

Ford Motor Company Robotics Building



Project Description

The project was proposed to be a three-story, approximately 100,000-gross-square-foot research and teaching facility for the College of Engineering's robotics program estimated to cost \$54,000,000. The College of Engineering now proposes to add a fourth story and 40,000 gross square feet to the project to accommodate space for its corporate partner Ford Motor Company that will locate collaborative research activities within the new building. The revised design for the new Robotics Laboratory is approximately 140,000 gross-square-feet with an updated budget of \$75,000,000. This new state-of-the-art facility will house research and testing laboratories, associated support functions, offices and classroom space. These spaces will be constructed in an open plan to allow for greater collaboration, increased flexibility, and better space utilization. Several of the key testing labs include a robot walking lab, a flight testing lab, a rehabilitation robotics lab, and labs for electronics and software development. The original project anticipated an additional parking demand of 30 spaces. The total increased parking demand is now anticipated to be 130 parking spaces that will be met with additional parking on North Campus.

Energy Efficiency Measures

- The building's design and systems include a number of energy efficient features that will allow for an estimated 31% energy savings compared with an energy code compliant building as defined in ASHRAE 90.1-2007 Appendix G
- Use of triple glazed high performance glass at south elevation curtain wall. The south elevation curtain wall system has sunscreens and fritted glass to reduce solar heat gain
- Use of insulated metal panels with limited glass area at remaining elevations maintain views and daylighting while providing overall 'R' values that effectively manage performance of the building envelope
- An enthalpy energy recovery system used with a dedicated outside air handling unit to capture heat from the exhaust air and utilize it to pre-heat/pre-cool supply air
- Chilled beams used for conditioning spaces with reheat coils
- Occupancy sensors turn off lights when spaces are un-occupied

Other Sustainability Features

- This project is LEED® certified to the Gold level and achieved 60 points under the LEED for New Construction v2009 rating system.
- Storm water management system that limits increased (post-construction) levels of storm water into the existing storm water system
- Building's orientation takes advantage of natural daylighting by placing the glazed, shaded event space on the south face of the building and minimizing glazing on the west façade
- Construction waste diverted from landfills when possible
- Low-VOC adhesives and sealants, paints and coatings, flooring systems, and composite wood and agrifiber products
- Materials and products used were extracted and manufactured within 500 miles of the project site when possible
- Materials used contain recycled content when possible