

## U-M Health North Campus Research Complex Buildings 30, 35, 36, and 60, University Hospital, and University Hospital South Clinical Pathology Laboratories Relocation and Renovation

### Project Description

The goals of the project are to enhance the clinical laboratory functions necessary to meet present and future growth in test volumes, improve operational efficiency, and reduce the expense of having laboratories in multiple locations. Pathology laboratories currently located within University Hospital, University Hospital South, Medical Science Unit I, North Ingalls Building, and leased space will be relocated to NCRC Buildings 30, 35, 36 and 60. The Michigan Medical Genetics Laboratory of the Department of Pediatrics will also be relocated to NCRC. The relocation will also provide faculty offices and space for resident training, and laboratories will be designed to provide flexibility to meet future education, research, and technology requirements. After the NCRC construction work is complete, laboratories at University Hospital and University Hospital South will be renovated to allow for increased throughput and the expansion of capacity for automated sample processing. In total, approximately 186,000 gross square feet of space will be renovated at NCRC, University Hospital and University Hospital South.

### Energy Efficiency Measures

- The project will meet or exceed the ASHRAE 90.1-2007 prescriptive path for energy compliance which includes individual equipment efficiency requirements
- Exhaust air energy recovered via a heat recovery air handling unit using a pumped glycol water solution
- Variable frequency drives on fans and pumps to modulate fan or pump speed based on actively changing system requirements
- Control points tied into the energy management system to optimize HVAC and lighting controls
- Demand control ventilation strategy at air handlers to actively control the amount of outside air intake based on occupied space requirements
- Variable air volume terminal boxes capable of night setback control
- Hot water reheat coils and perimeter radiant heating system employ hot water temperature re-set based on outside air temperature sensors controlled by the energy management system
- Existing chilled water piping system at Building 35 renovated to reduce pressure drop and thus energy used by powerhouse pumps
- Existing 100% outside air units at Building 35 retrofit with return air ductwork to reduce cooling capacity requirements and chilled water pumping energy at the powerhouse
- Existing 2-pipe changeover rooftop units with glycol hot water and glycol chilled water loops replaced with a new, energy efficient, hot water and chilled water roof top air handling unit
- Occupancy sensors utilized in office areas to turn off lights and reduce air quantities when spaces are un-occupied
- High-efficiency lighting specified: LED's and high-efficiency T-5 fluorescents

### Other Sustainability Features

- Project site located near public and U-M bus routes to encourage use of public transit
- Campus with green space to promote interaction with the natural environment
- Changing rooms provided to promote bicycle use
- Low flow, high efficiency plumbing fixtures
- Use of low-VOC paints, flooring, adhesives and sealants
- Use of regional and recycled materials when possible

*NOTE: 186,000 gsf reflects the square footage for the entire project, both phases. Phase 1 at the NCRC complex is approximately 145,000 and Phase 2 at UH & UH South is approximately 41,000 gsf. Phase 1 scope of work was substantially complete in summer of 2018. The Construction Complete percentage reflects the construction progress for Phase 2 at UH & UH South.*