



Creating models of sustainability in urban places

I WAS pondering the word “sustainability” last week while working on a project near St. Louis. We had been hired to take a barn down for the Collinsville Area Recreational District (C.A.R.D.). This particular barn was probably built around 1820 and most likely remodeled extensively in the 1860s.

The original structure was hewn white oak (including all braces, joists etc); the remodel was of white pine. The older oak portion of the frame was built with small dimension timbers (nothing larger than a 6 x 8) of local origin. By contrast, some of the roof sheathing and flooring included boards up to 30 in. wide and 16 ft. long: material regularly produced from the large white pine growing in Wisconsin and Michigan, up to 750 miles away from St. Louis. Of all the old-growth pine forests in the U.S., of which there used to be almost 3,200,000 hectares (over 7.9 million acres), as much as 2,026,000 hectares were located in the upper Midwest—63% of the nation’s total old-growth white pine forests, today mostly on the endangered list due to deforestation (www.ancient-forest.org). This deforestation occurred in a relatively short time, from the mid- to the late-1800s.

Sustainability is often thought of as an attempt to provide the best outcomes for the human and natural environments both now and into the indefinite future. Or, as defined by the Brundtland Commission, “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (www.sustainablemeasures.com).

What makes me think of sustainability when dismantling a barn, especially one that will be re-erected as a barn? I think of how structures can be built well enough to meet the demands of the present and the future. I also consider the materials used in structures and their impact on the local (or non-local) environment.

Last year we erected another dismantled barn for



My daughter Ari in front of the first barn we built for C.A.R.D. To the left is the herb garden. The silo is hand poured from the early 20th century, rare these days.

C.A.R.D. That structure was built in 1868, mostly of Wisconsin red and white pine in E. Peoria, Ill., where most local timber had already been cut down and the area was suffering a wood shortage. Peoria was first explored and documented in 1673 and founded in 1813. There was plenty of time for a resource-hungry population to exploit the local materials and be forced to look elsewhere (www.state.il.us/hpa).

The early-1800s barn we just dismantled for C.A.R.D. near St. Louis came from trees that may have been no older than 75 years. Like Peoria, St. Louis had been explored and documented in 1673 and founded in 1764. The barn was just a few miles from the bluffs overlooking the Mississippi and the very large Native American settlement of Cahokia Mounds (the largest earthen structure in the New World, with a peak population of 40,000).

<p>PLANER</p>	<p>NOTCHER</p>	<p>BAND SAW</p>	<p>DRILL GUIDES</p>	<p>MORTISER</p>
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When the barn was built, the area already had a long history of pre-European settlement and resource use by Native Americans (www.en.wikipedia.org/wiki/Cahokia).

C.A.R.D., like other community groups we have worked for, is interested in preserving local heritage. Unlike some community groups, though, they are pursuing sustainability in an area exploding with urban growth. As the 19th-century farm landscape gets swallowed up by the industrial agricultural landscape, which in turn is getting devoured by the urban landscape, C.A.R.D. attempts to preserve aspects of early 20th-century farmscapes and demonstrate how small farms as well as the barns and buildings on them can be both sustainable and self-supporting.

(For more on C.A.R.D.'s Willoughby Farm project, see www.collinsvillerec.com/Farm.html.)

Over the years, I have restored many buildings (with lots of help from too many people to list) of varying shape, purpose, and design. Often, these buildings end up in museums, act as town showpieces, or serve in adaptive re-use (such as homes). Once or twice a year, though, the opportunity for the restoration of a building occurs with the original purpose upheld. How satisfying, to see the building continue its intended purpose.

I believe that good restoration is sustainability. Even though many new materials may be used in restoration,

much is original. And what can be more sustainable than using labor (and fewer products rich in the use of fossil fuels) to achieve a shelter, rather than resource-heavy methods? Restoration takes a lot of labor and, if we keep it simple, local resources. We have seen the environment (and landscape) change due to civilization's needs over the last several thousand years of human habitation in the Americas, forcing people to use non-local resources

(such as white pine for the decking and flooring of our current dismantle) when local resources have been depleted.

If we are to provide "the best outcomes for the human and natural environments both now and into the future," shouldn't we remind ourselves about

both the follies and the wisdom of the past? In the U.S. and Canada, currently over 76% of the population lives in an urban area, and by 2030 as much as 84% of the population will be living in areas classified as urban areas (www.un.org/esa/population/pubsarchive/ura/wracht1.htm).

This May 23, for the first time in human history, the earth's population was more urban than rural. This tipping point occurred in the U.S. as early as 1910 (www.news.ncsu.edu/releases/2007/may/104.html). With the population moving to cities and urban areas, it is clear that we need not just green spaces in urban areas but



They live in caves, in abandoned housing, under bridges, and in shanties built with whatever they can find. They have no wiring, plumbing, or heating. They live in Mongolia, Darfur, Ethiopia, Afghanistan—and everywhere. They are the poor and marginalized of our common humanity.

They live in an existential black hole.

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My goal is to set up a timber frame shop dedicated to turning out thousands of small, rugged frames and giving them to the reputable NPOs whose leaders and workers risk (and sometimes lose) their lives in the most dangerous places on earth, simply to help them. My vision is to establish this project to last as long as the frames themselves.

For more information, to indicate your interest in taking part, or for donations, please reach:

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