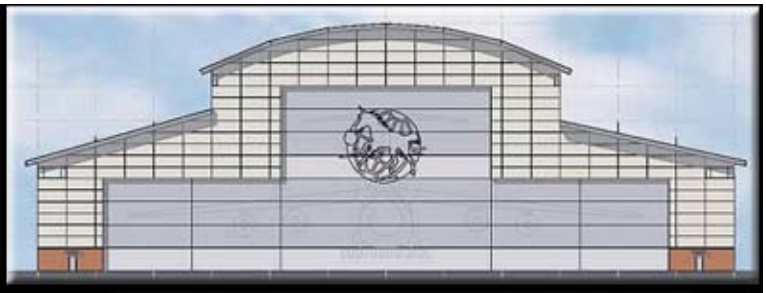
C-5 Fuel Cell Facility
167th Airlift Wing
Martinsburg, WV



Project Team:
- Owner: 167th Airlift Wing, WV ANG
- General Contractor: Kinsley Construction, Inc.
- Architect: LSC Design
- Civil Engineer: Greenway Engineering
- Structural, MEP Engineer: TranSystems

Project Information:
- Location: Martinsburg, WV
- Function: Hangar and Maintenance Building for C-5 Aircraft
- Building Size: 78,825 SF
- Project Cost: $27 million
- Construction Dates: Oct. 2008 - May 2010
- Delivery Method: Design-Build

Structural System:
- Drilled caisson foundations around perimeter of building
- Braced frame lateral force resisting system
- Structural steel framing with combination of wide flange and hollow structrural steel columns and beams
- K-series and Longspan joists supporting roof
- Steel trusses spanning nearly 220 feet

Architecture:
- Split-face CMU covers first 10' of exterior wall space above finished floor level, with accent course
- Insulated metal panels cover all other exterior wall area
- Insulated translucent sandwich panels allow natural light into building
- MEGADOOR assembly on Southeast face- 14,600 SF
- Standing seam metal

Electrical/Lighting System:
- Service transformer to convert 12.47kV utility distribution to 480Y/277V utilization
- 200A load break junction boxes distribute power to building
- Connections for 400Hz generators
- 277V fluorescent fixtures in support areas
- 277V metal halides in hangar area
- 277V HPS wall mounted on exterior
- 120V LED roof mounted as obstruction lights
- 277V LED emergency lighting inside

Mechanical System:
- Vented infrared radiant heaters in hangar
- (2) 15,000 CFM make-up air units
- Inline centrifugal exhaust fans
- (2) 300 GPM boilers
- 4,000 CFM air handling unit
- VAV boxes
- (3) 1400 CFM energy recovery units

KYLE GOODYEAR

CONSTRUCTION MANAGEMENT

http://www.engr.psu.edu/ae/thesis/portfolios/2010/keg5031/index.html