

Cascade Creek:

Revitalizing Community

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North Dakota State University 2014

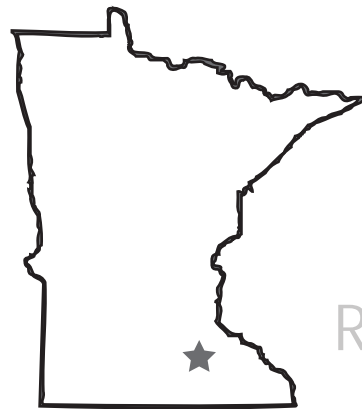
LA572

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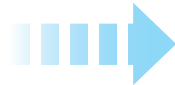
A four stage project set to revitalize Cascade Creek and Kutzky, Northrop, and Washington Neighborhoods.



Rochester, Minnesota

Program

Community Connection



-Development-

The first stage of revitalizing Cascade Creek is to redevelop the park system with a holistic masterplan that physically links the parks to the neighborhoods, the trails to the community, and maintains the health of the creek. Creating thematic elements that pervade throughout the entire Cascade Creek corridor will help visually link the multiple parks. A plant palette based on remediating the runoff and creek water will further ensure the health of the creek ecosystem for future generations.

Community Involvement



-Action-

The second stage in the process of revitalizing the Cascade Creek area is reinvigorating the existing community groups and associations. Instigating community involvement and volunteer days will get community members involved in items such as maintaining the parks plants and vegetation. This will help the community's residents foster personal connections with the parks at an individual level.



Community Identity



-Pride-

The third stage of the revitalization process is the combination of the new community activism with the new park system. This will help create a radiating sense of pride that designates the Cascade Creek corridor as not only a local hub but a destination for the greater Rochester area.

Creek Reclamation

-Result-

The end of the four stage project will be the culmination of the holistic master plan and the newly reinvigorated community resulting in a reclaimed creek that is maintained locally, void of pollutants (NPK, pesticides, salt, heavy metals and petroleum products), and responsive to water runoff during storm events. As a result the Cascade Creek will be able to progress into the future along with the surrounding and continually evolving neighborhoods.

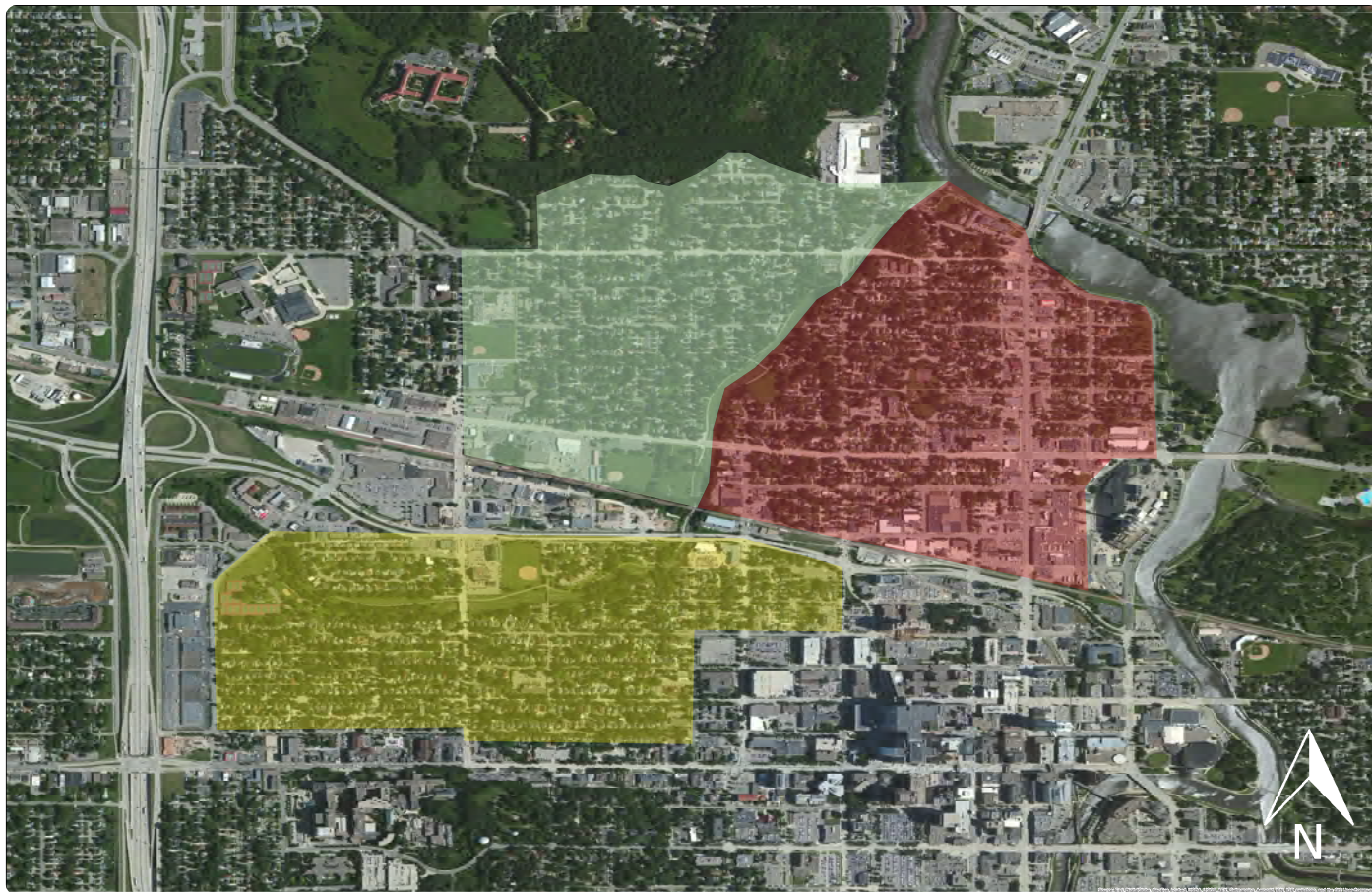


Site Background

Positioned a few blocks Northwest of the Mayo Clinic and the rest of Downtown Rochester, is the final mile and a half stretch of Cascade Creek before it empties into the Zumbro River and then into the Mississippi River.

Revitalizing the Cascade Creek corridor is a multi-step process that will take the cooperation and involvement of the surrounding neighborhoods, the city government and most importantly, the citizens that form the surrounding community.

The end result of the Cascade Creek Masterplan will be a revitalization of not only the physical elements of the corridor but also a revitalization of sense of community in the neighborhoods surrounding Cascade Creek.



History

The Cascade Creek area is regarded as the first location to be claimed and settled of what would become Rochester, Minnesota. Settled in 1854 by the Cummings and McReady families, the first settlers lived on their claims as subsistence farmers and hunters. By 1859, a proposed railroad from Winona, Minnesota to St. Peter, Minnesota was surveyed across the settlement, thus fortifying the permanence of the settlement (“Kutzky park neighborhood,” 2009).

Kutzky neighborhood and Kutzky Park are both named after August W. Kutzky, a German immigrant often forgotten in Rochester’s history due to the prominence of the Mayo Family. He began buying land on the Northwest limits of Rochester. Eventually he acquired over 90 acres that were turned into housing lots and the area was named Kutzky’s Addition. He lived in multiple houses in the area throughout his entire life. In 1927, August donated 51 more acres that were North of Kutzky’s Addition to the town of Rochester, which then became Kutzky Park. As the town grew the addition became Rochester’s first neighborhood. In 1948, August Kutzky passed away (“Kutzky park neighborhood,” 2009).



August Kutzky and his wife Bertha.



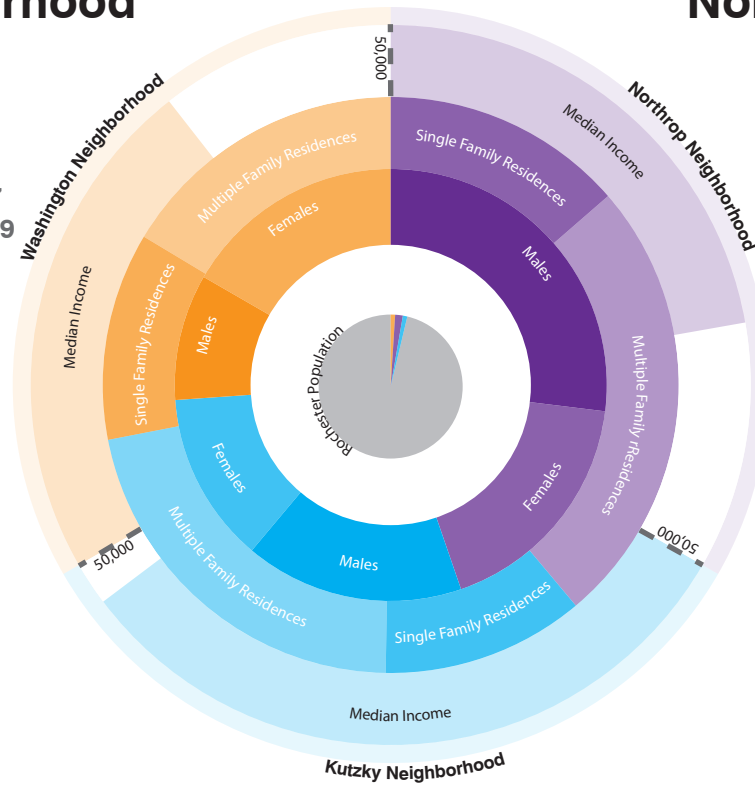
Neighborhood Demographics

Washington Neighborhood

Population: 996
 Males: 362
 Females: 634
 Households: 556
 Single Family Housing: 227
 Multi Family Residences: 329
 Median Income: \$33,828

Northrop Neighborhood

Population: 1,754
 Males: 1,051
 Females: 703
 Households: 773
 Single Family Housing: 269
 Multi Family Residences: 504
 Median Income: \$33,427



Kutzky Neighborhood

Population: 1,094
 Males: 611
 Females: 483
 Households: 635
 Single Family Housing: 215
 Multi Family Residences: 420
 Median Income: \$46,771



Neighborhood Theme



Kutzky Neighborhood



Washington Neighborhood



Northrop Neighborhood



Existing Map Stations



Existing Trail Markings

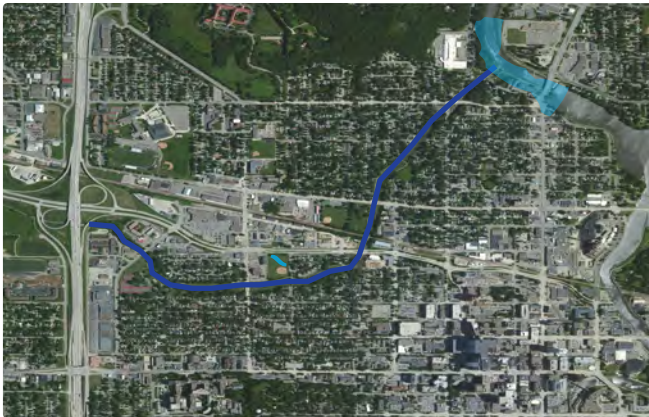


Cascade Creek Flooding

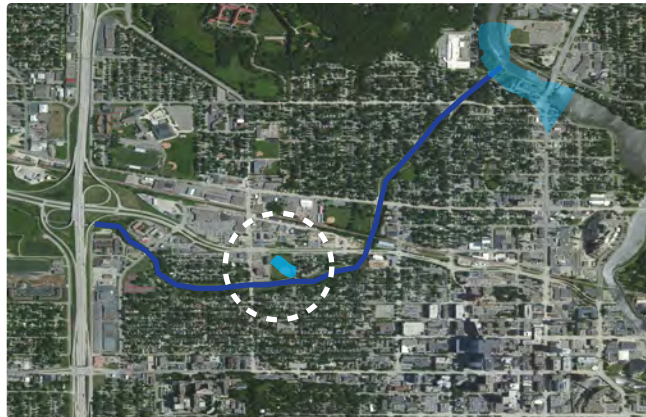


Flood Zones

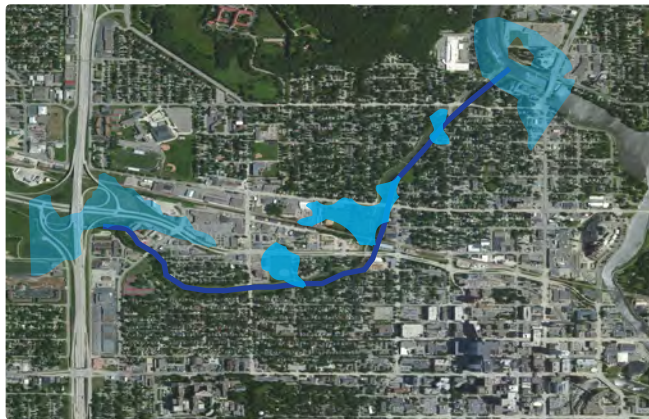
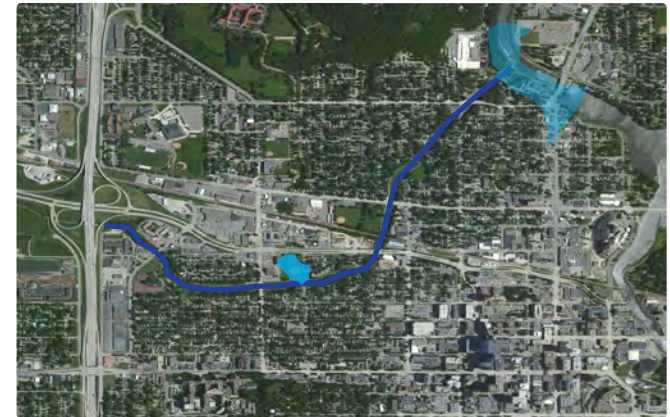
1-2 Year Storm Event



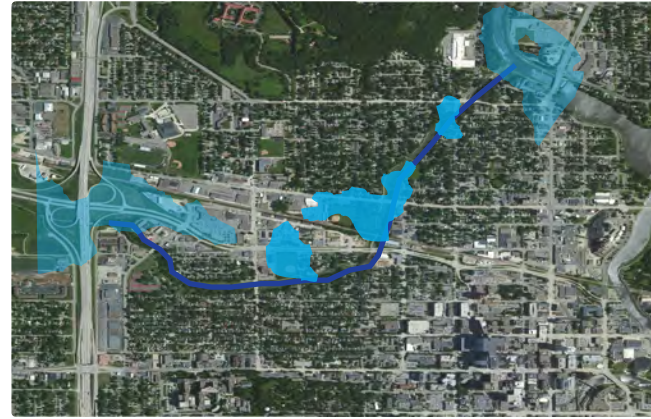
5 Year Storm Event



10 Year Storm Event



25 Year Storm Event



50 Year Storm Event



Cascade Creek Conditions



Above: Temporary relief from erosion problems.



Above: One of the many flock of mallards that call the creek home.



Above: Engineered channels that form a majority of the Creek.



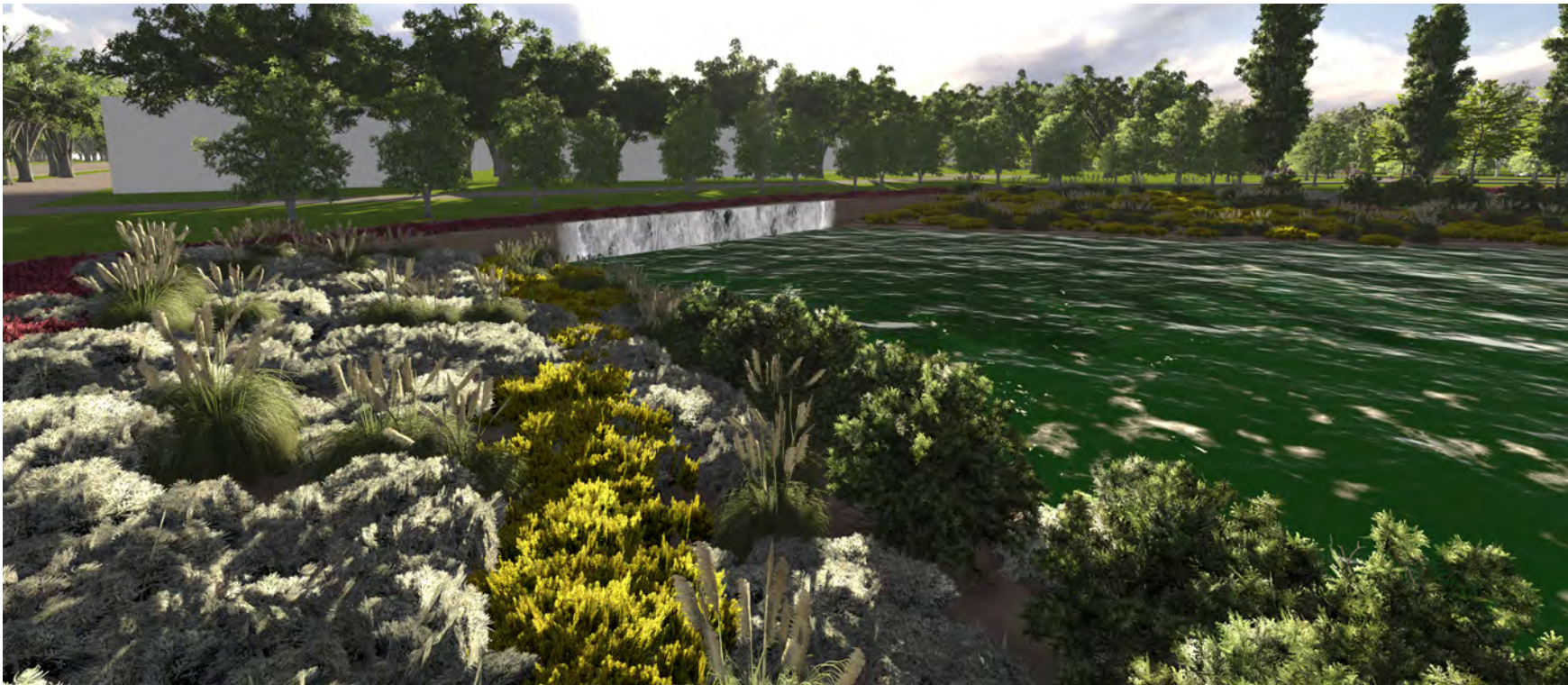
Above: Manmade weirs used as flooding control.



Stormwater Remediation

Two retention basins will be located at Kutzky Field and Cooke Park as determined by the current ground elevations. As the two lowest locations, both parks naturally flood and become inundated with water even during 1-2 year storm events. The retention basins are designed to hold up to 40,000 cubic yards of water. This is enough storage to contain all the flow of Cascade Creek during a 50 year storm event for over half an hour in each retention basin, or over an hour total between the two basins.

As retention basins, they will never be dry, continually holding a couple of feet of water. Located on the far end of each basin there is a 60 foot long and seven foot tall waterfall. The waterfalls serve an aesthetic purpose for both pedestrians in the park but are also angled so that passing motorists can catch a glimpse of the falls. The waterfalls also serve a physical purpose of aerating the water to prevent algae growth and mosquito breeding.

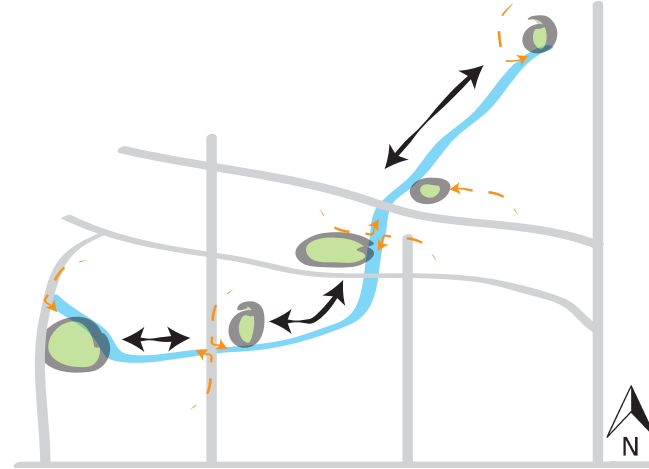


Above: View of the Kutzky Field from Civic Center Drive looking at the waterfall and retention basin.

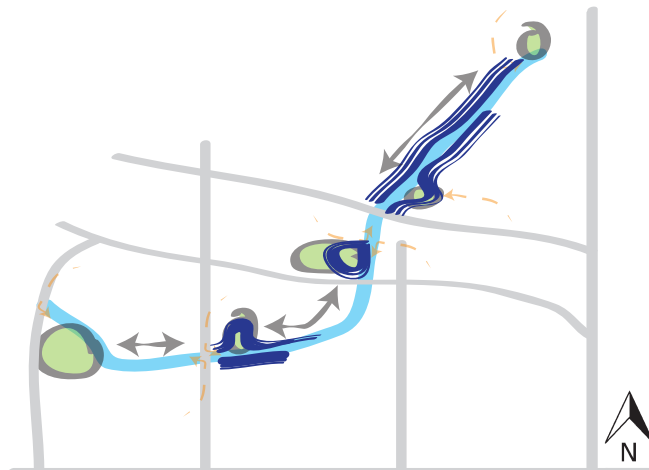
Analysis



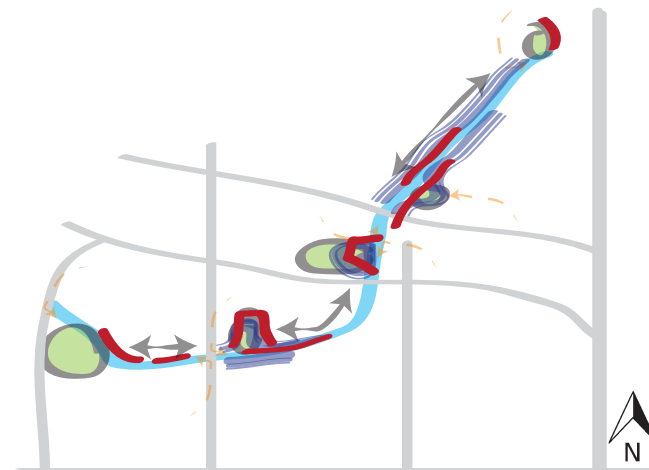
1. Existing Greenspace



2. Public Access



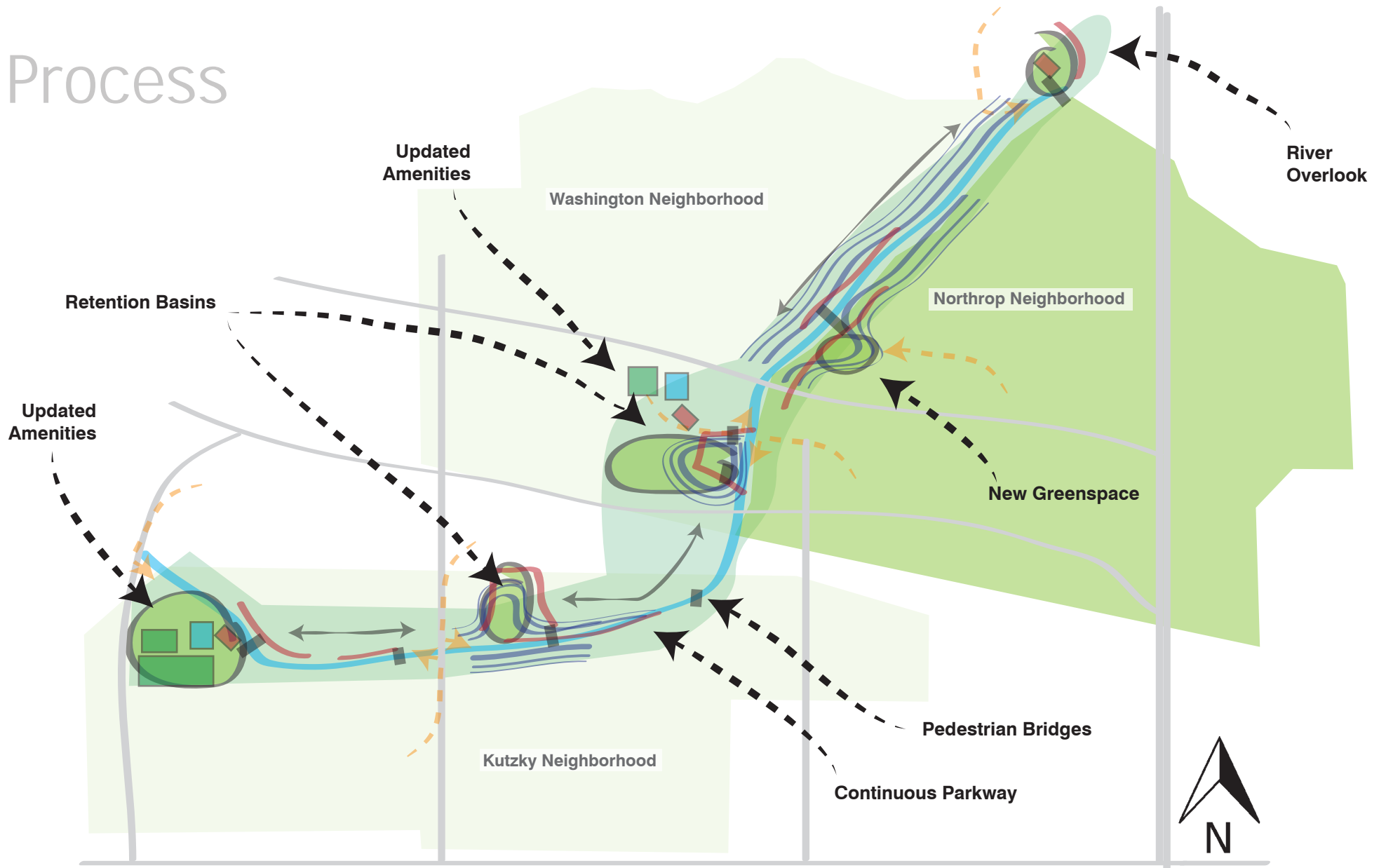
3. Flooding



4. Remediation



Process



5. Concept

Plant List

Plants selected for Casade Creek and the five parks connected to the creek are a combination of remediation based plants (NPK focused), native plants, and zone (4b) friendly plants.

Remediation Plant List

Trees:

Fraxinus pennsylvanica - Green Ash
Pinus mugo pumilo - Dwarf Mugo Pine
Salix alba 'Tristis' - Golden Weeping Willow

Shrubs:

Viburnum odoratissimum - Sweet Viburnum

Perennials:

Agapanthus africanus - Lily of the Nile
Hemerocallis hybrid - Daylily
Typha latifolia - Broad Leaved Cattail
Typha angustifolia - Narrow Leaved Cattail

Grasses:

Cynodon dactylon - Bermuda Grass
Festuca arundinacea - Tall Fescue
Festuca rubra - Red Fescue
Lolium multiflorum - Ryegrass

Plant List

Trees:

Acer platanoides - Norway Maple
Acer saccharinum - Silver Maple
Betula nigra - River Birch
Tilia americana - American Linden
Quercus macrocarpa - Bur Oak
Pinus strobus - Eastern White Pine

Shrubs:

Buxus 'Green Gem' - Green Gem Boxwood
Cornus sericea - Redosier Dogwood
Forsythia 'Northern Gold' - Forsythia Northern Gold
Physocarpus opulifolius 'Diablo' - Diablo Ninebark
Physocarpus opulifolius 'Center Glow' - Center Glow Ninebark

Perennials:

Achillea millefolium 'Paprika' - Paprika Yarrow
Heuchera 'Can Can' - Can Can Coral Bells
Hosta 'Abiqua Drinking Gourd' - Abiqua Drinking Gourd Hosta
Hosta fluctuans 'Sagae' - Sagae Hosta
Spirea japonica 'Firelight' - Firelight Spirea





Rochester, Minnesota

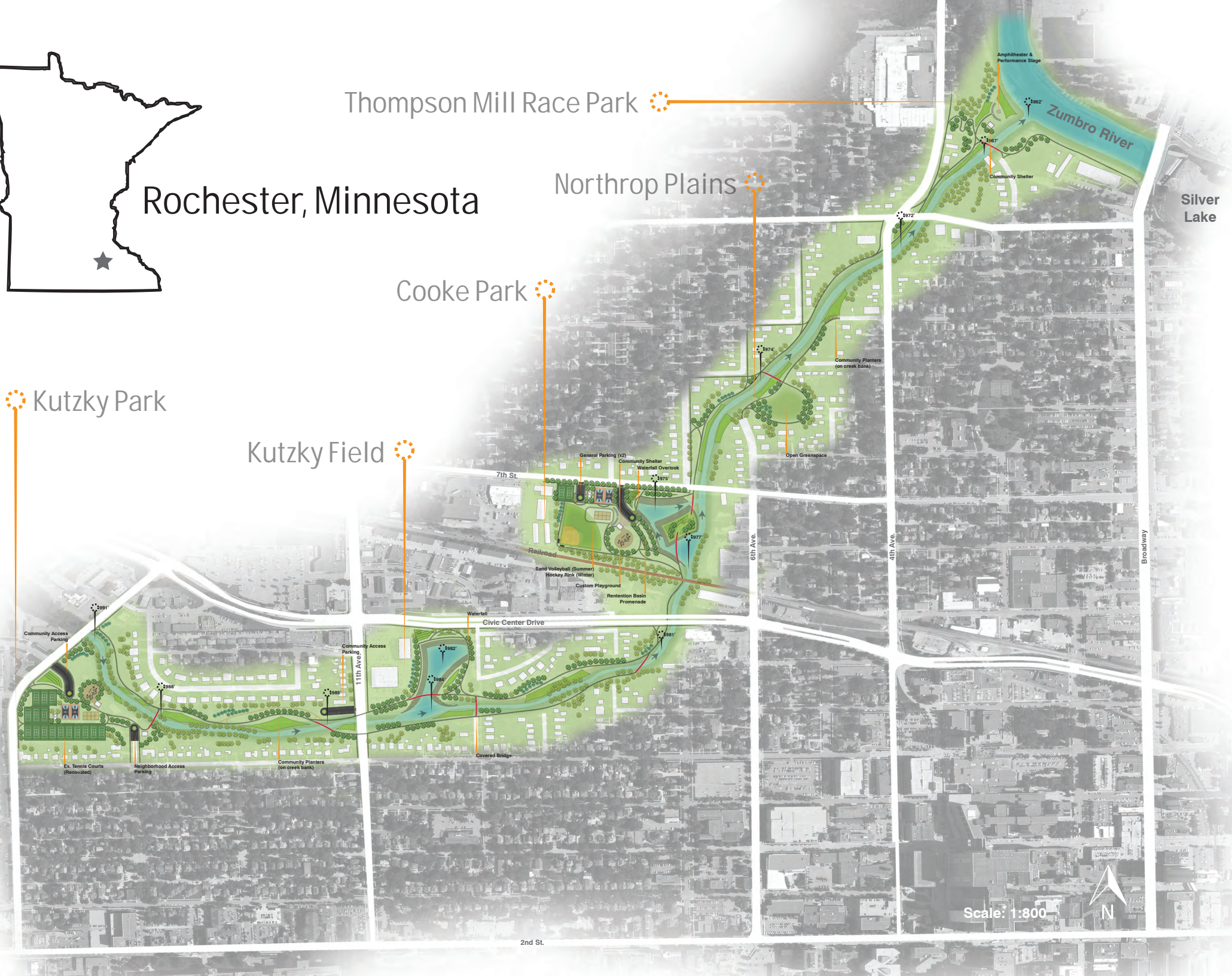
Thompson Mill Race Park

Northrop Plains

Cooke Park

Kutzky Field

Kutzky Park



Silver Lake

Scale: 1:800



2nd St

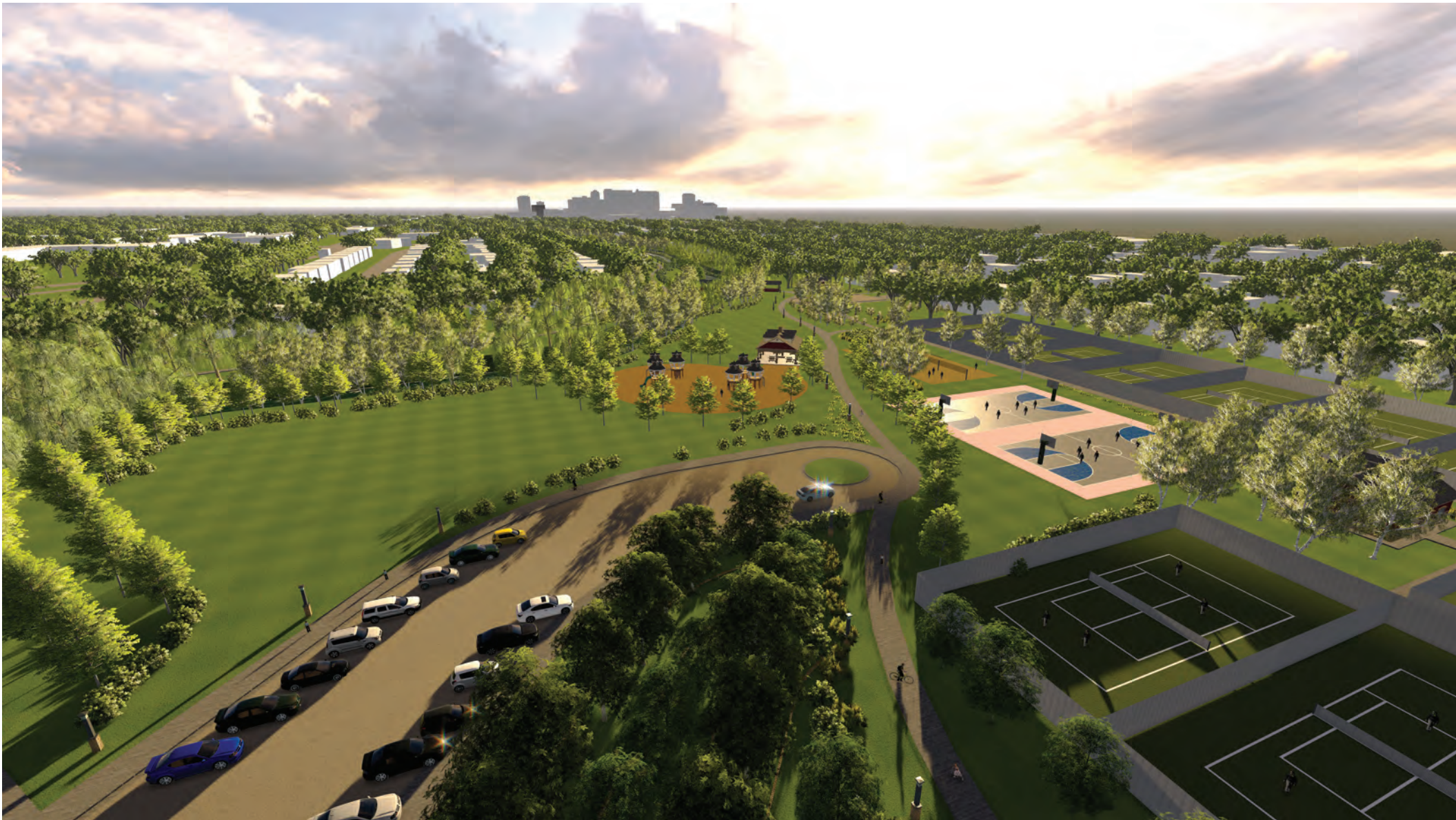
Kutzky Park

As the far Western entrance to the Cascade Creek corridor, Kutzky Park currently supports an extensive yet outdated tennis court system. Remodeling the existing tennis courts, while adding volleyball and basketball courts, modernizes the park to current day standards.

Updating the community shelters and playground equipment and adding more parking to the park provides a use for all generations and ages of users while providing for different sized community gatherings.

Located at the Eastern edge of Kutzky, visitors will notice the first of over a dozen community planters that run along the creek banks. Unlike normal 'community gardens', these planters are not produce oriented but focus on vegetation that helps remediate and purify both the runoff water during storm events and the creek water that passes by during elevated water conditions.





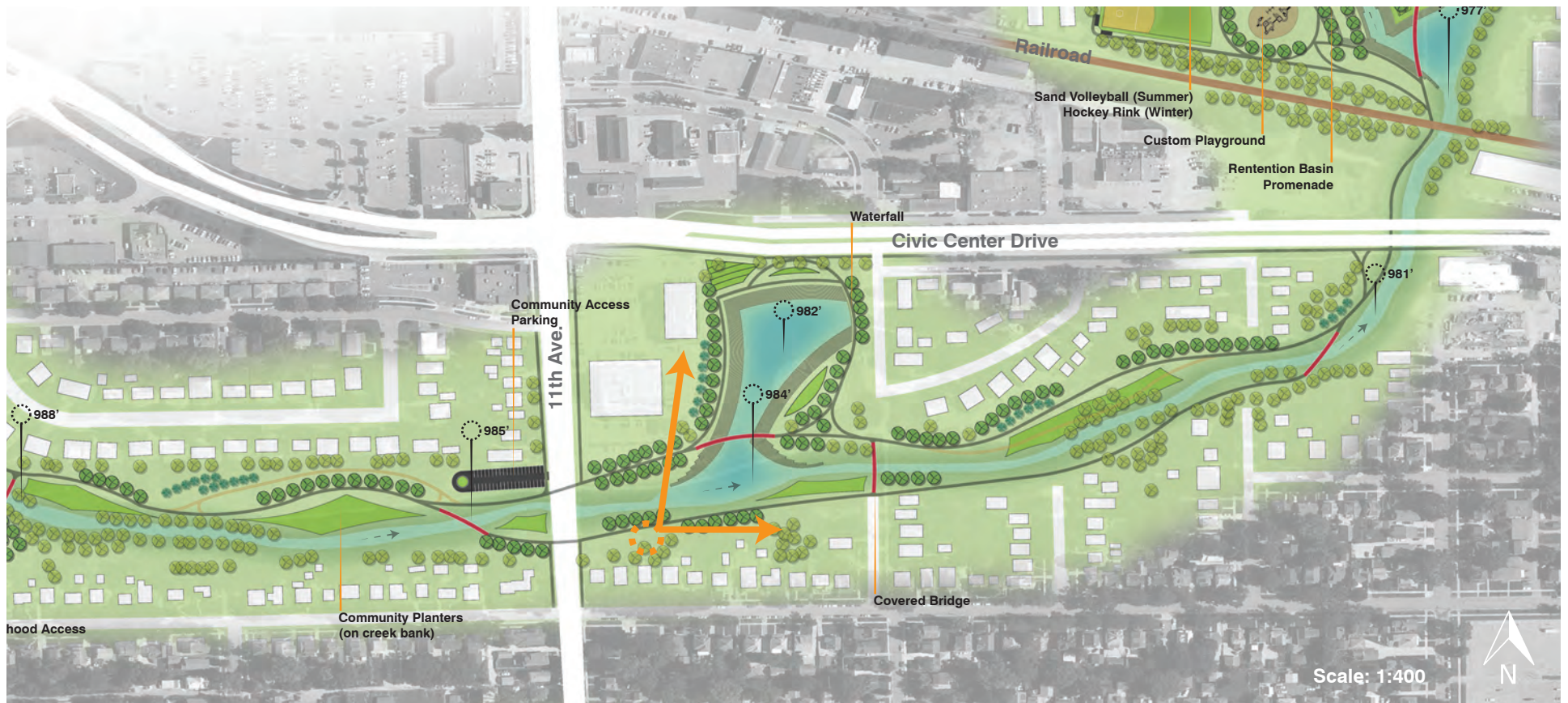
Above: View of Kutzky Park looking East towards the Mayo Clinic and the rest of downtown Rochester.



Kutzky Field

Currently a low lying baseball and football field, Kutzky Field, as of recently is no longer used by the local high school as a practice field because the school relocated. One of the first areas to flood during even a 1-2 year storm event, the area is perfect for one of two retention basins that will be created along the Cascade Creek corridor. The retention basins will help reduce the peak flow rate.

The retention basin provides enough storage for over 30 minutes of a 50 year storm event. Not only does the basin serve a physical purpose, the 60' long waterfall that faces Civic Center Drive provides an aesthetic view for motorists heading downtown to the Mayo Clinic.





Above: View of Kutzky Field retention basin looking Northeast with the waterfall in the background.



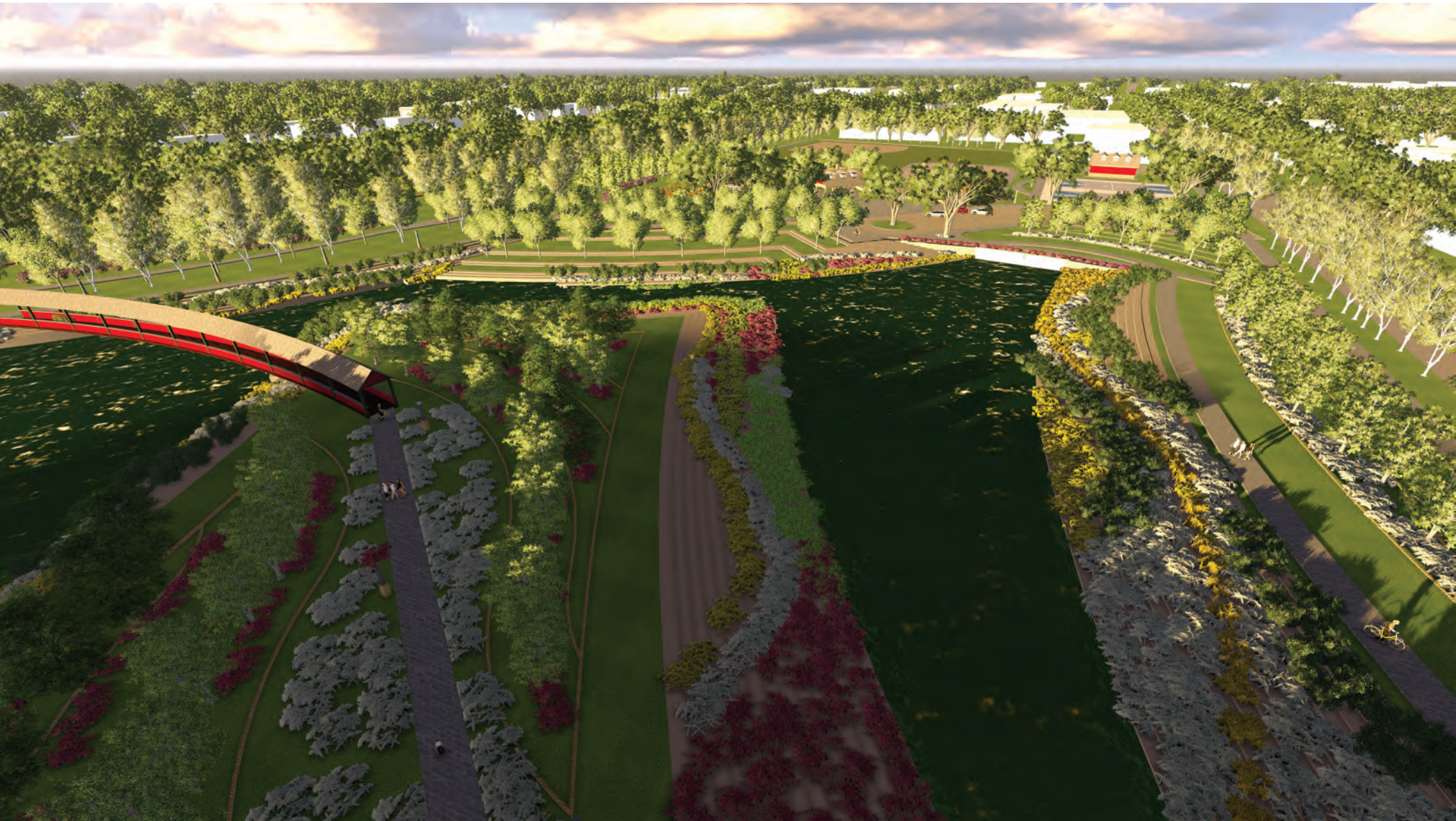
Cooke Park

Located in the center of the revitalization project is Cooke Park. The aging and mismatched park equipment is replaced with an expansive modern play system. Modern sports facilities are provided for both league play and general games.

Winter activities include groomed trails for cross country skiing, sledding on the retention basin's banks. The locker room is used as a warming house for a full size hockey rink during the winter months.

Due to prevalent flooding in the lower portion of the park, the second retention basin along Cascade Creek is incorporated here to store runoff water during and immediately after storm events. When the creek is not flooding and still within the banks, the basin will still retain water and a 60' long waterfall will keep the water from becoming stagnant.





Above: View of the Cooke Park retention basin with community shelter and sports facilities to the West.



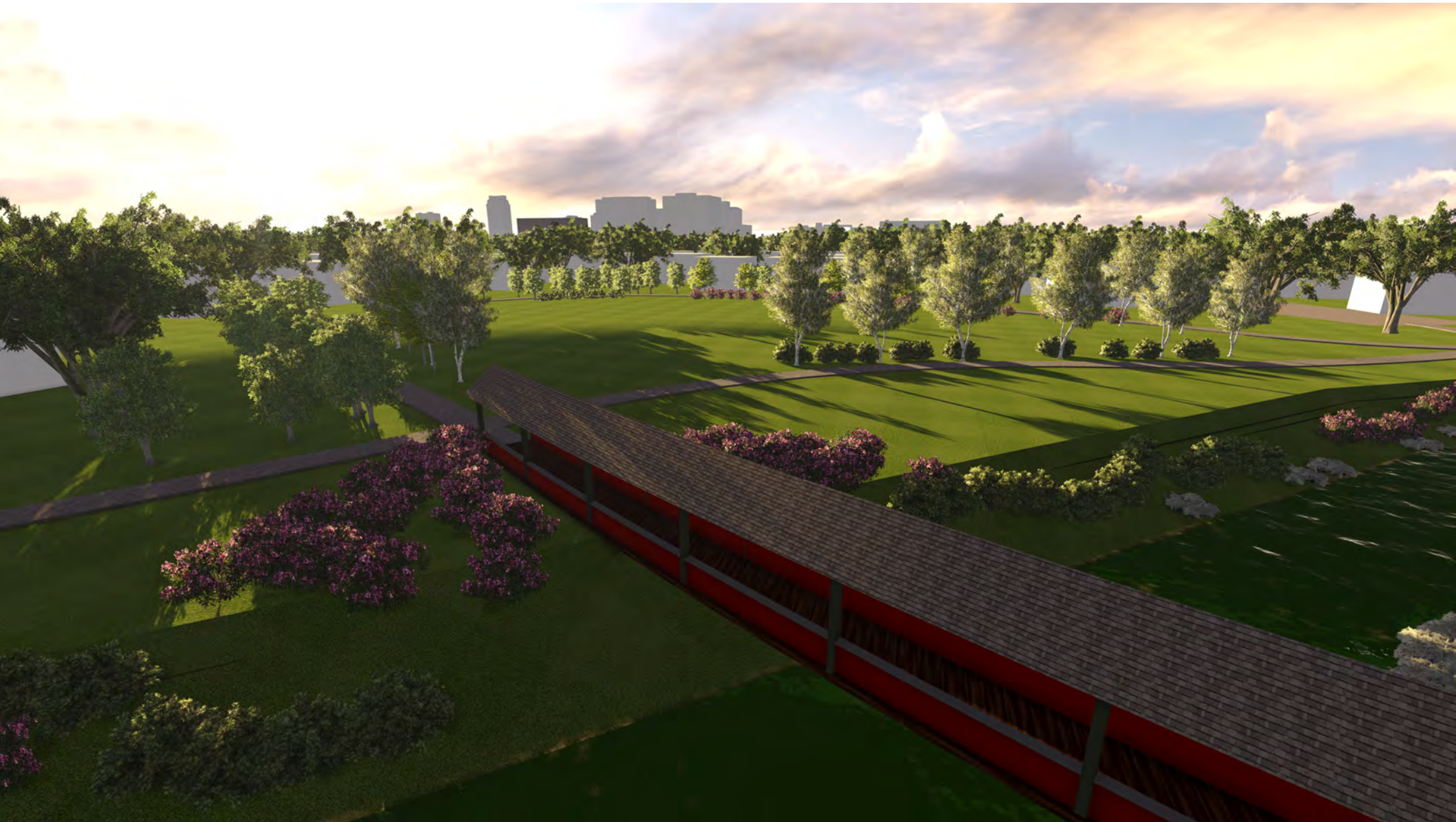
Northrop Plains

What before were empty lots in the flood plain, Northrop Plains is now an entirely passive greenspace that serves as an entrance into Cascade Creek for Northrop Neighborhood, an open field for spontaneous pickup games, and a grassy rest area for people traveling through on the now interconnected city path system.

Paths connecting to the dead end roads create the entrance into Northrop Plains. A circular path populated with broadleaf trees fills up the once empty area and defines the new greenspace.

One of the many new covered bridges is located here in order to connect to the rest of the trail system while connecting Northrop and Washington Neighborhoods with pedestrian access.





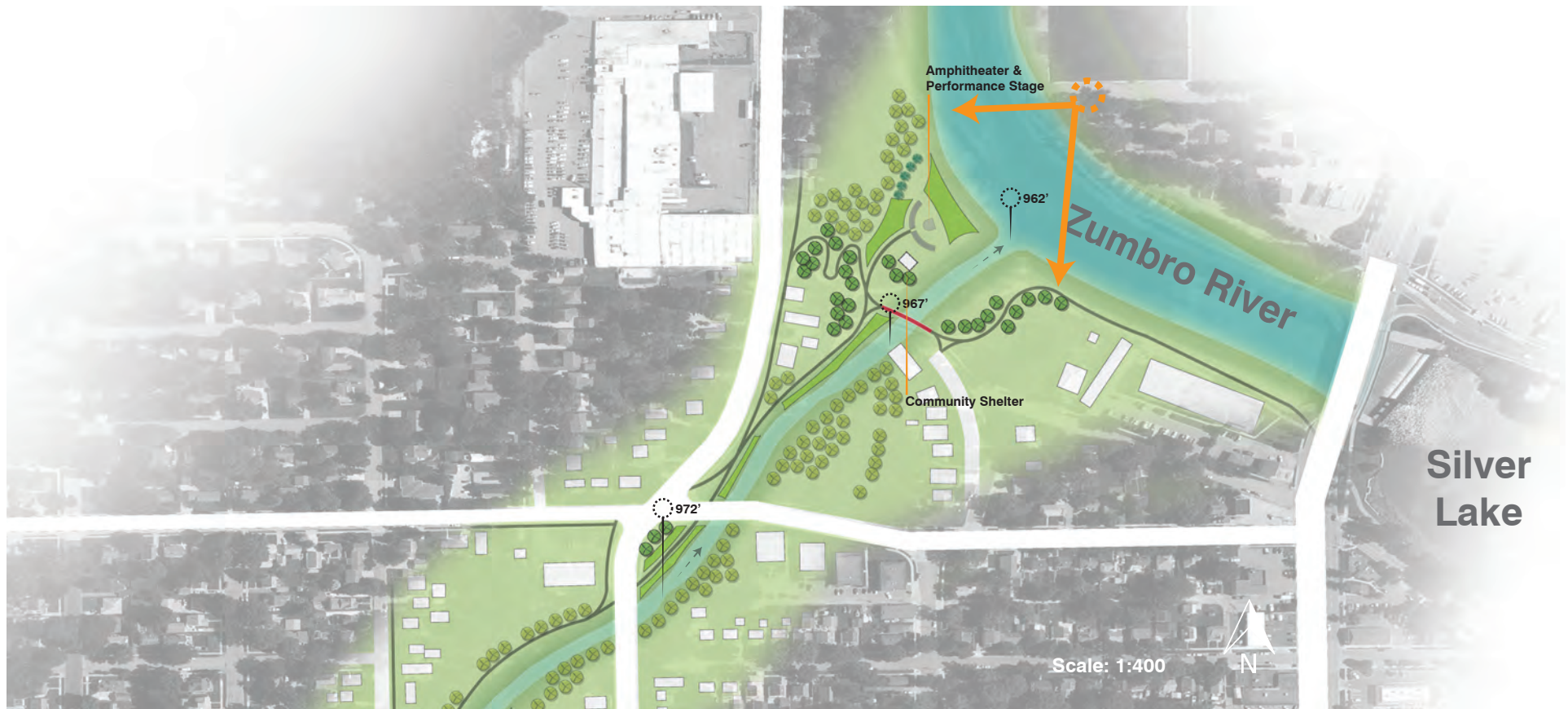
Above: View of Northrop Plains greenspace looking Southeast towards the Mayo Clinic.



Thompson Mill Race Park

Located where Cascade Creek empties into the Zumbro River, Thompson Mill Race Park currently is a prime location for fishing and looking back on the Rochester skyline.

An amphitheater, performance stage and community shelter allows for various performance arts with the Zumbro River set as the backdrop. During the Fourth of July, the amphitheater and park can be utilized for a direct view of the fireworks that are displayed over Silver Lake half a mile away.





Above: View of Thompson Mill Race Park from the opposing banks of the Zumbro River with the Mayo Clinic to the South.



Community Development

Unified Theme

In order to create a holistic design that connects the entire mile and a half of the Cascade Creek corridor, it is necessary to design thematic elements that are consistent throughout the entire area. A parts kit consisting of shelters, signage, planters, lighting, etc. ties the area together visually when traversing between parks. The same construction materials, colors and style are used among each element, keeping them within close resemblance of each other. These elements also are reflective of the architecture of the surrounding neighborhoods, which ranges from Cape Cod, Foursquare, and Colonial to modern split level and rambler houses.

Involvement

As one of the four stages in the revitalization of Cascade Creek, a major aspect of the design is not in the physical changes and revitalization, rather it is focused on the 'physical' work and involvement of the community. The ultimate goal in revitalizing the Cascade Creek corridor is to create a self-sustaining park system for the region.

Volunteer days and events will involve community members. Setting up regular maintenance days and events will get community members involved and interested in the parks and creek. Community social events will reward those that have put time and equity into the park. In the end, this community action will help members foster personal connections to the park and to each other, strengthening the community as a whole.



Parts Kit



Path Seating

Picnic Table

Planter

Waste Receptacle



Entry Gate

Park Sign

Bollard Light

Pedestrian Light





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