

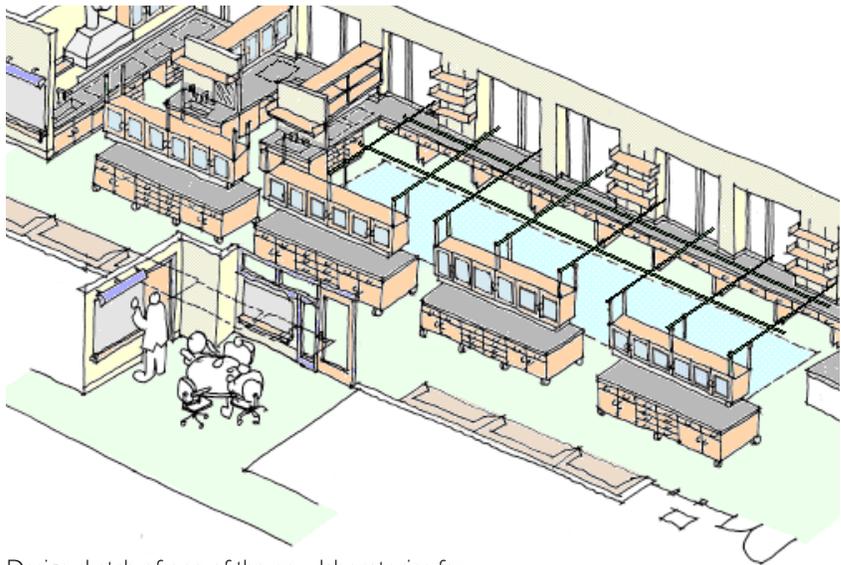
# Imai Keller Moore Architects Laboratory/Research

Massachusetts Institute of Technology  
East Campus Building E25  
Cambridge, Massachusetts

Laboratory Renovations and Building  
Infrastructure Renewal of Health Sciences  
Technology and Earth Atmosphere  
Planetary Sciences

181,800 Total GSF Building E25  
45,000 sf Lab Renovations  
2007

Building E25 (Whitaker College) is one wing of an L-shaped 267,000 sf medical building on MIT's East Campus and is linked by a full-height atrium to E23, MIT's Health Services Center. MIT needed to provide new laboratories for the Departments of Health Sciences Technology and Earth Atmosphere Planetary Science in Building E25 and to consolidate each department's space within the 6-story research facility. Following a programming and feasibility phase, the architectural team designed a complete systems upgrade of E25 to accommodate up-to-date requirements for research laboratories and current building codes. On four of the floors there are modern laboratory suites tailored to the specific needs of each scientist and public lobbies and corridors are improved throughout the building. Modern heat recovery systems were utilized accommodating over 90 fume hoods in the building. The renovations were meticulously planned and phased so that occupied labs in the building were kept operational through the process.



Design sketch of one of the new laboratories for an Earth Air Planetary Science professor

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## Infrastructure Upgrades

Building E25 and E23 completed in 1982 were constructed as one building with research labs housed in E25 and a primary care center in Building E23. With the construction of a new Brain and Cognitive Center space became available in E25 to house two Departments looking to consolidate, Earth Atmosphere and Planetary Science (EAPS) and Health Sciences and Technology (HST). The renovated spaces comprised about 50,000 sf of a 140,000 GST total in E25. The 90,000 that was not renovated was occupied space that had to remain in operation. Part of the occupied space was laboratory space on the third floor, a 24/7 facility that could not incur any major downtime as they were one of the most prolific labs on the MIT Campus. Coupled with the new program renovations was a total renovation to E25's infrastructure along with a decoupling from emergency electrical systems in E23. Imai Keller Moore and its Design Team worked closely with MIT's SEG group to explore several scenarios to upgrade the building in parallel with strategies to keep the building operational. The chosen scheme was selected not only for its promise in mitigating downtime but also offered a superior heat recovery design, an MIT mandate. To ensure that the



*Penthouse Before Renovation*



*Penthouse After Renovation*



new mechanical and electrical systems would be implemented in an intelligent phased fashion that would be owned as part of the construction IKM developed a phasing strategy as part of the contract drawings. This phasing diagram is shown on the following page and not only identifies what is to be done when but also how much downtime in the building would be allowed. This approach proved very successful and over the course of the construction the only major complaint by the occupants was noise, a difficult issue to mitigate hence most of the major noisy work was done on premium time with the working hours negotiated with the tenants of the building.