

CASE STUDY

St. Cloud Police Headquarters

Municipal Building/Below-grade Parking – St. Cloud, Minnesota

HISTORY

Since 1987, the St. Cloud Police Department shared a building with the Stearns County Sheriff's Department, and as both departments expanded, closets and storage rooms were turned into work stations and office space. At one point, six officers were working in a space designed for just one.

The residents of St. Cloud approved funding for a brand-new \$27 million police headquarters in 2006. Located two blocks from its previous home, the new police station would incorporate a contemporary work environment and modern operations to meet staff and community expectations. The three-story, 100,000 square-foot building was designed to combine administration, investigations, patrol, training and community meeting space, evidence and forensic labs, and one level of below-grade parking with capacity for 250 vehicles.

PROBLEM

The building footprint is located on the edge of the town's commercial center and established residential district, with three of the planned walls tight to the surrounding community and a road way. A challenging design stacked the program vertically and placed 115,000 square feet of parking underground. Planning for below-grade construction with traditional methods drove costs higher than anticipated.

SOLUTION

In 2008, Nucor Skyline presented the project partners with a cost-effective, top-down construction system that allowed for the excavation of a below-grade parking level



to complete while the building of the superstructure commenced. The steel sheet pile design maximized the available footprint and parking space, and accelerated completion of the project.

Skyline provided Z-shaped steel sheet piles, at 32-foot lengths, that were driven to 20 feet below slab and measured at an ultimate capacity of 44 KLF (kips per linear foot) to create the excavation site.

The project was completed in the winter of 2010 with minimal interruption to the commercial center and an established residential district. The subterranean parking allowed the confluence of the commercial and residential pedestrian patterns in an urban plaza that marks the threshold of the two districts.

PROJECT PARTNERS

Contractors

R.A. Morton & Associates
St. Cloud, Minnesota

Carl Bolander & Sons
Minneapolis, Minnesota

Architects

BKV Group
Minneapolis, Minnesota

GLTArchitects

St. Cloud, Minnesota

Engineer

Engineering Partners Intl.
Eagan, Minnesota

PRODUCT

Z-shaped Sheet Piles: 250 tons