

## Biological Science Building



### Project Description

A new Biological Science Building of approximately 300,000 gross square feet with a connection to the Life Sciences Institute (LSI) Building to increase the utilization of its dock and vivarium functions. A small renovation to LSI will also be necessary for vivarium and related support activities. The new building will house research laboratories, associated support functions, offices, classrooms, vivarium services, and four museums - Anthropology, Natural History, Paleontology and Zoology museums. The laboratories will be constructed in an open plan to allow for much greater collaboration than what can be achieved in the existing buildings, increased flexibility, space utilization and better management. The proposed site of the BSB is adjacent to LSI where both North Hall and the Museums Annex currently exist.

### Energy Efficiency Measures

- The building's design and systems include a number of energy efficient features that will allow for an estimated 30% energy savings compared with an energy code compliant building as defined in ASHRAE 90.1-2007 Appendix G
- Exterior envelope rain screen wall system to minimize air leakage even under the negative pressurization required for laboratories
- Frit and high performance coatings on the glazing reduce solar heat gain
- Occupancy sensors to turn off lights when spaces are un-occupied
- Chilled beams for conditioning spaces
- Preheated outside air with process cooling water to provide precondition makeup air
- Return air from offices and classrooms utilized as makeup air to laboratories
- Conditioned open lab air used to help cool lab equipment spaces
- Energy recovery at fume hoods
- Chillers and heaters to utilize heat recovery to efficiently provide simultaneous heating and cooling

### 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.
- Project site located near public and U-M bus routes to encourage use of public transit
- Close proximity to basic services such as banks, theaters and restaurants to encourage building occupants to walk instead of drive
- Stormwater management design to reduce post development site runoff by 41% for the two-year, 24-hour design storm
- Centrally controlled irrigation management system to ensure proper watering through monitoring of flow rates and weather
- Designed to reduce water consumption by over 49% beyond Michigan Plumbing Code; savings obtained through the use of low flow bathroom fixtures
- 79% construction waste diverted from landfills when possible
- Low-VOC adhesives and sealants, paints and coatings, flooring systems, and composite wood and agrifiber products
- 31% of the total building material content used was extracted and manufactured within 500 miles of the project site
- 62% of the total building materials used contain recycled content.

