Building Statistics- Part One

Bryce Burkentine |Construction |Dr. Anumba | State College Area High School |State College, PA |September 4th, 2015

General Building Data

Building Name- State College Area High School

Location And Site- 650 Westerly Parkway, State College, Centre County, Pennsylvania

Building Occupant Name- State College Area High School

Occupancy Or Function Type- Mixed Nonseparated Groups E and Occasionally A-1

Size (Total Square Feet)-

New Construction: 478,303 SF
Renovations: 170,672 SF

Number Of Stories Above Grade |**Total Levels-** 3 Stories | 3 Stories

Primary Project Team-

Owner: State College Area High School- http://www.scasd.org/Domain/1891
Architect: Crabtree, Rohrbaugh & Associates- http://cra-architects.com/
Construction Manager: Massaro CM Serivces, LLC- http://massarocms.com/
MEP Engineer: Centerpoint Engineering- http://www.centerpointeng.com/
Structural Engineer: Centerpoint Engineering- http://www.centerpointeng.com/
Civil/Landscape Engineer: ELA Group, INC And ELA Sport- http://www.elagroup.com/
Geotechnical Engineer: Advantage Engineers- http://www.advantageengineers.com/
Food Service Consultant: McFarland Kistler & Associates- http://www.fcsi.org/
Landscape Architect: ELA Group, INC And ELA Sport- http://www.elagroup.com/
Code Consultant: Quality Assurance Plus- http://www.qualityassuranceplus.com/
Lighting Consultant: Centerpoint Engineering- http://www.centerpointeng.com/
Security Consultant: Centerpoint Engineering- http://www.centerpointeng.com/

Dates Of Construction- July 2015 - August 2018

Actual Cost Information-

Total Cost- $117,003,000
HVAC- $13,992,000
Electrical- $12,427,000
Plumbing- $4,771,000

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Project Delivery Method-

Procurement Method: Design-Bid- Build

Organizational Structure: CM Agency with Multiple Prime Contracts

Renderings-

Figure 1: State College Area High School- Crabtree, Rohrbaugh & Associates

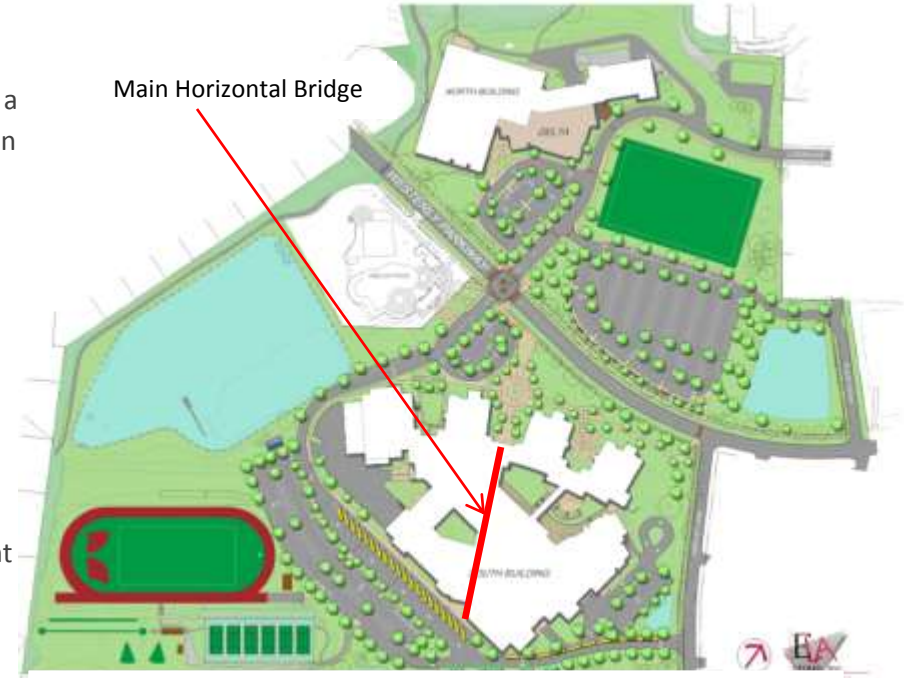
Figure 2: North View Of State College Area High School- Crabtree, Rohrbaugh & Associates

Figure 3: Interior View Of State College Area High School- Crabtree, Rohrbaugh & Associates

Architecture

Architecture-

The State College Area High School is part of a two building campus with 79.2 acres between the two buildings. The existing buildings are identified as North Building and South Building. Each will consist of demolition, renovations, and additions. There are four main pods on the South Building know as learning communities. Each pod has its own classrooms, break out rooms, mini meeting rooms, bathrooms. These pods also are filtered by dividing the academic classes into certain sections. These spaces have abundant natural light for the students to learn in. There is a main horizontal bridge where the bus drops off the students and where the students travel to their classes on the first and second floors. No historical requirements on this project.



Site Plan Of State College Area Hight School- Crabtree, Rohrbaugh & Associates

Major National Model Codes-

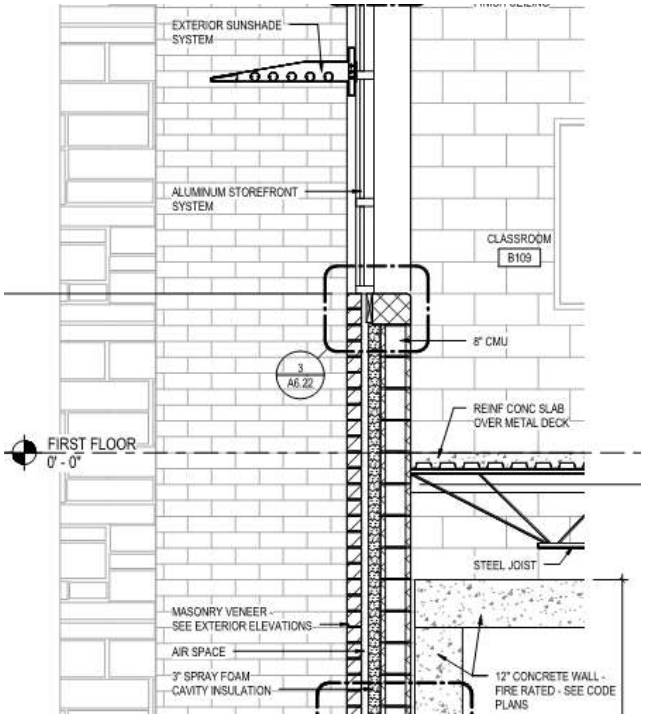
PA Uniform Construction Code
2009 International Existing Building Code (IEBC), Chapter 3
2009 International Building Code (IBC), Excluding Chapters 1, 11 &30
2012 International Building Code (IBC), Chapter 11 & Appendix 'E'
2009 ICC A117.1 (ANSI)

Zoning- CP2- Planned Commercial 2

- For Commercial: no minimum lot area
- Parking: In accordance with Chapter 19 Part H
- Open Space: 30% minimum of total lot area; no more than 25% of the open space can be hardscape
- Height: Maximum 35 ft (3 stories) for all buildings and accessory structures
- Setbacks: Front-30ft/ Side-10ft/ Rear- 40ft

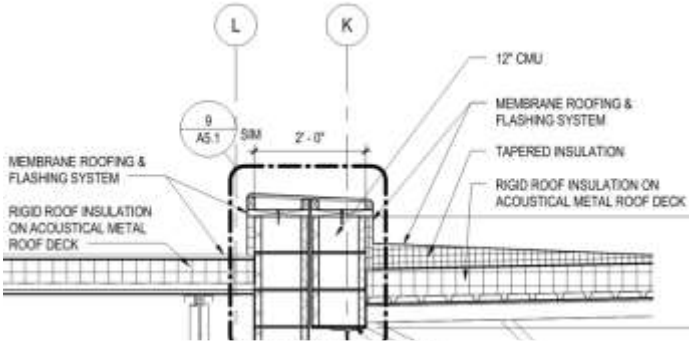
Building Enclosure

Building Facades- The façade of the structure is mainly composed of aluminum storefront system and manufactured brick material. As part of the sustainable design sunshades will be incorporated into the design. There will be an upgraded 3 inch cavity spray foam insulation that will increase the R-Value on the CMU wall. The perimeter walls are composed of 3" insulated metal panel system, 3 5/8" metal studs, 8" CMU, and 5/8" GWB on 1 5/8" metal studs.



Detailed Wall Section- Crabtree, Rohrbaugh & Associates

Roofing- The roof is mostly unseen but will play an integral part of the sustainability features. Increasing the roof insulation to 6 inches will result in an R-Value rating beyond IBC code required standards and less thermal movement. The roof is composed of rigid roof insulation on metal roof deck, insulation material, and single-ply membrane roofing and flashing system. There will be metal fascia on wood blocking on the perimeter walls that extend 2 ft above the roof.



Detailed Roof Section- Crabtree, Rohrbaugh & Associates

Sustainability Features

The goal of the building process was to create and obtain a LEED certification through the United States Green Building Council of LEED Gold. Some of the means by which this rating will be achieved include the coordination of increased roof R-values, green roof system, solar array system, high performances building systems such as the MEP systems, and construction waste management.