

Keeping a Low Profile

Super streamlined portable operations are somewhat stealthy, moving from site to site almost under the radar. Yet the mission is getting maximum mobility and high capacity production from every component – from the plant through an arsenal of support equipment. Concrete Materials, a Sioux Falls, South Dakota-based construction materials supplier, knows the drill. If they roll in with the best portable package, additional market share is in the bag. The company's market areas range across the Midwest, from their home state and beyond into Iowa, Nebraska and Minnesota. They supply a wide variety of projects, from multi-million dollar DOT work to weekend home improvements, each requiring a different competitively priced transportation solution. Recently, this producer acquired one of the latest offerings in truck unloading systems, an extremely portable, low profile unloader that's ideal for their high profile projects.

In March 2005, Concrete Materials began its biggest job of the season – processing, delivering and stockpiling five different aggregate products for its customer, Brower Construction Company, who will be placing a portable asphalt plant near Ashton, Iowa. Brower is the prime-paving contractor for Iowa's Highway 60 project. A four-lane highway is being erected on an integral eighty-mile stretch from Sioux City, Iowa to Worthington, Minn. One of the unique challenges Brower faces on the job is laying asphalt eleven inches in depth.

To maintain production right from the start, Brower's portable asphalt plant will require more than 170,000 tons of quartzite aggregate, one of the highest quality materials mined in the region. Concrete Materials is filling the order via the delivery of an approximate 6,000-truckloads of material. "We figured we'd have to unload a truck every four minutes, and that's what we've been doing," says Clark Meyer, aggregate sales and transportation manager for Concrete Materials. With that sort of demanding delivery schedule, and because they're building a variety of product stockpiles, Meyer discovered the need for a truck unloading system that they could quickly move from stockpile A, to B, to C, and so on. They invested in the road-portable RazerTail™ Truck Unloader manufactured by Superior Industries, a conveyor systems manufacturer located in Morris, Minnesota.

"We had some traditional truck unloaders in mind for the job, but we soon found that they wouldn't work. They're not low profile. It takes nearly a ten-hour day, and more than 1,000 cubic yards of material to build the earth ramp, because the unit is 6-feet in the air. That's a \$2,000 price tag for each move. Since we need to move every week or so, we decided that a traditional

truck unloader is unacceptable," says Meyer. As the Superior Industries RazerTail Truck Unloader requires only a 22-inch earth ramp, Meyer says that they have a far safer operation, and that they can easily move the new low profile unit from one stockpile to another, and be up and running again in under two hours.

"We also needed a way to unload both belly dump and end dump trucks, and this system will accommodate that," says Meyer who, like other producers, finds that hauling aggregates in belly dumps is more cost-effective than using end dump trucks. However, in the absence of an unloading system, such as a drive-over, DOT officials typically discourage the use of belly dumps if material has to be dumped on the ground and rehandled. Meyer is pleased that the Superior RazerTail Truck Unloader solves that problem as well. He can eliminate the potential of material contamination, while giving his haulers the flexibility to unload onto conveyors.

With skyrocketing fuel costs, and 3-hours and 20-minutes of travel time from the quarry to the delivery site and back, Meyer knew he needed speed in the unloading cycle. Upon setup at the site, trucks unload onto a 72-inch conveyor belt that allows the transfer (at a rated capacity of 1500 TPH) of up to 25-tons of 100 PCF material in just minutes. A removable discharge hood directs material onto the 36-inch belt of a Superior radial stacking conveyor for stockpiling. "With the 72-inch belt, the trucker's unload time is very minimal. They can usually dump their entire load in under three minutes, and off they go," says Meyer.

With that level of speed, it's important that the unloader is engineered to minimize or eliminate spillage problems, say Superior



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engineers who have tackled that issue by designing self-cleaning, hinged hopper ramps that hydraulically rise to a vertical position to dump any spilled material onto the conveyor.

Concrete Materials is delivering and unloading material for the Brower asphalt plant site for several months. Their RazerTail Truck Unloader is fitted with a pintle hitch so that they can easily hook it to a loader and move it from stockpile to stockpile. When the job is done, they utilize a flip down fifth wheel hitch, attach it to a truck and down the road it goes in a less-than-12-foot-wide transport position that facilitates the permitting process.

Meyer says he is anxious to see the RazerTail Truck Unloader on upcoming jobs. "When we show up to most of jobsites, it's just a level field there, so we need to be able to move in and out quickly with little setup time. It's nice that the low profile unit requires such a small amount of material for a ramp. That's the big time saver with this," he says adding that in the future he will allocate his traditional truck unloaders to projects where they remain stationary for a several month period.

"The new unloading system has been a win-win for everyone. The customer is very pleased that we're putting up good stockpiles, and we're able to cost-efficiently separate them just the way they've asked us to," says Meyer.

Like other successful producers, Concrete Materials strives for big-picture portability. Every aspect of its operation – from processing through transport, unloading and stockpiling – is under the microscope until it passes muster. With that in tow, strategic market growth is just around the corner.