

# UW Madison Chemistry Building, Phase 1

1101 University Ave, Madison, Wisconsin



STORIES BUILT



Chemistry classes are part of the core curriculum of many degree programs at University of Wisconsin-Madison. As student enrollment grew over the years, the Chemistry Daniels Building complex became overtaxed and space became insufficient for students to easily register for courses, access study areas and find places to draft lab reports. Department of Chemistry staff also struggled to maintain equipment and chemical storage in the aging facility.

In fall 2018, the university broke ground on the two-phase Chemistry Building Project to provide more laboratory, classroom and study spaces. The first phase was the construction of a nine-story addition—a structural steel and concrete tower with a steel plenum on top. Ceco provided formwork services for the elevated decks, which included using Ceco's own HV system and EZ Perimeter Panels as well as 36-foot-tall EFCO Shoring Towers at the lower levels.

Ceco also assisted with value engineering preconstruction planning and provided expert knowledge on the project's unique bubble deck structural system. The bubble deck is a void and reinforcement system

that provides for the larger design loads of heavy lab equipment while also decreasing the structural dead load by minimizing the concrete needed for the slabs. It provides a flat formwork soffit for the 16-inch concrete slabs and 30 x 30-foot bays. The top-level and first few lower-level slabs are mildly reinforced with large beams to support the plenum structure. Typical levels are 20,000 square feet and columns are roughly 24 x 36 inches.

One of the biggest challenges the Ceco team faced was related to the 4-foot-wide pour strip design, which necessitated the team to leave the entire pour strip area shored until the building was topped out. This presented interference issues for other trades trying to complete work on the four lower levels of the structure. Ceco engineers worked with the project's structural engineer to redesign Levels 7-9 so that the pour strip bays would support their own weight. As a result, they eliminated the need for extensive reshoring on the lower levels, allowing all trades to progress with their work sooner than anticipated.

## FAST STATS

**Project Owner:** University of Wisconsin-Madison (UW Madison)

**Contractor:** Miron Construction Co.

**Designer/Architect:** Strang Design

**Structural Engineer:** GRAEF

**Ceco Scope:** Deck formwork services

**Ceco Project Manager:** Marcus Gooden

**Ceco Superintendent:** Mark Anderson

**Date Completed:** May 2020

