

# Crookston Bean Design/Build Facility



## Crookston, Minnesota

**Electrical Construction:** \$100,000

**Year Completed:** 2011

**Project Manager:** Jason Wardner

**Project Designer:** Chad Bottem

**Project Foreman:** Steve Zavoral

This 16,000 square foot facility was a design-build project that included a 4,000 square foot milling area (where peas are cleaned, processed, and packaged for shipping), an 11,000 square foot storage room, and a small office. The project was necessary to replace the old elevator and processing facility that was lost in a fire in July of 2009.

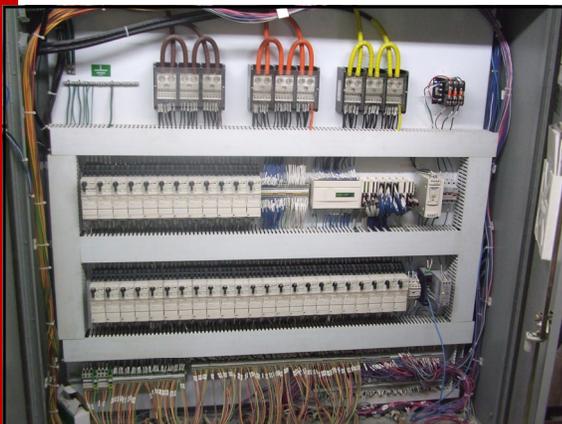
Bergstrom Electric designed the entire electrical system, including all of the controls for the facility, automating almost the entire system to minimize the necessary labor. The project included over 50 motors that were all programmably controlled. The owners estimate that the new facility processes approximately 50% more than the old plant, using the same amount of labor. Bergstrom also designed and installed an 800 amp 480 volt 3-phase service, along with a single phase off-peak service for the heating system.

Any program changes necessary, for example, having a motor start at a different time or changing any of the control functions, can be done easily by the programmer over a landline with no additional wiring necessary.

Other challenges to the project included wiring the processing area for a dusty environment, which required specific fittings and fixtures. The type of facility also posed some issues regarding where it fell in the electrical code, so Bergstrom worked closely with the Minnesota electrical inspectors to ensure it was wired appropriately.

Because the processing area had 30 foot ceilings, Bergstrom had to design an elaborate racking conduit system to get power to the free-standing machinery. This project-specific innovation was challenging, yet effective.

GW& Sons Construction constructed the building and Bjerke Brothers from Buxton, ND built and installed the milling equipment, augers, conveyors, and storage bins. The total electrical construction cost approximately \$100,000 and the project was completed in April of 2011.



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