

**ITEM 1 - APPLICATION SUMMARY – FY 2014 APPLICATION**

<b>Contact Information:</b>			
Grant Applicant Org:	City of Duluth		
Contact Person:	Tari Rayala		
Contact Title:	City Architect		
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<b>Park Information:</b>			
Project Name:	Chambers Grove Park Flood Recovery and Improvements		
Project County:	St. Louis		
Existing Park Acreage:	15.93		
<b>Proposed Activities with this Application:</b>			
Acres to be purchased:	N/A		
Facilities to be developed or redeveloped: Chambers Grove Park			
<ul style="list-style-type: none"> <li>• Trail head at Western Terminus of Duluth Traverse Trail</li> <li>• Trail head for Gateway Flow base trail</li> <li>• Embankment stabilization</li> <li>• Wet meadow</li> <li>• Replacement of existing toilet building with new ADA compliant facility</li> <li>• Improved Parking and Access Road</li> <li>• Accessible Playground with a unique theme</li> <li>• Canoe/kayak put in spot</li> <li>• Swimming Access</li> <li>• ADA compliant Fishing Access</li> <li>• Accessible grills and picnic tables</li> <li>• Retain/relocate existing wedding gazebo</li> <li>• Relocate WWII Veteran Memorial</li> <li>• Dumpster Screening</li> <li>• Improved accessibility to existing Picnic Pavilion</li> <li>• Tree planting and landscaping</li> </ul>			
<b>Financial Information:</b>			
	Grant Request	Match	Total Cost
	\$1 million	\$0	\$1 million

## ***ITEM 2 - REGIONAL SIGNIFICANCE***

### **1. Natural Resource Based Settings and Range of Activities Offered:**

**Chambers Grove Park is situated within a natural setting along the scenic St. Louis River and offers outdoor recreation facilities and activities that are primarily natural resource based.**

**One of the most enjoyed amenities offered is picnicking, whether throughout the park or protected under a picnic pavilion complete with an operating fireplace. The park is used informally by visitors and also permitted for small scale and large scale gatherings. Chambers Grove hosts weddings, reunions, birthdays and other special events. The park offers grills and picnic tables, as well as a picturesque 'wedding' gazebo on site.**

**Chambers Grove is home to trail heads for biking and hiking trails with some of the best vistas of the St. Louis River and surrounding area. The biking trails are currently under construction and are going to become a large attraction to the park from around the region.**

**Currently swimming occurs on a limited basis due to the existing seawall and limited access to the water. With river restoration plans scheduled for 2015 (outside the scope of this proposal), Chambers Grove will provide unsupervised swimming access.**

**Boating along Chambers Grove on the St. Louis River is a favorite activity for fishing and sightseeing, The Park does not offer a motor-boat landing, as this is available in the adjacent Fond du Lac Campground. However Chambers Grove will offer a canoe/kayak put-in spot, much needed along this section of the river. A temporary holding rack for canoes, kayaks and standup paddle boards will be available as well.**

**St. Louis River has some of the best fishing in the area. Chambers Grove offers an ADA compliant accessible fishing platform and has on-shore fishing access.**

**Improvements to the park will include incorporation of a small wet meadow, rain garden and bio-swale, all providing the opportunity for nature study and education. Birders and wildlife enthusiasts enjoy the abundance of migratory birds as well as the resident fauna that resides year round. The St. Louis River Alliance and other entities conduct water monitoring of the river at Chambers Grove.**

**The existing swing sets in the park will be expanded upon with a new accessible playground, which will be uniquely-themed.**

### **2. Use:**

**Users of Chambers Grove currently are a visitor mix of roughly 2/3 local and 1/3 regional. Regional clientele can be demonstrated through issued permits as shown in the following chart.**

YEAR	# of Permits / % of Permits Issued to Individuals from Outside of Duluth **	# of People in Attendance of Permitted Events
2013	34 / 21%	2320
2012	23 / 35%	2163
2011	33 / 30%	1550
2010	26 / 27%	1925

**\*\* Permits were issued to individuals who had mailing address in ND, NY and FL.**

3. Size:

**Chambers Grove Park is 15.93 acres, and provides a trail head to a biking system that encompasses 100 miles of trails across the length of Duluth. Fond du Lac neighborhood is soon to host 21.6 miles of new off road bike trails, currently under construction, that will attract people from the region. See Exhibit A.**

4. Special Features:

**Chambers Grove is located in the Fond du Lac neighborhood, the original development of what we now know as Duluth. Fond du Lac (French for "head of the lake") was the site of an Ojibwe settlement in the 16th through 19th centuries. The 1826 and 1847 Treaties of Fond du Lac were signed at Fond du Lac. A village was platted in 1856 and incorporated in 1857. In 1895, the city of Duluth annexed Fond du Lac.**

**The fur post at Fond du Lac was first built in 1908 by John Jacob Aster for his American Fur Company. After the War of 1812 forced the British out of the fur trade, Astor fortified the post with a fort in 1816. Chambers Grove Park still has some remains of ruins from the former home of Michael and Emily Chambers, built with brownstone quarried at Chambers' brownstone quarry. Brownstone wasn't quarried at Fond du Lac until 1856; the fur post was built with wooden logs. The fur post ruins, actually located further up the St. Louis River at what is today Historical Park (formerly Astor Park), lasted until 1900. The fort was recreated in the 1930's by the Works Projects Administration and, after falling into neglect and disrepair, was destroyed in 1968. The Chambers house was destroyed in an arson fire in 1891. The mansion was never rebuilt. Michael Chambers died in 1895, but the ruins of his home were not removed until 1912. Before Emily Chambers' death in 1926, the City of Duluth purchased 577 acres from her. Ten of those acres east of the quarry and the home site were developed into Duluth's Chambers Grove Park. A few remnants of the home remain.**

5. Scarcity of Recreational Resources:

**Chambers Grove is one of two Duluth locations for public accessible fishing that meets ADA requirements, drawing people of all abilities from the area. This is a highly used feature that will carry over into the proposed improvements to the park. The lower St. Louis contains good populations of muskellunge and northern pike as well as large smallmouth bass.**

Canoeing and kayaking is another large draw to the park. Because the river has minimal shallow rapids, there is nearly always enough water for paddling. Stream flow usually peaks in late April and falls throughout the summer. Because of the large open expanses on this section of the river with minimal boat traffic, this part of the St. Louis River is a premier canoe and kayak area. In addition to leisurely paddling as well as annual paddling races, dragon boat and outrigger canoe training takes place all summer long. This is an ideal location for a much needed put-in point for this type of boating.

With the proposed changes to restore the river's edge to a more natural state, we will see an increase in swimming activity in this shallow section of the St. Louis River.

### ***ITEM 3 - PROJECT NARRATIVE***

#### **Introduction:**

The City of Duluth proposes to use the grant funds for flood recovery and improvement to Chambers Grove Park within the Fond du Lac neighborhood. The success of this project will accomplish three goals: a) make whole the park which was severely affected by the historic June 2012 flood, b) update and improve a well-used, beloved park, bringing it into ADA compliance and elevating it to a Regional Park status and c) comply with the City's economic and community development goals for the St. Louis River Corridor. The restoration and redevelopment of the St. Louis River Corridor (Corridor) is a priority in recently completed neighborhood, City, State and multi-jurisdiction land-use and development plans.

#### **Background:**

Chambers Grove Park is located at the far western end of the City, situated along the St. Louis River. The parcel number is 010-2730-00900 and the address is 100 North 134th Avenue West. Chambers Grove is a popular community park with numerous weddings, reunions, birthdays and other special events held in the park each summer. Because of its boardwalk and accessible fishing piers, it is a well-used on-shore fishing location for locals. Over the years the retaining walls along the river edge have started to shift and move, allowing the river flow to undermine the backfill. As a result, the boardwalk heaves each winter. The City was in preliminary stages of looking at these issues when the flood of June 20, 2012 hit the Duluth area. Chambers Grove was directly affected by the overflow of the St. Louis River which deposited substantial amounts of debris and sediment throughout the park and infilling the water retention pond and trench system. The seawall was compromised further and the boardwalk sustained damage. As a result, the City has broken down the overwhelming amount of recovery into three projects, each with their own funding: a) river restoration, b) storm water management, and c) overall park flood recovery and improvement, which is the focus of this Park Legacy Grant.

#### **A Collaboration of Three Projects:**

**Project One – River Restoration (not included in this grant).** Post flood, the Chambers Grove design team re-grouped to reassess the situation. At an early meeting with the Minnesota DNR, we learned that the DNR has changed their approach to hard edges along rivers, preferring to remove all sheet piling and rip rap retaining wall systems, and softening the edge in a more natural way. Softening the edge provides a number of advantages to the Park including elimination of seawall maintenance, better accommodation of future flooding, improved access to the water, and improved fishing habitat. The main benefit is that long term maintenance of the Park will be less costly. For all these reasons, the City has agreed to work with the DNR to collaboratively design and implement the removal of the existing sheet metal piling and the gabion retaining wall systems with a replacement of a softened edge. Funding for this project is being sought through grants with coordination with the Minnesota DNR. Although Project One will work collaboratively with the other two projects, it is not included within the Parks Legacy Grant.

**Project Two – Storm Water Management (not included in this grant).** The City is aware of the impact such improvements will have on the existing sediment pond and associated drainage into the St. Louis River. Two catch basins receive much of the run off from the area around the picnic pavilion and paved entrance drive and empty directly into a sediment pond, slowing and cooling the run off, and trapping contaminants before flowing into the St. Louis River. Currently the pond and trench are filled with sediment from the 2012 flood, and do not function as intended. It is the City's plan to remove the sediment and improve the aesthetics and functionality of the holding pond by implementing a bio-swale and/or rain garden. Funding for this project is being sought through a grant from the Great Lakes Shoreline Cities Green Infrastructure Grant. Although Project Two will work collaboratively with the other two projects, it is not included within the Parks Legacy Grant. See Exhibit B.

**Project Three – Park Flood Recovery and Improvements (included in the Parks Legacy Grant).** At this time, the City of Duluth is focusing on a Mini-Master Plan for improvements to the Chambers Grove Park over all. With the imminent creation of many miles of mountain bike trails in the Fond du Lac area, and the connection to the Duluth Traverse Trail – over 100 miles of bike trails, this park is slated to become a park of regional significance and a hub for numerous recreation opportunities. Chambers Grove will soon become a premier park for Duluth and region. Improvements to Chambers Grove that are being proposed include stabilization of damaged hillside, a trail head for the western terminus of the Duluth Traverse Trail, a trail head for the Gateway Flow base trail, a wet meadow of native plant species, new accessible toilet facility, improved parking and access road, new playground, a canoe/kayak put-in location and an accessible fishing location. Funding for this project is sought through the Park Legacy Grant. This project will work collaboratively with the other two projects to collectively bring Chambers Grove into a Regional Park status.

**ITEM 4 - COST BREAKDOWN**

**Development**

Facility (e.g. picnic area, campground)	Description (linear feet, dimensions, material used, number of components, etc.)	Estimated Cost	Expected Completion Date
ADA Toilet Facility	Approximately 42' x 42', insulated CMU construction, slab on grade, wood trusses, (2) stalls each men's and women's. Includes demolition of existing building.	\$300,000	
Improved parking and road access	Increase blacktop parking to approx. 30 parking spaces, includes striping, signage and bollards.	\$175,000	
Accessible route to picnic pavilion	Reduce slope of incline by lengthening the path to meet ADA requirements. Includes landscaping.	\$25,000	
Screened Dumpster	10' x 20' concrete pad with wood privacy fence.	\$5,000	
Relocate WWII Veteran Memorial	Removal and relocation of existing memorial and added landscaping.	\$10,000	
Relocation of existing 'Wedding' gazebo	Due to construction on site, this structure will get relocated. Includes new concrete foundation and removal of existing. Includes landscaping.	\$15,000	
Accessible Playground	New uniquely themed playground for all ages and abilities.	\$75,000	
Wet Meadow and misc Site Landscaping	Preparation and planting of native and local ecotypes within a Wet Meadow, and other park landscaping.	\$50,000	
Entrance Signage and Gate	Replace existing Park Entrance Sign and Security Gate with new.	\$50,000	
Hillside Stabilization	Approx. 6,000 SF of erosion control along flood damaged hillside. Anticipated approach is to stabilize using landscaping and vegetation to retain hillside.	\$200,000	
Canoe/kayak put-in spot	Signage and boat racks	\$3,000	
Design Fees – 10%		\$92,000	
<b>Total</b>		<b>\$1,000,000</b>	

## ***ITEM 5 - LOCATION MAP***

See Exhibit C.

## ***ITEM 6 - RECREATIONAL SITE PLAN***

See Exhibit D.

## ***ITEM 7 - PROJECT SITE EVALUATION***

### I. Description of the Environment and the Environmental Impact of the Proposed Project

#### A. Present Land Use:

Chambers Grove Park is currently a community park within the City of Duluth. All the existing park features will remain and be improved upon with the addition of a new canoe/kayak put-in spot and a new wet meadow. The existing bathroom facilities will be removed and replaced with ADA compliant, energy efficient and aesthetically pleasing facilities, with an accessible pathway. The existing picnic pavilion is well used, but in very good condition. No work will be done to this structure, but an accessible pathway leading to it will be installed. The existing playground consists of two sets of swings; two swings for infant and toddlers and two swings for older children. The swings will be enhanced with a new playground that will be thematically unique. The new playground will be accessible for all users. Chambers already hosts a number of grills and picnic tables which will be supplemented with additional, including ADA compliant ones with accessible pathways. The existing "wedding" gazebo is a favorite spot for bridal parties to have wedding photos taken. Due to work to be done to restore the river, the gazebo will need to be relocated elsewhere. It will be enhanced with an accessible path and landscaping. The wet meadow is to be located in an area that is usually wet and consistently difficult to mow. The topography does not allow for active park use in the particular area, and will make perfect habitat for a wet meadow comprised of native and local eco-types, important to Chambers Grove. One popular feature of the park is the WWII Veterans War Memorial. This unique and respected monument is presently not in an accessible location. Relocating the monument to make it more readily accessible results in providing the dignity and stature it deserves. On the other hand, the current prominence of the garbage dumpster needs to be played down. Although it requires easy access for servicing, the dumpster location will be improved upon and discreet screening added. The park's hillside sustained significant erosion due to the June 2012 flood. Although the State Hwy 210 has been stabilized by MnDOT, the portion of the slope within the park boundaries has not. In order to correct existing erosion damage and to stabilize the embankments against future large rain events, extensive repair work needs to take place by means of landscaping and vegetation.

#### B. Environmental Intrusions:

Chambers Grove has three built structures: a bathroom building, a picnic pavilion and a 'wedding' gazebo. The first two have underground electrical and the bathroom is on City water and sewer, with a lift station on the property. The light poles are owned and maintained by the City of Duluth and the associated power is run underground from the electrical transformer at the entrance to the park with a meter at the transformer. The decorative pole lighting along the water is also fed underground. There is no fencing around the property, but there is a lockable entrance gate to the park that helps to control the parks hours of operation. There is an adjacent drainage ditch that runs between the park and State Hwy 23, as part of the storm water management system for the park. Associated with that system are two underground culverts. The first culvert captures the park's water runoff into two catch basins flanking the driveway and feeds the runoff into the pond on site. The second culvert takes the runoff from the ditch into the river. Hwy 23 has street lights and a bridge that crosses the St. Louis River immediately adjacent to Chambers Grove, both the responsibility of MnDOT. MnDOT is responsible for both Hwys 23 and 210 and all associated highway signage. There are no billboards or railroads in the vicinity of the park. There does not appear to be any potential conflict with the parks improvements and MnDOT property or any adjacent development.

#### C. Fish and Wildlife:

Outside the park boundaries of Chambers Grove, the City of Duluth also owns significant property referred to as Fond du Lac Park. Hwy 210 that runs between the two City Parks, leads directly into Jay Cooke State Park. Although 210 was extensively damaged due to the flood and currently closed, this road will eventually be reopened.

The St. Louis River is fished for walleye, northern pike, smallmouth bass, largemouth bass, bluegill, black crappie, and channel catfish populations. Other species of rough fish include shorthead redhorse and white sucker. Attempts to introduce sturgeon are under way; sturgeon, if caught, are to be returned.

In addition to the rampant white tail deer population, there is ample wildlife in the area, typical of the local fauna in the northland, including wolf, bear and coyote. Chambers is a popular birding destination for easy sightings along the great flyway of the St. Louis River. Some particular interesting sightings include large flocks of the American white pelican, tundra swan, and Canada goose, as they stop to rest in the park and on the river.

#### D. Vegetation:

Many different wild flower species are found along the edge of Chambers Grove. Two of the most showy and protected are the large flowered trillium and the yellow lady's slipper. Both put on an impressive spring show, blooming under the hardwoods in the area. Wild ginger can also be found in the spruce/fir part of the woods. Northern hardwoods including oak, maple, basswood and elm, display the whole spectrum of local trees. This area is primary or Pioneer Forest, consisting of poplar, white and yellow birch and smaller woody under story. There are also examples of majestic white pine, spruce and fir. A plan for future tree management will be guided by the Urban Forest Management Plan, which is currently in progress by the Duluth Tree Commission. Invasive species known to be in the park include

**bamboo, honeysuckle and buckthorn.**

**E. Water Resources:**

**There are no wetlands located within the boundary of Chambers Grove Park. See Exhibit E. There is an area that is often wet within the park that is unsuitable for recreating. It will however, make a wonderful small scale wet meadow comprised of local eco-types that are supportive of the park. During periods of high rainfall, the wet meadow will collect runoff, reducing the likelihood of flooding in the usable park area. In the process of collecting and storing runoff, the vegetation of the wet meadow will remove the excess nutrients accumulated by the water, acting as a natural filter. This nutrient rich environment will provide vital food and habitat for many insects, amphibians, reptiles, birds, and mammals. A wet meadow in this application is sustainable and environmentally responsible storm water management.**

**F. Geologic and Physiographic Features:**

**There is a rich history of early indigenous cultures, fur traders, sandstone quarries and paddlewheel boats that delivered tourists to the resorts and settlements on the islands in Fond du Lac. The story is epic and fascinating, one that needs to be told. There is no better place than Chambers Grove Park, the heart of so much of the historic activity and growth. See Exhibit F, provided by the St. Louis River Alliance.**

**G. Air Quality/Noise:**

**Although construction activity will necessitate temporary closure of parts of the park during various stages of the work, there will not be any adverse impacts on adjacent land uses or land owners.**

**H. Transportation:**

**The main route for vehicular traffic to Chambers Grove would be State Hwy 23 from Duluth in the north and again coming from Wrenshall in the south. State Hwy 210 will provide access from the west, once it reopens, and until such time, traffic is rerouted from I-35 through Becks Road/State Hwy 3 in Gary-New Duluth, just east of the Fond du Lac neighborhood. Although Chambers Grove can boast of being the furthest point west within the City of Duluth limits, it still has the fortuitous advantage of being on the Duluth Transit Authority bus line.**

**II. Description of the Proposed and Future Management Activities**

**A. Land Management and Protection:**

**Because the area footprint of Chambers Grove Park is to remain the same, there will be no additional impact on the ability to properly protect the site and its resources. Currently the park is locked in on two sides by state highways, the St. Louis River on a third side and City owned park land on the fourth side. The advantage to this situation is that the City of Duluth has ultimate protection from additional development or adjacent property owners. The private property owned across Hwy 23 from Chambers Grove is zoned commercial and consists of Fond du Lac Campground, a very popular RV/tent seasonal campground with a boat launch available to the public for a nominal fee. The Fond du Lac Campground is an**

ideal neighbor as their business compliments the park activities.

B. Partnerships:

**Minnesota Pollution Control Agency (MPCA)**

Shanna Schmidt, VIC, [shanna.schmidt@state.mn.us](mailto:shanna.schmidt@state.mn.us)

Nelson French, Lake Superior Unit, [nelson.french@state.mn.us](mailto:nelson.french@state.mn.us)

**St. Louis River Alliance (SLRA)**

Julene Boe, Executive Director, [jboe@stlouisriver.org](mailto:jboe@stlouisriver.org)

See Exhibit G.

**Fond du Lac Community Club**

Jim Rodman, Club President

[marodman@juno.com](mailto:marodman@juno.com)

**Minnesota Department of Natural Resources (DNR)**

John Lindgren, St. Louis River AOC, Program Coordinator

[John.lindgren@state.mn.us](mailto:John.lindgren@state.mn.us)

**Cyclists of Gitchee Gummee Shores (COGGS)**

Adam Sundberg, President

[adamsundbergdc@hotmail.com](mailto:adamsundbergdc@hotmail.com)

See Exhibit H.

**Minnesota Department of Transportation (MnDOT)**

Todd R Campbell, P.E., Assistant District Engineer, Program Delivery, MnDOT Duluth

[todd.campbell@state.mn.us](mailto:todd.campbell@state.mn.us)

***ITEM 8 – SUSTAINABLE AND RESILIENT INFRASTRUCTURE***

1. Sustainable and resilient infrastructure.

**Proper stabilization of the hillside slope is the goal. The use of vegetation (soil bioengineering) together with other slope stability structures (biotechnical engineering) for slope protection is our sustainable approach. Properly installed and maintained, vegetation will protect the slopes by reducing erosion, strengthening soil, and inhibiting landslides which increase general slope stability. The use of vegetation to manage erosion and protect slopes does not require heavy machinery on the slope, establishes wildlife habitat, is sustainable, and will improve the aesthetic quality of the park.**

2. Energy efficient, easy to maintain and recycled/recyclable materials.

**The new accessible Restroom Facility is the City's opportunity to implement best design practices to create a new energy efficient, easy to maintain building comprised of**

recycled/recyclable materials. This building will utilize natural daylighting to minimize use of artificial light, solar panels to power the electrical use, water-conserving fixtures, motion sensors and controls to reduce energy use, and LED light fixtures.

3. Conservation of water use and the design of facilities to effectively manage storm water on site.

Although a majority of the storm water management within Chambers Grove Park is addressed in another project (See Exhibit B), the wet meadow addresses storm water management on the westerly portion of the park. As part of the storm water management system, the wet meadow is a sustainable and environmentally responsible solution. Using native and local eco-types of vegetation will result in something aesthetically interesting, but also sustainable and resilient. The location for the wet meadow is ideal because of restricted drainage and the receipt of large amounts of water from rain or melted snow which naturally occurs in the riparian zone of the St. Louis River. The proposed location does not have standing water present except for brief to moderate periods during the growing season. Instead, the ground fluctuates between brief periods of flooding and longer periods of wetness.

The wet meadow will have a high diversity of plant species, which should attract large numbers of birds, small mammals and insects including butterflies. Vegetation will include a wide variety of herbaceous species including sedges, rushes, and grasses. A few of many possible examples include species of *Rhexia*, *Parnassia*, *Lobelia*, some species of wild orchids (e.g. *Calopogon* and *Spiranthes*), and carnivorous plants such as *Sarracenia* and *Drosera*. The final selection of plant species will be of native and local eco-types, supportive of the park.

## ***ITEM 9 – COMMUNITY INVOLVEMENT***

1. What efforts were made to get input from members of the community that will be affected by this project? For example, public meeting(s), notification of adjoining property owners, etc.

Public meetings are held in the Fond du Lac neighborhood the second Tuesday of the month, every other month. Flood recovery and improvements to Chambers Grove Park have been discussed at numerous meetings since the June 2012 flood, with community input and approval. Adjacent property owners are updated of the project progress at the community meetings. The Flood Recovery and Improvements project is widely supported by the Fond du Lac community, the St. Louis River Corridor stakeholders, and the City of Duluth.

2. What community planning process was used to show a need for this project and to define its scope?

As the Fond du Lac neighborhood continues in its recovery efforts on an individual household

basis as well as a community wide effort, the Chambers Grove Park Flood Recovery and Improvements project becomes an opportunity to make whole the damage and loss at this park. Improvements to the park will encourage more use by the neighborhood, the citizens of Duluth and the entire regional population.

3. How do you expect this project to increase outdoor recreation participation?

While the effects of the flood have left its mark on the park, Chambers Grove continues to see use. The current development of an extensive bike trail system in the immediate area is sure to draw bikers from around the region. With a number of purpose-built routes to choose from, everyone from beginner to pro will enjoy the breath-taking rides and overlooks. When taking a break from the exhilarating rides, mountain bikers can watch for bald eagles, red-tailed hawks, otters and other wildlife. Hosting trail heads to these trails in a newly restored and improved park with ample parking, accessible toilet facilities, access to the St. Louis River, will greatly enhance the park users' experience and help ensure return visitors. The COGGS cycling organization is working collaboratively with the City of Duluth to build a continuous network of multi-use trails across the entirety of our 27 mile-long city. This is a project which has raised nearly \$700,000 in funds from both private and public sources and has received numerous articles in national publications. Chambers Grove sits as a critical trail-head for the 100 mile Duluth Traverse Trail System and because of this, it is very important that it is fully rehabilitated and an attractive meeting point for the visiting recreationalists using the trails.

#### ***ITEM 10 – AVAILABILITY FOR PUBLIC USE***

Chambers Grove is open to the public from 6am until 10pm, every day, all year round. The bathroom facility is closed by about October 15th and reopens by about May 1st. With an improved bathroom facility that is insulated and heated, this is an opportunity to keep the building in operation all year round for park users.

There is no entrance fee to use the park, but reservations can be made for large group picnics and weddings. Generally picnics are about \$50 for five hours and weddings are about \$80 plus \$50 extra if alcohol will be present. See Exhibit I, for Facility Fees.

Chambers Grove hosts a number of annual events including company picnics, family reunions, fishing events, and church service/picnics. Chambers is also a favorite for birthday parties, anniversary celebrations, and graduation parties as well as several weddings. Chambers Grove had 34 reservations in 2011, 24 in 2012 (year of the flood) and 34 in 2013. The City of Duluth Parks and Recreation staff, who are responsible for booking the park, anticipate an increase in scheduled use once the park improvements are made.

## ***ITEM 11 - STATEMENT OF ACCESSIBILITY***

The critical elements of this proposal will meet the ADAAG requirements for Buildings and Facilities, Accessibility Guidelines of Outdoor Developed Areas and Accessibility Guidelines for Play Areas.

### **Parking Area**

The inclusion of a Parking Area is critical to providing adequate access to area recreational opportunities, including use of trails and river access. The parking area provides designated, striped and signed van accessible parking. It provides a minimum of forty (40) parking spaces (10' x 20'), two (2) of which are van accessible (20' x 20') located closest to the buildings. There is a 5'-0" wide sidewalk on the east side of the parking area. Curb cuts and tactile strips are provided per MN State standards.

### **Access Routes**

To gain access from the parking lot to the buildings, the project provides for a 5'-0" ADA compliant, paved blacktop path that does not exceed 5.0% slope or a 2.0% cross slope. This path starts at the access road, goes up to the picnic pavilion, runs in front of the pavilion to the playground, and behind the pavilion to the toilet facility. Approximate length of the path to the picnic pavilion is 150 lineal feet. Approximate length of additional path to the toilet building is 100 lineal feet. Approximate length of the path from the picnic pavilion to the playground is 50 lineal feet.

The pathway for the Duluth Traverse trail head and the Gateway Flow base trail head will extend past the toilet building. The project provides for a 5'-0" wide ADA compliant, crushed limestone access trail that does not exceed 5.0% slope or a 2.0% cross slope. Approximate length of this trail from the toilet building to the Duluth Traverse trailhead is 50 lineal feet. Approximate length of additional trail to the Gateway Flow base trail head is 75 lineal feet.

### **Play Area**

The City of Duluth continues its commitment to providing accessible playground equipment so that children of all abilities can enjoy the fun. Inclusive play and accessibility for all children is a great way to foster friendships, build skills and create an environment of creativity. The Play Area is comprised of an accessible surface, allowing all levels of ambulatory access to the play equipment. The playground will offer parallel play experiences, social gathering areas and quiet spaces, combined with decks, ramps, berms and transfer points or modules to provide the accessibility.

### **Picnic Tables and Grills**

Currently the park provides accessible picnic tables and grilles. Additional handicap tables and grills will be accessed with a 5'-0" ADA compliant, paved blacktop path that does not exceed 5.0% slope or a 2.0% cross slope.

See Exhibit J, for City of Duluth Policy on Americans with Disabilities Act.

***ITEM 12 - PROJECTED OPERATION AND MAINTENANCE COSTS***

Chambers Grove Park has an average annual operating and maintenance cost of \$6,000. There is minimal increase projected for operation and maintenance cost to the City with the proposed improvements. The functions and features of Chambers Grove Park essentially remain the same after the project is completed. The picnic pavilion, bathrooms, playground and gazebo are all existing amenities and are currently maintained on a regular schedule. Same is true of the grounds and the parking. We see an increased size of the toilet facility, playground and additional parking. Our estimated cost for increased annual operation and maintenance is \$1,500 for a \$7,500 total cost each year.

***ITEM 13 - APPLICANT'S RESOLUTION***

See Exhibit K.

***ITEM 14 - PLANS***

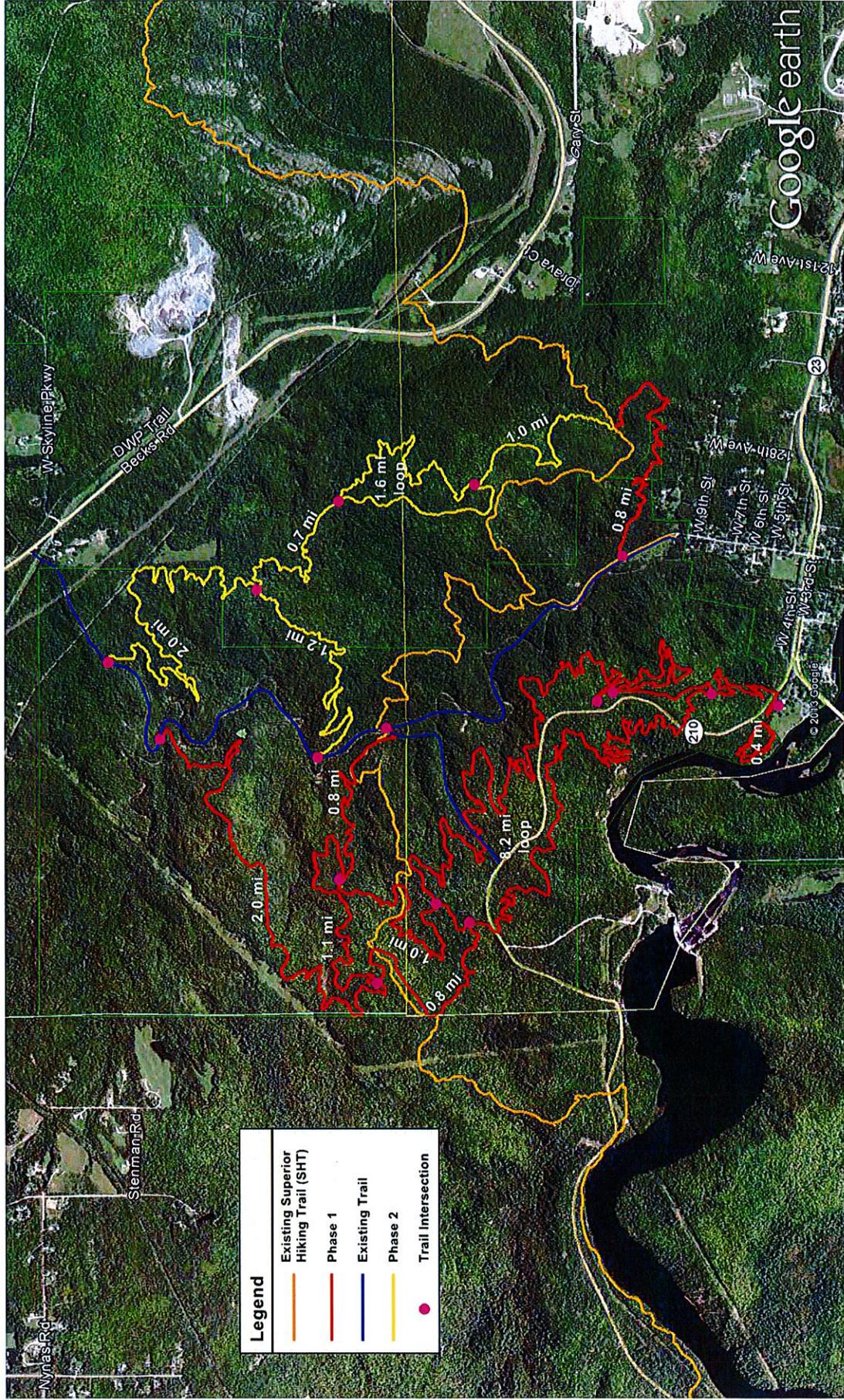
See Exhibit L, for Toilet Facility floor plans. These plans were used in the construction of the new toilet facility associated with the new storm water overflow holding tank at the Lakewalk in Canal Park. This is the model for future Toilet Facilities for the City of Duluth, including the new building at Chambers Grove Park.

Playground plans were not available at the time of the submission of this grant.

***ITEM 15 - ACQUISITION PROJECTS APPRAISAL(S)***

Not applicable.

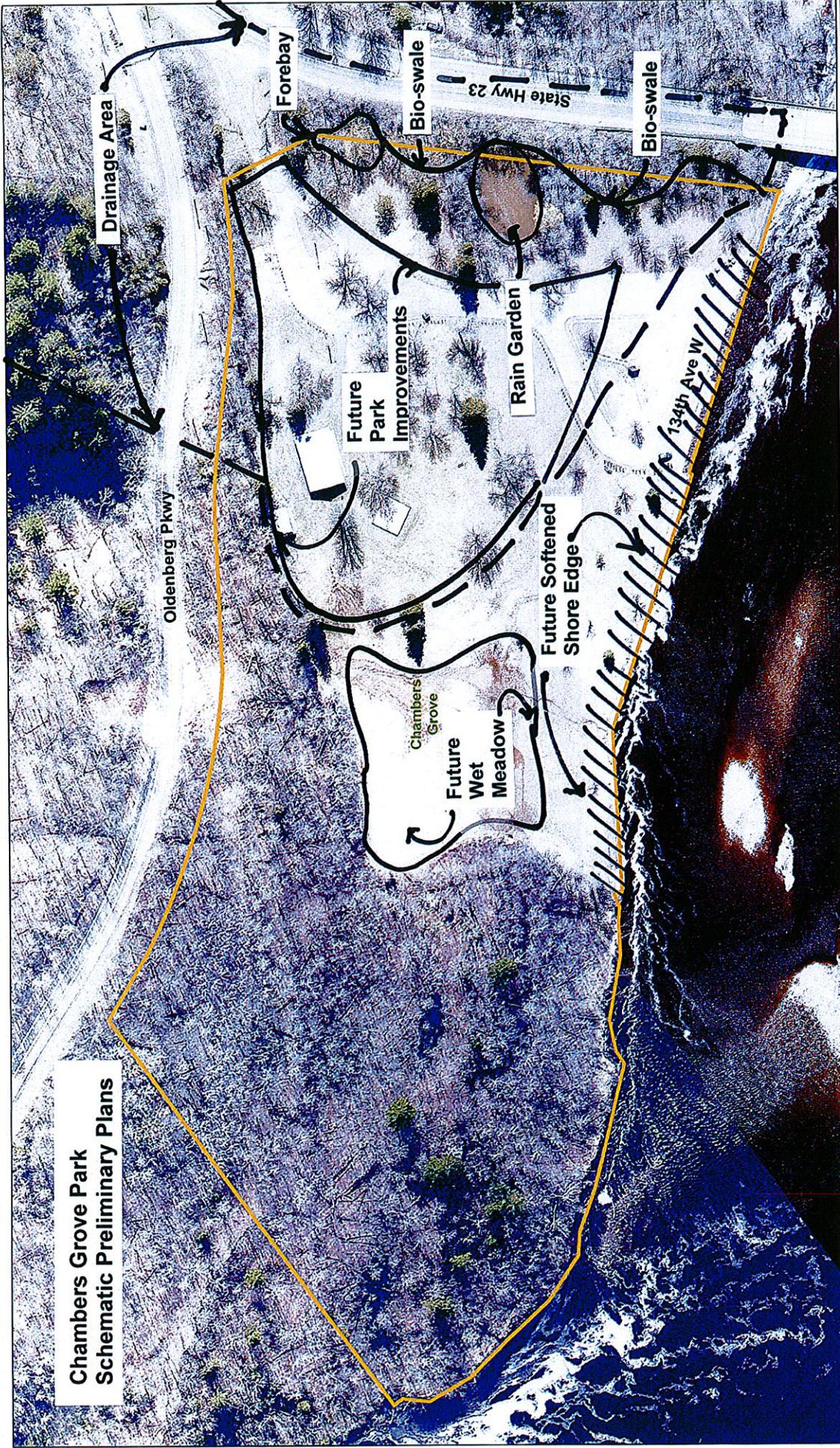
# Duluth Traverse Trail - Mission Creek Trails Masterplan



Legend	
	Existing Superior Hiking Trail (SHT)
	Phase 1
	Existing Trail
	Phase 2
	Trail Intersection



# Chambers Grove Park Schematic Preliminary Plans



	<p>1:1,200 1 inch = 100 feet 0 50 100 Feet</p>
	<p>Photo Date: May 2013 Prepared By: [Name] Plan Date: 8/2013 The City of Duluth, MN</p>
	<p>City of Duluth Site Map</p>
	<p>The City of Duluth has used its best efforts to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability of this information. This information is for informational purposes only and does not constitute an offer of insurance, financial, or other services. The City of Duluth, County of St. Louis, and other persons are not liable for any damages or losses resulting from the use of this information. The City of Duluth reserves the right to update this information at any time without notice. The City of Duluth reserves the right to update this information at any time without notice. The City of Duluth reserves the right to update this information at any time without notice. The City of Duluth reserves the right to update this information at any time without notice.</p>

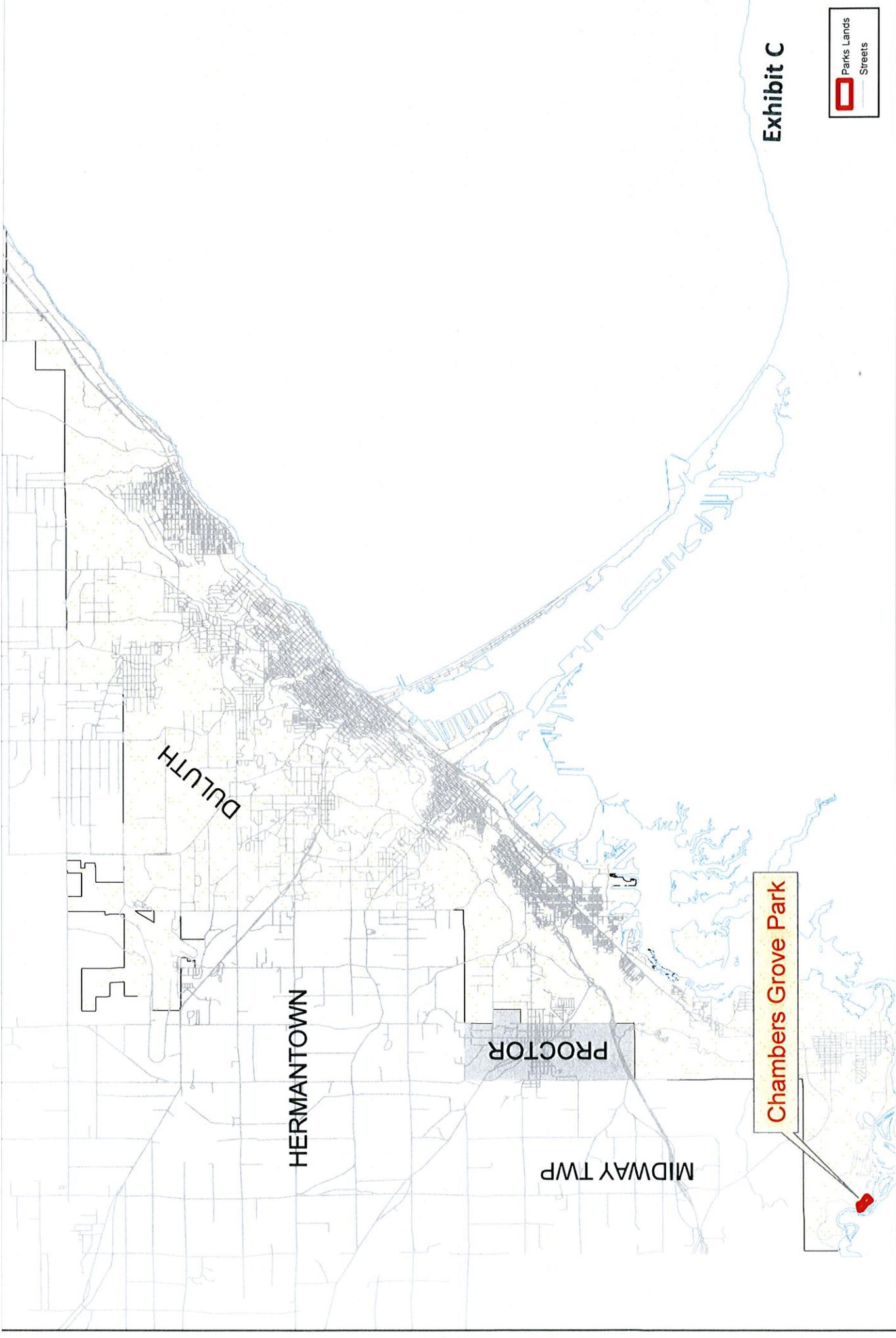
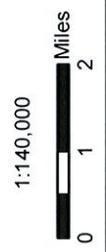


Exhibit C



1:140,000  
 Photo Date: May 2013  
 Print Date: 10/25/2013  
 Prepared By: The City of Duluth GIS Office

**Chambers Grove Park - Overview Map  
 Flood Recovery and Improvements  
 City of Duluth - St. Louis County**

Applicant Signature: \_\_\_\_\_

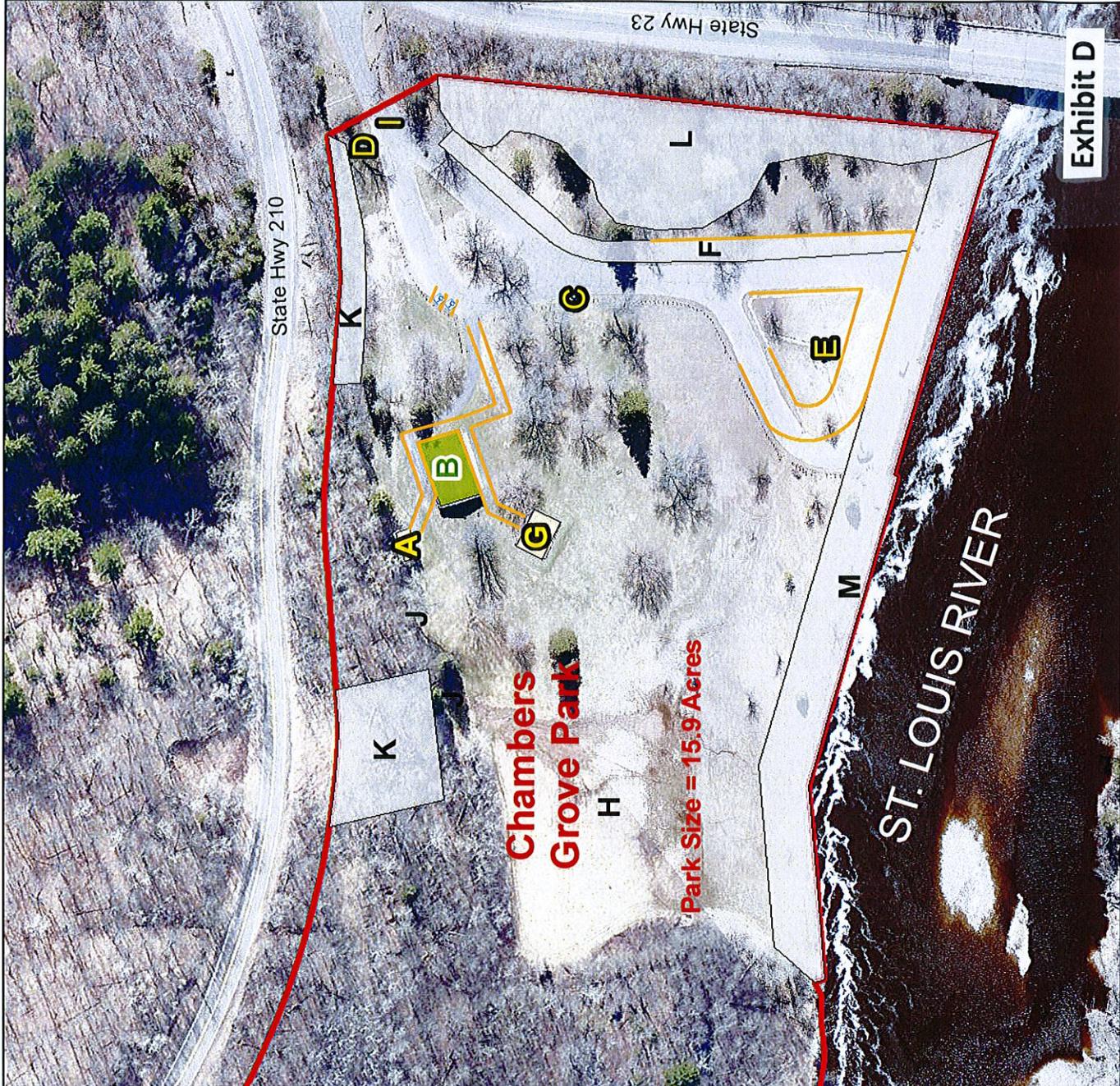
The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy of the data. The data is either a legally recorded map or survey and/or State offices and other sources affecting the area shown, and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.

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## Chambers Grove Improvements

- A - Existing Toilet Building to be replaced with ADA compliant facilities
- B - Existing Picnic Pavilion to remain
- C - Screened Dumpster
- D - WWII Veteran Memorial to be relocated for improved accessibility
- E - "Wedding" Gazebo to be relocated
- F - Improved Parking and Access Road
- G - Accessible Playground uniquely themed
- H - Wet Meadow
- I - Improved Park Entrance Signage and Gate
- J - Trail Head
- K - Hillside Stabilization
- L - Storm Water Management System - outside the scope of this project
- M - Softening of waters edge - outside the scope of this project

-  New Sidewalks and Road Alignment
-  Parks Lands
-  Other Areas
-  Existing facilities that will remain
-  Development accomplished with grant



**Chambers Grove Park**  
 Park Size = 15.9 Acres

Exhibit D

The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located at various locations and is not intended to be used as a legal document. The City of Duluth shall not be liable for any damages in connection with the use of this information contained within.

The City of Duluth requires that this map/data not be redistributed to any party in whole or in part, including any derivative works of products generated by combining the data with other data, unless authorized by the City of Duluth GIS office.

Chambers Grove Park  
 Flood Recovery and Improvements  
 City of Duluth - St. Louis County  
 Applicant Signature: *Sabri Rayala 10.25.2013*

1:1,800  
 1 inch = 150 feet  
 0 75 150 Feet

Photo Date: May 2013  
 Print Date: 10/25/2013  
 Prepared By: The City of Duluth GIS Office





## HISTORY OF THE LOWER ST. LOUIS RIVER

### Geologic History of the Lower St. Louis River

The geologic history of the Lower St. Louis River can be reconstructed from the rocks and sediments exposed in the river bed and along the shoreline.

The present St. Louis River channel was shaped primarily by the glaciers of the Pleistocene epoch, which began approximately 2 million years ago. As glaciers advanced and retreated across the land, receding for the last time around 10,000 years ago, the melting ice and flowing meltwater left behind complex patterns of sediment, including moraines, drumlins, beach sands, and lake-bottom clays. These glacial deposits, which form many of the surface features we see today, greatly influence the flow and habitat conditions of the river.

The bedrock over which the St. Louis River flows is part of the Canadian Shield, the stable ancient core of the North American continent. From below Jay Cooke State Park to the Fond du Lac neighborhood, the river crosses the Fond du Lac Formation, which is made up of brown to red sandstone, siltstone, and shale approximately 950-1,040 million years old. Below Fond du Lac, coarse-grained, dark gray gabbro forms the high ridgeline on the Minnesota side of the river. This gabbro, along with the fine-grained volcanic basalts that are visible along the Lake Superior shoreline in Duluth, formed as the result of continental rifting about 1,100 million years ago (Ojakangas and Matsch 1982).

On the Wisconsin side of the river, bedrock is buried beneath thick layers of red clay, silt, and sand—remnants of a time over 11,000 years ago when the area was covered by Glacial Lake Duluth, which formed as meltwater was trapped in front of the ice of the retreating Superior Lobe of the Laurentide Ice Sheet. The red clay that is so characteristic of the Wisconsin side of the river was deposited in the deep water of this glacial lake (Farrand and Drexler 1985).

As the glacial ice retreated to the northeast, outlets of progressively lower elevation were exposed in the eastern part of the basin. The lake level dropped in stages as water drained away through these lower outlets (Landmesser and Johnson 1982). As the lake level fell, water began flowing into the western end of the lake, cutting a deep channel—the ancestral St. Louis River—into the easily eroded red clay sediments.

As the heavy weight of the ice was removed, the land began to rise, a process known as “isostatic rebound.” Since the land to the north and east was the last to lose its covering of ice, it was the last to rebound. As the land rose faster in the northeast, the water in Lake Superior shifted toward the western end of the lake, flooding the lower portion of the St. Louis River and its tributaries, and forming the freshwater estuary that we see today.

A baymouth sand bar formed across the western end of the lake, separating the estuary from the open water of the

lake and creating a sheltered harbor. Historically, there was only one break in the baymouth bar—near what is now the Superior Entry—where water from both the St. Louis River and the Nemadji River flowed out into Lake Superior (Ojakangas and Matsch 1982).

### **Pre-Industrial History of the Lower St. Louis River**

In the area surrounding the Lower St. Louis River, the name “Fond du Lac” now refers to a Band of Lake Superior Chippewa whose reservation is located near Cloquet, Minnesota, or to a neighborhood of Duluth, Minnesota, which is located on the northern bank of the St. Louis River approximately 20 miles upstream from Lake Superior. But in the early days of European exploration, the entire Lower St. Louis River area was referred to as Fond du Lac, a name that is now translated in various ways—as “Head of the Lake,” “Foot of the Lake,” or “where the water stops.”

Although Native Americans have lived in northeastern Minnesota for thousands of years, they left few descriptions of life along the St. Louis River. Written records arrived with the Europeans who came to the area in the 1600s to explore, trade, and introduce Christianity to the Indians. Prior to the early 1800s, reports indicate that the Fond du Lac Band of Lake Superior Chippewa consisted of villages scattered along the shores of the St. Louis River. Villages were located at what are now the cities of Superior and Cloquet as well as the Duluth neighborhoods of Fond du Lac and Minnesota Point. The Fond du Lac Band also had seasonal camps at Spirit Lake and Indian Point, living primarily on game, fish, wild rice, and other wild plants (Fritzen 1978).

During the days of canoe travel, the St. Louis River was a major transportation route. Travelers from the east crossed Lake Superior, traveled up the St. Louis River, and then headed south toward the Upper Mississippi River or north toward Lake Vermilion. From the mouth of the river to the rapids above what is now the Fond du Lac neighborhood, most early travelers described a wide shallow river with extensive emergent wetland vegetation, including floating bog and beds of wild rice. The vegetation was so thick that it was often difficult to follow the main channel.

Canoes could be paddled upstream as far as the Grand Portage, which was located about 1.5 miles above the Fond du Lac settlement. There the current became strong and paddling more difficult. Canoes could not travel this section of the river, so they were carried across the Grand Portage, a distance of approximately 17 miles to the lower end of Maple Island, about a mile below what is now Scanlon. The portage was difficult, requiring three to seven days to cover the distance (Fritzen 1978).

Although Daniel Greysolon Sieur du Lhut, in the summer of 1679, was one of the first European explorers to arrive in the area, his reports do not contain much detail. Over 100 years later, in the summer of 1793, the North West Company constructed Fort St. Louis on the Superior bayfront several miles west of the mouth of the Nemadji River. While the North West Company controlled the territory from the 1780s until 1816, Fort St. Louis

was the headquarters of the Department of Fond du Lac, which included the entire Upper Mississippi region. Trade goods and supplies were brought to the fort from Sault Ste. Marie and taken inland to various trading posts. Fort St. Louis was the scene of one of the first attempts at agriculture at the Head of the Lake. George Henry Monk, a clerk of the North West Company, described it this way: "Here are two horses, a cow, a bull and a few pigs; with the manure of these animals a garden of 3 acres of pure sand is cultivated, which produces about 220 bushels of potatoes" (Fritzen 1978).

In about 1816 Fort St. Louis was closed down, and the company built a new post some 18 miles up the river at the town of Fond du Lac. The new post included large gardens planted with potatoes and other crops; Indian lodges and gardens were located on an island in the river.

In 1820, an expedition led by Lewis Cass, territorial governor of Michigan, passed through the area enroute to locate the source of the Mississippi River. It is from this expedition that more detailed descriptions of the St. Louis River began to emerge. Henry R. Schoolcraft, expedition geologist, wrote the following (Schoolcraft 1855).

*"On reaching the mouth of the St. Louis River or Fond du Lac River, the Cabotian mountains present a lofty barrier towards the north. We here saw in plenty the folle avoine, or wild rice... Three miles above the mouth of the St. Louis River there is a village of Chippewa Indians... The river is ascended two miles further, to the foot of the Grand Portage... The difficulties of the portage are much increased by the rain, which has filled the carrying path with mud and water. We are advancing into a dreary region – everything around us wears a wild and sterile aspect, and the extreme ruggedness of the country – the succession of swampy grounds and rocky precipices – the dark forest of hemlock and pines which overshadow the soil and the distant roar of the river, would render it a gloomy and dismal scene..."*

Twelve years later, in 1832, Schoolcraft returned as leader of an expedition whose purpose was to curb hostilities between the Sioux and Chippewa and to investigate the condition of the fur trade. Lieutenant James Allen was the man chosen to command the military escort for the expedition and to keep a daily journal. Allen's detailed journal includes the following descriptions of entering the St. Louis River from Lake Superior and traveling upstream to the settlement of Fond du Lac (Allen 1832).

"The mouth of Fond du Lac River, or "The Entrance," as it is called by the traders and voyageurs, is about eighty yards broad, but is shallow, and would not admit a vessel of three or four feet draught. It expands immediately into two bays, to the right and left, separated from each other by a small island near and directly in front of the entrance. The mouth seems to be in the very end of the lake, and hence it is properly called *Fond du Lac River*. A river that enters the left bay of The Entrance is also as aptly called *La Rivière à Gauche* [Left Hand River, now called Nemadji River]. The bays to the right [Superior Bay] and left [Allouez Bay] lie in their length parallel to the shores of the lake, from which they are only separated by low sandy tongues of land, very much attenuated, and sustaining a few little

scattering pines. The point to the right, entering, is near fifty yards broad near the end, but it afterwards narrows, and runs back for about two miles, with a breadth of from twenty to forty yards.

“Our course was through the right hand bay, N. 60° W. for four miles, to a strait one hundred yards broad, by which, in a distance of two hundred yards, we entered another bay [St. Louis Bay], long and narrow, and which contracted gradually to the very narrow, crooked channel of the river. ... The river for this distance is very crooked and winding, but its general course up is southwest; the channel is of variable breadth, and generally deep; the shore is irregular, and presents alternately, on either hand, marshes, bluff sand banks and hills, and is cut up by numerous channels, or “pockets,” from ten to one hundred yards broad, which run out straight and generally perpendicular to the river, frequently extending as far inland as we could see. These are separated by long tongues or promontories, of semi-cylindrical shape, rounded on either side up to the summit, fifty or sixty feet, and covered with a thick growth of small trees, aspen, birch, tamarack, *Pinus pendulus*, and other species of pine. Several of these singular promontories occur in many places in succession, parallel to each other, with channels between, and present a formation and appearance altogether peculiar.

“We arrived at the trading house at 4 o'clock p.m. The river is here penetrating a chain of mountains, is more regular in its course, and has its channel more confined. The trading house is situated at the base of the mountain, on a narrow piece of bottom, three or four hundred yards broad, which is rich, and excepting the gardens where the trader raises abundance of potatoes, is covered with a very tall, green luxuriant grass, principally *Poa compressa*. ... This is called the Fond du Lac Post. The buildings...are handsomely situated on the bank of the river, and directly in front is an island, of about two miles circuit, of very rich soil and a forest of large elm.

*“The population of the Fond du Lac band is 193, of whom about 45 are warriors. ... their country is very poor in all animals for food, and their particular trader furnishes most of their living; the rest they get from the fish of the lake; whitefish and trout, which they take in gill nets, and from the few furred animals they kill.”*

Lieutenant Allen also recorded the difficulties encountered as the expedition headed upstream from Fond du Lac and carried their supplies across the Grand Portage (Allen 1832).

*“...The portage was commenced by ascending a hill 100 feet high, with an acclivity of about 45°. No pains have ever been bestowed to make a road up it, and the ascent is by means of little imperfect steps, just large enough for the toes, that wind up the hill without any regularity as to direction or relative position. ... The portage road, after the hill, was rough, narrow, and crooked, a mere uncut path through bad woods. ... The portage road continued a little, narrow, crooked path, with bushes crowding it on either side, winding around trees, through marshes, over ridges, and across ravines, and*

*presenting all the irregularities and inconveniences of a rude trail through difficult woods. ...No idea can be formed of the difficulty of this portage without witnessing it. The men with heavy loads are sometimes forced to wade through a swamp of half a mile, full of roots and bushes, and over their knees in mire at every step, and where the road is dry, it is generally over a hill, or across a gully, the steep banks of which are worse to pass than the swamps. ... The general direction of this portage has been a little west of northwest. ... It is on the north side of the river, and the land about it is rich, excepting the swamps. In some places we passed groves of sugar maple, but the general growth is birch and pine; some of the latter being very large and beautiful, measuring eighteen feet in circumference at the base."*

Edmund F. Ely, a missionary of the American Board, was stationed at Fond du Lac (Nute 1944). His diary includes a map of the settlement, which shows "Indian gardens" and an Indian village on islands in the St. Louis River. Ely wrote the following description of paddling upstream toward Fond du Lac in August 1833.

*"The bed water of the river still remains about a mile in width to the land, but much of this width as we proceed up was Savannas; sometimes there were two or three channels, and the main channel so serpentine that we lost it and fell into another which brought us into a savanna through which we found a little ditch just large enough to crowd our canoe through; we happened then to come into the main channel."*

As the fur trade declined, fur companies had to find other lines of business. In 1834 the American Fur Company established commercial fisheries to exploit Lake Superior trout and whitefish. One of their packing stations, which operated until the late 1840s, was located at the Fond du Lac trading post.

### **Post-Industrial History of the Lower St. Louis River**

In 1854, the U.S. government signed the LaPointe Treaty with the Chippewa Indians, opening the area to settlement. Towns were quickly platted on both sides of the St. Louis River. Duluth grew slowly at first, while the city of Superior boomed. By 1857 Superior had a population of over 2,000 people, but the nationwide financial panic of 1857 saw the population drop to less than 500 (Lusignan 1983).

The first road in the region was built in 1854 with the goal of linking Superior and Duluth with Fort Snelling on the Mississippi River. Known as the "Military Road," it originated in Superior and covered 50-60 miles to the junction of the St. Croix and Mississippi rivers. For the next twelve years the Military Road remained the only road in the area.

In 1855, construction of locks at Sault Ste. Marie made it possible for ships to bypass the rapids of the St. Mary's River at the outlet of Lake Superior. This event marked the opening of unobstructed shipping between Lake Superior and Lake Huron, making it possible for larger ships to sail to the Duluth-Superior Harbor. The locks

expedited shipment of the area's natural resources, including iron ore, lumber, and grain. The natural harbor made ship-building an obvious industry for the area; the ship-building industry was most active in the Duluth-Superior Harbor during World War II. Ship renovation still continues in Howards Bay. The opening of the St. Lawrence Seaway in 1959 brought international trade to the Duluth-Superior Harbor.

The first railroad was begun in 1861, but due to financial problems and the Civil War, it was not completed until 1870. From Thomson, the railroad followed the north bank of the St. Louis River to Fond du Lac and then to Third Avenue East in Duluth. The section between Thomson and Fond du Lac, being close to the river, presented many spectacular views of the wild river with its numerous waterfalls and rapids. It also presented many dangers. High wooden trestles were built to cross the deep ravines along the riverbank, but the wooden structures were constantly threatened by fires started by the wood-burning locomotives. The grade was long and steep, and mud slides in the spring often caused delays. At least one train slid down the bank into the river.

With the introduction of the railroad, Duluth and Superior underwent a rapid period of growth. In 1869 Duluth grew from a population of fourteen families to 3,500 people. In 1870 Duluth was incorporated as a city, and by 1892 the population was over 50,000. Superior began to boom around 1886 with the establishment of the Lehigh Coal and Iron Company, grain elevators, flour mills, and shipyards. The City of Superior was officially recognized in 1887, and by 1893 Connors Point boasted 235 residential buildings, more than fifteen storefronts, and two schools. By 1893 the population of Superior reached 35,000, and shipments through the port totaled over \$20,000,000 per year (Lusignan 1983). A financial crisis in 1893 slowed down growth, but by 1910, the population of the Duluth-Superior area was near 120,000.

The development of the river shoreline and reconfiguration of the harbor began in earnest in 1872 when the Minnesota Harbor Improvement Company cut through the baymouth sand bar to construct a ship canal for Duluth. This also created a second outlet for the St. Louis River. In 1873, the River and Harbor Act passed by the federal government included the first appropriations to dredge the harbor channels to a depth of 13 feet. In 1881, amendments to the Act allowed the channels to be dredged to 16 feet.

An Act of Congress in 1896 joined the Duluth and Superior harbors under one administration and authorized \$3 million to enlarge the harbor and rebuild the Duluth Ship Canal. By 1902, the harbor had 17 miles of shipping channels excavated to a standard depth of 20 feet.

Because of the availability of transportation—either on the river itself or by railroad located adjacent to the river—the shoreline of the river was the logical location for commerce and industry, and the various businesses that sprang up along the river had a major impact on the habitats.

The abundance of bedrock along the river led to the establishment of several rock quarries. The St. Louis Slate & Brick Company in Thomson manufactured brick from ground slate. Three sandstone quarries operated near Fond

du Lac, one along Mission Creek, and another on the south side of the river about a mile above Fond du Lac. The third was on the north side of the river. When these quarries were active, the shipping channel was dredged all the way to Fond du Lac to facilitate transport of the rock.

Logging was one of the first major industries in the area. The first wave of logging removed white pine from the extensive forests of Minnesota and Wisconsin. Once facilities became available for shipping, lumber sawmills were started in Carlton and Thomson. Logging operations were carried on over much of what is now Jay Cooke State Park. The large cleared areas where the park headquarters is now located was once the ox pasture of the Thomson sawmill. The clearing on the south side of the river, known as the "high landing" was the site of early logging operations dating from 1870. The logs were floated down the river to Fond du Lac, then boomed and rafted to sawmills in Duluth and Superior.

In 1888, serious flood conditions developed in the St. Louis River watershed, and the log booms at Cloquet broke. A year's supply of sawlogs, amounting to almost 90 million board feet, went roaring down the St. Louis River. Bridges were torn out, roads were washed away, and log booms at Fond du Lac were washed out. Some of the logs ended up stranded along the river bank, and some ended up floating in the bays of the estuary. Some were even swept out into Lake Superior. Many, but not all, of the logs were salvaged (Fritzen 1978).

The lumber industry dominated Wisconsin's Connors Point between 1860 and 1909. By 1894 at least fifteen sawmills were located along both sides of the St. Louis River, but the logging boom ended quickly. By 1925 only one mill remained in operation in Duluth. The white pine forests, which in 1895 had been estimated to hold a virtually inexhaustible 40 billion feet of lumber, had disappeared.

In addition to lumber, the Duluth-Superior Harbor quickly became a major shipping point for Midwestern grain. As early as 1885 there were eleven grain elevators on Rice's Point in the area that became known as elevator row. By 1886, Duluth-Superior was the largest wheat shipping port on the Great Lakes, and between 1919 and 1935 Duluth-Superior handled nearly 20% of all grain transhipped on the Great Lakes. By 1918, the harbor included 25 grain elevators (Kellner et al. 1999). Today, bulk grain shipments are the port's third leading commodity (Duluth Seaway Port Authority 2002).

The first shipment of iron ore from Mountain Iron, Minnesota, arrived at the newly constructed ore dock at Superior's Allouez Bay in 1892 (Kellner et al. 1999). The West Superior Iron and Steel Company was started in 1888 by James Roosevelt, New York financier and father of Franklin Roosevelt. Constructed in Superior on a site directly north of Belknap Street along St. Louis Bay, the steel plant became one of the largest employers in the community, employing over 300 workers at its peak in 1892 (Lusignan 1983).

On the Minnesota shore, the Zenith Furnace Company opened in 1902 on the site of the earlier West Duluth Blast Furnace. Zenith Furnace included three units - a wholesale coal trade, a pig iron operation, and a coking operation

that included the capture and sale of coking byproducts. Heavy oils were sold to Duluth Tar and Chemical, and manufactured coal gas (called “town gas”) was sold to the City of Duluth. The site later became Interlake Iron (Kellner et al. 1999).

In 1915 U.S. Steel completed construction of its fully integrated steel mill on 1,500 acres of land on the Minnesota shore of the St. Louis River, a spot where small scale smelting operations had been attempted as early as 1890. In 1911 the Universal Portland Cement Plant was built on land adjacent to the steel plant. The nearby community of Morgan Park was built to house the steel plant and cement plant workers.

Standard Oil Co. built the first dock for the receipt of petroleum products on the Superior side of the harbor in 1891. Around 1910 an abrupt increase was recorded in shipments of petroleum, perhaps due to the introduction of the automobile in the Twin Ports. The years between 1932 and 1946 were the banner years for this industry. After World War II, petroleum receipts abruptly declined (Kellner et al. 1999).

The construction of hydroelectric dams also brought changes to the habitats of the Lower St. Louis River. In 1904 the St. Louis River Power Company was organized and construction of the dam and power station at Thomson was begun. The dam was completed in 1907. In 1915 the St. Louis River Power Company deeded the lands not needed for water power purposes to the State of Minnesota for a park, forming the nucleus of Jay Cooke State Park.

Shipping remains one of the key segments of the economy for the “Twin Ports” of Duluth and Superior. Approximately 1,100 ships enter the Duluth-Superior Harbor each year, transporting 40 million metric tons of material. Principal cargoes include iron ore (40%), coal (40%), and grain (10%). Based on cargo volume, the Duluth-Superior Harbor ranks as the number one Great Lakes port (Duluth Seaway Port Authority 2002).

## **Summary**

Prior to the 1850s, the Lower St. Louis River was home to a small population of Lake Superior Chippewa as well as an important center for the European fur trade. Once the LaPointe Treaty with the Chippewa Indians was signed in 1854, the area began to change rapidly as thousands of European immigrants arrived. Development of the river shoreline and reconfiguration of the Duluth-Superior Harbor began in earnest in 1872 when a ship canal for Duluth was cut through the baymouth bar that had separated the river and Lake Superior. The next quarter of a century saw both the Duluth and the Superior entries entirely reconstructed, and the basins and channels in both Superior Bay and St. Louis Bay dredged into the basic contours they possess today. Dredging had significant effects on both the shoreline and the riverbed. Since dredging began in the late 1800s, over 69,500,000 cubic yards of clay and mud mixed with sand have been dredged from the river bottom and used as fill to create docks, to replenish eroded areas on Minnesota and Wisconsin Points, and to form new islands (U.S. ACOE, personal communication, 2002).

Although ongoing maintenance dredging and industrial and commercial activities still result in changes to the river, the major dredging and shoreline reconstruction activities took place within a relatively short period of time, between 1870 and 1920. By 1902, the harbor had 17 miles of shipping channels excavated to a standard depth of 20 feet, and by 1960, most channels had been dredged to a depth of 27 feet—a very significant change to this once-shallow freshwater estuary.



**St. Louis River Alliance**  
**394 Lake Avenue S, Suite 321**  
Duluth, Minnesota 55802-2338  
Phone: 218-733-9520  
Fax: 218-723-4794

October 22, 2013

Mr. Joe Hiller  
Minnesota Department of Natural Resources  
Division of Parks and Trails  
500 Lafayette Road, Box 52  
Saint Paul, MN 55155

RE: The City of Duluth application to Parks and Trails Legacy Program

Dear Mr. Hiller:

This letter is written to express the St. Louis River Alliance's support for the City of Duluth's application for Parks and Trail Legacy Program funding for improvements at Chambers Grove due to flood damage. The St. Louis River Alliance (SLR Alliance) is a nonprofit organization that is a key partner working together with the St. Louis River Area of Concern Coordinating Team of local, state, and federal agencies to address issues related to the St. Louis River Area of Concern (AOC).

The City of Duluth's proposal will be used to make improvements in a city park that is located next to the St. Louis River and within the AOC. Chambers Grove Park is a popular site for fishing on the St. Louis River. The funds will be used for overall park improvements including improving parking, two new trail heads, a wet meadow, hillside stabilization, new ADA compliant toilet facilities, improved accessibility to picnic pavilion, accessible grills and picnic tables, canoe/kayak put-in spot, relocated WWII Veteran Memorial, dumpster screening, and new accessible playground. These improvements will have a positive impact on fish habitat as well as make this park more accessible for park users, including those who want to fish.

The St. Louis River Alliance encourages the Park and Trail Legacy program to award this funding as it will address the damage caused by the flooding and it will make the park more accessible to more users. Most important, these improvements will have a positive impact towards the delisting of the St. Louis River Area of Concern by improving fish habitat in this area of the river. The City of Duluth will be highly effective at using these funds in a responsible and energetic manner. Thank you for your consideration.

Sincerely,

Julene Boe  
Executive Director



# CYCLISTS OF GITCHEE GUMEE SHORES

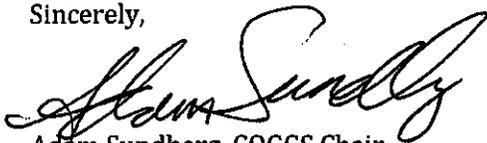
P.O. Box 161261 Duluth, MN 55816 [www.coggs.com](http://www.coggs.com)

Mr. Joe Hiller  
Minnesota Department of Natural Resources  
Division of Parks and Trails  
500 Lafayette Road, Box 52  
Saint Paul, MN 55155

Dear Mr. Joe Hiller,

COGGS fully supports the City of Duluth's application for the Chambers Grove sediment pond grant. Chambers Grove is going to the western termination of the Duluth Traverse Trail, which is a shared project between the City of Duluth and COGGS to build a continuous network of multi-use trails across the entirety of our 27 mile-long city. This is a project that has raised nearly \$700,000 in funds from both private and public sources and has received numerous articles in national publications. Chambers Grove sits as a critical trail-head for our proposed 100 mile Duluth Traverse Trail System and because of this it is critical that it is fully rehabilitated and an attractive meeting point for the visiting recreationalists using the trails.

Sincerely,



Adam Sundberg, COGGS Chair



Exhibit H

## 2013

### Indoor/Outdoor Facility Fees

#### **Outdoor Parks/ Shelters for Private Events:**

- for a 5-hour time slot 10am-3pm, 4-9pm

<b>Picnics:</b>	1-150	\$50	<b>Weddings:</b>	1-150	\$ 80
	151-300	\$90		151-300	\$120
	300+	\$115		301+	\$150

<b>Rose Garden:</b>	\$250 per 2-hour time slot
<b>Enger Park:</b>	\$300 per 5-hour time slot
<b>Leif Erikson:</b>	\$200 per 5-hour time slot
<b>Wedding Rehearsal Only</b>	\$ 50 Monday-Friday
<b>Picnic Wedding Receptions:</b>	Park Rental Fee (no alcohol or live music or dancing)
<b>Alcohol:</b>	\$50 + security
<b>Permit Replacement:</b>	\$25
<b>Key Deposit:</b>	\$20 park gate key

#### **Outdoor Parks/ Shelters for Special Events:**

Special Events are open to the public or charge an admission or registration fee.

1-150	\$80	Damage/clean up deposit without alcohol	\$100
151- 300	\$120	Damage/clean up deposit with alcohol	\$200
301+	\$150	Portable electric panel deposit	\$100
		Vendor Space	\$20 each
-for a 5-hour time slot-		Water spigot deposit	\$25 each
		Alcohol consumption - \$50 park or \$100 building	
		There are also insurance requirements for special events	

#### **Building Rentals:**

Meetings:	\$20 per hour (12 or less)
Event Set-Up:	\$20 per hour
Youth Birthday Party:	\$50 4 Hour Time Slot (Youth 18 & under)
Youth Recreation Program Special:	\$50 4 Hour Time Slot (Youth 18 & under)
Other Events:	\$70 first hour plus \$25 for each additional hour
Deposit:	\$100 without alcohol
Alcohol Consumption:	\$100 + security
Deposit with Alcohol:	\$200
Key Deposit:	\$20
Washington Gym Rental:	\$20 per hour
	\$35 per hour with floor covered and use of tables and chairs

#### **Athletic Field Rentals:**

Per field per day for adult activities:	\$60
Per field per day for youth activities:	\$25
Lights per hour per field:	\$60

#### **Heritage Sports Center:** \$115 per hour for ice time

\*\*\*We do not have discount rates for 501(c)3 groups for any rentals\*\*\*

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**Exhibit I**

POLICY & PROCEDURE		
		<b>Americans with Disabilities Act</b>
Approved: <i>[Signature]</i>	Supersedes:	Effective: September 1, 2003
		Page 1 of 1

The City of Duluth will comply with Title I of the Americans with Disabilities Act (ADA) to accommodate workplace needs for its employees with disabilities so that they can accomplish the essential functions of their jobs. The ADA is intended to protect the rights of individuals with physical or mental impairments that substantially limit one or more major life activity and provide clear, consistent, enforceable standards for addressing discrimination against individuals with disabilities. Title I ensures that qualified individuals with disabilities, including both applicants and current employees, have available to them the same employment opportunities as people without disabilities. Furthermore, the City values the strength and creativity brought about by a diverse workforce that includes those with disabilities.

**Applicants.** Applicants requesting an accommodation to take the civil service test must contact Human Resources and provide medical documentation of their disability. Human Resources staff will determine if disability qualifications are met under the ADA and what accommodation, if any, would be reasonable for testing purposes. If requesting applicant receives a conditional offer of employment, further evaluation will be necessary as outlined below.

**Employees.** Employees may request an evaluation to determine ADA qualification and possible accommodation by contacting the Equal Opportunity Representative, Room 410 City Hall, (218) 730-5630. Additionally, if a supervisor believes accommodations are necessary, they should make the employee aware of the following procedure.

#### ADA Qualification Procedure

- 1) Employee contacts the Equal Opportunity Representative (EOR) and requests an evaluation.
- 2) The EOR will document the request on the ADA Qualification Determination Worksheet and will contact the Employee Benefits Administrator (EBA) within five (5) business days of the request, to facilitate the collection of necessary data including medical, the nature of employee complaint/request, and the nature of employee's work.
- 3) Upon collection of all necessary documentation, the EBA convenes a Review Committee comprised of the EOR, Human Resources Manager, a City Attorney, and Loss Control Specialist, which will review the data and determine if disability qualifications are met under the ADA. If they are not, the EOR will notify the employee of the decision. If ADA qualifications are met, the Review Committee will meet with the employee, direct supervisor, and Division Manager to discuss and select reasonable accommodations for trial, keeping compliance of applicable laws and labor contracts in mind. The recommended accommodation will be documented on the ADA Qualification Determination Worksheet.
- 4) The trial period for the accommodation will be 90 days, during which time, the supervisor will be responsible for monitoring the use of the accommodation and to meet periodically with the employee to discuss its effectiveness. Any further adjustments made to the initial recommendation must have Review Committee approval before implementation to ensure legal compliance.
- 5) The Review Committee will review the initial recommendation with the Division Manager, direct supervisor and employee 90 days after implementation to ensure measures are adequate. If the recommendations are not adequate, further accommodations will be recommended or the Review Committee may reconsider its determination of the employee's capability to perform the essential job functions with accommodation. If the Review Committee believes that the employee will not be able to perform the essential job functions with reasonable accommodations, the employee will be offered Long Term Disability benefits in accordance with the governing collective bargaining agreement. Employees unable to perform the essential job functions with accommodations who have less than six months of continuous employment will be terminated on probation.

Note: If there are already modifications in place to prevent injury or to assist employees to do their job, it is the supervisor's responsibility to ensure that employees are using them. Failure to use or enforce modifications will result in disciplinary action. The City's goal is to stop preventable injuries from occurring.

PPM ada 01 20040203

**City of Duluth**  
**ADA Qualification Determination Worksheet**

Name \_\_\_\_\_ Date \_\_\_\_\_  
Department/Division \_\_\_\_\_ Supervisor \_\_\_\_\_

I. Condition to be Evaluated (attach supporting data) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

II. Determination \_\_\_\_\_ Date \_\_\_\_\_

- Not qualified under the ADA
- ADA qualifying disability (continue worksheet)

Reasoning: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

III. Reasonable Accommodation \_\_\_\_\_ Start Date \_\_\_\_\_

- No Reasonable Accommodation Available (explain)
- Unable to Determine Accommodation (explain)
- Accommodation (describe)

Explanation or Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

IV. 90 Day Efficiency Review \_\_\_\_\_ Date \_\_\_\_\_

- Accommodations are adequate (no further action)
- Further accommodations needed (explain -include new date each time)
- Employee unable to perform essential job functions with accommodations (explain)

Explanation or Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*Worksheet(s) must be completed in its entirety and retained in confidential portion of personnel files.

## PEOPLE FIRST LANGUAGE

People First Language puts the person before the disability,  
and it describes what a person has, not who a person is

<u>SAY</u>	<u>INSTEAD OF</u>
People with disabilities/ Person with a disability	The handicapped/handicapped people
Uses a wheelchair	Confined to a wheelchair/ wheelchair bound
Has a physical disability	Crippled/paralyzed
Emotional disorder/ Mental health disability	Insane/crazy
Child with a disability	Special needs child
Person has.....	Person suffers from.....
People who are blind/ visually impaired	The blind
Accessible parking	Handicapped parking
Person with a cognitive disability	Person is mentally retarded

The Center for Independent Living of Northeastern Minnesota:  
Assisting people with disabilities to live independently pursue meaningful  
goals and have the same opportunities and choices as all people.

CERTIFIED COPY OF RESOLUTION OF THE CITY COUNCIL OF THE CITY OF DULUTH, MINNESOTA

RESOLUTION 13-0508

ADOPTED: OCTOBER 14, 2013

RESOLVED, that city act as legal sponsor for the project contained in the park legacy application to be submitted on or before October 25, 2013, and that the city's chief administrative officer is hereby authorized to apply to the Minnesota department of natural resources (MnDNR) for funding of this project on behalf of city.

FURTHER RESOLVED, that city has the legal authority to apply for financial assistance and financial capability to ensure adequate construction, operation, maintenance, and replacement of the proposed project for its design life.

FURTHER RESOLVED, that city has not incurred any development costs or entered into a written purchase agreement to acquire the property in connection with the project.

FURTHER RESOLVED, that if the aforesaid grant is offered, the proper city officials are authorized to enter into a grant agreement with the MnDNR agreeing to the project with grant funds to be deposited in Fund 225-125-1808-4220-06 (disaster recovery fund, finance department, disaster aid and revenue, state of Minnesota legacy funds). This grant is one of ten legislatively designated appropriations for the purpose of restoration of parks and trails in the Duluth area impacted by the flood of 2012 and requires no in-kind (match) contribution by the city.

Resolution 13-0508 was unanimously adopted.

Approved October 14, 2013

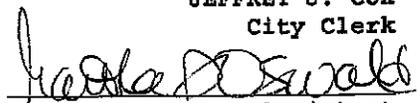
DON NESS, Mayor

I, JEFFREY J. COX, city clerk of the city of Duluth, Minnesota, do hereby certify that I have compared the foregoing resolution passed by the city council on the 14th day of October, 2013, with the original in my custody as city clerk of said city and that the same is a true and correct transcript therefrom.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said city of Duluth, this 24th day of October, 2013.

JEFFREY J. COX  
City Clerk

by

  
Assistant  
CITY OF DULUTH, MINNESOTA

### ROOM FINISH SCHEDULE - TOILET BUILDING

ROOM NO.	ROOM NAME	FLOOR	WALLS	CEILING	REMARKS
201	WOMEN'S	1	WT	WT	WT
202	MECHANICAL	1	WT	WT	WT
203	MEN'S	1	WT	WT	WT
204	VESTIBULE	1	WT	WT	WT
205	VESTIBULE	1	WT	WT	WT
206	VESTIBULE	1	WT	WT	WT

WALLS: WT, SW (PAINTED)  
 CEILING: WT, SW (PAINTED)  
 FLOOR: WT, SW (PAINTED)

REMARKS:  
1. NONE

### DOOR & FRAME SCHEDULE - TOILET BUILDING

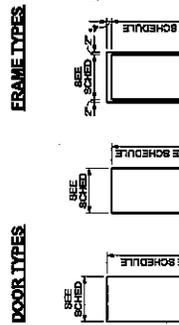
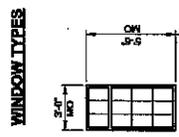
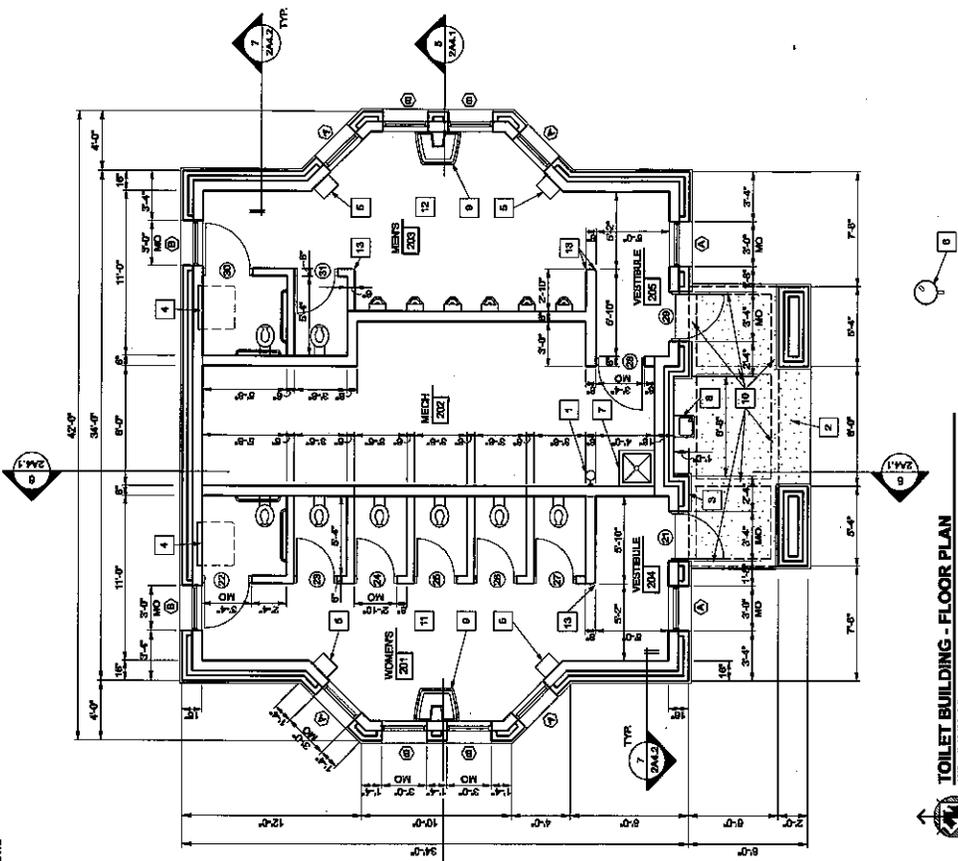
NO.	DOOR TYPE	DOOR FRAME	DOOR	FRAME	REMARKS
1	A	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
2	B	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
3	C	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
4	D	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
5	E	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
6	F	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
7	G	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
8	H	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
9	I	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
10	J	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
11	K	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
12	L	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
13	M	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
14	N	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
15	O	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
16	P	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
17	Q	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
18	R	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
19	S	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
20	T	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
21	U	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
22	V	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
23	W	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
24	X	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
25	Y	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
26	Z	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
27	AA	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
28	AB	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
29	AC	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
30	AD	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	
31	AE	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	1 1/2" x 6 1/2"	

REMARKS:  
1. SET THRESHOLD IN A BEAD OF SEALANT

- ### BOX NOTES
- FIRE EXTINGUISHER w/ BRACKET LOCATION
  - CONCRETE STOOP - SEE FOUNDATION PLAN
  - W/ SHIMMERAL FINISH MATERIAL BETWEEN SIDEWALK AND STOOP BUILDING TYP.
  - RECESSED SS BABY CHANGING STATION
  - ELECTRIC HAND DRYER - SEE ELECTRICAL
  - FREE STANDING SINGLE STATION DRINKING FOUNTAIN w/ PET BOWL - SEE SITE PLAN FOR LOCATION
  - MOP BASIN - SEE PLUMBERS
  - 36" SPOUT HEIGHT DRINKING FOUNTAIN - SEE PLUMBING
  - WASH FOUNTAIN - SEE PLUMBING
  - DECORATIVE BEAMS - SEE DETAIL 102AAS.1
  - INTERIOR ELEVATIONS - SEE 10AAS.1 AND 20AAS.1
  - INTERIOR ELEVATIONS - SEE 20AAS.1 AND 20AAS.1

### CODE SUMMARY

OCCUPANCY:	XX
BUILDING TYPE:	VI
STORIES:	ONE
AREA, ACTUAL:	1,281 SF
VOLUME:	FOUR (4) FT
OCCUPANT LOAD:	(CODE)
EXIT ENTRANCE:	(CODE)
SPRINKLERS:	NONE

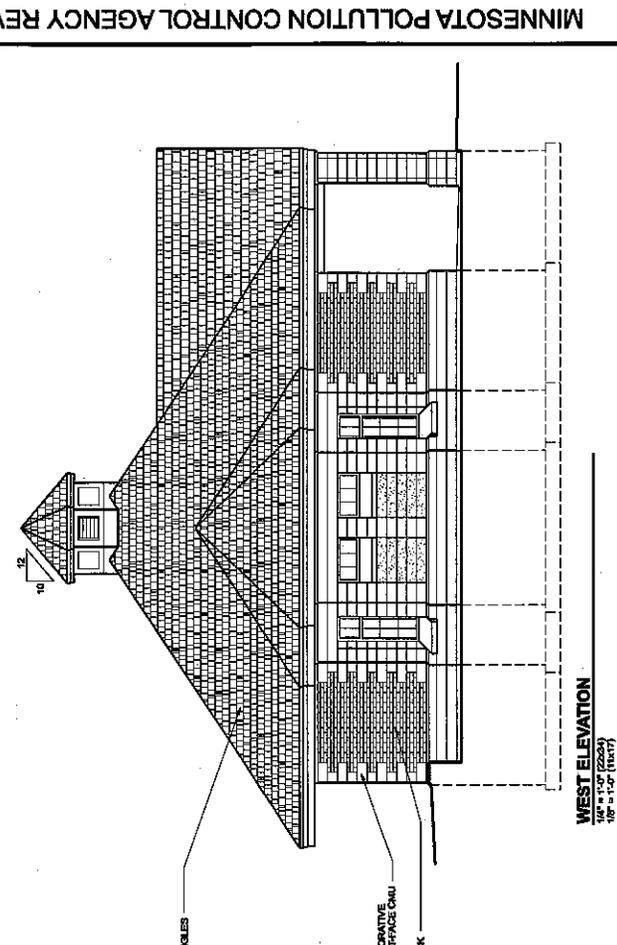
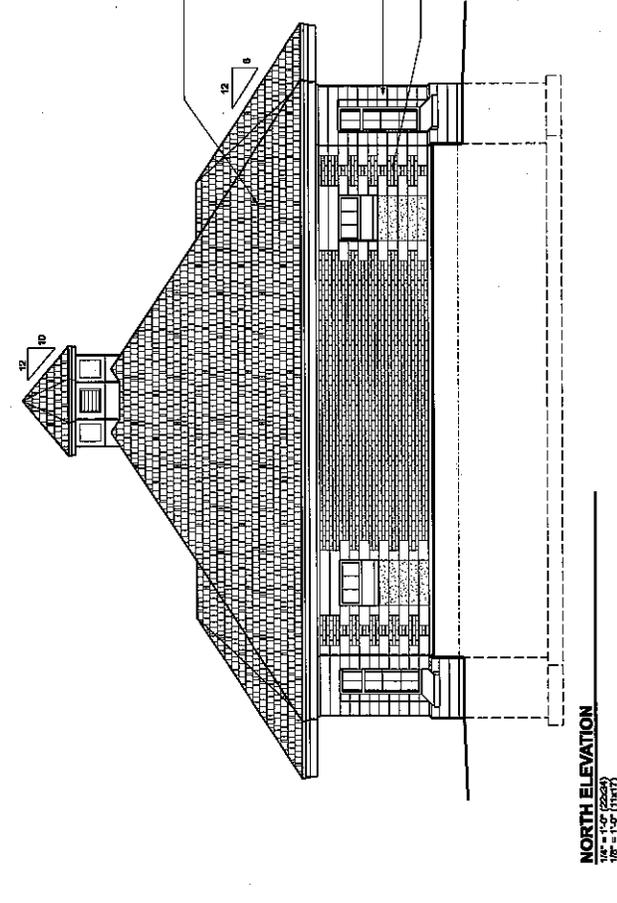
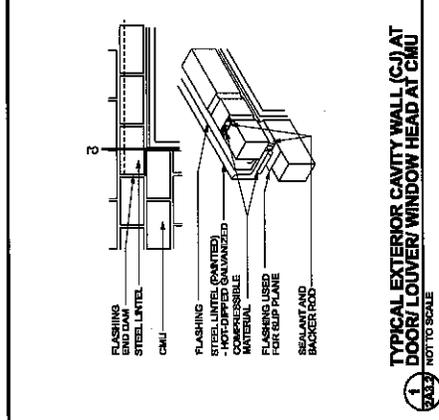
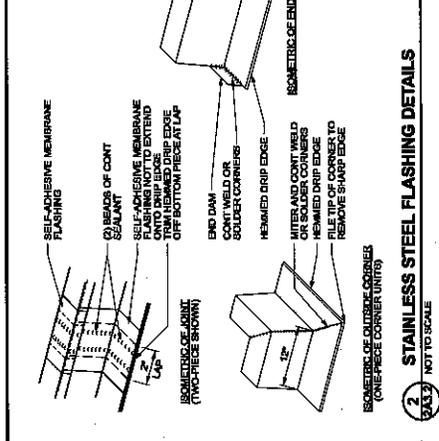
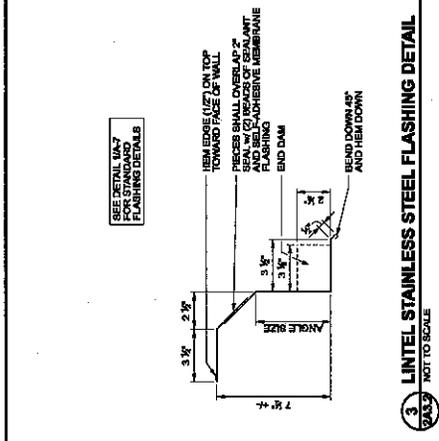
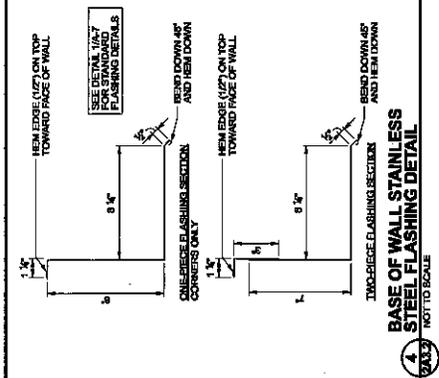


TOILET BUILDING - FLOOR PLAN  
 58' x 110' (11/24)  
 88' x 110' (11/24)

CITY PROJ. NO. 0819SN  
 EAST INTERCEPTOR S.S. STORAGE FACILITY  
 PHASE 3

MSA





**MSA** MINNESOTA SURVEILLANCE & ANALYSIS CORPORATION  
10000 University Avenue, Suite 100, Minneapolis, MN 55425  
TEL: 612-338-1000 FAX: 612-338-1001  
WWW.MSA-CORP.COM

Project: EAST INTERCEPTOR S.S.O. STORAGE FACILITY  
Phase: PHASE 3  
City Proj. No.: 0819SN  
Res. No.: 4672 DATE: 2/28/00

2A3.2, EXTERIOR ELEVATIONS