

THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENT OF ARCHITECTURAL ENGINEERING
SENIOR THESIS

UPMC Passavant Pavilion

Pittsburgh, Pa

Thesis Breadth Proposal

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18 March 2009



UPMC Passavant
Tower Addition

Burt Hill, Architects

Appendix A – Breadth Studies

While completing the in depth construction management analyses for the UPMC Passavant Pavilion and Addition I plan on also investigating other areas of the Architectural Engineering discipline. These breadth studies will be part of a larger construction management investigation and they are briefly explained below.

Structural Breadth

My proposed structural breadth is a portion of a larger construction management investigation in which I propose to use precast concrete panels in lieu of hand laid brick veneer. When determining if this alternate system is a viable option it is important to investigate the structural details that may need to be changed. The brick relief angles that are currently designed will need to be evaluated to determine if they can be utilized for the precast wall panels. If they cannot be utilized a new detail will need to be produced along with any additional connection details that are needed for the system.

Architectural Breadth

From the same detailed construction management analysis outlined in the structural breadth I also plan on completing an architectural breadth. Due to some of the limitations with regard to spans and openings for the precast panels some aspects of the exterior façade may need to be changed to facilitate their use. I will also investigate the feasibility of utilizing the precast panels in lieu of the metal panels. This change could have positive schedule and cost impacts as the overall duration of the exterior façade will be shortened. Utilizing precast in lieu of the metal panels as currently proposed will also eliminate a material from the façade and lead to less issues at the material interfaces. From this analysis exterior elevations and renderings will be developed to evaluate the aesthetic changes to the façade.