TREMCO™
Roofing and Building Maintenance

ROOF DESIGN – A COMPREHENSIVE APPROACH | Sept 2022

The roof is exposed to the harshest environment versus other parts of the building. The roof is subjected to sun, wind, rain, snow, sleet, ice, hail, temperature extremes, UV degradation and perhaps even harsh chemicals from the local environment or processes within the building. Often the roof is out of sight and out of mind, and therefore, may be subject to neglect or abuse.

"Roofing may be one of the least rewarding aspects of an architect's design program, but it deserves undivided attention or else it can become the most conspicuous of the program's shortcomings". Peter Green *Architectural Record,* m February 1987.

Several key design factors must be considered when designing and specifying a roof assembly. The roof must be designed to:

• Thermal Performance: Provide proper insulation type and thickness for code compliance, reduced energy consumption and occupant comfort.
• Stormwater/Moisture Control: Provide for proper drainage of stormwater; control moisture vapor from inside the building; prevent condensation from forming in the roof assembly.
• Wind: Withstand peak gust required by code and/or insurer.
• Fire: Resist fire in accordance with applicable code and insurance requirements.
• Impact: Resist damage from hail and from punctures from tools dropped by workers.
• Structural Movement: Withstand expansion and contraction of the building.
• Traffic: Withstand foot and equipment traffic by service and maintenance personnel.
• Chemicals and Processes: Resist degradation from chemicals in the local environment and from processes occurring in the building.

A properly designed roof system will provide years of comfort and performance, and your Roofing Design Professional Representative is available to help you navigate the many roofing systems and options available today to find the right solution for you and your building.

Article by Tremco Roofing and Building Maintenance

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