

ROSE-HULMAN INSTITUTE OF TECHNOLOGY PI-VILION





CATEGORY: NEW BUILDING, LESS THAN \$5 MILLION CONSTRUCTION COST
PROJECT TYPE: HIGHER EDUCATION
ADDRESS: 5500 WABASH AVENUE, TERRE HAUTE, IN 47803
COMPLETION: JUNE 7, 2019

ARCHITECT'S STATEMENT

The new dining pavilion at Rose-Hulman addresses and expands upon the concept of student wellness, supplementing the already successful Mussallem Union, which serves as a campus dining hub and place for students to unwind. The university engaged the design team to create an outdoor pavilion as an extension of the campus dining experience and an outdoor manifestation of the Union.

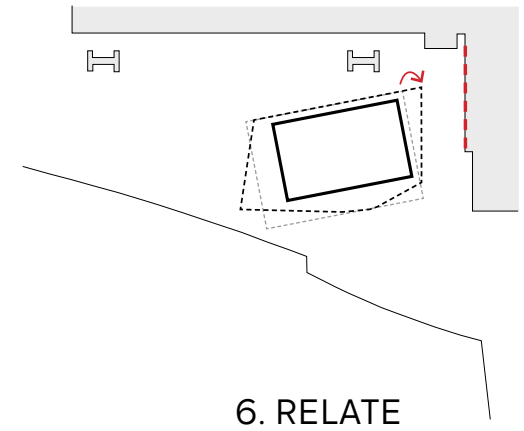
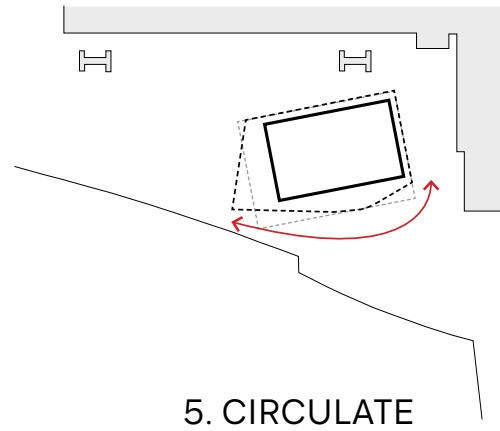
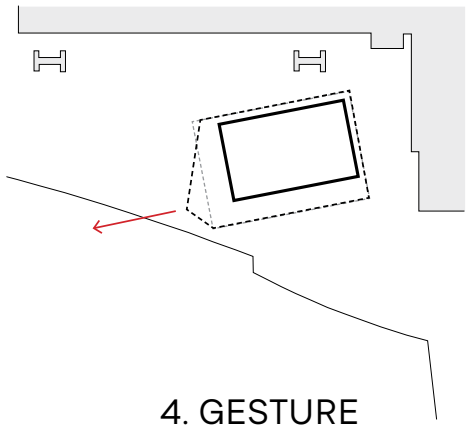
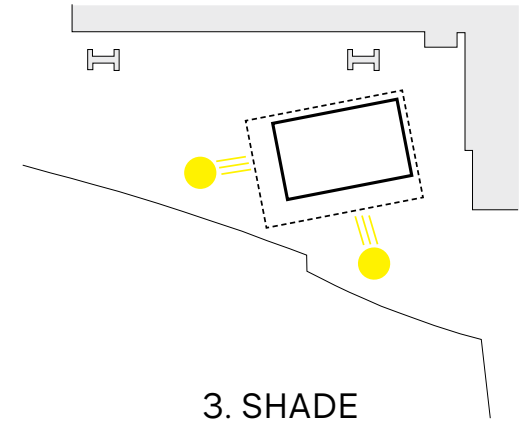
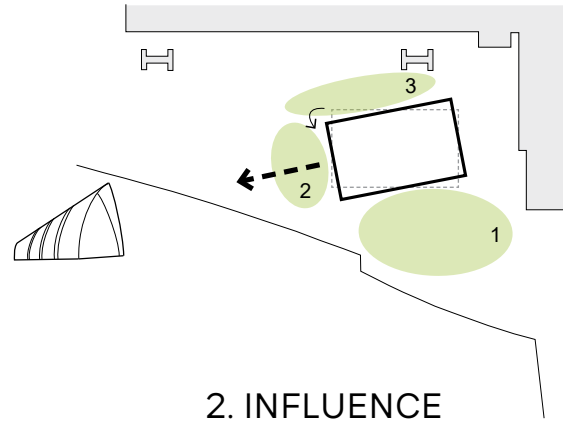
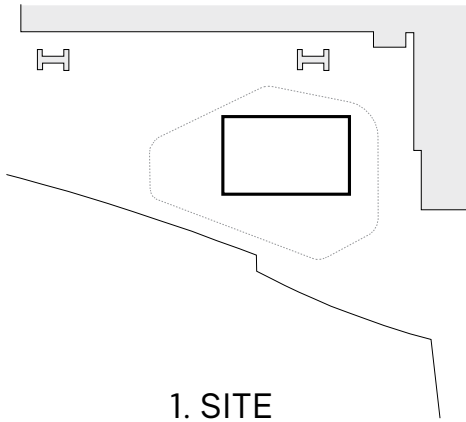
The project challenged the design team to create a semi-conditioned outdoor space that could accommodate approximately 50 people and a built-in grilling area, integrated seamlessly into the existing landscape. The pavilion needed to fit within the original site's surrounding hardscape and minimize disruption of student walkways during the school year within a tight nine-month construction schedule. To further complicate matters, an existing underground vault and storm lines prescribed a small area to build the pavilion structure. To address this, the pavilion was rotated to frame and complement the campus' well-regarded White Chapel. Nestled within several newly created outdoor "rooms," the pavilion acts as part of an expanded landscape.

The pavilion structure is a conceptual glass box beneath a floating canopy. Mimicking a tree, the canopy provides shade and integrates with a green roof that can be seen from the Union's existing dining hall. All systems, pipes, conduit, outlets, and technology were integrated in such a way that minimized their visibility and instead emphasized the seamlessness of the glass box. Now complete, the pavilion is a fully functional and technologically integrated outdoor space that can be used year-round.

SITE PLAN



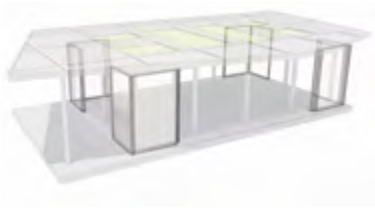
**DESIGN PROGRESSION
DIAGRAM**



SITE PLAN

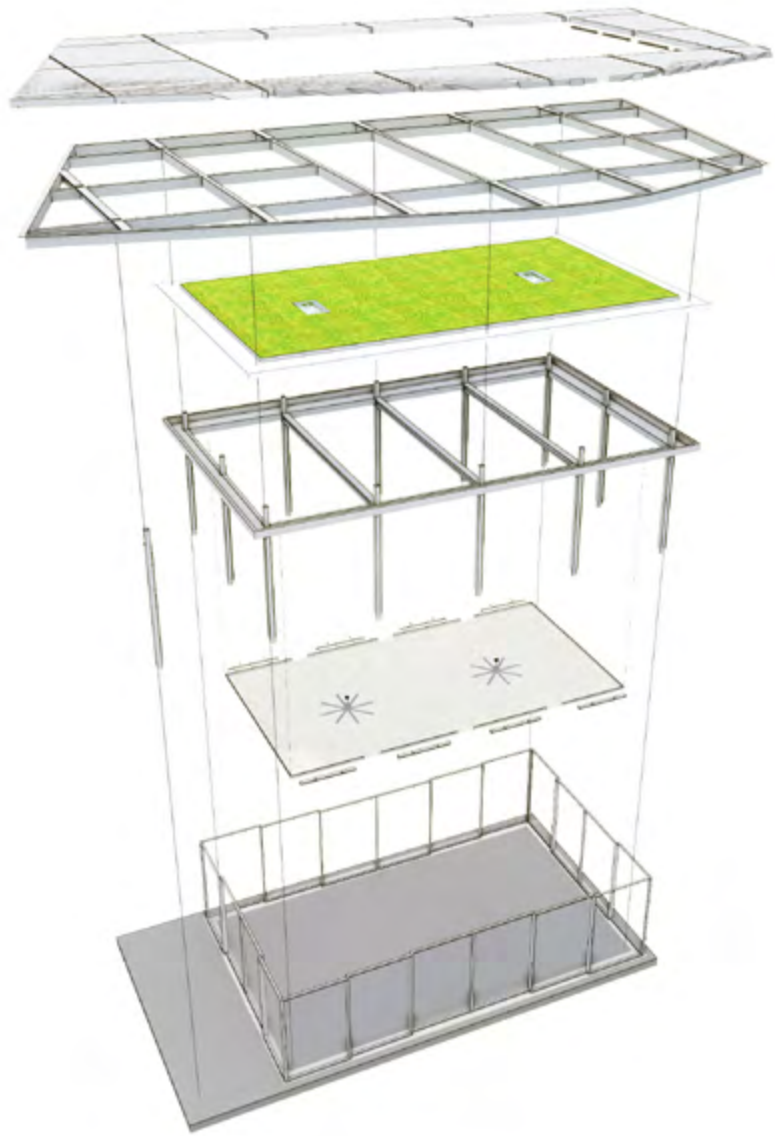
1. Low stature shrubs & perennials
2. Exposed sand matrix concrete
3. "Front porch" seating zone
4. Cafe seating zone
5. Food service queue
6. Lounge zones
7. Built-in grill station
8. Pavilion structure
9. Cafeteria access

GLAZING OPEN



GLAZING CLOSED







MUSSALLEM UNION



HEALTH, WELLNESS, & ENVIRONMENT

The pavilion promotes health & wellness on campus, giving students a place where they can gather outdoors, interact with the natural environment, and enjoy a healthy meal from the nearby cafeteria. Maintaining a connection to the campus's natural landscape shaped the site, orientation, and materiality of the building. Native, hardy plants encircle the pavilion's transparent glass box, emphasizing the surrounding landscape and lake views. New walkways and outdoor hardscapes connect existing pathways across major grade changes, creating a fully accessible and integrated site. The building's light framework allows for greater flexibility and, if it were removed, the site could still be utilized as designed.

Blurring the line between indoor and outdoor space, the building's movable glass walls open for ventilation or close for shelter. To temper a semi-outdoor space within the Indiana climate, the design utilizes a series of infrared heaters for the colder months, ceiling fans to promote air movement along with natural ventilation in the warmer months, and an insulative green roof system for both. The natural ventilation minimizes energy usage in the warmer seasons, and although the pavilion was designed as a "three-season" space, many students have noted that it remains warm in the winter months due to the infrared heat. The building canopy was designed to respond to solar orientation while the green roof system helps with storm water retention and solar heat gain.

CONSTRUCTION + MATERIALS

After considering various options for the pavilion envelope, the NanaWall Cero sliding glass wall system was chosen because of its large panel sizes, minimal site lines, and its ability to enclose using one system. The drain detail surrounding the pavilion was integrated into the sill plate to maintain accessibility and seamlessly connect the surrounding surfaces to a larger space. The shape of the canopy was informed by the context, circulation paths, and emphasis toward the White Chapel while the integrated fin structures are a nod to the existing horizontal louvers found on the Mussallem Union next door.

The steel canopy was carefully detailed with flat plates and tee-shaped beams to maintain thin profiles below, while integrating into the primary steel structure of tube columns and beams that support the roof. Steel plates were added to the sides of the tube columns to tie into the existing pilaster and mullion design of the Union as well as hide conduit and piping. Additionally, these systems are recyclable, primarily consisting of aluminum and steel.







