

Concrete at Three Locations

AURORA COOPERATIVE ADDS STORAGE AS IT PREPARES FOR THE FUTURE

NEBRASKA

Grand Island ★★ Aurora
★ Sedan

Aurora Cooperative Elevator Co.
Aurora, NE • 402-694-2106

Founded: 1908

Storage capacity: 34.5 million bushels at 20 locations

Annual volume: 30 million bushels

Annual revenues: \$400 million

Number of members: 10,000

Number of employees: 447

Crops handled: Yellow and white corn, soybeans, hard red winter wheat, sorghum

Services: Grain handling and merchandising, feed, agronomy, petroleum

Key personnel:

- Mark Cleveland, director of grain operations
- Nate Panko, Aurora West location manager
- Scorr Hnut, Grand Island location manager
- Rob Hunnicutt, Sedan location manager

Supplier List

Aeration fans.....AIRLANCO

Aeration system North American Equipment Co. Inc./Drake Inc.

Bearing sensors.. 4B Components Ltd.

Bucket elevators.....Schlagel Inc.

Catwalk.....Warrior Mfg. LLC

ContractorTodd & Sargent Inc.

Conveyors ...Schlagel Inc., Hi Roller Conveyors, Tramco Inc.

Electrical systems.... The Interstates Companies

Elevator buckets Maxi-Lift Inc.

EngineeringTodd & Sargent Inc. (structural), Olsson & Associates (geotechnical)

Grain dryer Zimmerman Grain Dryers

Level indicators..... Monitor Technologies LLC

Millwright.....Todd & Sargent Inc.

Motion sensors 4B Components Ltd.

Roof systemSherwin-Williams

ScreenersIntersystems



The grain elevator portion of Aurora Cooperative Elevator Co.'s Aurora West complex near Aurora, NE includes two new 294,000-bushel slipform concrete tanks at right. Photos by Ed Zdrojewski.

Agriculture in south central Nebraska is much different than it was even a decade ago, and the change continues.

Wheat once was the primary crop in this part of the country, but today that has been supplanted largely by fall crops such as corn and soybeans,



The two new tanks at Grand Island, NE are at the left end of the facility. Also visible are a 30,000-bph Schlagel jump leg for unloading onto an overhead Hi Roller enclosed belt conveyor.

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which yield a lot more per acre than wheat, meaning area grain handlers must deal with a much bigger volume.

In addition, new genetics continue to boost per-acre yields further, and continuing farm consolidation means bigger combines and trucks, requiring elevators to handle even bigger volumes over a shorter period of time.

“We’re gearing up for the future,” says Mark Cleveland, director of grain operations at Aurora Cooperative Elevator Co., Aurora, NE. “Having more storage will allow us to do a better job of serving both the ethanol plants in the



Mark Cleveland (left), coop director of grain operations, and Nate Panko, branch manager at Aurora West.



Two new tanks, twin receiving pits, and receiving leg at Aurora Coop’s country elevator in Sedan, NE.

area and soybean shuttle trains.”

To move toward that goal in 2010, Aurora Coop performed \$10 million worth of work centered around building a pair of 294,000-bushel slipform concrete tanks at each of three locations:

- At the cooperative’s huge Aurora West terminal (402-694-4110).

- At a shuttle-loading rail terminal on the northeast edge of Grand Island, NE (308-382-3033).

- At a country elevator in Sedan, NE (402-224-3395).

The general contractor at all three sites was Todd & Sargent, Inc., Ames, IA (515-232-0442). “We have a good relationship with them,” says Cleveland, who notes that the contractor built the Aurora West terminal in 2007 and the original concrete workhouse in Grand Island in 1981.

Todd & Sargent also performed structural engineering, while Olsson & Associates, Grand Island (308-384-8750) performed geotechnical engineering. The Interstates Companies, Sioux Center, IA (712-722-1663), performed electrical engineering, programming, and electrical installation.

Ground breaking took place in June 2010, and the work was completed by November.

Concrete Storage

All six tanks constructed at the three locations were virtually identical, standing ▶



New tanks at Aurora West empty via Schlagel jump legs onto a Hi-Roller enclosed belt conveyor running back to existing grain handling equipment.

58 feet in diameter and 140 feet tall. None of these tanks have grain temperature monitoring, but they are equipped with Monitor Technologies level indicators.

All of them are equipped with KanSystem floors from North American Equipment Co., Inc. installed by Drake Inc., Waco, NE (402-362-1863). These concrete floors have sloped channels containing ducting for both aeration and air-assisted unloading, eliminating the need to enter the tanks for cleanout. A set of three 60-hp AIRLANCO centrifugal fans per tank provide 1/7 cfm per bushel for aeration.

All six tanks are loaded using overhead 30,000-bph Schlagel drag conveyors.

Site-Specific Designs

At **Aurora West**, the two new tanks

have side drawoffs for truck loading but otherwise empty into a 30,000-bph Schlagel jump leg equipped with two rows of Maxi-Lift 14x7 Tiger-Tuff buckets mounted on a 30-inch Good-year belt. The jump leg, in turn, deposits grain onto a 30,000-bph above-ground Hi Roller enclosed belt conveyor running back to existing grain handling equipment.

The project at **Grand Island** included a pair of enclosed 600-bushel mechanical receiving pits, which feed into a Schlagel 30,000-bph leg. The leg deposits grain through a two-way valve into the tanks.

As at Aurora West, these tanks also empty into a 30,000-bph jump leg, this one depositing grain onto a 30,000-bph

overhead Hi Roller belt running back to existing equipment.

The project at **Sedan** also included twin receiving pits and 30,000-bph leg but also included a 30,000-bph Inter-systems gravity screener for optional grain cleaning before grain is deposited into the tanks. These new pits include a 30,000-bph Tramco drag conveyor feeding into the leg.

In addition to the tanks, the cooperative also installed a 7,000-bph GSI Zimmerman tower dryer fired by natural gas. The dryer is served by 10,000-bph Schlagel wet and dry legs. Fall 2010 was dry in south central Nebraska, so thus far, the new dryer has seen little use.

Ed Zdrojewski, editor



New 7,000-bph Zimmerman natural gas grain dryer installed at Sedan.