

Although the building shell is a relatively simple precast panel design, extensive excavation was needed to stabilize the underfoot and install utilities to the site.

# The Missner Group: Survive to thrive

By Clair Urbain

## The Missner Group leverages its heritage, culture and technology to chart its way out of a slow construction market.

"This has been the fourth major business downturn our company has gone through. This downturn taught us again how to buckle down and tighten our belts. No one can rest on their laurels," says Glen Missner, executive vice president at The Missner Group, a third-generation general contractor that works in the Chicago metropolitan area as well as other areas around the country. "In many ways, construction contracting has become a commodity. We have tighter margins and we are shopped harder than ever before," he adds.

The Missner Group is well known for its design-build approach and attention to detail on the complex projects it has on its resume. It is no stranger to food-grade manufacturing

facilities, pharmaceutical-grade research and production facilities, state-of-the-art medical and office buildings and high-end automobile dealerships. About a quarter of its business has been real estate development that it leases.

While Missner says the economic downturn has changed the market, its core philosophies and the way it goes to market continues to serve it well. "We are primarily a design-build company that has a broad level of experience in a variety of buildings. We are getting some pressure from larger contractors who are reaching into smaller markets for the types of jobs we do," he says. "2011 was a bit better than 2010, but I think everyone will agree that profitability

has decreased and we all must work harder. Like other contractors, we are bidding on projects we have never bid on before. Everyone is taking smaller jobs so the competition has not decreased."

### Secrets to success

Missner shares the company's plan to remain strong and gain share in design-build work:

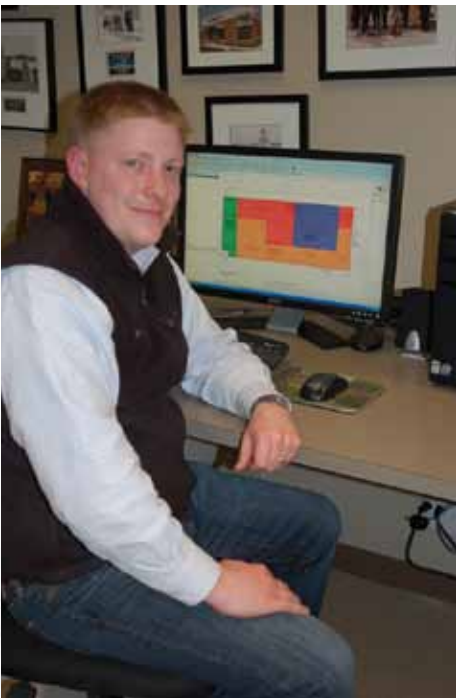
"The key components to our business strategy are leveraging technology, understanding new building materials and how they can help buildings perform better, further developing our selling and marketing process, continue with professional training for employees and continue developing skills among our blue-collar professionals," he says.

The company has already made the switch to online documents and electronic take-off, which

Photos: The Missner Group; Clair Urbain



*"There are more layers to jobs now. Everyone must have access to information and be able to know what's changing so they can help assure the change doesn't create other problems," says Glen Missner, executive vice president at the Missner Group, a third-generation Chicago area-based general contractor that specializes in design-build projects.*



*Jess Knigge, The Missner Group's project manager on the Chicago Process Fruit project, leverages technology to efficiently move design-build project from concept to completion.*

greatly speeds the bidding and building process, says Jess Knigge, vice president of construction at The Missner Group. "We had the information technology up and running before the economy went south. We use [www.GradeBeam.com](http://www.GradeBeam.com) for exchanging plan information with subcontractors. It allows us to build distribution lists so information can be sent to all interested parties throughout the bidding and building process. Subcontractors, suppliers, architects, engineers and even owners can download plan PDFs and make notes on them so we can update plans on the fly. I think this has reduced bid time by 50 percent," Knigge says.

Knigge and others at The Missner Group use PlanSwift software for fast, accurate plan take-off. The system can export data in a variety of estimating program-compatible formats. "We exchange all this information through [www.dropbox.com](http://www.dropbox.com), our Cloud computing service. Where email is like accessing information through a straw, having information posted to the Cloud is like using the ocean to transfer that data," Knigge says.

### **Design-build less of a barrier to entry**

Missner says in the past, having expertise in building a certain type of building and offering design-build capability provided some protection from low-bid competitors. "That was the case until recently. In some instances, we are seeing bids coming in so low that the client can't refuse them. We have seen this especially in the auto dealership remodel market.

"The design-build contractor continues to evolve. Owners realize that contractors bring value to the job with their fiscal insight, ability to schedule the work and to stage materials. They also bring design expertise to the process. But now, more than ever, it seems to be the low

bid is more important than the success of the project," Missner says. "But project complexity may make those initial low-bid savings expensive later in the project.

"There are more layers to jobs now. There are consultants and equipment representatives that are required on complex projects to assure the facility meets stringent standards. Permits, licenses, easements and other paperwork take time and cost money. Everyone must have access to information and be able to know what's changing so they can help assure the change doesn't create other problems," Missner says.

Knigge agrees that additional regulations are time consuming and eat into project schedules. "What has been saved on the development side by leveraging information technology has been taken up on the review side for licenses, titlements and permits," he says.

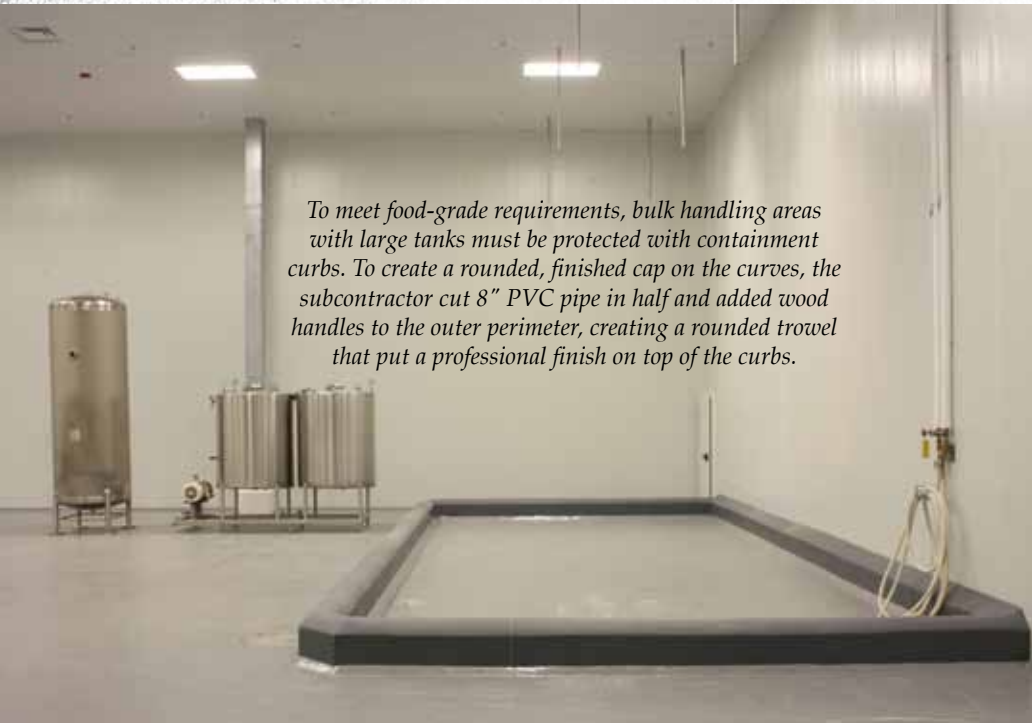
### **Fast track example**

The Missner Group recently finished a 60,000 sq.-ft. food-grade facility for Chicago Processed Fruit, a division of Greenwood Associates in Niles, Illinois. While the building from the outside appears to be a simple pre-cast structure, a look inside reveals a complex and flexible processing plant that presented several building and logistics challenges, says Knigge, who served as the project's manager.

"It's a good example of what our design-build capabilities can do. This was super fast-track. We got the shell designed and permitted and started construction while the rest of the facility's components were still being designed.

"We used auto CAD and PDFs back and forth to subcontractors, consultants, designers and customers around the country to finalize the design in phases. The building was

*Continued on page 8*



*To meet food-grade requirements, bulk handling areas with large tanks must be protected with containment curbs. To create a rounded, finished cap on the curves, the subcontractor cut 8" PVC pipe in half and added wood handles to the outer perimeter, creating a rounded trowel that put a professional finish on top of the curbs.*

going up before the final plans were completed. The information technology increased our efficiency, reduced mistakes, increased information sharing and helped confirm our pricing was correct.

"We prefabricated many parts of this job. The building shell is made of pre-cast concrete panels, which are poured offsite and were quickly set up once the foundation was engineered and poured. We preassembled the sprinkler heads needed in the freezer offsite so they only had to be installed onsite, based on the CAD drawings.

### **Faster collaboration**

"With information technology, the collaboration is much faster. By using distribution lists, files and design updates stored on the Cloud, we can keep everyone in the loop and there is no way anyone can say they weren't told of a change," Knigge says.

The building also serves as a corporate headquarters, so part of it is office space. The rest is purpose-built for receiving, processing, freezing, chilling and shipping fruit concentrates used in many popular alcoholic and non-alcoholic citrus-flavored beverages.

"This is a specialty manufacturing facility that can be quickly changed to meet customers' specific requirements. The process re-pasteurizes incoming fruit concentrate and blends it to customer specifications, then packages it for shipment to customers' bottling plants," Knigge says.

### **Foundation critical**

The site, in an already heavily developed area of Niles, Illinois, created many challenges for The Missner Group and its subcontractors. From a utility standpoint, the site was landlocked, so easements and coordination of excavation with neighboring property owners were needed. One easement had a 30" high-pressure gas main located there, further increasing utility installation and increasing safety concerns. "We had a gas transmission safety specialist on site at all times while we were installing the utilities. The plant design required two separate water supplies, which added more complexity," recalls Missner.

"Due to the acidity of the plant's wastewater, it got a variance to use PVC sewer pipe instead of cast iron the city requires. "It was one of the

few things that turned out to be less costly instead of costing more on the project," says Knigge.

Soil tests revealed a site with highly variable soil types as well as fill. That, combined with exceptionally heavy rains, created an underfoot that simply couldn't be stabilized to install foundation footings, especially under the critical freezer floor. This area had to be designed to prevent frost from the freezer floor heaving the floor's integrity and failing food-grade safety requirements.

"We dug trenches to a sump to dewater the site, but we simply couldn't get water away fast enough. We ended up excavating the site as deep as 6' in some areas and stabilizing it with lime. We mixed the lime into the soil with a pavement profiler, then hydrated and compacted it so it would firm up. We did this in 18" lifts. Our cost-benefit analysis found it was less expensive than it was to remove the soil and replace it with limestone fill," Knigge says.

### **Design-build beauty**

Once foundation and utility installation issues were solved, the building went up quickly and the beauty of design-build's flexibility proved to save additional time and cost. "The plant's final layout was still in progress as the pre-cast panels were being installed. Once designers identified the final locations of racking, they found one man-door exit was going to be blocked by storage racking. We simply switched that panel with another on that wall to better position the door. The design-build process headed off many problems like that before they became expensive issues," says Knigge.

The refrigerator and freezer sections of the plant are best described as buildings within the building.

A four-layer system under the

*Continued on page 10*