An aerial photograph of the Upper River in Minneapolis, Minnesota. The river flows from the top left towards the bottom center. A bridge crosses the river in the middle. To the right of the river, there is a large area with a master plan overlay, showing various colored zones (green, yellow, red, blue) and road layouts. In the background, the Minneapolis skyline is visible under a clear sky.

Above The Falls

A Master Plan for the Upper River in Minneapolis

Prepared for:

Minneapolis Park and Recreation Board
Hennepin County
Minneapolis Planning Department
Minneapolis Community Development Agency

Funded in part by a grant from the State of Minnesota
Legislative Commission on Minnesota Resources.

Above The Falls

A Master Plan for the Upper River in Minneapolis

BRW, Inc.

with

Wallace Roberts and Todd

James Miller Investment Realty Co.

Robbin B. Sotir & Associates, Inc.

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McComb Group, Ltd.

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1999

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Above The Falls

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Note: The Appendix referenced in *Above The Falls* is a separate document available for review at the Minneapolis Park and Recreation Board or Minneapolis Planning Department.

Introduction and Summary

The Vision

The Upper River Master Plan presents a bold vision for developing the Mississippi riverfront into a regional park amenity in north and northeast Minneapolis. The need for action is clear: heavy industry on the river continues to pose land-use conflicts, while adjacent neighborhoods struggle to provide a quality of environment that attracts new investment. The opportunity is also clear: ***There is only one Mississippi***, and the Upper River is the best potential large-scale amenity awaiting development in the City of Minneapolis.

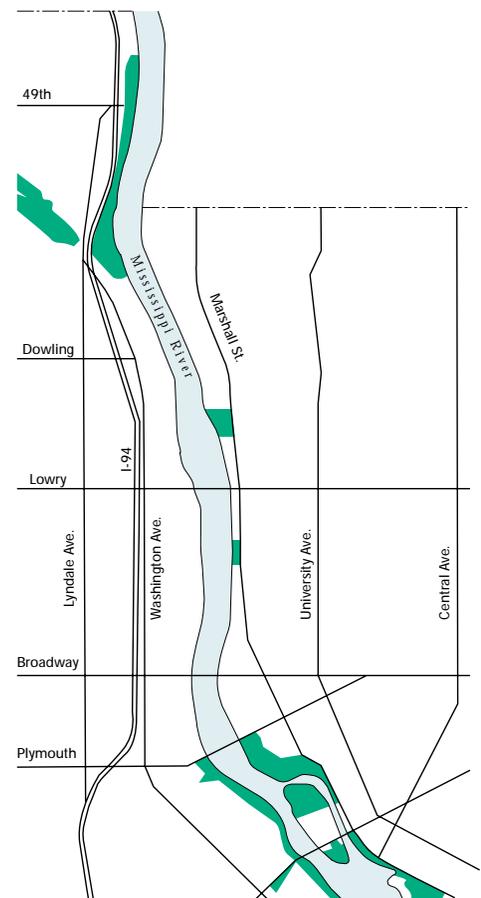
Over 50 percent of the linear riverfront along the Upper River is currently owned by public agencies. The Master Plan shows how these parcels can be linked into a continuous park system to create an amenity that will extend the intrinsic value of the river into local neighborhoods and the region, and provide new destinations for visitors that celebrate Minneapolis as a city on the Mississippi.

Master Plan Objectives

- ✓ Provide public access to river.
- ✓ Create a system of Riverway Streets
- ✓ Enhance the ecological function of river corridor.
- ✓ Link Upper River to Grand Rounds parkway system.
- ✓ Realize the area's potential for economic development.
- ✓ Establish urban design guidelines.

Major Benefits of Plan Implementation

- ◆ 90 acres of new park
- ◆ 15 miles of bike lanes and recreational trails
- ◆ 4 miles of restored riverbank
- ◆ 5.25 miles of parkway and boulevard
- ◆ 2,500 housing units in new riverfront neighborhoods
- ◆ 2,000 net additional jobs
- ◆ Over \$10 million in additional annual tax revenue



Upper River in Minneapolis

A New Era of Land Use

Land use in the Upper River corridor has been in a state of flux for the past 125 years, with a succession of bulk-material-processing and transport industries responding to market forces and rapid changes in available resources and technologies. This change can be understood by tracking the history of specific parcels of land. For example, the area along the west bank of the Mississippi north of Plymouth Ave. was used for saw mills, lumberyards, and foundries during the first era of the city's settlement. When the supply of trees declined, the vacant land became a railroad yard stretching up past Broadway. After the rail yard became unnecessary with conversion from steam to diesel engines, the MCDA developed the current West River Road, with riverfront open space on one side, and the other lined with light industries such as printing plants and laboratories.

Current City policies encourage light-industrial and parks development on the Upper River, while also supporting old-line, bulk-material-handling industries with subsidies to the City-owned Upper Harbor Terminal. The Upper River Master Plan explores the potential benefits to completing a continuous riverfront park system on both banks of the Upper River, leading a transition away from barging and heavy industry to a new, more stable era of land use.

The Plan seeks the highest and best use of land adjacent to riverfront parks, including the development of new residential communities. Riverfront living is gaining in popularity in Minneapolis, and the Upper River affords some of the most enticing sites with excellent river views and quick access to downtown. Two major redevelopment areas are proposed on the west bank, including a mixed-use urban promenade district south of Lowry Avenue and a new residential neighborhood north of Lowry. The development of residential neighborhoods will produce many benefits including a higher value tax base, move-up housing for area residents, increased park security, and an enlarged constituency seeking continued improvements to the ecology of the river corridor and communities of north and northeast Minneapolis.

River and Recreation

The basis of all the benefits outlined in the Upper River Master Plan flow from a system of continuous public parks and open space along the Mississippi north of Plymouth Ave. Recreation trails along both banks of the river are paralleled by an extended West River Parkway and redesigned Marshall Street. A Riverway Street System, with common streetscape elements such as pedestrian lighting and signage, will connect north and northeast Minneapolis neighborhoods to new riverfront parks.

In addition to recreational amenities, the aesthetics and ecology of the river corridor will be restored through bank stabilization and revegetation. Wildlife habitat and improved bank conditions will attract more recreational boaters to the Upper River, as will new riverfront hospitality destinations. Overlooks, fishing piers, and boat rental concessions are planned to offer opportunities for visual and physical interaction with the river.



Old Sash and Door Factory - 1st Era



Barge Terminal - 2nd Era



Light Industry and Open Space - 3rd Era



Riverfront Communities - 4th Era



Skyline view on Upper River



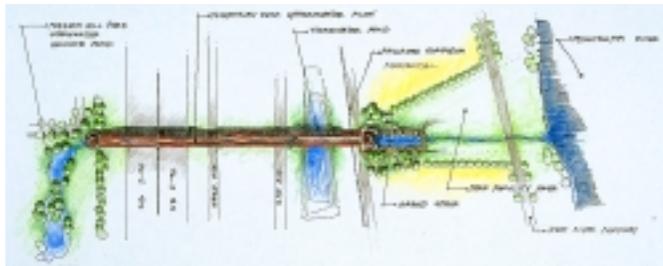
Restoration along West River Parkway



Landscape Restoration



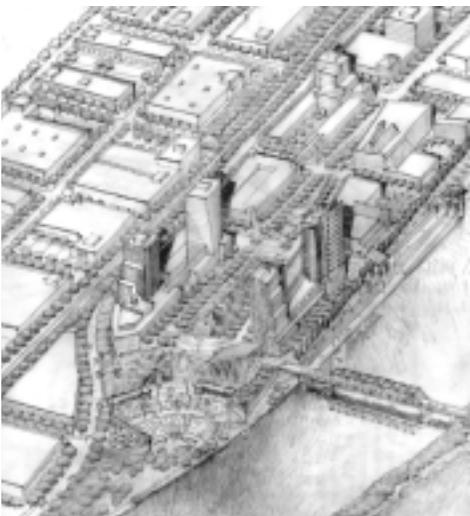
New Riverfront Neighborhood



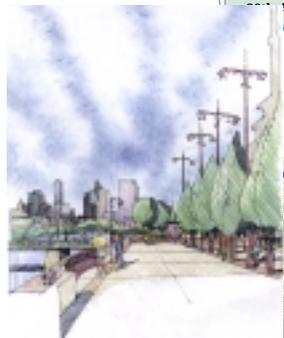
Connections to Neighborhoods



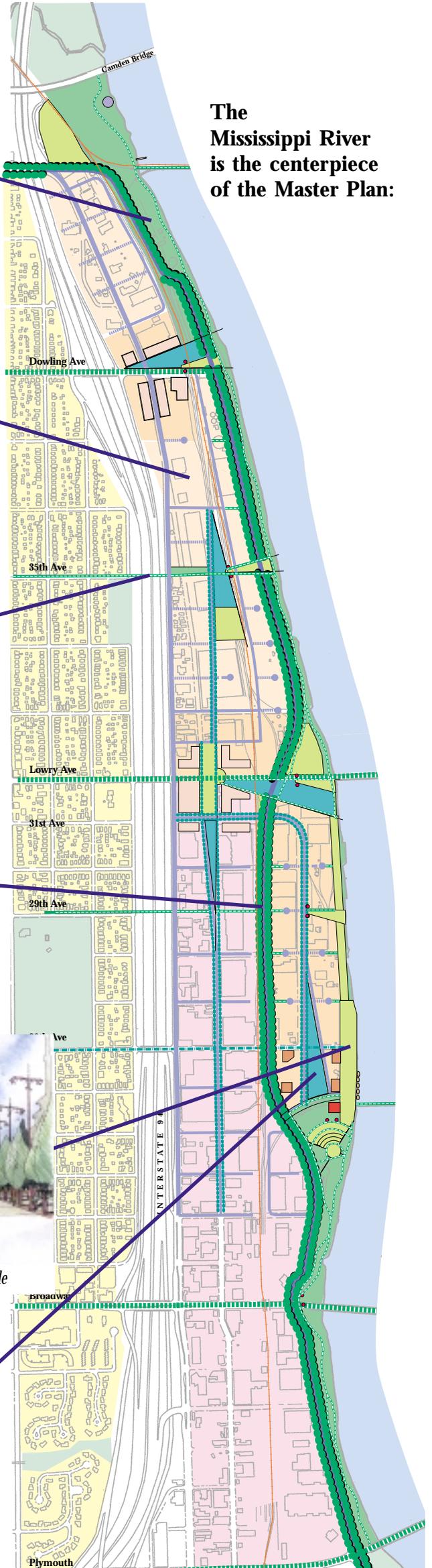
Extended West River Parkway



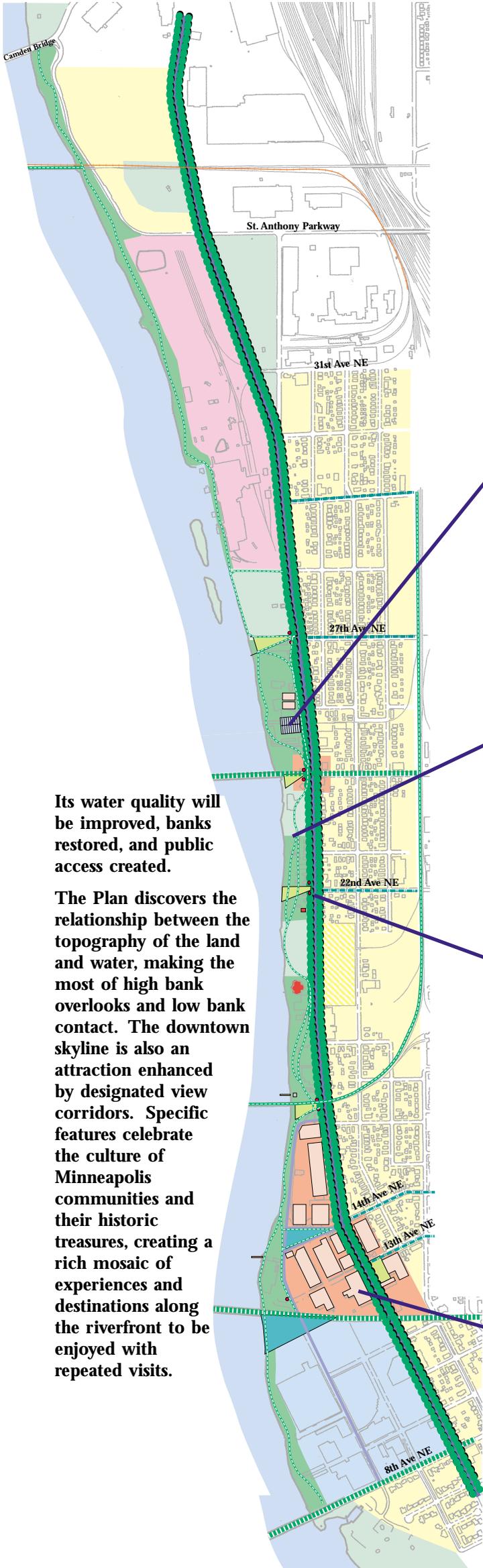
Urban Riverfront District



Riverfront Promenade



The Mississippi River is the centerpiece of the Master Plan:



Its water quality will be improved, banks restored, and public access created.

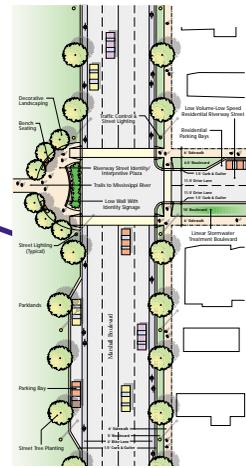
The Plan discovers the relationship between the topography of the land and water, making the most of high bank overlooks and low bank contact. The downtown skyline is also an attraction enhanced by designated view corridors. Specific features celebrate the culture of Minneapolis communities and their historic treasures, creating a rich mosaic of experiences and destinations along the riverfront to be enjoyed with repeated visits.



Botanical Gardens Park Feature



Riverbank Stabilization



Riverway Street System



Grain Belt Redevelopment

Issues Addressed by the Master Plan

Parks and Parkways Development

- * Creation of a continuous riverside park corridor is a primary objective of the Plan.
- * Recommendations are given on specific park areas, size of open space, and programming.
- * A wide variety of experiences are included, from an urban promenade to park landscaping focused on habitat restoration.
- * An innovative parkway alignment is suggested to remove vehicular traffic from a portion of the waterfront and buffer different land uses.

Access to the River

- * Current lack of access to the river is addressed by the Plan with new parks and trails along both banks.
- * A Riverway Street System is proposed to parallel new riverfront parks and connect to existing neighborhoods.
- * Two pedestrian decks over the interstate are included making a direct connection from north Minneapolis to the river.
- * A railroad bridge is identified for conversion to a pedestrian and bicycle boardwalk, while overlooks and boating facilities offer visual and physical contact with the water.

River Ecology

- * The Plan gives specific recommendations for riverbank stabilization and restoration to improve the ecological and visual condition of banks along the Upper River.
- * Water quality ponds are a key feature, designed to meet current standards for retaining and filtering run-off in redevelopment areas.
- * Wildlife habitat in the river corridor is increased and connected through landscape restoration proposals.

Neighborhood Renewal

- * Existing neighborhoods will receive major benefits from the planned parks, redesigned streets, and associated economic development. A regional park is outlined, to give north and northeast Minneapolis communities a waterfront amenity equal to those found in south Minneapolis, but a facility that also recognizes the unique culture and opportunities of the Upper River area.
- * Realization of the plan will raise property values on the city's north side, while providing an incentive for current residents to stay in their community. Public projects will act as a catalyst to private investment in existing and new housing stock, as well as new business starts.

Marshall Street

- * As a major thoroughfare along the river, Marshall Street is a key concern to residents of northeast Minneapolis and adjoining communities.
- * The Plan calls for a new streetscape along Marshall—greener, less cluttered, and safer.
- * As the boundary to a new continuous park, reconstruction of Marshall is expected to spur long-term private redevelopment of housing facing the river.

Commercial Navigation

- * The Plan discusses barging from the perspective of land use, concluding that large areas devoted to open storage of bulk materials return little to the City in terms of jobs and tax revenue.
- * Economics of lock and channel maintenance are explored, showing that public subsidies are high on this last stretch of the Mississippi lock system, and difficult to justify given alternatives in the region.

Heavy Industry

- * Conflicts between some heavy industries and nearby properties are unavoidable given the nature of these operations.
- * While these businesses provide needed services to society, the Plan confirms that the Upper River is too valuable and too close to existing neighborhoods and the heart of the city for this land use to continue indefinitely.
- * A transition to light industry and other land uses is recommended.

Grain Belt

- * One of the great architectural and cultural resources of the Upper River is the former Grain Belt Brewery complex.
- * The Plan proposes a mixed-use development focusing on meeting, hospitality, and entertainment facilities.

Housing Development

- * In a radical departure from past land uses along the Upper River, the Plan captures the true potential of planned park and parkway development by proposing major new residential developments.
- * A new neighborhood is planned for the west bank, allowing a richer mix of land uses and guaranteeing that the new parks will be used and safe.
- * The Plan creates a new space in which the City of Minneapolis can meet Metropolitan Council growth objectives.

Traffic

- * With the recommendation to phase out intermodal terminals as a land use on the Upper River, the corridor will experience fewer trucks and rail cars moving through.
- * At the regional scale, new residential development along the Upper River, within minutes of downtown and easily accessed by transit or bicycle, will take thousands of daily commuter trips off expressways.

Employment

- * A move away from bulk-material-handling industries to light manufacturing, back office, and research facilities is promoted as an overall objective of the Plan.
- * Riverfront park amenities will attract business development to designated areas on the west bank, with higher job densities and quality structures.
- * In addition to light manufacturing and office employment, new areas for riverfront hospitality and entertainment venues will provide opportunities for job creation in the service sector.

Summary of Recommendations

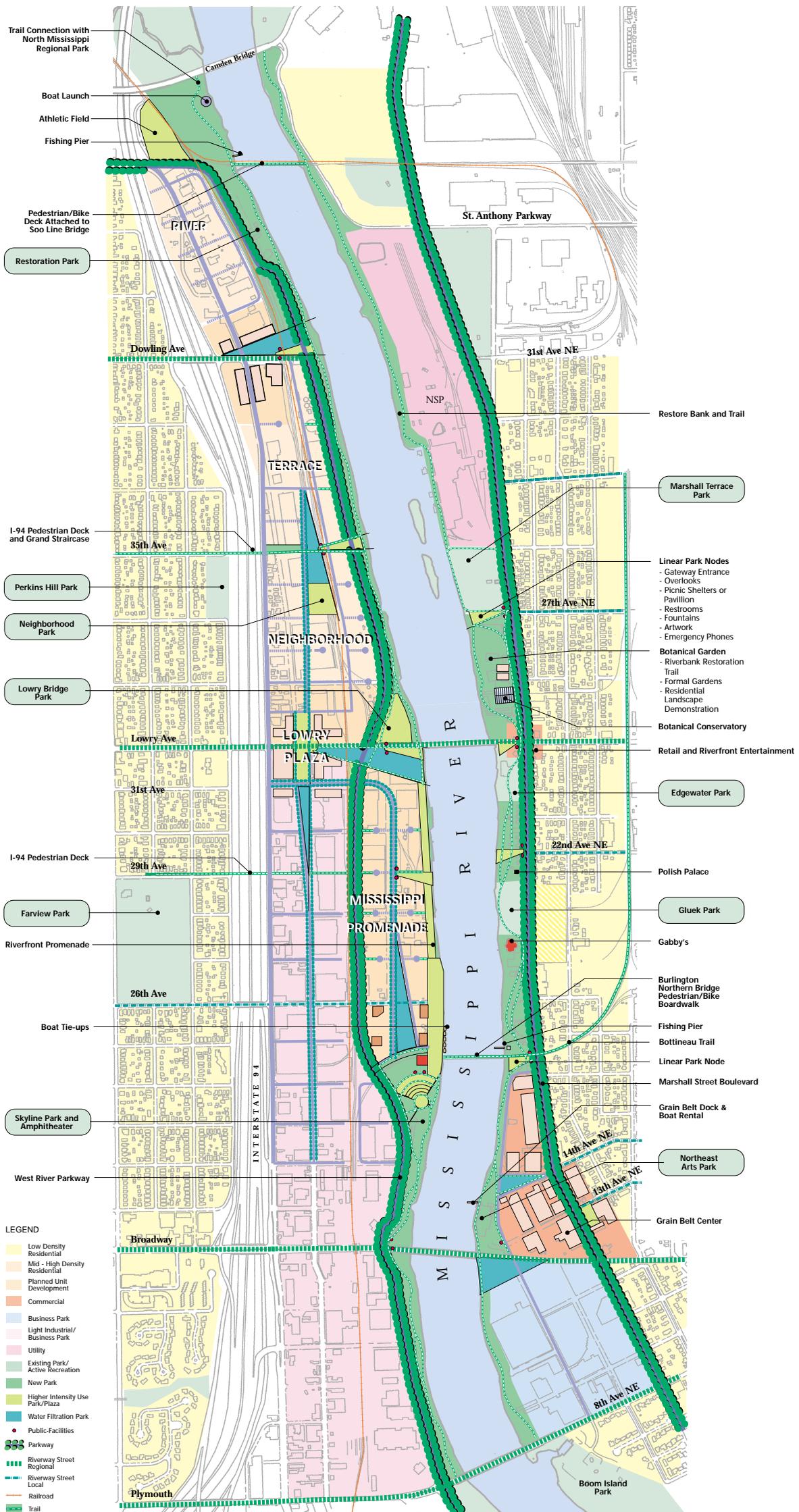
Parks, Urban Design, and Environmental Restoration

- Create a **continuous** and integrated riverfront **parks** and open space system long the Upper River.
- Construct recreational **trails along both banks** of the river.
- Provide space in parks for riverbank, landscape, and habitat **restoration**.
- Develop **waterfront features** in new parks, and **nodes** of interest at regular intervals along trails.
- Preserve **hospitality uses** within parks corridor.
- Establish a **Riverway Street System**, with common streetscape elements and signage that identify streets leading to and paralleling the riverfront.
- Designate no-build zones to hold **view corridors** to the river and downtown skyline.
- Construct a system of **area-wide water quality ponds** that meet the highest standards for stormwater retention and filtration.
- Extend **West River Parkway** to North Mississippi Regional Park.
- Convert the **BN Bridge** to a pedestrian and bicycle facility linking both banks.
- Reconstruct **Marshall Street** as a **boulevard**, with new landscaping and bicycle lanes.

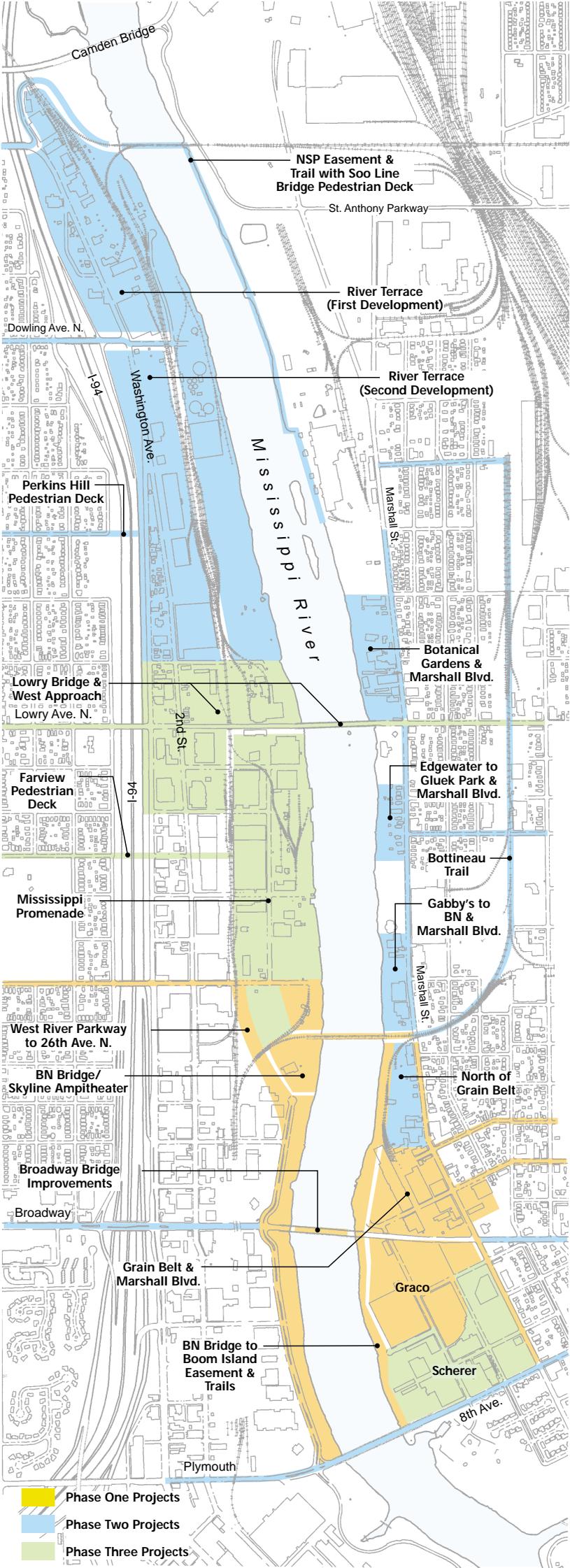
Land Use and Implementation

- Establish an **Upper River Development Corporation** as a non-profit entity with the sole purpose of implementing the Upper River Master Plan.
- **Rezone** property in accordance with the Upper River Land Use Plan.
- **Close the Upper Harbor Terminal**.
- **Phase out heavy-industrial** uses in Upper River corridor.
- Transition land use in corridor to a **mix** of parks, residential, light-industrial, and commercial uses.
- Develop new **riverfront residential** and mixed-use **communities** on west bank.

Upper River Master Plan



Implementation Projects and Phasing



Historical Inertia

When the last great tracts of old growth white pine were felled in the vales of the Mississippi in northern Minnesota, the cut logs stopped floating to the numerous saw mills that occupied the land above St. Anthony Falls. Interspersed with foundries, sash and door mills, cement and brick works, the sawmills along the Upper River in Minneapolis took advantage of large sites for open storage of lumber. Competing railways laid tracks along both sides of the river to transport raw materials and finished products. Housing for industrial workers was built between factories and in adjacent neighborhoods. Breweries tapped deep wells on the east bank, offering employment, impressive architecture, and beer gardens to a vibrant community. Extending cultural traditions with roots in Eastern Europe, distinctive neighborhoods with landmark churches grew in northeast Minneapolis. The river's role was set and unquestioned as a place of industry and work.

With the natural resource exhausted in the early decades of the twentieth century, many sawmills and lumberyards went out of business, leaving large tracts along the river open to new uses. Scrap metal dealers came to dominate much of the west bank south of Lowry Ave., continuing Minneapolis's regional role as a processor of bulk materials. While the power of the Falls of St. Anthony was the reason for the city's being and location, civic leaders in Minneapolis desired a new use for the river as grain milling declined only a few decades after lumber. A lock over the falls was planned. Putting aside the Army Corps of Engineers doubts about the costs and benefits, two locks were constructed at the Lower and Upper Falls. A new era of navigation above the falls opened in 1963, as two-by-two barges were lifted to the last mile of working river on the Mississippi.

But the promise that barging would spur construction of large manufacturing plants along the Upper River did not materialize. By the late 1960s other industrial centers such as Detroit, the Menomonee Valley in Milwaukee, the steel works of south Chicago, the Monongahela in Pittsburgh, were coming to be known as the "rust belt" —vast areas of industrial plant were abandoned, made redundant by new manufacturing techniques and global competition. Minneapolis, with its new locks taking nearly 15 years to construct, had misjudged the larger economic currents and what types of industries and levels of employment barging would bring.

Opening its own municipal barge terminal on the Upper River in 1968, Minneapolis sought to rival the traditional role of its twin city three locks down

stream. The Upper Harbor Terminal found a limited niche in the regional transport system, loading and unloading bulk commodities including grain, potash, salt, twine, fertilizer, and steel. Private terminals on the Upper River moved only scrap metals, concrete, and aggregate, important and necessary commodities, but far short of the manufacturing plants forecast to justify the locks. To pay for construction of the municipal terminal—its locomotive, tug boat, conveyor belts and storage sheds—local taxes subsidized the operation for 30 years.

Over those three decades much had changed in attitudes regarding the river. With successful efforts to clean the water, citizens organized around a new concept of *the river as an amenity* and called for an end to the historical inertia, set in City policy and regulations, that continued to place industry along the banks.

A New Vision Emerges

The City's master plan for its riverfront published as *Mississippi/Minneapolis* in 1972 proposed wide ranging and ambitious goals for redevelopment of the central riverfront in downtown, which at the time was only a shell of its former glory as the world capital of grain milling. Many of these redevelopment goals have since been accomplished. The 1972 plan also addressed the Upper River, proposing a high-employment manufacturing area with quality structures and river edge setbacks at non-barging sites, while also including significant open space, river access, and trail development goals. A major success has been the creation of the North Mississippi Regional Park and replacement of the Camden Bridge, yet almost all of the other suggestions regarding industrial character, employment levels, local access greenways, and a continuous trail along the east bank have not been realized.

“The extension of a public access greenway along the entire river edge of this district to Marshall Terrace Park is an important, if difficult, task”

— *Mississippi/Minneapolis*, 1972

Over a dozen plans since 1972 have addressed the Upper River in some manner, including "The Upper River in Minneapolis" (1985), "Mississippi Corridor Neighborhood Coalition" (1994), and "Gateways to the River" (1997).

The basic goals identified over a 25-year period of planning for the Upper River remain the same:

- Create continuous recreational trails along both banks of the river.
- Seek opportunities for public ownership of the riverbank.
- Enhance streets leading to and paralleling the river.
- Create locations for observing the river.
- Work toward a pattern of river-enhancing land uses.
- Revegetate the riverbanks.

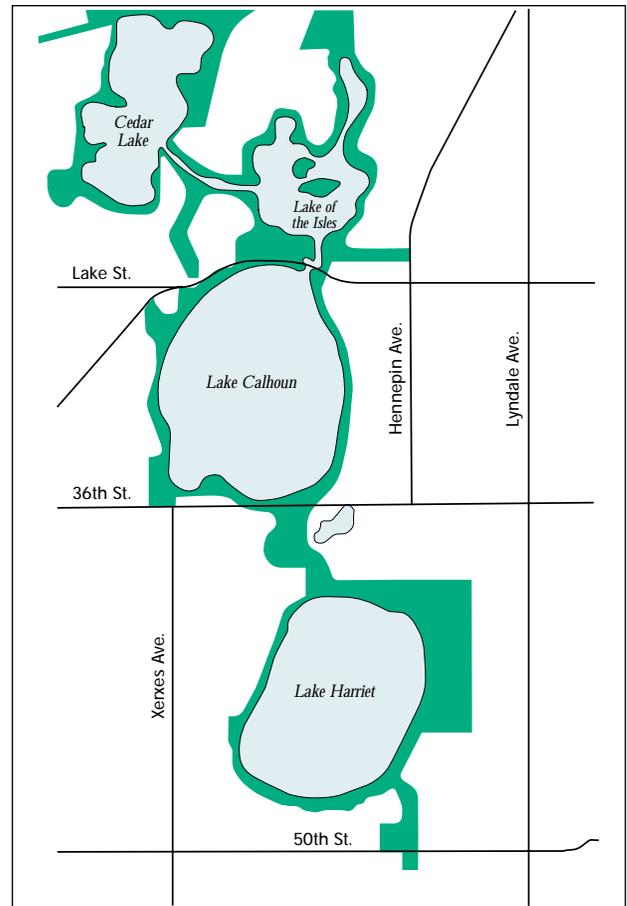
- Remove unneeded railroad spurs.
- Improve river ecology and water quality.
- Reduce or eliminate sources of air, noise, or water pollution.
- Develop a coordinated effort at all levels of government to implement goals.

Citizens of Minneapolis and residents of neighborhoods adjacent to the Upper River clearly have a strong desire to see substantial changes made to conditions along the river. Calls for action have increased in the 1990s, as bulk-material-handling businesses seek to expand operations on the riverbank, while north and northeast Minneapolis confront a broad array of social and environmental issues.

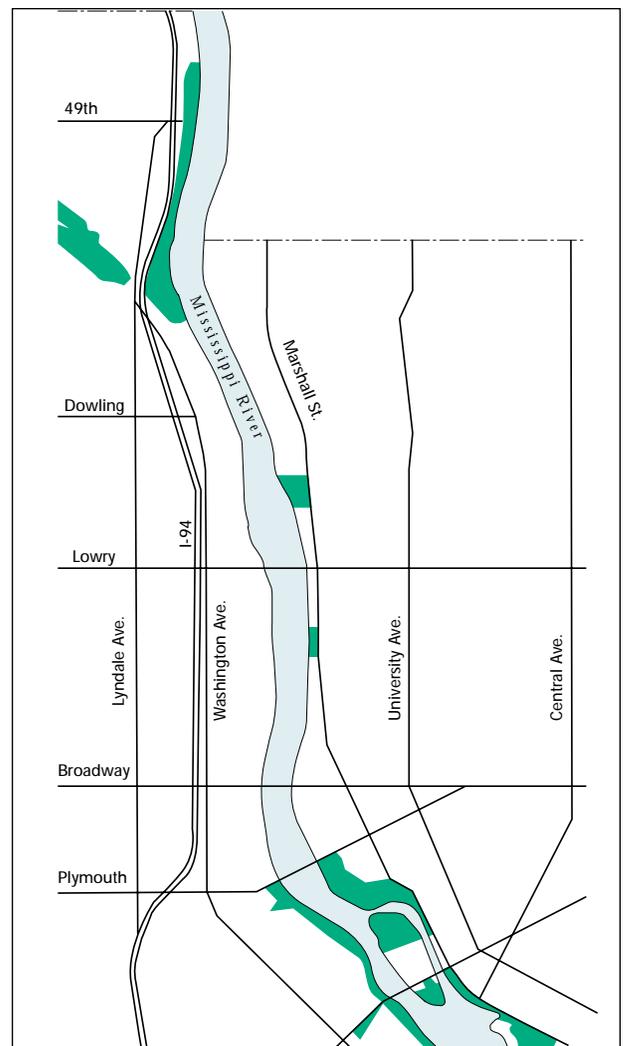
Northern sections of the city have frequently looked to the south side, with its Chain of Lakes and West River Parkway, and felt that their part of the city should have similar waterfront parks. The opportunities that the Upper River offers are tantalizing from vantage points such as the Grain Belt Brewery, Marshall Terrace Park, or the terminus of West River Road. And the need to develop new public amenities that will act as a catalyst for private reinvestment in north and northeast Minneapolis becomes critical, as housing stocks deteriorate and employment lags behind the robust growth in the rest of the city and overall metropolitan area. Indeed, the historical ties between the riverfront industrial areas and residents of adjacent neighborhoods have been loosened, if not broken altogether: in 1999 less than 10 percent of all employees in the Upper River area lived in adjacent neighborhoods, and only 33 percent lived in the City of Minneapolis. The automobile has freed most employees to live far from work, and neighborhood affiliation with local plants has declined. The location of Interstate 94, completed in 1982, was explained as a *buffer* between industry and north Minneapolis, but employment opportunities have not increased substantially for nearby residents and the interstate acts as a real *barrier* to any conception of north Minneapolis as a riverfront community.

Prelude to a Master Plan

By the time of completion of the "Gateways to the River" report and its acceptance by the City Planning Commission in 1997, the concept of the Upper River as the focus for parks, parkways, and trails had been thoroughly discussed. The citizens advisory committee appointed to develop the 1997 concept plan consisted of neighborhood delegates from each of the ten neighborhoods bordering the river north of Plymouth Ave. plus representatives from industrial, commercial, recreational, environmental, and hospitality interests. The committee met over a period of 16 months, assisted by an inter-jurisdictional staff from the City Planning and Inspections departments, Minneapolis Park and Recreation Board, Minneapolis Community Development Agency, and National Park Service. The "Gateways to the River" plan reiterated and refined goals expressed in previous plans, including the general desire for continuous parks and trails along the river. The issue of the



Chain of Lakes



Upper River

Comparison to scale of Chain of Lakes and Upper River. The Chain of Lakes has 10.5 miles of waterfront with trails, parkways, and parks creating the key amenity for south Minneapolis. The Upper River offers 4.5 miles of waterfront south of the Camden Bridge.

City's Upper Harbor Terminal was recommended for further study, as was the designation of Marshall St. N.E. as a truck route, and the potential for a marina.

In December of 1997 the Minnesota Department of Natural Resources executed an agreement approving a grant to the Minneapolis Park and Recreation Board from the Legislative Commission on Minnesota Resources "to develop a master plan addressing greenspace and trail development, riverbank restoration, and stimulation of river-oriented land uses within a corridor along the east and west banks of the Mississippi River from Plymouth Avenue north to the Minneapolis city limits." The master plan, as described in the project outline and request for proposals from consultants, was to be *comprehensive*. The primary goal was for a parks plan to "provide the final link in the Mississippi riverfront greenspace system," but the scope of study also included "neighborhood economic revitalization and sustainable development through a gradual shift in land use toward light industrial parks and residential neighborhoods in conjunction with greenways and riverfront trail systems," and "environmental questions regarding possible soil contamination by previous and current land uses and the restoration of the ecological integrity and stability of the riverbanks." This comprehensive master plan was not to be a strict feasibility study, nor a reexamination of possible goals for the area, but a plan that began where previous plans left off and answered questions of how parkways, parks, and trails might be configured, how the riverbank could be restored, and what might be the optimal urban design for adjacent lands—with a shift away from heavy-industrial use of the riverfront prescribed.

The Upper River—A unique place on the Mississippi

The Mississippi River in Minneapolis has three distinct geographical zones: the gorge below the falls, the Falls of St. Anthony, and the area above the falls; which have for planning purposes been correspondingly labeled the Lower Gorge, Central Riverfront, and Upper River. Plymouth Avenue and its bridge just north of Boom Island Park serves as the dividing line between the Central Riverfront and the Upper River. The Lower Gorge displays visible evidence of the falls collapse and recession over the millennia, as softer sandstone was undercut by the force of the water flowing over the harder limestone riverbed. The different geology of the gorge and falls areas from the Upper River is revealed in the geography above ground, with early accounts of the area before urbanization noting the clear distinctions in topography and vegetation.

Henry Schoolcraft, discoverer of Lake Itasca as the source of the Mississippi, noticed while making portage in 1820 that the Falls of St. Anthony were: ". . . in fact the precise point of transition, where the beautiful prairies of the upper Mississippi, are merged in the rugged lime stone bluffs which skirt the banks of the river from that point downward."



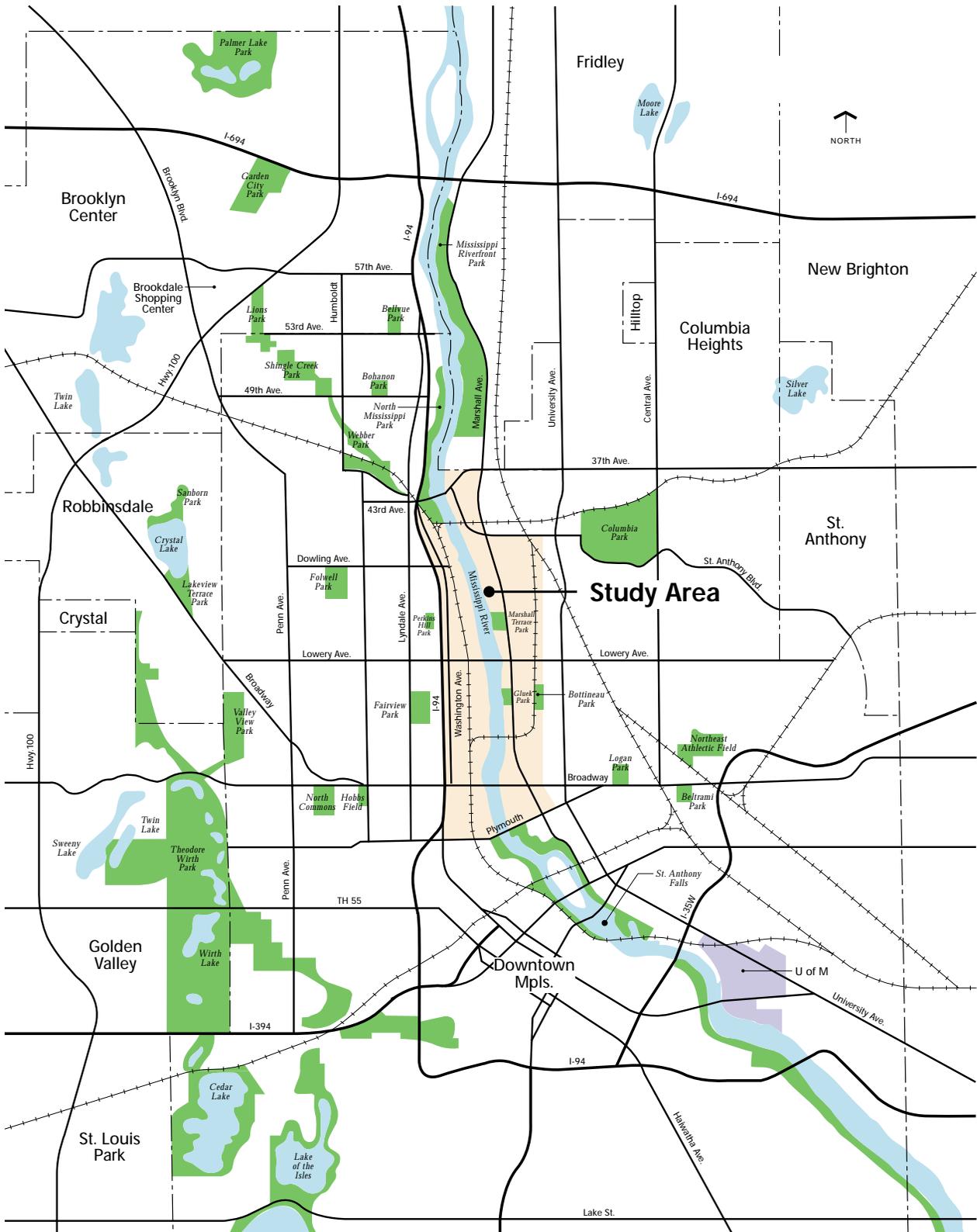
The Minneapolis Institute of Arts

" . . . and the eye embraces at one view, the copses of oaks upon the prairies, and the cedars and pines which characterize the calcareous bluffs. Nothing can exceed the beauty of the prairies which skirt both banks of the river above the falls. They do not, however, consist on an unbroken plain, but are diversified with gentle ascents and small ravines covered with the most luxuriant growth of grass and heath-flowers, interspersed with groves of oak, which throw an air of the most picturesque beauty over the scene. "

—Henry Schoolcraft, 1820. "St. Anthony Falls in 1848" by Henry Lewis.

Boundaries

Interstate 94 sets the western boundary of the study area. The eastern extent of the study area is the Burlington North railroad spur paralleling California St. N.E. Plymouth Ave. N. extending across the river to become 8th Ave. N.E. is the southern boundary of the Upper River area. The City limits at 53rd Ave. N. and 37th Ave. N.E. mark the northern boundary. Although part of the Upper River, North Mississippi Regional Park is being developed with its own master plan; therefore, the Upper River Master Plan uses the Camden Bridge as its northern limit for detailed study. Investigation of circulation and traffic patterns extends outside the study area for land use.



Geology and Landscape Features

A serendipitous irony of history is found in the underlying geology of the river in Minneapolis, for only a few hundred yards upstream from the present location of the falls, the limestone that forms the bluffs and falls gives out—if the collapse had been a bit faster, only a rapids would have been discovered by the first European explorers.

In contrast to limestone bluffs, the area above the falls is characterized by deep sand terraces, remnants of former channels and floodplains left from the time when the ancient river swelled with glacial melt. The topography of this terrace is most apparent on the west side of the river where the bank is low, only a few feet above the water, giving way to a mostly level plain that steps up to a glacial outwash west of the interstate. In most areas, the east bank is higher and the slope from the river steeper, up to 25 feet above the average water level, but also generally flat land above the bluff line. This difference in elevations shows the cut and deposit action of the river, with its slight meander to the east between the outfall of Shingle Creek and the Burlington Northern railroad bridge.

Shingle Creek and Bassett Creek enter the river from the west bank and mark important topographic boundaries for the Upper River. The Plymouth Ave. bridge was built just north of Bassett Creek, while Shingle Creek meets the Mississippi immediately north of the Camden Bridge. Downstream of Camden, the Soo Line Railroad bridge marks the end point of the dredged channel maintained by the Corps of Engineers. There are no surface streams on the east side in the study area, and no major creeks were documented at the time of European settlement.

Site alterations throughout the study area have included dredging, importation of fill to level and stabilize ground, as well as placement of bulkheads and other structures along much of the bank. With the exception of stands of cottonwood near the water, there are no remnants of the original patterns of vegetation. Four roadway and two railroad bridges span the Mississippi in the study area. Storm sewers carry surface runoff from north and northeast Minneapolis to 33 outfalls along the river.

- | Natural Features | |
|---|--|
|  | Wetlands |
|  | Woodlots |
|  | Grass & Scrublands |
|  | Exposed Water Features |
|  | Slopes |
|  | Depressions |
|  | Historic Ponds |
| Human Influenced Features | |
|  | Storm Drain Outlets Into The Mississippi River |
|  | Landscaped/Maintained Areas & Parks |
|  | Significantly Disturbed & Abandoned Areas |
|  | Potential Corridor |

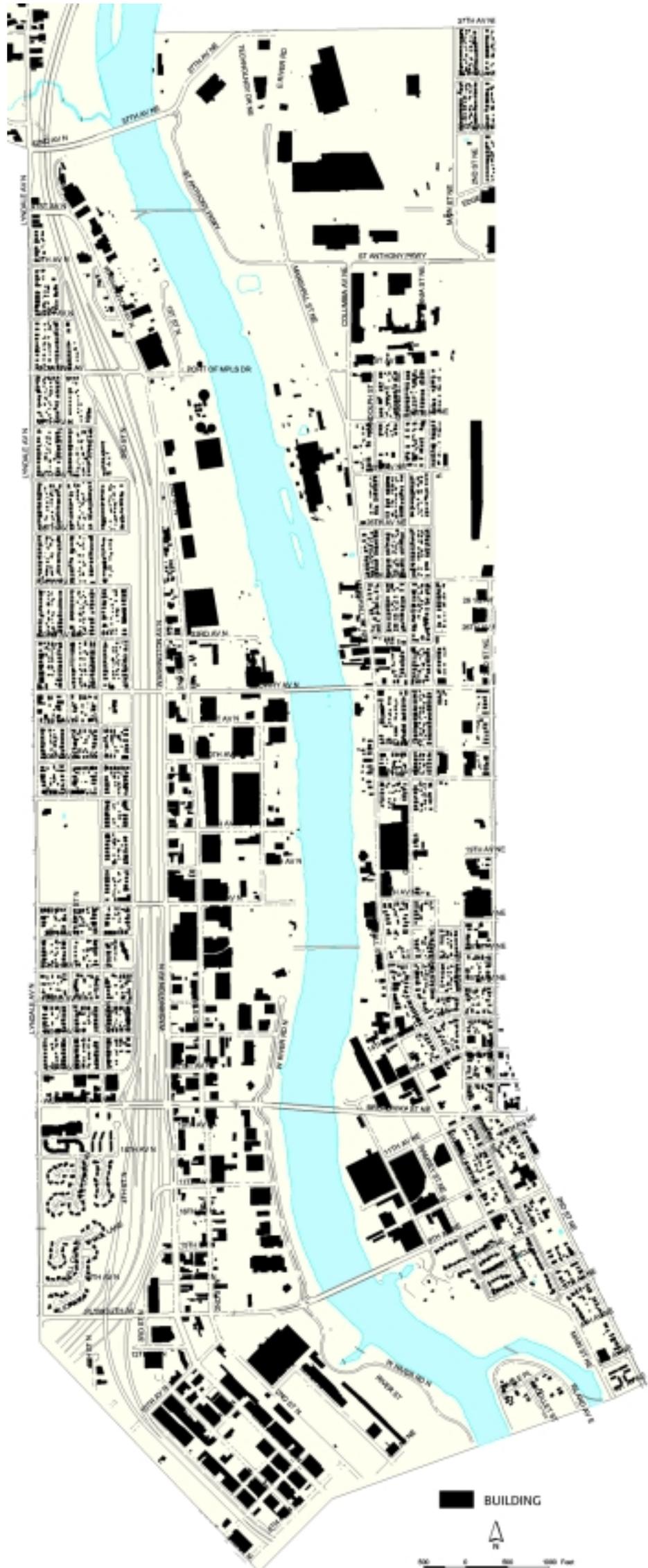


Figure-Ground Elements

The figure-ground diagram shows built structures, in black, set against the background of open land and water, in white and blue respectively. This type of diagram is useful to an understanding of the spatial characteristics of structures in relationship to each other and the pattern of underlying topography and infrastructure. Most telling are the large areas along the west bank that have no structures. These areas in white correspond directly with barge terminals. This relationship is created by the nature of the bulk-material-handling operations, where outdoor storage occupies the majority of land.

On the east bank, large areas of white along the river indicate existing park lands, including Marshall Terrace, Edgewater, and Gluek. The Northern States Power plant also stands out along the riverfront, with park open space to the south and a large open area to the north used to store coal.

The largest single feature that the figure ground indicates is the Mississippi River itself. Obviously, it contains no structures, but perhaps less obvious, the open space of the river creates long views to other parts of the city and also open views of the sky.



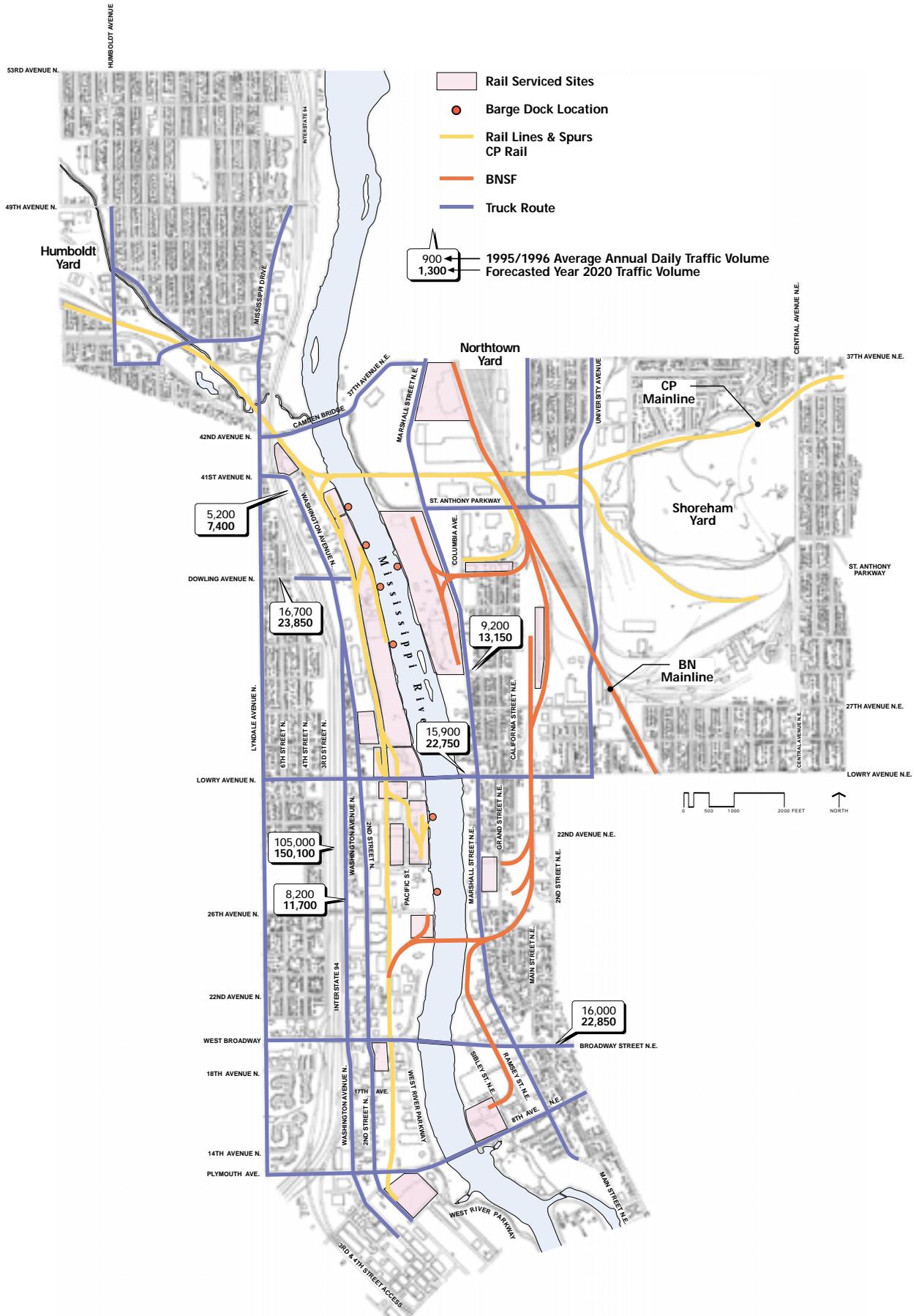
Existing Land Use

The parcel-by-parcel land-use depiction shows the west bank dominated by general-industrial uses on large sites. Along Washington, Broadway, and West River Road a more complex mix of commercial, office, residential, and vacant land is shown on parcels of a variety of sizes. On the east bank, parks are intermixed with general-industrial and residential uses. Residential neighborhoods of northeast Minneapolis extend right up to Marshall St. and the riverbank, while the communities of north Minneapolis are cut off from the river by the interstate (shown as a corridor of white) and the large area of industrial uses.



Circulation

The Upper River corridor is well connected to national, regional, and local transportation systems. Interstate 94 has exits at Broadway, Dowling, and 49th Ave. N. Truck routes mark regional highways and bridge crossings. High-traffic routes include Washington, Broadway, Marshall, and Lowry. Two railways own mainlines and yards in the study area, with Canadian Pacific Railway (CP Rail) servicing businesses with a spur down the west bank, and the Burlington Northern Santa Fe Railway (BNSF) extending a spur down through the residential neighborhoods of northeast Minneapolis to the BN Bridge and customers on both sides of the southern riverfront. Barge terminals lie on the last stretch of commercial navigation on the Upper Mississippi.



Policy Issues

A complex knot of difficult and intertwined policy and land-use planning issues stand in the way of change for the Upper River. Existing policies supporting heavy industry while promoting light-industrial development and parks are in conflict. Basic questions about current conditions and future uses cut to the core conception of the Upper River: Should the river be developed as an amenity or should it remain a working river? And from an economic development perspective, is the working river working?

Policy and the Central Riverfront: A model for the Upper River?

When *Mississippi/Minneapolis* was published in 1972 it was clear that the industrial era on the Central Riverfront was past. The mills stood silent and grain silos empty. The Milwaukee Road abandoned rail passenger service along with its yard and depot at 3rd and Washington in 1971, while the Burlington Northern looked to its land development subsidiary to find new uses for its redundant yard north of downtown. Nicollet Island was blighted with old empty factories and crumbling houses. Yet, seeing the slow decline, policy makers had decades to prepare.

The 1972 plan provided a vision, but one that required imagination to grasp and will to accomplish. Land-use zoning was changed to reflect the proposed development patterns, public works were planned and implemented—constructing new roads, bridges, and parks, with a project-by-project investment of hundreds of millions of dollars. In turn, the private sector made substantial investments: large development corporations built high-rise residential apartments and condominiums with views of the river and renovated historic structures along St. Anthony Main, while individual families turned the once decrepit Nicollet Island into a village of historic homes.

Projects and uses achieved varying levels of success, but now almost 30 years later, the pace of construction has gained momentum, with developments such as River Station, Sawmill Run, and the Northstar Mill, making the central riverfront *the place to be* for downtown living. With hundreds of new residential units, a new Federal Reserve Bank, and other projects going on along the Central Riverfront, generating millions of dollars in new tax base, the concept of the river as an amenity is gaining ground on the old idea of the river as an essential part of the city's transportation infrastructure. **In fact, new construction stretches out from downtown all the way to Plymouth Ave.**

While the experience of the Central Riverfront shows what can be done through a concerted public and private effort, the need for action along the Upper River does not seem, at first glance, as imperative. The Central Riverfront abuts the downtown business district, the Upper River is easily overlooked and passed by. And the policy for the Upper River was set long ago by public investments, starting as far back as the 1940s, with Congress funding the locks over the falls and the City investing millions in the Upper Harbor Terminal. The Upper River was to be Minneapolis' working river. But the question to be resolved now is has this concept of the river returned benefits to justify present and future costs?

Commercial Navigation on the Upper River

Histories of Minneapolis discuss the long held desire by civic leaders to extend river navigation upstream from St. Paul. In the nineteenth century the main goal was to bring passenger vessels up to the Lower Falls. Decades of rivalry between St. Paul and Minneapolis, and water power magnates and navigation proponents, led to many fruitless proposals to build locks and dams in a number of places between the Lower Falls and Fort Snelling. Finally, a dam construction project was started, only to have a higher dam near the mouth of Minnehaha Creek scuttle the effort. This resulted in the "High Dam," more commonly known as the Ford Lock and Dam, so named following sale of power generation rights to Henry Ford to secure a deal for an automobile manufacturing plant.

The pool of water behind the Ford Dam allowed passage up to the flats below the Washington Avenue Bridge. But as soon as this section of the river was opened in 1917, city leaders and navigation boosters began an indefatigable lobbying of Congress to construct further locks over the Falls of St. Anthony. The lock over the Lower Falls dam was finally completed in 1956. Construction of the lock over the Upper Falls was begun soon after, in 1959, and completed in 1963. These locks were known as the "Upper Harbor" project, because they opened the area above the falls as a new harbor. Opponents of the project argued at the time that it was an unnecessary and unwise investment that would result in few benefits to the city.



Upper Falls Lock

Today, nearly 40 years after the opening of the Upper Falls lock, the results from both a land-use and economic development standpoint are clear. There are four barge terminal users: a sand and gravel operation, a scrap metal yard, a cement storage facility, and the Upper Harbor Terminal.

Key points to understanding river navigation on the Upper River further illuminate the present situation:

- Annual public cost for navigation on the Upper River is \$3.1 million, budgeted by the Army Corps of Engineers for lock and channel maintenance.
- Only 2 barges and a towboat fit through the St. Anthony Locks during any one lockage, compared to 9 barges on all the locks down river, from St. Paul to St. Louis.
- Roundtrip time from the Port of St. Paul to the Upper River is 12 hours.
- Additional costs due to less efficient 2-barge operations are \$0.50 per ton on the Upper River, compared to \$0.25 on the Minnesota River and \$0.10 to move barges around the Port of St. Paul.
- Minimum threshold set by the Corps to justify the public cost of barging is 1 million tons.
- Tonnage totals for the Upper River fluctuate, with a peak of 2.3 million tons in 1975 and low of 0.66 million tons in 1989. Tonnage average 1989 to 1998 was 1.58 million tons.
- The barging season on the Upper River is usually about 8 months, depending on the weather.
- Upper River barge terminals employ approximately 80 persons, many on a seasonal basis.
- Barge terminal operations occupy 72 acres of land.
- In total, barge terminal operations pay less than \$300,000 in annual property taxes (an average of \$4,167 per acre, or less than 10 cents per square foot).

Upper Harbor Terminal

Perhaps the key policy issue for the Upper River is the status and future of the Upper Harbor Terminal (UHT). This 48-acre barge terminal facility is owned by the City of Minneapolis. The MCDA manages the terminal, with a private company handling operations. Nine acres of the site are used to store dredge spoils, basically riverbed sand, which the Corps of Engineers dredges to maintain a nine-foot-deep barge navigation channel on the Upper River. An additional seven-acre parcel south of the barge docks is vacant. In addition to dredge spoils, the UHT site contains large piles of road salt and coal. The remaining parts of the site contain a warehouse, grain elevator, three concrete storage domes, asphalt tanks, a railroad yard, and three barge

docking areas. A series of conveyors is used to transport materials between the three modes of barge, railcar, and truck. The operation also has its own towboat, locomotive, crane, and other equipment.

While many barge terminals in other cities, including St. Paul, are privately owned, the City of Minneapolis owns the UHT, providing the land and original capital investment. Although the terminal has generated a positive cash flow, service on the original debt has caused annual deficits, with the City, through the MCDA budget, subsidizing the operation in the amount of \$500,000 to \$1 million each year for the past 30 years. Bonds used to finance the terminal are scheduled to be paid off by the end of 1999. Positive cash flow in subsequent years will provide revenue to the City, however, the UHT will continue to be exempt from property taxes. This lack of a tax-generating use of this 48-acre riverfront site is an ongoing opportunity cost. Even if much of the site were used as non-taxed parkland, the adjacent properties would rise in value.

A full report on the Upper Harbor Terminal and river navigation issues is included in the Appendix. Some points useful for policy consideration include:

- Only 5 to 8 percent of material moved through the UHT is related to business in Minneapolis, an additional 12 to 15 percent in the metropolitan area, with the balance of 80 percent originating or destined for greater Minnesota, other states, and Canada.
- The UHT employs approximately 30 persons, half on a seasonal basis. Employment density is less than 1 job per acre.
- The UHT, at roughly 1 million tons per year, generates from half to two-thirds of the annual tonnage moving through the Minneapolis locks.

“If a good harbor does not come to Minneapolis, much of Minneapolis will go where there is a good harbor.”

“I don’t know of any public works appropriation that I voted for that will bring as many benefits as this one in 50 or 100 years.”

— Congressman Walter Judd, 1954 and 1963



Upper Harbor Terminal

To barge or not to barge?

The Upper River Master Plan is essentially a land-use plan that investigated commercial barging as one of the key issues regarding the use of riverfront land. The Master Plan makes recommendations on the highest and best use of land in accordance with the stated planning objectives. However, the Army Corps of Engineers, and ultimately the U. S. Congress, have final say over the future operation of the three locks in Minneapolis.

The fate of the Upper Harbor Terminal will be determined by the Minneapolis City Council, as a separate issue for discussion or as an ongoing part of the City's annual budget process. **The City of Minneapolis has invested millions of dollars in the UHT and has not to date received any identifiable economic benefit.** With the bonds paid off, it is anticipated that the UHT will generate limited revenue for the City. However, capital equipment at the terminal will require ongoing maintenance, and big ticket items at some point will need to be replaced, most likely requiring additional subsidies by the City. It remains unclear why the City of Minneapolis is in the barge terminal business.

Private barge terminal users benefit from the City's operation of the UHT, since the UHT is the major factor in justifying annual federal expenditures on the Minneapolis locks and channel dredge and maintenance operations. All of the businesses that operate private terminals provide necessary commodities and services to the city and region. CAMAS provides aggregate for making concrete, with Holnam Cement also operating a terminal. American Iron and Supply gathers recyclable metals from demolished buildings and other sources. The availability of publicly subsidized barging as a transport option allows these businesses to operate at a lower cost. However, it should be noted that competing businesses in the study area, and other parts of the region, move scrap metal and cement solely by rail or truck.

Barge terminals are intermodal transfer facilities, and as such, bulk materials are loaded on or off railcars and trucks, concentrating rail and truck traffic on the west bank of the Upper River. Relocation of this traffic to other facilities may cause minuscule regional impacts. A comparison of the costs of barges versus trucks is included in the Appendix, however real world impacts of a shift to other modes are not known. Not all of the shift would be to trucks, and some origins and destinations may be closer to other terminals; likewise the assumption used is that goods would move by truck from the Upper River area, but this is only for purposes of comparison: most goods originate far from the Upper River and are destined elsewhere. For instance, grain now off-loaded from railcars at the UHT would not travel by truck from the study area to St. Paul, it would continue on rail to its final destination.

In fact, there are over 30 other barge terminals in the Twin Cities metropolitan area, on the Mississippi in St. Paul and also on the Minnesota River.

Terminals in St. Paul can easily absorb the much smaller volumes moving through the Upper River. If barging were discontinued on the Upper River, it is likely that truck traffic in the study area would substantially decrease, as commodities would no longer be transported into and out of the area on barges and trucks.

Future of Employment and Economic Development

In the first half of the twentieth century when the construction of the locks at St. Anthony Falls was proposed, the future of cities and their economic development seemed inextricably linked to heavy manufacturing, which required easy access to bulk materials. Minneapolis' regional and national role though has been limited in the area of complex manufacturing, rather the city's original purpose was bulk materials processing: sawing logs and milling wheat. The capital accumulated by these early industries has subsequently been reinvested, transforming the city's economy away from industry to office and high-technology businesses.

The small number of businesses that located along the Upper River to take advantage of barging are bulk-material-handling businesses, rather than the hoped for manufacturing plants. By the very nature of their operations these businesses require open storage of materials: piles of sand, gravel, and scrap metals. These materials are unsightly viewed from the land or river. They are also frequently noisy and dirty operations that will understandably conflict with other uses. In 1997 the Japs-Olson printing facility moved out of the study area to a suburban location away from the scrap metals yards surrounding their property. The move resulted in the loss to the city of over 500 jobs paying good wages. This relocation is an example of the choices confronting policy makers regarding land-use issues in the study area. Currently, job densities for the bulk material industries are low, approximately one job per acre, with seasonal layoffs. MCDA guidelines seek 1 job per 1000 square feet of building, with a minimum of 40 percent site coverage, which works out to approximately 17 jobs per acre. Much of the benefits of the MCDA's effort on the North Washington Industrial Park have come by offering land with the objective of placing businesses that provide jobs with good wages, in enclosed facilities, in growth industries, such as graphic arts and laboratories. The jobs per acre of these light industries are much higher than barging, land-intensive uses, such as the UHT. The jobs provided are also year round, rather than seasonal.

The basic direction of industry and employment at the turn of the twenty-first century is perhaps easier to predict than during previous decades. Manufacturing employment in the United States continues to decline, service and information jobs are increasing. While river navigation may have been the eighteenth- and nineteenth-century's vital communication and transport infrastructure, sustained growth in the Upper River area could very well be more dependent on new high-speed communications cables than on barges.

The basic land-use planning objectives of the Upper River Master Plan can facilitate economic development goals through the creation of new urban riverfront parks and recreational facilities. Quality of life issues are playing an increasing role in attracting entrepreneurs and retaining skilled employees. The Upper River area has the potential to be an exciting urban area, immediately north of downtown, with a mix of new light manufacturing, studio, and live-work units. Parks will attract adjacent housing, and also riverfront hospitality venues that provide jobs in the service sector. If public policy sets a new course for the Upper River, away from bulk material handling, with a clear goal of creating a twenty-first century city location, then the question becomes how to best balance the variety of land uses.

“Those heavy industrial uses currently operating with a negative impact on their surroundings and generating relatively low job counts should be required to mitigate their impact and encouraged to relocate when possible. . . . Minneapolis will support the existing economic base by providing adequate land and infrastructure to make city sites attractive to businesses willing to invest in high job density, low impact light industrial activity.”

— *The Minneapolis Plan*, 1997



Planning Objectives

Building on over 25 years of previous effort, the Minneapolis Park and Recreation Board and its partnering agencies, Hennepin County, the MCDA, and the City Planning Department, had clear planning objectives prior to the start of the Upper River Master Plan process.

Grand Rounds

The Park Board stated that “the primary objective is a Master Plan for the development of a riverside park corridor to connect with existing park systems to the north and south. . . .” (Request For Proposals, 1997). Since its inception in the 1880s the Minneapolis Park Board has had a long record of success in developing parks, parkways, and trails—the total system of integrated parkways known as the Grand Rounds. The most celebrated of these have been greenway amenities surrounding the City’s water bodies, including the Chain of Lakes, Minnehaha Creek, and East and West River Parkway. Park planners have long recognized the natural affinity and interest people have in water features. Given the steep topography of the Lower Gorge, the East and West River Parkways along the Mississippi could be developed early in the City’s history without vying with competing land uses. The Central Riverfront, however, was the industrial heart of the Minneapolis for a hundred years; yet, when milling declined and ended at the falls, most of the riverbank became vacant and available. In 1989 the Park Board and other agencies celebrated the extension of West River Parkway through the historic milling district, past the Hennepin Avenue Bridge, to its present terminus at Plymouth Ave. Therefore, the Upper River Master Plan is to address one of the final links in the Grand Rounds system: an extension of park amenities north along the Mississippi.

Access

Access to the riverfront is currently restricted by the large number of parcels in private ownership. On the west bank, even public streets that extend to the river edge are frequently closed off by fencing and parked trucks. Heavy industrial sites on both banks are dangerous places for non-employees, with equipment moving bulk material, and many trucks entering and exiting. While previous plans have called for areas to observe activities such as barge loading, none have been constructed, and finding access to such observation areas would in itself be difficult. Carrying trails away from the riverbank and around such industries would put trail users onto adjacent truck routes. Conflicts are unavoidable. Moreover, water is the attraction and trails should provide visual and physical access to the river. Following Park Board policy, purchase of property is the preferred means of gaining public access. Where public ownership conflicts with other goals, yet space is available for trails, easements are a second option.

Riverway Street System

In addition to parks and recreational trails, the Minneapolis park system continues to develop parkways for passenger vehicles. Original parkways were first constructed as carriageways for horse-drawn vehicles, with the resulting streets setting a clear boundary between public and private space. Park Board standards call for narrow drive lanes, restricted connections to local streets and arterial thoroughfares, and no commercial truck traffic. Traditionally, parkways have followed along water courses. An increasing concern is the level of traffic on parkways being used as commuter routes. A key objective for the Upper River plan is to extend West River Parkway past Plymouth Ave. up the west bank to connect with Webber Parkway and North Mississippi Regional Park, and connect to the east bank via the Camden Bridge to St. Anthony Parkway.

On the east bank, Marshall Street is the logical boundary for new riverfront parks, and as such, there is a desire to convert Marshall into a parkway. As part of a complete riverway street system, improvements to streets leading to the riverfront will encourage local identification with the river and extend the benefits of new park amenities back into adjacent neighborhoods. Regional access routes for vehicles can be provided on thoroughfares with river bridges. Previous plans have called for improved local access streets, referred to as “greenway windows” or “gateway streets,” that would include new landscaping and infrastructure that facilitates pedestrian and bicycle movement to the river.

Objective:

- ✓ **A riverside park corridor.**

Objective:

- ✓ **Public ownership of riverfront parcels.**
- ✓ **Continuous riverside recreational trails on both banks.**

Objective:

- ✓ **Parkways along both banks of the river.**
- ✓ **Integrated riverway street system.**
- ✓ **Enhanced streets leading to the river.**

Ecological Restoration

While much of the rationalization for the early park movement focused on human needs for fresh air and light in crowded urban areas, the growth of environmentalism in the last decades of the twentieth century has added water quality improvements, landscape restoration, and the provision of habitat for wildlife as key concerns. The historic use of the Upper River as a place of industry is challenged by local residents, concerned about both the river's health and the environment in their own neighborhoods, as well as organized environmental groups. The Mississippi River is seen in terms of its intrinsic value as one of the great rivers of the world, and the Upper River as an area where the continuity of the river as an ecological system has been degraded, yet could be restored through a directed effort.

The river is made of the water flowing into it, with two major components to this watershed: the moving water and the land it travels over and under. Improvements to the ecology of the Upper River must address the quality of water entering the river and the condition of banks. New regulations regarding the retention and filtration of storm water have been written since the period of initial urbanization of the Upper River area. The master plan must meet and exceed these standards. Likewise, new techniques have been developed for the "bioengineering" of riverbanks, utilizing living plants to stabilize banks, reduce soil erosion, and create new habitat. However, it is not possible to create a pristine landscape: the Upper River is not the Lower Gorge. It has been an area of heavy-industrial use for 125 years, providing benefits to the city and region but at a cost. Large segments of the Upper River have areas with soils known to be contaminated with petroleum products, heavy metals, PCBs, VOCs, and other chemical wastes. There are a number of leaking underground storage tanks that threaten groundwater. Much of the west bank is also fill, including sawdust, industrial-wastes, and post-consumer garbage. Remediation of contaminated sites is essential to a comprehensive master plan.

Economic Development

In association with park development objectives, the partnering agencies also seek a number of interrelated economic development goals. The Minneapolis Community Development Agency (MCDA) and City Planning Department work together to realize policy goals set by the City Council. These policies are meant to shape long-range strategies, specifically in the areas of land use and public infrastructure. Because the Upper River master plan addresses a large segment of the city, the land-use plan must balance policy directives in regard to employment opportunities, business retention and development, and housing. One clear directive is to grow the city's population by providing new opportunities for housing. Another long-standing goal is to encourage development of industrial and service businesses that utilize land in an efficient way, that is by providing a high number of jobs per acre, and pay wages that will sustain families and an overall quality of life in the city. Hennepin County, through the establishment of a partnership with the City under the Hennepin Community Works program, is also committing resources to address issues of tax base and employment development through investment in infrastructure, specifically new public amenities such as greenway corridors. All the partnering jurisdictions have an interest in strategic approaches to halt the decline in north and northeast Minneapolis, and consider the Mississippi River a potential amenity to attract new private investment.

Urban Design

A comprehensive approach for the Upper River seeks to reveal the underlying potential of the land along the river. Planning for the ambitious goal of a continuous riverfront park creates other opportunities and questions: If heavy industry is phased out then what is the optimal use of land adjacent to new parks? How should future development be configured to take advantage of inherent opportunities? What cultural artifacts should be preserved and how should they be used? What is the best balance of land uses and how can conflicts be mitigated? In addition to these questions of related development, there is the question of how the parks themselves should be programmed. Given the size and cost of the new parks, they must be considered regional facilities. The river in Minneapolis should also be considered a total system, and just as the underlying geology and history cause distinctions between the three planning regions, the planning process needs to discover what will make the Upper River a unique destination, offering different experiences from the Lower Gorge and Central Riverfront.

Objectives:

- ✓ **Stabilize the riverbank and revegetate for wildlife habitat.**
- ✓ **Provide areas for stormwater retention and filtering.**
- ✓ **Identify contaminated sites and suggest approaches to remediation.**

Objectives:

- ✓ **Create opportunities for new housing.**
- ✓ **Increase employment levels and density.**
- ✓ **Develop new tax base and stabilize neighborhoods.**

Objectives:

- ✓ **Establish urban design principles to guide future development.**
- ✓ **Balance land uses and minimize conflicts.**
- ✓ **Explore alternatives for park features and destinations that recognize the area's unique opportunities and culture.**

Constraints and Opportunities

The Upper River corridor presents a daunting array of obstacles to the planning objectives. While the barge-using, bulk-material-handling industries on the west bank would seem to present the greatest challenge, the development of continuous trails and an improved Marshall Street on the east bank is also confronted by a number of constraints. A section-by-section exploration of existing land uses and associated issues will provide an understanding of both the constraints and opportunities.

West Bank

Interstate 94

Access to the river on the west bank is restricted by both existing transportation infrastructure and existing land uses. The most obvious constraint is Interstate 94, which limits access from north Minneapolis to the river. Crossings are available at overpasses spaced roughly every 6 blocks (two-thirds of a mile) at: Plymouth Ave., Broadway Ave., 26th Ave. N., Lowry Ave., Dowling Ave., 41st Ave. N., 42nd Ave. N., 49th Ave. N., and 53rd Ave. N. At Broadway and Plymouth access is available to the river bank. At 41st, 49th, and 53rd overpasses connect to the new North Mississippi Regional Park, with an additional underpass at 45th Ave. N. However access to the riverbank is denied at 26th, Lowry, and Dowling, with the Camden Bridge at 42nd crossing high over both the interstate and river. Thus the whole reach of river opposite north Minneapolis, south of 41st to Broadway, has no public access due to current land uses. Between I-94 and the river, heavy truck traffic on Washington Ave. and 2nd St., and multiple-track railroad spurs offer additional obstacles.

West River Road, Plymouth Avenue to BN Bridge

The area between Plymouth Ave. north to the Burlington Northern (BN) railroad bridge is a major success for the MCDA and the City's North Washington Industrial Park. The riverbank is owned by the City of Minneapolis, with minimal landscaping and maintenance by the Public Works Department. This open space provides public access to the river. A median on this stretch of West River Road contains power transmission lines. One- and two-story offices, laboratories, and light-industrial structures front on West River Road. Broadway Pizza and the Riverview Supper Club suggest the potential for increased hospitality uses in the area. The area presents an opportunity for park programming, including landscaping and trails, with few impediments.

BN Bridge to Lowry Avenue, railroad corridor to the river

The segment north of the BN Bridge to Lowry Ave. presents the most difficult challenges to major land-use changes. Just north of the railroad bridge and BN spur are CAMAS, selling sand and gravel aggregates (formerly Shiely), and Lafarge Corporation, a supplier of dry bulk cement. Shiely Sand and Gravel was relocated from the Central Riverfront to the site by the Minneapolis Park and Recreation Board in 1988 as part of the City's ongoing riverfront revitalization efforts. CAMAS has the second highest barge tonnage total on the Upper River, and is therefore an important factor in keeping the Minneapolis locks operating.

With just a short spur to cross the river, Lafarge is the only customer for the Burlington Northern Santa Fe Railway (BNSF) on the west bank and the only user of the BN Bridge. The BNSF spur presents a major obstacle to extending West River Road because of curved tracks and constant use as a place to store railcars. However, an easement across the Riverview Supper Club parcel was included in the deed when the MCDA sold the site, which was retained for the express purpose of extending West River Road when feasible.



River Access Denied to Bicyclists on Pacific St.



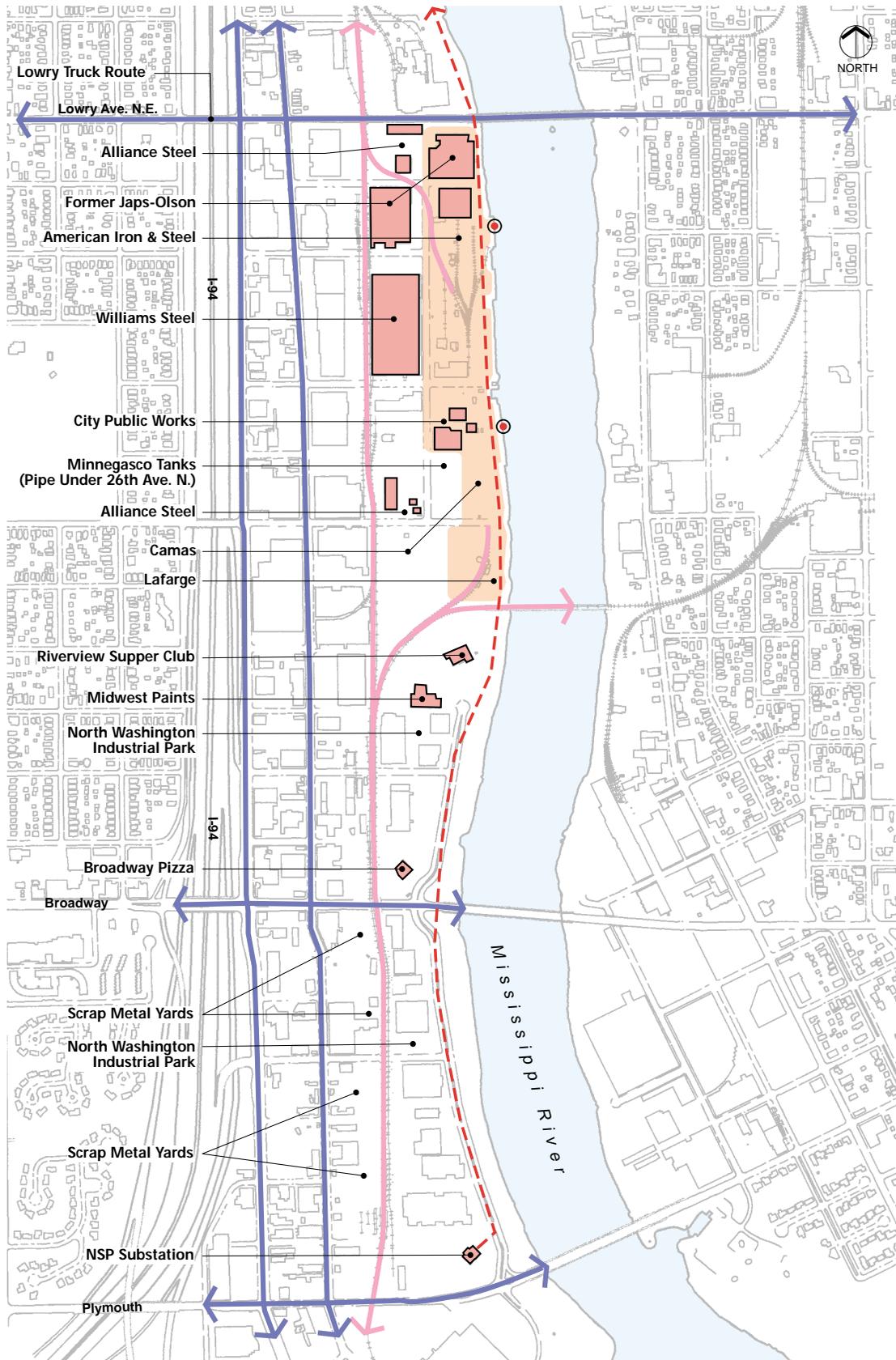
West River Road



CAMAS



BNSF Spur



- Property with River Access Restricted
- Power Transmission Towers and Lines
- Truck Route
- Railroad Spur
- Barge Dock

**West Bank — South of Lowry Avenue
Constraints**



Lafarge



Public Works



Minnegasco



American Iron



Former Japs-Olson



Skyline View

The Lafarge site is well-maintained, with grass lawns and no open storage of materials. Although on a riverfront parcel, the Lafarge operation does not have a barge terminal. Given the relatively low impact of the dry cement storage and loading, the operation could be moved to another site in the area with rail and truck access.

The City owns property on the riverfront between 27th and 28th Ave. N., where the Public Works Department operates a garbage truck fueling, cleaning, and storage facility. CAMAS currently leases a portion of this property along a riverfront bulkhead to off-load barges. This Public Works facility could be relocated off the river, to the west of the railroad corridor or elsewhere, through action of the City Council.

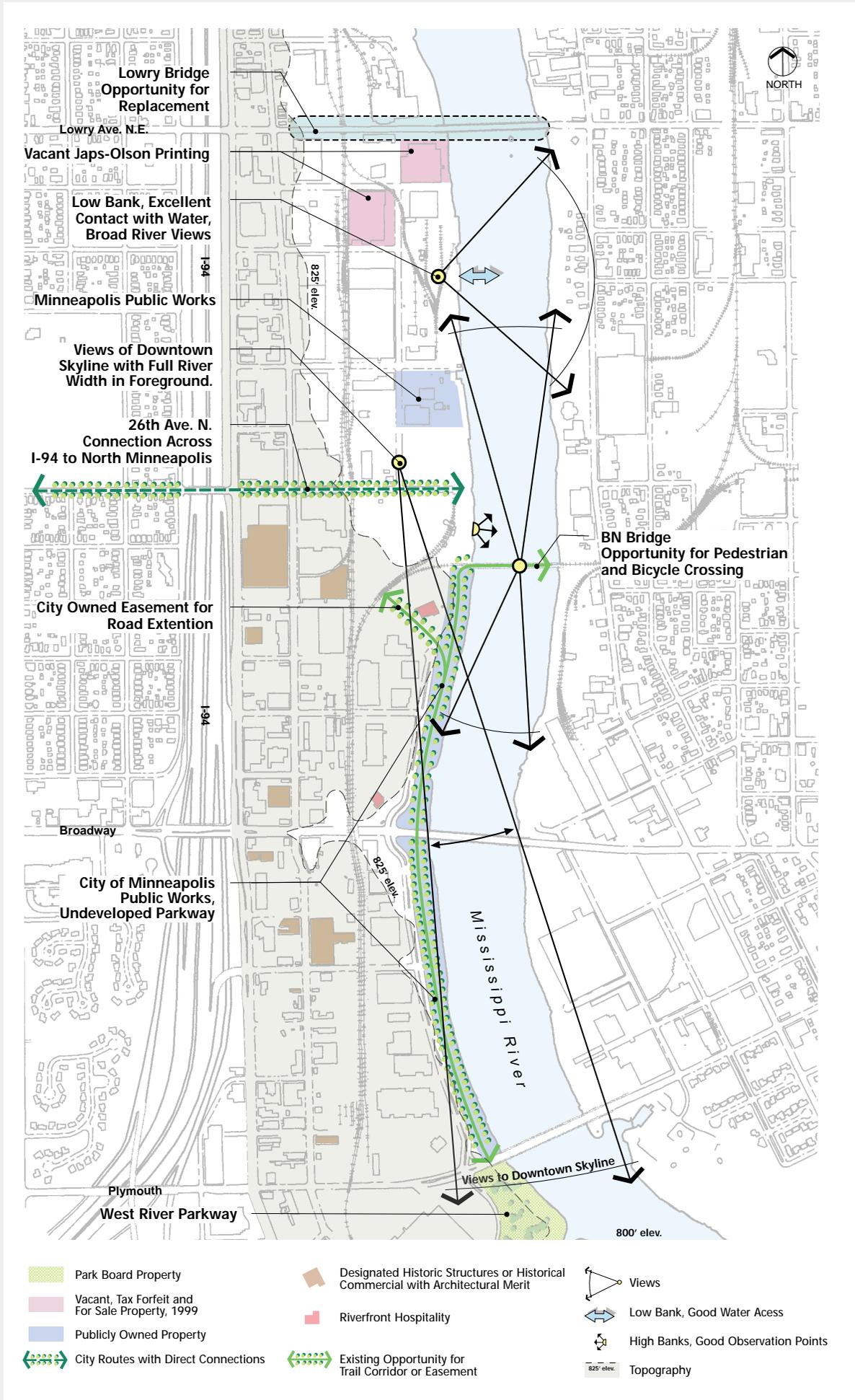
At the corner of Pacific and 26th Ave. N., Minnegasco owns a tank farm that operates as a “peak shaving facility,” supplying extra heating fuel during peak demand in bitter cold winter weather. Propane stored in the tanks is mixed with air and natural gas, with the majority serving residential customers in north Minneapolis through a pipeline under 26th Ave. N. The tank facility was built in the 1940s at a key distribution point. Any relocation is likely to require public assistance in the siting of a new facility, and would by necessity still need to be within a short distance of the pipeline under 26th Ave. Given the age of the facility, relocation to the west of the railroad corridor and construction of a new underground storage system might be of mutual benefit to Minnegasco and the redevelopment effort.

In the area defined by the Canadian Pacific railroad corridor to Pacific St., and 26th Ave. to Lowry, two businesses operate: Alliance Steel acquires scrap metal products for shipment to recycling plants outside the study area and Williams Steel and Hardware shapes and distributes new metal products. Alliance owns properties at the north and south ends of this rectangle, with Williams Steel in between. American Iron and Supply (AIS) owns a riverfront parcel between 28th and 31st Ave. N. AIS barges scrap metal from this riverfront site to recycling plants outside the study area. Prior to and during the study period, AIS and the City of Minneapolis were opponents in a lawsuit regarding the issuing of a permit to AIS to allow construction of a large metal shredding machine, known as the “Kondirator,” on this site.

Expansion of scrap metal operations on the Upper River would present a significant impediment to the stated planning objectives. Due to the extreme difficulties associated with relocating scrap metal yards as a local land-use issue, as well as the variety of transport options of barging, trains, or trucks on the existing sites; relocation of these uses present the single most difficult impediment to land-use change. In addition to the difficulties associated with relocating businesses along Pacific, most of the area is classified as a Minnesota Pollution Control Agency site, requiring expensive cleanup of soil contaminants to effect land-use changes.

Just north of AIS, along the river to the Lowry Bridge, is a building that formerly contained Japs-Olson, a printing plant, vacant since 1997. These buildings are in good condition and may find another use before implementation of the plan addresses this site.

While the area between the BN Bridge and Lowry Ave. present real challenges to land-use change, the topographic relationship between the river and bank is one of the most enticing in the City of Minneapolis. In general the bank is low, allowing intimate contact with the river if access were available. At the Riverview Supper Club, and adjacent sites of CAMAS and Lafarge, truly magnificent views of the downtown skyline unfold, with the skyline along the horizon and a long view of the Mississippi in the foreground. This view is created by the river’s slight bend to the west at the BN Bridge and then back to the east after the Broadway Bridge—the bridge also framing the skyline view. This site where the supper club and cement facilities sit is also elevated above the surrounding land. The supper club was built on top an old railroad roundhouse foundation due to poor quality soils in the area. Word of mouth reports claim that the elevated land may in fact be a pile of fill, with former roundhouse sites usually presenting



**West Bank – South of Lowry Avenue
Assets & Opportunities**



CP Rail Corridor at UHT



Ambassador Press



Former Bardwell, Robinson & Co.
Sash, Door & Blind Factory



Lowry Bridge



Lowry Bridge at Pacific St.



GAF

additional soil contamination difficulties.

The Canadian Pacific railroad corridor could provide a buffer between uses to the east and west. Land-use changes to the east of the tracks along the riverfront would relocate most current users of this spur, with the exception of the *Star Tribune* printing plant at the end of the line. While total abandonment might be considered, the rail corridor holds excellent views to downtown and also provides opportunities for future transit as well as other infrastructure such as power transmission lines, telecommunication cables, and sewers. Future freight customers might also be found in the adjacent light-industrial areas.

Plymouth Avenue to Lowry Avenue, I-94 to railroad corridor

Over the last 25 years the MCDA has worked to bring about development of light-industrial businesses on sites north of Plymouth that were previously used for open storage of scrap metals. Three businesses continue to sell scrap metals from sites west of the railroad corridor, and south of Broadway. Soil remediation efforts by the MCDA have prepared vacant sites for redevelopment and attracted new construction along 2nd St., including a new printing plant and a new warehouse. As this cleanup and redevelopment proceeds, the area will present a more favorable environment, with new landscaping and structures reaching a threshold that will transform the area from one of blight to that of a modern industrial park.

Opportunities in the area include a number of older commercial structures that retain attractive brick facades. In addition, portions of the area are now vacant and await new development. Opportunities may present themselves to relocate businesses in accordance with the master plan onto sites south of Broadway. Showrooms, graphic arts offices, printing plants, metal fabricators, and other businesses present a more favorable image for the area north of Broadway. These businesses pose no impediment to the overall redevelopment efforts and would, in fact, benefit from park development along the river.

Lowry Bridge area

The existing Lowry Bridge is an obstacle to realizing the planning objectives; however, the eventual replacement of this bridge offers a real opportunity for large-scale redevelopment on the western approach. Hennepin County owns the Lowry Bridge and considers it adequate for the next 20 years. While some admire the bridge as an interesting landmark with more style than new highway bridges, its narrow lanes and very narrow pedestrian facilities present difficulties in crossing, especially for bicyclists. In addition, the open metal deck vibrates when vehicles cross and the resulting noise can be heard blocks away. A ramp with concrete crib wall, which lifts the western approach, creates a barrier to passage under the bridge from the railroad corridor to the water. As time passes the bridge is likely to be seen as an indicator of neglect, with calls for its replacement increasing. When the bridge is replaced, the whole western approach can be included in a redevelopment area.

Lowry to North Mississippi Regional Park

Just north of the Lowry Bridge an asphalt shingle factory sits on the riverfront. This facility owned by GAF, Inc. is a major employer on the west bank. The facility is one of the more complex in its industrial engineering and is the only manufacturing plant on the west side riverfront; however, the plant does not use barges. Openly stored product covers the site, while the odor of asphalt and other chemicals permeates the surrounding area. The anticipated difficulty in relocating this shingle factory is the major obstacle to change north of Lowry.



UHT



3500 Block 2nd St. N.



Natogas



Terrace in Three Levels

Immediately west of GAF between Lowry and 33rd Ave. N. is a row of old houses fronting 2nd St., some occupied, and some abandoned tax-forfeit and vacant properties. The Upper Harbor Terminal (UHT), owned by the City of Minneapolis and operated by River Services, Inc., stretches along the riverfront from 33rd Ave. N. to 39th Ave. N. This 48-acre facility is a terminal for loading and unloading barges. A large portion of the site is used to store dredge spoils (river sand), coal, and road salt. The City of Minneapolis is required to provide a place for storage of dredge spoils under an existing agreement with the Army Corps of Engineers.

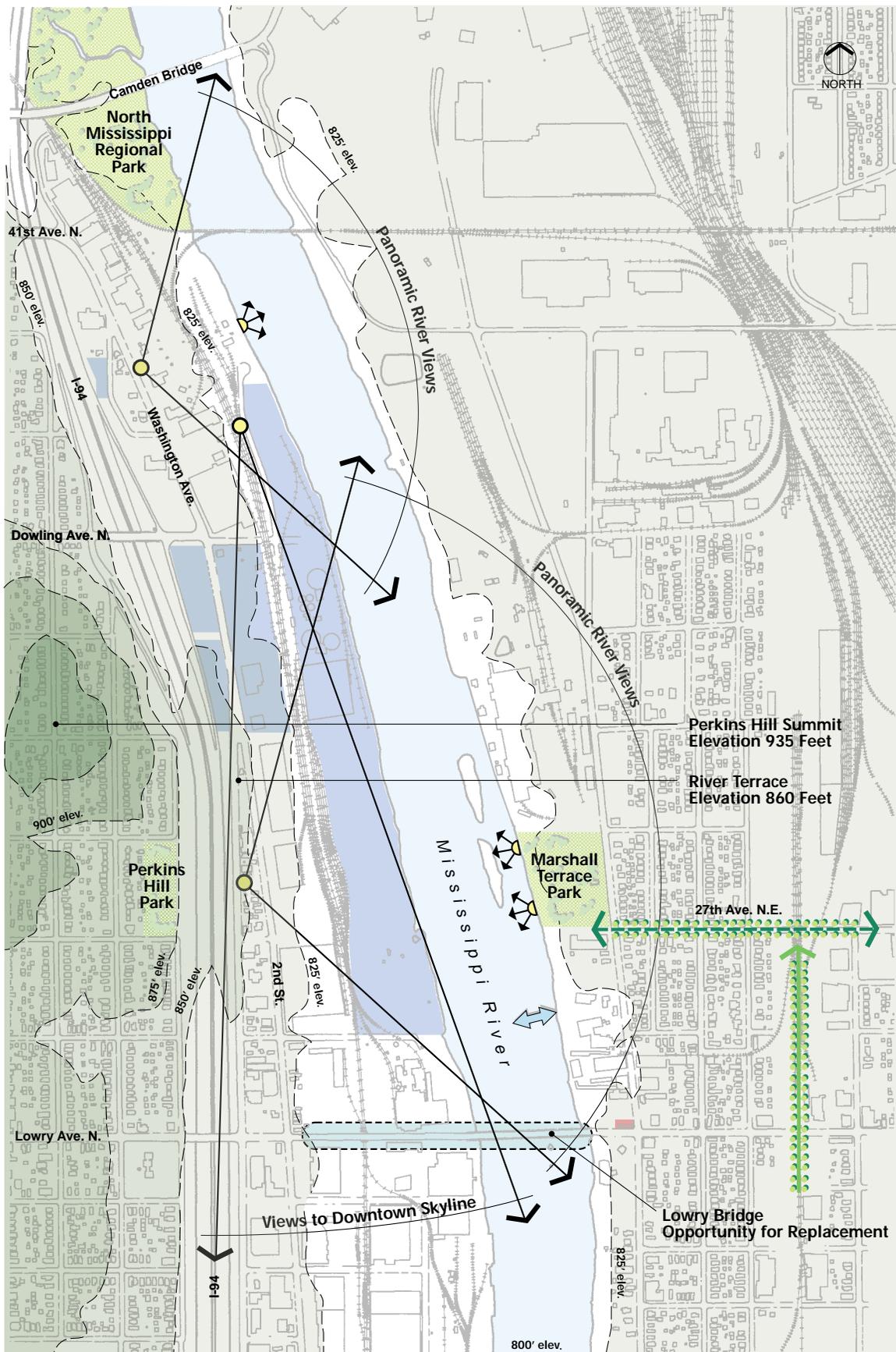
In its present use the terminal is a major barrier to river access, yet its ownership by the City of Minneapolis also makes this land the greatest opportunity in the whole study area. The environmental investigation completed for this report does not show any major known contamination on the UHT site. While this issue requires further and more extensive investigation, the site may be one of the largest and cleanest on the west bank. Just north of the UHT on 1st St. N. is Holnam Cement, an active barge user on a three-acre site.

Between 2nd St. and the UHT are three windowless warehouse structures, occupied by a variety of businesses. A 300-foot square parcel of land lies vacant along 2nd St. between two of these warehouses. Along Washington Ave. and the west side of 2nd St., is a mix of old houses and commercial buildings. A taxi company operates from this area. The Minnesota Department of Transportation owns a maintenance facility where Washington and 2nd join south of Dowling. An asphalt storage facility leased by Koch Materials, on land that is part of the UHT, is at the corner of Dowling and Washington.

North of Dowling, on the east side of Washington, are the following types of businesses: foam products manufacturer, industrial oxygen supply, propane supply, machine tool shop, drywall supply, engineering lab, and lumber supply. Between Washington and the interstate is a materials fabricator, computer repair shop, plumber, and a number of older houses in poor condition. A new tool shop is on the northwest corner of Washington and Dowling.

The opportunities north of Lowry are inherent in the large amount of land in existing public ownership, as well as excellent river views. The topography of the land between Lowry and Dowling is a terrace in three levels from Washington to the river, which continues the slope that creates the Perkins Hill summit to the west of the interstate. This terrace presents an excellent site for future development with views to the river. Views of the Northern States Power Riverside plant, and especially its coal piles, are the main draw back to potential redevelopment.

The majority of structures fronting Washington and 2nd are obsolete, and many could be considered blighted. Relocation of machine tool shops and materials fabricators is not problematic from a land-use standpoint. Likewise, distribution businesses in the area require only good truck access. It is the number of businesses north of Dowling that presents the major impediment, rather than their land-use impacts on new sites. In contrast, the overall density of businesses between Dowling and Lowry is lower, with large parcels that could conceivably be assembled into a sizable redevelopment site, sloping to new riverfront parks. North of Lowry only the UHT and Holnam Cement use barge terminals, for all the rest of the businesses the river is unrelated to their location.



- Park Board Property
- Publicly Owned Property
- City Routes with Direct Connections
- Existing Opportunity for Trail Corridor or Easement
- Views
- Low Bank, Good Water Access
- High Banks, Good Observation Points
- Topography
- Riverfront Hospitality

East and West Banks – North of Lowry Avenue Assets and Opportunities



Power Lines and Towers

Power Transmission Towers and Lines

Currently Northern States Power owns and maintains power transmission towers and lines on both sides of the river. On the west bank the lines cross over the river opposite the Riverside plant just south of Dowling onto the UHT site. Siting of the towers varies in relationship to the river edge. At the UHT the towers are roughly 150 feet from the river, then at the Lowry Bridge the tower actually sits on a sheetpile pad that extends from the bank. The towers and lines hug the riverbank from Lowry south to the BN Bridge, where the tower sits within 50 feet of the bank just east of the Riverview Supper Club. South of the BN Bridge the towers are located within the median along West River Road, continuing to a substation at the northwest corner of the intersection with Plymouth Ave.

In order to maximize the potential for river views on parcels adjacent to the new parks, relocation of these towers and lines may be necessary. Two corridors are available for tower relocation: either the railroad corridor, or the west side of Washington Ave. along the interstate. While the railroad corridor may be adequate for portions of the redevelopment area, placement of the lines along the interstate would clear views for all redevelopment areas.



Scherer Bros. Lumber

East Bank

Impediments to accomplishing the planning objectives are far fewer on the east bank of the river than on the west. In fact, the Minneapolis Park and Recreation Board already owns four large parcels on the riverfront. The issue then is one of connecting these park areas, and improving Marshall St. as a north-south thoroughfare and eastern boundary to a continuous park.



Graco

Boom Island Park to the BN Bridge

Just south of 8th Ave. N.E. (Plymouth Ave. on the west bank) is Boom Island Park, a major park development success assembled from former industrial sites during the 1970s and 1980s, and still undergoing programming and landscaping. A connection to Boom Island is an important component of a future trail system for the east bank. Just north of 8th Ave. on the riverfront are Scherer Bros. Lumber and Graco, Inc., a light-manufacturing plant. This lumberyard with millwork and the light-industrial plant to its north show opposite treatments regarding the riverbank. The lumberyard extends its open storage all the way to the water's edge, with a riprap bank denuded of vegetation. In contrast, the manufacturing plant is set back from the bank, which is vegetated and bermed.

In order to connect trails along the river from Boom Island to new parks north of 8th Ave., either relocation of the lumberyard or an easement along the bank is necessary. During the study period Graco announced plans to relocate its headquarters to this Minneapolis riverfront site, and indicated a willingness to consider easements along the bank for trail development. Trail passage under the Broadway Bridge may be possible at the riverbank, providing direct access to newly acquired Park Board property behind the former Grain Belt Brewery complex.

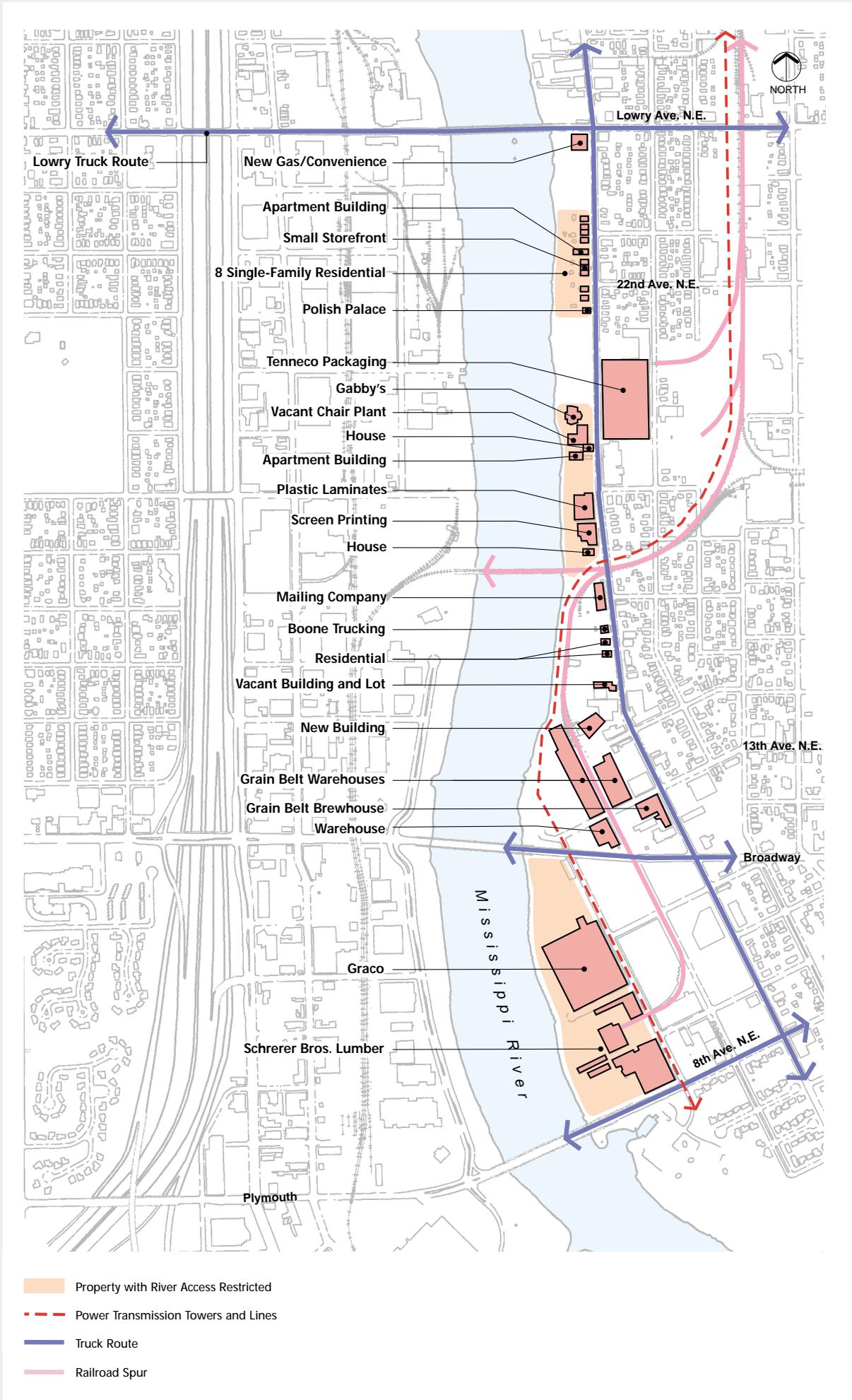


Grainbelt Brewery

The MCDA owns the Grain Belt Brewery complex and has restored the exteriors of the former brewhouse and associated smaller buildings. Currently, space in the complex is rented, except for the brewhouse itself, which presents a number of challenges to renovation. The sheer size of the brewhouse is one challenge, as is the interior which was constructed on a number of different levels for the brewing operation. Facing Marshall St. the brewhouse is one of the treasures of northeast Minneapolis—its massive limestone foundation and cream-brick façade designed in four sections with distinct architectural styles to represent the four companies that united to form the Minneapolis Brewing Company in 1890. The complex is listed in the National Register of Historic Places and has seen a number of redevelopment proposals fail since the brewery closed in 1977.



Grainbelt Warehouse Renovation



**East Bank – South of Lowry Avenue
Constraints**

This master planning process has sparked new interest in the Grain Belt by setting any reuse into the context of an area-wide park development project. The recent acquisition and demolition by the Park Board of an old foundry occupying the riverbank behind the Grain Belt is also likely to increase the potential for reuse. In the meantime, artist's studios have brought new life to the associated historic warehouses at the complex. An industrial building behind the brewhouse on Ramsey St., utilized as a warehouse by Scherer Bros., detracts from the overall area, with demolition an option for any Grain Belt redevelopment project. Given its location and status as a local landmark, reuse of the Grain Belt is essential to making the Upper River a regional destination.



Water Ski Show Spectators at Grain Belt



BN Bridge



Private Road



BNSF Spur at Marshall St.

The Broadway Bridge blocks views to the downtown when at the river's edge behind the Grain Belt; however, the upper floors of the brewhouse offer exciting opportunities to create views to the west and downtown, including a potential rooftop patio area. **Also evident at the Grain Belt site is the potential for a close relationship between the two banks of the river between Broadway and the BN Bridge.** The impressive historic structures of the former brewery on the east bank are one attraction, while on the west side outstanding views of the river and downtown skyline are the draw. Spanning the river, and potentially linking these two elements, is the Burlington Northern Bridge. This wide railroad bridge was built for two tracks, one of which has been removed. If the remaining spur to the west bank were no longer needed, the bridge could be re-decked as an appealing pedestrian and bicycle facility. With attractions developed on both banks, a trail loop from Broadway to the BN Bridge would focus attention on and around the river.

BNSF Spur

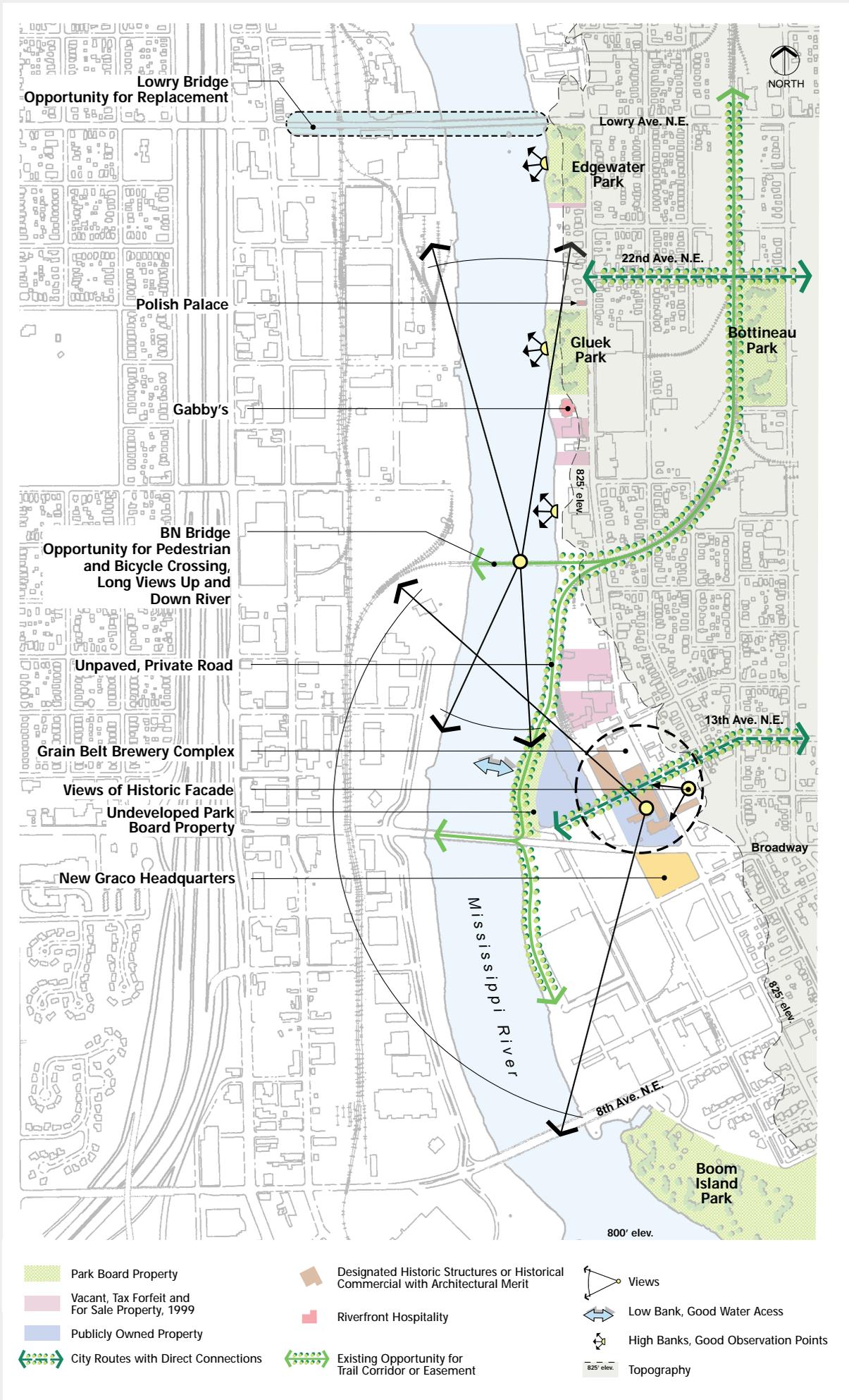
Proceeding north of the Grain Belt, an unpaved private road owned by the BNSF Railway leads along the bank to the BN Bridge. This road lies between the river edge and a railroad spur serving Scherer Bros. Lumber, with NSP power transmission towers and lines in the same corridor. Relocation of the lumberyard would allow removal of this spur. But even without removing the tracks, this private road is an existing opportunity for trail development between the Grain Belt area and the BN bridge.

At 14th Ave. N.E. and the west side of Marshall, a new structure built for a now defunct video studio awaits reuse. Other businesses between the Grain Belt and the BN Bridge, on the west side of Marshall—such as a vacant shingle-roofed shed with adjacent surface lot, and Boone Trucking rubbish removal—present an image problem for the overall area rather than a physical impediment to a continuous recreational trail. However, if a wider park or trail corridor is desired, or redevelopment to support the Grain Belt project, then relocation of these businesses will be necessary. Just south of the BN Bridge are a mailing service in a commercial building and two residential properties.

As previously mentioned, the BNSF Railway serves Lafarge Corp. via the BN Bridge on the west bank and Scherer Bros. Lumber via a spur on Ramsey St. From the BN Bridge this spur continues east and then swings north, with side spurs serving Tenneco Packaging between 18th and 20th avenues. An opportunity exists to develop trails in this corridor leading to the river crossing. However, if such a trail was developed an actualized signal would be required to allow safe crossings of Marshall St.

BN Bridge to Gluek Park

Immediately north of the BN Bridge sits one older house on a deep parcel that slopes from Marshall down to the riverbank. North of this house is a commercial building containing a screen printer, a plastic laminates plant, a vacant and tax-forfeit lot, a newer 6-unit apartment building and adjacent single-family dwelling, a vacant chair manufacturing plant, and Gabby's Saloon and Eatery.



East Bank — South of Lowry Avenue Assets and Opportunities



2204 Marshall St.



Marshall Concrete



Siwek Lumber



Heavy Industry and Residential

Gluek Park to Edgewater Park

Between Gluek Park (site of a former brewery) and the undeveloped Edgewater Park (site of a former riverbank restaurant) there are 8 single-family dwellings and a 24-unit apartment building. The Polish Palace, a tavern that is something of a local landmark, sits immediately north of Gluek Park. At the midpoint of this residential block is a small commercial storefront, currently occupied by a studio. A vacant lot just south of Edgewater Park was for sale by Minnegasco in September of 1999.

The eight houses on the 2100, 2200, and 2300 blocks of Marshall date from the 1890s and 1900s. Three of these houses are larger Victorians with some Queen-Anne-style detailing. The rest are more ordinary vernacular representatives of the construction period. The noticeable up keep and decorative period fencing in front of the larger houses helps this group of houses to stand out from other properties along heavily trafficked Marshall. Clearly a weighing of values and options, including house moving, will be necessary to decide the fate of these structures if the short stretch between Gluek and Edgewater parks is to be connected.

Lowry Avenue to Marshall Terrace Park

While the approach to the Lowry Bridge on the west bank is long, including an embankment to clear the railroad corridor and raise the bridge to meet the higher bank on the other side, the bridge simply meets the eastern bank at grade. Even with a new bridge, this alignment is unlikely to change. Lowry and Marshall meet only 275 feet from the bridge, creating an intersection with the heaviest traffic in the study area. Such an important intersection produces the necessary market for commercial development. On the southwest corner a newer gas station with convenience store serves this traffic. Across Marshall is a liquor store and car wash on opposite corners, and on the northwest corner is Tony Jaros River Garden, a local tavern.

Construction of a new bridge may allow the development of trails under Lowry at the immediate edge of the bank, however this would probably require a trail to hang below the bridge and necessitate ramps below current grades on each side. Edgewater Park wraps around the gas station providing continuous park to Lowry, yet trails may need to be brought back to the signalized intersection to cross. North of Lowry, the River Garden tavern is an asset to the development of a destination hospitality and retail node, and can be retained without significant interruption of the riverfront park. Continuing up Marshall, a union hall is located north of the tavern. Two larger parcels are occupied by Siwek Lumber & Millwork and Marshall Concrete Products.

Siwek, like Scherer Bros., is a remnant and reminder of the Upper River's historic use as a lumber milling area. As a land use, lumberyards require large parcels and truck access. Relocation of Siwek off the riverfront, for instance to the nearby Shoreham Yard, seems an achievable goal. Marshall Concrete produces cement for poured applications as well as finished blocks. A large number of trucks enter and exit the site, which is completely filled by the operation. The riverbank along this cement mixing plant seems to have been excavated, almost to river level, which contrasts with the generally higher bank on the east side. Interior portions of the site are also well below the grade of Marshall. Any potential expansion of the cement operation is constrained and, therefore, the business might benefit by relocation to a larger site.

One of the jarring land-use conflicts apparent in the study area is present in the placement of a lone single-family dwelling and a large apartment building, called River Terrace, between the heavy-industrial use at Marshall Concrete and Marshall Terrace Park.

NSP to St. Anthony Parkway

North of Marshall Terrace Park is the Northern States Power (NSP) Riverside Plant. This coal-fired power plant supplies electricity to the region. NSP representatives state that the aging plant can continue to operate for 30 to 40 years. Relocation of such an operation is virtually impossible given its vast infrastructure of transmission lines and huge capital investment in plant. Deregulation of the electric utility industry may have some effect on the competitiveness of the Riverside plant, but it may also allow NSP to integrate electric production at Riverside into a much larger sales area. Currently NSP reserves the capability to use an existing barge terminal on the site, but actually coal never has been off-loaded to the plant. In the past, coal was loaded from rail *onto* barges for shipment down river. The issue of barging capabilities leading to a better rail freight rate was discussed during the study; however, this effect is probably insignificant considering the western sources far from navigable rivers and vast amounts of coal purchased by NSP.

While some consider the visibility of the Riverside plant an impediment to redevelopment on the opposite, west bank, the older part of the plant is relatively handsome with its classic red brick industrial facades. The northernmost smokestack is twice the height of the original stacks and connects to a newer metal and concrete-sided addition. The large piles of coal and this addition create the negative visual impact. The coal piles are well hidden by high landscaped berms along Marshall St.; however, given the topography, it is difficult to hide the coal from view on the west bank. The actual river edge, north of the barging bulkheads and in front of the coal, is vegetated with a few trees and grasses, and is not as denuded as other banks in the study area. Perhaps enough space is available to continue a river side trail from Marshall Terrace Park on NSP's property, if issues of safety and liability can be satisfied. These are not small issues given the nature of the operation, but an easement might be arranged. Such a trail would connect to existing trails along St. Anthony Parkway, eventually connecting to trails along the river in Anoka County.

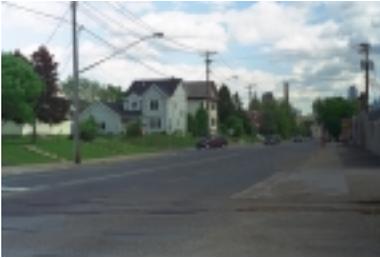
Between NSP and the Camden Bridge, there are two large sites backing on St. Anthony Parkway that have potential for development. This area is bisected by the Soo Line Bridge, with the new Bureau of Engraving building taking the eastern half of the northern site and a fly ash depot occupying much of the southern site. Development is constrained by wet soils behind the Bureau site and by the storage of fly ash on the other. Fly ash is a product of the power plant and is likely to remain. If NSP ever decided to convert the Riverside plant to natural gas, the associated areas with piles of coal and fly ash would become prime redevelopment sites with western exposure and river views.



NSP Riverside Plant



NSP



Marshall St.



Bicyclist on Marshall Sidewalk



Bicyclist on Marshall Sidewalk



Tenneco

Marshall Street

In addition to the goals of continuous parks and recreation trails, improvements to Marshall St. are also desired. Marshall St. is a major north-south route in northeast Minneapolis leading north to communities in Anoka County. It is currently designated as Hennepin County State Aid Highway 23, and its design must meet state aid standards. Hennepin County has indicated a willingness to discuss the eventual redesignation of the route as a City-owned street, yet this possibility will not change the realities on the ground of heavy traffic, including commercial trucks. Any redesign that constrains traffic would lead to impacts on University and Central avenues, which would be unacceptable from local resident and traffic movement points of view. There is no denying Marshall's geographic location and overall place in the transportation system.

The current right of way owned by Hennepin County is 66 feet wide north of 14th Ave. N.E., and 80 feet wide in front of the Grain Belt. Four drive lanes occupy 44 feet between the curbs, including the gutter pan. Parking is allowed in the outside drive lanes, but is disallowed during rush hours on the inbound lane in the morning and outbound lane in the evening. A 7-foot sidewalk is located on each side, beginning at the curb with no planting strips. The visible infrastructure of asphalt, curb, and sidewalk then is 58 feet wide, with the County owning an additional 4 feet between the sidewalk and the private lot. In some areas this additional right of way abuts structures.

The appearance of Marshall is harsh, with heavy traffic, no planting strips for street trees, and local power lines and poles, street signs, and hydrants punctuating the sidewalk area. Bicyclists are usually on the sidewalk, rather than risk riding in high-speed drive lanes. Much of the asphalt, curb, gutter, and sidewalk is in need of replacement. Local residents have organized to plan for new investments, but real improvements are stymied by the lack of useful right of way and adequate setbacks for structures. Yet a redesign is possible and can work in conjunction with other planning objectives of riverfront parks and trails. The necessity of increasing the right of way adds impetus to any eminent domain taking of private property between Marshall and the river.

Properties on the east side of Marshall

A number of properties on the east side of Marshall are past the point of probable reinvestment and renovation under current conditions. One of the justifications for public investment in an extensive new riverfront park system is the expectation that private investments will follow. This is the hope for the east side of Marshall St., as well as areas on blocks within walking distance of the new parks. Properties, such as the one currently owned by Tenneco Packaging may become enticing redevelopment opportunities following completion of the parks. The Tenneco site, located between 18th and 20th, is interesting in that it has residential uses to the north and south and Bottineau Park to the east. A linking of Bottineau Park to the riverfront parks might be a key feature of a future residential redevelopment project. The focus of public action though must remain on the riverfront parcels for the foreseeable future, with benefits to the overall social and economic conditions in northeast Minneapolis to accrue as the riverfront park is realized.

Summary Note

The stated planning objectives for the Upper River Master Plan are confronted by historical inertia that has favored industrial uses in the area, capital sunk in public and private infrastructure, family histories of ownership of riverfront properties, and conflicting values regarding the best use of riverfront parcels. The narrative provided in this report is only a summary that can not capture the intricate knot of issues, personal sensibilities, and business decision imperatives that will prove formidable barriers to accomplishing the planning goals. The summary *does* show some of the potential in a truly beautiful stretch of the Mississippi River in the City of Minneapolis and some of the possible soft points where barriers to implementation might be breached, for instance: the Upper Harbor Terminal, the BN Bridge, Grain Belt, Graco, and a new Lowry Bridge. **It should not escape notice that public agencies currently own over 50 percent of the linear riverfront along the Upper River.** Opportunities exist to expand these public lands, with no less than five riverfront parcels on the east bank for sale in September of 1999, while beneath the Lowry Bridge the former Japs-Olson site sits vacant and available.



Riverfront Property for Sale, 1999

Concept Plan Alternatives

Alternatives Development

Following analysis of existing conditions and in response to the stated planning objectives, three concept plan alternatives were created: “Heavy Industry and Parks,” “Parks and Light Industry,” and “Parks and Residential.” These concepts built upon previous planning efforts, following recommendations contained in the “Gateways to the River” report published in 1997. A *Star Tribune* article on the three alternatives dubbed the heavy industry option the “Working River,” and the two options with continuous parks the “River Green.”

Given the high degree of land-use change entailed in creation of a continuous riverfront park corridor on the west bank, the three alternatives vary most in parkway and land-use patterns explored for the area between Interstate 94 and the river. On the east bank Marshall St. is the logical boundary for a new continuous park corridor, and all three of the plans have similar treatments for that area. Although most of the discussion focuses on options for the west bank, the magnitude of the proposed park creation and improvements to Marshall Street on the east bank should not be discounted.

Overall Planning Issues

While the planning objectives for the Upper River Master Plan are straightforward, a wide amount of latitude remains regarding the pattern of new land uses, size of parks, alignment of parkways, options for rail service, and the optimal mix of land uses for community formation and economic development. Over the course of alternatives development, a weighing of values and perceptions about the potential of the land found expression in the concepts developed. Although the three concepts presented in this report contain the broad approaches, many more variations on the basic themes were also tested and set aside.

During this alternatives development phase the task was to translate policy issues and planning objectives into questions and options that could be expressed in the form of two-dimensional land-use plans.

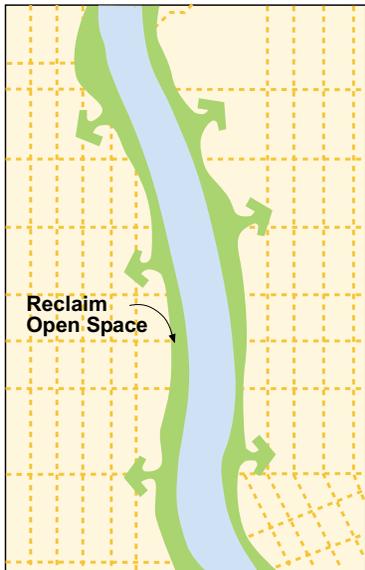
Major physical planning issues:

1. Can the planning objectives be met with continued barging and heavy industry?
2. If barging is discontinued, what is the best pattern of land uses to take advantage of the inherent opportunities?
3. Is it possible to introduce a mix of uses, including housing on the west bank?
4. How can potential conflicts between various uses be minimized and mitigated?
5. How much land should be devoted to parks along the river?
6. Are parcels remaining after park depth is set viable development sites?
7. What areas will still require rail service and how should spurs be configured?
8. What are the options for mitigating the impact of commercial truck and commuter traffic on Marshall St.?
9. How can recreational use of the river be promoted?
10. What configuration of uses will provide the highest return in tax base and social benefits?

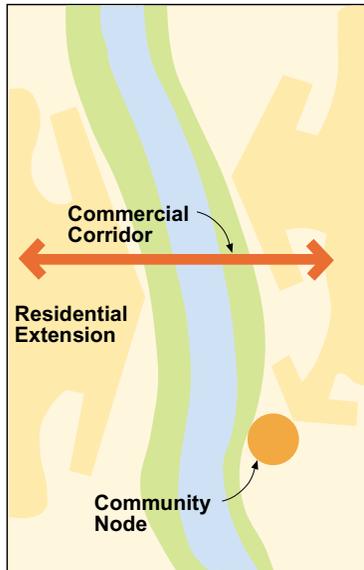
Planning Principles

A set of principles were formulated to guide overall planning and the creation and evaluation of alternatives. The principles, described on page 41, recognize the unique character of the Upper River and seek to integrate best planning practices into the concept plans.

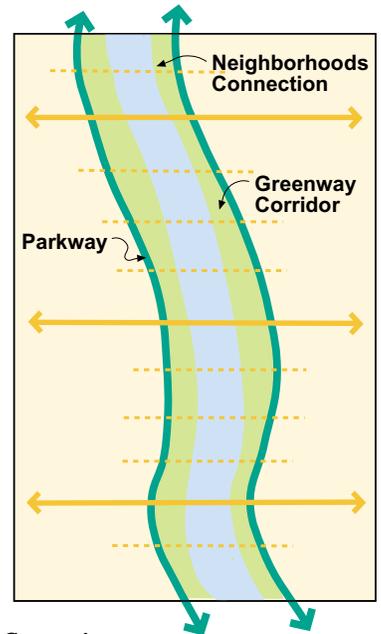
Upper River Planning Principles



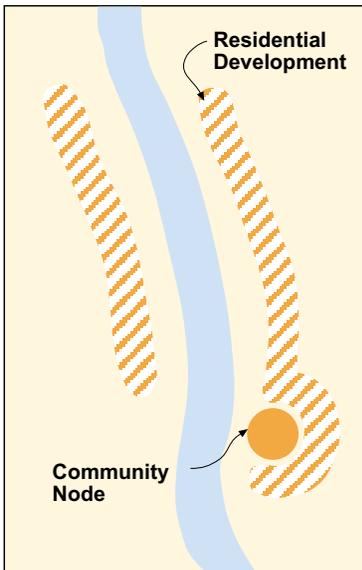
Reclamation
Reclaim open space for the benefit of the community and ecological health of the river.



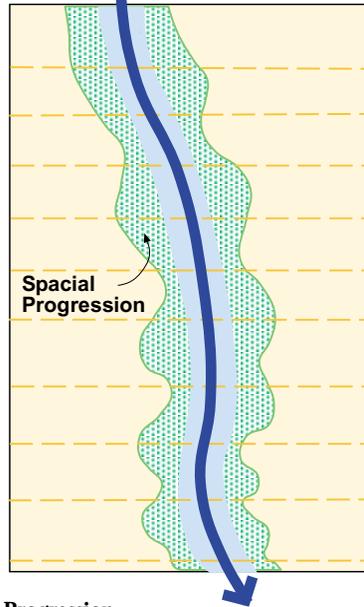
Extension
Extend urban fabric of houses, commercial buildings, and infrastructure to and across the river.



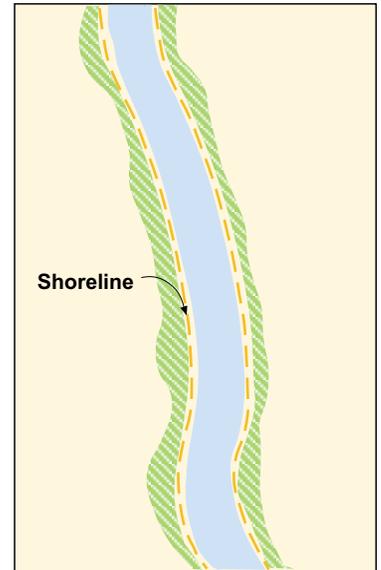
Connection
Provide visual and physical links between two sides and along the river.



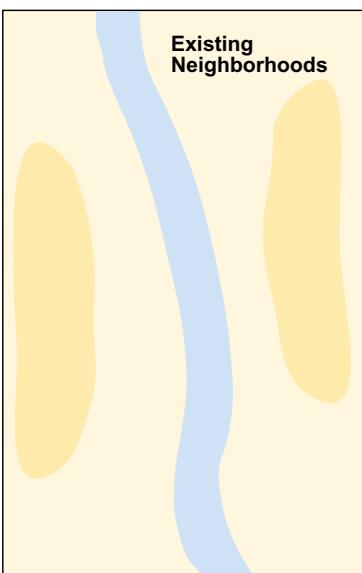
Revitalization
Revitalize underutilized industrial corridors, commercial and residential properties. Reuse historic structures.



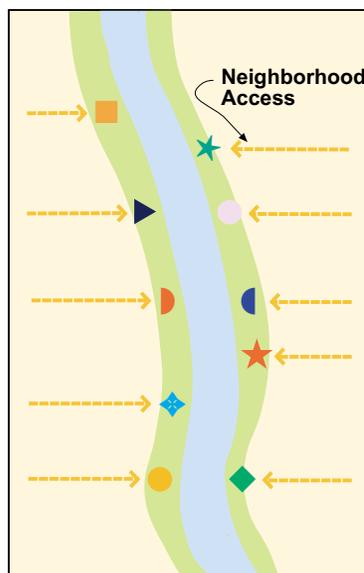
Progression
Vary the spatial, textural, and formal aesthetic experience of the river corridor, upstream and downstream.



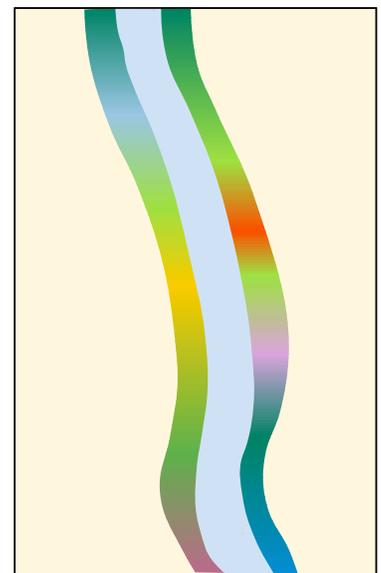
Restoration
Improve ecological performance of the river edge and islands. Conserve quality environmental features



Stabilization
Stabilize existing neighborhoods and river enhancing uses.



Destination
Provide new and exciting destinations for recreation and social life on the Upper River.



Differentiation
Differentiate the park design along the linear riverfront to heighten variety and interest.

Common Elements

A number of elements appear in all three of the concept alternatives, especially in regard to the east bank. Many of these proposed features address issues at the system-wide scale, in the areas of access, ecology, traffic, and community enhancement.

Common elements include:

- A continuous riverfront park from Grain Belt to the NSP power plant on the east bank.
- Streetscape improvements for local and regional routes leading to the river.
- Observation areas at the river end of “gateway” streets leading to the river.
- A new commercial truck and automobile route utilizing the BNSF railroad corridor on the east bank. This route would relieve traffic on Marshall St. and allow it to be redesigned as a true parkway, north of 16th Ave. N.E.
- Redevelopment of the Grain Belt Brewery complex, with commercial and community facilities.
- Lowry Place commercial node at Lowry and Marshall.
- Restoration of riverbank, where needed in all areas parallel to new parkways.
- Rail service to the *Star Tribune* printing plant at 10th Ave. N. is retained.

Park Programming Scenarios

In addition to the land-use plans shown for the three concept alternatives, accompanying park programming scenarios were developed. These park programming alternatives can be found in the Appendix. Various themes were tested including retaining remnants of the Upper River’s industrial heritage as park features. Locations for major park features were also proposed, including an amphitheater, small boat marina, water park, beach, and Ferris wheel on the BN Bridge. Issues arising from these park proposals are discussed in the Evaluation and Synthesis sections of this chapter.

Key park programming issues addressed:

1. How can the linear park corridor be programmed to provide a variety of experiences?
2. How far apart should park features and nodes be spaced to encourage and reward continuation along recreational trails?
3. What are the appropriate themes for the Upper River parks? Is an overall theme desired?
4. Should active recreational areas, including sports fields and facilities, be placed along the river?
5. What new facilities, such as boat launches, fishing piers, and beaches, are desired to encourage recreational use of the river?
6. How should programming vary in response to adjacent residential or light-industrial uses?
7. Can or should existing and new riverfront hospitality venues be integrated into the park plan?
8. How much of the new parklands should be devoted to ecological restoration, including habitat areas, and how much to active and passive uses?

Upper River Master Plan Study Area



Existing conditions are shown in this aerial photograph looking south toward downtown. In the foreground is the Camden Bridge, with I-94 to the right, and the domes of the Upper Harbor Terminal visible next to the river.

Heavy Industry and Parks

Description

The “Heavy Industry and Parks” alternative assumes continued barging on the Upper River. This alternative is essentially a reiteration of the concept plan contained in the 1997 “Gateways to the River” report. The Upper Harbor Terminal is retained, with the idea that other barge terminal operators south of Lowry could be relocated to the UHT area. West River Parkway is extended as a narrow strip along the river, then directed west before Lowry, and connected to Washington Ave. N. Rail service continues on both banks, but the BN Bridge is converted for use by pedestrians and bicyclists.

Features

- * 57 acres of new parkland.
- * 10 miles of bike lanes and recreation trails.
- * 3.75 miles of parkway or boulevard.
- * Trails and parkway separated from waterfront north of 31st Ave. N., a 1.5 mile gap.
- * Washington Ave. used as parkway connection.
- * BN Bridge is converted for recreational use.
- * 2 miles of riverbank restoration.
- * Approximately 50 new housing units, all as infill on east bank.
- * 62 acres for business park and light industry



Photomontage rendering shows aerial view south to downtown. New parks on the east bank are highlighted in green, as are new parks up to Lowry on the west bank. Heavy industry dominates west bank.

Plan Critique

- Does not meet master plan objectives:
 - No continuous park and trails on west bank,
 - As a truck route, Washington Ave. N. can not be a parkway, too far from river,
 - Consolidation of heavy industry costly, benefits few, available land inadequate.
- Takes out private barge terminals, but leaves UHT.
- Single barge terminal may not be enough to keep locks open.
- Moving scrap metal yards to UHT likely to introduce new environmental problems.
- Ecological restoration goals compromised.
- Few benefits to adjacent neighborhoods, especially on west bank.
- Potential for few users of new parks on west bank.
- No relationship, synergy between banks.

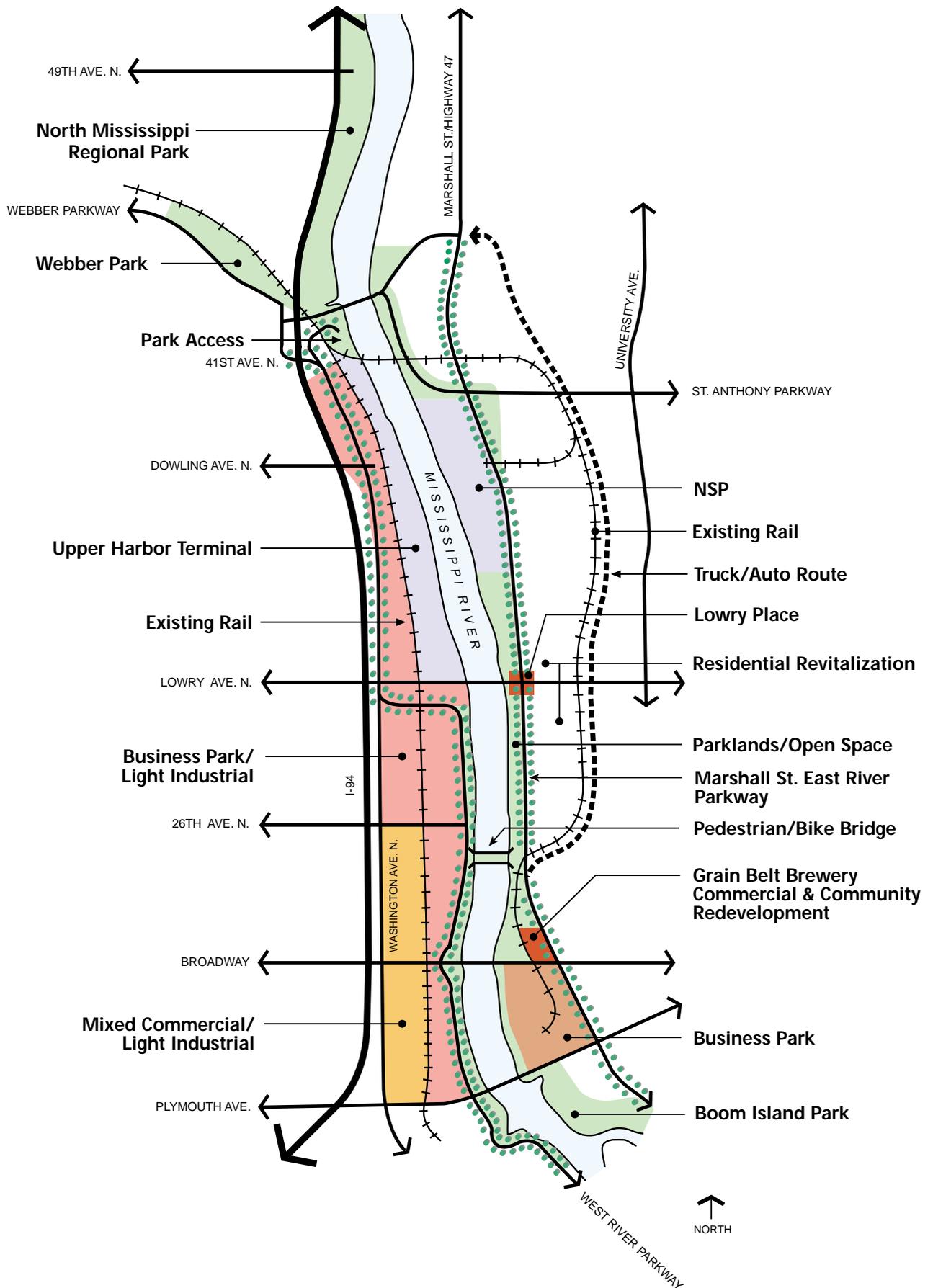
Implementation Issues

- Side steps issue of long-term future of barging.
- Unlikely to find broad support and funding.
- Limited economic benefit, but high costs.
- Weak justification for action.

Heavy Industry and Parks

“Working River”

First Option



Distinguishing Features

- ◆ Barging on Upper River continues.
- ◆ Upper Harbor Terminal retained.
- ◆ Consolidation of heavy industry in UHT area.
- ◆ West River Parkway directed away from river onto Washington Ave.
- ◆ BN Bridge converted to pedestrian and bicycle facility.
- ◆ Rail service continues on both banks.

Parks and Light Industry

Description

The “Parks and Light Industry” alternative anticipates that barging on the Upper River will decline and be discontinued. The riverbank is given over to parks along both sides of the river, for the whole length of the study area (excluding NSP). The key issue becomes one of land use adjacent to new parks, especially on the west bank. Although the broad label calls for additional light industry, the development of office buildings and laboratories is also included, with a site design aim of quality structures set in landscaped sites. This alternative follows long-standing City policies regarding the Upper River area, with a goal of converting heavy industries with outdoor storage, to light industries and offices. The North Washington Industrial Park (NWIP) project is an ongoing effort, begun in the 1970s to facilitate this conversion, and provides an example of the type of structures that can be anticipated under this land-use classification.

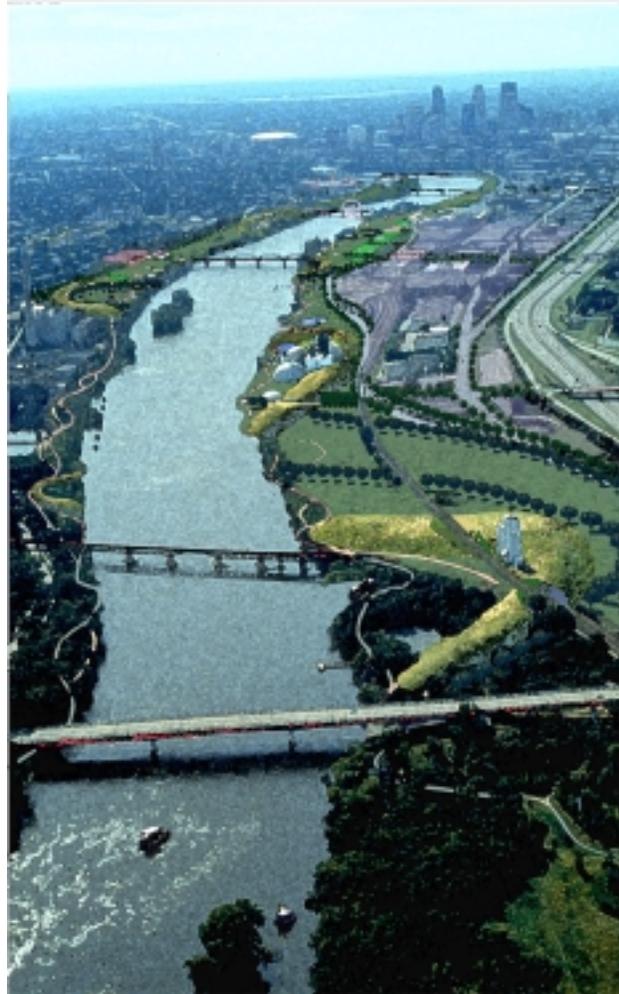
Features

- * 162 acres of new parkland.
- * 15 miles of bike lanes and recreation trails.
- * 5.25 miles of parkway or boulevard.
- * BN Bridge is converted for recreational use.
- * 4 miles of riverbank restoration.
- * Approximately 200 new housing units, all as infill on east bank.
- * 95 acres for business park and light industry.



Plan Critique

- Safety and use of parks an important concern, large new park on west bank with no residential units nearby.
- Overly large park on west bank, limiting land available for economic development.
- Development market limited to office and light-industrial use, 25 years of NWIP has not filled available land.
- Aesthetics of parkway experience limited by plain architecture of most light-industrial buildings, likewise access from north Minneapolis is through light-industrial area.
- Some potential for competition with downtown, if large areas are planned for office park development.
- Lack of balance between available land uses.



Photomontage rendering shows aerial view south to downtown. New parks, highlighted in green are shown along the east and west banks. Domes at the Upper Harbor Terminal are shown retained as part of an industrial theme park.

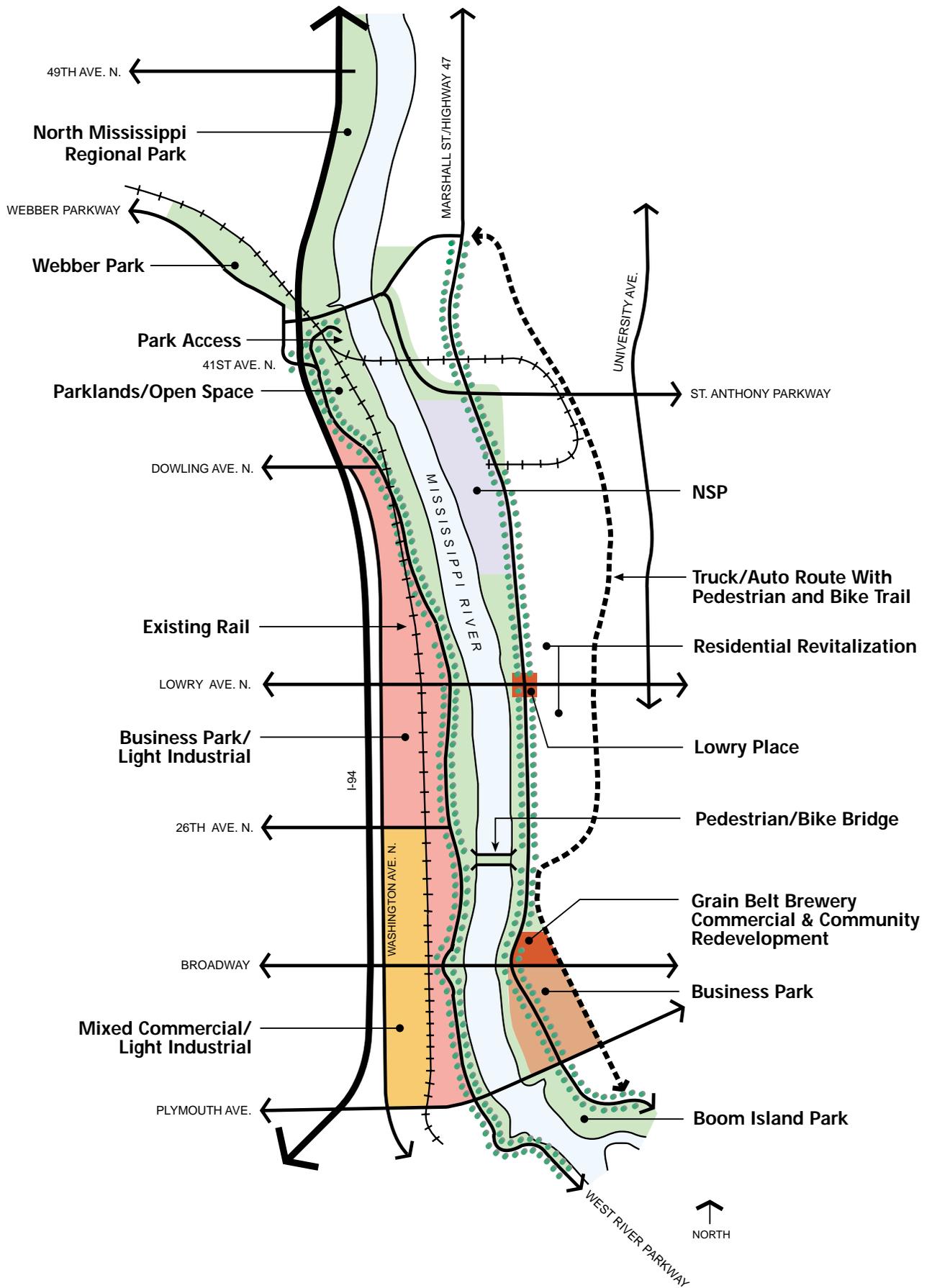
Implementation Issues

- Incremental approach.
- Reliance on City funding, tax increment financing.
- Potential for drift, inaction, and continued location of undesirable uses in light-industrial areas.

Parks and Light Industry

"The River Green"

Second Option



Distinguishing Features

- ◆ Business park and light industrial district on west bank.
- ◆ Barging is discontinued.
- ◆ West River Parkway extends along river.
- ◆ Wide new parklands on west bank.
- ◆ BN Bridge converted to pedestrian and bicycle facility.
- ◆ Rail service continues on west bank, BN spur on east bank removed.

Parks and Residential

Description

The “Parks and Residential” alternative anticipates that barging on the Upper River will decline and be discontinued. The riverbank is a continuous park along both banks (excluding NSP). The major difference with the second option is that a significant area of new housing is shown north of Lowry Ave. on the west bank. In addition, a strip of residential is shown south of Lowry immediately west of the new riverfront park. The plan envisions development of a completely new neighborhood on the west bank, where only scattered housing currently exists next to industrial sites. This residential concept calls for a change in City policy regarding the conversion of heavy-industrial land, with residential uses favored rather than light industry.

Features

- * 162 acres of new parkland.
- * 15 miles of bike lanes and recreation trails.
- * 5.25 miles of parkway or boulevard.
- * 4 miles of riverbank restoration.
- * Approximately 1,700 new housing units.
- * 55 acres for business park and light industry.



Plan Critique

- Residential units guarantee people in parks, increasing use and safety.
- Residential best use of river views and park amenities.
- Better mix of land uses and market potential.
- Potential for conflicts with light-industrial uses.
- Block of residential south of Lowry too narrow.
- Standards for pollution remediation higher.
- Questions about cohesiveness of neighborhood between river and interstate.
- Impacts of trucks and rail a concern.
- Excellent location for downtown workers.
- Meets City housing goals.
- Overly large park on west bank, limiting land available for economic development.
- Better environment for access from north Minneapolis, better environment for views from trails and east bank.
- Provides move-up housing for north Minneapolis.
- Increase in local residents helps build constituency to support river restoration and hospitality and retail uses.



Photomontage rendering shows aerial view south to downtown. New parks, highlighted in green are shown along the east and west banks. A new residential neighborhood is shown in mixed colors between I-94 and the river. An amphitheater is shown just south of the Soo Line bridge.

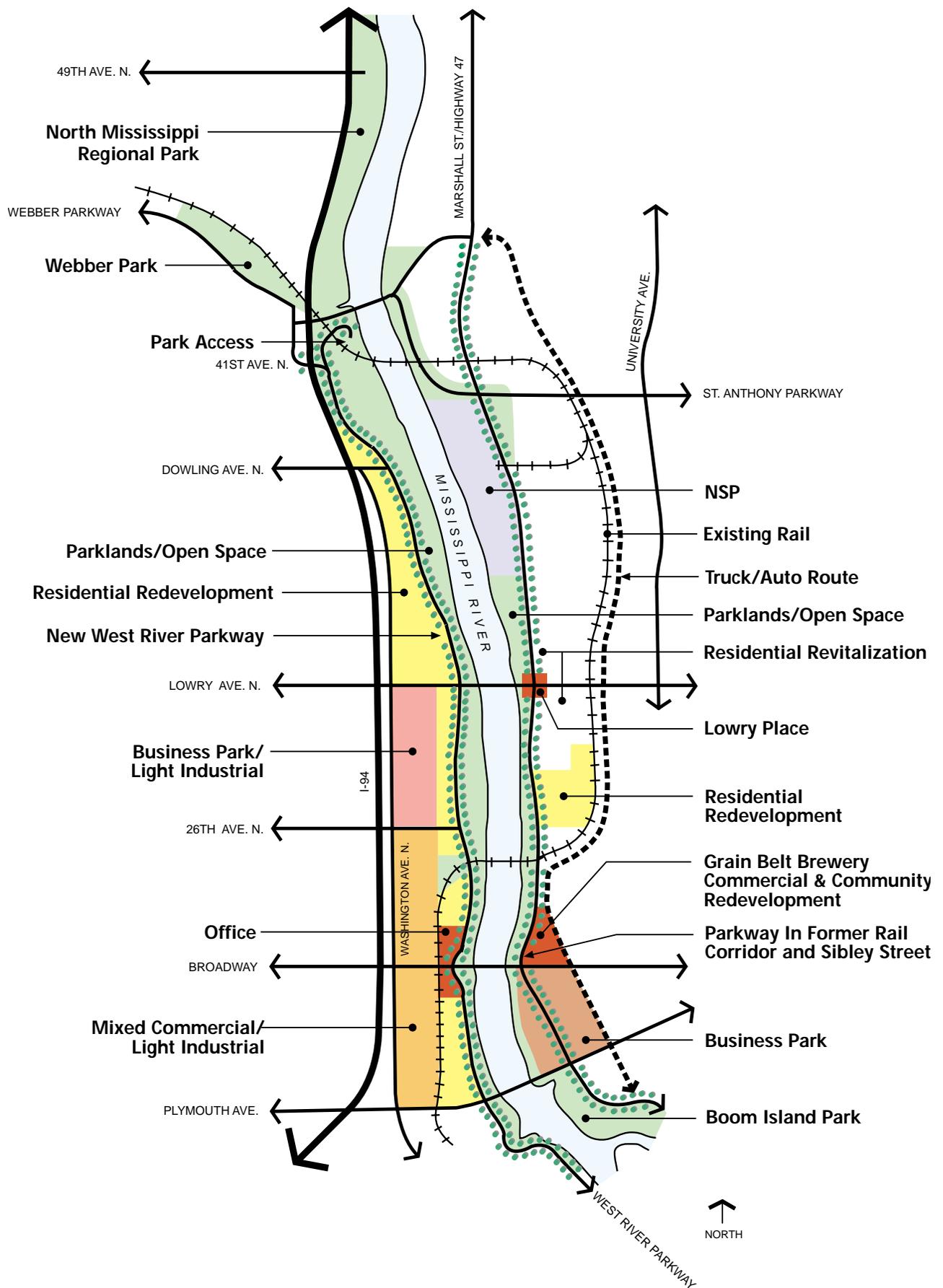
Implementation Issues

- High cost of land-use change.
- Visionary plan has potential to attract funds from outside city, including state, federal, and private sources.
- Anti-sprawl justification for action.
- Potential to find broad support and champions.
- Recognizes current development trends along river.
- Call for radical change, rather than incremental approach.

Parks and Residential

“The River Green”

Third Option



Distinguishing Features

- ◆ New neighborhood on west bank.
- ◆ Barging is discontinued.
- ◆ West River Parkway extends along river.
- ◆ Wide new parklands on west bank.
- ◆ Residential redevelopment east of Marshall St. at Gluek Park.
- ◆ Rail service continues on east side, BN Bridge remains in rail use.

Evaluation

Comments were received on the three concept plan alternatives during a series of public meetings, small group discussions, presentations to elected officials, and regular meetings with Park Board, City Planning, MCDA, and County staff sitting as the Upper River Master Plan technical advisory committee. In addition, a group of national advisors in the areas of real estate, conservation, and waterfront development critiqued the plans. Following this input a formal evaluation was conducted which critiqued each of the alternatives in reference to planning and policy statements published by public agencies with jurisdiction over the study area. Full reports on comments and the evaluation are available in the Appendix.

Review and comments by:

Minneapolis City Council Members
Minneapolis City Planning Commission
Minneapolis Park and Recreation Board
Hennepin County Commissioners
National advisory panel
Interested citizens
Organized environmental groups
Business representatives and organizations
Upper River Master Plan technical advisory committee

Planning and Policy statements:

- Consistent objectives identified in over 25 years of previous planning for the Upper River
- Stated planning objectives and planning principles
- *The Minneapolis Plan*, 1997
- City of Minneapolis Housing Principles, 1995
- Critical Area and Mississippi River and Recreation Area plans

During the review a number of components from the “Parks and Light Industry” and “Parks and Residential” alternatives received positive comments, with encouragement to create a plan that seeks the highest and best use of land adjacent to the river. Representatives from heavy industry with parcels along the riverfront expressed general opposition to the overall planning objectives; however some representatives did state that if they were given a timeframe in the range of 10 to 20 years for implementation they might be able to support the plan. It is clear that the “Heavy Industry and Parks” alternative had a number of contradictions and unmet planning objectives, while receiving little support from heavy industry, elected officials, or the public.

“Parks and Residential” favored plan

Because the parks and open space plan for the two “River Green” alternatives was basically identical, many of the parks development, riverbank restoration, and habitat creation goals were met by either the residential or light-industrial concepts. In regard to parks and access, the residential concept had the important differences of a local user base and more lively and interesting environment provided by a new neighborhood, as opposed to a business park. The most important criterion then was in the area of neighborhood development

impacts under the “Parks and Residential” alternative, with the conclusions that:

There is only one Mississippi River, and housing takes better long-term advantage of the river as an amenity than can industry.

New parkland and housing provide the greatest opportunity to dramatically change the character of the riverfront in north and northeast Minneapolis.

Calculations regarding potential tax-base development showed that medium- to high-density residential development will result in more tax base than industrial uses. In addition, an approach to implementation that recognized the value of a visionary plan won favor among many participants. The Master Plan proposes the concept of a new neighborhood for north Minneapolis, on the west bank of the Mississippi, as a radical point of departure from historical inertia favoring heavy industry. This approach calls for action at a large scale, rather than incremental change. Funding sources outside the City of Minneapolis can be sought with the promise of real change and a host of benefits to the overall community.

Park programming review

Regarding park programming, an industrial heritage theme that retained warehouse domes and other structures found little support. Fishing piers and boating facilities were more desired than athletic fields, courts, or amusement features in riverfront parks; however a full marina was deemed unfeasible. In fact, programming of the parks received little comment, with the focus on land-use issues, but restoration of wildlife habitat and encouragement of riverfront entertainment and hospitality sites were strongly favored.

Synthesis

Following the evaluation of the three alternatives, a final “Preferred Plan” concept was synthesized. This synthesis plan contains many of the recommendations of the “Parks and Residential” concept, but also recognizes and addresses potential conflicts between land uses and refines the plan in regard to open space development. With a large number of interest groups, holding divergent values and concepts of the study area, a balance of land provided for a variety of uses came to be a fundamental goal for the final concept plan.

Key critique issues for synthesis:

- New neighborhood on west bank is best use of land.
- Strip of residential south of Lowry is too narrow.
- 162 acres of new parklands is excessive from an urban design point of view and does not provide the necessary economic development potential to aid park development.
- Plenty of space can still be provided for light industry under residential option.
- Truck and traffic impacts must be mitigated, but conversion of Marshall St. to parkway is not feasible, use of rail corridor was strongly rejected by public.
- Hospitality destinations should be retained and reinforced with additional venues.

Preferred Plan Basis of Selection: Assessment Summary

Assessment Criteria	Plan Alternatives			
	Heavy Industry & Parks	Parks & Light Industry	Parks & Residential	Preferred Plan
1) Consistent Objectives over 25 Years and Planning Objectives of 1999 Upper River Master Plan	○	●	●	●
2) Upper River Master Planning Principles	○	●	●	●
3) Review/Critique by National Advisory Panel	○	●	◐	●
4) Review/Critique by City Council	◐	◐	◐	●
5) Review/Critique by City Planning Commission	◐	●	●	●
6) Development and Application of Evaluation Criteria	◐	●	●	●
7) Response from Public Participation Process	◐	◐	◐	●
8) Response to Policy Directions in <i>The Minneapolis Plan</i>	◐	◐	●	●
9) Response to City of Minneapolis Housing Principles	○	◐	●	●
10) Critical Area and MNRRA Plan Policies and Goals	◐	●	●	●
11) Potential for Implementation Funding from Regional, State, National Sources	○	◐	●	●

Legend

- Plan Supports Assessment Criteria
- ◐ Plan Neutral to Assessment Criteria
- Plan Does Not Support Assessment Criteria

Preferred Plan

Description

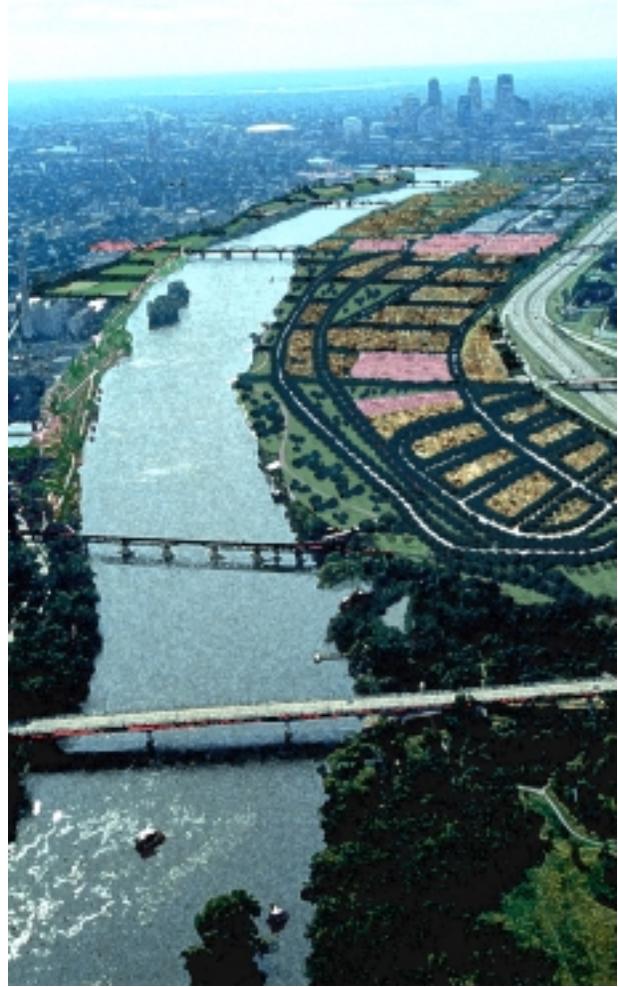
The “Preferred Plan” proposes that the best use of land on the west bank is a mix of new residential, light industry, office, and commercial development. In a major departure from Minneapolis Park Board models for waterfront parkway development, the plan calls for swinging the parkway away from the immediate riverfront south of Lowry, to the east side of the CP railroad corridor, providing a buffer between light industries and the new residential area. This alignment allows creation of a riverfront promenade, with immediate access from residential units and hospitality venues to the waterfront without having to cross a road with vehicular traffic. This design also doubles the width of the residential redevelopment in this area from one block to two, forming a more cohesive base for this community.

The width of new parklands north of Lowry was narrowed from those shown in the “River Green” concepts to increase the space for housing and tax base, while also reducing the amount of land to be maintained by the Park Board. A further refinement recognizes the excellent freeway access at Dowling Ave. by calling for a mixed-use development including offices and housing. Citizen comments about the potential for a conference center along the river was seconded by the national advisory panel, with the Grain Belt complex as the most desirable site. While this conference center idea is included in the plan, the MCDA reserves the ability to develop the Grain Belt to other uses as development proposals are offered.

Residents of northeast Minneapolis rejected the concept of a truck route utilizing the BN railroad corridor. This proposed route was seen as too disruptive to the surrounding neighborhood, and therefore is not included in the Preferred Plan. The issue of traffic on Marshall remained unsolved, leading to an effort to mitigate the impacts with a new roadway designed as a landscaped boulevard instead of a true Minneapolis parkway.

Features

- * 95 acres of new parkland.
- * 15 miles of recreation trails.
- * 5.25 miles of parkway.
- * 4 miles of riverbank restoration.
- * Approximately 2,500 new housing units.
- * 55 acres for business park and light industry.



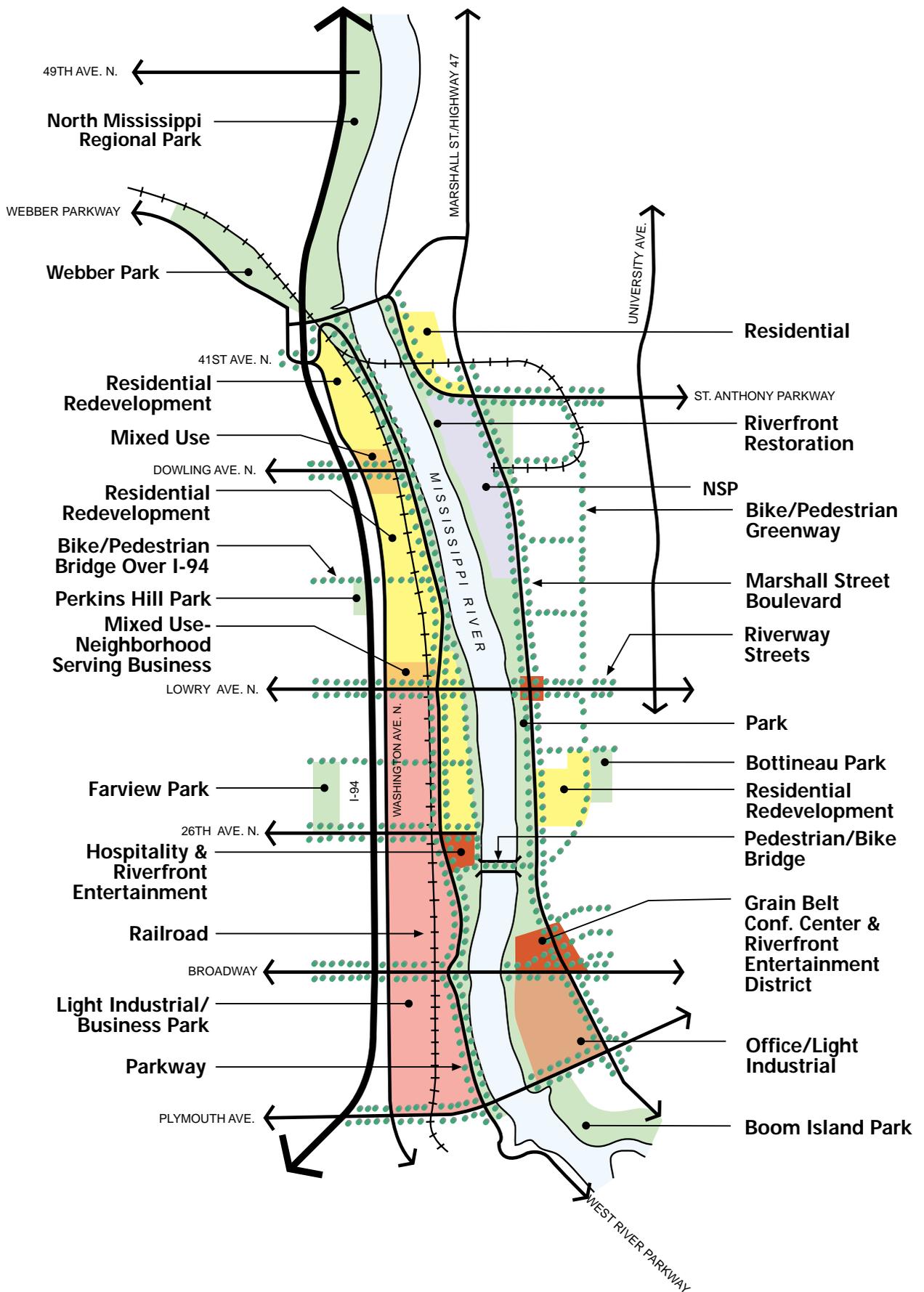
Plan Critique

- Takes best advantage of the river as an amenity.
- Acknowledges probable, eventual discontinuation of barging on the Upper River.
- Strikes a balance between jobs and housing.
- Results in greatest tax-base development.
- Best potential for revitalization in north and northeast Minneapolis.
- Provides locations for lively riverfront entertainment and hospitality sites.
- Recognizes growing concern about traffic on Minneapolis parkways by proposing pedestrian promenade along waterfront.

Implementation Issues

- Most able to attract regional, state, and national support.
- Tax base maximized for tax increment financing.
- Visionary approach most likely to find champions.

Preferred Plan



Features

- ◆ New neighborhood on west bank.
- ◆ Pedestrian promenade along river south of Lowry.
- ◆ West River Parkway acts as buffer between uses.
- ◆ Opportunities for entertainment and hospitality destinations.
- ◆ Mixed-use, higher-intensity development at Dowling Ave.
- ◆ BN Bridge converted to pedestrian and bicycle facility.
- ◆ Rail service continues on west bank.

Upper River Master Plan

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Plan Sequence

The Upper River Master Plan is organized in four sections: Land Use, Parks and Urban Design, Environmental Restoration, and Implementation. The Plan begins with a description at the system-wide scale, followed by details on park and urban design features. Plan specifics for park elements and urban design features are related in *a series of vignettes*, with text describing the Plan and associated graphics as a visitor might experience the Upper River following implementation. The description begins traveling north on the west bank, with Lowry Avenue as a mid-point, and then proceeds south along the east bank.

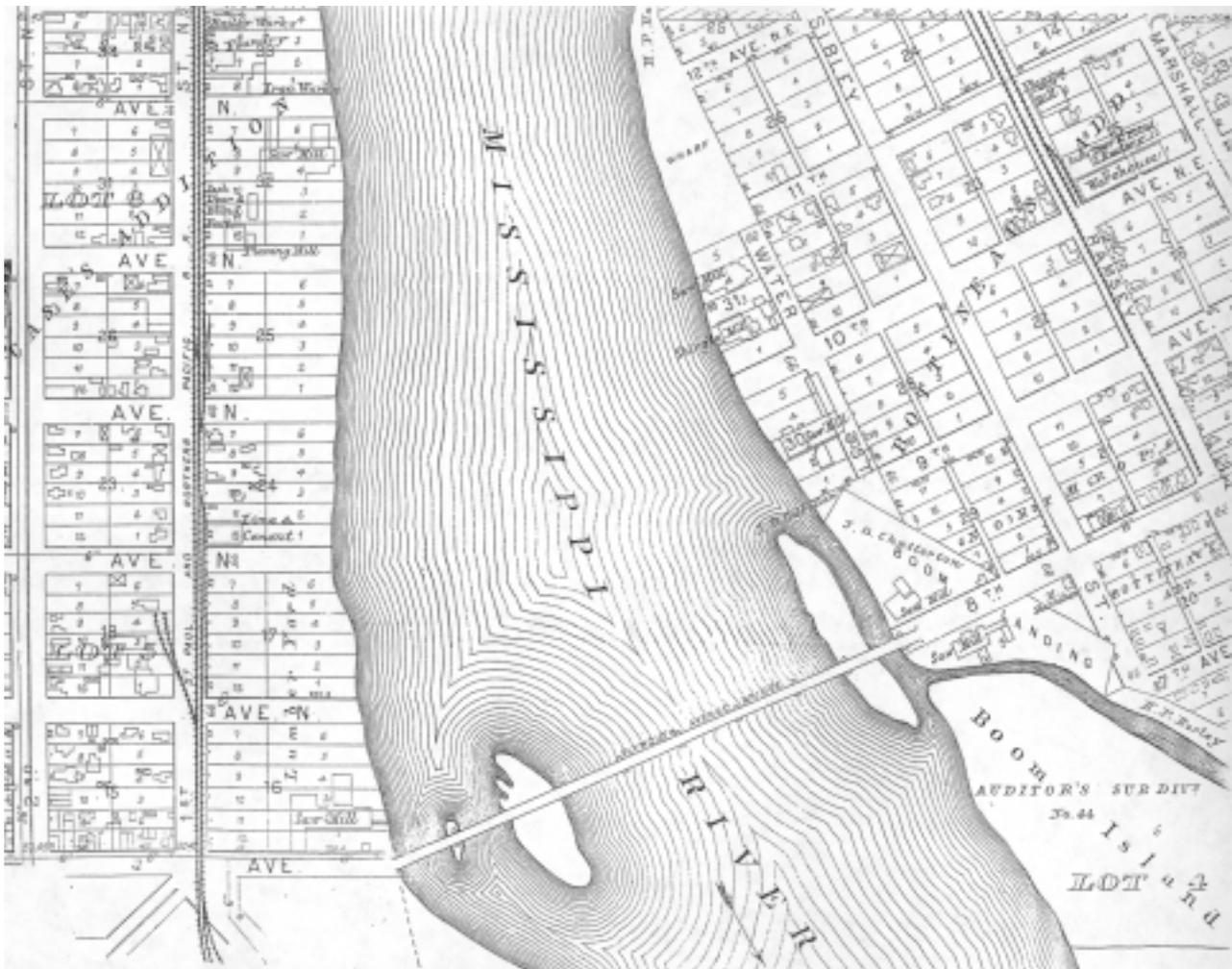
Following the park and urban design vignettes, recommendations are given on environmental restoration at the system scale. A normative approach is used to discuss approaches that should be taken regarding issues of soil contamination, water quality improvement, riverbank stabilization, and habitat restoration. The final section of the Plan suggests approaches to implementation. Position in the Master Plan does not relate to project phasing, nor the relative weight given to the various issues discussed: a holistic approach is necessary to realize the planning objectives with environmental cleanup and restoration, public infrastructure including parks, and private development all necessary components.

Land Use Plan

The Upper River Master Plan proposes a fundamental shift in public policy regarding land use along the Mississippi River north of the Plymouth Bridge. The Plan breaks with the conception of the river as a place for heavy industry, and embraces a new vision of the riverfront as a public amenity that will stabilize existing neighborhoods and act as a catalyst for new residential and business development. The Land Use Plan meets the planning objectives established for the corridor, including continuous public open space along both banks of the river, areas for new housing and commercial use, and light-industrial zones with increased employment densities. Implementation of the Land Use Plan will produce significant benefits for the City of Minneapolis, Hennepin County, and the region.

A Fourth Era of land use

Since the time of the first introduction of steam-powered lumber mills and railroads to the area above St. Anthony Falls, land use along the Upper River has been in a relative state of flux compared to many other areas of the City of Minneapolis. A concentration on resource processing industries, such as sawmills, brick making, foundries, and breweries, led to the first large-scale land-use pattern of industry along both banks, with the boom leading inevitably to bust.



1892 Atlas

“Increasingly, sawmilling was centered along the river, from Boom Island north to the Northern Pacific Railroad bridge near 26th Avenue North—a mile-and-a-half long, unbroken strip of sawmills and lumber yards on the west side of the river, and a shorter but deeper belt on the opposite shore.”

– Dick Heath, “Minneapolis Growth and City Form”

A second phase of uses slowly filled the vacuum created when large parcels became vacant after the decline of lumber. As one historian has described it: “The once-active milling district along the north river reverted to vacant land, railroad yards or new open storage industry, and junkyards” (Heath). In 1912 an electric power plant was constructed on the Upper River, NSP’s Riverside plant, which took advantage not only of the river water and railroad access, but also available land for storing coal. Public policy to construct the Minneapolis locks and Upper Harbor Terminal reinforced a pattern of land use dominated by low-job-density, bulk-material-handling industries.

Yet, as is the case with large-scale change over decades of time, the current third era of land use, during which portions of the riverfront have been transformed to parks and light industry, overlaps with the period dominated by open storage of

materials. For instance, in 1966 the defunct Gluek Brewery was demolished and the site converted to a riverfront park by the Minneapolis Park and Recreation Board. Likewise, City policy directs the MCDA to promote the development of job-intense light industries out of areas abandoned by scrap metal operations in the North Washington Industrial Park, with West River Road as an example. The Upper River Master Plan proposes to extrapolate this third period of change, to a fourth, and more stable, era of land use along the Upper River.

Implementation of the objectives that mark the third phase of land use will proceed with the creation of riverfront parks, and redevelopment of parcels for light industries. However, a thorough investigation of the potential of land adjacent to new riverfront parks has led to the development of a Land Use Plan that seeks a much richer pattern

of land use along the river’s banks, including the establishment of new residential areas on the west bank, the creation of new urban riverfront hospitality destinations, business parks for professional offices, and new commercial nodes.

This recommended Land Use Plan can be conceived as the fourth era of land-use transformation, with the resulting development recognizing and celebrating the true potential of the Mississippi in Minneapolis. The introduction of new residential land uses on the west bank will stabilize the area from the boom and bust cycle of industries subject to the effects of global markets. A larger constituency will be created to promote the betterment of the Upper River area, including protection of the river’s water quality and riverbank ecology, as well as other community development goals.



Aerial photo from 1947 shows that a railroad yard replaced lumberyards and saw mills north of Plymouth Ave. along the riverfront. Scrap metal yards line 2nd St. N. Following abandonment of the railroad yard, development of West River Road brought the current light industry and open space to this land.

Brownfields over sprawl

The Land Use Plan promotes the concept of redeveloping a large portion of north Minneapolis from heavy industrial use, to a new riverfront community proximate to downtown. This transformation from a brownfield condition will have positive effects for the ecology of the riverfront and further goals to promote and grow the city. Real benefits will also accrue to the region by creating a more vibrant central city and slowing sprawl at the urban fringe by assembling land for construction of new residential units within easy reach of the central business district. Access to the downtown via shuttle transit service and commuter bicycle routes will preclude thousands of commuter trips on congested roadways.

Residential

The Upper River Land Use Plan proposes that substantial portions of the west bank be transitioned to residential use. Including the Planned Unit Development area south of Lowry and the Middle Density Residential area north of Lowry, approximately 90 acres will be made available for the construction of at least 2,500 new housing units. Fronting on new riverfront parks and a riverfront promenade, this new residential zone ensures a high level of use in the parks, thereby making them more secure and lively places. In addition, residential uses will support new commercial development included in the Plan by bringing increased buying power to north and northeast Minneapolis. A relationship is also expected between new residents and business starts in the area, especially entrepreneurs based in units designed for living and work.

Models for the west bank

The proposed patterns and densities of land use on the west bank can be conceived as both an extension of downtown up West River Parkway, and the advance of Camden to the riverfront. The 90 acres for residential are net acres, calculated after subtracting a percentage for public right of way; therefore the overall proposed residential density is between 25 to 30 dwelling units per acres. The Plan calls for the area south of Lowry to be higher than this average density, allowing lower densities north of Lowry, while still reaching the 2,500 unit goal. The relationship between floor-to-area ratio, building height, and ground plane open space is another consideration for all areas of new development. Taller structures can be constructed in selected areas with site plans that provide more open space on the ground level.

The proposed density of development along the river south of Lowry is very comparable to other neighborhoods surrounding the central business district, such as Stevens Square and Loring Park. The residential aspects of the proposed Planned Unit Development, at a recommended density approaching 50 dwelling units per acre, is very similar to the Loring Greenway development undertaken by the City and private investors during the 1970s and 1980s. A mix of mid- and high-rise housing surrounds the central greenway of a water

filtration park, with the added amenities of a new parkway and views of the Mississippi River. The highest density portion, south of 26th Ave., is comparable to the Riverplace apartments and condominiums.



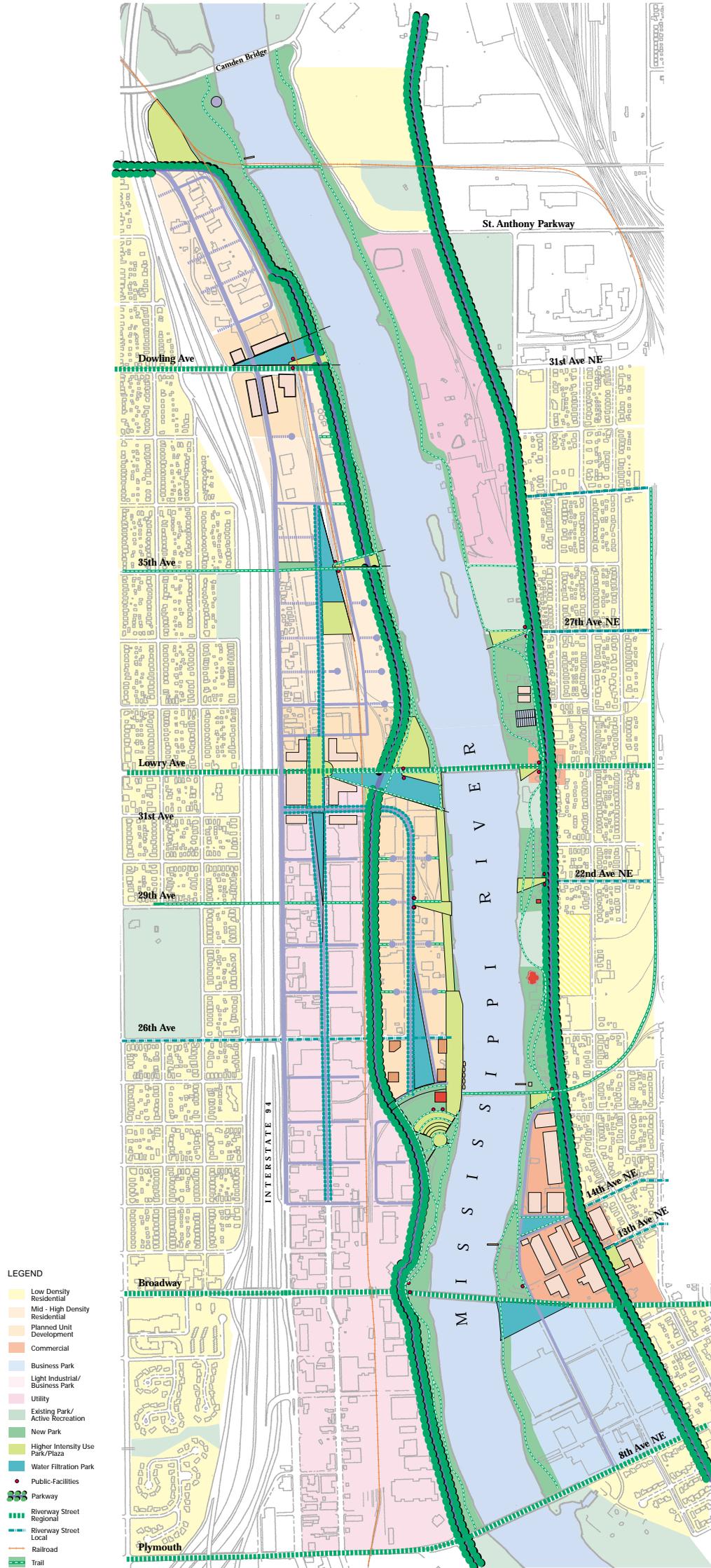
Loring Greenway

North of Lowry the new Mid Density residential neighborhood has a close relationship to the Camden community, just across the interstate. In fact, the Land Use Plan proposes to complete the work of connecting Camden to the riverfront begun with North Mississippi Regional Park. The inclusion of a substantial area for new housing construction will provide move-up housing for Camden residents, and other residents of the city and inner-ring suburbs, which is not currently available. Projects such as the Humboldt Greenway in far north Minneapolis are proving that the market will respond if redevelopment areas and amenities are provided. The new neighborhood will also attract some high-end units at townhouse densities similar to Sawmill Run and midrange, stacked townhouses like those at River Station, both projects filling up the last available land near the riverfront just south of Plymouth Ave.



River Station

Upper River Land Use Plan



Residential on the east bank

The Land Use Plan assumes that patterns and densities of residential use on the east bank will remain basically the same, with the exception of removing a small number of single-family detached and apartment units on the west side of Marshall St., and the potential redevelopment of the Tenneco Packaging site on the east side of Marshall opposite Gluek Park. Once a continuous park is created to the west of Marshall, the market and private owners may be encouraged to redevelop some properties on the east side.

The Tenneco site has potential because of its size, location between adjacent residential units, and the possibility for creating a master planned development that also includes a greenway connection from the riverfront to Bottineau Park. At a townhouse density averaging 15 units per acre, this 19-acre site could be developed to 285 units of new housing in northeast Minneapolis. As a low priority for public action, this potential land-use change is not included in the new residential count of 2,500 units.

Parks

The creation of continuous riverfront parks on the Upper River will bring a number of interrelated benefits. A primary rationale for creating over 90 acres of new parkland, as called for in the Land Use Plan, is to protect and restore the ecology of the Mississippi. The most important zone is where the river and land meet; the Plan provides needed space to stabilize banks and create new habitat for wildlife.

In addition, the plan provides approximately 16 acres for Water Filtration Parks, where stormwater run-off will be retained and filtered through constructed wetlands before entering the river. The existing urbanization has no established space for improving water quality. The Plan meets current standards for retaining stormwater. These water quality ponding areas are strategically located in relation to topography, planned development, and will also act as no-build zones to create view corridors to the river and downtown skyline.



North Mississippi Regional Park

In regard to new parklands, the Plan distinguishes between more passive and naturalized zones and Higher Intensity Use Parks. These higher intensity open spaces are located in areas where large numbers of users are expected, and should be programmed and constructed in a manner that best protects the riverbank zone from erosion.

While the planned parks will be a vast improvement to riverfront ecology, related benefits offer an additional rationale for action and a means to fund their creation. Property values in northeast Minneapolis will be increased by the new riverfront parks, and the parks will create a needed amenity and catalyst for new development in north Minneapolis.

Planned Unit Development

The Land Use Plan calls for Planned Unit Development (PUD) on the west bank at Dowling and Lowry avenues, and south of Lowry along the riverfront to the BN Bridge. City of Minneapolis zoning ordinances state that the intent of the PUD designation is to “provide for flexibility in the use of land the placement and size of buildings in order to better utilize the special features of sites and to obtain a higher quality of development which incorporates high levels of amenities and which meets public objectives for protection and preservation of natural and historic features, than might otherwise occur under the strict application of the zoning regulations” (Code 527.10).

Designation as a PUD will allow the flexibility to create a complex mix of land uses at each of the three planned areas. At Dowling and Lowry the emphasis should be on commercial uses including offices in a business park setting, and retail serving the local neighborhood and surrounding areas, but with the possibility of residential and institutional uses as well.

South of Lowry, high-density residential is the favored use, but inclusive of office, retail, and hospitality development. The Plan anticipates that market forces will seek the best use of land, however, the provision of a riverfront promenade is expected to encourage creation of a lively urban riverfront as a place of residence, entertainment, and work. Zoning of the area as a PUD will also allow consideration of variances for specific developments within the shoreland zone, as necessary to reach the level of vitality that is intended by the Land Use Plan and related urban design recommendations.

Light Industrial and Business Park

Implementation of the Land Use Plan, especially a continuous riverfront park and parkway on the west bank and related investments in streetscape along 2nd St. N., will be conducive to the ongoing development of the North Washington Industrial Park. The evolution away from bulk-material-handling industries will improve the area's overall competitiveness in the region and help to attract high-employment, high-wage light industries and businesses.

The planning process identified approximately 80 acres as potential business redevelopment areas. It is estimated that over 2,000 additional jobs can be created in the study area, with underutilized land developed for twenty-first-century industries in light-industrial facilities and business parks.



North Washington Industrial Park

Commercial

Much of the planned commercial development will occur within the PUD districts, however the Land Use Plan specifies two other areas on the east bank as commercial zones. The largest and most important is the redevelopment of the Grain Belt Brewery complex as an center of activity. The main opportunity is to reuse the historic architecture as an attraction for urban hospitality businesses, with the Plan suggesting a conference center, hotel rooms, and entertainment venues. An area of supporting development is planned north of the complex.

On the eastern approach to the Lowry Bridge, a small riverfront commercial zone is planned. This pattern recognizes the existing hospitality businesses, with the potential for more retail serving park users and the normal traffic at this crossroads.

Business Park

In addition to the areas marked for both Light Industrial and Business Park, a separate area of Business Park is shown on the Graco and Scherer Bros. Lumber sites south of Broadway. The distinction is only a matter of emphasis, since Graco operates an industrial plant on their site; and is included in recognition of the decision by Graco to construct a new headquarters office on their site. The plan also promotes the potential of the riverfront Scherer Bros. site for use as a high-density office development with excellent proximity to downtown.

Balancing new uses

The Upper River Land Use Plan proposes a complex mix of new land uses adjacent to a riverfront park corridor. During the planning process the Plan evolved from broad single-use zones—parks, light industrial, or residential—to a more integrated, balanced mix. The result is a Land Use Plan that contains over 90 acres of new parks, 90 acres of residential, and 80 acres to be redeveloped for light industry. The Plan challenges public agencies and the private market to develop interesting and exciting places on the banks of the Mississippi, for all aspects of urban life: home, work, recreation, shopping, and entertainment.

Land Use Plan Conclusions

The Upper River Master Plan proposes a major shift in City policy regarding the use of land adjacent to the Mississippi in north and northeast Minneapolis. The low-intensity use of land for storing and transferring bulk materials does not provide job or tax revenue benefits equal to the on-going public subsidies that make commercial navigation possible; in fact these land uses bring high costs in land-use conflicts, environmental degradation, and missed economic development opportunities. The Land Use Plan calls for a dramatic introduction of new land uses on the west bank, and a continuation of park development along the east bank to link parcels currently owned by the Minneapolis Park and Recreation Board.

From the starting point of a system of connected and continuous riverfront parks, the Plan follows a logic seeking the highest and best use of adjacent land. Given the necessary public investment to create riverfront parks—including the relocation of industries and environmental cleanup—redevelopment of adjacent land must return tax revenue to public coffers. The Plan states that development of medium- to high-density residential uses on the west bank will return the most in tax base and social benefits to the local and regional community. A primary consideration is that the Parks must have daily use by a resident population, who through their presence create a safer park environment for all visitors. The proposed neighborhood development will also increase the constituency monitoring the health of the river ecology and promoting implementation of the Plan's objectives.

The creation of riverfront parks will benefit the City in the areas of business attraction and retention in the North Washington Industrial Park. The Plan outlines a pattern of land use that seeks to balance a variety of needs and create a vibrant mix of different types of activity. The west bank is especially interesting as an urban location near to downtown and light industry, where home and work life will blend, with housing units designed for twenty-first-century lifestyles and the twenty-first-century, high-tech economy. The Land Use Plan responds to the inherent opportunities on the Upper River, bringing the city up to the river edge in the appropriate location, to promote development of hospitality and entertainment destinations, and setting development back to create generous open spaces. Areas for local neighborhood commercial nodes are included, as well as places for business park development.

Perhaps the most important result of the planning process is the concept of a new residential neighborhood on the west bank. The benefits to the city and region will be substantial. The Plan opens a large space, with a waterfront amenity, where 2,500 housing units can be developed in a variety of densities. The Metropolitan Council expects the City of Minneapolis to grow by 9,500 housing units by the year 2020—The Upper River Master Plan provides a Land Use Plan which can accommodate 26 percent of the forecast growth. Implementation of the Plan will make a land resource available to the city that will reduce pressure on existing residential neighborhoods to absorb the growth in housing units. Locating these units within easy bicycling and transit reach of downtown will further regional objectives for slowing growth on the urban fringe, and reduce the number of automobiles congesting expressways and arterial streets. The Land Use Plan is the essential component of the Upper River Master Plan, it meets the planning objective of balancing new land uses by presenting a bold vision for converting non-performing land uses to new riverfront parks and an exciting mix of new land uses.

Recommendations Summary

- Phase out heavy-industrial uses in Upper River corridor.
- Develop parcels between Marshall St. and the river, from the BN Bridge to Marshall Terrace Park, as parkland.
- Transition riverfront parcels between the North Mississippi Regional Park and the terminus of West River Road to parks and an urban riverfront promenade, and redevelop the remainder of parcels as residential, office, and hospitality uses.
- Transition land use adjacent to riverfront parks corridor to a mix of residential, office, light-industrial, and commercial uses.
- Develop new riverfront residential and mixed-use communities on west bank.
- Utilize the Planned Unit Development category of the zoning code to allow the predominately residential Mississippi Promenade District and Dowling Avenue area to include a mix of office, institutional, hospitality, and commercial uses.
- Seek an overall density of 25 to 30 dwelling units per acre in the residential redevelopment areas planned for the west bank, to create at least 2,500 units on 90 net acres of land.

Parks and Urban Design Plan

Urban Design Guidelines

The Upper River portion of the Mississippi in Minneapolis is a unique place, with a unique water amenity. In order to guide development as conceived in the Land Use Plan, a careful investigation and analysis of the topography of the area and its location within the city led to the establishment of a set of six urban design guidelines. Following their creation, the guidelines were applied to the Preferred Plan Alternative to refine it as the final Land Use Plan. Perspective sketches portray how development might occur. The guidelines should be applied at the system scale, but are most relevant to new development on the west bank.

River Views

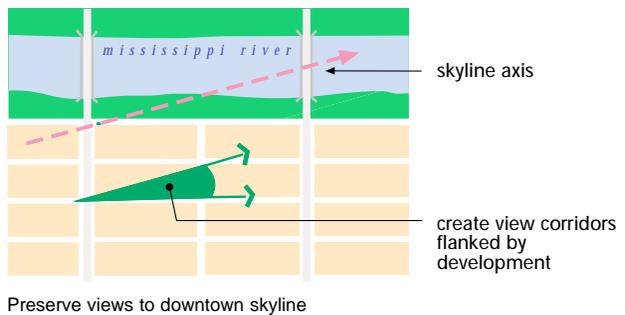
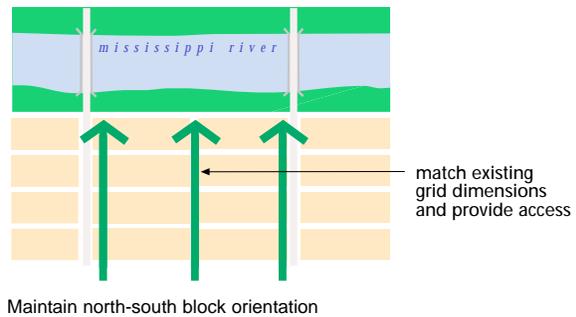
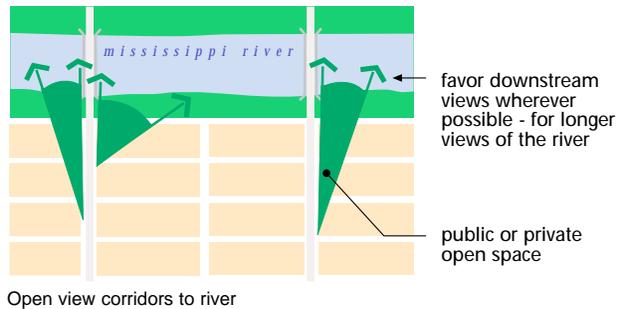
To make the most of the river as a public amenity, and as a location to entice adjacent development, view corridors should be maintained. Bridge areas are especially important to maintain as no-build zones, so that wide views are opened where the largest number of people approach the river. In addition to views of the water, the river also opens views of the sky. Looking downstream, southern exposure provides more light allowing longer views, so view corridors, expressed in the plan as “wedges” favor downstream views.

Block Orientation

Minneapolis is, in general, a city laid out on a north-south grid, with structures fronting on blocks so that facades receive either morning sun from the east or afternoon sun from the west. This north-south block orientation should be maintained, specifically on the west bank where redevelopment will include construction of new blocks, and in some new street alignments. The new street grid should in most cases follow existing block dimensions, to match street alignments across the interstate in north Minneapolis. Maintaining this orientation will insure sunlight during some part of the day for structures and units.

Views to Downtown

The west bank of the Upper River has a unique position north of the downtown that allows for views of the skyline. These views should be maintained and enhanced by the establishment of a number of view corridor wedges. The Plan sets these wedges in strategic locations where the best views of the downtown are available, with new development flanking these wedges in relation to the skyline axis.



Stormwater Retention and Filtration

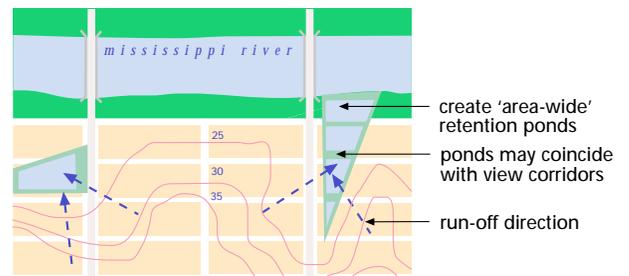
In order to meet current standards for reducing surface run-off during storm events, a series of retention ponds should be created in redevelopment areas. The provision of ponding areas within the overall plan allows for an area-wide system related to new development, rather than smaller individual ponds for each new construction. This approach will create more satisfactory results for water quality improvement and urban design. The Plan places water filtration areas within the view corridor wedges as the most efficient use of land.

Public-Private Interface

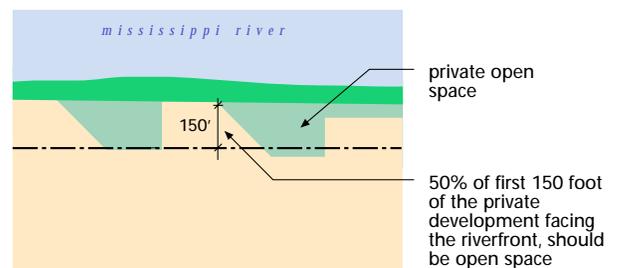
Along many areas of the riverfront, a better interface between public and private space can be achieved by including private open space around which structures are arranged. This crenellated, or notched, pattern will preclude the construction of uninterrupted facades along the riverfront. Application may vary in relation to other urban design goals, specifically at the higher density, riverfront entertainment node along the southern portion of the promenade, where development should create a strong urban edge.

Sunlight

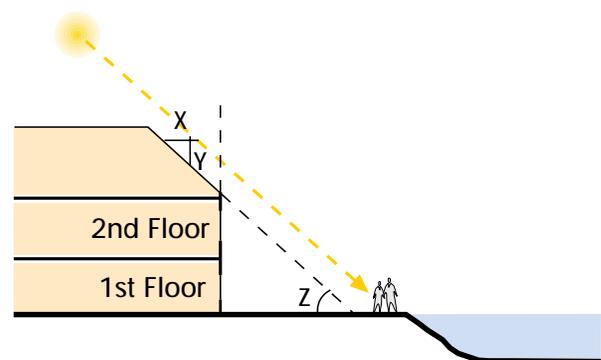
Where development is to occur on the west bank in close proximity to the riverfront, calculations should be made to step back structures so that sunlight penetrates to the public areas. Morning sunlight is always assured by the north-south block orientation, but structures should also allow some afternoon sun if possible. Provision of private open space, as outlined above will also allow areas with increased afternoon sunlight.



Retain and filter stormwater run-off



Create private open space and varied facades



Allow for sunlight at river edge

Parks and Open Space System

Riverfront Parks

The Upper River Parks Plan proposes the addition and programming of over **90 acres of new parkland** beside the Mississippi River in north and northeast Minneapolis. North Mississippi Regional Park and Boom Island Park represent recent park development at the north and south ends of the Upper River. Yet along the 2.75 mile stretch in between, only 11 acres of parks exist at Marshall Terrace and Gluek, with the undeveloped Edgewater an additional 3.5 acres. The Upper River Master Plan proposes a six-fold increase in parklands that will create a new waterfront park destination for residents of local neighborhoods and the region on the banks of one of the great rivers of the world.

Open Space Amenities

Integrated into the overall Parks Plan are other amenities creating additional open space, including a half-mile-long, 7-acre urban Riverfront Promenade and over 16 acres of Water Filtration Parks.

Parkways and Trails

The Plan extends West River Parkway 2.75 miles and redesigns Marshall St. as a landscaped boulevard for a total of 5.25 miles of new enhanced roadway parallel to the river. Continuous parks along both banks are accessed by over 15 miles of new bike lanes and recreational trails.

West River Parkway will connect to Webber Parkway on the west bank and the entrance to North Mississippi Regional Park. On the east bank, the new Marshall Boulevard will connect Boom Island and the central riverfront to St. Anthony Parkway and riverfront parks in Anoka County.

The trail system follows the riverbank, the majority passing through lands acquired for parks. However, an easement is desired along the river at Scherer Bros. Lumber and Graco between 8th Ave. N.E. and Broadway, as well as through the NSP Riverside plant between Marshall Terrace Park and St. Anthony Parkway. Two railroad bridges are also utilized to carry trails across the river, on a converted BN Bridge and a deck attached to the Soo Line Bridge.

Riverbank and Landscape Restoration

A key objective of the Parks Plan is to stabilize and vegetate banks to reduce soil erosion and increase connectivity of habitat corridors. The Plan calls for over four miles of riverbank restoration, with a majority of the new parks and open space devoted to naturalized areas, including prairie plantings and constructed wetlands, providing new habitat for wildlife.

River Recreation

Every aspect of the Upper River Master Plan is designed to increase the recreational use of the Mississippi. Included in the Parks Plan are boat tie-ups, fishing piers, and boat launches. A boat dock and boat rental concession is proposed behind the Grain Belt complex. The Plan retains current riverfront hospitality venues accessible by boat and proposes new waterfront features and uses which

will increase the use of the Upper River by recreational boaters. Bringing new residential units to the river will also add to the number of people canoeing its waters, walking on trails, and fishing the banks.

Variety and Interest

In conjunction with ecological restoration objectives, the Parks Plan was created to provide a myriad of experiences encouraging visitors to return again and again. Restored landscapes will offer a wide variety of flora and fauna, the scene constantly changing with the seasons. Intermingled with the wild, urban riverfront destinations offer places for gathering, dining, shopping, and entertainment. Park programming will spark continued interest along trails by the inclusion of a feature—be it a butterfly garden, overlook, piece of art, or landmark tree—that rewards users for continuing on down the trail.

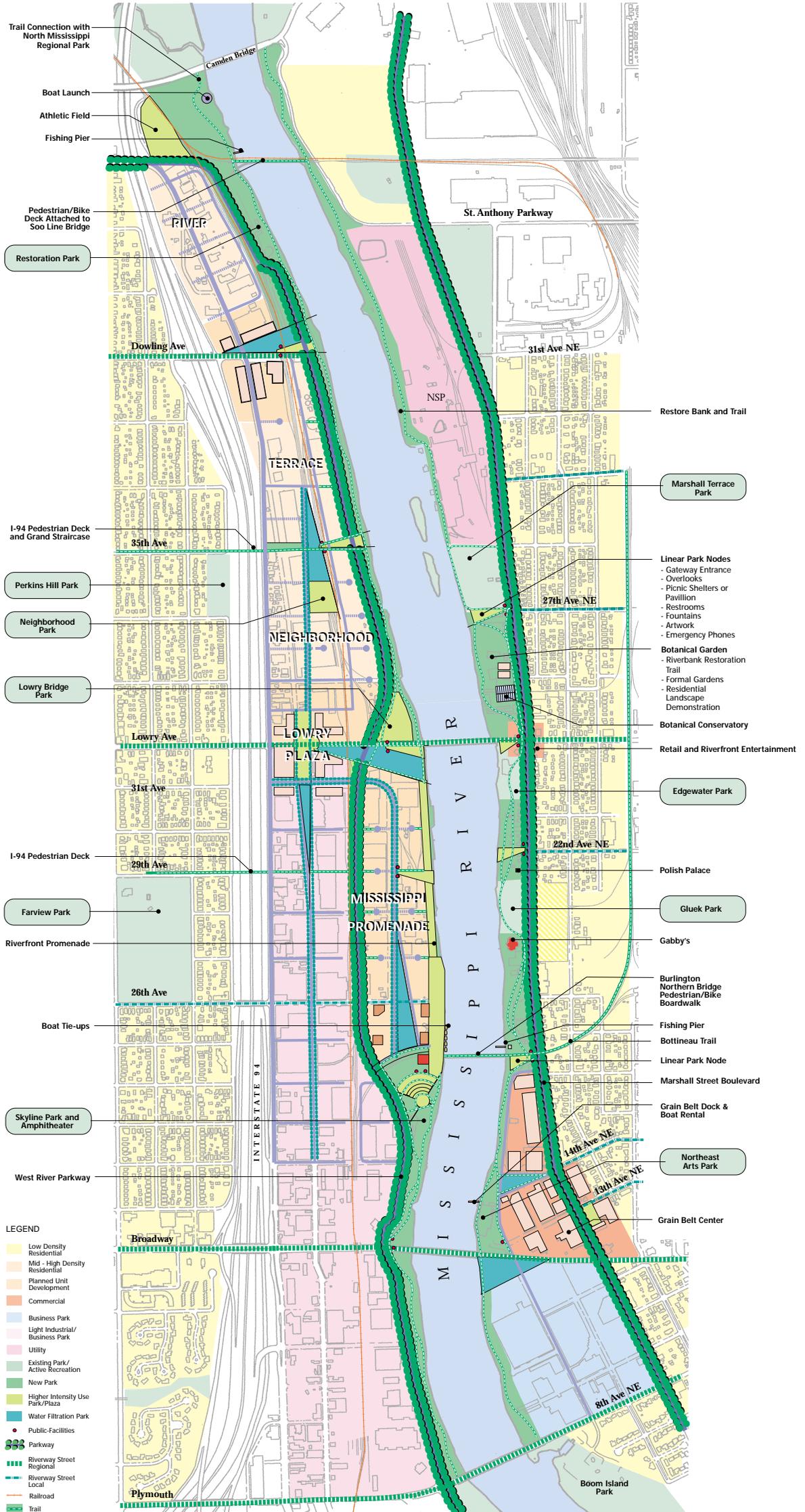
Using the Upper River parks as a system

All of the parks and open space elements contained in the Upper River Master Plan are connected to the overall system. Trails intersect with four vehicular and two railroad bridges. Pedestrian and bicycle facilities are proposed to be added to the two railroad bridges, with improvements to vehicular bridges as well. These river crossings allow trail and park users to experience the system in a series of loops up one bank and down the other, either small loops around two adjacent bridges or even the largest loop from Plymouth to the Camden Bridge. The different topography and programming on each bank creates exciting opportunities for a day along the Upper River.

System-Scale Features

- ◆ Skyline Park and Amphitheater
- ◆ Mississippi Promenade
- ◆ Restoration Park
- ◆ Marshall Terrace Botanical Garden and Conservatory
- ◆ “Gemuetlichkeit” Park
- ◆ Northeast Arts Park
- ◆ Grain Belt Boat Concession

Upper River Parks and Urban Design Plan



Urban Design System

Urban design components included as part of the Upper River Master Plan, add richness and suggest how reconfigured land uses can be enhanced through place-making infrastructure and nomenclature, since frequently it is the neighborhood park, unique topography, main street, or landmark that distinguishes a place and gives it a recognizable name. Application of the project planning principles and urban design guidelines resulted in a system of features, including designated view corridors, water retention and filtration areas, Riverway Streets, and new internal circulation patterns, which occur throughout the plan.

View Corridors and Water Filtration Parks

Combining the necessary water retention and filtration infrastructure with recommended no-build view corridors produces a pattern of “wedges” in the plan. These wedges meet both ecological and aesthetic objectives, to improve the river’s water quality and preserve views of the river and downtown skyline, which add value to surrounding land.

Riverway Street System

The plan envisions a system of “Riverway Streets,” with enhanced streetscapes and signage that will lead residents and visitors to riverfront parks. This system includes major thoroughfares with river crossing bridges, as well as local streets that provide the most direct routes across north and northeast Minneapolis. Regional routes on high traffic thoroughfares should have enhancements that are oriented to vehicular way-finding, while local routes should have improved facilities for pedestrians and bicyclists. Employing a common palette of streetscape elements will identify the streets leading to and parallel with the river as a unified system; especially important is the installation of signage specifically designed to direct people to Upper River parks.

Riverway Street Elements

- Directional signs to Upper River parks.
- Decorative pedestrian-level lighting.
- Bicycle lanes and designated routes.
- Enhanced boulevard plantings.
- Additional street tree plantings.

Internal Circulation and Truck Routes

A layout is included in the Plan suggesting street alignments in redevelopment areas. These streets, shown as deep blue lines, set a block pattern for future development, with the existing grid extended into areas where segments are currently missing in the industrial areas on the west bank.

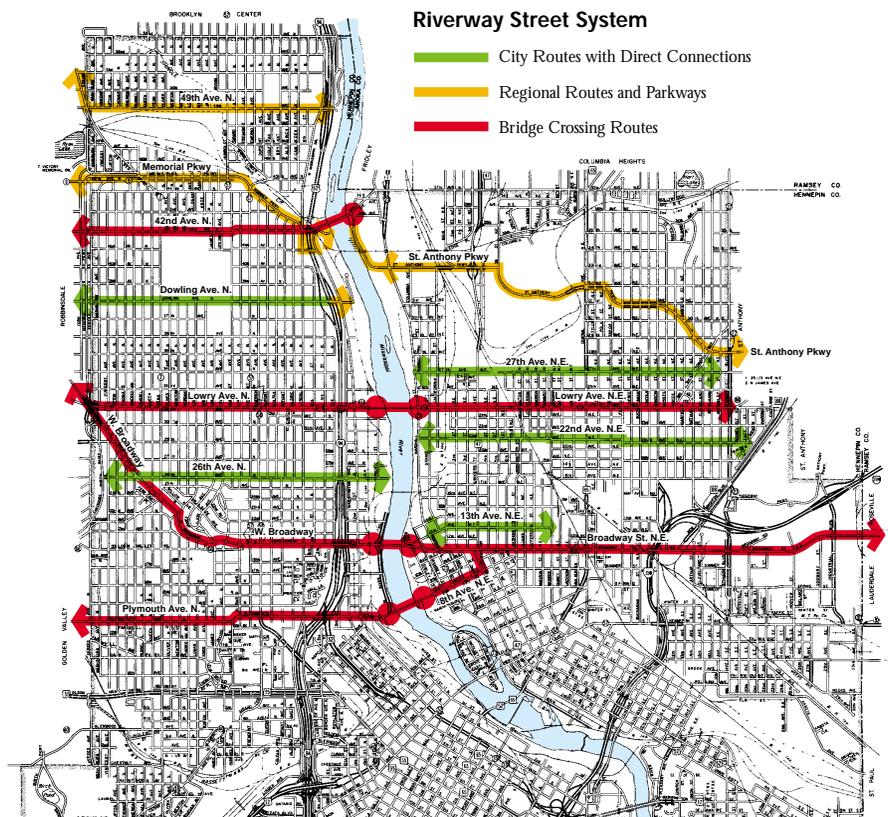
Truck routes remain on Washington Ave. and 2nd St. N. south of Lowry, but are excluded to the east of the new parkway. Railroad crossings are limited. One block south of Lowry, traffic is diverted to the west and onto Washington in order to eliminate the truck route on 2nd St. through the new residential zone to the north. The street pattern in the residential area north of Dowling shifts to parallel the river.

Riverfront Destinations

The Plan encourages trips to the riverfront not only by the creation of new parkland, but also by conserving existing hospitality venues and proposing new areas with urban riverfront destinations. Special park programming and commercial destinations within the overall waterfront open space system will increase the number of users, providing increased safety in parks, and a variety of choices of things to do on the Upper River.

System-Scale Features

- ◆ Riverway Street System
- ◆ Mississippi Promenade
- ◆ River City
- ◆ Lowry Plaza
- ◆ River Terrace Neighborhood
- ◆ Pedestrian Deck and Grand Stair
- ◆ Dowling Place
- ◆ Marshall Boulevard
- ◆ Grain Belt Center



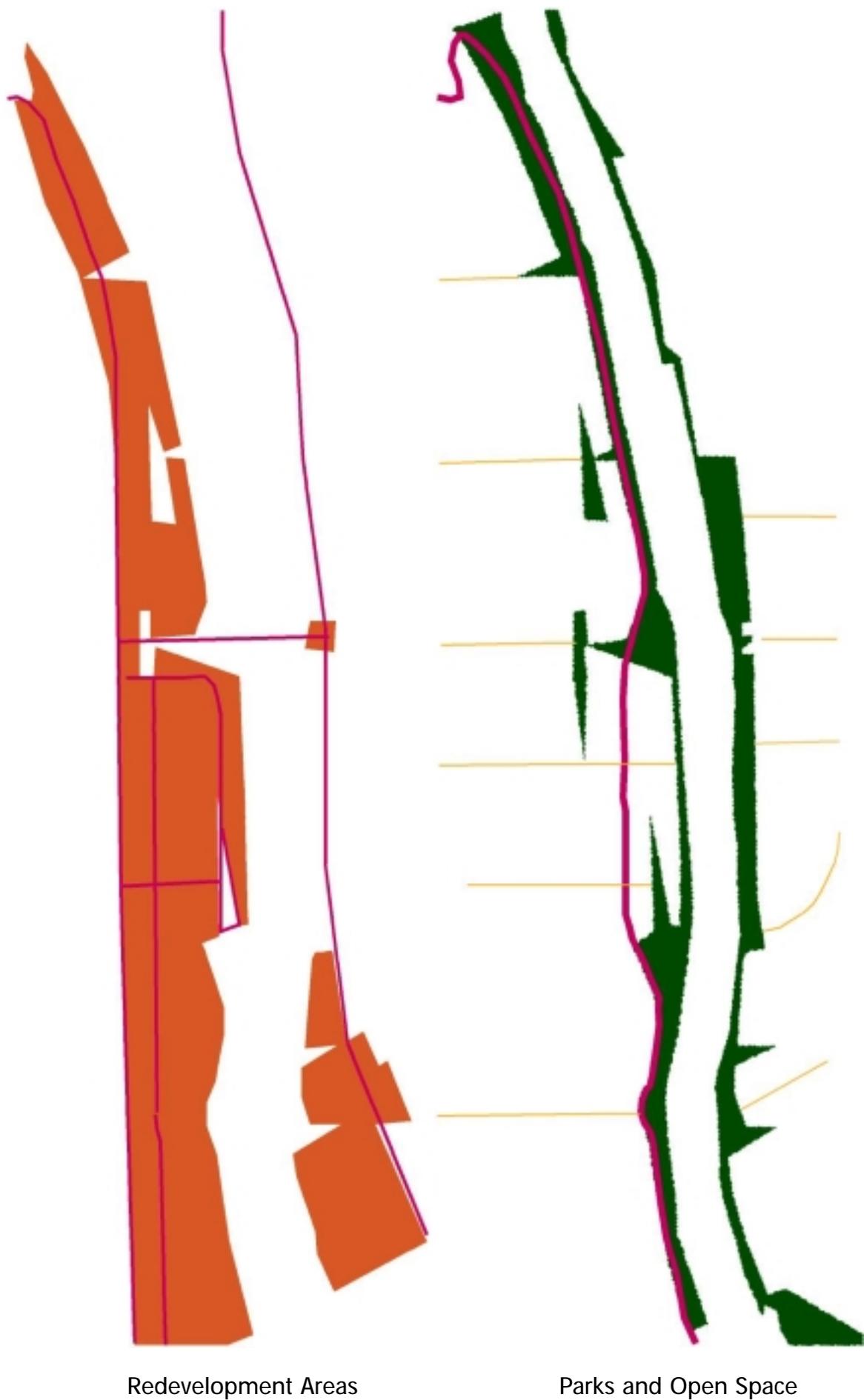


Figure shows the Upper River Master Plan as cut-out parks and redevelopment areas. This view reveals the relative size and interrelated structure of the recommended urban design. All of the parks and open space elements are connected as part of an integrated system.

Skyline Park and Amphitheater

Just below the BN Bridge, where the Mississippi meanders to the west before flowing under Broadway, a unique confluence of land and water brings crowds to the riverbank. Looking to downtown, a fabulous vista unfolds with the blue-green Mississippi creating a watery foreground for the Minneapolis skyline. At the site where the river begins its bend, a long view down river is aligned precisely with the position of the downtown business district and its office towers on the horizon. The full width of the river is captured in this view, with the skyline seemingly resting on the Broadway Bridge.



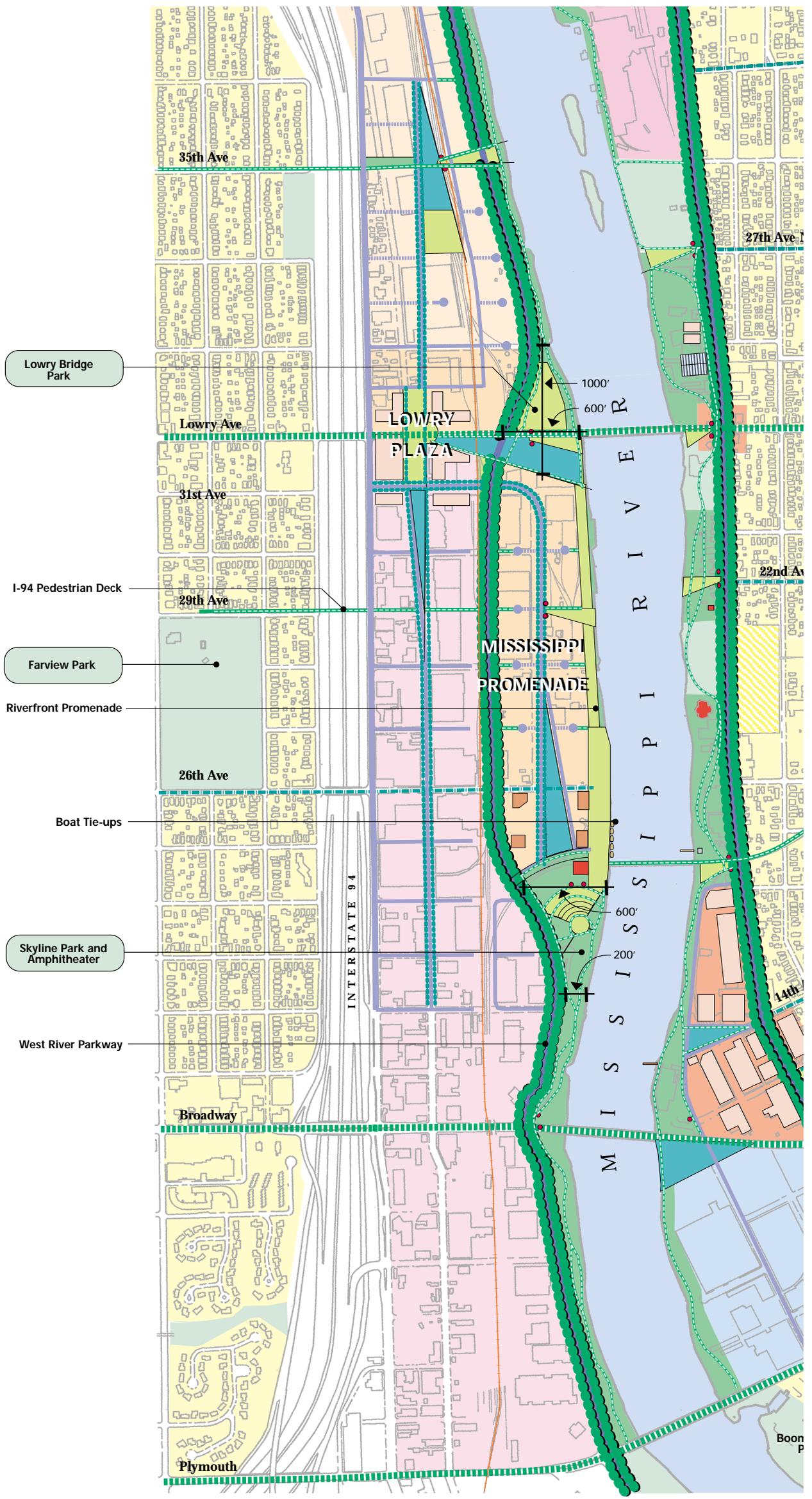
On this site, Skyline Park and Amphitheater celebrate the river and its city. The Amphitheater has 1,000 seats all directed to the magnificent view and a small stage near water level. The seating is cut into a rise of land, with a patio, concessions, and public facilities at the top level. The Amphitheater is a public venue for performances on stage and on the river. Musical acts are sponsored by the Upper River hospitality business association. Festivals also utilize the stage and the rest of Skyline Park between the BN and Broadway bridges. Big crowds consistently turn out for water ski shows and fireworks launched just downstream at Boom Island. Boaters too are drawn to the area during performances and events.



Above Skyline Amphitheater (see page 75), a pool and fountain play with water soon to join the river, adjacent to a major hospitality venue near the west end of the BN Bridge. This structure contains a full supper club, dance floors, and indoor stage. Near the Broadway Bridge fishing areas and a small sunning beach bring people to the river's edge.

The synergy between the east and west banks is stirred by a dressed up Broadway Bridge and the conversion of the former BN railroad bridge into a boardwalk for pedestrians and bicyclists. The Broadway Bridge is fitted with decorative lighting along sidewalks above, as well as lamps below lighting the underside of the bridge and reflecting in the water. The two bridges form a loop for strolls around the river from Skyline Park to the Grain Belt Center.





West River Parkway

Extending north from Skyline Park, West River Parkway envelops the Mississippi Promenade development, containing the vibrant mixed-use residential, office, entertainment district to the east and sheltering the new settlement from the light-industrial park to the west. Recognizing the need for a green buffer between the different land-use zones, the parkway includes generous landscaping on both sides of the railroad corridor. With traffic counts growing on all Minneapolis parkways, and a connected West River Parkway carrying some commuter traffic, the alignment located away from the waterfront allows a separation of vehicular traffic from those on foot desiring closer contact with the river. High-speed bicyclists and rollerbladers are directed to follow the parkway, with on-street lanes provided.

26th Avenue connection

North of Skyline Park the parkway intersects with 26th Ave. N., a local Riverway Street offering the only bridge over the interstate between Lowry and Broadway. With access to the river provided to the heart of north Minneapolis, the linking of West River Parkway to 26th Ave. N. connects a whole community to the Mississippi River. A view to the water, which begins on the incline at Farview Park and carries through the new development, is ensured by a wide landscaped right of way that leads to the water's edge. When turning south onto the parkway at 26th, a vista of the downtown skyline is revealed as the road curves back to the river.



26th Ave. at Farview Park

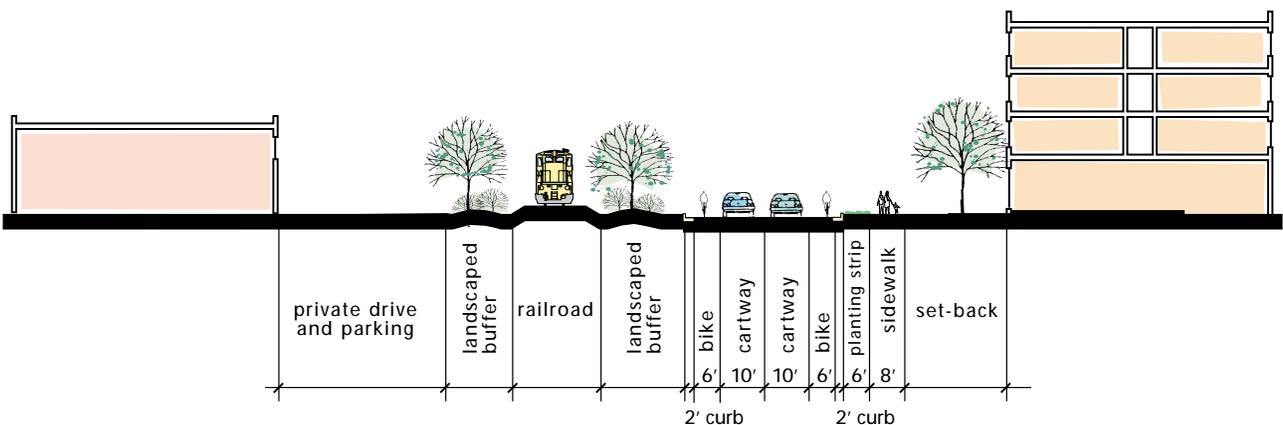
Pedestrian access

Traveling north along the parkway, views to the river are caught between buildings set on the normal street grid (330-by-330-foot blocks in this section). Pedestrian access to the river or parkway is provided throughout the development via a system of sidewalks connecting to short internal drives, which stem from a new Pacific St. This pedestrian system is augmented by a pedestrian deck over the interstate at 29th Ave. N., providing a greenway experience from the north side of Farview Park to the river.



Parkway intersections

Vehicles entering the Mississippi Promenade are restricted to intersections with the parkway at 24th, 26th, and 31st avenues. A route to Lowry Ave. is provided from the parkway, west on 31st to Washington Ave. This configuration excludes a direct interface between the high-traffic Lowry and the parkway, yet provides a reasonable route for residents and visitors to the area.



The Promenade—An Urban Riverfront for Minneapolis

The Mississippi Promenade is a new type of waterfront for Minneapolis. It is located at the river edge, on a low bank between the BN Bridge and Lowry Avenue. While the Lower Gorge is usually seen from above and the Falls of St. Anthony at a distance, the river along the Promenade entices contact. Standing on the Promenade, the Mississippi is a few feet below yet fills the view to eye level—*the river is right there!* The Promenade is a unique feature that offers not just a river view, but a real urban riverfront.



Promenade View at 27th Ave. N.

The public right of way is a decorative plaza filled with activity. The plaza varies in width, but is a minimum of 50 feet, creating a large space in which those passing through and those lingering can safely mix. Hundreds of trees in planting strips green the plaza, with ornamentals adding flowers and scent, while broad-limbed trees provide pools of shade. Lamps, benches, drinking fountains, and flower planters dot the plaza. District property owners pay for daily maintenance, including cleaning and plowing, by the Promenade’s dedicated service crew.



Fronting on the Promenade, cafes, shops, and music clubs create a major riverfront destination unlike any other place in the city or region. Residents of the district’s apartments and condominiums fill the Promenade day and night, while visitors make a day of it strolling along the Mississippi, window shopping, relaxing just feet from the river at an outdoor café, or dining at a waterfront restaurant.

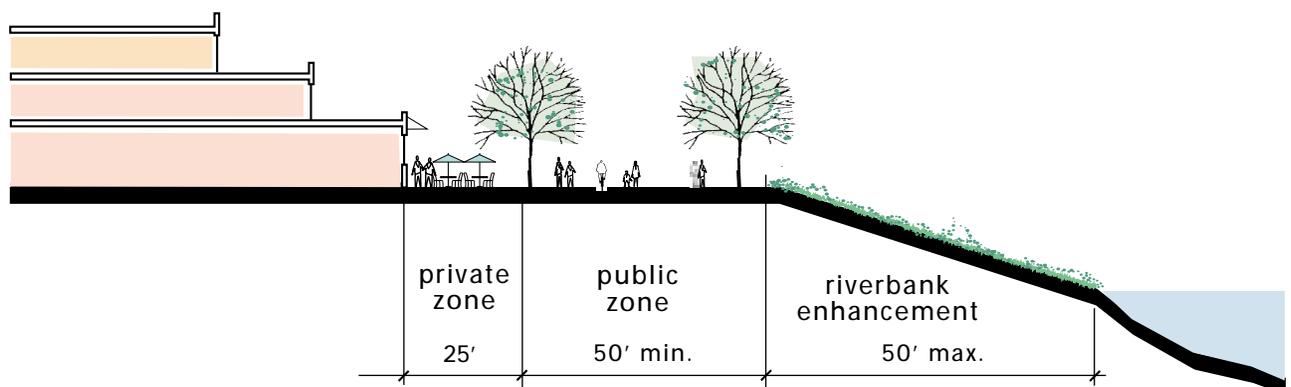


The Promenade is built in two distinct sections. The southern section (see pages 74 and 75) has two levels, in the style of quays along the Seine, with the upper level beginning at the back row of the Skyline Amphitheater, and the lower level skirting past a retaining wall and under the BN Bridge. On the upper level, outdoor seating is provided adjacent to the wall separating the two levels. The setting is one of the most romantic in the city, especially at night, with the river slipping by and office lights in downtown towers creating a pastiche along the downstream horizon. Because of the activity, including local residents, area employees, and visitors, the Promenade is the safest waterfront in the city after nightfall.



Ramps at each end, and terraced steps, link the upper and lower levels. The lower quay is a special place where the city meets the river. Pedestrians and slow-speed bicyclists share the space. Boaters tie up along the bulkhead and ascend to dine or attend events at the Amphitheater.

Where 26th Ave. meets the river an overlook feature celebrates the special node; at 27th the ramp from the lower quay brings the Promenade to a single level from this point north to Lowry. The northern section of the Promenade has a vegetated bank, with low growing shrubs, small trees, and emergent wetland plants. At 29th Ave., steps descend to the water from a parkland wedge extending public space back to Pacific St. The northern end of the Promenade takes on a quieter residential aspect, with the plaza terminating at a landmark piece of outdoor sculpture where the space opens into Lowry Bridge Park.



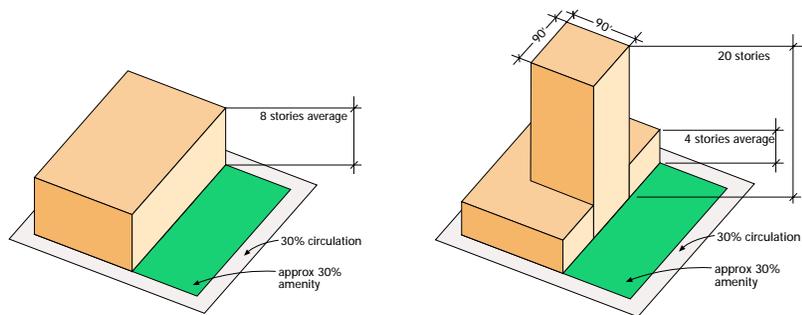
Mississippi Promenade District

The District is defined by the Mississippi Promenade along the river and West River Parkway, from the BN Bridge to Lowry. The density of residential development approaches 50 dwelling units per acre, with the tax base generated paying for a portion of public costs incurred during development. The land use is a complex mix of open space, residential, office, retail, and hospitality.

Housing dominates the planned unit development. The population includes young professionals, employees of nearby industries and downtown offices, empty-nesters, and seniors. The environment is decidedly urban.

North of 26th Avenue

Mid-rise apartment buildings and stacked townhouses create the core of the district north of 26th. Studios and live-work lofts serve the twenty-first-century housing market, with the lines between workplace and home blurred. Taller buildings near the parkway provide views of the river over mid-rises along the Promenade.



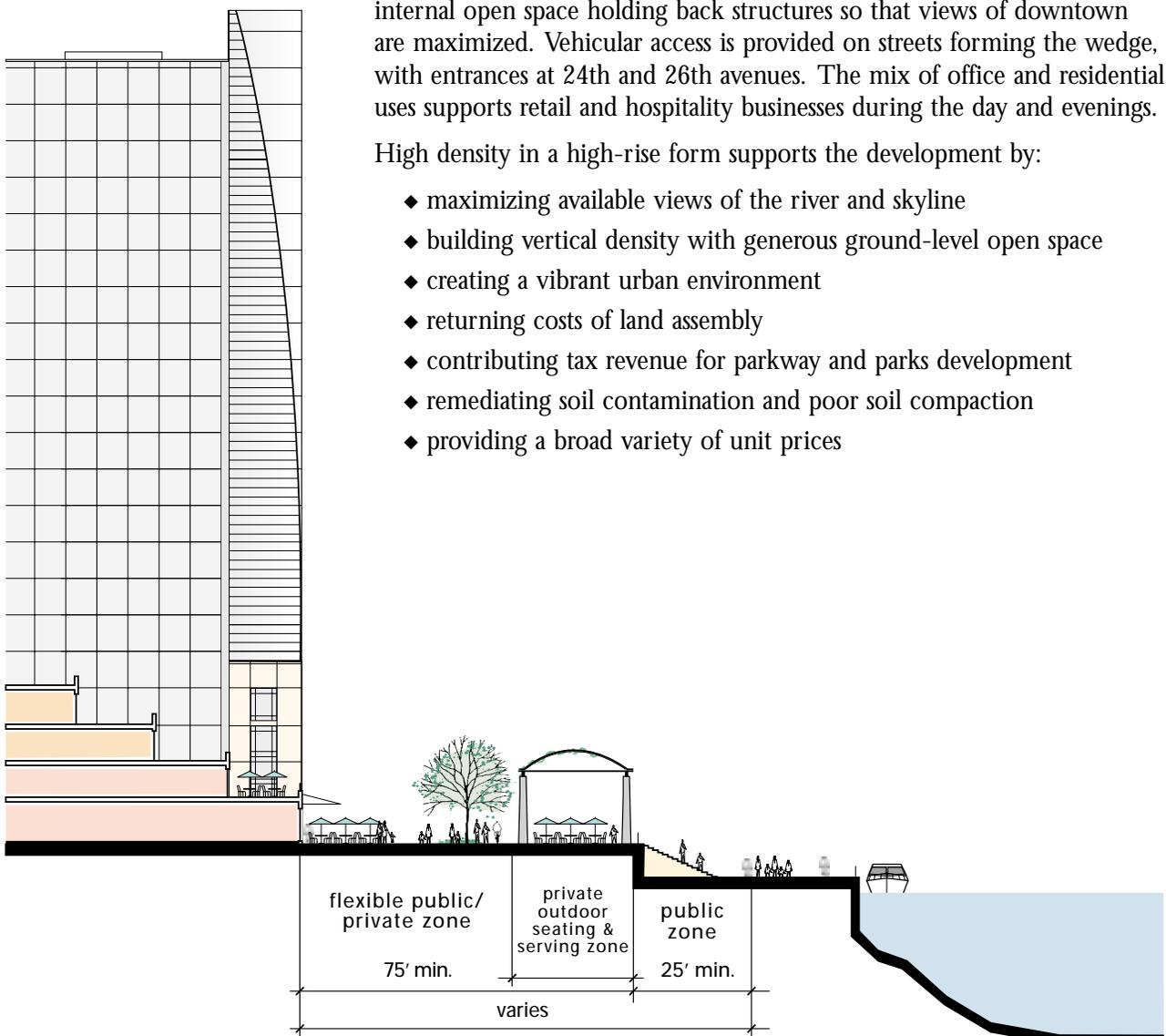
Towers allow a varied building mass at 50 du/a.

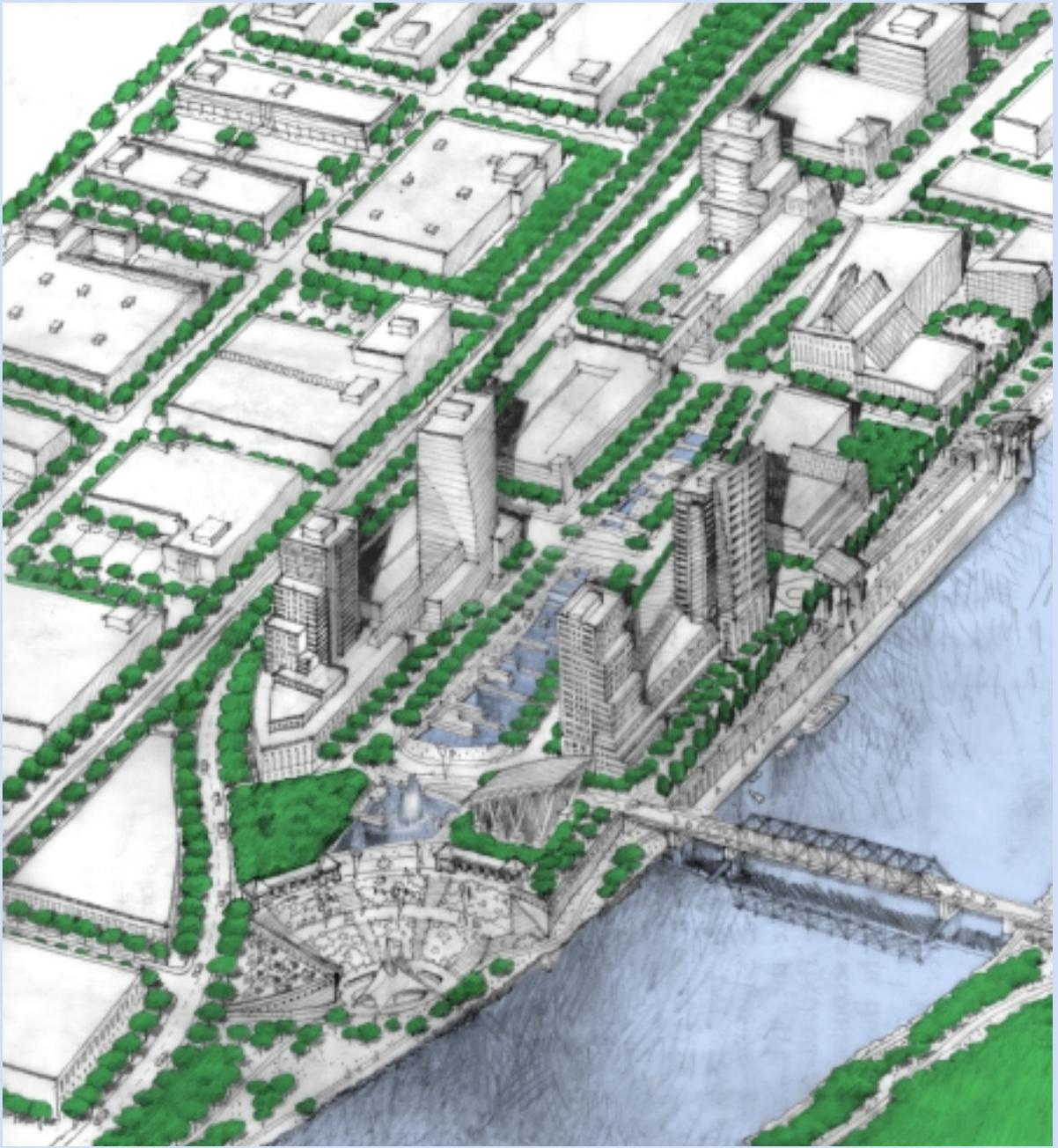
River City

Taking advantage of the magnificent views of the river and downtown, the River City development south of 26th Ave. incorporates residential high-rises, as well as a landmark hotel, and single-tenant office tower. The River City site offers a triple-loaded amenity package including: a parkway, water filtration park, and riverfront promenade. Parking is available in ramps and under structures. The development shows a full realization of the district urban design guidelines, with the wedge of internal open space holding back structures so that views of downtown are maximized. Vehicular access is provided on streets forming the wedge, with entrances at 24th and 26th avenues. The mix of office and residential uses supports retail and hospitality businesses during the day and evenings.

High density in a high-rise form supports the development by:

- ◆ maximizing available views of the river and skyline
- ◆ building vertical density with generous ground-level open space
- ◆ creating a vibrant urban environment
- ◆ returning costs of land assembly
- ◆ contributing tax revenue for parkway and parks development
- ◆ remediating soil contamination and poor soil compaction
- ◆ providing a broad variety of unit prices

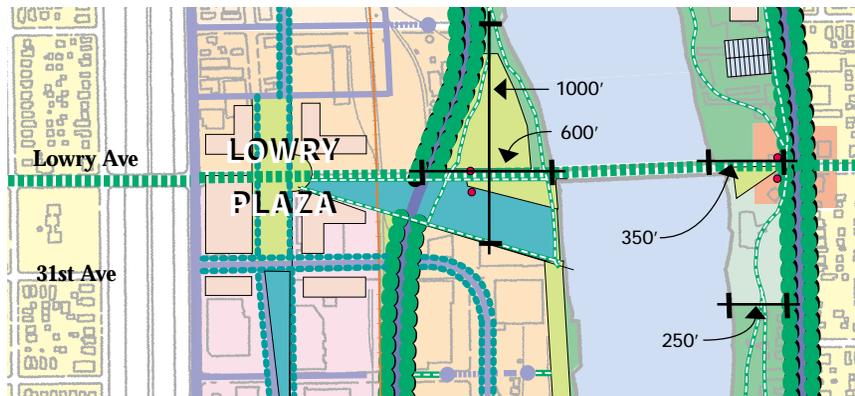




River City

Lowry Plaza

Situated as a main thoroughfare across north and northeast Minneapolis, Lowry Ave. has always played an important role in the life of the community. Traffic converges on Lowry because it has a river crossing, making the western approach to the Lowry Bridge a premier address for professional and technical offices, and neighborhood retail businesses. The Lowry Plaza development realizes this inherent potential, with the combined bridge construction and area redevelopment project acting as a catalyst to private investment.



New Lowry Avenue Bridge

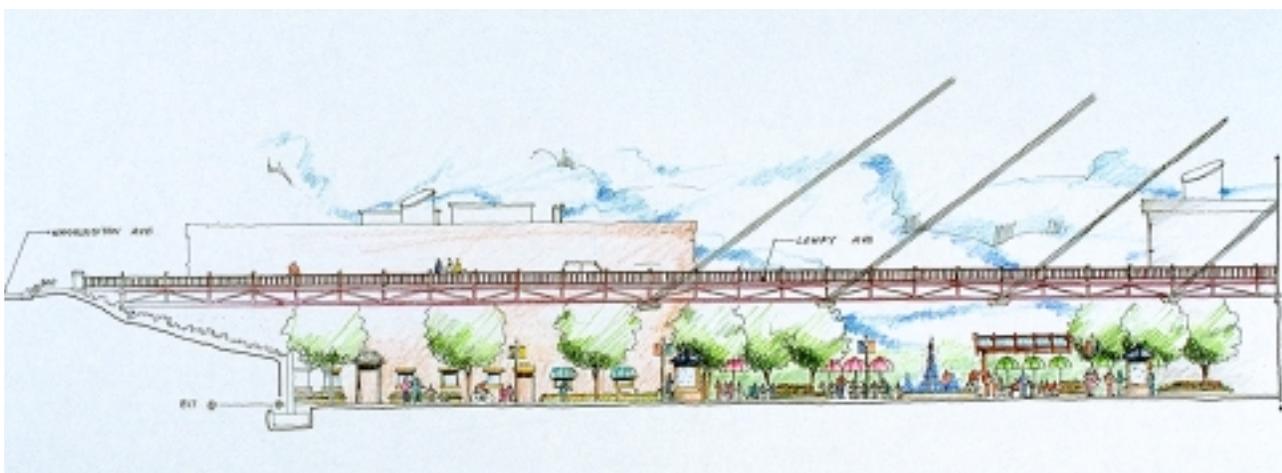
More than a plain, utilitarian river crossing, the new Lowry Bridge is both an example of twenty-first-century structural engineering and a work of sculpture at landscape scale. The cable-stayed design has an elegance and lightness unlike any other bridge in the city. The twin piers rise high above the river, supporting shining strings of cable reaching down to lift the roadway deck. The whole western approach is redesigned as part of the bridge project. The long, concrete cribwall that had raised the old approach over the railroad corridor is removed—the new bridge is suspended over the tracks, as well as West River Parkway, with the riverfront park corridor flowing unimpeded beneath the deck. Along the bridge deck, wide bicycle and pedestrian facilities include river observation areas, with a stairway and ramp down to plaza level on the west bank.

2nd Street North

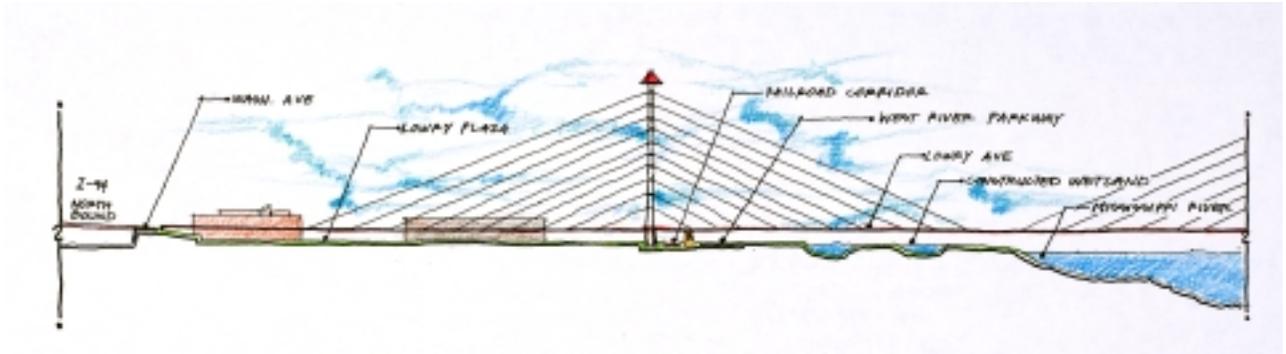
In a special piece of urban design, the new Lowry Bridge deck is suspended over 2nd St. N., finally touching down at Washington Ave. This extension of the bridge deck recognizes that 2nd St. lies a bit lower than the elevation at Washington, and that starting the bridge at Washington allows a more level approach to the crossing. Under the bridge deck 2nd is closed to vehicular traffic creating Lowry Plaza. Truck traffic is diverted off of 2nd onto Washington, one block south of Lowry at 31st Ave. This diversion limits the impact of traffic on the residential neighborhood north of Lowry, by removing the redundant truck route.

Lowry Plaza

Closing 2nd St. to vehicular traffic under the new Lowry Bridge opens a 700-by-175-foot space, from 31st to a new local access street north of Lowry. This space forms Lowry Plaza, a wide pedestrian mall that is the front door address for small office and retail buildings. The plaza is especially popular during lunch time, with carry-out restaurants and street vendors serving many of the employees in the nearby light-industrial and business park. Plaza businesses also cater to daily needs of the residents of River Terrace and Mississippi Promenade neighborhoods, and add to shopping choices of communities on both sides of the river. Parking is provided behind structures fronting the plaza.



Lowry Plaza

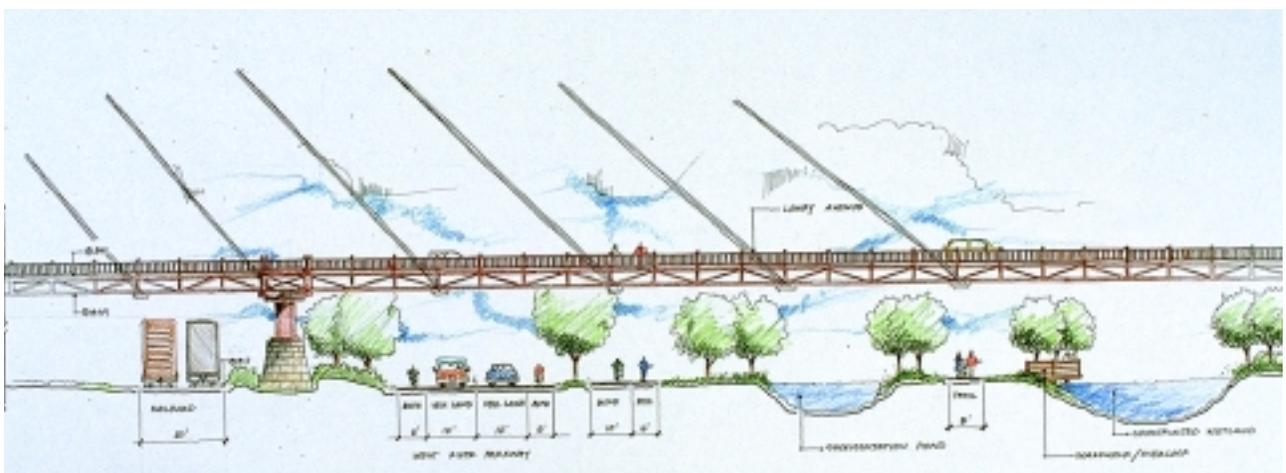


Lowry Bridge



Lowry Bridge Park

Flowing uninterrupted under the new Lowry Bridge, the two sections of Bridge Park, at 14 acres, form one of the larger parks on the Upper River. The southern section contains a two-cell stormwater pond system, the first cell being a retention and settling pond slowly draining into the secondary constructed wetland. North of the bridge, a destination park serves the needs of local and regional residents, with lawn areas for informal ball play, games, and Frisbee, as well as simple open space for picnics or sunning along the river. Trails connecting to the Promenade follow the restored and stabilized bank.



West River Parkway at Lowry

Neighborhood Park

West of the railroad corridor, and just north of 34th Ave. N., a local park serves the residents of River Terrace Neighborhood. At the southern end of a water filtration park, this active two-acre park includes a tot lot and play field. Internally located and focused on meeting neighborhood resident needs, the park is frequented by youth living in the surrounding housing. Interpretive displays around the constructed wetlands of the adjacent water filtration park and the challenge of climbing the Grand Stairs provide plenty of additional daily interest.



Restoration Park

Copses of burr and white oaks huddle among prairie grasses and flowers along the 1.5 miles of riverfront that is Restoration Park. Stretching north from Lowry Bridge Park, Restoration Park recreates the oak savanna landscape that the sandy soils of the Upper River support. North of Dowling, the parkway corridor widens from 300 to 600 feet, with the largest section joining North Mississippi Regional Park at the Soo Line Bridge.

A blaze of color throughout the summer, the savanna buzzes with insect and bird life feasting on the available nectar. Owls are frequently heard from perches in the oaks; a chorus of cicadas fill the day and crickets the night. Under winter snows, matted grasses form secret networks, where mice, rabbits, and muskrats nest. Human visitors slow down to the natural pulse, finding favorite places among the trees and prairie to watch the river pass.



West River Parkway

Leaving the Promenade district, the parkway slips under the new Lowry Bridge and back toward the river. Curbside landscaping is thick with savanna species, blending the roadway with Restoration Park. Views of the river, wildlife, and wildflowers are presented along the drive. A new entrance welcomes visitors to North Mississippi Regional Park where the parkway intersects with Washington Ave. at 41st Ave. N. A popular athletic field, with running track and a surrounding fence, is located between the CP Rail mainline and the parkway.

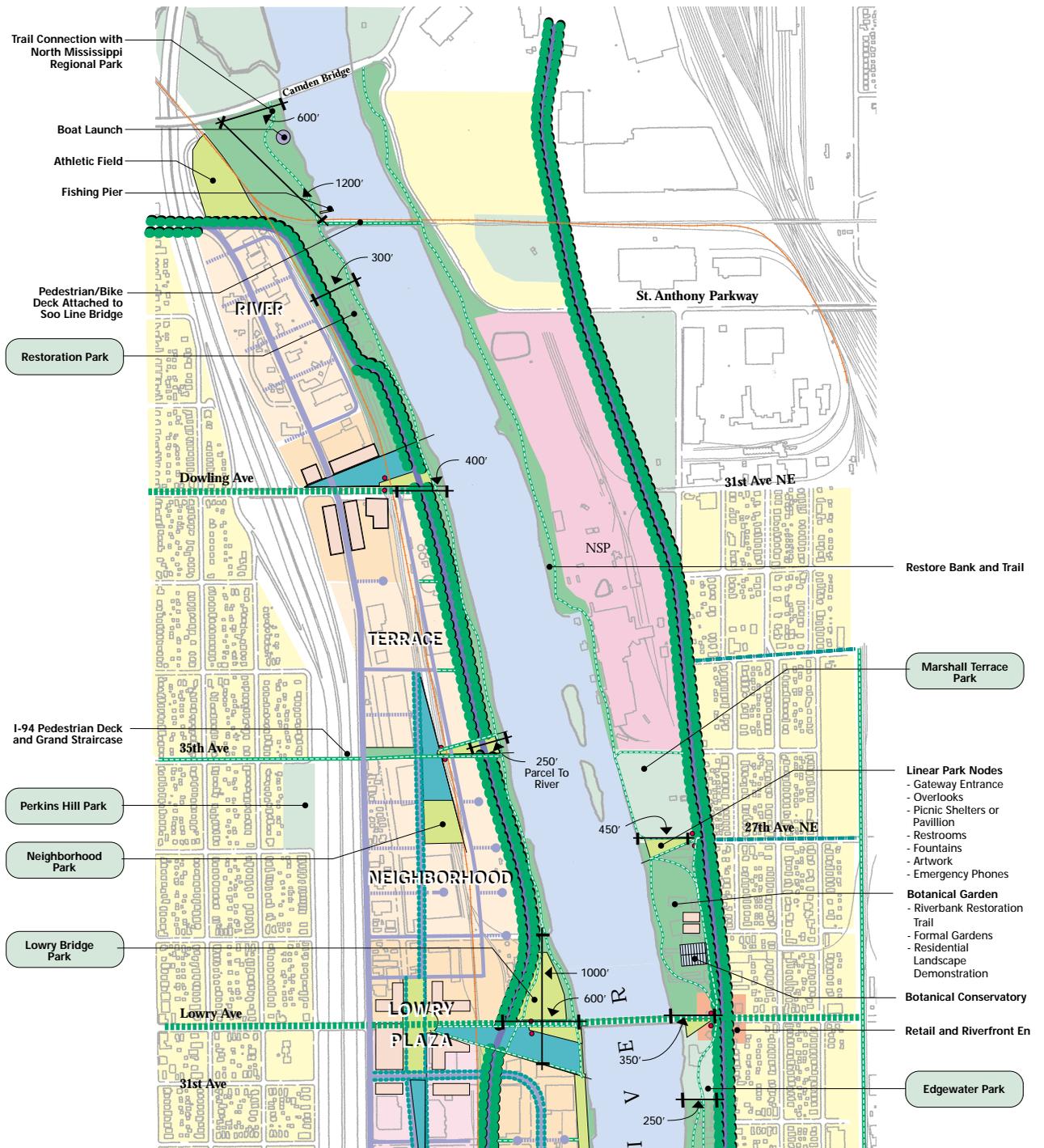


Trails

Recreational and walking trails are the main park facilities in Restoration Park, connecting to similar trails in North Mississippi Regional Park and beyond. High-speed bicyclists and rollerbladers are accommodated on parkway lanes, with a recreation trail in the park varying its distance near to the road. Along the restored riverbank, walking trails weave through the prairie plantings, to oak openings, and river observation points on softer, porous surfaces. Careful attention to sight lines and placement of emergency phones and lighting allow strollers added security along paths.

A pedestrian and bicycle deck attached to the Soo Line Bridge makes for an exciting river crossing to the east bank and St. Anthony Parkway. An easement at the river's edge provides passage through the NSP Riverside plant, with high berms forming a green slope topped by the black of coal piles behind. Interpretive signage explains the process for generating electricity in front of the plant, before the trail climbs up to observation platforms at Marshall Terrace Park.





River Terrace Pedestrian Deck and Grand Stair

The pedestrian deck from Perkins Hill Park to the riverfront is located in the middle of a three-quarter-mile, or six-block, gap between Lowry and Dowling avenues where no bridges span the interstate. Although primarily designed to provide access from north Minneapolis to riverfront parks, the pedestrian deck is much more than a simple catwalk over the expressway—it is a unique addition to the civic infrastructure of the area, and an original solution to a number of vexing constraints.

Making the connection

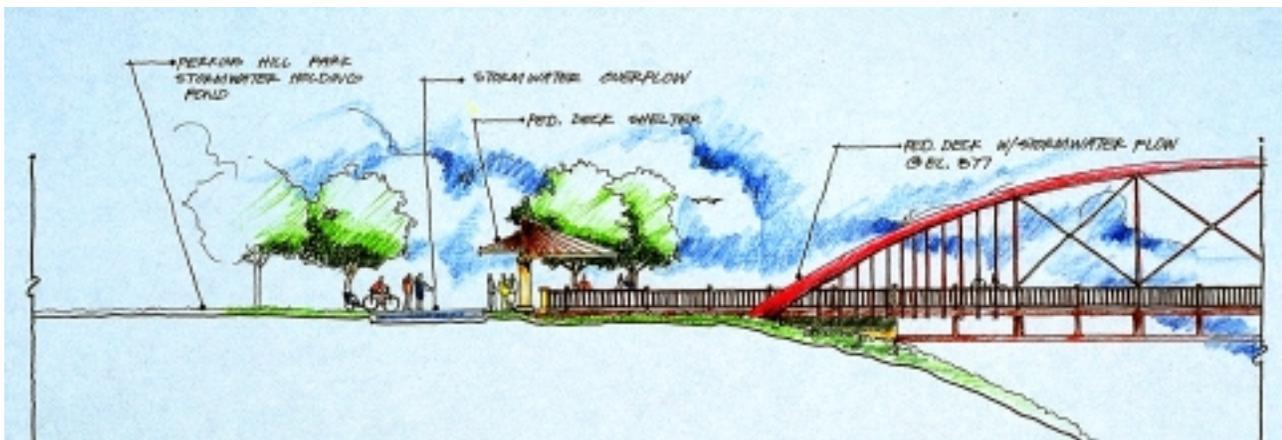
In addition to the multiple lanes of the interstate, the truck route on Washington Ave. and the railroad corridor also separate north Minneapolis from the riverfront. The pedestrian deck is constructed to carry pedestrians completely over all of these barriers, a feat aided by the underlying slope that descends in three terraces from Washington to 2nd St. and finally to the level of the railroad and river. The deck and associated stairways also connect the three levels of the River Terrace Neighborhood, allowing passage up and down the slope without having to walk to through streets at 33rd or 36th.

Grand Stair

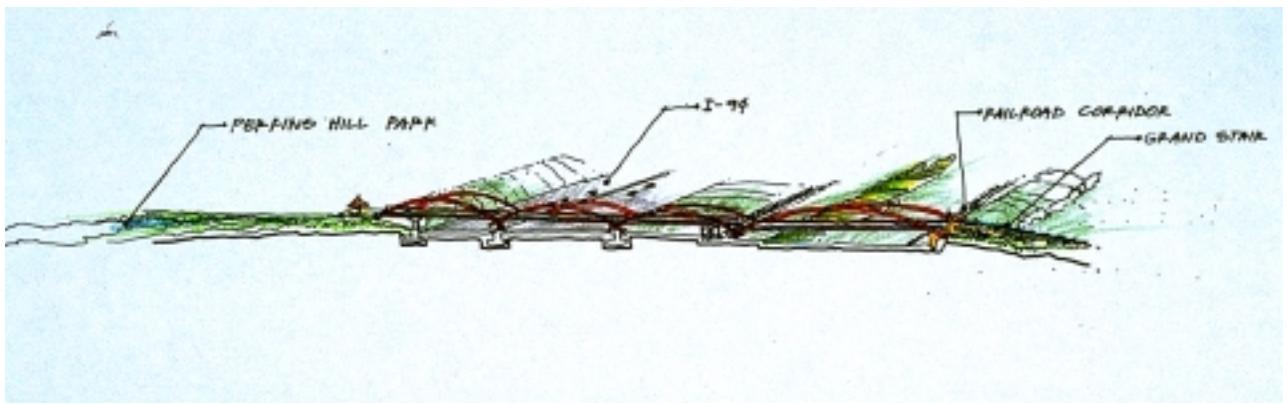
The culmination of the four-span deck is a Grand Stair at the end of the final span over the railroad corridor. This stair case, with adjoining ramps, accentuates the terraced descent to the river. An overlook at the top of the Grand Stair provides an excellent vantage point from which to view the river, with the stairs themselves a favored place to sit.

Cascade

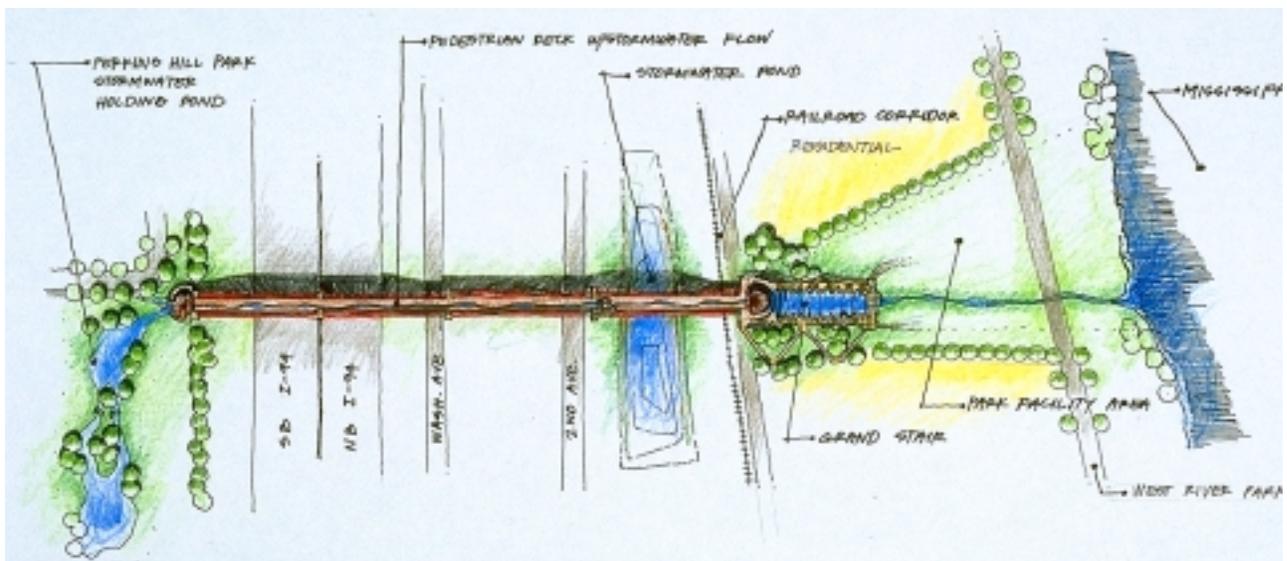
An added touch to the pedestrian deck and Grand Stair is the inclusion of a small channel for stormwater. A holding pond at Perkins Hill Park provides a constant supply of water gathered from local collectors, with gravity causing the flow over the interstate, as the channel descends from an elevation of 877 feet above sea level at Perkins Hill Park, to 869 on the span over 2nd St., and 853 at the top of the Grand Stair. The final cascade down the Grand Stair makes a dramatic statement about River Terrace as a place and the small streams that combine as one great river.



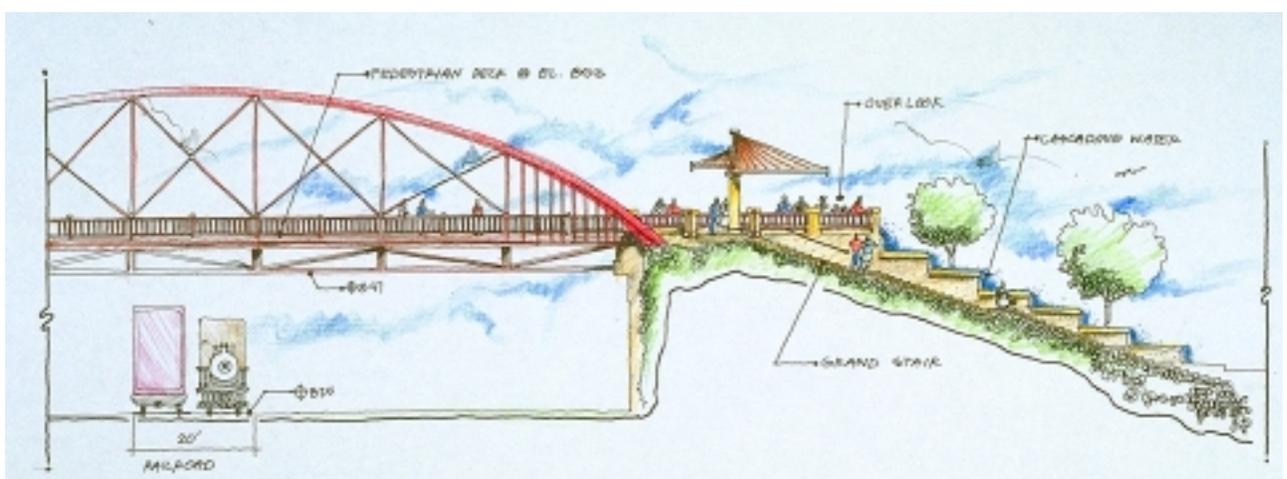
Perkins Hill Park



Section Perspective



Plan



Grand Stair and Cascade

River Terrace Neighborhood

North of Lowry along the west bank of the Mississippi is River Terrace Neighborhood. Built along slopes formed long ago when the Mississippi filled a wider valley, River Terrace is home for over 2,000 residents, including 400 children. The river is ever present for those who live on these terraces: it's there out the living room or kitchen window, down the street stepping out the front door, from a rooftop garden, or the neighborhood park. Nearly every unit has some view, and many have an added prospect to downtown. Housing developments vary between 15 to 30 units per acre.

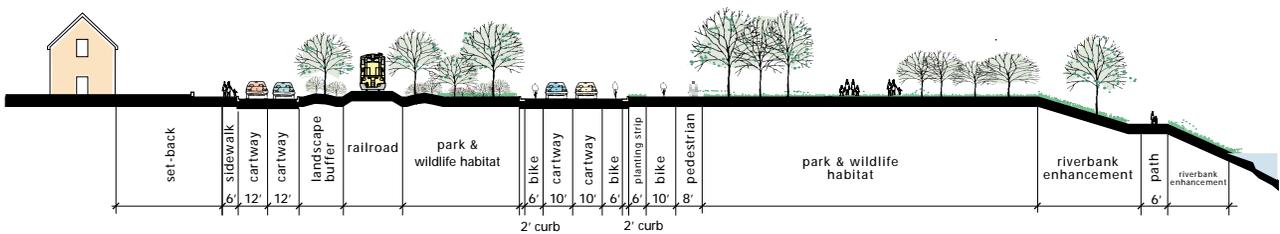
Brick and stucco walk-up apartment buildings line Washington Ave. south of 36th, turning their backs to the interstate and truck route and framing views to the river and downtown from the highest elevation of this three-level terrace on the eastern slopes of Perkins Hill. Below, along a redesigned 2nd St. and West River Parkway, stacked row houses and courtyard apartments line the middle and lower terrace levels. Around the neighborhood park a number of larger single-family houses have attracted families with children.

North of Dowling a more secluded and lower density area of the neighborhood lies between the tracks and Washington Ave. The riverfront park is a giant playground for resident youth, days spent in favorite haunts, fishing under the Soo Line Bridge and counting train cars. Couples enjoy walks along the river and through neighborhood streets.

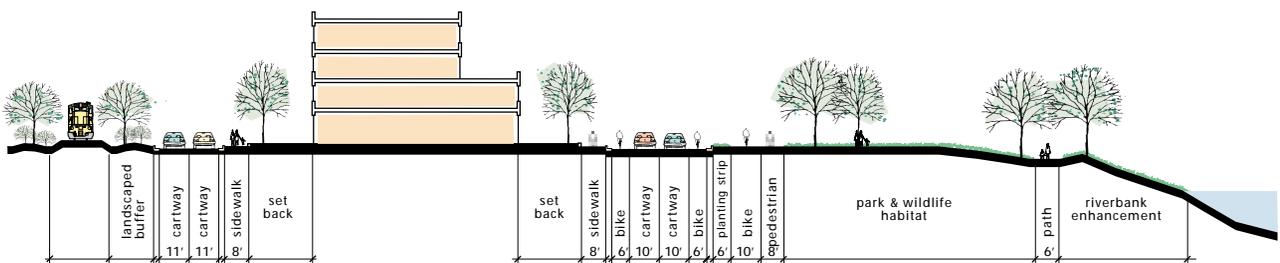
Perhaps the biggest advantage of River Terrace for busy families is the easy access to downtown (5 minutes by car, 10 minutes by transit) or northern suburbs, and neighborhood businesses at Dowling Place and Lowry Plaza. Many residents know north and northeast Minneapolis well, having moved up to River Terrace from starter homes in adjacent neighborhoods. The ability to find new housing next to a unique park amenity sealed the decision to stay put in the community, and forego long commutes on congested highways.

Dowling Place

Dowling Ave. is the off-ramp exit from the interstate to River Terrace. This ease of access encourages higher intensity uses at the Dowling Place development, including an office complex, medical clinic, technical college, and senior high-rise apartments. Neighborhood residents and office workers provide the market for retail shops on the first floors of the larger buildings. Commuters also appreciate the coffee shop across from the Dowling transit station. A water filtration park retains run-off from the development, while also creating a setting for the office complex. South of Dowling, courtyard apartments present a crenelated façade to West River Parkway, with private open space contributing to the parkway aesthetic and opening a variety of views up and down river. North of Dowling, Restoration Park expands in width to the railroad corridor.



West River Parkway North of Dowling Ave.



West River Parkway South of Dowling Ave.



River Terrace Neighborhood at Dowling Ave.

Linear Park Nodes

Areas of higher intensity park programming are found at strategic locations where the Riverway Street System leads park users to the riverfront. These are areas where the greatest number of visitors enter the riverfront parks, forming a series of linear park nodes containing common park facilities. One example is the node on the south side of Marshall Terrace Park. This location is at the riverfront terminus of 27th Ave. N.E., a local street which provides a direct route to the riverfront, all the way across northeast Minneapolis to the Village of St. Anthony.

Given the more intense use, park nodes have lawn areas maintained as open space for community gatherings. The regular spacing of nodes rewards trail users for continuing by offering a series of experiences, be it a special view of the river, an outdoor sculpture, or a picnic rest area. For those attending gatherings at specific nodes, the trail system offers a chance for short diversions exploring the riverbank.

Gateway Entrance

A landscaped entrance signals that the riverfront is just ahead to those approaching from Riverway Streets. These entrances vary in design, with paths from sidewalks, low stone walls, landmark trees, park entrance signs, hedges, and tended flower beds as common techniques to mark the area and welcome visitors.

Overlooks

Placed on high banks with steep slopes to water level, overlook facilities provide interesting and safe vantage points from which to observe the river and its banks. Some overlooks are placed in a direct line with local Riverway Streets and entrances, others can be found along trails, such as the two in Marshall Terrace Park with views of river islands. Facilities also vary from small clearings along the tops of banks to structures supported from below on steep banks.

Picnic Shelters or Pavilions

A pavilion at the Marshall Terrace node provides shelter during rainfall and hosts many receptions following weddings in the nearby Botanical Gardens. The pavilion can be reserved for special events, while other park nodes contain smaller picnic areas with tables and shelters available on an unreserved basis.

Restrooms

Public restrooms are available immediately adjacent to picnic areas and trails.

Fountains

As part of an overall playfulness in regard to water, fountains add to the experience at nodes on the Upper River. Benches attract sitters near the sound and cool of the water.

Artwork

Outdoor sculptures, earth works, and signature pieces on facilities enliven linear park nodes, adding to and recognizing local culture and the heritage of the Mississippi.

Emergency Phones

With a direct connection to the 911 Emergency System, these phones provide added security at each node, and are easily accessed from trails.



Marshall Terrace Botanical Gardens and Conservatory

Built from scratch on a site that had practically no vegetation, the Botanical Gardens on the Upper River bring a year-round stream of visitors to northeast Minneapolis. Local residents know the real pleasure is in repeated visits—the passage of seasons marked by the rush of daffodils, bloom of lilac then rose, late asters, and the deepening yellow and reds of maple and oak.

The Conservatory

Sunny days in January find crowds of people enjoying the Conservatory at Marshall Terrace Botanical Gardens. Inside the glass enclosure the air is warm and humid; the green growing plants lifting spirits during the long winter, with abundant southern and western exposure maximizing infusion of light. When flowing again in spring, views of the river behind giant palms and vines heighten an illusion of tropic adventure for fanciful youth. Frequent class trips learn about the world's variety of plant life and ecological zones. Special flower shows find favor among senior horticulturalists during the day, while after hours the indoor formal garden is booked solid for sunset wedding events.

Formal Gardens and Landscape Design Classes

Allowing a space for Park Board garden designers to display their talents, the Botanical Gardens outdoor formal beds are constantly changing. Shows are carefully planned and executed. Next to the formal gardens, a restored Victorian house relocated to the site serves as the master gardener's office, while a second hosts community meetings, gardening classes, and makes dressing rooms available for wedding parties. Recommended landscaping practices and other design ideas for residential lots are demonstrated around the two houses.

Riverbank Restoration Trail

Leading down to the river, away from the bustle of the Conservatory and formal gardens, the Riverbank Restoration Trail displays and interprets bank restoration techniques applied to the Upper River area. Trees, shrubs, and other plants are labeled for easy identification. Interpretive displays explain how the bank was restored, techniques and plants used, and a timeline showing growth over the years.



“Gemueticlichkeit” Park

The open space along northeast Minneapolis’s riverfront embraces the local culture with a series of hospitality destinations set in parks along the bank, which welcome residents and visitors alike. Combining Edgewater, Gluek, and Grain Belt in a continuous linear park, the riverfront is known informally as “Gemueticlichkeit” Park, recognizing the sites of the former Gluek and Grain Belt breweries, and recalling the tradition of beer gardens, sociability, and love of goods times that are the hallmarks of the old northeast.

Lowry and Marshall Riverfront Node

The River Garden Tavern on the northwest corner of Lowry and Marshall, with its neon sign on early-twentieth-century brick front is a classic neighborhood watering hole. The tavern is the anchor of the small riverfront hospitality node at the intersection. A new gas station, with two-level convenience store and retro-fashion diner is at the northeast corner of Edgewater Park. An outdoor patio seating area is popular with trail riders stopping at the seasonal ice cream shop. Visitors to the nearby Botanical Gardens also frequent the area, strolling through older buildings on Marshall converted to antique shops and art galleries selling local works.



Edgewater to Gluek

With the two best Victorian houses formerly on the site moved to the Botanical Gardens, Edgewater and Gluek are linked together as a single long park: *the* riverfront gathering grounds for residents of northeast Minneapolis. The top of the bank is a mosaic of naturalized and maintained areas, with more active uses such as picnicking programmed at the linear park node leading from the gateway at 22nd Ave. Trails pass behind the revamped Polish Palace tavern, with parking removed to a side lot and bays along Marshall. Overlooks along the bluff-top greenway offer views of the river, the Lowry Bridge, and the restored bank and Mississippi Promenade on the other side.



Gluek to the BN Bridge

Thick plantings along and atop the steep banks at Gluek Park allow quiet space for humans and wildlife alike. In the middle of the expanded park, Gabby’s Saloon and Eatery brings hundreds of people to the riverbank each week. The enlarged patio fills at sunset, and nearby steps lead patrons down to the banks of the Mississippi. Frequently boaters dock and climb the stairs to dine. South of Gabby’s the river can be experienced on either the formal trails at the upper level or along the sand bank at water’s edge.



BN Bridge

Realizing one of the great opportunities on the Upper River, the former Burlington Northern Bridge is a wide boardwalk connecting the east and west banks. The trestles of the old railroad bridge form an appropriate transition from the modern River City to the historic Grain Belt. Long views up and down river are available for those who linger. The boardwalk invites a stroll to the other side just for the fun of crossing. Recreational trail users appreciate the vehicle-free span, with flags flying atop a festive observation tower marking the junction on the east side. With the Broadway Bridge only a third of a mile away, the pair of bridges form a quick loop uniting the two banks, focusing attention on the river and activities on each side.



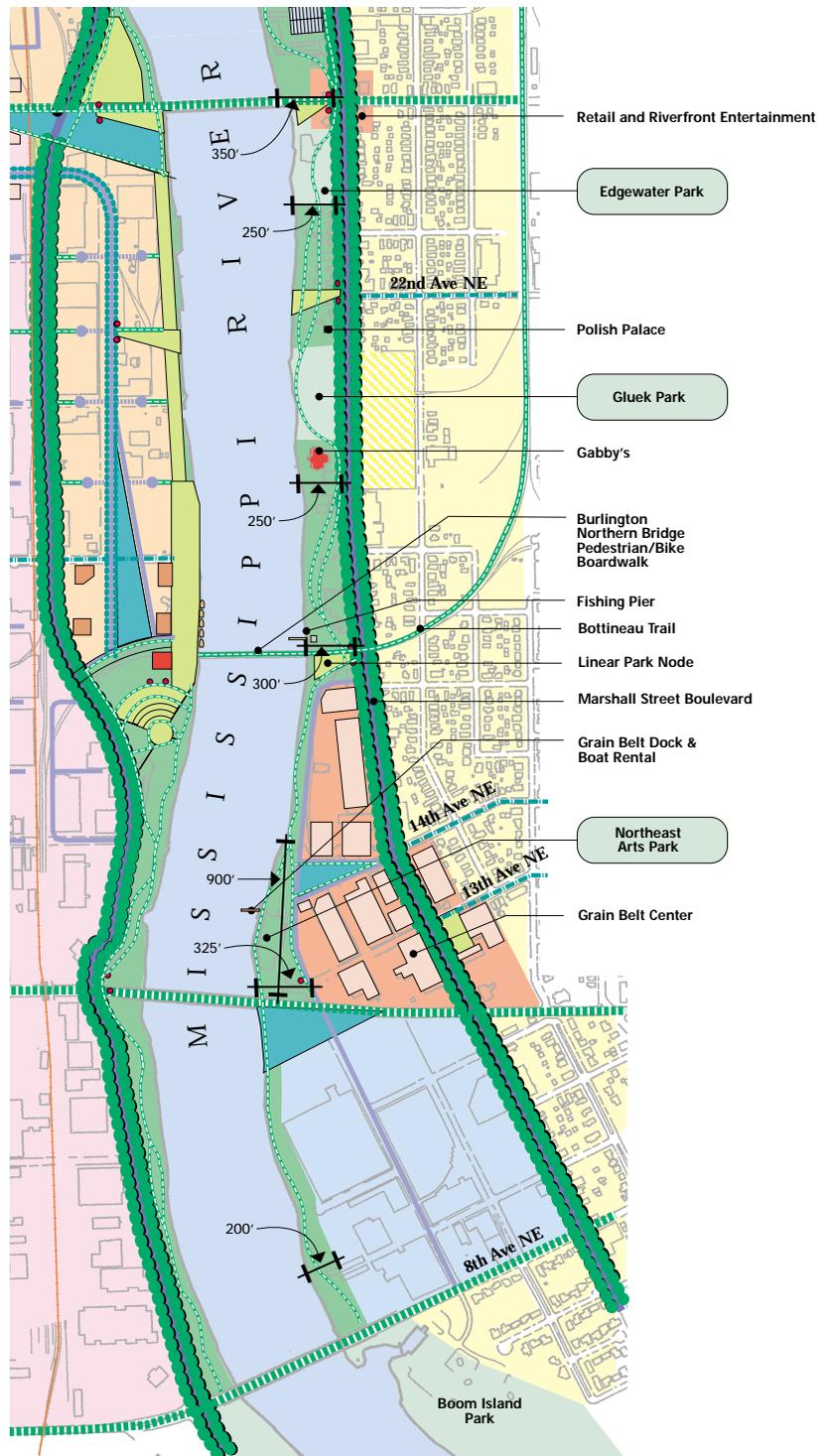
Bottineau Trail

Forming a nexus of trails in all four directions, a paved path proceeds east from the BN Bridge into the old BNSF railroad corridor. An actualized signal allows trail users to stop traffic on Marshall St. so that safe crossings are possible. The trail swings northeast, then north, joining the riverfront to Bottineau Park. Continuing north in the corridor, Bottineau Trail serves local access needs, intersecting with Riverway Streets.



Northeast Arts Park

A flamed orange-red in fall, sumac fills the river edge trail from the BN Bridge to the Arts Park behind the Grain Belt Center. Outdoor sculptures, created by artists in residence at the Grain Belt and elsewhere in northeast Minneapolis, range in tone from serious to whimsical. Placed along the riverbank, trails, and water quality ponds, the sculptures claim part of the open space for arts sake. Other park features too are festooned: benches, drinking fountains, trail markers and railings, nothing is safe from the Northeast artist's touch!



Grain Belt Boating Facilities

With dozens of riverfront destinations on the Upper River, boating is a popular way to tour the area, taking in parks, restored banks, restaurants, and riverfront entertainment. The boat rental concession facility at Grain Belt Center rents canoes, kayaks, and paddle boats, also providing the necessary life vests and expert information on river currents, channels, sand bars, and drop-offs. Recognizing that the Mississippi River is the only water body in the City of Lakes open to motorized recreational boating, the facility also rents shallow-draft fishing boats, pontoons, and personal watercraft. Renting a boat is a popular diversion for those attending events at the Grain Belt Center, with radio-dispatched assistance available if needed. Boat slips too can be rented at the facility, with area corporations and residents finding easy access to the water a useful amenity.

Marshall Boulevard

Paralleling the river from Grain Belt to NSP, Marshall Boulevard serves a variety of purposes in the local and regional community: Marshall Boulevard is a thoroughfare connecting downtown and northeast Minneapolis to Anoka County; it is a residential street and a place of business; it is a commercial truck route; a park border; and commuter bicycle facility. The redesign, accomplished in conjunction with development of riverfront parks, balances an increase in the width of right of way with competing desires and needs.

Traffic

Although its position along a major park facility leads to consideration of Marshall as a parkway, traffic levels and the inability to force commercial trucks onto other routes necessitates that Marshall remain a four-lane roadway. The multiple lanes are especially important to avoiding backups at the heaviest traffic intersections at Lowry and Broadway. Keeping traffic moving also allows platooning of cars, providing breaks in traffic for crossing and relief along the road, rather than steady congestion. New park facilities and a general improvement in the environment along Marshall also brings increased use for pleasure drives, especially on weekends.

East Boulevard

One of the most important improvements to Marshall is the installation of a boulevard, or planting strip, on the east side of the roadway. This five-foot-wide planting area lies between the sidewalk (moved four feet to the eastern boundary of public right of way) and the curb. This space allows the introduction of street trees, grass, and flowers, greening and softening the streetscape and providing a buffer between traffic and houses.

Bicycle Lanes

North and south bound bicycle lanes are a second improvement, widening the right of way by five feet each. Known as “Class A” bike lanes, this on-street facility is utilized by high-speed bicyclists—commuters and recreationalists—whose presence on park trails is disruptive. The addition of these lanes not only encourages a non-polluting mode of transport, but also provides a safe space on the high-traffic street and widens the buffer between traffic and houses.

Right of way and constraints

A number of constraints limit the roadway in regard to the width of right of way. First are the cultural landmarks and hospitality destinations retained on the west side of Marshall: the River Garden and Polish Palace. Because these brick buildings were constructed when the road had fewer lanes, the resulting increases moved the road closer to their front doors. In order to retain these structures, the roadway jogs a few feet to the east at the Lowry intersection and south of 22nd Ave. This new alignment is accomplished in conjunction with improvements to the Lowry intersection and a housing redevelopment project across from the Polish Palace and Gluek Park.

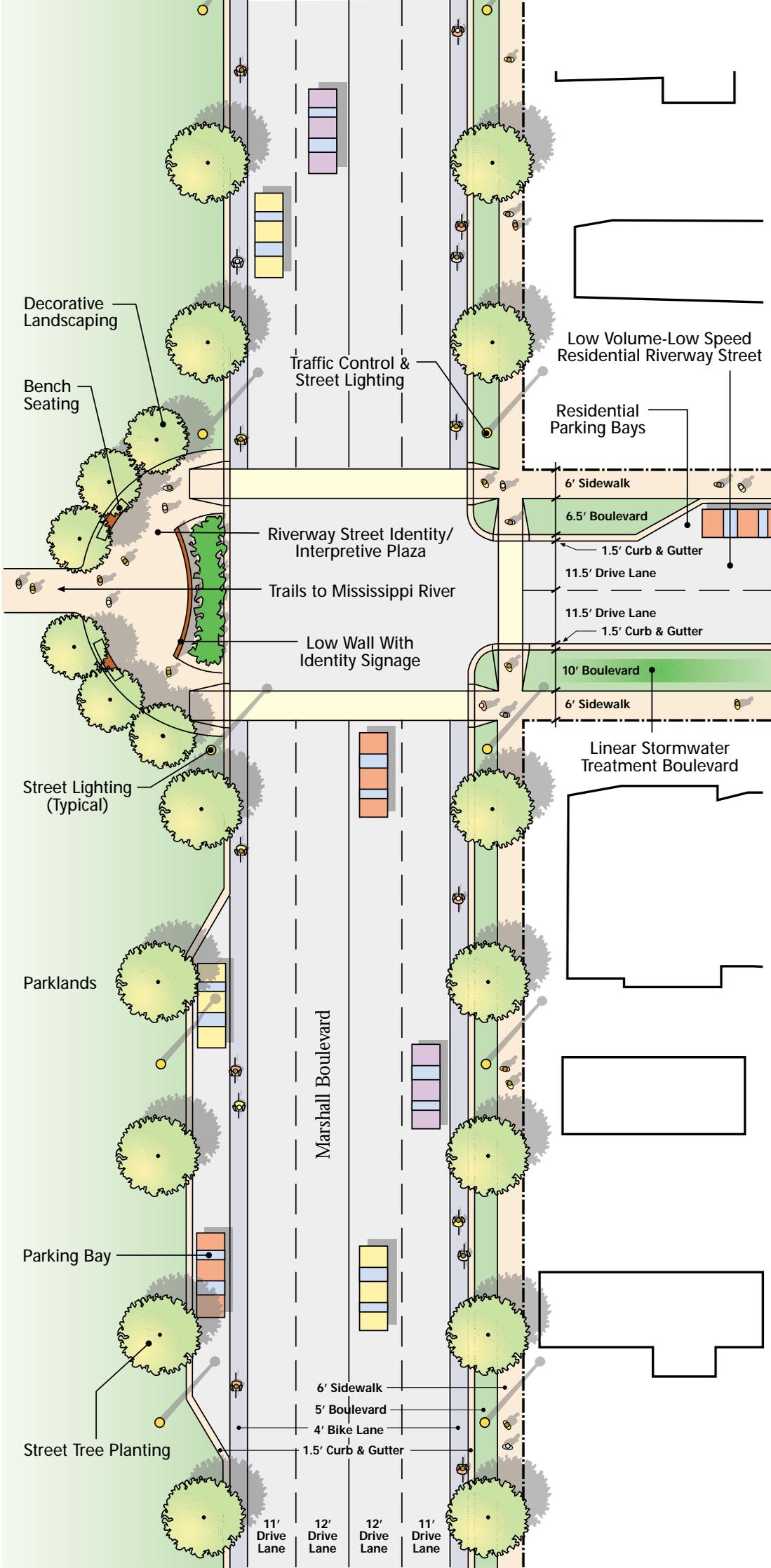
The new Marshall Boulevard is as narrow as possible to avoid significant encroachment into the riverfront parks, while still providing necessary bicycle lanes and a planting strip to buffer housing on the east side. Parking bays are also provided along portions of the west side of the street for use by park visitors, precluding construction of surface lots in the parks themselves, while allowing the green of the park to reach out to the street with trees and other plantings.

Other improvements

The balance struck between roadway, parks, and private lots on Marshall Boulevard creates a whole new aesthetic on the street. Additional measures, such as the removal of all power and communications lines and poles from the streetscape—buried during reconstruction—is a vast improvement over previous conditions. New decorative street lamps, transit shelters, and Riverway Street signage adds much of the charm of a true parkway between the hundreds of maturing street trees.



Marshall Boulevard and Riverway Street



Grain Belt Center

Called “the most significant landmark in Northeast Minneapolis” in a *Star Tribune* article a few years after brewing operations ceased, the historic Grain Belt Brewery complex is the cultural focal point of the Upper River. The brewhouse, with its varied five-to-six-story façade, embodies the eclectic spirit of the area, its renovation a testimony to perseverance. Artists were the first to take advantage of the old brick and limestone buildings, filling warehouses renovated by the MCDA. Park development projects behind the complex and across the river encouraged private investors to tackle the final step: the brewhouse itself.

Conference Center

Perceiving a market niche for a unique conference destination along the Mississippi in Minneapolis, developers of the Grain Belt Conference Center realized that difficulties inherent to any reuse of the multi-level brewhouse could be turned to an advantage. The street level serves as a lobby with reception area for directing conference attendees to meeting rooms on other levels. The remains of original staircases, railings, doors, and brewery artifacts continue the enchantment begun by the exterior architecture.

But the renovation is not all about the past. Contained within the nineteenth-century walls is twenty-first-century infrastructure: high-speed communications technology for Internet conference calls, portals for individual modem interface, satellite feeds and up-links. The state-of-the-art conference facilities bring gatherings of national and international organizations, as well as local businesses holding networked meetings and training sessions

On-site entertainment facilities enliven the atmosphere after sundown: banquet halls serviced by an in-house catering kitchen, digital cinema and video arcade, a rooftop patio with river and downtown views, and, of course, a reopened beer garden outside the shining kettles of its own microbrewery. Many facilities are open to the general public, and rooms are available for wedding receptions and community events.

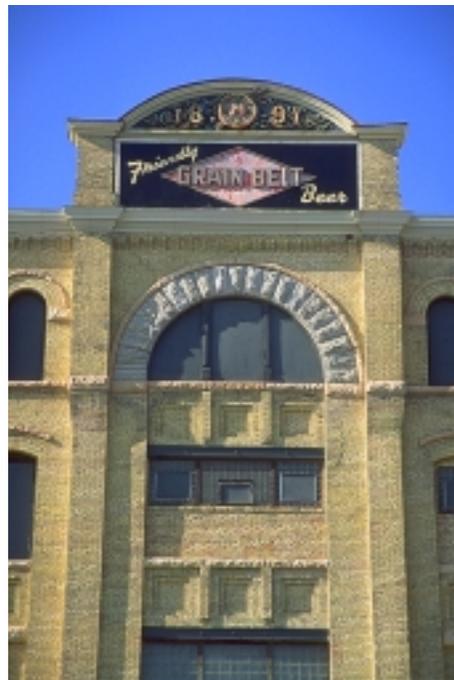
A national chain rents business suites behind the brewhouse, with additional rooms available a short distance away at River City. Parking for hotel guests and conference participants is found to the south of Broadway, in a ramp shared with Graco headquarters, constructed as part of the public-private partnership to revitalize the Grain Belt.

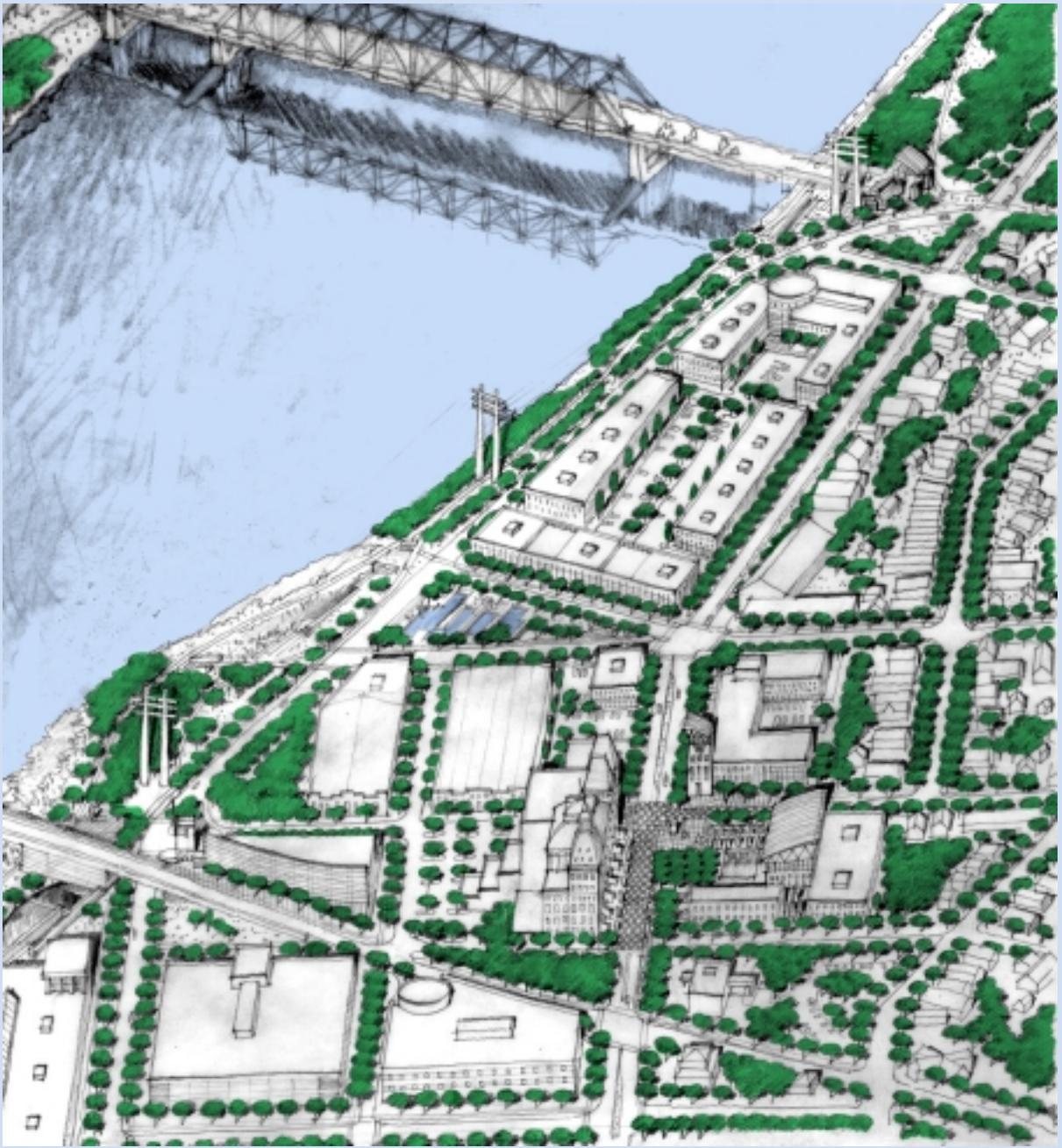
North of Grain Belt

A small development including residential units, studios, and offices lies just north of Grain Belt Center, between Marshall and the river. This development supports the conference, entertainment, and arts uses at Grain Belt by increasing the urban vitality of the surroundings.

Brewery Square

Opening a space across Marshall opposite the brewhouse, Brewery Square is a European-style plaza setting the building into the context it always deserved. Stepping back onto the checkerboard plaza, it is possible to find the needed perspective to view the huge façade. Carrying on this Old World theme, new brick row houses front on the Square, with small shops, including a traditional bakery and deli, below some of the living units.





Grain Belt Center

Parks and Urban Design Conclusions

The Upper River in Minneapolis is a unique stretch of the Mississippi. The Upper River Parks and Urban Design Plan recognizes the opportunities inherent in the topography of the land, its location in the city, and the local cultures of adjacent communities. Where the land provides a low and flat bank, with existing environmental constraints, an urban riverfront promenade and mixed-use district is proposed. The natural terrace on the eastern slopes of Perkins Hill has the potential for community design that makes the most of the sloping terrain, so unusual in a generally flat region, and maximizes views to the river and downtown skyline. The Plan designates routes as Riverway Streets, to be enhanced to lead residents of north and northeast Minneapolis, and the region, to riverfront parks and carry the value of waterfront amenities to nearby properties. The concept of “taverns on the green” along the east bank, celebrates a culture of neighborhood meeting places in northeast Minneapolis and retains destinations that bring people to riverfront parks. The Plan identifies the *genius loci*, or spirit and flavor, of the Upper River, offering a variety of experiences to residents and visitors.

The Upper River Parks Plan continues the Minneapolis tradition of connecting larger parks to each other via parkway segments; the system is completely integrated so that all the open spaces, including Water Filtration Parks, are connected to the whole. Within the parks, and along West River Parkway, the Plan suggests a variety of programming, including areas for passive recreation, riverbank stabilization, landscape restoration, and new wildlife habitat. Each bank also has a major park attraction, with Skyline Amphitheater to the south and Botanical Gardens to the north. The trail system offers opportunities for loop trips up one side of the river and down the other, with the special feature of a pedestrian and bicycle facility on a retrofitted BN Bridge.

While carrying on the Minneapolis parks development legacy and utilizing traditional models, the Plan also calls for innovations in the way Minneapolis approaches space along this waterfront. The Mississippi Promenade is a unique opportunity to create a public right of way at the very edge of the water, with places of residence and hospitality having direct access to the riverfront without an intervening roadway. The impact of traffic on Minneapolis parkways is growing; the Plan proposes to separate vehicles from a section of the riverfront and give it over completely to pedestrians. Private venues opening onto the public Promenade keep the waterfront safe and lively throughout the day and evening hours. The Plan urges that the riverfront not be a monolith representing a single model for interaction between the city and river, but rather a tapestry that weaves in the best of the old and makes the most of the land for new development. Minnesota is blessed with an abundance of rivers and lakes for outdoor experiences; the Upper River can not and should not try to compete as a pristine riverfront—what the Upper River in the City of Minneapolis can offer is an experience where the best qualities of river, park, and city are combined.

The urban design contained in the Plan and the six specific guidelines focus on the large-scale interaction of planned land uses and the river. View corridors to the river and downtown are shown as no-build zones, which play a double role as necessary water filtration areas. Density recommendations follow from the potential amenities at various sites. At the River City development, 10-to-20 story high-rises will build three-dimensional space to multiply the best viewshed available on the Upper River. At Dowling Place the intensity of use proposed is in direct response to the excellent regional access from the interstate. Sketches of new development in the Plan suggest how development *might* occur in accord with the Land Use Plan, displaying a belief in the area’s potential, and challenging the private market to respond. With the build-out of the Plan sure to take many years, more detailed guidelines regarding architecture and site planning are not provided, however the Plan does promote the value of the land in the Upper River corridor in a way that has never been presented before: future public and private development partners need to ensure that the substantial public investments required to implement the Plan are matched by the finest quality twenty-first-century engineering, architecture, and landscape design.

The Upper River Master Plan creates *continuous* access and views along trails paralleling both banks of the river: every possible view of the river will be available to visitors along these trails. In addition, regular access will be created, where none now exists, through development areas from streets meeting the river at a perpendicular, with overlooks and special features marking access points. It should be noted that carefully designed high-density or high-rise dwellings do not block visual or physical access to the water any more than private lots with single-story structures lining a parkway—access is always possible along the riverfront and at the public right of way that forms development blocks. The Upper River Master Plan meets its primary objectives of total access along a riverfront park corridor, and related objectives of developing new tax base, increasing the value of existing neighborhoods, and providing a rich variety of riverfront destinations.

Recommendations Summary

- Create a continuous and integrated riverfront parks and open space system along the Upper River.
- Construct recreational trails along both banks of the river.
- Provide space in parks for riverbank, landscape, and habitat restoration.
- Develop waterfront features in new parks, and nodes of interest at regular intervals along trails.
- Preserve hospitality uses within parks corridor.
- Establish a Riverway Street System, with common streetscape elements and signage that identify streets leading to and paralleling the riverfront.
- Ensure consistent river access with public right of way developed on the regular street grid.
- Designate no-build zones to hold view corridors to the river and downtown skyline.
- Design and construct an urban riverfront promenade between the BN Bridge and Lowry Ave.
- Extend West River Parkway to North Mississippi Regional Park.
- Align West River Parkway as a vegetated buffer between light-industrial and residential uses between the BN Bridge and Lowry Ave.
- Convert the BN Bridge to a pedestrian and bicycle facility linking both banks.
- Reconstruct Marshall Street as a boulevard, with new landscaping and bicycle lanes.
- Maximize the potential of river and downtown skyline views on the west bank at the BN Bridge by allowing high floor-to-area ratios.

Environmental Restoration Plan

Soil Contamination and Remediation

With a history of heavy-industrial use dating back over 125 years, land in the Upper River corridor has absorbed industrial wastes, many of which could pose serious threats to human health. Fortunately, steady advancements have been made in regulatory requirements for identifying contaminants and techniques for cleaning soils. The Upper River Master Plan includes a list of sites of known contamination in the Appendix. As redevelopment proceeds more thorough investigations will be needed. The Plan responds to concentrations of pollutants with new, higher-revenue-producing land uses and suggests possible remediation techniques.

Pollution concerns

Scrap metal yards, oil tanks, former foundries, railroad yards, printing plants, piles of coal and salt: all of these potential sources of pollutants are found along the Upper River. Contaminants identified from government sources, including the Minnesota Pollution Control Agency (MPCA), are those commonly generated by industry.

Known pollutants

- Petroleum products
- Solvents
- Lead, and other heavy metals
- PCBs (polychlorinated biphenyls)
- VOCs (volatile organic compounds)
- PAHs (polynuclear aromatic hydrocarbons)

Contact with these contaminants can be made at ground level from soils, or through evaporated or fine particles in the air. Lead has been shown to damage nervous systems and other chemical pollutants are suspected carcinogens. Children are particularly vulnerable to health problems associated with soil contaminants, because they are closer to the ground and their bodies are still developing.

Groundwater

Concerns about contamination are not limited to soils because some pollutants can reach the water table. Once pollutants, such as diesel fuel, descend to the level of groundwater, the hydrologic system can cause them to migrate. Given industrial sites near and on the riverbank, migration into the river water can be the quick result. Metals too can simply wash off into the river, enter storm drains, or leach through soils into groundwater. The Mississippi River supplies drinking water to the City of Minneapolis, with hundreds of other communities downstream. While the City Water Works ensures a supply of drinking water to residents, aviary, terrestrial, and aquatic wildlife drink directly from the river. Contamination of the riverbed, constantly stirred by dredging, barges and recreational boats, add to long-term consequences

and the need to limit sources that pollute the ground and surface waters.

Analysis of Specific Areas

The MPCA maintains a database of known sites of contamination, and works with property owners to identify sites and monitor cleanup activities. Sites are listed as “active,” meaning that cleanup is still necessary, or “closed,” signifying that the MPCA is satisfied with the level of remediation. An important classification is listed under the acronym “LUST” sites, for “Leaking Underground Storage Tank.” Contamination identified can be from prior uses and owners, current uses and practices, or in some cases, migrated to the site via groundwater hydrology.

A cross-referencing of databases compiled by the MPCA with geographic representation revealed areas with the greatest concentration of MPCA sites and LUSTs. The greatest concentration of known contamination sites is on the west bank, south of Lowry. Pollution of these sites is due to past or present businesses, on-going practices or single events. For instance, solvents at the site of a former printing plant are impacting groundwater; heavy metals, VOCs, PAHs, and PCBs have contaminated soil and groundwater at the current site of a scrap metal yard; and a ruptured line spilled diesel fuel at the City’s Public Works sanitary truck garage. Additional large areas of concern are between Broadway and Plymouth on the west bank, and land east of St. Anthony Parkway.

An encouraging result of the overall analysis is that many portions of the Upper River corridor seem to have relatively minor levels of contamination. The research shows no MPCA or LUST sites at the Upper Harbor Terminal. Most of the east bank is also without reported sites. Caution must be used though in drawing conclusions from this level of investigation. A complete Phase One land-use history research and Phase Two soil borings should be undertaken before public acquisition of any sites.

Levels of cleanup

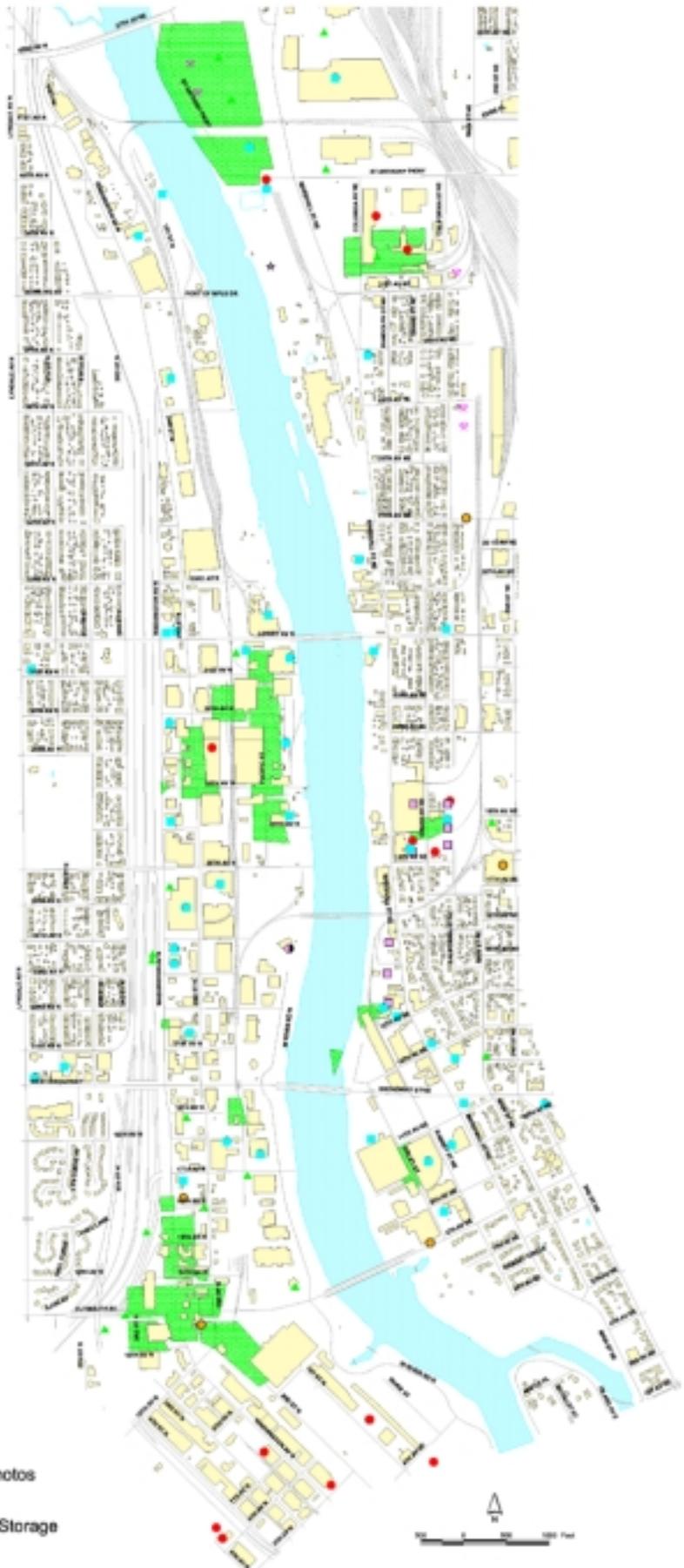
Differing levels of soil remediation are required based on the proposed use of land with known contamination. The highest level of decontamination is required for residential uses. The cleanup level of sites to be used for parks are negotiated with the MPCA in response to specific conditions; generally this cleanup is less restrictive than for residential uses, provided that any contamination is not migrating and the site is capped so that no contact with soil pollutants occurs at ground level. Sites where light-industrial or commercial structures are to be built are held to a lower standard of cleanup, since concrete pads and flooring will reduce contact with soils.

The Upper River Land Use Plan responds to a concentration of soil contamination by proposing high-density residential and office uses, designated as the Mississippi Promenade District. This density of development implies apartments and condominiums. The bank of the river is capped with a concrete plaza. This recommended residential use will require extensive and expensive cleanup. The intensity of development will help to payback some of the remediation cost. In addition, digging deep foundations for large buildings will remove contaminated soils to be safely disposed. Most other redevelopment areas seem to offer few impediments to the planned uses. The MCDA will continue its program for soil cleanup in the North Washington Industrial Park, successfully encouraging new construction.

Decontamination Technologies

Exciting progress is being made in the field of soil remediation. On many sites contamination can be addressed *in situ*, that is without removing the soil. For instance, steam can be injected into soils holding petroleum or solvents, with the vapor then extracted, condensed, and removed from the site. This technique is being used to great success in the Central Riverfront. Heavily contaminated sites, for instance former scrap yards, are likely to require some excavation to remove metals and other pollutants. Capping is a technique to introduce a layer of clean soil, providing a barrier between contamination and the ground level. On some sites capping may also include installation of an impervious surface, or subsurface membrane, to reduce penetration of water into deep layers of contaminated soils; however this technique should only be used in the most contaminated areas.

Over the period of implementation, innovative techniques are sure to be developed for remediation. Current technologies on the cutting edge include injecting soils with materials that attract microorganisms to break down complex organic compounds into harmless chemicals. An important point is to recognize that the Upper River *can* be cleaned up with existing technologies and that it *should* be cleaned up to avoid migration of pollutants into the Mississippi.



Stormwater Retention and Filtration

The Mississippi River drains a watershed that includes a majority of the land mass of North America. The river is much more than a meandering channel within defined banks, it is in a sense all of the water flowing over and under the land, gathering in large and small tributaries to the great stream.

Existing System

Still within a few hundred miles of its origin, the portion of the Mississippi in Minneapolis known as the Upper River, is increased by two creeks: Shingle Creek near the Camden Bridge and Bassett Creek south of Plymouth. While the entrance of the two creeks is visible, water also flows to the river in simple cascades over banks during rainfall, and through a system of 33 stormwater outfall culverts. Many of these drains enter the river below water level; all collect water running off streets, yards, and buildings in the catchbasins seen along curbs.

Before the advent of sanitary sewers and treatment plants, stormwater and human wastes both flowed into the Mississippi, which was conceived of as the largest drain in the system. Today, a separate system of stormwater sewers carries run-off to the river, yet the water still picks up trash and pollutants along the way. Oil, anti-freeze, lawn fertilizer, animal wastes, leaves, paper, sand, road salt, and many other solid and dissolved materials enter the flow. Impervious surfaces increase the volume of run-off, and reduce the filtering effect that land can have if water is able to percolate through to the level of groundwater. Currently, no water quality improvement ponds exist adjacent to the Upper River.

A 21st-Century Stormwater System

The Upper River Master Plan includes recommendations for improving the ecological function of the river edge and retaining and filtering surface run-off. Riverbank stabilization and revegetation will create a shoreland buffer that filters trash, slows run-off, and provides areas for groundwater recharge. Treating water at the river edge, however, is not sufficient to meet standards for stormwater retention in areas of new development. The Plan recommends stormwater treatment that meets best-practice standards for new development, even though these standards are not mandated in the area because of preexisting urbanization. It is also recommended that, as the Plan is implemented, the most up-to-date techniques for improving water quality be installed to create a twenty-first-century infrastructure for cleaning storm run-off.

Water quality improvement goals:

- Intercept trash from surface run-off
- Remove sediment and particulates
- Detain heavy metals
- Reduce nutrient levels
- Increase dissolved oxygen

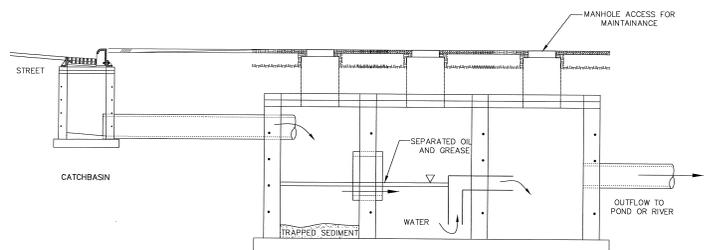
Sub-Watersheds

Most of the Upper River is part of the Middle Mississippi Watershed, which drains approximately 13,620 acres. Shingle and Bassett Creeks also have designated watersheds to the north and south of the Middle Mississippi. Sub-watershed districts are related to storm sewer infrastructure, and also include areas where water runs directly from banks into the river. The Master Plan focuses on improving water quality in the sub-watershed districts within the Upper River redevelopment areas, including the west bank and the redevelopment proposed for the Grain Belt area.

Run-off Interception

Infrastructure placed in curbs and under streets is used to intercept stormwater running on impervious surfaces. Interception can also be accomplished utilizing vegetated swales or depressions, for instance in parking lots, which will collect and begin to filter the water. Swales can be combined with infiltration basins or trenches, which are excavated and filled with coarse aggregate. Run-off is stored in the voids between aggregate, and then allowed to seep into the surrounding soil.

Catchbasins collect water at curbs and should also be combined with filter devices that separate petroleum products and grit. Separate grit chambers should be used in areas close to sources of pollutants. Oil and grit separators need to be cleaned out at least twice a year to maintain their effectiveness.



A typical oil and grit chamber has three chambers. Sediment settles in the first chamber. Oil and grease float on the permanent pool of water and are kept from discharging by a submerged outlet between the second and third chambers.

Run-off Interception Techniques

- Vegetated Swales
- Infiltration Basins
- Catchbasin Filters
- Grit Chambers

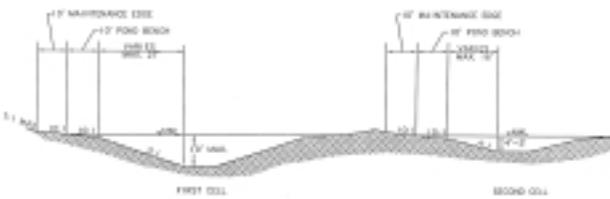
Area-wide Ponds

The Master Plan proposes establishment of a system of ponds serving the Upper River redevelopment areas, rather than requiring each development project to create its own ponds. This area-wide system will result in consolidation of ponds into the desired areas, and produce more satisfactory aesthetic and water quality improvement results. Costs for constructing and maintaining stormwater ponds should be shared amongst parcel owners contributing run-off to each sub-watershed district.

Water Quality Ponds

In order to meet Nationwide Urban Run-off Program (NURP) standards, the Plan proposes areas for retaining and filtering stormwater. Sub-watersheds areas are overlaid on the redevelopment areas with recommended sizes for the ponds given.

Typical ponds are constructed with one or two cells. A one-cell pond will improve water quality by slowing run-off and allowing sediment and other solids to settle out of the water. A two-cell pond system combines the benefits of a retention area with a constructed wetland. These constructed wetlands provide additional cleansing action, through the uptake of nutrients by wetland plant species. Bacteria that live on roots and stems of species such as bulrush and duckweed also break down organic pollutants into simpler, less harmful compounds.



Two-cell pond

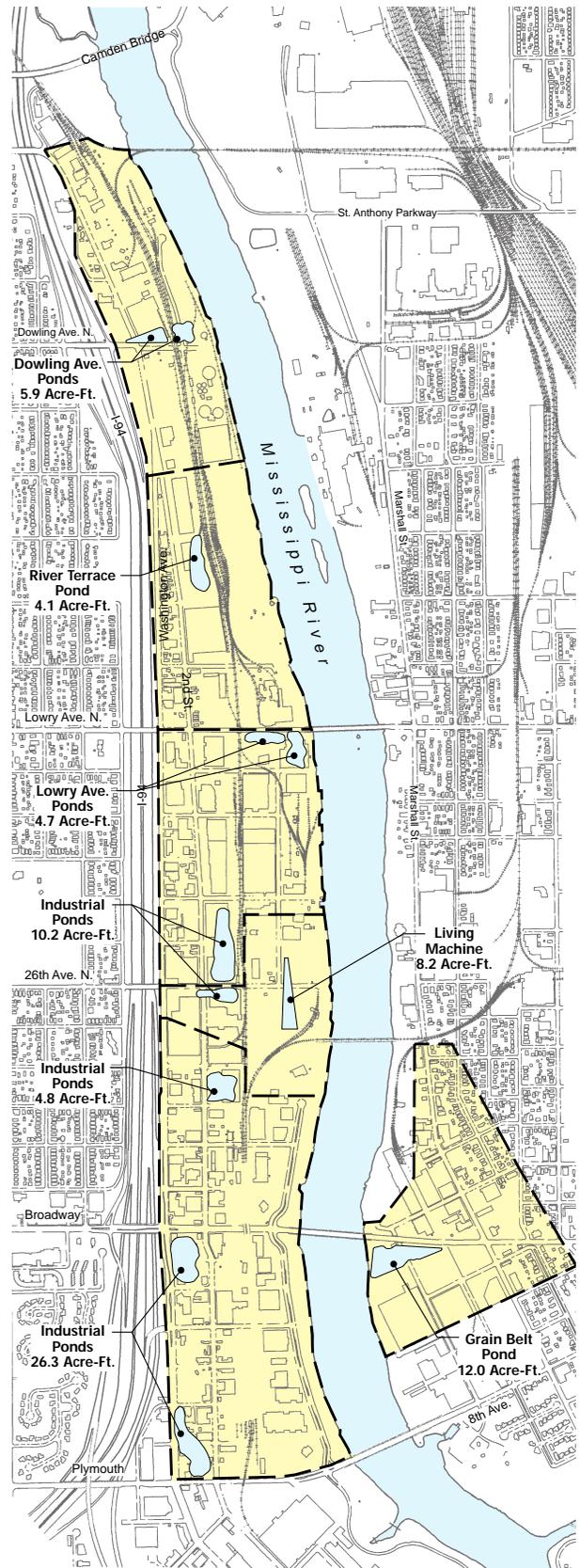
Benefits

Pollutants reduced by retention and filtration techniques can be placed in the following broad categories:

- Suspended Sediment
- Trace Metals
- Phosphorus
- Nitrogen
- Bacteria

Suspended solids, such as sediment, make run-off water look clouded, while trace metals, such as lead, pose health hazards to animal life. Nitrogen- and phosphorus-based pollutants are generated by lawn fertilizers and decomposing organic matter; when entering the river they increase the nutrient level leading to algae and bacteria growth, and thereby reduce dissolved oxygen which aquatic species need to breath. Retention ponds remove large percentages of these pollutants, with benefits increasing the longer the water is detained.

In addition to water filtration areas included in the Land Use Plan, it is recommended that a series of “Industrial Ponds” be constructed in the North Washington Industrial Park as part of the ongoing redevelopment of that area.



Recommended water quality ponds with sub-watershed districts. An acre-foot is a measure equal to a 1-foot-deep pond covering an acre. Typical retention ponds average 6 feet in depth, so a recommended pond of 12 acre-feet would have a surface area of approximately 2 acres.

Water Filtration Parks

Retention and filtration of stormwater run-off is a crucial component of an ecosystem approach to improving the Upper River. However, sites devoted to improving water quality should be designed and constructed, not as simple exercises in engineering, but as additional amenities complementing the river and adjacent redevelopment. The concept of water filtration areas as parks has reached an exciting level of development, with stormwater ponds utilized as water bodies within open space settings designed for human interest and education.

The Master Plan combines no-build zones reserved as view corridors to the river and downtown with Water Filtration Parks. These filtration parks are connected to the overall parks system, and in most cases should be designed to blend together seamlessly. However, most of the land utilized for ponding would not be owned by the Minneapolis Park and Recreation Board, but rather should be outlots within private development sites set aside for ponding. An option for future consideration might be the establishment of a public-private partnership to develop ponds and allow public access.

Features

Water quality ponds have such great potential as park features precisely because they store water, which has been a traditional part of park and pleasure garden design since their origins. The ecological, regulatory, and aesthetic converge, with a sharing of costs for pond construction between what is required to meet standards and the addition of certain public amenities to produce useable parks. In addition to retention ponds, other basic features should include:

- Wetland plantings, for increased ecological and aesthetic effect
- Observation platforms
- Trails
- Educational signage

A Model

As concern about water quality grows, municipalities around the globe have recognized the opportunity to combine stormwater ponds with parks. Many examples could be listed, but one new park is so outstanding that it provides the best model for a high-quality water filtration park. This park is the “Living Water Garden” in Chengdu, China, winner of the 1998 “Top Honor Award” from The Waterfront Center. The Living Water Garden transformed a polluted riverfront site in a highly urbanized area into an amenity that both cleans river water and educates visitors about the processes used. The park combines the finest in design—it is *shaped to resemble a fish*—with excellent engineering, utilizing an advanced constructed wetlands system to treat the water. Flowing through a series of ponds, or tanks, the water is purified by settling, anaerobic microorganisms, aeration, and a variety of wetland plants.



“Living Machine” Wetland Garden

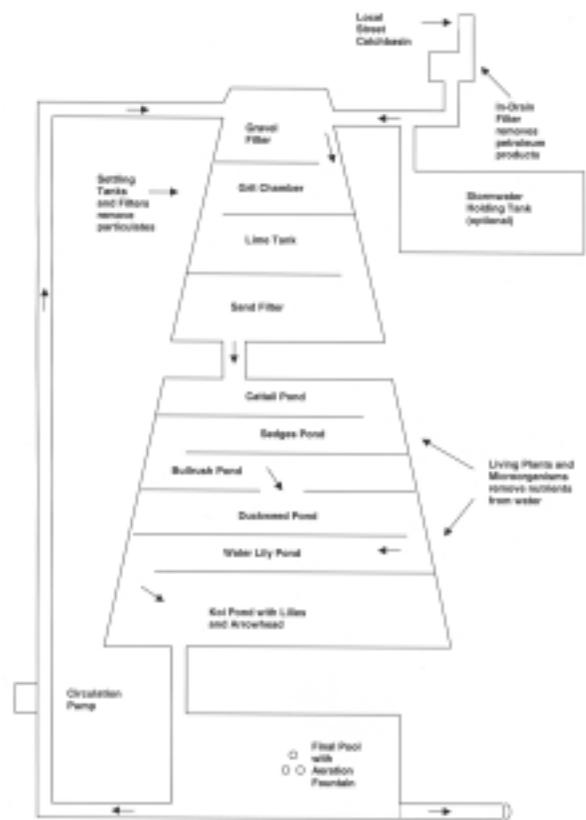
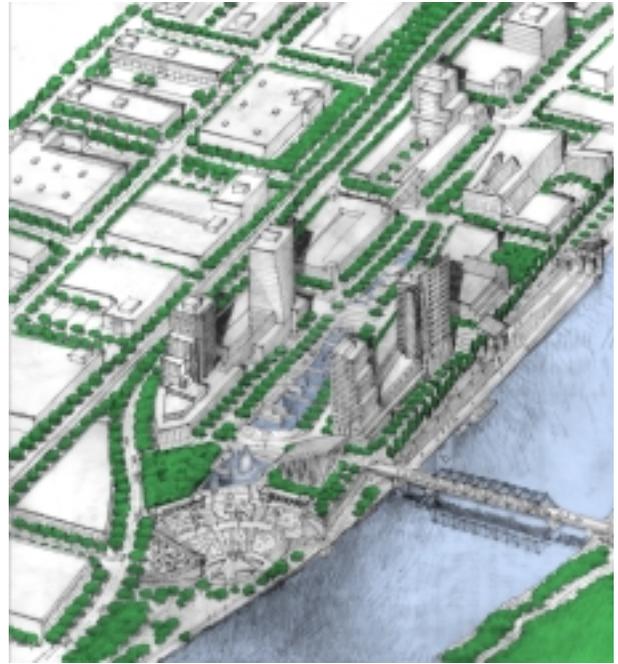
An advanced constructed wetlands system is applied to the “River City” site in the Upper River Master Plan. Labeled the “Living Machine,” after wastewater systems developed by John and Nancy Todd, the system utilizes inert filters and biological processes of living plants and microscopic animals to cleanse stormwater. The urban design of the water filtration park complements the surrounding high-intensity uses, collecting run-off from the area’s impervious surfaces. The concept is the same as the wetlands park in China: a system of settling tanks and filters are combined with concrete-lined wetland “ponds.” On this site, impervious tanks or “ponds” are recommended given the possibility of remaining soil contamination—water might only pick up more pollutants if allowed to filter through to the level of groundwater.

The primary filters and settlement tanks remove grit and solids in the water, while anaerobic microorganisms in the tanks break down organic pollutants. The water would flow from one tank over a series of cascades, the splash and aeration increasing dissolved oxygen levels. The secondary filtration is provided by a series of ponding tanks with wetland species, and associated microorganisms, taking nutrients out of the water as they grow. The China system harvests wetland plants grown in the nutrient rich water for use as fertilizers and feed. The “Living Machine” would also require periodic maintenance. During winter the flow would slow or stop, as does the flow of surface run-off.

In addition to water quality benefits, the “Living Machine” would provide an educational resource informing citizens about efforts and techniques utilized to clean stormwater. Signage would describe the various filters and plant species, and the improvements that each stage makes to the water quality. Finally, the last phase of treatment includes a fish pond, which could have ornamental fish or river species, leading to a large pool and fountain above the Skyline Amphitheater, providing a final burst of aeration to increase oxygen content before the water is allowed to flow to the river.

Other Water Filtration Parks

Of course not every water filtration park should be as elaborate as the proposed “Living Machine.” Most parks would consist of simple one- or two-cell ponds, with wetland plantings, in a naturalized setting. Some might include aeration fountains or other devices to improve water quality. New techniques are sure to be developed over the implementation period of the Upper River Master Plan, yet the goals of improving water quality, creating wetland habitat, and education will remain constant.



“Living Machine” Concept

Riverbank Stabilization and Restoration

Over the 125 years of industrial use of the Upper River, the condition of the river banks has been substantially altered. Vegetation has been cleared and slopes excavated or filled to provide easier access for the movement of materials. Industrial river edge treatments currently found include: barge bulkheads, rock riprap, and steel sheetpile. Some of these structures are necessary to reduce further erosion of banks on properties in industrial use, however, many other sections of bank have been needlessly degraded or simply neglected. In order to improve the ecological function and aesthetics of the Upper River, the Restoration Plan recommends the application of soil bioengineering techniques to stabilize and revegetate the river edge.

Existing Conditions

A comprehensive survey of bank conditions along the Upper River is included in the Appendix. In general terms, the main naturally occurring problem is toe erosion, that is the lower bank is being undercut in certain sections by river action causing the upper bank to collapse. Human-made impediments include retaining structures at the edge, such as rock riprap or sheetpile, many of which are in deteriorating condition. Transfer of bulk materials at barge docks preclude bank vegetation, with open storage of materials also creating areas without vegetation at many places along and above the bank. Some of these denuded areas are caused by the nature of the activity on the site, other deteriorated banks are the result of abandonment and indifference. Careless clearing of vegetation to create views from private residential lots is also a problem.

Besides a variety of human constructs, the Upper River also has a number of different types of slopes:

- Flat slope, with well vegetated low banks
- Moderate slope, with construction debris and vegetation
- Large shallow bank failures, with little vegetation
- Steep slope, well vegetated
- Surface sloughs, or gullies with sparse vegetation

Much of this variety is a remnant of original topography—in general the east bank is higher and steeper—while the rest is the result of human alterations.

Bank Stabilization and Restoration

The Mississippi River is a critical connecting element in the surrounding natural and urban environment. The riverbank acts as an important corridor for the conservation of plant species and movement of wildlife. In addition, the riparian zone where the river and land meet is a crucial last chance to slow and filter water running over banks into the river. The overall objective for restoring the riverbank is to introduce new plantings that will provide an integrated series of benefits.

Bank restoration goals

- Stabilize the mechanics of slopes
- Reduce soil erosion
- Improve water quality
- Create and connect wildlife habitat
- Enhance riverbank aesthetics



Example of soil bioengineering using a live fascine technique.

Soil bioengineering concepts and techniques

The Plan recommends utilizing soil bioengineering techniques to restore vegetation to the banks of the Upper River. Soil bioengineering is a living technology consisting of plant structures that initially add stability to banks through live stem stakes, and over time, through root systems. Roots consolidate soil particles as a mass, thus reducing the potential of the bank to slump or collapse. Growth of plant stems and leaves creates a shoreland buffer that reduces run-off velocities, cleanses the water by collecting sediment, redirects flow, and offers surface erosion control protection. Use of native species for bioengineering will enhance biological diversity and complement the landscape restoration and wildlife habitat recommendations.

Four bioengineering methods are recommended for the Upper River:

- Joint planting
- Live fascine
- Brushmattress
- Vegetated geogrid

Details on which techniques should be applied to specific sections of river bank are included in the Appendix.

Joint Planting is a system that installs live vegetative stakes between the joints of previously placed riprap rock. As the plants grow, a mat of roots spread beneath the rocks, increasing the stability of the existing structure and placing a new filtration buffer on the surface. The technique is simple and low cost, but produces highly effective ecological and aesthetic results.

Live Fascine structures are bound bundles of live cut branches. They are tied together securely and placed into trenches along streambanks, upland slopes, wetlands, or in gullies. The live fascine bundles are typically installed with live stakes and dead stout stakes, and often used in conjunction with erosion control fabrics. Plantings follow contour lines in dry areas, breaking up slopes into a series of shorter slopes separated by benches. Mini-dam structures are created capable of holding soil on slopes. The technique provides surface stability, which speeds the natural process of vegetation.

Brushmattress is a system that combines living structures to form an immediate protective surface cover on riverbanks. Live stakes, live fascine, and a branch mattress cover are installed, resulting in rapid growth of heavy vegetation.

Vegetated Geogrid is useful for the reconstruction of steep fill slopes. This technique involves the installation of live rooted plants, branch cuttings, and soil lifts wrapped with geogrid, in regular arrays in the face of reconstructed slopes. The branches are oriented perpendicular to the slope, and when combined with geogrid material, offers significant reinforcements to soils. This method is most useful for upland slopes and riverbank to solve complex, deeper instability and higher run-off velocity conditions.

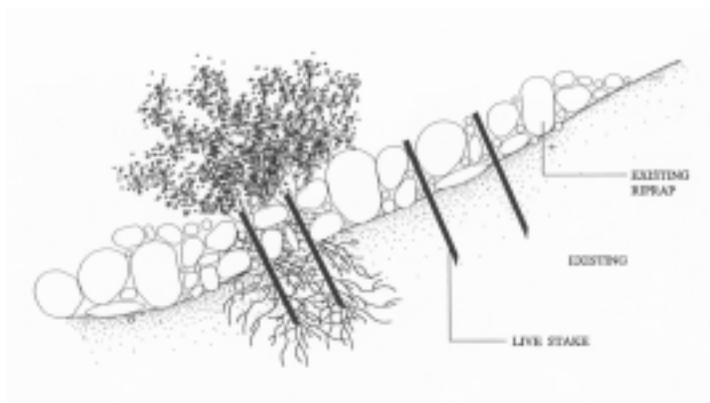
Benefits

Application of these techniques to selected sites along the Upper River will vastly improve the ecological function of the riverbank: vegetating denuded sites, creating a shoreland buffer for filtering run-off, stabilizing slopes, reducing erosion, and connecting habitat for wildlife in the river corridor. The aesthetic effect of implementation will be dramatic, with luxuriant growth along both banks of the Mississippi, softening and greening the river landscape for park and trail users and recreational boaters alike.

Upper River sites and recommended soil bioengineering techniques.



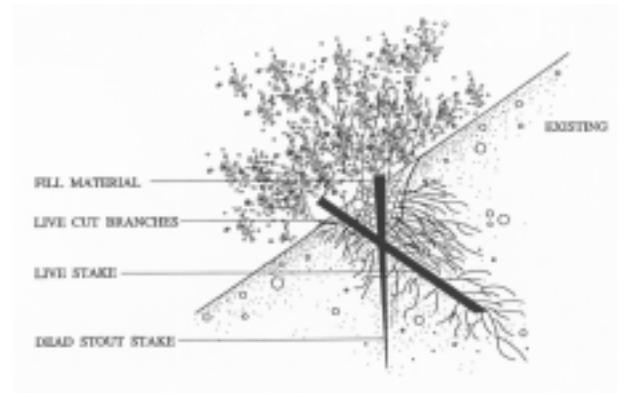
Riprap bank



Joint Planting



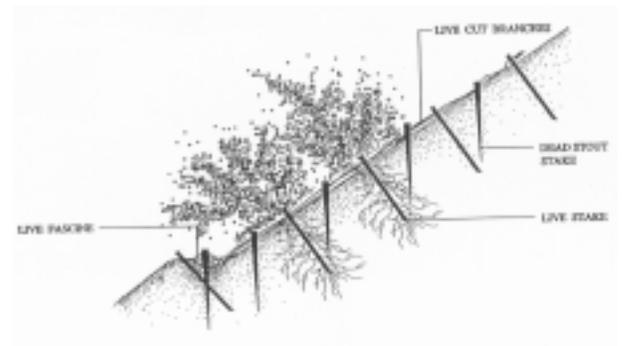
Very high and steep sloughing slopes



Live Fascine



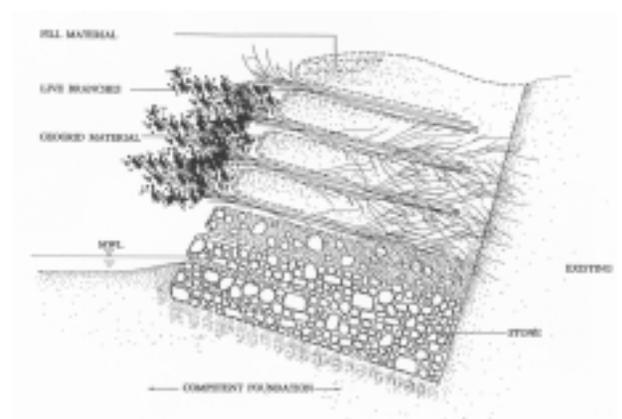
Open site with concrete and rock bank



Brushmattress



Toe erosion, construction fill, and overwash



Vegetated Geogrid

Landscape Restoration and Wildlife Habitat

Improving the ecological function of the Upper River area is a primary objective of the Master Plan. Creation of over 90 acres of new parkland is proposed, with an additional 16 acres reserved for Water Filtration Parks. In order to maximize the potential of these new open space amenities the Restoration Plan recommends an ecosystem approach that will recreate areas of native vegetation and provide habitat for a wide variety of wildlife.

The ecology of the Mississippi River can be considered at a number of scales, from the global, to the regional, local, and specific sites. Recommendations recognize the Upper River as a unique landscape along a stretch of a much larger river, connected to the ecology of the region up and down the river corridor, but also as a place within an urban environment where restoration treatments will be set in a mosaic of human activity.

Historic Vegetation

The area above St. Anthony Falls is a transition zone between the Northern Hardwood Forest and Tall Grass Prairie ecotypes. During the period following the end of the last Ice Age, the present structure of the Upper River, its course, topography, climate, and soil conditions, was set. Soil and geological surveys show that the Upper River is composed of terraces, created as the river receded in width, and outwashes deposited as the river shifted course. In general, soil conditions are deep sand with a layer of organic material at the surface. Upland soils are porous, retaining little water near the surface, creating conditions conducive to sustaining an oak savanna ecotone. Fire swept by prevailing westerly winds played a role in creating oak savannas, because white and burr oak are able to withstand repeated burning, while other trees are consumed. Prairie species benefit from periodic fire, creating an open savanna with copses of oak surrounded by grasses and flowers. Wetter soil conditions at the river edge, and in the floodplain, allowed other species such as cottonwood and willow to survive fires, especially on the east bank, with the river acting as a fire break.

Landscape Restoration

Within the Parks Plan large areas are provided where the historic vegetation of the Upper River can be restored. Although altered by industrial use, fill, and construction, it is probable that underlying soils are still of a type that will most easily support oak savanna species, with a minimum of maintenance once established. Planting native species historically found on the Upper River will also restore the regional flavor of the place, creating an aesthetic effect and educational opportunity for visitors. Wildlife will be attracted to the habitat, with prairie plantings providing food and cover.

Restoration Goals:

- Increase biodiversity of flora and fauna.
- Create quality wildlife habitat.
- Improve aesthetics of river corridor.



Greenways

In many respects the Upper River Parks Plan is based on a concept of the riverfront as a linear greenway. Studies in landscape ecology show the benefits of connected vegetated corridors to the survival of plant and animal species, because corridors allow species to move and disperse through a landscape, increasing resistance to disturbance events. Corridors enhanced with native plantings do not necessarily require a minimum width to be effective, nor do they have to have unbroken continuity of vegetation to be effective. In response to other urban design objectives, the Parks Plan allows varying levels of connectivity for species movement. Yet along all but the southernmost part of the Promenade, a continuous vegetated corridor at the river's edge is proposed for restoration. Within this greenway corridor, trail facilities should be complemented by a variety of restored landscapes.



Design Guidelines to Meet Ecological Objectives

- Integrate natural and human environments.
- Promote connectivity of vegetation.
- Target wildlife species.
- Use native plantings.
- Promote restoration on private and public land.
- Provide neighborhood involvement.
- Manage non-native species.

Shoreland Buffer

The most important zone within the greenway corridor is the shoreland, where the river and land meet. Designed in concert with riverbank restoration bioengineering techniques, plantings should be made at a preferred minimum width of 50 feet from the top of the bank. Wider areas can be accommodated in many areas for aesthetic variety and increased habitat diversity. A minimum strip of 50 feet will provide water quality benefits, by slowing and filtering water during storms, and will also provide a suitable wildlife habitat corridor. The riverbank and floodplain should be planted with species that thrive in soils that are periodically wet, including cottonwood, willow, and wetland grasses and forbs. This shoreland buffer will attract and benefit small mammal species and amphibians. Dispersal of plant and animal species along the restored bank will be facilitated, while overhanging trees will provide shade that cools water and provides in-stream structures for fish habitat. Along the shoreland, visitors might catch site of muskrat, heron, and frogs. Eagles too might find the Upper River attractive if the desired perches and fishing opportunities increase, while nest boxes placed near wetlands can be used to attract wood ducks.



Open Space Plantings

Large areas programmed for landscape-scale plantings, such as Restoration Park north of Lowry, provide an opportunity to recreate a semblance of the oak savanna that once dominated the banks of the Mississippi. White and burr oaks should be established in groups set within a short and tall grass prairie. These species will thrive in the sandy, dry soils and create an interesting landscape, blending at the Soo Line Bridge with North Mississippi



Regional Park. The oak savanna has much in common with traditional park designs, with both open areas and patches of trees.

Special plantings to attract butterflies or hummingbirds should be established, with informational signage explaining the location and ecological function of such areas within the park. Shorter grasses can be used under tree groupings to encourage use as informal picnic spots. Plantings should also be well designed in coordination with river views to insure that the best places for observing the river are not blocked by taller species. Trails should lead to special plantings, and places to observe the river or wildlife.

Desired wildlife species can be encouraged to nest in open spaces through the provision of their favorite plant forage or nest-making materials. Bird houses, for instance for blue birds and other song birds, can be placed in appropriate spots. Insect eaters, such as bats and purple martins, can also be attracted in the same way. Grasses are sure to bring mice, voles, and rabbits, who will in turn attract owls to nest in the taller trees. Peregrine falcon platforms can be constructed on taller buildings adjacent to the open spaces, reducing the populations of pigeons and small mammals. Perhaps red tail hawks will also circle above good hunting grounds.

Constructed Wetlands

The Water Filtration Parks, included as a major urban design component of the Master Plan, provide an excellent opportunity to construct wetlands as part of two-cell water-quality treatment ponds. Wetland plant species should be established in the emergent zone around wetlands constructed with shallow slopes. Deeper ponds may need to be fenced so that the safety of children is ensured, with thorny shrubs another option.

Gracefully water lilies, sedges, and bulrush will add much aesthetic and educational interest to wetland ponds. Wetland plantings will also filter and improve water quality, while providing habitat. Smaller-scale creatures, such as turtles, frogs, and waterbugs, can be found in the emergent zones, where water levels rise and fall. Larger species may also come to drink and forage.

Geese and Deer

White-tailed deer and Canada geese have adapted so well to urban environments that these two species can become a nuisance in the wrong areas. Geese are especially fond of the traditional mowed lawn areas with ready access to water bodies. Plantings of taller grasses and forbs at the water's edge have proved effective in discouraging foraging by geese in parks. In the case of deer, the increased connectivity created by bank and landscape restoration will make migrations into the Upper River area more frequent. Periodic breaks in the linear greenway corridor will be beneficial in limiting the movement of larger mammals, especially in the southern sections of the Upper River closer to downtown.



Maintenance and Safety

Although periodic burning is the best way to maintain prairie plantings, this technique will most likely prove problematic given the urban location of the Upper River land. Alternative methods are available for annual mowing and brush removal when necessary. The first few years after planting are the most crucial for maintenance, while prairie plantings establish a thick system of roots that crowd out other volunteer species. Weeding or application of non-toxic herbicides will be necessary. Tree seedlings will also require protective tubes or fencing.

In addition to a different set of maintenance practices, naturalized landscapes must be designed so that the safety of visitors is not compromised by plantings which become overgrown. Trails through restored areas will need a shorter maintained edge, so that users can anticipate and avoid unwanted contact. Lighting and special safety measures, such as emergency phones, should be provided at regular points within park areas. Both visual and vehicular access for park police will need to be provided.

Balancing Wildlife and Human Use

In addition to wildlife, restoring the landscape along the banks of the Mississippi in Minneapolis will also attract people, and park design must consider how wildlife habitat can best be integrated with park facilities provided for human visitors. Trails through restored areas can be constructed of the traditional asphalt, but may also include porous surfaces in special areas. Observation areas should be created at critical junctions of ecosystem types, where shorelands blend with prairies, and where the different landscape zones, such as upland and lowland, can both be seen. Every effort should be made to utilize the new landscapes on the Upper River to educate visitors about the riverine ecology, as well as realize the potential for civilization to blend with natural landscapes and wildlife.

Indeed, the use of non-traditional plants, including native species, on landscaped building sites should be considered for redevelopment areas adjacent to riverfront parks. For instance, colorful prairie wildflowers and grasses, such as purple coneflower, black-eyed Susan, or bluestem, have been used with great success in business parks, and on residential lots. Backyard and sideyard corridors will provide varied habitat for many types of wildlife and provide value to residents. School and community groups participating in park maintenance, nest box construction, controlled burns, and other restoration activities will fully realize the potential for large-scale landscape renewal through concerted action.

Perhaps the real benefit of landscape restoration along the Upper River will be the ability of park users to experience the Mississippi River in a naturalized state. Spotting a muskrat, snake, or heron in a highly urbanized setting can be a thrilling moment, helping to connect city dwellers with the larger natural world. A real appreciation can develop when considering the true extent of the Mississippi's watershed and all of the living creatures that depend on the water flowing to and in the great river.



Environmental Restoration Plan Conclusions

Water is essential to all life. As one of the great and critical waterways of the planet, the Mississippi River must be treated with respect and consideration of the long-term consequences of actions that alter its banks or pollute the adjacent land. An unquantifiable number of living creatures depend on the river for water, whether they live in the channel, along the banks, or in cities drawing drinking water. The Upper River in Minneapolis is only one 4-mile reach of a 2,470 mile long river—but it is no less important than any other place if the river is recognized as a flowing ecosystem. The Restoration Plan includes specific recommendations to restore the riverbanks along the Upper River, filter and cleanse the water entering the river from storm drains, and recreate a landscape that attracts, feeds, and shelters wildlife.

The Plan investigates known concentrations and types of soil and groundwater pollution. Planned conversion of land from industry to parks and residential uses will require a high level of cleanup. This remediation will be expensive, yet considering the location of the proposed redevelopment areas on the banks of the Mississippi, this is work that should be undertaken to protect the water supply irregardless of future uses.

Because the Upper River is an older urbanized area it is exempt from standards for stormwater retention that new development on greenfields are held to. Currently, there are no water quality ponds in the Upper River corridor. But the Upper River Master Plans recommends that redevelopment areas so close to the Mississippi should meet best-practice standards, and outlines specific areas for ponding and techniques for improving quality before water is allowed to flow to the river. A series of Water Filtration Parks are proposed, in which run-off can be retained and wetlands constructed.

Riverbank stabilization and restoration is highlighted by the Plan as a crucial component of improving the Upper River. Soil bioengineering techniques are recommended which utilize living plants to create structural stability on slopes through stems and the growth of root systems. A detailed analysis of existing bank conditions is given, leading to specific recommendations for the variety of different sites along the river.

In concert with bank stabilization, the Plan proposes park landscaping to recreate a semblance of the river corridor ecosystem prior to industrialization. Landscape restoration recommendations center on an oak savanna ecotype that the sandy soils of the Upper River support. Prairie plantings will attract, feed, and shelter a wide variety of insects, song birds, raptors, and small mammals. Park visitors will find a colorful riverscape that changes with the season.

All of the environmental restoration recommendations will improve the health, aesthetics, and provision of wildlife habitat in the Upper River corridor. The planning objectives in the area of ecological restoration are met by the Plan. The comprehensive nature of the Plan is displayed by the manner in which land-use, economic development and environmental recommendations all support each other. This is most evident in the area of barging, with the Plan recommending that heavy industry be phased out on the Upper River. As more scientific research is conducted on the effects of locks, dams, and barging on the Mississippi River it becomes clear that controlling water levels, channels, and flow to use the river as a transport canal is creating serious, long-term consequences to the river's ecology. While the debate about the expansion of locks and barging on the Upper Mississippi continues, the Upper River Master Plan argues that the area above the Falls of St. Anthony, the last barging pool in the system, is a place where barging can be discontinued, and the ecology of the river, its water, banks, and bed restored. It is most difficult to break the chain of locks and dams in the middle, but it can be shortened at its northernmost end, on the Upper River.

Recommendations Summary

- Continue to monitor known sites of soil and groundwater contamination.
- Conduct extensive investigation of all sites with possible contamination before public acquisition.
- Cleanup contaminated soil and groundwater in the Upper River corridor.
- Install swales, basins, filters, and grit chambers to intercept and clean run-off.
- Construct a system of area-wide water-quality ponds that meet the highest standards for stormwater retention and filtration.
- Add amenities to stormwater ponding areas to create a system of Water Filtration Parks.
- Utilize soil bioengineering techniques to stabilize and revegetate banks and slopes along the Upper River.
- Create a vegetated shoreland buffer and wildlife habitat through landscape restoration techniques in new parks along the Upper River.

Implementation Plan

The stretch of river above the Falls of St. Anthony offers the last unrealized waterfront amenity in the City of Minneapolis. The creation of Boom Island Park, and extension of West River Parkway to Plymouth Ave., point to the potential inherent in the Upper River as an attraction for recreational use and as a catalyst for growth and renewal on adjacent lands. The Upper River Master Plan presents a blueprint for change, discovering opportunities awaiting action. Significant portions of the riverfront and cultural landmarks are held by the public. Old concepts of utilitarian imperative controlling the fate of the river landscape are giving way to demands for ecologically enhancing uses that add value to the surrounding communities. The challenge of change must be met by a new spirit of cooperation and civic duty, ratified by the establishment of an implementation entity with a clear strategy for accomplishing the goals set forth in this Master Plan.

Benefits of Implementation

During the process of analysis, urban design, and public review, the potential for an interrelated set of benefits formed around the vision contained in the Plan. A brief list of attainable results best captures the future presented in the Plan:

- ◆ **Over 90 acres of new parks and open space.**
- ◆ **4 miles of restored riverbank.**
- ◆ **40 acres of additional wildlife habitat.**
- ◆ **16 acres devoted to water quality ponds.**
- ◆ **5.25 miles of new parkway or boulevard.**
- ◆ **15 miles of bicycle and pedestrian trails.**
- ◆ **A wide variety of new riverfront destinations.**
- ◆ **2,500 housing units in new riverfront neighborhoods.**
- ◆ **2,000 net additional jobs.**
- ◆ **Over \$10 million in additional annual tax revenues.**

The Plan

- **proposes that the highest and best use of the Upper River area has yet to be developed,**
- **recognizes the future economic development value of riverfront amenities,**
- **helps to stabilize communities in north and northeast Minneapolis,**
- **meets Metropolitan Council goals for growth within established urban areas.**

The plan recognizes that an amenity such as the Mississippi River within minutes of the central business district of the City of Minneapolis is simply too valuable to be ignored. Nature created the amenity, and will renew and maintain it, but public policy controls future use of lands along the river.

Implementation of the Upper River Master Plan depends on an evolution in public policy, at all levels of government, in order to realize the vision. Initial steps should concentrate on establishing the Master Plan as part of City policy and creating an organizational structure to promote and guide implementation.

Approving the Plan

While other governmental bodies have interests in the Upper River, it is the City of Minneapolis that controls decisions relating to land use in the area. The first step to implementation of the Master Plan is its adoption by the Minneapolis Planning Commission, with a recommendation for approval to the City Council. As an independent elected body, the Minneapolis Park and Recreation Board also has powers it can use to implement parts of the plan. Approvals by the City Council and Park Board will set a direction for future projects. In addition, as one of the funding partners, and a jurisdiction with capital investments in the Upper River area, a request for action should be submitted to the Hennepin County Board of Commissioners to accept the basic concepts contained in the Plan.

It is expected that most or all of the Upper River park system will become part of the Regional Open Space System, therefore approval of the Plan by the Metropolitan Open Space Commission should be sought. This approval will make it possible for the Minneapolis Park and Recreation Board to seek funds from that source.

Upper River Development Corporation

Structure

A national panel of advisors recommends that a single-purpose entity be created to facilitate implementation of the Upper River Master Plan. Such an entity is necessary to promote redevelopment of the Upper River area, with a staff focused solely on implementing the Plan. Creation of this organizational structure is recommended as the second major step in implementation following approval of the Plan by the City Council and Park Board. Promotion of the Plan by a single-purpose entity will ensure that the Upper River is not forgotten, or placed in a low-priority status, during the period required for implementation.

Based on research of successful riverfront redevelopment programs and local administrative responsibilities, **it is recommended that a private, non-profit corporation be created to promote and lead implementation of the Master Plan.** This new Upper River Development Corporation (URDC) will act as the champion for the redevelopment effort, building support in the community, including north and northeast Minneapolis neighborhoods, area businesses, and among private landowners. The organizational structure of this development corporation should be based on previous multi-jurisdictional programs involving all of the relevant public agencies, with the local funding partners of the Master Plan as the core implementing group. A summit of the City Council, County Board of Commissioners, and Park Board should be convened to seat an interim steering committee to write bylaws of the Upper River Development Corporation, including composition of the Board of Directors.

A number of advantages are available with a private, non-profit corporation. For instance, such an entity is likely to be most successful in lobbying for grants from private foundations. Also, this type of structure will be able to work with existing units of government that have the power of eminent domain and bonding, such as the MCDA, without creating a rival agency.

Function

The Upper River Development Corporation will provide a forum for interagency coordination and discussion, in the same way that existing entities, such as the St. Anthony Falls Heritage Board, convene representatives from governing bodies. The main responsibilities of the corporation staff will be to implement decisions of the Board and recommend actions that promote implementation of projects described in the Plan. Staff duties will include identification of priorities, advising elected officials and commissions, writing grant requests, communicating with citizen organizations and the media, and fundraising.

In regard to development actions, the corporation staff would seek proposals from developers for new construction in the identified redevelopment areas, including national and international promotion and searches. The staff would also refine development guidelines and review development site plans with the Board and relevant agency staff. The Master Plan should act as an outline for desired land uses and urban design components, with flexibility to seize opportunities that the private market may propose. Special relationships with taxing jurisdictions might be sought to allow the most economical assembly and holding of land for the best possible development proposals. Coordination with the MCDA will be crucial in the areas of establishing redevelopment projects and seeking tax-increment financing.

Proposed Upper River Development Corporation

Characteristics	Examples	Advantages	Disadvantages
<ul style="list-style-type: none"> • More development-oriented than a multi-agency management council. • Board is independent of local government. • Functions include: negotiating agreements with developers, coordinating public and private development activities, contracting for design and maintenance of public improvements, and fundraising. 	<ul style="list-style-type: none"> • Charles Center Inner Harbor Management, Baltimore • St. Paul Riverfront Development Corporation • Riverfront Recapture, Hartford • Sheyboyan Development Corporation 	<ul style="list-style-type: none"> • Free from certain constraints typical of public bodies. • Enjoys privacy in negotiations and financial decisions. • Partially sheltered from political pressures. • May receive private or charitable donations. • May take on less profitable ventures than would a for-profit company. 	<ul style="list-style-type: none"> • No bonding, taxing, or eminent domain authority. • Less willing to subsidize risky ventures than a purely public body. • May be somewhat less responsive to public opinion.

Citizen Oversight and Participation

Successful implementation of the Master Plan will depend on the involvement of citizens and community organizations. This Plan recommends a three-part approach, including:

- Existing Neighborhood Organizations
- An Upper River Citizens Advisory Committee
- The proposed Upper River Development Corporation

Existing Neighborhood Organizations, recognized by the City of Minneapolis as representatives of neighborhoods, with designated seats on the Citizens Advisory Committee.

The **Upper River Citizens Advisory Committee** would consist of representatives from neighborhood organizations, area businesses, and regional and environmental interests. Importantly, the Committee would be represented on the Upper River Development Corporation Board.

The **Upper River Development Corporation** would be organized and guided by a Board of Directors, including members who are elected officials from the City Council, Hennepin County Board of Commissioners, and the Park Board. State and federal legislators may also have ad hoc seats if desired. As noted above, other Board members would be selected from and by the Citizens Advisory Committee. A provisional board should be established to write bylaws defining how the organization will function and how public bodies and citizens will be represented.

Public Agencies involved in Upper River Redevelopment.

Implementation Tools

City of Minneapolis
 Planning Commission
 Departments of Planning, Public Works, and Inspections
 Minneapolis Park and Recreation Board
 Minneapolis Community Development Agency
 Hennepin County
 Department of Transportation
 Hennepin Community Works
 Metropolitan Council of the Twin Cities
 Metropolitan Open Space Commission
 Livable Communities Program
 Middle Mississippi Watershed Management Organization
 State of Minnesota
 Legislative Commission on Minnesota Resources
 Departments of Natural Resources, Transportation, Trade and Economic Development
 United States
 Housing and Urban Development
 Army Corps of Engineers
 National Park Service
 Mississippi National River and Recreation Area
 American Heritage River Initiative

Task	City of Minneapolis	Minneapolis Park and Recreation Board	Minneapolis Community Development Agency	Hennepin County	Development Corporation	Citizens Advisory Committee
Adopt Plan, Amend Comp Plan, Rezone	✓	○	○	○	○	
Establish Non-Profit Corporation	✓	✓	○	✓		
Raise Funds	○	○	○	○	✓	○
Information and Education	○	○	○	○	✓	○
Redevelopment Assistance and Incentives, including Acquisition	○	○	✓	○	○	○
Parks Improvements		✓			○	○
Street Improvements	✓			✓		
Property Acquisition for Parks		✓			○	

✓ Primary Responsibility
 ○ Support Responsibility

As with other areas of the Plan, implementation should utilize existing tools and approaches as well as new programs that may be created. Implementation can be facilitated through varying degrees of public action, from changing the regulatory environment to more aggressive public acquisitions. Private organizations and a number of public agencies at all levels are seeking improvements along the Mississippi River, consistent with the objectives outlined by the Master Plan, making coalition building an important part of implementation.

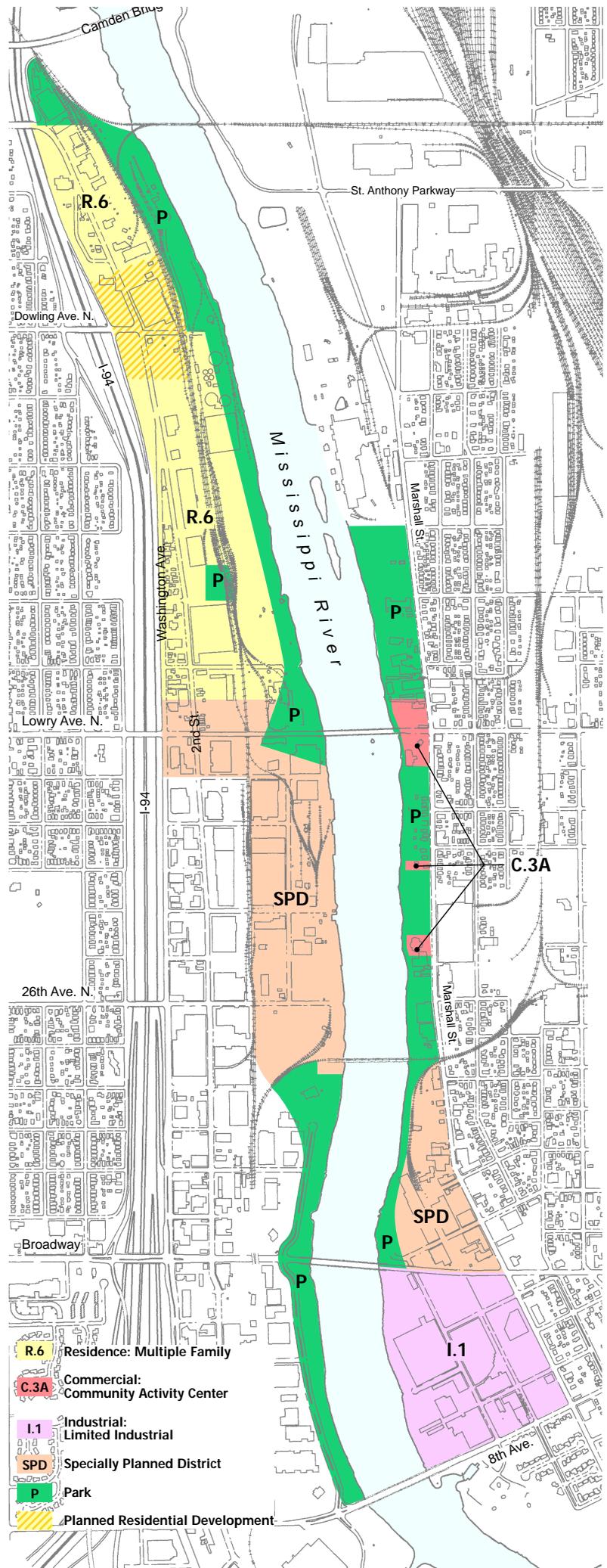
Land-Use Controls

The City of Minneapolis, through its comprehensive plan and zoning ordinance, has the power to set regulations for acceptable uses in the Upper River area, in order to promote the general welfare and seek an orderly evolution of the city. Private property identified in the Plan for land-use change should be rezoned to eventually bring about new uses. This rezoning should occur as part of comprehensive plan revisions, or as a series of separate “40 Acre” studies.

Rezoning of property does not imply an immediate change, what does change is the regulatory environment and classifications. Existing uses are “grandfathered,” that is the owner may continue the current use as a “non-conforming use” for an indefinite period. However, if the non-conforming use is discontinued for a period of one year, or two-thirds of the assessed value of the property is destroyed, for instance by a fire, then a new use must conform to the new zoning classification. In addition, rezoning precludes expansion of non-conforming uses on the property. Zoning then is an important tool to bring about long-term transformations in land use, such as those proposed in the Plan.

Regulatory actions are an important component of implementing the Master Plan. Acceptance of the Upper River Master Plan as part of the City’s Comprehensive Land Use Plan will give the Upper River project legal weight and certainty. Rezoning lands will halt future expansion of industry on the riverbank, while creating a climate of confidence necessary for private developers to invest in new housing construction, and other planned uses.

Recommended Zoning



Public Acquisition

Creating public parks, extending parkways and roadways, and creating or increasing public right of way are all actions that can justify the taking of private property through the use of eminent domain powers held by public bodies. Redevelopment projects to remove blight and promote policy objectives can also justify public acquisition. The Upper River Master Plan states a clear public purpose: the creation of a continuous riverfront park corridor of benefit to the whole civic community. The rights of property owners are also clear when their property is taken for a public project: they are entitled to the fair market value of their land, set by an independent appraiser, plus relocation benefits.

Implementation of the Master Plan will require the use of eminent domain to acquire some properties, however, this does not mean that all transactions will need to be instigated by public agencies. Many properties are likely to be offered by willing sellers, with a number of properties for sale in the corridor at any one time. A project-based approach as outlined in the Plan will make possible the orderly assembly of land for parks and other redevelopment projects within specific timeframes. **At present the Upper River Master Plan is an outline for future action, it will need to be approved and funded before any acquisitions of private property are undertaken.** Ongoing communications with property owners regarding the purpose and phasing of projects will be crucial to building and sustaining support for the plan.

Public-Private Partnership

Given the large-scale and long-term actions necessary to implement the Plan, the right of eminent domain should be used sparingly. A preference should be established to work with private property owners within timeframes based on depreciation of capital investments or personal plans. The national panel of advisors to the Upper River Plan suggested that property owners be engaged in discussions regarding business planning horizons. Given that market conditions change, and capital equipment requires constant reinvestment, property owners should be notified of the general policies set forth in the Plan in order to plan for eventually ceasing operations on riverfront sites. For instance, a specific business may find that current investments and operations will be profitable for the next 10 years, but after that new investments that conflict with the objectives of the Plan would be needed. Public agencies should identify opportunities for working with businesses on coordinated phasing of projects.

One of the advantages of the Upper River Development Corporation as a private, non-profit corporation is that it can seek innovative partnerships with owners of land in the redevelopment areas, as well as private developers interested in the project. As the transition from older industries begins to occur, owners may be encouraged to enter partnerships regarding the future development of their property. The URDC should act as a facilitator between owners and developers to create partnerships of benefit to all parties and the implementation of the Plan. Not all property need pass through public acquisition to be redeveloped. The URDC should seek coalitions to assemble lands into developable parcels, with property owners as partners in, and profiting from, redevelopment. The creation of a continuous riverfront park amenity is sure to raise values on adjacent properties, with the Plan suggesting what are believed to be the highest value uses.

Coalition Building: Environmental Groups, Private Foundations, Critical Area, and MNRRA

There are many non-governmental organizations, including environmental groups and private foundations, that have a keen interest in improving the environment of the Mississippi River, at the national, metropolitan, and local scales. These organizations are a valuable resource for information and lobbying for the river. Any and all interested groups and individuals who support the concepts outlined in the Master Plan should be actively engaged in a broad coalition for progressive implementation.

In addition to the many private groups and local public agencies working to improve the Mississippi, the state and federal governments also have ongoing planning requirements and programs. The State of Minnesota has designated the Mississippi River a “critical area,” and requires municipalities to create plans for improving the riverbank environment. At the federal level the National Park Service manages the Mississippi National River and Recreation Area (MNRRA), a unique unit of the National Parks system working with municipalities to establish continuous parks and river access along the Mississippi in the Twin Cities metropolitan area.

The Upper River Master Plan is fully consistent with the Executive Order creating the Mississippi River Critical Area and all the goals and policies of the *Mississippi National River and Recreation Area Comprehensive Management Plan*. Moreover, the outcome of the Plan is expected to be an outstanding model of sensitive design that realizes the ecological, social, cultural, and economic development opportunities of the river corridor. A review of compliance with Critical Area and MNRRA goals is contained in the Appendix.

In general, the Upper River Master Plan will realize the Critical Area and MNRRA goals with a continuous riverfront trail system connecting to other trails north and south, a greenway buffer along the riverbank, and new land uses replacing open storage of bulk materials with attractive housing, offices, and hospitality destinations. Variances to the standards set in the City’s Shoreland Ordinance regarding the height of

structures and setbacks may be necessary along the Mississippi Promenade to create the type of lively urban riverfront district that the Plan envisions; however, such action should only be taken in the context of specific development proposals, and in coordination with public agencies that oversee Critical Area and MNRAA compliance. Along all of the Upper River the Plan is the most comprehensive proposal ever produced to meet the goals of the Critical Area and MNRRA plans, with the necessary economic development included to help pay for the public costs of continuous parks, trails, and riverbank restoration.

A Strategic Approach

A crucial component of Plan implementation is to set principles to guide future actions. Initial consideration of the Plan may bring discouragement regarding the magnitude of change envisioned. To undertake implementation as a single project would be a Herculean task sure to falter. Likewise, simply acquiring parcels on a piecemeal basis will not produce recognizable results in the form of usable parks or redevelopment parcels. Therefore a guiding set of principles is recommended.

Implementation Action Principles

1. Acquire properties that are contiguous with existing parks.
2. Seek stand-alone projects that can be completed in specific timeframes.
3. Pursue strategic acquisitions to connect parcels in public ownership.
4. Utilize public lands as catalyst for assembling larger redevelopment areas.
5. Hold tax-forfeit parcels along the river and in redevelopment areas.
6. Work with industries that can benefit from relocation.
7. Create trail loop projects across river.
8. Connect local streets to the riverfront.

These principles should be utilized with the goal of creating complete park and redevelopment projects that can be celebrated. Initial success will bring more people to the banks of the Upper River, media attention, and additional funding for projects.

Strategy

In addition to guiding principles, a strategy should be planned to launch the implementation campaign. This strategy requires: establishing the necessary organizational structures, the identification of stand-alone projects, an understanding of the relationship between projects, and a set of priorities and potential phasing. In regard to a strategic approach, the spatial organization of the Upper River Master Plan, and its infrastructure projects, is best represented with a graphic overlay to the Plan (see page 117). The accompanying recommendations suggest priorities for first actions.

A Project-based Approach

Phase One Projects

- BN Bridge and Skyline Park
- 26th Avenue North connection to West River Parkway
- BN Bridge to Boom Island trail
- Grain Belt renovation

Phase Two Projects

- Edgewater to Gluek Park expansion
- Gluek Park expansion to BN Bridge
- Marshall Boulevard redesign, Lowry south to BN Bridge
- Bottineau Trail
- Botanical Garden and Conservatory
- Marshall Boulevard redesign, Lowry north to St. Anthony Parkway
- UHT and River Terrace Neighborhood (north of Dowling)
- River Terrace Neighborhood (south of Dowling)

Phase Three Projects

- Lowry Bridge and Plaza
- Mississippi Promenade District

Phase One: South of 26th Avenue North

Initial actions should develop an implementation entity and projects on both sides of the river south of 26th Ave. N. The strategy should focus on creating a synergy between the two banks, including a trail loop from the BN Bridge to Broadway and Plymouth and encouraging redevelopment of the Grain Belt complex. As the only user of the BN Bridge, relocation of the Lafarge Corporation cement storage facility is the key action, allowing the removal of the BNSF railroad spur, extension of West River Parkway to 26th, and the decking of the BN Bridge for pedestrians and bicycles. Public agencies should enter into a discussion with Lafarge, the Burlington Northern Santa Fe Railway, and CAMAS, to explain the public purpose of the proposed acquisitions and establish timeframes and a working relationship. Lafarge has a well-maintained site, and relocation to another site in the City should be facilitated. Only a narrow strip along the western portion of the CAMAS site is required to extend West River Parkway to 26th Ave. N.; negotiations should also include Canadian Pacific Railway to rebuild track in this short section and limit the encroachment on CAMAS.

The Riverview Supper Club is an important hospitality venue bringing people to the riverfront. In order to construct the Amphitheater as shown in the Plan the supper club will need to be relocated, but the venue should be retained in a new building on the site as a concession within Park Board property. Trail easements across Graco and Scherer Bros. should be sought to create a trail loop to Boom Island Park, with a temporary route on Sibley Street as an alternative. This first set of projects will have relatively low cost compared to the much more extensive relocations in other phases, while bringing real benefits in useable parks and trails, and creating a constituency seeking to extend the trail and park system further north.

Recommended priorities

1. Create Upper River Development Corporation
2. Reuse the Grain Belt Brewhouse and develop adjacent riverfront park.
3. Relocate Lafarge Corp. to new site with rail access.
4. Acquire Burlington Northern Bridge for pedestrian and bicycle facility.
5. Construct trails from Plymouth Ave. along both banks and across the BN bridge.
6. Extend West River Road to 26th Ave. N., thereby providing a new link from north Minneapolis to the riverfront.

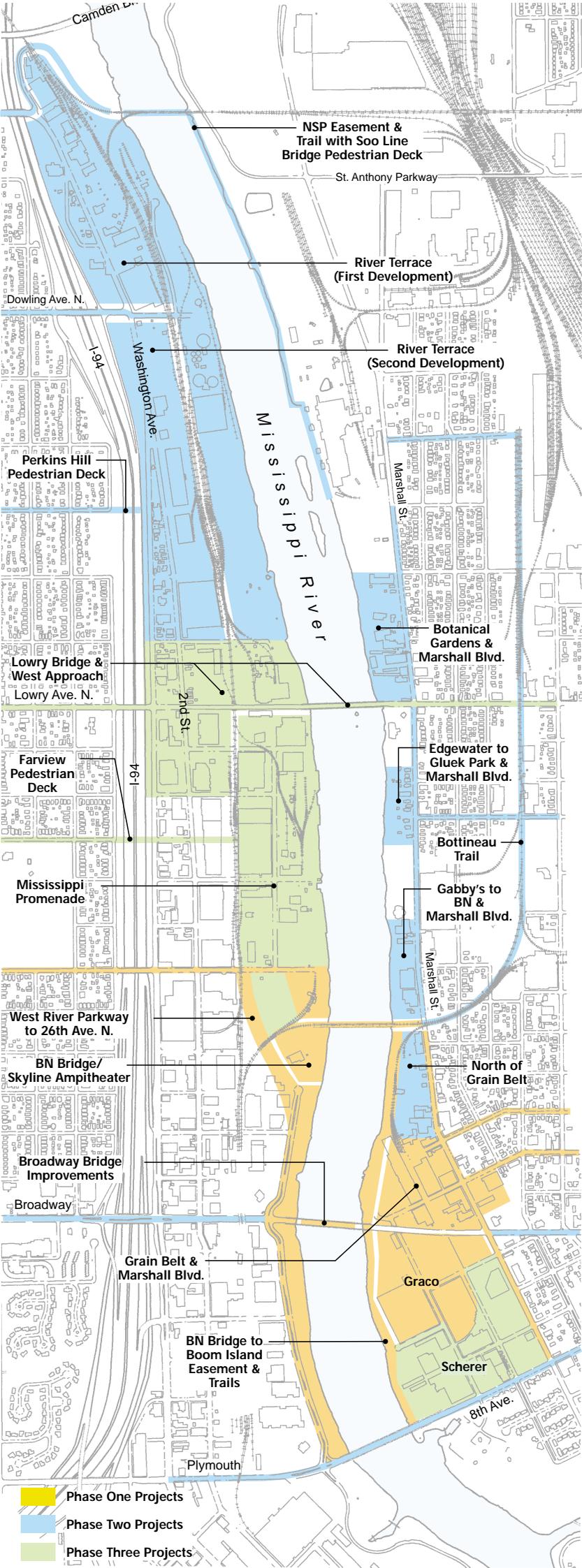
Phase Two and Three

The projects suggested for the second and third phases of implementation are very flexible in their potential order of implementation. For instance, the Botanical Gardens and Conservatory is a stand-alone project which could be promoted and constructed whenever the necessary will and funds are available. The construction of Marshall Boulevard can be accomplished in phases in conjunction with acquisitions to link existing parks on the west side of Marshall: at the Botanical Gardens site, and along Gluek Park expanded north to Edgewater and south to the BN Bridge.

Regarding the redevelopment projects on the west bank, phasing should consider the desired final build-out and which sites have the highest potential in the long term. Parks and other infrastructure improvements will have to be well funded and planned in detail before private developers are likely to be attracted. The Upper Harbor Terminal is under the control of the City Council, and a parks development project can be undertaken as the first step to induce adjacent redevelopment. Because of its size, depth, and better views to downtown, River Terrace Neighborhood south of Dowling is likely to attract higher value development. The desired private investment will be facilitated if the section north of Dowling is already converted to residential use. Likewise, the Mississippi Promenade District will require a high level of private investment. Confidence in the area will be increased if the River Terrace Neighborhood is under construction, and the continuous system of parks and trails, including the riverfront promenade, are in place.

The strategic approach outlined in the Plan is a useful guide to overall implementation, but conditions will change and unanticipated opportunities will arise. Key parcels may become available which are not immediately connected to a stand-alone project. Public agencies and the URDC should remain flexible to seize opportunities, especially in regard to acquiring riverfront parcels, but should also remain focused on producing recognizable results. Flexibility with an eye on specific project goals will carry the Plan forward.

Implementation Projects and Phasing



Costs

In order to estimate costs for implementing the Upper River Master Plan a section-by-section analysis is made utilizing parcel data obtained from the Hennepin County Assessor. Tax assessment values for 1998 are factored to estimate acquisition and relocation costs. Standard practices for estimating engineering projects are used to generate estimates for public construction projects. The details of this process are given in the Appendix, a summary is included below.

The analysis shows an estimated cost for basic parks, parkway, and related public improvements of approximately \$83.9 million. The two largest add on projects are separated out, with the proposed Botanical Gardens and Conservatory estimated at \$20 million, and the Lowry Bridge at \$28 million. A grand total of \$141.9 million is estimated for the public infrastructure proposed in the Upper River Master Plan.

The public cost of assisting private land redevelopment, mainly business relocation and land assembly, is approximately \$60.5 million. This total is based on costs for land assembly in the two main redevelopment areas proposed in the Plan: River Terrace Neighborhood and the Mississippi Promenade District. Although the Plan calls for sweeping redevelopment on the west bank, the costs of assembling land are not high relative to the acreage, showing the current low tax assessments on some of the larger heavy-industrial parcels, and no tax value for the UHT site. The redevelopment costs for the North Washington Industrial Park are not included since this is an ongoing project that predates the Master Plan; however it is anticipated that the attractiveness of NWIP and pace of redevelopment will be enhanced by new riverfront parks.

Total public costs are estimated at approximately \$200 million for implementing parks development, infrastructure improvements, and land-use changes. This rough estimate is useful to show the relative scale of public costs. These public investments along the Upper River are on a level with similar large-scale public efforts, such as highway building, arenas, and neighborhood revitalization projects. All of the recommended public expenditures are less than one-half the cost of the Hiawatha Corridor Light Rail project. However, unlike many public projects that must be completed in a specific, short-term timeframe, the Upper River Master Plan can be implemented over a period of 30 years, spreading costs over a number of stand-alone projects that can be funded through a variety of sources. In addition, the public investment is expected to be multiplied many times by private investments, on the order of five times the public cost. The Plan outlines a worthy investment in the civic infrastructure of the City of Minneapolis and the region.

Estimated Cost of Riverfront Parks, Trails, and Parkway

Property Acquisition, Relocation, and Demolition	40,000,000
Park Development	23,000,000
Riverbank Stabilization and Restoration	7,000,000
West River Parkway and Marshall Blvd.	13,000,000
Street and Utility Removals	400,000
BN Bridge Conversion	500,000
Basic Parks and Parkway Subtotal	\$ 83,900,000
Botanical Gardens and Conservatory	20,000,000
Riverway Streets	7,000,000
Pedestrian Bridges over I-94	3,000,000
Parks, Gardens, and Riverway Streets Subtotal	\$113,900,000
Lowry Avenue Bridge	28,000,000
Upper River Public Infrastructure Total	\$141,900,000

Park development costs include:

- Improvements to existing parks in study area.
- New passive recreation parks.
- Riverfront promenade and plazas.
- Amphitheater.
- One naturalized stormwater pond.
- Fishing piers and small docks.
- One athletic field.
- Restrooms.

Estimated Cost of Public Assistance for Land Redevelopment

	Public Costs	Private Investment	Annual Property Tax Increase
River Terrace Neighborhood			
Acquisition, Relocation, Demolition	67,000,000		
Land Sale Income	<u>-17,000,000</u>		
	\$50,000,000	209,000,000	5,400,000
Mississippi Promenade District			
Acquisition, Relocation, Demolition	34,500,000		
Land Sale Income	<u>-24,000,000</u>		
	\$10,500,000	290,000,000	7,100,000
Upper River Redevelopment Total	\$60,500,000	\$499,000,000	\$12,500,000

Note: Public costs do not include soil remediation.

Phase One: Initial projects south of 26th Avenue North

A solid estimate is possible on the basic trail and parkway parts of recommended Phase One projects, including the important extension of West River Parkway to 26th Ave. N., the conversion of the BN Bridge to a pedestrian and bicycle facility, and construction of trails along both banks, from the BN Bridge to Plymouth Ave. A temporary trail route to Boom Island utilizing Sibley Street is assumed for calculation of trail costs, rather than an easement along Graco and Scherer. This Upper River kick-off project can be accomplished for less than \$3.7 million.

Extending the parkway and creating the trail loops are the priority actions. Investments in the Amphitheater should wait until the rest of Phase One is funded.

Acquisition costs

Relocate Lafarge Corp., acquire BN Bridge and rail corridor easement on east bank, and acquire narrow linear portion of CAMAS site to extend West River Parkway \$2,300,000

Construction costs

Pedestrian and bicycle recreation trails = 12,800 linear ft. x \$25/ft	\$320,000
BN Bridge conversion, decking and lighting	\$500,000
Extending West River Parkway to 26th Ave. N. = 1400 linear ft. x \$300/ft.	\$420,000
26th Avenue reconstruction, from river to Farview Park = 2600 linear feet x \$50/ft.	<u>\$130,000</u>

Phase One, Trail and Parkway Total \$3,670,000

Potential Sources of Implementation Funds

In order to implement the Upper River Master Plan funds should be sought at all levels of government, as well as grants from private foundations. One of the benefits of a visionary Plan, calling for large transformations, is that interest and excitement can be generated outside of the City of Minneapolis. At the metropolitan level, funds should be sought on the grounds of slowing sprawl. At the state level, the Plan contains many fundable elements relating to infrastructure and environmental resource protection. The Plan also is also consistent with federal programs for inner city revitalization and transportation efficiency.

Potential sources of funds include the following;

City of Minneapolis and Hennepin County

Tax Increment Financing

General Obligation Bonds—Minneapolis Capital Improvement Program

Housing Revenue Bonds

Hennepin Community Works projects

County Transportation Capital Improvement Programs

Proceeds from Land Sales

Upper Harbor Terminal Income

Watershed

Middle Mississippi Watershed Grants

Metropolitan Council

Metropolitan Parks and Open Space Commission

Livable Communities Program grants

State of Minnesota

Upper River projects earmarked in biennial Bonding Bill

LCMR grants

State Transportation Capital Improvement Programs

Great River Road Program grants

Hazardous Waste Remediation grants

Department of Trade and Economic Development grants

Federal

Department of Transportation, TEA-21

Department of Housing and Urban Development, programs and special grants

National Park Service, Mississippi National River and Recreation Area grants

Urban Park and Recreation Recovery Program

Army Corps of Engineers grants

Empowerment Zone grants

Private Sources

Foundation grants

Donations for specific projects

Key sources

Tax increment financing (TIF) districts are established as a means to pay for public infrastructure that will help to make private development projects feasible. The City of Minneapolis, MCDA, and Upper River Development Corporation should investigate which portions of the Plan can be financed through existing TIF districts, specifically the North Washington Industrial Park, and should promote special legislation to create new TIF districts, where necessary to encourage redevelopment that would not otherwise occur in the Upper River area. Tax increment will be an important source of funding, with many riverfront parcels large enough to create new parks as well as new tax-base-generating developments.

The State of Minnesota, through its Legislative Commission on Minnesota Resources (LCMR), was a funding partner for the Master Plan. A strong argument can be made that implementation of the Plan will protect and enhance one of Minnesota's critical resources: the Mississippi River. Funds from the LCMR should be sought on a periodic basis throughout implementation, specifically for park acquisition and development. Funding from state and federal sources should also be sought by the City, County and Park Board, as part of existing infrastructure programs, such as the federal Transportation Efficiency Act for the 21st Century (TEA-21) to rebuild Marshall St., the Lowry Bridge, and recreation trails. In addition, specific capital improvement legislation at the state level should be proposed for projects in accordance with the Plan. The U. S. Congress and agencies of the federal government, including the Department of Housing and Urban Development, should also be involved in funding redevelopment projects contained in the plan.

Regarding funding the cleanup of soil and groundwater contamination, grants should be applied for from state and federal programs. The state Department of Trade and Economic Development has already made grants to the MCDA for remediation in the North Washington Industrial Park. Additional grant proposals will need to be submitted. Special grant requests might also be made to the federal Environmental Protection Agency to fund decontamination projects.

As implementation continues, innovations in financing and legislation are sure to change the ground rules for development, and it should be a responsibility of the URDC staff to promote public and private actions that will encourage investment in the Upper River corridor. Local developers consulted regarding potential housing construction along the Upper River stated that existing state programs for tax-exempt housing revenue bonds should be revised to allow favorable financing of rental properties. The role of the URDC will be to engage developers, legislative staff, and elected officials in discussions regarding potential public assistance to the redevelopment projects.

In August of 1999 the Minneapolis City Council took an important first step to funding implementation of the Upper River Master Plan by dedicating annual revenues generated by the Upper Harbor Terminal operation to Upper River projects. With the bonds for the UHT paid off in 1999, current estimates are for revenues of \$350,000 per year, for as long as new investments in equipment are not required. The MCDA will use these funds to promote redevelopment projects, for instance improvements to the Grain Belt Brewhouse to make that property more attractive to private investment. This initial flow of funds should be used to leverage more investments from public and private sources, resulting in a steady stream of funding and projects returning benefits to the ecological, social, and economic life of the Upper River corridor.

Implementation Plan Conclusions

Real and tenacious obstacles exist to implementation of even small-scale parts of the Upper River Master Plan. However, the history of land use in the Upper River corridor shows if anything that change is inevitable. Many of the opportunities for implementation lie completely within the purview of the City of Minneapolis. The Upper Harbor Terminal is a 48-acre asset that can and should be redeveloped to a use with higher tax and social value. Regarding ongoing and future land-use conflicts, it is recommended that the City of Minneapolis vigorously defend its right and responsibility to control land use along the Upper River. Potential nuisance land uses should be denied to promote the general welfare. The Upper River should not be an enclave where heavy industries cause impacts external to their properties, and limit access to the public right of way or the river. Existing building and business operating codes should be consistently enforced.

The Implementation Plan makes two major recommendations, organizational and strategic. First, the rationale and outline for a new non-profit redevelopment corporation is given. **Creation of an Upper River Development Corporation is the most important step to ensure that the Master Plan is implemented.** A dedicated staff will remain focused on the Upper River, lobbying, fundraising, and seeking development proposals. Without such a single-purpose entity, implementation of the Plan will be subject to varying levels of interest and prioritization at existing public agencies. The second major recommendation is for a strategic approach to implementation. The Plan addresses a very large area, calling for not only the acquisition of a continuous public riverfront, but also associated land-use changes, and large infrastructure projects. The project-based approach described in the Implementation Plan shows how the overall comprehensive redevelopment project can be divided into smaller doable projects.

The public investments outlined in the Upper River Master Plan are in the range of hundreds of millions of dollars. Private investments in new housing, office, commercial, and light-industrial construction are likely to be over half a billion dollars. While these costs are high, so are the prospects for tax-base development and profits from private development. Public costs can be spread out over a period of 30 years. **It must be noted that inaction to improve the condition of north and northeast Minneapolis has an equally high monetary and social cost. The Mississippi River offers the best opportunity to reinvigorate struggling communities: investments can be made in new amenities and new housing and employment or in more social services concentrated in areas of declining tax base.** The Upper River Master Plan seeks to clarify these policy choices, while promoting the opportunities inherent to one of the most enticing riverfronts in the region.

The Upper River Master Plan began with the ambitious goal of a continuous riverfront park corridor. As the scope of action necessary to meet this objective became apparent, the Plan sought the best use of adjacent lands, finally recommending that a completely new vision of what the Upper River corridor could be is necessary to realize the intrinsic value of the Mississippi in Minneapolis. Bringing the planned transformation to fruition will require a steady will and involvement of community leaders over many years. The Master Plan is the most comprehensive investigation of the potential of the Upper River ever created, it is a good beginning for the future.

Recommendations Summary

- Establish an Upper River Development Corporation as a non-profit entity with the sole purpose of implementing the Upper River Master Plan.
- Rezone property in accordance with the Upper River Land Use Plan.
- Close the Upper Harbor Terminal.
- Utilize a strategic approach to implement stand-alone parks and redevelopment projects, starting with publicly-owned properties.
- Seek partnerships with private property owners, private foundations, and non-governmental organizations interested in improving the Upper River.

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