



MAY 2008

Preservation = Conservation

The greenest building is the one already built.*



As the national focus shifts to global warming and energy conservation, preservationists and environmentalists have found their concerns to be remarkably similar. Related problems of pollution, urban/suburban sprawl, fuel consumption, and full landfills have emphasized the need for sustainability in terms of the built environment. A significant part of the problem is that the modern teardown trend has had a much greater impact on our well-being than just the loss of historic architecture and greenspace. In Glen Ellyn alone there have been 635 residential teardowns since 1993. Given that the demolition of one 2000 square foot bungalow generates about 120 tons of waste; our village has added at least 76,200 tons of this type of waste to the environment, some of it toxic, such as lead paint dust and asbestos. In addition, a 5,000 square foot replacement home generates an average of 10 tons of construction waste, bringing the total to 130 tons (260,000 pounds) from just one project. It is estimated that in Glen Ellyn approximately 60%

of the total waste going into our dumps each year is from demolition. While the average homeowner is making the effort to reduce, reuse and recycle, for the most part, the building industry is not.

Our built environment has a considerable impact on both the use of our national resources and on the quality of our air and water. Based on figures from the U.S. Energy Information Administration, our nation's buildings generate:

- 40% of total energy consumption
- 72% of electricity consumption
- 30% of greenhouse gases
- 39% of carbon dioxide emissions

Given these figures, one might assume that replacing older, historic structures could be beneficial, in light of advancements in engineering, heating, cooling, etc. However, the common perception that older structures are energy inefficient turns out to be a myth. In fact, current
(continued on back)

Embodied Energy Computation

Embodied energy is the sum of all of the energy used to build a house, from acquiring, manufacturing and transporting building materials to the energy needed for the actual construction process. Below is the resulting energy cost to build a new home from an imagined teardown of a typical bungalow.

1916 Craftsman Bungalow
342 Montclair: 2,601 square feet
lot: 14,353 square feet
embodied energy: 18,207,000 BTUs
(equal to 15,832 gallons of gasoline)

2008 New Construction
6,459 square feet allowable for this lot
embodied energy: 4,521,300,000 BTUs
+ embodied energy of former house:
18,207,000 BTUs
+ demolition energy: 8,063,100 BTUs

6,350,063,000 BTUs

The total energy to demolish an existing home and build a new house is equal to 55,218 gallons of gasoline, which, at \$3.40 per gallon, would cost \$187,741.20. Since the average car now uses about 20 gallons per week, this could provide enough fuel for 53 years.

Part of improving the energy efficiency of an older home includes the replacement of the old wood windows, right? Think again.

- Only a small amount of heat loss is transferred through glass. 90% of heat loss in your home is through cracks and small openings, uninsulated attics, etc.
- An old single pane window without storms has an insulation value of R1. A standard double-glazed window has a value of R3. Restoring the old window and adding a storm can bring the old window up to the same R-value as a modern window.
- An Indiana study found that the payback period through energy savings from replacing old windows with modern windows is 400 years.
- New wood windows are made of soft, fast-growth wood and, because of their sealed design, cannot be repaired when the seals fail. This creates an endless cycle of replacement.
- 30% of new windows are replaced in two to ten years.
- Vinyl windows use 40 times more energy in the manufacturing process than wood.
- Aluminum windows use 126 times more energy in the manufacturing process than wood.
- Money used in the restoration of original windows is spent locally, supporting community businesses instead of distant window factories.

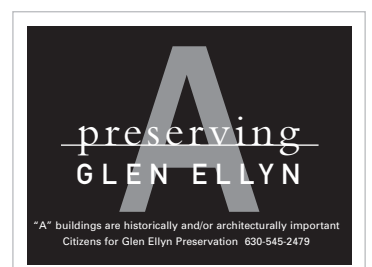
May is Historic Preservation Month

Citizens for Glen Ellyn Preservation is joining thousands of individuals around the country to celebrate 2008 National Preservation Month in May. **"Preservation Matters!"** is the theme of this year's celebration, sponsored by the National Trust for Historic Preservation. Preservation Month provides an opportunity to celebrate the diverse and unique

heritage of our country's cities and states and encourages more Americans to get involved in historic preservation.

Citizens for Glen Ellyn Preservation is again offering to post "A" signs in the yards of historically and/or architecturally significant properties throughout the Village, as identified in the first (2002), and the second

(2007?), phases of the village's Historic Resources Survey, undertaken to identify potential landmarks. We also have Preservation Yard Signs available for sale to other property owners who want to post signs in their yard supporting preservation of the historic character of Glen Ellyn. (see form on reverse side).



*"A" buildings are historically and/or architecturally important
Citizens for Glen Ellyn Preservation 630-545-2479

PRESERVATION (continued from front)

data provides proof that older buildings can be equal in energy efficiency to new ones. With features such as large, operable windows placed cross-wise for ventilation, high ceilings, deep porches and thick, breathable plaster walls, older buildings are both inherently efficient and healthful in design. Built to endure the test of time, they were constructed with old-growth wood that, because of its density and natural oils, can last for centuries, genuine examples of sustainability. By contrast, new fast-growth woods may suffer from rot within only a couple decades, particularly on exteriors or in damp environments. Through projects such as weather-stripping and caulking original windows and doors, and adding storm windows, attic insulation and modern heating and

appliances, older homes can be brought up to current standards while satisfying the needs of contemporary life at far less expense than reconstruction. These basic improvements can reduce energy consumption by as much as 25%.

Typically, older homes were built of local materials that did not require long distance hauling, which adds to the energy expenditure of construction. Actually, this is an important part of what is known as *embodied energy*, that is, the full measure of energy expended in the harvest, manufacture, and transportation of materials, as well as the energy that was used during the construction process of each standing building. Therefore, the full measure of energy use in new construction includes the embodied energy lost in the

demolition of the structure that it replaces. According to Mike Jackson, chief architect of the Illinois Historic Preservation Agency, even with the most energy-efficient type of construction, if it includes the demolition of an older structure, a new residential building may not begin saving energy for close to 28 years, and energy payback for a commercial building may not start for over 60 years.

Quite the reverse, green retrofitting of historic buildings begins immediate payback to both the environment and the pocketbook with the additional benefit of preserving the character of our communities. This makes preservation the very essence of conservation.

**quote by architect Carl Elefante in 2007 Forum Journal, publ: National Trust*

Watch for a special Citizens for Glen Ellyn Preservation Seminar on Green Building this fall.

PO Box 454
Glen Ellyn, IL 60138

Citizens for Glen Ellyn Preservation

Please join us at our monthly meetings on the first Thursday of each month from 7:30 p.m. to 9:00 p.m. at Faith Lutheran Church, 41 N. Park Boulevard, Glen Ellyn.

For more information

Contact Chris Wilson at 630.469.7924 or visit us online, www.glenellynpreservation.org.

Officers Chris Wilson, President
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CALL FOR MEMBERSHIP

We need you!

Please join other interested citizens in helping preserve the historic character of Glen Ellyn. Your membership dues will help us keep in regular communication with citizens who share our philosophies. Dues and contributions also provide the seed money we need to raise other funds, and keep the organization growing.

Please make checks payable and send dues to: Citizens for Glen Ellyn Preservation, PO Box 454, Glen Ellyn, IL 60138.

To purchase a membership online go to www.glenellynpreservation.org.

We are a 501(c)(3) non-profit organization which means that your membership fee or donation will be tax deductible.

Annual Membership Dues

- Individual \$15
- Dual or Family \$25
- Student \$7.50
- Senior Citizen (over 65) \$7.50
- Charter Member \$150
- Non-profit Organization \$50
- Corporate Member \$100

Name _____

Address _____

City/State/Zip _____

Phone _____

E-mail _____

Preserving Glen Ellyn Sign

- Plastic Corrugated Sign with Stand \$32



Preserving Glen Ellyn signs, which are available for purchase, signify homeowners who desire to promote and preserve the historic character of Glen Ellyn.