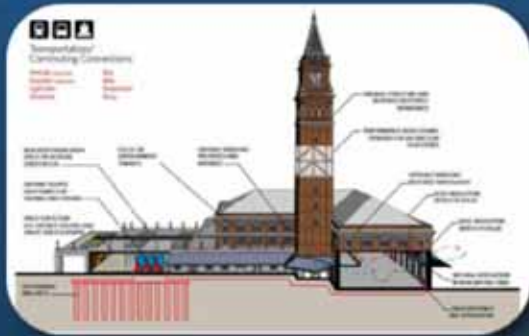


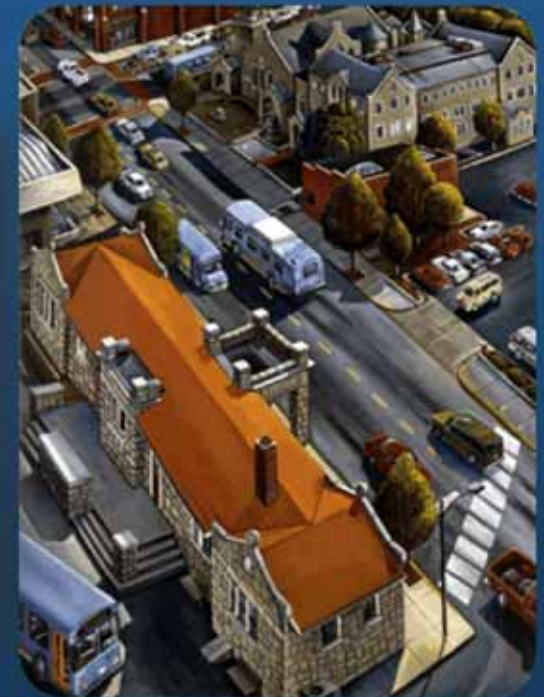
# Looking Back, Moving Ahead: Green Building and Historic Preservation in Transit Stations



## INITIAL LEED ANALYSIS: BASIC PROJECT CHARACTERISTICS

Certification Categories	Maximum Points Available	Points Likely *	Additional Points Possible **
Sustainable Sites	28	16	11
Water Efficiency	10	4	6
Energy & Atmosphere	37	2	35
Materials & Resources	13	9	4
Indoor Air Quality	12	8	4
Innovation in Design	6	3	0
Regional Priorities	4	4	0
<b>Total</b>	<b>110</b>	<b>46</b>	<b>60</b>

\* Points indicated as "likely" are not guaranteed by Delta.  
 \*\* Excludes 4 credit points suggested by Delta as unlikely to be obtained.



New Partners for Smart Growth Conference  
 February 8, 2012

Building Sustainable Communities

# Key outcomes of our Active Interagency Collaboration

- Joint implementation of projects
- Sharing of lessons from the field
- Identification of opportunities
  - Linking grant opportunities
  - Where can federal efforts enhance outcomes?
  - Where can new federal partners get involved?
  - Implementation!



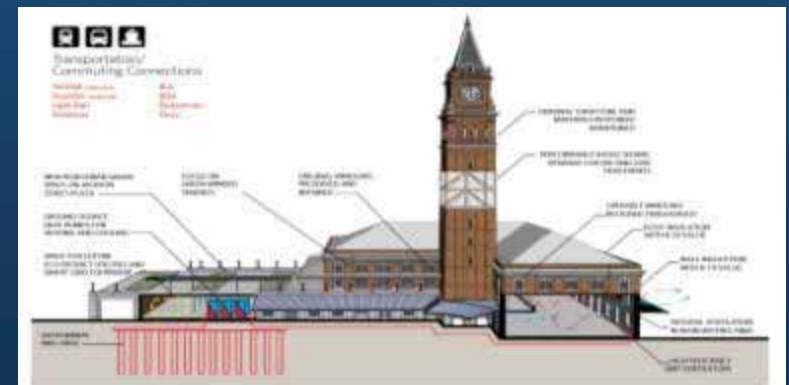
# Sustainable Communities Partnership – Key Lessons

- Federal, state, local agency coordination
  - Implementation!
- Funding is tip of iceberg
- Cross-pollination of ideas:
  - Transit Oriented Development
  - Area wide planning efforts
  - Green Buildings
  - Existing Buildings



# 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



# Benefits Beyond the Building – Green Preservation & Transit Stations



## 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-OTCERF Partnership for Sustainable Communities by providing the City of Moline access to technical resources and expertise. EPA's technical assistance activities focused on the development of the case studies on the renovation of existing transit stations to meet Leadership in Energy and Environmental Design (LEED) standards for multi-modal transportation projects, where possible. These case studies were presented at the Moline Developer Workshop held on October 10, 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 construction of Amtrak, intensity bus centers, local bus and light rail vehicles, taxis, bicycles and bike accommodations. The Depot will provide future capacity for high-speed rail and other planned intensity and light rail services.

The project is located in an urban-urban 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 pivotal property in the Lowertown National Historic Register District and the St. Paul Lowertown Heritage Preservation District and serves as an integral part of the surrounding urban fabric.

The project will return the Depot's trio of historic buildings (the waiting room, concourse and local house), as well as its adjacent rail yard, to active use. A Progressive 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 structure that will become an interpretive center.



**Project Description**  
 Name: Union Depot, Green  
 Site of Community Interest  
 St. Paul population: ~383,511  
 Local Owner: Ramsey County Regional Railroad Authority  
 Square Footage: 105,000 Square Feet ± 20 acres  
 Original Construction Date: 1929  
 Historic Designation: National Register of Historic Places (1975)  
 Project Completion Date: 2012  
 Construction and Project Costs:  
 Construction Cost: \$148 Million  
 Total Project Cost: \$207 Million  
 LEED or Green Certification: Targeted LEED Platinum, Silver, depending on achievement

Visit the EPA Land Revitalization Web site at <http://www.epa.gov/landrevitalization>

#### 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  
 Preservation 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 town's historical architect. The process allowed the architects 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 overall 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 manage the completed facility. The other involved parties are:

- Transportation providers including Amtrak, intensity 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 funds and the Metropolitan Council for Federal Transit Administration funds.

- Organizations and government are entering in a variety of coordination and support roles such as LOCAL, Task Force, City of Saint Paul, Saint Paul Area Chamber of Commerce, Counties Transit Improvement Board, AFL-CIO, On Board Midwest, Saint Paul Port Authority (SOPA) – St. Paul, Saint Paul Riverfront Corporation, Capital City Partnership, U.S. Postal Service, Minnesota High Speed Rail Commission, Red Rock Corridor Commission, Rush Line Task Force and the Gateway Corridor Commission.

Project costs include purchase of the train deck, waiting room, 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 I federal funds \$30 million
- Federal Transit Administration funds \$4 million
- State bond funds \$13.7 million
- Expanded RCRRA levy \$11.5 million

#### Leverage Financing Opportunities

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



Visit the Partnership for Sustainable Communities Web site at [www.transportationpartnership.com](http://www.transportationpartnership.com)

#### Green Features

Green features include:

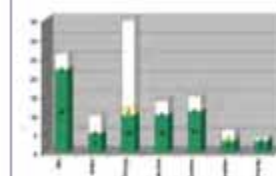
- Asbestos abatement
- Construction waste management
- Full service bicycle station
- Electric vehicle charging stations
- Fuel efficient vehicle parking
- Connection to district heating/cooling
- Bike/pedestrian enhancements
- PUEA transportation access
- Stormwater control
- Building reuse
- Construction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

#### Challenges and Solutions

##### Building Entrance

A new entrance to the historic train deck 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 concourse front door. This impacted the historical access to the building. The design



Union Depot LEED Credit Summary (including site access and signage)

Visit the EPA Greenbuild Web site at [www.epa.gov/greenbuild](http://www.epa.gov/greenbuild)

team reviewed the historical plans and worked with local historical agencies to develop an alternate access point via an existing courtyard entry at the lower level. Widening the courtyard, in the same architectural style and materials as the original, provides access to the historic Head House in the same general location and separates event access from transportation access. The plaza 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 refurbished and supplemented by a storm window for energy efficiency. In addition, the Waiting Room has three large sash windows that were painted over during the war years. The sash windows 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 effectively. This challenge was addressed in the following ways:

- The Union Depot has been able to utilize many aspects of its existing fabric as the new construction materials removed in one area was salvaged and reused in areas where it was missing.
- Historic doors were repaired, refurbished, refreshed and reinstalled.
- Existing stone window was cleaned, patched and reused.
- Brick removed from one area was reinstalled in other areas.
- The only remaining historic front access stair and platform was salvaged to provide for its reuse/restore use as an historic, outdoor and future use for transportation.
- Historic accessories such as wood cabinetry, signage, and chairs are all being reused and in some cases, reinterpreted, used.
- Original mechanical systems are once again being used for the new building systems.

# 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

- Green Preservation and Transit Case Studies  
<http://epa.gov/region5/sustainable/moline.html>
- Partnership for Sustainable Communities  
<http://www.sustainablecommunities.gov/>
- Partnership Grants List  
<http://www.sustainablecommunities.gov/pdf/leveragingPartnership.pdf>
- US EPA Region 5 Sustainable Communities  
<http://epa.gov/region5/sustainable/>

# Green Building and Historic Preservation in Transit Stations



## Green Preservation

- Jean Carroon, Goody Clancy



## Wabash Station

- John Gaar, 360 Architecture



## King Street Station

- Trevina Wang, Seattle Dept of Transportation



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