



How to...

Increase Market Share By Converting Structural Steel to Cold-Formed Steel

by Libby Maurer

Increase market share and spread product awareness in the process.

Cold-formed steel components have many commercial construction applications. Particularly suitable for high-pitched structures or complex roof lines, cold-formed steel typically achieves a more interesting end aesthetic. Convincing specifiers and builders to embrace the versatile qualities of cold-formed steel is a good way to increase market share. The Noonans of Cascade Mfg Co in Cascade, IA explain how converting a building that originally calls for structural steel to its cold-formed steel equivalent demonstrates this flexibility, accommodates fast track projects and adds green to builders' bottom lines. Here, they share how they sell it and why they're sharing their idea with all of us. (Hint: there's an ulterior motive.)

Think Right-Brained/Become Entrepreneurially Minded

Mike and Tim Noonan call themselves the "Buns of Steel Road Show," which refers not only to the product they're peddling, but the anatomical impact of their long hours on the road. The uncle/nephew team work side by side in the company's cold-formed steel division, an enterprise that has grown tremendously in the last four years (the shop first opened in 1998). This growth didn't happen by accident; the pioneering Mike is always looking for the opportunity to apply cold-formed steel components in a new way. This entrepreneurial mindset allowed him to suggest substituting their product for the originally specified bar joist when talking to a builder he'd met at a local HBA event. "It's up to the imagination of the fabricator to substitute structural steel with cold-formed steel. That's how we were able to convince builders to switch to our product," he says.

Being on the road often creates plenty of opportunities to talk about upcoming commercial projects and hone in on whether cold-formed steel could be offered as an option. In fact, at one lunch-and-learn Mike gave, he met an architect working on a church fellowship hall that required the addition of office and fellowship space. "He was curious about the possibility of using steel trusses on a small portion of the project and sent me the drawings. It gave me the opportunity to ask if he had considered doing the entire project in cold-formed steel," he recalls. Thanks to Mike's initial foot in the door and outside the box mindset, Cascade got the job.

Understand When (& Why!) Cold-Formed Steel Makes Sense

Steel bar joists generally perform well in applications with shallow depths and wider on-center spacing and spans. As a general rule of thumb, cold-formed steel has a difficult time competing with a flat bar joist product at wide on-center spacing. Pitched bar joists, however, require a complicated fabrication process with typically a longer lead time than cold-formed steel. So given its flexibility in terms of lead time, cost and visual appeal, cold-formed steel is a natural substitute. This is why, Tim explains, cold-formed steel trusses lend themselves better to structures that aim for more architectural freedom and an aesthetically pleasing effect.

Mike says buildings like schools and assisted living facilities are good candidates for conversion. "These structures are mixing into residential neighborhoods now, and they often look like warehouses. They tend to really stick out—and not in a good way," he explains. But providing a sloped roof with cold-formed steel trusses gives these types of buildings a less institutional look, Mike says.



For this casino expansion project, converting cold-formed steel trusses was a "no-brainer."

With this in mind, it was a "no-brainer" for Mike to ask whether the prospective customer had considered trussing a casino expansion project. The 77-foot span with 6/12 pitched drive-under canopy was originally specified with pitched bar joists, and since both lead time and cost were critical in this job, cold-formed steel was an ideal substitute. (See photo above.)

Tim and Mike also had success converting a new college dining facility. At the College of St. Benedict in St. Joseph, MN, pitched bar joists specified for the dining hall were drawn as 65-ft spans with a 7/12 pitch. "They would have been behemoth," says Tim. But since the drawings also had a small area of cold-formed steel trusses, it made sense to convert the other pitched areas as well. The customer agreed, and the original \$5,000 job turned quickly into a sizable \$140,000. (See layout below.)

In the process, Tim had to redesign the trusses to work instead at 3-ft on center instead of 4-ft. Although this conversion required additional trusses, Cascade's customer saved significantly compared to what they would have paid if they had stayed with structural steel.

The moral of the story, Mike says, is to use common sense. "If you bid out a project, and you see a portion of the project that is steel bar joist, use common sense—offer the builder cold-formed steel in a more cost efficient manner."

Define Your Selling Points

In order to sell the conversion, the application has to offer something better or different than the structural steel option. For instance, substituting cold-formed steel could shave days or weeks off lead time. The Noonans estimate that the lead time on a bar joist project (after approval of the shop drawings) can run up to about 12 weeks. But for the same job, the lead time on cold-formed steel would likely be considerably less: in the four-week range.

Other selling points include reduced cost and design diversity. For instance, Tim says if you can pull it off without compromising the design values or deviate from the general span range of the original plans, cold-formed steel will cost less than structural steel in 99 percent of cases. And as stated above, if the goal is an architecturally complex look, cold-formed steel is "hands down" the best option.

In the case of the casino project, lead time was Cascade's magic bullet. "If we could cut lead time, the casino could open its doors earlier, which meant extra days to increase gambling revenues," Tim says, adding that the builder was under

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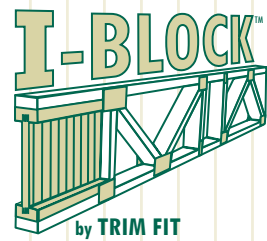


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at a glance

- ❑ Converting structural steel to its cold-formed steel equivalent showcases the flexibility, efficiency and cost saving benefits of the product.
- ❑ Steel truss component manufacturers will generally have a difficult time competing with a non-pitched bar joist product at wide on-center spacings.
- ❑ Schools and assisted living facilities are good candidates for conversion.

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big pressure from the owner to expedite the job. Plus, they estimated that switching to cold-formed steel could be done for two-thirds of the cost of the bar joists. Once they defined the conversion in terms of additional revenues and fewer days waiting for product, it was an easy sell. "We were saving them money, so they were pretty enthusiastic about going with cold-formed steel," Mike says.

Execute the Conversion

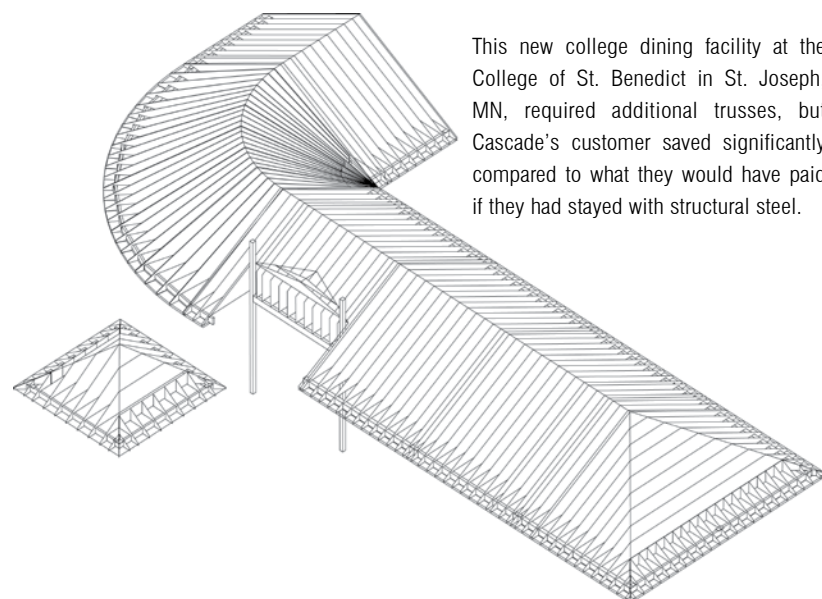
Tim lays out two ways for converting projects like these. Both of these approaches have drawbacks, so be mindful of a few pitfalls and some possible concessions you'll need to make.

1. Attack the job at the time the project is being designed; sell the building designer on the idea.

Potential pitfalls: This approach requires a big marketing effort on the front end; the architect or engineer is often the hardest nut to crack. However, if you can convince them that the project cost and lead times can be reduced, this may entice them to consider converting.

2. You come across a project that is already out to bid, and it specifies structural steel, so you go after it.

Potential pitfalls: Keep in mind that you may encounter some resistance from the structural engineer if you go this route. Because of this, warns Tim, you had better be prepared to completely engineer the roof if you are successful in converting the project. This means designing all



This new college dining facility at the College of St. Benedict in St. Joseph, MN, required additional trusses, but Cascade's customer saved significantly compared to what they would have paid if they had stayed with structural steel.

the permanent bracing, the shear transfer blocking and truss to bearing connections. "You can't expect the EOR to do it. You can bet it's a relatively new product to them, and they don't know much about it," he says, adding that if the EOR had known anything about cold-formed steel design, he would have designed the job this way from the beginning. And as always, remember to cover your costs for this work.

Whether or not you attempt to convert a job at this point may also depend on whether the general contractor has been pre-selected. "I would hesitate to go after it at the time of the bid (attacking it after it's designed) unless the GC has been pre-selected." This is because if there are multiple GCs in the running, it's difficult and time consuming convincing all of them to embrace cold-formed steel trusses. It may be too much to bite off, according to Tim.

However, if the GC is pre-selected, you are bringing them the idea of how to save money and time, and they can expect better success.

Why Share?

And remember that ulterior motive I mentioned? Well, turns out Mike and Tim are glad to spread the word for a quite selfish reason: they hope that by sharing, steel component products will become more well known. "What's important to us is that we see more adaptation of the product on the front end, in the design community. The only way we can do that is to spread the word and open a dialog about the benefits, savings and efficiencies of cold-formed steel applications," Mike says. And ultimately, because they want the industry to grow, Cascade is happy to be a resource. **SBC**



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