Case Study

Lantern Building, Pittsburgh, PA
Virage Rainscreen System
Case Study

The Lantern Building, Pittsburgh, PA
Virage Rainscreen System, Vertical Application

Company Profile

The Bunting Group of Companies can trace its beginnings back to 1869 in Pittsburgh, PA where the original W. A. Bunting founded Bunting Stamp Company. The subsequent generations of entrepreneurial family members experienced success and developed new opportunities in several businesses related to construction.

Today, Bunting is emerging as a leader in the fabrication and installation of metal panels used in rainscreen cladding. Bunting maintains its leadership and growth orientation by reinvesting in technology and incorporating a disciplined approach to process driven work flow. The company employs a proactive approach to training and education with the goal of providing world class project management and engineering services to all clients.
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Project Profile

The former Liberty Travel building located at 600 Liberty Avenue in Pittsburgh was an underutilized masonry building which had fallen into disrepair and was being used primarily as advertising space with two billboards affixed to the façade and roof. PNC Financial Services purchased the building and retained Edge Studios to transform the eyesore into a landmark building in the vibrant downtown district. The entire façade was refreshed with translucent glass and rich naturally oxidized zinc panels. Bunting was subcontracted by Turner Construction engineer, manufacture and install the Virage Rainscreen System using zinc panels in a vertical orientation.

Before

After
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Technical Situation

The existing brick façade was more than 100 years old and had undergone several applications of pargeting which created an uneven surface with much of it in ill repair. Other challenge areas involved the transition details inherent with the complicated architecture and diverse materials as well as developing final CAD fabrication drawings from client supplied bridging documents.

Basis of Design

The bridging documents showed a “Z” girt framing on the west elevation. Since the building was more than 100 years old and out of square, this design would not work.

Approved Construction Detail

Bunting designed and engineered a self-leveling girt assembly to account for the uneven mounting conditions.
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**Basis of Design**

Bridging documents showed flashing details at the headers for the west elevation doors, but no details for the jambs.

**Approved Construction Detail**

Bunting designed and engineered 30" deep side door flashing components.
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Basis of Design

Unforeseen changes occurred during construction requiring the general contractor to rebuild the top sixteen feet of exterior wall out of CMU block which changed the slope of the building.

Approved Construction Detail

Bunting designed and engineered an alternate parapet cap.
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Basis of Design
The original engineering calculations were based on a CMU block façade instead of brick. The age of the brick at 100+ years also presented concerns regarding the structural integrity of the façade.

Approved Construction Detail
In order to ensure the integrity of the façade, Bunting performed pull-testing on site to verify the actual pull-out capacity of the screw fasteners.

Results
Bunting was successful in building upon the details in the bridging documents which resulted in engineered and stamped construction drawings. Bunting self-performed all work, fabricating and installing the zinc panel rainscreen.

During the mock-up phase, Bunting modified the design of the panel reveal joint to improve the overall aesthetics of the rainscreen. The overall appearance of the completed building façade is spectacular.
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Photo Gallery