THE FEDERAL DESIGN STUDIO

Course: Architecture 484/584
Term: Fall 2021
Instructor: Professor Mark L. Gillem, PhD, FAIA, FAICP and Barry Gordon, AICP, LEED GA
Credits: 6
Time: Wednesdays and Fridays 12:00-1750 (12:00-5:50pm) VIRTUAL

Studio Overview. In this architectural design studio, students will prepare architectural design proposals for new construction using cross-laminated timber or other similar materials. A grant will support the studio’s investigation into using these materials and how they can successfully be adopted by the U.S. federal government. Given that the federal government is one of the biggest builders in the world responsible for the design and construction of office buildings, homes, industrial facilities, ports, airfields, and hospitals, showing federal architects and engineers a way to use more sustainable materials and designs can have a significant impact on climate change, affordability, and equity. Our case study location will be Mountain Home Air Force Base in Idaho. The base may soon see substantial new construction to support a new training partnership with the government of Qatar which will require single-family homes, apartments, dormitories, office buildings, mixed-use buildings (primarily housing over retail), training facilities, aircraft hangars, and an Islamic Cultural Center. Students will select a building type and a site consistent with the installation’s master plan and prepare a conceptual design for their chosen building.

Studio Assignments. Students will work individually through the course of the term on their selected building type. They will 1) study other similar building types to develop a case book of precedents; 2) analyze the existing conditions to develop an understanding of the site and master plan; 3) prepare a clear vision for their design with measurable goals and clear patterns; 4) prepare a site plan, floor plans, a roof plan, elevations (4), building sections (2), wall details (2), renderings (two interior and two exterior); 5) complete an energy model; 6) prepare a low-impact development stormwater analysis; 7) complete a LEED checklist with a target of LEED platinum; and 8) prepare a cost estimate for construction.

Studio Structure. Instruction will be virtual with regular class discussions, small group reviews, and “desk” crits. Guest speakers will participate as needed through the course of the term. The studio includes an in-person site visit 15-18 October to Idaho funded by the grant in order to conduct analysis and participate in a design charrette.