**Boilerplate: Laboratory Facilities at the School**

**Michael Hooker Research Center**

The Michael Hooker Research Center (MHRC) is a 124,000 gross-square foot wet laboratory building that was completed and occupied in April of 2005. The 38 million dollar building project provides teaching, research, meeting and event space. The building includes four floors of modern laboratories totaling 40,000 assignable square feet. Departments occupying laboratory space at MHRC include Environmental Sciences and Engineering, Nutrition, and Epidemiology. The laboratory and event space provided at MHRC represents a major advance in the facilities available to SPH researchers.

Assignable laboratory modules are located along the exterior walls of the building to maximize natural lighting. Rooms housing instruments and common equipment that are shared among multiple investigators such as environmental control chambers, tissue culture rooms, freezer morgues, autoclave and glass wash facilities are located in the center of the building with access from surrounding laboratories.

The typical laboratory module is 1,100 square-feet and includes four bays of bench space, an alcove for ducted chemical fume hoods and/or biological safety cabinets, and an internal office. Non load-bearing metal partitions divide the laboratory modules and allow for programming flexibility. Epoxy resin bench tops and metal casework hang from a central spine system supporting interchangeable cabinetry and shelving units that can be reconfigured to meet an investigator’s specific needs.

Metal panels in the walls at laboratory bench tops can be removed with suction cups to reveal utility lines and allow changes in the location of air, gas or vacuum services without demolition and repair of sheetrock walls. The building is among the first at UNC-Chapel Hill to include a building-wide reverse osmosis and de-ionized (RO/DI) water system. The RO/DI system is constantly re-circulating to provide 16-18 Meg Ohm water on demand at point of use locations in each lab module.

The Michael Hooker Research Center includes a three-story glass and steel atrium. The atrium connects the laboratory wings to the rest of the School of Public Health and provides internal connections between the three major buildings. The atrium acts as the school’s “living room” and provides a gathering space capable of facilitating both formal event and informal interaction among the schools nine separate academic, service and administrative units. In addition to food service and open seating, the atrium provides access to seven separate centrally scheduled conference, break out and meeting rooms ranging from 12 to 25 seats as well as the 100-seat teleconference-capable Blue Cross Blue Shield auditorium. These rooms can be scheduled by any student, staff or faculty at the school.

**Rosenau Hall**

Rosenau Hall is a 122,000 gross-square foot building housing laboratory, research, academic and service space for the Departments of Environmental Sciences and Engineering, Health Behavior and Health Education, Health Policy and Management, Maternal and Child Health, and Nutrition. The building also houses the Center for Environmental Health and Susceptibility, the Program on Ethnicity Culture and Health Outcomes, the Office of Global Health and support units including Instruction and Information Systems and the school’s own laboratory instrument fabrication shop.

The building includes approximately 8,000 assignable square feet of laboratory space, including a 1,100 square-foot Mass Spectrometry and Gas Chromatograph laboratory with dedicated air handling and generator back-up power supply, as well as the 2,500 square foot instrument fabrication and design shop. The design shop provides researchers across of broad range of disciplines with engineering and scientific design and fabrication services.

Rosenau Hall underwent a 16-million dollar building-wide renovation in 2008 which included replacement of laboratory bench tops and utilities, and replacement of all mechanical systems. Specifically, the project replaced the heating, ventilation and air conditioning (HVAC) systems, exterior windows, domestic and laboratory plumbing, life safety systems including sprinkler protection, electric systems including wiring, devices, main switch gear and connection to standby power generator, and added high speed network cabling and wireless access throughout the building.

The renovation project also centralized instruction space locating classrooms and instructional support functions in proximity to existing teaching spaces in adjacent buildings and to other student oriented spaces housed in Rosenau Hall such as the Office of Student Affairs, Student Government and Minority Student Caucus. Teaching facilities provided by the project include two new 56-seat classrooms, a renovated 258-seat auditorium, a 30-seat teaching kitchen for the Department of Nutrition, and a reconfigured 30-seat teleconference facility with a control room that can remotely operate a 100-seat teleconference facility in the adjoining Michael Hooker Research Center.

The project provided some new amenities open to all building occupants. These include individual and group study rooms, a lactation room and shower facilities to promote active living and alternative transportation to campus.

**McGavran-Greenberg Hall**

McGavran-Greenberg Hall is a 124,000 gross square-foot building that was completed and occupied by the School in 1991. It houses the Departments of Health Policy and Management, Epidemiology, and Biostatistics as well as the Public Health Leadership Program and wet laboratory space for the Departments of Nutrition and Environmental Sciences and Engineering. McGavran-Greenberg Hall includes over 40,000 assignable square feet of academic office, meeting and study space, approximately 14,000 assignable square feet of wet laboratory space, and more than 7,000 assignable square feet of instruction space including 10 classrooms and a 100-seat auditorium.

Wet laboratory space at McGavran-Greenberg Hall includes two biological safety-level three (BSL3) laboratory (overseen by the University’s Department of Environment, Health, and Safety), laboratory animal research facilities, and a roof-top smog chamber fabricated by the school’s own instrument and design shop in 2005. The 1,700 cubic foot roof-top smog chamber is used to analyze the effects of sunlight on hydrocarbon exhaust emissions.

**The Herman G. Baity Environmental Engineering Laboratory (Baity Labs)**

Baity Labs, although a separate building, was a part of the McGavran-Greenberg Hall project completed in 1991. This approximately 6,400 gross-square foot building provides specialized high-bay wet research space to facilitate water and air quality research. The building includes high-bay space, assignable lab modules and support space. Both the water and air laboratories are occupied by the Department of Environmental Sciences and Engineering. Exhaust fans and ducting used for air quality research were replaced in 2005.

**Laboratory Space Summary**

The school’s facilities include approximately 61,000 square feet of assignable wet laboratory space, including two biological safety level three laboratories (BSL-3) overseen by UNC-Chapel Hill’s Department of Environment, Health and Safety. Of this space, approximately 40,000 assignable square feet are in state of the art laboratories completed in 2005 with the Michael Hooker Research Center. Another approximately 8,000 assignable square-feet in Rosenau Hall, including the Mass-Spectrometer/Gas Chromatograph Laboratory, were renovated in 2008. The remaining approximately 18,000 assignable square feet were built in 1991 in McGavran-Greenberg Hall and Baity Labs. In addition, the school built and maintains an approximately 1,700 cubic foot roof-top smog chamber used to mix diesel engine exhaust emissions with sunlight and analyze its effects on lung tissue. The school is also unique in that it maintains its own approximately 2,200 square foot instrument shop that fabricates custom and provides specialized research tools to support experimental and field research, as well as a smog chamber in Pittsboro, NC (approximately ten miles from Chapel Hill).