Solving the Steel Procurement Puzzle

BY MAX POWELL

Service centers offer significant help with the logistics of steel acquisition.

DURING "NORMAL" BUSINESS CYCLES, hundreds of new construction projects are bid monthly throughout the U.S., and almost all follow the same routine. General contractors (GCs) are chosen by owners to build their projects. The GCs put out bid packages to subcontractors who will assist them in getting these projects completed. Drawings and general conditions for the projects are completed and sent to the subcontractors, who then prepare bids and submit them to the GC, hoping that they are the successful bidder. The GC then begins the process of evaluating the bids for completeness, final price and schedule.

Since many of the projects have a structural steel frame, fabricators are included in the list of subcontractors bidding the supply, fabrication and sometimes the erection of the steel frame. When a fabricator is awarded a contract for the steel package, it in turn prepares final shop drawings which are used in the fabrication of steel beams and columns to the exact sizes needed for the project. Once these detailed drawings are prepared, the fabricator has a more exacting list of material needed for the project. At this point, the fabricator secures material that will be delivered to its shop in time for the fabrication to be completed within the project schedule.

Mill Purchases vs. Steel Service Center Purchases

The fabricator has two places where it can buy steel: A producing mill, or a steel service center. Each has advantages and each fabricator has its own preferences and criteria for buying from either. Approximately 70% of steel in the U.S. is delivered via a steel service center. While it's fair to say that virtually every fabricator buys steel from a service center, not every fabricator has the resources or desire to buy from a producing mill. Here is a closer look at some of the issues involved.

Mill Purchases

In order for a fabricator to buy steel directly from a steel mill, several main issues need to be analyzed. These include minimum order limits, distance from the mill, transportation, handling, rolling schedules, project schedule, and financial resources.

Some projects are just not large enough to justify buying directly from the mill. Producing mills require minimum order quantities, including mill bundles. For instance, assume the fabricator has a requirement for W18×40 beams in the following configuration: three at 35 ft, six at 40 ft, 12 at 45 ft and two at 50 ft. The mills would require the fabricator to buy each of those different lengths in mill bundles of five each, or five at 35 ft, 10 at 40 ft, 15 at 45 ft and so on. Instead of purchasing the desired quantity with a weight of 19.7 tons, the fabricator would be required to purchase 30 tons, or 52% more material than is required. This example may seem extreme, but it makes the point.

Another consideration is the distance from the producing mill to the fabricator. Given there are only three producers of structural beams in the U.S., chances are that most structural steel fabricators will have extensive transportation and handling needs that prohibit buying directly from the mill. The most economical way to ship material long distances is usually by rail, which requires a purchase of 60 to 90 tons for each rail car. Taking receipt of a railcar requires a rail spur and the infrastructure necessary to unload the railcar within the time limits imposed by the rail provider. The logical alternative—shipping by truck—can be very expensive, especially where long lengths are involved crossing state lines.

Mills post rolling schedules that detail when their product will be produced. These production schedules are based on maximizing production efficiency for the mill and generally run in eight- to 12-week cycles. Most project lead times simply do not allow enough time to wait for mill rollings. However, in some cases the project timeline is extended far enough into the future to allow the fabricator to secure

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Max Powell is the structural products marketing manager for PDM Steel Service Centers, Inc., Lehi, Utah. He can be reached at ***mpowell@pdmsteel.com****.*

PDM Steel Service Centers Inc.

With expertise in steel handling and transportation, steel service centers routinely maintain a large variety of inventory and can quickly deliver a mix of products on the same truck.

material from the producing mill. To do so requires that the fabricator monitor the roll schedules and order deadlines at the producing mill. If the fabricator happens to miss the rolling schedule on one of the steel sections, it will have to wait for the next scheduled rolling, which could be an additional eight to 12 weeks before the steel is rolled. And this could happen multiple times, depending on the variety of steel sections needed.

Finally, producing mills require payment within a shorter time frame than most fabricators can fabricate and deliver to the project. In most cases, this can create a cash flow problem for the fabricator.

Steel Service Center Purchases

As the name implies, steel service centers provide service. Several aspects of that service are worthy of consideration: Inventory (the total quantity and the variety), location, handling, staging, processing, delivery and financial resources.

One of the major advantages a steel service center provides a fabricator is the inventory it carries. During normal business conditions, service centers historically carry two to three months worth of steel items in their facilities at all times. That equates to hundreds of thousands of tons of steel on the floor in steel service centers throughout the U.S.

This steel inventory is purchased direct from the various mills, based on the producers roll schedules, meeting minimum order requirements, maximizing transportation options and minimizing freight expenses. As handling experts, service centers take great care in moving the material efficiently and accurately from inbound railcars or trucks and storing the inventory in efficient locations for easy order preparation. Because steel service centers constantly replace the material that they are selling and are continually placing orders with the mills for replacement steel, their personnel achieve a high level of expertise in monitoring roll schedules and transportation issues.

In most cases, steel service centers do not require that a customer buy in full mill bundles. They provide as few as one piece of any item and also provide a wide variety of items—HSS, W-shapes, angle, channel, plate, flat and round bars, sheet products, expanded metal, etc., and often sourced from different mills—on the same truck.

Service centers anticipate the needs of their clientele in each of their locations and purchase enough product in advance to have the items that their customers need. Literally hundreds of service centers are located throughout the U.S., close to fabricators and able to deliver within a day or two. If the material a fabricator needs isn't available at one service center, there are usually other service centers in the area that can fill in the missing pieces.

Many steel service centers also can provide value-added services to the material they supply. Beams can be cut to length, cambered, and piece marked. Plates can be nested, cut to size and even punched. Material can be delivered according to the project requirements, in batches and sequences to meet just-in-time schedules. A service center can be a crucial part of the fabricator's project team and can enable a faster, efficient project.

Additionally, many steel service centers offer the fabricator a wide variety of financial and risk management strategies to help meet its needs, and to keep a project moving forward.

Essentially, steel service centers are the service providers and supply chain managers to the fabrication and manufacturing sectors of our country. For many, service centers provide the material they need, when they need it, how they need it and where they need it. Knowing that fabricators have a choice in where and how they buy steel, steel service centers across the nation are poised and ready to assist the successful completion of any new project by getting the right material delivered in a timely, efficient and cost-effective manner. All of these factors result in an improved service offering at competitive prices for the fabricator and a product offering that is second to none. MSC