from the BIA document on Steel Studs, several recommendations are made, including stud minimum thickness, galvanized coating, fastener types and coating, sheathing types, application and location of the brick ties, and special requirements for seismic considerations.

For the designer or builder preparing to install a brick veneer system over metal studs, all of these three resources provide excellent insight into how the system should be designed, detailed and installed. Proper anticipation, mitigation and management of heat, air and moisture within the system can go a long way to preserving the building and the wall. Anticipating building movements and loads, and ensuring that unintended loads do not get into the wall (using slip or drift connectors, for example) can help the wall meet its expected performance.

For More Information

AISI publication CF03-1: Steel Stud Brick Veneer Design Guide*, available at the "store" link at www.steelframing.org (look under the "Technical Publications" bar at the left side of the page.) Alliance members: $29; non-members: $35. Phone orders may be placed at (800) 79-STEEL.*

WSCPA Design Guide for Anchored Brick Veneer over Steel Studs (2nd Edition, August 2004); *$10 for printed copy, or free download of text at www.wscpa.us; click on the "Technical Publications" tab.*

BIA Technical Notes on Brick Construction, #28B, revised November 1999: Brick Veneer/Steel Stud Walls. *Available for free text download at www.bia.org. Printed copies are also available by calling (703) 620-0010.*

Don Allen PE is director of engineering development for the Steel Framing Alliance.

MHD

EDUCATION

EASE YOUR WAY INTO COLD-FORMED STEEL

BY MARIBETH RIZZUTO

LOOKING FOR A SLOW TRANSITION TO COLD-FORMED STEEL? NON-STRUCTURAL WALLS MAY BE YOUR ANSWER. MANY BUILDERS, FRAMERS AND VOCATIONAL TECHNICAL SCHOOLS HAVE STARTED THEIR EXPANSION TO STEEL FRAMING WITH THIS METHOD.

Non-structural walls do not support or carry the weight of the structure. Because non-structural walls are not vital to the structural capabilities, in-line framing does not have to be followed.

NON-STRUCTURAL WALL STUD SIZE

The studs for non-structural walls may be the same size and thickness as those used in exterior walls. However, framers often use thinner, less expensive studs for these walls.

Commercial framers typically use 18-, 27- and 30-mil studs, also known as drywall studs, to frame non-structural or partition walls. These walls typically have longer spans, are taller, and use intermediate bridging.

On the other hand, residential framers often use minimum 33-mil studs for non-structural walls to prevent the stud from bending or being damaged. While structurally not necessary, they are selected and used for their durability. Because residential walls are typically closer together, they are frequently bumped and could be dented during construction.

NON-STRUCTURAL WALL STUD STANDARDS

The standard for non-structural studs is a base metal thickness of 18 mil and a minimum galvanized coating of G40 for corrosion protection. ASTM C 645 covers the material and manufacturing tolerances and corrosion protection requirements are governed by ASTM A1003/1003M.

MORE INFORMATION ABOUT STANDARDS FOR NON-STRUCTURAL STUDS CAN BE FOUND IN THE STANDARD FOR COLD-FORMED STEEL FRAMING—GENERAL PROVISIONS AVAILABLE AT WWW.STEELFRAMING.ORG.

LIMITING NON-STRUCTURAL WALL HEIGHTS

There are limiting heights for non-structural steel stud walls depending on the amount of allowable deflection (bending) specified for the wall. The chart below provides an example of the allowable height for non-structural walls supported with a single layer of ½-inch gypsumboard on both sides with screws spaced 12 inches on center and deflection criteria of L/240, and a transverse load of 5 pounds per square foot.

STEEL WALL STUD UNIVERSAL DESIGNATOR	WALL HEIGHT STUD SPACING	
	16" o.c.	24" o.c.
350S125-18	14'4"	13'5"
350S125-30	15'8"	14'0"

This example is derived using ASTM 754-04, which governs the installation of non-structural steel stud walls. The standard includes allowable deflection limits of L/120, L/240, and L/360, and transverse loads of 5 pounds per square foot, 7.5 pounds per square foot, and 10 pounds per square foot.

While the chart presented below involves an example of limiting wall height for residential sized studs one should consult the Steel Stud Manufacturers Association, Product Technical Information Catalog, for commercial sized studs and other wall height limitations for commercial construction.

THE PRODUCT TECHNICAL INFORMATION CATALOG, FOR COMMERCIAL SIZED STUDS AND OTHER WALL HEIGHT LIMITATIONS, IS AVAILABLE FOR FREE DOWNLOAD AT WWW.SSMA.COM.

METHODS OF ASSEMBLY

Non-structural walls may be assembled using several different methods including assembling the wall on the floor and raising it into place, and in-place framing.

Non-structural walls are typically installed in place. The top and bottom tracks are screwed into the floor and ceiling, and the studs are twisted into place. After nailing the bottom track to the floor use a level and a stud to locate the top track on the ceiling joists. Screw the top track to the ceiling joists, bottom chord of the trusses, or second floor joists using No. 8 self-drilling screws. Where interior walls run parallel to the joists or trusses, pieces of

EASE YOUR WAY...
CONTINUED FROM PAGE 33

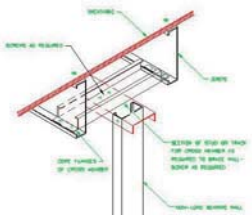


Figure 1

track or stud material may be used as blocking every 24 inches. (See Figure 1—blocking detail for walls running parallel to joists.) The pieces of stud or track used for the blocking sections should be cut 2 inches longer than the distance between the joists. Clip the flanges off 1 inch on each side to allow the webs to lap over the joists. Screw the blocking on both ends with two No. 8 self-drilling screws. Mark the track for 16- or 24-inch stud spacing. Some framers wrap the rough openings with wood, which requires leaving 1½ inches from the edge of rough openings to allow room for a wood member. Begin your layout with the open side of the stud pointed toward the source of the layout, and continue with all studs facing the same direction.

Twist the studs on layout and secure the flanges on both sides of the track. Unlike structural walls, non-structural walls do not have to be fastened at each flange of the track to the studs. They may instead be crimped, or screwed with No. 6 or No. 8 self-piercing screws—just

A Home Depot in Georgia gets wise to steel with a prominent sign that reads, "Strong yet Lightweight! Easy to Use! Termite Proof!"

EASE YOUR WAY...
CONTINUED FROM PAGE 34

enough to hold the studs in place until the gypsum board is installed. The gypsum board is installed with No. 6 bugle head screws spaced 12 inches on center.

FRAMING CORNERS

Framing corners where a non-structural wall abuts an exterior wall requires the positioning of a six inch or larger stud in the exterior wall so that the web of the stud serves as a connecting surface for the non-structural wall, (shown in **Figure 2**). Blocking may also be used. The stud or blocking will serve as a means for attaching the non-structural stud wall as well as a backer for gypsum board on the exterior stud wall.

Figure 2

Another corner may be formed by two intersecting non-structural walls. To provide for both the attachment of one structural wall to the other, and a backer for the eventual placement of the gypsum board, place an additional stud three inches from the end of one of the non-structural walls, as shown in **Figure 3**.

Figure 3

Next issue we will examine the framing of rough openings, take a look at situations where you may need to install isolators, and the attachment of gypsum board and other accessories.

Maribeth Rizzuto is director of training and education for the Steel Framing Alliance.

MHD

ABC Annual Conference and Championships

Walt Disney World Orlando was host to this year's Associated Builders Convention and Championships, and steel framing was well represented. This is the second year that the SFA, assisted by member companies, provided technical expertise and materials for the Carpentry and Electrical competitions.

The JoistRite floor system was used in students' assembly projects.

More than 130 competitors representing ABC member firms and chapter craft training programs demonstrated their craft skills. **Marino\Ware** supplied its JoistRite floor system and steel studs for Carpentry and Electrical contestants to test their talents. Fasteners for the projects were supplied by **Jetna Fastech Inc.**

Member materials were used in both the Carpentry and Electrical competitions.

In Carpentry, each contestant was responsible for constructing a small residential structure consisting of a steel-framed floor system, as well as steel walls with a header. The contest project was presented to the contestants just minutes before the competition began and they were given a quick lesson in proper tool operation. The Electrical competitors were responsible for installation of an electrical panel and wiring in a steel-framed wall.

"The ABC National Craft Championships is proud to have the Steel Framing Alliance as a sponsor," said Fred Day, director of the National Craft Championships, "keeping the next generation of craft professionals and future company owners up to date with steel framing technology!"

The Alliance and **Marino\Ware** were honored for their Silver Sponsorship with plaques at the Construction Careers Awards Breakfast.

In addition to the Craft Championships the Alliance was joined by **Alpine/TrusSteel** in exhibiting at the Construction Showcase held in conjunction with the conference.