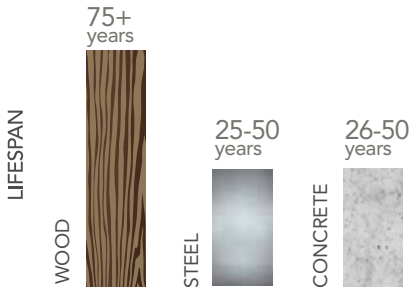


# WOOD AND DURABILITY

## WOOD BUILDINGS ARE DURABLE

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.



## DECADES, EVEN CENTURIES, OF RELIABLE SERVICE

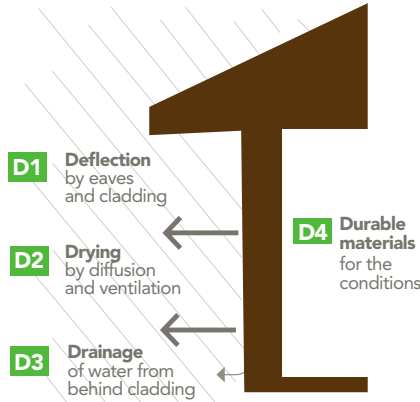


When buildings are designed with local climate impacts in mind, wood buildings can last for centuries.

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

# 1056

## 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.

## 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.

## 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
- Buildings and constructed assets: Service Life Planning ISO 15686-5:2008
- 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

Find these links and learn more about how wood construction creates buildings that endure.

Visit [ThinkWood.com/durability](https://www.thinkwood.com/durability)

# THINK WOOD™

Photo: Butler Brothers Building | Preservation Alliance of Minnesota

SOURCES: Survey on Actual Service Lives for North American Buildings (O'Connor et. al., 2005) | Designing for Durable Wood Construction: The 4 Ds (Hazleden & Morris, 1999)