



EPISCOPAL HIGH SCHOOL

CENTENNIAL GYMNASIUM

ALEXANDRIA, VA

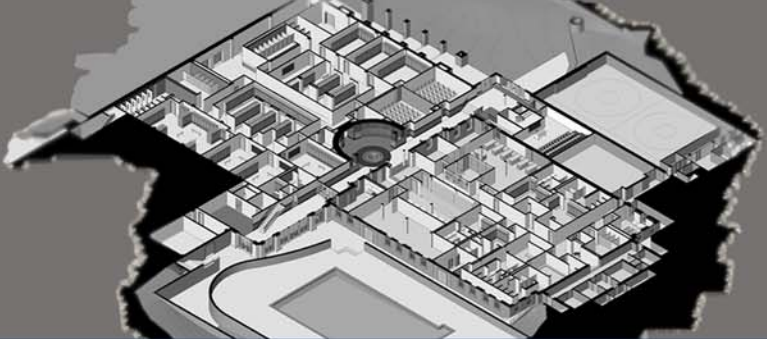


ERIC FEDDER | CONSTRUCTION MANAGEMENT | WWW.ENGR.PSU.EDU/AE/THESIS/PORTFOLIOS/2010/EWF5002

PROJECT OVERVIEW

OWNER: EPISCOPAL HIGH SCHOOL
CM AGENCY: ADVANCED PROJECT MANAGEMENT
ARCHITECT/ENGINEER: CANNON DESIGN
GENERAL CONTRACTOR: JAMES G. DAVIS CONSTRUCTION

TOTAL HEIGHT: 3 STORIES
GROSS BUILDING AREA: 99,044 SF (INCLUDING RENOVATION WORK)
CONTRACTED GMP: \$22,457,189.00
CONSTRUCTION DATES: 03/06/2009 - 09/03/2010



ARCHITECTURAL FEATURES

RED-BRICK FAÇADES AND LARGE WHITE COLUMNS AT THE ENTRANCES ARE A CONSISTENT THEME AMONG THE BUILDINGS ON THE EHS CAMPUS. CANNON DESIGN CARRIED THESE KEY ARCHITECTURAL FEATURES INTO THE NEW CENTENNIAL GYMNASIUM ADDITION, MIRRORING THE ENTRANCE OF THE EXISTING FACILITY. THE NEW CENTENNIAL GYMNASIUM ADDITION WILL FILL A VOID BETWEEN THE EXISTING GYMNASIUM AND THE FLIPPIN' FIELD HOUSE (INDOOR TRACK FACILITY). ONE OF THE MAIN ARCHITECTURAL FEATURES IS THE JOINING OF THE NEW ADDITION TO THE EXISTING CENTENNIAL GYMNASIUM WITH A TWO-STORY GLASS ATRIUM.

STRUCTURAL SYSTEM

- FOUNDATION:**
- AGGREGATE PIER SOIL REINFORCEMENT SYSTEM WITH #57 STONE AT AN AVERAGE PIER DEPTH OF 14 FEET
 - CONCRETE PIER CAPS, GRADE BEAMS, FOUNDATION WALLS AND PARTIAL SLAB-ON-GRADE
- STRUCTURE:**
- ONE WAY SLAB SYSTEM (9 1/4" THICK) WITH CONCRETE COLUMNS AND SPANDREL BEAMS
 - STEEL COLUMNS/BEAMS
- FACADE:**
- "DELMARVA" STYLE BRICK EXTERIOR WALL WITH GLAZED ALUMINUM CURTAIN WALL SYSTEM AT ATRIUM
- ROOF:**
- 108' TRUSSES WITH 18" WIDE STANDING-SEAM METAL PANELS WITH A FLUOROPOLYMER FINISH SYSTEM



MECHANICAL AND ELECTRICAL SYSTEMS

THE MECHANICAL SYSTEM IS A VARIABLE AIR VOLUME FAN COIL SYSTEM CONSISTING OF (5) HIDEAWAY CEILING FAN COIL UNITS, (7) AHU'S RANGING FROM 5,000 - 21,000 CFM, (1) INDUCED DRAFT COOLING TOWER, (1) CHILLER, (1) BOILER, AND (57) VAV TERMINAL UNITS RANGING FROM 150-1800 CFM.

CENTENNIAL'S POWER IS SUPPLIED BY DOMINION VIRGINIA POWER. THE MAIN FEED IS STEPPED DOWN AT THE DVP EXTERIOR TRANSFORMER TO A 277/480V, 3 PHASE, 3 WIRE SYSTEM.

CONSTRUCTION LOGISTICS

A DETAILED 3 PHASE CONSTRUCTION PROCESS WILL REQUIRE DEMOLITION, RENOVATION AND NEW BUILDING CONSTRUCTION TO TAKE PLACE SIMULTANEOUSLY THROUGHOUT THE PROJECT SCHEDULE TO ALLOW FOR SECTIONS OF THE EXISTING FACILITY TO BE FUNCTIONAL DURING THE SCHOOL YEAR.

- PHASE ONE:** UTILITY RELOCATION, COMPLETE CAGE RENOVATION, FLIPPIN' RENOVATION AND NEW GYM CONSTRUCTION
- PHASE TWO:** NEW GYM CONSTRUCTION, EXISTING FITNESS AREA DEMOLITION AND MECHANICAL ROOM CONSTRUCTION
- PHASE THREE:** CONSTRUCTION OF NEW GYM AND DEMOLITION/RENOVATION OF EXISTING GYM

