

# separation of the city & the river

enhancing Lowertown through the revitalization of St. Paul's industrial waterfront



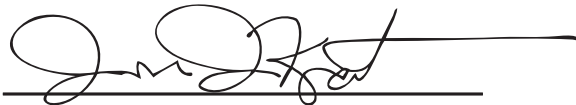
Separation of the City & the River :  
Enhancing Lowertown through the revitalization of St. Paul's industrial waterfront

A Design Thesis Submitted to the  
Department of Architecture and Landscape Architecture  
of North Dakota State University

By

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I could not have gotten this completed without the support of my professors, friends, and family.  
Thank you all for pushing me through to the very end.

## abstract | |

This research addresses the historic Mississippi riverfront in Lowertown, St. Paul, Minnesota, focusing directly on Lower Landing Park. The Lower Landing Waterfront Park Project aims to rediscover the underutilized industrial waterfront for public use. Through the integration of the urban and natural setting, Lower Landing Waterfront Park will provide users with a mixed-recreation open space and a riverfront promenade that will reflect the social and historic influences of the Lowertown warehouse district. According to the author, the resulting relationship between the adjacent community and the River's edge will be reestablished, thereby enhancing the quality of living.

## keywords

*riverfront | accessibility | history | culture*

“The historic waterfront, which dramatically portrays the history of industrial capitalism and its social [effects], is a particularly relevant site for examining urban transformations that focus on creating livability.”

[Hagerman, 2007]

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chapter one.

## typology | |

This project cannot easily be studied as a single landscape typology, as it is the combination of an assortment of typologies: 1) riverfront park; 2) contemporary urban park; 3) riverfront promenade; and, 4) streetscape.

## statement of intent | |

I intend to place emphasis on repurposing the currently neglected riverfront, which is Lower Landing Park in Lowertown, St. Paul, Minnesota. The redesigned Lower Landing Riverfront Park aims to provide users with an accessible outdoor waterfront through the integration of both the natural and urban settings. A bridge structure is proposed to physically link the residents of Lowertown to the park, providing safe accessibility for users.

“[Regrettably] in many cases, where a waterfront area is used for residential purposes, the area is sealed off from the public with physical or psychological barriers. [It has been emphasized] that such barriers should be avoided and visible and attractive walkways should be constructed by the water(Sairinen, 2006).”

As it is now, the park is physically and visually inaccessible, inhibiting the use of the space, rendering it neglected. Rail lines, elevated rail structures, high-traffic roads, and a 20-foot wall separate the riverfront from the people.

It is this physical and visual disconnection to the river that I seek to change. Lower Landing Park has never been perceived as an amenity to Lowertown; poor accessibility and a lack of spatial diversity and program elements limit the current uses of the space. Consequently, this redesign and reconnection to Lower Landing Riverfront Park will enhance the quality of living in Lowertown in these ways:

- Increase views and access to river
- Create opportunities for active and passive water recreation
- Define Lower Landing Riverfront Park as a destination
- Maintain unique, historic character

As a result of this research, I will produce a series of conceptual designs based upon inventory and analysis of the site.

These concepts will be developed into a master plan, accompanied by design details, construction drawings, perspectives, and section/elevations, in order to properly display the integration of the project within the existing context of Lowertown.

As Lowertown continues to expand and increase in density, the need for public open spaces will increase, as well. The rejuvenation of Lower Landing Riverfront Park will provide Lowertown with a spatially defined and interactive waterfront destination.



## chapter two. critical evaluation of cited papers.

## site background ||

Lower Landing Park is the current name of the linear open space that forms the historic wharf of the Lowertown district in St. Paul, Minnesota. It is this space that I would like to transform into Lower Landing Riverfront Park, in an effort to rehabilitate the historic, but underutilized Mississippi riverfront. This design will provide riverfront access to the local residents, as well as visitors touring the city. I propose to accomplish this riverfront rehabilitation by bridging the space between the historic St. Paul Union Depot and the riverfront in the existing Lower Landing Park.

The re-establishment of the waterfront will bring about a renewed focus on the development of spaces adjacent to the new park, attracting developers, bringing along new residents and new retail opportunities. Revitalizing the riverfront will enhance the livability of Lowertown and further define the district as a product of its own environment.

## hypothesis ||

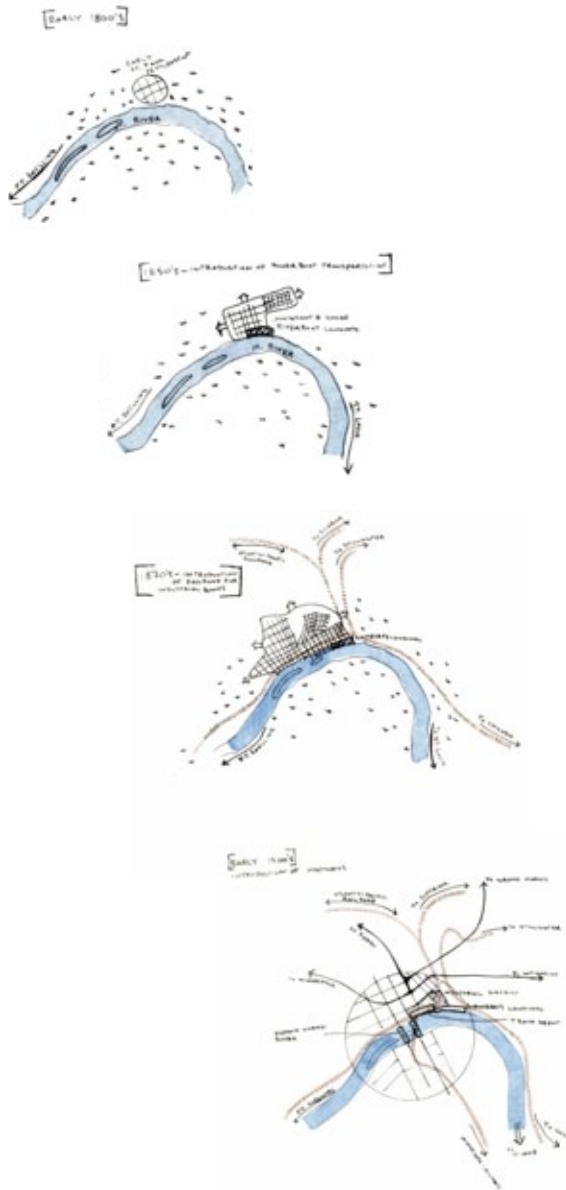
The Lower Landing Riverfront Park in St. Paul, Minnesota, will provide public access to the derelict industrial riverfront of the neighborhood. As a result, the rejuvenation of this deteriorating space will provide Lowertown with a spatially- defined and interactive waterfront destination, thereby enhancing the quality of life within the area.

## history ||

Lowertown, St. Paul's warehouse district, is a historically and culturally significant place that began as sacred ground and home for the Dakota Indians. During the late 1800's, European settlers built the city of St. Paul, using this site as a major docking area. "Lower Landing provided a soft landing at the bend of the river, with gentle access to the uplands" (Cunningham Group, 2011).

The original Lower Landing Park was a hub for industry and transportation, adding more infrastructure and industrial growth to Lowertown. "Lured by the promise of good jobs, thousands of immigrants passed through Lowertown. The Lower Landing and Union Depot welcomed thousands of immigrants to the Upper Midwest as they made their way up the Mississippi by boat and across Minnesota to Wisconsin by train" (Cunningham Group, 2011). After the Great Depression, Lowertown took a hit; the area was left alone, falling aside as a neglected district.

Fortunately during the 1970's, the City of St. Paul, along with a private foundation, began to reinvest in Lowertown. It is this reinvestment that became the catalyst for urban renewal in downtown St. Paul (Cunningham Group, 2011).



## current analysis ||

Lowertown has grown and evolved while preserving its historic and cultural atmosphere. Currently, it is a mixed-use community that houses artists, musicians, and young people living and working in the surrounding area. As a result of the restoration of the Union Depot, Lowertown will see an increase in both residents and visitors (Cunningham Group, 2011). While the Lowertown District is home to various local restaurants, nightlife, and creative expression, it has grown away from the riverfront, turning the development focus inward. "For over a century, the river was a working river, an economic driver, but not an amenity to the city or Lowertown" (Cunningham Group, 2011).

Lowertown is growing larger due to the new lightrail connection between Minneapolis and St. Paul, pulling people directly to the Union Depot and into the heart of the district. It is this new influx of people that has raised attention regarding the enhancement of Lowertown as a place for the community to live, work, play, and collaborate (Cunningham Group, 2011).

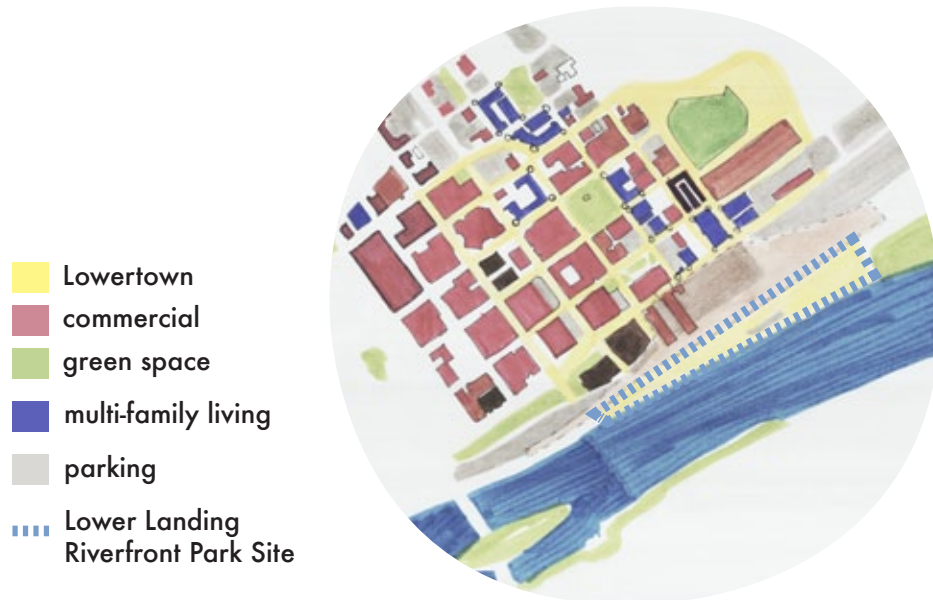
## problem ||

The largest limitation to the existing Lower Landing Park, both directly and indirectly, is the elevated rail deck and flood protection wall that runs parallel to Warner/Shepard Road.

"Walls, barriers, underpasses, bridges, and steps have confused and complicated streets... The aim, as opportunities for change occur, should be to create a barrier-free urban area- one where people can easily see and get to where they want to go" (Tibbalds, 2001). This visual and physical barrier separates the people of Lowertown from the riverfront, deterring the use of the riverfront as an amenity for the public, rendering it a predominantly derelict and empty space.

As the residential population of Lowertown increases, it is imperative to continue to develop and maintain open, public, green spaces. "The opportunity should always be taken to remove barriers and open up the town or city to greater accessibility" (Tibbalds, 2001).

This research builds upon the site strengths and weaknesses to create a new public waterfront open space.



## sub-argument questions ||

- Why is public open space important in an urban setting?
- What is the importance of public urban waterfront space?
- Why is public accessibility to open space important?
- What is the definition of 'quality of living'?

## argument | |

### *Why is public open space important in an urban setting?*

Throughout the history of public places, beginning with the ancient Greek agora, open spaces for the public to collectively gather have been found to be at the center of civilized urban living (Shaftoe, 2008). While open space is currently a small piece of the puzzle that is urban planning, it is necessary to explore and develop a clear understanding of the importance of open space for the public.

The importance of open space within an urban setting is explained in *Urban Parks and Open Space*, by Alexander Garvin and Gayle Berens, who argue that, ultimately, it is our open space networks that form our cities. "In redeveloping our cities to accommodate growth, we can learn from 19th century city development and from more recent suburban developments. In both cases, parks and open space are often the primary organizing elements that shape development, create livability, and preserve property values" (Garvin, 1997). Therefore, according to Garvin and Berens, it is the open spaces within a city that give it a life of its own. The strongest open spaces, "Can promote community investment, educate citizens about the environment, contribute to a city's unique character, and link surrounding buildings to create a sense of place" (Garvin, 1997). The existing Lower Landing Park does not accomplish these goals, but with the redesign of the area, the park is expected to achieve them to become a unique destination space that increases social interaction. Consequently, the Lowertown Riverfront Park project will be an improvement to not just the physical scale of the city, but also to the social aspect. Open spaces are essential components of successful urban cores because of the opportunities they provide, which impact and influence the overall experience or a place.

Furthermore, Garvin and Berens suggest that open space within the urban realm can aid in building an image or identity for a city, thus boosting the morale of nearby residents, providing a place that can be pointed at with a sense of pride.

In his book, *The Social Life of Small Urban Spaces*, William Whyte argues that, "It is far easier, simpler to create spaces that work for people, than those that do not" (Whyte, 1980). Through a series of observational surveys, Whyte was able to methodically define what specific program elements need to be present for a public plaza to thrive. Whyte's purpose was to grab the attention of city planners, urban designers, landscape architects, and architects so as to teach or educate them on the design of successful open spaces in an urban environment. For instance, Whyte states, "A good new space builds a new constituent. It simulates people into new habits- and provides new paths to and from work, new places to pause" (Whyte, 1980).

The Lowertown Riverfront Park site is not at the heart of the city for people to pass through during the workday, but instead lies along an underutilized section of the Mississippi riverfront, marking the physical edge of Lowertown. Whyte claims that, "Some of the most felicitous spaces are leftovers, niches, odds and ends of space that by happy accident work very well for people... It is wondrously encouraging that places people like best of all, find least crowded, and most restful are small spaces marked by a high density of people and a very efficient use of space" (Whyte, 1980). The linear form of the Lowertown Riverfront Park creates a series of challenges, including: 1) lack of space; 2) lack of elements; and, 3) lack of events/planned uses.

Instead of approaching these as challenges, Lowertown Riverfront Park will capture the full experience of the space, efficiently utilizing the whole space, and revitalizing a derelict space to attract new users and bring more attention to the entire Lowertown district. As industrial waterfronts continue to become repurposed as part of the urban renewal process, opportunities to design challenging, narrow, yet long, waterfront spaces will also continue to become more prevalent.

In the book *Creating Convivial Spaces*, author Henry Shafteoe writes about the integration of successful and unsuccessful public open spaces within the urban setting. Shafteoe argues that, "Public space...is now of central political importance to questions of sustainable, equitable, and enriching urban life" (Shafteoe, 2008). The author writes in an exploratory tone, expressing the various components that collectively form the ideal convivial public space. "Such places should consist of a rich, vibrant, mixed-use environment, that... is visually stimulating and attractive to residents and visitors alike" (Shafteoe, 2008). While Lowertown Riverfront Park is not expected to involve any mixed-use infrastructure, the space itself is intended to serve a variety of users, providing an attractive open space that offers an array of activities.

Public open spaces form the identity of an area, influencing the social and economic value of a place. The current Lowertown Riverfront Park site is removed, offers poor accessibility, and draws in very few users. Shafteoe claims that, "Many parks and streets are so derelict and run down that people feel scared to use them" (Shafteoe, 2008). This being the case, it is imperative to design this underutilized space with the intention of creating a new attractive destination because, "In contrast, places that are well designed and cared for feel safer and people tend to use them more" (Shafteoe, 2008).

The importance of having well designed open spaces in any urban setting, not only Lowertown, lies in the beneficial outcomes. "Public spaces are important for health, well being, learning, conflict resolution, tolerance, and solidarity" (Shafteoe, 2008).

Lowertown as a district is undergoing a phase of urban renewal at this time, which is why it is necessary to understand both the importance of open spaces, and the varying functions successful public spaces have to offer the surrounding community. Shafteoe asserts that the function of any urban open space should be to permit and encourage interaction- meetings, encounters, and challenges, evolving into a community stage where, " The drama of social life can be enacted" (Shafteoe, 2008). Therefore, Lowertown Riverfront Park must not only provide users with open space but also provide users with a space that places emphasis on increasing social interaction in an outdoor environment.

Furthermore, the amount of open space available within the urban environment has been decreasing, reflecting the increase in population density and growing need for more residential infrastructure. Ironically, with an increase in population comes the need for increasing the amount of available public open spaces. In his book *For Pedestrians Only: Planning, Design, and Management of Traffic Zones*, Roberto Brambilla emphasizes the relationship shared between open space, density, and pedestrian accessibility. "As density increases in cities, allocation of open space decreases to the point where pedestrians are squeezed into the leftover spaces between traffic and buildings" (Brambilla, 1977).

Lowertown Riverfront Park is intended to be an innovative public open space that bridges the gap between the urban and natural settings while accommodating user accessibility.

It is essential to be aware of the relationship that is shared between user and open space; Brambilla states that, "Urban spaces often represent an entire city... The amount of available urban space has an effect on human behavior. If there is too little room to perform physical tasks or if objects and other people in a given space interfere, the natural [flow] will be inhibited" (Brambilla, 1977). The district of Lowertown has been undergoing urban renewal initiatives over the past 20 years, which has led to a focus on infrastructure and the built environment, neglecting open space and public accessibility. "The neglect of those areas which are responsive to social needs has been a chronic disease of major urban areas. It is most apparent...where emphasis was placed on exploiting land values and making use of decreasing open space for building construction and the accommodation of more vehicles" (Brambilla, 1977). Therefore, the existing Lower Landing space provides a feasible site for a new convivial public space.

### *What is the importance of public urban waterfront space?*

Historically, urban waterfronts have provided the public with a place conducive to social interaction with regards to water access transportation, and trade services. Regrettably, Lower Landing Park has progressively become more disconnected from the city as the focus shifted from industrial growth to the revitalization of the built environment.

In his book, *Urban Waterfront Development*, Douglas M. Wrenn argues that, "As options of commerce have changed, the nature and use of urban waterfronts have changed... Urban waterfronts were allowed to deteriorate as a result of old age, underutilization, and lack of investment" (Wrenn, 1983). Although many of these waterfronts remain in their current condition, Lowertown would benefit from the rejuvenation of the existing waterfront space. Wrenn compares the historic use of waterfront space and contemporary space, observing that these areas originally provided the community with a focal point of activity. "In every colonial port the waterfront was an important meeting place and a symbol of community strength" (Wrenn, 1983). Therefore, because Lower Landing Park has historically been a place for social interaction, it is imperative that revitalization succeeds in restoring this social gathering space.

As David Specter states in his book *Urban Spaces*, "Water is the best edge a city can have. It creates at the same time a barrier and a sense of unlimited space. It reflects by night and cools by day. Waterfront is any city's most valuable natural asset" (Specter, 1974). The current lack of accessibility to the existing Lower Landing Park area prevents the community of Lowertown from fully connecting with the river and the waterfront.

Specter emphasizes the importance of valuing waterfront space as an amenity to the city, reflecting that Lowertown can benefit from the rejuvenation of Lower Landing Park because of the recent increase in density and activity that has been introduced to the community. A new, publicly accessible, interactive waterfront park is intended to be the outcome of this, Separation of the City & the River: enhancing Lowertown through the revitalization of St. Paul's industrial waterfront project.

The rediscovery of industrial waterfront space has been on the rise in recent decades, drawing the attentive eye of the public. These spaces have become home to new development opportunities, but economic value is only a fraction of the interest. The article, 'Pleasure, Politics, and the Public Interest,' written by Leonie Sandercock, suggests that waterfront space should be viewed as, "an opportunity to remake the relationship between the city and waterfront and provide significant social, recreational, and environmental benefits" (Sandercock, 2002). Unfortunately, because Lower Landing Park is currently cut-off due to physical barriers, access to, and recreation within the space is limited, attracting very few users to the area regularly.

Urban waterfront spaces need to function on various levels in order to be successful places that encourage social interaction. The importance of a waterfront open space relies heavily on the amenities provided within the site, consequently drawing in a larger variety of site users daily. To this end, Sandercock argues that, "First the area should be complimentary to downtown.... with a cultural and entertainment focus to attract both locals and tourists. Second, it should be mixed-functionality, socially, and formally. Third, it should be designed to create a lively public waterfront with full public access" (Sandercock, 2002).

The anticipated outcome to reestablish the space as a new, accessible, interactive waterfront park is designed to link the Lowertown community back to the river, creating a cultural bond between the neighborhood and the amenities that it has to offer. Therefore, the Lowertown Riverfront Park project will attempt to "become incorporated into the collective public life of the city and its everyday conviviality" (Sandercock, 2002).

"We perceive the transformation of urban waterfronts in North America over the last 30 years contributing to and often playing the major role in ongoing efforts to restore the centers of our cities and towns to economic and social health."

[Breen, 1994]

As Lowertown continues to develop, renew, and grow in both attractions and density, the relationship shared between the community and the riverfront must be improved and reestablished. The value of public waterfront space within an urban setting, such as that of Lowertown, has great potential to become a defining feature of the neighborhood and/or city. Ann Breen, author of, *Waterfronts: Cities Reclaim Their Edge*, wrote “We perceive the transformation of urban waterfronts in North America over the last 30 years contributing to and often playing the major role in ongoing efforts to restore the centers of our cities and towns to economic and social health” (Breen, 1994). Unfortunately, Lowertown has placed more importance on the preservation, rehabilitation, and repurposing of the historic buildings that form the built infrastructure of the community.

The riverfront has been blocked by both physical and visual barriers since the late 1800’s and has become a disconnected empty space that contributes to neither the social nor the economic health and well-being of the community. Breen also argues her opinion of what defines a successful waterfront, explaining that, to create a convivial public space, it must: 1) provide physical access to and alongside the riverfront; 2) provided visual access, enabling onlookers to see glimpses of the space from outside of it; 3) sensitive, design-friendly seating areas both in terms of size and bulk; and, 4) a barrier-free setting (Breen, 1994). Through the comparison of Whyte’s analysis of small social spaces and Breen’s analysis of urban waterfronts, similar program elements begin to arise, building around the basic components of successful urban design. The Lowertown Riverfront Park project aims to be influenced by both Whyte and Breen, to develop and design a successful destination place for the people.

### *Why is public accessibility to open space important?*

As discussed previously, the book, *Urban Parks and Open Spaces*, written by Alexander Garvin and Gayle Berens, expresses the basic importance behind safe and easy pedestrian accessibility. “Perhaps the most appealing way to recapture public outdoor space is to make waterfronts accessible and more attractive” (Garvin, 1997). The existing Lower Landing Park lacks both pedestrian access, and engaging and varying program elements, which only further removes the public presence within the space.

Designing with the cohesive collaboration between the built and natural environment tends to produce the most successful open spaces. More importantly are the routes of accessibility that bring pedestrians into the site on a regular basis. These access routes “Must emphasize the unique advantages of social integration and pedestrian access to amenities” (Garvin, 1997). Lower Landing Park currently offers neighborhood residents few public events and very little with regards to site attractions, but the Lowertown community will see the benefits that arise with the rejuvenation of the riverfront as a public destination. “By knitting together physical and social space, parks and open space play a crucial role on defining and strengthening the advantages of city living” (Garvin, 1997). Urban open spaces and parks are designed for people to experience and, without safe and easy routes of accessibility they tend to become forgotten, empty, and sometimes dangerous. Thus, as Garvin and Berens stated, the access routes created must be comfortable for the pedestrian, providing space to move, sit, and interact socially.



Accessibility to and from Lower Landing Park, as it exists, is poor, placing emphasis on the automobile approach. Pedestrians were an afterthought, and due to the physical barriers that currently exist, Lowertown is predominantly disconnected from the park and riverfront, except by vehicle. The intent of the Lowertown Riverfront Park is to rejuvenate the riverfront. Therefore, analysis of existing access points is necessary, not only to understand the current site conditions, but also to develop a successful solution which provides insight as to how pedestrian accessibility can be improved upon.

In her article “Pedestrian Access as a Measure of Urban Quality,” Emily Talen presents a theoretical argument that analyzes the importance of accessible pedestrian spaces within an urban setting, arguing that there ought to be a clearer link “between where people live and work and where they get the goods and services they require for a high quality of life” (Talen, 2002). Talen demonstrates how access can and should be given a more prominent role in design. “The quality of access and its function of promoting the integration of activities is a long-standing component of theories about good urban form” (Talen, 2002). Consequently, when analyzing the points of entry and the existing access routes to Lower Landing Park, it becomes clear that the qualities of access need to be improved.

Talen asserts that pedestrian access, very simply, revolves around the distance in which one has to walk to arrive at a destination, and once there, what other urban opportunities may also be within walking distance (Talen, 2002). “Pedestrian access is a vital dimension of urban quality” (Talen, 2002), and therefore, to enhance the quality of living in Lowertown, access must be improved upon, creating new connections to existing places.

Connectivity within an urban setting is the glue that holds the area together, and due to existing physical barriers, the riverfront space that defines the southern edge of Lowertown is disconnected. The improvement of the quality of pedestrian access routes to Lower Landing Park will increase the activity of pedestrians, improve the liveliness of the Lowertown riverfront, and physically reconnect the district to its naturally defined boundary.

## What is urban 'quality of living'?

The Lower Landing Park Project is intended to improve the quality of living in the Lowertown district of St. Paul, Minnesota, but in order to do so it is necessary to understand the relationship between quality of life and the urban setting. In his article, "Shaping Neighborhoods and Nature: Urban political ecologies of urban waterfront transformations in Portland, Oregon," author Chris Hagerman examines the redevelopment of Portland's historic industrial waterfront, defining and analyzing what makes up the livability of a place. Hagerman initially states, "Livability is a complex and unstable set of understandings combining ideologies of nature, society, urbanity, and nostalgia" (Hagerman, 2006). Although later, Hagerman establishes that, "Criteria that define a place as livable are easier to come by and reflect a focus on urban design, environmental quality, and human and economic development" (Hagerman, 2006).

Therefore to assess the quality of livability within Lowertown, it is imperative to analyze the existing conditions related to each of the four criteria listed. Hagerman further argues that designers are progressively moving towards designing, "A more livable landscape in terms of reduced automobile dependence, walkable neighborhoods, and greater proximity to transit, shopping, and entertainment" (Hagerman, 2006). The renovation of the historic Union Depot has rekindled public transit opportunities not only within Lowertown, but also by connecting the district to other portions of both St. Paul and Minneapolis. Yet the open spaces surrounding the depot are few and far between, offering a limited amount of green space for transit riders to interact with. Improving the livability of a place makes it all the more enjoyable and consequently, draws more people in.

Lowertown is a rapidly developing district that is bound to experience the pressures of expansion, which includes the creation and preservation of public open spaces. According to Hagerman, "Preserving and enhancing the livability of a place has been portrayed as a prerequisite for enticing people to stay in the central city or return to it" (Hagerman, 2006). Comparatively, the Lowertown renewal has thus far focused, for the most part, on the improvement of infrastructure, but as already mentioned, the importance of open space is rapidly becoming prevalent.

Douglas C. Smith, author of *Waterfront Destinations*, begins to point out the connections between quality of life and the repurposing of industrial waterfronts in urban settings. Smith reveals various practical and beneficial qualities that pertain to the importance of the design of open spaces and the impact such spaces have on the livability of a place.

Accordingly, Smith argues that, "To be successful, urban waterfronts need to make use of the built and natural landscape to enhance the unique history, character, and qualities of the surrounding community" (Smith, 2008). As Lowertown continues to redefine itself, it also continues to expand and build upon the historic character of the eclectic district.

Quality of life within Lowertown is expected to increase as accessibility, walkability, and usability of public open space improve. Reintegrating a currently derelict site such as Lower Landing Park back into the district will reconnect the community with the riverfront, building upon the historic context of the site itself. Smith asserts that, "With effective planning, cities can restore and renew urban waterfronts into sustaining cultural centers that enrich the quality of life" (Smith, 2008). In addition, the more that the repurposed riverfront is tied into the local culture and heritage of the urban fabric it resides in, the more authentic the space will become, defining itself as a new destination.

The importance of a destination space and its relationship to quality of life is made clear in the article "Spectrum Matrix: Landscape Design and Landscape Experience," written by Terry Clements and Sarah Dorminey. Both authors define what it is that landscape architects are, what our overall goals are, and what landscape architecture aims to achieve in the built environment. Specifically, Clements states that landscape architects have a responsibility to design in ways that maximize the quality of life by means of promoting human interactions, enriching the overall experience, and by promoting physical, ecological, and psychological health (Clements, 2011). For this reason the quality of life in Lowertown will be improved upon with the redesign and the integration of a new Lowertown Riverfront Park. Designing a new destination that engages users and makes open space more accessible will, undoubtedly improve the quality of life in Lowertown by providing more opportunities for meaningful experiences to occur.

Concurrently, according to the article, "Accessibility and Usability: Green space preferences, perceptions, and barriers in a rapidly urbanizing city in Latin America," by Heather E. Wright Wendel, "A lack of public green spaces, [has] been linked to increased levels of crime and lower quality of life for urban residents" (Wendel, 2012). The Lower Landing Park, as it exists, is already home to many homeless people, rendering the public space less friendly and attractive. As a result, local residents become more pushed away, further removing the Lowertown community from the riverfront. But Wendel presents a solution, stating that, "Numerous studies have illustrated the social, environmental, and economic importance of urban green space. In particular, many residents use green space as a way to escape the stresses and demands of city living"(Wendel, 2012).

So, while the existing Lower Landing Park is observed as a derelict, neglected open space utilized predominantly by vagrants, there is an abundance of opportunities present. It is the intent of the Lowertown Riverfront Park project to redefine the riverfront as a place for public experiences and activity. Lastly, Wendel states, "Improving access to green space provides a means for improving equality within urban areas"(Wendel, 2012), which will increase the quality of living within the Lowertown district.

"Uses and activities [that] are more important than buildings to the life of a town or city. Greater diversity will help create a more livable city"

[Tibbalds, 2001]

Providing a destination space that is unique in character, ties directly into the historic context of the setting, and promotes social interaction and increased recreational activities will improve the livability of Lowertown by:

- Increasing the walkability of the district;
- Improving accessibility between spaces;
- Improving public green spaces within proximity to shopping, transit, and entertainment; and,
- Reconnecting the district with its defining edge and historic birth place.

It has been difficult to define quality of life and livability of a place, but for the purposes of this research, quality of life must be understood as a personal evaluation of the experiences unique to each user. Therefore, to successfully improve the quality of life within the Lowertown district, it becomes important to understand how and why to design for the public.

Designing for the public, to make people-friendly places, must not only meet the desires of the public, but must do so in a unique style, differentiating itself from other, similar places. In his book *Making People-Friendly Towns*, Francis Tibbalds approaches problems currently facing our urban centers and clearly demonstrates that it is not the individual components of the built environment that matters, but it is the components as a collective whole that form a place. To truly improve the quality of life in Lowertown, Tibbalds suggests, " We must concentrate on attractive, intricate places related to the scale of people walking, not driving. We must exploit individuality, uniqueness and differences between places. An attractive public realm is very important to a feeling of well-being"(Tibbalds, 2001). The quality of living is impacted by the unique design of the Lowertown Riverfront Park because it is directly linked to the attractive and engaging components of the space that collectively attract people and define the park as a public gathering place.

By providing more activities and opportunities for the public, the Lowertown Riverfront Park will increase the livability of the Lowertown district. As Tibbalds states, it is "Uses and activities [that] are more important than buildings to the life of a town or city. Greater diversity will help create a more livable city" (Tibbalds, 2001). The increase in activity will impact social interactions, economic development, and draw more attention to the district, giving Lowertown a renewed sense of excitement.

## conclusion ||

The Lowertown Riverfront Park project will build upon the existing site strengths and weaknesses in order to create a new, convivial public riverfront space. The re-establishment of the riverfront will bring about a renewed focus on the development of spaces within and surrounding the site. Revitalizing this public open space will attract new users, and engage local residents who previously had ignored the space. Bringing new energy to the riverfront will enhance the livability of Lowertown and further define the district as a unique product of its own environment, boasting of a place that locals can take pride in and utilize. Providing access and recreation opportunities enhances the quality of living in Lowertown because it creates more versatility within the district, bringing more groups of people together in a common gathering place. The Lowertown Riverfront Park Project will build upon the existing site strengths and weaknesses in order to create a new, convivial public riverfront space.



Looking east, down Shepard/Warner Rd



from parking lot on site, facing elevated rail wall



(above) sidewalk along Jackson St. going under elevated rail deck, looking north into Lowertown



(top) Jackson St. looking south at elevated rail deck, site is on the other side of the tunnel  
(middle & bottom) examples of surrounding contextual material palette

## case study ||

Project Name: Allegheny Riverfront Park

Location: Southern Shore, Allegheny River, Pittsburgh, Pennsylvania

Date Designed/Planned: Design completed in September 1994

Construction Completed: Lower tier- 1998; Upper tier- 2001

Construction Cost: 11 million, 10 million for the road adjustments

Size: 4,000- foot long linear strips; 50- foot wide maximum on upper level, 15- foot wide cantilevered lower tier

Landscape Architect(s): Michael Van Valkenburgh, Laura Soland, & Matthew Urbanski/ MVVA

Artists: Ann Hamilton, Michael Mercil

Client/Developer: Pittsburgh Cultural Trust

Associated Consultants: Ove Arup & Partners (structural engineering), Frederic R. Harris, Inc. (civil engineering), GAI Consultants (geotechnical engineering), Phillip Craul (soils), Inter Fluve (hydrology), Urban Design Associates (planning)

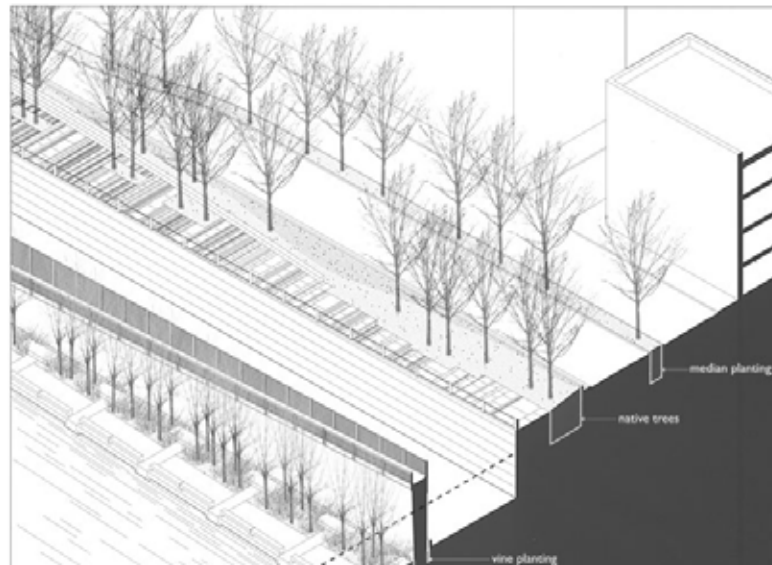
## context ||

Allegheny Park, located on the southern shore of the Allegheny River in Pittsburgh, Pennsylvania, is a linear waterfront park that creates a connection, linking the larger systems of the city, nature, and industrial context of the site itself. Frederick Law Olmstead Jr. had originally developed a park system along the riverfront but that turned into a series of highways not long after. The upper level became a six-lane highway and the lower level was a four-lane highway with parking. The introduction of these expansive roadways limited the peoples' ability to access or utilize the waterfront at all (Sokol, 2011).

As it stood, the riverfront was derelict and disconnected from the city, yet it was one of the first things someone entering Pittsburgh would encounter crossing one of the several bridges that connect into the city. It became clear that the design of this space would need to attempt to re-link the riverfront, while consecutively overcoming various physical barriers. The Pittsburgh Cultural Trust had envisioned a design program that both redefined the northern boundary of the cultural district, and restored the city's relationship with the Allegheny River. These key elements influenced the design and development of the park, which was completed in phases beginning in 1998 with the opening of the Lower Tier, and ending in 2001 upon completion of the Upper Tier.



[1] photo looking east along the lower river walk



[2] section diagram of upper plaza, ramp, hypernature planting, and lower cantilevered river walk



## site analysis | |

The boundaries of Allegheny Riverfront Park include the Allegheny River on the north and highways on the south. The park is also tucked between the Tenth Street Bypass and Fort Duquense Boulevard, both of which are high-frequency roads (Sokol, 2011). Three large, yellow, historic bridges can be seen from the park, as well as the Pittsburgh city skyline. The upper tier is on top of a twenty-five-foot high seawall, making the lower tier accessible only by stairways located at the Sixth and Ninth Street bridges. The presence of the bridges, on-ramps, and highways prevailed over the presence of the park, reinforcing the disconnection between the city and the river (Amidon, 2005). The highway bisecting the park and the dramatic change in elevation impacted the settings of each site. Along the Upper Tier is the cultural district, composed of a civic, or welcoming landscape; the highways, ramps, and bridges form the infrastructural landscape; and along the Lower Tier, the landscape naturalizes as it meets the Allegheny River. The lower level is within the floodplain of the river and the design of the park was required to address issues such as flooding and standing water. The design team concluded, after completing analysis of the site, that it would be imperative to the park's success to expand and abstract each of these three layers and integrate them together in one design (Amidon, 2005).

## project background & history | |

As a city, Pittsburgh has always been known for its rich industrial heritage. Since the early 1900's, the riverfronts were filled with shipyards that physically separated the city from the enjoyment of the river. The Olmsted Brothers devised a linked park system for Pittsburgh's waterfront in 1910, but the plan was set aside and the river banks were later constructed as highway corridors (Amidon, 2005).

## project genesis | |

After the Pittsburgh Cultural Trust had been formed in 1984, the Allegheny River began to gain more attention. Once the cultural district had undergone its own redevelopment, the PCT turned to the river. In 1994, The Trust issued a request seeking only qualified landscape architects to design the new Allegheny Riverfront. Michael Van Valkenburgh Associates, landscape architecture, was unanimously chosen, along with two professional artists, to collaboratively design an award-winning park (Amidon, 2005).

## design development ||

The basis of the design functioned around revitalizing the edge of the river, enhancing the positive experience of the newly redeveloped cultural district (Amidon, 2005). The MVVA design team along with the artists analyzed the space, noting limitations, strengths, and inspiration. The final design solution expanded on the site's existing limitations, utilizing each feature, highlighting them and integrating them seamlessly into the end product. For this to be a reality, the team concluded that, given the narrowness of the current site, the new design must amplify the useable space, providing more room for opportunity. This led to overtaking an existing 50-foot median atop the upper tier, and restructuring the road. It also meant designing, testing, and constructing a cantilevered concrete walk that hung over the water's edge. Gaining permission from various parties involved was a difficult task. Trying to work within the rules and comply with the federal, state, and local governments was nearly impossible, but after interpreting the rules in favor of the design, the process came together smoothly.

## role of landscape architect(s) ||

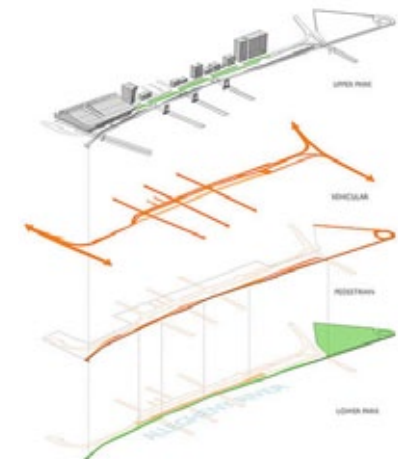
The role of the MVVA design team was to reclaim the industrial waterfront site. The design was to respond to existing infrastructure, environmental factors (i.e. flooding), connecting the people back to the river, and creating a destination that strengthens the city's cultural district and industrial heritage.

## program elements ||

The park design program was essentially constructed around the limitations of the site as determined by the MVVA design team. Michael Van Valkenburgh summed up the park's problem, stating, "It was a piece of land that nobody would think twice about (Amid on 2005, p. 35)." Together with the artists, the design team chose to emphasize the constraints of the site through the use of unique materials and artwork. "Exploration of materials allows the experience of landscape to be felt (Amidon, 2005)."

Specific programmatic elements included:

- Creating a linear continuum
- Upper tier must be reflective of Pittsburgh's identity
- Lower tier must respond to environmental factors, i.e. flooding
- Integrating artwork into the landscape
- Implying sense of movement
- Reinforcing art and park to create a landscape of a singular system



[3] exploded isometric diagram of Allegheny Riverfront Park circulation

## maintenance & management ||

The Allegheny Riverfront Park is overseen and maintained by the Pittsburgh Park Maintenance Team, specifically the State Division.

## user/use analysis ||

Significant pre-existing infrastructure was one of the largest challenges of the site. It was the identified challenges that created the program for this park. The site had been a linear space that people moved through, having little interaction with the surrounding landscape.

The Upper Tier responds to the civic setting of the cultural district, incorporating pathways and plantings that represent materials found in traditional Pittsburgh public spaces. "We wanted the upper level to be made from materials that were of Pittsburgh, so that memory of the city would be embedded in the physical materiality of the new park (Amidon, 2005)." The linear design has dense, canopy trees that provide users with shade as they progress through the space. Simple benches and seating areas were also designed, presenting site goes with more intimate or personal spaces to reflect, relax, or escape. The topography of the upper park was also altered, lowering the center to form a slightly bowl-like shape.

The civic landscape of the Upper Tier reaches out from the cultural district, drawing in a wider array of site users during the workday hours. From the upper level, people within the park are able to look out over the river, observing and taking in all of the views.

The transition space between the upper and lower sections of the park was one of the initial site issues that the design team had identified.

The user moves from the upper level to the lower level through a series of transitional zones:

1) Scalar transition; 2) spatial transition; 3) sectional transition; and, 4) an acoustic transition (Amidon, 2005). To physically move people from upper to lower level, large concrete ramps were designed to compliment the existing infrastructure and visually display the gradual transition and change of setting. The design used the addition of a sculpted copper handrail and a living wall, making the transition between experiences, of the upper and lower levels, both comfortable and pleasant (Skolt, 2011).

The lower tier has a much more naturalistic character compared to the civic landscape of the upper tier. The materials used are more loose, light, and wild in response to the natural and organic personality of the Allegheny River. The lower level was designed to address the flooding issue, incorporating a random tree system, comprised of native trees, along the riverfront. Large bluestone boulders also were added to the design of the lower level, providing seating but also creating a dense, heavily textured surface that builds upon the naturalistic setting of the lower tier (Amidon, 2005). The walkway along the lower level is a cantilevered concrete path that stretches along the Allegheny Riverfront, offering significant views of other portions of the city and the river.

## peer reviews | |

Allegheny Riverfront Park has been well received by the landscape architecture community since it opened in 1998. The riverfront park received a 2002 EDRA/Places Placemaking Award, a 2002 Design Honor Award, and a 1997 Progressive Architecture Awards Citation (mvvainc.com, 2014). It has been written about in ASLA's Landscape Architecture Magazine and on ASLA's website, accompanied by various case studies that have been completed for this project.

## significance & uniqueness of project | |

Allegheny Riverfront Park is unique because of the site-specific materials and features within the park. It is also significant because of the seamless integration of art, landscape, and culture that collaboratively create the full atmosphere of the park. In opening this space to the public, the city was able to redefine its edge, linking the once neglected space back to the district it is derived from. The design created by MVVA capitalizes on the challenges of the park, using the limitations to build a dialogue between both the upper and lower tiers. Allegheny Riverfront Park transformed a derelict and useless space into a new experiential public space that transitioned as the user progressed through (Amidon, 2005).

## limitations | |

Limitations of the site as it existed pre-redesign included:

- Small amount of available open space
- Ten lanes of highway traffic bisecting the space
- Twenty-five-foot high seawall
- Limited public site access
- Seasonal flooding
- Divided space

## generalizable features & lessons | |

The key features of the Allegheny Riverfront Park, seating, strong design, and careful and unique detailing, are now becoming more typical for any public space to be successful. The creative and coherent blend of art and landscape form the space, giving life and feeling to the experience as people move through the park. This park offers several lessons for the repurposing of difficult or "impossible" project sites.

The approach of the design team was specific to this project, analyzing the city and the site in order to develop an understanding of how the two components were related originally, and how to pull the cultural heritage of the city out into the physical design. This is an example of a project that interprets the rules to fit the issues and accommodate reasonable design alterations. Allegheny Riverfront Park demonstrates the importance of site analysis and how program elements can be formed around, or in response to, the identified limitations (Amidon, 2005).

The success of this park is a reflection of the space and all that it offers the user. This is no longer a narrow, linear passage. The riverfront has evolved into a sequence of experiences, which provide different opportunities for each user through the variation of repeated materials and textures. It is an exemplary design that demonstrates how even a constricted site can be manipulated and formed into a much more valuable space.

## future issues/ plans ||

The Pittsburgh Trust has moved forth from the restoration of the cultural district, leaving Allegheny Riverfront Park for the people's enjoyment. The park has played a large role in the renewal of downtown Pittsburgh within the last two decades, displaying how much parks can enhance the livability of a city (Amidon, 2005).

## contact for further information ||

Michael Van Valkenburgh Associates, Inc.  
Landscape Architects, P.C.  
16 Court Street, 11th Floor  
Brooklyn, NY 11241  
617.864.2076



[4] upper plaza of Allegheny Riverfront Park; site specific paving material and pattern; riverfront planting design

## chapter three. methodology.

## approach to research ||

The city of St. Paul, Minnesota, alongside various other groups and companies, has progressively been developing a plan to form a network of parks that would run along the entire 17-miles of St. Paul's Mississippi riverfront. Concurrently, Lowertown, St. Paul's historic warehouse district, spans from the edge of downtown to the river, providing the opportunity to integrate the urban and the natural settings. Unfortunately, there is a lack of both physical and visual connection between Lowertown and the Mississippi, ultimately driving people away from the Lowertown riverfront altogether.

Lower Landing Park was once the front entrance to St. Paul for immigrants, river pioneers, and trade services, but as industries began to expand and vehicle traffic increased, the river became progressively more blocked off, preventing the public from easily accessing the waterfront. Designing more accessible and user-friendly routes which link the city to the river via Lower Landing Park, will lead to an improved quality of living both for current residents and those yet to come.

As a portion of the city of St. Paul's riverfront plan, a community survey was conducted so as to better understand the common needs and desires of the expanding, mixed-use community. This survey placed various questions into four clearly defined categories: 1) access and connections; 2) parks and open space; 3) the river and you; and, 4) economic vitality. Within these categories, specific questions addressing accessibility, current passive and active site uses, potential future uses, and other opportunities that could prevail from the redesign of Lower Landing Park.

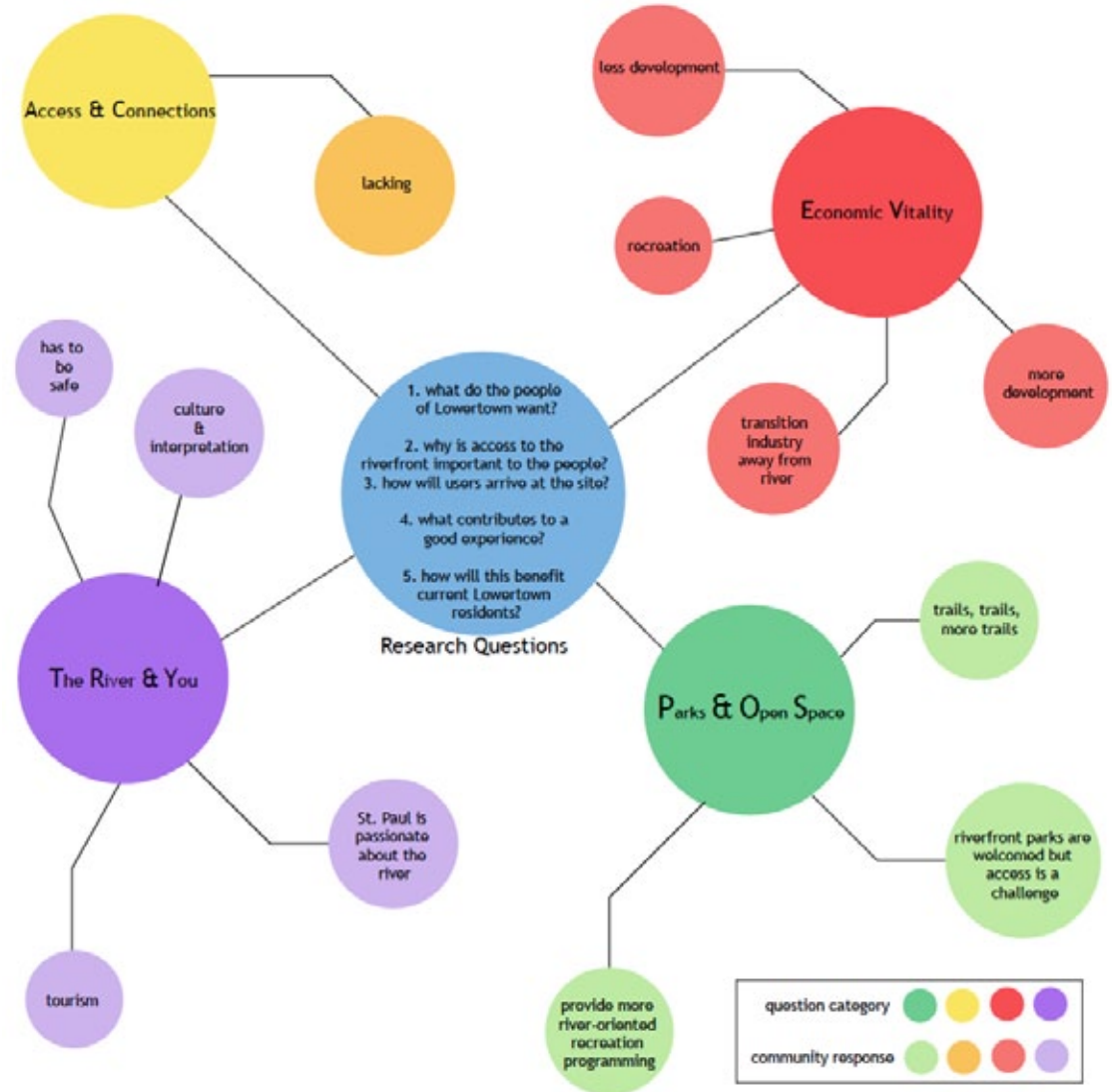
## themes of public feedback ||

- Wildlife and nature contribute to our quality of life.
- St. Paul is passionate about this river
- River corridor needs a higher standard of care/maintenance
- Link people to nature
- Recreation
- Safe pedestrian and bike connections are needed
- Connections to river corridor from downtown & neighborhoods are lacking
- Transition industry and airport away from river
- Provide more river-oriented programming & facilities for: canoes/kayaks, fishing, camping, trails, and birding
- Riverfront parks are great but accessing them is challenging
- Access and connections is the top issue
- Culture and interpretation are important to the river
- Need better wayfinding
- River corridor has to feel and be safe
- Barges and industry are part of river heritage and attraction

Although the survey results displayed that access and connectivity only had one response, this was the category that community had the most concern with. Aside from access, the survey also had a large amount of responses pertaining to the river & you category. Overall, the concepts for the redesign of Lower Landing Park came from the basic consensus of the public, who expressed interest in an urban, riverfront park, that is not overly developed, but provides easy access and more recreation opportunities for a wider audience, thereby enhancing the quality of living in Lowertown.

The next objective, following the analysis of the survey results, is to conduct an inventory of the existing Lower Landing Park site and its contextual relationship within the warehouse district. The inventory and observational analysis of the area will provide answers to the remaining research questions, identify the predetermined qualitative and quantitative data measures, and will aid in the spatial organization of elements within the final design. The basic unifying concept behind this entire research design intervention lies within the access to, and connectivity between the river and the people, bringing the river back into the city. Therefore, accessibility and connectivity will be constantly considered as the design process continues.

research questions & generalized public response diagram ||





## site introduction | |

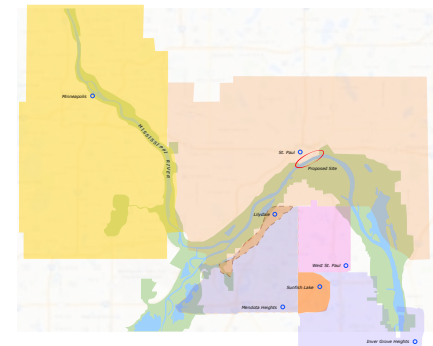
Lowertown, St. Paul, Minnesota, is an ever-changing, yet authentic urban neighborhood rich in culture, the arts, music, and history. Initially beginning as a warehouse district in the 1800's, Lowertown today has notably changed, transitioning into an eclectic mixed-use community. The atmosphere created in this neighborhood establishes Lowertown as a hub for creativity and historical preservation. The unique value lies in the ideology of Lowertown. A person can take a piece of the raw neglected space available and not only live and work there, but also mold it, turning the space into something useful, balancing between cultural values and innovation to create a new layer of history.

For the purposes of this research, Lowertown extends from Jackson Street to the Lafayette Bridge, and from the Mississippi River to Seventh Street East. Currently, Lower Landing Park is the open, linear, riverfront space between Jackson Street and the Lafayette Bridge, and the river and Warner/Shepard Road. The park forms the southern edge of Lowertown's boundaries.

Lower Landing Park is separated from Lowertown vertically because of elevated rail lines, the St. Paul Union Depot Rail Deck, and a large floodwall. Atop of the floodwall, to the east of the St. Paul Union Depot, is a second neglected open space, fenced off and completely inaccessible to the public.



state context map | |



city context map | |



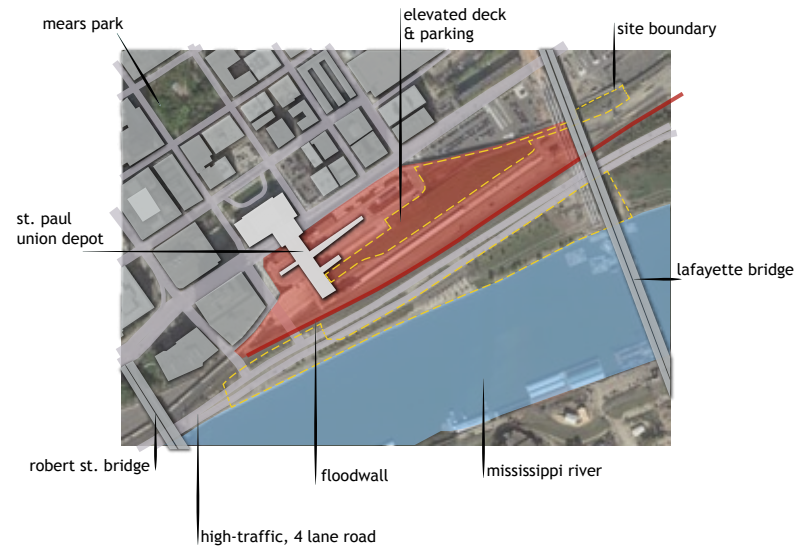
site context map | |

## site strengths ||

- Located in area that has seen growth and redevelopment in recent years
- Implementation of lightrail train system connecting St. Paul and Minneapolis
- Restoration of historic warehouse buildings to be used as residential living
- Restoration of the St. Paul Union Depot as a public transit hub

## site limitations ||

- Elevated railroad lines
- Visual and physical disconnect from river
- Fast moving automobile traffic



google earth map with site limitations highlighted



looking east from Robert Street Bridge, above site; highlighted areas represent site limitations and Lower Landing Riverfront Park site outline

## client/ user description | |

The client for the Lower Landing Riverfront Park project is the City of St. Paul Parks and Recreation. The department will direct the project, guiding the development and construction of the new civic space to completion. The Lowertown Riverfront Park will be utilized as a public gathering space, private picnic destination, waterfront recreation area, and a node along the regional bike trail system. It is a civic open space that will function as both a thoroughfare and destination.

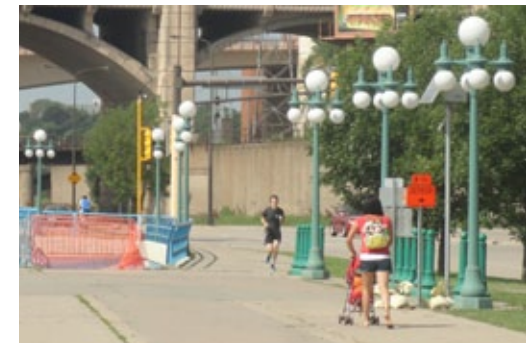
The user will vary throughout the day, accommodating local residents, business people, teens, families, and visitors seeking a new space to experience. Park goers may be drawn in by the variety of events hosted within the space or they may simply be residents seeking out an open space to escape to from the bustle of the surrounding city. The colorful history of the Lower Landing Riverfront Park site helps to define the experience of the space through the careful integration of local history and the influence of the urban setting. The park is expected to increase socialization, pedestrian activity, and waterfront recreation opportunities, therefore enhancing the quality of life within Lowertown.



cyclists passing through lower landing park on the Samuel H. Morgan trail



promotion of pedestrian awareness in the surrounding neighborhood



families and joggers get exercise through lower landing park

## data measures ||

Through both qualitative and quantitative analysis methods, this section will determine the means by which I intend to collect and evaluate the necessary research. The data to be analyzed will fall into one of the following categories:

- connectivity
- material type
- surrounding recreation opportunities
- barge traffic and waterway use

Quantitative analysis compares numbers, charts, and graphs, taking note of the differences and similarities reflective of definitive, statistical data. Qualitative analysis places focus on the overall experience of a space, providing a more philosophic interpretation of the collected data. The research data has thus far been collected through three methods:

- Literature
- Community responses to city-issued survey
- Personal observation-analysis of the site

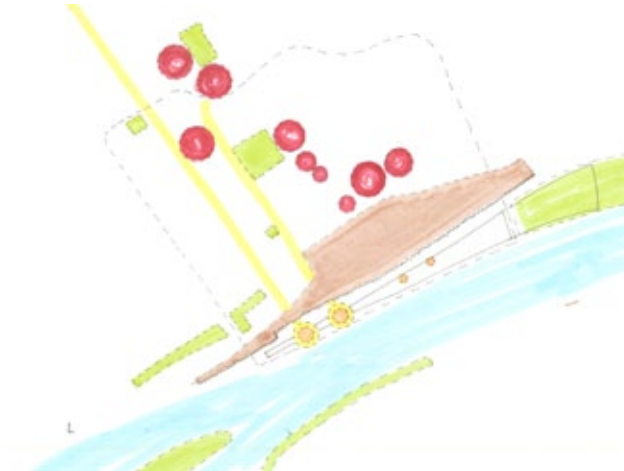


connections inventory | light rail, bicycle paths, major roads, barge traffic

## connectivity ||

Connectivity of place, the spatial distance between key nodes and points of interest, will be measured by analyzing current building use maps, traffic patterns, and public transportation circulation. The mapping of the connectivity of place is intended to:

- Identify key places of interest outside of the site
- Identify the path's of least resistance to the site
- Access to other recreation amenities in the surrounding community
- Access to larger, regional park and trail systems



connections inventory | multi-family residences, green spaces, direct access routes to site

## material type ||

The most effective way to find results is by analyzing what already exists. It will be most beneficial to analyze the success of the Allegheny Riverfront Park case study, to determine what appropriate material types may include.

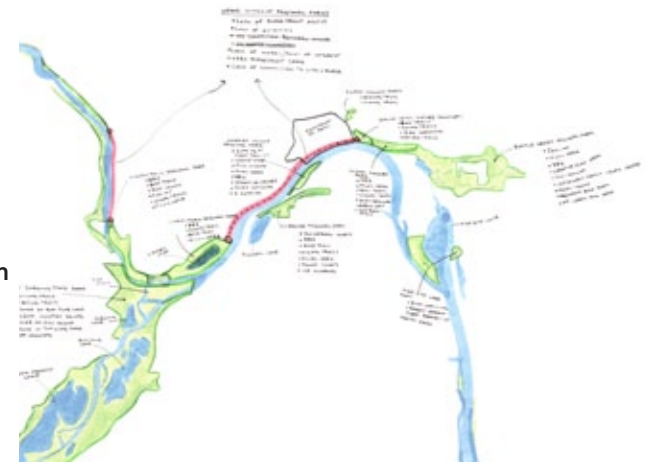
After studying the material types used and the unique site specific paving patterns, it was understood that the materials collectively influence the experience of the site. A strong understanding of the importance of materials in design is necessary in order to bring the entire site to life and determine the use intended for each smaller space within the context of the park.

Because of the historic value of Lower Landing to the Lowertown neighborhood, the material palette developed around an industrial revitalization theme.

## surrounding recreation opportunities ||

The site is located in close proximity to a wide variety of public green spaces- parks, malls, river outlooks, outdoor concert spaces, etc. To better understand what is going to be successful and thrive in the Lower Landing Riverfront Park space, it is necessary to consider what existing recreation opportunities are available. As a result, the design will provide recreation activities that further enhance the Lowertown District. Specific data obtained from this research includes:

- park sizes
- park uses
- unique, site-specific amenities
- park user demographics



surrounding recreation inventory | parks, amenities, sizes

## barge traffic & waterway use ||

The river was historically used for industrial transportation of goods and continues to be to this day. Barges have loading docks, drop-off docks, and docks for tugboats that are waiting during the barge unloading and loading process. St. Paul has a large amount of active barge loading stations along the riverfront, therefore restricting the designable space. Information provided by local barge companies, the Army Corp. of Engineers, local river use records, and national park records were used to analyze data regarding:

- current land use
- potential useable land
- current barge operating stations
- current public water access locations

The data measures collected from this research were obtained through the combined use of literature, survey's, personal observation, and various internet resources. Data obtained from personal observation began in July of 2014; the site was re-observed a second time in late November 2014, a third time in January 2015, and a fourth, final visit was conducted in early March 2015. Documentation of the site displays various seasons of the year, providing visual images depicting the different experiences of the park as it is affected by the elements. The data that has yet to be analyzed, will determine:

- Appropriate historic connection between the community and the river

This information will influence and impact the overall success of the Lowertown Riverfront Park, proving that the rediscovery and revitalization of a neglected, industrial, urban riverfront will inherently enhance the quality of life in Lowertown.



public water access locations map

## historic connection between community & the river | |

Due to the historic significance of the site as it relates to the development of industrial St. Paul, the design solution must represent that relevance. Analysis of the history of St. Paul has determined that, dating back to the late 1800's, the river has not been utilized as a public amenity. As such, the relationship between the community and the river has become absent. Data gathered from the Historical Society of Minnesota, including historic maps and narratives, has been analyzed, influencing the overall final design solution in both form and material palette. The industrial environment of the Lower Landing riverfront has evolved and transitioned with the development of the automobile while progressively removing the Lowertown community from the riverfront. Currently, the opportunity for new recreation space and economic development along the riverfront is predominantly prohibited.



public water access locations map

## chapter four. results.



## research findings | |

The results of the community survey are applicable to the Lower Landing Riverfront Park program elements, enabling the community to be more involved in the design process. The connectivity of the site within the urban context is poor. Due to the disconnection from the space, much of the public does not use the space frequently. Information gained from a various conversations held on site with active site users provided insight from others. Those who expressed an interest in talking, said very similar remarks regarding the lack of site amenities, lack of plantings, complete physical removal from the river, and the recreation opportunities that were desired.

The site observation analysis and user documentation has been influential in the final spatial design of Lower Landing Riverfront Park, determining locations for potential gathering spaces, grass play areas, and more intimate, small spaces. The findings thus far have shown that currently, the space is predominantly used by cyclists who utilize the existing regional bike trail running alongside the river. Furthermore, observational analysis has demonstrated that the largest in-site user is currently the homeless. The observation analysis data was collected over the summer months between May and August of 2014, the winter months of December 2014 and January 2015, and the spring months of March and April 2015.

Collectively, these results have influenced and enabled the final design solution to be more responsive to the needs of the community, while also benefitting the district socially and economically. By attracting more visitors to Lowertown and exploring what economic development opportunities are possible in the surrounding area, the district will thrive, transitioning into a convivial community.

## applicable site values | |

Research has revealed that it is the inclusion of open spaces within our urban environments that form the primary elements responsible for shaping the development of these area while increasing the livability and preserving the value of property (Garvin, 1997). Lowertown, St. Paul, Minnesota can be recognized as an urban environment that is experiencing large change with regards to density and connectivity, yet the riverfront has remained neglected and inaccessible to the public, making it an area of concern (Cunningham Group, 2011). As the area continues to experience various waves of urban renewal, research has shown that more emphasis has been placed on infrastructure and the built environment, pushing the importance of public space out of the picture. However, "Many cities are redefining themselves through the creation of waterfront parks, the attraction of water, whether for recreation, commerce, or views, is still magnetic" (Hopper, 2007). Therefore, based upon research that began with the basic importance of public open space and concluded with what quality of living can be defined as, I have been able to extract and apply various theories and ideas that collectively create a set of values to be applied to the Lower Landing Riverfront Park site.

While the idea behind transforming an industrial riverfront into a public open space is not new to the realm of Landscape Architecture, it is the approach to design that will define the Lower Landing Riverfront Park as a unique, convivial, public space. An example of how to achieve this experience can be derived from three major components:

- Area compliments downtown, building on attraction with a focus culture and entertainment
- Mixed-functionality
- Designed to create lively and accessible waterfront (Sandercock, 2002)

The Lowertown Riverfront Park will build upon these core concepts to ultimately provide an open space that accommodates values such as:

- Accessibility
- Connectivity
- Uniqueness
- Sense of place
- Waterfront recreation and historic identity
- Social interaction and public involvement

The Allegheny Riverfront Park case study is of value to this project because of the numerous similarities found within the physical challenges that inhibit both sites. The landscape architecture firm, Michael Van Valkenburgh Associates chose to approach the Allegheny Park project by first determining the site challenges and restraints, which led them to the final design outcome. The team incorporated the physical barriers into the design allowing the end product to be an aesthetically pleasing public space. The commonalities shared between each individual site's challenges have provided a clear example of how to successfully design a problematic space, transforming it to create a renewed interest in the area.

The research of this site proves that a well-designed space can overcome barriers both physical and visual, in order to restore excitement and attract the eye of the public. The Allegheny Riverfront Park has brought new life to Pittsburgh's riverfront, acting as a catalyst for other industrial waterfront renewal sites, regardless of existing physical or visual barriers

## plan for proceeding | |

### december

| Dec 21 | construct AutoCAD basemaps  
| Dec 28 | construct sketchup model of existing site

### january

| Jan 4 | finalize basemap & existing site model  
| Jan 11 | develop conceptual plan on paper  
| Jan 18 | review, fix, or change anything up to now; develop schematic plan on paper  
| Jan 25 | finalize digital schematic plan

### february

| Feb 1 | develop masterplan  
| Feb 8 | finalize masterplan & begin sketchup model  
| Feb 15 | begin design details & construction documents; continue sketchup model  
| Feb 22 | finalize design details & construction documents; finalize sketchup model

### march

| Mar 1 | review, fix, or change anything up to now; begin developing perspectives & renderings  
| Mar 8 | continue perspectives & renderings  
| Mar 15 | finalize perspectives & renderings  
| Mar 22 | review, fix, or change anything that  
| Mar 29 | begin layout & structure of boards

### april

| Apr 5 | finish board layout  
| Apr 12 | begin finalizing booklet  
| Apr 19 | review, fix, or change anything up to now; finalize booklet & boards; practice plot  
| Apr 26 | begin preparing for final presentation

### may

| May 3 | continue presentation preparation  
| May 10 | finalize anything additional; final plot; practice presentation

## preliminary design goals ||

### physical

- Design space that compliments Lowertown atmosphere
  - Use materials local to the area, tied to the history of the site, or as requested by the community (determined by survey results)
- Mixed-function space for providing a variety of activity opportunities
- Improve connectivity at the pedestrian scale
  - Provide more access routes to the riverfront
- Bridge the gap between the Union Depot/ elevated rail deck with the existing Lower Landing Park
- Rediscover and reclaim riverfront as a public amenity to Lowertown

### social

- Reconnect the district with the river
- Restore the riverfront to create large, open, convivial, gathering space for public use
- Design open space as multi-functional to appeal to a wider demographic
- Provide places for social interaction at the intimate and private, and open and public levels
- Link local history and culture into the design of the space, integrating the neighborhood and the site

### theoretical

- Improve quality of life
- Increase livability within Lowertown
- Improve economic development of district
- Attract more people and improve economic development of district
- Provide more open space

## chapter five. discussion.

## results as applied to site concepts | |

This research places most importance on overcoming the challenges of accessibility and connectivity within, and directly outside of, the Lower Landing Riverfront Park. However, these challenges have provided many opportunities for the design solution. Most importantly, it is the limited access into and out of the park that is inhibiting pedestrian use and disconnecting the community from the river. Therefore the biggest challenge, the separation of the city and the river, has become the core concept behind the final design. Constructing connections that bring the community to the river is the overruling element of the site design. The linear shape of Lowertown Riverfront Park will allow for the integration of various new connection nodes, providing the community with multiple access routes to the river.

The success of Lowertown Riverfront Park not only relies on accessibility and improved connections to the river; it is also expected to be a stand-alone destination, drawing new attention to St. Paul. Lowertown Riverfront Park is located on the eastern edge of downtown St. Paul and is part of a network of riverfront parks that the city maintains and manages. Yet none of the riverfront park spaces along the eastern edge of downtown St. Paul provide interactive access to the river. Fortunately, Lowertown Riverfront Park is located in a bend of the river, and has historically been a boat landing and port because of the calm segment of current. Therefore, it is possible for Lowertown Riverfront Park to define itself as a public, interactive waterfront, making it a unique amenity to both Lowertown and downtown St. Paul.

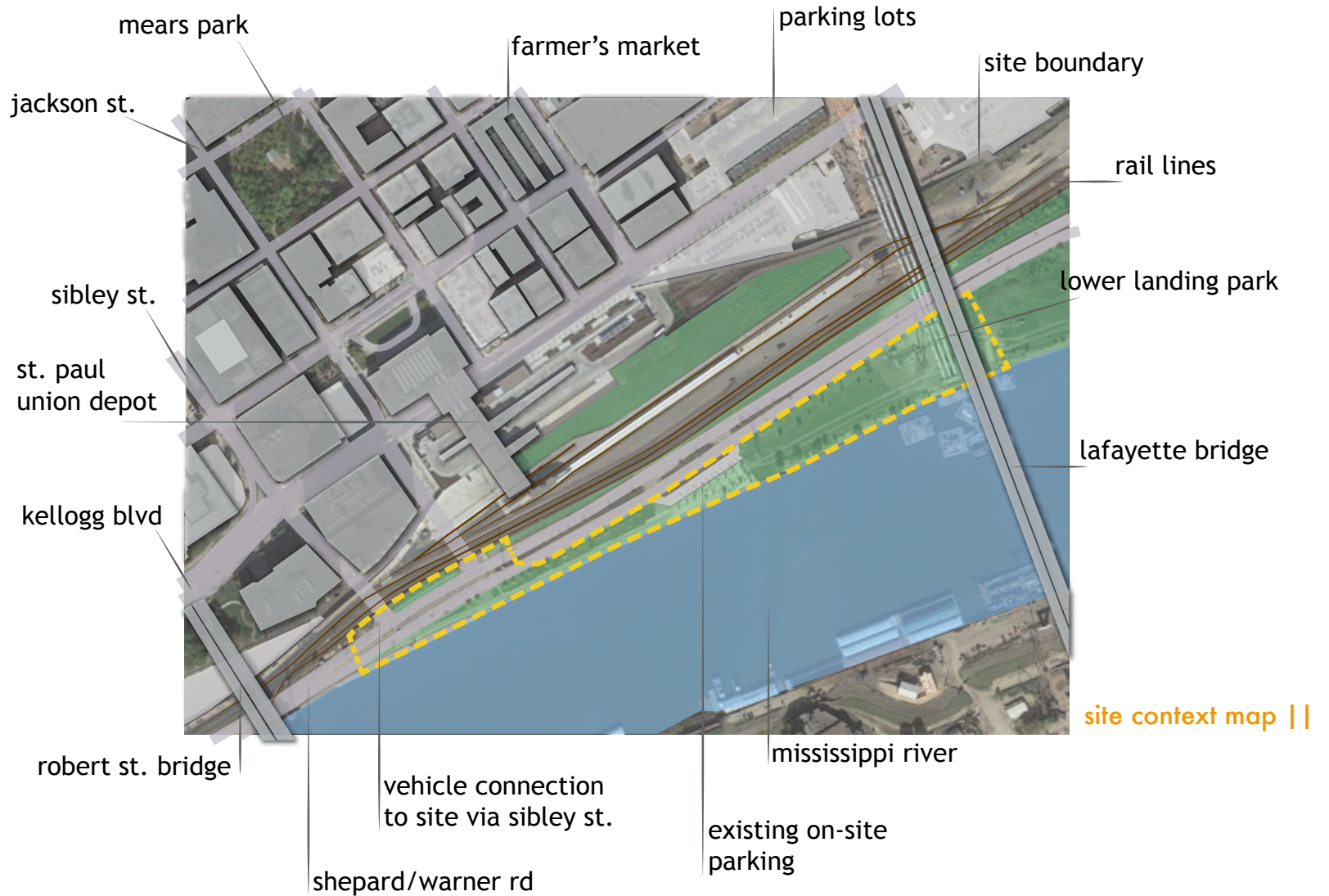
## results as applied to site elements | |

Accessibility, as previously mentioned, is the core focus of Lower Landing Riverfront Park. Lowertown's largest challenge, with regards to reconnecting to the river, lies in the physical and visual barriers, which separate potential users from the site. Therefore, a pedestrian bridge shall be integrated as a key design element, providing users with a physical link between the elevated rail deck/ union depot and the riverfront space, and a visual link to people outside the site, drawing them in. To improve the visual access to the site, various planting beds have been strategically placed, to be seen from vehicles passing by. Incorporating colors and natural riverfront plants will provide a visual reminder to site users, directly correlating to the genesis of the site in the early 1800's.

Access to the river, once in the park, must also be considered and incorporated in the final design of the riverwalk. The park is intended to be functioning year-round which impacts the materials used for the walkways and built structures. Varying degrees of accessibility to the river are interwoven in the final design solution, providing users with numerous spatial experiences, each influenced differently by the relationship to the river.

Unfortunately, as it exists, Lower Landing Park has very little to offer site users and the physical amenities that do exist do no compliment each other, the site, or the context of the surrounding area. Consequently, Lower Landing Riverfront Park will integrate a stylistic material palette that links the culture and the history of the area to the physical experience of the park. Gathering spaces, seating areas, open space, and site furniture will all collectively unite the park, as well as integrate seamlessly into the urban setting that makes up Lowertown.

## chapter six. inventory.



## location ||

The proposed Lowertown Riverfront Park is located in Lowertown, St. Paul, Minnesota's historic warehouse district. The existing Lower Landing Park site is 6.73 acres, providing ample open space for the community.

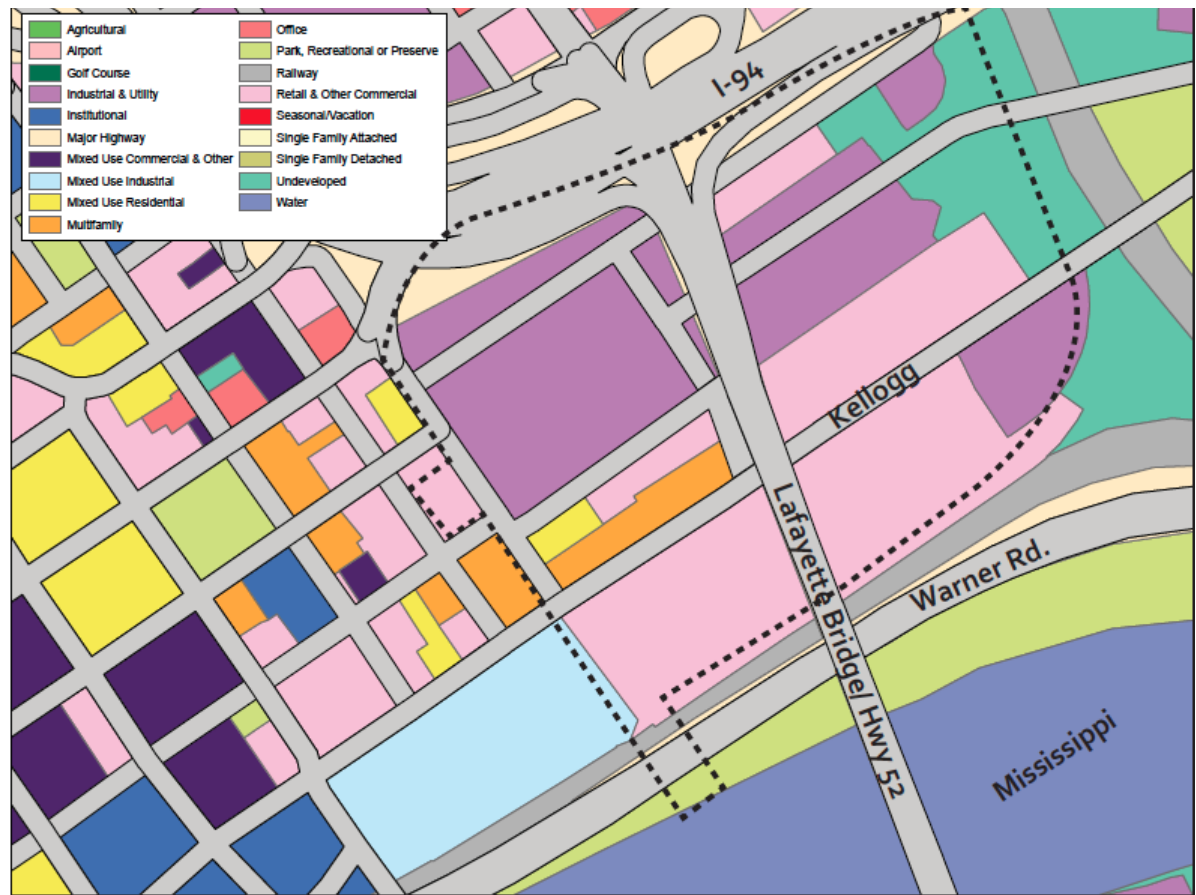


St. Paul neighborhoods map ||

## neighborhoods ||

The Lowertown neighborhood is located in the heart of downtown St. Paul, providing the opportunity to design the final site incorporating accessibility, walkability, and activity. The Lowertown neighborhood is currently an artistic community focusing on historic preservation of the district while maintaining the unique sense of place.

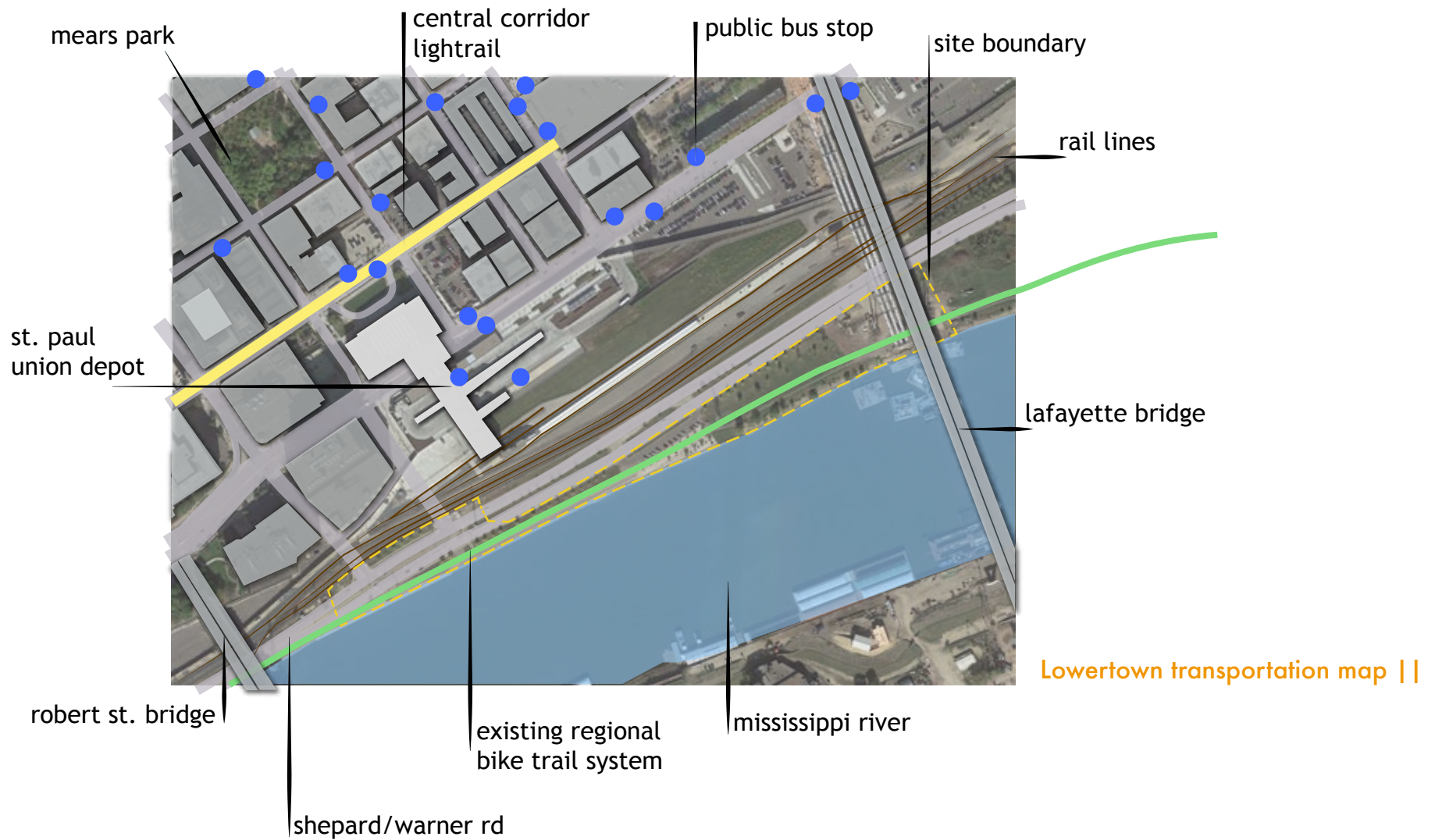




land use ||

[5] Lowertown land use map

The majority of the land within Lowertown has transitioned to become a mixed-functionality community, although currently, it is predominantly residential. If the neighborhood continues moving in the direction that it is currently going in, Lowertown will be revitalized and redefined as an urban village within the next 15 years. The space surrounding the Lower Landing Riverfront Park site is composed of grey systems and infrastructure with very little open space for this growing residential area.



### Public transit & bicycles ||

- the union depot is a hub for public city buses, Amtrak trains, and coach buses
- central corridor lightrail is new connection linking Minneapolis and St. Paul directly
- public bus stops are located all around the site and the downtown area
- Sam Morgan Regional bike trail and Bruce Vento Regional bike trail are part of larger trail network that follows the general form of the riverfront

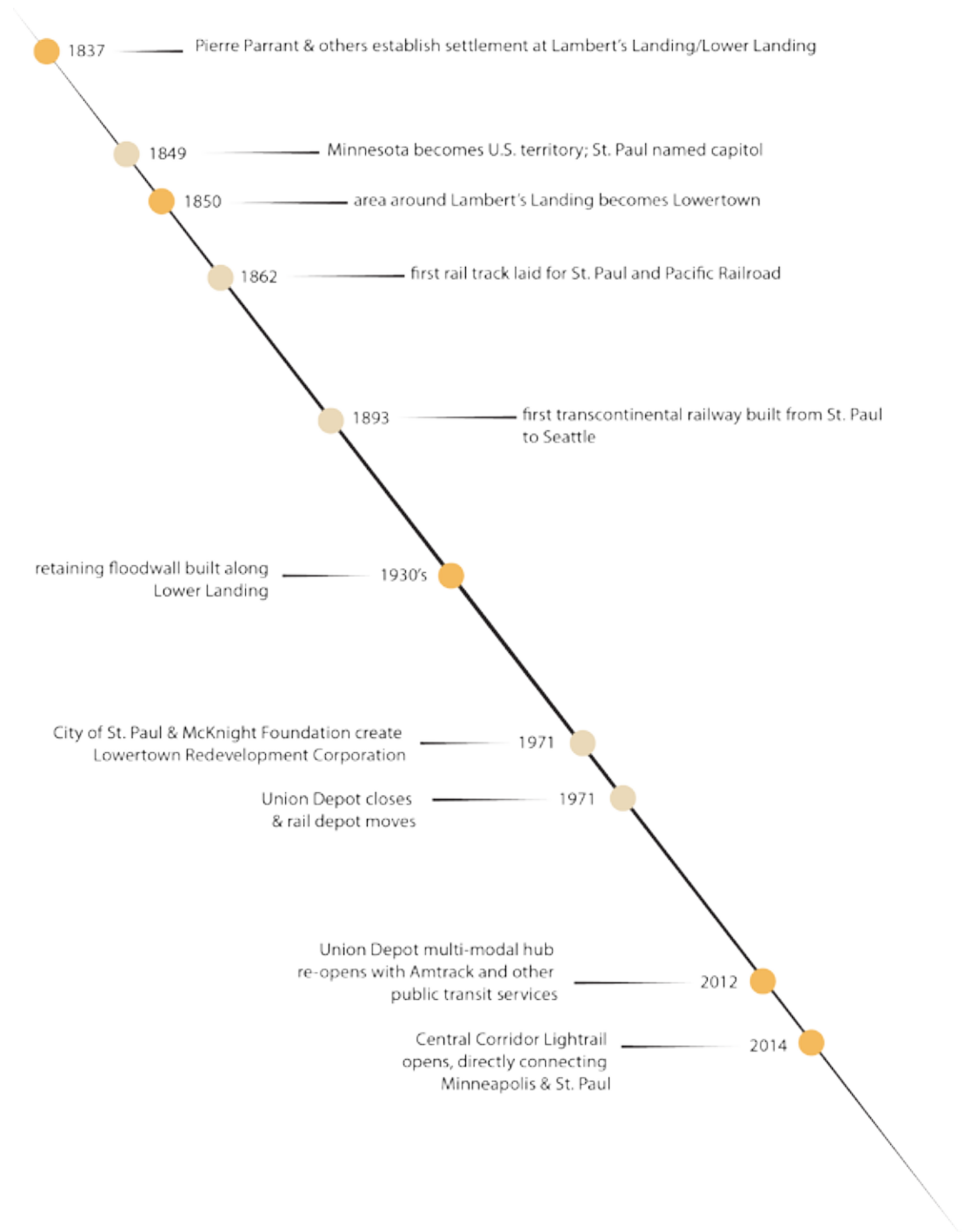
### Vehicle traffic ||

- several freeways provide automobile access to the site: I-94 and 35-E; highways 52, 61, 12, and 10; and county highways 36/Shepard Road and 36/Warner Road
- Warner/Shepard Road is busy, fast vehicle traffic, with poor pedestrian accessibility
- Sibley street and Jackson Street bring vehicles to the site

### rail systems ||

- 5 rails carry freight
- 2 rails carry passengers
- The rail lines are biggest barrier to overcome with project design

## historical timeline ||



## history ||

Lower Landing was settled in 1837, making it the first permanent European settlement in St. Paul. After Lower Landing had been established, steamboat traffic began to accumulate, bringing more settlers on each boat. Within 15 years of being established, Minnesota became an official U.S. Territory and St. Paul was chosen as the capitol city. As the city grew, it attracted more industry to the area, and eventually the railroad companies were providing every 1 in 4 people with work. The increase in both demand and supply brought on the need to create 12 rail lines, connecting St. Paul to various cities across the country including: Chicago, Omaha, St. Louis, and Milwaukee.

During the 1880's the first Union Depot was constructed in Lowertown but was destroyed in a fire in 1915. The existing Union Depot was built in 1923 but closed and relocated to Midway, St. Paul in the early 1970's. Since the 1970's, the Lowertown community has been aggressively redefining itself as a cultural, historic, stand-alone district, but unfortunately much of the emphasis has been placed on the grey systems, until recently. In the last 10 years, Lowertown has redesigned Mears Park, integrated the "ride-share" bicycle program into the community, and both restored Union Depot and installed the new lightrail system (O'Dell, 2011).

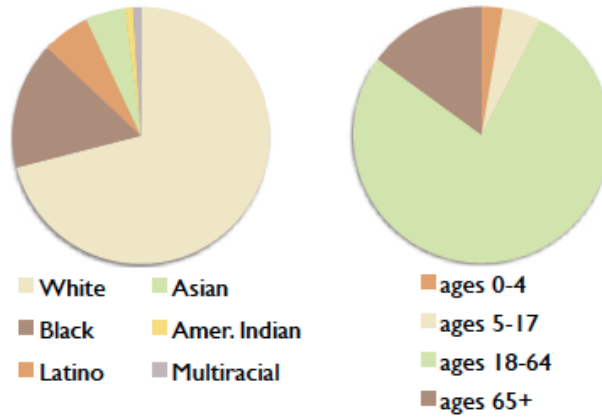


[6] historic photo of lower landing circa 1800's

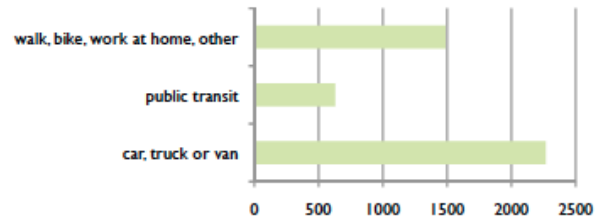
## culture ||

As previously mentioned, Lowertown is home to a large community of artists and musicians, many of whom live in the converted warehouse apartments because of the raw style and industrial material palette, as well as the low cost of rent. Despite the large artistic culture of the area, Lowertown does not display much of its resident-created artwork. Overall, this small community, progressing toward becoming an urban village, is becoming denser and attracting more people back into the downtown. Lowertown is experiencing urban renewal; young people are being drawn in, companies, stores, and restaurants are renting out spaces and becoming settled within the community, and public transit is taking priority over automobile transportation.

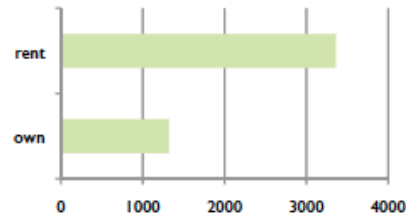
## People



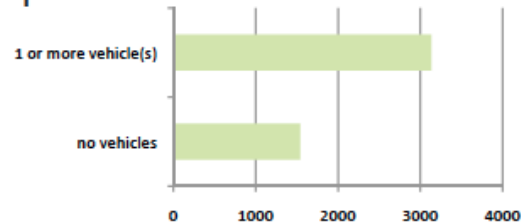
## Transportation to work



## Housing



## Vehicles per household



## demographics | |

Young people are returning to urban areas and this is no different in Lowertown. The increase in sustainable and environmentally-conscious public transit options is reducing the importance and reliance on vehicles for transportation. The influx of younger adults will also have an impact on the overall atmosphere of the district; new ideas and new opportunities are bountiful within the Lowertown neighborhood.

## recreation ||

Surrounding Lowertown are various places for recreation depending on what one is seeking; bike trails link Minneapolis and St. Paul, various parks, outside of Lowertown, can be used for tag, football, soccer, frisbee, dog-walking, or any other variety of activities.

Despite being surrounded by many places for outdoor recreation, Lowertown mainly relies on Mears Park for outdoor activity. Because of its size, Mears Park gets over-crowded and because it is one of the only open park spaces within the district, it draws in a wide variety of users. Mears Park is also not a park for active recreation, with its benches, curvilinear walks, and large creek-style water feature, it is much more conducive for reading a book on a summer afternoon or simply people watching.

Outdoor recreation opportunities are available, but one has to leave the Lowertown area to find them. It has been repeatedly mentioned in the survey results that the community would much appreciate river access to be able to utilize the waterfront. Canoeing, kayaking, fishing, and paddle boating have all been brought up by the public as activities that they would like to see included/incorporated in the final site design.

## chapter seven. design development.



on site facing west, looking towards the Robert Street Bridge

### site photos ||

Throughout the duration of this project, I periodically photographed the site, documenting the conditions and users. I took interest in the seasonal uses of the site, capturing the space during the summer and both the mild and harsh winter climates. Because of the history of the neighborhood, I also became interested in the surrounding site context, photographing common materials, paving patterns, and unique details that add to the patina, character, and overall experience of the area.



main existing entry condition into the park from Lowertown; Warner Rd & Sibley St





on site, looking west toward Lafayette Bridge



on site, Robert St. Bridge from docking pier



train bridge infrastructure



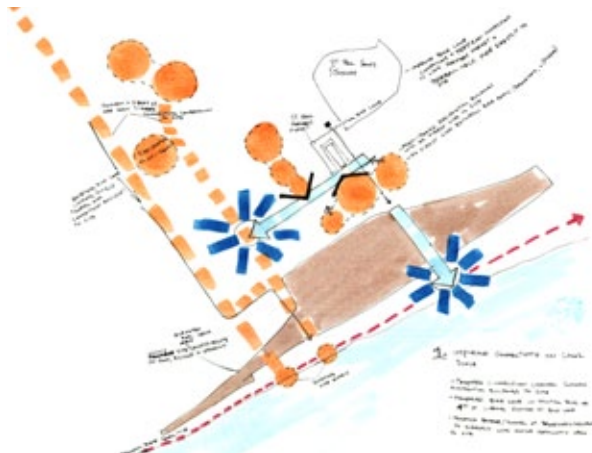
facing west, Robert St. Bridge from Warner Rd.



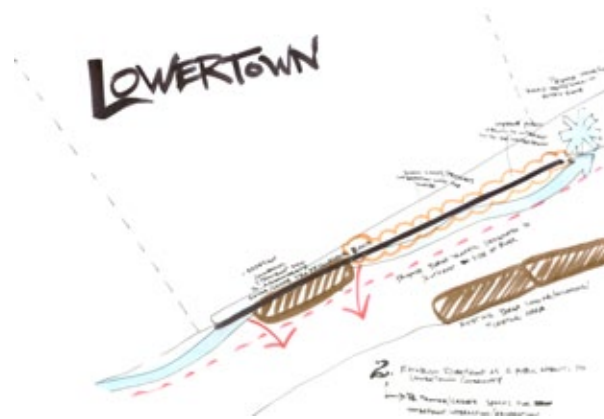
graffiti on railing on site, adding to site culture

site photos ||

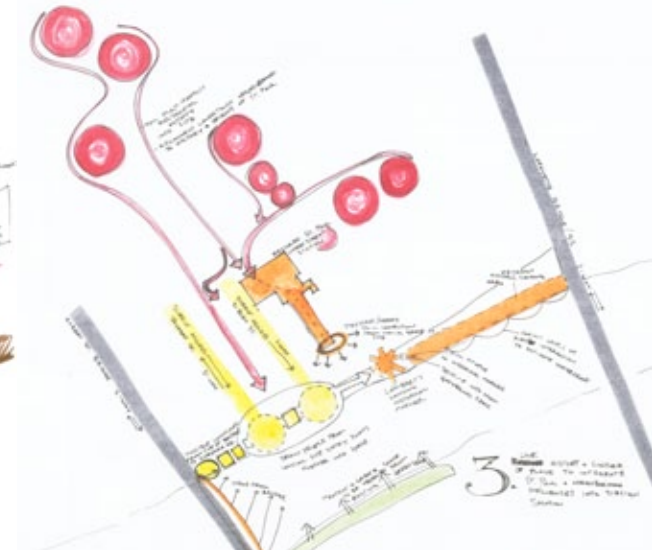
## analysis ||



[big idea : Connectivity] analysis derived from existing connections to site



[big idea : Riverfront Opportunities] analysis derived from existing public riverfront amenities



[big idea : Social & Cultural Link] analysis derived from existing social & cultural neighborhood influences

## preliminary design goals ||

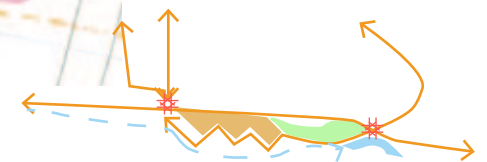
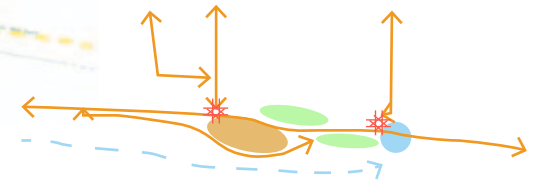
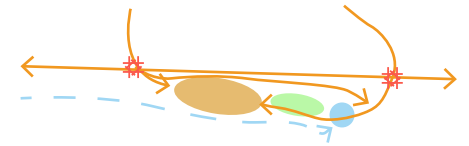
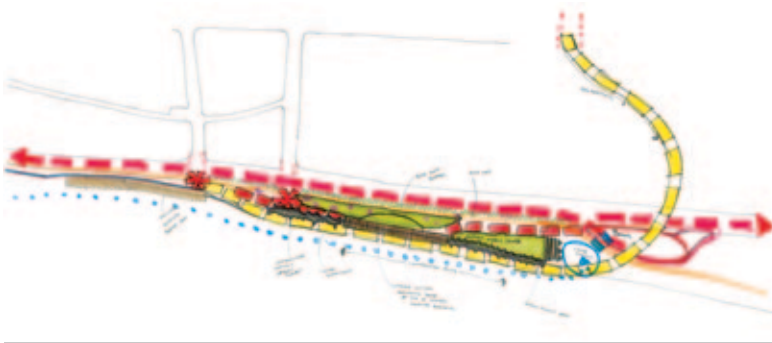
- Increase views and access to the Mississippi River
- Create opportunities for active and passive water recreation
- Define Lower Landing Riverfront Park as a destination for a variety of users
- Maximize use of outdoor spaces, year-round, for visitors to enjoy and come back to
- Maintain the unique and historic character of Lowertown within the park

The strongest open spaces, “Can promote community investment, educate citizens about the environment, contribute to a city’s unique character, and link surrounding buildings to create a sense of place”

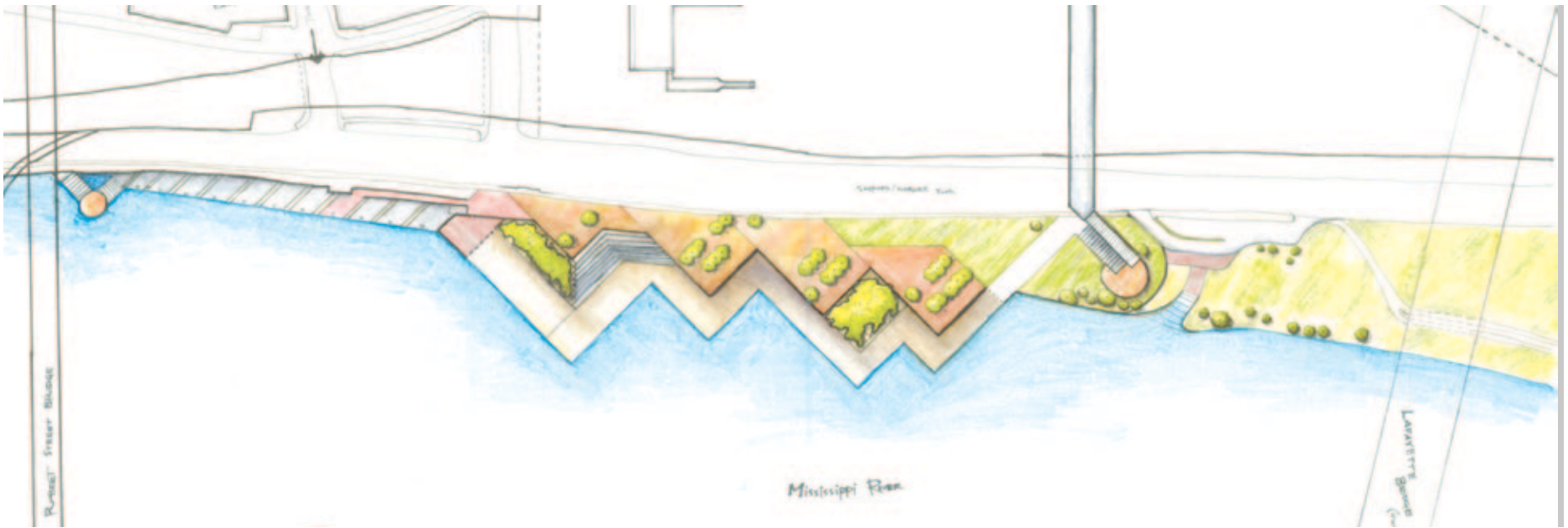
[Garvin, 1997].

### revised design goals ||

- **Recreation Opportunities:** provide increased opportunities for passive and active recreation
- **Urban and Natural Transition:** integrate the urban and natural settings
- **Connections:** develop and establish visual and physical connections between the Lowertown neighborhood and the adjacent riverfront
- **History:** maintain the historic character of place



concept development ||



preliminary master plan development ||

## design solution program elements ||

- recreation opportunities ●
- urban and natural transitions ●
- connections ●
- history ●
- parking ● ●
- seating ●
- riverwalk ● ● ●
- green open space ● ● ●
- local art/sculpture ●
- pedestrian bridge/tunnel ● ● ●
- urban hypernature forest ● ●
- Mississippi riverfront native planting beds ● ●
- kayak/canoe walk-in access ● ● ●
- barge/paddleboat parking ● ●
- local food opportunities ●
- historic gathering space ● ●
- bicycle path ●
- skatepark ●

## master plan design solution ||

The final master plan design took on the general outline of the historic former Lower Landing dock. The rigid forms and sharp angles created by the upper and lower levels were offset by the integration of organic, curvilinear, recycled wood paving patterns. The meandering paving forms casually pull the site user in, slowly moving them through each of the smaller spaces.

Various grass mounds were placed within the upper level to break up the vast amount of hardscape, provide users with areas to sun, and as a metaphor, representing the interruption along the riverfront caused by the industrial revolution during the 1800's.

The pedestrian bridge, reaching across six sets of train tracks then descending across Shepard Rd., brings site users into the site from above, creating an entirely new experience. Various ADA requirements were used in the designing of the ramps and bridge, making this site accessible to those in motorized or wheel chairs.

The actual vertical change in elevation from above the rail deck to the ground within the site is approximately 30 feet. Materials repeated throughout the site consist of repurposed rail tracks, reclaimed river wood, corten steel, and concrete, thereby beginning to mimic the historic character of the original landing.



### recreation opportunities ||

- a kayak storage & public launch
- b open green
- c public skatepark (conceptual)
- d active fitness path

### urban & natural transition ||

- a urban hypernature planting
- b lower riverfront deck

### physical & visual connections ||

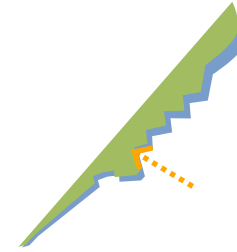
- a secondary entrance- public parking
- b pedestrian bridge
- c ADA ramp
- d main site entrance

### representation of local history ||

- a upper plaza deck
- b riverboat paddle water feature
- c extended wooden upper outlook
- d active barge & riverboat dock



lower walk perspective ||



- Ⓐ large stone step seating
- Ⓑ active fitness path
- Ⓒ main site entrance
- Ⓓ enclosed metal fire sculpture
- Ⓔ rail track retaining wall
- Ⓕ ADA concrete ramp
- Ⓖ wood bench seating
- Ⓗ grass mounds
- Ⓘ urban hypernature forest
- Ⓝ elevated wood deck outlook
- Ⓚ riverboat paddle water feature



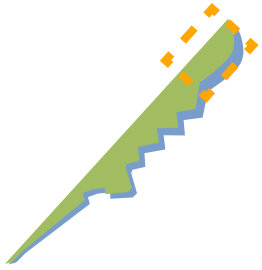
- Ⓛ river birch clump plantings
- Ⓜ lower riverfront deck
- Ⓨ segmented rail track walls

main entrance site plan ||

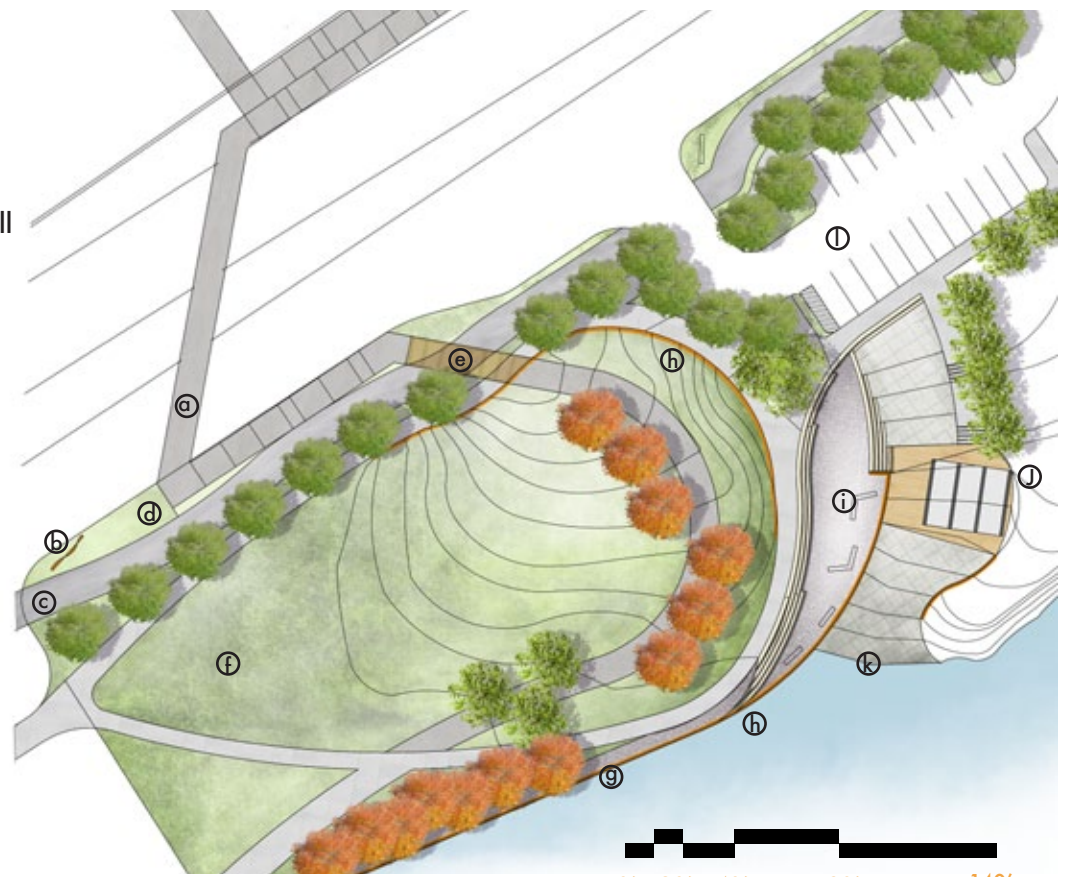




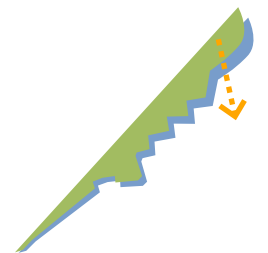
# kayak launch & open lawn site plan ||

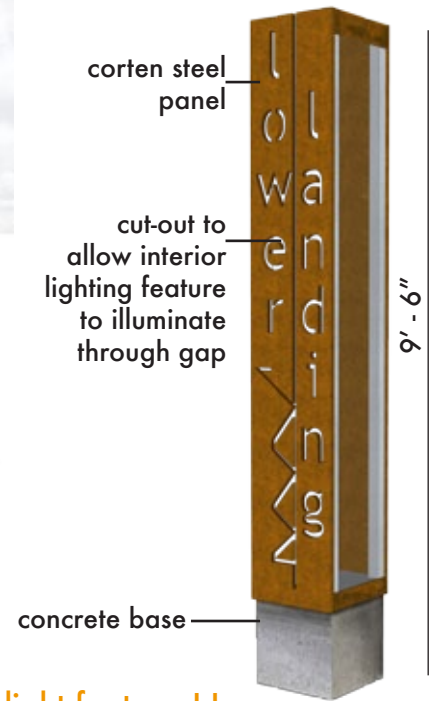


- Ⓐ pedestrian bridge
- Ⓑ segmented rail track sculpture wall
- Ⓒ active fitness path
- Ⓓ bicycle pump/lock station
- Ⓔ wooden truss bridge overpass
- Ⓕ open green
- Ⓖ crushed trap rock gravel path
- Ⓗ corten steel retaining walls
- Ⓘ crushed gravel plaza
- Ⓚ kayak storage structure
- Ⓛ public kayak/canoe launch
- Ⓜ public parking lot



## kayak launch perspective ||



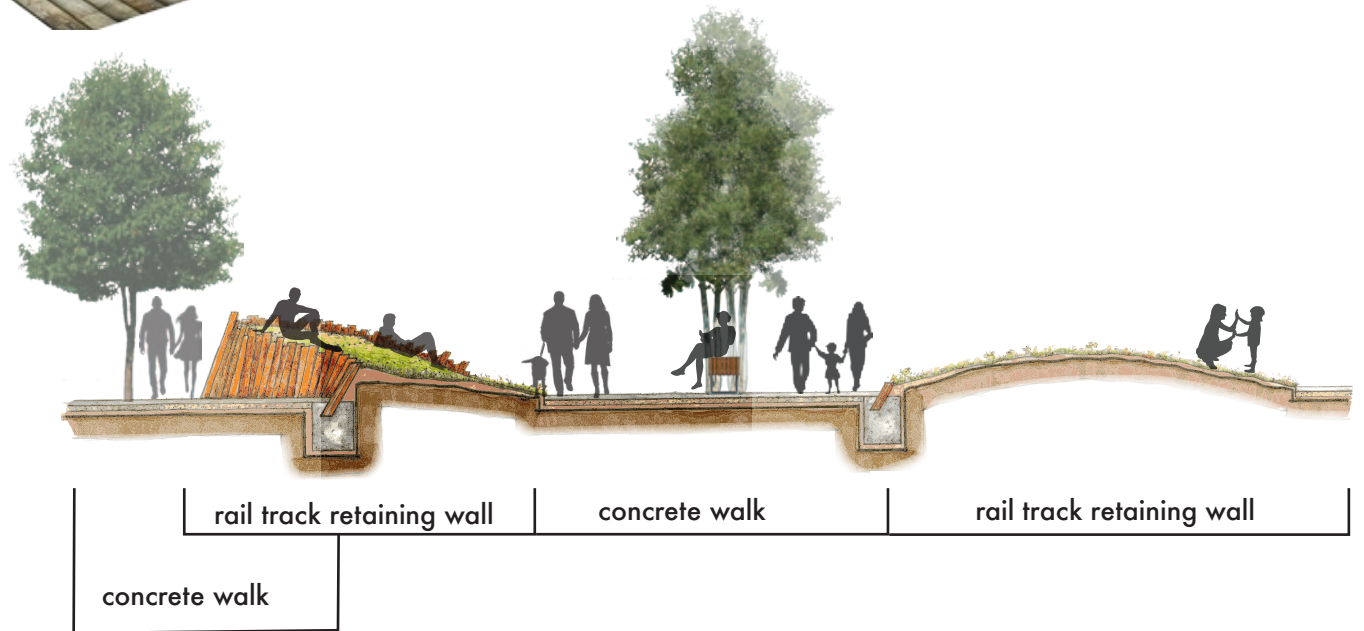
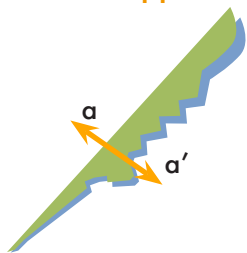


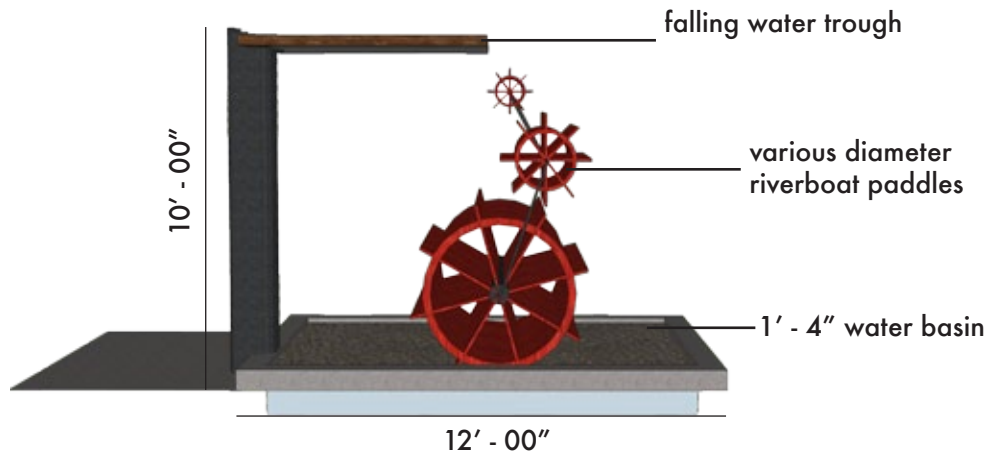
custom light feature ||

site entrance perspective ||

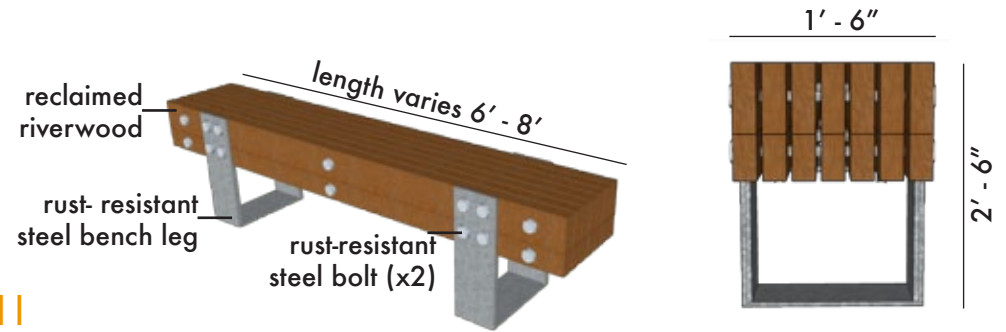


section a - a' ||



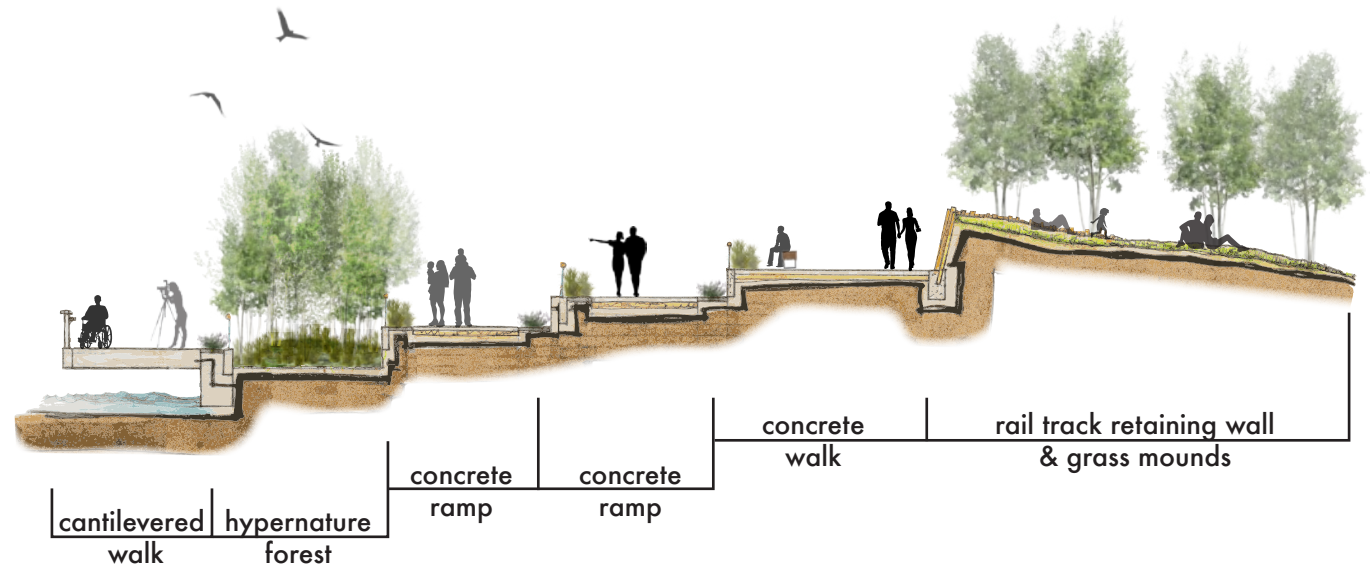
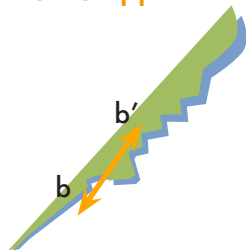


wood & steel industrial bench ||



wood & steel industrial bench ||

section b - b' ||



## A successful public waterfront space must | |

- 1 | provide physical access to and alongside the riverfront
- 2 | provide visual access, enabling onlookers to see glimpses of the space from outside of it
- 3 | sensitive, design-friendly seating areas, both in terms of size and bulk
- 4 | a barrier-free setting

[Breen, 1994]

## lower landing riverfront park design goals | |

Urban and Natural Transition: integrate the urban and natural settings

Recreation Opportunities: provide increased opportunities for passive and active recreation

Connections: develop and establish visual and physical connections between the Lowertown neighborhood and the adjacent riverfront

History: maintain the historic character of place

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## photo source citation | |

- [1] [http://landscapevoice.com/wp-content/uploads/2012/09/7981583499\\_65a3e9d0e9\\_b.jpeg](http://landscapevoice.com/wp-content/uploads/2012/09/7981583499_65a3e9d0e9_b.jpeg)
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