

From Blighted to Beautiful

Brownfield project garners 2009 Phoenix Award, presented annually to top ten U. S. brownfields-redevelopment projects.

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The Menomonee Valley Industrial Center and Community Park (MVIC) redevelopment project in Milwaukee has transformed a contaminated, blighted portion of the valley into a development rich in recreational, economic, natural, and sustainable benefits. Once widely known as “Wisconsin’s biggest eyesore,” the site is now the largest brownfield-redevelopment success in Wisconsin history—providing sustained jobs for the valley’s workforce, a cleaner Menomonee River for ecology and nature lovers, and recreational green spaces for neighborhood use.

Originally a vibrant marsh, the Menomonee River Valley was the industrial heart of the region and served as the area’s manufacturing and transportation hub for close to 150 years. Once home to 50,000 manufacturing jobs, this number decreased to less than 7,000

jobs in the late 1990s—resulting in high poverty and unemployment. Industrial-land uses resulted in contamination, and when manufacturing declined, jobs left the area leaving the land blighted and abandoned. One of the largest historical manufacturers was the Milwaukee Road “Shops” facility where rail cars and locomotives were built and serviced between 1879 and 1985. The facility closed after declaring bankruptcy, leaving behind dozens of vacant and dilapidated buildings and acres of contaminated land.

The Redevelopment Authority of the City of Milwaukee (RACM) acquired the property in 2003 and implemented an integrated master plan for a new industrial and recreational development. Most site remediation work was completed by 2004, the land improvements were wrapped up by the end of 2005, and development of light industrial facilities has continued since 2005.

The MVIC project has successfully incorporated the goals of both sustainable economic development and ecological and recreational restoration, demonstrating that these two objectives can successfully coexist. Meeting both goals aided the rehabilitation of nearby neighborhoods and provided a better envi-

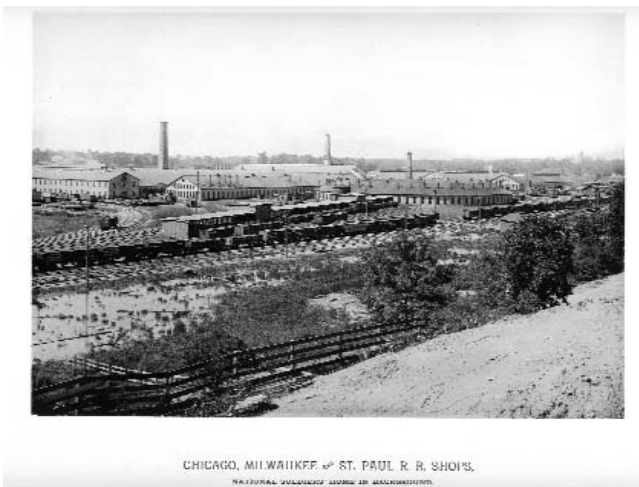
ronment for both residents and the local ecosystem.

Collaborative Funding

Without participation from numerous funding sources, the MVIC would still only be a “good idea.” Both the city and the Menomonee Valley Partners, Inc., a non-profit agency, focused on improving all aspects of valley life and pursued numerous funding ideas and grants for the project—and the response was fantastic.

“The valley’s development is a unique example of public-private cooperation,” stated Rocky Marcoux, commissioner of the Milwaukee Department of City Development in the January 2, 2009 issue of *The Business Journal Serving Greater Milwaukee*. These financing efforts from many sources helped to make MVIC a reality:

- A \$16-million Tax Increment District was created by the City of Milwaukee to fund new roads and other infrastructure and to remediate environmental contamination.
- Several new MVIC businesses have received New Market Tax Credit loans through the Milwaukee Economic Development Corporation, a city-sponsored lending company that offers financing programs to small companies.
- Twenty local, state, and federal grants and dozens of private donations totaled \$24 million. State grants were provided by the Wisconsin Department of Commerce and Wisconsin Department of Natural Resources for infrastructure establishment, environmental



CHICAGO, MILWAUKEE & ST. PAUL R. R. SHOPS.
NATIONAL GEOGRAPHIC ARCHIVE

Rail cars and locomotives were built and serviced at the Road “Shops” facility between 1879 and 1985.

Sustainable Measures of Success

Ecologic Habitats and Recreational Spaces

- Remediation and containment of contaminated soil and groundwater using methods and designs approved by the WDNR.
- Improvement of river water quality by exceeding stormwater-discharge limits and having zero direct surface water discharge.
- Re-establishment of native wildlife habitats.
- Restoration of 35 acres of landscape to their native condition.
- Restoration of 3,000 ft of riverbank to benefit flood control management.
- Construction of three state-of-the-art fields for soccer and other field sports.
- Completion of miles of biking and walking trails, with connections to local, regional, and state trail systems.
- Establishment of river access to canoe enthusiasts via a new canoe ramp.

Beneficial Reuse Dominates Planning and Implementation

- Demolition and onsite management of more than 120,000 cu yd of asbestos-containing building debris into landscaped mounds.
- 700,000 cu yd of fill imported from a local highway project to raise site (generated more than \$1.5 million in revenue).
- 20,000 cu yd of crushed concrete used in stormwater conveyance structures and construction roads; excess sold to developers for foundation subgrade.
- Recycled glass panels used in pathway railings.
- Former stockyard beams used to construct park benches and tables.
- Grubbed vegetation chipped and used in topsoil.
- "Cream City" brick from historical fill incorporated into landscaping.
- Preservation of two historic smokestacks as a reminder of the site's industrial past-integrated into a park "gathering place."

Sustainable Economic Results

- Since 2005, 700 sustained jobs with projections for 1,200 jobs.
- Increased city tax revenue by \$1 million, helping fund public facilities and improvements.
- More than \$120 million of increased ecological, recreational, and aesthetic resource site value.
- Six new industries (600,000 sq ft of buildings) since September 2005.
- An unprecedented 40 percent participation in remediation and site development work by emerging business contractors (DBE/MBE).
- MVIC development guidelines for developers to ensure high caliber and energy efficient new construction.
- Transportation alternatives for the development's industrial and commercial workers (public bus transportation, autos, trails).
- Regional roadway and pathway connections to the rest of the Menomonee River Valley.
- Registration of one of MVIC's buildings for LEED® Silver industrial certification.

cleanup, and community park development. State Stewardship Funds were used for the creation of the Hank Aaron State Trail. Federal grants were received from the U.S. Department of Housing and Urban

Development, EPA, and the Economic Development Administration.

Complex Challenges

The MVIC project team surmounted

a number of complicated challenges by combining award-winning site design and innovative engineering. Physical site conditions inherited with the parcel posed the greatest challenge to redevelopment including:

- 125 years of petroleum- and building- (asbestos) related contamination.
- Contaminated runoff to the Menomonee River.
- Location within the 100-year floodplain.
- Stability issues from organic, floodplain soils.

In addition, construction of a new thoroughfare directly through the site to support regional traffic was concurrent to remediation and construction activities. The political expectations to produce economic success at MVIC within a quick time frame added the final challenge. Innovative solutions used by the MVIC project team not only met these challenges, but in many cases achieved both environmental and financial benefits.

Onsite versus offsite remediation and containment of contaminated soil, groundwater, and building debris was possible through early engagement of local and state environmental agencies into the decision-making process, and was critical to staying on schedule. Financial benefit of solving this challenge included a \$10-million savings in offsite management and disposal costs.

A creative agreement with the Wisconsin Department of Transportation helped to address the challenge of redeveloping a site located within the 100-year floodplain. Fill from the nearby Marquette interchange construction site was used at MVIC, generating a financial benefit of \$1.5 million in tipping fees for the project and beneficial re-use of 700,000 cu yd of material otherwise destined for construction or special waste landfills.

An innovative, centralized stormwater facility was constructed to meet stringent surface water quality standards. The facility uses recycled concrete materials in subsurface treatment basins to treat all stormwater from 60 acres of the development area—cleaning water

Applicability to other Communities

Project approaches used to create Milwaukee's MVIC can be used by other cities to transform contaminated land parcels into beneficial economic and environmental communities. These approaches can be incorporated into a master plan for the development and include:

- Early compilation of available environmental data for soil, groundwater, and water media to facilitate up-front discussions with environmental agencies and build consensus on risks present and required solutions.
- Early consultation with remediation firms, environmental consultants, construction companies, regulatory agencies, developers, municipalities, state representatives, and citizen groups to produce collective buy-in from all stakeholders—a cooperative project from the beginning will lead to many project economic benefits as information and ideas are exchanged.
- Consideration of both actual and perceived human health and ecological risks to prepare for discussions with the community.
- Incorporation of onsite containment of contaminated soil and debris into the design—including protective engineering layers and monitoring as applicable.
- Consideration to include a centralized stormwater treatment facility or facilities into the design, making one issue much easier for potential developers.
- Beneficial reuse of all non-hazardous materials for fill, landscaping, and construction.
- Centralized grant application and public relations efforts—if numerous parties are applying for various grants, a centralized “repository” or main author for these documents avoids duplicated efforts and increases efficiency.
- Creation of a developer agreement stipulating responsibilities of all stakeholders in relation to the development's amenities, requirements, guidelines, and future liabilities (if present) such as environmental monitoring or geotechnical stability.
- Sponsoring community events throughout planning and implementation phases to keep the public actively involved in enjoying and maintaining the development.



Six new MVIC industries since September 2005, with room for more.

to a quality that exceeds discharge requirements—and removing the need for individual developers to have their own stormwater systems.

Geotechnical challenges were met by instituting a model developer agreement that stipulates known geotechnical conditions and then clearly outlines future responsibilities. Individual site developers have ready-made instructions for future subsurface work that may have environmental or geotechnical components. Having an established, up-front agreement saves time and money spent on identical questions from numerous developers.

Twenty acres remain within the industrial portion of the development—it is anticipated that this space will be inhabited by an additional five indus-

tries. A plan is in place for the design of an expansion of the Hank Aaron State Trail project, construction of pedestrian bridges to link neighborhoods and workers situated across (south of) the Menomonee River from MVIC, and restoration of an additional 30 acres, also south of the river.

The Menomonee Valley has benefited not only economically from the MVIC development, but from the ongoing commitment by the City of Milwaukee and others to enhance the area's environment and recreational use. The unique design of MVIC encourages recreational use side-by-side with the commercial aspect of the facility.

As Milwaukee's Mayor Barrett has said, “In addition to the increase of local industrial and commercial jobs that MVIC has produced for our region, the integration of ecological restoration and recreational green space components into the overall development is critical to its acceptance by the community and therefore to its success.” (Letter from the Mayor to RACM, April 9, 2009). **GE**

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The Stormwater Park facility and associated green spaces.