# :: Case Study :: Building Envelope Management

# NESSET PAVILION

## the beginning

Lutheran General Hospital's **Nesset Pavilion** was experiencing chronic water penetration over many years at the exterior walls and roof due to inadequate wall flashings, poorly constructed roof parapet walls, and roofing failures. This long-term water penetration resulted in damage to interior finishes and corrosion of structural steel framing and steel masonry supports within the exterior walls.

Subsequently, the expansive forces of this steel corrosion, compounded with insufficient vertical expansion jointing, resulted in cracking and displacement of exterior brick masonry.

## the Tremco/WTI Solution

The full building envelope renovation began with a complete roofing replacement performed in 2002, followed by restoration and waterproofing of the exterior masonry block-and-brick "cavity walls" (or "drainage walls") in 2004.

- **Stabilization (or "friction") Pinning** was installed to provide mechanical wall "ties" of exterior clay brick to interior concrete block back-up wall
- Cracked and displaced **brick was replaced** with custom-modified masonry
- **Full-height building corner brick re-constructions** were isolated from adjacent walls with new vertical expansion jointing

**Block-and-brick cavity walls were waterproofed** at the internal air cavity (at the concrete block back-up wall) with fully-adhered bituthene flashings enveloping the steel masonry supports and perimeter structural steel faming,

- **Horizontal "soft" jointing** provided at undersides of brick support steel
- Existing architectural metals were treated with **epoxy-modified exterior coatings**, and water-repellant surface sealers were applied to all exterior masonry surfaces.
- **Aluminum cladding was installed** to shed water from the exposed back-up walls of the 4-foot high roof parapet walls