



PROJECT PROFILE

Amherst College Lyceum

Building Enclosure Consulting Services | Amherst, MA



CLIENT

Bruner/Cott Architects (BCA)

BACKGROUND

The scope of work for the new Aliko Perroti and Seth Frank Lyceum included the renovation of an existing historic masonry house and construction of a 12,000-square-foot addition. The building includes department offices, shared event spaces, and classrooms with a focus on creating dynamic academic spaces and an environment of collaboration.

Amherst College aims to reach campus-wide carbon neutrality by 2030. The Lyceum is the first building constructed on campus as part of this effort. The College aimed to minimize its climate impact through the use of responsible, sustainable construction standards. The design team, with WJE as building enclosure consultant, adhered to the framework in The International Living Future Institute's Zero Carbon standard, whose goals affect the building design in many ways, including material selection, energy performance, mechanical systems, and building enclosure design.



SOLUTION

The proposed design of the existing masonry wall included the restoration of an existing clay brick multiwythe mass masonry wall with the addition of thermal and air control layers on the interior face of the wall to increase the air-tightness and thermal performance of the wall. The proposed design of new exterior walls included masonry, wood, or metal panel rainscreen cladding installed over a double wood-stud-framed wall system. Air control is achieved at multiple points in the wall assembly.



In addition to providing building enclosure consulting to BCA during design development, WJE designed repairs to the historic brick masonry facades and performed hygrothermal analysis of the proposed exterior wall assemblies. This analysis included sampling and testing of the existing brick masonry by our Janney Technical Center laboratories. As the project moved into construction, we completed construction site visits and observed performance mock-up construction and testing as well as in situ performance testing. Our professionals collaborated with BCA to monitor the exterior wall assemblies with hygrothermal sensors as part of ongoing research into the long-term performance of highly insulated double wood-stud-framed wall assemblies.