

# Looking Back, Moving Ahead: Green Building and Historic Preservation in Transit Stations



**Rail~Volution**  
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# HUD-DOT-EPA Partnership for Sustainable Communities

- Federal, state, local coordination
  - Joint implementation of projects
- Funding is tip of iceberg
- Cross-pollination of ideas:
  - Transit Oriented Development
  - Area-wide Planning Efforts
  - Green Buildings
  - Existing Buildings



# Partnership in Action: Moline, IL

- EPA Brownfields Assessment Grant
- DOT TIGER II Funding
- EPA Technical Assistance
  - Green building evaluation
  - Historic preservation and green building



# Moline Multi-Modal Station Project

## Challenges and Opportunities

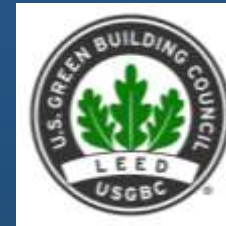
- Redevelop an existing urban **Brownfield** site
- End goal is **LEED-certified** multimodal facility.
- Building is contributing structure to the Moline Downtown Commercial **Historic District**
  - National Register of Historic Places (2007)
  - Long term – Housing



# Green Historic Preservation

## Challenges and Opportunities

- What is Green Preservation?
- Meeting the Secretary of the Interior's Standards for Rehabilitation
- Meeting LEED Certification Standards
- Opportunities



# Climate Change: The Role of Buildings



The Greenest Building:  
Quantifying the Environmental  
Value of Building Reuse

“Building reuse almost always yields fewer environmental impacts than new construction when comparing buildings of similar size and functionality.”

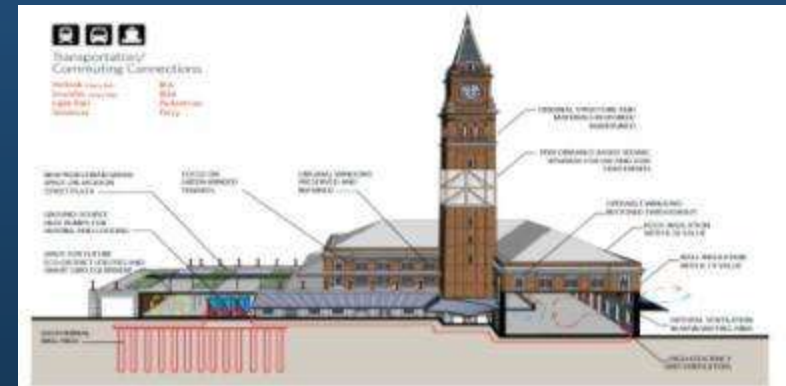
A REPORT BY:

**Preservation  
Green Lab**

NATIONAL TRUST FOR  
HISTORIC PRESERVATION

# Case Studies – Green Preservation & Transit Stations

- Present a series of successful green preservation transit projects
- Highlight the **challenges** and approaches to overcome those challenges
- Lay out replicable vehicles/methods of **funding** used to complete the projects
- Demonstrate the project's **impact on development** in the surrounding community



# land revitalization

Region 5 Land Revitalization Technical Assistance Project

## GREEN BUILDING AND HISTORIC PRESERVATION CASE STUDIES FOR MOLINE MULTI-MODAL STATION PROJECT (2 OF 4)

EPA provided technical assistance support to the City of Moline, Illinois in the areas of green building and historic preservation for the Moline Multi-Modal Station Project. This assistance was intended to strengthen the HUD-DOE/EPB Partnership for Sustainable Communities by providing the City of Moline access to technical resources and expertise (TEA) technical assistance activities focused on the development of the case studies or the renovation of existing historic structures to meet Leadership in Energy and Environmental Design (LEED) standards for multi-modal transportation projects, where possible. These two case studies were presented at the Moline Developer Workshop held on October 18, 2011. This is the second case study in the series.

### UNION DEPOT MULTI-MODAL TRANSIT AND TRANSPORTATION HUB – ST. PAUL, MINNESOTA

#### Project Summary

The Saint Paul Union Depot Multi-Modal Transit and Transportation Hub is a passenger rail and regional transit project. It consists of the renovation of historic Union Depot and the relocation of Amtrak, heavy bus centers, local bus and light rail services, taxis, bicycles and bicycle accommodations. The Depot will provide future capacity for high-speed rail and other planned intercity and light rail services.

The project is located in an urban downtown setting and is expected to have a significant positive impact on downtown revitalization.

#### Historic Features

Union Depot is individually listed on the National Register of Historic Places. It is the principal property in the Lowertown National Historic Register District and the St. Paul Lowertown Historic Preservation District and serves as a integral part of the surrounding urban fabric.

The project will return the Depot's historic buildings (the waiting room, concourse and food houses), as well as its historic rail yard, to active use. A Programmatic Agreement was developed with the State Historic Preservation Office and other agencies that identifies areas of historic preservation and other design requirements—including a 300 square foot area in the last remaining original storefront that will become an interpretive center.



**Project Description**  
 Elements: Transit, Historic, Green  
 Size of Community Served:  
 St. Paul population is 130,000  
 Current Owner: Ramsey County Regional Railroad Authority  
 Project's Footprint: 100,000 Square Feet in 12 acres  
 Original Construction Date: 1910  
 Historic Designation: National Register of Historic Places (1970)  
 Project Completion Date: 2012  
 Construction and Project Costs:  
 Construction Cost: \$140 Million  
 Total Project Cost: \$200 Million  
 LEED or Other Green Certification: Targeted LEED Platinum Silver – expected to achieve Gold

#### Agencies Involved in the Section 106 Process

- State Historic Preservation Office
- St. Paul Heritage Preservation Commission
- St. Paul Planning and Economic Development
- Minnesota Department of Transportation
- Historic St. Paul
- Promotion Alliance of Minnesota
- Mississippi National River and Recreation Area National Park Service
- Capital River Council

#### Accelerated Schedule and Agency Review

The accelerated schedule was in potential conflict with a deliberate Section 106 historic preservation review process that requires thorough documentation and a 30 day review process at each step. This process was managed by involving key agencies that met on a regular basis (every three weeks) to discuss and present design options. The design team included representatives from the owner, contractor, architect, and transportation planners. Meetings were facilitated by the team's historical architect. The process allowed the architect time to adequately develop design approaches—based on initial positive feedback, without requiring significant, last minute redesign work—resulting in better detailed design solutions. This collaborative process was efficient and rewarding. Differences could be discussed and weighed in the central context of all participants who had the opportunity to help shape and influence the outcome.

#### Partnerships and Funding Strategies

Ramsey County Regional Railroad Authority (RCRRA) is an affiliate of Ramsey County RCRRA will build, own, and operate the completed facility. The other involved parties are:

- Transportation providers including Amtrak, commuter bus carriers, Metro Transit and the Twin Cities regional transit agency.
- Funding partners include the Minnesota Department of Transportation for Federal Railroad Administration and Federal Highway Administration state funds and the Metropolitan Council for Federal Transit Administration funds.

- Organizations and government are serving in a variety of coordination and support roles such as UICAFI, Task Force, City of Saint Paul, Saint Paul Area Chamber of Commerce, Coakley Transit Improvement Board, M1, CGL, On Board Midwest, Saint Paul Port Authority SOMA - St. Paul, Saint Paul Riverport Corporation, Capital City Partners, U.S. Postal Service, Minnesota High Speed Rail Corporation, Rail Road Corridor Commission, South Line Task Force and the Gateway Corridor Commission.

Project costs include purchase of the train track, waiting areas, concourse and adjacent land from the U.S. Postal Service and purchase of the Head House public area from a private owner. Track usage agreements will be required with two Class I railroads, Union Pacific and Canadian Pacific.

#### Funding sources to date include:

- SAFETEA-LI, 1301 federal funds \$43.5 million
- Federal Railroad Administration funds, HSR \$40 million
- TIGER 1 federal funds \$35 million
- Federal Transit Administration funds \$4 million
- State bond funds \$13.7 million
- Expanded RCRRA levy \$0.5 million

#### Leverage Financing Opportunities

RCRRA will negotiate leases and/or operating agreements with the transportation providers for external space needs and provide care and shed conditions for the provider to complete and launch.



#### Green Features

Green features include:

- Address abatement
- Construction waste management
- Fuel service bicycle station
- Electric vehicle charging stations
- Fuel efficient vehicle parking
- Connection to district heating/cooling
- Bike/pedestrian enhancements
- Public transportation access
- Stormwater control
- Building reuse
- Construction waste management
- Water efficient landscaping

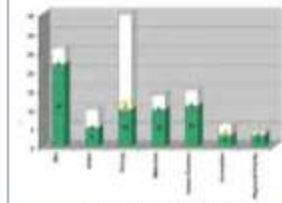
#### Challenges and Solutions

##### Building Entrance

A new entrance to the historic train dock provides an important component of modern functionality. The design was modified from a completely glass enclosure to one incorporating more use of stone and brick, which was deemed more complementary to the historic building.

##### Head House Historic Access and Light Rail Station Development

The new Central Corridor light rail station impacted the main building entrance and effectively eliminated automobile access to the ceremonial front door. This impacted the historical access to the building. The design



Union Depot LEED Credit Summary

Meeting LEED Platinum Silver and Beyond

teams retained the historical plans and worked with local historical agencies to develop an alternate access point via an existing terracing entry at the lower level. Withdrawing the carriages, in the same architectural style and materials as the original, provides access to the historic Head House in the same general location and separates street access from transportation access. The place was rebuilt and insulated and energy efficient lighting was installed.

#### Historic Windows and Energy Efficiency

The building has many of the original windows in place, some with steel frames and some with wood. Much discussion revolved around how to retain these windows and improve energy efficiency. All of the steel frame windows were salvaged and supplemented by a storm window for energy efficiency. In addition, the Waiting Room has three large skylights that were painted over during the war years. The skylights have been cleaned and restored to allow daylighting into the Waiting Room that has been absent for nearly 70 years.

#### Building Material Salvaging and Reuse

Many building materials in an historic building are no longer available and often difficult to match efficiently. This challenge was addressed in the following ways:

- The Union Depot has been able to utilize many aspects of its existing fabric in the new construction because materials in one area was salvaged and reused in areas where it was missing.
- Historic doors were repaired, refurbished, retouched and reinstated.
- Existing stone wainscot was cleaned, patched and reused.
- Bricks removed from one area was reinstated in other areas.
- The only remaining historic train access stair and platform was relocated to provide for its immediate use as an historic exhibit and future use for transportation.
- Historic accessories such as wood (cabinetry, signage) and clocks are all being reused and in some cases, re-patinaed and
- Original mechanical systems are reuse again being used for the new building systems.

<http://epa.gov/region5/sustainable/moline.html>



# Lessons for Green Historic Communities

- Preservation is sustainable development and recycling in the highest form
- Green buildings and historic preservation can be a winning combination
- Project communication is essential
- One anchor green building may spark growth and redevelopment of entire community

# Learning More After Today

- Partnership for Sustainable Communities  
<http://www.sustainablecommunities.gov/>
- Partnership Grants List  
<http://www.sustainablecommunities.gov/pdf/leveragingPartnership.pdf>



# Contact Information

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