

DAKOTA VALLEY GRAIN UNIT TRAIN LOADOUT FACILITY



Owner

Dakota Valley Grain,
L.L.C./Fremar Farmers
Cooperative

Size/Capacity

413,200 bushel in
workhouse
1,287,000 bushel in
steel bins

Completion Time

10 months

Younglove's Services

- Conceptual design
- Structural engineering
- General construction
- Construction management
- Slipform concrete construction
- Equipment installation

Marion, South Dakota

The new workhouse at Marion, South Dakota, consists of two 50-foot-diameter silos with two interstice bins 120 feet high with 8-inch-thick walls and three 90-foot-diameter corrugated steel silos. Grain receiving will be through a double driveway, with 500-bushel hoppers and one 40,000- and one 20,000-bushel-per-hour receiving belt conveyors to one 40,000- and one 20,000-bushel-per-hour receiving/loadout legs. Distribution to bins is through an electric dual distributor spouted to the bins or transfer belt conveyors to the steel bins. Reclaim from the concrete silos is by gravity from the hopperfilled silos back to the receiving/loadout legs. Reclaim from the steel bins is by either a 40,000- or 20,000-bushel-per-hour belt conveyor back to the receiving/loadout legs. Loadout to the rail system is by reclaiming grain from the workhouse through the receiving/loadout legs to a 30,000-bushel-per-hour grain cleaner or 40,000-bushel-per-hour grain scalper, to a 40,000-bushel-per-hour bulk scale, to a 40,000-bushel-per-hour rotary sampler, and then to rail loadout.

A 7,500-bushel-per-hour grain drier has been provided to condition grain, with a 1/10 cfm surface-mounted aeration system in the concrete workhouse. Flush-floor systems were formed in each silo, with 1/10 cfm aeration in two of the steel silos and 1/7 cfm aeration in the other steel silo. Heat detection cables provided in all bins will allow continuous grain temperature readouts.



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