

PROJECT PROFILE

CIVIL DESIGN AND UTILITIES FOR UNIVERSITY BUILDING

D'Appolonia was engaged by the project architect, Payette Associates, Inc., Architects and Planners of Boston, Massachusetts to provide civil engineering design services for Roberts Hall, a five-story, 70,000-square-foot building that includes laboratories, classrooms, offices, clean rooms with vibration-sensitive equipment, and mechanical equipment rooms.

The building was constructed into a steep hillside on the campus that posed several site development problems including variable-strength bedrock for support of the building, construction of deep excavations adjacent to other movement-sensitive university buildings, relocation of an existing steam line located in the middle of the planned facility, and interconnection with and conveyance of existing and proposed storm and sanitary sewerage systems.

D'Appolonia and its mechanical engineering subconsultant were responsible



Roberts Hall at the Carnegie Mellon University Campus in Pittsburgh's Oakland section.



Passageway between Roberts and Hammerschlag Halls.

for planning, design and construction document preparation for: all utility services to the building; a temporary steam line during construction and permanent steam line extending through the basement of the building; erosion and sediment control during construction, site grading; pavements; roadways and sidewalks; surface water collection and detention structures; water and fire services; site sanitary sewage system and connection to the existing sanitary lines. The new stormwater and sewage lines were designed as separate systems to meet local ordinances.

D'Appolonia prepared erosion and sedimentation control and sewerage permits for regulatory review and site and stormwater plans for municipal review. In addition, D'Appolonia provided geotechnical engineering support to the project team to evaluate designs for foundations and soil and rock excavation support.