

## Carbon Fiber Composite Facility (CFCF) and Integrated Net-Zero Energy Buildings Research Laboratory (Z-Lab) – A-E Design

The Architect-Engineer (A-E) shall provide all labor, materials, services, and consultants necessary to provide ORNL the complete design of these projects. All design drawings and specifications needed for the construction of the facility shall be prepared, sealed and issued to UT-Battelle. The package should be adequate to enable bidding for a competitive fixed price construction subcontract for the construction of the project. Depth of detail shall be such as to clearly and completely define the construction subcontractor's scope of work. Construction documents shall be prepared in accordance with generally accepted industry standards for architectural and engineering design and the Project Design Criteria requirements.

### CFCF

The CFCF will be a 20,000 gross square foot facility constructed on the west campus of ORNL. The building is comprised of offices/support areas, wet chemistry and instrumentation laboratories and a high bay area. The building will be designed and constructed in a cost effective manner to achieve Leadership in Energy and Environmental Design, New Construction (LEED-NC) Gold Certification under the U.S. Green Building Council (USGBC).

### Z-Lab

The Z-lab will be a 16,000 gross square foot facility constructed at the corner of Bethel Valley Road and 5th street at ORNL and two research platforms totaling 4,800 gross square feet that will be located across 5th street in the 3000 area of ORNL. The building is comprised of offices/support areas, high bay and low bay laboratories and a high bay area. The two research platforms are shelled buildings that provide the opportunity to test and develop real world construction assemblies in outdoor weather conditions. To provide research results needed the external walls and HVAC units will be replaceable on a yearly basis. The building will be designed and constructed in a cost effective manner to achieve Leadership in Energy and Environmental Design, New Construction (LEED-NC) Platinum Certification under the U.S. Green Building Council (USGBC).