



Glenside Public Library is a 2-story structure originally constructed in 1982. The library underwent major renovations in 2002 which included the construction of an addition. The meeting room at the building was constructed as part of the 2002 addition. Condensation and moisture related issues had been a concern within the meeting room interior space for many years. Therefore, the Library retained BTC to assess the sources of the moisture, and to provide recommendations for repairs.

A multifaceted evaluation protocol was recommended by BTC. The evaluation consisted of review of available drawings, meetings with Library staff to establish the pattern of previous moisture-related events, visual review of interior and exterior building components, infrared thermography, analysis of interior temperature and humidity data over a 2-week period, and hygrothermal analysis using WUFI commercial software.

During the visual review, evidence of condensation such as water droplets on aluminum curtain wall framing members and water staining on interior finishes was observed. BTC also observed potential paths of bulk water infiltration. Temperature and relative humidity dataloggers were installed at several interior locations. Analysis of the data indicated high relative humidity within the space. Infrared thermography confirmed surface temperatures lower than interior dew point temperature on several occasions. BTC's WUFI analysis also suggested the potential for condensation within the meeting room. Based on BTC's findings, it was concluded that the moisture issues were primarily related to condensation; however, bulk water infiltration could also occur.

In its report, BTC provided several recommendations to lower interior relative humidity within the meeting room, and to reduce the potential for bulk water and air leakage through exterior walls and roofs.

Project Name:
*Evaluation of Moisture Intrusion,
Glenside Public Library*

Project Location:
*25 East Fullerton Avenue
Glendale Heights, Illinois*

Client:
*Glenside Public Library District
25 East Fullerton Avenue
Glendale Heights, Illinois 60139*

Approximate Construction Cost:
Not Available

Year Completed:
2012

Nature of Services:
*Evaluation of Moisture Intrusion, Infrared
Thermography, and Hygrothermal
Analysis*

