

Installation of Shaftless Screw Conveyors in the Aerated Grit Tanks at the Calumet WRP

Project Number 25-821-21

Service Area Calumet

Location Calumet WRP

Engineering Consultant In-house design

Engineering Contractor To be determined

Estimated Construction Cost \$10,800,000



Contract Award Date October 2025

Substantial Completion Date December 2028

Project Description This project entails the demolition of eight traveling bridges and the installation of seven shaftless screw conveyors and eight tank covers/ E-fans.

Project Justification The Calumet WRP Grit Building has eight traveling bridge grit tanks which were installed nine years ago. There have been seven bridge misalignment issues in four years. The festoon rollers have been replaced at a cost of approximately \$4,500 per tank. There have also been numerous problems with proximity and limit switches. The District has investigated putting the bridges on rails to eliminate misalignments. The cost of parts alone is \$177,880. A grit conveyor was installed on Grit Tank #2 for \$405,000. Screw conveyors are less complex than the traveling bridges because they have fewer moving parts. Electrical components on the traveling bridges are prone to failure due to hydrogen sulfide. The screw conveyors will be controlled through a distributed control system, so very few electrical components will be exposed to hydrogen sulfide. The grit tanks will be covered and connected to the existing exhaust fans to reduce hydrogen sulfide in the building.

Project Status Planning