

INVER GROVE HEIGHTS CITY COUNCIL AGENDA
MONDAY, MARCH 11, 2013
8150 BARBARA AVENUE
7:00 P.M.

1. **CALL TO ORDER**
2. **ROLL CALL**
3. **PRESENTATIONS**
4. **CONSENT AGENDA** – All items on the Consent Agenda are considered routine and have been made available to the City Council at least two days prior to the meeting; the items will be enacted in one motion. There will be no separate discussion of these items unless a Council member or citizen so requests, in which event the item will be removed from this Agenda and considered in normal sequence.
 - A. i) Minutes – February 25, 2013 Council Study Session _____
ii) Minutes – February 25, 2013 Regular Council Meeting _____
 - B. Resolution Approving Disbursements for Period Ending March 6, 2013 _____
 - C. Approve Custom Grading Agreement for 8671 Alvarado Court (Lot 4, Block 2, Wildwood Ranch Estates) _____
 - D. Resolution Authorizing Execution of a Professional Services Agreement with SEH, Inc. for Construction Phase Services for City Project No. 2006–08, Asher Water Tower Replacement _____
 - E. Change Order No. 4 and Pay Voucher No. 7 for City Project No. 2012–09D, Urban Street Reconstruction, 65th Street Neighborhood and Cahill Court _____
 - F. Resolution Accepting Amendment No. 5 to the Proposal for Engineering Services from Bolton & Menk, Inc. for the 2012 Pavement Management Program, City Project No. 2012–09D Urban Street Reconstruction, 65th Street Neighborhood and Cahill Court _____
 - G. Resolution Accepting Contract Change Order No. 1 to Proposal from American Engineering Testing, Inc. for Construction Materials Testing Services for the 2012 Pavement Management Program, City Project 2012–09D – Urban Street Reconstruction, 65th Street Neighborhood and Cahill Court _____
 - H. Resolution Accepting Final Response Action Plan (RAP) Prepared by AET, Inc. for Pollution Mitigation on City Project No. 2012–09D, 65th Street Improvements _____
 - I. Approve Actions Related to State Auditor TIF Reports _____
 - J. Approve the 2013 Tree Replacement Plan _____

K. Approve MOU with Friends of the Mississippi River for Implementation of the First Phase of a Natural Resource Management Plan for the Rock Island Swing Bridge Property _____

L. Approve Contract for Portable Toilets for the Park System _____

M. Approve Revised Date for Commission Appreciation Dinner _____

N. Personnel Actions _____

5. **PUBLIC COMMENT:** Public comment provides an opportunity for the public to address the Council on items that are not on the Agenda. Comments will be limited to three (3) minutes per person.

6. **PUBLIC HEARINGS:**

7. **REGULAR AGENDA:**

COMMUNITY DEVELOPMENT:

A. **MIKE STANTON;** Consider Resolutions for the property located at 3865 73rd Street:

i) Resolution and Improvement Documents relating to a **Conditional Use Permit** to allow additional impervious surface up to 4,719 square feet _____

ii) Resolution relating to a **Variance** to allow an addition to the existing home five (5) feet from the side property line where as 10 feet is required _____

iii) Resolution relating to a **Variance** to allow a front porch addition 26 feet from the front property line whereas 30 feet is required _____

FINANCE:

B. **CITY OF INVER GROVE HEIGHTS;** Approve Carryover of Unused Budget Appropriations, Approve Transfers, Closing of Funds, and 2013 Budget Amendments _____

8. **MAYOR & COUNCIL COMMENTS**

9. **EXECUTIVE SESSION**

A. Update on City Hall Mediation

10. **ADJOURN**

This document is available upon 3 business day request in alternate formats such as Braille, large print, audio recording, etc. Please contact Melissa Kennedy at 651.450.2513 or mkennedy@invergroveheights.org

**INVER GROVE HEIGHTS CITY COUNCIL STUDY SESSION
MONDAY, FEBRUARY 25, 2013 – 8150 BARBARA AVENUE**

1. CALL TO ORDER The City Council of Inver Grove Heights met in study session on Monday, February 25, 2013, in the City Hall Lower Level Training Room. Mayor Tourville called the meeting to order at 5:30 p.m. Present were Council members Bartholomew, Madden, Mueller and Piekarski Krech; City Administrator Lynch, City Attorney Kuntz, Parks & Recreation Director Carlson, Community Development Director Link, Public Works Director Thureen, Finance Director Smith, Police Chief Stanger, Fire Chief Thill, Assistant Fire Chief Bergum and Deputy Clerk Kennedy.

2. FIRE DEPARTMENT STRATEGIC PLAN

Chief Thill provided an update on the fire department strategic planning process. She stated over the course of many months meetings were held with all firefighters, fire officers, and the City Administrator to gather input regarding the plan's foundation and the direction of the department in the next 3-5 years. She noted that a significant portion of the plan had already been completed, but more input was still needed from other sources. Specifically input was still needed from key members of city staff including the Finance Director, Police Chief, Community Development Director, and Assistant City Administrator. Their input would be used to coordinate the information and data that would affect the fire department in the future. In the next 3 months Chief Thill intended to provide status updates to Council. A draft plan is scheduled to be presented at the May 28th Council work session. After the Council has determined that the draft plan is acceptable a final draft will be made available for public review and citizen input. It is anticipated that the final plan will be presented at the regular Council meeting on June 24, 2013.

Chief Thill outlined the key components of the strategic plan. She stated two of the most important sections related to the current conditions and the identification of the department's strengths, weaknesses, opportunities, and threats. Each of these sections, which addressed staffing, operations, equipment, fleet, facilities, and technology, would help shape the strategic priorities and the make-up of the department in the years to come.

Mayor Tourville questioned how the discussion regarding a potential new fire station would fit into the plan. He stated some justification would be needed if the Council was asked to consider a new facility.

Mr. Lynch stated future facility considerations and challenges would be included as part of the strategic plan, but anything specific to a new fire station would be discussed separately. The information included in the strategic plan would be used to demonstrate the need and justification for a new facility, if Council was asked to consider such a request.

Councilmember Mueller questioned how the aging population in the City would affect the department's services.

Mr. Lynch stated the plan would address service challenges in the future which include how to serve an aging population and the growing commercial sector.

3. PARKS AND RECREATION SYSTEM PLAN UPDATE

Mr. Carlson reviewed the process followed to develop the Parks and Recreation System Plan. He explained the process examined the existing park and trail system to assess the future needs of the system along with the needs for the Northwest Area. In August of 2012 the Council hired HKGI to lead the development of the plan. The Parks and Recreation Advisory Commission (PRAC) has been heavily involved with the project and appointed a subcommittee comprised of three commissioners to oversee the process and keep the entire commission informed. He highlighted the work that has been done to gather information and feedback from the public and to educate residents on the process. An online survey was offered on the City's website, comment boards were provided at City Hall and at the VMCC/Grove, an open house was held, information was posted on the City's website and placed in the Insights newsletter, a booth was sponsored at Inver Grove Heights Days, and information was sent to neighborhood associations.

Mr. Carlson explained HKGI used the information that was collected to develop a draft needs assessment. The assessment is currently being reviewed by PRAC and the “Park Champions” group and will be finalized in several weeks. The “Park Champions” group is comprised of approximately 15 residents and was formed to assist staff and PRAC in reviewing the future needs of the system and in disseminating information to residents. The group was provided with information on how the City compares to national and local benchmark standards in Park Service Area coverage and park amenity variety and accessibility. He explained on a national and local level, park planning has strived to provide access to a public park within a ½ mile radius. The Park Champions and PRAC reviewed the future vision of the park service areas and felt the City should attempt to maintain that service level into the future in the existing portions of the park system. With respect to the Northwest Area there is a strong interest to create a park system that is well connected to the neighborhoods and Dakota County Regional Greenway through a series of City trails and small parks with one (1) or two (2) parks that could serve the active recreational needs of residents in the Northwest Area. He noted in 2010 Council adopted a Trail Gap study which outlined the community’s interest in closing gaps in the existing trail system so pedestrians and cyclists could access the park system, schools, libraries, and commercial areas safely. Trails and trail loops are the most highly sought recreation amenity the City provides.

Mr. Carlson discussed park system funding. He stated much of the existing system had been built during the last 20 years. The existing infrastructure is reaching a critical point in its lifespan where reinvestments will need to be made. The system currently has \$11.5 million in infrastructure which requires approximately \$500,000 of annual investment. The City currently sets aside \$150,000 from the General Fund, \$25,000 from the Host Community Fund, and \$25,000 from Capital Facilities Fund for a total of \$200,000 in the Park Maintenance Fund (444). The funding gap that exists will need to be addressed going forward either through the reduction of services, an increase in funding, or a combination of both measures. He noted as the community grows and develops in the Northwest Area and additional public park amenities are added, the construction costs will be funded through the Park Acquisition and Development Fund. Increased maintenance and replacement needs will also increase the City’s need for increased funding of the Park Maintenance Operation Budget.

Mr. Carlson stated when the City is compared to other municipalities of similar size in the metro area it was found that the City was average in terms of the variety and amount of amenities provided. Going forward the challenge will be tailoring the amenities to what residents want as demographics and interests change. The City will have to determine if it has amenities residents want, that are in the right location, and in the right quantities to service the community for the next 20 years. The next step in the process involved a joint meeting between the Council, PRAC, and the Park Champions group to discuss the information and concepts included in the system plan prior to its release to the general public.

Councilmember Piekarski Krech questioned what other communities are doing to address ongoing maintenance and replacement costs in their budgets.

Mr. Carlson explained he is trying to collect information from other cities in which the comparables are similar.

Councilmember Bartholomew questioned if the department already had an idea of what the priorities would be if the funding was not increased.

Mr. Carlson stated the system plan being drafted would help identify what the priorities should be based on what is most important to the community.

Councilmember Madden questioned the ½ mile radius benchmark and stated it was unrealistic. He opined the standards should not all be based on walking distances. He stated the ongoing maintenance costs need to be considered when decisions are made because residents want all of the amenities but they don’t have the funding to pay for them in the long-term. He added residents need to understand how much the amenities cost and how much they will cost to maintain going forward so they can decide what they are willing to pay for.

Mr. Lynch reiterated that this whole process has been about determining what is important to residents, what amenities they expect, want, and are willing to pay for.

Councilmember Bartholomew stated they need to figure out how to make the current funding level work.

Mayor Tourville agreed people have to be informed about what amenities will cost so the Council can determine what residents are willing to pay for.

Councilmember Madden stated all he is looking for is a realistic approach to the needs of the current system and planning for future amenities.

Councilmember Mueller stated the Park Champions group should come up with ideas to generate revenue for the park system. He suggested licensing bikes, charging for bikers for use of the trail system, or charging for the use of other amenities in the parks.

Mayor Tourville noted that the trails and bike paths are used by people from other communities as well and it would be hard to enforce or collect a fee for usage. He questioned if the City could have a referendum for operating expenses.

Mr. Kuntz indicated he would research the issue and get back to the Council with a definitive answer.

Mr. Carlson stated the City of Roseville passed an \$18 million dollar referendum for capital replacement to serve the same function as our Park Maintenance Fund.

Councilmember Bartholomew asked Mr. Carlson if he was confident in the estimated costs of replacement and maintenance.

Mr. Carlson responded in the affirmative.

Councilmember Piekarski Krech questioned if staff was looking at new ideas for programming in the recreation system and at the golf course. She asked how recreation was changing with the demographic and how they can know what the needs of the community will be in the next 15-20 years. She stated it is important that the City continues to refresh its programs and amenities so children and adults can stay active.

Mr. Carlson stated all of those topics are being looked at during the development of the system plan. He added a lot of similar topics would also be discussed at the MRPA conference.

Mayor Tourville stated although the golf course may not be a necessity it does make a difference in the community and is a nice amenity to offer. He suggested that staff and Council revisit the idea of implementing full food and liquor service to generate more revenue at Inver Wood. He stated a number of other golf courses in the metro make the majority of their profits from their food and liquor service. He opined it would also be a good idea to have discussions with the school district regarding physical locations and joint uses that could benefit the whole community because the school district is going through the same process of trying to fund and budget for current and future needs.

Councilmember Piekarski Krech agreed the school district and City should be consulting and cooperating with each other to see if some tax dollars could be saved through joint ventures.

Councilmember Madden stated he would like to see more interest on the part of the school district to participate in joint discussions or cooperative efforts with the City

The meeting was adjourned at 6:30 p.m.

**INVER GROVE HEIGHTS CITY COUNCIL MEETING
MONDAY, FEBRUARY 25, 2013 - 8150 BARBARA AVENUE**

CALL TO ORDER/ROLL CALL The City Council of Inver Grove Heights met in regular session on Monday, February 25, 2013, in the City Council Chambers. Mayor Tourville called the meeting to order at 7:00 p.m. Present were Council members Bartholomew, Madden, Mueller, and Piekarski Krech; City Administrator Lynch, City Attorney Kuntz, Parks & Recreation Director Carlson, Community Development Director Link, Public Works Director Thureen, Finance Director Smith, Police Chief Stanger, Fire Chief Thill, and Deputy Clerk Kennedy

3. PRESENTATIONS: None.

4. CONSENT AGENDA:

- A. i) Minutes – February 25, 2013 Council Study Session
ii) Minutes – February 25, 2013 Regular Council Meeting
- B. **Resolution No. 13-17** Approving Disbursements for Period Ending February 20, 2013
- C. **Resolution No. 13-18** Approving Property Access Agreement with the Minnesota Pollution Control Agency
- D. **Resolution No. 13-19** Authorizing the City to Enter into an Agreement with Dakota County for Engineering, Highway Construction, Signal Revisions for County Project No. 56-10, Traffic Signal Agreement No. 13-01, City Project No. 2013-07
- E. **Resolution No. 13-20** Approving Joint Powers Agreement between Inver Grove Heights, Dakota County and West St. Paul for the Design and Construction of Traffic Signal Improvements at the Intersection of Babcock Trail (CSAH 73) and Mendota Road (CSAH 14) as City Project No. 2013-08
- F. Accept Resignation of Environmental Commissioner
- G. Approve 2013 EAB Work Plan for 2012-2014 Forest Bonding Grant
- H. Approve 2013-14 VMCC Ice Rates
- I. Renew Fairway Flyerz Discs, Inc. North Valley Disc Golf Operations Agreement
- J. Approve Donation Request from Inver Grove Heights Days Committee
- K. Personnel Actions

Motion by Madden, second by Bartholomew, to approve the Consent Agenda

Ayes: 5

Nays: 0 **Motion carried.**

5. PUBLIC COMMENT:

Duane Schiefelbein 8555 S. Robert Trail, opined that the storm water utility fee was unfair to those residents who are not served by City sewer or water services. His understanding was that the costs were removed from property taxes and set up as a separate fee to increase revenues from non-profits and businesses. He opined it did not make sense to charge residents that do not generate storm water and the sliding scale to calculate the fee should have gone down to zero (no fee). He stated he already pays for his well and septic systems and it is unfair to ask him to pay for somebody else's services.

Councilmember Piekarski Krech explained she did not have City services either but voted in favor of the storm water utility fee because she wanted all property owners to pay for what the City is mandated to do for storm water. She clarified that the fee is not for a septic system or for sewer, it is for storm water. She stated everyone generates storm water unless they have nothing on their property at all. The City is required by the federal government to meet certain criteria and standards and if the costs associated with that were included with property taxes there would be a number of people in the City that would pay nothing and those who were charged would pay more as a result. She noted the sliding scale for the fee

is structured so people pay for what they generate.

Mr. Schiefelbein reiterated his belief that the City should have given consideration to those who did not have City services. He stated 90% of his property is foliage and there is no runoff.

Mayor Tourville explained Mr. Schiefelbein's property was at the lowest end of the scale and he was being charged the minimum amount. He stated he understood the concern was less about the cost and more about the principal of the fee. He noted Council discussed implementing a storm water utility fee for almost five (5) years and finally moved forward with it after considering the fact that there were a number of properties in the City that generated storm water and were not paying for it.

Mr. Schiefelbein stated he still was not satisfied even though he was charged the minimum fee.

Mayor Tourville explained the sliding scale was not going to go down to zero because then they would be back to square one with some people paying more than their fair share because others were paying nothing.

Mr. Schiefelbein opined the City picked up enough additional revenue from the non-profit and commercial properties to offset the minimal fee he was charged. He stated he still did not understand why he was being charged and unless the City could demonstrate a benefit to his property he did not feel he should have to pay the fee. He suggested that the costs should go back to being recovered through the property tax system.

Mayor Tourville asked Mr. Schiefelbein if he thought it would be fair for everyone else in the City to pay for the storm water work that the City is required to do to comply with state and federal mandates as long as he did not have to pay anything.

Mr. Schiefelbein responded in the affirmative. He stated the fee was unfair because there was no direct benefit to him. He explained he pays more money for the maintenance of his sewer and well systems.

Mayor Tourville reiterated that the well and septic systems had nothing to do with the storm water utility.

Jim Brown questioned if the revenue collected from the storm water utility fee was set aside in a separate fund.

Mayor Tourville responded in the affirmative.

6. PUBLIC HEARINGS:

7. REGULAR AGENDA:

COMMUNITY DEVELOPMENT:

A. BILL KRECH; Consider a Resolution and Related Improvement Documents relating to a Conditional Use Permit to Exceed the Impervious Surface Maximum for property located at 9074 Alger Court

Mr. Link reviewed the location of the property. The applicant is currently constructing a new home on the property and has plans for an additional 3,100 square feet of hard cover. The request met the standard conditional use permit criteria of the ordinance and also complied with the more specific impervious surface conditional use permit criteria. Engineering staff has been working with the applicant on a storm water plan and custom grading agreement. Both Planning staff and the Planning Commission recommended approval of the request.

Councilmember Madden questioned if the applicant agreed with the conditions of approval.

Bill Krech, 7755 Argenta Trail, responded in the affirmative.

Motion by Mueller, second by Madden, to adopt Resolution No. 13-21 approving a Conditional Use Permit and Related Improvement Documents to Exceed the Impervious Surface Maximum for property located at 9074 Alger Court

Ayes: 5

Nays: 0 Motion carried.

B. CITY OF INVER GROVE HEIGHTS; Consider Resolution relating to a Variance to Allow an Accessory Structure 10 feet from the Front Property Line whereas 30 feet is required for property located at 8373 Alta Avenue

Mr. Link explained the request was for a variance from the front yard setback for an accessory structure. Ordinance requires a front yard setback of 30 feet and the structure being considered has a setback of ten (10) feet. The structure is a 10' by 12' storage shed that is already located in the northeast corner of the property. Staff became aware of the issue after a complaint was received. Planning staff determined the shed could be moved a little to the west in order to comply with the setback requirement and did not believe that the setback standards would preclude a reasonable use of the property. Both Planning staff and the Planning Commission recommended denial of the request.

Mayor Tourville stated there was a difference of opinion with respect to whether or not the structure could be moved to the west.

Mr. Link stated there was a slope to the property but staff believed the structure could be moved to the west in order to comply with the setback requirement.

John Gieske, 8373 Alta Avenue, stated the structure could not be moved to the west.

Councilmember Piekarski Krech questioned why it would not be possible to move the structure.

Mr. Gieske stated the structure would still be in violation of the setback requirement for the property line to the north. He explained if the structure could have been moved he would have done it a long time ago.

Mayor Tourville asked if the structure would be in violation of the setback requirement if it was moved to the west.

Mr. Link responded in the negative. He stated the required setback from the north property line was only five (5) to ten (10) feet and if the structure was moved 20 feet to the west it would still comply with that setback. He explained the most critical issue was the topography and moving the structure would require some grading. He noted the applicant believes that the slopes are too steep to be able to relocate the structure, even with grading.

Councilmember Mueller stated it looks like the property has a 40' drop as you move to the west.

Mr. Link explained that it does not drop that much at the proposed location for the structure.

Councilmember Mueller confirmed the setback from the northern property line would not be an issue.

Mr. Link reiterated the setback from the north would be ten (10) feet and the structure was currently at that distance, so the applicant would be able to move the structure directly to the west and still maintain the setback from the north.

Councilmember Piekarski Krech questioned how much right-of-way was there.

Mr. Link stated the road was very narrow.

Councilmember Mueller stated the gravel road was approximately the width of a car and a half and was crowded to the west because of the wash off the hill to the east.

Mr. Gieske stated there was a 40' drop from the level of the road down to his house and another steep slope to the west of his house that prevents him from being able to move the structure.

Councilmember Mueller stated he could only see the roof of the shed behind the six (6) foot high fence.

Mayor Tourville stated the big concern is with setting a precedent. He explained he looked at the property and it was difficult to determine if the slope would be too steep to the west because of the snow cover. He questioned why the applicant chose the current location of the shed.

Mr. Gieske explained the people he hired to build the shed chose the spot because they thought it was the only place it could go on the property.

Councilmember Bartholomew stated when he visited the property it appeared as though it would be feasible to move the structure but there was a lot of snow on the ground and it was hard to see the actual grade. He explained he believed staff's opinion that the structure could be moved given that the contour map shows a five foot drop to the proposed location. He suggested that the item be tabled until the spring so it will be easier to see the grade of the property. Then a final determination can be made as to whether or not it would be feasible to move the structure.

Mayor Tourville stated both parties could meet on the property in the spring, after the snow has melted, to determine if the structure could be relocated.

Mr. Gieske agreed to wait until the spring and stated he appreciated Council's consideration.

Motion by Madden, second by Piekarski Krech, to table consideration of the item until May 13, 2013 and to direct staff to extend the first 60 day deadline for another 60 days.

Ayes: 5

Nays: 0 Motion carried.

ADMINISTRATION:

C. CITY OF INVER GROVE HEIGHTS; Review and Discuss Draft Ordinance Regulating the Feeding of Deer

Mr. Lynch explained at a January work session the Council heard discussion and concerns about the current deer population and the feeding of deer in the City. Council directed staff to inform the community and advertise the intent to move forward with a proposed ordinance that would prohibit the feeding of deer in order to get as much feedback on the issue as possible.

Ned Hunter, 9836 Alaureate Ct., stated he and his wife feed the deer because they enjoy it. They like living in the country and enjoy watching the animals. He explained they only feed the deer enough to supplement their regular diet. He opined if they stop feeding the deer they will survive but it will be at the expense of private gardens, shrubs, and landscaping. He stated everyone recognizes the problem and agrees there are too many deer. He opined that the proposed ordinance would not address the problem of overpopulation because the deer are reproducing at an alarming rate. He suggested that all metro cities work together to solve the problem and opined the only humane solution would be to organize a controlled, mass slaughter of the deer.

Mayor Tourville explained 4-5 years ago the DNR spoke to many cities in the metro area about urban deer feeding. He stated the DNR made it very clear that residents were not doing the deer any favors by feeding them in urban areas because the deer become accustomed to it and take part. He noted the DNR also advised cities to adopt control measures because the feed on the ground created problems for the deer and made them more susceptible to disease. He explained there have been a number of car accidents involving deer and people in the urban residential areas have complained about the effects of the increased population. The DNR also linked the coyote population to the high volume of well fed deer in the City.

Councilmember Madden added that the DNR is also concerned with the introduction of chronic waste disease within the deer population. He suggested Council may want to consider limiting the ordinance to the urban areas of the City because that is where the majority of the problems seem to be concentrated.

Vance Grannis, Jr., 9249 Barnes Ave. E., stated he did not attend because he wanted to feed the deer. He attended because he does want to feed cardinals, chickadees, blue jays, quail, grouse, ring necked pheasants, and other birds. He opined that the proposed ordinance was too broad and would prohibit the feeding of birds and squirrels in addition to deer. He opined if his neighbors want to feed the deer they should be allowed to do so. The problem in the City is the overpopulation of deer and prohibiting feeding is not going to reduce the number of deer. He asked the Council to get answers to several questions before proceeding with the ordinance. He questioned what evidence the City had that feeding the deer caused the overpopulation problem and what evidence the City had that not feeding the deer would reduce the deer population. He also questioned what evidence there was to prove that not feeding the

deer would not cause the deer to eat even greater quantities of landscape plantings throughout the City. He asked what evidence the City had that the ordinance significantly restricting archery hunting did not cause an explosion of the deer population, and what evidence the City had that expanding archery hunting would not correct the deer problem more than a feeding ban. He opined that the proposed ordinance needed to be totally rewritten to change the overly broad approach to the issue of an overpopulation of deer.

Ken Nuorala, 3750 102nd St. E., stated he lived on a private street and two (2) sides of his property are state scientific nature areas and he has a heavy population of deer around his property. He explained he attended seminars on landscaping and there are shrubs and plants that deer will not eat, and there are various products one can spray on their vegetation to prevent deer from eating it. He noted fencing also works great to keep deer away from landscaping. He asked Council to take into consideration the areas in which they ban feeding because people who live on acreage and not in the urban area should be allowed to continue feeding if they choose.

Mayor Tourville most of the complaints have come from the urban, residential areas of the City. He stated the feeding ban is not intended as a mechanism to control the deer population. He explained the DNR has seen success with the lack of urban feeding because it allows the deer to be in their natural habitats in larger areas. He reiterated there are more coyotes coming into the urban area because they are following the deer. The premise was to educate people to help redirect the population out of the urban area.

Amy Hunting, 2645 96th St. E., opposed the proposed ordinance as written. She stated she moved here 13 years ago specifically because of the natural type of environment the city had to offer. She lives on a 3 acre lot that is heavily wooded. There is a variety of wildlife that lives in the wooded area and they love to watch the deer and other animals that come through their yard. She noted the deer would be there whether they fed them or not. She agreed it was not smart to have deer congregating in more densely populated, residential areas because of the hazards they can create. She suggested that the ordinance be rewritten to specify the urban areas where feeding would be prohibited, or to limit the feeding to lots that meet a certain size standard.

Mayor Tourville questioned if staff's interpretation of the ordinance was that it would also ban the feeding of birds and squirrels.

Mr. Lynch stated that was not the intent of the ordinance because that was not the direction received from Council.

Councilmember Piekarski Krech stated the part that struck her was the language pertaining to feeding on the ground "in a manner that attracts, or is designed to attract, or is likely to attract deer". She noted anyone who feeds birds will end up with feed on the ground that is likely to attract deer. She opined that sentence may need to be removed or reworded because there are many circumstances that could be construed as "likely to attract deer". She stated because the City is such a mix of urban and rural areas, the focus of the ordinance should be limited to urban residential areas and more education should be done to inform people about the dangers of urban feeding.

Willy Krech, 9574 Inver Grove Trail, stated when you are raised on a farm you have a natural inclination to want to help animals. He opined in the winter, when there is a lot of snow, there is nothing wrong with providing some food for the deer to help supplement their diet. He noted that his situation was different because he was on a 5 acre lot in a rural area of the City. He explained he could understand the need for regulations in the residential areas that have smaller lots and are more densely populated, but not in the rural areas.

Councilmember Madden stated his main concern was regulation within the urban area. He stated he would be in favor of excluding large lots with acreage that are in the rural areas.

Karen Taylor, 8815 River Heights Way, stated she was well versed on the deer situation in the City after dealing with the bow hunting ordinance a few years ago. She opined that the DNR was not aware of the full extent of the problem with the deer population in the City. She explained she quit feeding deer a few years ago because she decided it really wasn't in the best interest of the deer to spend the money to feed

them so their neighbors could hunt them. She noted she still feeds birds and it would be impossible to keep all of the bird seed off of the ground. She opined that the City's government should not have to regulate the feeding of deer.

Mayor Tourville stated the City became involved because of the large herds that have moved into the urban areas. He noted the DNR does not do any inspections or perform any control measures because in their opinion the City has done nothing to help itself control the problem.

Ruth Ann Rechtzigel, 10620 Courthouse Boulevard, opined the DNR is not always correct. She suggested signage could be put up on the roadways to warn drivers in the areas where the deer population is especially dense. She stated feeding wildlife is a hobby and people do it because they enjoy it.

Councilmember Madden stated the ordinance should be rewritten so the intent is to regulate the urban areas.

Councilmember Mueller suggested that the height regulations for bird feeders be removed and eliminating the language regarding feed that ends up on the ground.

Councilmember Bartholomew stated everyone seems to be in agreement that the focus should be on the urban areas because that is where the majority of problems and complaints originate. He added the focus should also be on intent because incidental feeding that occurs is not the same thing. He agreed that the height of the food vessel should not be the criteria. He opined the criteria should be intent. If someone is willingly and knowingly feeding the deer they should be educated about the issue and if the feeding does not stop then it should be considered as a violation.

Councilmember Madden stated the intent was to solve the problem in the urban area, not to limit the feeding of deer.

Councilmember Piekarski Krech stated the educational component is critical and could eliminate the need for an ordinance.

Mayor Tourville stated many people in the urban areas have said they will continue to feed the deer because there is nothing that prohibits them from doing it.

Mr. Lynch explained the City currently does not have any authority to respond to complaints of feeding because there is nothing in the City Code that prohibits the action.

Mr. Kuntz stated he has heard versions of the same ordinance debated in other communities. The reason there is a five (5) foot height requirement included is because it was usually put in at the request of those who did feed birds. The idea was to create a safe haven such that if the feeder was 5' 3" above the ground the ordinance did not apply and there was no question regarding interpretation and everyone would understand what the regulation was. If the Council directs staff to pursue the distinction between urban and rural there would also have to be direction regarding what those designations specifically mean because there are a number of different definitions that could apply. One of the reasons why other communities did not want to introduce the intent situation was the challenge or difficulty that came with trying to prove intent. The language "or is likely to attract deer" may be the main source of concern from those who feed birds and could be deleted.

Councilmember Madden suggested that the urban versus rural areas be separated out by zoning designations.

Councilmember Mueller stated the ordinance should be written such that a citation will be issued for a violation after three (3) complaints of deer feeding are received.

Mayor Tourville stated the complaints would have to be substantiated or verified in some way otherwise people will just file three (3) complaints so their neighbor receives a citation. There needs to be evidence that deer are actually being fed. He reiterated the intent is to focus on the problems in the urban areas.

Councilmember Bartholomew suggested that information from the DNR regarding urban feeding be placed on the City's website. He stated he supported the idea of mapping out the designated areas where feeding would be prohibited.

8. MAYOR & COUNCIL COMMENTS:

9. ADJOURN: Motion by Bartholomew, second by Mueller, to adjourn. The meeting was adjourned by a unanimous vote at 8:40 p.m.

DRAFT

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Meeting Date: March 11, 2013
 Item Type: Consent
 Contact: Kristi Smith 651-450-2521
 Prepared by: Bill Schroepfer, Accountant
 Reviewed by: N/A

Fiscal/FTE Impact:
 None
 Amount included in current budget
 Budget amendment requested
 FTE included in current complement
 New FTE requested – N/A
 Other

PURPOSE/ACTION REQUESTED

Approve the attached resolution approving disbursements for the period of February 21, 2013 to March 6, 2013.

SUMMARY

Shown below is a listing of the disbursements for the various funds for the period ending March 6, 2013. The detail of these disbursements is attached to this memo.

General & Special Revenue	\$377,288.73
Debt Service & Capital Projects	9,829.40
Enterprise & Internal Service	208,691.26
Escrows	33,504.11
	<hr/>
Grand Total for All Funds	<u><u>\$629,313.50</u></u>

If you have any questions about any of the disbursements on the list, please call Kristi Smith, Finance Director at 651-450-2517.

Attached to this summary for your action is a resolution approving the disbursements for the period February 21, 2013 to March 6, 2013 and the listing of disbursements requested for approval.

DAKOTA COUNTY, MINNESOTA

RESOLUTION NO. _____

**RESOLUTION APPROVING DISBURSEMENTS FOR THE
PERIOD ENDING March 6, 2013**

WHEREAS, a list of disbursements for the period ending March 6, 2013 was presented to the City Council for approval;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF INVER GROVE HEIGHTS: that payment of the list of disbursements of the following funds is approved:

General & Special Revenue	\$377,288.73
Debt Service & Capital Projects	9,829.40
Enterprise & Internal Service	208,691.26
Escrows	33,504.11
Grand Total for All Funds	<u><u>\$629,313.50</u></u>

Adopted by the City Council of Inver Grove Heights this 11th day of March, 2013.

Ayes:

Nays:

George Tourville, Mayor

ATTEST:

Melissa Kennedy, Deputy City Clerk



Expense Approval Report

By Fund

Payment Dates 2/21/2013 - 3/6/2013

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
ACE PAINT & HARDWARE	513096/5	03/06/2013	501126	101.42.4200.423.60065	16.00
AFSCME COUNCIL 5	INV0017749	02/22/2013	UNION DUES (AFSCME FAIR SHARE)	101.203.2031000	28.48
AFSCME COUNCIL 5	INV0017750	02/22/2013	UNION DUES (AFSCME FULL SHARE)	101.203.2031000	653.07
AFSCME COUNCIL 5	INV0017751	02/22/2013	UNION DUES (AFSCME FULL SHARE-PT)	101.203.2031000	74.25
AFSCME COUNCIL 5	INV0018041	03/08/2013	UNION DUES (AFSCME FAIR SHARE)	101.203.2031000	28.48
AFSCME COUNCIL 5	INV0018042	03/08/2013	UNION DUES (AFSCME FULL SHARE)	101.203.2031000	653.07
AFSCME COUNCIL 5	INV0018043	03/08/2013	UNION DUES (AFSCME FULL SHARE-PT)	101.203.2031000	74.25
AMERICAN PLANNING ASSOCIATION	082861-12114	02/27/2013	ZONING PRACTICE	101.45.3000.419.50070	95.00
ARAMARK UNIFORM SERVICES	629-7688990	02/27/2013	792069636	101.43.5200.443.60045	24.08
ARAMARK UNIFORM SERVICES	629-7688990	02/27/2013	792069636	101.44.6000.451.60045	28.59
ASSOCIATED MECHANICAL CONTRACTORS	38719	03/06/2013	S26577	101.42.4200.423.40040	201.00
BAUER, CORA L	2/27/13	02/27/2013	REIMBURSE-MILEAGE	101.41.2000.415.50065	27.35
BERGUM, ERIC	2/13/13	03/06/2013	REIMBURSE-TRAINING	101.42.4200.423.50065	687.60
BERGUM, ERIC	2/13/13	03/06/2013	REIMBURSE-TRAINING	101.42.4200.423.50080	2,060.00
CARGILL, INC.	2900985948	02/27/2013	903175	101.43.5200.443.60016	21,455.04
CARGILL, INC.	2900988926	02/27/2013	903175	101.43.5200.443.60016	20,285.20
CARGILL, INC.	2900994608	02/27/2013	903175	101.43.5200.443.60016	21,783.16
CENTURY LINK	2/19/13 651 455 9072 782	03/06/2013	651 455 9072 782	101.42.4200.423.50020	23.61
CITY OF MINNEAPOLIS RECEIVABLES	400413003552	03/06/2013	612005356	101.42.4000.421.30700	1,878.00
DAKOTA COMMUNICATIONS CENTER	ig2013-03	03/06/2013	MARCH 2013 DCC FEE	101.42.4000.421.70501	38,846.70
DAKOTA COMMUNICATIONS CENTER	ig2013-03	03/06/2013	MARCH 2013 DCC FEE	101.42.4200.423.70501	4,316.30
DIAMOND SNOW & ICE CONTROL	2107	02/27/2013	2/5/13	101.43.5200.443.60016	650.79
EFTPS	INV0017753	02/22/2013	FEDERAL WITHHOLDING	101.203.2030200	37,386.24
EFTPS	INV0017755	02/22/2013	MEDICARE WITHHOLDING	101.203.2030500	10,869.70
EFTPS	INV0017756	02/22/2013	SOCIAL SECURITY WITHHOLDING	101.203.2030400	33,810.10
EMC	39846	03/06/2013	INVERG	101.42.4200.423.60065	101.45
FEDEX KINKO'S	062000004537	03/06/2013	2/14/13	101.42.4000.421.50030	11.17
FIRE MARSHALS ASSOCIATION OF MINNESOTA	2/18/13	03/06/2013	2013 MEMBERSHIP	101.42.4200.423.50070	35.00
FIRST IMPRESSION GROUP, THE	51824-P	02/27/2013	MARCH/APRIL INSIGHTS	101.41.1100.413.50035	2,250.00
GENESIS EMPLOYEE BENEFITS, INC	INV0017747	02/22/2013	HSA ELECTION-SINGLE	101.203.2032500	2,422.61
GENESIS EMPLOYEE BENEFITS, INC	INV0017748	02/22/2013	HSA ELECTION-FAMILY	101.203.2032500	3,955.26
GENESIS EMPLOYEE BENEFITS, INC	2/28/13 DEPEND	02/28/2013	DEPEND CARE REIMBURSEMENT	101.203.2031500	1,811.25
GENESIS EMPLOYEE BENEFITS, INC	2/28/13 MED	02/28/2013	MEDICAL FLEX REIMBURSEMENT	101.203.2031500	2,665.17
GERRY'S FIRE & SAFETY INC	43606	03/06/2013	2/28/13	101.42.4200.423.40040	110.79
GERRY'S FIRE & SAFETY INC	43606	03/06/2013	2/28/13	101.42.4200.423.40042	69.50
HENDEL, BRIAN	2/21/13	02/27/2013	GARNISHMENT REFUND PR 02/08	101.203.2031900	342.50
HOME DEPOT CREDIT SERVICES	2/13/13 6035 3225 0206 19	03/06/2013	6035 3225 0206 1959	101.43.5200.443.60016	64.24
HOME DEPOT CREDIT SERVICES	2/13/13 6035 3225 0206 19	03/06/2013	6035 3225 0206 1959	101.43.5200.443.60040	84.63
HOME DEPOT CREDIT SERVICES	2/13/13 6035 3225 0255 48	03/06/2013	6035 3225 0255 4813	101.42.4200.423.40040	146.67
HOME DEPOT CREDIT SERVICES	2/13/13 6035 3225 0255 48	03/06/2013	6035 3225 0255 4813	101.42.4200.423.60011	181.07
HOME DEPOT CREDIT SERVICES	2/13/13 6035 3225 0255 48	03/06/2013	6035 3225 0255 4813	101.42.4200.423.60065	40.66
IAFC MEMBERSHIP	2013 MEMBERSHIP	03/06/2013	2013 MEMBERSHIP	101.42.4200.423.50070	234.00
ICMA RETIREMENT TRUST - 457	INV0017704	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	135.00
ICMA RETIREMENT TRUST - 457	INV0017705	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	261.92
ICMA RETIREMENT TRUST - 457	INV0017706	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	200.00
ICMA RETIREMENT TRUST - 457	INV0017707	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	560.86
ICMA RETIREMENT TRUST - 457	INV0017708	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	175.00
ICMA RETIREMENT TRUST - 457	INV0017709	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	284.02
ICMA RETIREMENT TRUST - 457	INV0017710	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	940.00
ICMA RETIREMENT TRUST - 457	INV0017711	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	116.12
ICMA RETIREMENT TRUST - 457	INV0017712	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	250.00
ICMA RETIREMENT TRUST - 457	INV0017713	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	658.43
ICMA RETIREMENT TRUST - 457	INV0017714	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	75.00
ICMA RETIREMENT TRUST - 457	INV0017715	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	239.44
ICMA RETIREMENT TRUST - 457	INV0017716	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	1,553.84
ICMA RETIREMENT TRUST - 457	INV0017717	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	121.01
ICMA RETIREMENT TRUST - 457	INV0017718	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	240.00
ICMA RETIREMENT TRUST - 457	INV0017719	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	372.95
ICMA RETIREMENT TRUST - 457	INV0017720	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	190.00
ICMA RETIREMENT TRUST - 457	INV0017721	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	442.06
ICMA RETIREMENT TRUST - 457	INV0017722	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	500.00
ICMA RETIREMENT TRUST - 457	INV0017723	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	145.69

ICMA RETIREMENT TRUST - 457	INV0017724	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	125.00
ICMA RETIREMENT TRUST - 457	INV0017725	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	37.02
ICMA RETIREMENT TRUST - 457	INV0017726	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	550.00
ICMA RETIREMENT TRUST - 457	INV0017727	02/22/2013	ICMA (AGE 49 & UNDER)	101.203.2031400	59.48
ICMA RETIREMENT TRUST - 457	INV0017728	02/22/2013	ICMA (AGE 50 & OVER)	101.203.2031400	200.24
ICMA RETIREMENT TRUST - 457	INV0017729	02/22/2013	ICMA (AGE 50 & OVER)	101.203.2031400	325.00
ICMA RETIREMENT TRUST - 457	INV0017730	02/22/2013	ICMA (AGE 50 & OVER)	101.203.2031400	93.85
ICMA RETIREMENT TRUST - 457	INV0017731	02/22/2013	ICMA (AGE 50 & OVER)	101.203.2031400	150.00
ICMA RETIREMENT TRUST - 457	INV0017732	02/22/2013	ICMA (AGE 50 & OVER)	101.203.2031400	684.91
ICMA RETIREMENT TRUST - 457	INV0017733	02/22/2013	ICMA (AGE 50 & OVER)	101.203.2031400	872.63
ICMA RETIREMENT TRUST - 457	INV0017734	02/22/2013	ICMA (AGE 50 & OVER)	101.203.2031400	76.54
ICMA RETIREMENT TRUST - 457	INV0017735	02/22/2013	ICMA (AGE 50 & OVER)	101.203.2031400	3,857.57
ICMA RETIREMENT TRUST - 457	INV0017736	02/22/2013	ICMA (EMPLOYER SHARE ADMIN)	101.203.2031400	70.79
ICMA RETIREMENT TRUST - 457	INV0017745	02/22/2013	ROTH IRA (AGE 49 & UNDER)	101.203.2032400	532.70
ICMA RETIREMENT TRUST - 457	INV0017746	02/22/2013	ROTH IRA (AGE 50 & OVER)	101.203.2032400	230.77
IGH FIRE RELIEF ASSN	2013 PENSION CONTRIBUTION	03/06/2013	2013 PENSION CONTRIBUTION	101.42.4200.423.20500	25,000.00
INVER GROVE FORD	2/25/13 94917	03/06/2013	94917 MONTHLY RENTAL CHARGE	101.42.4000.421.70300	267.81
IUOE	INV0018044	03/08/2013	UNION DUES IUOE	101.203.2031000	1,151.25
KEEPRS, INC	205989-01	02/27/2013	INVGROHTPD	101.42.4000.421.60045	29.91
KELTING, BRANDON	1/2/13	03/06/2013	REIMBURSE-GLOVES	101.42.4000.421.60045	22.99
KENISON, TERRI	FEBRUARY 2013	03/06/2013	FEBRUARY 2013	101.42.4200.423.30700	908.44
LELS	INV0018045	03/08/2013	UNION DUES (LELS)	101.203.2031000	1,350.00
LELS SERGEANTS	INV0018046	03/08/2013	UNION DUES (LELS SGT)	101.203.2031000	225.00
LILLIE SUBURBAN NEWSPAPERS	10/31/12	03/06/2013	001363 OCTOBER 2012	101.41.1100.413.50025	31.26
LILLIE SUBURBAN NEWSPAPERS	10/31/12	03/06/2013	001363 OCTOBER 2012	101.41.1200.414.50025	132.14
LILLIE SUBURBAN NEWSPAPERS	10/31/12	03/06/2013	001363 OCTOBER 2012	101.42.4000.421.50030	25.00
LILLIE SUBURBAN NEWSPAPERS	10/31/12	03/06/2013	001363 OCTOBER 2012	101.43.5100.442.50025	21.88
LILLIE SUBURBAN NEWSPAPERS	10/31/12	03/06/2013	001363 OCTOBER 2012	101.45.3000.419.50080	178.13
LOCAL GOVERNMENT INFORMATION SYSTEMS	36248	03/06/2013	106325	101.42.4000.421.70501	1,525.00
LOCAL GOVERNMENT INFORMATION SYSTEMS	36248	03/06/2013	106325	101.42.4200.423.30700	108.00
LOCAL GOVERNMENT INFORMATION SYSTEMS	36322	03/06/2013	106325	101.42.4000.421.70501	1,420.00
MINNEAPOLIS OXYGEN CO.	171057342	02/27/2013	113504	101.42.4200.423.40042	116.62
MINNESOTA DEPARTMENT OF HUMAN SERVICES	INV0017702	02/22/2013	RICK JACKSON FEIN/TAXPAYER ID: 4160052	101.203.2032100	318.41
MINNESOTA DEPARTMENT OF HUMAN SERVICES	INV0017703	02/22/2013	JUSTIN PARRANTO FEIN/TAXPAYER ID: 4160052	101.203.2032100	484.54
MN DEPT OF EMPLOYMENT & ECONOMIC DEVELOPMENT	2/26/13	02/26/2013	4TH ATR 2012 UNEMPLOYMENT COMP BENEFIT	101.41.1200.414.20700	3.34
MN DEPT OF EMPLOYMENT & ECONOMIC DEVELOPMENT	2/26/13	02/26/2013	4TH ATR 2012 UNEMPLOYMENT COMP BENEFIT	101.43.5200.443.20700	946.85
MN DEPT OF EMPLOYMENT & ECONOMIC DEVELOPMENT	2/26/13	02/26/2013	4TH ATR 2012 UNEMPLOYMENT COMP BENEFIT	101.44.6000.451.20700	291.60
MN DEPT OF REVENUE	INV0017754	02/22/2013	STATE WITHHOLDING	101.203.2030300	15,822.20
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.203.2030900	1,958.05
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.41.1100.413.20620	59.80
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.41.2000.415.20620	67.67
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.42.4000.421.20620	300.04
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.42.4200.423.20620	36.58
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.43.5000.441.20620	15.16
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.43.5100.442.20620	81.30
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.43.5200.443.20620	58.26
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.44.6000.451.20620	57.34
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.45.3000.419.20620	19.32
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.45.3200.419.20620	19.67
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	101.45.3300.419.20620	14.29
MN NCPERS LIFE INSURANCE	MAR 2013 PREMIUM	03/06/2013	MARCH 2013 PREMIUM	101.203.2031600	320.00
MNSCU/MRTC	1824	02/27/2013	000225736-001	101.42.4200.423.30700	854.19
NORTHERN STAR COUNCIL	1/9/13	03/06/2013	EXPLORING POST RENEWAL	101.42.4000.421.50070	100.00
PERA	INV0017737	02/22/2013	EMPLOYER SHARE (EXTRA PERA)	101.203.2030600	2,317.73
PERA	INV0017739	02/22/2013	EMPLOYER SHARE (PERA COORDINATED PLAN)	101.203.2030600	14,485.70
PERA	INV0017740	02/22/2013	PERA COORDINATED PLAN	101.203.2030600	14,485.70
PERA	INV0017741	02/22/2013	EMPLOYER SHARE (PERA DEFINED PLAN)	101.203.2030600	57.69
PERA	INV0017742	02/22/2013	PERA DEFINED PLAN	101.203.2030600	57.69
PERA	INV0017743	02/22/2013	EMPLOYER SHARE (POLICE & FIRE PLAN)	101.203.2030600	15,370.88
PERA	INV0017744	02/22/2013	PERA POLICE & FIRE PLAN	101.203.2030600	10,247.28
PRECISE MRM	306170	02/27/2013	000208	101.43.5200.443.50070	33.47
PRESTIGE ELECTRIC, INC.	85672	03/06/2013	INVERGRO	101.42.4200.423.40040	94.00
SCHROEPFER, WILLIAM	3/1/13	03/06/2013	REIMBURSE-MILEAGE	101.41.2000.415.50065	23.50
SENSIBLE LAND USE COALITION	3/27/13	03/06/2013	MARCH 27, 2013 REGISTRATIONS	101.45.3000.419.50080	38.00
SENSIBLE LAND USE COALITION	3/27/13	03/06/2013	MARCH 27, 2013 REGISTRATIONS	101.45.3200.419.50080	76.00
SENSIBLE LAND USE COALITION	3/27/13	03/06/2013	MARCH 27, 2013 REGISTRATIONS	101.45.3300.419.50080	38.00
SMITH KRISTI	2/28/13	03/06/2013	REIMBURSE-FEBRUARY	101.41.2000.415.50065	86.45
SMITH KRISTI	2/28/13	03/06/2013	REIMBURSE-FEBRUARY	101.41.2000.415.50070	60.00
SMITH KRISTI	2/28/13	03/06/2013	REIMBURSE-FEBRUARY	101.41.2000.415.50075	40.00
SNI SOLUTIONS	131545	02/27/2013	2/12/13	101.43.5200.443.60016	2,907.00
SOUTH RIVER HEATING & COOLING, INC.	13-16076	03/06/2013	2/22/13	101.42.4200.423.40040	568.29
SPRINT	842483314-135	02/27/2013	842483314	101.41.1100.413.50020	50.03

SPRINT	842483314-135	02/27/2013	842483314	101.42.4000.421.50020	1,224.68
SPRINT	842483314-135	02/27/2013	842483314	101.42.4200.423.50020	611.15
SPRINT	842483314-135	02/27/2013	842483314	101.43.5000.441.50020	51.91
SPRINT	842483314-135	02/27/2013	842483314	101.43.5100.442.50020	215.90
SPRINT	842483314-135	02/27/2013	842483314	101.43.5200.443.50020	262.77
SPRINT	842483314-135	02/27/2013	842483314	101.44.6000.451.50020	271.06
SPRINT	842483314-135	02/27/2013	842483314	101.45.3000.419.50020	71.56
SPRINT	842483314-135	02/27/2013	842483314	101.45.3300.419.50020	189.34
UNIFORMS UNLIMITED	152731	03/06/2013	114866	101.42.4000.421.60045	100.00
UNIFORMS UNLIMITED	153188	03/06/2013	114866	101.42.4000.421.60045	11.70
UNITED WAY	INV0017752	02/22/2013	UNITED WAY	101.203.2031300	105.00
UNITED WAY	INV0018047	03/08/2013	UNITED WAY	101.203.2031300	105.00
UNIVERSITY NATIONAL BANK	INV0017738	02/22/2013	STEVE HER FILE #62-CV-07-3401	101.203.2031900	391.94
UNIVERSITY NATIONAL BANK	INV0018030	03/08/2013	STEVE HER FILE #62-CV-07-3401	101.203.2031900	143.31
US BANK	2/27/13	02/27/2013	MARCH 1, 2013 DCC WIRE PMT	101.42.4000.421.70530	2,381.27
US BANK	2/27/13	02/27/2013	MARCH 1, 2013 DCC WIRE PMT	101.42.4200.423.70530	264.56
XCEL ENERGY	357411008	02/27/2013	51-5185446-3	101.42.4000.421.40042	46.75
XCEL ENERGY	358780369	03/06/2013	51-6025596-7	101.43.5400.445.40020	74.93
XCEL ENERGY	358814256	03/06/2013	51-8394358-2	101.43.5400.445.40020	107.39
XCEL ENERGY	358825538	03/06/2013	51-9359857-3	101.43.5400.445.40020	362.04
Fund: 101 - GENERAL FUND					348,181.58
NOVOPRINT USA, INC.	I-501258	03/06/2013	78702	201.44.1600.465.50025	995.00
TOUR MINNESOTA ASSOCIATION	3/4/13	03/06/2013	TMA 2013 DIRECTORY AD	201.44.1600.465.50025	25.00
Fund: 201 - C.V.B. FUND					1,020.00
DUCHENE, EVELYN	2/21/13	02/27/2013	REFUND-LOW ENROLLMENT	204.44.0000.3470000	42.00
FIRST IMPRESSION GROUP, THE	51890-20	02/27/2013	POSTAGE FOR SPRING BROCHURE	204.44.6100.452.50035	1,122.50
MN DEPT OF EMPLOYMENT & ECONOMIC DI	2/26/13	02/26/2013	4TH ATR 2012 UNEMPLOYMENT COMP BEN	204.44.6100.452.20700	5.10
MN DEPT OF EMPLOYMENT & ECONOMIC DI	2/26/13	02/26/2013	4TH ATR 2012 UNEMPLOYMENT COMP BEN	204.44.6100.452.20700	104.86
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	204.44.6100.452.20620	38.92
OFFICEMAX INC	670410	02/27/2013	687054	204.44.6100.452.60010	21.37
SPRINT	842483314-135	02/27/2013	842483314	204.44.6100.452.50020	90.80
Fund: 204 - RECREATION FUND					1,425.55
ABRAHAMSON, TAMMY	2/13/13	03/06/2013	REIMBURSE-MANKATO JOB FAIR	205.44.6200.453.50065	96.75
ACE PAINT & HARDWARE	513652/5	03/06/2013	501126	205.44.6200.453.60065	27.77
ADAMS, JOE	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
AIM ELECTRONICS	36026	02/27/2013	1/31/13	205.44.6200.453.40040	396.43
ALCORN, JACQUELYN	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
AMERICAN RED CROSS - HEALTH & SAFETY	10207420	03/06/2013	23193-11-60008	205.44.6200.453.60018	38.00
ANDERSON, FRANCIS	1/31/13	02/27/2013	REFUND-UCARE	205.44.0000.3490100	30.00
ARCAND, SHIRLEY	1/31/13	02/27/2013	REFUND-UCARE	205.44.0000.3490100	30.00
BAUMEISTER, CARL	3/1/13	03/06/2013	REIMBURSE-UCARE	205.44.0000.3490100	60.00
BEHRENDT, KATHY	3/1/13	03/06/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
BENJAMIN, AUDREY	1/31/13	02/27/2013	REFUND-UCARE	205.44.0000.3490100	30.00
BOEHMER, BARBARA	1/31/13	02/27/2013	REFUND-UCARE	205.44.0000.3490100	30.00
BOHN, MARY	1/31/13	02/27/2013	REFUND-UCARE	205.44.0000.3490100	30.00
BRONS, IRENE	1/31/13	02/27/2013	REFUND-UCARE	205.44.0000.3490100	30.00
CHHEM, CHHIN	2/22/13	03/06/2013	PR 2/22	205.44.6200.453.10300	29.27
COLLETTE, LARRY & DIANNE	3/1/13	03/06/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
COMCAST	2/12/13 8772 10 591 012718	02/27/2013	8772 10 591 0127188	205.44.6200.453.50070	228.70
DALCO ROOFING & SHEET METAL INC	048225	03/06/2013	31098	205.44.6200.453.40040	1,629.15
DALCO ROOFING & SHEET METAL INC	048225	03/06/2013	31098	205.44.6200.453.40040	1,629.15
ECSI SYSTEM INTEGRATORS	13067	02/27/2013	165950	205.44.6200.453.50055	449.32
ECSI SYSTEM INTEGRATORS	13067	02/27/2013	165950	205.44.6200.453.50055	449.32
ERICKSON, HAZEL	1/31/13	02/27/2013	REFUND-UCARE	205.44.0000.3490100	30.00
FIRST IMPRESSION GROUP, THE	51772	03/06/2013	3022	205.44.6200.453.50025	197.72
FIRST IMPRESSION GROUP, THE	51890-20	02/27/2013	POSTAGE FOR SPRING BROCHURE	205.44.6200.453.50035	1,122.50
GILLENWATER, ROBERT	3/1/13	03/06/2013	REIMBURSE-UCARE	205.44.0000.3490100	60.00
GOOD, MARY LOU	1/31/13	02/27/2013	REFUND-UCARE	205.44.0000.3490100	30.00
GRAINGER	9067450560	02/27/2013	806460150	205.44.6200.453.60016	39.76
HILLYARD INC	600597165	03/06/2013	274069	205.44.6200.453.60011	379.36
HILLYARD INC	600597165	03/06/2013	274069	205.44.6200.453.60011	379.35
HOLTY, RONALD	1/31/13	02/27/2013	REFUND-UCARE	205.44.0000.3490100	30.00
HUEBSCH SERVICES	3025165	02/27/2013	92965	205.44.6200.453.40040	207.27
HUEBSCH SERVICES	3025165	02/27/2013	92965	205.44.6200.453.40040	51.59
JOHNSON, LEWIS	1/31/13	02/27/2013	REFUND-UCARE	205.44.0000.3490100	30.00
JOHNSON, LOIS	1/31/13	02/27/2013	REFUND-UCARE	205.44.0000.3490100	30.00
KENNERLY, KAREN	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
KILLIAN, CAROLE	2/25/13	03/06/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
KRYZER, AUSTYN	2/22/13	02/27/2013	REFUND-ROOM AND ICE RENTALS	205.207.2070300	4.79
KRYZER, AUSTYN	2/22/13	02/27/2013	REFUND-ROOM AND ICE RENTALS	205.44.0000.3492200	2,793.33

KRYZER, AUSTYN	2/22/13	02/27/2013	REFUND-ROOM AND ICE RENTALS	205.44.0000.3492500	67.21
LARSON, WARREN	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
LEACH, JUDY	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
MAGNUM POOL AND SPA SERVICE	15569	02/27/2013	2/14/13	205.44.6200.453.40040	673.31
MEISSNER, JOYCE	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
MENARDS - WEST ST. PAUL	17594	03/06/2013	30170270	205.44.6200.453.60040	65.45
MN DEPT OF EMPLOYMENT & ECONOMIC DI	2/26/13	02/26/2013	4TH ATR 2012 UNEMPLOYMENT COMP BEN	205.44.6200.453.20700	156.21
MN DEPT OF EMPLOYMENT & ECONOMIC DI	2/26/13	02/26/2013	4TH ATR 2012 UNEMPLOYMENT COMP BEN	205.44.6200.453.20700	67.64
MN DEPT OF HEALTH	2013 FBL-13264-10565	03/06/2013	2013 FBL-13264-10565	205.44.6200.453.50070	398.00
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	205.44.6200.453.20620	7.94
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	205.44.6200.453.20620	25.08
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	205.44.6200.453.20620	15.88
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	205.44.6200.453.20620	7.94
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	205.44.6200.453.20620	15.87
MONEY MAILER OF THE TWIN CITIES	7678	03/06/2013	2/25/13	205.44.6200.453.50025	420.00
NAC MECHANICAL & ELECTRICAL SERVICE	88936	02/27/2013	8712-1	205.44.6200.453.40040	3,115.89
NAC MECHANICAL & ELECTRICAL SERVICE	89315	03/06/2013	8712-1	205.44.6200.453.40040	309.93
NAC MECHANICAL & ELECTRICAL SERVICE	89566	03/06/2013	8712-1	205.44.6200.453.40040	221.64
OFFICEMAX INC	670410	02/27/2013	687054	205.44.6200.453.60065	85.49
PUSH PEDAL PULL	2435	02/27/2013	2/14/13	205.44.6200.453.60040	2,053.87
R & R SPECIALTIES OF WI, INC.	0051896-IN	02/27/2013	0159456	205.44.6200.453.40042	66.83
RECREATION SUPPLY COMPANY	253935	02/27/2013	MO9501	205.44.6200.453.60016	221.23
ROACH, RICK	2/27/13	03/06/2013	REIMBURSE-PARTS	205.44.6200.453.60016	23.34
ROSENBERGER, LEONA	2/27/13	03/06/2013	REIMBURSE-UCARE	205.44.0000.3490100	165.00
SALISBURY, MARY	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
SCHINDLER ELEVATOR CORPORATION	7151744100	03/06/2013	1077364	205.44.6200.453.40040	346.73
SCHINDLER ELEVATOR CORPORATION	8103415449	03/06/2013	1077364	205.44.6200.453.40040	270.96
SEELHAMMER, RHEA	1/25/13 PR	01/30/2013	PR ACH RETURN 1/25/13	205.44.6200.453.10300	24.94
SPRINT	842483314-135	02/27/2013	842483314	205.44.6200.453.50020	92.41
SPRINT	842483314-135	02/27/2013	842483314	205.44.6200.453.50020	21.53
SPRINT	842483314-135	02/27/2013	842483314	205.44.6200.453.50020	43.06
SPRINT	842483314-135	02/27/2013	842483314	205.44.6200.453.50020	92.42
STOWELL, ROSEMARY & WARREN	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
STOWELL, ROSEMARY & WARREN	3/1/13	03/06/2013	REIMBURSE-UCARE	205.44.0000.3490100	60.00
SUPREME AUDIO INC	192125	03/06/2013	192125 58774	205.44.6200.453.40042	349.00
SWANK MOTION PICTURE INC	RG 1777895	03/06/2013	0259507002	205.44.6200.453.60065	182.75
TAHO SPORTSWEAR	13TF0196	02/27/2013	2/7/13	205.44.6200.453.60045	186.00
TETU, DENNIS & PEGGY	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	60.00
THIBOLDEAUX, JANICE	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	15.00
TORAASON, ROSEMARY	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
W W GOETSCH ASSOC INC	90250	03/06/2013	2/22/13	205.44.6200.453.40040	599.02
WEINBERG, DEBORAH & STEVEN	1/31/13	02/27/2013	REIMBURSE-UCARE	205.44.0000.3490100	30.00
Fund: 205 - COMMUNITY CENTER					21,517.10
BRAUN INTERTEC CORPORATION	364884	02/27/2013	BL-12-058768	290.45.3000.419.30700	4,220.75
LANDMARK ENVIRONMENTAL, LLC	12067.01-1	02/27/2013	12067.07	290.45.3000.419.30700	850.00
LILLIE SUBURBAN NEWSPAPERS	10/31/12	03/06/2013	001363 OCTOBER 2012	290.45.3000.419.50025	43.75
RIVER HEIGHTS CHAMBER OF COMMERCE	3166	02/27/2013	LUNCHEON	290.45.3000.419.50080	30.00
Fund: 290 - EDA					5,144.50
EHLERS AND ASSOCIATES, INC.	63776	02/27/2013	GO IMPROVEMENT BONDS 2006A	346.57.9000.570.30150	2,390.00
Fund: 346 - 2006A IMPROVEMENT BONDS					2,390.00
EHLERS AND ASSOCIATES, INC.	63788	02/27/2013	GO EQUIPMENT CERTIFICATES SERIES 2008I351.57.9000.570.30150		2,195.00
Fund: 351 - G.O. EQUIP. CERT. 2008B					2,195.00
LILLIE SUBURBAN NEWSPAPERS	10/31/12	03/06/2013	001363 OCTOBER 2012	426.72.5900.726.50025	110.25
Fund: 426 - 2006 IMPROVEMENT FUND					110.25
EMMONS & OLIVIER RESOURCES	00095-0027-20	02/27/2013	00095-0027	429.72.5900.729.30300	67.07
Fund: 429 - 2009 IMPROVEMENT FUND					67.07
EMMONS & OLIVIER RESOURCES	00095-0027-20	02/27/2013	00095-0027	446.74.5900.746.30300	67.08
Fund: 446 - NW AREA					67.08
STAR CITY DAYS, INC.	2/7/13	03/06/2013	FIREWORKS SHOW CONTRIBUTION	451.75.5900.751.70600	5,000.00
Fund: 451 - HOST COMMUNITY FUND					5,000.00
ACE PAINT & HARDWARE	514330/5	03/06/2013	501126	501.50.7100.512.60016	32.02
ACE PAINT & HARDWARE	514879/5	03/06/2013	2/20/13	501.50.7100.512.60016	11.20
ACE PAINT & HARDWARE	514884/5	03/06/2013	2/21/13	501.50.7100.512.60016	12.81
DON PIEHL	348364	03/06/2013	2/26/13	501.50.7100.512.60040	307.80
GOPHER STATE ONE-CALL	64367	03/06/2013	MN00435	501.50.7100.512.30700	108.75
MN AWWA	4/2-4/4 REGISTRATION	02/27/2013	APRIL 2-4 2013 METRO SCHOOL REGISTRAT	501.50.7100.512.50080	700.00
MN DEPT OF HEALTH	1/1/13-3/31/13	03/06/2013	SYSTEM 1190014 INVER GROVE HGTS	501.207.2070100	11,197.00

MN GLOVE & SAFETY, INC.	269908	03/06/2013	CTINVE	501.50.7100.512.60045	178.95
MN GLOVE & SAFETY, INC.	269931	03/06/2013	CTINVE	501.50.7100.512.60045	193.95
MN GLOVE & SAFETY, INC.	269932	03/06/2013	CTINVE	501.50.7100.512.60045	184.95
MN GLOVE & SAFETY, INC.	269933	03/06/2013	CTINP	501.50.7100.512.60045	184.95
MN GLOVE & SAFETY, INC.	269934	03/06/2013	CTINVP	501.50.7100.512.60045	168.95
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	501.50.7100.512.20620	43.36
MN PIPE & EQUIPMENT	0295409	03/06/2013	0295409	501.50.7100.512.60016	118.54
NAC MECHANICAL & ELECTRICAL SERVICE	89111	02/27/2013	8712	501.50.7100.512.40040	446.50
SEXTON COMPANY, THE	55904	02/27/2013	4115	501.50.7100.512.60045	44.00
SPRINT	842483314-135	02/27/2013	842483314	501.50.7100.512.50020	256.94
STATE OF MN-DEPT OF PUBLIC SAFETY	1907100472012 M-58705	02/27/2013	190710047 2520	501.50.7100.512.40040	100.00
STATE OF MN-DEPT OF PUBLIC SAFETY	1907100492012 M-58701	02/27/2013	190710049 2522	501.50.7100.512.40040	25.00
TKDA	002013000307	03/06/2013	0014026.007	501.50.7100.512.30700	1,399.11
TOTAL TOOL	01889541	03/06/2013	01420846	501.50.7100.512.60040	30.52

Fund: 501 - WATER UTILITY FUND **15,745.30**

FLW, INC.	1049792	02/27/2013	1052734	502.51.7200.514.40042	403.03
METROPOLITAN COUNCIL	0001011569	03/06/2013	5084	502.51.7200.514.40015	128,384.95
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	502.51.7200.514.20620	23.40
TRACTOR SUPPLY CREDIT PLAN	2/18/13 6035 3012 0018 36	03/06/2013	6035 3012 0018 3679	502.51.7200.514.40042	17.13

Fund: 502 - SEWER UTILITY FUND **128,828.51**

CHECKPOINT SYSTEMS INC	902126657	02/27/2013	64063	503.52.8500.526.50055	417.79
G & K SERVICES	1182390016	03/06/2013	0012446	503.52.8600.527.60045	108.46
GEMPLER'S INC.	1019341539	03/06/2013	SC10106740	503.52.8600.527.60020	41.78
GEMPLER'S INC.	1019343815	03/06/2013	SC10106740	503.52.8600.527.60020	155.56
GEMPLER'S INC.	1019349120	03/06/2013	SC10106740	503.52.8600.527.60065	160.15
GEMPLER'S INC.	1019356785	03/06/2013	SC10106740	503.52.8600.527.60020	28.92
MENARDS - WEST ST. PAUL	15572	02/27/2013	30170265	503.52.8600.527.60020	31.21
MENARDS - WEST ST. PAUL	16770	02/27/2013	30170265	503.52.8600.527.40040	33.14
MN DEPT OF EMPLOYMENT & ECONOMIC DI	2/26/13	02/26/2013	4TH ATR 2012 UNEMPLOYMENT COMP BEN	503.52.8000.521.20700	5,693.28
MN DEPT OF EMPLOYMENT & ECONOMIC DI	2/26/13	02/26/2013	4TH ATR 2012 UNEMPLOYMENT COMP BEN	503.52.8300.524.20700	2,016.81
MN DEPT OF EMPLOYMENT & ECONOMIC DI	2/26/13	02/26/2013	4TH ATR 2012 UNEMPLOYMENT COMP BEN	503.52.8500.526.20700	770.00
MN DEPT OF EMPLOYMENT & ECONOMIC DI	2/26/13	02/26/2013	4TH ATR 2012 UNEMPLOYMENT COMP BEN	503.52.8600.527.20700	990.89
MN GOLF COURSE SUPT ASSN	2013 MGCSA DUES	03/06/2013	2013 MGCSA DUES	503.52.8600.527.50070	365.00
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	503.52.8000.521.20620	7.02
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	503.52.8500.526.20620	(7.43)
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	503.52.8600.527.20620	28.19
NIKE USA, INC.	948203906	03/06/2013	79282	503.52.8200.523.76250	492.33
SPRINT	842483314-135	02/27/2013	842483314	503.52.8500.526.50020	56.91
STATE OF MN - DEPT OF PUBLIC SAFETY	1907100482012 M-59633	03/06/2013	2521 190710048	503.52.8600.527.50070	25.00
TITAN MACHINERY	52353-CL	03/06/2013	5885389	503.52.8600.527.40042	5,250.90
XCEL ENERGY	358936706	03/06/2013	51-5877511-0	503.52.8600.527.40020	11.22

Fund: 503 - INVER WOOD GOLF COURSE **16,677.13**

KENNEDY & GRAVEN	112553	02/27/2013	NV125-0045	602.00.2100.415.30420	14,847.20
LEAGUE OF MN CITIES INS TRUST	11067114	02/27/2013	CINDY HANE	602.00.2100.415.70200	3,355.31
LEAGUE OF MN CITIES INS TRUST	C0019164	03/06/2013	WHITE, GENE	602.00.2100.415.70200	2,493.98
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	602.00.2100.415.20620	1.36

Fund: 602 - RISK MANAGEMENT **20,697.85**

ARAMARK UNIFORM SERVICES	629-7688990	02/27/2013	792069636	603.00.5300.444.40065	75.91
ARAMARK UNIFORM SERVICES	629-7688990	02/27/2013	792069636	603.00.5300.444.60045	43.68
CARQUEST OF MSP-ROSEMOUNT	1596-190928	02/27/2013	614420	603.140.1450050	10.54
CARQUEST OF MSP-ROSEMOUNT	1596-190930	02/27/2013	614420	603.140.1450050	62.50
CARQUEST OF MSP-ROSEMOUNT	1596-191232	02/27/2013	614420	603.140.1450050	67.27
CARQUEST OF MSP-ROSEMOUNT	1596-191233	02/27/2013	614420	603.140.1450050	9.20
CLAREY'S SAFETY EQUIPMENT	148522	03/06/2013	00103980	603.00.5300.444.40041	85.78
CUB FOODS	1/14/13	03/06/2013	HOUSE CHARGE CITY IGH 1/14/13	603.00.5300.444.60011	20.50
GOODIN COMPANY	02974288-00	02/27/2013	1001619	603.00.5300.444.40041	47.71
H&L MESABI	86576	02/27/2013	514	603.00.5300.444.40041	400.92
H&L MESABI	86577	02/27/2013	514	603.00.5300.444.40041	598.67
H&L MESABI	86608	02/27/2013	514	603.00.5300.444.40041	603.11
INFINITY WIRELESS	32999	03/06/2013	14127	603.00.5300.444.40041	310.34
I-STATE TRUCK CENTER	C242245365:01	02/27/2013	13468	603.00.5300.444.40041	89.18
KREMER SERVICES LLC	0000023087	02/27/2013	0000027263	603.00.5300.444.40041	2,869.83
KREMER SERVICES LLC	0000023205	02/27/2013	0000027365	603.00.5300.444.40041	2,662.66
KREMER SERVICES LLC	0000023296	03/06/2013	0000027322	603.00.5300.444.40041	7,597.69
MN DEPT OF REVENUE	JANUARY 2013 PETRO TAX	02/25/2013	JANUARY 2013 PETRO TAX	603.46.0000.3650000	668.90
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	603.00.5300.444.20620	13.46
POMP'S TIRE SERVICE, INC.	450004204	02/27/2013	4502557	603.140.1450050	1,378.05
POMP'S TIRE SERVICE, INC.	450004223	02/27/2013	4502557	603.00.5300.444.40041	42.50
RALPH'S CAR & TRACTOR SERVICE	2275	02/27/2013	HT-C5780	603.00.5300.444.40040	134.02

SPRINT	842483314-135	02/27/2013	842483314	603.00.5300.444.50020	103.77
TITAN MACHINERY	43127 CL	02/27/2013	6239910	603.00.5300.444.40041	2,802.28
TOTAL CONSTRUCTION & EQUIP.	56420	02/27/2013	CIT001	603.00.5300.444.40040	1,045.82
WESTERN PETROLEUM COMPANY	97114354-41801	02/27/2013	112741	603.00.5300.444.40041	79.91
WESTERN PETROLEUM COMPANY	97114354-41801	02/27/2013	112741	603.140.1450050	517.60
Fund: 603 - CENTRAL EQUIPMENT					22,341.80
OFFICEMAX INC	670410	02/27/2013	687054	604.00.2200.416.60005	11.24
OFFICEMAX INC	670410	02/27/2013	687054	604.00.2200.416.60010	64.16
Fund: 604 - CENTRAL STORES					75.40
HOME DEPOT CREDIT SERVICES	2/13/13 6035 3225 0206 19	03/06/2013	6035 3225 0206 1959	605.00.7500.460.60011	208.36
LONE OAK COMPANIES	2/25/13	02/27/2013	UTILITY MAILING	605.00.7500.460.50035	1,410.71
LONE OAK COMPANIES	58354	03/06/2013	UTILITY BILLS	605.00.7500.460.50035	375.56
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	605.00.7500.460.20620	5.41
Fund: 605 - CITY FACILITIES					2,000.04
CIVICPLUS	132205	03/06/2013	APRIL-JUNE 2013 HOSTING FEE	606.00.1400.413.30700	2,262.20
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	606.00.1400.413.20620	13.00
SPRINT	842483314-135	02/27/2013	842483314	606.00.1400.413.50020	50.03
Fund: 606 - TECHNOLOGY FUND					2,325.23
BLUE EARTH COUNTY DISTRICT COURT	070287	02/27/2013	JARED JOHNSON	702.229.2291000	300.00
DAKOTA CTY ATTORNEY	10-0979	02/27/2013	VEHICLE FORFEITURE 10-0979	702.229.2291000	153.00
DONNELLY, DAVID & JESSICA	2/12/13	02/27/2013	ESCROW RELEASE-7666 BARBARA COURTH	702.229.2285000	399.00
GREINER CONSTRUCTION	2/22/13	02/27/2013	ESCROW RELEASE	702.229.2288401	1,672.55
GWC IV, LLC	2/25/13	03/06/2013	ESCROW RELEASE-CAMERONS	702.229.2283200	8,311.75
HENNEPIN COUNTY DISTRICT COURT	12404015	03/06/2013	PEDRO ALBERTO CARRERA CASTILLO	702.229.2291000	1,200.00
HOEFT BUILDERS INC	2/12/13	02/27/2013	ESCROW RELEASE WHITE PINES SENIOR LIVI	702.229.2284000	4,391.54
INVERWOOD SENIOR LIVING LLC	2/25/13	03/06/2013	ESCROW RELEASE	702.229.2304400	2,125.52
LILLIE SUBURBAN NEWSPAPERS	10/31/12	03/06/2013	001363 OCTOBER 2012	702.229.2289101	21.88
LILLIE SUBURBAN NEWSPAPERS	10/31/12	03/06/2013	001363 OCTOBER 2012	702.229.2290101	25.00
PRAXAIR	2/25/13	03/06/2013	ESCROW RELEASE	702.229.2300800	4,286.40
PRAXAIR	2/25/13 B	03/06/2013	ESCROW RELEASE L.O.C.	702.229.2300900	10,000.00
RIVER COUNTRY COOPERATIVE	2/12/13	02/27/2013	ESCROW RELEASE	702.229.2283100	541.00
WASHINGTON COUNTY COURT ADMIN	111016608	03/06/2013	JOSEPH COLLARO	702.229.2291000	75.00
Fund: 702 - ESCROW FUND					33,502.64
MN LIFE INSURANCE CO	MARCH 2013	03/06/2013	POLICY #0027324	703.43.5500.446.20620	1.47
Fund: 703 - LANDFILL ABATEMENT					1.47
Grand Total					629,313.50

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Approve Custom Grading Agreement for 8671 Alvarado Court (Lot 4, Block 2, Wildwood Ranch Estates)

Meeting Date: March 11, 2013
 Item Type: Consent
 Contact: Thomas J. Kaldunski, 651-450-2572
 Prepared by: Thomas J. Kaldunski, City Engineer
 Reviewed by: Scott D. Thureen, Public Works Director

SAT

Fiscal/FTE Impact:	
<input checked="" type="checkbox"/>	None
<input type="checkbox"/>	Amount included in current budget
<input type="checkbox"/>	Budget amendment requested
<input type="checkbox"/>	FTE included in current complement
<input type="checkbox"/>	New FTE requested – N/A
<input type="checkbox"/>	Other:

PURPOSE/ACTION REQUESTED

Approve a Custom Grading Agreement for a new home to be built at 8671 Alvarado Court on Lot 4, Block 2, Wildwood Ranch Estates.

SUMMARY

The owners of 8671 Alvarado Court are affected by the City Ordinance Title 9, Chapter 5, Section 9-5-5. This ordinance requires lots of record which do not have recorded contracts, approved grading plans, or agreements with the City to provide information to ensure the development meets current City standards for grading, erosion control and storm water management. The Wildwood Ranch Estates Development Agreement requires City Engineer approval on the custom grading.

The owners, Blake and Lori Grams, are working with Highmark Builders and they have provided the required Grading and Erosion Control Plans. They are following the Storm Water Management Plan requirements from the original Wildwood Ranch Estates Development which allow the site to drain to an existing wetland located northeast of the house. The Storm Water Management Plan was supplemented by an August 3, 2012 Barr Engineering model to reflect the existing driveway conditions at 8677 Alvarado Court. Some drainage will flow southwesterly to the existing street. The applicants have signed a Custom Grading Agreement (attached) which spells out the conditions to be met. They also provided a surety of \$10,000 to ensure compliance. An engineering escrow of \$1,500 was also provided to cover any costs incurred by the City for review and inspection of the site grading. The owners will proceed with construction per their building permit following the Council approval of the Custom Grading Agreement.

It is recommended that the City Council approve the Custom Grading Agreement for 8671 Alvarado Court and authorize the Mayor to execute the Agreement.

TJK/kf

Attachments: Custom Grading Agreement
Site plan

CUSTOM GRADING AGREEMENT
FOR
LOT 4, BLOCK 2, WILDWOOD RANCH ESTATES
DAKOTA COUNTY, MINNESOTA

CUSTOM GRADING AGREEMENT

THIS CUSTOM GRADING AGREEMENT is made and entered into on the 11th day of March, 2013, by and between the City of Inver Grove Heights, a Minnesota municipal corporation (City), and the Owner identified herein.

RECITALS:

WHEREAS, the Owner has applied to the City for approval of the Development Plans and a building permit for the Property;

WHEREAS, in conjunction with the granting of these approvals, the City requires that the Property be improved with grading, drainage and erosion control facilities and with landscaping;

WHEREAS, the Council has agreed to approve the Development Plans on the following conditions:

1. That the Owner enter into this Custom Grading Agreement, which contract defines the work which the Owner undertakes to complete; and

2. The Owner shall provide an irrevocable letter of credit in the amount and with conditions satisfactory to the City, providing for the actual construction and installation of such Improvements within the period specified by the City.

WHEREAS, the Owner has filed four (4) complete sets of the Development Plans with the City;

WHEREAS, the Development Plans have been prepared by a registered professional engineer or registered land surveyor and have been approved by the Director of PWD.

NOW, THEREFORE, subject to the terms and conditions of this Custom Grading Agreement and in reliance upon the representations, warranties and covenants of the parties herein contained, the City and Owner agree as follows:

ARTICLE 1 DEFINITIONS

1.1 TERMS. The following terms, unless elsewhere defined specifically in the Custom Grading Agreement, shall have the following meanings as set forth below.

1.2 CITY. "City" means the City of Inver Grove Heights, a Minnesota municipal corporation.

1.3 OWNER. "Owner" means Blake Grams and Lori Grams, husband and wife.

1.4 **DEVELOPMENT PLANS.** "Development Plans" means all those plans, drawings, specifications and surveys identified on the attached Appendix 1.

1.5 **CUSTOM GRADING AGREEMENT.** "Custom Grading Agreement" means this instant contract by and between the City and Owner.

1.6 **COUNCIL.** "Council" means the Council of the City of Inver Grove Heights.

1.7 **PWD.** "PWD" means the Public Works Department of the City of Inver Grove Heights.

1.8 **DIRECTOR OF PWD.** "Director of PWD" means the Director of the Public Works Department of the City of Inver Grove Heights and his delegates.

1.9 **COUNTY.** "County" means Dakota County, Minnesota.

1.10 **OTHER REGULATORY AGENCIES.** "Other Regulatory Agencies" means and includes the following:

- a.) Minnesota Department of Transportation
- b.) Dakota County
- c.) Water Management Organization
- d.) State of Minnesota
- e.) Minnesota Department of Natural Resources
- f.) any other regulatory or governmental agency or entity affected by, or having jurisdiction over the Improvements.

1.11 **UTILITY COMPANIES.** "Utility Companies" means and includes the following:

- a.) utility companies, including electric, gas and cable
- b.) pipeline companies.

1.12 **PRIOR EASEMENT HOLDERS.** "Prior Easement Holders" means and includes all holders of any easements or other property interests which existed prior to the grant or dedication of any public easements transferred pursuant to this Custom Grading Agreement.

1.13 **IMPROVEMENTS.** "Improvements" means and includes, individually and collectively, all the improvements identified in Article 3 and on the attached Appendix 2.

1.14 **OWNER DEFAULT.** "Owner Default" means and includes any of the following or any combination thereof:

- a.) failure by the Owner to timely pay the City any money required to be paid under this Custom Grading Agreement;
- b.) failure by the Owner to timely construct the Improvements according to the Development Plans and the City standards and specifications;
- c.) failure by the Owner to observe or perform any covenant, condition, obligation or agreement on its part to be observed or performed under this Custom Grading Agreement;
- d.) breach of the Owner Warranties.

1.15 **FORCE MAJEURE.** "Force Majeure" means acts of God, including, but not limited to floods, ice storms, blizzards, tornadoes, landslides, lightning and earthquakes (but not including reasonably anticipated weather conditions for the geographic area), riots, insurrections, war or civil disorder affecting the performance of work, blockades, power or other utility failures, and fires or explosions.

1.16 **OWNER WARRANTIES.** "Owner Warranties" means that the Owner hereby warrants and represents the following:

- A. **AUTHORITY.** Owner has the right, power, legal capacity and authority to enter into and perform its obligations under this Custom Grading Agreement; no approvals or consents of any persons are necessary in connection with the authority of Owner to enter into and perform its obligations under this Custom Grading Agreement.
- B. **FULL DISCLOSURE.** None of the representatives and warranties made by Owner or made in any exhibit hereto or memorandum or writing furnished or to be furnished by Owner or on its behalf contains or will contain any untrue statement of material fact or omit any material fact the omission of which would be misleading.
- C. **PLAN COMPLIANCE.** The Development Plans comply with all City, County, metropolitan, state and federal laws and regulations, including but not limited to subdivision ordinances, zoning ordinances and environmental regulations.
- D. **FEE TITLE.** The Owner owns fee title to the Property.

- E. WARRANTY ON PROPER WORK AND MATERIALS.** The Owner warrants all work required to be performed by it under this Custom Grading Agreement against defective material and faulty workmanship for a period of two (2) years after its completion. During the warranty period the Owner shall be solely responsible for all costs of performing repair work required by the City within thirty (30) days of notification. All trees, grass, and sod shall be warranted to be alive, of good quality, and disease free for one year after planting. Any replacements shall be similarly warranted for one year from the time of planting. In addition, the warranty period for drainage and erosion control improvements shall be for two (2) years after completion; the warranty for the drainage and erosion control improvements shall also include the obligation of the Owner to repair and correct and damage to or deficiency with respect to such improvements.

1.17 CITY WARRANTIES. "City Warranties" means that the City hereby warrants and represents as follows:

- A. ORGANIZATION.** City is a municipal corporation duly incorporated and validly existing in good standing under the laws of the State of Minnesota.
- B. AUTHORITY.** City has the right, power, legal capacity and authority to enter into and perform its obligations under this Custom Grading Agreement.

1.18 FORMAL NOTICE. "Formal Notice" means notices given by one party to the other if in writing and if and when delivered or tendered either in person or by depositing it in the United States mail in a sealed envelope, by certified mail, return receipt requested, with postage and postal charges prepaid, addressed as follows:

If to CITY: City of Inver Grove Heights
Attention: City Administrator
Inver Grove Heights City Hall
8150 Barbara Avenue
Inver Grove Heights, MN 55077

If to Owner: Blake and Lori Grams
8245 Claymore Court
Inver Grove Heights, MN 55076

or to such other address as the party addressed shall have previously designated by notice given in accordance with this Section. Notices shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the third day after mailing if mailed as provided above, provided, that a notice not given as above shall, if it is in writing, be deemed given if and when actually received by a party.

1.19 PROPERTY. Property means the real property located in the City of Inver Grove Heights, Dakota County, Minnesota legally described as follows:

Lot 4, Block 2, Wildwood Ranch Estates, Common Interest Community Number 423, Dakota County, Minnesota.

1.20 CERTIFICATE OF SURVEY. Certificate of Survey means the Certificate of Survey for the Property prepared by E.G. Rud & Sons, Inc. dated March 4, 2013, attached hereto as Appendix 3. A copy of the Certificate of Survey is on file with the City.

ARTICLE 2 **APPROVAL OF DEVELOPMENT PLANS**

2.1. APPROVAL OF DEVELOPMENT PLANS. Subject to the terms and conditions of this Custom Grading Agreement, the recitals above, and all other applicable City Code provisions the City hereby approves the Development Plans.

2.2 RECORDING. This Custom Grading Agreement shall be recorded with the County Recorder within thirty (30) days from the date of this Custom Grading Agreement. No certificate of occupancy for the Property shall be issued unless the Owner shows evidence to the City that this Custom Grading Agreement has been recorded with the County Recorder.

ARTICLE 3 **IMPROVEMENTS**

3.1 IMPROVEMENTS. The Owner shall install, at its own cost, the Improvements in accord with the Development Plans. The Improvements shall be completed by the dates shown on Appendix 2, except as completion dates are extended by subsequent written action of the Director of PWD. Failure of the City to promptly take action to enforce this Custom Grading Agreement after expiration of time by which the Improvements are to be completed shall not waive or release any rights of the City; the City may take action at any time thereafter, and the terms of this contract shall be deemed to be automatically extended until such time as the Improvements are completed to the City's satisfaction.

The building permit submittal provided by the Owner to the City involved only the current house, driveway and grades as shown on the Certificate of Survey attached in Appendix 3. The proposed future structures of a sport court and pool area depicted on the Certificate of Survey were not part of the approval of the Development Plans granted by the City under this Custom Grading Agreement. The Owner will be required to submit any additional future structures, impervious surfaces, and grading changes not referenced in the Development Plans and Improvements to the City for compliance with applicable City ordinances, permits and standards prior to construction. The Certificate of Survey appears to have more impervious surface (including the proposed future structures of a sport court and pool area) than the allowed amount for current City standards.

3.2 GROUND MATERIAL. The Owner shall insure that adequate and suitable ground material shall exist in the areas of private driveways and utility improvements and shall guarantee the removal, replacement or repair of substandard or unstable material. The cost of removal, replacement or repair is the responsibility of the Owner.

3.3 GRADING/DRAINAGE PLAN. The Owner shall construct drainage facilities in accord with the Development Plans. The grading and drainage plan shall include lot and building elevations, drainage swales to be sodded, storm sewer, catch basins, erosion control structures and ponding areas necessary to conform with the overall City storm sewer plan. The grading of the site shall be completed in conformance with the Development Plans.

3.4 BOULEVARD AND AREA RESTORATION. The Owner shall seed or lay cultured sod in all boulevards within 30 days of the completion of street related improvements and restore all other areas disturbed by the development grading operation in accordance with the approved erosion control plan. Upon request of the PWD, the Owner shall remove the silt fences after grading and construction have occurred.

3.5 STREET MAINTENANCE, ACCESS AND REPAIR. The Owner shall clear, on a daily basis, any soil, earth or debris from the streets and wetlands within or adjacent to the Plat resulting from the grading or building on the land within the Plat by the Owner or its agents, and shall repair to the City's specifications any damage to bituminous surfacing resulting from the use of construction equipment.

3.6 LANDSCAPING. Site landscaping shall be in accordance with the Development Plans.

3.7 EROSION CONTROL. The Owner shall provide and follow a plan for erosion control and pond maintenance in accord with the Best Management Practices (BMP) as delineated in the Minnesota Pollution Control Agency handbook titled Water Quality in Urban Areas. Such plan shall be detailed on the Development Plans and shall be subject to approval of the Director of PWD. The Owner shall install and maintain such erosion control structures as appear necessary under the Development Plans or become necessary subsequent thereto. The Owner shall be responsible for all damage caused as the result of grading and excavation within the Plat including, but not limited to, restoration of existing control structures and clean-up of public right-of-way, until the Property is final graded and Improvements are completed. As a portion of the erosion control plan, the Owner shall re-seed or sod any disturbed areas in accordance with the Development Plans. The City reserves the right to perform any necessary erosion control or restoration as required, if these requirements are not complied with after Formal Notice by the City as stated in Article 9. The Owner shall be financially responsible for payment for this extra work.

3.8 GRADING/DRAINAGE PLAN. The Owner shall construct drainage facilities adequate to serve the Property in accord with the Development Plans. The grading and drainage plan shall include lot and building elevations, drainage swales to be sodded, storm sewer, catch basins, erosion control structures and ponding areas necessary to conform with the overall City storm sewer plan. The grading of the site shall be completed in conformance with the Development

Plans. In the event that the Owner fails to complete the grading of the site in conformance with the Development Plans by the stipulated date, the City may declare the Owner in default pursuant to Article 9.

3.9 AS BUILT INFORMATION. One (1) copy, on polyester film, of the detailed record plan "as built" drawings of the Improvements shall be provided by the Owner in accord with City standards no later than 90 days after completion of the Improvements, unless otherwise approved in writing by the PWD.

Final as-built information shall be submitted in an electronic format compatible with the CITY'S Geographic Information System (GIS). All information must be on the Dakota County coordinates system. Compatible formats are AUTOCAD .DWG or .DXF files on compact disk. As-built drawings shall also be scanned and stored as images in .TIFF or .PDF files on compact disk. Note: All corrected links, grades and elevations shall have a line drawn through the original text and the new information placed nearby; the original information or text shall not be erased.

ARTICLE 4 **OTHER PERMITS**

4.1 PERMITS. The Owner shall obtain all necessary approvals, permits and licenses from the City, the Other Regulatory Agencies, the Utility Companies, and the Prior Easement Holders. Major design requirements of any such entities shall be determined prior to completion and incorporated into the Development Plans. All costs incurred to obtain the approvals, permits and licenses, and also all fines or penalties levied by any agency due to the failure of the Owner to obtain or comply with conditions of such approvals, permits and licenses, shall be paid by the Owner. The Owner shall defend and hold the City harmless from any action initiated by the Other Regulatory Agencies, the Utility Companies and the Prior Easement Holders resulting from such failures of the Owner.

ARTICLE 5 **RESPONSIBILITY FOR COSTS**

5.1 IMPROVEMENT COSTS. The Owner shall pay for the Improvements; that is, all costs of persons doing work or furnishing skills, tools, machinery or materials, or insurance premiums or equipment or supplies and all just claims for the same; and the City shall be under no obligation to pay the contractor or any subcontractor any sum whatsoever on account thereof, whether or not the City shall have approved the contract or subcontract.

5.2 CITY MISCELLANEOUS EXPENSES. All fees and costs associated with the drafting and recording of the Custom Grading Agreement are the responsibility of the City. The Owner shall reimburse the City for all engineering, administrative, legal and other expenses incurred or to be incurred by the City in connection with this Custom Grading Agreement. Bills not paid within thirty (30) days shall accrue interest at the rate of eight percent per year.

5.3 ENFORCEMENT COSTS. The Owner shall pay the City for costs incurred in the enforcement of this Custom Grading Agreement, including engineering and attorneys' fees.

5.4 **TIME OF PAYMENT.** The Owner shall pay all bills from the City within thirty (30) days after billing. Bills not paid within thirty (30) days shall bear interest at the rate of 8% per year.

ARTICLE 6
OWNER WARRANTIES

6.1 **STATEMENT OF OWNER WARRANTIES.** The Owner hereby makes and states the Owner Warranties.

ARTICLE 7
CITY WARRANTIES

7.1 **STATEMENT OF CITY WARRANTIES.** The City hereby makes and states the City Warranties.

ARTICLE 8
INDEMNIFICATION OF CITY

8.1 **INDEMNIFICATION OF CITY.** Owner shall indemnify, defend and hold the City, its Council, agents, employees, attorneys and representatives harmless against and in respect of any and all claims, demands, actions, suits, proceedings, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including interest, penalties and attorneys' fees, that the City incurs or suffers, which arise out of, result from or relate to:

- a.) breach by the Owner of the Owner Warranties;
- b.) failure of the Owner to timely construct the Improvements according to the Development Plans and the City ordinances, standards and specifications;
- c.) failure by the Owner to observe or perform any covenant, condition, obligation or agreement on its part to be observed or performed under this Custom Grading Agreement;
- d.) failure by the Owner to pay contractors, subcontractors, laborers, or materialmen;
- e.) failure by the Owner to pay for materials;
- f.) approval by the City of the Development Plans;
- g.) failure to obtain the necessary permits and authorizations to construct the Improvements;
- h.) construction of the Improvements;

- i.) delays in construction of the Improvements;
- j.) all costs and liabilities arising because building permits were issued prior to the completion and acceptance of the Improvements.

ARTICLE 9
CITY REMEDIES UPON OWNER DEFAULT

9.1 CITY REMEDIES. If an Owner Default occurs, that is not caused by Force Majeure, the City shall give the Owner Formal Notice of the Owner Default and the Owner shall have ten (10) business days to cure the Owner Default. If the Owner, after Formal Notice to it by the City, does not cure the Owner Default within ten (10) business days, then the City may avail itself of any remedy afforded by law and any of the following remedies:

- a.) the City may specifically enforce this Custom Grading Agreement;
- b.) the City may collect on the irrevocable letter of credit or cash deposit pursuant to Article 10 hereof;
- c.) the City may suspend or deny building and occupancy permits for buildings within the Property;
- d.) the City may, at its sole option, perform the work or improvements to be performed by the Owner, in which case the Owner shall within thirty (30) days after written billing by the City reimburse the City for any costs and expenses incurred by the City.

9.2 NO ADDITIONAL WAIVER IMPLIED BY ONE WAIVER. In the event any agreement contained in this Custom Grading Agreement is breached by the Owner and thereafter waived in writing by the City, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other concurrent, previous or subsequent breach hereunder. All waivers by the City must be in writing.

9.3 NO REMEDY EXCLUSIVE. No remedy herein conferred upon or reserved to the City shall be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Custom Grading Agreement or now or hereafter existing at law or in equity or by statute. No delay or omission to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver thereof, but any such right and power may be exercised from time to time and as often as may be deemed expedient. In order to entitle the City to exercise any remedy reserved to it, it shall not be necessary to give notice, other than the Formal Notice.

9.4 EMERGENCY. Notwithstanding the requirement contained in Section 9.1 hereof relating to Formal Notice to the Owner in case of a Owner Default and notwithstanding the requirement contained in Section 9.1 hereof relating to giving the Owner a ten (10) business day period to cure the Owner Default, in the event of an emergency as determined by the Director of

PWD, resulting from the Owner Default, the City may perform the work or improvement to be performed by the Owner without giving any notice or Formal Notice to the Owner and without giving the Owner the ten (10) day period to cure the Owner Default. In such case, the Owner shall within thirty (30) days after written billing by the City reimburse the City for any and all costs incurred by the City.

ARTICLE 10
ESCROW DEPOSIT

10.1 ESCROW REQUIREMENT. Contemporaneously herewith, the Owner shall deposit with the City an irrevocable letter of credit, or cash deposit for the amount of \$10,000.00 ("Escrow Amount").

The bank and form of the irrevocable letter of credit, or cash deposit shall be subject to approval by the City Finance Director and City Attorney and shall continue to be in full force and effect until released by the CITY. The irrevocable letter of credit shall be for a term ending December 31, 2015. In the alternative, the letter of credit may be for a one year term provided it is automatically renewable for successive one year periods from the present or any future expiration dates with a final expiration date of December 31, 2015, and further provided that the irrevocable letter of credit states that at least sixty (60) days prior to the expiration date the bank will notify the City that if the bank elects not to renew for an additional period. The irrevocable letter of credit shall secure compliance by the Owner with the terms of this Custom Grading Agreement. The City may draw down on the irrevocable letter of credit or cash deposit, without any further notice than that provided in Section 9.1 relating to a Owner Default, for any of the following reasons:

- a.) a Owner Default; or
- b.) upon the City receiving notice that the irrevocable letter of credit will be allowed to lapse before December 31, 2015.

The City shall use the escrow proceeds to reimburse the City for its costs and to cause the Improvements to be constructed to the extent practicable; after the Director of PWD determines that such Improvements have been constructed and after retaining 10% of the proceeds for later distribution pursuant to Section 10.2, the remaining proceeds shall be distributed to Owner.

With City approval, the irrevocable letter of credit or cash deposit may be reduced pursuant to Section 10.2 from time to time as financial obligations are paid.

10.2 ESCROW RELEASE AND ESCROW INCREASE.

Periodically, upon the Owner's written request and upon completion by the Owner and acceptance by the City of any specific Improvements, ninety percent (90%) of that portion of the irrevocable letter of credit, or cash deposit covering those specific completed improvements only shall be released. The final ten percent (10%) of that portion of the irrevocable letter of credit, or cash deposit, for those specific completed improvements shall be held until acceptance by the City and expiration of the warranty period under Section 1.17 hereof; in the alternative, the Owner may

post a bond satisfactory to the City with respect to the final ten percent (10%).

10.3 ADDITIONAL INSPECTION ESCROW. In addition to the Escrow Amount, the Owner shall also deposit \$1,500.00 in cash with the City (hereafter "Engineering Escrow Amount") contemporaneously with execution of this Agreement.

This Engineering Escrow Amount shall be used to pay the City for engineering inspection fees and other City costs at the City's standard rates charged for such tasks.

Subject to the following paragraph, upon satisfactory completion of the Improvements, the City shall return to the Owner any remaining portion of the Engineering Escrow Amount not otherwise charged the Owner for engineering inspection performed by the City.

Twenty five percent (25%) of this Engineering Escrow Amount shall be retained by the City (hereafter referred to as Escrow Retainage) and this Escrow Retainage shall be available to the City to pay for deficiencies and problems related to the Improvements in the event such problems and deficiencies arise after the City has accepted the Improvements. The City may use the Escrow Retainage to correct any such deficiencies or problems or to protect against further deficiencies or problems.

The City shall return to the Owner any remaining Escrow Retainage when all the following events have occurred:

- a.) The expiration of the warranty period under Section 1.16(E) of this Agreement.

To the extent the engineering inspection charges or the amount needed to correct any deficiencies and problems exceed the initially deposited \$1,500.00 Engineering Escrow Amount, the Owner is responsible for payment of such excess within thirty (30) days after billing by the City.

ARTICLE 11 **MISCELLANEOUS**

11.1 CITY'S DUTIES. The terms of this Custom Grading Agreement shall not be considered an affirmative duty upon the City to complete any Improvements.

11.2 NO THIRD PARTY RECOURSE. Third parties shall have no recourse against the City under this Custom Grading Agreement.

11.3 VALIDITY. If any portion, section, subsection, sentence, clause, paragraph or phrase of this Custom Grading Agreement is for any reason held to be invalid, such decision shall not affect the validity of the remaining portion of this Custom Grading Agreement.

11.4 RECORDING. This Custom Grading Agreement shall be recorded by the Owner with the County Recorder by March 1, 2013, and the Owner shall provide and execute any and all documents necessary to implement the recording.

11.5 **BINDING AGREEMENT.** The parties mutually recognize and agree that all terms and conditions of this recordable Custom Grading Agreement shall run with the Property and shall be binding upon the heirs, successors, administrators and assigns of the Owner.

11.6 **ASSIGNMENT.** The Owner may not assign this Custom Grading Agreement without the written permission of the Council. The Owner's obligations hereunder shall continue in full force and effect, even if the Owner sells the Property.

11.7 **AMENDMENT AND WAIVER.** The parties hereto may by mutual written agreement amend this Custom Grading Agreement in any respect. Any party hereto may extend the time for the performance of any of the obligations of another, waive any inaccuracies in representations by another contained in this Custom Grading Agreement or in any document delivered pursuant hereto which inaccuracies would otherwise constitute a breach of this Custom Grading Agreement, waive compliance by another with any of the covenants contained in this Custom Grading Agreement, waive performance of any obligations by the other or waive the fulfillment of any condition that is precedent to the performance by the party so waiving of any of its obligations under this Custom Grading Agreement. Any agreement on the part of any party for any such amendment, extension or waiver must be in writing. No waiver of any of the provisions of this Custom Grading Agreement shall be deemed, or shall constitute, a waiver of any other provisions, whether or not similar, nor shall any waiver constitute a continuing waiver.

11.8 **GOVERNING LAW.** This Custom Grading Agreement shall be governed by and construed in accordance with the laws of the State of Minnesota.

11.9 **COUNTERPARTS.** This Custom Grading Agreement may be executed in any number of counterparts, each of which shall be deemed an original but all of which shall constitute one and the same instrument.

11.10 **HEADINGS.** The subject headings of the paragraphs and subparagraphs of this Custom Grading Agreement are included for purposes of convenience only, and shall not affect the construction of interpretation of any of its provisions.

11.11 **INCONSISTENCY.** If the Development Plans are inconsistent with the words of this Custom Grading Agreement or if the obligation imposed hereunder upon the Owner are inconsistent, then that provision or term which imposes a greater and more demanding obligation on the Owner shall prevail.

11.12 **ACCESS.** The Owner hereby grants to the City, its agents, employees, officers, and contractors a license to enter the Property to perform all work and inspections deemed appropriate by the City during the installation of Improvements.

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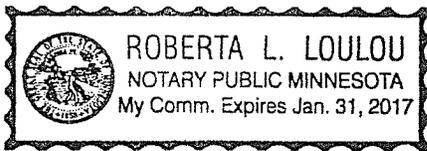
OWNER:

Blake Grams
Blake Grams

Lori Grams
Lori Grams

STATE OF MINNESOTA)
)
COUNTY OF DAKOTA) ss.

The foregoing instrument was acknowledged before me this 7th day of ~~January~~ ^{February}, 2013, by Blake Grams and Lori Grams, husband and wife.



Roberta L. Loulou
Notary Public

THIS INSTRUMENT DRAFTED BY:
LeVander, Gillen, & Miller, P.A.
633 South Concord Street, Suite 400
South St. Paul, MN 55075
(651) 451-1831

**AFTER RECORDING, PLEASE
RETURN DOCUMENT TO:**
LeVander, Gillen & Miller, P.A.
633 South Concord Street, Suite 400
South St. Paul, MN 55075
(651) 451-1831

L:\CLIENTS\810\81000\10000\Documents\Custom Grading Agreement (Grams) 1-8-13 (Final).doc

APPENDIX 1
LIST OF DEVELOPMENT PLANS

<u>PLAN</u>	<u>DATE OF PLAN PREPARATION</u>	<u>PREPARED BY</u>
1.) Certificate of Survey, Grading, Drainage, and Erosion Control	3/4/13	E.G. Rud & Sons, Inc. Professional Land Surveyors

The building permit submittal provided by the Owner to the City involved only the current house, driveway and grades as shown on the Certificate of Survey attached in Appendix 3. The proposed future structures of a sport court and pool area depicted on the Certificate of Survey were not part of the approval of the Development Plans granted by the City under this Custom Grading Agreement. The Owner will be required to submit any additional future structures, impervious surfaces, and grading changes not referenced in the Development Plans and Improvements to the City for compliance with applicable City ordinances, permits and standards prior to construction. The Certificate of Survey appears to have more impervious surface (including the proposed future structures of a sport court and pool area) than the allowed amount for current City standards.

APPENDIX 2
IMPROVEMENTS

The items checked with an "X" below are the Improvements.

<u>CHECKED</u>	<u>COMPLETION DATE</u>	<u>IMPROVEMENT</u>
<u>X</u>	Prior to obtaining building permit	erosion control
<u>X</u>	Prior to release of assurances	grading, drainage, turf establishment, as-built
<u>X</u>	Prior to obtaining building permit	curb cut to street
<u>X</u>	Prior to Certificate of Occupancy	driveway

APPENDIX 3
CERTIFICATE OF SURVEY

CERTIFICATE OF SURVEY

FOR
HIGHMARK BUILDERS, INC.

B L O C K

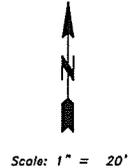
Impervious Surface Calculations

- Existing Lot Area = 59,703 Sq. Ft.
- Proposed House and Porch = 4,221 Sq. Ft.
- Proposed Driveway = 2,379 Sq. Ft.
- Proposed Sidewalk = 110 Sq. Ft.
- Proposed Pool and Staircase = 2,054 Sq. Ft.
- Proposed Staircase @ NE Corner Pool = 142 Sq. Ft.
- Total Impervious Area = 8,906 Sq. Ft.
- Total Impervious Allowance @ 15% Lot = 8,955 Sq. Ft.

N89°54'45"E 179.30
118.80

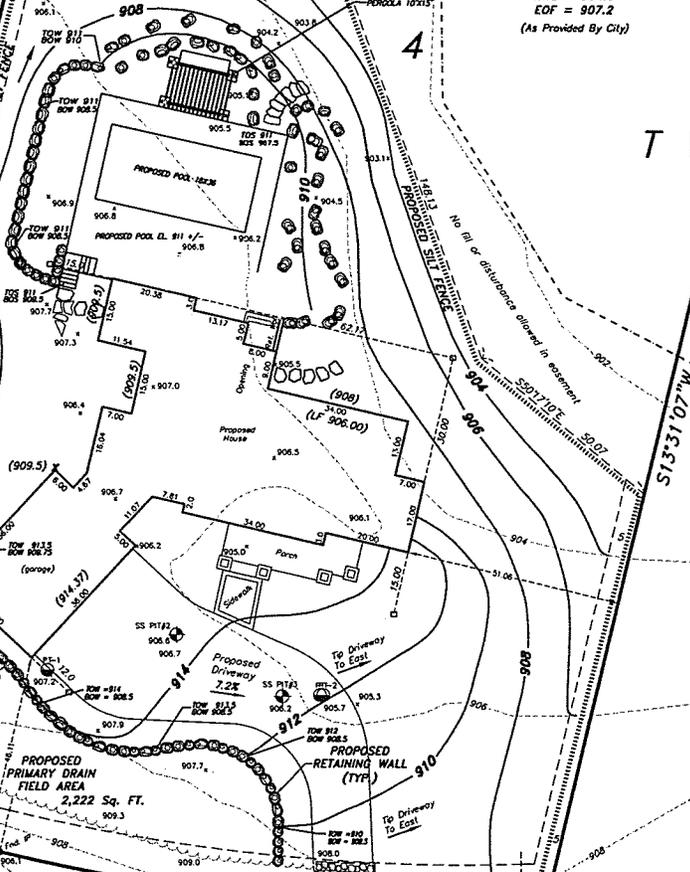
PROPOSED SECONDARY DRAIN FIELD AREA
3,200 Sq. FT.

DRAINAGE AND UTILITY EASEMENT



- Denotes 1/2 inch by 14 inch iron pipe monument to be set, marked with a plastic cap inscribed "WILDWOOD RLS 19421"
 - Denotes iron pipe monument found, size and markings as indicated.
- The orientation of this Bearing System is based upon the recorded plat of WILDWOOD RANCH ESTATES.

NWL = 901.5
HWL = 904.6
EDF = 907.2
(As Provided By City)



- Denotes Surface Drainage
 - () Denotes Proposed Elevation
 - + Denotes Existing Elevation
 - 908.0 Lowest Existing Elevation
 - 914.67 Top Block Elevation
 - 914.37 Garage Floor Elevation
 - 906.0 Lowest Floor Elevation
- Type of Building: A Wood Frame House - Modified Walkout
Benchmark: Top of Iron Monument at SW Lot 4, Block 2
Elevation = 904.08

ALL BUILDING DIMENSIONS AND FLOOR ELEVATIONS MUST BE VERIFIED BY BUILDER.

Lot 4, Block 2,
WILDWOOD RANCH ESTATES,
Dakota County, Minnesota.
8671 Alvarado Court

ALVARADO COURT

BENCHMARK:
TOP OF IRON
MONUMENT
ELEV.=904.08 FEET

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Dated this 6th day of December, 2012.
By: *[Signature]* Registration No. 19421

E. G. RUD & SONS, INC.
Professional Land Surveyors
6776 Lake Drive NE, Suite 110
Lino Lakes, MN 55014
Tel: (651) 341-8200 Fax: (651) 341-8701

DRAWN BY: BLR	JOB NO: 13027	DATE: 12/6/12	
CHECK BY: BLR	SCANNED <input type="checkbox"/>		
1			
2			
3			
NO.	DATE	DESCRIPTION	BY

Blake L. Rud - Minnesota Licensed Land Surveyor
Revised retaining wall and grades around primary drain field 12-27-12
Revised contours adjacent to easement area 1-7-13
Revised grades and contours for retaining walls and pool area 2-1-13
Revised per city comments 2-7-13
Revised grades over primary drain field area 2-26-13
Revised pool area 3-4-13

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Resolution Authorizing Execution of a Professional Services Agreement with SEH, Inc. for Construction Phase Services for City Project No. 2006-08 – Asher Water Tower Replacement

Meeting Date: March 11, 2013
Item Type: Consent
Contact: Scott D. Thureen, 651.450.2571
Prepared by: Scott D. Thureen, Public Works Director
Reviewed by: *SST*

Fiscal/FTE Impact:	
<input type="checkbox"/>	None
<input type="checkbox"/>	Amount included in current budget
<input type="checkbox"/>	Budget amendment requested
<input type="checkbox"/>	FTE included in current complement
<input type="checkbox"/>	New FTE requested – N/A
<input checked="" type="checkbox"/>	Other: Water Connection Fund

PURPOSE/ACTION REQUESTED

Resolution authorizing execution of a professional services agreement with SEH, Inc. for construction phase services for City Project No. 2006-08 – Asher Water Tower Replacement.

SUMMARY

On March 26, 2012, the City Council ordered City Project No. 2006-08 – Asher Water Tower Replacement and approved a professional services agreement with SEH, Inc., for preliminary and final design services. The final construction plans and specifications were brought to the Council for approval and authorization to advertise for bids on October 8, 2012, and the contract for construction was awarded on November 26, 2012.

Staff requested a proposal from SEH, Inc. to provide construction phase services. This project requires specialized inspection skills for the tower steel erection and coating application.

I have reviewed the consultant’s proposal and find it appropriate for the scope of the project. I recommend approval of the resolution accepting the proposal from SEH, Inc. (for a fee not to exceed \$93,325) and authorizing staff to execute the professional services agreement. The work will be funded from the Water Connection Fund.

SDT/kf
Attachment: Resolution
Proposal

**CITY OF INVER GROVE HEIGHTS
DAKOTA COUNTY**

**RESOLUTION RECEIVING PROPOSAL AND AUTHORIZING EXECUTION OF A PROFESSIONAL
SERVICES AGREEMENT WITH SEH, INC. FOR CITY PROJECT NO. 2006-08 – ASHER WATER
TOWER REPLACEMENT**

RESOLUTION NO. _____

WHEREAS, a resolution passed by City Council on March 26, 2012 ordered City Project No. 2006-08, ordered preparation of the construction plans and specifications and authorized execution of a professional services agreement with SEH, Inc. for preliminary design and final design services for this new water tower; and

WHEREAS, the project was advertised for bid and a construction contract awarded on November 26, 2012; and

WHEREAS, a proposal was requested, and received, from SEH, Inc. for construction phase services; and

WHEREAS, based on the experience of the firm, the scope and the associated fee for the proposed services, it was decided that SEH, Inc. be selected for this task; and

WHEREAS, there are sufficient funds in the Water Connection Fund for the project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF INVER GROVE HEIGHTS, MINNESOTA THAT:

1. The proposal for construction phase services for the Asher Water Tower Replacement is received.
2. Authorization is hereby given to execute a professional services agreement with SEH, Inc. for such engineering services for this project.
3. Funding for this work is to be from the Water Connection Fund.

Adopted by the City Council of Inver Grove Heights, Minnesota this 11th day of March 2013.

AYES:

NAYS:

George Tourville, Mayor

ATTEST:

Melissa Kennedy, Deputy Clerk



February 25, 2013

RE: Proposal for Construction Phase
Professional Engineering Services
Asher Water Storage Tank
City of Inver Grove Heights, Minnesota
SEH No. INVER P-123709

Mr. Jim Sweeney, Utility Superintendent
City of Inver Grove Heights
8150 Barbara Avenue
Inver Grove Heights, MN 55077

Dear Jim:

Thank you for taking the time to meet with Dan Zienty and me last Friday, February 22. As we discussed, this letter supplements the Master Agreement for Professional Engineering Services between the City of Inver Grove Heights (Owner), and SEH dated January 10, 2011 and outlines our proposal to provide professional construction administration and observation engineering services associated with the construction of the new 1.0 million gallon (MG) elevated water storage tank.

A. PROJECT DESCRIPTION

This Project involves construction of a 1.0 million gallon water tower for the City of Inver Grove Heights on the site of the former 2.0 MG Asher standpipe. The Asher standpipe was removed from the site by the City in late 2012. The new tank was designed by SEH under a previous contract. The construction project has been bid and the construction contract has been awarded to CB&I. The style of tank will be a steel hydropillar similar to the City's Arbor Pointe water tower.

B. SCOPE OF SERVICES

The scope of work for the construction administration and observation efforts is generally described as follows:

1. Assist Owner in preparing contract documents for review and execution by Owner and contractor.
2. Assist Owner in conducting pre-construction conference with representatives of the Owner, contractor, SEH, and affected agencies and utilities.
3. Assist Owner in contracting with a materials testing firm to perform soil property and compaction testing associated with site, foundation and utility construction.
4. Review shop drawings and technical submittals required of the contractor by the Contract Documents.
5. Provide construction staking for each construction contract as follows:
 - a. One survey baseline and benchmark for constructing water tower.
 - b. Alignment and grade staking for water, sanitary sewer and stormwater utilities and access road.
6. Furnish a Project representative who will visit the construction site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of work. During such site visits, SEH shall keep the Owner informed of the progress of work, shall endeavor to guard the Owner against defects and deficiencies in the work of the contractor, and will reject work found not in conformance with the contract documents.
7. Provide observation during the construction of tower connecting water main, stormwater and sanitary sewer utilities as directed by the City.
8. Provide site visits by professional design personnel affiliated with the design of the structural, process, civil, electrical and landscape architecture elements of the project. These design personnel will observe the work at appropriate stages of construction to review the quality of

work and to determine, in general, whether the work is in substantial conformance with the contract documents.

9. Prepare contract change orders for Owner execution and perform other construction administration during Project.
 10. Full-time coatings observations. Furnish a coatings inspector to confirm that the tower steel surface is prepared and field-applied coatings are applied in conformance with the project specifications.
 11. Furnish a weld inspector to confirm that welding of steel plates is in conformance with the project specifications.
 12. Review monthly applications for payment submitted by the contractor and recommend action by the Owner.
 13. Supply the Owner with copies of communications issued by SEH to the contractor.
 14. Conduct regular job progress meetings with the Owner and contractor, and distribute minutes of the meetings.
 15. Perform a field observation of the completed construction contract before final application for payment is processed.
 16. Where applicable, witness field-testing of the facilities furnished under the construction contract to help assure conformance with the Contract Documents.
 17. Coordinate completion of punch list items with the contractor.
 18. Review the SCADA control system equipment installation and coordinate start-up.
 19. Coordinate the tank disinfection and filling.
 20. Revise the original drawings upon completion of the Project in accordance with the construction observation records of the contractors, and supply the Owner with three copies of the revised drawings.
 21. Review operation and maintenance manual submittals required of the contractor by the Contract Documents. Provide two copies of Project operation and maintenance manuals to Owner.
 22. **Special Inspections:**
 - a. Coordinate and perform special inspections as may be required by the City's Building Official.
 - b. Coordinate with the City's contracted materials testing company for soils testing.
 - c. Coordinate with CB&I's contracted materials testing company for concrete plasticity and strength testing.
 - d. Prepare reports as may be required by the City's Building Official.
- C. **ASSUMPTIONS AND CLARIFICATIONS**
1. The City of Inver Grove Heights will contract with a materials testing company for soil testing and select special inspections.
 2. Costs associated with shop inspections of the blasting and prime painting of the tower and tank steel are not included in this proposal as they have been established within the construction contract. SEH's charges for such work will be billed under a separate project number and are considered as a pass-thru for which the City of Inver Grove Heights will be reimbursed by the Construction contractor, CB&I through a price-reducing change order.
- D. **PROJECT STAFF**
- For the construction phase of the project, SEH proposes to provide you with our experienced staff members with whom you worked with on the planning, design and bidding aspects of the project.

Miles Jensen will continue to serve as project manager and lead engineer for this project and will be responsible for coordinating the work and the work schedule with all team members.

John Chlebeck will continue to serve as project engineer. For this stage of the project, John will be responsible for the coordination of shop drawing review and early communications with the Contractor, CB&I.

Chad Setterholm will continue to serve as project engineer responsible for the civil construction elements and coordination of the project surveyors and civil RPR elements.

Dan Zienty will serve as SEH's coatings expert. Dan will coordinate the shop and field coatings inspection work.

Chad Westbrook (Stanley) will continue to serve as project engineer responsible for the electrical shop drawing review, electrical construction elements and coordination of the SCADA system installation and start-up.

E. SCHEDULE

We will begin work promptly after receipt of your authorization. Now that the project has been awarded, we have begun to receive shop drawings and other project submittals. We expect construction to proceed as soon as practical this spring. The current contracted schedule provides substantial completion date of August 1, 2014. Painting is currently understood to take place in September and October of 2013.

F. COMPENSATION

We propose to complete the outlined Construction Services efforts on an hourly basis not to exceed \$93,235, which includes Reimbursable Expenses such as mileage, equipment, postage, and printing. The following table provides an approximation of the breakdown is project task efforts.

Phase	Fee	Fee Basis
Construction Administration	\$14,435	Hourly (includes reimbursable expenses)
Utilities & Paving Observation, Survey & Staking	\$8,945	Hourly (includes reimbursable expenses)
Tower Erection Observation	\$12,985	Hourly (includes reimbursable expenses)
Field Coatings Inspection	\$44,300	Hourly (includes reimbursable expenses)
Special Inspections	\$6,615	Hourly (includes reimbursable expenses)
Start-up and project close out	\$6,045	Hourly (includes reimbursable expenses)
Total	\$93,325	(Not to Exceed)

We understand that the value of these Phase 3 fees cannot increase without further authorization from you. SEH will invoice the City of Inver Grove Heights monthly for services completed.

Invoices are due upon receipt.

Mr. Jim Sweeney
February 25, 2013
Page 4

SUMMARY

This letter and the Master Agreement for Professional Engineering Services dated January 10, 2011 represent the entire understanding between the Owner and SEH in respect of the Project. This agreement may only be modified in writing and if signed by both parties. If this letter satisfactorily sets forth your understanding of our agreement, please sign the enclosed copy of this letter in the space provided below and return one copy to us.

If you have any questions or would like to discuss this proposal in greater detail, please contact me at your convenience at 651.775.5031. We look forward to working with you.

Sincerely,



Miles B. Jensen, PE
Regional Water Practice Center Leader

Accepted by:
City of Inver Grove Heights, Minnesota

By: _____

By: _____

Date: _____

Date: _____

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Consider Change Order No. 4 and Pay Voucher No. 7 for City Project No. 2012-09D – Urban Street Reconstruction, 65th Street Neighborhood and Cahill Court

Meeting Date: March 11, 2013
 Item Type: Consent
 Contact: Thomas J. Kaldunski, 651.450.2572
 Prepared by: Thomas J. Kaldunski, City Engineer
 Reviewed by: Scott D. Thureen, Public Works Director

TJK

SST
SD

Fiscal/FTE Impact:	
<input type="checkbox"/>	None
<input type="checkbox"/>	Amount included in current budget
<input type="checkbox"/>	Budget amendment requested
<input type="checkbox"/>	FTE included in current complement
<input type="checkbox"/>	New FTE requested – N/A
<input checked="" type="checkbox"/>	Other: Pavement Management Fund, Special Assessments, MSA Funds, Water Fund, Sewer Fund

PURPOSE/ACTION REQUESTED

Consider Change Order No. 4 and Pay Voucher No. 7 for City Project No. 2012-09D – Urban Street Reconstruction, 65th Street Neighborhood and Cahill Court.

SUMMARY

The improvements were ordered as part of the 2012 Pavement Management Program. The contract was awarded in the amount of \$4,715,686.33 to Friedges Contracting Co., LLC, on May 14, 2012 for City Project No. 2012-09D 65th Street Neighborhood and Cahill Court Urban Reconstruction.

The change order items related to the lead contamination and storm sewer bedding will be funded by the Contamination Contingency Funds (\$90,543.50). The change order items related to water main work will be funded through the Water Utility Fund (\$17,645.09). Details related to the lead contamination remediation are outlined in the final response action plan prepared by AET in a separate Council item.

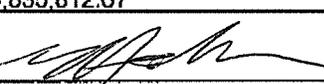
I recommend approval of Change Order No. 4, in the amount of \$108,188.59 (for a revised contract amount of \$4,835,812.67), and Pay Voucher No. 7 in the amount of \$135,390.76 for work on City Project No. 2012-09D – Urban Street Reconstruction, 65th Street Neighborhood and Cahill Court.

TJK/kf

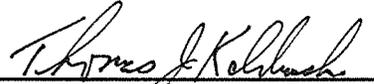
Attachments: Change Order No. 4
 Pay Voucher No. 7

CHANGE ORDER NO. 4

**2012 PAVEMENT MANAGEMENT PROGRAM
CITY PROJECT NO. 2012-09D
URBAN STREET RECONSTRUCTION – 65TH STREET NEIGHBORHOOD AND CAHILL COURT**

Owner: City of Inver Grove Heights 8150 Barbara Avenue Inver Grove Heights, MN 55077	Date of Issuance: March 1, 2013
Contractor: Friedges Contracting Co., LLC. 21980 Kenrick Ave. Lakeville, MN 55044	Engineer: Bolton & Menk, Inc.
PURPOSE OF CHANGE ORDER: See attached.	
CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIME
Original Contract Price: \$4,715,686.33	Original Contract Time:
Previous Change Orders \$11,937.75	Net Change from Previous Change Orders
Contract Price Prior to this Change Order \$4,727,624.08	Contract Time Prior to this Change Order
Net Increase of this Change Order \$108,188.59	Net Increase (Decrease) of Change Order
Contract Price with all Approved Change Orders \$4,835,812.67	Contract Time with Approved Change
Recommended By:  Nick Hahn, Engineering Technician	Approved By:  Friedges Contracting Co., LLC.

Approved By:


Thomas J. Kaldunski, City Engineer

Approved By:

George Tourville, Mayor

Date of Council Action:

March 11, 2013

ATTACHMENT TO CHANGE ORDER NO. 4

CITY PROJECT NO. 2012-09D – URBAN STREET RECONSTRUCTION 65TH STREET NEIGHBORHOOD AND CAHILL COURT

Description of Changes:

Removal of Lead Contaminated Soil

American Engineering Testing (AET) was hired by the City to perform environmental testing to determine the limits of the lead contamination area on Buckley Way. It was determined during exploratory excavation that the contamination was much more widespread than originally anticipated. A total of 1,364.18 tons was removed and disposed of at the SKB landfill. This work was done as time-and-materials work with an agreed price of \$89,318.50.

Total Cost to Remove and Dispose of Lead Contaminated Soil = \$89,318.50

Night Water Main Work

In order to accommodate the operating hours of the Entira Medical Clinic on the project, City Engineering staff requested that Friedges Contracting perform any water main work requiring water service interruption at night. This represented a change-of-conditions for the Contractor, requiring additional overtime staffing and light plants to be brought in. This work was done as time-and-materials work with an agreed price of \$5,002.16.

Total Cost of Night Water Main Work = \$5,002.16

Water Main Break Repair on 65th Street

On December 20, 2012, a water main break occurred on 65th Street. Friedges Contracting was called in to perform the emergency repair. It was not known if the break was a result of their previous work, or if it was due to pre-existing conditions. After excavation, it was determined that the break was the result of pre-existing conditions, and not the fault of Friedges Excavating. This work was done as time-and-materials work with an agreed price of \$9,112.93.

Total Cost of Water Main Break Repair = \$9,112.93

Adjustment of Existing Curb Boxes in Driveways

Several of the existing curb boxes on Borden Way and Bonner Court were in driveways and needed adjustment, as they were too high to fit with the new driveway grades. The adjustments were performed, and covers as required by the Utility Division were installed. This work was done as time-and-materials work with an agreed price of \$510.00.

Total Cost of Adjustment of Existing Curb Boxes in Driveways = \$510.00

Bedding Rock for Storm Sewer

Due to unstable soil conditions, the 30-inch RCP storm sewer from Storm Manhole 54B to Flared-End Section 54 needed to be bedded with crushed rock. 35 tons of rock was furnished and installed at \$35 per ton for a total price of \$1,225.00.

Total Cost of Bedding Rock for Storm Sewer = \$1,225.00

Double Water Main Shutdown to Accommodate Presbyterian Homes

Water main work on 65th Street necessitated an extended water service interruption to the Presbyterian Homes senior housing complex, which was a concern of the complex management. To minimize inconvenience to the residents, City Engineering staff requested that Friedges Contracting instead perform this work in two separate shorter interruptions. In order to accomplish this, extra coordination, excavation, and time was required. This was done as time-and-materials work with an agreed price of \$3020.00.

Total Cost of Double Water Main Shutdown = \$3020.00

Total Cost of Revisions \$108,188.59

CITY OF INVER GROVE HEIGHTS
CONSTRUCTION PAY VOUCHER

ESTIMATE NO: 7 (Seven)
DATE: March 11, 2013
PERIOD ENDING: January 31, 2013
CONTRACT: 2012 Pavement Management Program
PROJECT NO: 2012-09D – Urban Street Reconstruction, 65th Street Neighborhood and Cahill Court

TO: Friedges Contracting Co., LLC.
21980 Kenrick Ave.
Lakeville, MN 55044

Original Contract Amount.....\$4,715,686.33
Total Addition.....\$120,126.34
Total Deduction..... \$0.00
Total Contract Amount.....\$4,835,812.67
Total Value of Work to Date..... \$3,372,436.37
Less Retained (5%) \$168,621.82
Less Previous Payment\$3,088,423.79
Total Approved for Payment this Voucher..... \$135,390.76
Total Payments including this Voucher\$3,203,814.55

Approvals:

Pursuant to our field observation, I hereby recommend for payment the above stated amount for work performed through January 31, 2013.

Signed by: Thomas J. Kaldunski March 1, 2013
Thomas J. Kaldunski, City Engineer
Signed by: J. [Signature] 2/26/12
Friedges Contracting Co., LLC Date
Signed by: _____ March 11, 2013
George Tourville, Mayor

PAYMENT DETAIL LIST

Contract: CP NO. 2012-09D
 Owner: City of Inver Grove Heights
 Project: 2012 Urban Street Reconstruction - 65th Street Neighborhood

BMI Job No: T18.103889

Schedule: A
 Description: Street Improvements

Item No.	Mn/DOT No.	Item Description	Unit	Estimated Quantity	Quantity To-Date	Contract Unit Price	Total Estimated Cost	Total Contract Cost To-Date
1	2013.601	ENVIRONMENTAL CLEANUP	LUMP SUM	1.00	1.00	\$30,000.00	\$ 30,000.00	\$ 30,000.00
2	2021.501	MOBILIZATION	LUMP SUM	1.00	1.00	\$58,000.00	\$ 58,000.00	\$ 58,000.00
3	2031.601	FIELD OFFICE	LUMP SUM	1.00	0.26	\$12,500.00	\$ 12,500.00	\$ 3,250.00
4	2101.502	CLEARING	EACH	23.00	32.00	\$300.00	\$ 6,900.00	\$ 9,600.00
5	2101.507	GRUBBING	EACH	23.00	35.00	\$300.00	\$ 6,900.00	\$ 10,500.00
6	2104.501	REMOVE GUARD RAIL	LIN FT	465.00		\$2.70	\$ 1,255.50	\$ -
7	2104.501	REMOVE EXISTING CURB & GUTTER	LIN FT	27,306.00	21,792.00	\$2.95	\$ 80,552.70	\$ 64,286.40
8	2104.505	REMOVE CONCRETE WALK	SQ YD	8,362.00	621.00	\$0.55	\$ 4,599.10	\$ 341.55
9	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	1,880.00	1,096.00	\$5.85	\$ 10,998.00	\$ 6,411.60
10	2104.505	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	3,140.00	3,328.00	\$2.85	\$ 8,949.00	\$ 9,484.80
11	2104.505	REMOVE BITUMINOUS TRAIL	SQ YD	227.00		\$3.35	\$ 760.45	\$ -
12	2104.507	REMOVE CONCRETE RUBBLE	CU YD	120.00	111.00	\$38.50	\$ 4,620.00	\$ 4,273.50
13	2104.509	REMOVE SIGN TYPE C	EACH	63.00		\$25.00	\$ 1,575.00	\$ -
14	2104.618	SALVAGE DRIVEWAY PAVERS	SQ FT	50.00	9.40	\$7.50	\$ 375.00	\$ 70.50
15	2105.501	COMMON EXCAVATION (P)	CU YD	57,618.00	50,461.00	\$8.00	\$ 460,944.00	\$ 403,688.00
16	2105.507	SUBGRADE EXCAVATION	CU YD	1,158.00		\$9.00	\$ 10,422.00	\$ -
17	2105.525	TOPSOIL BORROW (LV)	CU YD	4,391.00	174.00	\$15.00	\$ 65,865.00	\$ 2,610.00
18	2105.526	SELECT TOPSOIL BORROW (LV)	CU YD	7,058.00	3,700.00	\$17.50	\$ 123,515.00	\$ 64,750.00
19	2105.541	STABILIZING AGGREGATE (2 1/2" MINUS)	CU YD	1,218.00		\$0.01	\$ 12.18	\$ -
20	2105.602	EXCAVATION SPECIAL (POTHOLE EXISTING UTILITY)	CU YD	50.00	1.00	\$135.00	\$ 6,750.00	\$ 135.00
21	2105.604	GEOTEXTILE FABRIC TYPE V	SQ YD	67,533.00	11,444.00	\$1.00	\$ 67,533.00	\$ 11,444.00
22	2105.609	SELECT GRANULAR BORROW (CV)	CU YD	45,206.00	33,884.00	\$11.95	\$ 540,211.70	\$ 404,913.80
23	2118.501	AGGREGATE SURFACING, CLASS 2 (DRIVEWAY)	TON	20.00		\$25.00	\$ 500.00	\$ -

24	2123.61	STREET SWEEPER (WITH PICKUP BROOM)	250.00	34.53	\$100.00	\$	25,000.00	\$	3,453.00
25	2211.501	AGGREGATE BASE, CLASS 5	6,760.00	1,928.31	\$0.01	\$	67.60	\$	19.28
26	2211.501	AGGREGATE BASE, CLASS 5 (100% CRUSHED LIMESTONE)	2,189.00	1,720.30	\$14.75	\$	32,287.75	\$	25,374.43
27	2232.501	MILL BITUMINOUS SURFACE (EDGE MILL)	2,258.00	2,793.00	\$2.65	\$	5,983.70	\$	7,401.45
28	2301.607	HIGH EARLY STRENGTH CONCRETE	100.00	54.00	\$14.25	\$	1,425.00	\$	769.50
29	2331.604	BITUMINOUS PAVEMENT. RECLAM.	58,312.00	43,987.00	\$3.25	\$	189,514.00	\$	142,957.75
30	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	4,826.00	1,150.00	\$3.00	\$	14,478.00	\$	3,450.00
31	2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (3.C)	6,749.00	4,802.58	\$59.00	\$	398,191.00	\$	283,352.22
32	2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (3.B)	461.00	169.61	\$57.00	\$	26,277.00	\$	9,667.77
33	2360.502	TYPE SP 12.5 NON-WEARING COURSE MIXTURE (3.C)	6,749.00	5,038.90	\$60.00	\$	404,940.00	\$	302,334.00
34	2360.502	TYPE SP 12.5 NON-WEARING COURSE MIXTURE (3.B)	3,499.00	2,071.47	\$54.00	\$	188,946.00	\$	111,859.38
35	2360.604	FULL DEPTH BITUMINOUS PATCHING (STREET)	280.00		\$21.00	\$	5,880.00	\$	-
36	2360.604	2.5" BITUMINOUS DRIVEWAY PAVEMENT	3,295.00	5,061.00	\$25.50	\$	84,022.50	\$	129,055.50
37	2502.541	4" PERF PVC PIPE DRAIN	15,681.00	16,249.00	\$3.50	\$	54,883.50	\$	56,871.50
38	2502.541	6" PERF PVC PIPE DRAIN	11,547.00	5,480.00	\$4.50	\$	51,961.50	\$	24,660.00
39	2503.602	CONNECT TO EXISTING DRAINAGE STRUCTURE (DRAIN TILE)	21.00	5.00	\$205.00	\$	4,305.00	\$	1,025.00
40	2506.522	ADJUST FRAME AND RING CASTING (SANITARY)	32.00	27.00	\$625.00	\$	20,000.00	\$	16,875.00
41	2506.522	ADJUST FRAME AND RING CASTING (STORM)	28.00	10.00	\$415.00	\$	11,620.00	\$	4,150.00
42	2521.501	4" CONCRETE WALK	8,334.00	4,880.00	\$3.45	\$	28,752.30	\$	16,836.00
43	2521.604	3" BITUMINOUS PATH PAVEMENT	256.00		\$34.55	\$	8,844.80	\$	-
44	2531.501	CONCRETE CURB AND GUTTER (HAND POUR)	500.00	112.00	\$14.55	\$	7,275.00	\$	1,629.60
45	2531.501	CONCRETE CURB AND GUTTER DESIGN B618	27,228.00	21,814.00	\$9.35	\$	254,581.80	\$	203,960.90
46	2531.507	6" CONCRETE DRIVEWAY PAVEMENT (RESIDENTIAL)	1,019.00	816.00	\$41.00	\$	41,779.00	\$	33,456.00
47	2531.507	8" CONCRETE DRIVEWAY PAVEMENT (COMMERCIAL)	997.00	698.00	\$45.00	\$	44,865.00	\$	31,410.00
48	2531.602	PEDESTRIAN CURB RAMP	35.00	21.00	\$450.00	\$	15,750.00	\$	9,450.00
49	2531.603	SPOT CURB REPLACEMENT	500.00	217.00	\$14.00	\$	7,000.00	\$	3,038.00
50	2531.603	CONCRETE VALLEY GUTTER	189.00	125.00	\$16.00	\$	3,024.00	\$	2,000.00

51	2531.618	CONCRETE WING APRON		SQ FT	1,291.00	1,314.00	\$4.60	\$	5,938.60	\$	6,044.40
52	2540.601	MAILBOX MAINTENANCE		LUMP SUM	1.00	0.76	\$15,000.00	\$	15,000.00	\$	11,400.00
53	2540.618	INSTALL SALVAGED DRIVEWAY PAVERS		SQ FT	50.00	9.40	\$12.00	\$	600.00	\$	112.80
54	2554.501	TRAFFIC BARRIER DESIGN B8338		LIN FT	213.00		\$18.15	\$	3,865.95	\$	-
55	2554.501	TRAFFIC BARRIER DESIGN SPECIAL		LIN FT	100.00		\$74.75	\$	7,475.00	\$	-
56	2554.523	END TREATMENT - FLARED TERMINAL		EACH	4.00		\$2,145.00	\$	8,580.00	\$	-
57	2563.601	TRAFFIC CONTROL		LUMP SUM	1.00	0.82	\$17,000.00	\$	17,000.00	\$	13,940.00
58	2564.531	SIGN PANELS, TYPE C		SQ FT	252.00		\$50.00	\$	7,560.00	\$	-
59	2564.602	SALVAGE AND RE-INSTALL SIGN		EACH	34.00		\$50.00	\$	1,700.00	\$	-
60	2572.505	PRUNE TREES		HOUR	15.00		\$75.00	\$	1,125.00	\$	-
61	2573.505	FLOTATION SILT CURTAIN (WORK AREA TYPE)		LIN FT	200.00		\$22.00	\$	4,400.00	\$	-
62	2573.53	STORM DRAIN INLET PROTECTION		EACH	103.00	100.00	\$115.00	\$	11,845.00	\$	11,500.00
63	2573.54	FILTER LOG TYPE COMPOST BIOROLL		LIN FT	4,013.00	1,074.00	\$4.45	\$	17,857.85	\$	4,779.30
64	2573.55	EROSION CONTROL SUPERVISOR		LUMP SUM	1.00	0.76	\$1,000.00	\$	1,000.00	\$	760.00
65	2573.601	DEWATERING (EXCAVATION)		LUMP SUM	1.00		\$1.00	\$	1.00	\$	-
66	2573.602	TEMPORARY ROCK CONSTRUCTION ENTRANCE		EACH	7.00	1.00	\$745.00	\$	5,215.00	\$	745.00
67	2575.505	SODDING, TYPE LAWN		SQ YD	22,865.00	11,397.00	\$2.65	\$	60,592.25	\$	30,202.05
68	2575.511	MULCH MATERIAL TYPE 1		TON	10.00		\$300.00	\$	3,000.00	\$	-
69	2575.523	EROSION CONTROL BLANKET CATEGORY 4		SQ YD	3,137.00		\$1.45	\$	4,548.65	\$	-
70	2575.545	WEED SPRAYING		ACRE	8.70		\$300.00	\$	2,610.00	\$	-
71	2575.56	HYDRAULIC SOIL STABILIZER, TYPE SPECIAL (FLEXTERRA)		POUND	6,485.00		\$1.20	\$	7,782.00	\$	-
72	2575.602	RESTORATION OF STAGING AREAS		LUMP SUM	1.00		\$7,500.00	\$	7,500.00	\$	-
73	2575.605	SEEDING, MNDOT MIX NO. 250		ACRE	0.45		\$800.00	\$	360.00	\$	-
74	2575.605	SEEDING, MNDOT MIX NO. 260		ACRE	2.23		\$850.00	\$	1,895.50	\$	-
75	2575.605	SEEDING, MNDOT MIX NO. 350		ACRE	2.60	0.84	\$875.00	\$	2,275.00	\$	735.00
76	2582.502	4" SOLID LINE, WHITE EPOXY		LIN FT	9,802.00	4,724.00	\$0.35	\$	3,430.70	\$	1,653.40
77	2582.502	4" DOUBLE SOLID LINE, YELLOW EPOXY		LIN FT	4,901.00	2,207.00	\$0.75	\$	3,675.75	\$	1,655.25
78	2757.57	RAPID STABILIZATION, METHOD 2		ACRE	12.50	2.30	\$1,575.00	\$	19,687.50	\$	3,622.50

Schedule A Subtotal: \$ 3,661,912.83 \$ 2,595,965.13

Schedule: B
 Description: Storm Sewer Improvements

Item No.	Mn/DOT No.	Item Description	Unit	Estimated Quantity	Quantity To-Date	Contract Unit Price	Total Estimated Cost	Total Contract Cost To-Date
79	2104.501	REMOVE SEWER PIPE (STORM)	LIN FT	2,469.00	1,412.00	\$9.50	\$ 23,455.50	\$ 13,414.00
80	2104.509	REMOVE MANHOLE OR CATCHBASIN	EACH	68.00	42.00	\$215.00	\$ 14,620.00	\$ 9,030.00
81	2104.509	REMOVE CASTING AND RINGS (STORM)	EACH	2.00	1.00	\$1.00	\$ 2.00	\$ 1.00
82	2104.509	REMOVE CONCRETE FLARED END SECTION	EACH	8.00		\$300.00	\$ 2,400.00	\$ -
83	2501.515	15" RC PIPE APRON	EACH	3.00		\$1,075.00	\$ 3,225.00	\$ -
84	2501.515	24" RC PIPE APRON	EACH	1.00	1.00	\$1,445.00	\$ 1,445.00	\$ 1,445.00
85	2501.602	TRASH GUARD FOR 15" PIPE APRON	EACH	2.00		\$1.00	\$ 2.00	\$ -
86	2501.602	SALVAGE AND RE-INSTALL FLARED END SECTION	EACH	1.00		\$785.00	\$ 785.00	\$ -
87	2501.602	EXISTING FLARED END SECTION RESTORATION	EACH	3.00		\$785.00	\$ 2,355.00	\$ -
88	2503.541	15" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	3,329.00	2,397.50	\$22.50	\$ 74,902.50	\$ 53,943.75
89	2503.541	18" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	1,036.00	809.00	\$25.50	\$ 26,418.00	\$ 20,629.50
90	2503.541	21" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	27.00	40.00	\$30.50	\$ 823.50	\$ 1,220.00
91	2503.541	24" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	68.00	505.00	\$34.50	\$ 2,346.00	\$ 17,422.50
92	2503.602	CONNECT TO EXISTING STORM SEWER	EACH	55.00	37.00	\$900.00	\$ 49,500.00	\$ 33,300.00
93	2503.602	CUT-IN STORM MANHOLE	EACH	4.00	3.00	\$2,150.00	\$ 8,600.00	\$ 6,450.00
94	2504.602	CONSTRUCT BULKHEAD (STORM)	EACH	4.00	5.00	\$285.00	\$ 1,140.00	\$ 1,425.00
95	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL (CB-2'X3')	EACH	46.00	32.00	\$1,450.00	\$ 66,700.00	\$ 46,400.00
96	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4022	EACH	38.00	23.00	\$2,550.00	\$ 96,900.00	\$ 58,650.00
97	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	EACH	9.00	3.00	\$2,550.00	\$ 22,950.00	\$ 7,650.00
98	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 60-4020	EACH	1.00		\$3,550.00	\$ 3,550.00	\$ -
99	2506.601	MANHOLE CONE SECTION	EACH	2.00		\$2,050.00	\$ 4,100.00	\$ -
100	2506.602	CONSTRUCT DRAINAGE STRUCTURE (SUMP BASKET)	EACH	6.00	5.00	\$3,050.00	\$ 18,300.00	\$ 15,250.00
101	2506.602	INSTALL NEW RINGS AND CASTING (STORM)	EACH	7.00	3.00	\$955.00	\$ 6,685.00	\$ 2,865.00
102	2506.602	RECONSTRUCT MANHOLES OR CATCH BASIN	EACH	4.00	10.00	\$1,375.00	\$ 5,500.00	\$ 13,750.00
103	2506.602	RECONSTRUCT MANHOLES OR CATCH BASIN (SPECIAL)	EACH	6.00	7.00	\$1,375.00	\$ 8,250.00	\$ 9,625.00
104	2511.501	RANDOM RIP RAP CLASS IV	CUYD	23.00	36.70	\$80.00	\$ 1,840.00	\$ 2,936.00
105	2575.604	EROSION STABILIZATION MAT	SQ YD	100.00		\$7.95	\$ 795.00	\$ -

Schedule B Subtotal: \$ 447,589.50 \$ 315,406.75

Schedule: C
 Description: Pond/Outfall Improvements

Item No.	Mn/DOT No.	Item Description	Unit	Estimated Quantity	Quantity To-Date	Contract Unit Price	Total Estimated Cost	Total Contract Cost To-Date
106	2101.501	CLEARING	ACRE	1.93	2.20	\$3,250.00	\$ 6,272.50	\$ 7,150.00
107	2101.506	GRUBBING	ACRE	1.93	2.20	\$3,250.00	\$ 6,272.50	\$ 7,150.00
108	2104.501	REMOVE SEWER PIPE (STORM)	LIN FT	451.00	453.00	\$10.50	\$ 4,735.50	\$ 4,736.50
109	2104.507	REMOVE CONCRETE RUBBLE	CU YD	60.00	83.00	\$38.50	\$ 2,310.00	\$ 3,195.50
110	2104.509	REMOVE SURGE BASIN	EACH	3.00	3.00	\$1,150.00	\$ 3,450.00	\$ 3,450.00
111	2104.509	REMOVE CONCRETE FLARED END SECTION	EACH	2.00	1.00	\$295.00	\$ 590.00	\$ 295.00
112	2105.525	TOPSOIL BORROW (LV)	CU YD	1,537.00		\$15.00	\$ 23,055.00	\$ -
113	2501.515	15" RC PIPE APRON	EACH	1.00		\$1,075.00	\$ 1,075.00	\$ -
114	2501.515	24" RC PIPE APRON	EACH	3.00	1.00	\$1,445.00	\$ 4,335.00	\$ 1,445.00
115	2501.515	30" RC PIPE APRON	EACH	1.00	1.00	\$1,625.00	\$ 1,625.00	\$ 1,625.00
116	2501.602	TRASH GUARD FOR 15" PIPE APRON	EACH	1.00		\$1.00	\$ 1.00	\$ -
117	2501.602	TRASH GUARD FOR 24" PIPE APRON	EACH	3.00	3.00	\$1.00	\$ 3.00	\$ 3.00
118	2501.602	TRASH GUARD FOR 30" PIPE APRON	EACH	1.00	1.00	\$1.00	\$ 1.00	\$ 1.00
119	2503.541	15" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	37.00		\$42.50	\$ 1,572.50	\$ -
120	2503.541	24" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	626.00	180.00	\$47.50	\$ 29,735.00	\$ 8,550.00
121	2503.541	30" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	88.00	81.50	\$54.50	\$ 4,796.00	\$ 4,441.75
122	2503.602	CONNECT TO EXISTING STORM SEWER	EACH	5.00		\$900.00	\$ 4,500.00	\$ -
123	2504.602	CONSTRUCT BULKHEAD (STORM)	EACH	1.00		\$285.00	\$ 285.00	\$ -
124	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	EACH	6.00	6.00	\$3,150.00	\$ 18,900.00	\$ 18,900.00
125	2511.501	RANDOM RIP RAP, CLASS IV	CU YD	38.00	24.60	\$80.00	\$ 3,040.00	\$ 1,968.00
126	2575.523	EROSION CONTROL BLANKET CATEGORY 4	SQ YD	8,167.00	4,740.00	\$1.45	\$ 11,842.15	\$ 6,873.00
127	2573.54	FILTER LOG TYPE COMPOST BIOROLL	LIN FT	1,860.00	1,689.00	\$4.20	\$ 7,812.00	\$ 7,093.80
128	2575.604	EROSION STABILIZATION MAT	SQ YD	53.00		\$6.95	\$ 368.35	\$ -
129	2575.605	SEEDING, MNDOT MIX NO. 328	ACRE	1.90	0.14	\$975.00	\$ 1,852.50	\$ 136.50

Schedule C Subtotal: \$ 138,429.00 \$ 77,034.05

Schedule: D
 Description: Sanitary Sewer Improvements

Item No.	Mn/DOT No.	Item Description	Unit	Estimated Quantity	Quantity To-Date	Contract Unit Price	Total Estimated Cost	Total Contract Cost To-Date
130	2104.501	REMOVE PIPE SEWER (SANITARY)	LIN FT	100.00		\$1.00	\$ 100.00	\$ -
131	2104.509	REMOVE CASTING AND RINGS (SANITARY)	EACH	10.00	10.00	\$1.00	\$ 10.00	\$ 10.00
132	2503.511	8" PVC PIPE SEWER SDR 26	LIN FT	100.00	25.00	\$30.00	\$ 3,000.00	\$ 750.00
133	2503.602	CONNECT TO EXISTING SANITARY SEWER	EACH	3.00	2.00	\$1,275.00	\$ 3,825.00	\$ 2,550.00
134	2506.602	REPLACE SANITARY SEWER SERVICE	EACH	2.00		\$1,175.00	\$ 2,350.00	\$ -
135	2506.602	INSTALL NEW RINGS AND CASTING (SANITARY)	EACH	10.00	4.00	\$995.00	\$ 9,950.00	\$ 3,980.00
136	2506.602	FURNISH AND INSTALL EXTERNAL MANHOLE CHIMNEY SEAL	EACH	32.00	42.00	\$200.00	\$ 6,400.00	\$ 8,400.00
137	2506.602	RECONSTRUCT MANHOLES SANITARY SEWER	EACH	15.00	16.00	\$735.00	\$ 11,025.00	\$ 11,760.00

Schedule D Subtotal:

\$ 36,660.00 \$ 27,450.00

Schedule: E
 Description: Watermain Improvements

Item No.	Mn/DOT No.	Item Description	Unit	Estimated Quantity	Quantity To-Date	Contract Unit Price	Total Estimated Cost	Total Contract Cost To-Date
138	2103.507	DISCONNECT WATER SERVICE	EACH	10.00		\$30.00	\$ 300.00	\$ -
139	2104.501	REMOVE WATERMAIN	LIN FT	400.00	94.50	\$1.00	\$ 400.00	\$ 94.50
140	2104.509	REMOVE GATE VALVE	EACH	31.00	26.00	\$275.00	\$ 8,525.00	\$ 7,150.00
141	2104.509	REMOVE GATE VALVE BOX	EACH	10.00	5.00	\$275.00	\$ 2,750.00	\$ 1,375.00
142	2104.509	REMOVE HYDRANT AND GATE VALVE	EACH	26.00	21.00	\$675.00	\$ 14,950.00	\$ 12,075.00
143	2104.509	REMOVE HYDRANT	EACH	1.00		\$575.00	\$ 575.00	\$ -
144	2504.602	REMOVE AND REPLACE WATER SERVICE	EACH	1.00		\$1,675.00	\$ 1,675.00	\$ -
145	2504.602	1" CORPORATION STOP	EACH	10.00		\$75.00	\$ 750.00	\$ -
146	2504.602	RECONNECT WATER SERVICE	EACH	10.00		\$145.00	\$ 1,450.00	\$ -
147	2504.602	WATERMAIN SERVICE ADJUSTMENT	EACH	20.00		\$295.00	\$ 5,900.00	\$ -
148	2504.602	ADJUST VALVE BOX	EACH	11.00	4.00	\$345.00	\$ 3,795.00	\$ 1,380.00
149	2504.602	WATERMAIN OFFSET	EACH	5.00		\$3,275.00	\$ 16,375.00	\$ -
150	2504.602	CONNECT TO EXISTING WATER MAIN	EACH	10.00	10.00	\$1,175.00	\$ 11,750.00	\$ 11,750.00
151	2504.602	HYDRANT AND GATE VALVE	EACH	28.00	21.00	\$4,575.00	\$ 128,100.00	\$ 96,075.00
152	2504.602	CUT IN 6" GATE VALVE & BOX	EACH	1.00	1.00	\$2,475.00	\$ 2,475.00	\$ 2,475.00
153	2504.602	6" GATE VALVE AND BOX	EACH	29.00	23.00	\$1,575.00	\$ 45,675.00	\$ 36,225.00
154	2504.602	8" GATE VALVE AND BOX	EACH	5.00	6.00	\$2,575.00	\$ 12,875.00	\$ 15,450.00
155	2504.602	INSTALL PRESSURE REDUCING VALVE	EACH	1.00	1.00	\$11,000.00	\$ 11,000.00	\$ 11,000.00
156	2504.602	GATE VALVE BOX	EACH	20.00	5.00	\$625.00	\$ 12,500.00	\$ 3,125.00
157	2504.602	CURB STOP AND BOX	EACH	15.00		\$405.00	\$ 6,075.00	\$ -
158	2504.603	6" DIP WATERMAIN, CLASS 52	LIN FT	200.00	59.50	\$40.00	\$ 8,000.00	\$ 2,380.00
159	2504.603	8" DIP WATERMAIN, CLASS 52	LIN FT	200.00	20.00	\$50.00	\$ 10,000.00	\$ 1,000.00
160	2504.604	4" POLYSTYRENE INSULATION	SQ YD	50.00	33.74	\$40.00	\$ 2,000.00	\$ 1,349.60
161	2504.608	DUCTILE IRON FITTINGS	POUND	800.00	52.5.00	\$4.00	\$ 3,200.00	\$ 2,100.00

Schedule E Subtotal: \$ 311,095.00 \$ 205,004.10

Schedule: F
 Description: Allowances

Item No.	Mn/DOT No.	Item Description	Unit	Estimated Quantity	Quantity To-Date	Contract Unit Price	Total Estimated Cost	Total Contract Cost To-Date
162	2130.601	WATER USAGE ALLOWANCE	LUMP SUM	1.00		\$15,000.00	\$ 15,000.00	\$ -
163	2504.601	IRRIGATION SYSTEM REPAIR ALLOWANCE	LUMP SUM	1.00	0.95	\$20,000.00	\$ 20,000.00	\$ 19,000.00
164	2540.601	BOULEVARD LANDSCAPING ALLOWANCE	LUMP SUM	1.00	0.13	\$25,000.00	\$ 25,000.00	\$ 3,250.00
165	2563.601	TRAFFIC CONTROL ALLOWANCE	LUMP SUM	1.00	0.23	\$40,000.00	\$ 40,000.00	\$ 9,200.00
166	2573.601	ADDITIONAL STORM WATER MANAGEMENT ALLOWANCE	LUMP SUM	1.00		\$20,000.00	\$ 20,000.00	\$ -

Schedule F Subtotal: \$ 120,000.00 \$ 31,450.00

COST SUMMARY

Contract: CP NO. 2012-09D
 Owner: City of Inver Grove Heights
 Project: 2012 Urban Street Reconstruction - 65th Street Neighborhood

Schedule	Description	Total Estimated Cost	Total Contract Cost To-Date
A	Street Improvements	\$ 3,661,912.83	\$ 2,595,965.13
B	Storm Sewer Improvements	\$ 447,589.50	\$ 315,406.75
C	Pond/Outfall Improvements	\$ 138,429.00	\$ 77,034.05
D	Sanitary Sewer Improvements	\$ 36,660.00	\$ 27,450.00
E	Watermain Improvements	\$ 311,095.00	\$ 205,004.10
F	Allowances	\$ 120,000.00	\$ 31,450.00
Total Base Bid		\$ 4,715,686.33	\$ 3,252,310.03

Change Order No. 3	\$ 11,937.75	\$ 11,937.75
Change Order No. 4	\$ 108,188.59	\$ 108,188.59

Total Contract Amount	\$ 4,835,812.67	
Contract Work Completed To Date	\$ 3,372,436.37	
Retainage (5.0%)	\$ 168,621.82	
Previous Payments	\$ 3,068,423.79	
Amount Due This Partial Payment #7	\$ 135,390.76	

FINANCING INITIATIVES
2012 PAVEMENT MANAGEMENT PROGRAM
URBAN STREET RECONSTRUCTION - 65TH STREET AREA & CAHILL COURT
CITY PROJECT NO. 2012-09D

AWARDED TO: Friedges BID AMOUNT: \$4,715,686.33

Finance Initiative	% of Bid	Costs
Contingency (Construction)	10%	\$471,568.60
Contamination Contingency	2%	\$94,313.73
Legal	1%	\$47,156.86
Engineering (Consulting)	15%	\$707,352.95
Contamination Area	1%	\$47,156.86
Administration (Resident Engineering)	8%	\$377,254.91
Finance	5%	\$235,784.32
Fiscal	1%	\$47,156.86
SUBTOTAL FINANCING INITIATIVE	43%	\$2,027,745.09

TOTAL FINANCING: BID + FINANCING INITIATIVES

\$6,743,431.42

Construction Payments: Summer, Fall, Winter 2011
 Final Payment: Spring 2012

	PMP	Assess (30%)	State Aid	Water Fund	Sewer Fund	TOTAL
Funding:	24.44%	30.00%	40.35%	4.44%	0.77%	100.00%
Account:	\$1,648,185.82	\$2,023,029.43	\$2,720,883.40	\$299,408.35	\$51,924.42	\$6,743,431.42

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Consider Resolution Accepting Amendment No. 5 to the Proposal for Engineering Services from Bolton & Menk, Inc. for the 2012 Pavement Management Program, City Project No. 2012-09D Urban Street Reconstruction – 65th Street Neighborhood and Cahill Court

Meeting Date: March 11, 2013
Item Type: Consent
Contact: Thomas J. Kaldunski, 651.450.2572
Prepared by: Steve W. Dodge, Assist. City Engineer
Reviewed by: Scott D. Thureen, Public Works Director

TJK
SDT

	Fiscal/FTE Impact:
<input type="checkbox"/>	None
<input type="checkbox"/>	Amount included in current budget
<input type="checkbox"/>	Budget amendment requested
<input type="checkbox"/>	FTE included in current complement
<input type="checkbox"/>	New FTE requested – N/A
<input checked="" type="checkbox"/>	Other: Pavement Management Fund, Special Assessments, State Aid Funds, Sewer Fund, Water Fund

PURPOSE/ACTION REQUESTED

Consider resolution accepting Amendment No. 5 to the proposal for engineering services from Bolton & Menk, Inc. for City Project No. 2012-09D Urban Street Reconstruction – 65th Street Area (Babcock Trail to Cahill Avenue).

SUMMARY

At its September 12, 2011, regular meeting, the City Council authorized an engineering services contract with Bolton & Menk in the amount of \$385,490 for preparation of a feasibility report and final design engineering services. Amendment No. 1 for additional engineering services due to geotechnical test findings was approved on December 12, 2011, in the amount of \$57,140. Amendment No. 2 covering additional engineering services for 67th Court East and contaminated soils disposal site in the amount of \$25,310 was approved on February 27, 2012. Amendment No. 3 for additional construction phase project management services was approved on May 29, 2012, in the amount of \$18,720. Amendment No. 4 was for additional services in City Council directed plan modifications of 65th Street width (Cahill Avenue to 675 feet west) from 42 feet to 46 feet and Borden Way backyard storm sewer topographic survey, plans, and construction staking in the amount of \$22,830.

Amendment No. 5 is for additional services for: (1) additional project management and coordination for contractor negotiations and construction management related to the pollution remediation; (2) additional services required for environmental response action and construction management to address an expanded lead contamination area. Attached is Bolton & Menk’s letter of request for a total amount of \$16,670. Items will be funded by the Engineering Contingency for consultants and item (2) will be funded by the Engineering Contingency for the contamination area (project budget is attached).

I recommend that the Council adopt the resolution accepting Amendment No. 5 to the proposal for engineering services from Bolton & Menk in the amount of \$16,670 for a total contract amount of \$526,160 for 2012 Pavement Management Program, City Project No. 2012-09D – 65th Street Neighborhood and Cahill Court.

TJK/kf

Attachments: Resolution
Amendment No. 5
Project Budget

**CITY OF INVER GROVE HEIGHTS
DAKOTA COUNTY, MINNESOTA**

**RESOLUTION ACCEPTING AMENDMENT NO. 5 TO AGREEMENT FOR ENGINEERING SERVICES
FROM BOLTON & MENK, INC. FOR THE 2012 PAVEMENT MANAGEMENT PROGRAM, CITY
PROJECT NO. 2012-09D – URBAN STREET RECONSTRUCTION, 65TH STREET
NEIGHBORHOOD AND CAHILL COURT**

RESOLUTION NO. _____

WHEREAS, on September 12, 2011, City Council authorized a contract with Bolton & Menk, Inc. for preparation of a feasibility report and final design engineering services in an amount of \$385,490; and

WHEREAS, Bolton & Menk has submitted Amendment No. 5 for the additional engineering services related to: (1) additional project management and coordination for contractor negotiations and construction management related to the pollution remediation; (2) additional services required for environmental response action plan, and construction management to address an expanded lead contamination area; (3) additional surveyor services for topographic surveys to document the amount of contaminated soil disposed of on the City property and to ensure that a minimum of two feet of fill was placed over the contaminated soils to cap them.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE INVER GROVE HEIGHTS, MINNESOTA THAT:

1. Amendment No. 5 to the agreement for engineering services from Bolton & Menk,, Inc. for the 2012 Pavement Management Program, City Project No. 2012-09D – Urban Street Reconstruction, 65th Street Neighborhood and Cahill Court in the amount of \$16,670 is hereby approved.
2. Funding is provided by the Pavement Management Fund, special assessments, State Aid Funds, and the Sewer and Water Funds, as outlined in the project budget for contamination area engineering.

Adopted by the City Council of Inver Grove Heights, Minnesota this 11th day of March 2013.

AYES:

NAYS:

George Tourville, Mayor

ATTEST:

Melissa Kennedy, Deputy Clerk



BOLTON & MENK, INC.

Consulting Engineers & Surveyors

12224 Nicollet Avenue • Burnsville, MN 55337

Phone (952) 890-0509 • Fax (952) 890-8065

www.bolton-menk.com

February 14, 2013

Mr. Tom Kaldunski
City Engineer
City of Inver Grove Heights
8150 Barbara Avenue
Inver Grove Heights, MN

Re: 2012-09D Urban Reconstruction – 65th Street Neighborhood
Engineering Services Amendment No. 5

Dear Mr. Kaldunski:

As you are aware, the lead contamination area and environmental cleanup associated with the material on Buckley Way and 65th Street became a much larger issue than was originally anticipated. The original scope of work was identified in the original proposal as:

- We will evaluate all environmental concerns within project limits related to the Rubbish Ranch area and provide recommendations for cleanup options or additional studies that may be needed. This work will include preliminary coordination with Dakota County and/or the MPCA. Any detailed cleanup or work beyond that will need to have a complete scope of work and fees determined.

In addition, as a part of Fee Addendum No. 2, we submitted a proposal to complete a topography survey and grading plan for a disposal area on the north side of 65th Street.

Subsequently, we have been required to complete two additional topography surveys of the designated fill area for the contaminated soil. The first after all of the contaminated material was disposed of, and the second once the area was capped with clean soil. These surveys were necessary to compute the amount of materials disposed of and to ensure the site was capped with two feet of clean material. There was also a substantial amount of coordination with City Staff and AET throughout the project to ensure everything was handled and disposed of correctly. This included:

- Several meetings with AET and City Staff to determine appropriate procedure
- Review of the RAP (Response Action Plan)
- Construction administration during excavation and disposal
- Quantity verification and cost estimates
- Coordination and negotiation with the contractor on costs to complete the work. The lead contamination resulted in a change order and required research of documentation, quantity calculations and meetings to resolve the final costs

BOLTON & MENK, INC.

PROJECT FEES

ADDITIONAL SERVICES FEE
(Environmental Remediation)

\$16,670

Please contact me at (952) 890-0509 with any questions or comments. If the City accepts this addendum, please sign and return this contract addendum.

Sincerely,

BOLTON & MENK, INC.



Brian J. Hilgardner, P.E.
Project Manager

Accepted: _____
City of Inver Grove Heights



**FEE STRUCTURE - ADDENDUM NO. 5
ESTIMATED PROJECT FEES**

CLIENT: City of Inver Grove Heights		BOLTON & MENK INC.									
PROJECT: 2012 Urban Street Reconstruction - 65th Street		Project Manager/ Principal-in-Charge	Project Engineer	Design Engineer	Engineering Technician	Survey CAD Specialist	Licensed Land Surveyor	Survey Crew	Clerical	Total Hours	Total Cost
TASK NO.	WORK TASK DESCRIPTION										
1	Meetings	13	6	0	0	0	0	0	0	19	\$2,130.00
2	Review Response Action Plan	4	6	0	0	0	0	0	0	10	\$1,050.00
3	Construction Administration	20	0	0	0	0	0	0	0	20	\$2,400.00
4	Quantity Calculations and Verifications	22	18	0	0	0	0	0	0	40	\$4,350.00
5	Contractor Coordination and Change Order Items	20	0	0	0	0	0	0	0	20	\$2,400.00
6	Additional Topography Survey	0	0	0	0	8	2	40	0	50	\$4,340.00
	TOTAL HOURS	79	30	0	0	8	2	40	0	159	
	AVERAGE HOURLY RATE	\$120.00	\$95.00	\$90.00	\$85.00	\$85.00	\$130.00	\$85.00	\$55.00		
	SUBTOTAL	\$9,480.00	\$2,850.00	\$0.00	\$0.00	\$680.00	\$260.00	\$3,400.00	\$0.00		
	TOTAL LABOR COSTS										\$16,670.00
	OTHER DIRECT COSTS: SUBCONSULTANT										\$0.00
	TOTAL FEE										\$16,670.00

**FINANCING INITIATIVES
2012 PAVEMENT MANAGEMENT PROGRAM
URBAN STREET RECONSTRUCTION - 65TH STREET AREA & CAHILL COURT
CITY PROJECT NO. 2012-09D**

AWARDED TO:	Friedges	BID AMOUNT:	\$4,715,686.33
Finance Initiative	% of Bid	Costs	
Contingency (Construction)	10%	\$471,568.60	
Contamination Contingency	2%	\$94,313.73	
Legal	1%	\$47,156.86	
Engineering (Consulting)	15%	\$707,352.95	
Contamination Area	1%	\$47,156.86	
Administration (Resident Engineering)	8%	\$377,254.91	
Finance	5%	\$235,784.32	
Fiscal	1%	\$47,156.86	
SUBTOTAL FINANCING INITIATIVE	43%	\$2,027,745.09	

TOTAL FINANCING: BID + FINANCING INITIATIVES

\$6,743,431.42

Construction Payments: Summer, Fall, Winter 2011
Final Payment: Spring 2012

Funding:	PMP	Assess (30%)	State Aid	Water Fund	Sewer Fund	TOTAL
Account:	24.44%	30.00%	40.35%	4.44%	0.77%	100.00%
Amount:	\$1,648,185.82	\$2,023,029.43	\$2,720,883.40	\$299,408.35	\$51,924.42	\$6,743,431.42

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Resolution Accepting Contract Change Order No. 1 to Proposal from American Engineering Testing, Inc. for Construction Materials Testing Services for the 2012 Pavement Management Program, City Project 2012-09D – Urban Street Reconstruction, 65th Street Neighborhood and Cahill Court

Meeting Date: March 11, 2013
 Item Type: Consent
 Contact: Thomas J. Kaldunski, 651.450.2572
 Prepared by: Thomas J. Kaldunski, City Engineer
 Reviewed by: Scott D. Thureen, Public Works Director
SJT

Fiscal/FTE Impact:	
<input type="checkbox"/>	None
<input type="checkbox"/>	Amount included in current budget
<input type="checkbox"/>	Budget amendment requested
<input type="checkbox"/>	FTE included in current complement
<input type="checkbox"/>	New FTE requested – N/A
<input checked="" type="checkbox"/>	Other: Pavement Management Fund, Special Assessments, State Aid Funds, Sewer Fund, Water Fund

PURPOSE/ACTION REQUESTED

Resolution accepting Contract Change Order No. 1 from American Engineering Testing, Inc. for construction materials and environmental testing services related to pollution remediation in the vicinity of the Rubbish Ranch for the 2012 Pavement Management Program, City Project 2012-09D – Urban Street Reconstruction, 65th Street Neighborhood and Cahill Court.

SUMMARY

City Project No. 2012-09D was ordered on April 9, 2012. At its April 23rd, 2012, regular meeting, the City Council authorized a construction material testing services agreement with AET providing preliminary geotechnical evaluation for the project in the amount of \$87,299. AET has provided similar services on many of the City's reconstruction projects. The original proposal from AET included the following: material testing and control, concrete testing, bituminous testing, aggregate materials testing, soils observations, compaction and related testing on the site, testing of select borrow and topsoil, Phase I environmental site assessment and environmental sampling and testing in the Rubbish Ranch area.

Contract Change Order No. 1 includes additional environmental monitoring on-site, lab testing for lead, DROs, VOCs, PAHs and preparation of a Response Action Plan meeting the requirements of the MPCA's VIC and PBP programs for pollution remediation.

These additional services will be funded through the 2012-09D budget for engineering contamination area (\$12,940 of the \$47,157 budget).

I recommend that the Council adopt the resolution accepting contract Change Order No. 1 to the AET Agreement for pollution remediation testing services and reporting in the amount of \$12,940 (for a total contract of \$100,237) for the 2012 Pavement Management Program, City Project No. 2012-09D – Urban Street Reconstruction, 65th Street Neighborhood and Cahill Court.

TJK/kf
 Attachments: Resolution
 Proposal
 Project budget

**CITY OF INVER GROVE HEIGHTS
DAKOTA COUNTY**

**RESOLUTION ACCEPTING CONTRACT CHANGE ORDER NO. 1 TO THE AET AGREEMENT FOR
POLLUTION REMEDIATION TESTING FOR THE 2012 PAVEMENT MANAGEMENT PROGRAM, CITY
PROJECT NO. 2012-09D – 65TH STREET FROM BABCOCK TRAIL TO CAHILL AVENUE AND ADJACENT
NEIGHBORHOODS AND CAHILL COURT**

RESOLUTION NO. _____

WHEREAS, as part of the City's 2012 Pavement Management Program, 65th Street Neighborhood and Cahill Court was ordered for reconstruction in 2012; and

WHEREAS, in order to complete the construction and pollution remediation in a timely manner for the 2012 Pavement Management Program – City Project No. 2012-09D, 65th Street Neighborhood and Cahill Court , assistance of a consulting engineering firm was required for reporting and testing services; and

WHEREAS, the City has an approved Response Action Plan to address environmental contamination which resulted from the Rubbish Ranch which requires additional monitoring during construction and testing of contaminated materials which must be done by a geotechnical consultant, and

WHEREAS, the City wants to meet the pollution remediation requirements of MPCA and Dakota County to ensure the City qualifies for the Voluntary Investigation and Clean-up Program (VIC) and the Petroleum Brownfield Program (PBP); and

WHEREAS, City staff requested, and received a proposal for a contract change order from AET; and

WHEREAS, based on the experience of the firm, the scope and associated fee for the proposed services, it was decided that AET be selected from the Technical Services Consultant Pool to provide these pollution remediation and reporting services on City Project No. 2012-09D.

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF INVER GROVE HEIGHTS,
MINNESOTA THAT:**

1. The contract Change Order No. 1 from AET, dated December 6, 2012, is accepted and staff is authorized to enter into a contract with AET in an estimated amount of \$12,940 for these services, environmental monitoring, reporting and testing, and other deliverables as identified in the December 6, 2012 contract Change Order No. 1 for the 2012 Pavement Management Program – City Project No. 2012-09D, 65th Street Neighborhood and Cahill Court.

Adopted by the City Council of Inver Grove Heights, Minnesota this 11th day of March 2013.

AYES:
NAYS:

George Tourville, Mayor

ATTEST:

Melissa Kennedy, Deputy Clerk

FINANCING INITIATIVES
2012 PAVEMENT MANAGEMENT PROGRAM
URBAN STREET RECONSTRUCTION - 65TH STREET AREA & CAHILL COURT
CITY PROJECT NO. 2012-09D

AWARDED TO: Friedges	\$4,715,686.33
Finance Initiative	% of Bid
Contingency (Construction)	10%
Contamination Contingency	2%
Legal	1%
Engineering (Consulting)	15%
Contamination Area	1%
Administration (Resident Engineering)	8%
Finance	5%
Fiscal	1%
SUBTOTAL FINANCING INITIATIVE	43%
	\$47,156.86
	\$2,027,745.09

TOTAL FINANCING: BID + FINANCING INITIATIVES **\$6,743,431.42**

Construction Payments: Summer, Fall, Winter 2011
 Final Payment: Spring 2012

Funding:	PMP	Assess (30%)	State Aid	Water Fund	Sewer Fund	TOTAL
Account:	24.44%	30.00%	40.35%	4.44%	0.77%	100.00%
Amount:	\$1,648,185.82	\$2,023,029.43	\$2,720,883.40	\$299,408.35	\$51,924.42	\$6,743,431.42



AMERICAN
ENGINEERING
TESTING, Inc.

CONTRACT CHANGE ORDER

CLIENT City of Inver Grove Heights
8150 Barbara Avenue
Inver Grove Heights, MN 55077

SITE LOCATION 65th Street & Buckley Way
Inver Grove Heights, MN

PROJECT NO. 22-01370 (City Project 2012-09D)

DATE December 6, 2012

CHANGE ORDER NUMBER 1

CONTACT Tom Kaldunski

CLIENT FAX (651) 450-2502

CLIENT PHONE (651) 450-2572

TYPE OF CHANGE **ADDITION** **DELETION**

DETAILED DESCRIPTION OF CHANGE:

We have exceeded the planned budget for environmental excavation and monitoring, project management, coordination and reporting due to the discovery of additional lead contaminated soils beneath Buckley Way, as described in the attached memo dated September 7, 2012. We are requesting this additional funding to cover reporting time, additional meetings and consultation with the City and Contractor.

CHANGE ORDER COST BREAKDOWN:

(Use brackets or minus sign to denote deletion.)

See attached fee schedule. Time and materials in accordance with fee schedule established in the Contract Agreement Between the City of Inver Grove Heights and American Engineering Testing, Inc. for Professional Services, dated February 10, 2011.

CHANGE ORDER'S TOTAL COST \$12,940.00

CUSTOMER ACCEPTANCE:

American Engineering Testing, Inc.

CUSTOMER REPRESENTATIVE

PRINT Tracey C. Lee

PRINT _____

SIGNED

SIGNED _____

DATE December 6, 2012

DATE _____

ITEMIZATION
PROJECT TESTING SERVICES
2012 STREET & UTILITY IMPROVEMENTS
INVER GROVE HEIGHTS, MINNESOTA
AET PROJECT No. 22-01370
CITY PROJECT NO. 2012-09D

SERVICE DESCRIPTION	PROJECT BUDGET			CHANGE ORDER AMOUNT	
	ESTIMATED UNITS	UNIT RATE	BUDGET AMOUNT	# Units	Amount
<i>Environmental Excavation and Monitoring</i>					
1. Staff Scientist II for observations of roadway excavations, consultation and reporting (services provided on a will-call basis if required).	8 hours	\$117.00	\$936.00	7.3	\$854.10
2. Environmental Technician mobilization for PID and XRF screening and sample collection.	15 trips	\$85.00	\$1,275.00		\$0.00
3. Personal or Company vehicle mileage (Engineers or Scientists).	120 miles	\$0.65	\$78.00		\$0.00
4. Environmental Technician site time to perform screening and sampling for laboratory analysis.	120 hours	\$85.00	\$10,200.00		\$0.00
5. Photoionization Detector (PID) Rental	15 days	\$100.00	\$1,500.00		\$0.00
6. X-ray Fluorescence (XRF) Meter Rental	2 weeks	\$1,500.00	\$3,000.00	1.4	\$2,100.00
<i>Subcontract Laboratory Testing</i>					
1. Total Lead	7 unit	\$11.50	\$80.50		\$0.00
2. Diesel Range Organics	5 unit	\$34.50	\$172.50		\$0.00
3. Volatile Organic Compounds	5 unit	\$97.75	\$488.75		\$0.00
4. 8 RCRA Metals	5 unit	\$74.75	\$373.75		\$0.00
5. Polynuclear Aromatic Hydrocarbons	5 unit	\$80.50	\$402.50		\$0.00
6. Polychlorinated Byphenyls	5 unit	\$80.50	\$402.50		\$0.00
7. TCLP 8 RCRA Metals	5 unit	\$126.50	\$632.50		\$0.00
8. Asbestos	5 unit	\$15.00	\$75.00		\$0.00
<i>Env. Project Management, Coordination, RAP Implementation, Reporting</i>					
1. Project Manager/Scientist II for coordination of AET environmental personnel and activities, attending pre-construction meeting, consultation and report preparation.	50 hours	\$117.00	\$5,850.00	80.0	\$9,360.00
2. Personal or Company vehicle mileage.	120 miles	\$0.65	\$78.00	0.0	\$0.00
3. Principal Hydrogeologist for special consultation and report review.	5 hours	\$156.00	\$780.00	4.0	\$624.00
Phase I Environmental Site Assessment	1 ls	\$2,000.00	\$2,000.00	0.0	\$0.00
<i>Project Management & Coordination</i>					
1. Project Manager for coordination of AET personnel and activities, attending pre-construction meeting, consultation and report preparation.	44 hours	\$102.00	\$4,488.00		\$0.00
2. Principal Engineer for special consultation and report review.	2 hours	\$156.00	\$312.00		\$0.00
ESTIMATED BUDGET			\$87,297.00	MONTHLY INVOICE TOTAL	\$12,938.10

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Resolution Accepting Final Response Action Plan (RAP) Prepared by AET, Inc. for Pollution Mitigation on City Project No. 2012-09D – 65th Street Improvements

Meeting Date: March 11, 2013
 Item Type: Consent
 Contact: Thomas J. Kaldunski, 651.450.2572
 Prepared by: Thomas J. Kaldunski, City Engineer
 Reviewed by: Scott D. Thureen, Public Works Director

SDT

Fiscal/FTE Impact:	
<input type="checkbox"/>	None
<input type="checkbox"/>	Amount included in current budget
<input type="checkbox"/>	Budget amendment requested
<input type="checkbox"/>	FTE included in current complement
<input type="checkbox"/>	New FTE requested – N/A
<input checked="" type="checkbox"/>	Other: Pavement Management Fund, Special Assessments, MSA Funds, Water Fund, Sewer Fund

PURPOSE/ACTION REQUESTED

Accept the final Response Action Plan (RAP) for City Project No. 2012-09D and authorize submittal of the RAP to the MPCA and Dakota County Environmental Management.

SUMMARY

City Project No. 2012-09D was ordered on April 9, 2012. At its April 23, 2012 regular meeting, the City Council authorized a construction materials testing services agreement with AET. AET was subsequently contracted to conduct environmental site assessments on the project in the vicinity of the Rubbish Ranch area. This area, near 65th and Buckley Way, was a known pollutant site before the project was initiated. AET was hired to ensure the City handled any pollutants encountered during the construction project in a manner that meets applicable MPCA and Dakota County regulations. The City also sought the benefits of the MPCA Volunteer Investigation and Cleanup (VIC) Program (V.P. 1223).

AET performed various geotechnical services at the start of the project to identify locations and types of pollutants that might be encountered. This information is outlined in Appendix A of the RAP report dated March 5, 2013 that AET prepared. This report identified an area of petroleum contaminated soil and debris and a hotspot of lead contamination that would be encountered.

AET was subsequently hired to prepare a Response Action Implementation Report to address hot spot soil removals and management/disposal of contaminated soil and debris. The preliminary RAP was reviewed and approved by the MPCA and the Dakota County Environmental Management Department on May 22, 2012. Soil impacts included P.A.H.s, lead, diesel range organics (DROs) and arsenic.

The City followed the RAP prepared by AET to ensure the activity was managed to meet the requirements of the MPCA Voluntary Investigation and Cleanup (V.I.C.) Program and Petroleum Brownfield Program (PBP) as the contaminated soil and debris were removed during construction activities. These activities were performed by the contractor (Friedges Construction) under the direction of the City's consulting engineers (Bolten & Menk and AET).

Materials with lower level contaminants were disposed of on City property adjacent to the project and capped with clean fill. The hot spot pollutants (mainly lead) were disposed of at the Pine Bend Landfill as documented in the RAP.

As part of the project planning, a budget was established for dealing with the contaminated soils in the Rubbish Ranch area. A copy of the budget is attached for your reference. This construction project included the following estimated costs for the pollution remediation in the estimated \$6.7 million total project cost.

Construction Contamination Contingency	\$ 94,314
Additional Consulting Services in the Contaminated Area	<u>47,157</u>
Pollution Remediation Total	\$141,471

These pollution remediation services were provided by Friedges Construction, Bolten & Menk and AET. All services within the scope of pollution remediation were negotiated with these companies and the work has been performed within the overall pollution remediation budget. There are additional actions for Council approval on this agenda related to the pollution remediation. They include a pay estimate and negotiated change order with Friedges Construction (\$89,318), an amendment to Bolten & Menk's consulting engineering services (\$16,670) and an amendment to AET Geotechnical and Environmental Services contract (\$12,940). The Council will consider separate actions to approve the contract modifications related to pollution remediation (Total \$118,928).

Initial quantity estimates in the spring of 2012 indicated that 4600 cubic yards (CY) of contaminated soils were to be disposed of on the City-owned site adjacent to the project and 15 CY of lead contaminated soils were to be disposed of at the Pine Bend Landfill.

Subsequently, the quantities of materials were modified as the City secured its RAP from the MPCA and Dakota County. Field testing provided on the project by AET determined the pollutant concentration levels and the subsequent disposal site based on the level readings.

Dakota County's lead contamination clean up requirement of less than 100 mg/kg resulted in an increase in the final quantity of material disposed of at the Pine Bend Landfill (1364 tons). The contaminated soils disposed of on the City property amounted to 3,954 CY. The contaminated soils found are best illustrated by the September 7, 2012 letter from AET (attached).

The City worked with Bolten & Menk to adjust the street grades on Buckley Way to minimize the amount of contaminated soils requiring removal for the project. This was an effective way of managing the pollutants within the budget and goals for the project.

It is recommended that the City Council approve the resolution accepting the final RAP as prepared by AET and authorizing the submittal of this document to the MPCA and Dakota County Environmental Management along with a request for "No Further Action" determination from the MPCA VIC Program and an "Approval of Voluntary Response Actions" letter from the MPCA PBP.

TJK/kf

Attachments: Resolution
September 7, 2012 memo from AET
Partial Response Action Plan (full report available in Engineering)

**CITY OF INVER GROVE HEIGHTS
DAKOTA COUNTY, MINNESOTA**

**RESOLUTION ACCEPTING A FINAL RESPONSE ACTION PLAN (RAP) FROM AMERICAN
ENGINEERING TESTING FOR THE 2012 PAVEMENT MANAGEMENT PROGRAM, CITY
PROJECT NO. 2012-09D – 65TH STREET FROM BABCOCK TRAIL TO CAHILL AVENUE
AND ADJACENT NEIGHBORHOODS AND CAHILL COURT**

RESOLUTION NO. _____

WHEREAS, as part of the City's 2012 Pavement Management Program, 65th Street Neighborhood and Cahill Court was identified for reconstruction starting in 2012; and

WHEREAS, in order to complete the construction and pollution remediation in a timely manner for the 2012 Pavement Management program – City Project No. 2012-09D, 65th Street Neighborhood and Cahill Court, assistance of a consulting engineering firm was required for reporting and testing services; and

WHEREAS, the City has an approved Response Action Plan (RAP) that addressed environmental contamination on City Project No. 2012-09D which resulted from the Rubbish Ranch near 65th Street and Buckley Way; and

WHEREAS, the City has met the pollution remediation requirements of the MPCA and Dakota County to ensure the City qualifies for the Voluntary Investigation and Cleanup Program (VIC) and the Petroleum Brownfield Program (PBP); and

WHEREAS, the City has received the March 5, 2013 Response Action Implementation Report, MPCA VIC No. VP1223 prepared by AET.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF INVER GROVE HEIGHTS, MINNESOTA THAT:

1. The Response Action Implementation Report prepared by AET, dated March 5, 2013, is accepted and staff is authorized to submit this RAP to MPCA and Dakota County to request the issuance of a "No Further Action" determination from the MPCA VIC Program and the issuance of an "Approval of Voluntary Response Action" letter from the MPCA PBP.

Adopted by the City Council of Inver Grove Heights, Minnesota this 11th day of March 2013.

AYES:
NAYS:

George Tourville, Mayor

ATTEST:

Melissa Kennedy, Deputy Clerk

FINANCING INITIATIVES
2012 PAVEMENT MANAGEMENT PROGRAM
URBAN STREET RECONSTRUCTION - 65TH STREET AREA & CAHILL COURT
CITY PROJECT NO. 2012-09D

AWARDED TO:	Friedges	BID AMOUNT:	\$4,715,686.33
Finance Initiative	% of Bid		Costs
Contingency (Construction)	10%		\$471,568.60
Contamination Contingency	2%		\$94,313.73
Legal	1%		\$47,156.86
Engineering (Consulting)	15%		\$707,352.95
Contamination Area	1%		\$47,156.86
Administration (Resident Engineering)	8%		\$377,254.91
Finance	5%		\$235,784.32
Fiscal	1%		\$47,156.86
SUBTOTAL FINANCING INITIATIVE	43%		\$2,027,745.09

TOTAL FINANCING: BID + FINANCING INITIATIVES

\$6,743,431.42

Construction Payments: Summer, Fall, Winter 2011
 Final Payment: Spring 2012

Funding:	PMP	Assess (30%)	State Aid	Water Fund	Sewer Fund	TOTAL
Account:	24.44%	30.00%	40.35%	4.44%	0.77%	100.00%
Amount:	\$1,648,185.82	\$2,023,029.43	\$2,720,883.40	\$299,408.35	\$51,924.42	\$6,743,431.42



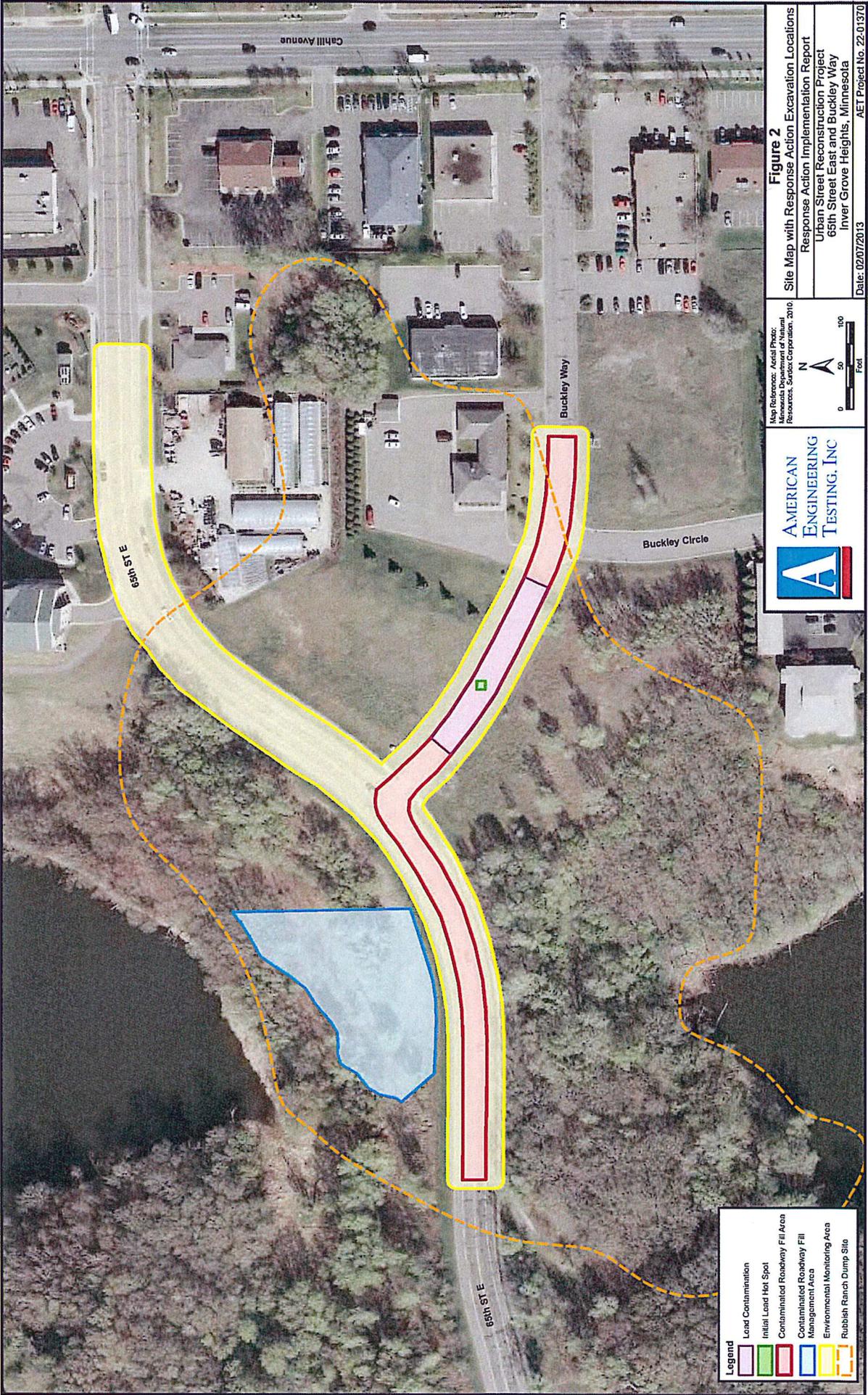
Memo

Date: September 7, 2012
To: Steve Dodge, City of Inver Grove Heights
From: Kate Kleiter *Kathryn Kleiter*
Re: Additional lead contaminated soils under Buckley Way in former Rubbish Ranch Dump Site Area
Project No.: 22-01370

Additional lead contaminated soils were uncovered during excavation for disposal of the proposed lead hot spot (GP-12) located on Buckley Way. The lead hot spot was planned for excavation and disposal in accordance with the MPCA and Dakota County approved Response Action Plan (RAP) dated April 20, 2012. The lead contamination is associated with the Rubbish Ranch Dump fill material located under Buckley Way and 65th Street East. Seventeen exploratory environmental borings were initially advanced along the roadways over the Rubbish Ranch Dump area but lead was not detected above regulatory goals in all but one of the soil samples analyzed by the laboratory. We assumed based on all the borings drilled that the lead was an anomalous hot spot.

Fifteen additional test pits were conducted in the roadway northwest and southeast of the hot spot to delineate the lead extent around the hot spot. Soil samples were collected from the test pits and screened with our field XRF for lead concentrations. Additional samples were analyzed in the laboratory. The results indicated that the nature of the lead contamination is not homogeneous in the fill but occurs in large pockets that could be easily missed by 2 inch diameter borings. The presence of glass shards appears to be associated with the lead contamination so it was traced by test pits and our lead field screening instrument to be generally as shown in purple along Buckley Way on the attached site map. Based on planned grades for reconstruction of the road, the areal extent, and concentrations detected, we estimate that approximately 1500 cubic yards (in-place) of contaminated soil will need to be disposed at landfill.

Attachment – Site Map



Legend

[Red Box]	Lead Contamination
[Orange Box]	Initial Lead Hot Spot
[Yellow Box]	Contaminated Roadway Fill Area
[Green Box]	Contaminated Roadway Fill Management Area
[Blue Box]	Environmental Monitoring Area
[Dashed Orange Box]	Rubbish Ranch Dump Site

Map Reference: Aerial Photo
 Minnesota Department of Natural Resources, Sanjour Corporation, 2010

0 50 100
 Feet

N



Figure 2
 Site Map with Response Action Excavation Locations
 Response Action Implementation Report
 Urban Street Reconstruction Project
 65th Street East and Buckley Way
 Inver Grove Heights, Minnesota
 Date: 02/07/2013
 AET Project No. 22-01370



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ENGINEERING
TESTING, INC.

CONSULTANTS

- ENVIRONMENTAL
- GEOTECHNICAL
- MATERIALS
- FORENSICS

RESPONSE ACTION IMPLEMENTATION REPORT

Urban Street Reconstruction Project Inver Grove Heights, Minnesota

MPCA VIC No. VP1223
AET Project No. 22-01370

Date:

March 5, 2013

Prepared for:

City of Inver Grove Heights
8150 Barbara Avenue
Inver Grove Heights, Minnesota 55077

www.amengtest.com





- CONSULTANTS
- ENVIRONMENTAL
 - GEOTECHNICAL
 - MATERIALS
 - FORENSICS

March 5, 2013

City of Inver Grove Heights
8150 Barbara Avenue
Inver Grove Heights, MN 55077

Attn: Mr. Steve Dodge

RE: Response Action Implementation Report
Urban Street Reconstruction Project
Inver Grove Heights, Minnesota
MPCA VIC No. VP1223
AET Project No. 22-01370

Dear Mr. Dodge:

American Engineering Testing, Inc. has prepared the enclosed Response Action Implementation Report for the above-referenced project in Inver Grove Heights, Minnesota. Enclosed are two copies of the report. On your behalf, we are submitting two copies to the Minnesota Pollution Control Agency for review and approval and one copy to Dakota County Environmental Management for their records.

We appreciate the opportunity to assist you with this project. If you have any questions regarding the information presented in this report, please contact myself or Kate Kleiter at 651-659-1319.

Sincerely,
American Engineering Testing, Inc.

A handwritten signature in black ink, appearing to read 'Tracey C. Lee', is written over a light blue horizontal line.

Tracey C. Lee
Environmental Engineer

Phone: 651-789-4648
Fax: 651-659-1379
Email: tlee@amengtest.com

Enclosure

CC: MPCA VIC Program
Thomas Kaldunski, City of Inver Grove Heights
Dakota County Environmental Management



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AET Project No. 22-01370

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AET Project No. 22-01370

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- A. References
- B. Previous Site Sampling Results
- C. Methods and Procedures
- D. Landfill Disposal Documentation
- E. Lead Contamination Excavation Modifications
- F. Soil Screening Data Sheets
- G. Laboratory Analytical Reports
- H. Grading Plan for Contaminated Roadway Fill Management Area

**RESPONSE ACTION IMPLEMENTATION REPORT
URBAN STREET RECONSTRUCTION PROJECT
INVER GROVE HEIGHTS, MINNESOTA
MPCA VIC No. VP1223**

AET PROJECT NO. 22-01370

1.0 GENERAL OVERVIEW

1.1 Introduction

American Engineering Testing, Inc. (AET) was authorized by the City of Inver Grove Heights (the “City”) to oversee implementation of response actions for the Urban Street Reconstruction Project (hereafter, referred to as the “Site”). The Site is located in Section 4, Township 27 North, and Range 22 West in Dakota County, Minnesota (**Figure 1**). This Response Action Implementation Report addresses hot spot soil removal and management/disposal of contaminated soil and debris that were encountered during roadway construction at the Site. This Report is being submitted for Minnesota Pollution Control Agency (MPCA) review of the response actions.

The Site, that has historically been considered part of the Rubbish Ranch Dump site, includes approximately 0.95 acre in the right-of-way area of 65th Street East and Buckley Way in Inver Grove Heights. The Rubbish Ranch Dump site covers an area of approximately 22 acres with a majority of the site (18 acres) being undeveloped. **Figure 2** shows the Site configuration and features and includes the boundaries of the Rubbish Ranch Dump site.

1.2 Background Information

AET previously performed environmental assessment activities at the Site. A reference list of the previous environmental reports is included in **Appendix A**. Previous environmental sampling results and maps are included in **Appendix B**.

Soil impacts identified on the Site include fill soils contaminated by polynuclear aromatic hydrocarbons (PAHs), lead and petroleum consisting of diesel range organics (DRO). Arsenic was also detected above the MPCA Residential Soil Reference Values (SRVs) at concentrations consistent with natural background levels in Minnesota. Buried debris was also discovered in random pockets.

On April 20, 2012, AET submitted a Response Action Plan (RAP) to the MPCA Voluntary Investigation and Cleanup (VIC) and Petroleum Brownfield Programs (PBP), which addressed management of contaminated soils and debris during construction activities. The MPCA VIC program approved the RAP on May 22, 2012.

2.0 RAP APPROACH AND SCOPE

2.1 Response Action Goals

The implementation activities outlined in the RAP were intended to address known impacts during roadway excavation and reconstruction at the Site. The response actions mainly involved excavation and off-site disposal of one lead impacted hot spot and management of contaminated soils with pockets of debris.

The objective of the RAP was to remove the lead hot spot and manage contaminated soil and debris encountered during construction activities. Contaminated fill soils (red area on **Figure 2**) excavated from the roadway were to be used to regrade city property located north of the roadway (blue area on **Figure 2**) within the confines of the Rubbish Ranch Dump site (dashed outline on **Figure 2**). Contaminated fill soils greater than cleanup goals and debris were to be hauled off-site for disposal at an appropriate landfill. The City would like to obtain a No Further Action determination from the MPCA VIC Program and a RAP Implementation Approval letter from the MPCA PBP. The City has also undertaken response actions to comply with Dakota County requests written in a RAP approval email to AET, dated April 9, 2012.

2.2 Cleanup Criteria

Cleanup criteria for the Site were established in the RAP to eliminate future risk to human health, safety, and the environment. The response action goals were intended to allow recreational use in the contaminated roadway fill management area within the confines of the dump site (blue area on **Figure 2**). No cleanup goals were proposed for soil under the roadway construction area. The soil cleanup goals for the Site include the following:

- PAHs, Metals – less than MPCA Tier I SRVs;
- Petroleum – less than 10 parts-per-million (ppm) organic vapors by photoionization detector (PID); and DRO – less than 100 mg/kg.

Dakota County Environmental Management recommended the following response action goals be applied in the contaminated roadway fill management area:

- Lead – less than 100 mg/kg (MPCA Tier I SRV for lead is 300 mg/kg);
- Inert Debris – less than 1% by volume and less than 18 inches in diameter; and
- DRO – less than 10 mg/kg. However, the contaminated fill soils located under the roadway (red area on **Figure 2**) that goes through the Rubbish Ranch Dump are acceptable to be placed in the confines of the Rubbish Ranch Dump site, but cannot be reused as MPCA defined unregulated fill in Dakota County.

2.3 Response Actions Proposed

The proposed response actions at the Site are summarized as follows:

- Excavation and disposal at a landfill one known lead-impacted area located in the contaminated roadway fill area.
- Excavation and relocation of known contaminated roadway soils to adjacent city property located within the confines of the Rubbish Ranch Dump site.

- Screening of soil samples for organic vapors by PID, for lead by x-ray fluorescence analyzer (XRF) and for debris during all excavation activities for the reconstruction of the roadway through the Rubbish Ranch Dump site.
- Two feet of imported clean fill will be used to cap soils placed in the contaminated roadway fill management area.

2.4 Scope of Environmental Consulting Activities

AET was contracted by the City to provide on-site environmental services to assist with the implementation of the response actions. AET conducted the following RAP Implementation activities:

- Prepared an Environmental Site Safety Plan for AET site personnel.
- Assisted the City with waste characterization profiling for disposal authorization by the selected landfill, SKB Industrial Waste Facility (SKB) in Rosemount, Minnesota.
- Screened response action excavations for organic vapors by PID, lead by XRF and debris.
- Collected confirmation soil samples for laboratory analysis in accordance with the RAP.
- Documented soil conditions during excavation activities, communicated contaminated soil conditions to the contractor, and executed procedures for handling and disposal of the contaminated soils in accordance with the RAP.
- Prepared this Response Action Implementation Report summarizing the hot spot excavation and excavation monitoring activities.

3.0 RESPONSE ACTION RESULTS

3.1 Methods and Procedures

The City contracted AET to implement the response actions and contingency plan monitoring for the entire site. Excavation, filling, grading and disposal activities were undertaken by the general contractor, Friedges Contracting Co. LLC (Friedges). The approved RAP identified the general

methods for the execution of contaminated soil cleanup activities. Environmental screening and sampling was conducted by AET prior to, during and following earthwork activities. The methods and procedures AET employed for soil sample collection and on-site screening are outlined on methodology fact sheets in **Appendix C**.

3.2 Site Preparation/Mobilization

Prior to excavation and disposal of contaminated soils, AET conducted the following activities for implementation of the response actions:

- Coordinated with Friedges to obtain approval to dispose contaminated soils at SKB.
- Coordinated with Friedges the site safety procedures, site controls, excavation and stockpile locations, stockpile handling, debris management, transportation and disposal, and soil import.

Mobilization for RAP implementation activities occurred as follows:

- August 15, 2012 – Impacted soils from the initial lead hot spot (green area on **Figure 2**) were excavated and hauled to SKB. AET collected confirmation samples at the hot spot location and extents of the contaminated roadway fill area. Additional excavation was required in the lead hot spot based on field confirmation samples.
- August 16, 2012 – AET conducted test pit exploration beyond the initial 15 cubic yards to delineate the lead hot spot. Impacted soils were hauled to SKB and confirmation samples were collected from the hot spot excavation.
- August 29 and September 5, 2012 – AET conducted test pit exploration beyond the initial 15 cubic yards to delineate the lead hot spot and collected confirmation samples.
- September 13 and 17, 2012 – AET observed and sampled contaminated roadway fill soils excavated along 65th Street and west of Buckley Way. Impacted soils were placed in the contaminated roadway fill management area.

- September 19, 2012 – AET observed and sampled contaminated fill soils excavated along Buckley Way and south of the lead hot spot. Impacted soils were placed in the contaminated roadway fill management area.
- September 21 and 25, 2012 – Impacted soils from the hot spot were excavated and direct hauled to SKB. AET observed and sampled soils from the lead hot spot.
- September 26, 2012 – AET observed and sampled contaminated fill soils excavated along Buckley Way and south of the lead hot spot. Impacted soils were placed in the contaminated roadway fill management area.
- October 3-5 and 8, 2012 – AET observed and sampled soils during excavation in the environmental monitoring area along 65th Street and east of Buckley Way. Soils were excavated and hauled off-site.

3.3 Contaminated Soil Excavation/Disposal

3.3.1 Contaminated Soil Landfill Acceptance

Data from previous assessments met landfill requirements for characterization of the soils to be disposed. The waste profile sheet from SKB is included in **Appendix D**. The impacted soils to be disposed of in the permitted off-site facility were manifested in accordance with state and federal regulations and in accordance with the facility's specific requirements.

3.3.2 Excavation/Disposal Procedures and Equipment

The contractor excavated and disposed of contaminated soils in accordance with the approved RAP. Friedges used a track-mounted backhoe for excavating and placing the contaminated soils into dump trucks for transport to SKB. The daily load ticket summary is included in **Appendix D**. A total of 1,364.18 tons of contaminated soil from the lead hot spot was excavated and disposed at SKB. Based on a generic factor of 1.4 tons-per-cubic-yard, we estimate the volume of contaminated soil disposed as 974 cubic yards; this figure should be considered approximate.

3.3.3 Excavation Hot Spot Area Location and Boundaries

The identified lead hot spot and contaminated roadway fill soils were targeted during the response actions. A proposed excavation of 10 feet by 10 feet and 4 feet deep was initially completed on the

lead hot spot (green area on **Figure 2**). The lead hot spot was excavated to the proposed dimensions and then required additional excavation based on confirmation samples. Test pits were advanced in the roadway northwest and southeast of the hot spot to delineate the lead extent around the hot spot. Soil samples were collected from the test pits and screened for lead by XRF. Additional samples were analyzed in the laboratory for lead. The hot spot was expanded to the limits as shown by the purple area on **Figure 2**. The hot spot excavation depth was also modified by the City by raising the final road grade in order to reduce the total volume removed for disposal. A draft of the revised plan sheet is included in **Appendix E**.

3.4 Soil Excavation Monitoring

3.4.1 Excavation Field Screening Results

Excavation activities at the Site were observed and monitored by an AET environmental technician or scientist. During excavation activities, the soil samples for screening and laboratory analysis were collected directly from the excavated area. Soil samples were screened for organic vapors using a PID equipped with a 10.6-eV lamp, lead using an XRF analyzer and for debris. The screening confirmation sample locations are shown on **Figure 3A**. Field screening results are presented on soil screening data sheets in **Appendix F**.

PID readings ranged from 0.0 to 3.1 parts per million (ppm). No obvious odors associated with the recovered soil samples were noted. Lead readings outside the lead contamination area did not exceed the response action goal of 100 ppm. Readings within the lead contamination area ranged from non-detect to 1021 ppm.

Scattered debris materials were encountered throughout the lead hot spot excavation. The encountered materials included brick, cinders, tile, dishes and glass. All encountered debris was excavated and disposed by Friedges.

3.4.2 Excavation Laboratory Confirmation Results

Per the RAP, representative numbers of base and sidewall confirmation samples were collected from the lead hot spot and contaminated fill excavations. The samples were submitted to Pace Analytical

Services, Inc. (Pace) for fixed laboratory documentation of residual lead, DRO and/or BaP concentrations. The confirmation sample locations are shown on **Figure 3B**. The laboratory data are summarized in **Table 1**. The laboratory analytical reports are included in **Appendix G**.

Lead

Of the 16 confirmation soil samples analyzed for lead, 11 samples exhibited a lead concentration greater than Dakota County's goal of 100 mg/kg; 6 of these 11 samples exhibited a lead concentration exceeding the MPCA Tier I Residential SRV of 300 mg/kg. Only sample locations B-1 and B-3 were left in place upon completion of excavation activities.

DRO

Of the 12 confirmation soil samples analyzed for DRO, five samples were greater than Dakota County's goal of 10 mg/kg, while no samples exhibited concentrations exceeding MPCA unregulated fill criterion of 100 mg/kg. Soils from these locations were relocated to the contaminated roadway fill management area.

BaPs

Of the 12 confirmation soil samples analyzed for PAHs, no samples exhibited a BaP concentration exceeding the MPCA Tier I Residential SRV of 2 mg/kg.

3.5 Filling Activity

The contractor backfilled response action excavations with clean fill to planned construction grades. Excavated soils placed in the contaminated roadway fill management area were capped with 2 feet of clean fill, and will be final graded and vegetated to reduce runoff to the adjacent pond. The proposed grading plan for the contaminated roadway fill management area is included in **Appendix H**.

4.0 DISCUSSION

4.1 RAP Implementation Limitations and Modifications

Contaminated soils were excavated at the Site to prepare the roadway for reconstruction. The nature of metals, PAH and petroleum contamination in the soils appeared similar to the conditions identified in previous investigation activities, although the extent was greater than anticipated. Therefore, the RAP tasks were not substantially modified, except for broader excavation in the lead hot spot location to meet cleanup goals. As a result, more contaminated soils required disposal than previously anticipated.

4.2 Attainment of RAP Goals

Based on soil field screening and laboratory analytical results during this RAP Implementation, soils within the limits of response action excavations met the goals established in the RAP as approved by the MPCA. Confirmation base and sidewall soil samples exceeded Tier I Residential SRVs at six locations in the lead contaminated area at the construction limits. **Figure 4** shows the locations where residual contamination remains.

4.3 Additional Necessary Actions

Based on the field and laboratory results from the excavations during this RAP Implementation, no other additional actions appear necessary.

5.0 CONCLUSIONS

This remediation of the Site has been performed in compliance with the requirements contained in the MPCA-approved RAP. Soil cleanup activities completed at the Site have addressed soil contamination concerns by removing the contaminated soils. Remaining soils meet the approved response action criteria, except where they cannot be removed along construction limits. Remaining soil impacts in the roadway have been capped with clean backfill material and paved surfaces.

6.0 RECOMMENDATIONS

Based on our results, discussion, and conclusions above, AET believes that no further excavation and disposal of soils is necessary for response action purposes. AET recommends the MPCA VIC program should issue a No Further Action determination for the Site. In addition, the MPCA PBP program should issue an Approval of Voluntary Response Actions letter.

7.0 CLOSURE

AET believes that we conducted our services for this project in a manner consistent with that level of skill and care ordinarily exercised by other members of the profession currently practicing in this area. If conditions differing from our original findings are identified, AET should be immediately contacted to review those conditions and determine if there are any material impacts on any of our conclusions and recommendations. Any alterations will be communicated to the client and the MPCA.

Report Prepared By:
American Engineering Testing, Inc.



Tracey C. Lee
Environmental Engineer

Report Reviewed By:
American Engineering Testing, Inc.



Kathryn J. Kleiter, P.G.
Manager, St. Paul Environmental Dept.

Tables

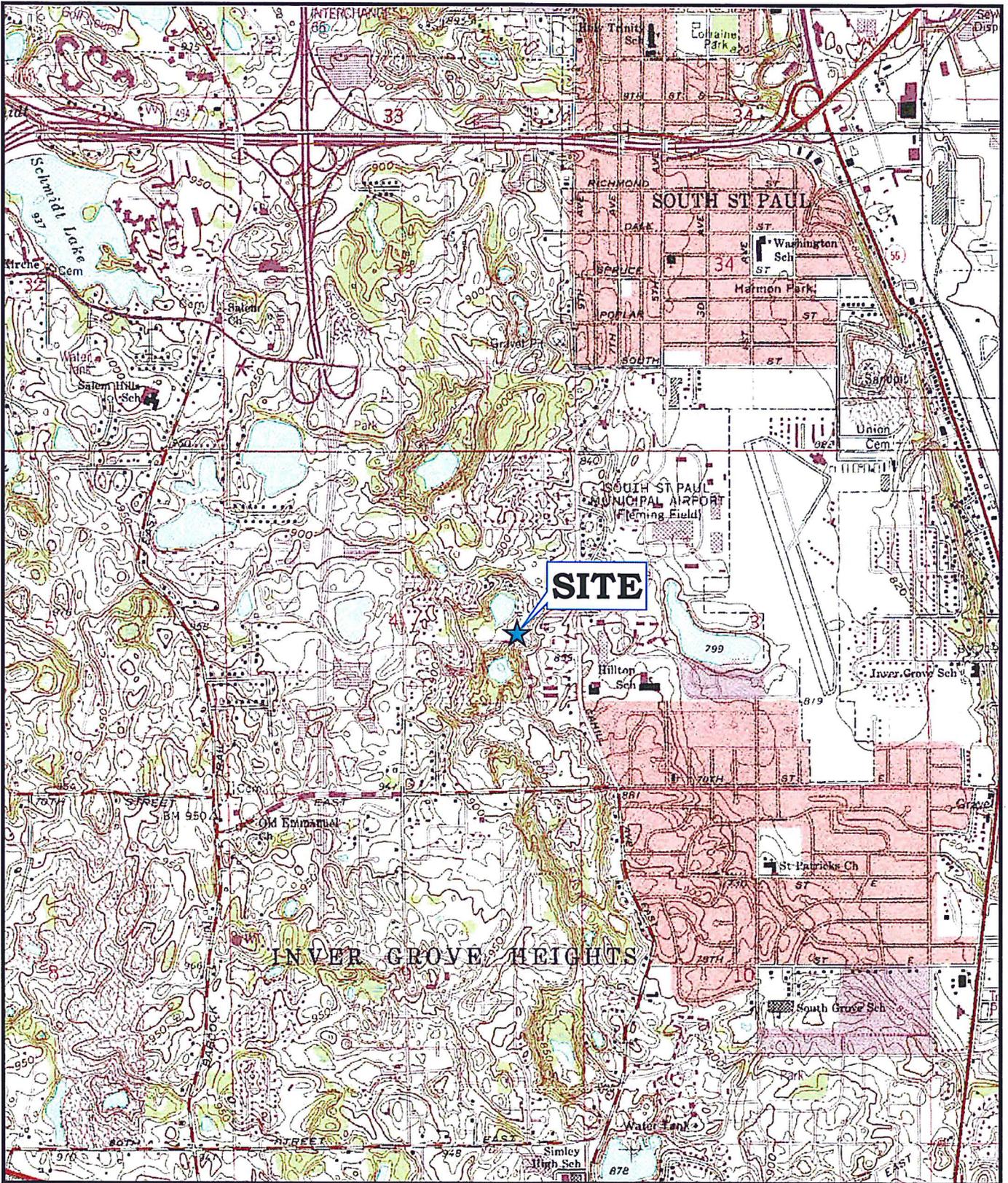
Table 1
 Summary of Soil Sample Laboratory Analysis
 Urban Street Reconstruction Project, 65th Street East Buckley Way, Inver Grove Heights, MN
 AET Project No. 22-01370

Sample ID	Sample Depth (feet)	Sample Date	PID Reading (ppm)	Diesel Range Organics	Polynuclear Aromatic Hydrocarbons (PAHs)										Lead			
					BaP Equivalent (BaP Eq)	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene		Phenanthrene	Pyrene	
MPCA Tier I Residential SRVs			10*	100*	2	7880	BaP Eq	2	BaP Eq	2	BaP Eq	BaP Eq	BaP Eq	1080	BaP Eq	--	890	300
TP-1	2-4	8/15/12	0.5	<7.5	<0.0510	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	2.2
TP-2	2-4	8/15/12	0.3	<8.0	<0.0512	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	2.1
TP-3	2-4	8/15/12	0.5	<8.0	<0.0530	<0.0106	<0.0106	<0.0106	<0.0106	<0.0106	<0.0106	<0.0106	<0.0106	<0.0106	<0.0106	<0.0106	<0.0106	3.3
TP-4	2-4	8/15/12	0.4	69.1	0.066	0.015	0.034	0.051	0.065	0.037	0.023	0.059	0.069	0.020	0.054	0.080	0.080	6.4
B-1	4	8/15/12	0.6	8.9	0.226	0.018	0.121	0.150	0.215	0.141	0.065	0.147	0.169	0.115	0.048	0.190	0.190	343
S-2 (R)	2-4	8/15/12	0.4	9.7	0.923	<0.112	0.469	0.628	0.799	0.509	0.347	0.567	0.516	0.431	<0.112	0.618	0.618	435
B-3	4	8/16/12	0.4	12.1	0.108	<0.0109	0.058	0.072	0.095	0.068	0.041	0.069	0.080	0.053	0.019	0.093	0.093	309
B-4	4	8/16/12	0.4	7.6	0.358	0.033	0.214	0.234	0.300	0.222	0.113	0.232	0.277	0.170	0.080	0.300	0.300	157
S-5 (R)	2-4	8/16/12	0.2	9.3	0.105	<0.0110	0.060	0.072	0.102	0.043	0.045	0.072	0.085	0.035	0.020	0.095	0.095	304
S-6 (R)	2-4	8/16/12	0.1	43.2	0.296	<0.110	0.207	0.227	0.320	0.201	<0.110	0.239	0.327	0.140	<0.110	0.347	0.347	392
S-7	2-4	8/16/12	0.1	39.2	0.333	0.023	0.195	0.220	0.306	0.205	0.108	0.208	0.241	0.171	0.058	0.264	0.264	231
S-9	2-4	8/16/12	0.3	23.9	0.206	0.017	0.121	0.142	0.223	0.082	0.067	0.133	0.146	0.066	0.039	0.175	0.175	265
S-11	2-4	8/29/12	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	234
S-15	2-4	8/29/12	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	234
S-16	2-4	8/29/12	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	50.7
S-17 (R)	2-4	8/29/12	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1110

Notes:

- ppm: parts per million
- MPCA: Minnesota Pollution Control Agency
- SRV: Soil Reference Value
- * MPCA limit for unregulated fill
- : not applicable or analyzed
- TP-1: test pit sample
- B-1: base sample
- S-1: sidewall sample
- (R): removed
- 1110** value exceeds response action limit(s)

Figures



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ENGINEERING
TESTING, INC**

Map Reference:
USGS 7.5' Quadrangle: Inver Grove
Heights and St. Paul East, Minnesota

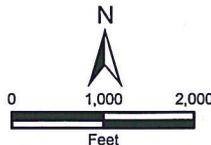
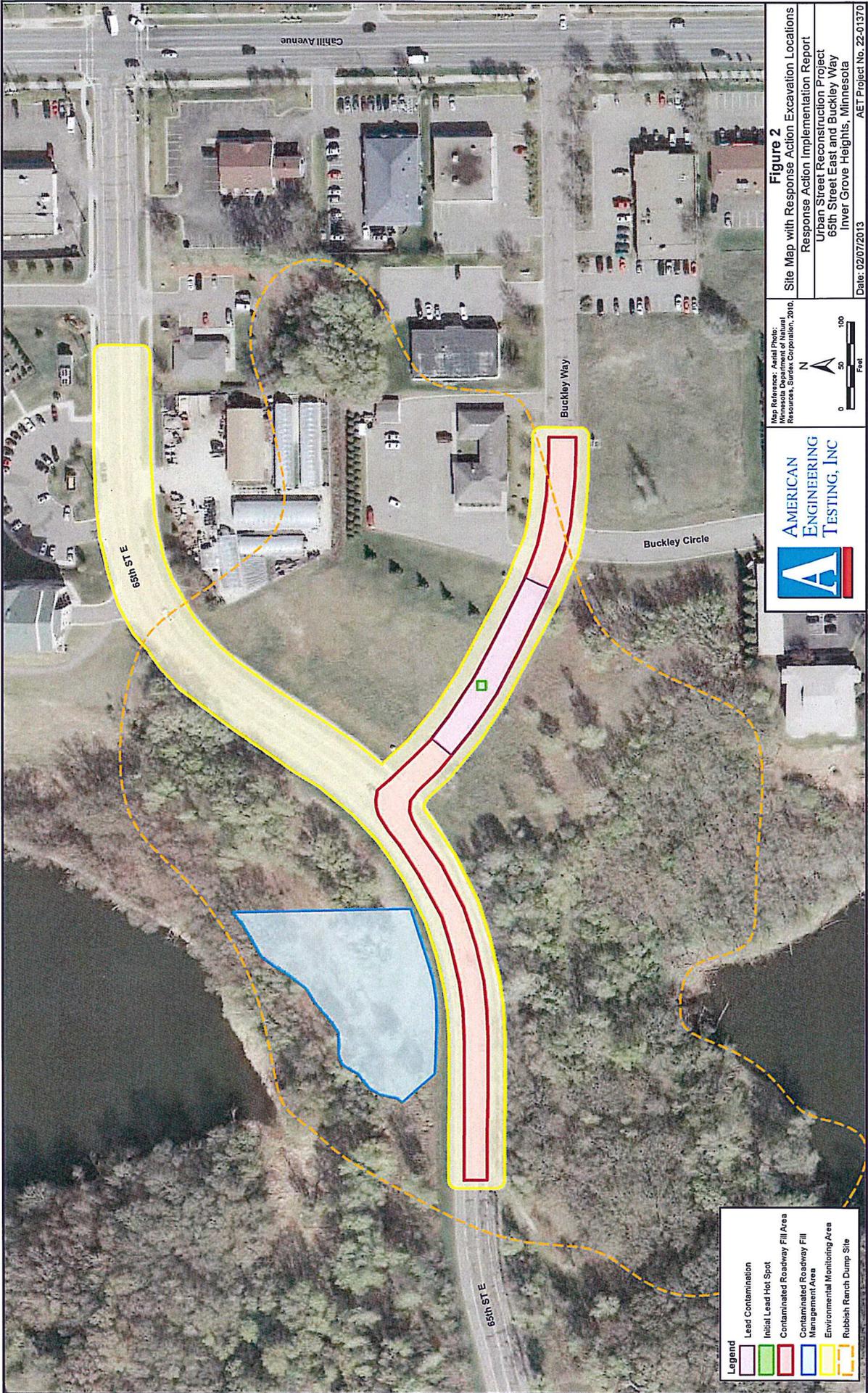


Figure 1
Site Location Map

Response Action Implementation Report
Urban Street Reconstruction Project
65th Street East and Buckley Way
Inver Grove Heights, Minnesota

Date: 01/16/2013

AET Project No. 22-01370



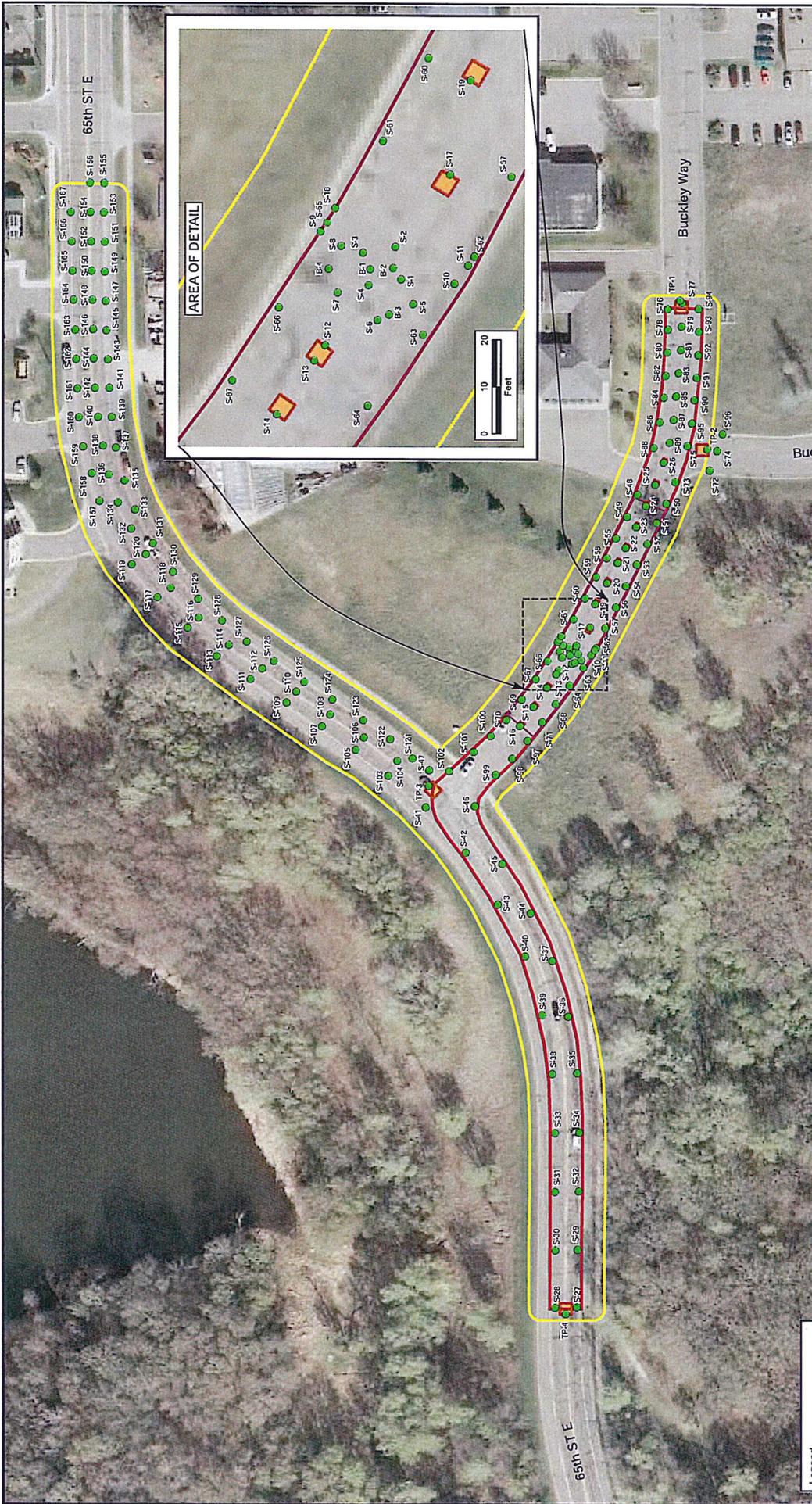
- Legend**
- Lead Contamination
 - Initial Lead Hot Spot
 - Contaminated Roadway Fill Area
 - Management Area
 - Environmental Monitoring Area
 - Rubbish/Renewal Dump Site



Map is based on Aerial Photo
 Minnesota Department of Natural
 Resources, Surdex Corporation, 2010.



Figure 2
 Site Map with Response Action Excavation Locations
 Response Action Implementation Report
 Urban Street Reconstruction Project
 65th Street East and Buckley Way
 Inver Grove Heights, Minnesota
 Date: 02/07/2013
 AET Project No. 22-01370



Legend

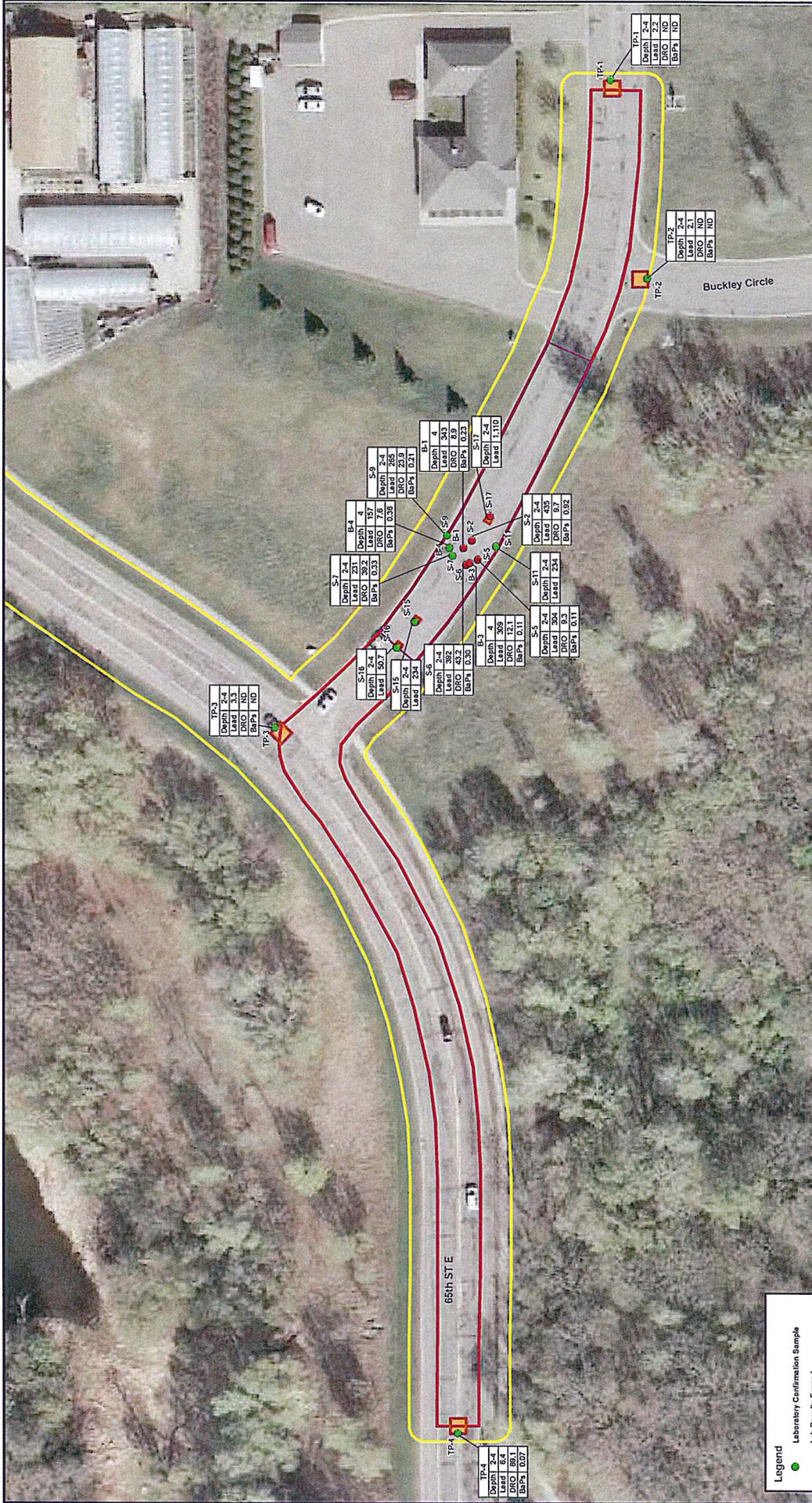
- Screening Confirmation Sample
- Test Pit Areas
- Lead Contamination
- Contaminated Roadway Fill Area
- Environmental Monitoring Area

**AMERICAN
ENGINEERING
TESTING, INC**

Map Reference: Aerial Photo:
Minnesota Department of Natural
Resources, Surlex Corporation, 2010.

N
0 40 80
Feet

Figure 3A
Response Action Results
Screening Confirmation Samples
Response Action Implementation Report
Urban Street Reconstruction Project
65th Street East and Buckley Way
Inver Grove Heights, Minnesota
Date: 02/07/2013
AET Project No. 22-01370



AMERICAN ENGINEERING TESTING, INC

Figure 3B
Response Action Results
Laboratory Confirmation Samples
Response Action Implementation Report
Urban Street Reconstruction Project
65th Street East and Buckley Way
Inver Grove Heights, Minnesota
Date: 02/07/2013
AET Project No. 22-01370

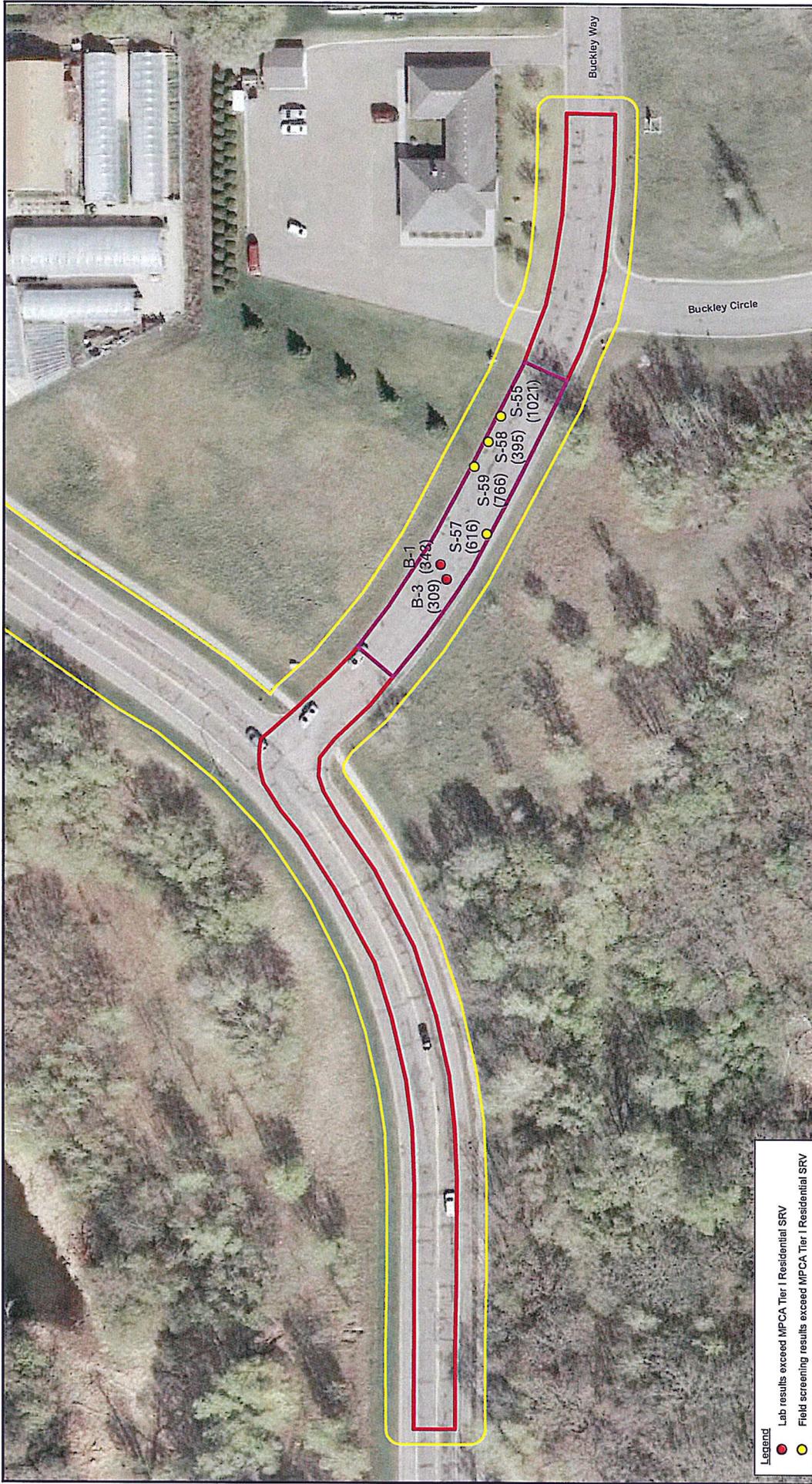
Map Reference: Aerial Photo: Mosaic
Map Data: Minnesota State
Resources, Surdex Corporation, 2010.

N
0 30 60
Feet

Legend

- Laboratory Confirmation Sample
- U.S. Route Escarpment
- MPCA Tier 1 Residential SRV
- Test Pit Areas
- Lead Contamination
- Contaminated Roadway Fill Area
- Environmental Monitoring Area

All results in mg/kg



Legend

- Lab results exceed MPCA Tier I Residential SRV
- Field screening results exceed MPCA Tier I Residential SRV
- Lead Contamination
- Contaminated Roadway Fill Area
- Environmental Monitoring Area
- (309) Lead Result (mg/kg)

Map Reference: Aerial Photo
 Minnesota Department of Natural Resources, Surdex Corporation, 2010.

N

0 30 60
 Feet

AMERICAN ENGINEERING TESTING, INC

Figure 4
 Residual Contamination Locations
 Response Action Implementation Report
 Urban Street Reconstruction Project
 65th Street East and Buckley Way
 Inver Grove Heights, Minnesota
 Date: 02/07/2013
 AET Project No. 22-01370



Memo

To: Joe Lynch, City of Inver Grove Heights
From: Jessica Cook and Shelly Eldridge, Ehlers
Cc: Kristi Smith, City of Inver Grove Heights
Steve Apfelbacher and Elizabeth Diaz, Ehlers
Date: August 28, 2012
Subject: Actions Related to State Auditor TIF Reports

Each year, as required under state law, the City completes financial reporting forms for each tax increment district and files them with the Minnesota Office of the State Auditor. Ehlers completed the most recent reports for fiscal years 2010 and 2011 on behalf of the City.

In 2010, the Office of the State Auditor significantly and retroactively changed the reporting forms and the method for reporting. The new reports require the City to segregate tax increment revenue from other revenues that have been routinely accounted for in the TIF funds, not only by the City of Inver Grove Heights but by most cities. Beginning in 2012, the City's audited financial statements will only show tax increment revenues and expenditures in the City's financial statements.

The State Auditor's requirement to segregate the tax increment from "non-increment" and make other changes to the record keeping and reporting result in the need to make transfers between funds. The City Council approved TIF Fund transfers by resolution in March of 2012. Based on further review, we have determined that the transfers need to be revised. Kristi Smith has been instrumental in assisting Ehlers to address this issue.

Ehlers recommends rescinding the prior transfers, and adopting the attached resolution approving the transfers needed to comply with the new OSA reporting requirements. Adopting the attached resolution will allow the transfers to occur in fiscal year 2012.

**CITY OF INVER GROVE HEIGHTS
DAKOTA COUNTY
STATE OF MINNESOTA**

Council member _____ introduced the following resolution and moved its adoption:

RESOLUTION NO. _____

RESOLUTION APPROVING TRANSFERS FOR FISCAL YEAR 2012

WHEREAS, the City of Inver Grove Heights, Minnesota (the "City") has three existing tax increment districts; and

WHEREAS, in 2010, the Minnesota Office of the State Auditor changed the reporting forms and the method for reporting for the tax increment districts; and

WHEREAS, the new reporting and record keeping requirements necessitate the transfer of funds; and

WHEREAS, on March 26, 2012 the City Council adopted Resolution No.12-44 approving transfers for Fiscal Year 2011; and

WHEREAS, the transfers need to be revised and amended;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Inver Heights, Minnesota, that the City Council hereby rescinds Resolution No.12-44 and approves the transfers listed on Exhibit A for Fiscal Year 2012.

The motion for the adoption of the foregoing resolution was duly seconded by Council member _____, and upon a vote being taken thereon, the following voted in favor thereof:

and the following voted against the same:

Dated:

ATTEST:

Mayor

Deputy Clerk

(Seal)

EXHIBIT A
to
RESOLUTION NO. _____

Fund Number	Fund Name	Transfer In	Transfer Out	Action
405	TIF 2-1 Water System	1,809,408.00		To comply with OSA reporting requirements
442	Improvements		1,809,408.00	
452	TIF 3-1 Water System		1,272,180.00	To comply with OSA reporting requirements
442	Improvements	1,272,180.00		
453	TIF 4-1 Water System		63,567.00	To comply with OSA reporting requirements
445	Improvements	63,567.00		
405	TIF 2-1		253,577.00	To transfer out non increment revenue per OSA reporting requirements
399	Closed Bond Fund	253,577.00		
452	TIF 3-1 Water System		1,193,623.00	To transfer out non increment revenue per OSA reporting requirements
442	Improvements	1,193,623.00		
453	TIF 4-1 Water System		165,248.00	To transfer out non increment revenue per OSA reporting requirements
442	Improvements	165,248.00		

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Approve 2013 Tree Replacement Plan

Meeting Date: March 11, 2013
 Item Type: Consent Agenda
 Contact: Mark Borgwardt-651-450-2581
 Prepared by: Mark Borgwardt, Brian Swoboda
 Reviewed by: Eric Carlson

Fiscal/FTE Impact:
 None
 Amount included in current budget
 Budget amendment requested
 FTE included in current complement
 New FTE requested – N/A
 Other

PURPOSE/ACTION REQUESTED

Consider approval of the proposed 2013 Tree Replacement Plan not to exceed \$10,000 from the Tree Preservation Fund (Fund 443).

SUMMARY

The Council approved the Tree Preservation Fund Plan Policy in early 2003. (See attached). The purpose of the policy is to provide criteria for the expenditure of funds in the City of Inver Grove Heights Tree Preservation Fund. The policy provides for expenditures of up to 50% of the fund in any given year. The current balance in the Tree Preservation Fund (Fund 443) is approximately \$27,800 (50% = \$13,900). While the policy allows for the expenditure of up to 50% of the fund balance, we don't expect much development activity in 2013 based on the economy.

The following is the recommended 2013 expenditures:

Tree Removal	Dead, dying, diseased, storm, & hazard trees as required by City ordinance on public property	\$10,000
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POLICY

TREE PRESERVATION MITIGATION FUND

TREE REPLACEMENT PLAN

PURPOSE AND INTENT OF POLICY

The purpose of this policy is to provide criteria for the expenditure of funds in the City of Inver Grove Heights Tree Protection and Preservation Fund. The intent is the enhancement of the city's forest resource.

POLICY

Funds may be used as follows:

1. Reforestation Program

The Reforestation Program includes the purchase and planting of trees on public land including, but not limited to city parks, city golf course, city nursery, storm sewer retention ponds, open space and limited road right-of-way such as Cahill Ave. between Upper 55th St. and 80th St. with community-wide significance. Costs may include tree purchase, planting, and a maintenance period (i.e. irrigation, tree staking, fertilization, pruning, etc.) until the tree(s) becomes established.

2. Special Needs

In the event of a natural disaster or other identifiable special need, funds may be contributed to other city sponsored reforestation programs.

CONTINUANCE OF POLICY

This policy shall apply only to funds received specifically from Tree Protection and Preservation Mitigation Fund (Code 515.90 Subd 28) from applications to the City. At no time may the fund deplete by more than 50%, or to less than \$10,000 in any given year, without the express consent of the City Council.

RESPONSIBILITY

The Director of Parks and Recreation and the City Administrator shall have primary responsibility for the implementation and coordination of this policy per Code 515.90 Subd 28. An annual tree replacement plan, prepared by Parks Division, will be submitted for Park and Recreation Advisory Commission review and City Council approval.

Approved by the Inver Grove Heights City Council 2/10/03

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Consider Approval of a MOU with Friends of the Mississippi River for Implementation of the First Phase of a Natural Resource Management Plan for the Rock Island Swing Bridge Property

Meeting Date: March 11, 2013
 Item Type: Consent Agenda
 Contact: Mark Borgwardt-651-450-2581
 Prepared by: Mark Borgwardt
 Reviewed by: Eric Carlson

Fiscal/FTE Impact:

- None
- Amount included in current budget
- Budget amendment requested
- FTE included in current complement
- New FTE requested – N/A
- Other

PURPOSE/ACTION REQUESTED

Approve entering into Memorandum of Understanding, with Friends of the Mississippi River, (attached) to provide restoration services for 17.28 acre Rock Island Swing Bridge property. Recommended \$15,000 funding is from Park Fund 402.

SUMMARY

Parks staff was successful in securing \$15,000 funding for restoration of 17.28 acre area surrounding Rock Island Swing Bridge through a grant provided by the Minnesota Environment and Natural Resources Trust Fund as recommended by the Legislative-Citizen Commission on Minnesota Resources (LCCMR), through Friends of Mississippi River membership in the Metro Conservation Corridors partnership. The total city grant match cost for restoration activities is \$15,000 with funding recommended from Park Fund 402.



Friends of the Mississippi River

360 N Robert Street, Suite 400 • Saint Paul, MN 55101 • 651/222-2193 • Fax 651/222-6005

DRAFT Restoration Agreement Between
Friends of the Mississippi River
And
The City of Inver Grove Heights, MN

This Agreement establishes a partnership between Friends of the Mississippi River (FMR) and The City of Inver Grove Heights, MN for the purposes of conducting restoration and enhancement activities at the Rock Island Swing Bridge unit within the Heritage Park as described in the *Rock Island Swing Bridge, within Heritage Village Park - Natural Resource Management Plan*.

Together, the Parties enter into this Agreement to mutually improve the natural communities within the Rock Island Swing Bridge unit. Accordingly, FMR and City of Inver Grove Heights, MN operating under this Agreement agree as follows.

II. Deliverables

Using the *Rock Island Swing Bridge, within Heritage Village Park - Natural Resource Management Plan*, FMR agrees to conduct the list of activities within the Rock Island Swing Bridge unit as specified in Exhibits A (activity list and timeline spreadsheet) and B (map showing activity areas) as allowed with the available funding. These activities include: hiring a contractor(s) to remove exotic invasive woody species from the floodplain forest, the lowland hardwood forest, the embankment slopes, and the altered shrubland areas. Activities also include conducting a prescribed burn on areas to be restored to prairie and savanna (Mesic Savanna and portions of the Prairie on the embankments) and to the Terrace Forest. Other activities include stabilizing areas of eroding soil on the steep slopes of the embankments (using water bars, wattles, erosion control fabric, plantings, etc.), cutting selected trees in the floodplain forest to expose gaps in the canopy for cottonwood regeneration, planting of shrubs near the swing bridge pier and along the north side of 66th Street E, and seeding the areas designated as savanna and prairie. FMR is also interested in organizing one or more community stewardship events at this site, if funding can be located. Using an adaptive management approach to enhancing the natural features of the site, FMR may find it necessary to use other techniques to achieve the goals. FMR will consult with city staff prior to utilizing other techniques not specifically identified in this MOU.

III. RESPONSIBILITIES

Each party will appoint a person to serve as the official contact and to coordinate the activities of each organization in carrying out this MOU. The appointees of each organization are:

Friends of the Mississippi River Tom Lewanski, Conservation Director 360 North Robert Street, Suite 400. St. Paul, MN 55101 651-222-2193 Ext. 12 tlewanski@fmr.org	The City of Inver Grove Heights Mark Borgwardt, Park Superintendent 8150 Barbara Ave. Inver Grove Heights, MN 55077 651-450-2581 mborgwardt@invergroveheights.org
--	---

The partnering organizations agree to the following tasks for this Agreement:

FMR will:

- Contribute up to \$15,000 toward the completion of the restoration activities presented in Exhibit A. FMR's funds for this project are provided by a grant from the Minnesota Environment and Natural Resources Trust Fund as recommended by the LCCMR. Funding for activities in subsequent years will have to be applied for in future grant cycles. FMR is committed to partnering with the City of Inver Grove Heights to restore and enhance the natural areas at this site.
- Notify the city's designated contact when the contractor(s) plan to be on-site to conduct activities associated with this project.
- Secure all permits, variances, and/or official permission required to conduct the activities
- Submit invoices in timely manner.
- FMR guarantees that the work that it will do as part of this Agreement and according to the approved work plan will be done in accordance with applicable standards in a workman like manner. However, FMR disclaims and excludes any warranties of any kind including but not limited to fitness, whether implied or expressed, for a particular purpose or merchantability. In no event shall FMR be liable to City of Inver Grove Heights for consequential or incidental damages or personal injuries.

The City of Inver Grove Heights will:

- Contribute up to \$15,000 toward the completion of the restoration activities presented in Exhibit A.
- Assist FMR in obtaining any necessary permits.
- Be available to consult on the project.
- Pay invoices promptly.
- Grant permission to Friends of the Mississippi River and any contractors that it hires to conduct restoration/enhancement activities at this site and grant unobstructed access to the project site.
- Conduct outreach required to inform neighborhood/community of the activities associated with this enhancement project.
- The City of Inver Grove Heights acknowledges that the funds that FMR will use to conduct the restoration and enhancement activities were awarded through a grant from the Minnesota Environmental and Natural Resources Trust Fund. Use of these funds has specific requirements. In accepting the use of these funds at this site the City of Inver Grove Heights agrees to the following:

- To maintain the project for a minimum of ten (10) years from the date of this signed agreement, or according to agreements with other jurisdictions, whichever is longer, to ensure that the conservation objectives of this agreement are met and maintained.
- Maintenance will consist of retaining any installed planting/restoration work and not disturbing, degrading or removing it by other activities, including mowing. Plants installed in the restoration site and all other management activities, including use of herbicides, mowing, etc must comply with the Natural Resource Management Plan.
- If the City of Inver Grove Heights must temporarily impact the restoration site to respond to emergent issues affecting normal business activities, it is the responsibility of the City of Inver Grove Heights to ensure that the site will be restored to the pre-impact conditions as soon as possible, using its own funding. Consultation with FMR prior to any such work is strongly suggested, to ensure minimizing impacts and achieving proper mitigation.
- If FMR or the City of Inver Grove Heights intends to conduct habitat restoration, enhancement or management activities that differ from the jointly approved NRMP, the other party to this agreement must be consulted prior to implementing these changes to determine if the proposed activities are acceptable or a revised NRMP is required.

IV. TERM OF UNDERSTANDING

The term of this Agreement is for a period of one year from the date that it was finalized. Changes to this Agreement must be in writing and signed by the official contacts from both organizations.

Authorization

On behalf of the organization I represent, I agree to fulfill my responsibilities outlined in this MOU.

Whitney Clark

Date:

Executive Director
Friends of the Mississippi River

Mark Borgwardt

Date:

Park Superintendent
City of Inver Grove Heights

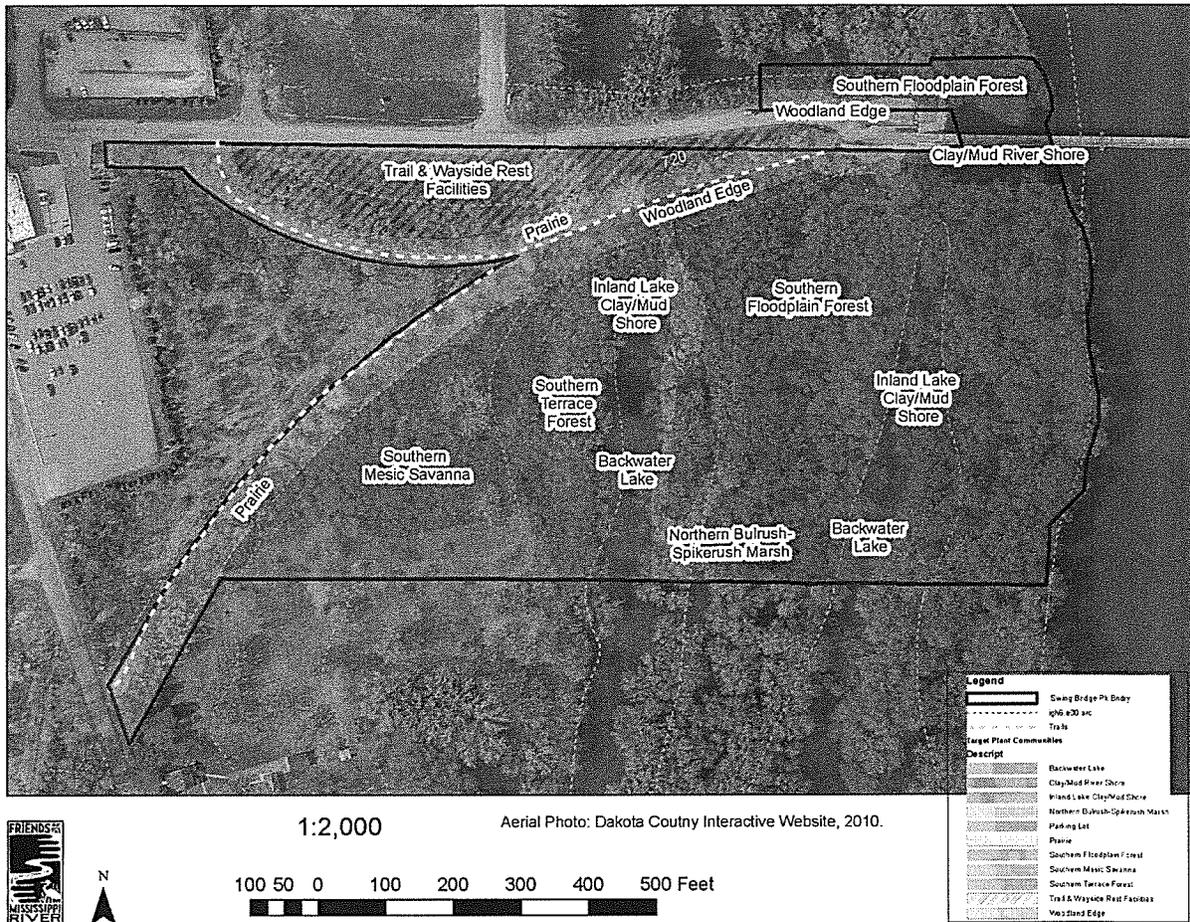
EXOTIC BRUSH REMOVAL				
#	Units	Acres	When	Tasks
2013				
1	TF, Sav	2	Winter	Cut exotic brush, and designated native brush, and treat stumps. Work directly with STS crews to haul and stack. See attached map for designated area.
2	FF, Pr, WdEdg, TF, Sav	9	Winter	Cut, treat, haul, and stack exotic brush, and designated native brush. Burn brush piles.
	WdEdg-north side of 66th Street	0.6	Winter	Cut, treat exotic brush. Chip and blow chips back onto area where brush was removed.
FLOODPLAIN FOREST RESTORATION				
Units	Acres	When	Tasks	
2013				
3	FF	1	Summer, Fall	Control purple loosestrife on shoreline.
4	FF	4	Winter	Create canopy gaps by cutting designated trees along shoreline and around blowdown in interior.
5	FF	1.5	Summer, Fall	Plant into canopy gaps with cottonwood; also with black willow by shoreline.
6	FF	4	Spring	Plant bare root whips throughout forest.
7	FF	4	Any	Annual Ecological evaluation.
PRAIRIE RESTORATION ON EMBANKMENT SLOPES				
Units	Acres	When	Tasks	
2013				
8	Pr, WdEdg	3	Spring, summer	Collect and test soil samples.
9	Pr	1	Spring, summer, fall	Monitor the north-facing slope of embankment for prairie seedlings.
10	Pr, WdEdg	3	Spring and Fall	For seedlings and saplings (whips), brush cut in late spring (after leaf-out) and foliar-treat with glyphosate herbicide in fall (ideally mid October).
11	Pr, WdEdg	3750 SQ FT	Summer, Fall	Spot-treat to control herbaceous weedy species, only where no native prairie seedlings occur, and at FMR Ecologists designation.
12	Pr, WdEdg	3	Spring	Install water bars and/or wattles on slope to stabilize it.
13	Pr, WdEdg	3750 SQ FT	Spring	Hand seed prairie mix onto treated areas. Install erosion control blanket as necessary. Seed provided by FMR.
14	Pr, WdEdg	1	Spring	Install native shrubs on slopes.
15	Pr, WdEdg	3	Summer	Mow or brush cut weeds two or three times on seeded areas on slope. Install 370 native plugs as per "scope of work" section in RFP.
2014				
16	Pr, WdEdg	3	Spring	Mow or brush cut weeds one time on seeded areas on slope.
17				Annual Ecological evaluation.
RESTORATION of TERRACE FOREST and MESIC SAVANNA				
Units	Acres	When	Tasks	
2013				
18	TF, Sav	4	Spring, Summer, Fall	Spot-treat to control herbaceous weedy species.
19	TF, Sav	5	Summer, Fall	Treat exotic resprouts.
20	TF, Sav	5	Spring and Fall	Mow or brush cut exotic woody saplings (whips) and seedlings, after they leaf out. Foliar-treat (with glyphosate) resprouts later, in fall, while they are still actively growing (ideally, mid October).
21	TF, Sav, Pr (s-facing)	5	Summer, Fall	Seed with wild rye (and other native grasses) and oats to establish a grass component that will serve as fuel for a ground fire.
2014				
22	TF, Sav, Pr (s-facing)	5	Spring	Evaluate for fuel levels in units prior to burn.
23	TF, Sav, Pr (s-facing)	6.5	Spring	Conduct controlled burn on the Terrace Forest, the Mesic Savanna, and the south-facing Prairie (embankment slopes) units.
24	TF, Sav	5	Spring (before 3rd week of June)	Seed with native prairie/savanna mix.
25	TF, Sav	5	June, July, August	Mow 3 times.
2015				
26	TF, Sav	5	Spring	Mow once.
27	TF, Sav	5	Spring, summer	Spot treat as necessary.
28	TF, Sav	5	Spring (before 3rd week of June)	Seed or interseed in areas that did not take (contingency plan).
29	TF, Sav	5	Any	Annual Ecological evaluation.
30	TF, Sav	3	Spring, summer, fall	Plant savanna trees in pods. Protect pods.

EXHIBIT A Restoration Activities

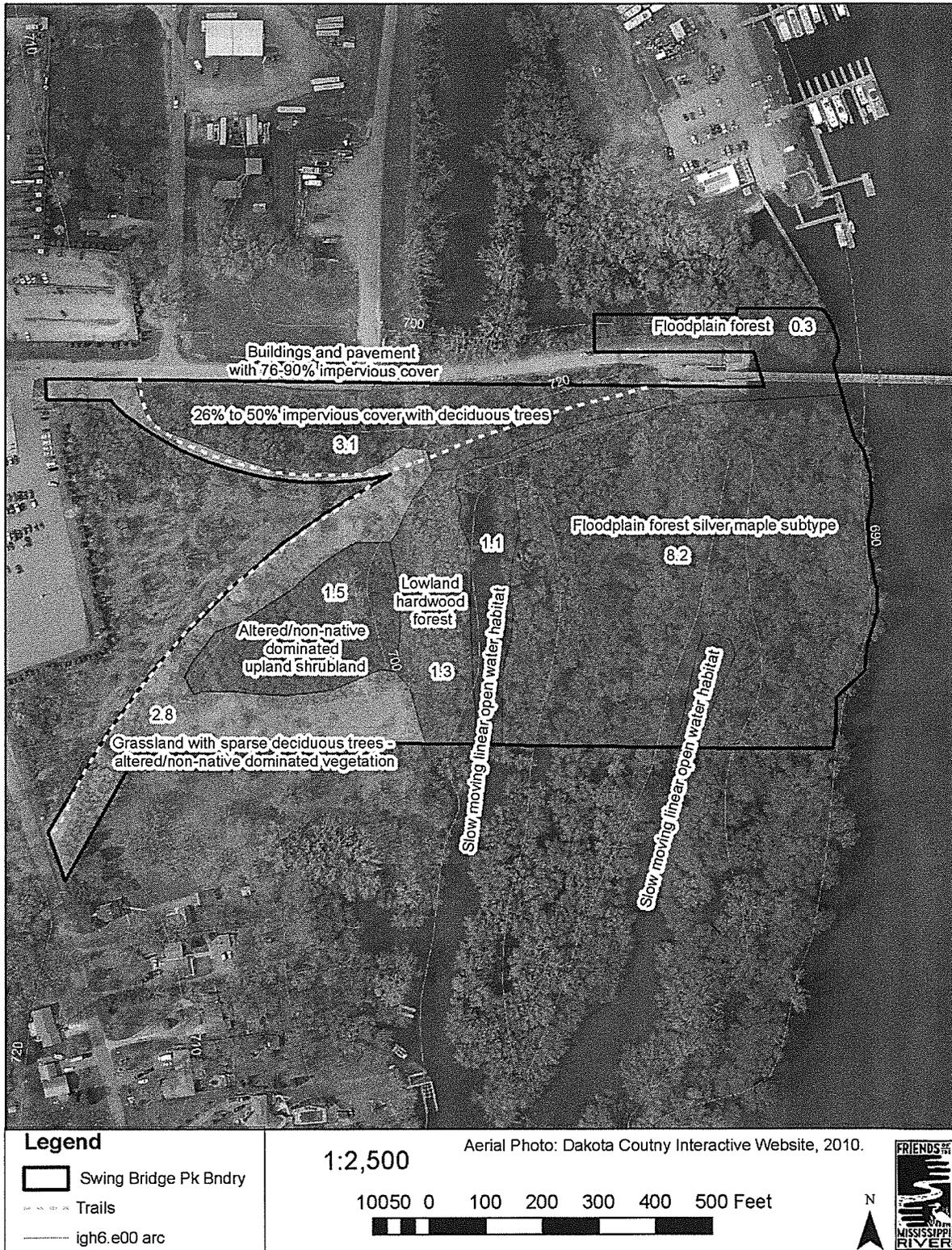
This represents a list of tasks that will be completed in the timeframe of this MOU. Text highlighted in yellow is higher priority and text highlighted in green is slightly lower priority. Text in white is scheduled to be completed in years 2 and 3, so will have to be covered under future MOU's. We estimate that yellow-highlighted and green-highlighted tasks will be completed in the first 12 months, and thus be covered under this MOU, but actual costs may vary from estimated ones. Any task not completed in the first 12 months will have to be addressed in future MOU's.

EXHIBIT B

Map 1. Target Plant Communities of Project Area

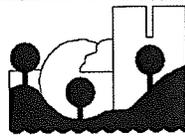
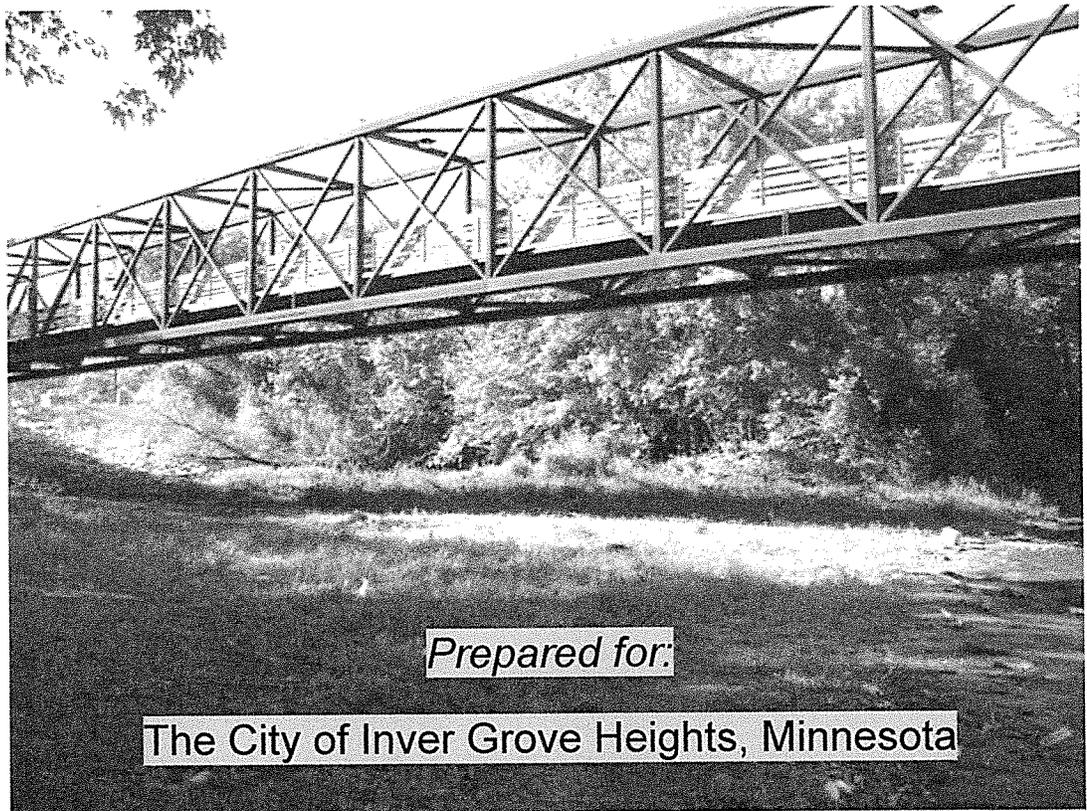


Map 2. Existing Landcover.



Rock Island Swing Bridge, within Heritage Village Park

Natural Resource Management Plan



Prepared by:

Joseph Walton

Friends of the Mississippi River
360 North Robert Street, Suite 400

St. Paul, MN 55101

Ph: 651-222-2193 x33

October 2012



This Natural Area Management Plan and Work Plan has been reviewed and approved by:

City of Inver Grove Heights

_____ Date: _____
Mark Borgwardt, Park Superintendent, City of Inver Grove Heights, MN

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INTRODUCTION

This Natural Resource Management Plan presents the site analysis and recommended management land use activities for the approximately 19-acre Rock Island Swing Bridge Park, a city park owned by the City of Inver Grove Heights, MN. The document can be changed only by written agreement the landowner (the City of Inver Grove Heights, MN).

There are a several significant features on the site. First, the park is located on the banks of the Mississippi River, and thus is primarily composed of floodplain forest landcover type (8.2 acres), two backwater lakes (1.5 acres), and some lowland hardwood forest (1.3 acres). Another significant feature is the remnant from the old Rock Island Swing Bridge, which was the main reason the park was dedicated. Another feature of the park is that it is part of the regional trail system, which traverses Heritage Village Park (a larger system of City parkland that includes the Swing Bridge property) and beyond to the Mississippi River Regional Trail system, which is planned to go from the headwaters to the gulf of Mexico.

There are no rare plant or animal species records within park boundaries. However, in the open water river channel, there are 10 records of an endangered mussel, the wartyback (*Quadrula nodulata*), within 1 mile of park boundaries.

The forests of the Upper Mississippi River System serve as critical habitat for birds, animals, and fish. Forty percent of all migratory birds use the Mississippi River flyway. Large blocks of continuous forest still exist, especially in the north part of the Upper Mississippi River System, and the floodplain forest in the Swing Bridge Park is part of a larger block of forest. The floodplain forest bird community can be maintained by conserving existing forests as close to their present state as possible. Forest management should promote natural forest successional processes that produce diversity in age and structure of trees. (Knutson et al. 1996). Certain components of the forest are in decline, however, for example cottonwood regeneration, and one of the goals of this plan is to make recommendations on how to improve that situation.

Prior to European settlement, the park property, just upland from the floodplain, was likely dominated by oak savanna (historically called "Oak Openings and Barrens"). The majority of land surrounding the park site has been converted to urban landuse. Impervious surfaces, and increased stormwater runoff levels associated with that have impacted the quality of surface water, including that of the Mississippi River. Drastic changes to the rivers hydrology, flow, and flooding regime have come due to human modifications of the river, including wing dams and the construction of the 9-foot-channels project, starting in the 1920's and 1930's.

Changes to the plant communities of this park are also significant, with most of the former upland areas being lost or highly degraded. The floodplain forest has also changed quite a bit over the last 200 years, with a reduction of species diversity, age class distribution, and vegetation structure. Today the floodplain forest is dominated by a near monoculture of large silver maples, and to a lesser extent green ash. Eastern cottonwood and black willow have declined. The introduction of non-native, invasive species (especially buckthorn in the upland areas and potentially reed canary grass in the lowland areas), has also taken its toll on the land. One of the goals of this plan is to lay a strategy that can address the loss of diversity of the plant communities on this property, keeping in line with larger, regional conservation planning.

The purpose of management plan is to:

- Identify existing ecological conditions on the property
- Identify best management practices to maximize wildlife values, and retain and improve water quality and bank stabilization
- Identify methods to increase diversity of the extant plant communities

Specific ecological and cultural goals for this property are to:

- Increase coverage and diversity of native plant species and reduce non-native species
- Provide connectivity with other natural areas in the landscape and along the river corridor
- Maintain and manage the property for water quality by preventing or controlling any erosion that may develop
- Regenerate cottonwoods along the shoreline
- Restore oak savanna in the degraded upland portions of the property
- Reconstruct native prairie on the steep slope of the trail embankment (former railroad embankment)
- Utilize this property to demonstrate conservation and restoration of the riparian zone of the Mississippi River in Inver Grove Heights

SITE INFORMATION

Owner name, address, city/township, county and phone:

City of Inver Grove Heights, MN
8150 Barbara Ave.
Inver Grove Heights, MN 55077

Contact:

Mark Borgwardt
Parks Superintendent
651-450-2581

Township, range, section:

South ½ of Sec 2, T27N, R22W

Watershed:

Basin: Lower Mississippi River Basin

Watershed: Lower Mississippi River

Watershed District:

Lower Mississippi River

Parcel Identification Numbers:

200020078011, 200020075010, 203650041150.

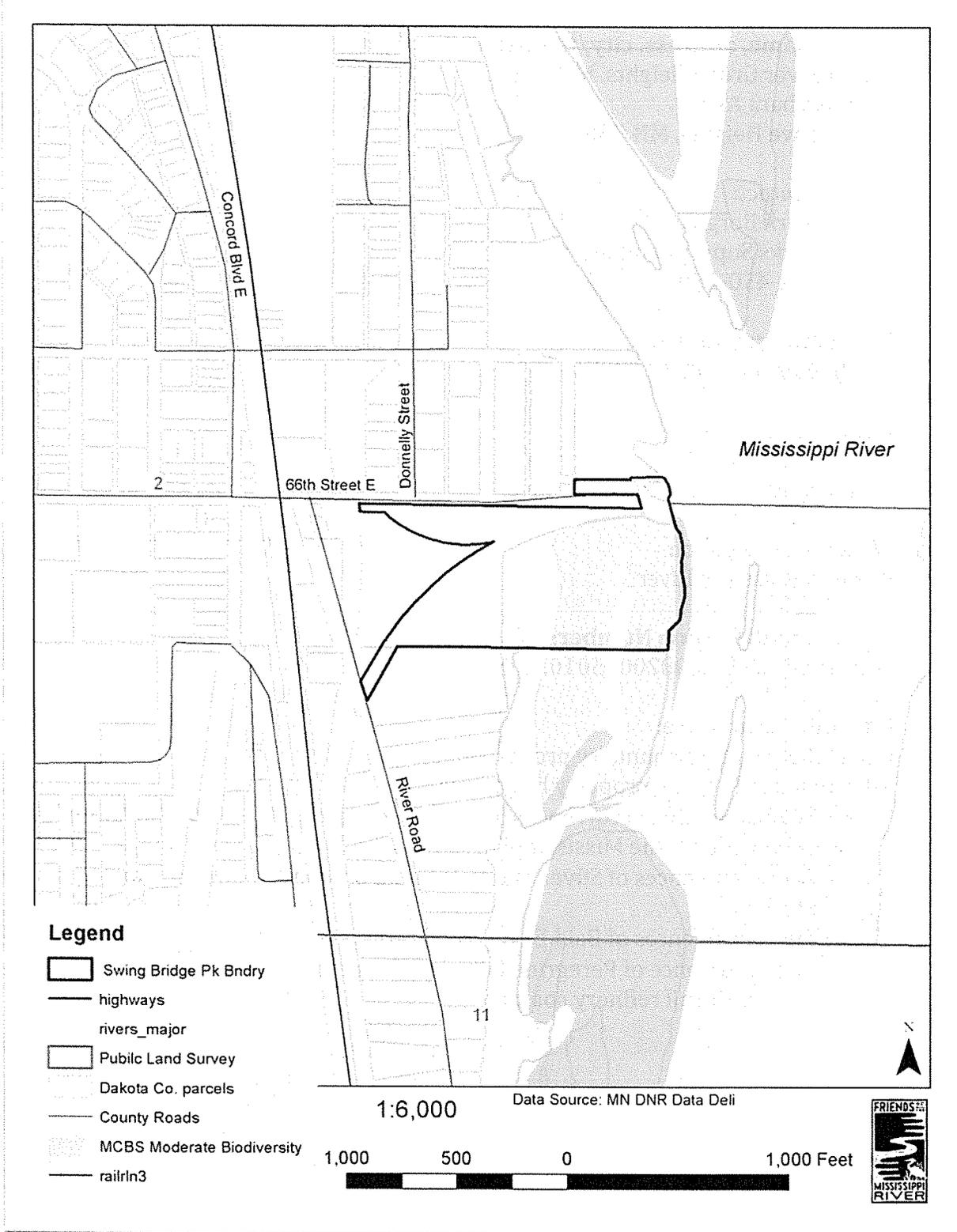
Element occurrence:

Inside the property boundary proper: none.

Within one mile of the property boundary:

- 10 documented occurrences of Wartyback mussel (*Quadrula nodulata*) in the open water of the Mississippi River.
- Two occurrences of Silver Maple-Virginia Creeper Floodplain Forest Type, FFs68a
- Two occurrences of Bald Eagle (*Haliaeetus leucocephalus*) on nearby islands
- One occurrence of Peregrine falcon (*Falco peregrinus*), to the east, across the river at the oil refinery complex

Figure 1. Property Parcel



LANDSCAPE CONTEXT

Proximity to established greenways

Because it contains areas designated as ecologically significant by Minnesota Department of Natural Resources (DNR), the Swing Bridge Park property is mapped within the Metro Conservation Corridor, a regional land protection plan of the DNR (Figure 2).

The site is connected to both the Great River Road and the Mississippi River Regional Trail. It is also inside the National Park Service's Mississippi National River Recreation Area. Connection to all of these regional trails provides multiple reasons for people to come to the area, recreate, shop, and explore the existing and future businesses (City of Inver Grove website).

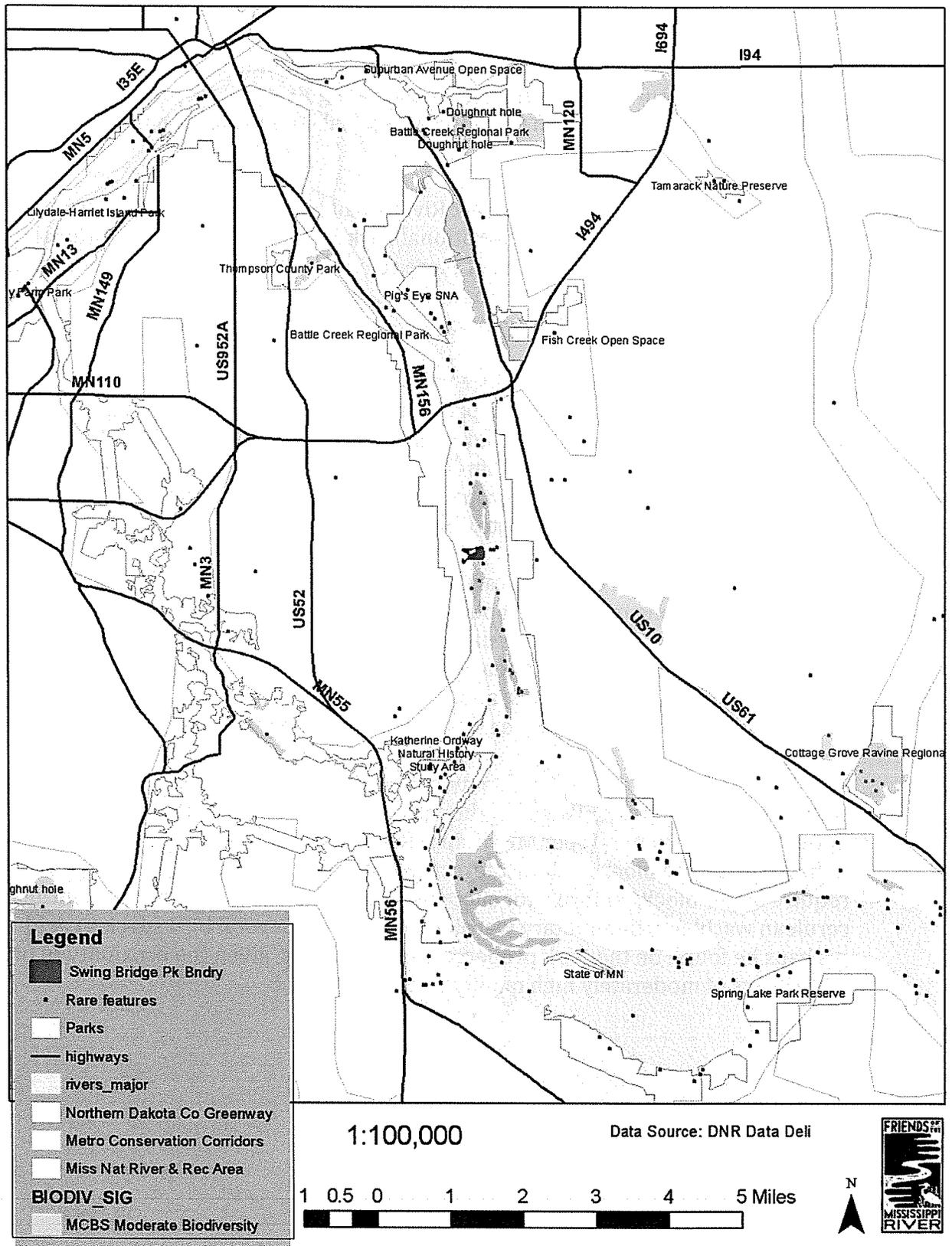
Ecological significance and wildlife value

The floodplain forest portion of the property is part of a larger area that was designated as having "moderate biodiversity" by the Minnesota County Biological Survey (MCBS) (Figures 1 and 2). Similarly ranked, are the islands to the north and to the south of the Swing Bridge property. This is significant, since not all areas of the Mississippi have been designated by MCBS, and thus this spot is important.

Although there are no records of rare species within the Swing Bridge Park property, within one mile, in the open water of the Mississippi River, occur ten records (observed 2011) of the endangered wartyback mussel (*Quadrula nodulata*). Within one mile of the park boundary, are two records for bald eagles (*Haliaeetus leucocephalus*) on nearby islands, and one record of Peregrine falcon (*Falco peregrinus*) to the east, across the river at the oil refinery complex.

Also within one mile of the park, are two records for Silver Maple-Virginia Creeper Floodplain Forest Type, FFs68a. Although this is the dominant forest type of the floodplain forest of the Upper Mississippi River System (UMRS), it is still beneficial to have such large blocks of intact forest. Many migratory and year-round birds require larger blocks of forest for successful fulfillment of their life cycles, including cerulean warbler, prothonotary warbler, and others. Several bird species could perhaps be found on the park property, even rare ones, given the proximity to other large tracts of moderately high quality floodplain forest.

FIGURE 2. LANDSCAPE CONTEXT



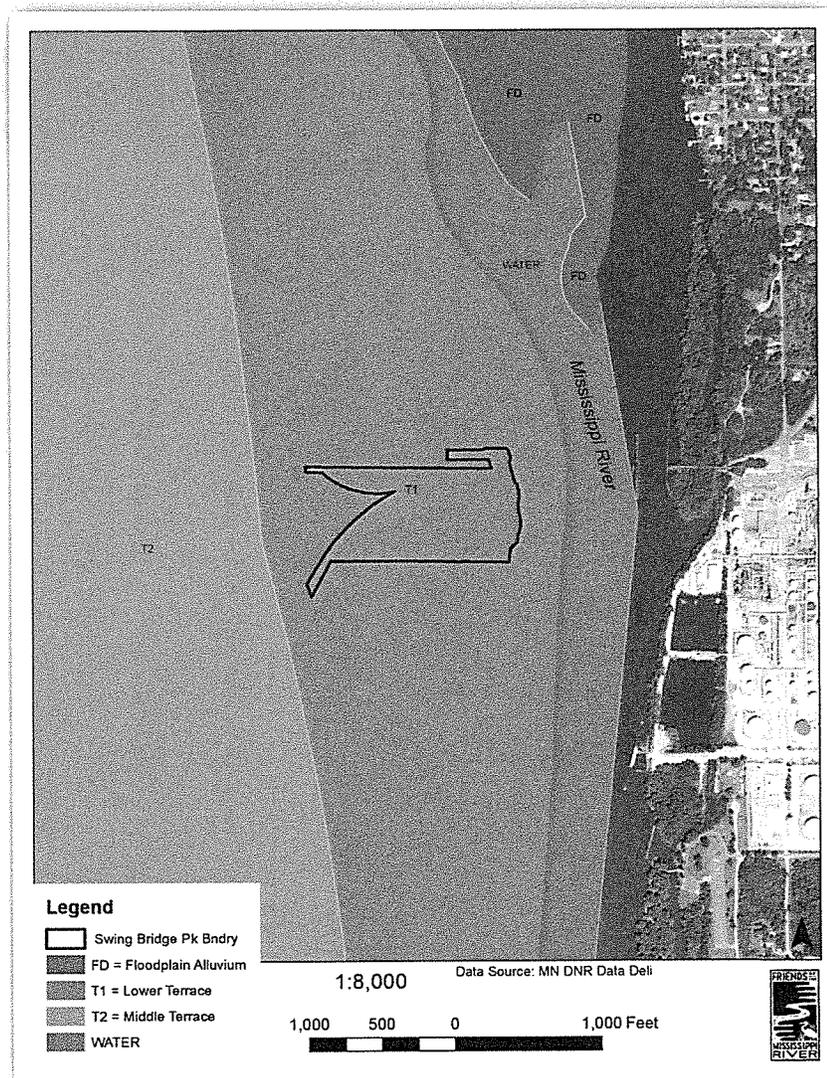
SITE GEOLOGY AND GROUNDWATER

The bedrock of the site varies. On the east, closer to the deeper channel, the bedrock is Jordan Sandstone. On the west, higher up and further away from the deeper channel, it is Prairie du Chien Group. Prairie du Chien is harder and erodes more slowly than the softer Jordan sandstone. Depth to bedrock is quite shallow; only about 10 to 20 feet below the surface.

The surficial geology of this site represent the lower terrace deposits, T1. Terraces were formed from the large river (Glacial River Warren, which followed the

Figure 3. Surficial Geology.

Although this map shows that the site falls completely within T1 deposits, mini terraces can exist within the major terrace groupings, which was observed in the field.



recession of the last glaciers circa 11,000 years before present) that formed the valley that now contains the Mississippi and Minnesota Rivers. Terrace materials may overlie outwash; sometimes with indistinct boundaries. T1 are “lower terraces” comprised of clean sand and gravel. The lower level of this terrace is only

5 to 20 feet above the present floodplain, which is where the swing bridge park is located. The upper level of T1 is 40 to 70 feet above the floodplain. T2 represents "middle terraces" of clean sand and gravel. The lower level of T2 is 70 to 90 feet above the present floodplain, and the upper level of T2 is 100 to 130 feet above (Hobbs, et. al., 1990). Although no part of this site overlies T2 deposits, mini-terraces can occur within the major terrace groupings. Such mini-terraces were observed by the FMR Ecologist, in the field, during site visits.

On the terraces, there is little to no deposited material overlying the bedrock. These zones (west side of property) are rated "high-moderate" for sensitivity to of the Prairie du Chien aquifer to pollution. Since the Prairie du Chien is the aquifer that provides most of the drinking water from wells in the county, this is very important. High-moderate sensitivity means that estimated time for water-borne surface contaminants to reach the aquifer are "years to a decade" (Hobbs, 1990). Efforts should be made to limit any potential contamination of the aquifer when implementing this natural resource plan.

SOILS AND TOPOGRAPHY

There are only two soil types that occur on the site of the Swing Bridge property (Figure 4). These soils are Alganssee loamy sand and Copaston loam. Alganssee is located on Terrace 1 of the floodplain, which is nearest the present day channel. Copaston is located at the west side of the property, Alganssee on the east side.

The *Alganssee* soil series consists of deep, somewhat poorly drained soils of major rivers. They are very rapidly permeable. The available water capacity is low, and runoff is slow. Reaction in the underlying material ranges from medium acid to moderately alkaline. Organic matter content is moderate to moderately low. The seasonal high water table is at a depth of 1 to 2 feet. These soils formed in sediments that are loamy in the upper part and sandy in the lower part. Typically, the surface layer is very dark grayish brown sandy loam about 12 inches thick. The underlying material to a depth of about 60 inches is dark brown and dark yellowish brown sand with a few mottles. Mottles formed from oxidation-reduction reactions in the soil due to occasional flooding. Slopes range from 0-2 percent.

The *Copaston* soil series consists of shallow, well-drained soils on terraces and uplands. They are moderately permeable to moderately rapidly permeable. The available water capacity is low, and runoff is slow. Reaction in the subsoil is slightly acid to mildly alkaline. Organic matter content is moderate. The root zone ranges from 12 to 20 inches thick. These soils formed in a thin mantle of loamy glacial drift underlain by limestone bedrock. Typically, the surface layer is very dark brown loam about 8 inches thick. The subsoil is dark brown and dark yellowish brown loam about 10 inches thick. Hard limestone bedrock is at a depth of about 18 inches. In some areas bedrock is at a depth of less than 12 inches or as much as 40 inches. Some areas are underlain by cemented sandstone. Slope ranges from 0-12 percent.

Soil formation is the result of the interaction of five soil-forming factors: parent material, climate, organisms, topographic position or slope, and time (Foth, 1990). Taken collectively, these factors can help determine the dominant floral and faunal communities that helped form the soils. The Copaston soils are classified as "loamy, mixed, mesic Lithic Hapludolls" (USDA, 1983). Mollisols are generally deep, dark in color, and rich in cations, and thus would have been dominated by graminoid vegetation (prairie or savanna), pre-settlement. In this case, since they are so close to the bedrock, Copaston soils are much shallower than typical mollisols, but still would have likely support mesic prairie/savanna plant community. Evidence from pre-settlement vegetation (Figure 6) concurs with this soil data.

Alganssee soils are classified as "mixed, mesic, Aquic Udipsamments". This means it is a mesic sandy soil formed in a humid climate regime. It is also a hydric soil ("Aquic"), due to its proximity to the river, which causes it to be occasionally/seasonally flooded. This is not a prairie soil, but rather would be dominated by vegetation that could withstand conditions of seasonal flooding

(usually in spring and early summer), and that dry out considerably after that in the upper layers. Thus, plants that have the ability to tolerate spring flooding and then to be shallowly rooted enough to deal with the high water table, but rooted deep enough so as to avoid the dry surface-soil conditions, would be well-suited for this environment. Floodplain forest vegetation, therefore, would fit this description. Species such as silver maple, green ash, cottonwood, black willow, and American elm, are the common dominants in floodplain forests of the UMRS today. More information about floodplain forests is contained in the sections regarding Existing Vegetation and Target Plant Communities, below.

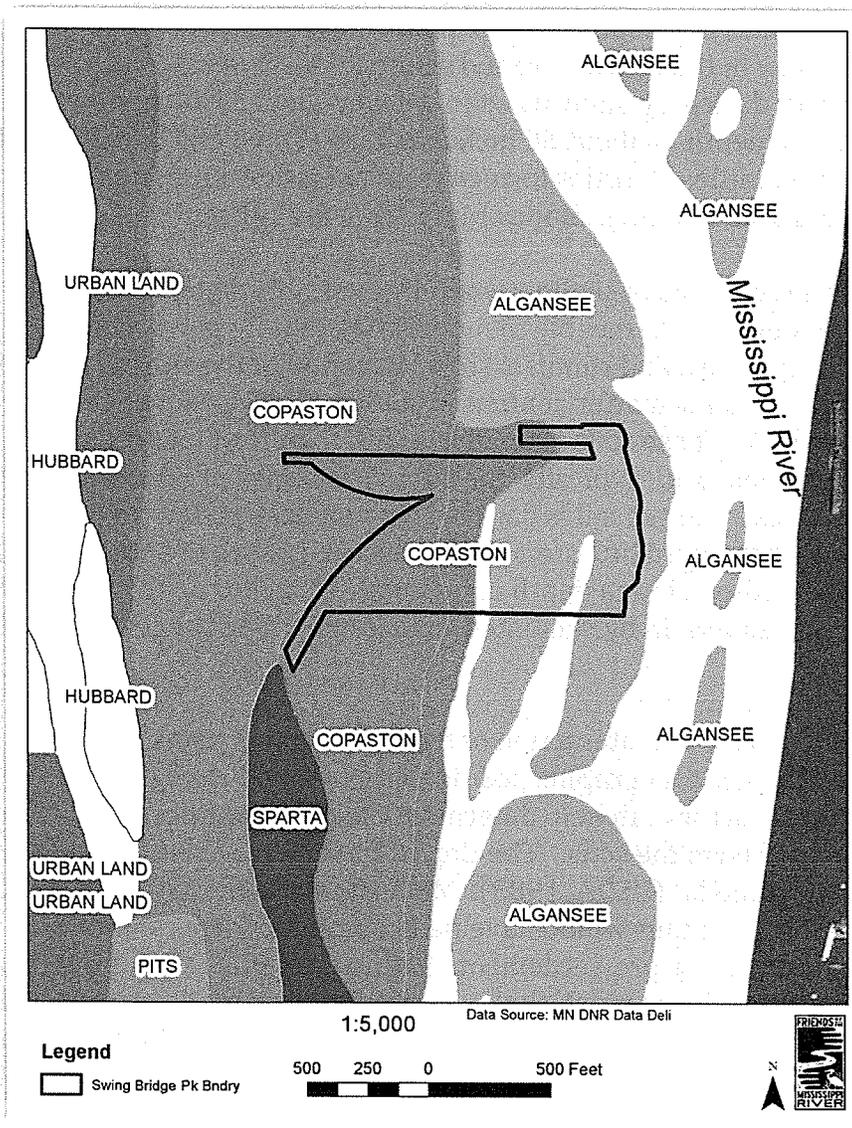


Figure 4. Soils in the area of the Swing Bridge Park.

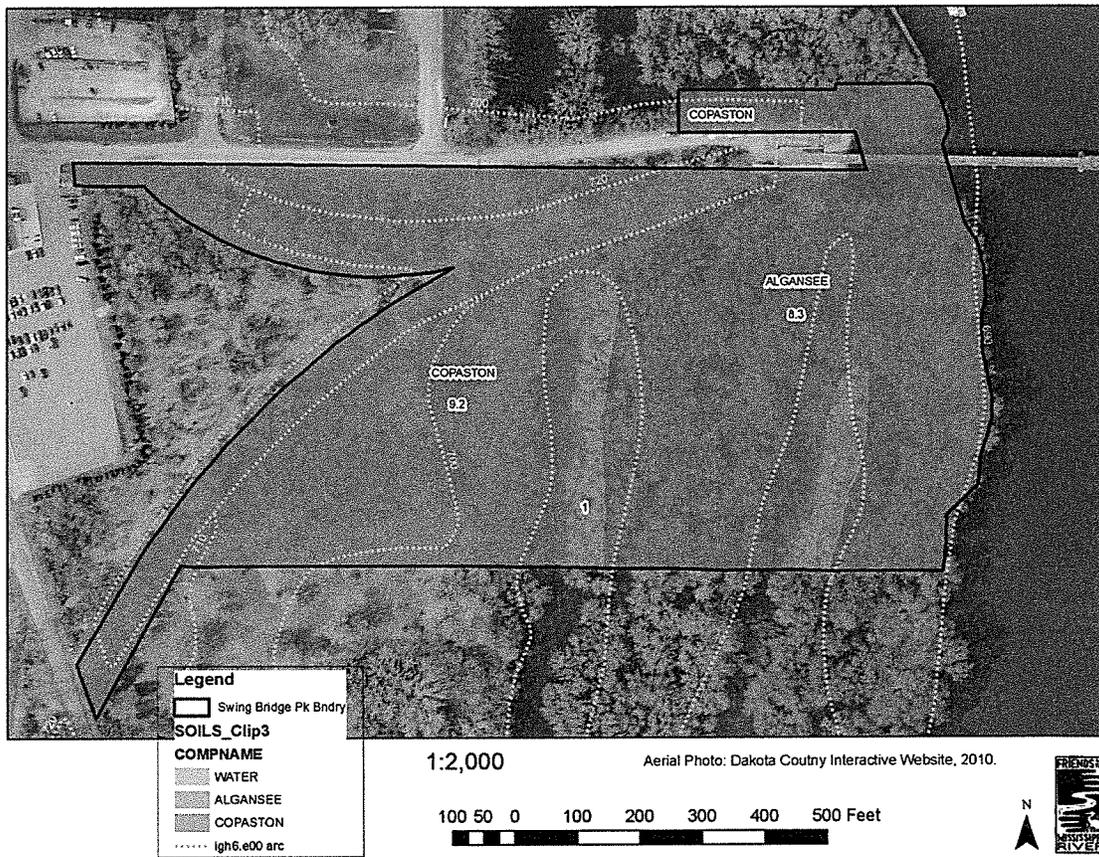


Figure 5. Soils that occur at Swing Bridge Park property.

Topography of the site is rather flat, except for the steep slopes of the man-made embankment structure, and except for the terrace on the west side. Elevations start at about 690 feet above sea level (FASL) at the river's edge, and very gradually rise to about 700 FASL, 750 feet upland from the river, and to about 720 FASL at the western boundary of the property (the two terraces). The constructed embankment rises about 25 feet above the surrounding landscape.

Table 1. Soil Types

Soil Code	Soil Name	Percent Slope	Acres	Soil Family	Hydric (yes or no)	Drainage	Erod-ibility*
100A	Copaston	0-2	9.2	Loamy, mixed, mesic Lithic Hapludolls	No	Well	Low, NHEL
1821	Algansee	0-2	8.3	Mixed, mesic, Aquic Udipsamments	Yes	Somewhat Poor	Low, NHEL
W	Open Water		1				

*NHEL = Not highly erodible

RARE SPECIES

No rare species have been recorded within the park boundaries, but within a radius of 1 mile from the park there are records for the following endangered species: wartyback mussel (*Quadrula nodulata*) and peregrine falcon (*Falco peregrinus*). Also within 1 mile of the park, there was a record of bald eagles (*Haliaeetus leucocephalus*), on adjacent islands. Although not recorded within one mile of the park, it is possible that Paddlefish (*Polyodon spathula*), Minnesota's only endangered fish species, could potentially occur in these waters.

Wartyback Mussels

One of the records was just off the end of the bridge, two were just beyond that, near the old bridge site, and one was just south of the floodplain forest of the park. The wartyback historically occurred in the Minnesota and Mississippi rivers in Minnesota (Mn DNR website, 2012), where populations have since declined. Only 7 live individuals at 4 sites in the Minnesota River were found in a survey in 1990. The species is still rare and sporadically distributed in the Mississippi River, although there is recent evidence of some recovery in the Twin Cities area.

The wartyback is found in large rivers in Minnesota, and it can be found in fine or coarse substrates in areas of slow or moderate current. Degradation of mussel habitat in streams throughout the wartyback's known range is a continuing threat. Populations in Minnesota are vulnerable to further decline because of 1) hydrologic alteration of streams and watersheds, 2) declining habitat conditions on the Minnesota and Mississippi rivers, 3) water and sediment pollution, and 4) the infestation of non-native zebra mussels (*Dreissena polymorpha*) in the Mississippi River and its tributaries. Zebra mussels can attach themselves in large numbers to the shells of native mussels, eventually suffocating them. The fact that 10 records occur within 1 mile of the Swing Bridge park site is significant. Managing the park site in conjunction with other natural areas nearby is recommended to further the recovery of this endangered mussel species.

Peregrine Falcon

One record for Peregrine falcon occurred in the oil refinery complex, across the river from the park. Peregrine falcons are endangered, and require steep cliffs for their nests, in nature. Tall buildings seem to suffice, instead of cliffs, which is the case here, with these falcons using the buildings of the oil refinery complex to nest on.

Bald Eagle

Within one mile of the park boundary, are two records for bald eagles (*Haliaeetus leucocephalus*), on nearby islands. Bald eagles have been recently removed from the endangered species list (June, 2007), after spending three decades in recovery.

They are, however, still considered “special concern” and are tracked by the DNR. Eagles prefer large “super-canopy” trees. Super canopy tree species in this area would be the largest cottonwoods or silver maples. Thus, the fact that eagles are nesting nearby the Swing Bridge property is a sign that there is currently enough open water, ample food, limited human disturbance, and protective roosting sites for eagles (DNR Website). Sources state that “the fact that bald eagles are now successfully nesting in proximity to humans, even in the Twin Cities metropolitan area, indicates that some bald eagles may become habituated to humans if they are not persecuted (DNR Website)”. So, not persecuting them (shooting, poisoning, harassing, etc.) is vital for their conservation. Maintaining trees large enough for them to nest in, however, may be challenging.

Forest Bird Species, in General

Sixty percent of all migratory birds and 40 percent of all migratory fowl in the US use the Mississippi Flyway in the Twin Cities Metropolitan area Important Bird Area (IBA) and millions of neo-tropical bird migrants (http://www.dnr.state.mn.us/northmetro_iba.html). Many bird species use the forests of the UMRS, such as those found in the Swing Bridge Park, as habitat (Urlich, 2002, Knutson et. al., 1996). Most species utilize both upland and floodplain forests for habitat, including American robin, house wren, great crested flycatcher, Baltimore oriole, American redstart, eastern wood pewee and yellow-bellied sapsucker. Some bird species prefer and nest in floodplain forests, including prothonotary warbler, brown creeper, yellow-billed cuckoo, yellow-bellied sapsucker, and great crested flycatcher. Some species nest in tall trees, and they prefer tall cottonwoods, including bald eagles, great blue herons, great egrets, and cerulean warblers. They will use tall silver maples as a substitute, but they prefer cottonwoods. Floodplain forest specialists include the prothonotary warbler, red-shouldered hawk, and bald eagle (Urlich, 2002).

In a three year study of birds in the UMRS, Knutson noted that twenty-four of the 84 species noted were considered to be species at risk because of regional or continental population declines. Some of these were the downy woodpecker, blue-gray gnatcatcher, warbling vireo, rose-breasted grosbeak, cerulean warbler, and ovenbird (Knutson et. al., 1996). In floodplain forests, a total of 23 cavity nesting birds were found, including primary cavity nesters (seven woodpecker species) and secondary nesters (great-crested flycatcher, prothonotary warbler, white-breasted nuthatch, brown creeper, wood duck, bluebird, and purple martin) (Knutson et. al., 1996). “The conservation of floodplain forest birds”, writes Knutson, “depends on efforts to restore degraded floodplains, maintain wide forested corridors, and provide hydrologic conditions that promote the natural regeneration of a high diversity of species including silver maple, ash, and cottonwood”, which will be a recommended goal of this management plan.

Potential SGCN Fish Species

Although no records of it occur here within one mile of the park boundary, it is possible that paddlefish (*Polyodon spathula*), Minnesota's only threatened fish species, could potentially occur in these waters. According to the DNR, paddlefish occur in open waters of large rivers and river lakes (such as Lake Pepin and Lake St. Croix), oxbow lakes, and backwaters, which occur on this property. In the upper Mississippi River drainage, they have been associated with areas of deep water and low current velocities (Zigler et al. 2003). Paddlefish need waters rich in zooplankton, on which they feed (Becker 1983), and free-flowing rivers with gravel bars that are inundated in spring floods for spawning. For more information on paddlefish, see Appendix F.

HISTORIC VEGETATION

One of the best information sources available on plant communities that were present at the time of European settlement comes from the 1850's Public Land Surveyor (PLS) notes, which recorded plant species (usually "bearing trees") at each one-mile node. A compilation of those notes was converted into a map showing the plant communities of the entire state (Marschner, 1974). The region where the Swing Bridge Park property is located was called "Oak Openings and Barrens", which roughly corresponds to what we today call "oak savanna" or possibly "woodland" (Figure 6). The nearby bearing trees recorded were "AH" (ash), "MA" (maple, probably silver maple in this case), "BO" (bur oak). The Vegetation type recorded was "River", "Forest, Timber", and "Plowed Field". The adjacent community type to the west was called "Big Woods" which roughly corresponds to Eastern Deciduous Forest today. The boundaries between cover types was sometimes rather fuzzy, and that is the case here, with some records inside the Oak Openings and Barrens parcel being identical to those on the edge of the Big Woods parcels. The bearing tree record that is directly to the south of the Swing Bridge property is the one marked "River", which means that at that time, the spot was not really an upland location, which is perfectly plausible, since rivers are dynamic and change their course over time. The Swing Bridge park property did not have a bearing tree directly within its boundaries, but we can surmise that the vegetation would have been a combination of floodplain forest, bottomland forest, and savanna-woodland. Floodplain and Bottomland forest would probably have occurred on Terrace 1, and savanna-woodland on the upland side of Terrace 1 and Terrace 2.

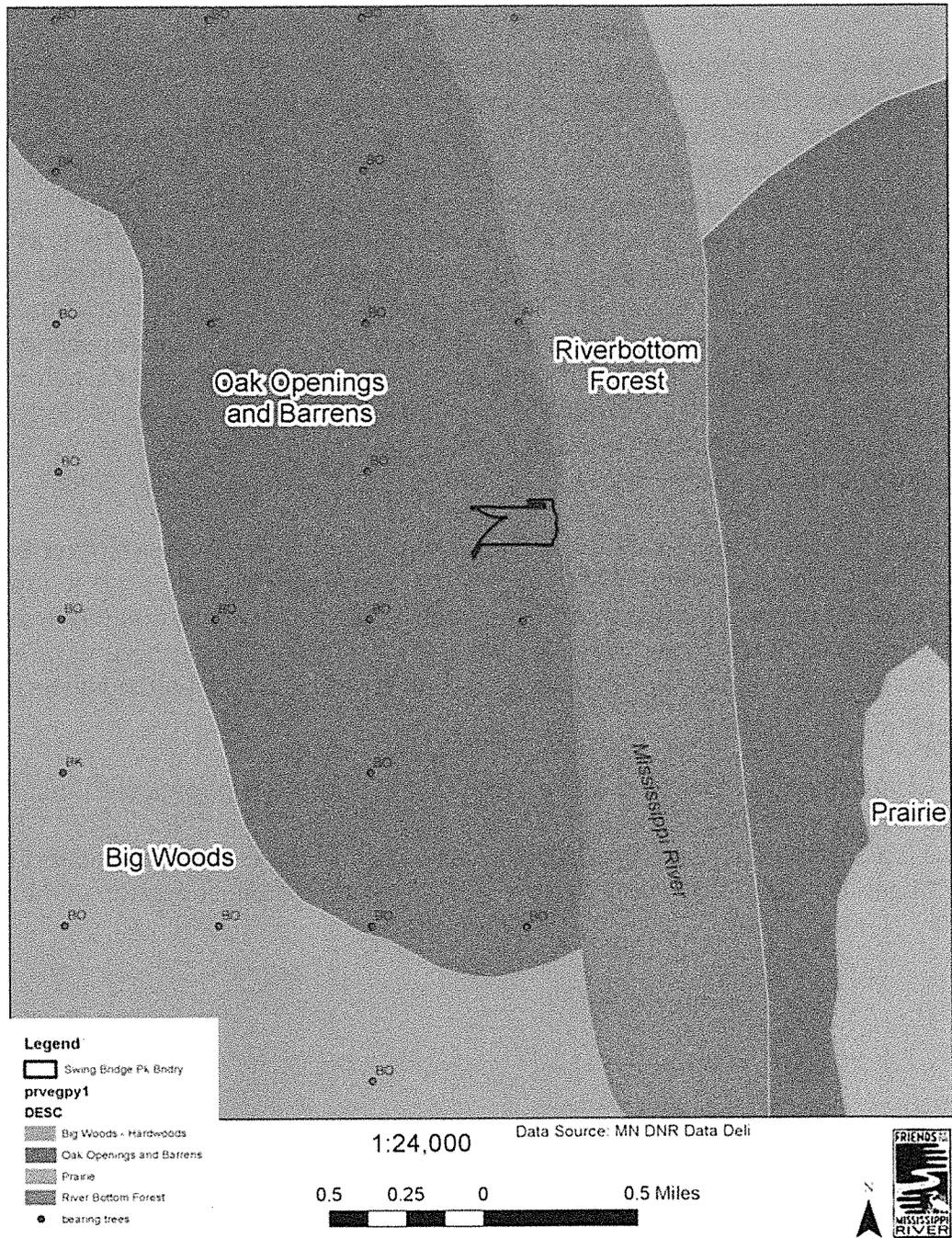


Figure 6. Pre-settlement Vegetation and Bearing trees.

Codes for bearing trees: BO = bur oak, AH = ash, MA = maple, BK = "black" or pin oak; if "-", then it refers to "River".

HISTORIC AERIAL PHOTOGRAPHY

Historic aerial photographs provide additional information on the former vegetation conditions of the site (**Figures 7 and 8**). Comparison of leaf-on historical aerial photographs from 1937 (**Figure 7**), 1940, 1957, and 2010 (**Figure 8**) shows some interesting changes to the site over the course of 70 years. Along with the usual increase in roads, buildings, and other man-made features, some other interesting changes can be observed. In 1940, there was much more exposed soils, as evidenced by the white, linear areas on these maps, which would correspond to areas that were flooded in 2010. This may have been the result of disrupted hydrology due to the constructed embankment for the railroad, or perhaps it was just a drier period. 1937 post-dates the 9-foot river channel project, of the Mississippi River, so it is conceivable that the floodplain was drier historically. It also appears that there were three more or less distinct backwater or “finger” lakes on the property. In 2010, the middle finger lake was mostly gone.

Also, looking closely at the 1937 and 1940 photos, there appears to have been, broadly, a general difference in vegetation type across the property. It appears there were three general vegetation types on the property: 1) floodplain forest from the riverbank westward through the backwater lakes, 2) river bottom forest west of the backwater lakes, and 3) open grassland type vegetation on the westernmost part of the property.

Comparing the cover from larger trees in the two earlier photos with that in 2010 shows that the larger trees were not as prevalent in the earlier photos. There were a few scattered larger trees, with one grove just to the west of the westernmost finger lake, and with a very dense cover on the easternmost portion of the property,

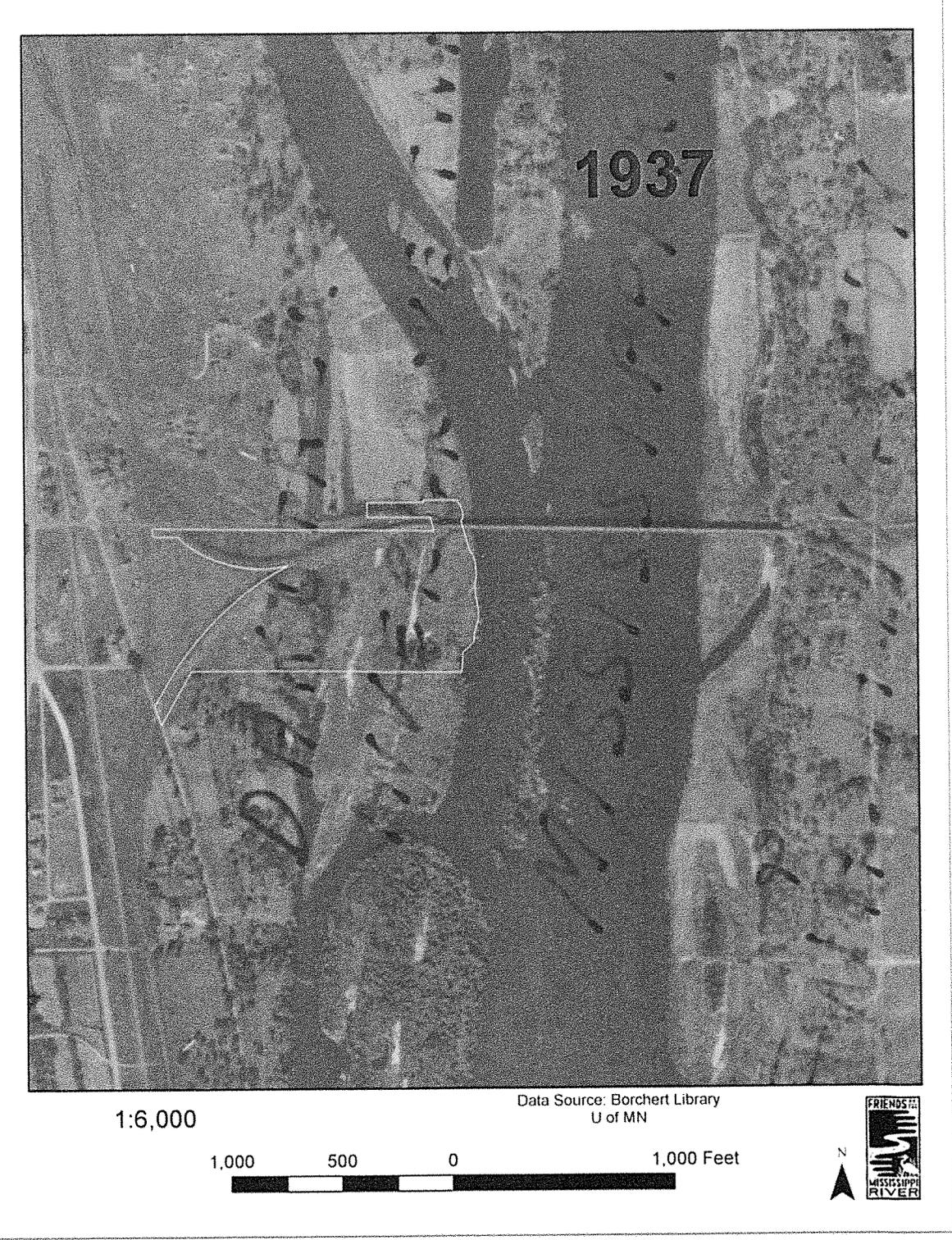
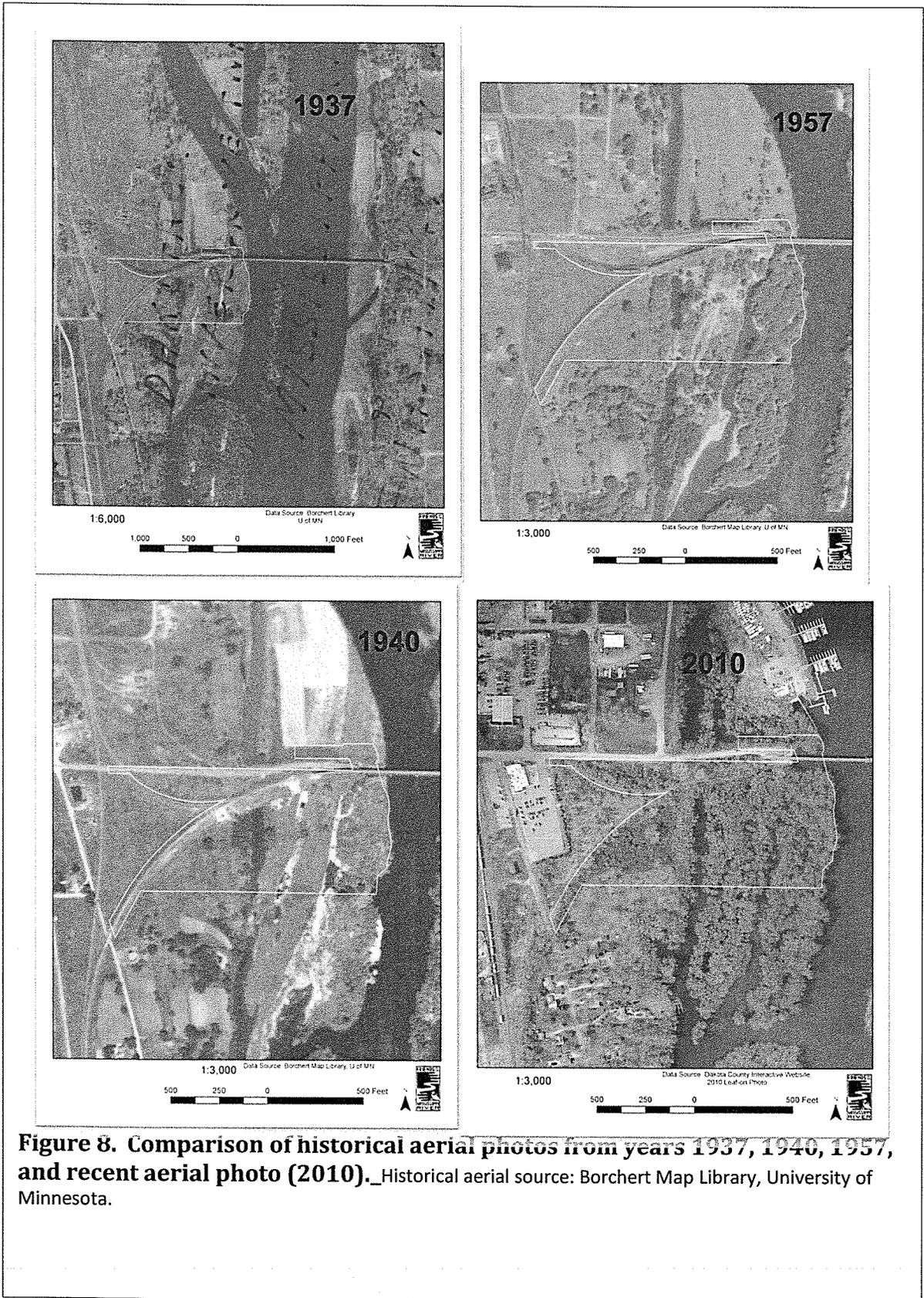


Figure 7. Historical Aerial photo from 1937.



but generally, large-tree cover was much less dense in the earlier photos. Over time,

the middle and western portions of the site filled in with larger and denser tree cover.

Looking at the photo from 1937 (**Figure 7**), the oak savanna type vegetation can be readily observed in two bands, on either side of the river, on the margins of the floodplain. Today, there is almost nothing left of this vegetation type due to loss from agriculture and rural development. In 1937, there the two railroads converged at the swing bridge, and the bridge was of course still in use. The oil refinery, on the eastern side of the channel, was not yet in existence. The marina, today that abuts the north side of the Swing Bridge park property, also does not yet exist—it was still an agricultural field. The land to the adjacent south of the property was also an agricultural field—today it is row of large residential lots. Fortunately, it appears that the bulk of the land of the Swing Bridge Park was not converted to an agricultural field in the late nineteenth and early twentieth century.

HISTORIC AND EXISTING LAND USE

Railroad and Bridge

As mentioned before, this site was used by railroads (Beltway, Terminal Railway, Rock Island), and for a bridge that spanned the Mississippi River, known best as the “Rock Island Swing Bridge”. The Swing Bridge, first constructed in 1894, spanned the Mississippi River between Inver Grove Heights, MN and St. Paul Park, MN. It was also known as the Newport Rail Bridge (as it had a spur to Newport, MN), and J.A.R. bridge, after previous owners Joan and Al Roman of Chicago. It was originally built for transportation to and from the Stockyards in South St. Paul. It was one of the few double-decker bridges on the Mississippi, with the top level formerly used for railroad traffic and the bottom level formerly used as a road crossing (originally for horse and buggy, then eventually for cars). It also was one of a few toll bridges in Minnesota, and one of the last remaining ones. It closed to rail traffic in 1980, and road traffic in 1999, when the toll was 75 cents. After closing, the bridge sat dormant in the open position for 10 years before being partially demolished in 2009. In October 2009 the City of Inver Grove Heights took ownership of the structure. It was converted into a recreational pier, which opened to the public on June 11, 2011. Today the bridge decks and remaining structure have been refurbished at a cost of \$2,300,000 (City of Inver Grove Heights, Official Website-Rock Island Swing Bridge).

The City of Inver Grove Heights developed this park project to provide visitors with an opportunity to access the Mississippi River. The city expects that the bridge/pier will draw visitors to the area and help with the city’s efforts to revitalize the Concord Boulevard neighborhood.

Park Land History

Although difficult to determine, it appears that the land of Swing Bridge Park was not used for farming. The more upland, western half of the property, however, was probably used for grazing, since there were old fence lines on the property. Also, an

old ruined foundation was located on the property during the one of the site visits by the FMR Ecologist.

WATER RESOURCES

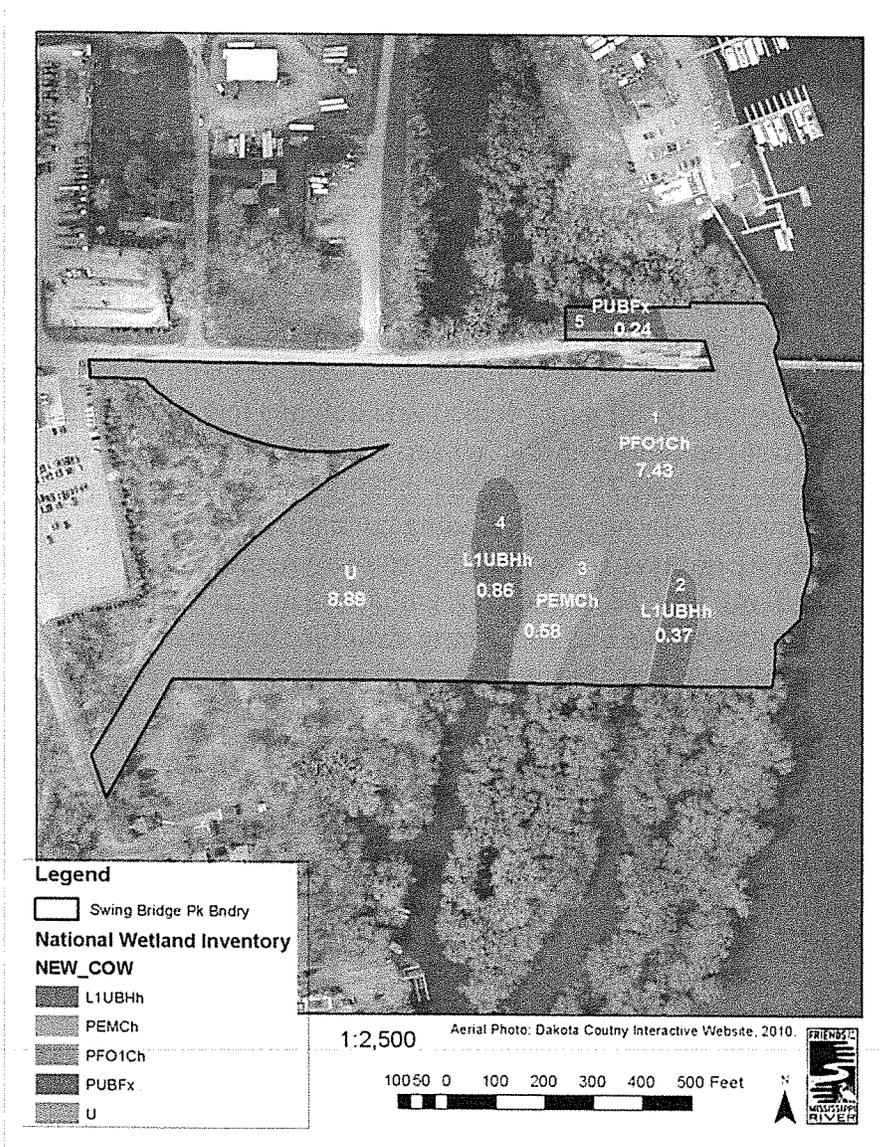
The entire eastern half of the park (the floodplain forest portion), is considered wetland (Figure 9). The western half of the property is upland. A dry creek bed exists just to the west of the westernmost backwater lake, technically in the “upland” side of the property.

Surface Waters (Wetlands, Streams, Rivers, etc.)

Wetlands

There are four different types of wetlands on the eastern half of the property (Table 2). These wetlands are flooded for varying durations and times. The animals and

Figure 9. Wetlands of the Swing Bridge Park property.



plants that carry out part or all of their life cycles in these wetlands are well adapted to life in a flooded environment.

Table 2. List of Wetlands on the Swing Bridge Park Property.

Wetland Number	NWI Code	Description	Acres
1	PFO1Ch	Palustrine, Forested, Broad-leaved deciduous, seasonally flooded, Diked/impounded	7.43
2	L1UBHh	Lacustrine, Limnetic, Unconsolidated bottom, Permanently flooded, Diked/Impounded	0.37
3	PEMCh	Palustrine, Emergent, Seasonally flooded, Diked/Impounded	0.58
4	L1UBHh	Lacustrine, Limnetic, Unconsolidated bottom, Permanently flooded, Diked/Impounded	0.86
5	PUBFx	Palustrine, Unconsolidated bottom, Semipermanently flooded, Excavated	0.24

Wetland 1 is a *Palustrine* wetland (starts with a “P” in the National Wetland Inventory, or NWI, code). Palustrine means that it is a nontidal wetland dominated by trees, shrubs, emergents, mosses, or lichens, with salinity less than 0.5 ppt. Wetlands lacking such vegetation are also included if they exhibit all of the following characteristics: 1) are less than 8 hectares (20 acres); 2) do not have an active wave-formed or bedrock shoreline feature; 3) have at low water a depth less than 2 meters (6.6 feet) in the deepest part of the basin; 4) have a salinity due to ocean-derived salts of less than 0.5 ppt.

Class “FO” stands for *Forested*, which means that the wetland is characterized by woody vegetation that is 6 meters (20 feet) tall or taller. Subclass “1” stands for *Broad-Leaved Deciduous*, which means woody angiosperms (trees or shrubs) with relatively wide, flat leaves that are shed during the cold or dry season; e.g., silver maple (*Acer saccharinum*). Water regime “C” stands for *Seasonally Flooded*, which means that water is present for extended periods, especially in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface. The special modifier “h” stands for *Diked/Impounded*, which means that the wetland has been created or modified by a man-made barrier or dam which obstructs the inflow or outflow of water.

Wetland 2 is a *Lacustrine* wetland (starts with an “L” in the NWI, code). Lacustrine means that it is a deepwater habitat with all of the following characteristics: 1) situated in a topographic depression or a dammed river channel; 2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30% areal coverage; 3) total area exceeds 8 hectares. This determination was made since this is a backwater of the Mississippi River, and from aerial maps, this lake is

contiguous with the main channel of the river. The subsystem "1" stands for *Limnetic*, which means it extends outward from the Littoral boundary and includes all deep-water habitats within the Lacustrine System. This again was designated because of aerial photos. Actually, the north part of this wetland, which is the tip of the "finger lake" or backwater of the Mississippi, is quite shallow, and should be designated as *Littoral*, which means that it extends from the shoreward boundary to 2 meters (6.6 feet) below annual low water or to the maximum extent of nonpersitent emergents, if these grow at depths greater than 2 meters.

"UB" stands for *Unconsolidated Bottom*, which means that it has at least 25% cover particles smaller than stones (less than 6 to 7 cm), and vegetative cover less than 30%. Water regime is "H" which stands for *Permanently Flooded*, which means that water covers the land surface throughout the year in all years. Actually, this is not quite correct, since the survey fieldwork by the FMR Ecologist revealed that much of this wetland was not flooded, but in fact was covered by annual vegetation. Granted, it was surveyed in an unusually dry year. Special modifier is "h", *Diked/Impounded*.

Wetland 3 is a Palustrine system with "EM" *Emergent* class, which is characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants. The water regime is *seasonally flooded* and it is *diked/impounded*.

Wetland 4 has the same designation as Wetland 2: a lacustrine, limnetic, unconsolidated bottom, that is permanently flooded and diked/impounded. Again, the same cautions apply to this wetland as to Wetland 2: this should really be a lacustrine, littoral, UB, *permanently to semi-permanently* flooded, diked/impounded wetland.

Wetland 5 is a Palustrine system, with an unconsolidated bottom, and *Semipermanently Flooded* water regime. Semipermanently flooded means that surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land's surface. This wetland has the special modifier "x" which stands for *Excavated*, which means that it lies within a basin or channel that have been dug, gouged, blasted or suctioned through artificial means by humans.

The designator "U" stands for *Upland*, so this area was not characterized as being any type of wetland.

Streams

The origin and nature of the dry creek are unknown, but it appears that it may have been man-made. It was modified somehow, by being lined with a layer of riprap rock at some point in the past. The reason for the lining has not been determined. Another possible theory is that the dry creek was a former naturally occurring

stream whose hydrology was cut off by the construction of the railroad embankment. Yet another possibility could be that the stream was created by diverting river water, as a result of human activities associated with construction of the railroad, the bridge, or perhaps even prior to that.

Rivers

Of course, the Mississippi River runs next to the property, directly to the east, and the river floods seasonally most every year, so it is actually integrally connected with the eastern part of the property. Floodplain forest and backwater lakes have formed unique plant and animal communities adapted to the seasonal pulses of the river. These are some of the most potentially productive ecosystems in the world, due to the inputs of nutrients from river sediments (Mitch and Gosselink, 2003).

Groundwater Recharge or Infiltration Areas

Since this parcel is on the Mississippi River, the general trend would be that it is a discharge area. This means that groundwater will move from the aquifer (below the water table, underground, to above the water table and out of the aquifer: a discharge of the aquifer. The backwater lakes will hold some water, but are generally contiguous with the river, and thus reflect the water table that supports streamflow.

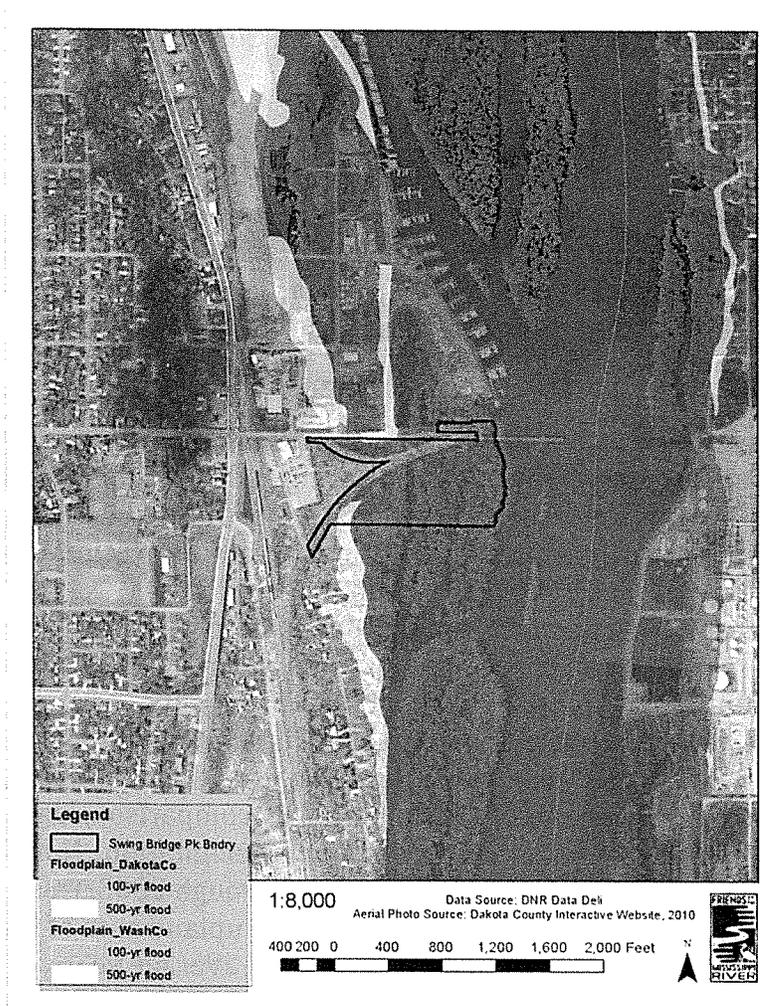
The upland area will infiltrate some water, and thus may serve to recharge groundwater somewhat. Recharge generally occurs in spring and fall of the year in Minnesota. During winter, the soils are frozen and water does not move either upward or downward. During summer, most of the water that falls as precipitation will be either intercepted or captured by actively growing vegetation. Evapotranspiration is greatest during summer months, due to vegetation. If a large rain event occurs, then the recharge may occur even in the summer. Recharge rates to unconfined aquifers in Minnesota typically are about 20–25 percent of precipitation. A crude, preliminary estimate of recharge rate is sometimes made on the basis of this assumption. Recharge rates where glacial clays or till are present, however, generally are less than 10 percent of precipitation. By comparison, leakage rates to confined aquifers generally are less than 1 percent of precipitation. Normal annual precipitation for Dakota County, data accumulated up through 2003, was about 32 inches per year. This means that recharge rates for the upland area of this property would be no more than about 6 inches per year, during average years.

Stormwater Management Issues

Surface water runoff is directed generally towards the river, on this site. The soils are not particularly erosion prone, and the slopes on the upland terrace are slight, therefore erosion on the uplands is not a big concern. However, the uplands are dominated by buckthorn, which is a concern. Buckthorn grows in such a way that shades out nearly all other plants, and results in a depauperate understory with much bare soil. Leaf litter turnover rates are high, since the leaves of buckthorn

contain little lignin. Earthworms also contribute to low amounts of leaf litter. Given the dominance of buckthorn on the upland part of the property, soils will surely erode and sediment will accumulate downslope in the floodplain.

It is important to establish vegetated buffers along streams and rivers. The larger the river, the wider the buffer should be. Although state rules call for a 50-foot minimum shoreline buffer, studies show that much greater water quality and wildlife benefits are gained by wider buffers. The nearly 1200 foot buffer should be adequate. A buffer of this width is within the 100-year floodplain for this site (**Figure 9B**).



The trail embankment also represents an erosion and sedimentation concern. Given the extremely steep slope of the embankment, and the lack of deep-rooted vegetation on this slope, erosion will occur. Many small gullies have already formed on the slope of the embankment. Therefore, it should be a priority to establish appropriate vegetation on the embankment slopes (see *Management Recommendations* below).

ADJACENT LAND USE

Refer to **Figure 10** for this discussion.

North:

- River Heights Marina.
- Heritage Village Park, an approximately 55-acre city owned site just abutting to the north of Swing Bridge Park (to the north and west of the Marina), is an area that is being planned to be developed into a city park simultaneously with the Swing Bridge. Plans show Heritage Park will include lawn areas, community spaces, heritage gardens, historic buildings, park buildings, trail systems, play areas, event seating, informational kiosks, etc.
- Dakota Bulk Terminal, located on the river is a transport and loading/unloading facility for a variety of materials via river barge.

South:

- Private Residences along the west shore of the river
- South half of the peninsula on which Swing Bridge Park sits is privately owned by one residential entity
- A large river island:
 - North 1/3 is privately owned by one residential entity
 - South 2/3 is owned by Louisiana Dock Company, LLC

West:

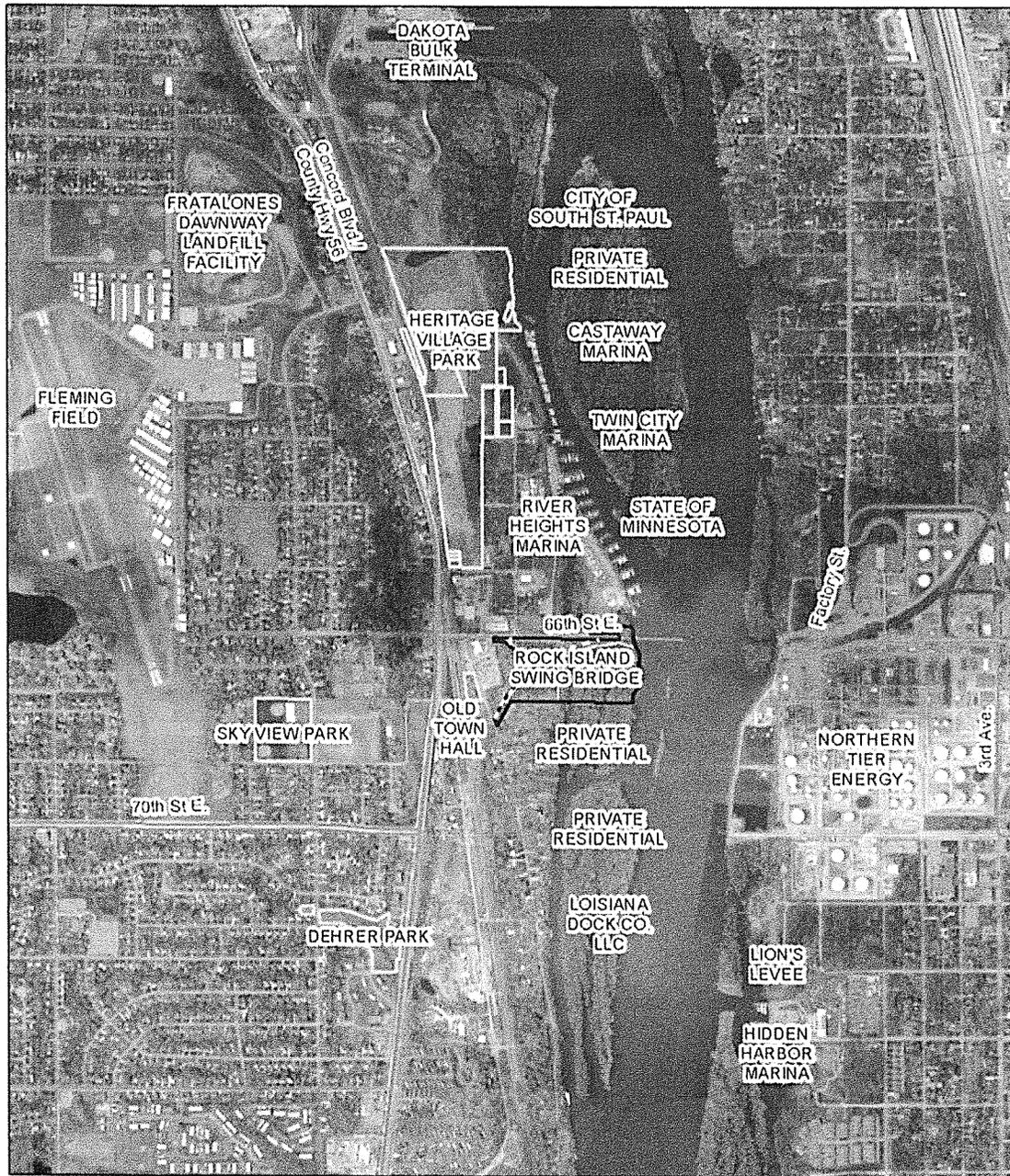
- Old City Hall Park
- Commercial Property along Concord Blvd (County Hwy 56)(King of Diamonds, Allied Waste Services, Turrity's Pizza, etc.)
- Residential homes to the west of Concord
- Fleming Field, a small airport
- Fratalone's Dawnway Landfill Facility for demolition debris

East:

- Mississippi River
- Beyond (across river): Northern Tier Energy (formerly Marathon Oil, formerly Ashland Oil).

Land use on the properties adjacent to the Swing Bridge Park property has direct and indirect effects on the park property. The impervious surfaces on the Marina, the Concord businesses, the airport, and the residential neighborhood generate increased volumes of stormwater runoff, some of which flows onto the Swing Bridge Park property. Stormwater carries with it pollutants and sediments, which will accumulate on the surface of the low-lying floodplain area. Coupled with increased sediment loads from the Minnesota/Mississippi River system, over-sedimentation is a real issue for the shoreline here. During the site survey, much recent sediment was seen to have accumulated along the shore (Photo 10).

Figure 10. Adjacent Landuse Map



Legend

- Swing Bridge Pk Bndry
- Trails
- IGH_City_Parks

1:15,000

Data Source: DNR Data Deli
 Aerial Photo Source: Dakota County Interactive Website, 2010

0 0.050 0.1 0.2 0.3 0.4 0.5 Miles



Oil and petroleum that may spill from boats or fueling of boats, or leak from fuel tanks of boats may be a problem for fish, reptiles, and amphibians that live in the water and sediments of the river. Oil leaks and spills from Northern Tier Energy Company could also be a problem for the site. Also materials from the Dakota Bulk Terminal may impact the local environment. The Fratalone's Landfill facility may also potentially impact the groundwater and wind dispersed dust in the area.

Indirectly, the urban landuses adjacent to the site serve to fragment the natural areas and also relegate the river buffer a relatively narrow strip along the floodplain. Restoring the upland portion of this site would be a big benefit in this case, since so much upland riparian habitat has been lost elsewhere along the river corridor.

The adjacent lands can potentially act as portals for nearby species to enter into the park. The trail system also will function as a conduit for species. Introduction of new invasive, exotic species would be the concern. Monitoring along both sides of the trail, in the parking lot, along the roads, along the shoreline, and around the edges of the property would help. Early detection and rapid response are recommended approaches to controlling newly introduced invasive species.

The residential property owner to the southwest of the park boundary has been encroaching onto city property, by mowing turf. This property owner should be contacted and advised to stop mowing on city property.

The property south of the Swing Bridge, on the south side of the peninsula, is privately owned by one couple (approximately 7 acres) . Also, the large island just south of that is owned by one couple (approximately 11 acres) and the Louisiana Dock Company, LLC (approximately 20 acres). It may be fruitful to reach out to these landowners to both educate them about the goals and objectives of this NRMP for the Swing Bridge Park, so that they can be consistent with it as much as possible. They also may be interested in selling their land to the City, and thus would double or triple the size of the park. The price of the land is not that high, either. Access to the island would have to be by boat, we assume.

Emerald Ash Borer

Since many green ash trees exist on the property, the reality of Emerald Ash Borer (EAB) must be addressed. Emerald ash borer, the introduced green beetle from Asia, was discovered in Minnesota in 2009. EAB is a tree killer. To date, no cure for the disease exists. Affected trees can be treated with a fungicide, but this is not recommended for trees in a natural setting or larger parkland area like this site. If EAB were to come to this area, then many ash trees would most likely die. The good news is that green ash is just a component of the floodplain forest, and not a dominant species. If it were to vanish, then other tree species could fill in to replace it. However, it will create gaps in the canopy that could be exploited by invasive plant species. Management should proceed that reduces the impacts of potential

invasive species due to EAB induced ash decline. Active management that maintains forest cover is recommended. See the section below on *Management Recommendations* for more detail.

EXISTING LAND COVER & ECOLOGICAL MANAGEMENT RECOMMENDATIONS

The Department of Natural Resources (DNR) developed a system called the Minnesota Land Cover Classification System (MLCCS), which defines and classifies all types of landcover. This information was used as a basis for the site evaluation, which was conducted by FMR's ecologist in the summer of 2012.

For determining target plant communities for restoration (**Table 3**), we considered the following: 1) historic conditions, 2) existing conditions, and 3) relative effort vs. benefits. Relative effort vs. benefit simply means that if the amount of energy and work that needs to go into restoring a particular community is too great, in terms of the benefits received, then restoration would not be recommended.

As a guideline for the target plant community goals, we used the *Field Guide to the Native Plant Communities of Minnesota: the Eastern Broadleaf Forest Province* (DNR, 2005). This book describes the system developed by the Minnesota Department of Natural Resources for identifying ecological systems and native plant community types in the state, based on multiple ecological features such as major climate zones, origin of glacial deposit, plant composition, and so on.

There are four ecological provinces in Minnesota (prairie parkland, eastern broadleaf forest, Laurentian mixed forest, and tallgrass aspen parkland), ten sections within the provinces, and 26 subsections (**Fig. 11**). The Swing Bridge Park property is classified as follows:

Ecological Province: *Eastern Broadleaf Forest*
Section: *Minnesota and Northeast Iowa Morainal*
Subsection: *St. Paul Baldwin Plains and Moraines*

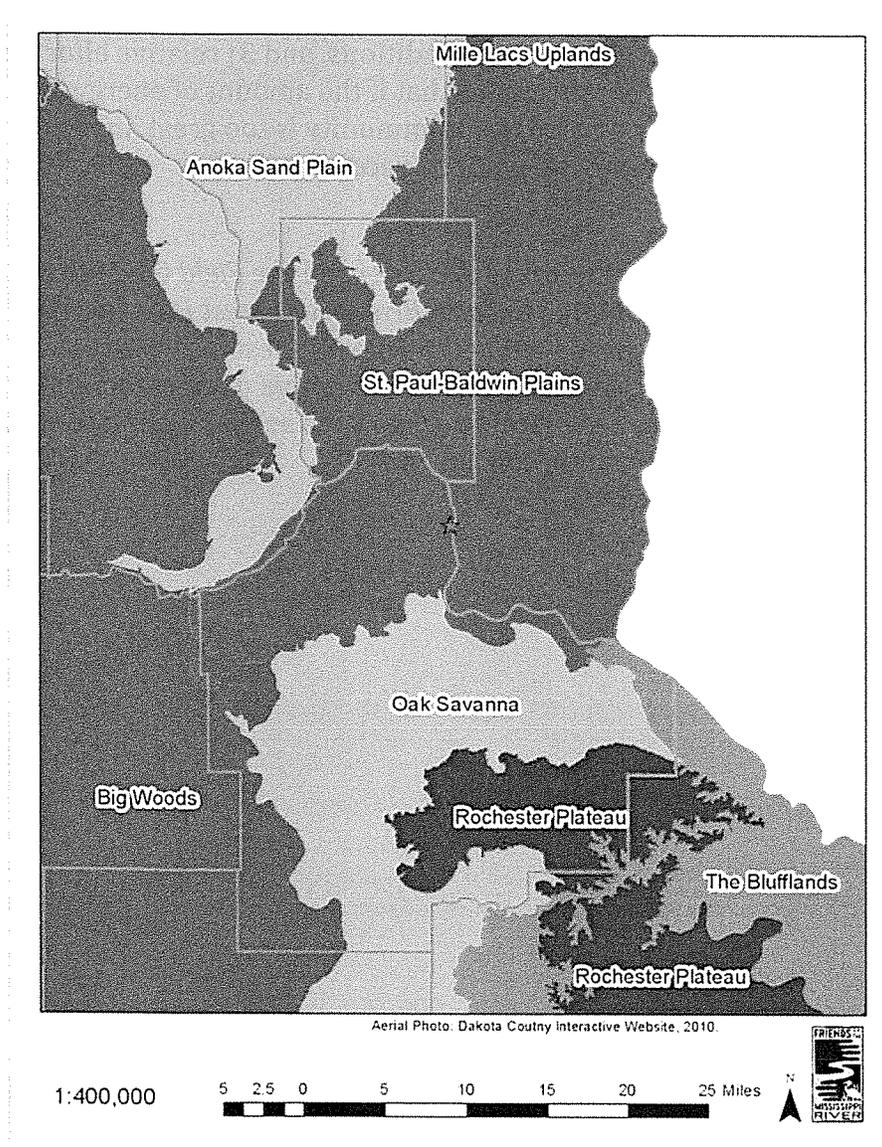


Figure 11. MN DNR Ecological Subsections for southeast Minnesota.

Green star shows approximate location of the Swing Bridge Park property, located in the *St. Paul Baldwin Plains and Moraines* subsection.

As stated before, in the Historic Vegetation section of this document, the vegetation of the Swing Bridge Park property in pre-settlement times was most likely divided into floodplain forest, bottomland forest, and upland terrace savanna. The floodplain and bottomland forest have experienced great changes since settlement, especially because of hydrologic changes of the river. The upland savanna also experienced changes due to grazing, fragmentation, and conversion of nearby savanna into intensive agriculture. Today the natural communities look quite a bit different than they would have 150 years ago. Current landuse practices and manipulations of the river hold in store yet more changes for the future condition of the natural communities along the Upper Mississippi River System.

The Swing Bridge Park property was evaluated by a FMR Ecologist in summer and fall of 2012. Recorded information included a list of plant species and their percent coverage in each vegetation layer (tree, shrub, grass) (**Appendix A**), soil type, slopes, and animal signs. Information also included ecological concerns, such as erosion, exotic species, etc. The classification was modified as needed, based on plant species observed and the resulting landcover types are shown in **Figure 12**. Each of the landcover units is summarized in **Table 3** and described in the paragraphs below. Some notable features observed during the survey were noted on the map in **Figure 13**.

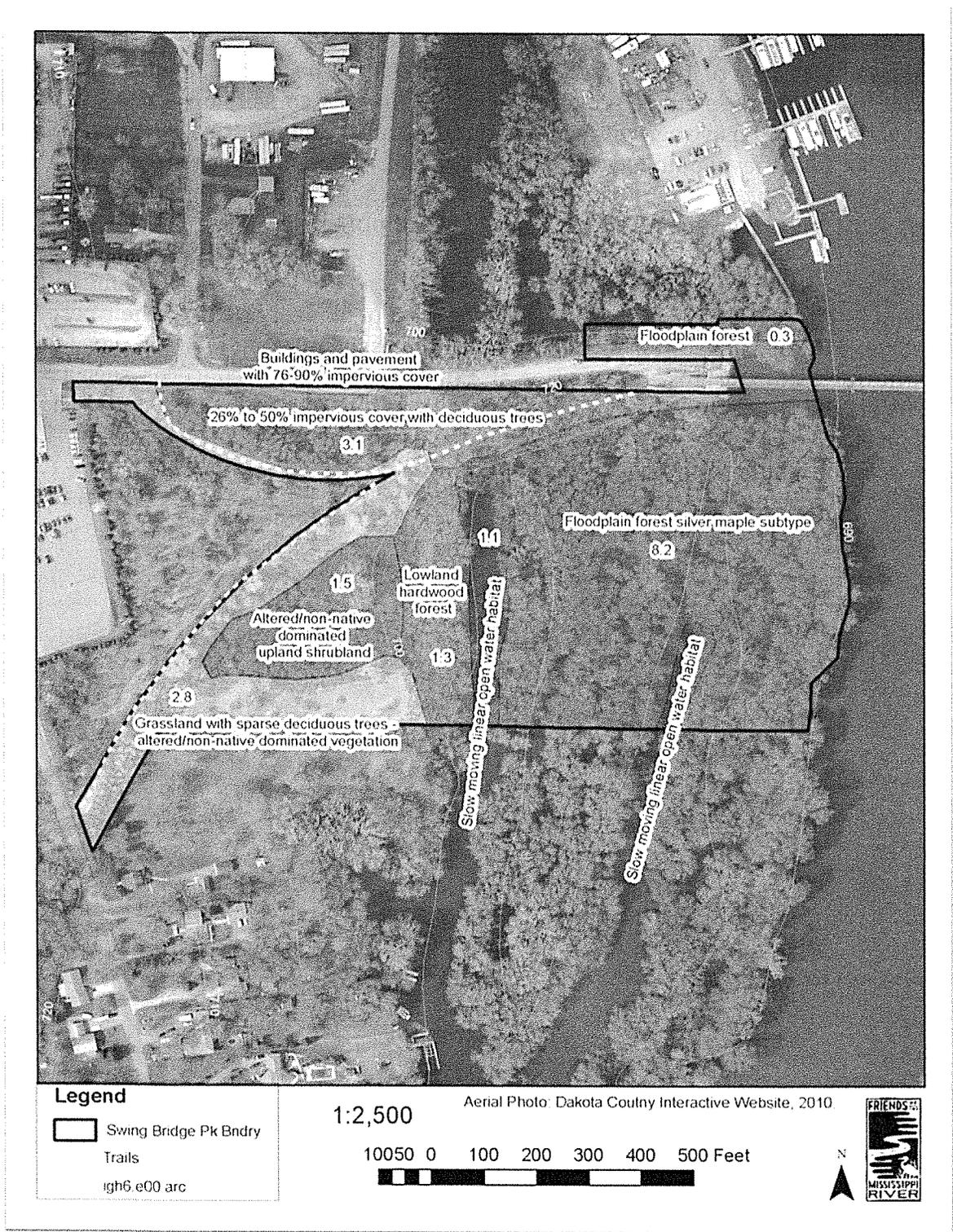


Figure 12. Existing Landcover Map.

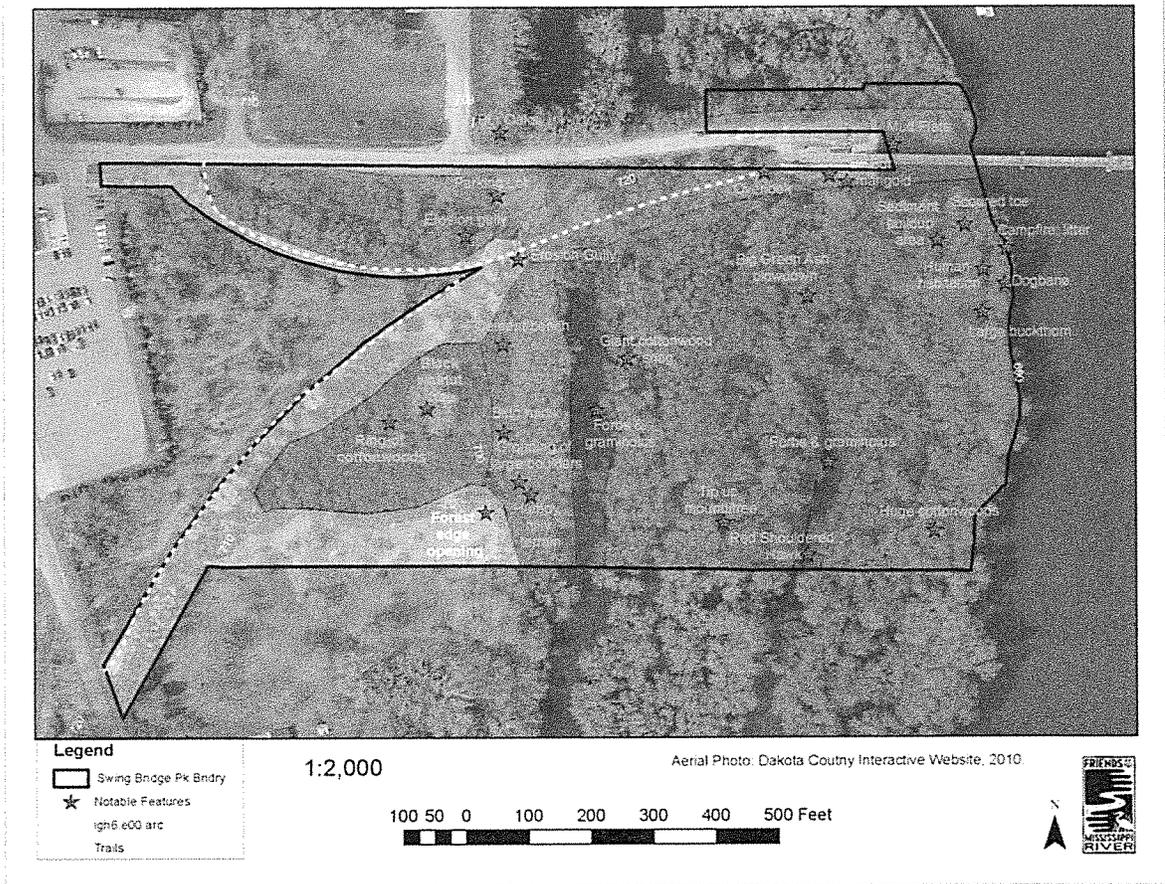


Figure 13. Some notable features.

Floodplain Forest, silver maple subtype (8.2 ac)



Photo 1. Sandy shoreline of river channel.

This area includes the shoreline of the main river channel and the floodplain forest.

Shoreline

This zone includes about a 20-foot strip of land that parallels the river channel. The plant community that occurs here is distinct from that of the more inland floodplain. The shoreline community is more open, due to the light that enters from the open water channel. The sand bottom of the beach on the shoreline was quite firm, with

no soft sediment accumulation (Photo 1). This shoreline was quite gradual, also; it was not steep or undercut. Just upland from the shoreline was about a 3" layer of softer sediment accumulation, perhaps the source of which was from upland runoff. Upland from that was about twelve feet of relatively bare, sandy soil, with few plants growing here. The next zone upland from the bare shore was the start of vegetation, per se: grape vines, rice cut grass, wood nettle, which graded into larger trees, predominantly silver maples (Photo 2).



Photo 2. Shoreline of floodplain forest.

Because of increased light exposure, plants that are less tolerant to shade can flourish along the edge. Vegetation typically found along the shoreline edge were Eastern cottonwood, a variety of tall sedges in patches (Photo 3), scattered purple loosestrife (an exotic invasive), scattered barnyard grass, patches of dogbane, and scattered yellow nut sedge. Also



Photo 3. Tall native sedges on river shore.

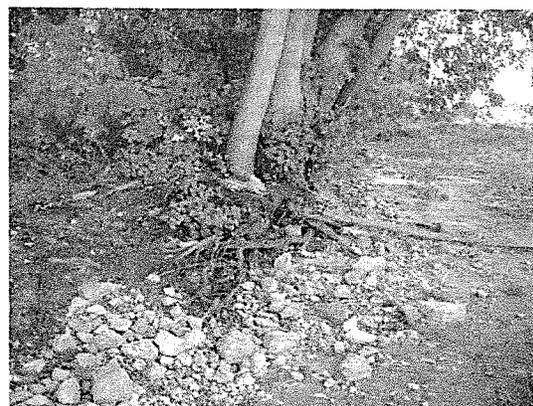


Photo 4. Scour on toe of shore and exposed roots of silver maples, near the bridge.

present were little white asters, *Bidens* spp., lady's thumb-print smart weed, and ironweed.

The shoreline near the bridge was more eroded, with lots of scouring of the toe and many exposed roots on cottonwood and silver maple trees (Photo 4). The water levels of the river were very much lower than normal, due to a three-month drought preceding the field survey. See the section below entitled "*26% to 50% impervious cover with deciduous trees (3.1 ac), West Bank of River, north of Bridge/Pier*" for more information on this area.

Cottonwood regeneration is a problem in the UMRS (Urich, 2002; Guyon, et. al., 2012). Cottonwoods, which require lots of light for seed germination and seedling

growth, are being shaded out by silver maple and reed canary grass throughout the UMRS. Also, increased duration of flooding, much more than was historically normal, has taken its toll on cottonwood regeneration. Cottonwood is second only to black willow for shade intolerance. The two species often compete in environments where high light conditions exist and water levels fluctuate. Black willow is more tolerant to flooding than cottonwood, so in open areas that are flooded for long period of time, willow will outcompete eastern cottonwood (Bottomland Forests Web-based Forest Management Guide, 2012). On slightly higher sites, where water levels are more stable and the light environment remains high, cottonwood often out-competes black willow. Both species grow in nearly pure stands, and are replaced by longer lived, more tolerant species, like American elm, red maple, river birch, silver maple, boxelder, and to a lesser extent, hackberry (Bottomland Forests Web-based Forest Management Guide, 2012).

There were surprisingly few invasive plants in the shore and near shore areas, as well as the floodplain forest. Other than a handful of purple loosestrife and a few yellow nut sedge, there were not many invasive exotic herbaceous plants. Notably, there was little reed canary grass, which in some areas of the UMRS is quite problematic. There was one large common buckthorn shrub, pistillate (female) form, replete with berries, near the shore; but that was the only one in this community (unlike the upland terrace areas where it was dominant).

Floodplain Forest

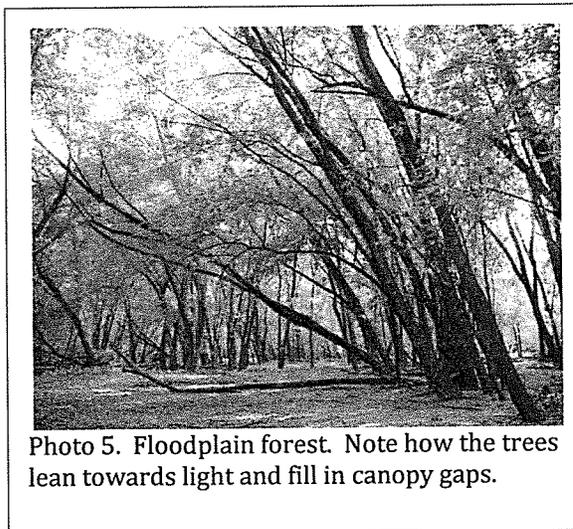


Photo 5. Floodplain forest. Note how the trees lean towards light and fill in canopy gaps.

According to the *Upper Mississippi and Illinois River Floodplain Forest* report (Urich, 2002), floodplain forests are declining in the Mississippi and Illinois River systems due to agricultural and urban developments, changes in the natural riverine flood pulses, the rising water table, and island loss due to wind and wave action (USGS 1999). The forests that remain are changing in composition from a diversity of species, including mast trees; to a more monotypic forest stand dominated by silver maple. Furthermore, many forest stands are even aged mature trees with little or no understory or seedling

regeneration. This situation is true for the Swing Bridge Park property.

Although some other tree species were present there, including boxelder, green ash, American elm, and eastern cottonwood, the vast majority of trees were silver maples (Photo 5). These dominant silver maples were 20" to 40" diameter at breast height (DBH), with an average spacing of 20 feet. The canopy coverage of the floodplain forest was 80% to 95%. The boxelders were generally smaller, at about

4" to 12" in diameter.

This unit is probably inundated every spring, and sometimes following heavy rain, for several days to several weeks, and has regular deposition of silt and sand. Recently deposited sediment, windrowed debris, and ice scars on trees were present, and are evidence of such flooding (Photo 6).

Given the dominance of silver maple in the canopy layer, there was very little regeneration of silver maple in the understory (possibly due to increased duration and intensity of flooding). The litter layer was almost non-existent, with vast areas of bare soil present (Photo 7). Since precipitation was far below normal during the three months preceding this survey, the ground appeared in many places to be parched mud flats. In the swales, the soil was moister, and annual vegetation, more like that under the bridge, predominated, including large patches of water smartweed. Some of the drier forest floor areas had extensive patches of wood nettles (Photo 7). There was really no shrub layer at all. A vine layer existed,



Photo 6. Floodplain forest understory. Note the rows and piles of debris and the lack of leaf litter.



Photo 7. Patch of wood nettle in canopy gap.



Photo 8. Tip up mound caused from a fallen silver maple tree.

and was composed nearly exclusively of grape vine (*Vitis riparia*), with some scattered Virginia Creeper Vine.

The forest was punctuated with occasional tip up mounds, and some large fallen trees had recently created new tip up mounds (Photo 8). There were numerous snags of large, dead trees. Notably, there was one large cottonwood snag near one of the backwater lakes, which was charred (Photo 9). Perhaps someone tried to

light it on fire, since fire is uncommon in floodplain forests. There was a fair amount of large woody debris on the ground, although it was segregated into piles and lines of debris, having been moved by floodwaters (Photo 6).

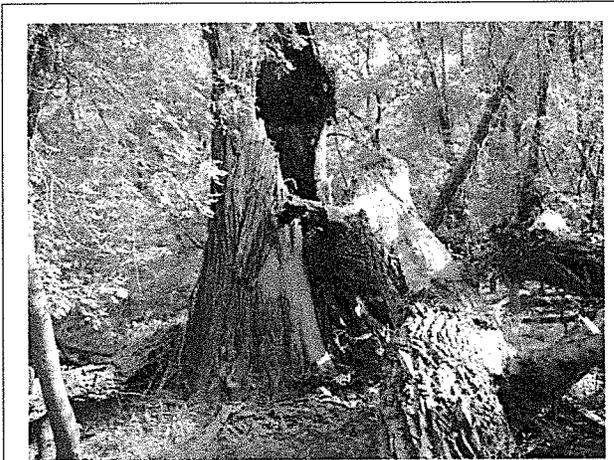


Photo 9. Large snag of a cottonwood. Inside was hollow and charred.

The forests of the Upper Mississippi River System serve as critical habitat for birds. Current trends in water regimes, plant succession, and human influences on the UMRS will result in significant changes in tree species composition and the conversion of forests to grassland or shrubs over the next 50 to 75 years (Urich, 2002). These changes will influence wildlife resources of the river. Bald eagles, great blue herons, great egrets, and cerulean warblers favor taller trees such as cottonwood for roosting and nesting habitat. Cottonwoods are

regenerating only a minor amount (Urich, 2002). Without direct management promoting growth of these trees, tall tree habitat will continue to diminish. These birds now utilize silver maple as a substitute to tall trees, yet future widespread occurrence of silver maple is also in question due to competition with exotic herbaceous species and due to prolonged flooding durations.

Sedimentation

An approximately 1-acre area, in the northeastern corner of the floodplain forest area, south of the bridge, contained significant amounts of sediment buildup. The trunks of trees, in this area, were buried in many inches of sediment (Photo 10). The source of this sediment is deposition from the river during flooding events, which is typical of a floodplain area. A very small percentage may also come from runoff from adjacent upland areas.

Other Human Impacts

A small spot where people use to camp was found near the river channel.

Assorted paraphernalia was found here, including a lawn chair, a tarp, a rake, coolers, and water jugs. Also near this spot was an active campfire on a point that was littered with beer cans and fishing gear.



Photo 10. Sediment buildup in floodplain. Note the base of this silver maple has no flare—it appears to protrude straight from the ground, like a pole. This indicates a significant amount of sedimentation here.

Floodplain forest, general (0.3 ac)

This unit contains an extension of the floodplain forest (on the east), and a strip along the north side of 66th Street, south of the lake owned by the Marina to the north. It also includes the west (east-facing) bank of the Mississippi River, just north of the bridge/pier. In addition, it also technically includes the segment of river bottom under the bridge/pier, but that was described in the Floodplain Forest section above.

Floodplain Forest Extension

This portion is north of the bridge and slightly more disturbed than the larger area of floodplain to the south, due to its vicinity with the marina and the road. The plant community was basically the same as that of the previous landcover unit, with the exception that the canopy was not quite as full. The same species composition was found here, with silver maple being dominant.

West Bank of River, surrounding of Bridge/Pier

This segment of riverbank was highly disturbed due to construction and/or repair of the bridge. North of the bridge/pier, the width of the bank is about 30-40 feet. This bank was steeper than the natural bank further south of the bridge (Photo 11).

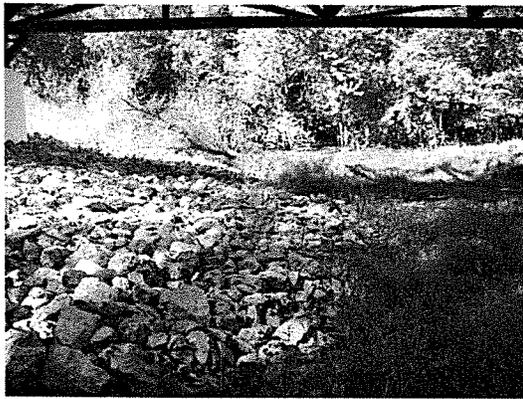


Photo 11. View underneath bridge, looking north. Note the riprap toe on the left, the annual vegetation on the right, the disturbed bank on left north of bridge footing, and the floodplain forest in the background.

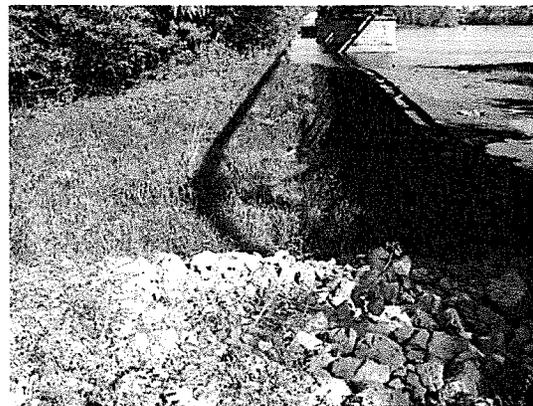


Photo 12. Under the bridge. Note the bare area directly under the bridge, due to shade.

The upland 10-20 feet was dominated by invasive weedy species, including green foxtail (an annual exotic grass), common ragweed, sweet clover (exotic leguminous forb). A sparse spattering of native forbs was also present—perhaps the result of a native seeding that was not adequately maintained—which included black eyed Susan, side oats grama, big bluestem, purple prairie clover, hoary vervain, and narrow yellow cone flower. The netting from an erosion control blanket still persisted here—long after the seeding was done—this is a potential problem for wildlife, and it should be removed if possible.

Just down from this strip was a band of riprap, approximately 10-20 feet wide, with various tree seedlings (Siberian elm, Cottonwood, black willow) that had volunteered into the spaces between the rocks. At the bottom of the slope of the



Photo 13. Perennial emergent vegetation under the bridge: aquatic smartweed.

bank was a broad, approximately 100-foot wide mud flat, with some scattered areas of very shallow, standing water. The summer and fall of 2012 had been very dry, and the river was very low—it was a “drawdown year” (Photo 12).

South of the bridge pier is dominated by common burdock, primarily, with other exotic invasives present also. The plant community in this area will need to be reconstructed from scratch.

The area under the bridge was basically mud flats, with not much vegetation

(Photo 12). Closer to the shore, flanking the bridge, annual vegetation like nodding bur marigold, barnyard grass, sedges, and rice cut grass had taken advantage of the draw-down conditions and were dominant here. In areas of more permanent low-water conditions, a sedge meadow type community predominated, with abundant perennial emergents like broad-leaved arrowhead and water smartweed (Photo 13). In adjacent uplands to the sedge meadow community, hydrology was dry enough so that silver maples, red-osier dogwoods, and other woody floodplain species prevailed, with the plant community grading into that of floodplain forest.

North Side of 66th Street

A strip of land on the north side of 66th Street, approximately 250 feet long and 70 feet wide, extends westward from the Bridge/Pier, which is part of this site (Photo 14). According to MLCCS, this is included in the Floodplain Forest cover type unit, which is fairly accurate. The middle part and western end of this area include a rather steep bank that connects to the backwater lake of the Marina property to the north. This area has been disturbed. The forb layer was dense, by the top of the slope. Species included velvet leaf, cockle bur, common ragweed, Canada goldenrod, green foxtail, and grape vine.

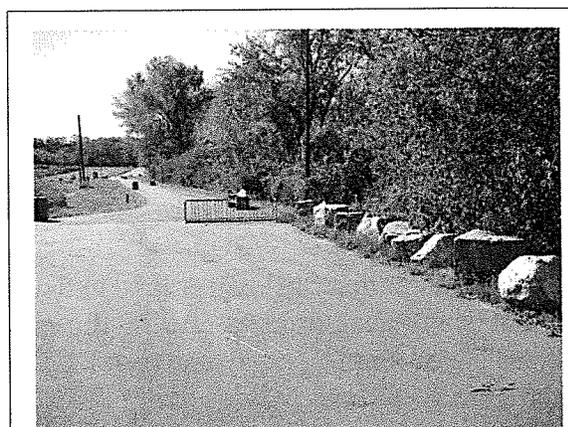


Photo 14. Parking lot for Swing Bridge Memorial Pier and the disturbed floodplain forest to its north. 66th Street extends beyond the parking lot to the west.

The area just to the west of this strip of land, although still disturbed, had a few more natives present. The plant community graded from that of a floodplain forest community dominated by large cottonwoods and silver maples, into that of a dry-mesic oak forest, with a few bur oaks in the canopy, non-native woody shrubs (T. honeysuckle and buckthorn) dominant in the shrub layer, and a very sparse ground layer. Other tree species present were black locust, green ash, and American elm.

Slow moving linear open water habitat (1.1 ac)



Photo 15. Vegetation of drawdown backwater lake. Bur marigold and rice cut grass are prominent here.

This landcover unit will be called either a “backwater lake” or a “finger lake” throughout this document. The backwater lakes are contiguous with the main river channel, and rise and fall according to river water levels. The lakes are shallow, being only a couple of feet deep at the most. At the time of this survey, in summer and fall of 2012, these lakes, although saturated, did not hold any standing water. They were not devoid of vegetation, however, but, were filled with a variety of annual herbaceous plant species including nodding bur marigold, rice cut grass, little white asters, bugleweed,

smartweeds, and sedges (Photo 15). These lakes are categorized as “open water” and “permanently flooded wetlands” by the soils survey and national wetland inventory, respectively (See section on *Wetlands* above). The fact that they were dry is probably a very uncommon occurrence. Also, the fact that they were filled with vegetation is a sign that the seed bank was poised to be released even after being dormant for many years—quite a testament to nature’s resiliency.

The westernmost backwater lake had a small island vegetated by four medium sized silver maples, a few scattered false indigo bushes (*Amorpha fruticosa*), and a dense carpet of tall, perennial sedges (*Carex* species). This interesting community was unique on the property, and perhaps is a remnant of a more widespread community from the past (Photo 16).



Photo 16. Amidst this backwater lake, what would be an island in most years can be seen in the left foreground. Note the tall sedges and four silver maple trees. The false indigo bush can be seen in the back of the island.

Number and Ephemeral Quality of Lakes

The exact number and amount of area of backwater lakes probably changes



Photo 17. View of herbaceous vegetation in the westernmost backwater lake of the property. This lake was experiencing a natural “drawdown”.

continuously from season to season and from year to year. Some of these lakes are ephemeral in nature, most likely, appearing and disappearing with rising and falling water levels, as influenced by seasonal river flooding and regional precipitation. At the time of the survey, there were two main backwater lakes observed, but there was evidence that three or more could be possible during wetter years. Light is probably the biggest factor determining the potential for vegetation during drawdowns. A veritable explosion of annual

vegetation is possible, given the right conditions (Photo 17).

Wildlife Habitat

These lakes present excellent habitat for many wildlife species, including a variety of amphibians and reptiles, such as frogs, toads, salamanders, snakes, and turtles. They also provide habitat for birds such as waterfowl and song birds. Fish utilize these shallow lakes for spawning in the spring.

Lowland hardwood forest (1.3 ac)

Parallel to, and abutting the west side of the westernmost backwater lake, occurred an approximately 1-acre area labeled “lowland hardwood forest”. This rather generic term describes a plant community that was located farther from the main channel and a bit higher up, probably being located on the upper part of the geological terrace (Terrace 1). This area presumably does not flood that often, maybe rarely, but is not far from the water table, which lies just under the surface of the soil in most years.

The species composition and density were different from that of the floodplain forest (Photo 18). The total



Photo 18. Lowland Hardwood forest, view of canopy from ground level. Note the numerous sky openings. Also note that the trees are not fully mature.

canopy coverage was only approximately 25%. The most abundant tree species was boxelder, which indicates that this site was disturbed, since boxelder takes advantage of disturbance and is an opportunistic tree species. Other tree species present were hackberry, green ash, and American elm. At one time, American elm was probably the dominant tree species, since many dead elms were abundant throughout. Dutch elm disease was responsible for this tree mortality (probably a reason why the canopy coverage was low, currently). The average spacing of the trees here was 15 to 20 feet. The average diameter was about 10" for hackberry and boxelder, with some of the larger elms reaching a diameter of about 20", but not much larger. Therefore, the trees were not very mature. No mast trees were found in this unit.

There was a *shrub layer* extant in this forest, as opposed to none in the floodplain forest, and it was strongly dominated by a dense growth of common buckthorn and Tartarian honeysuckle. Native shrubs were uncommon. Only a couple red-berried elder and nannyberry were noted. Large grape vines were quite common, growing far up into the canopy trees, and common on the dead elms. The *ground layer* was very sparse with a very thin leaf litter layer and much bare ground showing. Only a handful of species were present, including buckthorn seedlings, T. honeysuckle seedlings, white snakeroot, and Virginia creeper.

Dry Creek

A dry creek, or the remains of a former stream or former back-channel of the Mississippi river, was found in this unit (Photo 19). The dry channel ran north-



Photo 19. Dry Creek. Note the trees growing in the creek bed and the exposed bedrock bank.

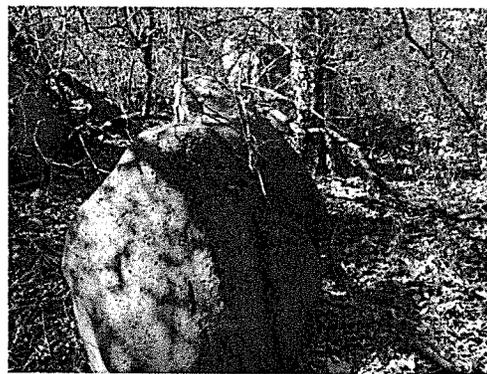


Photo 20. Grouping of large boulders on south end of dry creek.

south, parallel with, and just west of the backwater lake edge. It is now replete with small to medium sized trees, and appears that it has not been running for many years. Throughout most of its reach, this stream was lined with riprap rock, so it must have been associated with some sort of man-made purpose or project. On its southern end, near the mouth and entry into the finger lake, a grouping of very large boulders occurred. There were approximately 20 of these boulders, averaged 3 feet

in diameter, presumably arranged and placed on purpose here, for what reason was not apparent (Photo 20).

At one time, this stream must have been quite strong, for the banks expose bedrock, and the channel is fairly deep (Photo 19).



Photo 21. Foundation of an old building. It is at least 40 years old, judging by the size of the tree.

Whether the stream still runs today is a mystery. Perhaps it is active during wet years and seasons. It did not appear that water had been running in it for many years, however. The origin of the stream is also a mystery. Historical aerial photos do not shed any light on the subject, either (See section above, *Historic Aerial Photography*). Perhaps it was once connected with the area to the north, and flow was cut off after construction of the railroad embankments. Perhaps it was used for some purpose and diverted from the main channel? An old cinder block

bench was found on the top of the western bank of this stream channel, and an old abandoned stone fire ring, the age of which are uncertain. Also, the ruins of an old structure were found towards the middle of the unit. It was difficult to determine what the structure would have been or how old it was, but it was apparently excavated for a basement or root cellar (Photo 21).

Altered/non-native dominated upland shrubland (1.5 ac)

This unit is located adjacent to the west of the Lowland Hardwood Forest unit. It



Photo 22. View of upper terrace unit from above on the trail/embankment. Note the thick growth of exotic shrubs throughout.

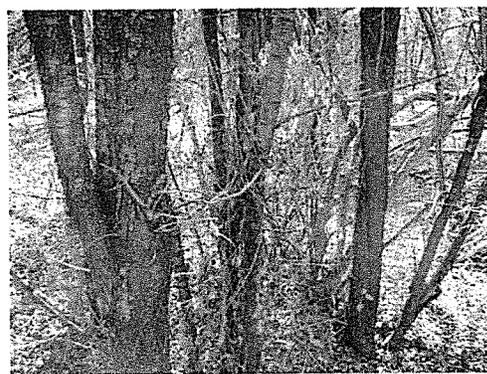


Photo 23. Large buckthorn in the unit.

started at the base of the embankment slope from the trail. The embankment was very steep, but the topography of this unit was nearly flat. This area must have

experienced some severe and prolonged disturbance, since there was a distinct lack of natives and a strong dominance of non-native shrubby vegetation.

The most striking characteristic about this unit was the almost complete dominance of common buckthorn (Photos 22). The buckthorn shrubs were very dense, with many larger, mature individuals (Photo 23). There was also much Tartarian



Photo 24. Ring of large cottonwoods.



Photo 25. Black walnut. Note the lack of large exotic brush around it, although many seedlings abound.

honeysuckle present in the shrub layer. The canopy tree coverage was sparse and spotty. There were a few cottonwoods (grouped in “rings” or scattered individuals), boxelder, and green ash. One ring of cottonwoods numbered five huge individuals (30” – 40” DBH) (Photo 24). Rings of this type arise from root sprouts, and then the stump decays and eventually disappears. A lone black walnut was found (10” DBH) (Photo 25). Remarkably, the buckthorn shrubs were not crowded around this walnut; it was fairly open around this tree in roughly 12-foot radius around the stem. This is likely the result of juglone, an allelopathic substance contained in the sap of the tree.

**Grassland, sparse deciduous trees-
altered/non-native dominated
vegetation (2.8 ac)**

This is an oddly shaped unit that includes the far southwest portion of the property and also includes the two arcing strips of land that contain the embankment/trail on the western edge of the property. The “grassland and sparse deciduous trees” designation comes from the mowed grass on either side of the trail, and from the area that must have been maintained (mowed),



Photo 26. Wall of buckthorn and honeysuckle. Looking east from Grassland unit at Upland Shrub unit. Foreground shows smooth brome, mullein and other herbaceous exotics.

which is near a residential property. This is a relatively narrow strip of land in located on the south and west boundary of the property and that curves upward and inward on the west property boundary (**Figure 12**).

Grassland at Southwest Corner of Property

The relatively open grassland at the southwest corner of the property contrasts with the dense, closed shrub cover of the adjacent landcover units to the north and east. Photo 26 shows the wall of buckthorn and T. honeysuckle, as seen from the open grassland to the west. A buffer of unmanaged vegetation borders the Upland Shrubland unit and the Lowland Hardwood Forest unit. This border abruptly



Photo 27. Grassland unit looking westward. Notice the turf and scattered trees in the background.



Photo 28. Edge of grassland unit with piles of downed buckthorn and T. honeysuckle.

changes, in the Grassland unit, into a manicured landscape with mowed turf and scattered deciduous trees (Photo 27). The residential property owner to the south is undoubtedly mowing on City property. There were also several large brush piles along the border of the shrubby units to the north and west (Photo 28). The brush had been cut and piled, but the piles were never burned. In addition, this area contained several invasive exotic herbaceous and a few woody species including spotted knapweed, smooth brome grass, mullein, Kentucky bluegrass, buckthorn seedlings, and T. honeysuckle seedlings.



Photo 29. Embankment looking westward. Park property is south, or left in this photo.

Southwestern Trail/Railroad Embankment

The embankments were originally installed for the railroad, circa 1858 (Parks & Recreation Director, personal communication, 2012). The 1937

aerials show the railroad was present at that time, so they were installed sometime before 1937. The bituminous trail on the embankment had been recently installed. The slope of the embankment had not been restored or seeded, at the time of this survey (summer and fall of 2012). On the south side of the embankment, a combination of native and non-native vegetation was growing on the steep slope (Photo 29). Many large buckthorn shrubs (exotic) were present, along with Tartarian honeysuckle (exotic), smooth sumac (native), and prickly ash (native). The ground layer also contained a mix of exotic (smooth brome, mullein, buckthorn seedlings, T. honeysuckle seedlings, hoary allysum, catnip) and native (stiff goldenrod, common milkweed, old field goldenrod, green ash seedlings, smooth sumac root sprouts) vegetation. The vegetation shows signs of much disturbance with a partial recolonization by native species.

The north side of the southwest stretch of embankment, as well as the south side of the northwest stretch of the embankment was off the property. The north stretch of the embankment trail will be described in the next landcover unit.

26% to 50% impervious cover with deciduous trees (3.1 ac)

This landcover unit is a long strip of land on the northern edge of the property, just south of 66th Street, including the northern stretch of embankment/trail and the flat, barren parking area north of the embankment.

Northern Stretch of Embankment/Trail

This landcover unit includes the northern stretch of the embankment/trail—the part that parallels the parking lot and leads to/from the overlook and stairs that connect to the pier/bridge. This embankment had very steep side slopes (Photo



Photo 30. Steep north-facing slope of embankment, dominated by exotic weeds.



Photo 31. South-facing slope of embankment, dominated by buckthorn.

30). The surface soil consisted of high amounts of a rubbly, low-density, highly porous, slag-like material—sort of a fill material—very low in organic matter, with a trace of topsoil mixed in. Subsoil was not investigated. The two side slopes, north-facing and south-facing, had different plant communities on them. The north-facing

slope consisted of a fairly diverse array of exotic and native weedy herbaceous species (pigweed, sweet clover, alfalfa, oats, Gallardia, giant mustard, lamb's quarters, giant ragweed, barnyard grass, etc.), with scattered woody seedlings, whips, and resprouts (green ash, cottonwood, buckthorn, boxelder, etc) (Photo 30). The south-facing slope was low in diversity and was dominated by small trees, no larger than 20' tall (boxelder, American elm, and green ash) and woody shrubs (Tartarian honeysuckle, buckthorn, chokeberry, and nannyberry), with a sparse, to interrupted, ground cover (Tartarian honeysuckle seedlings, buckthorn seedlings, wood nettle, violet species, and carrion flower, with rice cut grass, and riverbank rye at the bottom of the slope) (Photo 31). There were several small gullies that had formed, on the side slopes, due to exposed soil and sparse vegetation cover. The north-facing slope had been recently hydro-seeded (Parks Director, personal communication July, 2012), but it evidently was not very successful. Perhaps the shadiness of the north-facing slope contributed to this lack of success. The abundance of species like Gallardia, and non-native, small flowering plants like a poppy-like species, blue chervil, a phlox-like species, sweet Williams, mallow, indicates that a mix that is labeled "wildflower seed mix", that is primarily composed of non-native plants, was used on this slope. A native seed mix would have been more appropriate.

Animals observed at this unit were: chipping sparrow and American robin.

Parking Area

The rest of this unit consisted of a flat area with temporary parking lot, an infiltration area, an empty dirt field, and a paved street that leads up to the bridge/pier. Proposed for this area is a Wayside Rest building, a parking lot, raingardens, and informational kiosks. No plant communities occurred here.

Buildings and pavement with 76% to 90% impervious cover (0.1 ac)

This was a mere sliver of land on the northernmost boundary of the property, just south of 66th Street, and west of Donnelly Ave. This small area must have been defined by MLCCS by the impervious pavement of the roads. There was no vegetation on this area.

RESTORATION PROCESS

*Undertaking a restoration project of this sort is a significant task and assistance is available to help landowners with the process. Friends of the Mississippi River and Dakota County will continue to work closely with the landowners, if desired, by helping to secure funding and providing project management and oversight. Professional firms that can conduct management tasks are listed in **Appendix D**.*

Restoration Goals

The primary objective for this site is to improve the composition of the plant communities throughout the property to better reflect the diversity, composition and structure that would have been present at the time of European settlement and to improve the ecological functions that the historic native plant communities would have provided, including:

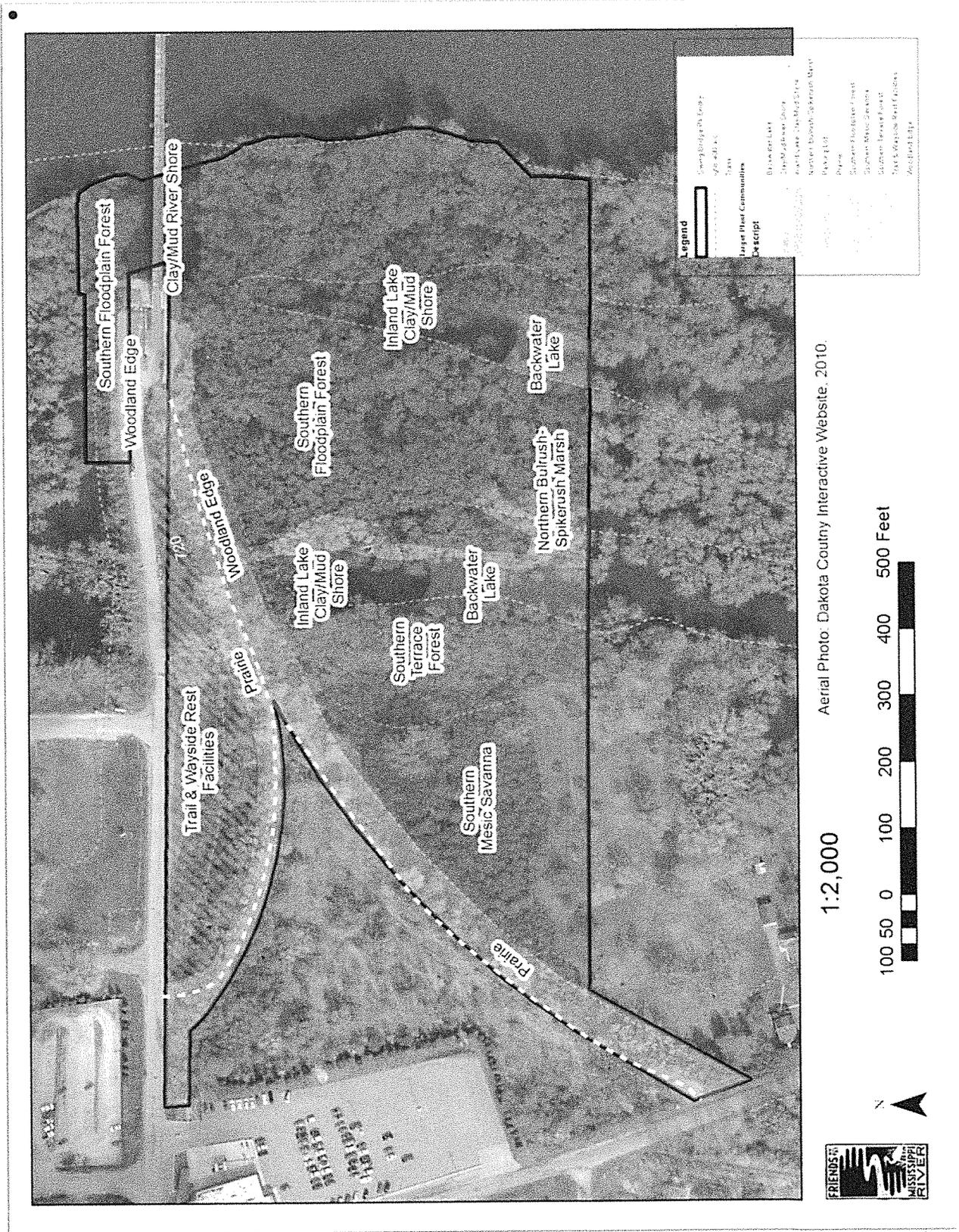
- habitat for a diversity of wildlife species,
- nutrient and water cycling,
- carbon storage,
- moderation of water-table levels,
- erosion control,
- filtration of nutrients, sediments and pollutants,
- development and enrichment of soils,
- local temperature moderation.

Though degraded by past uses, the existing plant cover retains a good variety of native species and could be readily improved. A healthy and diverse plant community can provide much greater wildlife value than a degraded one, and tends to be much more stable, and less susceptible to disease, invasive species, and other concerns.

Management recommendations were developed for each land cover area, with the overall goals for the easement area focused on 1) promoting a functional, sustainable floodplain ecosystem that includes a mosaic of native vegetation communities sufficient to support important wildlife habitat, 2) protecting high quality wetlands and floodplain forest, 3) restoring terrace forest and oak savanna, 4) controlling and reducing erosion, and 5) promoting cottonwood regeneration. Overall management practices to achieve those goals are:

- remove non-native, invasive, woody species;

Figure 14. Target Plant Communities at Swing Bridge Park



- control non-native invasive herbaceous species, including, common buckthorn, Tartarian honeysuckle, spotted knapweed, common mullien, Canada thistle, common burdock, and smooth brome grass;
- re-establish native vegetation in highly disturbed areas, especially the oak savanna target plant community unit.
- Re-introduce historic, light surface fires via controlled burning of prairie and savanna Native Plant Community units
- establish native ground layer and/or shrub layer on steep embankment slopes;
- conduct periodic prescribed burning to maintain prairie, savanna, and woodland edge vegetation and reduce invasive shrubs and overabundant tree seedlings;
- plant cottonwoods in the floodplain, especially along the edge of the river channel
- plant a diversity of native trees in the floodplain forest
- maximize the amount of interior forest habitat
- monitor annually for potential erosion and sedimentation, as well as for non-native invasive woody species;
- institute a monitoring plan to track effectiveness of management and restoration activities.

Target Plant Communities

The restoration sites on this park property will consist primarily of a mix of floodplain forest, terrace forest, and oak savanna (**Figure 14** and **Table 3**). Also, the river shore will be restored, where possible, especially in the disturbed areas near the bridge and also in terms of cottonwood regeneration along the entire shore. The backwater lakes were divided into two types of lake, depending on their permanence and their depth. The shallower zones that have potential for drawdown are designated “inland lake clay/mud shore” and the deeper zones that are more or less permanently flooded are designated “backwater lake”. The focus for the lakes and the marsh will be protection and monitoring, with no plans for active restoration. On the steep slopes of the embankment/trail, there will be a considerable amount of “prairie” constructed. The type of prairie is not specified, since it is located on such an unnatural and disturbed area. The unit on the map called “Woodland Edge” refers to the vegetative cover on the steep slope between the embankment/trail and a floodplain forest or terrace forest, which is, again, a generic term for this similarly artificial and disturbed area.

Table 3. Restoration target plant communities for existing landcover.

Unit	Acres	Existing Landcover (MLCCS)	Dominant Soil Type(s)	Target Community
FF	6.78	Floodplain forest, silver maple subtype	Alganssee	Southern Floodplain Forest (FFs68)
InLk	1.29	Slow moving linear open water habitat	Alganssee	Inland Lake Clay/Mud Shore (LKi54)
RvSh	0.44	Floodplain forest	Alganssee	Clay/Mud River Shore (RVx54)
BkLk	0.63	Slow moving linear open water habitat	Alganssee	Backwater Lake (BkLk)
Marsh	0.6	Floodplain forest, silver maple subtype	Alganssee	Northern Bulrush-Spikerush Marsh (MRn93)
TF	1.14	Lowland Hardwood forest	Copaston	Southern Terrace Forest (FFs59)
Sav	2.67	Altered/non-native dominated upland shrubland	Copaston	Southern Mesic Savanna (UPs24)
Pr	2.24	Grassland with sparse deciduous trees--altered/non-native dominated vegetation	Copaston	Prairie (Pr)
WdEdg	0.65	Grassland with sparse deciduous trees--altered/non-native dominated vegetation	Copaston	Woodland Edge (WdEdg)
Fac	1.63	26% to 50% impervious cover with deciduous trees	Copaston	Trail & Wayside Rest Facilities
TOTAL	18.07			

Restoration Process

Restoration is a process. The Society for Ecological Restoration (SER) defines restoration as *the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed*. It takes time to restore ecosystems to their former functioning, sometimes this can only be approximated. It took many years to degrade the ecosystems and biological communities of the Swing Bridge Park site, so it will not be restored overnight. Many steps are typically involved in a successful restoration. Even deciding when a restoration is complete/successful can be very difficult. A good guide on how to accomplish restoration is using the concept of

adaptive management. Adaptive management is a strategy commonly used by land managers and restorationists, and integrates thought and action in the process. It can be described as a strategy that uses evaluation, reflection, communication, and also incorporates learning into planning and management. It is set up like a feedback loop and looks like this: Assess Problem -> Design -> Implement -> Monitor -> Evaluate -> Adjust -> Assess Problem -> and so forth. Thus, moving forward with restoration, each round of adaptive management refines and hones the process to better fit the conditions of the site and time. This strategy should be used at the Swing Bridge Park site.

The restoration of the biological communities at the Swing Bridge Park property will be broken into phases. Each phase will address the restoration of each given target plant community. Phases will be spread out over a number of years. Restoration will also be prioritized, with the most important resources or vital areas taking precedence. On this site, the Floodplain Forest is the *highest priority* because this plant community is so vital to the condition of the Mississippi River and its biota, and thus will be given preference in this plan. The *second priority* is establishing native prairie cover on the steep slopes of the embankment/trail, since they are very prone to erosion and they are so visible to potential park visitors. The third priority is restoring the Mesic Savanna and Terrace Forest units, since savanna is a vulnerable plant community and the Terrace forest is a vital link between the upland and the floodplain. **Table 4** is a schedule of proposed management activities and cost estimates, and lists each step in the process.

Site-Wide Invasive Woody Plant Removal/Control

The initial restoration goal is the eradication of non-native woody species. For this property, it is more pertinent on the uplands than in the floodplain and the backwater lakes, since most of the woody invasive species are located in the upland units. The lowland units have some scattered woody invasives, but not much energy will need to be allocated to these areas. The upland sites, the mesic savanna, the embankment slopes, and the terrace forest, have a plethora of woody invasive exotics, especially common buckthorn, and Tartarian honeysuckle, which need to be removed. Removal can be done in phases, depending on funding and scheduling, or can be done for the entire property all at once. It would be preferable to have the removal happen all at once, since this is not too large of an area and then the seed source for would be eliminated. Due to the high density of woody invasives on the western/upland portions of the property, removal could take either one or two years, if done all at one time, and could take as many as five years if phased.

Closely integrating seeding, following removal, will be necessary, since the site is so badly degraded (seed source will be minimal) and also on the steep slopes of the embankment (to prevent erosion). Part of the exotic woody control would be prescribed burns, which will reduce seedlings of exotic species and will help to foster native species.

Restoration Priorities

PRIORITY 1: Restore/Protect Southern Floodplain Forest

Shoreline

Non-native species control

Control purple loosestrife along shoreline (**Appendix C**). Monitor for reed canary grass and treat with aquatic herbicide; treat as new recruits come in. Remove the few large buckthorn shrubs and treat stumps with aquatic herbicide.

Shoreline Stabilization

High bounce and scouring make shoreline stabilization a challenge. Installation of root wads with boulder and shrubs/herbaceous plants behind the hard armoring is recommended for the areas that are experiencing scour and erosion around tree roots. Another recommended practice is the installation of rock vanes, although the Army Corps of Engineers would need to be consulted whether they would allow such structures in a navigation channel. See **Appendix F** for more information.

Planting

Since cottonwood regeneration, and to a lesser extent black willow regeneration, are of paramount concern here, it is recommended to plant these two species (especially cottonwood) on the shoreline and the near shore area (about 100 to 200 feet from the bankfull discharge). A variety of sizes of trees can be planted, from small whips to large container stock. Balled and burlapped trees would probably be too large and difficult to transport and plant. Protect larger trees from damage with perhaps a ring of sturdy posts that are driven well into the ground, to withstand flooding and damage by floating debris. Small bare root whips need no special protection. Planting should probably occur in the fall, since spring and summer are the flood prone seasons. Since both of these species requires light for growth, especially when young, canopy gaps can be made if they do not exist, by selectively removing some medium-sized silver maples or green ash to create gaps. Leave tallest, "super-canopy" trees for possible nest and roosting sites for eagles.

Riverbank, near the bridge/pier

This area will need to be reconstructed from scratch, so to speak. Killing all exotic annuals, biennials, and perennials should precede any plantings. Plantings in this area will need to be able to withstand heavy competition from weeds in the seed bank. Thus, it is recommended to plant aggressive, taller, herbaceous species and also shrubs. Since this is a rather small area, planting plugs on the bank would be economical and ensure a higher success rate than seed. Tall shrubs and trees are not recommended on the north side of the bridge/pier, because they may block view from the paved areas nearby. Sandbar willow would be a good selection. Other

more showy shrubs would also be nice for this highly visible spot. Species such as leadplant and wolfberry on the upper bank, and chokeberry and witch hazel and nannyberry on the mid bank, and wild indigo bush (and sandbar willow and highbush cranberry) on the lower bank, would be appropriate.

Floodplain Forest

Since exotic species were scarce in this cover unit, their control is not a concern. The main concern and priority in this unit is increasing species diversity.

Planting

To achieve a more diverse plant community (both in terms of species composition, vegetation structure, and age class composition), and to ensure that the canopy forest continues in the future, plant appropriate native trees in canopy gaps. If canopy gaps do not exist, they can be created by removing selected canopy trees: preferably ones that are currently well represented by species and size class (primarily 10-25) inch DBH, silver maple, and secondarily boxelder and green ash). However, leave the tallest silver maples for potential eagle nesting trees. Focus on creating gaps along the river, where more sunlight will be available due to the opening afforded by the channel. In the interior areas, being too aggressive with tree removal may be more of a liability than a benefit, since many trees would have to be removed to provide enough light for seedlings. Therefore, only use large natural gaps in the interior, where a modest amount of tree removal will suffice. When trees are removed, save the limbs (preferably 10-15" diameter) for use on the steep slopes of the embankments as waterbars: a technique for erosion control (see **Priority 2**).

If removal of trees is not feasible, another option is to kill the trees and leave them dead-standing, by girdling them and treating the ring with a systemic herbicide. This will allow more light to penetrate, provide wildlife habitat. Trees treated in this manner will eventually fall.

Diversity in species composition and in age class composition is recommended. A variety of sizes of trees can be planted, from small whips to large container stock. Balled and burlapped trees would probably be too large and difficult to transport and plant. Protect larger trees in some manner, perhaps with a ring of sturdy posts that are driven well into the ground, to withstand flooding and damage by floating debris. Small whips need no special protection. If small whips are used, it is recommended to plant in large numbers, to overwhelm browsers and to account for greater mortality rates. If larger trees are used, planting in pods (groups of trees) would be a good strategy, since it would be easier to monitor them. Planting should probably occur in the fall, since spring and summer are the flood prone seasons. Fall plantings should be monitored closely for adequate soil moisture conditions. Fall can be a very dry time, and newly planted trees require regular water (a thorough soaking once a week, at least) to survive. Planting in the spring would avoid moisture deficits, but flooded soils may not allow planting to occur. Summer

plantings can work, but hot and dry conditions are poor for planting. This floodplain forest, by virtue of its dense canopy, may provide satisfactory conditions for summer planting. Bareroot plant material is the cheapest, and probably the best way to plant, since this will be a large planting. However, the only time to obtain bareroot material is in the early spring, which is potentially problematic for planting on a floodplain, because of flooding. Sometimes bareroot plants can be stored for a short time in a refrigerator. Perhaps, too, it may not flood during the year that planting is planned. If it does flood that year, have a spot designated to plant the bareroot plants, perhaps in the Lowland Hardwood Forest unit. Planting a limited amount of containerized material would not be too expensive. Species recommended to plant are cottonwood, silver maple, green ash, and limited amounts of hackberry. Consult **Appendix B** for species list. Monitor and use an adaptive management strategy over the course of the next couple years.

Seeding

Seeding may also be an option for floodplain forest regeneration. Wind-dispersed seed is the natural way that cottonwoods, silver maples, green ash trees regenerate. The seed “rain” (when seeds are released) occurs for these species in the spring. Under current conditions, seed rain often coincides with unnaturally high water levels on the river during June (the “June rise”), which acts to reduce germination success, and thus is part of the problem of forest tree regeneration in floodplain forests. One strategy might be to collect seed, on site, that is naturally dispersed and then spread it onto areas of higher ground, thus protecting it from getting washed away. (This may be a good volunteer event). Such an area might be at the toe of the embankment slope or in the Terrace Forest. Remember to provide enough light to reach the forest floor to germinate the seed. Seed source for cottonwoods exists on the property, since there are several large cottonwoods at the south end of the Floodplain Forest unit and a couple patches of large trees located in the Mesic Savanna unit. Suitable spots for spreading seed should first be field surveyed and marked by an ecologist or equivalent, prior to seeding.

Backwater Lakes

Since the backwater lakes are really in quite excellent condition, they need very little attention other than monitoring for invasive species. Also, monitoring in the spring and summer for spawning fish would be interesting too.

North of 66th Street

Increasing the species diversity and improving the view to the north could improve this area. Perhaps the best and easiest way to accomplish this, after removing exotic brush, would be to plant native shrubs. Use of too many large shrubs should probably be avoided, to keep sight lines open to the north. Shrub species like black chokeberry, and bush honeysuckle would be good candidates, with a few medium-sized ones like smooth sumac and grey dogwood thrown in for good measure.

Mixing in a few larger shrubs like nannyberry, silky dogwood, and button bush would improve diversity and habitat value.

Cleanups

Some areas of the floodplain may accumulate trash and non-natural debris. These areas would be improved by periodically cleaning up the trash. Volunteer groups work well for clean-ups. Groups such as Girl Scouts and Boy Scouts should be considered. Friends of the Mississippi (FMR) excels at reaching out to, organizing, and managing volunteers and volunteer events. FMR would be happy to assist the City with volunteer events to restore the park.

PRIORITY 2: Establish prairie and woodland edge vegetation on the steep slopes of the trail embankments

Prairie on Trail Embankment

The condition of the plant community is poor on the embankments, but since it was just seeded with a native prairie mix last year it is recommended to monitor the slope for prairie seedings. If there is little or no progress by the end of what would be the second growing season (October, 2013), then it is recommended to apply systemic broadcast herbicide and start over from scratch. If the seed only takes in spots on the slope, then a spot treatment and seeding would be recommended on areas that are weedy. Also, a general overseeding may help enhance the native seeds that are already there, so seeding at a light rate of about 4 lb/acre would work as an overseeding.

Taking soil tests to determine deficiencies in soil nutrients and identifying soil texture are also recommended. It is highly likely that organic matter is deficient in these soils. If organic matter is low, add composted leaf mulch or treated compost (can be purchased). Compost should be incorporated into the soil pre-planting, otherwise, post-planting, it could be carefully sprinkled in a thin layer over seedlings.

Due to the large number of resprouting woody stumps on the slope, it is also recommended to cut and treat resprouts with a systemic herbicide. Glyphosate (Roundup) or triclopyr (Garlon) are typically used for treating resprouts. It is not recommended to use the oil-based form of triclopyr, since collateral damage to nearby plants can be very high.

Stabilization

To stabilize these slopes, wattling or water bars can be installed. Wattles are made of either live thicket plant material (both material that will readily root [willow, dogwood, etc.], or not can be used). Wattles should be about 6-10" in diameter. Water bars should be cut from downed tree limbs that are at least 10" in diameter. Both wattles and water bars should be trenched into place on the slope, either in

trenches that are dug in rows or randomly placed on the slope. Install the wattles or water bars so that they are buried about 1/2 -way down. Stake wattles and or

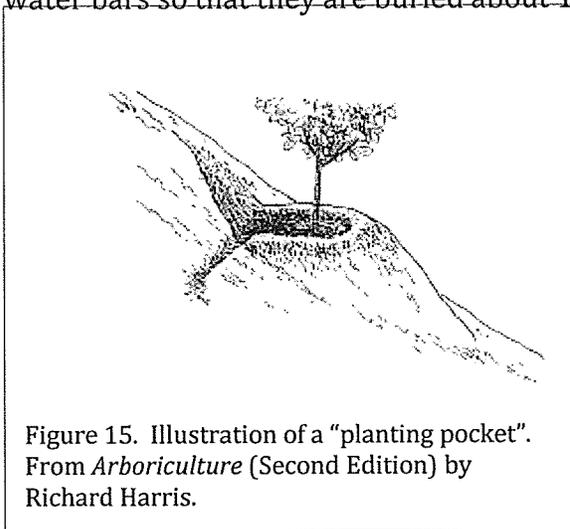


Figure 15. Illustration of a "planting pocket".
From *Arboriculture* (Second Edition) by
Richard Harris.

water bars in with sturdy stakes, at least 4 feet long. Drive stakes in perpendicular to the slope. Plant plugs or seed around the installed wattles and/or water bars.

When planting larger prairie plants on the slope, it is recommended to dig a planting pocket into the slope to facilitate irrigation (**Figure 15**). The plant is set well forward in the pocket, establishing a basin to the inside that will retain water and protect the plant from a certain amount of eroding or sloughing soil. An overflow spillway will prevent the pocket from being washed out by all but the heaviest rains. Create an overflow spillway by cutting into the undisturbed slope at one side of the pocket so that water will flow out of and away from the basin before the berm is breached.

Planting and Seeding Methods

There are two alternatives available for planting methods: 1) planting transplants, and 2) seeding. Both methods have plusses and minuses. Planting transplants (plugs, container-grown plants) is probably the best way to get instant establishment. Seeding generally takes a little more time. Transplants do not cover as much area as quickly as seed, however. Transplants are more expensive than seed, per unit area. Transplants also need to be planted by people, which mean that feet will be walking on these steep slopes, which will disturb these soils. Depending on timing of planting or seeding, both methods usually require some irrigation, but transplants will need more, typically. Perhaps the best method is to mix both methods by planting transplants and seeding, to assure the best results for a steep slope like this one. Planting a few prairie shrubs, scattered across the slope, from larger containers is also recommended. See Appendix B for a complete recommended species list for prairies.

Seeding

Hydroseeding can also be used on steep slopes. This method will be successful only if good seed to soil contact is established. If the substrate (soil) does not have enough moisture and nutrient capacity, then seed will not germinate and grow. Irrigation is vital during the germination period. If the seed mix is stacked with a high percentage of quick germinating species like wild rye, bottlebrush grass, and annual oats or winter wheat for cover crop, germination success will be greater. Whenever a seeding method is used, good site prep is vital. Doing adequate weed control prior to seeding is highly recommended. Perhaps apply two or multiple rounds of herbicide treatments, to flush out the weed seed bank, just before seeding with natives.

Broadcast seeding should work, too, and is less expensive, but does it does not have a tackifier so it will not stick to slopes like hydroseed will. Consider broadcast seeding by hand into microsites that are suitable, i.e., ones that have exposed bare soil, are on a slight flat spot, and have decent soil (not too much debris or rock). This may be a good way to increase diversity on the site, after plug planting and shrub planting occur. For seeding, an erosion control blanket will be required. For proper installation of erosion control blanket, it is best to key in the blanket at the top of the slope and roll it down, overlapping on the sides as you go. It is recommended using a natural product that is not made from plastic, even if it claims to be bio-degradable—often this is sunlight-dependent, which is not always consistent. One that is entirely made from natural fibers is best. The best times for seeding and planting are in spring and fall, due to moisture availability. Also winter seeding can be done in early spring, sowing on top of a light cover of snow. Freeze-thawing will help sink the seed down into the soil.

Many native species seeds require a period cold treatment (stratification), typically for a couple of months, where temperatures dip near or below freezing. Many species also require scarification—a scraping or scarring of the seed coat. Some even need to be acid-treated (mimicking stomach acids of animals). Thus, germination almost never occurs all at once for all species—it is mixed and unpredictable. Some species such as wild rye, partridge pea, common black-eyed Susan, and side-oats grama will germinate quickly and reliably, but they usually diminish in the community after a couple of years (early successional). Many of the more conservative native species take longer to germinate and longer to establish in the community, but once they do, they usually persist. A technique to add diversity and add conservative species is to seed with a common seed mix, and then to follow up in later years by planting transplants of more conservative, later successional, natives.

Seed Mixes

A showy seed mix with plenty of native forbs, and native grasses/sedges, would probably be best for the embankment nearer the parking area, where more people will see it. Diverse seed mixes can be obtained from various local vendors. See Appendix B for some examples.

Woodland Edge on Trail Embankment

Due to the poor condition of this area, it is again recommended to start from scratch. Cut and treat the stumps of woody exotics like buckthorn and T. honeysuckle. Broadcast-apply a systemic herbicide to kill all other herbaceous vegetation. Take soil tests and add organic matter if necessary. Then stabilize the slope as necessary with wattles and/or water bars. Plant native shrubs across this slope. Planting scattered plugs and seeding in bare spots is recommended for stabilization purposes, since these fine roots hold onto fine soil particles better than the coarse roots of shrubs. Since this side of the slope is not very visible to the public, and it is located on a man-made structure, so it doesn't have to conform strictly to a specific plant community. Species composition can be simple. For instance, a few native shrubs, a few forbs, and a few graminoids should suffice. Recommended shrubs are chokeberry, nannyberry, prickly gooseberry, common elder and hawthorn. Forbs: inexpensive: white snakeroot, ostrich fern, interrupted fern, woodland sunflower; more expensive: black snakeroot, wild geranium, Virginia waterleaf, zig-zag goldenrod, Jacobs ladder, figwort. Graminoids: Virginia wild rye, bland sedge, Pennsylvania sedge.

PRIORITY 3: Restore the Terrace Forest and the Mesic Savanna

These two units are of lower priority, simply by virtue of the fact that they are farther from the river, or not as high profile as the other units. This is not meant to convey that they are of little or no value. On the contrary, restoring these two units would immensely improve the ecological value of the property, and restoration is highly recommended.

Southern Terrace Forest

Exotic Woody Brush Removal

The first activity of this unit should be removing the exotic woody brush, which is quite dense. Also, cutting and stump treating wild grape vine is recommended, since it is very abundant. The abundance and density of canopy trees is appropriate for this plant community, so no new tree planting is required. For a list of potential tree species to plant if needed in the future, see **Appendix B**. Consideration should be given to planting disease-resistant elms, since elm was once a dominant tree in this NPC. Enhancing the diversity of the shrub and ground layers is recommended. Planting in pods, located in canopy gaps, is a recommended method to proceed. Pods should be protected from browsing by fencing, which should be checked and tended annually until the plants are well established. Fence posts should be made of wood, since metal ones rust and deer push them over. Protect pods from fire for the first 2 to 3 years. It is recommended to plant plugs within pods, instead of to seed. Seeding may be done, but it is recommended only when following site preparation (e.g., weed control followed by a burn). Seeding is typically done for large areas, so it is recommended that probably the entire, or nearly the entire, unit be seeded, if this is to be done. Seeding large areas is a good strategy for deer browse—deer can heavily browse a small seeding and wipe it out, whereas larger areas can

accommodate more browsing pressure. The success of seeding depends on good seed to soil contact, which means that seed should not be sown onto areas that have thick duff or deep mulch. Seed needs light to germinate, so it would be best to seed into spots that are not too shady. This is why site preparation is so important. See Appendix B for full species lists. Removing buckthorn and honeysuckle brush, which grows very densely, and removing much of the wild grape is pretty essential to exposing the ground layer to light. Although these forests did not burn often, historically, some areas burned occasionally, about every 10 to 15 years, during droughts. Burning is recommended as a management tool for the first couple of years after buckthorn removal, however.

Mesic Savanna

The mesic savanna affords the best opportunity to improve the condition of the property. This unit is probably the most degraded, with the densest growth of woody brush of all the units. In terms of regional significance, upland mesic savanna vegetation has been reduced more than any other vegetation type, over the last 150 years. Restoring this mesic savanna would truly be a notable achievement.

As with the Terrace Forest unit, the biggest challenge in the Mesic Savanna unit will be clearing and removing exotic woody brush. Cut stumps very close to the ground, so that walking over the savanna in the future is not impaired. The process of removal is quite intense. Stumps will need to be treated with a systemic herbicide so they do not resprout. Cut brush can be hauled and stacked and then burned. Brush can be either hauled and stacked at the time of cutting or done later, but many contractors prefer to do it at the same time. Volunteers can also be used to haul and stack brush, once it is cut. Burning of brush piles should be done when there is no danger of spreading wild fire. Fire in brush piles can get very hot, in fact, spots underneath burn piles become sterilized and nothing will grow, so they need to be seeded later. Once brush is cut and removed, then a several rounds of foliar treatments of sprouts is recommended for the next spring, summer, and fall. Once that is accomplished, burning the unit will be paramount in importance. Following the burn, then sow a diverse seed mix onto the onto the blackened soil surface. A light disking or harrowing may be necessary prior to seed mix, to loosen up the top layer of soil and break up larger soil clods, if it can navigate over the stumps. Seed may be purchased from a local vendor (**Appendix D**). Appropriate seed mixes can be obtained (**Appendix B**). Local ecotype origin seed is highly recommended.

Since this is a savanna unit, oaks and other appropriate trees may be planted after the prairie grasses and forbs are established (about 3 years). Bur oak is the species of choice for savannas. Other species include northern pin oak, black cherry, paper birch, quaking aspen, hackberry, and, for this site, black walnut. Trees can be planted in pods (groups of about a dozen). In the end, tree cover should be typically 25-40%; no greater than 50%.

Fire is needed to maintain the savanna ecosystem. It helps regenerate graminoids and forbs, injects nutrients into the soil, and reduces competition from invading woody species. Frequency of fire is typically higher in prairies than savannas, but rotation rates of about every 3 to 5 years should suffice for both communities.

Facilities for Trail and Wayside Rest

This approximately 1.6-acre unit, located on the north portion of the property, will be devoted to construction of facilities for a Wayside Rest for the Mississippi River Regional Trail (MRRT) and Heritage Village Park (**Appendix G**). Included will be picnic pads, a restroom building, a 40-car parking lot, raingardens, an “Overview Interpretive Kiosk”, “Bridge history interpretive Kiosk”, “Local history interpretive kiosk”, “Interpretive Plaza”, “river interpretive kiosk”, lighting, tree plantings, and floodplain hiking trails.

During construction of these facilities, the primary concern would be protecting the adjacent natural areas from being damaged. Damage can come in the form of soil compaction from heavy equipment and from storage of materials. It can also come from sedimentation from exposed soils that erode onto adjacent natural areas. A detailed plan, Stormwater Pollution Prevention Plan (SWPPP) shows staging areas, areas for storing materials, ingress and egress areas that have contained washout systems, perimeter protection, inlet and outlet protection, temporary erosion control and permanent erosion control, inspections, and site construction meetings and documentation. For more information on SWPPPs see the following websites: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/construction-stormwater/index.html>, and <http://cfpub.epa.gov/npdes/stormwater/swppp.cfm>.

Hiking Trails

Regarding the hiking trails in the floodplain forest, the location placement of these trails is important. Avoiding sensitive areas such as the backwater lakes, the emergent marsh will be important. The type of trail and construction are also important. Since this floodplain floods regularly every spring/summer, any trails that are built will have to take this into consideration. If trails are constructed, covering with wood chips may be the best option. Wood chips will provide a nice surface for hikers, protect soils from compaction, and also not contaminate or pollute surrounding water and soil. To maintain wood chip trails, additions of new chip would most likely be needed each year, due to flooding.

Prescribed Burns—More Information

It is usually recommended to split sites up into burn units, for ease of operation and for ecological reasons (impacts on insects and animals, for instance). The fire dependent communities of this property, however, are so small that this may not be feasible. It is important to leave some areas unburned (refugia) to allow insect and animal populations to recover and repopulate burned areas, which is a strong

reason for creating burn units, no matter how small. Rotate the burning of units from year to year, and try not to burn adjacent units in consecutive years. Prior to a prescribed burn, a burn plan must be devised. The burn contractor can help with the burn plan. Permits must be obtained from the DNR and local fire officials. Initially, burning would be rotated every one or two years, so that each year a different burn unit would be burned. Long-term, burns should occur every 5-9 years in woodlands and 3-5 years in prairies and savannas. Burning in the savanna should be done carefully the first 10 to 20 years, so that the planted trees can get established. If young trees are not protected during their early years, they will be top-killed by fire. Roots and stumps will resprout, but frequent fire will continually kill the top growth. This is the main reason why bur oak is so prominent in savannas, because it has thicker bark and readily stump-sprouts, and is able to withstand and respond to fire more than most of its thinner barked associates.

Prior to burning, burn breaks must be created to contain the fire. Burn breaks consist of a mowed swath in grassland areas, typically at least 8 feet wide. In woodland areas, the break line is created by clearing the leaf litter and any other debris to reach mineral soils. Locating breaks on the periphery of the property is a logical place for them. Also utilizing the trail system and edges of forests would be useful and easier than making them from scratch. The burn contractor can also help with the placement and installation of burn breaks. Allowing fire to run into adjacent different land covers is a good strategy. For example, breaklines in a prairie unit that is adjacent to woodland should be placed a short distance into the woodland, where feasible. This makes for a more natural looking and functioning landscape and helps to prevent the woodland from encroaching into the prairie.

Smoke management is the main concern for burning on this property, since there are a number of nearby residences, buildings, and roads. If smoke lays down onto buildings, the burn should be paused or stopped. Detailed instructions for each burn will be listed in the *burn plan*, which needs to be completed prior to obtaining a state permit from the DNR. Burn plans are typically completed and submitted by the burn contractor. Submission is usually to the DNR, the County, the local unit of government (usually the city), and the local fire department. The local fire department should be notified prior to the burn. If state lands are involved, then a DNR employee certified in burn planning must complete the burn plan.

Long-Term Monitoring and Maintenance

Monitoring is very important to restoration success. Monitoring, evaluation and assessment should be done at least annually by an ecologist or a restoration professional. More frequent monitoring will be needed in the initial phases of restoration to evaluate the success of the methodology and to inform future strategies. Adapting to issues or factors observed during monitoring and assessment is vital to the restoration process.

Once the primary restoration tasks are completed, the restoration process will convert to a monitoring and adaptive management phase. Long-term maintenance will consist of burning Terrace Forests once every 15 to 20 years or so, and checking for understory restoration success. For Prairies and Savannas, burning should occur every 3 to 5 years. It will also consist of checking the tree plantings in the floodplain forest; replanting if necessary and tending the deer protection fencing.

Restored areas must be regularly monitored to identify ecological issues, such as erosion (especially on the disturbed river banks and on the steep slopes of the embankments), sedimentation (especially in the flood plain forest), invasive species (site wide), and disease (site wide). Monitoring is also important for detecting human-related issues such as illegal activities (hunting, ATV use, tree harvesting, etc.) Early detection of concerns enables quick responses to address them before they become significant problems.

Monitoring animal as well as plant communities is also helpful for evaluating results of the restoration. A comparison of bird populations before and after restoration, for example, would be a valuable tool for quantifying positive impacts on the land.

RESTORATION SCHEDULE AND COST ESTIMATES

An approximation of restoration/management tasks, priorities, and costs are provided in **Table 4**, below. Project cost estimates are not based on actual contractor bids, but on typical costs for similar projects. Actual project costs could be significantly higher or lower, depending on multiple factors. Costs could potentially be decreased, for example, by reducing the diversity of prairie seed, contracting for the entire project with one contractor, using volunteers or STS (Sentence to Serve) crews for portions of the labor such as brush hauling. Some activities may be carried out by the landowner, if they wish, if they have the time and equipment to do so. Project tasks and costs may also change over time, as more information is learned about the property and as the site conditions change.

Table 4. Rock Island Swing Bridge Park Property Restoration Schedule and Cost Estimates

These tables are rough schedules and approximate costs for restoration and management tasks for the Swing Bridge Park property. Both the project tasks and costs are likely to change as the project progresses - these tables should be used only as rough guides. Tasks were phased, with 1 being the highest priority. (Work units correspond with those shown in Figure 16).

Phase	Yr	Season	Units	Activity	Acres	Cost/Ac	Cost Est.
RESTORE and PROTECT SOUTHERN FLOODPLAIN FOREST							
1	1	Summer, fall	FF	Control purple loosestrife on shoreline. Remove a few large buckthorn shrubs from shoreline.	1.0	500	\$500.00
1		Summer, fall	FF	OPTIONAL: Install root wads with boulder toe and native shrubs and herbaceous plants.	1.0	TBD	
1	1 to 5	Summer, fall	FF	Plant cottonwood and black willow on near-shore. Use larger stock in containers. Protect with fencing. Mulch and water.	2.0		\$11,200.00
1	1 to 5	Summer, fall	FF	Plant cottonwood and black willow on near shore. Use small bare root whips.	2.0		\$3,300.00
1	1 to 5	fall, winter, early spring	FF	Create canopy gaps for planting pods.	6.0		\$8,000.00
1	1 to 5	Summer, fall	FF	In floodplain forest, plant larger container stock of native trees in pods, in canopy gaps. Plant understory plugs in pods also.	6.0		\$12,000.00
1	1 to 5	Spring, summer, fall	FF	Plant bare root whips throughout floodplain forest.	6.0		\$3,500.00
1	1 to 5	Any	FF	Annual Ecological evaluation and assessment.	6.0		\$1,050.00
Subtotal Range					7.0		\$16,350 to \$32,750
ESTABLISH PRAIRIE and WOODLAND EDGE VEGETATION ON STEEP SLOPES OF EMBANKMENTS							
2	1	Any	Pr, WdEdg	Collect soil samples from embankment slopes and have them analyzed for texture, organic matter, and other normal parameters.	3.0		\$600.00

2	1	fall, winter, early spring	Pr, WdEdg	Control woody brush plants and other undesirable native woody brush throughout the unit. Brush cut whips in June-July. Allow to resprout. Foliar treat with Glyphosate in Sept/Oct.	3.0	1500	\$4,500.00
2	1 & 2	fall, summer	Pr, WdEdg	Spot-apply systemic herbicide to control herbaceous weedy species.	3.0	200	\$600.00
2	2	spring or fall	Pr, WdEdg	Burn unit with savanna unit, if possible, to prepare the site for seeding.	3.0	250	\$750.00
2	2	Summer, fall	Pr, WdEdg	Install water bars and/or wattles on slopes.	3.0	200	\$1,500.00
2	2, 3	Fall, spring	Pr, WdEdg	Plant shrubs on slopes.	3.0		\$9,000.00
2	2, 3	Fall, spring	Pr, WdEdg	Plant prairie plugs on slopes	3.0		\$20,000.00
2	2, 3	Fall, spring	Pr, WdEdg	Hand broadcast prairie seed (purchased) onto slopes.	3.0	855	\$2,565.00
Subtotal					3.0		\$39,515.00

RESTORE TERRACE FOREST and MESIC SAVANNA							
3	1	fall, winter, early spring	TF, Sav	Control large exotic woody brush plants and other undesirable native woody brush throughout both units. Cut and treat stumps. Haul brush to piles and burn in fall or winter.	4.0	1500	\$6,000.00
3	3	spring or fall	TF, Sav, Pr, WdEdg	Conduct prescribed burn on both Terrace Forest and Mesic Savanna units. Allow burn to climb prairie slopes. Burn north-facing prairie slope, also.	5.0	250	\$1,250.00
	2, 3	Summer, fall	TF, Sav	Treat exotic resprouts	4.0	200	\$800.00
3	3	Spring, summer, fall	TF	Plant pods with native trees, shrubs, and herbaceous plugs. Protect pods with fencing. Water, mulch.	1.0		\$5,525.00
3	3	spring or fall	TF	Seed open spots with native seed mix	1.0	2000	\$2,000.00
3	3, 4	Summer, fall	Sav	Broadcast apply herbicide to control herbaceous weeds.	3.0	200	\$600.00
	3 or 4	spring or fall	Sav	Hand-sow seed of native prairie mix.	2.0	2000	\$4,000.00
3	3	Any	TF, Sav, Pr, WdEdg	Annual Ecological evaluation and assessment.	5.0		\$1,050.00

3	4	spring or fall	TF, Sav	If necessary, seed again with a diverse mix of prairie and savanna graminoids and forbs. Replace dead shrubs and plugs in pods. Repair fencing.	3.0	1000	\$3,000.00
Subtotal					5.0		\$24,225.00
Total (range)							\$80,090 to \$96,490

Long-Term Management

Once initial restoration tasks are completed, then long-term management ensues. Long-term management includes tasks that are required to be done periodically to maintain the plant community. **Table 5** lists these tasks with associated cost estimates.

Table 5. Rock Island Swing Bridge Park Long-Term Management Schedule and Cost Estimates

Phase	Yr	Season	Units	Activity	Acres	Cost/Ac	Cost Est.
		Spring or fall		Burn the Prairie and Savanna every 2-5 years for 20 years.	5.0	300	10500
				Spot treat invasives as necessary.	5.0	250	8750
		Spring, summer, fall		Maintain and repair erosion gullies on steep slopes as necessary.	3.0	300	2700
		Spring or fall		Burn the Terrace Forest unit every 15-20 years.	1.0	300	300
		Spring or fall		Check on the survival of planted trees in the floodplain forest for 20 years. Replant if necessary.	7.0	200	2800
		Summer, fall		Check on the success of root wads on shoreline. Adaptive management strategy as needed.	1.0		TBD
		fall, summer, spring		Evaluation and assessment by ecologist, every 3 years for 20 years.	18.0		7210
Total (Long-Term Mgmt)							32260

WORKPLAN

The following tasks and budget are based on known costs and project needs at the time of the restoration agreement. All parties, prior to implementation, will agree upon additional future tasks. Work units are shown on Map in **Figure 16**.

Yr	Season	Activity	Acres	Cost Estimate	Farm & Natural Areas Program	City of Inver Grove Heights	Other
		RESTORE and PROTECT SOUTHERN FLOODPLAIN FOREST					
1	summer, fall	Control purple loosestrife and remove a few buckthorn shrubs from shoreline.	1	\$500.00			
1	summer, fall	OPTION: Stabilize shoreline with hard and soft armoring	1	TBD			
1 to 5	summer, fall	Plant cottonwoods and black willows on near-shore	2	\$11,200.00			
1 to 5	fall, winter, early spring	Create canopy gaps in floodplain forest.	6	\$8,000.00			
1 to 5	summer, fall	Plant native trees, understory plugs in floodplain forest.	6	\$12,000.00			
1 to 5	Any	Evaluation and assessment	7	\$1,050.00			
SUBTOTAL Range				\$16,350 to \$32,750			
		ESTABLISH PRAIRIE and WOODLAND EDGE VEGETATION ON STEEP SLOPE OF EMBANKMENTS					
1	fall, winter, early spring	Control large woody exotic brush and treat resprouts on embankment.	3	\$5,100.00			
1 & 2	fall, summer	Control herbaceous weedy species on embankment	3	\$600.00			
2	spring, fall	Burn the embankment slopes.	3	\$750.00			

2	summer, fall	Install water bars and/or wattles on slopes.	3	\$1,500.00			
2, 3	fall, spring	Plant plugs of native prairie species. Plant Shrubs at low density. Seed with native prairie mix in bare spots.	3	\$32,000.00			
				\$39,950.00			
		RESTORE TERRACE FOREST and MESIC SAVANNA					
1	fall, winter, early spring	Control large woody exotic brush and other undesirable woody brush in both units.	4	\$6,000.00			
3	spring, fall	Burn the units.	4	\$1,250.00			
2, 3	summer, fall	Treat exotic resprouts in both units. Spot treat to control herbaceous weeds.	4	\$1,400.00			
3	spring, summer, fall	Plant pods with native trees, shrubs, and herbaceous plugs in Terrace Forest.	1	\$5,525.00			
3 or 4	spring, fall	Seed with native seed mix in both units.	4	\$9,000.00			
3	Any	Ecological evaluation and assessment.	4	\$1,050.00			
		SUBTOTAL		\$24,225.00			
		TOTAL (range)		\$80,000 to \$96,500			
80							
1 to 20		Long-term management, for next 20 years.		\$32,300.00			

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<http://www.dnr.state.mn.us/rsg/profile.html?action=elementDetail&selectedElement=ABNKC10010>

Important Bird Area—Metropolitan Mississippi Flyway information:
http://www.dnr.state.mn.us/northmetro_iba.html

Forest Ecology:
<http://cffe.cfans.umn.edu/>

Stormwater Pollution Prevention:

<http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/construction-stormwater/index.html>

<http://cfpub.epa.gov/npdes/stormwater/swppp.cfm>.

Root Wads and Rock Vanes

Using Root Wads and *Rock Vanes* for Streambank Stabilization

www.bae.ncsu.edu/programs/extension/wqg/sri/rv-crs-4.pdf

http://www.stormwatercenter.net/Assorted%20Fact%20Sheets/Restoration/bank_protection.htm

Rock Island Swing Bridge information

<http://www.ci.inver-grove-heights.mn.us/index.aspx?NID=419>

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APPENDICES

APPENDIX A. Plant Species Recorded at the Rock Island Swing Bridge Property

The following plant species were identified at the site by Friends of the Mississippi River in September of 2012.

Floodplain Forest Areas

FLOODPLAIN FOREST

Non-Native	Scientific Name	Common Name	Cover	Diameter (inches)	Comments
CANOPY/SUBCANOPY		12 to 70 ft height	Total Cover: 5		Continuous
	<i>Acer negundo</i>	Boxelder		4 to 12	Smaller than other species.
	<i>Acer saccharinum</i>	Silver maple	4	20 to 40	Dominant, but not regenerating
	<i>Celtis occidentalis</i>	Hackberry	1	8 to 18	
	<i>Fraxinus pennsylvanica</i>	Green ash	2	20 to 40	
	<i>Populus deltoides</i>	Eastern cottonwood	1	30 to 45	Old, declining; not regenerating
	<i>Ulmus americana</i>	American elm	1	6 to 12	
UNDERSTORY/SHRUB LAYER		4 to 12 ft height	Total Cover: + to 1		
	<i>Sambucus racemosa</i> subs. <i>Pubens</i>	Red berried elder	+		
	<i>Viburnum lentago</i>	Nannyberry	+		
GROUND LAYER		to 4 ft height	Total Cover: 1 to 2		
Graminoids					
	<i>Carex pensylvanica</i>	Pennsylvania sedge	+		
	<i>Leersia oryzoides</i>	Rice cutgrass	+		
Forbs					
	<i>Laportia canadensis</i>	Wood nettle	2		
	<i>Lycopus virginicus</i>	Bugle weed	+		
	<i>Polygonum amphibium</i>	Water smartweed	+		
Vines					
	<i>Parthenicissus quinquefolia</i>	Virginia creeper	+		
	<i>Vitis riparia</i>	Grape vine	2		

RIVERSHORE

Non-Native	Scientific Name	Common Name	Cover	Diameter (inches)	Comments	
CANOPY			20-40 ft height		Total Cover: 1 to 2	None at shoreline; suddenly continuous at about 100' inland
	<i>Acer saccharinum</i>	Silver maple	1	20-40		
	<i>Fraxinus pennsylvanica</i>	Green ash	+	10 to 15		
	<i>Populus deltoides</i>	Eastern cottonwood	1	40-60		
UNDERSTORY/SHRUB LAYER			4 to 12 ft height		Total Cover: 2 to 3	Patchy
	<i>Fraxinus pennsylvanica</i>	Green ash	1		seedlings	
GROUND LAYER			to 4 ft height		Total Cover: 3	Sparse to patchy
Graminoids						
	<i>Carex cf. lacustris</i>	Lake sedge	2			
	<i>Carex spp.</i>	Sedge species	1			
	<i>Cyperus erythrorhizos</i>	Red root flat sedge	3			
	<i>Echinochloa crus-gali</i>	Barnyard grass	3			
	<i>Leersia oryzoides</i>	Rice cutgrass	1			
	<i>Leersia virginica</i>	White grass	1			
Forbs						
x	<i>Arctium minus</i>	Common burdock	2			near bridge
x	<i>Rhamnus cathartica</i>	Common buckthorn				One large berry-producing individual.
x	<i>Cirsium arvense</i>	Cannada thistle	1			near bridge
x	<i>Lythrum salicaria</i>	Purple loosestrife				
x	<i>Melilotus albus</i>	White sweet clover	1			near bridge
x	<i>Ulmus pumila</i>	Siberian elm				seedlings; near bridge
x	<i>Verbascum thapsis</i>	Common mullein	1			near bridge
x	<i>Xanthium strumarium</i>	Cocklebur				near bridge
	<i>Ambrosia artemisifolia</i>	Common ragweed	1			
	<i>Ambrosia trifida</i>	Giant ragweed	1			
	<i>Aster cf. lanceolatus</i>	Marsh aster	2			
	<i>Bidens cernua</i>	Bur marigold	3			
	<i>Apocynum androsaemifolium</i>	Spreading dogbane				Patchy
	<i>Cyperus erythrorhizos</i>	Red root flat sedge	3			
	<i>Eupatorium rugosum</i>	White snakeroot	1			
	<i>Ludwigia palustris</i>	Water purslane	1			
	<i>Lycopus cf. virginicus</i>	Bugleweed	3			
	<i>Polygonum amphibium</i>	Water smartweed	2			
	<i>Polygonum persicaria</i>	Lady's thumb print	2			
	<i>Sagittaria latifolia</i>	Broadleaved arrowhead	1			
LIANA LAYER			Total Cover: 4 to 5			Sometimes forms thickets.
	<i>Vitis riparia</i>	Wild grape	2			

Backwater Lakes (Slow moving linear open water habitat)

Non-Native	Scientific Name	Common Name	Cover	Diameter (inches)	Comments
CANOPY					
None					
UNDERSTORY/SHRUB LAYER 4 to 12 ft height					
None					
GROUND LAYER to 4 ft height			Total Cover: 3	Interrupted to continuous	
Graminoids					
	<i>Carex spp.</i>	Sedge species	1		
	<i>Echinochloa muricata</i>	Wild millet; cockspur grass	2		
	<i>Leersia oryzoides</i>	Rice cutgrass	4		
Forbs					
	<i>Aster cf. lanceolatus</i>	Marsh aster	2		
	<i>Berula erecta</i>	Cut-leaf water parsnip	2		
	<i>Bidens cernua</i>	Bur marigold	3		
	<i>Cyperus erythrorhizos</i>	Red root flat sedge	2		
	<i>Lemna minor</i>	Duckweed	2		
	<i>Ludwigia palustris</i>	Water purslane	3		
	<i>Lycopus cf. virginicus</i>	Bugleweed	3		
	<i>Pilea fontana</i>	Clearweed	2		
	<i>Sagittaria latifolia</i>	Broadleaved arrowhead	1		
Ferns					
	<i>Azolla spp.</i>	Mosquito fern	2		

Lowland Hardwood Forest Areas

LOWLAND HARDWOOD FOREST

Non-Native	Scientific Name	Common Name	Cover	Diameter (inches)	Comments
CANOPY			20-80 ft height	Total Cover: 2	Spacing: 15 to 20 ft, av
	<i>Acer negundo</i>	Boxelder	2	6 to 15	Abundant
	<i>Celtis occidentalis</i>	Hackberry	1	6 to 15	
	<i>Fraxinus pennsylvanica</i>	Green ash	1	6 to 15	
	<i>Ulmus americana</i>	American elm	+	6 to 15	
UNDERSTORY/SHRUB LAYER 4 to 12 ft height					
			Total Cover: 5		

x	<i>Lonicera tatarica</i>	Tartarian honeysuckle	4		Dominant
	<i>Prunus virginiana</i>	Choke cherry	+		
x	<i>Rhamnus cathartica</i>	Common Buckthorn	3		
	<i>Ribes cynosbati</i>	Gooseberry	+		

LIANA LAYER

Total Cover: 4 to 5

	<i>Vitis riparia</i>	Wild grape	2		Some very large.
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GROUND LAYER

to 4 ft height

Total Cover: + to 1

Very sparse; much bar

Graminoids

	<i>Carex pensylvanica</i>	Pennsylvania sedge	+		
	<i>Leersia virginica</i>	White grass	+		

Forbs

	<i>Eupatorium rugosum</i>	White snake root	+		
x	<i>Lonicera tatarica</i>	Tartarian honeysuckle	+		seedlings
x	<i>Rhamnus cathartica</i>	Common buckthorn	+		seedlings
	<i>Rubus cf. ideaus</i>	Black raspberry	+		
	<i>Solidago canadensis</i>	Canada goldenrod	+		

Upland Shrubland, altered/non-native dominated

UPLAND SHRUBLAND, NON-NATIVE DOMINATED

Non-Native	Scientific Name	Common Name	Cover	Diameter (inches)	Comments
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CANOPY

20-80 ft height

Total Cover: 1

	<i>Acer negundo</i>	Boxelder	1		Scattered
	<i>Celtis occidentalis</i>	Hackberry	+		Scattered
	<i>Fraxinus pennsylvanica</i>	Green ash	1		Scattered
	<i>Juglans nigra</i>	Black walnut	+	10	One individual.
	<i>Populus deltoides</i>	Cottonwood	+	26-35	Scattered. Ring.
	<i>Ulmus americana</i>	American elm	+	4 to 10	Scattered; small

UNDERSTORY/SHRUB LAYER 4 to 12 ft height

Total Cover: 2 to 3

x	<i>Lonicera tatarica</i>	Tartarian honeysuckle	3		
	<i>Rhus glabra</i>	Smooth sumac	1		
x	<i>Rhamnus cathartica</i>	Common buckthorn	5		Dominant
	<i>Zanthoxylum americanum</i>	Prickly ash	+		

GROUND LAYER

to 4 ft height

Total Cover: 3

Graminoids

	none				
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Forbs and others

x	<i>Allium petiolata</i>	Garlic mustard	1		
	<i>Erechtites hieracifolius</i>	American burn-weed	1		

	<i>Eupatorium rugosum</i>	white snakeroot	1		
	<i>Hackelia virginiana</i>	Stickseed	+		
	<i>Hydrophyllum virginianum</i>	Virginia waterleaf	+		
x	<i>Leonurus cardiaca</i>	Motherwort	1		
x	<i>Lonicera tatarica</i>	Tartarian honeysuckle	2		seedlings
x	<i>Rhamnus cathartica</i>	Common buckthorn	5		Seedlings
	<i>Verbena urticifolia</i>	White vervain	+		
	<i>Zanthoxylum americanum</i>	Prickly ash	+		seedlings

Grassland with sparse deciduous trees—altered/non-native dominated vegetation

GRASSLAND WITH SPARSE DECIDUOUS TREES

Non-Native	Scientific Name	Common Name	Cover	Diameter (inches)	Comments
The Flat					
CANOPY		20-80 ft height	Total Cover: 2		Scattered
	<i>Celtis occidentalis</i>	Hackberry	+		
	<i>Fraxinus pennsylvanica</i>	Green ash	2		
	<i>Prunus serotina</i>	Black Cherry	+		
	<i>Quercus macrocarpa</i>	Bur oak	+		Planted
	<i>Quercus rubra</i>	Red oak, northern	+		Planted
	<i>Tilia americana</i>	Basswood, American	+		Planted
	<i>Ulmus americana</i>	American elm	1 to 2		
UNDERSTORY/SHRUB LAYER 4 to 12 ft height					
			Total Cover: 2		Scattered
x	<i>Lonicera tatarica</i>	Tartarian honeysuckle	1		
x	<i>Rhamnus cathartica</i>	Common buckthorn	2		
	<i>Ribes cynosbati</i>	Gooseberry	+		
GROUND LAYER					
		to 4 ft height	Total Cover: 5		Continuous
Graminoids					
x	<i>Bromus inermis</i>	Smooth brome	5		
x	<i>Festuca spp.</i>	Fescue species	1		
x	<i>Poa pratensis</i>	Kentucky bluegrass	3		
Forbs and others					
x	<i>Centaurea</i>	Spotted knapweed	3		
x	<i>Cirsium arvense</i>	Canada thistle	1		
x	<i>Lonicera tatarica</i>	Tartarian honeysuckle	1		seedlings
x	<i>Rhamnus cathartica</i>	Common buckthorn	2		Seedlings
	<i>Solidago canadensis</i>	Canada goldenrod			
x	<i>Verbascum thapsis</i>	Common mullein	2		
The Embankment: North-Facing Slope					
CANOPY		20-80 ft height	Total Cover:		
	none				

UNDERSTORY/SHRUB LAYER 4 to 12 ft height

Total Cover: 2 to 3

	<i>Aronia melanocarpa</i>	Chokeberry	1		resprouts
	<i>Fraxinus pennsylvanica</i>	Green ash	1		seedlings
x	<i>Lonicera tatarica</i>	Tartarian honeysuckle	+		seedlings
	<i>Populus deltoides</i>	Cottonwood	1		seedlings
x	<i>Rhamnus cathartica</i>	Common buckthorn	+		seedlings
	<i>Ulmus americana</i>	American elm	1		volunteers
	<i>Viburnum lentago</i>	Nannyberry	+		resprouts

GROUND LAYER

to 4 ft height

Total Cover: 4 to 5

Graminoids

x	<i>Agrostis gigantea</i>	Red top	1		
x	<i>Avena spp.</i>	oats	2		
	<i>Butaloua curtipendula</i>	side oats grama	1		
x	<i>Echinochloa crus-gali</i>	Barnyard grass	1		
x	<i>Lepidium cf. densiflorum</i>	Peppergrass	+		
x	<i>Poa pratensis</i>	Kentucky bluegrass	2		
x	<i>Setaria faberi</i>	Giant foxtail	1		
x	<i>Setaria viridis</i>	Green foxtail	1		

Forbs and others

x	<i>Abutilon theophrasti</i>	Velvet leaf	1		
	<i>Ambrosia artemesiaefolia</i>	Common ragweed	1		
	<i>Ambrosia trifida</i>	Giant ragweed	2		
x	<i>Berteroa incana</i>	Hoary alyssum	1		
x	Brassicaceae family	Giant mustard	2		
x	cf. <i>Eschscholzia californica</i>	Poppy-type wildflower	1		
x	<i>Chenopodium rubrum</i>	Pigweed	2		
x	<i>Chenopodium spp.</i>	Lambs quarters	2		
x	<i>Chichorium intybus</i>	Chicory	1		
x	<i>Cirsium vulgare</i>	Bull thistle	+		
x	<i>Convolvulus spp.</i>	Field bindweed	1		
x	<i>Dianthus barbatus</i>	Sweet William	1		
	<i>Erechtites hieracifolius</i>	Burnweed	1		
x	<i>Gallardia spp</i>	Gallardia	2		
x	<i>Helianthus annuus</i>	Common sunflower	+		
	<i>Helianthus spp.</i>	Sunflower species	+		
x	<i>Lotus corniculatus</i>	Birds-foot trefoil	1		
x	<i>Malva spp.</i>	Mallow species	1		
x	<i>Medicago sativa</i>	Alfalfa	2		
x	<i>Melilotus albus</i>	White sweetclover	2		
x	<i>Melilotus officianalis</i>	Yellow sweetclover	2		
x	<i>Mirabilis albida</i>	Four o'clock	+		
	<i>Panicum capillare</i>	Witch grass	1		
x	<i>Phlox spp</i>	Phlox-like wildflower	1		
	<i>Polygonum spp.</i>	knotweed	+		
	<i>Polygonum spp.</i>	Smartweed species	1		
	<i>Populus deltoides</i>	Cottonwood	1		seedlings
x	<i>Rhamnus cathartica</i>	Common buckthorn	2		Seedlings

x	<i>Rumex crispus</i>	Curly dock	+		
x	<i>Solanum dulcamara</i>	purple nightshade	+		
	<i>Solidago canadensis</i>	Canada goldenrod	1		
x	<i>Sonchus spp.</i>	Sow thistle	1		
x	<i>Taraxacum officianale</i>	Dandelion	+		
x	<i>Triticum aestivum</i>	Winter wheat	1		
x	<i>Verbascum thapsis</i>	Mullein	1		
	<i>Verbena hastata</i>	Blue vervain	+		
	<i>Vitis riparia</i>	wild grape	1		

The Embankment: South-facing slope

CANOPY		20-80 ft height	Total Cover:		
	none				

UNDERSTORY/SHRUB LAYER 4 to 12 ft height

Total Cover: 2 to 3

x	<i>Lonicera tatarica</i>	Tartarian honeysuckle	1 to 3		Density varies on the slope
x	<i>Rhamnus cathartica</i>	Common buckthorn	1 to 5		Density varies on the slope
	<i>Rhus glabra</i>	Smooth sumac	+		
	<i>Zanthoxylum americanum</i>	Prickly ash	+		

GROUND LAYER

to 4 ft height

Total Cover: 3

Graminoids

	<i>Bromus inermis</i>	Smooth brome	1		
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Forbs and others

	<i>Asclepias syriaca</i>	Common milkweed	2		
x	<i>Berteroa incana</i>	Hoary alyssum	2		
	<i>Fraxinus pennsylvanica</i>	Green ash	+		seedlings
x	<i>Lonicera tatarica</i>	Tartarian honeysuckle	+		seedlings
x	<i>Nepeta cataria</i>	Catnip	2		
	<i>Oligoneuron rigida</i>	Stiff goldenrod	+		
	<i>Parthenocissus quinquefolia</i>	virginia creeper	+		
x	<i>Rhamnus cathartica</i>	Common buckthorn	2 to 4		Seedlings; density varies
	<i>Rhus glabra</i>	Smooth sumac	+		
	<i>Solidago canadensis</i>	Old-field goldenrod	2		
x	<i>Verbascum thapsis</i>	Mullein	1		
	<i>Vitis riparia</i>	wild grape	1		

26% to 50% impervious cover with deciduous trees
(This area was not surveyed, since it was a parking area.)

Buildings and Pavement—North side of 66th Street
BUILDINGS & PAVEMENT (NORTH SIDE OF 66TH STREET)

Non-Native	Scientific Name	Common Name	Cover	Diameter (inches)	Comments
CANOPY					
		20-80 ft height	Total Cover: 5		
	<i>Celtis occidentalis</i>	Hackberry	+	8 to 12	Scattered
	<i>Populus deltoides</i>	Cottonwood	3	20 to 35	Dominant
	<i>Acer saccharinum</i>	Silver maple	3	10 to 25	Co-dominant, towards ri
	<i>Acer negundo</i>	Boxelder	1	8 to 12	Scattered
x	<i>Robinia pseudoacacia</i>	Black locust	+	6 to 10	Patchy on western end
	<i>Quercus macrocarpa</i>	Bur oak	+	8 to 16	Scattered on western en
	<i>Fraxinus pennsylvanica</i>	Green ash	1	8 to 12	Scattered
	<i>Ulmus americana</i>	American elm	+	8 to 12	Scattered
UNDERSTORY/SHRUB LAYER 4 to 12 ft height					
			Total Cover: 2 to 3		
x	<i>Lonicera tatarica</i>	Tartarian honeysuckle	3		
x	<i>Rhamnus cathartica</i>	Common buckthorn	3		Dominant
	<i>Rosa arkansana</i>	Prairie rose	+		
	<i>Zanthoxylum americanum</i>	Prickly ash	1		
GROUND LAYER					
		to 4 ft height	Total Cover: 3		
Graminoids					
	<i>Setaria viridis</i>	Green foxtail			
Forbs and others					
x	<i>Rhamnus cathartica</i>	Common buckthorn	3		Seedlings
	<i>Lonicera tatarica</i>	Tartarian honeysuckle	1		seedlings
	<i>Vitis riparia</i>	wild grape	1		
x	<i>Abutilon theophrasti</i>	Velvet leaf	+		
x	<i>Xanthium strumarium</i>	Cocklebur	+		
	<i>Ambrosia artemesiaefolia</i>	Common ragweed	+		
	<i>Solidago canadensis</i>	Canada goldenrod	1		
	<i>Zanthoxylum americanum</i>	Prickly ash	+		seedlings
	<i>Eupatorium rugosum</i>	white snakeroot	+		

**APPENDIX B. Plant Species for Restoration at Rock Island Swing Bridge Property
Southern Floodplain Forest (FFs68)**

FFs68 SOUTHERN FLOODPLAIN FOREST

Genus	Species	Common Name	Likli- hood of Establi- shment	Coef- ficient of Conserv- atism	Commonly Commercially Available
Canopy Trees (>10 m)					
<i>Salix</i>	<i>nigra</i>	Black willow	M	4	x
<i>Ulmus*</i>	<i>americana*</i>	American elm*	H	3	x
Understory Trees					
<i>Carya</i>	<i>cordiformis</i>	Bitternut hickory	M	6	x
<i>Ulmus*</i>	<i>americana*</i>	American elm*	H	3	x
Shrubs					
<i>Salix</i>	<i>exigua</i>	Sandbar willow	M	2	x
Vines					
<i>Menispermum</i>	<i>canadense</i>	Canada moonseed	M	5	
Forbs					
<i>Asarum</i>	<i>canadense</i>	Wild ginger	L	7	x
<i>Aster</i>	<i>ontarionis</i>	Ontario aster	M	6	
<i>Bidens</i>	<i>spp.</i>	Beggar-ticks	H	5	
<i>Boehmeria</i>	<i>cylindrica</i>	False nettle	M	6	
<i>Campanula</i>	<i>americana</i>	Tall bellflower	M	4	x
<i>Cryptotaenia</i>	<i>canadensis</i>	Honewort	M	3	
<i>Eupatorium</i>	<i>rugosum</i>	Common snakeroot**	H	1	
<i>Helenium</i>	<i>autumnale</i>	Autumn sneezeweed	M	4	x
<i>Impatiens</i>	<i>capensis</i>	Touch-me-not	H	4	
<i>Lobelia</i>	<i>cardinalis</i>	Cardinal flower	M	7	x
<i>Lycopus</i>	<i>uniflorus</i>	Northern bugleweed	M	5	
<i>Mimulus</i>	<i>ringens</i>	Purple monkey-flower	M	6	x
<i>Physalis</i>	<i>virginiana</i>	Ground-cherry	M	4	
<i>Physostegia</i>	<i>virginiana</i>	Obedient plant	H	7	x
<i>Polygonum</i>	<i>punctatum</i>	Dotted smartweed**	M	5	
<i>Polygonum</i>	<i>virginianum</i>	Virginia knotweed**	H	7	
<i>Ranunculus</i>	<i>hispidus</i>	Hispid buttercup	M	6	
<i>Rudbeckia</i>	<i>laciniata</i>	Goldenglow	H	6	
<i>Scutellaria</i>	<i>lateriflora</i>	Mad-dog skullcap	M	5	
<i>Stachys</i>	<i>hispidus</i>	Smooth hedge-nettle	M	6	
<i>Viola</i>	<i>species</i>	<i>species</i>)	M	5	
Grasses, Rushes and Sedges					
<i>Carex</i>	<i>blanda</i>	Charming sedge	M	3	x
<i>Carex</i>	<i>crawfordii</i>	Crawford's sedge	M	5	
<i>Carex</i>	<i>intumescens</i>	Bladder sedge	L	5	
<i>Carex</i>	<i>lupulina</i>	Hop-sedge	M	6	x
<i>Carex</i>	<i>tribuloides</i>	Blunt-broom sedge	M	4	
<i>Carex</i>	<i>typhina</i>	Cattail sedge	M	9	
<i>Elymus</i>	<i>virginicus</i>	Virginia wild rye	H	6	x
<i>Leersia</i>	<i>oryzoides</i>	Rice cut grass	H	3	x
<i>Leersia</i>	<i>virginica</i>	White grass	H	5	x
Ferns and Fern Allies					
<i>Onoclea</i>	<i>sensibilis</i>	Sensitive fern	M	4	x
*Use only disease resistant varieties.					
**Use small or tiny amounts for these species.					

Southern Terrace Forest (FFs59)

Genus	Species	Common Name	Establishment	Conservation Coefficient	Commonly Commercially Available
Canopy Trees (>10 m)					
<i>Acer</i>	<i>saccharinum</i>	Silver maple	H	5	x
<i>Celtis</i>	<i>occidentalis</i>	Hackberry	H	3	x
<i>Fraxinus</i>	<i>pennsylvanica</i>	Green ash	H	2	x
<i>Populus</i>	<i>deltoides</i>	Cottonwood	M	2	x
<i>Salix</i>	<i>nigra</i>	Black willow	H	4	x
<i>Tilia</i>	<i>americana</i>	Basswood	M	5	x
<i>Ulmus</i>	<i>rubra</i>	Slippery elm	M	4	
<i>Ulmus*</i>	<i>americana*</i>	American elm*	H	3	x
Understory Trees					
<i>Acer</i>	<i>saccharinum</i>	Silver maple	H	2	x
<i>Carya</i>	<i>cordiformis</i>	Bitternut hickory	M	6	x
<i>Celtis</i>	<i>occidentalis</i>	Hackberry	H	3	x
<i>Fraxinus</i>	<i>pennsylvanica</i>	Green ash	H	2	x
<i>Ostrya</i>	<i>virginiana</i>	Ironwood	M	5	x
<i>Tilia</i>	<i>americana</i>	Basswood	M	5	x
<i>Ulmus*</i>	<i>americana*</i>	American elm*	H	3	x
<i>Ulmus*</i>	<i>rubra*</i>	Slippery elm*	M	4	
Shrubs					
<i>Cornus</i>	<i>amomum</i>	Silky dogwood	M	4	x
<i>Eunymus</i>	<i>atropurpureus</i>	Wahoo	M	7	
<i>Prunus</i>	<i>virginiana</i>	Chokecherry	M	3	x
<i>Ribes</i>	<i>americanum</i>	Wild black currant	M	4	x
<i>Ribes</i>	<i>cynosbati</i>	Prickly gooseberry	H	3	x
<i>Ribes</i>	<i>missouriense</i>	Missouri gooseberry	H	4	x
<i>Sambucus</i>	<i>canadensis</i>	Common elder	H	3	x
<i>Sambucus</i>	<i>racemosa</i>	Red-berried elder	H	5	x
<i>Viburnum</i>	<i>lentago</i>	Nannyberry	M	4	x
Vines					
<i>Menispermum</i>	<i>canadense</i>	Canada moonseed	M	5	
<i>Parthenocissus</i>	sp.	Virginia creeper	H	5	x
Forbs					
<i>Allium</i>	<i>tricoctum</i>	Wild leek	L	6	x
<i>Anemone</i>	<i>quinquefolia</i>	Wood-anemone	M	6	x
<i>Arisaema</i>	<i>triphylum</i>	Jack-in-the-pulpit	M	4	x
<i>Aster</i>	<i>cordifolius</i>	Heart-leaved aster	M	6	x
<i>Aster</i>	<i>ontarionis</i>	Ontario aster	M	6	
<i>Aster</i>	<i>pubertior</i>	Flat-topped aster	M	6	x
<i>Campulana</i>	<i>americana</i>	Tall bellflower	M	4	x
<i>Caulophyllum</i>	<i>thalictroides</i>	Blue cohosh	L	8	x
<i>Circaea</i>	<i>alpina</i>	Small enchanter's nightshade	L	7	
<i>Circaea</i>	<i>lutetiana</i>	Canada enchanter's nightshade	H	2	
<i>Cryptotaenia</i>	<i>canadensis</i>	Honewort	H	3	
<i>Dicentra</i>	<i>cucullaria</i>	Dutchman's-breeches	L	7	x
<i>Enemion</i>	<i>bitermatum</i>	False rue-anemone	L	7	x
<i>Erythronium</i>	<i>album</i>	White trout-lily	L	7	x
<i>Galium</i>	<i>aparine</i>	Cleavers	H	1	
<i>Galium</i>	<i>triflorum</i>	Three-flowered bedstraw	M	4	
<i>Geranium</i>	<i>maculatum</i>	Wild geranium	M	4	x
<i>Geum</i>	<i>canadense</i>	White avens	H	2	
<i>Hydrophyllum</i>	<i>virginianum</i>	Virginia waterleaf	H	3	x
<i>Impatiens</i>	<i>capensis</i>	Touch-me-not	H	2	
<i>Lilium</i>	<i>michiganense</i>	Michigan lily	L	6	x
<i>Maianthemum</i>	<i>canadense</i>	Canada mayflower	M	5	x
<i>Osmorhiza</i>	<i>claytonii</i>	Clayton's sweet cicely	H	3	x
<i>Phlox</i>	<i>divaricata</i>	Blue phlox	L	7	x
<i>Polygonatum</i>	<i>biflorum</i>	Giant Solomon's-seal	M	4	
<i>Ranunculus</i>	<i>abortivus</i>	Kidney-leaf buttercup	H	1	
<i>Rudbeckia</i>	<i>laciniata</i>	Goldenglow	H	6	x
<i>Sanguinaria</i>	<i>canadensis</i>	Bloodroot	L	6	x
<i>Sanicula</i>	<i>gregaria</i>	Gregarious black snakeroot	H	3	
<i>Smilacina</i>	<i>racemosa</i>	Racemose false Solomon's-seal	M	5	x
<i>Smilacina</i>	<i>stellata</i>	Starry false Solomon's-seal	M	5	
<i>Smilax</i>	<i>laxoneura</i>	Carrión-flower	M	4	
<i>Stachys</i>	<i>palustris</i>	Woundwort	M	5	
<i>Thalictrum</i>	<i>dasycarpum</i>	Tall meadow-rue	M	4	x
<i>Thalictrum</i>	<i>dioicum</i>	Early meadow-rue	M	5	x
<i>Trillium</i>	<i>cernuum</i>	Nodding trillium	L	8	
<i>Trillium</i>	<i>flexipes</i>	Drooping trillium	L	7	
<i>Uslularia</i>	<i>grandiflora</i>	Yellow bellwort	L	7	x
<i>Viola</i>	sp.	Violet	M	5	x
Grasses, Rushes and Sedges					
<i>Calamagrostis</i>	<i>canadensis</i>	Bluejoint	H	5	x
<i>Carex</i>	<i>amphibola</i>	Ambiguous sedge	M	4	
<i>Carex</i>	<i>pedunculata</i>	Long-stalked sedge	L	7	
<i>Carex</i>	<i>sprengelii</i>	Sprengel's sedge	M	6	x
<i>Carex</i>	<i>radiata</i>	Stellate sedge	M	4	x
<i>Cinna</i>	<i>arundinacea</i>	Stout woodreed	M	5	
<i>Elymus</i>	<i>hystrix</i>	Bottlebrush grass	M	6	x
<i>Elymus</i>	<i>virginicus</i>	Virginia wild rye	H	6	x
<i>Elymus</i>	<i>wiegandii</i>	Canada wild rye	H	4	x
<i>Glyceria</i>	<i>striata</i>	Fowl manna-grass	M	4	x
Ferns and Fern Allies					
<i>Matteuccia</i>	<i>struthiopteris</i>	Ostrich-fern	M	5	x
*Plant disease resistant varieties.					

Southern Mesic Savanna (UPs24) and Prairie (UPs23)

Genus	Species	Common Name	Life/level of	Conservation	Commonly
			Terrestrial	Coefficient	Available
Trees					
<i>Quercus</i>	<i>macrocarpa</i>	Bur oak	M	5	x
Shrubs					
<i>Amorpha</i>	<i>canescens</i>	Lead-plum	L	7	x
<i>Prunus</i>	<i>virginiana</i>	Chokecherry	M	3	x
<i>Rosa</i>	<i>arkansana</i>	Prairie rose	M	5	x
<i>Salix</i>	<i>humilis</i>	Prairie willow	M	6	x
<i>Symphoricarpos</i>	<i>abla</i>	Snowberry	M	6	
Grasses, Rushes and Sedges					
<i>Andropogon</i>	<i>gerardii</i>	Big bluestem	M	4	x
<i>Bromus</i>	<i>kalmii</i>	Kalm's brome	M	8	x
<i>Carex</i>	<i>hicknellii</i>	Bicknell's sedge	M	6	x
<i>Carex</i>	<i>meadii</i>	Mead's sedge	M	6	
<i>Carex</i>	<i>muhlenbergii</i>	Muhlenberg's sedge	M	4	x
<i>Elymus</i>	<i>canadensis</i>	Canada wild rye	H	4	x
<i>Dicanthelium</i>	<i>perlongum</i>	Long-leaved panic grass	M	7	
<i>Panicum</i>	<i>virgatum</i>	Switchgrass	H	2	x
<i>Schizachyrium</i>	<i>scoparium</i>	Little bluestem	M	4	x
<i>Sorghastrum</i>	<i>nutans</i>	Indian grass	M	5	x
<i>Sporobolus</i>	<i>heterolepis</i>	Prairie dropseed	L	10	x
<i>Stipa</i>	<i>spartea</i>	Porcupine-grass	M	9	x
Forbs					
<i>Allium</i>	<i>canadense</i>	Wild garlic	M	4	
<i>Allium</i>	<i>stellatum</i>	Prairie wild onion	M	9	x
<i>Anemone</i>	<i>canadensis</i>	Canada anemone	M	4	x
<i>Anemone</i>	<i>cylindrica</i>	Long-headed thimbleweed	M	6	x
<i>Anemone</i>	<i>virginiana</i>	Virginia thimbleweed	M	5	
<i>Antennaria</i>	<i>speciosa</i>	Pussytoes	L	3	
<i>Apocynum</i>	<i>androsaemifolium</i>	Spreading dogbane	M	3	
<i>Artemisia</i>	<i>campestris</i>	Tall wormwood	M	4	x
<i>Artemisia</i>	<i>frigida</i>	Prairie sagewort	L	9	
<i>Asclepias</i>	<i>syriaca</i>	Common milkweed	H	1	
<i>Asclepias</i>	<i>tuberosa</i>	Butterfly-weed	M	6	x
<i>Aster</i>	<i>ericoides</i>	Heath aster	M	4	x
<i>Aster</i>	<i>laevis</i>	Smooth aster	M	6	x
<i>Aster</i>	<i>lanceolatus</i>	Panicled aster	M	4	x
<i>Aster</i>	<i>novae-angliae</i>	New England aster	H	3	x
<i>Aster</i>	<i>oefentangiensis</i>	Sky-blue aster	M	5	x
<i>Astragalus</i>	<i>canadensis</i>	Canada milk-vetch	L	8	x
<i>Campanula</i>	<i>rotundifolia</i>	Harebell	M	5	x
<i>Comandra</i>	<i>umbellata</i>	Bastard toad-flax	L	6	
<i>Coreopsis</i>	<i>palmaria</i>	Stiff tickseed	M	8	x
<i>Dalea</i>	<i>candida</i>	White prairie-clover	M	8	x
<i>Dalea</i>	<i>purpurea</i>	Purple prairie-clover	M	7	x
<i>Desmodium</i>	<i>canadense</i>	Canadian tick-trefoil	M	4	x
<i>Euphorbia</i>	<i>corollata</i>	Flowering spurge	M	4	
<i>Euthamia</i>	<i>graminifolia</i>	Grass-leaved goldenrod	M	4	x
<i>Fragaria</i>	<i>virginiana</i>	Common strawberry	M	2	x
<i>Galium</i>	<i>horeale</i>	Northern bedstraw	M	5	x
<i>Gentiana</i>	<i>x</i>	Clasped gentian	L		
<i>Geum</i>	<i>triflorum</i>	Prairie smoke	M	7	x
<i>Helianthus</i>	<i>maximiliani</i>	Maximilian's sunflower	M		x
<i>Helianthus</i>	<i>pauciflorus</i>	Stiff sunflower	M		x
<i>Heliopsis</i>	<i>helianthoides</i>	Ox-eye	H	5	x
<i>Heterotheca</i>	<i>villosa</i>	Prairie golden aster	M	5	
<i>Heuchera</i>	<i>richardsonii</i>	Alum-root	M	7	x
<i>Lathyrus</i>	<i>venosus</i>	Veiny pea	M	6	
<i>Lespedeza</i>	<i>capitata</i>	Round-headed bush-clover	M	5	x
<i>Liatris</i>	<i>aspera</i>	Rough blazing star	M	5	x
<i>Liatris</i>	<i>ligulistylis</i>	Northern plains blazing star	M	7	x
<i>Liatris</i>	<i>pycnostachya</i>	Gayfeather	M	7	x
<i>Lilium</i>	<i>philadelphicum</i>	Wood lily	L	9	x
<i>Lobelia</i>	<i>spicata</i>	Rough-spiked Lobelia	M	7	x
<i>Maianthemum</i>	<i>racemosum</i>	False Solomon's-seal	M	5	x
<i>Maianthemum</i>	<i>stellatum</i>	Starry false Solomon's-seal	M	5	x
<i>Mirabilis</i>	<i>hirsuta</i>	Hairy four-o'clock	M	3	
<i>Monarda</i>	<i>fistulosa</i>	Wild bergamot	H	3	x
<i>Oenothera</i>	<i>biennis</i>	Common evening-primrose	H	1	x
<i>Pedicularis</i>	<i>canadensis</i>	Wood-betony	L	8	
<i>Phlox</i>	<i>pilosa</i>	Prairie phlox	L	7	x
<i>Physalis</i>	<i>heterophylla</i>	Clammy ground-cherry	M	3	
<i>Potentilla</i>	<i>arguta</i>	Tall cinquefoil	M	7	
<i>Pycnanthemum</i>	<i>virginianum</i>	Virginia mountain-mint	M	6	x
<i>Ratibida</i>	<i>pinnata</i>	Gray-headed coneflower	H	4	x
<i>Rudbeckia</i>	<i>hirta</i>	Black-eyed Susan	H	4	x
<i>Sisyrinchium</i>	<i>campestre</i>	Field blue-eyed grass	L	7	x
<i>Solidago</i>	<i>missouriensis</i>	Missouri goldenrod	M	7	x
<i>Solidago</i>	<i>nemorialis</i>	Gray goldenrod	M	4	x
<i>Solidago</i>	<i>ptarmicoides</i>	Upland white goldenrod	M	8	
<i>Solidago</i>	<i>speciosa</i>	Showy goldenrod	M	5	x
<i>Thalictrum</i>	<i>dasycarpum</i>	Tall meadow-rue	M	4	x
<i>Tradescantia</i>	<i>bracteata</i>	Bracted spiderwort	M	7	x
<i>Veronicastrum</i>	<i>virginicum</i>	Culver's root	M	6	x
<i>Viola</i>	<i>pedatifida</i>	Prairie bird-foot violet	L	9	x
<i>Zizia</i>	<i>aurea</i>	Golden alexanders	H	6	x
Ferns and Fern Allies					
<i>Equisetum</i>	<i>arvense</i>	Field horsetail	L	7	
<i>Equisetum</i>	<i>hyemale</i>	Tall scouring-rush	L	3	
<i>Equisetum</i>	<i>lacvigatum</i>	Smooth scouring-rush	L	2	

Woodland Edge

Shrubs					
<i>Amelanchier</i>	<i>interior</i>	Juneberry	M	7	x
<i>Amelanchier</i>	<i>laevis</i>	Allegheny serviceberry	M	6	x
<i>Cornus</i>	<i>alternifolia</i>	Pagoda dogwood	M	7	x
<i>Cornus</i>	<i>rugosa</i>	Round-leaved dogwood	M	7	x
<i>Cornus</i>	<i>racemosa</i>	Gray dogwood	M	2	x
<i>Corylus</i>	<i>americana</i>	American hazelnut	M	3	x
<i>Corylus</i>	<i>cornuta</i>	Beaked hazelnut	M	5	x
<i>Crataegus</i>	species	Hawthorn (multiple species)	M	2	x
<i>Diervilla</i>	<i>lonicera</i>	Bush honeysuckle	M	6	x
<i>Ilex</i>	<i>verticillata</i>	Winterberry	M	7	x
<i>Prunus</i>	<i>virginiana</i>	Chokecherry	M	3	x
<i>Ribes</i>	<i>cynosbati</i>	Prickly gooseberry	M	3	x
<i>Ribes</i>	<i>missouriense</i>	Missouri gooseberry	M	4	x
<i>Rosa</i>	<i>arkansana</i>	Prairie rose	M	5	x
<i>Rosa</i>	<i>blanda</i>	Smooth wild rose	M	7	x
<i>Sambucus</i>	<i>racemosa</i>	Red-berried Elder	M	5	x
<i>Symphoricarpos</i>	<i>alba</i>	Snowberry	M	6	x
<i>Viburnum</i>	<i>lentago</i>	Nannyberry	M	4	x
<i>Viburnum</i>	<i>rafinesquinum</i>	Downy arrow-wood	M	7	x
Forbs					
<i>Achillea</i>	<i>millefolium</i>	Yarrow	H	1	x
<i>Actaea</i>	<i>rubra</i>	Red baneberry	L	7	x
<i>Anemone</i>	<i>quinquefolia</i>	Wood-anemone	L	6	x
<i>Anemone</i>	<i>virginiana</i>	Tall thimbleweed	M	5	x
<i>Apocynum</i>	<i>androsaemifolium</i>	Spreading dogbane	M	3	
<i>Aquilegia</i>	<i>canadensis</i>	Columbine	L	5	x
<i>Aralia</i>	<i>nudicaulis</i>	Wild sarsaparilla	L	4	x
<i>Aralia</i>	<i>racemosa</i>	American spikenard	L	7	x
<i>Arisaema</i>	<i>triphylum</i>	Jack-in-the-pulpit	M	4	x
<i>Asclepias</i>	<i>exaltata</i>	Poke milkweed	M	7	
<i>Aster</i>	<i>macrophyllus</i>	Large-leaved aster	M	4	x
<i>Aster</i>	<i>coelentangiensis</i>	Sky-blue aster	M	5	x
<i>Caulophyllum</i>	<i>thalictroides</i>	Blue cohosh	L	8	x
<i>Circaea</i>	<i>lutetiana</i>	Canada enchanter's nightshade	H	2	
<i>Cryptotaenia</i>	<i>canadensis</i>	Honewort	H	3	
<i>Desmodium</i>	<i>glutinsum</i>	Pointed-leaved tick-trefoil	M	6	
<i>Dioscorea</i>	<i>villosa</i>	Wild yam	M	4	
<i>Fragaria</i>	<i>virginiana</i>	Common strawberry	M	2	x
<i>Galium</i>	<i>oparine</i>	Cleavers	H	1	
<i>Galium</i>	<i>boreale</i>	Northern bedstraw	M	5	
<i>Geranium</i>	<i>maculatum</i>	Wild geranium	M	4	x
<i>Geum</i>	<i>canadense</i>	White avens	H	2	
<i>Geum</i>	<i>triflorum</i>	Prairie smoke	L	7	x
<i>Helianthus</i>	<i>hirsutus</i>	Woodland sunflower	M	5	x
<i>Helianthus</i>	<i>strumosus</i>	Rough-leaf sunflower	M	4	x
<i>Hepatica</i>	<i>americana</i>	Round-lobed hepatica	L	7	x
<i>Heuchera</i>	<i>richardsonii</i>	Alum-root	L	7	x
<i>Maianthemum</i>	<i>canadense</i>	Canada mayflower	M	5	x
<i>Maianthemum</i>	<i>racemosum</i>	Racemose false Solomon's-seal	M	5	x
<i>Maianthemum</i>	<i>stellatum</i>	Starry false Solomon's-seal	M	5	x
<i>Osmorhiza</i>	<i>claytonii</i>	Clayton's sweet cicely	H	3	x
<i>Osmorhiza</i>	<i>longistylis</i>	Anise-root	M	4	
<i>Phryma</i>	<i>leptostachya</i>	Lopseed	M	5	
<i>Physalis</i>	<i>heterophylla</i>	Clammy ground-cherry	M	3	
<i>Polygonatum</i>	<i>biflorum</i>	Giant Solomon's-seal	M	4	
<i>Ranunculus</i>	<i>abortivus</i>	Kidney-leaf buttercup	H	1	
<i>Rubus</i>	<i>pubescens</i>	Dwarf raspberry	M	7	
<i>Sanguinaria</i>	<i>canadensis</i>	Bloodroot	L	6	x
<i>Sanicula</i>	<i>gregaria</i>	Gregarious black snakeroot	H	3	
<i>Sanicula</i>	<i>marilandica</i>	Mariland black snakeroot	M	5	x
<i>Smilax</i>	<i>luscifera</i>	Carrion-flower	M	4	
<i>Solidago</i>	<i>stexicaulis</i>	Zig-zag goldenrod	M	6	x
<i>Thalictrum</i>	<i>dasycarpum</i>	Tall meadow-rue	M	4	x
<i>Thalictrum</i>	<i>dioicum</i>	Early meadow-rue	M	5	x
<i>Thalictrum</i>	<i>thalictroides</i>	Rue-anemone	L	7	x
<i>Trillium</i>	<i>grandiflorum</i>	Large-flowered trillium	L	6	x
<i>Uvularia</i>	<i>grandiflora</i>	Yellow bellwort	L	7	
<i>Uvularia</i>	<i>sessilifolia</i>	Pale bellwort	M	6	
<i>Veronicastrum</i>	<i>virginicum</i>	Culver's root	M	6	
<i>Viola</i>	species	Violet (multiple species)	M	5	x
<i>Zizia</i>	<i>aurea</i>	Golden alexanders	H	7	x
Grasses, Rushes and Sedges					
<i>Carex</i>	<i>blanda</i>	Charming sedge	M	3	
<i>Carex</i>	<i>deweyana</i>	Dewey's sedge	M	6	
<i>Carex</i>	<i>gracillima</i>	Graceful sedge	M	4	x
<i>Carex</i>	<i>pedunculata</i>	Long-stalked sedge	M	7	x
<i>Carex</i>	<i>pennsylvanica</i>	Pennsylvania sedge	M	3	x
<i>Elymus</i>	<i>hystrix</i>	Bottlebrush grass	M	6	x
<i>Festuca</i>	<i>subverticillata</i>	Nodding fescue	M	4	
<i>Orzyopsis</i>	<i>asperifolia</i>	Mountain rice-grass	M	6	
<i>Schizachne</i>	<i>purpurascens</i>	False melic grass	M	7	
Ferns and Fern Allies					
<i>Athyrium</i>	<i>filix-femina</i>	Lady-fern	M	4	x
<i>Dryopteris</i>	<i>intermedia</i>	Fancy wood fern	L	7	
<i>Equisetum</i>	<i>pratense</i>	Meadow horsetail	L	9	
<i>Matteuccia</i>	<i>struthiopteris</i>	Ostrich-fern	M	5	x
<i>Osmunda</i>	<i>claytoniana</i>	Interrupted fern	L	6	x
<i>Pteridium</i>	<i>aquilinum</i>	Bracken	M	2	x

The following represents some sample seed mixes that were found from native seed vendor websites. These are merely suggestions, not recommendations or promotions. There are a variety of vendors available.

Potential seed mix for the north-facing embankment ("prairie"), near the raingardens and parking area.

Prairie Moon: Tallgrass Exposed Clay Subsoil for Mesic to Dry Mesic Soils

Forbs (51.76%)		Forbs (continued)		Grasses (48.24%)	
Species Name	%	Species Name	%	Species Name	%
Anise Hyssop	1.12	Foxglove Beardtongue	1.12	Big Bluestem	11.22
Smooth Blue Aster	1.12	White Prairie Clover	2.24	Canada Wild Rye	11.22
New England Aster	0.67	Purple Prairie Clover	3.37	Virginia Wild Rye	7.85
Canadian Milk Vetch	0.45	Yellow Coneflower	1.55	Upland Wild Timothy	1.12
White Wild Indigo	3.37	Black-eyed Susan	2.80	Switch Grass	1.12
Partridge Pea	11.21	Sweet Black-eyed Susan	0.52	Indian Grass	15.71
Purple Coneflower	6.18	Brown-eyed Susan	1.12		
Biennial Gaura	2.24	Compass Plant	2.24		
Early Sunflower	1.12	Prairie Dock	1.35		
False Boneset	1.12	Stiff Goldenrod	0.90		
Round-headed Bush Clover	2.58	Lead Plant	2.24		
Wild Bergamot	1.12				

Prairie Moon: Mixed Height Prairie for Dry Mesic Soils

Forbs 47.14(%)		Forbs (continued)		Grasses (52.86%)	
Species Name	%	Species Name	%	Species Name	%
Prairie Sage	0.49	Foxglove Beardtongue	1.22	Big Bluestem	2.12
Butterfly Weed	4.26	Purple Prairie Clover	2.44	Little Bluestem	15.63
Sky Blue Aster	0.98	Yellow Coneflower	0.98	Side-oats Grama	12.77
White Wild Indigo	2.13	Black-eyed Susan	2.55	Prairie Brome	7.45
Prairie Coreopsis	1.47	Sweet Black-eyed Susan	0.73	Plains Oval Sedge	5.31
Pale Purple Coneflower	7.82	Brown-eyed Susan	0.98	Canada Wild Rye	5.32
Rattlesnake Master	3.19	Wild Petunia	1.47	Indian Grass	4.26
Stiff Gentian	0.21	Compass Plant	0.98		
Early Sunflower	0.98	Stiff Goldenrod	0.64		
Round-headed Bush Clover	2.13	Showy Goldenrod	0.59		
Button Blazing Star	2.13	Ohio Spiderwort	3.42		
Wild Bergamot	0.73	Hoary Vervain	1.47		
Wild Quinine	3.19				

Shooting Star Nursery: Mesic Mixed-Height Prairie Mix

Seeding Rate: 10 lb/Acre (49.1 Seeds/ft²)

SCIENTIFIC NAME COMMON NAME % of Mix Seeds/ft² Rate/Acre

GRASSES:

Andropogon gerardii	Big Bluestem	8.00%	2.90	80PLS lb
Bouteloua curtipendula	Sideoats Grama	16.00%	3.51	60PLS lb

Bromus kalmii	Prairie Brome	6.40%	1.90.64PLS lb
Elymus canadensis	Canada Wild Rye	12.00%	2.31.20PLS lb
Panicum virgatum	Switchgrass	1.60%	0.80.16PLS lb
Schizachyrium scoparium	Little Bluestem	14.40%	7.91.44PLS lb
Sorghastrum nutans	Indiangrass	20.00%	8.82.00PLS lb
Sporobolus heterolepis	Prairie Dropseed	1.60%	0.90.16PLS lb

WILDFLOWERS:

Allium cernuum	Nodding Onion	0.60%	0.20.06PLS lb
Asclepias tuberosa	Butterfly Milkweed	1.00%	0.20.10PLS lb
Aster azureus	Sky Blue Aster	0.20%	0.60.02PLS lb
Aster laevis	Smooth Blue Aster	0.20%	0.40.02PLS lb
Aster novae-angliae	New England Aster	0.20%	0.50.02PLS lb
Astragalus canadensis	Canada Milk Vetch	0.10%	0.10.01PLS lb
Baptisia alba	White Wild Indigo	1.00%	0.10.10PLS lb
Chamaecrista fasciculata	Partridge Pea	2.80%	0.30.28PLS lb
Dalea candidum	White Prairie Clover	0.80%	0.60.08PLS lb
Dalea purpurea	Purple Prairie Clover	0.80%	0.40.08PLS lb
Echinacea purpurea	Purple Coneflower	2.40%	0.60.24PLS lb
Eryngium yuccifolium	Rattlesnake Master	1.40%	0.40.14PLS lb
Heliopsis helianthoides	Ox-eye Sunflower	0.40%	0.10.04PLS lb
Liatris ligulistylis	Meadow Blazingstar	1.00%	0.40.10PLS lb
Liatris pycnostachya	Prairie Blazingstar	2.00%	0.80.20PLS lb
Monarda fistulosa	Wild Bergamot	0.40%	1.00.04PLS lb
Parthenium integrifolium	Wild Quinine	1.00%	0.30.10PLS lb
Penstemon digitalis	Foxglove Beardtongue	0.40%	1.90.04PLS lb
Ratibida pinnata	Yellow Coneflower	0.40%	0.40.04PLS lb
Rudbeckia hirta	Black-eyed Susan	0.80%	2.70.08PLS lb
Silphium laciniatum	Compass Plant	0.40%	0.00.04PLS lb
Solidago rigida	Stiff Goldenrod	0.20%	0.30.02PLS lb
Verbena hastata	Blue Vervain	0.50%	1.70.05PLS lb
Veronicastrum virginicum	Culver's Root	0.20%	5.90.02PLS lb
Zizia aurea	Golden Alexanders	0.80%	0.30.08PLS lb

Board of Water and Soil Resources (BWSR): Mixture U5, Native SE MN Mesic Tallgrass Prairie

Seeding Rate: 15 lb/Acre (47 Seeds/ft²)

Notes: This mix is designed for mitigation projects.

SCIENTIFIC NAME COMMON NAME % of MixSeeds/ft²Rate/Acre

GRASSES:

Agropyron trachycaulum	Slender Wheatgrass	6.00%	2.30.90PLS lb
Andropogon gerardii	Big Bluestem	10.00%	5.51.50PLS lb
Avena sativa	Oats	32.00%	2.14.80PLS lb
Bouteloua curtipendula	Sideoats Grama	10.00%	3.31.50PLS lb
Elymus canadensis	Canada Wild Rye	7.00%	2.01.05PLS lb
Panicum virgatum	Switchgrass	5.00%	3.90.75PLS lb
Schizachyrium scoparium	Little Bluestem	10.00%	8.31.50PLS lb
Sorghastrum nutans	Indiangrass	12.00%	7.91.80PLS lb

WILDFLOWERS:

Asclepias tuberosa	Butterfly Milkweed	0.40%	0.10.06PLS lb
Asclepias verticillata	Whorled Milkweed	0.20%	0.10.03PLS lb

Aster ericoides	Heath Aster	0.10%	1.10.02PLS lb
Aster laevis	Smooth Blue Aster	0.20%	0.60.03PLS lb
Astragalus canadensis	Canada Milk Vetch	0.40%	0.40.06PLS lb
Chamaecrista fasciculata	Partridge Pea	0.80%	0.10.12PLS lb
Dalea candidum	White Prairie Clover	0.40%	0.40.06PLS lb
Dalea purpurea	Purple Prairie Clover	0.60%	0.50.09PLS lb
Desmodium canadense	Showy Tick Trefoil	0.60%	0.20.09PLS lb
Heliopsis helianthoides	Ox-eye Sunflower	0.60%	0.20.09PLS lb
Monarda fistulosa	Wild Bergamot	0.50%	1.90.08PLS lb
Ratibida pinnata	Yellow Coneflower	0.50%	0.80.08PLS lb
Rudbeckia hirta	Black-eyed Susan	0.40%	2.00.06PLS lb
Solidago rigida	Stiff Goldenrod	0.50%	1.10.08PLS lb
Tradescantia ohimensis	Ohio Spiderwort	0.40%	0.20.06PLS lb
Verbena hastata	Blue Vervain	0.20%	1.00.03PLS lb
Verbena stricta	Hoary Vervain	0.20%	0.30.03PLS lb
Zizia aurea	Golden Alexanders	1.00%	0.60.15PLS lb

Potential seed mix for the south-facing embankment ("prairie"), near the Southern Mesic Savanna

Prairie Moon Nursery: Shortgrass Inexpensive for Dry Mesic Soils

Forbs (29.17%)		Forbs (continued)		Grasses (70.83%)	
Species Name	%	Species Name	%	Species Name	%
Nodding Onion	0.53	Cream Gentain	0.70	Little Bluestem	29.00
Butterfly Weed	1.07	Foxglove Beardtongue	1.06	Side-oats Grama	32.48
Sky Blue Aster	0.46	White Prairie Clover	2.32	Prairie Brome	8.12
Canada Milk Vetch	0.23	Purple Prairie Clover	2.32	Upland Wild Timothy	1.33
White Wild Indigo	1.60	Prairie Cinquefoil	1.07		
Partridge Pea	5.32	Black-eyed Susan	2.89		
Lance-leaf Coreopsis	2.32	Showy Goldenrod	0.46		
Pale Purple Coneflower	3.47	Hoary Vervain	0.93		
Rattlesnake Master	2.32				

Shooting Star: Dry Mixed-Height Prairie Mix

Seeding Rate: 10 lb/Acre (58.6 Seeds/ft²)

SCIENTIFIC NAME COMMON NAME % of Mix Seeds/ft² Rate/Acre

GRASSES:

Andropogon gerardii	Big Bluestem	8.00%	2.90.80PLS lb
Bouteloua curtipendula	Sideoats Grama	20.00%	4.42.00PLS lb
Bromus kalmii	Prairie Brome	12.00%	3.51.20PLS lb
Elymus canadensis	Canada Wild Rye	8.00%	1.50.80PLS lb
Koeleria cristata	June Grass	1.60%	11.80.16PLS lb
Panicum virgatum	Switchgrass	1.60%	0.80.16PLS lb
Schizachyrium scoparium	Little Bluestem	20.00%	11.02.00PLS lb
Sorghastrum nutans	Indiangrass	6.40%	2.80.64PLS lb
Sporobolus aspera	Rough Dropseed	2.40%	2.60.24PLS lb

WILDFLOWERS:

Amorpha canescens	Lead Plant	0.60%	0.40.06PLS lb
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Asclepias tuberosa	Butterfly Milkweed	1.40%	0.20.14PLS lb
Aster azureus	Sky Blue Aster	0.20%	0.60.02PLS lb
Aster laevis	Smooth Blue Aster	0.40%	0.80.04PLS lb
Astragalus canadensis	Canada Milk Vetch	0.20%	0.10.02PLS lb
Baptisia alba	White Wild Indigo	2.00%	0.10.20PLS lb
Coreopsis palmata	Prairie Coreopsis	0.40%	0.10.04PLS lb
Dalea candidum	White Prairie Clover	1.00%	0.70.10PLS lb
Dalea purpurea	Purple Prairie Clover	1.00%	0.60.10PLS lb
Echinacea pallida	Pale Purple Coneflower	2.40%	0.50.24PLS lb
Eryngium yuccifolium	Rattlesnake Master	1.60%	0.40.16PLS lb
Heliopsis helianthoides	Ox-eye Sunflower	0.60%	0.10.06PLS lb
Lespedeza capitata	Round-headed Bush Clover	0.40%	0.10.04PLS lb
Liatris aspera	Button Blazingstar	1.00%	0.60.10PLS lb
Monarda fistulosa	Wild Bergamot	0.40%	1.00.04PLS lb
Monarda punctata	Spotted Bee Balm	0.40%	1.30.04PLS lb
Penstemon digitalis	Foxglove Beardtongue	0.60%	2.90.06PLS lb
Ratibida pinnata	Yellow Coneflower	0.40%	0.40.04PLS lb
Rudbeckia hirta	Black-eyed Susan	1.00%	3.40.10PLS lb
Silphium laciniatum	Compass Plant	0.60%	0.00.06PLS lb
Solidago rigida	Stiff Goldenrod	0.40%	0.60.04PLS lb
Solidago speciosa	Showy Goldenrod	0.20%	0.70.02PLS lb
Tradescantia ohiensis	Ohio Spiderwort	1.40%	0.40.14PLS lb
Verbena stricta	Hoary Vervain	0.60%	0.60.06PLS lb
Zizia aptera	Heartleaf Alexanders	0.80%	0.40.08PLS lb

Potential seed mix for the south-facing embankment ("woodland edge"), near the wetter natural areas

Prairie Moon Nursery: Shortgrass Woods Edge Savanna for Mesic to Dry Mesic Soils
 (This should be used sparingly, since it is very expensive. Mix with wild rye, inexpensive sedges, and other quick-to-establish species that can tolerate some shade and are also on the list for "woodland edge" above.)

Forbs (48.30%)		Forbs (continued)		Grasses (51.70%)	
Species Name	%	Species Name	%	Species Name	%
Anise Hyssop	2.45	Wood Betony	1.33	Little Bluestem	5.33
Tall Thimbleweed	1.33	Foxglove Beardtongue	1.22	Prairie Brome	7.99
Columbine	1.22	Jacob's Ladder	0.49	Gray Sedge	2.45
Crooked-stemmed Aster	0.67	Solomon's Seal	9.78	Slender Wood Sedge	2.66
Short's Aster	0.67	Hairy Mountain Mint	0.63	Beak Grass	15.98
Hairy Wood Mint	2.29	Black-eyed Susan	2.45	Virginia Wild Rye	10.37
Tall Bellflower	1.33	Brown-eyed Susan	1.84	Bottlebrush Grass	6.92
Midland Shooting Star	0.53	Starry Champion	1.33		
Purple Coneflower	2.66	Solomon's Plume	6.66		
Cream Gentian	0.67	Yellow Pimpernel	0.67		
Stiff Gentian	0.63	Golden Alexanders	3.67		
False Boneset	1.33				
Sweet Cicely	2.45				

APPENDIX C. Methods for Controlling Exotic, Invasive Plant Species

TREES AND SHRUBS

Common Buckthorn, Tartarian Honeysuckle, Siberian Elm, and Black Locust are some of the most common woody species likely to invade native woodlands or prairies in Minnesota. Buckthorn and honeysuckle are European species that escaped urban landscapes and invaded woodlands in many parts of the country. They are exceedingly aggressive and, lacking natural disease and predators, can out-compete native species. Invasions result in a dense, impenetrable brush thicket that reduces native species diversity.

Siberian elm, native to eastern Asia, readily grows, especially in disturbed and low-nutrient soils with low moisture. Seed germination is high and seedlings establish quickly in sparse vegetation. It can invade and dominate disturbed areas in just a few years. Black locust is native to the southeastern United States and the very southeastern corner of Minnesota. It has been planted outside its natural range, and readily invades disturbed areas. It reproduces vigorously by root suckering and can form a monotypic stand.

Chemical Control

The most efficient way to remove woody plants that are 1/2 inch or more in diameter is to cut the stems close to the ground and treat the cut stumps with herbicide immediately after they are cut, when the stumps are fresh and the chemicals are most readily absorbed. Failure to treat the stumps will result in resprouting, creating much greater removal difficulty.

In non-freezing temperatures, a glyphosate herbicide such as Roundup can be used for most woody species. It is important to obtain the concentrated formula and dilute it with water to achieve 10% glyphosate concentration. Adding a marker dye can help to make treated stumps more visible. In winter months, an herbicide with the active ingredient triclopyr must be used. Garlon 4 is a common brand name and it must be mixed with a penetrating oil, such as diluent blue. Do not use diesel fuel, as it is much more toxic in the environment and for humans.

Brush removal work can be done at any time of year except during spring sap flow, but late fall is often ideal because buckthorn retains its leaves longer than other species and is more readily identified. Cutting can be accomplished with loppers or handsaws in many cases. Larger shrubs may require brush cutters and chainsaws, used only by properly trained professionals.

For plants in the pea family, such as black locust, an herbicide with the active ingredient clopyralid can be more effective than glyphosate. Common brand names for clopyralid herbicides are Transline, Stinger, and Reclaim.

In the year following initial cutting and stump treatment, there will be a flush of new seedlings as well as resprouting from some of the cut plants. Herbicide can be applied to the foliage of these plants. Fall is the best time to do this, when desirable native plants are dormant and when the plant is pulling resources from the leaves down into the roots. Glyphosate and Krenite (active ingredient – fosamine ammonium) are the most commonly used herbicides for foliar application. Krenite prevents bud formation so the plants do not grow in the spring. This herbicide can be effective, but results are highly variable. Glyphosate or a triclopyr herbicide such as Garlon can also be used. Glyphosate is non-specific and will kill anything green, while triclopyr targets broadleaf plants and does not harm graminoids. All herbicides should be applied by licensed applicators and should not be applied on windy days. Care should be taken to avoid application to other plants. “Weed Wands” or other devices that allow dabbing of the product can be used rather than spraying, especially for stump treatment.

Undesirable trees and shrubs can also be destroyed without cutting them down. Girdling is a method suitable for small numbers of large trees. Bark is removed in a band around the tree, just to the outside of the wood. If girdled too deeply, the tree will respond by resprouting from the roots. Girdled trees die slowly over the course of one to two years. Girdling should be done in late spring to mid-summer when sap is flowing and the bark easily peels away from the sapwood. Herbicide can also be used in combination with girdling for a more effective treatment.

Basal bark herbicide treatment is another effective control method. A triclopyr herbicide such as 10% Garlon 4, mixed with a penetrating oil, is applied all around the base of the tree or shrub, taking care so that it does not run off. If the herbicide runs off it can kill other plants nearby. More herbicide is needed for effective treatment of plants that are four inches or more in diameter.

Mechanical Control

Three mechanical methods for woody plant removal are hand pulling (only useful on seedlings and only if few in number), weed wrenching (using a weed wrench tool to pull stems of one to two inches diameter), and repeated cutting. Pulling and weed wrenching can be done any time when the soil is moist and not frozen. The disadvantage to both methods is that they are somewhat time-consuming, as the dirt from each stem should be shaken off. Weed wrenching also creates a great deal of soil disturbance and should not be used on steep slopes or anywhere that desirable native forbs are growing. The soil disturbance also creates opportunities for weed germination. This method is probably best used in areas that have very little desirable native plant cover.

Repeated cutting consists of cutting the plants (by hand or with a brush cutter) at critical stages in its growth cycle. Cutting in mid spring (late May) intercepts the flow of nutrients from the roots to the leaves. Cutting in fall (about mid-October) intercepts the flow of nutrients from the leaves to the roots. Depending on the size of the stem, the plants typically die within three years, with two cuttings per year.

Stems, Seedlings and Resprouts

Prescribed burning is the most efficient, cost effective, and least harmful way to control very small stems, seedlings, and resprouts of all woody plants. It also restores an important natural process to fire-dependant natural communities (oak forests, for example). Burning can only be accomplished if adequate fuel (leaf litter) is present and can be done in late fall or early spring, depending site conditions.

If burning is not feasible, critical cutting in the spring is also effective, though it can impact desirable herbaceous plants as well. Foliar (leaf) application of a bud-inhibitor herbicide (Krenite) during fall is also effective. This method can also affect non-target species, though most natives will be dormant by that time.

Prickly ash

A native shrub, prickly ash can become excessively abundant, especially in areas that have been disturbed or grazed. Complete eradication may not be necessary, but management may target reducing the extent of a population. Removal is most easily accomplished in the same manner as for buckthorn – cutting shrubs and treating cut stumps with glyphosate herbicide. Cutting can be completed at any time of the year.

Disposal

The easiest and most cost-effective method to handle large amounts of brush is usually to stack it and burn it in winter. In areas where brush is not dense, it can be cut up into smaller pieces and left on the ground where it will decompose in one to three years. This method is especially useful on slopes to reduce erosion potential. Small brush piles can also be left in the woods as wildlife cover. Where there is an abundance of larger trees, cut trees may be hauled and chipped and used for mulch or as a biofuel. Alternatively, the wood can be cut and used for firewood, if a recipient can be found.

FORBS

Canada thistle

While native thistles are not generally problematic, exotics such as Canada thistle are clone-forming perennials that can greatly reduce species diversity in old fields and restoration areas (Hoffman and Kearns 1997). A combination of chemical and mechanical control methods may be needed at the Empire property. Chemical

control is most effective when the plants are in the rosette stage and least effective when the plants are flowering. A broadleaf herbicide such as 2,4-D would be appropriate for the south grassland (G1), to minimize damage to native grasses. It is most effective when applied 10-14 days before the flowering stems bolt. It is applied at rate of 2-4 lb/acre using a backpack or tractor-mounted sprayer or in granular form. Dicamba could also be used, with the advantages that it can be applied earlier in the spring at a rate of 1 lb/acre. Plants that do not respond to treatment or that are more widely dispersed could be controlled mechanically.

Mechanical control, involving several cuttings per year for three or four years, can reduce an infestation, if timed correctly. The best time to cut is when the plants are just beginning to bud because food reserves are at their lowest. If plants are cut after flowers have opened, the cut plants should be removed because the seed may be viable. Plants should be cut at least three times throughout the season. Late spring burns can also discourage this species, but early spring burns can encourage it. Burning may be more effective in an established prairie, where competition from other species is good, than in an old field, where vegetation may not be as dense.

Sweet clover

White and yellow sweet clover are very aggressive annual species that *increase* with fire. Sweet clover was found in the brome field (G2) and would be eliminated by treatment that eliminates the brome if prairie restoration occurs. However, it is a common plant in agricultural areas, so if restoration is implemented, the area should be surveyed for this species on an annual basis. Individual plants or small populations can be removed by hand-pulling. If seed production occurs, prodigious amounts of seed could be spread at the site.

Purple Loosestrife

Spot treat with an aquatic herbicide and hand pull. If populations are large, use bio-control by releasing the loosestrife beetles.

Spotted Knapweed

Knapweed is a perennial, and a pernicious one at that. It cannot be controlled with burning. Hand pull if populations are small. Volunteers do well for hand-pulling of knapweed. Can also do spot-spraying if fairly small populations. Treat when in the basal rosette stage.

If populations are large, use bio-control (knapweed beetles). Release knapweed beetles (weevils) during summer to get long-term control. Beetles can be purchased and they are sent via the mail. Monitor knapweed populations each year to keep a record of the effectiveness of the beetles' control.

Common Mullein

Hand-pull or spike with a shovel, if populations are small. Can also lop heads off when in flower – a good volunteer activity. If populations are large, consider spot treating with systemic herbicide. Mullein is a biennial, so control should be achieved eventually if seeds are prevented from dispersing.

GRASSES

Smooth Brome

Burn two years in a row (late-season burns in June) followed by seeding. This will usually be sufficient to control smooth brome. (Remember to collect seed from on-site first, and if there is not enough, then purchase local ecotype seed from off-site). Evaluate after the two years. If this is not working, perhaps try a cool-season overspray of a grass-specific herbicide either in the spring (April) or in the fall (October). Using glyphosate as a cool-season overspray herbicide application is a last resort, since it kills everything.

Reed canary grass

This species is extremely difficult to eradicate and requires repeated treatment over a period of one to three years. A combination of burning, chemical treatment and mowing can be used, in accessible areas, or chemical treatment alone in inaccessible areas. The combination method starts by burning in late spring to remove dead vegetation and to stimulate new growth. When new sprouts have reached a height of 4 to 6 inches, the site can be sprayed with a 5% solution of a glyphosate herbicide appropriate for wetland habitat (e.g. Rodeo). The site is then mowed in late summer, followed by chemical application after re-growth. This treatment will stimulate new growth and germination to deplete the seed bank. The sequence of chemical treatment and mowing are repeated for at least a second season, and possibly a third until the grass is completely eradicated. Then native grass and forb seed can be broadcast or drilled.

If reed canary is eradicated from an area, future management of the grassland, namely burning, will likely keep the reed canary in check. Monitoring and mapping new individuals or clumps should continue, however, and treated if burning is not adequate. If the plants are small they can be removed by digging out the entire root. Generally though, chemical treatment is more feasible. If plants are clumped, they can be treated by tying them together, cutting the blades, and treat the cut surface with herbicide. Otherwise herbicide should only be applied in native planted areas on very calm days to avoid drift to non-target plants.

Kentucky Bluegrass

Spot treat with a systemic herbicide during the growing season. Take care not to harm desirable natives. A grass herbicide may be used, especially if no native

grasses are present. Burning periodically will also deplete Kentucky bluegrass. Combining spot treatments with burning is even more effective.

Appendix D. Ecological Contractors

Following is a list of contractors to consider for implementing the management plans. While this is not an exhaustive list, it does include firms with ecologists who are very knowledgeable with natural resource management. Unless otherwise noted, all firms do prescribed burning. Many other brush removal companies are listed in the yellow pages (under tree care), but most do not have knowledge or understanding of native plant communities. We recommend hiring firms that can provide ecological expertise. Additional firm listings can be found on the DNR website:

<http://www.dnr.state.mn.us/gardens/nativeplants/index.html>

Friends of the Mississippi River (FMR) has extensive experience working with landowners to implement natural resource management plans. FMR can assist landowners with obtaining funding for restoration and management projects and providing project management, including contractor negotiations, coordinating restoration and management work, and site monitoring and evaluation.

Applied Ecological Services, Inc.
21938 Mushtown Rd
Prior Lake, MN 55372
952-447-1919
www.appliedeco.com

Conservation Corps Minnesota
2715 Upper Afton Road, Suite 100
Maplewood, MN 55119
(651) 209-9900

Great River Greening
35 West Water St, Suite 201
St. Paul, MN 55107
651-665-9500
www.greatrivergreening.org

Minnesota Native Landscapes, L.L.C.
14088 Highway 95 N.E.
Foley, MN 56329
(320) 968-4222
www.mnnativelandscapes.com

Prairie Restorations, Inc.
PO Box 305
Cannon Falls, MN 55009
507-663-1091
www.prairieresto.co

Stantec Inc.
2335 West Highway 36
St. Paul, MN 55113
651-604-4812
www.stantec.com

Wetland Habitats Restoration, LLC.
1397 Chelmsford St.
St. Paul, MN 55108
Cell: 612-385-9105
Fax: 636-333-8834
www.whr.mn
Email: wetlandhabitat@gmail.com

Appendix E. More Information on Paddlefish (*Polyodon spathula*)

The Minnesota DNR (Schmidt and Proulx, 2009) surveyed the stretch of the Mississippi, from the Coon Rapids dam to the Iowa border over three years, from 2006-2008. They found only two paddlefish in that entire stretch, and both were from Lake Pepin.

Because of the fact that the Swing Bridge Park is such a relatively small parcel, probably not a whole lot can be done to benefit paddlefish or other Species of Greatest Conservation Need (SGCN) fishes on this parcel. Joel Stiras, Fisheries Specialist from MN DNR, recommends that “the best thing for those species would be dam removal to restore connectivity to the entire river and would reduce water levels near dams, specifically Lock and Dam #1, which would increase velocities and wash away some fine sediment and expose quality spawning habitat”. Mr. Stiras said that the area around the Swing Bridge is relatively diverse. He thinks that the best management practice, for this area, would be to “control invasive species, such as buckthorn, and to encourage the promotion of a healthy floodplain forest and a vibrant and diverse understory (minus buckthorn) on the land”. He also said that around the bridge, there are some relatively “mucky and silty areas on the west bank”, which may or may not “be attributed directly to runoff from the land immediately adjacent to it”. A well-vegetated area, on the west bank, “would at least keep the problem from getting worse”. “Some erosion is bound to happen. It’s a river, and rivers are dynamic things, and erosion and scour sometimes lead to good things like downed trees and islands. But the vegetation, especially near the banks, can do a lot to hold sediment in place, and keep it from scouring so much.” (Joel Stiras, personal communication, October 2012).

On a positive note, according to Mr. Stiras, “the DNR has seen several paddlefish in Pool 2 [upstream from the Swing Bridge, by the Ford Dam] this year” (personal communication, 2012). “Most of them were sighted in the first few miles of Pool 2, up by Ford Dam,” Mr. Stiras said, “but we have been seeing them”. “Unfortunately we saw a few dead ones too, but it’s good to see them.” At least this is encouraging news, for it is evidence that paddlefish can be found in other reaches of the Twin City big rivers, besides the usual places they have been found lately, namely the lower St. Croix and Lake Pepin.

Here is an excerpt from the MN DNR Fish Survey of 2008-09:

Paddlefish: Commercial harvesters have reported an increasing frequency in incidental catches for several years with the greatest number coming from the lower St. Croix River, but abundance remains far below early historical accounts. Recent reports from several anglers have shown a similar pattern for the Mississippi and Minnesota Rivers.

Recommendations: (1) Study the feasibility of a future recreational harvest using a Missouri Department of Conservation management model of supplemental stocking that could fully recover Minnesota’s only Threatened fish species. (2) Research the frequency of prop strikes and degree of mortality from recreational watercraft. (3) Implement long term monitoring surveys that utilize cooperating commercial harvesters and seasonal creel census clerk who serve as on-board observers.”

It would also seem logical that long-term recovery of SGCN fish species may not be feasible until the sediment loading, especially from the Minnesota River, is reduced. Since sediment covers fish spawning beds, and makes the water unusually turbid, it is a real problem for fish populations. According to Joel Stiras, there are “no documented paddlefish spawning sites in MN”. There probably “are suspected spawning areas, but probably nothing documented”, he said. “Paddlefish spawn over gravel during high water. Water current in the channel is what keeps the gravel beds clean” (personal communication, 2012). Artificially scraping off the gravel beds would be a temporary fix, and not recommended. Paddlefish do inhabit backwaters, like the ones that occur at the Swing Bridge site, but the DNR has not yet observed any in Pool 2. Mr. Stiras said that in Indiana, samples from oxbow lakes for paddlefish would find them frequently. But he has “yet to see paddlefish in backwaters in MN”.

Appendix F. Information on Shoreline Stabilization

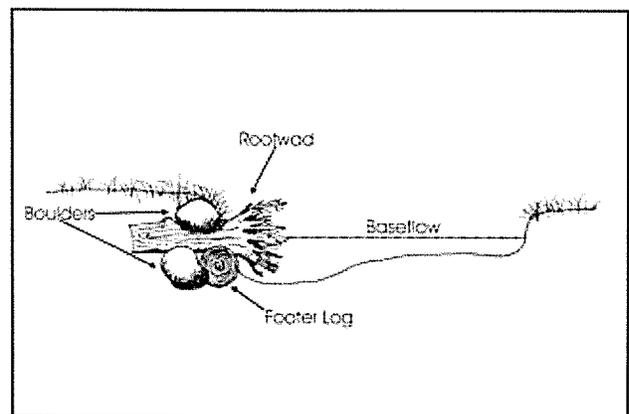
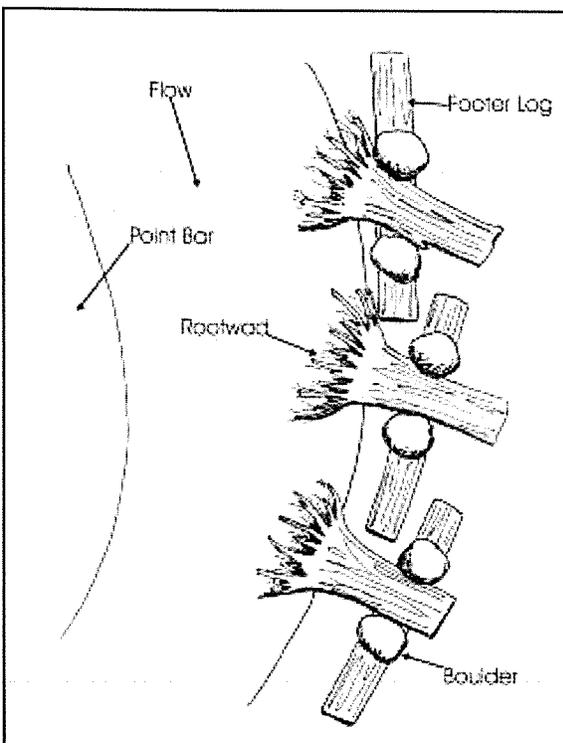
Root Wads

Root wads are a form of soil bioengineering technique, which uses large tree trunks and boulders to stabilize the shoreline of very high-energy situations, like large rivers shorelines that receive the highest erosive flow velocities. The trunk and root flare is buried into a streambank to provide armored protection against erosion and create habitat for aquatic organisms, especially juvenile fish. Root wads can be harvested and reused from trees on site. Trees should be 14 to 20 feet long, with a minimum of 12" diameter trunk. Footer boulders are used to help anchor the root wads into the shoreline. Footer boulders should be 350 to 450 lbs, 24" to 30" in diameter uncut, undressed.

To install:

- Support root wad with footer log.
- Bury footer boulder to anchor root wad in place.
- Root wads should be installed on the outside of the meander bend.
- Bury trunk in streambed with a backhoe, root end sticking out into the stream.
- Root wads should be angled upstream to deflect the streamflow away from the bank.
- Extend root wad vertically from streambed to a minimum bankfull elevation.
- Install at a slope of 2" of rise per 12" of run, from back to front (towards root)—higher on stream side than bank side.

Root wads alone do not provide enough stability. Placing boulders behind and over them and planting transplants behind boulders gets better results.

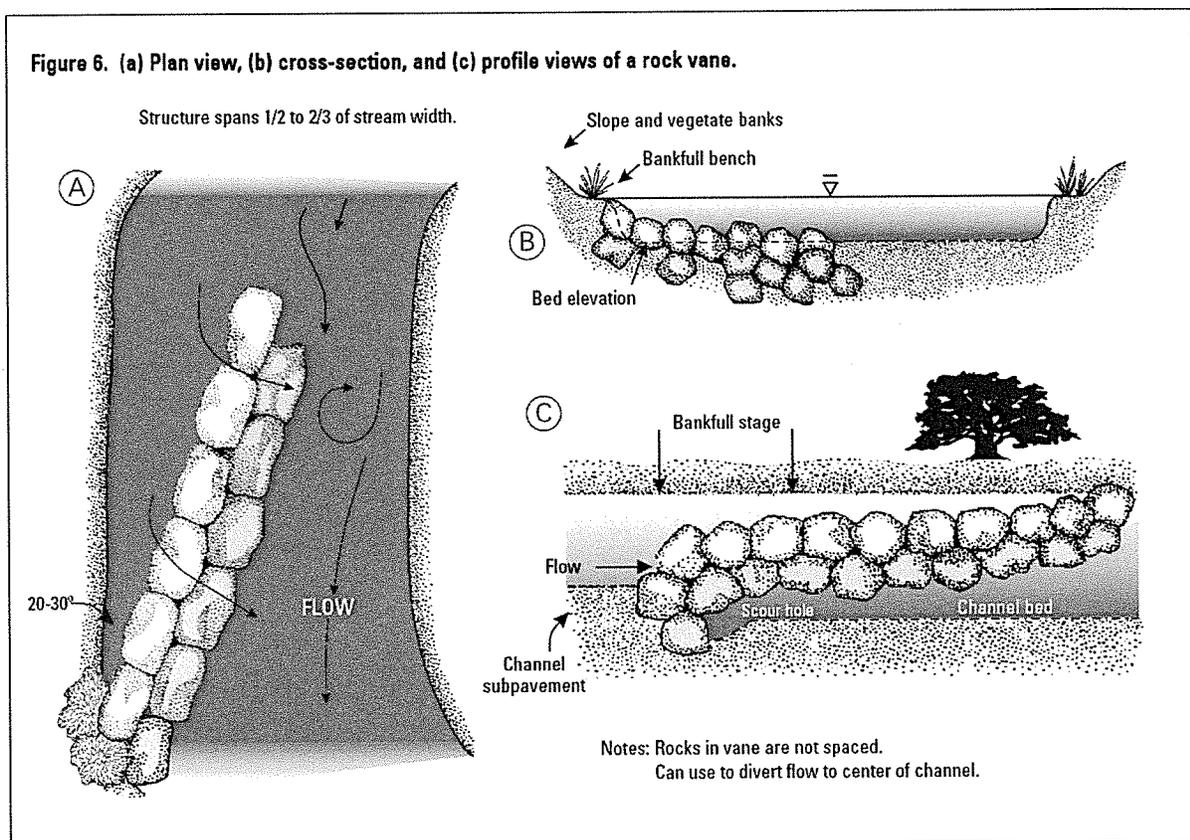


Rock Vanes

Rock vanes are structures made of boulders, placed in the stream channel to direct the current of the stream towards the center of the channel, away from the shore, to reduce bank erosion. This is an alternative to other hard armor techniques such as weir structures or gabions. Riffles and pools can be constructed to increase stream oxygenation and habitat. Boulders should be round, granitic stones, uncut, free from blast marks, with no square surfaces. Limestone does not make a good material for this practice, since it is not durable enough.

To install:

- Install during low stream conditions
- Key toe of vane into bank with two boulders at bankfull elevation—excavation required.
- Install each side of the rock vane so that it forms a 20 to 30 degree angle with the bank, and it point upstream, into the flow.
- Vanes should point downward, angling lower in the stream, about 2% to 7%, as they project into the center. Bank boulders are highest, and keystone boulder is lowest.
- Vanes should be made of double row (“wall” boulders). Filler boulders, smaller than wall boulders, can be placed in between upstream row of wall boulders.



CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Approve Contract for Portable Toilets for the Park System

Meeting Date: March 11, 2013
 Item Type: Consent Agenda
 Contact: Mark Borgwardt
 Prepared by: Mark Borgwardt
 Reviewed by: Eric Carlson

Fiscal/FTE Impact:
 None
 Amount included in current budget
 Budget amendment requested
 FTE included in current complement
 New FTE requested – N/A
 Other

PURPOSE/ACTION REQUESTED

Award three year portable toilet bid to Nature Calls for a monthly rate of \$54.00. This expense is included in the annual Parks Division budget.

SUMMARY

Portable toilet quote requests were mailed to three vendors for provision/servicing of facilities from April 1, 2013 through March 31, 2016, a three-year contract. A total of two vendors bid on providing services. The low bid was received from Nature Calls for a monthly rate of \$54.00. Recommend awarding portable toilet bid to Nature Calls through March 31, 2016. All bids include Damage Waiver protecting the city from any liability for damaged or destroyed units including vandalism and arson. The bid tabulation is provided below:

Nature Calls	\$54.00/month serviced weekly
Biffs	\$70.00/month serviced weekly

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

SET DATE FOR ADVISORY COMMISSION APPRECIATION DINNER

Meeting Date: March 11, 2013
Item Type: Consent
Contact: JTeppen, Asst. City Admin
Prepared by:
Reviewed by: n/a

Fiscal/FTE Impact:
 None
 Amount included in current budget
 Budget amendment requested
 FTE included in current complement
 New FTE requested – N/A
 Other

PURPOSE/ACTION REQUESTED Set date for Advisory Commission Appreciation Dinner.

SUMMARY Council had previously scheduled the Commission Appreciation Dinner for April 18, but due to schedule conflicts it needs to be rescheduled for April 11, 2013..

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

PERSONNEL ACTIONS

Meeting Date: March 11, 2013
Item Type: Consent
Contact: Jenelle Teppen, Asst. City Admin
Prepared by: Amy Jannetto, H.R. Coordinator
Reviewed by: n/a

Fiscal/FTE Impact:	
<input type="checkbox"/>	None
<input checked="" type="checkbox"/>	Amount included in current budget
<input type="checkbox"/>	Budget amendment requested
<input type="checkbox"/>	FTE included in current complement
<input type="checkbox"/>	New FTE requested – N/A
<input type="checkbox"/>	Other

PURPOSE/ACTION REQUESTED Staff requests that the Council approve the personnel actions listed below:

Please confirm the seasonal/temporary employment of: Aquatics – Natalie Thatcher, Joseph Werz, Golf – Matt Moynihan, Recreation – Ben Nelson, Hannah Johnson.

Please confirm the seasonal/temporary termination of employment of: Aquatics – Maria Dillon.

Please confirm the termination of employment of: Chris Wegner, Police Officer.

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Mike Stanton - Case No. 13-01CV

Meeting Date: March 11, 2013
 Item Type: Regular Agenda
 Contact: Allan Hunting 651.450.2554
 Prepared by: Allan Hunting, City Planner
 Reviewed by: Planning
 Engineering

Fiscal/FTE Impact:	
<input checked="" type="checkbox"/>	None
<input type="checkbox"/>	Amount included in current budget
<input type="checkbox"/>	Budget amendment requested
<input type="checkbox"/>	FTE included in current complement
<input type="checkbox"/>	New FTE requested – N/A
<input type="checkbox"/>	Other

PURPOSE/ACTION REQUESTED

Consider the following actions for property located at 3865 73rd Street:

- a. A Resolution and related improvement documents relating to a **Conditional Use Permit** to allow additional impervious surface up to 4,719 square feet.
 - Requires 4/5th's vote.
- b. A Resolution relating to a **Variance** to allow an addition to the existing home five (5) feet from the side property line where as 10 feet is required.
 - Requires 3/5th's vote.
- c. A Resolution relating to a **Variance** to allow a front porch addition 26 feet from the front property line whereas 30 feet is required.
 - Requires 3/5th's vote.
 - 60-day deadline: March 21, 2013 (first 60-days)

SUMMARY

The applicant is proposing two additions to the existing home, 1) a 12' x 32' addition along the side of the house five feet from the property line, whereas 10 feet is required and 2) an open unenclosed porch to the front of the house 26 feet from the front property line, whereas 30 feet is required. The applicant is also requesting a conditional use permit to increase impervious surface coverage to 4,719 square feet. The maximum allowed impervious surface, without a conditional use permit, is 35 percent for a lot of this size. The applicant is requesting the additional 10 percent impervious surface allowed by conditional use permit.

ANALYSIS

This lot and the surrounding neighborhood was developed and built prior to 1965. The homes were built using five foot side yard setbacks. Almost any addition to the house on the east side (side yard) would require some type of variance. The house is constructed 31 feet from the front property line. There is a provision in the ordinance to allow up to a six foot wide uncovered deck to be constructed on the front of the house. In this case, the proposed addition would add a roof over the front entry, but is not enclosed. Encroachments into front yards have a greater impact on aesthetics and the visual sight line along streetscapes.

Engineering has been working with the applicant on the storm water plans for the additional impervious surface. A storm water maintenance agreement is included as a standard document assuring continual maintenance of the storm water feature.

RECOMMENDATION

Planning Staff: Both Planning and Engineering Recommend approval of the conditional use permit. Planning Recommends approval of the side yard setback variance, but recommends denial of the front yard setback variance.

Planning Commission: Recommends approval of the conditional use permit and side yard setback variance (8-0). The Commission recommends denial of the front yard setback variance (7-1)

Attachments: Variance Approval Resolution
Front Yard Variance Denial Resolution
Conditional Use Permit Resolution
Storm water Maintenance Agreement
Planning Commission Recommendation
Planning Report

**CITY OF INVER GROVE HEIGHTS
DAKOTA COUNTY, MINNESOTA**

RESOLUTION NO. _____

**RESOLUTION APPROVING VARIANCES TO ALLOW; 1) A FRONT PORCH
ADDITION 26 FEET FROM THE FRONT PROPERTY LINE WHEREAS 30 FEET IS
REQUIRED AND 2) AN ADDITION TO THE EXISTING HOME FIVE (5) FEET FROM
THE SIDE PROPERTY LINE WHEREAS 10 FEET IS REQUIRED**

**CASE NO. 13-01CV
(Stanton)**

Property located at 3865 73RD Street and legally described as follows:

**Lot 17, Block 6, South Grove, Dakota County, Minnesota, according to recorded plat
thereof**

WHEREAS, an application has been received for a Variance to allow a front porch addition 26 feet from the front property line whereas 30 feet is required and an addition to the home five (5) feet from the side property line whereas 10 feet is required;

WHEREAS, the afore described property is zoned R-1C, Single Family Residential;

WHEREAS, a Variance may be granted by the City Council from the strict application of the provisions of the City Code Title 10, Chapter 3-4 and conditions and safeguards imposed in the variance so granted where practical difficulties or particular hardships result from carrying out the strict letter of the regulations of the Zoning Code, as per City Code 10-3-4 D;

WHEREAS, the City of Inver Grove Heights Planning Commission reviewed the request on February 19, 2013 in accordance with City Code Section City Code 10-3-3: C;

WHEREAS, a practical difficulty or uniqueness was found to exist based on the following findings:

1. The addition into the side yard setback would allow the owner to use the property in a reasonable manner and in a same manner as the surrounding properties that are not restricted by home placement and a situation that was created before the original zoning ordinance was adopted.
2. *(additional criteria to be stated by the city council)*

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF INVER GROVE HEIGHTS, that the variance to allow a front porch 26 feet from the front property line and an addition to the home five (5) feet from the side property line is hereby approved subject to the following condition:

1. The site shall be developed in substantial conformance with the site plan dated 2/14/13 on file with the Planning Division.

BE IT FURTHER RESOLVED that the Deputy Clerk is hereby authorized and directed to record a certified copy of this Resolution at the Dakota County Recorder's Office.

Adopted by the City Council of Inver Grove Heights this ____ day of _____, 2013.

George Tourville, Mayor

Ayes:

Nays:

ATTEST:

Melissa Kennedy, Deputy Clerk

Front Porch Variance Denial Resolution

**CITY OF INVER GROVE HEIGHTS
DAKOTA COUNTY, MINNESOTA**

RESOLUTION NO. _____

**RESOLUTION DENYING A VARIANCE TO ALLOW A FRONT PORCH ADDITION 26
FEET FROM THE FRONT PROPERTY LINE WHEREAS 30 FEET IS REQUIRED**

**CASE NO. 13-01CV
(Stanton)**

Property located at 3865 73RD Street and legally described as follows:

**Lot 17, Block 6, South Grove, Dakota County, Minnesota, according to recorded plat
thereof**

WHEREAS, an application has been received for a Variance to allow a front porch addition 26 feet from the front property line whereas 30 feet is the required setback;

WHEREAS, the afore described property is zoned R-1C, Single Family Residential;

WHEREAS, a Variance may be granted by the City Council from the strict application of the provisions of the City Code Title 10, Chapter 3-4 and conditions and safeguards imposed in the variance so granted where practical difficulties or particular hardships result from carrying out the strict letter of the regulations of the Zoning Code, as per City Code 10-3-4 D;

WHEREAS, the City of Inver Grove Heights Planning Commission reviewed the request on February 19, 2013 in accordance with City Code Section City Code 10-3-3: C;

WHEREAS, a practical difficulty or uniqueness was not found to exist based on the following findings:

1. The conditions of the property were not so limiting or unique that the property could not be used in a reasonable manner without the variance.
2. Approval of the variance could set a precedent for other front yard encroachment setbacks.
3. The facts presented did not satisfy the criteria needed to show a practical difficulty on the lot to support granting a variance.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF INVER GROVE HEIGHTS, that the variance to allow a front porch 26 feet from the front property line is hereby denied.

BE IT FURTHER RESOLVED that the Deputy Clerk is hereby authorized and directed to record a certified copy of this Resolution at the Dakota County Recorder's Office.

Adopted by the City Council of Inver Grove Heights this ____ day of _____, 2013.

George Tourville, Mayor

Ayes:

Nays:

ATTEST:

Melissa Kennedy, Deputy Clerk

**CITY OF INVER GROVE HEIGHTS
DAKOTA COUNTY, MINNESOTA**

RESOLUTION NO. _____

**RESOLUTION APPROVING A CONDITIONAL USE PERMIT TO ALLOW UP TO 4,719
SQUARE FEET OF IMPERVIOUS COVERAGE ON A LOT IN THE R-1C ZONING
DISTRICT**

CASE NO. 13-01CV
(Stanton)

WHEREAS, an application for Conditional Use Permit has been submitted for property located at 3865 73rd Street and legally described as the following;

Lot 17, Block 6, South Grove, Dakota County, Minnesota, according to recorded plat thereof

WHEREAS, the aforescribed property is currently zoned R-1C, Single Family Residential;

WHEREAS, all conditional use permits are subject to the criteria listed in City Code Title 10-3A-5, regarding consistency with the Comprehensive Plan, conformity with the Zoning Ordinance and compatibility with adjacent properties, among other criteria;

WHEREAS, a public hearing concerning the Conditional Use Permit was held before the Inver Grove Heights Planning Commission in accordance with Minnesota Statutes, Section 462.357, Subdivision 3 on February 19, 2013;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF INVER GROVE HEIGHTS, that a Conditional Use Permit to allow up to 4,719 square feet of impervious surface is hereby granted, subject to the following conditions:

1. The following criteria shall be met:
 - a) A storm water management system to mitigate the increased storm water runoff from the 1,049 square feet of additional impervious surface shall be constructed within the property that meets the best management practices criteria as set forth in the northwest area ordinances and stormwater manual.

- b) Prior to issuance of building permit, the design and location of the storm water facility shall provide for treatment and storage of storm water run-off in order to meet the 100-year event for the additional 1,049 square feet.
 - c) Prior to issuance of building permit, a storm water facility maintenance agreement shall be executed between the applicant and City to address responsibility and maintenance.
2. Prior to construction of the approved storm water facility:
 - a) The Engineering Division shall be notified of the contractors schedule and an on-sight preconstruction meeting held.
 - b) The soils shall be tested to determine the infiltration capacity to insure the storm water maintenance facility performs and functions within the assumed design parameters. The owner shall supply product specification sheets, testing results, and samples of the proposed engineered soils. The City Engineer may approve engineering staff inspections and approval of the soils in lieu of testing.
 3. The temporary erosion control and permanent storm water management plan should capture and route storm water runoff in a manner that does not adversely impact the adjoining or downstream properties.
 4. The Storm Water Management System and Grading Plan (including necessary details for construction, showing proper location, material, size, and grades) shall be approved by the Engineering Division prior to ground disturbance or installation of the facility.
 5. The Storm Water Management System is considered a private system and the responsibility of maintenance is that of the owner.
 6. Prior to release of the remainder of the Inspection Escrow and Construction Escrow, the storm water facility needs to be constructed in its entirety, vegetation planted, and approved by the Engineering Division.
 7. All existing easements shall be shown on the building permit submittal to ensure that the proposed structures are not encroaching in an easement area dedicated to the City. If there is encroachment, it will be the sole discretion of the City Engineer to either accept or deny the proposed encroachment. If allowed, an encroachment agreement would need to be executed prior to issuance of building permit.

BE IT FURTHER RESOLVED that the Deputy Clerk is hereby authorized and directed to record a certified copy of this Resolution at the Dakota County Recorder's Office.

Adopted by the City Council of Inver Grove Heights this 11th day of March, 2013.

George Tourville, Mayor

Ayes:

Nays:

ATTEST:

Melissa Kennedy, Deputy Clerk

STORM WATER FACILITIES MAINTENANCE AGREEMENT
FOR
3865 73rd STREET EAST
LOT 17, BLOCK 6, SOUTH GROVE
DAKOTA COUNTY, MINNESOTA

THIS STORM WATER FACILITIES MAINTENANCE AGREEMENT (Agreement) is made, entered into and effective this 11th day of March, 2013, by and between the City of Inver Grove Heights, a Minnesota municipal corporation (hereafter referred to as City) and Michael Stanton and Renae Stanton, husband and wife (hereafter referred to as Landowner and Responsible Owner). Subject to the terms and conditions hereafter stated and based on the representations, warranties, covenants, agreements and recitals of the parties herein contained, the parties do hereby agree as follows:

ARTICLE 1
DEFINITIONS

1.1 Terms. The following terms, unless elsewhere specifically defined herein, shall have the following meanings as set forth below.

1.2 City. “City” means the City of Inver Grove Heights, a Minnesota municipal corporation.

1.3 Landowner. “Landowner” means Michael Stanton and Renae Stanton, husband and wife, and their successors and assigns.

1.4 Storm Water Facilities. “Storm Water Facilities” means each and all of the following, individually and collectively, to the extent located within the Landowner Property:

Any existing or future raingardens, drainage facilities, and drainage swales lying within the Landowner Property.

1.5 Storm Water Facility Plan. “Storm Water Facility Plan” means both of the following:

- a. That certain Site Plan prepared by JLW Design dated February 14, 2013, and approved by the City Engineer. The Storm Water Facility Plan is on file with the City and is attached to this Agreement as part of Exhibit D; and
- b. The City of Inver Grove Heights Residential Rain Garden for CUP Exceeding Impervious Space Requirements attached to this Agreement as part of Exhibit D.

1.6 Landowner Property. “Landowner Property” means that certain real property located in the City of Inver Grove Heights, Dakota County, Minnesota legally described on **Exhibit A.**

1.7 Responsible Owner. “Responsible Owner” means, jointly and severally, all of the following:

The fee title owner of the property legally described on Exhibit A attached hereto, and the successors and assigns of such fee title owner.

1.8 NWA Stormwater Manual. “NWA Stormwater Manual” means the Inver Grove Heights Northwest Area Storm Water Manual prepared by Emmons & Olivier Resources dated July 2006, and as adopted by the City of Inver Grove Heights and codified in Section 10-13J-5 (H) of the Inver Grove Heights City Code, as amended from time to time by amendment of general applicability.

ARTICLE 2 **RECITALS**

Recital No. 1. Landowner owns the Landowner Property.

Recital No. 2. Landowner has requested that the City approve a conditional use permit to exceed the allowed maximum impervious coverage standard.

Recital No. 3. The City is willing to approve the conditional use permit if, among other things, Landowner executes this Storm Water Facilities Maintenance Agreement.

Recital No. 4. By this Agreement the parties seek to:

- a.) impose upon the Responsible Owner the responsibility of maintaining the Storm Water Facilities, notwithstanding the fact that the Storm Water Facilities may exist within easements dedicated or granted to the City and the public.
- b.) provide a mechanism where the City may charge-back to the Responsible Owner any maintenance work that the City performs with respect to the Storm Water

Facilities in the event the Responsible Owner fails to perform its obligations to maintain the Storm Water Facilities.

- c.) provide the City with right of access over the Landowner Property to access the Stormwater Facilities, when needed.

ARTICLE 3 **RESPONSIBILITY FOR MAINTENANCE**

3.1 Construction of Storm Water Facilities. Prior to September 10, 2013, Responsible Owner agrees that the Storm Water Facilities shall be constructed and installed in accordance with the Storm Water Facility Plan at the sole expense of Responsible Owner at a location and in a configuration as approved by the City.

3.2 Maintenance of Storm Water Facilities. The Responsible Owner is obligated at its expense to perpetually maintain the Storm Water Facilities in accordance with the Standard of Maintenance set forth in Section 3.3 hereof. The Responsible Owner shall not modify, alter, remove, eliminate or obstruct the Storm Water Facilities for as long as the Storm Water Facilities exist. The Responsible Owner shall also insure that the Storm Water Facilities always remain in compliance with the Storm Water Facility Plan. All entities that fall within the definition of Responsible Owner have the joint and several obligations of the defined Responsible Owner. The responsibility of the Responsible Owner for maintaining the Storm Water Facilities on the Lot exists even though the event or omission which caused the need for maintenance of the Storm Water Facilities may arise on property outside of the Landowner Property.

3.3 Standard of Maintenance. The Responsible Owner must meet the Standard of Maintenance set forth in this Section 3.3.

The Standard of Maintenance shall comply with all of the following:

- a. The Standard of Maintenance shall comply with the standards contained in Title 9, Chapter 5 of the Inver Grove Heights City Code (as amended from time to time, by amendment of general applicability); and
- b. The Standard of Maintenance shall comply with the stormwater maintenance standards and bio-retention standards and requirements as set forth in the **NWA Stormwater Manual** (as amended from time to time, by amendment of general applicability). The NWA Stormwater Manual is on file with the City's Director of Public Works. The NWA Stormwater Manual shall apply to the Storm Water Facilities notwithstanding the fact that the Landowner's Property is located outside of the Northwest Area Overlay District; and
- c. The Standard of Maintenance shall comply with the City approved Operations & Maintenance Plan hereafter referenced; and

- d. The Standard of Maintenance shall comply with the 2011 Watershed Management Plan for the Lower Mississippi Watershed Management Organization (LMRWMO) dated August 2011,
- e. The Standard of Maintenance shall include but not be limited to each of the following:
 - i.) The Responsible Owner shall monitor the Storm Water Facilities and shall as soon as possible correct any malfunction or deficiency in the operation of such structure so as to ensure that the structure operates in conformance with the design parameters.
 - ii.) Responsible Owner must comply with Section IV of the NWA Stormwater Manual which outlines the requirements for the operations and maintenance of Long Term Best Management Practices (BMP's) for storm water facilities. The Responsible Owner must prepare an Operations & Maintenance Plan to show how the Responsible Owner plans to operate and maintain Long Term Best Management Practices for the Storm Water Facilities being constructed on the Landowner Property. The Responsible Owner has submitted a final Operations & Maintenance Plan to the City, attached hereto as **Exhibit B**. The final Operations & Maintenance Plan attached hereto as Exhibit B has been approved by the City. The Responsible Owner and the successors and assigns thereof shall be responsible for following the Operations & Maintenance Plan as approved by the City. The final Operations & Maintenance Plan shall be on file with the City's Director of Public Works.
 - iii.) The final Operations & Maintenance Plan shall contain the following information:
 - a. Detailed inspection requirements;
 - b. Inspection and maintenance schedules;
 - c. Contact information for the Responsible Owner;
 - d. As built plans of the Storm Water Facilities;
 - e. A letter of compliance from the designer after construction of the Storm Water Facilities is completed;
 - f. The requirement for an annual report to the City to demonstrate that post construction maintenance is being accomplished per the Operations & Maintenance Plan;
 - g. The GPS coordinates for the Storm Water Facilities shall be provided to the City after construction is completed. Storm Water Facilities smaller than 200 square feet can be located with one GPS coordinate. Storm Water Facilities larger than 200 square feet shall have outlet coordinates and the corners of the Storm Water Facilities located by GPS. The GPS

readings shall be provided to the City before the Storm Water Facilities are covered.

If the Storm Water Facility Plan is inconsistent with the Standard of Maintenance or if components within the Standard of Maintenance are inconsistent with other components within the Standard of Maintenance, then that provision, term or component which imposes a greater and more demanding obligation shall prevail.

In January of each year, the Responsible Owner shall submit to the City an annual report that identifies all of the tests, inspections, corrective measures and other activities conducted by the Responsible Owner under the Operations & Maintenance Plan for the preceding year. The annual report shall also identify any conditions of non-compliance with the Standard of Maintenance during the preceding year and the annual report shall address how the conditions of non-compliance were cured. The annual report shall also include the information shown on the form attached hereto as **Exhibit C**.

3.4 Notice of Non-Compliance with Section 3.3 and 3.4; Cure Period. If the City's Director of Public Works ("DPW") determines, at his reasonable discretion, that the Responsible Owner has not complied with the Standard of Maintenance, the DPW shall provide written notice to the Responsible Owner of such failure to comply with the Standard of Maintenance. This notice shall specify that the Responsible Owner will have thirty (30) days to comply with the Standard of Maintenance, unless thirty (30) days is not practicable for the Responsible Owner to cure the default, in which case the Responsible Owner shall be given a reasonable time, as determined by the DPW, to cure the default provided the Responsible Owner has commenced a suitable cure within the initial thirty (30) days. Notwithstanding the requirement contained in this Section relating to written notice and opportunity of the Responsible Owner to comply with the Standard of Maintenance, in the event of an emergency as determined by the DPW, the City may perform the work to be performed by the Responsible Owner without giving any notice to the Responsible Owner and without giving the Responsible Owner thirty (30) days to comply with the Standard of Maintenance. If the City performs emergency service work, the Responsible Owner shall be obligated to repay the City the costs incurred to perform the emergency service work, and the City shall follow those procedures set forth in Sections 3.5 and 3.6 with respect to the billing, collection and/or tax certification of such costs.

3.5 Payment of Costs Incurred by City. If the Responsible Owner fails to comply with the Standard of Maintenance within thirty (30) days after delivery of the written notice, or in the case of an emergency situation as determined by the DPW, the City may perform those tasks necessary for compliance and the City shall have the right of access to the areas where the Storm Water Facilities are located to perform such work. The City shall charge all costs incurred by the City to perform the tasks necessary for compliance to the Responsible Owner.

The amount of costs charged by the City to the Responsible Owner shall be the usual and customary amounts charged by the City given the task, work, or improvement performed by the City to ensure compliance with the Standard of Maintenance. The Responsible Owner shall make payment directly to the City within twenty (20) days after invoicing ("Due Date") by the City. Bills not paid by the Due Date shall incur the standard penalty and interest established by the City for utility billings within the City.

3.6 Certification of Costs Payable With Taxes; Special Assessments. If payment is not made under Section 3.5 by the Responsible Owner with respect to the Landowner Property, the City may certify to Dakota County the amounts due as payable with the real estate taxes for the Landowner Property in the next calendar year; such certifications may be made under Minnesota Statutes, Chapter 444 in a manner similar to certifications for unpaid utility bills. The Responsible Owner waives any and all procedural and substantive objections to the imposition of such usual and customary charges on the Landowner Property.

Further, as an alternate means of collection, if the written billing is not paid by the Responsible Owner, the City, without notice and without hearing, may specially assess the Landowner Property for the costs and expenses incurred by the City. The Responsible Owner hereby waives any and all procedural and substantive objections to special assessments for the maintenance costs including, but not limited to, notice and hearing requirements and any claims that the charges or special assessments exceed the benefit to the Landowner Property. The Responsible Owner waives any appeal rights otherwise available pursuant to Minnesota Statute § 429.081. The Responsible Owner acknowledges that the benefit from the performance of maintenance tasks by the City to ensure compliance with the Standard of Maintenance equals or exceeds the amount of the charges and assessments for the maintenance costs that are being imposed hereunder upon the Landowner Property. Nothing in this paragraph shall be deemed to impair Responsible Owner's right to dispute the amount assessed as exceeding the usual and customary amounts charged by the City given the task, work, construction or improvement performed by the City to ensure compliance with Section 3.3.

3.7 Obligation For Maintenance Notwithstanding Public Easement. The Responsible Owner agrees that its obligations relating to maintenance of the Storm Water Facilities exist notwithstanding the fact that the Storm Water Facilities may be located in whole or in part within public easements.

The City hereby grants to the Responsible Owner a temporary right and license to enter public easements and public road rights-of-way for the purpose of performing the maintenance obligations relating to the Storm Water Facilities for the duration of the performance of the maintenance. The Landowner hereby grants to the City a right and license to access and enter the Landowner Property for the purpose of performing maintenance of the Storm Water Facilities for the duration of the performance of the maintenance.

3.8 Indemnification of City. Responsible Owner shall indemnify, defend and hold the City, its council, agents, employees, attorneys and representatives harmless against and in respect of any and all claims, demands, actions, suits, proceedings, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including interest, penalties and attorneys' fees, that the City incurs or suffers, which arise out of, result from or relate to:

- a.) failure by the Responsible Owner to observe or perform any covenant, conditions, obligation or agreement on their part to be observed or performed under this Agreement;
- b.) failure by the Responsible Owner to pay contractors, subcontractors, laborers, or materialmen;

- c.) failure by the Responsible Owner to pay for any materials that may be used by the Responsible Owner to maintain the Storm Water Facilities; and
- d.) construction of the Storm Water Facilities.

3.9 No Remedy Exclusive. No remedy herein conferred upon or reserved to the City shall be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Agreement or now or hereafter existing at law or in equity or by statute. No delay or omission to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver thereof, but any such right and power may be exercised from time to time and as often as may be deemed expedient. In order to entitle the City to exercise any remedy reserved to it, it shall not be necessary to give notice, other than the notice, if any, required by this Agreement.

ARTICLE 4 **ESCROW DEPOSIT**

4.1 Engineering Escrow Amount. The Landowner shall deposit \$1,500 in cash with the City (hereafter "Engineering Escrow Amount") contemporaneously with execution of this Agreement.

The Engineering Escrow Amount shall be used to pay the City for engineering review and inspection expenses, attorney's fees, consultant fees, erosion and sediment control expenses, staff review time associated with coordination, review, design, preparation and inspection of the Storm Water Facility Plan and this Agreement and other associated City costs. Fees will be calculated at the City's standard rates charged for such tasks.

The Engineering Escrow Amount shall also be available to the City to pay for deficiencies and problems related to grading, drainage and erosion control and landscaping on the Landowner Property in the event such problems and deficiencies arise. The City may also use the Engineering Escrow Amount to correct any such deficiencies or problems or to protect against further deficiencies or problems.

The City shall return to the Landowner any remaining Engineering Escrow Amount when all the following events have occurred:

- a.) all of the landscaping and vegetation has been established to the sole satisfaction of the City.

To the extent the engineering inspection charges or the amount needed to correct the deficiencies and problems relating to grading, drainage, erosion control, or landscaping exceed the initially deposited \$1,500 Engineering Escrow Amount, the Landowner is responsible for payment of such excess within thirty (30) days after billing by the City.

ARTICLE 5
CITY'S COVENANTS

5.1 Approval of Conditional Use Permit. The City agrees that if Landowner executes this Storm Water Facilities Maintenance Agreement and if the other conditions set forth in the Planning Report and Engineering Report relating to the conditional use permit are met, the Council will approve the conditional use permit for the Landowner Property.

ARTICLE 6
MISCELLANEOUS

6.1 Binding Agreement. The parties mutually recognize and agree that all terms and conditions of this recordable Agreement shall run with the Landowner Property and shall be binding upon the parties and the successors and assigns of the parties. This Agreement shall also be binding on and apply to any title, right and interest of the Landowner in the Landowner Property acquired by Landowner after the execution date of this Agreement or after the recording date of this Agreement.

6.2 Amendment and Waiver. The parties hereto may by mutual written agreement amend this Agreement in any respect. Any party hereto may extend the time for the performance of any of the obligations of another, waive any inaccuracies in representations by another contained in this Agreement or in any document delivered pursuant hereto which inaccuracies would otherwise constitute a breach of this Agreement, waive compliance by another with any of the covenants contained in this Agreement, waive performance of any obligations by the other or waive the fulfillment of any condition that is precedent to the performance by the party so waiving of any of its obligations under this Agreement. Any agreement on the part of any party for any such amendment, extension or waiver must be in writing. No waiver of any of the provisions of this Agreement shall be deemed, or shall constitute, a waiver of any other provisions, whether or not similar, nor shall any waiver constitute a continuing waiver.

6.3 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Minnesota.

6.4 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original but all of which shall constitute one and the same instrument.

6.5 Consent. Landowner consents to the recording of this Agreement.

6.6 Notice. Notice shall mean notices given by one party to the other if in writing and if and when delivered or tendered either in person or by depositing it in the United States mail in a sealed envelope, by certified mail, return receipt requested, with postage and postal charges prepaid, addressed as follows:

If to City:

City of Inver Grove Heights
Attention: City Administrator
8150 Barbara Avenue
Inver Grove Heights, MN 55077

If to Landowner:

Michael Stanton and Renae Stanton
3865 73rd St. East
Inver Grove Heights, MN 55076

or to such other address as the party addressed shall have previously designated by notice given in accordance with this Section. Notices shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the third day after mailing if mailed as provided above, provided, that a notice not given as above shall, if it is in writing, be deemed given if and when actually received by a party.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF Landowner and the City have entered into this Agreement on the day and year first stated above.

CITY OF INVER GROVE HEIGHTS

By: _____
George Tourville
Its: Mayor

ATTEST:

Melissa Kennedy, Deputy City Clerk

STATE OF MINNESOTA)
) ss.
COUNTY OF DAKOTA)

On this 11th day of March, 2013, before me a Notary Public within and for said County, personally appeared George Tourville and Melissa Kennedy to me personally known, who being each by me duly sworn, each did say that they are respectively the Mayor and Deputy City Clerk of the City of Inver Grove Heights, the municipality named in the foregoing instrument, and that the seal affixed to said instrument was signed and sealed on behalf of said municipality by authority of its City Council and said Deputy City Clerk acknowledged said instrument to be the free act and deed of said municipality.

Notary Public

LANDOWNER:

Michael Stanton

Renaee Stanton

STATE OF MINNESOTA)
)
COUNTY OF DAKOTA) ss.

The foregoing instrument was acknowledged before me this 11th day of March, 2013, by Michael Stanton and Renaee Stanton, husband and wife.

Notary Public

THIS INSTRUMENT DRAFTED BY:

Timothy J. Kuntz
LeVander, Gillen, & Miller, P.A.
633 South Concord Street
Suite 400
South St. Paul, MN 55075
(651) 451-1831

**AFTER RECORDING PLEASE
RETURN TO:**

Timothy J. Kuntz
LeVander, Gillen & Miller, P.A.
633 South Concord Street
Suite 400
South St. Paul, MN 55075
(651) 451-1831

EXHIBIT A
LEGAL DESCRIPTION OF LANDOWNER PROPERTY

Real Property located in the City of Inver Grove Heights, Dakota County, Minnesota, described as follows:

Lot Seventeen (17) in Block Six (6) of South Grove according to the plat thereof on file and of record in the office of the Register of Deeds within and for said County and State.

Torrens Property
PID: 20-71150-06-170

EXHIBIT B
FINAL OPERATIONS & MAINTENANCE PLAN

MAINTENANCE PLAN

Maintenance of the storm water facilities shall be performed as outlined in Table 1.1 below to ensure a healthy and functioning storm water facility conforming to the intend of the original design parameters. Maintenance shall be completed annually by September 10th. An annual inspection report shall be submitted to the City Engineering Division by January 1st of each year to demonstrate that post-construction maintenance is being accomplished per this Operations and Maintenance plan.

TABLE 1.1 – MAINTENANCE ACTIVITIES

Maintenance Activity	Frequency	Procedure	Maintenance Done By
1. Sediment, trash and debris removal from inlet, outlets, pipes and structures.	Annually in spring and fall as needed.	Remove trash and/or debris. Pruning and weeding, mow filter strip	Property owner unless designated
2. Sediment, trash and debris removal from bio-filtration basin and swale	Annually in spring and fall as needed.	Remove sediment and restore bio-filtration basin and swale to capacity	Property owner unless designated
3. Erosion repair and vegetation replacement.	Annually in spring and fall as needed.	Repair eroded areas and re-seed, re-sod, re-plant and mulch as necessary and remove dry, dead or severely diseased vegetation	Property owner unless designated
4. Mulch replacement	Every 2 to 3 years or as needed to maintain 3" to 4" depth	If applicable, add shredded hardwood mulch	Property owner
5. Watering	As needed	Provide 1 inch of water when plants show signs of stress	Property owner
6. Vegetation replacement and weeding	Annually in spring and fall	Replace dead vegetation and remove evasive or unwanted plants	Property owner
7. Clean/fix structural components	As needed per inspection	Dependent on the type of damage; repair components per manufacturer's recommendations	Property owner unless designated
8. <u>Replacement</u> of the bio-retention device.	Bio-retention device failure.	The owner shall notify the City and make repairs within 60 days, unless otherwise approved by the City Engineer.	Property owner unless designated

EXHIBIT C
ANNUAL INSPECTION FORM

CITY OF INVER GROVE HEIGHTS NPDES INSPECTION PROGRAM

INLET / OUTLET					
STRUCTURE ID		INSPECTION DATE		INSPECTOR(S)	
LOCATION					
EASEMENT					
ACCESSIBLE	Y	N			
STRUCTURES IN ESMT.	Y	N	DESCRIPTION		
TREES IN ESMT.	Y	N	LARGEST DIAMETER (INCHES)		
STRUCTURE	FES	PIPE	CB	OTHER	
ATTRIBUTES	TRASH GUARD	WEIR	SURGE BASIN	OTHER	NONE
CONDITION*	OK	MINOR MAINTENANCE	MAJOR MAINTENANCE	INACCESSIBLE	
END SECTION EROSION	Y	N			
FLOW CONDITION	FLOW PRESENT	NO FLOW	SUBMERGED		
COMMENTS					
VEGETATION/DEBRIS	WEEDS, ETC.	BRUSH, TREES, ETC.	GARBAGE/DEBRIS	NONE	
RESTRICTING FLOW	Y	N			
COMMENTS					
SEDIMENT					
CONDITION**	NONE	MINOR MAINTENANCE	MAJOR MAINTENANCE		
COMMENTS					
RIP RAP					
PRESENT	Y	N			
CONDITION***	OK	MINOR MAINTENANCE	MAJOR MAINTENANCE		
COMMENTS					
ILLCIT DISCHARGE	Y	N			
COMMENTS					

MAINTENANCE PERFORMED:			
SIGNED:		DATE:	

* Minor Maintenance: i.e. regROUT joint, repair trash guard; Major Maintenance: structure separating(ed) from pipe
 ** Minor Maintenance: repair can be done by City crews, Major Maintenance: heavy equip. is needed
 *** Minor Maintenance: repair can be done by City crews, Major Maintenance: heavy equip. is needed

EXHIBIT D
STORM WATER FACILITY PLAN

See the attached Site Plan prepared by JLW Design dated February 14, 2013. Also, see the attached City of Inver Grove Heights Residential Rain Garden for CUP Exceeding Impervious Space Requirements.

**RECOMMENDATION TO
CITY OF INVER GROVE HEIGHTS**

TO: Mayor and City Council of Inver Grove Heights
FROM: Planning Commission
DATE: February 19, 2013
SUBJECT: MIKE STANTON – CASE NO. 13-01CV

Reading of Notice

Commissioner Simon read the public hearing notice to consider the request for a conditional use permit to exceed the impervious surface maximum, a variance to allow an addition to the existing home within the required side yard setback, and a variance to allow a porch addition to the existing home within the required front yard setback, for the property located at 3865 – 73rd Street East. 53 notices were mailed.

Presentation of Request

Allan Hunting, City Planner, explained the request as detailed in the report. He advised that the applicant is requesting a conditional use permit (CUP) to construct a house addition that would increase the total impervious coverage to 4,419 square feet; however, the applicant is requesting a CUP to the full extent allowed, which is 4,719 square feet. The proposed request meets the CUP criteria. The applicant is also requesting two variances: 1) to allow a 12' x 32' addition to the house into the side yard setback, following the existing established building setback of five feet, and 2) to allow a 5' x 22' open porch addition onto the front of the house that would be 26 feet from the front property line. The furthest part of the proposed covered entry would extend out five feet from the house. Staff recommends approval of the CUP and the side yard variance request with the practical difficulty being the location and placement of the house which predates the zoning ordinance. Staff does not, however, recommend approval of the front yard setback variance for the covered porch as denial of the request would not preclude the applicant from reasonable use of the property and approval of the variance could set a precedent for other encroachment setbacks.

Commissioner Wippermann noted an error on the table on Page 1 of the report.

Mr. Hunting acknowledged the error, stating the maximum allowed impervious coverage on the lot should be 4,719 square feet rather than 14,334.

Commissioner Maggi noted some conflicting numbers and asked what size porch was being proposed.

Mr. Hunting replied that the discrepancy was likely due to rounding of numbers, and he stated the proposed portion in front of the front door was 5' x 8' with an additional 4' x 14'-10" along the front of the house.

Commissioner Lissarrague asked what the reason was for the 30' setback requirement.

Mr. Hunting stated it was the visual impact and the potential for setting a precedent. He advised that in this case safety would not be an issue if the proposed encroachment were to be

approved.

Commissioner Lissarrague noted that in the past the City has recommended approval of many setback requests.

Commissioner Simon asked if the applicant could put a roof over the porch as long as there were no support posts.

Mr. Hunting replied that the Zoning Code allows up to a 24" overhang from any of the rooflines as long as there is nothing supporting it.

Opening of Public Hearing

The applicant, Mike Stanton, 3865 – 73rd Street East, advised was available to answer any questions.

Chair Hark asked if the applicant understood and agreed with the conditions listed in the report.

Mr. Stanton advised that he understood the conditions and agreed with staff recommendations except in regard to the front yard setback variance.

Commissioner Elsmore asked if the applicant would be open to not having a roof over the proposed porch.

Mr. Stanton replied that his preference would be to have a covered porch but if the variance was denied by City Council he would go ahead with the porch and step portion. He advised there were other homes in the South Grove neighborhood with covered steps, and he showed a rendering of the proposed addition.

Commissioner Elsmore asked how many steps were being proposed.

Mr. Stanton replied it would likely be one step with no railing.

Commissioner Lissarrague asked how far the porch would extend from the house.

Mr. Stanton replied the farthest point in front of the door would be five feet from the house. He advised that he had a signed letter of support from several of his neighbors.

Commissioner Maggi asked how long the applicant had owned the home.

Mr. Stanton replied two years.

Commissioner Gooch asked if the window ledge shown on the drawing protruded out from the house.

Mr. Stanton replied that the area in question would protrude out a foot from the house, but was more of an aesthetic and would not change the interior living space or foundation.

Commissioner Lissarrague asked how the applicant would proceed should the front setback

variance be denied.

Mr. Stanton replied he would build the entrance within the provisions allowed.

Planning Commission Discussion

Commissioner Elsmore asked if staff would support a 3' x 3' covered front entry.

Mr. Hunting replied in the affirmative, stating that would seem reasonable.

Commissioner Elsmore asked if the issue was not so much the encroachment as the amount of encroachment.

Mr. Hunting replied that a front stoop larger than 3' x 3' seemed to go beyond the intent of the code requirements regarding encroachments into the front yard.

Commissioner Scales asked if the applicant could install support posts three feet from the house and then extend the roof 24" beyond that.

Mr. Hunting advised that he would research the ordinance while the Commissioners continued their discussion.

Planning Commission Recommendation

Motion by Commissioner Elsmore, second by Commissioner Lissarrague, to approve the request for a conditional use permit to exceed the impervious surface maximum in a residential district and a variance from the side yard setback for a home addition, for the property located at 3865 – 73rd Street, with the conditions listed in the report.

Motion carried (8/0).

Commissioner Simon asked if tabling of the front variance request would affect the other two.

Ms. Botten replied that the applicant could move forward with the first two requests and table the front yard setback variance.

Commissioner Simon asked if the applicant would consider tabling the front yard variance request in order to minimize and redesign the front entrance.

Mr. Stanton replied their hope was to build the front porch as presented; however, they were willing to work with staff on other options if that was not feasible.

Commissioner Wippermann stated although the proposed porch would enhance the appearance of the property, he could not support the request as it did not meet the variance criteria.

Commissioner Simon agreed, stating there was a lack of practical difficulty.

Chair Hark advised that the Commission's focus was very narrow; however, City Council could look at the request in a broader sense.

Mr. Hunting advised that the ordinance states that a roof, eave or overhang may project up to 24" into the required setback. Nothing could be added beyond that.

Commissioner Scales stated since the house was set back 31' and the allowed setback was 30', the applicant could add a support one foot from the house and the roof could overhang two feet beyond that.

Mr. Hunting replied in the affirmative.

Mr. Stanton stated at this point he would propose to move the application forward as proposed.

Commissioner Lissarrague stated in his opinion the proposed additions would enhance the value of the applicant's property as well as the value of the surrounding properties.

Chair Hark stated he was concerned about the precedent that could be set.

Motion by Commissioner Wippermann, second by Commissioner Simon, to deny the request for a variance from the front yard setback for a porch addition, for the property located at 3865 – 73rd Street, based on the rationale stated in the staff report.

Motion carried (7/1 – Lissarrague). This item goes to the City Council on March 11, 2013.

PLANNING REPORT CITY OF INVER GROVE HEIGHTS

REPORT DATE: February 13, 2013 **CASE NO.:** 13-01CV

HEARING DATE: February 19, 2013

APPLICANT: Mike Stanton

PROPERTY OWNER: Mike Stanton

REQUEST: A Conditional Use Permit to allow additional impervious surface and two Variations to allow additions to the house within the side and front yard setbacks.

LOCATION: 3865 73rd Street E

COMPREHENSIVE PLAN: LDR, Low Density Residential

ZONING: R-1C, Single Family Residential

REVIEWING DIVISIONS: Planning **PREPARED BY:** Allan Hunting
Engineering City Planner

BACKGROUND

The applicant is requesting a Conditional Use Permit to construct a house addition that would increase the total impervious coverage to 4,419 sq ft. The applicant is however requesting a conditional use permit to the full extent allowed which is 4,719 square feet. The applicant has provided a drawing which has the details of all existing and proposed impervious surface. Details of the impervious coverage are listed in the chart below.

	Square Feet	Allowed Impervious Coverage
Lot Size	10,486	3,670
Allowed additional impervious coverage by CUP	10% of lot area	1,049
Grand total impervious surface cover allowed		4,719
Total impervious coverage requested		4,419

The applicant is also requesting two variations; 1) to allow a 12' x 32' addition to the house into the side yard setback, following the existing building setback of five (5) feet, and 2) to allow a 5' x 22' open porch addition onto the front of the house that would be 26 feet from the front property line.

The house is currently setback five feet from the side line. The addition would extend along the existing established setback. The house was constructed in 1956 which predates the 1965 original zoning ordinance. The house would be considered a legal non-conforming house since it predates the ordinance.

SURROUNDING USES

The subject site is surrounded by the following uses:

- North - Residential; zoned R-1C, single-family; guided LDR, Low Density Residential
- East - Residential; zoned R-1C, single-family; guided LDR, Low Density Residential
- West - Residential; zoned R-1C, single-family; guided LDR, Low Density Residential
- South - Residential; zoned R-1C, single-family; guided LDR, Low Density Residential

EVALUATION OF REQUEST

GENERAL CUP CRITERIA

Section 10-3A-5 of the Zoning Regulations lists criteria to be considered with all conditional use permit requests. This criterion generally relates to the Comprehensive Plan and Zoning consistency, land use impacts such as setbacks, drainage, and aesthetics, environmental impacts, and public health and safety impacts.

The proposed conditional use permit meets the above criteria. The surrounding properties are all single-family residential homes. The proposed single-family home addition will aesthetically fit in with the neighborhood. Additionally, the applicant has agreed to comply with the storm water treatment conditions, which help maintain the drainage and storm water runoff on the applicant's property.

IMPERVIOUS SURFACE CUP CRITERIA

The zoning ordinance sets a maximum impervious surface allowed on each lot in the city based on lot size categories. Impervious surface can be increased by up to 10 of the lot area with a conditional use permit provided the following criteria are met:

- a) A Storm Water Management System shall be constructed within the property that meets the Best Management Practices design criteria as set forth in the Northwest Area Ordinances and Storm Water Manual.
- b) The Storm Water Management System and Grading Plan (including necessary details for construction, showing proper location, material, size, and grades) shall be approved by the Engineering Division prior to ground disturbance or installation of the facility.
- c) The Storm Water Management System is considered a private system and the responsibility of maintenance is that of the owner.
- d) The design of the facility shall provide storage and treatment for the 100-year event volume as it relates to the additional impervious surface being considered with a conditional use application.

- e) A storm water facilities maintenance agreement shall be entered into between the applicant and City to address responsibilities and maintenance of the storm water system.
- f) An escrow or fee, to be determined by the City Engineer, shall be submitted to the City with the Storm Water Management System submittal. The final amount and submittal process shall be determined by the City by the time the Owners are ready to submit the Storm Water Management System and Grading Plan. Surety shall be provided to ensure construction of the system according to the plans approved by the City Engineer.
- g) The soils shall be tested to determine the infiltration capacity at and below the stormwater facility to ensure the stormwater management facility performs and functions within the assumed design parameters. A three (3) foot separation shall be maintained from seasonal high water levels and the bottom of any facility.

The Engineering Department has been working with the applicant on the information to be submitted. An escrow has been deposited so the process of drafting the agreement documents has begun. The applicant has already submitted some preliminary design drawings for a rain garden for Engineering to review.

VARIANCE CRITERIA

City Code Title 11, Chapter 3. **Variations**, states that the City Council may grant variances when they are in harmony with the general purposes and intent of the zoning ordinance and consistent with the comprehensive plan and establishes that there are practical difficulties in complying with the official control. In order to grant the requested variances, City Code identifies criteria which are to be considered practical difficulties. The applicant's request is reviewed below against those criteria.

1. *The variance request is in harmony with the general purpose and intent of the city code and consistent with the comprehensive plan.*

The general intent of this standard is to limit the precedent that could be set if the variance was granted. The area is developed with single family homes. Allowing the addition on the side of the house would be in harmony with the general purpose and intent of the comp plan which is a single family detached housing neighborhood. The existing neighborhood was platted and developed before 1965, so the lot size and widths along with setbacks are less than what is required today. Almost any addition onto the house on the east side would require some type of variance since the setback is greater today than it was when the house was built.

The Zoning Ordinance does have a provision that allows uncovered front decks to encroach into the front setback up to six feet. In this instance, the porch is covered and therefore must meet the standard front yard setback of 30 feet. The house was constructed without a front porch and was placed at the 30 foot setback line. Staff has not historically supported encroachments into front yards on properties. The rules on

front yard setbacks have not changed since the house was built which makes this request different than the addition into the side yard.

2. *The property owner proposes to use the property in a reasonable manner not permitted by the zoning ordinance.*

The house was constructed in 1956, predating the 1965 zoning ordinance. The house is located 5 feet from the side property line. Nearly any addition to the home would require a variance. The addition would allow the owner to use the property in a reasonable manner and in a same manner as the surrounding properties that are not restricted by a home placement and situation that was created before the zoning ordinance was adopted.

The front addition extends beyond what was envisioned when the code was amended to allow open decks or porches on houses to encroach up to six feet. A typical front entry stoop must be at least 3' x 3' per building code. A roof over this minimum addition would seem reasonable and could meet the variance criteria. Beyond this creates further encroachments into the front yard setback which is established to maintain a straight visual sight line along the streetscape and to keep structures back from the street.

3. *The plight of the landowner is due to circumstances unique to the property not created by the landowner.*

This side yard variance situation is unique to the property and was not created by the landowner. As stated above, the setback issue is a pre existing condition.

The front encroachment is a new condition and not necessarily unique to the property.

4. *The variance will not alter the essential character of the locality.*

Allowing the side yard variance would not alter the essential character of the neighborhood. The addition is a typical home improvement and the reduced setback would not have an impact on any abutting properties.

Because the front addition is an open porch, it would not have the same effect as if an enclosed addition was being proposed. Staff has felt front yard encroachments can have a greater impact on the character of the neighborhood.

5. *Economic considerations alone do not constitute an undue hardship.*

Economic considerations do not appear to be a basis for this request.

ALTERNATIVES

The Planning Commission has the following alternatives available for the requested action:

A. Approval If the Planning Commission finds the requests to be acceptable, the Commission should recommend approval of the requests with at least the following conditions:

- Approval of a **Variance** to allow an addition to the existing home 5 feet from the side property line whereas 10 feet is required subject to the following conditions:
 1. The site shall be developed in substantial conformance with the site plan dated 2/14/13 on file with the Planning Division.
- Approval of a **Variance** to allow a front porch addition 26 feet from the front property line whereas 30 feet is required subject to the following condition:
 1. The site shall be developed in substantial conformance with the site plan dated 2/14/13 on file with the Planning Division.
- Approval of the **Conditional Use Permit** to allow additional impervious surface up to 4,719 square feet subject to the following conditions:
 1. In order to receive a conditional use permit, the following criteria shall be met:
 - a) A storm water management system to mitigate the increased storm water runoff from the 1049 square feet of additional impervious surface shall be constructed within the property that meets the best management practices criteria as set forth in the northwest area ordinances and stormwater manual.
 - b) Prior to issuance of building permit, the design and location of the storm water facility shall provide for treatment and storage of storm water run-off in order to meet the 100-year event for the additional 1049 square feet.
 - c) Prior to issuance of building permit, a storm water facility maintenance agreement shall be executed between the applicant and City to address responsibility and maintenance.
 2. Prior to construction of the approved storm water facility:
 - a) The Engineering Division shall be notified of the contractors schedule and an on-sight preconstruction meeting held.
 - b) The soils shall be tested to determine the infiltration capacity to insure the storm water maintenance facility performs and functions within the assumed

design parameters. The owner shall supply product specification sheets, testing results, and samples of the proposed engineered soils. The City Engineer may approve engineering staff inspections and approval of the soils in lieu of testing.

3. The temporary erosion control and permanent storm water management plan should capture and route storm water runoff in a manner that does not adversely impact the adjoining or downstream properties.
4. The Storm Water Management System and Grading Plan (including necessary details for construction, showing proper location, material, size, and grades) shall be approved by the Engineering Division prior to ground disturbance or installation of the facility.
5. The Storm Water Management System is considered a private system and the responsibility of maintenance is that of the owner.
6. Prior to release of the remainder of the Inspection Escrow and Construction Escrow, the storm water facility needs to be constructed in its entirety, vegetation planted, and approved by the Engineering Division.
7. All existing easements shall be shown on the building permit submittal to ensure that the proposed structures are not encroaching in an easement area dedicated to the City. If there is encroachment, it will be the sole discretion of the City Engineer to either accept or deny the proposed encroachment. If allowed, an encroachment agreement would need to be executed prior to issuance of building permit.

B. Denial If the Planning Commission does not favor the proposed Conditional Use Permit, the above request should be recommended for denial. With a recommendation for denial, findings or the basis for the denial should be given.

RECOMMENDATION

Based on the information in the preceding report and the conditions listed in Alternative A, staff is recommending approval of the conditional use permit and the side yard variance requests with the practical difficulty being the location and placement of the house which predates the zoning ordinance. Staff does not recommend approval of the front yard encroachment for the covered porch as the situation of the request does not seem to meet all of the variance criteria. A denial could be based on the following rationale:

1. Denying the variance request does not preclude the applicant from reasonable use of the property.
2. Approval of the variance could set a precedent for other encroachment setbacks.

Attachments: Exhibit A - Location/Zoning Map
Exhibit B - Applicant Narrative
Exhibit C - Site Plan



Location/Zoning Map

Case No. 13-01CV



Mike Stanton
3865 73rd St. E.
Inver Grove Hts., MN 55076
January 22, 2013

Inver Grove Heights
Planning Commission

Dear Planning Commission:

I am requesting a variance and Conditional Use Permit (CUP) for the property 3865 73rd St. E., Lot 17, Block 6 of the South Grove Plat. The requests are outlined below that are being sought after.

- 1.) CUP for the impervious surface exceeding the zoned 35% requirement but falling in the 10% margin of the CUP guidelines. We are willing to implement any water run-off programs that the city engineers see fit due to exceeding the 35% zoned allowance for impervious coverage.
- 2.) Variance #1- This is a request for a 5' lot setback vs. 10' on the Northeast corner of the house. When the house was constructed in 1956, the setbacks at that time were 5'. Later on the city had changed the setbacks to the current 10' requirement. We are requesting this variance to keep the same common exterior wall on the east side of the house in the same plane. The new proposed exterior wall will meet all current building codes for type of construction and insulation requirements. The neighboring property's driveway and garage are along this side of the house which will not hinder or obstruct any site lines to its property. After reviewing other homes in the neighborhood, numerous homes in the area have additions similar to what we are proposing. The homes are maintaining the previous setback of 5'. If a list of addresses is required we can submit a list of residences that we have found.
- 3.) Variance#2 – This request is for allowing us to cover the front step/porch with a roof. The step and porch fall well within the guidelines for a front step/deck encroachment for an uncovered structure. We are proposing cover the 4'x 15' porch area and the 5'x 8' step area with a roof. This roof will be supported by three posts allowing full site line to front of the house. The area between the decking and roof will be left open to the outside retaining the existing exterior wall in place. The covered section will encroach in on the front lot setback requirement of 30' by 4'. The placement of a covered front step will only work along the south side of the house due to a planned future addition of attaching the garage to the current house. This will allow us not to have to remove any structure a few years down the road on the west side of the house. The current proposed design fits

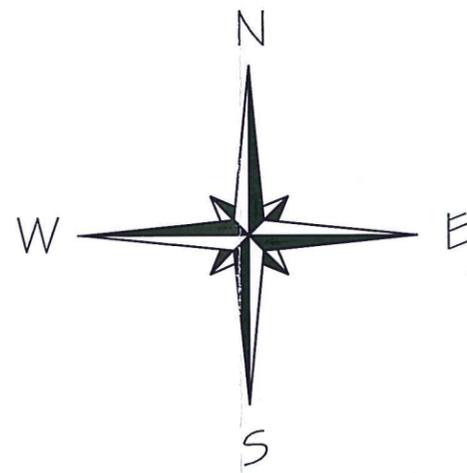
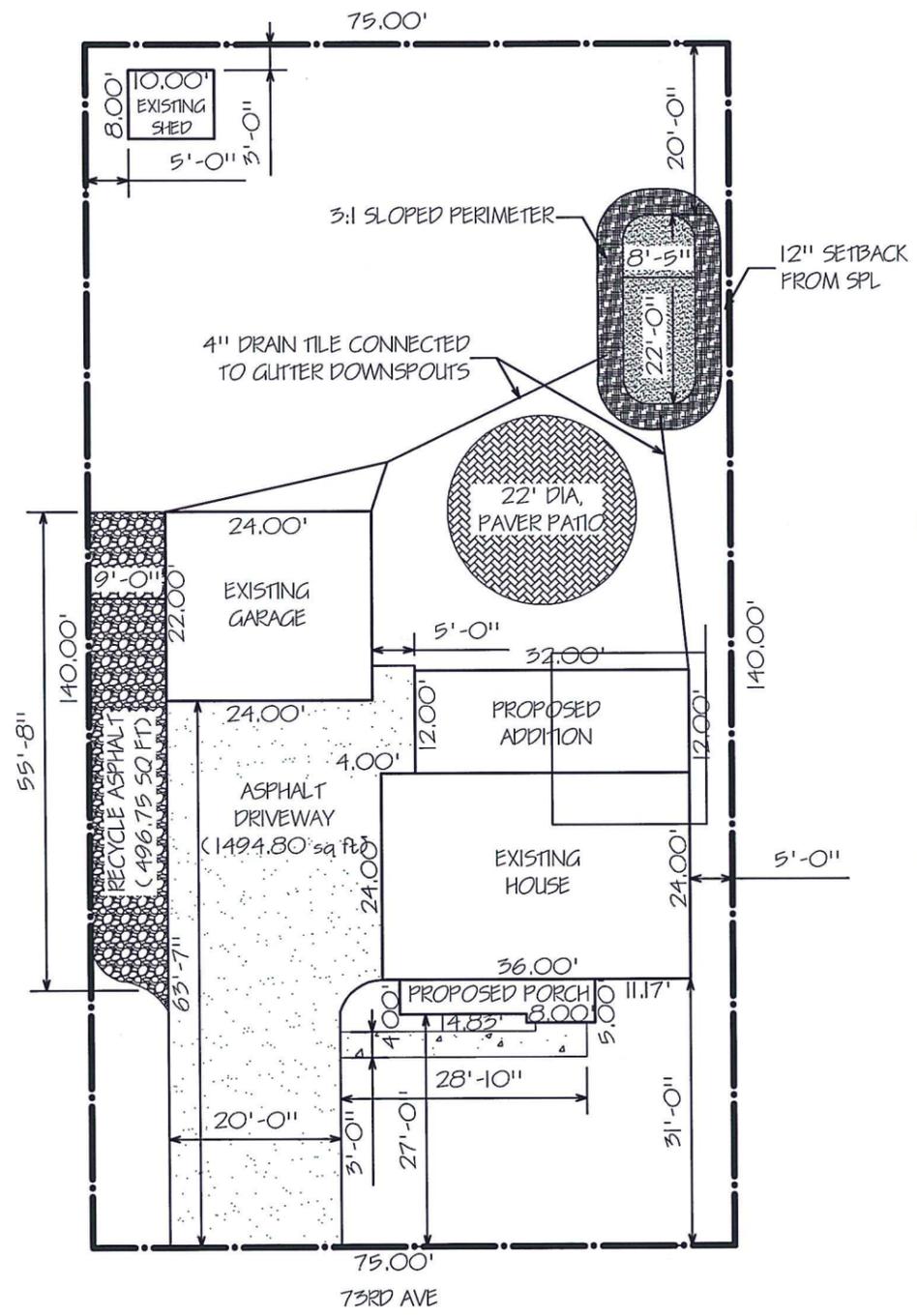
within the existing houses in the neighborhood. Vast majority of single level ramblers. After reviewing other homes in the neighborhood, several homes in the area do have covered front steps that do exceed the front setback requirements. If a list of addresses is requested we can submit a list of residences that we have found.

Thank you for time and effort put into considering our request for enhancing the neighborhood.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Stanton". The signature is written in a cursive style with a large initial "M" and a stylized "S".

Mike Stanton



ROOF AREA WITH OVERHANGS DRAINING TO GLITTER DOWN SPOUTS

GARAGE: 572 SF
 HOUSE: 360 SF
 TOTAL: 932 SF

RAIN GARDEN PER INVER GROVE HEIGHTS PLATE NO. STM-17

1.5-12 100-YEAR RAIN GARDEN (8'-22')
 (12-INCH DEPTH DEAD STORAGE, 1.5 FEET ENGINEERED SOILS)

RAIN GARDEN C (100-YR)	
POND	1.0 FEET
ENGINEERED SOIL	1.5 FEET
RAIN GARDEN BOTTOM AREA	175.0 SF
TOTAL STORAGE VOLUME	267 CF

EXISTING HOUSE:	864.00 SQ FT
ADDITION:	384.00 SQ FT
EXISTING GARAGE:	528.00 SQ FT
EXISTING SHED:	80.00 SQ FT
PORCH ADDITION:	99.30 SQ FT
DRIVEWAY/PATIO:	1,874.74 SQ FT
PROPOSED SIDEWALK:	92.48 SQ FT
RECYCLE PARKING AREA:	496.75 SQ FT
TOTAL SURFACE:	4,419.27 SQ FT
LOT SURFACE AREA:	10,500.00 SQ FT
IMPERVIOUS SURFACE AREA:	42.1%

SPECIAL NOTE: JLW DESIGN ACCEPTS NO RESPONSIBILITY FOR ERRORS OR OMISSIONS. EVERY EFFORT HAS BEEN MADE IN THE DESIGNING, CHECKING AND PREPARING OF THESE PLANS FOR ACCURACY. THE OWNER, SUPPLIER, AND SUB-CONTRACTOR MUST CHECK ALL DETAILS AND DIMENSIONS AND BE RESPONSIBLE FOR SAME DURING ACTUAL CONSTRUCTION.

28388 Henderson Way
 Randolph, MN 55065
 PH/Fax: 507-263-5105



STANTON RES
 3865 73RD ST E
 INVER GROVE HGTS, MN

DRAWN BY:
 LORI

DATE:
 2-14-2013

SHEET
 5-1

CITY OF INVER GROVE HEIGHTS

REQUEST FOR COUNCIL ACTION

Approve Carryover of Unused Budget Appropriations, Approve Transfers, Closing of Funds, and 2013 Budget Amendments

Meeting Date: March 11, 2013
Item Type: Regular
Contact: Kristi Smith 651-450-2521
Prepared by: Kristi Smith, Finance Director
Reviewed by: Joe Lynch, City Administrator

[Handwritten signature]

Fiscal/FTE Impact:
None
Amount included in current budget
Budget amendment requested
FTE included in current complement
New FTE requested – N/A
Other

PURPOSE/ACTION REQUESTED

Approve the Carryover of Unused Budget Appropriations from the 2012 Budget to the 2013 Budget, Approve Transfers, Closing of Funds and 2013 Budget Amendments.

SUMMARY

Appropriations for the 2012 Budget expired on December 31, 2012. As in past years some items were not completed in 2012 and we are requesting carryover of unused 2012 appropriations to the 2013 Budget. Requests are as follows:

General Fund

- Police - Small Tools & Misc. Equipment - \$800
- Police – Conferences and Seminars - \$2,500
- Engineering – Engineering Consultants - \$6,700
- Planning – Planning Services - \$19,500
- Fire – Temporary Employees - \$29,000
- Fire – Other Professional Services - \$11,500
- Fire – Repair & Maintenance – Buildings - \$3,400
- Fire – Repair & Maintenance – Vehicles - \$2,200
- Fire – Conferences and Seminars - \$4,700
- Fire – Uniform & Clothing - \$12,000
- Fire – Miscellaneous Contracts - \$22,000

Community Center

- Buildings - \$45,000 for the Grove front desk and \$50,000 for P&R office space. (Funded by transfers of \$45,000 from the Community Projects Fund and \$50,000 from the Capital Facilities Fund.)

Water

- Repair & Maintenance - Equipment - \$160,000

Sewer

- Repair & Maintenance - Utilities - \$48,000

We are requesting the following transfers effective December 31, 2012:

- From the Host Community Fund to the Community Center Fund - \$301,290 to cover the operating deficit for 2012. The budgeted transfer was \$393,900. The 2007 VMCC/Grove audit set a goal of recovering 90% of the Community Center operating expenditures with operating revenues. It is estimated that in 2012 the VMCC/Grove covered 88% of Community Center operation expenditures.
- From the Community Project Fund to the Community Center Fund - \$337,684 to cover capital outlay purchased in 2012.
- From the Capital Facilities Fund to the Community Center Fund - \$53,855 to cover capital outlay purchased in 2012.
- From the Host Community Fund to the Community Center Fund - \$10,000 to cover capital outlay purchased in 2012.
- \$150,000 from the Host Community Fund to the Doffing Avenue Voluntary Acquisition Program (2005 Local Improvement Construction Fund Project #9811) to replenish the account. The balance of uncommitted funds is currently about \$91,000.

We are requesting Fund 348 be closed to Fund 399 effective December 31, 2012 through a residual equity transfer:

- \$34,644.74 transfer from G.O. Equipment Certificates 2007A Fund 348 to Closed Bond, Fund 399.

We are requesting the following transfers for 2013:

- From the Community Projects Fund to the Community Center Fund – up to \$45,000 to cover the above carryover request for Community Center capital outlay.
- From the Capital Facilities Fund to the Community Center Fund – up to \$50,000 to cover the above carryover request for Community Center capital outlay.

The General Fund prior to these carryovers and transfers has an estimated surplus near \$1,060,000. The 2012 budget anticipated a contribution from fund balance of \$437,390.

Each department was asked to submit their requests for carryovers and transfers. Copies of those requests are attached.

We are also requesting the following budget amendments to the 2013 budget:

Decrease General Fund - Administration - Dues, Licenses and Subscriptions \$100, Decrease General Fund - Police - Dues, Licenses and Subscriptions \$200, Increase General Fund - Transfers Out \$300, Increase EDA - Transfers In \$300, and Increase EDA - Dues, Licenses and Subscriptions \$300.

Kristi Smith

From: Larry Stanger
Sent: Monday, February 11, 2013 11:39 AM
To: Kristi Smith
Subject: 2012 Carry Over
Attachments: image001.jpg; image003.jpg

Follow Up Flag: Follow up
Flag Status: Flagged

Kristi,

Below are the accounts and amounts of 2012 carry over's requested for POLICE:

101.42.4000.421.60040 - \$800.00

101.42.4000.421.50080 - \$2500.00

Let me know if there is anything else you will need.

Larry



Larry Stanger

Chief of Police

Inver Grove Heights Police Department

8150 Barbara Ave | Inver Grove Heights, MN 55077

651-450-2526 (Direct) | 651-450-2543 (Fax) | lstanger@invergroveheights.org

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MEMO

CITY OF INVER GROVE HEIGHTS

TO: Scott D. Thureen, Public Works Director
FROM: Thomas J. Kaldunski, City Engineer
DATE: February 13, 2013
SUBJECT: 2012 Carry-over Engineering Consultant Account

I request a carry-over of \$6,700 from the 2012 Engineering Division Consultant Account (.30300) for potential share of costs for the LMRWMO to have Barr Engineering complete a cost allocation analysis for City Project No. 2011-03, Pond T-23 emergency overflow outlets. The LMRWMO ordered the study at the City's request. If no project advances, the City's share of the study costs would be paid by the requested carry-over funds.

TJK/kf

Kristi Smith

From: Tom Link
Sent: Monday, March 04, 2013 4:10 PM
To: Kristi Smith
Subject: 2012 Budget Carryover

Follow Up Flag: Follow up
Flag Status: Flagged

Kristi,

The Community Development Department requests the carryover of \$19,500 from the 2012 Budget for Planning Services (101.45.3200.419.30600). The request is to fund the following two planning projects that were not completed in 2012:

- Gun Club Environmental Investigation \$15,000
- Housing Audit \$4,500

As we also discussed, I am requesting that \$150,000 be transferred from the Host Community Fund to the Doffing Avenue Voluntary Acquisition Program (Concord Floodplain Acquisition) for the year 2012.

Let me know if you need additional information or if you have any questions. Thanks.

Tom

TO: Kristi Smith, Finance Director
FROM: Judy Thill, Fire Chief
SUBJECT: Budget carryover 2012 to 2013
DATE: March 5, 2013

I would like to request carryover of the following 2012 Fire Department funds to 2013 for the listed accounts:

Temporary employee wages 101.42.4200.423.10300

- Haz Mat Operations training wages	\$10,000
- Fire Apparatus Operator class wages	\$4,000
- Inspector/Pre-plan program continuation	\$15,000
TOTAL	\$29,000

Other Professional Services 101.42.4200.423.30700

- Engineering review and minor repair of crumbling block	\$6,500
- Inspection and repair of exhaust roof enclosures	\$5,000
TOTAL	\$11,500

Repair/Maintenance Building 101.42.4200.423.40040

- Personnel door replacement/part of electronic access system	\$3,400
TOTAL	\$3,400

Repair/Maintenance Vehicles 101.42.4200.423.40041

- New light bar Brush 32 to improve safety and visibility	\$2,200
TOTAL	\$2,200

Conferences and Seminars 101.42.4200.423.50080

- Fire Apparatus Operator and	\$2,400
- Fire Department Instructors Conference.	\$2,300
TOTAL	\$4,700

Uniform and Clothing 101.42.4200.423.60045

- Three full sets of fire gear	\$12,000
TOTAL	\$12,000

Miscellaneous Contracts 101.42.4200.423.70501

- Emergency Medical Technician Contract Instruction	\$15,000
- Hazardous Materials Operation Contract Instruction	\$7,000
TOTAL	\$22,000

Total \$84,800

Kristi Smith

From: Eric Carlson
Sent: Wednesday, January 02, 2013 4:23 PM
To: Kristi Smith
Cc: Teri O'Connor; Tracy Petersen; Bethany Adams
Subject: 2012 VMCC Carryovers
Attachments: image003.jpg

Kristi

I would like to request that we carryover \$95,000 from the 2012 VMCC Budget to the 2013 VMCC Budget for capital projects that have been put on hold...\$45,000 is for the Grove Front Desk area and \$50,000 is for the P & R office space. Please let me know if you have any questions.

Thanks!

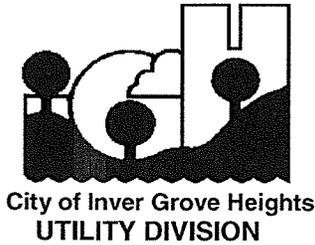
Eric


Eric Carlson
Parks & Recreation Director
City of Inver Grove Heights
ecarlson@invergroveheights.org
Phone: 651.450.2587
Cell: 763.350.8850

Parks & Recreation
8055 Barbara Ave
Inver Grove Heights MN 55077
www.invergroveheights.org
651.450.2585

"Discover the Opportunities"
Veterans Memorial Community Center
8055 Barbara Ave
Inver Grove Heights MN 55077
www.funatthegrove.com
651.450.2480

Inver Wood Golf Course
1850 - 70th St
Inver Grove Heights MN 55077
www.inverwood.org
651.457.3667



MEMORANDUM

TO : Scott Thureen
FROM : Jim Sweeney
SUBJECT : **2012 Budget Carryover**
DATE : February 8, 2013

We have identified two 2012 Utility Fund budget accounts that have balances we would like to carryover to 2013. Both these balances are related to major maintenance and rehabilitation projects that began in 2012 and are ongoing.

Water Fund Account # 501-50-7100-512-40042 - \$ 160,000.00

These funds are earmarked for the rehabilitation of Filter Cells # 1 thru 4 at the Water Treatment Facility. We are currently in the process of acquiring proposals for the different phases of this work. Due to the long lead time for some of the equipment involved in this project, we will place orders this spring and plan to begin work late October after the peak water production season.

Sewer Fund Account # 502-51-7200-514-40043 - \$ 48,000.00

These funds are intended for our annual cast in place pipelining project that is currently underway in select areas of our sanitary sewer system. The contractor performing the work (Visu-Sewer Inc.) expects the job to be completed in late February .

**CITY OF INVER GROVE HEIGHTS
DAKOTA COUNTY, MINNESOTA**

RESOLUTION NO. _____

**RESOLUTION AUTHORIZING AND DIRECTING THE CARRYOVER OF 2012
BUDGET APPROPRIATIONS BY AMENDING THE 2013 BUDGET, APPROVING 2012
TRANSFERS, AND ADDITIONAL 2013 BUDGET AMENDMENTS**

WHEREAS, there are a number of items that were appropriated for in the 2012 Budget which were not accomplished during the fiscal year, and

WHEREAS, it is desirable that these items be accomplished during 2013 and there needs to be budget appropriations in the 2013 Budget for these items, and

WHEREAS, there are transfers and fund closings which need to be approved for 2012, and

WHEREAS, there are transfers which need to be approved for 2013, and

WHEREAS, there are additional 2013 Budget adjustments necessary.

NOW, THEREFORE BE IT RESOLVED, BY THE CITY OF INVER GROVE HEIGHTS: that the 2013 Budgets are hereby amended as follows:

General Fund:

Police Department	101.42.4000.421.60040	Increase	\$800
Police Department	101.42.4000.421.50080	Increase	2,500
Engineering Department	101.43.5100.442.30030	Increase	6,700
Planning Department	101.45.3200.419.30600	Increase	19,500
Fire Department	101.42.4200.423.10300	Increase	29,000
Fire Department	101.42.4200.423.30700	Increase	11,500
Fire Department	101.42.4200.423.40040	Increase	3,400
Fire Department	101.42.4200.423.40041	Increase	2,200
Fire Department	101.42.4200.423.50080	Increase	4,700
Fire Department	101.42.4200.423.60045	Increase	12,000
Fire Department	101.42.4200.423.70501	Increase	22,000
Contribution from Fund Balance	101.00.0000.3991000	Increase	114,300

Community Center Fund: 205.44.6200.453.80200 Increase 95,000

Water Fund: 501.50.7100.512.40042 Increase 160,000

Sewer Fund: 502.51.7200.514.40043 Increase 48,000

BE IT FURTHER RESOLVED: that the following transfers are authorized in 2012:

From: Host Community Fund	451.57.9200.590.91100	\$301,290
To: Community Center Fund	205.59.0000.3911000	301,290

From: Community Projects Fund	450.57.9200.590.91100	337,684
To: Community Center Fund	205.59.0000.3911000	337,684
From: Capital Facilities Fund	400.57.9200.590.91100	53,855
To: Community Center Fund	205.59.0000.3911000	53,855
From: Host Community Fund	451.57.9200.590.91100	10,000
To: Community Center Fund	205.59.0000.3911000	10,000
From: Host Community Fund	451.57.9200.590.91100	150,000
To: 2005 Local Improvement Construction Fund Project #9811	425.59.0000.3911000	150,000

BE IT FUTHER RESOLVED: that the following residual equity transfer is authorized in 2012 and Fund 348 is subsequently closed:

From: G.O. Equipment Certificates 2007A	348.59.9200.590.91200	\$34,644.74
To: Closed Bond Fund	399.59.0000.391200	34,644.74

BE IT FUTHER RESOLVED: that the following transfers are authorized in 2013:

From: Community Projects Fund	450.57.9200.590.91100	Max. \$45,000
To: Community Center Fund	205.59.0000.3911000	Max. 45,000
From: Capital Facilities Fund	400.57.9200.590.91100	Max. 50,000
To: Community Center Fund	205.59.0000.3911000	Max. 50,000

BE IT FUTHER RESOLVED: that the following 2013 Budgets are hereby further amended as follows:

General Fund:			
Administration Department	101.41.1100.413.50070	Decrease	\$100
Police Department	101.42.4000.421.50070	Decrease	200
Transfers Department	101.57.9200.590.91100	Increase	300
EDA Fund:			
	290.45.0000.3911000	Increase	300
	290.45.3000.419.50070	Increase	300

Adopted by the City of Inver Grove Heights this 11th day of March 2013.

Ayes:
Nays:

George Tourville, Mayor

ATTEST:

Melissa Kennedy, Deputy Clerk