WOOD AND DURABILITY

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Between 2000-2003, newly-demolished buildings were surveyed in Minneapolis-St. Paul. The survey revealed wood buildings have longer lifespans than steel or concrete structures.

75+ years
25-50 years
26-50 years

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DECADES, EVEN CENTURIES, OF RELIABLE SERVICE

When buildings are designed with local climate impacts in mind, wood buildings can last for centuries.

A wooden pagoda in Ying County, Shaxi province, China has been standing strong since 1056.

IT’S ALL ABOUT DESIGN

Good design ensures that wood materials last and weather well in various climates, without unforeseen cost for maintenance or repair.

WOOD BUILDINGS ARE ADAPTABLE

When a building needs changes, wooden structures are easily modified. Reclaimed wood retains both sequestered carbon and its value as a building material.

This enables architects to also assume the role of curators, not just creators of the built environment.

DESIGN PROTECTION AND THE BUILDING ENVELOPE

1. DEFLECTION
   Overhangs, cladding and sealants combine to “deflect” wind-driven rain.

2. DRAINAGE
   Wind-driven rain penetrates beyond cladding and sealants, but is “drained” and returned to the exterior.

3. DRYING
   Minimal wind-driven rain—and other residual moisture retained within wall assembly—is “dried” by vapor diffusion and air movement.

4. DURABLE MATERIALS
   Durable sill plate of treated wood material is capable of retaining small amounts of moisture until drying occurs.

RESEARCH & RESOURCES

Stay informed with the latest research and resources on durability:

- Think Wood Research Library
- CEU: Designing for Durability
- Guideline on Durability in Buildings: CSA S478-95
- Building Green with Wood Toolkit
- American Wood Council: Design of Wood Frame Structures for Permanence
- WoodWorks: Wood-Frame Schools—Durability Techniques for Interior High Traffic and Moisture Areas

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Photo: Butler Brothers Building | Preservation Alliance of Minnesota

THINK WOOD