



The Wildbrook Development consists of two 12,000-square-foot commercial buildings. Each building consisted of a single-story structure with a steep slope roofing system. The buildings were clad in brick masonry over partially grouted concrete masonry load-bearing back-up walls. The roof assembly consisted of light-gauge galvanized steel trusses, oriented strand board sheathing, and asphalt shingles.

While the south building was under construction, the roof structure collapsed during a high wind event. This also resulted in collapse and/or damage to most of the masonry walls. Wind gusts on the day of the collapse varied from 30 to 35 miles per hour.

At the time of the collapse, all of the roof trusses were in place and only the east half of the roof had been sheathed. In addition, no temporary masonry wall braces had been installed. As such, the unbraced masonry walls were inadequate to support the wind loads imposed on them from the incomplete roof diaphragm.

BTC reviewed the remaining masonry walls and provided recommendations for repair and replacement based on the extent of the damage.

During installation of replacement roof trusses, another partial roof collapse occurred. However, masonry wall braces were in place at the time and only minor damage to the walls occurred. The partial collapse of the roof trusses was attributed to lack of temporary construction bracing.

Project Name:
*Roof Collapse Investigation
Wildbrook Commercial Building*

Project Location:
Prospect Heights, Illinois

Client:
Maemar, PC

Approximate Construction Cost:
Not Available

Year Completed:
2006

Nature of Services:
Forensic Investigation

