



UNIVERSITY OF DELAWARE

Life Science
Research Facility

CHALLENGE

- Minimize campus disruption and closures while adding onto existing lab facility
- Only 48" clearance from nearby building
- Match 2-story heights of existing lab rooms
- Meet strict vibration standards while supporting over 1 million pounds of HVAC/MEP in equipment penthouse

SOLUTION

- Accelerate schedule with off-site construction simultaneous with site development
- Unique 2-story "high-hat" (double-stacked) modules
- Structural steel beams and poured concrete floors for strength

SUCCESS

- Opened on time with only a brief, 1-week closure of adjacent road
- Drastically reduced site activity ensured minimal disruption
- Met all vibration, regulatory, and university requirements
- The first project to ever come in on budget for university

SCHEDULE ACCELERATION

LEAST SITE IMPACT

COST CERTAINTY



Expansion of the existing Life Science Lab at the University of Delaware presented numerous challenges. First, the rooms of the new addition had to match the 2-story heights of the existing lab rooms. High-hat (double stacked) modules were utilized to fulfill this requirement. Second, the addition had to support over 1 million pounds of HVAC/MEP in a rooftop equipment penthouse while meeting stringent vibration standards. A separate, reinforced modular penthouse for the HVAC/MEP equipment and structural steel beams and poured concrete floors for the lab rooms were key elements that addressed these structural challenges.

Also, the university did not want construction to disrupt a nearby noise-sensitive TV studio and vibration-sensitive research building. Completing much of the construction off-site—including insulation, sheathing, and moisture barriers—mitigated these vibration and noise impacts. Further, with site development taking place at the same time as off-site construction, overall time on site was drastically reduced. Just a brief, 1-week closure of an adjacent road was needed to install the modules, compared to the weeks of closure that conventional site-built construction would have entailed. The addition was completed on time and met all vibration and regulatory requirements while being the first construction project ever to come in on budget.

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TIMELINE

42 weeks

SIZE

7,760 SF

LOCATION

Boston, DE

BUILDING PARTNERS

Whiting-Turner

