LEED, or Leadership in Energy and Environmental Design, is an internationally-recognized green building certification system. Developed by the U.S. Green Building Council (USGBC) in March 2000, LEED provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

TULANE RIVER & COASTAL CENTER
Project Summary

The Tulane University River and Coastal Center is located on the Robin Street Wharf, adjacent to Mardi Gras World, on the Mississippi River close to the Warehouse District in New Orleans, LA. It is a 5,910 square foot building that includes laboratory space, offices, classrooms, and conference rooms. The River Center serves as a headquarters for Tulane/ Xavier Center for Bioenvironmental Research’s Center of Excellence for Coastal Protection and Restoration which will serve as a magnet for research, education, community engagement, investment, and technological development in the restoration and protection of the Gulf Coast. The Center is the first phase in establishing a new Tulane University Riverfront campus in downtown New Orleans. Ultimately, the entire wharf will be developed to include a riverfront promenade as well as additional facilities for research and education.

Energy Efficiency

The project team estimates that the River Center’s energy costs will be 55% lower than a baseline building’s. The Building is equipped with occupancy sensors as well as an optional daylight harvesting system in office spaces, conference rooms, and the forum. The building’s cooling load is served by a separate variable refrigerant flow system with heat recovery, allowing the units to heat, and cool simultaneously as needed. A Building Energy Kiosk will be installed in the River Center, making the building’s energy use and use patterns visible to occupants on a daily basis.

Efficient Water Use

The River Center is equipped with low flow fixtures which are expected to reduce the facility’s overall water use by 35% as compared to a baseline facility. The fixtures selected include toilets (1.28 gallons/ flush), urinals (.13 gallons/ flush), lavatory faucets (.35 gallons/ minute), a kitchen sink (1.5 gallons/ minute), and a shower (1.6 gallons/ minute). The courtyard section of the river center is planted with dwarf mondo grass and green giant liriope and does not have an irrigation system. A downspout collects rainwater and slows through a concrete tunnel for watering purposes.

Recycling and Sustainable Materials

During construction, 1,001 tons of materials were recycled including metal, concrete, and wood. The project had an 81.2% recycling rate.

Many materials were selected for the River Center because of their reduced environmental impact. Measured by cost, 23.8% of the materials used for construction were recycled materials. Measured by cost, 20.97% of the materials used came from within 500 miles of New Orleans, cutting down on emissions produced by transporting materials over long distances.

The River Center has a single-stream recycling system that accepts paper, plastic bottles, metal and aluminum cans, paperboard (i.e. cereal boxes) and cardboard. Recycling bins are paired with trash containers and can be found in the forum, lobby, and corridor outside labs and offices as well as in the outside break area.
Indoor Environmental Air Quality

During construction, the contractor took proactive measures to protect the building’s indoor air quality for future occupants, including protecting the HVAC system from dirt and dust and protecting materials from moisture. Paints, sealants, adhesives, and carpeting were screened to ensure compliance with low-VOC standards (Volatile organic compounds or VOCs vaporize at room temperature and can be harmful to both installers and occupants.)

All individual workspaces are equipped with their own thermal controls for increased occupant comfort. In order to ensure that harmful chemicals and materials do not travel through the building, entryways are outfitted with roll-out mats to capture dirt and particulates while laboratory spaces are outfitted with self-closing doors.

Transportation & Community Connectivity

The River and Coastal Center, located on the edge of the New Orleans Warehouse District is within walking distance to neighborhood businesses and services such as restaurants, daycare, shops, and a bank. The Center is also located less than a quarter mile from the John Churchill Chase Streetcar Station, which is a stop on the Riverfront Streetcar line, which runs along the riverfront through the length of the CBD and French Quarter. This line easily connects with the Canal Street Streetcar Line as well as several bus lines, enabling easy access to and from other parts of New Orleans by public transit. The River Center also includes bike racks and a shower for bike commuters.
Prerequisites
C R SSp1 Construction Activity Pollution Prevention
D R WEp1 Water Use Reduction, 20% Reduction
C R EAp1 Fundamental Commissioning of the Building Energy Systems
D R EAp2 Minimum Energy Performance
C R EAp3 Fundamental Refrigerant Management
D R MRp1 Storage and Collection of Recyclables
D R IEQp1 Minimum Indoor Air Quality Performance
D R IEQp2 Environmental Tobacco Smoke (ETS) Control

Earned Points - 65

Sustainable Sites
D 1 SSc1 Site Selection
D 5 SSc2 Development Density & Community Connectivys
D 6 SSc4.1 Alternative Transportation - Public Transportation Access
D 1 SSc4.2 Alternative Transportation - Bicycle Storage and Changing Rooms
D 2 SSc4.4 Alternative Transportation - Parking Capacity
C 1 SSc7.1 Heat Island Effect, Non-roof
D 1 SSc7.2 Heat Island Effect - Roof

Water Efficiency
D 3 WEc3 Water Use Reduction

Energy and Atmosphere
C 18 EAc1 Optimize Energy Performance (55% savings)
C 3 EAc5 Measurement and Verification

Materials and Resources
C 2 MRc4 Recycled Content (12% by cost)
C 2 MRc2 Construction Waste Management (81% diverted)
C 1 MRc5 Regional Materials
C 1 MRc7 Certified Wood (93%)

Indoor Environmental Quality
C 1 IEQc2 Increased Ventilation
C 1 IEQc3.1 Construction IAQ Management Plan - During Construction
C 1 IEQc4.1 Low-Emitting Materials - Adhesives and Sealants
C 1 IEQc4.2 Low-Emitting Materials - Paints and Coatings
C 1 IEQc4.3 Low-Emitting Materials - Flooring Systems
C 1 IEQc4.4 Low-Emitting Materials - Composite Wood and Agrifiber Products
C 1 IEQc5 Indoor Chemical and Pollutant Source Control
D 1 IEQc6.2 Controllability of Systems - Thermal Comfort
D 1 IEQc7.1 Thermal Comfort - Design
D 1 IEQc7.2 Thermal Comfort - Verification
D 1 IEQc8.1 Daylight and Views - Daylight (81%)
D 1 IEQc8.2 Daylight and Views - Views (99%)

Innovation in Design
D 1 IDc1.2 MRpc61 - Material Disclosure and Assessment
C 1 IDc1.3 Innovation in Design - Education
C 1 IDc2 LEED Accredited Professional

LEED Certification Thresholds
CERTIFIED - 40+ pts. SILVER - 50+pts. GOLD - 60+pts. PLATINUM - 80+pts.

PROJECT TEAM
Architect: Eskew+Dumez+Ripple, New Orleans, LA
Local Architect: Eskew+Dumez+Ripple, New Orleans, LA
Structural and Civil Engineer: Schrenk, Endom & Flanagan, LLC, New Orleans, LA
Mechanical, Electrical, Plumbing: TLC Engineering for Architecture, New Orleans, LA
Landscape Architect: Spackman Mossop & Michaels, New Orleans, LA
Construction: Capital Projects, Robert Leard, New Orleans, LA
Construction Services, Design Services, University Planning Office, Office of Environmental Affairs, Facility Services

Photographs And Images Courtesy Of: Eskew+Dumez+Ripple, Ryan Rivet

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