

## CATHERINE CATER HALL -NORTH DAKOTA STATE UNIVERSITY

FARGO, ND

With the university's growing on-campus student population, a new residence hall was needed. The new hall, the first new student housing project built on the campus since 2008, will provide an additional 392 student beds.

The buildings structural system consists of a structural steel frame, precast concrete hollowcore floor planks with a cast-in-place concrete topping, and simple hollowcore plank roof. The lateral system consists of structural steel braced frames and precast concrete wall panels at the stair and elevator shafts. The structure is supported with a deep foundation system consisting of driven steel pipe piles and cast-in-place pile caps. Helical pile were investigated due to noise and vibration concerns. The ultimate decision for driver piles were chosen because the proximity to existing buildings was far enough as not to affect them.

The project also included an underground tunnel connection to the existing tunnel system located to the east of the project. The tunnel was constructed of cast-in-place concrete and connected to a 'hub' approximately one hundred feet away.

**Project Size:** 148,000 SF **Completion Date:** Fall 2019

**Project Cost:** \$39.5 Million

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