

## ***Sustainability Begins with Preservation***

Cleveland Restoration Society

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Donovan D. Rypkema

Thank you. I am most pleased to be invited to Cleveland today. For those of you who may not know it, the Cleveland Restoration Society is one of the premier local historic preservation organizations in America. And your executive director, Kathleen Crowther, is highly regarded nationally by the preservation movement in general and her professional peers in particular. You are fortunate to have her.

One of the reasons that this organization is so admired is its long history of garnering support from the breadth of Cleveland including business, the public sector, the design professions, the financial community, environmentalists, foundations, and neighborhood groups in addition to traditional preservationists. The Cleveland Restoration Society is the model that most preservation organizations around the country try to emulate.

I am most pleased to have been invited to participate in this event. And the specific topic assigned to me – Heritage and Sustainability – is absolutely a most critical one. Two years ago about now, I was in Barcelona to attend the World Urban Forum. The World Urban Forum is UN Habitat's biennial gathering of people from around the world who are dealing with issues of cities.

In Barcelona there were 5000 people from 150 or so countries. During the week there were perhaps 300 sessions – workshops, plenary addresses, panel discussions – and, of course, thousands of less formal interactions. Not surprisingly, the most common phrase coming out of those sessions was *sustainable development*. But you know what the second most common phrase was? *heritage conservation*. There were perhaps a dozen or so sessions specifically about heritage conservation, so hearing the phrase there was no surprise. But *heritage conservation* permeated the discussions in sessions that on the surface weren't about historic preservation at all – sessions about economic competitiveness, job creation, housing, public private partnerships and social cohesion.

Much of the world has begun to recognize the interrelationship and the interdependency between sustainable development and heritage conservation.

Much of the world, but much less so in the United States. I'm not so sure we've really learned those lessons in America, or at least we have not yet broadly connected the dots. Far too many advocates in the US far too narrowly define what constitutes sustainable development. Far too many advocates in the US think that so-called green buildings and sustainable development are one in the same. They are not. And I'll come back to that shortly.

But let me give you an example of what I mean.

A while ago in Boulder, Colorado, a homeowner in a local historic district made an application to paint the window sashes and trim on his house and approval was given that day. Two weeks later the Landmarks Commission learned that the historic windows had all been removed – a clear violation of the local ordinance – and had been replaced with new windows. This was done, by the way, by contractor who claims to specialize in “ecologically sound materials and methods” and bills himself as “Boulder’s greenest contractor.”

The Landmarks Commission staff sent a letter directing that the original windows be retained and their condition documented. The contractor responded by saying that the greater energy efficiency of the new windows should outweigh the regulations that apply to houses within the historic district. A subsequent Commission hearing upheld the staff position and a City Council hearing supported the Commission’s ruling.

Here’s the next chapter – a reporter for a local alternative newspaper talked to the property owner, and then decided to take matters into his own hands. He went to the house, picked up all the historic windows, took a sledge hammer to them, then took them to the dump and arranged to have a bulldozer run over them. Sort of civil disobedience for an 11 year old’s mentality.

Now I want to stop the story for just a minute. I’m not even so sure that the Landmark Commission’s decision was the right one. But I’m telling you the story to demonstrate our ignorance about what sustainable development really is.

First from an environmental perspective:

1. The vast majority of heat loss in homes is through the attic or uninsulated walls, not windows.
2. Adding just 3 1/2 inches of cheap fiberglass insulation in the attic has three times the R factor impact as moving from the least energy efficient single pane window with no storm window to the most energy efficient window.
3. Properly repaired historic windows have an R factor nearly indistinguishable from new, so-called, “weatherized” windows.
4. Regardless of the manufacturers’ claims about 20 and 30 year lives, thirty percent of the windows being replaced each year are less than 10 years old, and many only two years old.
5. One Indiana study showed that the payback period through energy savings by replacing historic wood windows is 400 years.
6. The Boulder house was built over a hundred years ago, meaning that those windows were built from hardwood timber from old growth forests. Environmentalists go nuts about cutting trees in old growth forests, but what’s the difference? Destroying those windows represents the destruction of the same scarce resource.
7. The diesel fuel used to power the bulldozer to run over the windows in all likelihood consumed more fossil fuel that would be saved over the lifetime of the replacement windows.
8. Finally, the energy consumed in manufacturing vinyl is 40 times more than in producing wood for use. And if they were aluminum windows? 126 times more energy used in manufacture than for wood.

The point that I'm trying to make is this – sustainable development is about, but it not only about, environmental sustainability. There is far more to sustainable development than green buildings.

- Repairing and rebuilding the historic wood windows would have meant that the dollars were spent locally instead of at a distant window manufacturing plant. That's economic sustainability, also part of sustainable development.
- Maintaining as much of the original fabric as possible is maintaining the character of the historic neighborhood. That's cultural sustainability, also part of sustainable development.

But if we don't yet get it in the United States, others do. There's an international real estate consulting firm based in Great Britain – King Sturge – that has been at the forefront in broadening the concept of sustainable development. Their framework of sustainable development certainly includes environmental responsibility but also economic responsibility and social responsibility. I'm going to take the liberty of expanding the third category into social and cultural responsibility.

They further identify these important nexus: for a community to be viable there needs to be a link between environmental responsibility and economic responsibility; for a community to be livable there needs to be a link between environmental responsibility and social responsibility; and for a community to be equitable there needs to be a link between economic responsibility and social responsibility.

When we begin to think about sustainable development in this broader context the entire equation begins to change – and includes more than simply, “Does this building get a LEED gold certification” or “Is that development making sure that the habitat of the snail darter isn't being compromised?”

When we begin to think about sustainable development in this broader context the role of heritage conservation in sustainable development becomes all the more clear.

Let's start with the environmental responsibility component of sustainable development. How does heritage conservation contribute to that?

Well, we could begin with the simple area of solid waste disposal. In the United States, almost one ton of solid waste per person is collected annually. Solid waste disposal is increasingly expensive both in dollars and in environmental impacts.

So let me put this in context for you. You know we all diligently recycle our Coke cans. It's a pain in the neck, but we do it because it's good for the environment. Here is a typical building in a North American downtown – 25 feet wide and 100 or 120 or 140 feet deep. Let's say that today we tear down one small building like this in your downtown. We have now wiped out the entire environmental benefit from the last 1,344,000 aluminum cans that were recycled. We've not only wasted an historic building, we've wasted months of diligent recycling by the good people of our

community. And that calculation only considers the impact on the landfill, not any of the other sustainable development calculations like the next one on my list – embodied energy.

I have to confess that I hadn't paid much attention to the concept of embodied energy, not until I saw oil hitting \$70 a barrel. So I did a bit of research. *Embodied energy* is defined as the total expenditure of energy involved in the creation of the building and its constituent materials. When we throw away an historic building, we are simultaneously throwing away the embodied energy incorporated into that building. How significant is embodied energy? In Australia, they've calculated that the embodied energy in the existing building stock is equivalent to ten years of the total energy consumption of the entire country.

So much of the "green building" movement focuses on the annual energy use of a building. But the energy embodied in the construction of a building is 15 to 30 times the annual energy use.

Razing historic buildings results in a triple hit on scarce resources. First, we're throwing away thousands of dollars of embodied energy. Second, we are replacing it with materials vastly more consumptive of energy. What are most historic houses built from? Brick, plaster, concrete and timber. What are among the least energy consumptive of materials? Brick, plaster, concrete and timber. What are major components of new buildings? Plastic, steel, vinyl and aluminum. What are among the most energy consumptive of materials? Plastic, steel, vinyl and aluminum. Third, recurring embodied energy savings increase dramatically as a building life stretches over fifty years. You're a fool or a fraud if you say you are an environmentally conscious builder and yet are throwing away historic buildings, and their components.

Let me put it a different way – if you have a building that lasts 100 years, you could use 25% more energy every year and still have less lifetime energy use than a building that lasts 40 years. And a whole lot of buildings being built today won't last even 40 years.

The World Bank has specifically related the concept of embodied energy with historic buildings saying, "...the key economic reason for the cultural patrimony case is that a vast body of valuable assets, for which sunk costs have already been paid by prior generations, is available. It is a waste to overlook such assets."

On the commercial side if we want to begin to mitigate the endless expanse of strip center sprawl it is critical that we have effective programs of center city revitalization. Throughout America over the last decade, we have seen downtowns come back and reclaim their historic role as the multifunctional, vibrant, heart of the city. Now this is the area where I do most of my work. I typically visit 100 downtowns a year of every size, in every part of the country. But I cannot identify a single example of a sustained success story in downtown revitalization where historic preservation wasn't a key component of that strategy. Not a one. Conversely, the examples of very expensive failures in downtown revitalization have nearly all had the destruction of historic buildings as a major element. That doesn't mean, I suppose, that it's not theoretically possible to have downtown revitalization and no historic preservation, but I haven't seen it, I haven't read of it, I haven't heard of it. Now the relative importance of preservation as part of the downtown revitalization effort will vary some, depending on the local resources, the age of the city, the

strength of the local preservation advocacy groups, and the enlightenment of the leadership. But successful revitalization and no historic preservation? It ain't happening.

The closest thing we have to a broad-based sustainable development movement is known as Smart Growth. There is no movement in America today that enjoys a more widespread support across political, ideological, and geographical boundaries than does *Smart Growth*. Democrats support it for environmental reasons, Republicans for fiscal reasons, big city mayors, rural county commissioner, there are Smart Growth supporters everywhere. The increasing public volume and political expenditures of Smart Growth's opponents is in direct relationship to Smart Growth's broad and growing support.

The Smart Growth movement also has a clear statement of principles, and here it is:

- Create range of housing opportunities and choices
- Create walkable neighborhoods
- Encourage community and stakeholder collaboration
- Foster distinctive, attractive places with a Sense of Place
- Make development decisions predictable, fair, and cost effective
- Mix land uses
- Preserve open space, farmland, natural beauty and critical environmental areas
- Provide variety of transportation choices
- Strengthen and direct development toward existing communities
- Take advantage of compact built design.

But you know what? If a community did nothing but protect its historic neighborhoods it will have advanced every Smart Growth principle. Historic preservation IS Smart Growth. A Smart Growth approach that does not include historic preservation high on the agenda is not only missing a valuable strategy, but, like the historic buildings themselves, an irreplaceable one. A Smart Growth approach that does not include historic preservation high on the agenda is stupid growth, period.

Heritage conservation is vital to sustainable development, but not just on the level of environmental responsibility. Remember that the second component of the sustainable development equation was economic responsibility. So let me give you some examples in this area.

A frequently underappreciated component of historic buildings is their role as natural incubators of small businesses. It isn't the Fortune 500 who are creating the net new jobs in America. 85% of all net new jobs are created by firms employing less than 20 people. One of the few costs firms of that size can control is occupancy costs – rents. In both downtowns but especially in neighborhood commercial districts a major contribution to the local economy is the relative affordability of older buildings. It is no accident that the creative, imaginative, small start up firm isn't located in the corporate office "campus" the industrial park or the shopping center – they simply cannot afford the rents there. Older and historic commercial buildings play that role, nearly always with no subsidy or assistance of any kind.

Pioneer Square in Seattle is one of the great historic commercial neighborhoods in America. The business management association there did a survey of why Pioneer Square businesses chose that neighborhood. The most common answer? That it was a historic district. The second most common answer? The cost of occupancy. Neither of those responses is accidental.

While I'm often introduced as a preservationist, what I really am is an economic development consultant. At the top of the list for economic development measurements are jobs created and increased local household income. The rehabilitation of older and historic buildings is particularly potent in this regard. As a rule of thumb, new construction will be half materials and half labor. Rehabilitation, on the other hand, will be sixty to seventy percent labor with the balance being materials. This labor intensity affects a local economy on two levels. First, we buy an HVAC system from Michigan and lumber from Oregon, but we buy the services of the plumber, the electrician, and the carpenter from across the street. Further, once we buy and hang the sheet rock, the sheet rock doesn't spend any more money. But the plumber gets a hair cut on the way home, buys groceries, and joins the YMCA – each recirculating that paycheck within the community.

Many people think about economic development in terms of manufacturing, so let's look at that. For the average manufacturing concern in Ohio for every million dollars of production, 25.6 jobs are created. A million dollars spent in new construction generates 36.7 jobs. But that same million dollars in the rehabilitation of an historic building? 38.5 jobs.

A million dollars of manufacturing output in Ohio will add, on average about \$598,000 to local household incomes. A million dollars in new construction -- \$766,000. But a million dollars of rehabilitation? Over \$855,000. Now of course the argument can be made, "Yeah, but once you've built the building the job creation is done." Yes, but there are two responses to that. First, real estate is a capital asset – like a drill press or a boxcar. It has an economic impact during construction, but a subsequent economic impact when it is in productive use. Additionally, however, since most building components have a life of between 25 and 40 years, a community could rehabilitate 2 to 3 percent of its building stock per year and have perpetual employment in the building trades.

I know that trade policy and NAFTA was a big issue in the election this year in Ohio. Estimates are that Ohio has lost around 5200 jobs a year as a result of NAFTA. But just the tax act historic preservation projects in Ohio last year generated over 1100 more jobs than were lost through NAFTA. And in most states, tax act projects are a third or less of the total amount of historic preservation activity. And these jobs can't be shipped overseas. Nor are they jobs that exist only as a result of self-defeating protectionism.

Now there are some economists and politicians who would argue that in economic down turns public expenditures should be made to create employment. And I'm certainly not going to argue with that. And as you all know, among politicians' favorite forms of public works is building highways.

David Listokin at the Center for Urban Policy Research at Rutgers has calculated the relative impact of public works. Let's say a level of government spends \$1 million building a highway. (And these days that means a highway not quite the length of this room) but anyway a million dollar highway –

what does that mean? 34 jobs, \$1.2 million in ultimate household income, \$100,000 in state taxes and \$85,000 in local taxes.

Or we could build a new building for \$1 million. 36 jobs, \$1,223,000 in household income, \$103,000 in state taxes and \$86,000 in local taxes. Or we could spend that million rehabilitating an historic building. 38 jobs, a million three in household income, \$110,000 in state taxes and \$92,000 in local taxes. Now you tell me which is the most economically impacting in public works projects.

Other areas where historic preservation adds to the economic responsibility of sustainable development include heritage tourism. Wherever heritage tourism has been evaluated, a basic tendency is observed: heritage visitors stay longer, spend more per day and, therefore, have a significantly greater per trip economic impact.

Perhaps the area of preservation's economic impact that's been studied most frequently is the effect of local historic districts on property values. It has been looked at by a number of people and institutions using a variety of methodologies in historic districts all over the country. The most interesting thing is the consistency of the findings. Far and away the most common result is that properties within local historic districts appreciate at rates greater than the local market overall and faster than similar non-designated neighborhoods. Of the several dozen of these analyses, the worst-case scenario is that housing in historic districts appreciates at a rate equivalent to the local market as a whole.

Like it or not we live in an economically globalized world. To be economically sustainable it's necessary to be economically competitive. But to be competitive in a globalized world a community must position itself to compete not just with other cities in the region but with other cities on the planet. And a large measure of that competitiveness will be based on the quality of life the local community provides, and the built heritage is a major component of the quality of life equation. This is a lesson that is being recognized worldwide.

From the Inter American Development Bank we get, "As the international experience has demonstrated, the protection of cultural heritage is important, especially in the context of the globalization phenomena, as an instrument to promote sustainable development strongly based on local traditions and community resources."

Certainly among the most competitive cities in the world is Singapore. But here's what Belinda Yuan of Singapore National University says, "...the influences of globalization have fostered the rise of heritage conservation as a growing need to preserve the past, both for continued economic growth and for strengthening national cultural identity."

What neither the supporters nor the critics of globalization understand is that there is not one globalization but two – economic globalization and cultural globalization. For those few who recognize the difference, there is an unchallenged assumption that the second is an unavoidable outgrowth of the first. Economic globalization has widespread positive impacts; cultural globalization ultimately diminishes us all. It is through the adaptive reuse of heritage buildings that a community can actively participate in the positive benefits of economic globalization while simultaneously mitigating the negative impacts of cultural globalization.

So there are some ways that heritage conservation contributes to sustainable development through environmental responsibility and through economic responsibility. But I saved the third area – cultural and social responsibility – for last, because in the long run it may well be the most important.

First, housing. In the United States today we are facing a crisis in housing. All kinds of solutions – most of them very expensive – are being proposed. But the most obvious is barely on the radar screen – quit tearing down older and historic housing. Houses built before 1950 disproportionately are home to people of modest resources – the vast majority without any subsidy or public intervention of any kind. So you take these two facts – there is an affordable housing crisis and older housing is providing affordable housing and one would think, “Well, then, a high priority must be saving that housing stock.” Alas, not so.

In the last three decades of the 20<sup>th</sup> century, we lost from our national inventory of older and historic homes 6.3 million year-round housing units! Over 80 percent of those units were single-family residences. Now a few of those burned down or were lost to natural disasters. But the vast majority of them were consciously torn down – were thrown away as being valueless. And today millions of American families are paying the cost by paying for housing they cannot afford. Certainly not every one of those houses could or should have been saved. But if even half were retained instead of razed, the picture today would be much different for the millions of Americans inadequately or unaffordably housed.

For the last thirty years, every day, seven days a week, 52 weeks a year we have lost 577 older and historic houses. For our most historic houses – those built before 1920 – in just the decade of the 1990s, 772,000 housing units were lost from our built national heritage.

But when there are policies to conserve older housing stock, we are meeting the social responsibility of sustainable development.

But at least as important as the affordability issue is the issue of economic integration. America is a very diverse country – racially, ethnically, educationally, economically. But on the neighborhood level, our neighborhoods are not diverse at all. The vast majority of neighborhoods are all white or all black, all rich or all poor. But the exception – virtually everywhere I’ve looked in America – is in historic districts. There rich and poor, Asian and Hispanic, college educated and high school drop out, live in immediate proximity, are neighbors in the truest sense of the word. That is economic integration and sustainable cities are going to need it.

Earlier I mentioned the labor intensity of historic preservation and the jobs it creates as part of the economic component of sustainable development. But I want to mention it again in the social context. Those aren’t just jobs. They are good, well-paying jobs, particularly for those without formal advanced education. That too should be part of our social responsibility within sustainable development.

I told you that I work in the area of economic development. Economic development takes many forms – industrial recruitment, job retraining, waterfront development, and others. But historic

preservation and downtown revitalization are the only forms of economic development that are simultaneously community development. That too is part of our social responsibility.

So I want to return to the premise with which I started. Green buildings are part of, but in no way are a synonym for sustainable development. That is not to say that we should not all be very pleased that preservationists are beginning to try to enlighten the green building people. Preceding the National Trust conference in Pittsburgh a couple of weeks ago was held a National Summit on the greening of historic properties. This was an excellent step forward and I certainly don't have any quarrel with any of their conclusions or recommendations. I am certainly not wedded to the Secretary of the Interiors Standards for the Rehabilitation of Historic Buildings. And if the Secretary's Standards have to be adjusted to be more environmentally sensitive, so be it.

But I am very concerned that in our rush to make nice with the green building people we will forget this is about sustainable development, not about green buildings. Here's this great report. Green buildings mentioned 53 times; sustainable development mentioned exactly zero times.

Of course the big accomplishment of the U.S. Green Building Council is the development of the LEED certification system. In the pilot stage is a checklist for evaluating neighborhood development. And it's fine. 114 total possible points, including up to a gigantic 2 points if it's an historic building. But if you look at the individual line items in the checklist, at least 75% of the goals of those items are automatically met if you rehabilitate an historic building. If we really need such a checklist, it ought to be 200 points and you get 75 points for being an historic building.

I'm not sure we need platinum plaques on pilasters. But if we do, they should be for sustainable development, not for green buildings. And, in fact, just such a checklist has been devised in Great Britain. Using the three elements of sustainable development, this scoring system includes such elements as "functional adaptability", cultural importance, cultural adaptability, lovability, local amenities, and embodied energy as well as energy consumption, ecological attributes, etc. This certainly includes green building attributes, but within a broader sustainable development context.

Environmentalists cheer when used tires are incorporated into asphalt shingles and recycled newspapers become part of fiberboard. But when we reuse an historic building, we're recycling the whole thing. Preservation North Carolina has a bumper sticker that reads, "Historic preservation – the ultimate recycling" and they are absolutely right.

If I still haven't convinced you that the green building approach is insufficient, let me offer this last bit of evidence. As you all probably know, Wal-Mart has begun a big environmental initiative. Now I'm not a Wal-Mart basher, and I think they should be commended for this activity.

But let's say Wal-Mart is so successful, that they are able to build a Super Center that uses no external energy at all – the ultimate green building. But here's where the building is going to be built. In just 15 days, the extra fuel used to get to the Wal-Mart, wipes out the entire savings for the entire year, even if the building itself consumed no energy at all. A huge success as a green building. A huge failure in sustainable development. And in the case of Wal-Mart, in all three categories of sustainable development responsibility.

Finally, I'd ask you to take a moment and think of something significant to you personally. Anything. You may think of your children, or your spouse, or your church, or god, or a favorite piece of art hanging in your living room, or your childhood home, or a personal accomplishment of some type. Now take away your memory. Which of those things are now significant to you? None of them. There can be no significance without memory. Now those same things may still be significant to someone else. But without memory they are not significant to you. And if memory is necessary for significance, it is also necessary for both meaning and value. Without memory nothing has significance, nothing has meaning, nothing has value.

That, I think, is the lesson of that old Zen koan, "If a tree falls in a forest and no one hears, did it make a sound?" Well of course it made a sound; sound comes from the vibration of molecules and a falling tree vibrates molecules. But that sound might as well not have been made, because there is no memory of it.

We acquire memories from a sound or a picture, or from a conversation, or from words in a book, or from the stories our grandmother told us. But how is the memory of a city conveyed? Here's what Italo Calvino writes, "The city ... does not tell its past, but contains it like the lines of a hand, written in the corners of the streets, the gratings of the windows, the banisters of the steps, the antennae of the lightening rods, the poles of the flags, every segment marked in turn with scratches, indentations, scrolls."

The city tells its own past, transfers its own memory, largely through the fabric of the built environment. Historic buildings are the physical manifestation of memory – and it is memory that makes places significant.

What is the whole purpose of the concept of sustainable development? It is to keep that which is important, which is valuable, which is significant. The very definition of sustainable development is "...the ability to meet our own needs without prejudicing the ability of future generations to meet their own needs." We need to use our cities, our cultural resources, and our memories in such a way that they are available for future generations to use as well.

Heritage conservation makes cities viable, makes cities livable, makes cities equitable.

I particularly appreciate that the broadened concept of sustainable development is made up of responsibilities – environmental responsibility, economic responsibility, and social responsibility.

This, of course, was an election year. And every side in every race was supported by dozens of advocacy movements. And most of them are "rights" movements: animal rights, abortion rights, right to life, right to die, states rights, gun rights, gay rights, property rights, women's rights, and on and on and on. And I'm for all of those things – rights are good. But I would suggest to you that any claim for rights that is not balanced with responsibilities removes the civility from civilization, and gives us an entitlement mentality as a nation of mere consumers of public services rather than a nation of citizens. A consumer has rights; a citizen has responsibilities that accompany those rights. Historic preservation is a responsibility movement rather than rights movement. It is a movement that urges us toward the responsibility of stewardship, not merely

the right of ownership. Stewardship of our historic built environment, certainly; but stewardship of the meaning and memory of our communities manifested in those buildings as well.

Sustainability means stewardship. There can be no sustainable development without a central role for historic preservation. That's what the Cleveland Restoration Society is doing today, and future generations will thank you for it tomorrow.

Thank you very much.

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PlaceEconomics  
1785 Massachusetts Avenue, NW  
Washington, DC 20036  
202-588-6258  
[DRypkema@PlaceEconomics.com](mailto:DRypkema@PlaceEconomics.com)