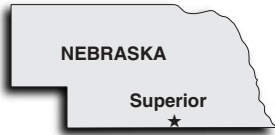


Southern Corridor

AURORA COOPERATIVE, CHS ADD A RAIL TERMINAL ALONG THE KANSAS STATE LINE



Aurora Cooperative
Aurora, NE • 402-692-2106

Founded: 1908
Storage capacity: 35.5 million bushels at 20 locations
Annual volume: 70 million bushels
Annual revenues: \$900 million
Members: 10,000
Number of employees: 450
Crops handled: Hard red winter wheat, sorghum, yellow corn, white corn, soybeans
Services: Grain handling and merchandising, feed, agronomy, petroleum, aerial application

Key personnel at Superior East:

- Todd Bellis, regional manager
- Connor Hiebner, location manager
- Lynn Colbertson, originations
- Carley Jones, scale operator
- Tim Glass, operations
- Joe Harwell, operations

Supplier List

Aeration fans.....AIRLANCO
Aeration system North American Equipment Co. Inc.
Bearing sensors ...4B Components Ltd.
Bucket elevators..... InterSystems
Bulk weigh scale InterSystems
Bulkweigher automation ... Cultura Technologies Inc.
Catwalk..... Todd & Sargent Inc.
ContractorTodd & Sargent Inc.
Control system..... Comco
Conveyors InterSystems
DistributorsSchlagel Inc.
Dust collection systemMAC Process
Elevator bucketsMaxi-Lift Inc.
Fall protectionFall Protection Systems Corp.
Grain dryer Zimmerman Grain Dryers
Grain temp system...OPISystems Inc.
Level indicators BinMaster Level Controls
MillwrightTodd & Sargent Inc.
Motion sensors...4B Components Ltd.
Temporary storage ...LeMar Industries Corp.



The new Superior East, LLC rail terminal near Superior, NE includes a 1.25-million-bushel slipform concrete elevator in foreground and a 2.2-million-bushel center-fill ground pile behind. Not visible are two 975,000-bushel oval ground piles. Aerial photo by Ink Photography.

Following a year and a half of construction, Aurora Cooperative and CHS on April 2, 2015 formally opened their 5-million-bushel Superior East LLC rail terminal east of Superior, NE (402-879-0143).

“This project is core to our strategic plan, and, with CHS as an equal partner, we were able to construct, finance, and operate the facility. We recognized many years ago that our existing grain elevator complex (an in-town elevator in Superior) would not meet our future farmers’ demands of a high-speed, high-expectation operation,” said George Hohweiler, Aurora Cooperative president and CEO, during the facility’s grand opening. (Aurora, which is a CHS member-owner, is the day-to-day operating partner of the joint venture.)

“We were looking for more access to the BNSF (Burlington Northern Santa Fe Railway),” Chad Carlson, Aurora vice president-grain, told *Grain Journal* in a phone interview in June 2015. “This also provides another destination option for our farmer-owners in the southern part of our territory.”

The Superior East elevator and loop track is located less than a mile east of another rail-loading terminal opened by Agrex Inc. about five years ago along State Highway 8. Carlson noted that this hasn’t caused any

Tower support system Todd & Sargent Inc.
Truck probe Gamet Mfg. Inc.
Truck scales Rice Lake Weighing Systems



Location Manager Connor Hiebner (left) and Southern Regional Manager Todd Bellis. Ground level photos by Ed Zdrojeuski.

problems, with plenty of grain to originate for both facilities in that part of south central Nebraska and north central Kansas.

The terminal includes a 1.25-million-bushel slipform concrete elevator, three ground piles, and an 8,000-foot loop track that can hold up to 120 covered hopper railcars.

To construct this complex, Superior East selected Todd & Sargent, Inc., Ames, IA (515-232-0442), which also built the Aurora Cooperative’s relatively new rail loader at the west end of Aurora, NE. “They have a track record of building high-quality facilities, and during the selection process, they came out on top,” said Carlson.

Construction began in late fall 2013. Todd & Sargent poured the slip in May 2014, and the terminal began taking grain in December.

Cost of the project is undisclosed.

“We have shipped a significant amount of multiple commodities by 110-car unit trains since January 2015,” Southern Regional Manager Todd Bellis told *Grain Journal* during a visit to the site in May 2015. (Bellis came to Aurora Cooperative five years ago from another farmer-owned cooperative.)

Storage Facilities

The slipform elevator consists of eight 140,000-bushel concrete tanks standing 42 feet in diameter and 130 feet tall plus four interstices. The tanks are outfitted with five-cable OPI Systems digital grain temperature monitoring systems, BinMaster SmartBob level indicators, and KanalSystem aeration floors for air-assisted unloading. A single AIRLANCO 50-hp centrifugal fan powers the Kanal floor on each tank.

Another slipform section at the east end of the elevator houses an 80,000-bph InterSystems bulk weigh loadout scale out of the weather.

A round LeMar center fill temporary storage pile holds 2.2 million bushels. The 350-foot-diameter system includes a compacted fly ash floor, six-foot-tall perforated steel sidewalls, and three 50-hp AIRLANCO centrifugal fans atop the center fill tower.

In addition, Superior East operates two more 975,000-bushel ground piles in oval-shaped enclosures, 150 feet wide x 450 feet long. These also have fly ash floors and six-foot sidewalls plus six 12-1/2-hp AIRLANCO axial fans per pile. ►

The center-fill pile is filled using an overhead 20,000-bph InterSystems drag conveyor. The others are filled with two drive-over 25,000-bph LeMar conveyors. All are emptied with front-end loaders.

Grain Flow

Grain trucks are routed through the site



Truckers pull onto a Rice Lake outbound scale, which is outfitted with Comco scale automation and a Gamet truck probe.

pit-type inbound and outbound truck scales. Scale operations are automated with a Comco facility automation system. Incoming trucks are sampled with a Gamet Apollo truck probe adjacent to the inbound scale, which sends samples via overhead pneumatic tube to a grain laboratory inside a nearby single-story office building.

The Comco system automatically routes trucks to one of two enclosed 1,200-bushel mechanical receiving pits. These pits feed a pair of 30,000-bph InterSystems legs outfitted with two rows of Maxi-Lift 14x8 Tiger-Tuff buckets mounted on a 30-inch belt or a 20,000-bph leg with a single row of 20x8 buckets on a 22-inch belt.

The smaller leg deposits grain into a Schlager six-hole rotary distributor. From there, grain can be routed via 20,000-bph InterSystems drag conveyors out to upright storage or to the center-fill storage pile. The two larger legs can reach the overhead drags or can send grain directly to rail loadout.

Grain also can be routed to a 7,000-bph, natural-gas fired Zimmerman tower dryer. Location Manager Connor Hiebner, who moved to Superior East in January from Aurora Cooperative, says the dryer is set up to switch to propane fuel,

as economics dictate. The dryer, which is serviced by 20,000-bph InterSystems wet and dry legs, has had relatively little use since startup, he says, but has performed well on the bushels it did dry.

The concrete tanks empty onto a 60,000-bph InterSystems enclosed belt conveyors in a below-ground tunnel running back to the receiving legs.

Operating at full capacity for rail loading, the legs and their distributors can deposit grain into an 80,000-bph InterSystems bulk weigh loadout scale under the control of a Cultura oneWeigh® automation system. During loadout operations, workers atop railcars utilize a Fall Protection Systems trolley unit running the length of three railcars.

“Overall, the performance (of the terminal) has been good,” Bellis says. “The producers are excited about it, and it has a lot of support in town.”

He notes that the Aurora Cooperative elevator in Superior remains in operation.

Ed Zdrojewski, editor