

**DRAFT
MEETING SUMMARY**

**U.S. EPA REGION 5
GREEN HISTORIC PRESERVATION SYMPOSIUM
THURSDAY, JANUARY 21, 2010**

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1.0 BACKGROUND AND INTRODUCTION

U.S. Environmental Protection Agency (EPA) Region 5 held the Agency's first Green Historic Preservation Symposium on January 21, 2010, at the historic Columbia Club in Indianapolis, Indiana. Approximately 300 people registered for the 1-day event. Attendees included representatives from government agencies, nonprofit organizations, academic institutions, and experts in the fields of historic preservation and green building. The Symposium stemmed from suggestions and comments EPA staff had received from preservationists, green building experts, and government representatives who expressed frustration about perceived and actual barriers to green historic preservation. In an effort to take action on these comments, EPA conducted interviews with roughly 30 people to confirm the need for a Symposium. The interviews confirmed the need for a Symposium to bring experts and decision makers together in one room to collectively discuss what's working, what's not, what should change, and what role federal agencies including EPA should play. EPA formed a diverse Planning Committee to develop the Symposium agenda and format.

Ms. Yolanda Bouchee, EPA Historic Preservation Specialist and Symposium coordinator, welcomed participants to EPA's first Green Historic Preservation Symposium. She introduced the theme of the Symposium, "what's working, what's not, and what should change" as part of EPA's probe into the Agency's potential role in shaping policies and building partnerships in the field of Green Historic Preservation.

2.0 WELCOMING REMARKS

Senior staff from EPA Region 5 and Indiana Department of Natural Resources (Indiana DNR) presented opening remarks on behalf of their agencies.

2.1 *Welcome from EPA Region 5*

**EPA News Release
(June 16, 2009)**

"U.S. Environmental Protection Agency Administrator Lisa P. Jackson, U.S. Secretary of Transportation Ray LaHood and U.S. Secretary of Housing and Urban Development Shaun Donovan today announced an interagency Partnership for Sustainable Communities to help improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide..."

Mr. James Mayka, Chief, Land Revitalization Branch, EPA Region 5 – on behalf of Bharat Mathur, Acting Regional Administrator, EPA Region 5 – thanked participants for lending their time and expertise to help address "the intersection of Historic Preservation and Green Building." He noted the recent shift of Historic Preservation from its "arcane" niche at EPA to the forefront of the national agenda as a result of President Barack Obama's Sustainable Communities Initiative.

Mr. Mayka highlighted the partnership between U.S. Department of Transportation (DOT), U.S. Department of Housing and Urban Development (HUD), and EPA, which is

aimed at standardizing policies and targeting funding for the benefit of communities.

Mr. Mayka said that, based on information gathered and lessons learned from the Green Historic Preservation Symposium, EPA's steering committee would determine "next steps" in terms of potential policy, process, and other changes to serve the interest of both Historic Preservation and Green Building. He gave assurance that this effort had the full support of Regional Administrator Mathur. He stated the Agency's belief that the preservation of valued buildings helps preserve communities as a whole, as well as protect human health and the environment.

Mr. Mayka said that EPA was eager to listen and learn from experts in the field; and serve as a catalyst for other Federal agencies to bring about change. He noted that sustainability has moved to the forefront of EPA's priorities. He added that, through the Brownfields Program, which is the primary program under EPA's Region 5 Land Revitalization Branch, EPA is involved in 150 communities, where each EPA project officer serves as the Agency's "ambassador" and "conduit" into those communities.

2.2. Welcome from Indiana Department of Natural Resources

Dr. James Glass, Director, Division of Historic Preservation and Archaeology, Indiana DNR – also Deputy State Historic Preservation Officer for Indiana – welcomed the audience on behalf of Mr. Robert Carter, Indiana State Historic Preservation Officer and Director, Indiana DNR. He noted Ms. Bouchee's report that 292 people had registered for the Symposium, from Indiana and across the Midwest. He commended EPA Region 5 for involving the steering committee and others in planning the event, and for the Agency's leadership in facilitating such a dialogue. He acknowledged that State Historic Preservation Offices (SHPOs) have been working for a long time with Federal agencies, developers, and local communities on the issue of "sustainability through rehabilitation of existing structures."

Dr. Glass introduced the significance of the historic Columbia Club, "one of downtown Indianapolis's most distinguished landmarks," which began as the meeting place for The Benjamin Harrison Marching Society that supported the former President's bid for Office in 1888. He stated that the venue then became a club for supporters of the Republican Party and a center for politics, business, and social events. Dr. Glass noted that every Republican President since Mr. Harrison had visited the Columbia Club. He said the current building, the third Club House on the site, was completed in 1924. It was designed by Indianapolis architects Mr. Preston Rubush and Mr. Edgar Hunter. Dr. Glass highlighted the plastic gargoyles in the Grand Lobby and the paintings throughout the Columbia Club that featured the work of the Hoosier Group of Indiana artists.

Dr. Glass reported that the Columbia Club now hosts a diverse membership, even including Democrats. He said that in 1983, the building was listed in the National Register of Historic Places because of its historic, architectural, and artistic significance.

3.0 PURPOSE OF SYMPOSIUM

Ms. Bouchee and Mr. James Van Der Kloot, EPA Region 5, described the goals that EPA hoped to achieve at the Green Historic Preservation Symposium.

Ms. Bouchee noted that 2009 was a year that many historic preservation organizations started focusing their priorities and efforts on sustainability. She recognized the critical role that Green Historic Preservation could play in addressing the goals of energy efficiency, climate change, and green building. She also noted, however, the general perception at EPA that historic preservation and green building “don’t always mesh smoothly.” She reported stakeholder concerns about “silos of communication” and differing viewpoints among those who deal with historic properties. Ms. Bouchee expressed hope that the day’s dialogue would reveal the reality of this perception, stressing that her focus was to identify and view challenges as opportunities rather than problems.

Mr. Van Der Kloot explained that EPA wanted to focus on listening closely to those directly involved in the field. As an example, he said that this “listening” approach had been applied to Brownfields policy, which resulted in changes in various State and Federal laws, policies, and procedures. He described the general steps of the approach, shown below.



Ms. Bouchee thanked members of the steering committee who represented the following stakeholder organizations:

- National Trust for Historic Preservation
- HUD
- Illinois Historic Preservation Agency
- Indiana Historic Landmarks Foundation
- Ohio Department of Development
- APEX Direct, Inc.
- Michigan State Housing Development Authority
- Sustainable Solutions
- Restoric, LLC
- Preservation Chicago
- City of Chicago
- Indiana DNR
- Historic Chicago Bungalow Association
- Landmarks Illinois

Mr. Van Der Kloot noted that it was an opportune time to discuss Green Historic Preservation because of the potentially significant impact of climate change on building policies. He gave the example of the City of Chicago, which developed an aggressive plan to address climate change that involved energy efficient retrofits of 400,000 homes and 90,000 commercial buildings. He stressed the importance of engaging in early dialogues about Green Historic Preservation to ensure that it is considered in similar actions across the country.

Mr. Van Der Kloot articulated EPA’s desire to ensure that “only positive consequences and no unintended negative consequences” emerge from these activities. He provided several examples of areas that have been recently been prioritized in large part because of the nation’s “enthusiastic new Administration.” These examples, Mr. Van Der Kloot explained, are being supported by Federal stimulus money and have aspects of Green Historic Preservation, including weatherization efforts of HUD and U.S. Department of Energy (DOE); alternative energy research by DOE; efforts to achieve sustainable communities under the HUD-DOT-EPA partnership; and work by EPA Regions in addressing lead in indoor environments.

4.0 STATUS AND FUTURE TRENDS IN GREEN HISTORIC PRESERVATION

Ms. Patrice Frey, Director of Sustainability Research, National Trust for Historic Preservation (National Trust), delivered a PowerPoint presentation on “where we’ve been and where we’re going” in the field of Green Historic Preservation.

4.1 *Where We’ve Been*

Ms. Frey reviewed the history of the preservation movement in the United States. To demonstrate how the public view of historic buildings has evolved in recent years, she showed two pictures from a clipping of a Cartier advertisement from The New York Times: (1) a 1970s sketch of the jeweler’s 5th Avenue mansion in New York as part of its advertising and branding, representing an era that recognized the social, cultural, and economic value of historic buildings; and (2) another illustration of the Cartier building as a gasoline can in the 1980s, representing an increasing awareness of the environmental value of historic buildings.

Ms. Frey demonstrated the reality of global warming by showing 1979 and 2007 satellite imagery from the National Aeronautics and Space Administration (NASA) of the melting polar ice caps in the Arctic. She then showed a map from the Happy Planet Index that illustrated resource use around the world. She noted that, according to the map, people living in the U.S. use “between 4 and 5 planets worth of resources every year.”

“When the preservation movement began ... it was really about the preservation of iconic, landmark, quality buildings. We’ve seen that evolve in recent years.”
-- Ms. Patrice Frey

Ms. Frey cited over-consumption of natural resources as the primary environmental problem. She referred to a 2009 EPA report, *Sustainable Materials Management*, that examined the issue of resource use and climate change. She highlighted the following relevant findings from the report:

- In the past 50 years, humans have consumed more natural resources than in all previous history.
- In 1900, 41 percent of the materials used in the U.S. were renewable; by 1995, only 6 percent of materials consumed were renewable.

- Our reliance on minerals as fundamental ingredients in the manufactured products used in the U.S. requires the extraction of more than 25,000 pounds of new non-fuel minerals per capita each year.
- According to the World Resources Institute, “one half to three quarters of annual resource inputs to industrial economies is returned to the environment as waste within just one year.”

She described the EPA study as examining 480 different materials, products, and services in the American economy and breaking them down into categories of resource use. She noted that after electric services (e.g., mining and combustion of coal), new construction (e.g., commercial and residential buildings) is the second leading contributor to global warming. She stated that more emphasis and focus should be placed on the energy and resources that go into buildings, in addition to the energy that buildings use.

Ms. Frey referred to a study by the Brookings Institution that estimates that 27 to 28 percent of the existing building stock in the U.S. will be demolished and reconstructed between 2005 and 2030. She noted that such demolition would create a tremendous amount of waste.

She explained that the purpose of the National Trust is to “get people to think about the value of existing buildings.” She described the organization’s four principles (i.e., “the four R’s”):

<p>Principles of Smart Growth</p> <ul style="list-style-type: none"> • Create Range of Housing Opportunities and Choices • Create walkable neighborhoods • Encourage Community and Stakeholder Collaboration • Foster Distinctive, Attractive Communities with a Strong 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 a Variety of Transportation Choices • Strengthen and Direct Development Towards Existing Communities • Take Advantage of Compact Building Design <p>(Source: www.smartgrowth.org)</p>

- **Reuse** – to preserve energy and resources; to avoid negative environmental impacts of new construction
- **Reinvestment** – to take advantage of the elements of Smart Growth, and reduce the need for growth on the urban fringe
- **Retrofit** – to repair existing infrastructure
- **Respect** – to recognize and maintain the historic integrity of buildings

Ms. Frey presented DOE data that showed, on a per square foot basis, commercial buildings constructed before 1920 actually use less energy than those constructed during any other era of construction up until 2000. She noted that this finding contradicts the perception of old commercial buildings as “energy hogs” that should be replaced. Ms. Frey also stated, however, that the data for residential homes showed the opposite, where older homes tended to exhibit worse energy performance.

Ms. Frey stated that the National Trust is primarily focusing its efforts on residential homes. She noted that the organization is engaged in several policy-related activities in partnership with other agencies,

including the following:

1. Working to create a 5 to 10 percent boost to the 20 percent Federal Historic Tax Credit for rehabilitating historic buildings for developers who meet certain energy efficiency standards.
2. Working to incorporate additional funding for owners of historic homes into Federal climate legislation.
3. Working with States (through The National Trust's Center for State and Local Policy) to help communities tap into Historic Preservation Recovery Funds to "green" historic homes.
4. Working with State and Local governments – through the Preservation Green Lab program that started in Seattle – to integrate preservation and sustainable development case studies and best practices that can be replicated nationwide.

4.2 *Where We're Going*

Ms. Frey referred to a one-day meeting of the National Trust and the National Park Service's National Center for Preservation Technology and Training in October 2009. The meeting, referred to as the "Nashville Challenge," gathered about 300 preservationists to discuss how the American preservation movement should be aligned with national efforts to address climate change.

Ms. Frey highlighted three of the 10 recommendations that emerged from the meeting. These recommendations, she said, offer potential opportunities for collaboration between EPA and the historic preservation community: (1) need for better research; (2) need for improved energy efficiency codes and standards; and (3) need for better engagement with Federal agencies. These three issues are discussed below.

4.2.1 Need for Better Research

Ms. Frey acknowledged the need for additional research to aid in better understanding the value of building reuse. She described Life Cycle Assessment (LCA) as a process that can be used to evaluate the overall life cycle and impact of buildings, from extraction of building materials, to building use, to disposal. She reported that the National Trust had commissioned an LCA study to compare the environmental impacts of building reuse to new construction for several scenarios, including homes, commercial buildings, and schools.

Ms. Frey referred to the U.S. Life-Cycle Inventory Database (<http://www.nrel.gov/lci/>), maintained by DOE's National Renewable Energy Laboratory, which houses data used in LCA models. She noted that the database lacks sufficient building data and data transparency in terms of data sources and collection methods. She called for EPA to bring a "holistic view" of the human health and carbon impacts to the field of Green Historic Preservation. She acknowledged the need for more money to get data.

4.2.2 Need for Improved Energy Efficiency Codes and Standards

Ms. Frey acknowledged the success of the joint EPA-DOE Energy Star Program, the voluntary labeling program designed to identify and promote energy-efficient products. She noted that the proposed Home Star Program would similarly provide incentives to homeowners who invest in improving energy efficiency in their homes. She pointed out, however, that the Home Star program does not contain provisions for historic buildings. She expressed interest in working with EPA on this issue.

4.2.3 Need to Engage Federal Agencies

Ms. Frey echoed the message from the “Nashville Challenge” regarding the need to engage Federal agencies in the issues of preservation and sustainability. She expressed her hope that historic preservation can move out of the “arcane box” that Mr. Mayka had described earlier and influence mainstream green building and sustainable community activities.

Ms. Frey ended her presentation by noting the need for a strong constituency advocating for building reuse. Referring to her earlier statement about new construction being the second largest contributor to global warming, she urged participants in the room to “seize the opportunity.”

5.0 FINANCIAL INCENTIVES TO PRACTICE GREEN PRESERVATION

Mr. Andrew Potts, Esq., Partner, Nixon Peabody LLP, stated that it was important to recognize what is subsidized and what is not, as an indicator of public policy priorities. He noted that, unfortunately, while there were potential funding sources being discussed in Congress, none are currently dedicated to Green Historic Preservation. He said that there are programs, however, that are complementary or readily available to fund certain aspects of green historic preservation projects.

Mr. Potts reviewed the tax credits, cash grants, and loan subsidies available to those involved in Green Historic Preservation; and described proposed new funding sources that are being considered in Congress. The following sections summarize these financial incentives.

5.1 Tax Credits

Mr. Potts described several Federal tax incentives used to finance Green Historic Preservation, including the following:

- **Rehabilitation Tax Credit** (Internal Revenue Code [IRC] Section 47), also known as the Historic Tax Credit – Mr. Potts stated that there are two types: (1) 10 percent of qualified rehabilitation expenditures for older (pre-1936) non-historic, non-residential buildings; and (2) 20 percent of qualified rehabilitation expenditures for historic buildings. He

noted that this tax credit program is more heavily utilized in areas where States have a good companion State historic tax credit program. To qualify for the tax credit, buildings (1) have to be listed in the National Register of Historic Places Building, or located in a registered historic district and certified by the Secretary of the Interior as being of historic significance to the district; (2) must be a “building,” defined as a structure or edifice enclosing a space within its wall and usually covered by a roof; and (3) must be “depreciable,” defined as used for commercial or residential rental purposes. Mr. Potts noted the need for more dialogue with NPS and guidance from them. Mr. Potts listed Indiana, Michigan, Ohio, and Wisconsin as EPA Region 5 states with State Historic Tax Credits; adding that Illinois has property tax abatements. He noted that Indiana’s program “is not one of the nation’s best,” while Michigan and Ohio’s programs are “good examples” for others.

- **New Markets Tax Credit** (NMTC; IRC Section 45D) – Mr. Potts explained that, unlike Historic Tax Credits, New Markets Tax Credits are allocated through a national competition. He reported that the U.S. Department of the Treasury awarded \$3.5 billion in NMTCs last year. Mr. Potts explained that wealthy individuals and banks generally obtain these tax credits for setting aside money that is, in turn, loaned to projects in low-income census tracts. He said that such projects often involve adaptive reuse of historic buildings in commercial areas.
- **Low-Income Housing Tax Credit** (IRC Section 42) – Mr. Potts referred to the Enterprise Green Communities Initiative, a national effort to “green” affordable housing, which has prompted States like Minnesota to require that projects meet Green Communities standards as a prerequisite for receiving State funding for affordable housing.
- **Commercial Building Deduction** (IRC Section 179D) – Mr. Potts gave one definition of a “green commercial building” as achieving a 50 percent reduction in energy use over the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) standards.
- **Homeowner programs** (e.g., Section 25C [efficient windows, appliances, etc.] and Section 25D [solar, wind, geothermal] credits) –Mr. Potts explained that a main challenge of this program is the requirement that homeowners must have the National Fenestration Rating Council (NFRC) energy performance label to apply for credit, which renders most projects “unworkable” for Green Historic Preservation and has a built-in bias for new construction.

Mr. Potts described another set of tax credits to subsidize the integration of on-site renewable energy strategies into buildings:

- Section 45 – Production Tax Credit
- Section 48 – Energy (or Investment) Tax Credit (ITC), also known as the “solar/wind credit”, which covers 30 percent of the cost of solar and small wind (>100 Kw) facilities; and 10 percent of the cost of geothermal operations.

- Section 1603 of the American Recovery and Reinvestment Act (ARRA) – In lieu of tax credits, this section provides a federal grant program. Mr. Potts noted that it must be elected in lieu of the ITC.

Mr. Potts stated that Historic Tax Credits and Energy Credits could be used on the same project but not for the same expenditures. He also referred to Section 1603 of the ARRA, which allows for the exchange of approved tax credits for cash through the end of 2010.

5.2 Cash Grants and Loan Subsidies

Mr. Potts described the following funding sources available from HUD:

- Community Development Block Grant (CDBG) – HUD funds this program, which is administered by local governments
- Section 108 Loan Guarantee Program
- HOME Program – Projects are required to have an affordable housing dimension
- HUD Brownfields Economic Development Initiative (BEDI) – HUD money is issued directly from Washington, D.C., for brownfields redevelopment and historic preservation.

Funding from the ARRA of 2009 (“Stimulus Bill”) includes the following:

- DOE programs like the State Energy Program and the Energy Efficiency Block Grants
- HUD Programs like “Neighborhood Stabilization” to deal with the foreclosure crisis, weatherization and CDBG
- Transportation Upgrades and Infrastructure

Mr. Potts presented three case studies – 71 Garfield/Detroit Arts Guild in the Sugar Hill Historic District in Detroit, Michigan; Homan Square Power House in North Lawndale, Chicago, Illinois; and Gerding Theater at the Armory in Portland, Oregon – to demonstrate how the funding sources he described could be combined.

5.3 Proposed New Funding Sources

Mr. Potts briefly introduced the following legislative initiatives being discussed in Congress:

- **Retrofit for Energy and Environmental Performance (REEP) Program** in Section 202 of House of Representatives (H.R.) Bill 2454, the American Clean Energy and Security Act of 2009 (“Waxman-Markey climate change bill”) – Includes a provision for cash grants to owners of residential and commercial buildings for energy retrofits. Buildings in or eligible for the National Register shall be eligible for awards of up to 120 percent of base amounts.

- **Energy Efficiency Supplement (EES)** in H.R. 3715, the Community Restoration and Revitalization Act of 2009 – Supplements the Federal Historic Tax Credit for rehabilitation projects that achieve energy use reductions.

6.0 HIGH PERFORMING HISTORIC BUILDINGS

Guy Bazzani, President and Chief Executive Officer, Bazzani Associates, introduced his firm’s “triple bottom line” philosophy, embodied in the following mission statement:

“To lead the industry in sustainable design and building practices that improve the economic, social, and environmental health of the communities we serve.”

He presented the following list of impacts of buildings:

- **65 percent** of total U.S. electricity consumption
- **36 percent** of total U.S. primary energy use
- **30 percent** of total U.S. greenhouse gas emissions
- **136 million tons** of demolition waste
- **12 percent** of potable water in the U.S.
- **40 percent** of global raw materials use

“Today, if you’re not building a green building, you’re building a soon-to-be-obsolete building.”
-- Guy Bazzani

Mr. Bazzani shared his experience as a voting member of the Michigan Climate Action Council appointed by Governor Jennifer Granholm. He reported the findings of the Council’s 1.5-year-long study that identified areas for potential greenhouse gas reductions. He noted that “existing building renovations” and “new construction of buildings” offered the two highest potential sources for greenhouse gas reductions. He stated that if buildings can be made 50 percent more efficient, it would result in a doubling of the power plant capacity.

He presented three case studies: (1) Bazzani Associates Headquarters, in a blighted neighborhood; (2) East Hills Center, a historic preservation project in a historic district; and (3) Hispanic Center of Western Michigan, a historic preservation project outside a historic district.

6.1 *Bazzani Associates Headquarters*

Mr. Bazzani described the conversion of a former crack house in a blighted neighborhood in Grand Rapids, Michigan; into a functional, attractive building that, in turn, prompted the positive transformation of the surrounding neighborhood. He highlighted the following aspects of the project:

- Used Historic Tax Credits.
- Involved the City of Grand Rapids in rebuilding the streets.
- Worked with non-profit, for-profit, and other City organizations to transform the community.
- Renovated first floor into office space and second floor into living space.

- Created a vegetative “green” roof, which decreases runoff, increases energy efficiency in the building, and extends the roof life.
- Achieved the LEED silver certification, the first LEED-certified building in the City of Grand Rapids; and was the first approved use of Low-E glass in a historic building in the U.S.
- Compared energy use of building with local utility averages for similar buildings, and observed a 33 percent below-average consumption of natural gas and 64 percent below-average consumption of electricity in 2008.
- Featured in April 2006 issue of Eco-Structure Magazine.

6.2 *East Hills Center*

As a second case study, Mr. Bazzani described the transformation of a contaminated property at a busy intersection, known to the neighborhood as “the center of the universe.” He noted the following project highlights:

- Cleaned up property that had been extensively contaminated by leaking underground storage tanks at a former Shell gas station.
- Not connected to storm sewer (i.e., zero stormwater discharge).
- Obtained grant from the Michigan Department of Environmental Quality to monitor the site and gained permission to discharge water underground through rain gardens.
- Installed a vegetative “green” roof.
- Installed a passive solar design to regulate sunlight into the building.
- Meets Secretary of the Interior’s guidelines for new buildings in a historic district.
- Compared energy use of building with local utility averages for similar buildings, and observed a 40 percent below-average consumption of natural gas and 48 percent below-average consumption of electricity in 2008.
- Received double-gold LEED certification for the (1) core and shell of the building; and (2) building interior.
- The Western Michigan Environmental Council serves as docent to show other builders the building.

6.3 *Hispanic Center of Western Michigan*

Mr. Bazzani described the conversion of the “boarded up and blighted...fire barn” as a third case study. He presented the following project highlights:

- Large rain garden in front, contributing to a zero stormwater site.
- Advised moving the less-used gathering space to the second floor and setting up offices on the first floor so that the building appears occupied most of the time, thereby helping to revitalize the neighborhood.
- Achieved LEED gold certification for the project.
- Also received a Sustainable Design Award from the American Institute of Architects in Grand Valley; and a Building Award from the Michigan Historic Preservation Network.

7.0 PANEL DISCUSSION: GREEN RESTORATION & HISTORIC PRESERVATION GUIDELINES, DO THEY WORK TOGETHER?

Mr. Andrew Hunt, Station Manager, WVPE Radio (88.1FM), moderated a panel discussion among the following experts in the field about key issues and challenges in the field of Green Historic Preservation:

- Ron Zmyslo, Restoration Specialist, Preserve Restore Maintain Indy
- Todd Zeiger, Director, Historic Landmarks Foundation of Indiana
- Keith Veal, Executive Director, United Northwest Area Development Corporation
- Karie Brudis, Assistant Director of Environmental Review, Indiana DNR
- Brian Conway, State Historic Preservation Officer, Michigan SHPO

7.1 *Windows*

Mr. Zmyslo described historic windows as a potential source of conflict in Green Historic Preservation. He stated that homeowners have found it challenging to obtain tax credits for retrofitting existing historic, vintage windows because of the inability to provide the required NFRC energy performance label when applying for the credit. He explained that research shows weather stripping or installation of storm windows is more cost-effective than replacing historic windows with vinyl windows, and such retrofitting could reduce energy use by 20 percent.

Mr. Zeiger said “windows are on our ‘10 most endangered list’ this year.” He observed that effective marketing by window manufacturers has skewed homeowners’ perception in favor of windows and away from other energy efficiency considerations like insulation, leaks, and heating, ventilating, and air conditioning (HVAC) performance.

Mr. Conway agreed that the issue of window replacement is the primary issue facing the Michigan SHPO in reviews of Section 106 documentation and tax credit applications. He stated his agency’s position, based on standards and guidelines from the National Park Service (NPS), that “repair rather than replace” is the preferred approach to dealing with windows in historic buildings. He acknowledged, however, the lack of skilled carpenters to perform this kind of repair work. As part of Michigan’s efforts to deal with this challenge, Mr. Conway stated that the Michigan SHPO recently collaborated with the City of Kalamazoo, Michigan Historic Preservation Network, and State-wide employment agencies to retrain unemployed carpenters and builders in the “art of window restoration [and] rehabilitation.” He noted the current lack of certified contractors.

Section 106 of the National Historic Preservation Act of 1966 requires Federal agencies to consider the effects of their projects on historic properties, defined as “properties that are included in the National Register of Historic Places or that meet the criteria for the National Register. If so, the agency must identify and consult with the appropriate State or Tribal Historic Preservation Officer, and involve the public and other stakeholders in the process.

(Source: Advisory Council on Historic Preservation, <http://www.achp.gov/106summary.html>)

Ms. Brudis echoed Mr. Conway’s position, that is, to give preference to projects that “repair rather than replace” historic windows. Ms. Brudis added that most of the projects she handles in Indiana already involve complete replacement of windows.

Mr. Conway referred to Michigan’s program as a “national model” and expressed a willingness to work with Indiana and other states. He recognized audience members Ms. Nancy Finegood, Executive Director, Michigan Historic Preservation Network; and Ms. Sharon Ferraro, Historic Preservation Coordinator, City of Kalamazoo, as additional resources.

Mr. Zeiger recognized Mr. Mark Dollase, Vice President, Historic Landmarks Foundation of Indiana, who was also in the audience and heads his organization’s Windows Task Force. Mr. Zeiger pointed out that the Task Force is conducting training for contractors doing historic window repair work.

Mr. Veal stated that in his work with low-income communities and affordable housing, whether to repair or replace windows is a “simple matter of economics.” Mr. Zeiger added that it’s important to also consider the “total life cycle cost” of preservation projects, including the cost of mining natural resources to produce replacement vinyl windows.

Ms. Brudis and Mr. Zeiger suggested – as a potential improvement to existing building codes – more definitive guidance for professionals to consider rehabilitation before replacement of historic windows. That way, the retrofit option could be introduced at the beginning of the project, “not as an afterthought.”

7.2 Wall Insulation

Mr. Conway stated that wall insulation is another potential area of conflict in Green Historic Preservation. He noted that the existing guidance from NPS on wall insulation is outdated. He referred to extreme temperature differences and moisture problems, particularly in Michigan and Indiana, where potential energy efficiency solutions may actually cause long-term damage to buildings.

Mr. Zymslo referred to his current research with professors at Purdue University and Ball State University on the effects of sidewall insulation in wood frame buildings on exterior paint

performance, stating that more scientific data is needed to supplement the available anecdotal information.

8.0 RATING SYSTEMS

Mr. Mike Jackson, Chief Architect of Preservation Services, Illinois Historic Preservation Agency, presented a preservation perspective on green rating systems. He noted that there are more than 25 ratings systems in the U.S., Canada, and England, with more to be created. He highlighted the U.S. Green Building Council's LEED rating system as the most well-known in the U.S.; the Green Globes rating system in Canada; and the Building Research Establishment Environmental Assessment Method (BREEAM) system in the U.K.

Mr. Jackson distinguished between "green rating systems" and "codes" – buildings are required to meet the latter. He noted that California is the first State to write a green building code that will become mandatory in 2011. He also acknowledged that several cities have developed their own green building codes and recognized the City of Boulder as the first city in the U.S. to have adopted its own green rating system and code that must be met to qualify for permits. Mr. Jackson also highlighted the Living Building Challenge in the Northwest, which is developing "an ultimate new 'greenest' green building code;" and the International Green Construction Code being developed by the International Code Council, which may eventually be adopted by most American cities. He described the LEED Green Guidelines, which focus on providing advice for "green aspects" of typical home renovation activities.

Mr. Jackson stated that the general categories of green ratings are (1) site and location; (2) energy; (3) resources; (4) water; and (5) indoor air quality. While he acknowledged that the ratings systems generally evaluate these same five categories, there is no consensus on the relative ranking or weighting of those categories.

He noted that Boulder's green rating system is currently the only one that ties in historic

"The Holy Grail of the green building movement would be a database in which the life-cycle environmental impacts of different materials were fully quantified and the impacts weighted so that a designer could easily see which material was better from an environmental standpoint."

Source: Environmental Building News 2000

preservation. He recognized that LEED's new Neighborhood Development Rating System does include identification of historic resources, however, which reflects a shift toward green historic preservation.

Continuing his remarks, Mr. Jackson pointed out that LEED gives only 4 out of the 110 available points to reusing an existing building. He stated that a higher value for resources would promote building re-use and preservation if retention of existing materials was given an equal value to the purchase of new environmentally preferable materials.

Mr. Jackson discussed the value of incorporating Life Cycle Assessment in green ratings systems. He highlighted the use of preferable materials such as ones that are locally available, produced from recycled

content, reused, contain safe materials, durable, and use certified forest products.

He discussed demolition as a factor that receives a lot of attention in green ratings systems. He said that virtually all rating systems are concerned about demolition and construction waste. He reported that LEED requires documentation of waste diversion from landfills. He said that Boulder, Colorado, has mandatory deconstruction requirements for building permits that call for 65 percent diversion for demolition and major new additions; and 50 percent diversion for new construction.

Mr. Jackson stated that green rating systems have no method of evaluating the viability of building retention instead of demolition. He said that historic preservation methods that emphasize reusing buildings and their materials can greatly reduce demolition waste. He also reported study findings that more debris comes from renovation than from demolition, and that new construction does not create as much debris. He urged historic preservationists to manage that.

Mr. Jackson noted that the English are “at least 5 years ahead of Americans” and cited two studies by British organizations:

- The report, “New Tricks with Old Bricks,” by Empty Homes, found that reusing an existing building has an initial savings of 35 tons of carbon dioxide over new construction (www.emptyhomes.com).
- The report, “Knock It Down Or Do It Up?”, by the Building Research Establishment (BRE), found that refurbishments are more sustainable and can result in significant energy savings.

Mr. Jackson introduced the Web site, www.thegreenestbuilding.org, which includes an “embodied energy calculator” based on the following equation:

$$\text{Embodied Energy Existing (lost) + Demolition Energy + Embodied Energy New Construction = Total Embodied Energy}$$

He recognized the calculator as an attempt to evaluate the ecological footprint of a building. He acknowledged that the calculator uses building data from 1976, but added that the Life Cycle Assessment study would address this.

In terms of energy efficiency standards, Mr. Jackson commented that there are competing standards among various organizations and programs, including ASHRAE, Energy Star, the International Energy Conservation Code, and the Architecture 2030 campaign.

Mr Jackson referred to a “green revival” that is happening, where practices of the past are making a comeback – for example, cisterns and clothes lines. He stated that the theme for Preservation Month in May 2010 will be “Old is the New Green.”

9.0 LEAD DANGERS IN OLDER BUILDINGS

Mr. Anthony Hunt, WVPE radio, spoke about health and safety issues involved with preservation projects. Using a personal story to illustrate his points, Mr. Hunt shared his family's experience with lead poisoning in their historic home. He described the long and expensive process he and his family endured to make their home more lead-safe, including covering siding around the house, replacing the wood windows, and installing wallpaper. He pointed out that protecting the health and safety of one's family is priority over preserving the historic and potentially harmful features of a home.

10.0 “WHAT’S WORKING, WHAT’S NOT, AND WHAT SHOULD CHANGE?”: PARTICIPANT EXERCISE AND EXPERT OBSERVATIONS

The afternoon of the Symposium focused on the three questions that comprised the theme of the event – (1) what's working, (2) what's not, and (3) what should change, in terms of existing policies and processes related to green historic preservation.

An exercise specifically developed for the Symposium was provided to all participants to work on in teams. Participants were seated in round tables and each table was a “team” for purposes of the exercise. Prior to the Symposium, attendees were assigned tables to ensure an even mix of preservationists, nonprofit groups, government, private sector firms, and others at each table. The exercise included a matrix structure designed to mimic the major steps involved in any typical green historic preservation project, and participants were given a building/structure and asked to work their way through the matrix steps while discussing critical factors that would be encountered at each step and how to overcome or address them. Factors included environmental, economic, tax incentives, policy and regulatory issues, and others. Participants were asked to view and discuss each step with an eye toward identifying barriers, incentives and solutions.

Following the scenario-based exercise, designated experts in the field shared their observations of the exercise in a panel discussion. Ms. Bouchee moderated the following individuals who served on the expert panel:

- Will Tippens, Vice President, Related Midwest
- Mark Dollase, Vice President, Historic Landmarks Foundation of Indiana
- Mark Lundine, Historic Preservation Tax Credit Program Coordinator, Ohio Department of Development
- Tammy Moore, Public Health Specialist, U.S. EPA Region 5
- Leonard Moye, Department of Public Works liaison to Mayor's office, City of Milwaukee
- Eugene Goldfarb, Associate Professor, University of Illinois
- Neal Vogel, Principal, Restoric, LLC

Section 10.1 describes the participant scenario exercise. Key concerns and ideas that emerged from the participant exercise and expert panel discussions are presented in Sections 10.2, 10.3,

and 10.4 on “what’s working,” “what’s not working,” and “what should change,” respectively. Section 10.5 summarizes other notable issues raised during these discussions.

10.1 Overview of Participant Scenario Exercise

Ms. Carla Bruni, Consultant, Historic Chicago Bungalow Association; and Mr. Tim Heppner, Consultant, Chicago Green Homes Program, explained that the purpose of the exercise was to gather information from the diverse group of professionals in attendance working in historic preservation, green building and other related fields. They asked participants to assume the mutual goal of a preserved, green building.

The roomful of participants was divided into three sections, each of which was assigned one of the three building scenarios below:



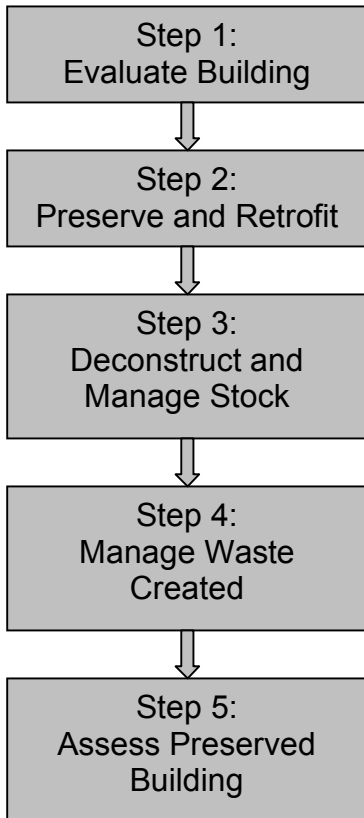
1930s Multi-unit brick residential in historic district



1870s Victorian in a popular neighborhood



1926 theater used intermittently



Each section of participants was asked to discuss the questions, “what’s working, what’s not, and what should change” within the context of a pre-assigned 5-step process for their assigned building.

10.2 “What’s Working?”

Participants and panel experts identified the following positive examples of what’s currently working in the field of green historic preservation:

- Availability of historic preservation and energy tax credits and grant programs.
- Growing awareness of green building and historic preservation benefits.

- Job creation from the various activities involved through the green historic preservation process.
- Appeal of historic buildings that draw buyers and visitors to a neighborhood (e.g., historic theater).
- Opportunities to generate revenue in historic neighborhoods.
- Close proximity of housing and jobs in historic neighborhoods, resulting in less need for transportation.
- Quality of craftsmanship that is unaffordable today.
- Long-term cost savings and reduced environmental impact of preserving and not demolishing property.
- Reduction of carbon footprint.
- Availability of information resources for professional developers to undertake historic preservation.
- Forums like the Green Historic Preservation Symposium that promote insightful discussions about current issues and trends in the field.

10.3 *“What’s Not Working?”*

Participants and panel experts discussed the following issues as current challenges and barriers:

- Difficulty in getting buildings listed in the National Register of Historic Places.
- Incongruity between rating systems for green development and historic properties.
- Perception that land itself is worth more than house and focus on “highest and best use” for land use, which potentially encourages tearing down of existing buildings to accommodate expansion.
- Lack of trained labor for green historic preservation projects.
- Greater cost to segregate and recycle materials than to purchase new materials.
- Difficulty in adapting historic buildings to modern use (e.g., complying with American Disabilities Act requirements).
- Struggle to meet energy conservation goals in conjunction with needs of building use.
- Focus of existing policies on new construction.
- Challenge to balance between single family and multi-family funding sources.
- High cost of hiring deconstruction contractors.
- Difficulty in identifying toxic and hazardous sources in historic homes.
- Competition among communities for funding, which makes them unwilling to share experience.
- Challenge of making contractors’ work more difficult.
- Unusual floor plans and tighter space in historic buildings.
- Excess of old windows at salvage stores.
- Power of the market in driving what happens to properties.
- High upfront costs (e.g., lead testing and assessment, cost of building permits).
- Lack of reputable salvage companies and oversight of those companies.
- Perception that EPA and DOE are “big brothers in the Federal government who don’t collaborate.”
- Conflicts in practice:

- “Sustainable communities” are sometimes created by constructing new buildings in locations of older buildings and existing mass transit infrastructure.
- “Well-meaning” initiatives that promote specific measures that are not preservation-friendly (e.g., demolition of beautiful old industrial buildings as part of brownfields redevelopment).
- New material is much less expensive to purchase in China where environmental laws are less stringent .
- Criticisms of Leadership in Energy and Environmental Design (LEED) program as not providing accurate data and tweaking data. Example was provided of a synagogue in Evanston, Illinois, with LEED platinum certification but is “off the charts” in terms of its electricity bill because all the lights are left on although there are few staff members. “It comes down to people.”
- Difficulty for individual homeowners to find information resources. Not a simple process.
- Nature of our “consumption society.” “We have a lot of situations where culturally we are not a responsible society.”

10.4 “What Should Change?”

The participant scenario exercise generated the following suggestions for improvement in the green historic preservation process, and ways that EPA may be able to facilitate change:

- Promote greater interagency and stakeholder collaboration (e.g., U.S. Department of Interior [DOI], DOE, legislators, green historic preservation organizations, U.S. Green Building Council, city leaders, etc.), especially in terms of financial options.
- Launch a strong education campaign on how homeowners can be energy efficient without buying a new home.
- Provide grants to organizations that give training, including training for laborers on retrofitting historic buildings in a “green” manner.
- Certify contractors for historic renovations.
- Work with banks to provide incentives for green historic preservation projects.
- Facilitate the establishment of uniform building codes across State and Federal agencies.
- Encourage a market for green historic preservation projects by highlighting pilot projects and creating additional funding sources that combine historic preservation and green building elements.
- Incorporate more flexibility into green historic preservation tools, financing, and incentives. There is no “one size fits all” formula for green historic preservation projects.
- Create a Web site that lists available financial incentives and grant information for various green historic preservation scenarios.
- Organize more forums like the Green Historic Preservation Symposium, as well as smaller, regional, targeted educational sessions.
- Promote green historic preservation to focus more on the homeowner level.
- Move preservation discussions “out of the arcane...and make it retail.”
- Incorporate lessons learned from European cities, where green historic preservation is common practice.

- Conduct a market analysis/feasibility study on building reuse.
- Develop better quantifiable measures for sustainability in historic buildings.
- Make Secretary of Interior standards and “green” standards more consistent.
- Establish policy for recycling construction debris.
- Create a more streamlined and consistent process that is easier to access and report on.
- Provide tax credits for communities to encourage groups of residents to take ownership of the task of rehabilitating their neighborhoods.
- Incorporate historic building standards into building codes.
- Create incentives to carefully manage waste.
- Create incentives for building “in city.”
- Develop a market for reused materials (e.g., offer tax deductions for donating and purchasing reusable materials).
- Develop a database/clearinghouse center to purchase historic and recycled materials.
- Provide local grants to keep aged owners in their homes.

10.5 New Lead Paint Rule

Ms. Moore provided a brief synopsis of EPA’s Renovation, Repair and Painting Rule, which was issued in March 2008 to reduce exposure to lead hazards created by renovation, repair and painting (RRP) activities that disturb lead-based paint. She announced that the RRP law goes into effect on April 22, 2010. Ms. Moore explained that the law requires any paid RRP projects in houses constructed prior to 1978 to be conducted by contractors certified in lead-safe work practices. When asked how the new rule would be enforced, Ms. Moore responded that, in addition to EPA having enforcement personnel to handle this task, the Agency is also working with States to enforce the law at the local level. She added that EPA is currently engaged in an education campaign to inform the public about the new rule. Ms. Moore encouraged the audience to visit the Web site, <http://www.epa.gov/lead>, for more information.

11.0 CONCLUSION

Ms. Bouchee expressed her appreciation for everyone who participated and shared ideas, including members of the Planning Committee, note takers, facilitators, observers, and other volunteers who were involved in the event. She reiterated that a summary of the presentations, panel discussions, and participant feedback regarding what’s working, what’s not working, what should change, and comments on what EPA’s role should be would be posted on EPA’s Web site, as well as copies of all the presentation slides. She concluded by saying EPA realizes there is a need to continue the dialogue and take action, and that a committee would be deciding EPA’s next steps, which would be shared publicly.