

Introduction & Project Background

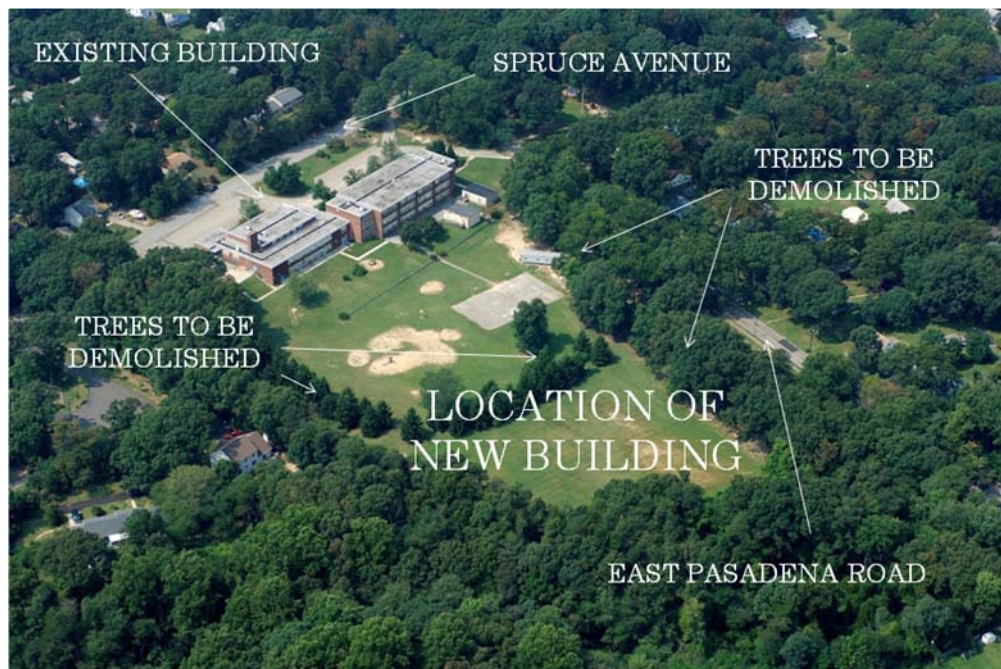
Project Background

Pasadena Elementary School is located in Pasadena, Maryland and is owned and maintained by Anne Arundel County School District. A new elementary school to replace the existing elementary school was designed to be 68,000 square feet and two stories above ground.

The original Pasadena Elementary School was built in 1954 on a 14 acre lot. In 1961 there was an interior renovation of the school to change an open space into classrooms for the use of kindergarten. The original building was 45,296 square feet and had 20 classrooms, a multi-purpose room including a stage and rooms for administrative use.

Due to its outdated construction it was decided back in 2001 to demolish the existing elementary school and build a brand new building in a new location on the existing site. In the original building's place multi-use sports fields will be constructed after the asbestos abatement and demolition of the existing elementary school.

Notice below an aerial photograph pointing out locations of interest on the project site. Also reference Appendix A for an existing site plan showing the two phases of the project.



Aerial View of Project Site

Project Delivery

The construction project delivery method was CM-Owner's Agent and 14 contractors, one for each trade of the project. Below is a list of the primary project team members and the contractors for Pasadena Elementary School.

Owner	Anne Arundel County Public Schools
Construction Manager	Jacobs Facilities, Inc.
Architect	Rubeling & Associates
Civil Engineer	KCI
MEP Engineer	Posey
Structural Engineer	Columbia Engineering, Inc.
Site Work	Pessoa Construction
Abatement & Demolition	GeoStructures, Inc.
Concrete	Canyon Contracting
Masonry	Moehrle Masonry
Steel	Jarvis Steel & Lumber
General Works	Hancock & Albanese
Roofing	Heidler Roofing
Windows	College Park Glass Company
Kitchen Equipment	Clark Food Service
Casework	Glover Equipment, Inc.
Technical Wiring	HP Electronics
Mechanical & Plumbing	G.E. Tignall
Fire Sprinkler	Fire-Mak, Inc.
Electrical	Action Electrical Contractors, Inc.

Project Schedule

Construction began in September 2006. Phase I of the project includes the construction of the new elementary school. This phase was completed in November 2007 and the new school building was occupied over Christmas break between 2007 and 2008.

Phase II of the project includes asbestos abatement and demolition of the existing elementary school and will begin after Phase I occupancy. This portion of the project is planned to be completed in May 2008. Also included in Phase II is the construction of the multi-use sports fields. The construction of the sports fields is the last stage of the project and is scheduled to be completed in July 2008.

Please reference Appendix B for the original project schedule.

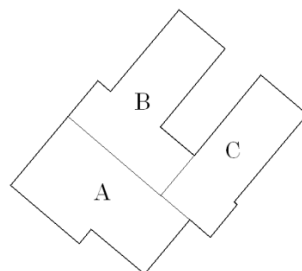
Cost Information

Below is a breakdown of the construction costs of the project separated by trade contractors. Notice the total cost of the project is \$14,042,006.

Contract	Total Contract Amount
Sitework	\$ 3,319,746
Abatement	\$ 244,780
Demolition	\$ 457,572
Concrete	\$ 692,129
Masonry	\$ 1,507,000
Structural Steel	\$ 907,921
General Works	\$ 1,727,333
Roofing	\$ 440,500
Windows	\$ 215,166
Kitchen	\$ 99,500
Casework	\$ 215,110
Tech Wiring	\$ 76,419
Mechanical	\$ 2,427,947
Fire Protection	\$ 171,045
Electrical	\$ 1,539,838
Total Project Cost	\$ 14,042,006

Construction Sequencing

Below is the footprint of Pasadena Elementary School. Construction of the building was performed in 3 stages that are identified below as A, B, and C. Area A is made of the gymnasium, kitchen and music room. Area B consists of the Media Room and a corridor of one-story classrooms. Area C is two stories high of classrooms. The construction sequence goes from A to B to C.



Building Footprint

Architecture

The exterior of Pasadena Elementary School consists of brick masonry. The northeast and south sides of the building are two stories high. In the center of the interior contains the Media Center. On the north side of the Media Center there are two hallways lined with classrooms. In between these two wings a courtyard is located. Lining the courtyard there are many windows from the classrooms that allows occupants to look outside.

The south side of the Media Center contains public spaces such as the gymnasium, cafeteria and music rooms. The gymnasium and the cafeteria are double height ceiling spaces that connect with the second floor roof.

The second floor consists is one hallway of classrooms above one of the hallways on the north side of the first floor.

Notice below a photograph of the exterior of Pasadena Elementary School at the main entrance.



Building Exterior at Main Entrance

Electrical System

There is one main switchboard that runs to panelboards located in 5 electrical closets throughout the building. The system runs on 277/480 V power with a 3 phase 4-wire system. The panelboards range from supplying 100 Amps to 600 amps.

Lighting System

All interior lighting must comply with local codes and zoning requirements as well as NFPA 70 and NFPA 101. Interior lighting consists of both fluorescent and High Intensity Discharge (HID) lighting. All lighting fixtures will be supplied with 270 V power with the exception of a few accent fixtures of 120 V.

Mechanical System

There are 3 Rooftop Units with Energy Recovery (ERUs) and 3 Air Handling Units (AHUs). There are 6 Ductless Split System Units (DSS). The RAHUs only have a return fan that can supply between 1530-7500 cfm (cubic feet per minute). Outdoor air is supplied at 375-2500 cfm. The ERUs supply and return air between 258 and 454 MBH (Thousand BTUs/hr). All units are supplied with 480 volts at 3 phase power.

Structural System

Steel HSS columns of sizes varying from 5 to 8 inches are throughout the 2 North wings of the building with bays varying around 30' each. Steel beams support joists and composite metal roof decking with normal weight 4000 psi concrete. On the south side of the building load bearing walls made of concrete are the support system for the gymnasium and cafeteria areas which are double height areas. The roof above these areas consists of composite metal decking with normal weight concrete and roofing membrane.

Fire Protection System

An automatic wet-pipe sprinkler system runs throughout the classrooms, offices, cafeteria seating, auditorium seating, corridors, lobbies and rest rooms at 0.1 GPM/sq. ft. (Gallons per Minute per square foot) over every 1,500 square foot area. In the mechanical room, kitchen food preparation and storage areas water is pumped at 0.15 GPM/sq. ft. over every 1,500 square foot area. The gymnasium and platform is supplied with 0.2 GPM/sq. ft. The system consists of 2 zones.