



Structural Engineer and
Building Envelope Specialist:
Klepper, Hahn & Hyatt

Owner:
SUNY Upstate Medical University

Location:
Syracuse, NY

Completed:
2016



Top & Bottom Right: Completed Reskinning
Bottom Left: Conditions Prior to Reskinning
Bottom Center: Application of Rockwool Insulation



SUNY Upstate Medical University Computer Warehouse Building Reskinning

Klepper, Hahn & Hyatt served as the Envelope and Structural Consultant for this SUNY Upstate project. The original building, built in 1968, was Brutalist-style with a stack-bond split-face concrete block façade that was literally falling apart due to masonry joint deterioration and corrosion of the steel bed joint reinforcing, which doubled as ties for the exterior wythe.

KHH assessed the existing building façade which included a physical review of distress conditions as well as identification of thermal losses using infrared thermography. This led to the development of remediation alternatives, which included traditional repair methods to maintain the original façade. The limitations of this scheme included the need for ongoing maintenance, no visual improvements in the overall aesthetic of the building, and a thermal envelope that did not perform any better than when it was designed nearly 50 years ago.

The solution became clear: The structure would undergo reskinning — the complete replacement of a building's exterior façade or cladding, including upgrades to the thermal envelope. The new insulation and air barrier system was selected to comply with the requirements of the Energy Conservation Construction Code of New York State. The approach would not only reduce the heating and cooling energy losses through the building's exterior but also modernize and enhance the building's appearance with a durable, low maintenance new skin.

The final selection was a combination masonry and metal panel system veneer over rock wool insulation, with new thermally resistant windows, a properly installed spray-applied liquid air barrier, and enclosure of the truck loading dock area. This system met the challenges of the building's unique form and configuration while significantly improving its energy performance, reducing operational costs, improving indoor thermal comfort, and creating an attractive and aesthetically appropriate contemporary upgrade to the exterior appearance of the building.