Hennepin County Environmental Response Fund Grant Application

Bassett Creek Main Stem Erosion Repair Project

Cedar Lake Road to Dupont Avenue N/2nd Avenue N, plus Fruen Mill Site, Minneapolis, MN

Fall 2016

Crystal • Golden Valley • Medicine Lake • Minneapolis Minnetonka • New Hope • Plymouth • Robbinsdale • St. Louis Park





Environmental Response Fund Grant Application
Project Name: _Bassett Creek Main Stem Erosion Repair Project
Requesting Funding for: Assessment/RAP DevelX Cleanup Total Amount Requested from ERF: \$150,300
Applicant: Bassett Creek Watershed Management Commission (BCWMC) Project Contact Name: Laura Jester
Address: c/o 16145 Hillcrest Lane, Eden Prairie MN 55346
Phone: 952-270-1990 E-mail: laura.jester@keystonewaters.com
If the applicant is a municipality applying on behalf of a third party, please provide: Third Party:
Contact Name:
Address:
Phone: E-mail:
Application Preparer: Jennifer Brekken (Barr Engineering)/Laura Jester (BCWMC)
Phone: (952) 832-2700 / (952) 270-1990 E-mail: jbrekken@barr.com / laura.jester@keystonewaters.com



Contamination Cleanup Application Submittal Checklist

Application - Provide a hard copy of the application text and include a PDF on CD.

Tables (provide a hard copy and include on CD):

- Table 1 Funding Sources Summary (see attached)
- Table 2 Project Budget Summary (see attached)
- Table 3 Housing Summary (Not applicable)
- Additional tables with project analytical data for contamination investigated onsite. This should include data for soil, groundwater, soil vapor, sediment, and/or surface water, where relevant and applicable to the project and grant request. Tables should include a comparison to applicable regulatory standards.
 - o Soil Analytical Data Summary

Figures (provide a hard copy and include on CD):

All figures should include the property boundaries, a scale bar, and a north arrow.

- Accurate and legible site location map and site diagram showing locations of relevant site features such as buildings, retaining walls, suspected/known areas of contamination, nearest public streets, etc.
- Proposed development plan site layout diagram or renderings.
- Site summary figure(s) showing investigation locations pertinent to the attached data tables.
- Site map showing areas with soil criteria exceedances (if applicable)
 - Figure 1 Project Location
 - Figure 2 Historical Soil Investigation Overview
 - o Figure 3 2016 Phase II Soil Investigation Summary
 - o Figure 4 Reach 1 Stabilization Sites
 - o Figure 5 Reach 2 Stabilization Sites
 - Figure 6 Reach 3 Stabilization Sites
 - Figure 7 Conceptual Stabilization Techniques
 - Figures 8 19 Property Maps (PIDs, Property Value, Taxes, etc.)

Attachments (on CD only):

- Legal description of the site (See Figures 8 19)
- Copy of municipal land use approval (signed by municipality and dated)
- Copy of the written neighborhood(s) statement(s) of support
- Environmental documents identified in Section IV of this application
- City resolution (see example attached)



I. SITE SETTING INFORMATION

1. Complete the following table:

Site address	Multiple, see Table 4
City (or Township)	Minneapolis
Hennepin County Commissioners District No.	District 2, Commissioner Linda Higgins
Property Identification No.	Multiple, see Table 4
Site acreage	4,000 linear feet of streambanks
Current and former site buildings: type, floors, square footage, age, and date of demolition or years vacant (if applicable)	No buildings in project area
Current land use (indicate if site is a vacant lot)	Mixed, multiple properties, see Section VI.
Current zoning type	Varies, multiple properties (see Figures 8- 19)
Future zoning type (final development)	Unchanged from current zoning

2. If a zoning change is required for the proposed final use of the site, describe the expected zoning and the necessary procedure for obtaining the change. **No zoning change.**

II. PROJECT STAKEHOLDERS

3. Complete the following table:

Current owner and date of purchase	Multiple, see Table 4
Future owner	Same
Municipal land use approval obtained for site	X Yes 🗌 No
	Agreement between City and
	BCWMC has been authorized and
	is being finalized.
Project has received written documentation of	\Box Yes X No written support,
neighborhood support	but no opposition, see #4.
Project is owned by applicant or has a	Yes X No
purchase agreement in place	Date of ownership/purchase
	agreement
Have the grantee/subgrantee owner(s), its	Yes No
officers, board of directors, and LLC members	
paid all Hennepin County property taxes and	Unknown, multiple owners
personal property taxes due as of December 31	
of the preceding year?	



If you answered **NO** to any of the questions in the above table, describe the current status and, if applicable, what steps are planned or have been taken to date to rectify the situation. Please describe any and all necessary approvals, planned agreements and their expected dates of execution.

Regarding Municipal Land Use Approval:

The project will be implemented by the City and no land use changes will occur as a result of the project. The City has approved the project and will be constructing and maintaining the project under an agreement with the BCWMC, which was approved by the City Council on October 21, 2016 and is currently under final review by the City.

Regarding Neighborhood Support:

There is no neighborhood opposition to the proposed Project. The BCWMC Administrator, Commissioners, and City of Minneapolis staff attended multiple neighborhood meetings and events to provide information, gather input and answer questions from area residents. In November 2015, a postcard was mailed to every address in the Bryn Mawr and Harrison neighborhoods inviting residents and businesses to learn more about the project and offer input at various venues including:

• Harrison Neighborhood Art Festival, November 21, 2015: Provided information through a display, site photos, and renderings of stabilization techniques

• Bryn Mawr Neighborhood Association (BMNA) Board Meeting, December 9, 2015: Gave presentation with general BCWMC information, project information, site photos, and renderings of stabilization techniques

• Harrison Neighborhood Association (HNA) Board Meeting, December 14, 2015: Gave presentation with general BCWMC information, project information, site photos, and renderings of stabilization techniques

• Bassett Creek Valley Redevelopment Oversight Committee Meeting, February 16, 2016: Gave presentation with general BCWMC information, project information, site photos, and renderings of stabilization techniques

In addition to these events, articles about the project were printed in the November/December 2015 issues of the HNA and BMNA newsletters and a special webpage on the project was promoted through materials and on the BCWMC homepage.

Further, the BCWC held a public hearing on this project on September 15, 2016. One resident attended the hearing, asked one clarifying question about the Project, and offered no opposition to the project.

Throughout the stakeholder outreach efforts, residents were supportive of the Project, although some residents are hoping for even bigger changes and improvements in the area.



Regarding Project Ownership:

Through an agreement with the BCWMC, the City of Minneapolis will construct the creek erosion and repair project and agrees to maintain the project into the future. Some parcels within the project area are owned by the City of Minneapolis. Others are currently in private ownership. The BCWMC has worked with these owners to gain site access to complete the Phase II Investigation. The private owners have expressed support for the project, including contamination clean up.

4. Please indicate what is the anticipated development?

Non-Profit
Mixed-use (ex: housing and commercial)
Single-use
Public
Private

Multiple uses adjacent to the creek project area, see Section VI. The project will not change the current use of any parcels.

5. If the applicant is not a municipality or if the ERF grant, if awarded, will be subgranted by the municipality to a third party, please list the names of the grantee/subgrantees' owner(s), officers, board of directors or LLC members.

Bassett Creek Watershed Management Commission Board Members:

Guy Mueller, Vice Chair, Representing the City of Crystal Stacy Hoschka, Secretary/Treasurer, Representing the City of Golden Valley Clint Carlson, Representing the City of Medicine Lake Mike Fruen, Representing the City of Minnetonka John Elder, Representing the City of New Hope Ginny Black, Representing the City of Plymouth Wayne Sicora, Representing the City of Robbinsdale Jim de Lamber, Chair, Representing the City of St. Louis Park

6. Provide contact information for current environmental consultant and legal counsel, if applicable:

Consultant: Jennifer Brekken, Barr Engineering Co., Phone (952) 832-2700

Attorney Troy Gilchrist, Kennedy & Graven, Phone (612) 337-9214



III. PROJECT FINANCIAL INFORMATION

7. Complete the following table:

Total cost of (re)development	\$1,064,472
Total cost of environmental costs (cleanup sites only)	\$150,300
Current property value	See Figures 8 - 19
Estimated future property value	Unknown
Current property taxes	See Figures 8 - 19
Estimated future property taxes	Unknown
Previous ERF grant awards: list the amount, year, grant	None
round, and source (ERF or Minnesota Brownfields Gap	
Financing Program)	
Number of new jobs (FTEs) created at the finished site	No change
Number of retained jobs (FTEs) at the finished site	No change
Number of jobs created during construction	It is estimated that there will be about 15 FTEs involved in the construction of the project involving about a three month period (excavators, labors, truck drivers, office support, surveying, engineering, etc.)
Does this application request funds for property acquisition?	□ Yes X No
Does this application request funds for demolition?	□ Yes X No
Have other sources of public or private funding for this	X Yes 🗆 No
project been pursued?	
Is this project waiting to secure any additional funding	□ Yes X No
that is necessary to commence construction?	
Is/Will the project be in a TIF district?	Yes X No
Expected annual TIF proceeds and timeframe	

- 8. If you answered **YES** to any of the questions in the above table, please clearly describe what is needed and why, the timeline, and additional steps necessary or planned. For funding sources contributing to the project, complete the attached *Table 1 Funding Sources Summary*.
- 9. Describe why ERF funding is needed.

The BCWMC is working to improve and protect the streambank of Bassett Creek to improve water quality and habitat. During this project, contaminated soils along the creek margin will be exposed and excavated into order to install the proper streambank



restoration techniques. ERF funding is needed to properly monitor, characterize, remove, and dispose of contaminated soils.

10. Describe the effect on the project if ERF funds are not awarded.

If ERF funds are not received, sections of the project area where streambanks are contaminated may not be restored and improved due to lack of funding to address contamination. This would result in a lost opportunity to control erosion, improve habitat and water quality, and address contamination in these areas. It's unlikely the BCWMC or the City would perform this type of work in this area again in the near future. It's a much better investment of public funds to address all issues in this area through this current project.

11. Complete the attached *Table 2 - Project Budget Summary*.

See attached Table 2.

IV. CONTAMINATION INFORMATION

Please provide the following information in addition to the required information listed in the application submittal checklist.

12. Complete the following table:

MPCA VIC I.D. No.	VP33640 – Project Area VP20360 - Fruen Grain Elevator VP29330 - Pioneer Paper Stock Co. VP20400 - Chemical Marketing Corp VP19870 - Van White Memorial Blvd.
MPCA Petroleum Brownfields I.D. No.	PB4955 – Project Area
MPCA Leak Program I.D. No.	15956 - Former Grain Elevator16296 - Scrap Metal Processors6830 - Transportation Center
Federal or State Superfund I.D. No.	MND980990253, SR42 – Bassett Creek/Irving Avenue Dump MND049529423, SR1009 - Chemical Marketing Corp of America
Department of Agriculture AgVIC I.D. No.	
Other MPCA listing(s) and I.D. No.(s)	



- 13. Indicate which document are available for the site and provide electronic copies with submittal of this application:
 - X Phase I Environmental Site Assessment (most recent only)
 - X Phase II investigation work plan
 - X Phase II investigation report
 - X Response Action Plan (RAP)
 - X MPCA RAP approval letter
 - □ Regulated Building Materials (asbestos, lead, etc.) Survey
 - □ Other relevant MPCA, U.S. EPA, and/or Department of Agriculture letters
 - □ Other relevant environmental investigation, monitoring, and/or cleanup reports (list document type or title):

Media	General contaminant types (e.g., VOCs, metals)
Soils	diesel range organics (DROs), arsenic, mercury, lead,
	polycyclic aromatic hydrocarbons (PAHs)
	and volatile organic compounds (VOCs).
Groundwater	Petroleum and chlorinated VOCs
Soil gas vapor	Not studied—No buildings in project limits
Regulated building	Asbestos containing material identified in soils
materials	-
Other	

14. Complete the following table for identified contamination:

15. Provide a brief synopsis of the site's land use history and explain why the site is believed to be contaminated (if the application is for an assessment grant) or how the site came to be contaminated (if the application is for cleanup). The description should include the occurrence of the contamination with respect to the site conceptual model and, where applicable, the proposed development (i.e., are there distinct areas of contamination or is contamination widely disseminated across the site? Is the contamination at the surface or at depth?).

The Project area includes reaches of Bassett Creek in Minneapolis where erosion repair and streambank stabilization work is planned to be conducted by the BCWMC. The reaches pass through properties that have known environmental issues related to past land uses adjacent to the Project. The existing environmental issues have been documented over several decades and are known to extend well beyond the Project area limits based on the results of investigations at multiple environmental sites adjacent to the Project area.

Environmental sites along the creek in the Project area include Irving Avenue Dump, Chemical Marketing, Scrap Metal Processors, the Minneapolis Public Schools



Transportation Center, Fruen Mill and Pioneer Paper, each with documented soil and groundwater impacts resulting from various types of releases. A summary of documented soil contamination is shown on Figures 2 and 3. The majority of the contamination in the Project area (shallow soils along the creek banks) resulted from the following historical activities:

- placement of contaminated fill (all sites)
- unpermitted dumping and lead battery handling (Irving Avenue Dump),
- petroleum tank releases (Fruen Mill and Transportation Center)
- scrap metal operations (Scrap Metal Processors)
- oil company operations (Scrap Metal Processors and Transportation Center)
- chlorinated solvent distributor release (Chemical Marketing).

Soil and groundwater contamination is also present at depths below the anticipated depths where the creek restoration project will be implemented.

The creek stabilization/improvement Project will include grading and some limited excavation of existing creek bank and creek bed soils and the placement of engineered fill (i.e., rip rap) and bank stabilization features in areas where the creek bank is susceptible to further erosion. Soils that are excavated to implement the project were investigated and determined to not meet MPCA criteria for unregulated fill, so landfill disposal is required.

16. Has a party (or parties) responsible (RP) for the contamination been identified and, if so, is the RP assisting with cleanup costs? If not, please explain.

No RPs are assisting with cleanup costs and there has been no enforcement of RPs to conduct investigation or cleanup in the area for many years, suggesting any further environmental efforts will be conducted in conjunction with Brownfield redevelopment projects. The BCWMC (the ERF applicant) does not own any portion of the site and is not an RP. An RP has been identified at the Chemical Marketing Site, a state Superfund site, where soil cleanup was completed and groundwater cleanup actions are now being implemented. The majority of the sites have changed ownership since the releases occurred, including several sites owned by local government units (City of Minneapolis, Minneapolis Park and Recreation Board, Minneapolis Public School District).

V. ADDITIONAL CONTAMINATION INFORMATION – CLEANUP APPLICANTS ONLY

For applicants requesting assistance for cleanup, complete the following additional questions:

17. Provide a concise description of the proposed RAP activities. Limit your response to 300 words. Include the following additional details:



- a. Describe demolition activities necessary to perform the cleanup, including age, condition of structures and required asbestos and/or lead paint abatement.
- b. Describe efforts to reuse contaminated soils on site. If soil is not being reused, why is this not feasible?

The objective of streambank erosion repair and stabilization Project is to reduce sediment loading and associated nutrient and contaminant loading to Bassett Creek and prevent future channel erosion by stabilizing the creek banks, which will result in water quality improvements in the creek. Response actions are required to manage the soil that will be exported as part of the Project. The stabilization and repair work is planned in fifteen zones along the creek as shown on Figures 4 through 6, most of which have soil impacts including debris and contaminants such as arsenic, mercury, lead, polycyclic aromatic hydrocarbons (PAHs), and DRO. Because of the impacts, soil exported from the Project is unsuitable to reuse offsite as Unregulated Fill, and exported soil will require landfill disposal. The streambank stabilization methods that will involve excavation and contaminated soil management and disposal include streambank grading and excavation to repair undercut areas and install rip rap, vegetated reinforced soil stabilization, boulder and log vanes, and plantings along the creek banks. The various stabilization methods are shown on Figure 7.

Soil that does not need to be removed to implement the stabilization and erosion repair work will be regraded within the Project area where possible. The erosion repair and stabilization methods will provide improved cover along the creek banks, and reduce direct contact risks with the addition of clean topsoil, vegetative cover and rip rap.

RAP activities include soil excavation and disposal, field screening and environmental oversight, sampling of imported topsoil, and stabilization of soil with hazardous levels of lead, if needed.

18. Complete the following table:

Total volume of contaminated soil (cubic yards) identified:	1900 CY
Total volume of contaminated soil (cubic yards) to be remediated (all contaminant types):	1900 CY

VI. DEVELOPMENT FEATURES

19. Provide a brief, general description (i.e., executive summary) of the site conditions, planned development, and project goals.

Please limit your response to 300 words and cover the following details:



- Explain the planned use of the site after investigation and cleanup and how this was determined (give examples of prospective developers, interested parties, zoning requirements, etc.).
- Describe how this project will incorporate sustainable activities and features in the project design, construction and operation, and/or in the cleanup remedy. Sustainable activities or project design may include but are not limited to: deconstruction and salvaging for building and/or material reuse, development planning that incorporates the cleanup remedy (i.e., building footprint/parking lot and site grading as capping feature), and environmentally friendly building and site design (i.e., sustainable building design and natural landscaping, green renovations and preservation, low/no stormwater discharge management, and greenspace enhancement/development).
- Describe how the community will derive benefit from the project. Describe to what extent the project will remove blight. Also indicate other benefits such as green space creation, affordable housing creation, tax base increase or other economic benefits that help quantify the community benefit of your project.
- If the project includes a residential component, indicate how the project contributes to the local municipality's approved livable communities housing mix goals and benefits for the local community. Also complete the attached *Table 3 Housing Summary*.

This Project is very narrow in its scope and geographical extent. Existing land use will not change and will not be affected by the Project. Nor does this Project include a residential component. The Project will improve and stabilize streambanks along Bassett Creek in three reaches as described below and found in Figure 1. Sustainable activities are inherent in this Project as the whole intent of the Project is to improve environmental conditions – within the creek and immediately adjacent to the creek. Vegetative stabilization techniques will use native vegetation with naturally long roots to hold soil in place and to improve habitat for pollinators and other species.

The community will derive benefit from the Project through improved water quality, aesthetics, and wildlife habitat along the creek margins.

Project Area Description (Figure 1):

Reach 1 extends 800 feet from Glenwood Avenue on the upstream end to the Soo Line Railroad Bridge crossing on the downstream end.

Reach 2 extends 1,150 feet from Cedar Lake Road on the upstream end to Irving Avenue on the downstream end.



Reach 3 extends 1,550 feet from Irving Avenue on the upstream end to the entrance to the New Bassett Creek Tunnel at Dupont Avenue on the downstream end. Reach 3 also includes the 500- 7 foot-long overflow channel to the entrance to the Old Bassett Creek Tunnel at Second Street North.

The 3,000 feet of Bassett Creek between Reach 1 and Reach 2 is not included in the project area because it was evaluated in a previous study and found not to be in need of erosion control and stabilization.

Land use adjacent to all three reaches is a mixture of industrial and recreational (parkland). Active and abandoned industrial facilities abut portions of all three reaches.

Other portions of all three reaches include wooded hill slopes; in Reach 1 these wooded slopes are part of the Bassett's Creek Park and include a walking path adjacent to the creek.

20. Describe the proposed construction schedule. Discuss the potential for delays and other issues that may arise. Describe what must occur before investigation and/or development and cleanup activities can proceed:

This Project will be designed in early 2017 with an anticipated start date of October 1, 2017. Project design and construction is the responsibility of the City of Minneapolis through an agreement with the BCWMC. Project designs will be reviewed by the BCWMC Board of Commissioners at the 50% and 90% design levels and will not advance until approved by the BCWMC. Once approved, final designs will be used by the City to solicit bids and award a construction contract to an appropriate contractor. A construction schedule will be developed between the City and the chosen contractor and may depend on weather and other environmental conditions (frozen vs. unfrozen ground, etc.). Construction is slated for winter 2017 - 2018 and no delays in project design or construction are anticipated.



VII. RESOLUTION

A city council resolution must be adopted in conjunction with the submittal of the application package. The required element is a council resolution which approves the project from the governing body of the municipality where the project site is located. The following blank resolution is included as an example for your convenience. You may choose to reformat it, but make sure to include all of the statements that appear in our example.

The resolution is attached.



Table 1 - Funding Sources Summary

Funding source	Amount	Status (committed, pending decision date, etc.)	Comments
BCWMC Capital Improvement Program (CIP) Funds originating from 2017 Hennepin Co. Levy on behalf of BCWMC	\$400,000	Committed	
BCWMC Capital Improvement Program (CIP) Funds originating from 2018 Hennepin Co. Levy on behalf of BCWMC	\$664,472	Pending Hennepin Co. Board decision date July 2017	MN State Statute 103.251 requires the County to levy funds on behalf of the watershed organization if the County approves of the project to which the funds will be directed. The County approved of this project and corresponding levy in July 2016, for 2017 funds; hence 2018 levy funding for the same project is expected.
TOTAL	\$1,064,472		



Table 2 – Project Budget Summary

Budget items	Expected costs		Met Council eligible costs	DEED eligible costs	ERF eligible costs
1) Past environmental investigation					
Incurred investigation costs					
Phase 1, II ESA and Building Survey	\$	36,600			
Response Action Plan	\$	14,000			
Subtotal					
1) Total past environmental costs	\$	50,600			
2) Soil remediation and environmental oversight					
Oversight/on-site monitoring and characterization (environmental specifications, import soil sampling, 25 days oversight, analytical)	\$	36,000			
Soil remediation (soil removal along creek, 2,850 tons @ \$34/ton for transportation and disposal as a nonhazardous waste)	\$	96,900			
Soil excavation costs: 1900 CY @\$4/CY	\$	7,600			
RAP Implementation Reporting	\$	8,800			
Regulatory Review	\$	1,000			
2) Total soil remediation costs	\$	150,300			
3) Hazardous material abatement and building					
Demolition survey	\$	-			
Plans and specs	\$	-			
Abatement oversight and air monitoring	\$	-			
Asbestos and lead abatement	\$	-			
3) Total hazardous abatement and building demolition costs	\$	-			
Total project budget (items 1, 2, & 3)	\$	-			
Total project funding sources breakdown					
Metropolitan Council (excludes soil excavation costs)	\$	-			
Hennepin County (includes soil excavation costs)	\$	150,300			
DEED (includes \$26,250 soil excavation)	\$	-			
Local match 12% (of DEED Eligible costs Items 1,2 & 3 and \$26,200 soil excavation)	\$	-			
Total for all funding sources	\$	150,300			

Table 3 – Housing Summary - Not Applicable

Category	Rental	Owner-occupied
New affordable units (# by		
bedroom)		
Retained affordable units (#		
by bedroom)		
Affordable unit rent(s)/sales		
price(s) (at percent AMI by		
bedroom)		
Market-rate units (# by		
bedroom)		
Market-rate units		
rent(s)/sales price(s) (by		
bedroom)		

Table 4. Property Information Where Environmental Response is Planned

(See Figures 8 - 19 for property maps, property value, current taxes)

Site Name	Hennepin County Property ID	Address	Property Owner	Figure Number
Fruen Mil (1)	2002924430138	303 Thomas Ave. North, Minneapolis 55405	AtGlenwood LLC	8
Fruen Mill (2)	2002924430013	2603 2 nd Ave. North, Minneapolis, MN 55405	June Capital LLC	9
Pioneer Paper (1)	2802924210005	155 Irving Ave. North, Minneapolis MN 55405	Richard O Hanousek	10
Pioneer Paper (2)	2802924210006	156 Irving Ave. North, Minneapolis MN 55405	Pioneer Industries Inc.	11
Chemical Marketing	2102924430079	180 Humboldt Ave. North, Minneapolis MN 55405	Michael S. Minter Trustee	12
Irving Ave. Dump	2802924120024	50 Dupont Ave. North, Minneapolis MN 55405	City of Minneapolis Public Works	13
Scrap Metal Processors	2102924430096	1129 2 nd Ave. North, Minneapolis MN 55405	City of Minneapolis CPED	14
Bassetts Creek Park	2002924430129	2700 2 nd Ave. North Minneapolis MN 55405	City of Minneapolis Park Board	15
Impound Lot West Parcel	2802924210024	10 Cedar Lake Rd. North, Minneapolis MN 55405	City of Minneapolis Park Board	16
Former NSP/Xcel Energy	2102924430034	101 Fremont Ave. North, Minneapolis MN 55405	City of Minneapolis CPED	17
City of Minneapolis CPED	2102924430118	105 Fremont Ave North, Minneapolis MN 55405	City of Minneapolis CPED	18
Minneapolis Public Schools Transportation Center	2102924430119	1001 2 nd Ave. North, Minneapolis, MN 55045	Minneapolis Board of Education Sp District 1	19

Table 1 Soil Analytical Data Summary Bassett Creek Main Stem Erosion Repair Project Minneapolis, Minnesota

						neapolis, N	linesola									
					Location	SB-15-01	SB-15-02	SB-15-03	SB-15-04	SB-15-05	SB-15-06	SB-15-07	SB-15-08	SB-15-09	SB-15-10	SB-15-11
					Date	2/17/2016	2/17/2016	2/18/2016	2/18/2016	2/17/2016	2/17/2016	2/17/2016	2/17/2016	2/18/2016	2/18/2016	2/18/2016
					Depth	0 - 4 ft	0 - 4 ft	0 - 1 ft	0 - 1 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft
				Minnesota Industrial	MPCA DRO	•	• • •	• • •	• • •	• • •	• • • •	• • •	•	• • •	• • •	• • •
Parameter	Analysis	Minnesota	Minnesota Residential	Soil Reference	Standard for											
	Location	Soil Leaching Values	Soil Reference Values	Values	Unregulated Fill											
Effective Date		06/01/2013	06/22/2009	06/22/2009	N/A											
Exceedance Key		Bold	Underline	Italic	Shade											
General Parameters																
Solids, percent	Lab					70 %	86 %	88 %	81 %	80 %	84 %	84 %	84 %	78 %	74 %	82 %
Metals																
Antimony	Lab	5.4 mg/kg	12 mg/kg	100 mg/kg						3.0 mg/kg	1.9 mg/kg	4.3 mg/kg	3.1 mg/kg	3.3 mg/kg	1.9 mg/kg	2.7 mg/kg
Arsenic	Lab	5.8 mg/kg	<u>9 mg/kg</u>	20 mg/kg		<u>10 mg/kg</u>	6.8 mg/kg	6.8 mg/kg	5.3 mg/kg	<u>11 mg/kg</u>	7.7 mg/kg	7.9 mg/kg	6.7 mg/kg	<u>9.8 mg/kg</u>	<u>9.1 mg/kg</u>	7.3 mg/kg
Barium	Lab	1700 mg/kg	1100 mg/kg	18000 mg/kg		130 * mg/kg	82 mg/kg	40 mg/kg	85 mg/kg	110 mg/kg	90 mg/kg	100 mg/kg	150 mg/kg	130 mg/kg	130 mg/kg	100 mg/kg
Beryllium	Lab	2.7 mg/kg	55 mg/kg	230 mg/kg						0.40 mg/kg	0.41 mg/kg	0.38 mg/kg	0.49 mg/kg	0.46 mg/kg	0.46 mg/kg	0.48 mg/kg
Cadmium	Lab	8.8 mg/kg	25 mg/kg	200 mg/kg		0.33 mg/kg	0.16 mg/kg	0.12 mg/kg	0.12 mg/kg	1.4 mg/kg	0.39 mg/kg	0.54 mg/kg	0.48 mg/kg	2.0 mg/kg	0.44 mg/kg	0.44 mg/kg
Chromium	Lab	36 CR6 mg/kg	87 CR6 mg/kg	650 CR6 mg/kg		17 mg/kg	15 mg/kg	8.5 mg/kg	17 mg/kg	15 mg/kg	15 mg/kg	16 mg/kg	17 mg/kg	19 mg/kg	17 mg/kg	20 mg/kg
Copper Lead	Lab Lab	700 mg/kg 2700 mg/kg	100 mg/kg 300 mg/kg	9000 mg/kg 700 mg/kg		 40 * mg/kg	 18 mg/kg	 7.4 mg/kg	 4.4 mg/kg	50 mg/kg 170 mg/kg	26 mg/kg 51 mg/kg	33 mg/kg 120 mg/kg	29 mg/kg 58 mg/kg	41 mg/kg 300 mg/kg	29 mg/kg 510 mg/kg	29 mg/kg 58 mg/kg
Mercury	Lab	3.3 MC mg/kg	0.5 mg/kg	1.5 mg/kg		< 0.71 mg/kg	< 0.58 mg/kg	0 0	< 0.62 mg/kg		< 0.60 mg/kg	2.7 mg/kg	< 0.60 mg/kg		< 0.68 mg/kg	
Nickel	Lab	180 mg/kg	560 mg/kg	2500 mg/kg		< 0.7 T mg/kg	< 0.50 mg/kg	< 0.57 mg/kg	< 0.02 mg/kg	14 mg/kg	15 mg/kg	13 mg/kg	18 mg/kg	17 mg/kg	15 mg/kg	18 mg/kg
Selenium	Lab	2.6 mg/kg	160 mg/kg	1300 mg/kg		< 3.6 mg/kg	< 2.9 mg/kg	< 2.8 ma/ka	< 3.1 mg/kg	< 3.1 mg/kg	< 3.0 mg/kg	< 3.0 mg/kg	< 3.0 mg/kg	0 0	< 3.4 mg/kg	
Silver	Lab	7.9 mg/kg	160 mg/kg	1300 mg/kg		< 0.71 mg/kg	< 0.58 mg/kg	00	< 0.62 mg/kg	00	00	< 0.60 mg/kg	00	< 0.64 mg/kg	00	
Thallium	Lab	0.89 mg/kg	3 mg/kg	21 mg/kg						< 2.5 mg/kg	< 2.4 mg/kg	< 2.4 mg/kg			< 2.7 mg/kg	
Zinc	Lab	3000 mg/kg	8700 mg/kg	75000 mg/kg						660 mg/kg	90 mg/kg	140 mg/kg	130 mg/kg	570 mg/kg	130 mg/kg	100 mg/kg
TCLP Metals										00				0.0		0 0
Lead	Lab									< 0.075 mg/l		< 0.075 mg/l		< 0.075 mg/l	< 0.075 mg/l	
SVOCs																
2-Chloronaphthalene	Lab					< 0.47 mg/kg	< 0.38 mg/kg	< 0.38 mg/kg	< 0.41 mg/kg	< 0.41 mg/kg	< 0.39 mg/kg	< 0.39 mg/kg	< 0.39 mg/kg	< 0.42 mg/kg	< 0.45 mg/kg	< 0.40 mg/kg
2-Methylnaphthalene	Lab		100 mg/kg	369 mg/kg												< 0.40 mg/kg
Acenaphthene	Lab	81 mg/kg	1200 mg/kg	5260 mg/kg		< 0.47 mg/kg										< 0.40 mg/kg
Acenaphthylene	Lab	NA				< 0.47 mg/kg										< 0.40 mg/kg
Anthracene	Lab	1300 mg/kg	7880 mg/kg	45400 mg/kg		< 0.47 mg/kg				< 0.41 mg/kg					00	< 0.40 mg/kg
Benzo(g,h,i)perylene	Lab	NA	1000	0000		< 0.47 mg/kg		0 0	< 0.41 mg/kg		< 0.39 mg/kg	00	< 0.39 mg/kg	00		< 0.40 mg/kg
Fluoranthene	Lab	670 mg/kg	1080 mg/kg	6800 mg/kg		< 0.47 mg/kg	00	00	< 0.41 mg/kg		0.48 mg/kg	0.93 mg/kg		3.7 mg/kg	1.9 mg/kg	1.6 mg/kg
Fluorene Naphthalene	Lab Lab	110 mg/kg	850 mg/kg	4120 mg/kg		< 0.47 mg/kg		< 0.38 mg/kg			< 0.39 mg/kg	0 0	< 0.39 mg/kg	0 0	< 0.45 mg/kg	
Phenanthrene	Lab	4.5 mg/kg NA	10 mg/kg	28 mg/kg		< 0.47 mg/kg		0 0	< 0.41 mg/kg	0 0	< 0.39 mg/kg 0.40 mg/kg	< 0.39 mg/kg 0.74 mg/kg	0 0	3.8 mg/kg	< 0.45 mg/kg 1.2 mg/kg	< 0.40 mg/kg 1.4 mg/kg
Pyrene	Lab	440 mg/kg	890 mg/kg	5800 mg/kg		0.0	< 0.38 mg/kg	00	< 0.41 mg/kg	0 0	0.45 mg/kg	0.88 mg/kg	0 0	3.5 mg/kg	1.7 mg/kg	1.4 mg/kg
Benz(a)anthracene	Lab	T	T	T				0.92 mg/kg			< 0.39 mg/kg				0.83 mg/kg	
Benzo(a)pyrene	Lab	Т	Т	T				0.81 mg/kg			< 0.39 mg/kg		< 0.39 mg/kg		0.78 mg/kg	
Benzo(b)fluoranthene	Lab	Т	Т	Т		< 0.47 mg/kg			< 0.41 mg/kg		< 0.39 mg/kg			2.1 mg/kg	1.2 mg/kg	0.93 mg/kg
Benzo(k)fluoranthene	Lab	Т	Т	Т		< 0.47 mg/kg				< 0.41 mg/kg						< 0.40 mg/kg
Chrysene	Lab	Т	Т	Т		< 0.47 mg/kg	00	0 0	< 0.41 mg/kg	00	< 0.39 mg/kg	00	0 0	0 0	1.0 mg/kg	0.83 mg/kg
Dibenz(a,h)anthracene	Lab	Т	Т	Т		< 0.47 mg/kg	< 0.38 mg/kg	< 0.38 mg/kg	< 0.41 mg/kg	< 0.41 mg/kg	< 0.39 mg/kg		< 0.39 mg/kg		< 0.45 mg/kg	< 0.40 mg/kg
Indeno(1,2,3-cd)pyrene	Lab	Т	Т	Т		< 0.47 mg/kg	< 0.38 mg/kg	0.60 mg/kg	< 0.41 mg/kg	0.47 mg/kg	< 0.39 mg/kg	< 0.39 mg/kg	< 0.39 mg/kg	0.82 mg/kg	< 0.45 mg/kg	< 0.40 mg/kg
B(a)P Equivalent, non-detects at 0, 2002 PEFs	Barr Calculation	1.4 T mg/kg	<u>2 T mg/kg</u>	3 T mg/kg		ND mg/kg	ND mg/kg	1.1 mg/kg	ND mg/kg	1.1 mg/kg	ND mg/kg	0.53 mg/kg	0.097 mg/kg	<u>2.2 mg/kg</u>	0.99 mg/kg	0.82 mg/kg
B(a)P Equivalent, non-detects at 1/2, 2002 PEFs	Barr Calculation	1.4 T mg/kg	<u>2 T mg/kg</u>	3 T mg/kg		0.46 mg/kg	0.37 mg/kg	1.2 mg/kg	0.4 mg/kg	1.2 mg/kg	0.38 mg/kg	0.68 mg/kg	0.44 mg/kg	<u>2.3 mg/kg</u>	1.2 mg/kg	0.97 mg/kg
B(a)P Equivalent, non-detects at 1x, 2002 PEFs	Barr Calculation	1.4 T mg/kg	<u>2 T mg/kg</u>	3 T mg/kg		0.93 mg/kg	0.75 mg/kg	1.3 mg/kg	0.81 mg/kg	1.3 mg/kg	0.77 mg/kg	0.82 mg/kg	0.78 mg/kg	<u>2.4 mg/kg</u>	1.3 mg/kg	1.1 mg/kg
VOCs																
1,1,1,2-Tetrachloroethane	Lab	0.41 mg/kg	31 mg/kg	51 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,1,1-Trichloroethane	Lab	56 mg/kg	140 mg/kg	472 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,1,2,2-Tetrachloroethane	Lab	0.012 mg/kg	3.5 mg/kg	6.5 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,1,2-Trichloroethane	Lab	0.014 mg/kg	9 mg/kg	14 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,1-Dichloro-1-propene	Lab					< 0.44 mg/kg							< 0.22 mg/kg			
1,1-Dichloroethane	Lab	0.41 mg/kg	34 mg/kg	55 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,1-Dichloroethylene	Lab	1.4 mg/kg	20 mg/kg	60 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			

Page 1 of 3

3/31/2016

Table 1 Soil Analytical Data Summary Bassett Creek Main Stem Erosion Repair Project Minneapolis, Minnesota

Minneapolis, Minnesota																
					Location	SB-15-01	SB-15-02	SB-15-03	SB-15-04	SB-15-05	SB-15-06	SB-15-07	SB-15-08	SB-15-09	SB-15-10	SB-15-11
					Date	2/17/2016	2/17/2016	2/18/2016	2/18/2016	2/17/2016	2/17/2016	2/17/2016	2/17/2016	2/18/2016	2/18/2016	2/18/2016
					Depth	0 - 4 ft	0 - 4 ft	0 - 1 ft	0 - 1 ft	0 - 4 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft			
		1	1		•	0 - 4 ft	0 - 4 ft	0-1 ft	0-1 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	0-1 ft	0-1 ft	0-1 ft
Deremeter	Analysis	Minnesota	Minnesota Residential	Minnesota Industrial Soil Reference	MPCA DRO Standard for											
Parameter	Location	Soil Leaching Values	Soil Reference Values	Values	Unregulated Fill											
Effective Date		06/01/2013	06/22/2009	06/22/2009	N/A											
Enective Date Exceedance Key		Bold	Underline	Italic	Shade											
1,2,3-Trichlorobenzene	Lab	Bold	ondernine	nane	Onade	< 1.1 mg/kg							< 0.55 mg/kg			
1,2,3-Trichloropropane	Lab	0.27 mg/kg				< 0.44 mg/kg							< 0.22 mg/kg			
1.2.4-Trichlorobenzene	Lab	0.23 mg/kg	200 mg/kg	985 mg/kg		< 1.1 mg/kg							< 0.55 mg/kg			
1,2,4-Trimethylbenzene	Lab	2.7 mg/kg	8 mg/kg	25 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,2-Dibromo-3-chloropropane	Lab	5.5	- 5.5	- 5 5		< 1.1 mg/kg							< 0.55 mg/kg			
1,2-Dibromoethane	Lab	0.000015 mg/kg	0.3 mg/kg	0.5 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,2-Dichlorobenzene	Lab	11 mg/kg	26 mg/kg	75 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,2-Dichloroethane	Lab	0.0038 mg/kg	4 mg/kg	6 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,2-Dichloroethylene, cis	Lab	0.21 mg/kg	8 mg/kg	22 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,2-Dichloroethylene, trans	Lab	0.42 mg/kg	11 mg/kg	33 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,2-Dichloropropane	Lab	0.024 mg/kg	4 mg/kg	6 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,3,5-Trimethylbenzene	Lab	2.7 mg/kg	3 mg/kg	10 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,3-Dichloro-1-propene, cis	Lab	0.011 DCP mg/kg				< 0.44 mg/kg							< 0.22 mg/kg			
1,3-Dichloro-1-propene, trans	Lab	0.011 DCP mg/kg				< 0.44 mg/kg							< 0.22 mg/kg			
1,3-Dichlorobenzene	Lab	10 mg/kg	26 mg/kg	200 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
1,3-Dichloropropane	Lab					< 0.44 mg/kg							< 0.22 mg/kg			
1,4-Dichlorobenzene	Lab	0.17 mg/kg	30 mg/kg	50 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
2,2-Dichloropropane	Lab					< 0.44 mg/kg							< 0.22 mg/kg			
Acetone	Lab	8.4 mg/kg	340 mg/kg	1000 mg/kg		< 2.2 mg/kg							< 1.1 mg/kg			
Allyl Chloride	Lab	0.15 mg/kg				< 0.44 mg/kg							< 0.22 mg/kg			
Benzene	Lab	0.017 mg/kg	6 mg/kg	10 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Bromobenzene	Lab					< 0.44 mg/kg							< 0.22 mg/kg			
Bromochloromethane	Lab	0.28 mg/kg				< 0.44 mg/kg							< 0.22 mg/kg			
Bromodichloromethane	Lab	0.021 mg/kg	10 mg/kg	17 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Bromoform	Lab	0.13 mg/kg	370 mg/kg	650 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Bromomethane	Lab	0.036 mg/kg	0.7 mg/kg	2 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Butyl benzene	Lab	NA	30 mg/kg	92 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Butylbenzene, sec	Lab Lab	NA NA	25 mg/kg	70 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Butylbenzene, tert Carbon tetrachloride	Lab	0.0077 mg/kg	30 mg/kg	90 mg/kg		< 0.44 mg/kg < 0.44 mg/kg							< 0.22 mg/kg			
Carbon tetrachionde	Lab	1.2 mg/kg	0.3 mg/kg	0.9 mg/kg									< 0.22 mg/kg			
Chlorodibromomethane	Lab	0.034 mg/kg	11 mg/kg 12 mg/kg	32 mg/kg 20 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Chloroethane	Lab	NA	1000 mg/kg	3000 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Chloroform	Lab	0.11 mg/kg	2.5 mg/kg	4 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Chloromethane	Lab	0.11 mg/kg	8 mg/kg	23 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Chlorotoluene, o	Lab	5 ing/ing	436 mg/kg	436 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Chlorotoluene, p	Lab					< 0.44 mg/kg							< 0.22 mg/kg			
Cumene (isopropyl benzene)	Lab	9.5 mg/kg	30 mg/kg	87 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Cymene p- (Toluene isopropyl p-)	Lab		<u>, , , , , , , , , , , , , , , , , </u>	<u> </u>		< 0.44 mg/kg							< 0.22 mg/kg			
Dibromomethane (methylene bromide)	Lab		260 mg/kg	1860 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Dichlorodifluoromethane (CFC-12)	Lab	37 mg/kg	16 mg/kg	50 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Dichlorofluoromethane (CFC-21)	Lab	NA				< 0.44 mg/kg							< 0.22 mg/kg			
Ethyl benzene	Lab	1.0 mg/kg	200 mg/kg	200 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Ethyl ether	Lab	0.51 mg/kg				< 0.44 mg/kg							< 0.22 mg/kg			
Hexachlorobutadiene	Lab	0.037 mg/kg	6 mg/kg	37 mg/kg		< 1.1 mg/kg							< 0.55 mg/kg			
Methyl ethyl ketone (2-butanone)	Lab	8.8 mg/kg	5500 mg/kg	19000 mg/kg		< 2.2 mg/kg							< 1.1 mg/kg			
Methyl isobutyl ketone (MIBK)	Lab	0.76 mg/kg	1700 mg/kg	9000 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Methyl tertiary butyl ether (MTBE)	Lab	NA				< 0.44 mg/kg							< 0.22 mg/kg			
Methylene chloride	Lab	0.017 mg/kg	97 mg/kg	158 mg/kg		< 1.1 mg/kg							< 0.55 mg/kg			
Naphthalene	Lab	4.5 mg/kg	10 mg/kg	28 mg/kg		< 1.1 mg/kg							< 0.55 mg/kg			
Propylbenzene	Lab	NA	30 mg/kg	93 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Styrene	Lab	2.0 mg/kg	210 mg/kg	600 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			

Page 2 of 3

3/31/2016

Table 1Soil Analytical Data SummaryBassett Creek Main Stem Erosion Repair ProjectMinneapolis, Minnesota

					11111	ineapolis, iv	lillesola									
					Location	SB-15-01	SB-15-02	SB-15-03	SB-15-04	SB-15-05	SB-15-06	SB-15-07	SB-15-08	SB-15-09	SB-15-10	SB-15-11
Date					2/17/2016	2/17/2016	2/18/2016	2/18/2016	2/17/2016	2/17/2016	2/17/2016	2/17/2016	2/18/2016	2/18/2016	2/18/2016	
					Depth	0 - 4 ft	0 - 4 ft	0 - 1 ft	0 - 1 ft	0 - 4 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft			
				Minnesota Industrial	MPCA DRO	• • •	• • • •	• • • •	• • •	• • • •	• • • • •	• • • •	• • • •	• • •	• • •	• • • •
Parameter	Analysis	Minnesota	Minnesota Residential	Coil Deference	Standard for											
	Location	Soil Leaching Values	Soil Reference Values	Values	Unregulated Fill											
Effective Date		06/01/2013	06/22/2009	06/22/2009	N/A											
Exceedance Key		Bold	Underline	Italic	Shade											
Tetrachloroethylene	Lab	0.042 mg/kg	72 mg/kg	131 mg/kg		< 0.44 mg/kg							2.2 mg/kg			
Tetrahydrofuran	Lab	0.24 mg/kg				< 2.2 mg/kg							< 1.1 mg/kg			
Toluene	Lab	2.5 mg/kg	107 mg/kg	305 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Trichloroethylene	Lab	0.0023 mg/kg	29 mg/kg	46 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Trichlorofluoromethane	Lab	35 mg/kg	67 mg/kg	195 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Trichlorotrifluoroethane (Freon 113)	Lab	17000 mg/kg	3745 mg/kg	5430 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Vinyl chloride	Lab	0.0014 mg/kg	0.8 mg/kg	2.2 mg/kg		< 0.44 mg/kg							< 0.22 mg/kg			
Xylene, m & p	Lab	М	М	М		< 0.89 mg/kg							< 0.44 mg/kg			
Xylene, o	Lab	М	М	М		< 0.44 mg/kg							< 0.22 mg/kg			
Xylene, total	Barr Calculation	5.4 M mg/kg	45 M mg/kg	130 M mg/kg		ND mg/kg							ND mg/kg			
PCBs																
Aroclor 1016	Lab														< 0.20 mg/kg	< 0.20 mg/kg
Aroclor 1221	Lab														< 0.20 mg/kg	< 0.20 mg/kg
Aroclor 1232	Lab														< 0.20 mg/kg	< 0.20 mg/kg
Aroclor 1242	Lab														< 0.20 mg/kg	< 0.20 mg/kg
Aroclor 1248	Lab														< 0.20 mg/kg	< 0.20 mg/kg
Aroclor 1254	Lab														< 0.20 mg/kg	< 0.20 mg/kg
Aroclor 1260	Lab															< 0.20 mg/kg
Total PCBs	Barr Calculation	0.13 mg/kg	1.2 mg/kg	8 mg/kg											ND mg/kg	ND mg/kg
Total Petroleum Hydrocarbons																
Diesel Range Organics, C10-C28	Lab				100 mg/kg	460 mg/kg	35 mg/kg	41 mg/kg	10 mg/kg	280 mg/kg	83 mg/kg	130 mg/kg	110 mg/kg	140 mg/kg	110 mg/kg	79 mg/kg

Figures

Figure 1 - Project Location

Figure 2 - Historical Soil Investigation Overview

Figure 3 - 2016 Phase II Soil Investigation Summary

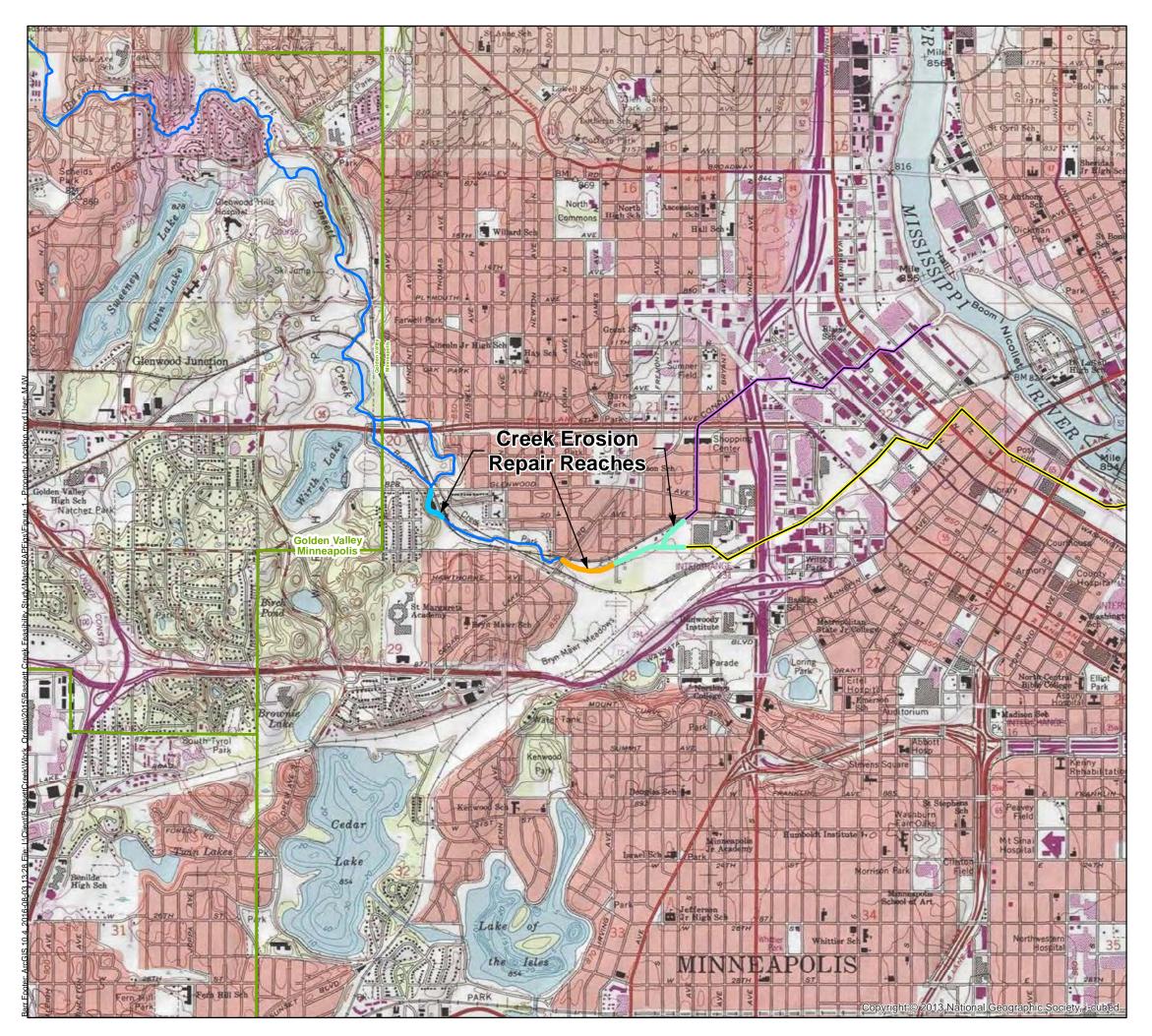
Figure 4 - Reach 1 Stabilization Sites

Figure 5 - Reach 2 Stabilization Sites

Figure 6 - Reach 3 Stabilization Sites

Figure 7 - Conceptual Stabilization Techniques

Figures 8 – 19 – Property Information Maps



Fruen Mill (Reach 1)
Cedar Lake Rd to Irving Ave (Reach 2)
Irving Ave to Dupont/2nd Ave (Reach 3)
Stream
Old Tunnel
New Tunnel

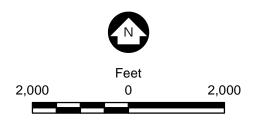
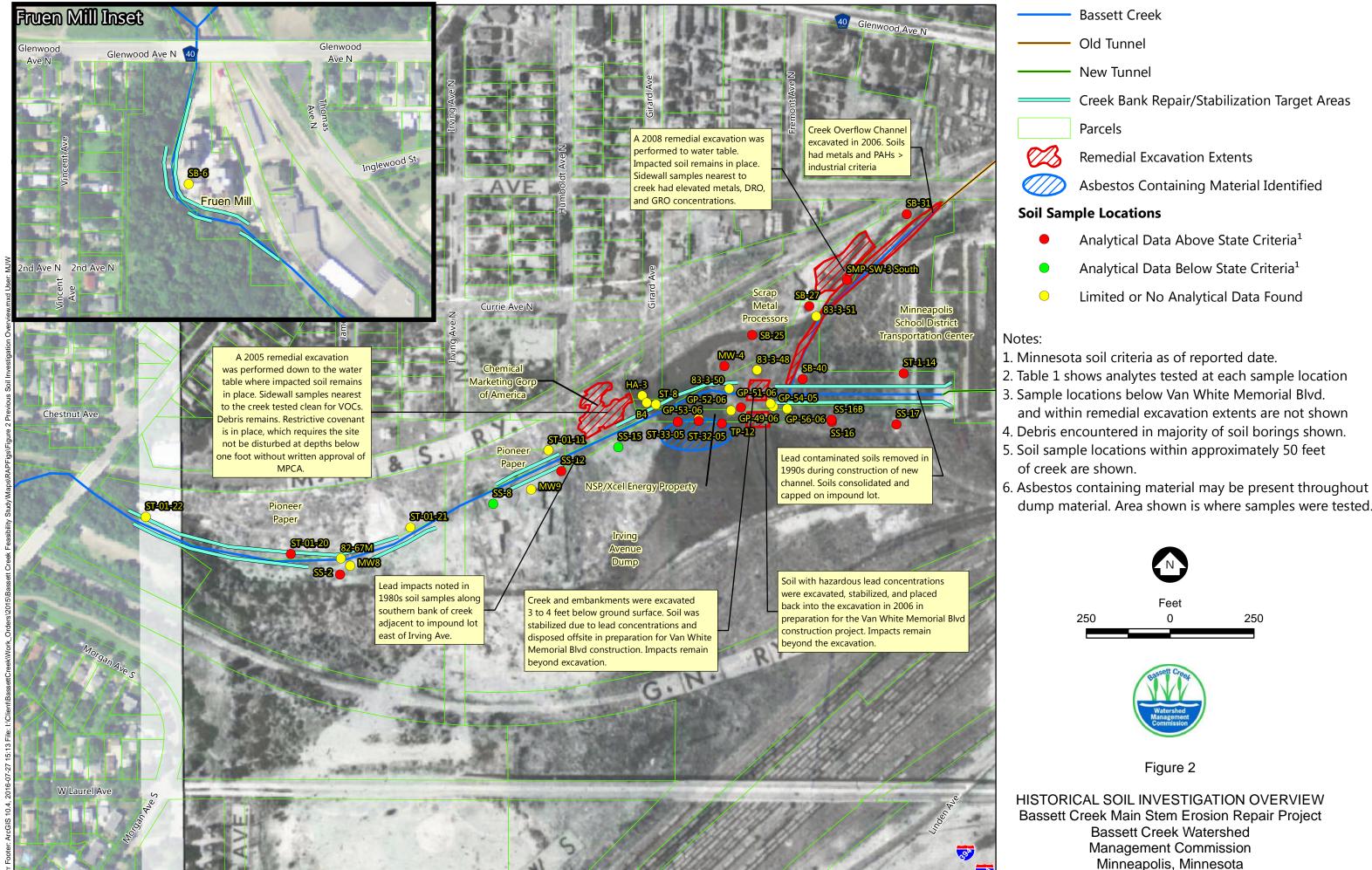




Figure 1

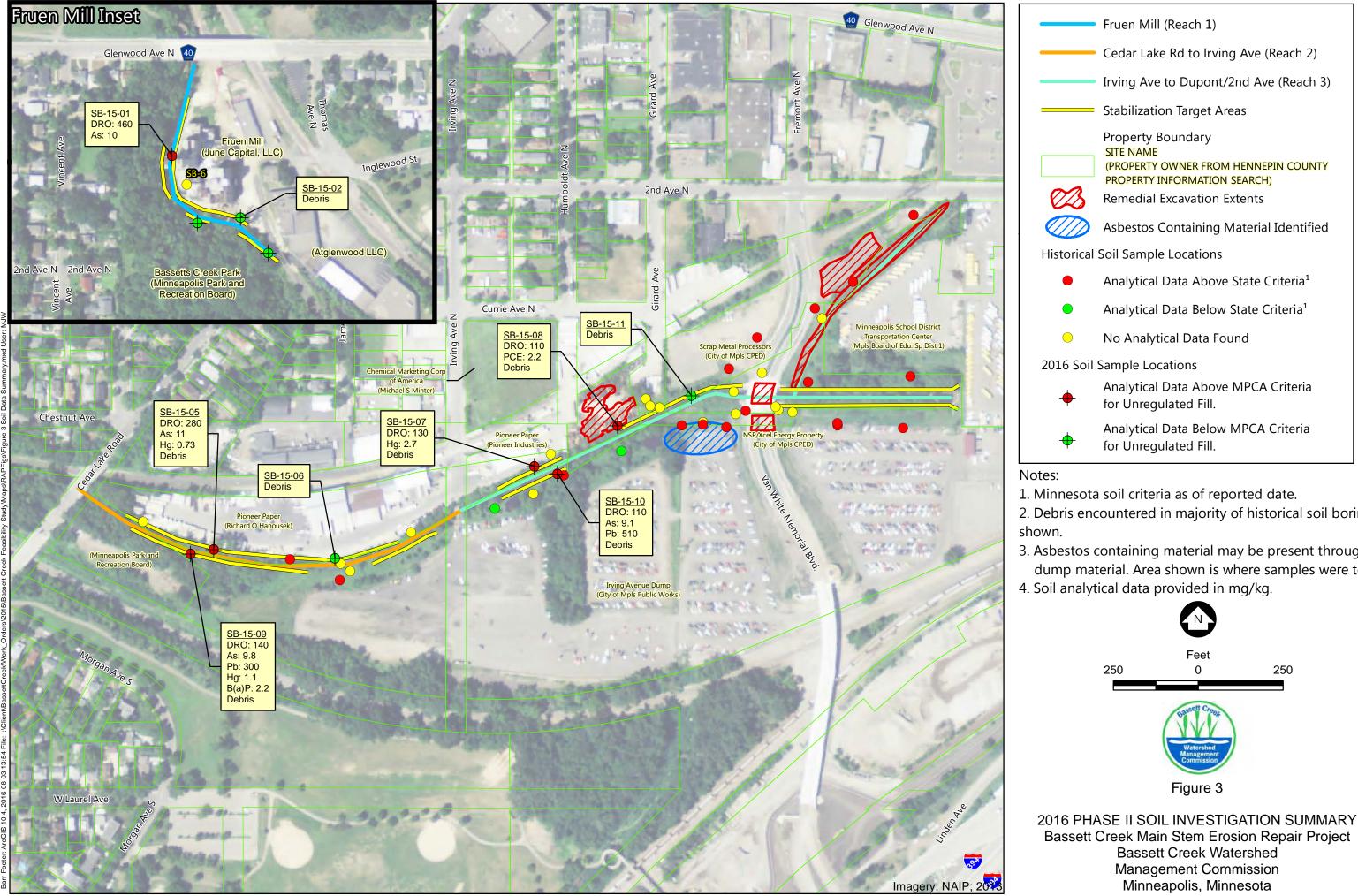
PROJECT LOCATION Bassett Creek Main Stem Erosion Repair Project Bassett Creek Watershed Management Commission Minneapolis, Minnesota



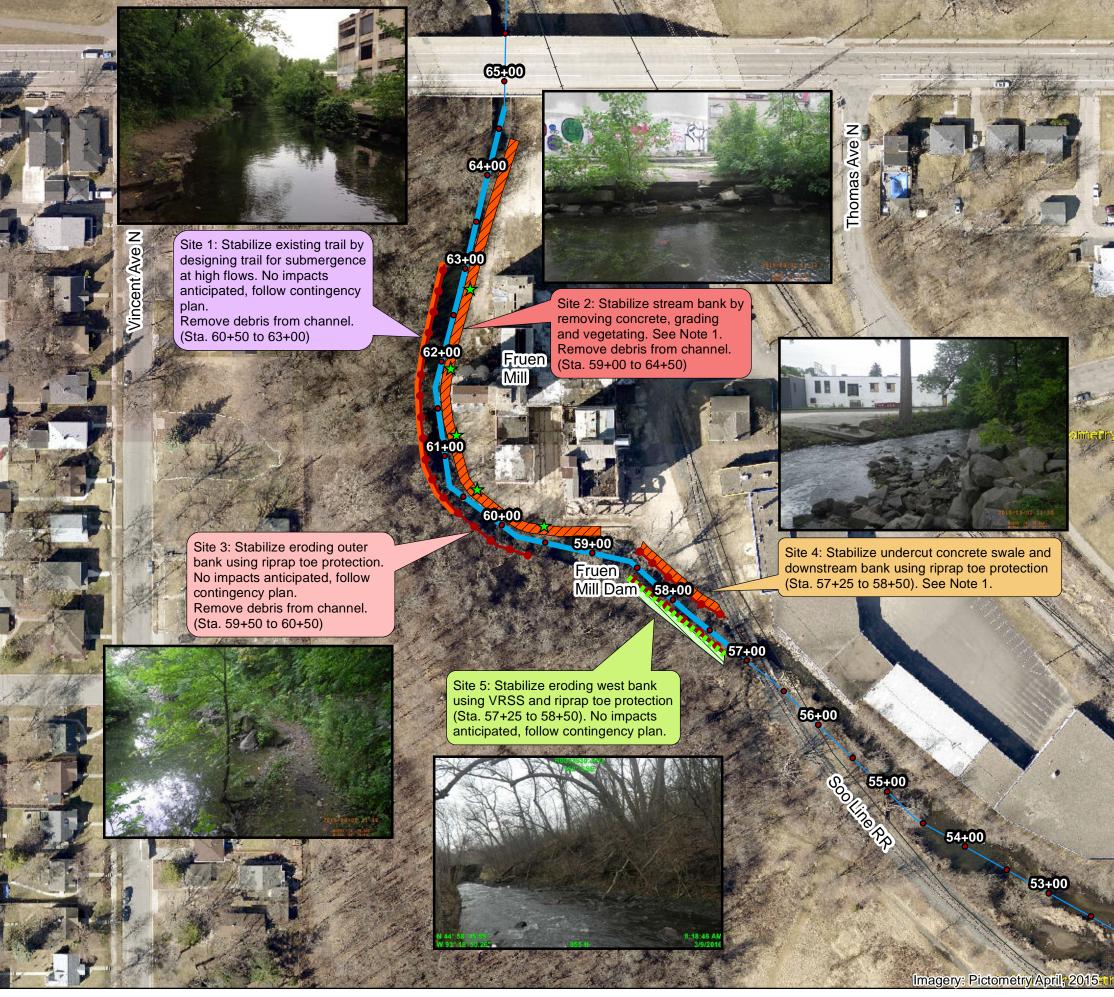
934 Aerial from Historical Informa

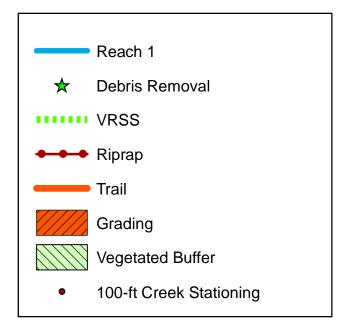
- dump material. Area shown is where samples were tested.

Minneapolis, Minnesota

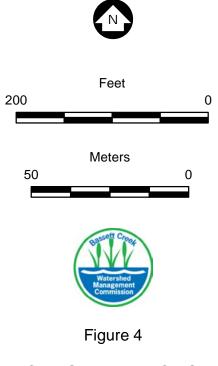


- 2. Debris encountered in majority of historical soil borings
- 3. Asbestos containing material may be present throughout dump material. Area shown is where samples were tested.

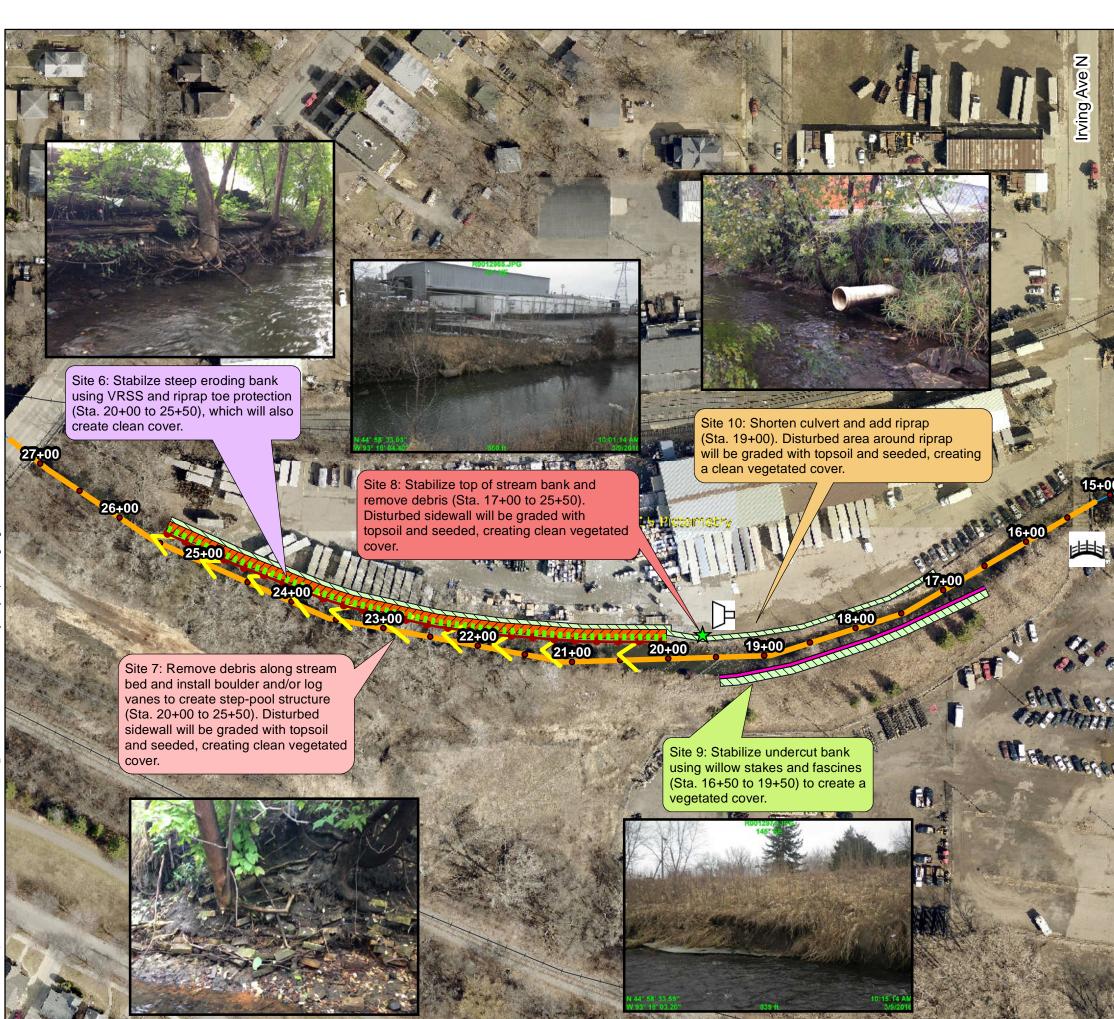


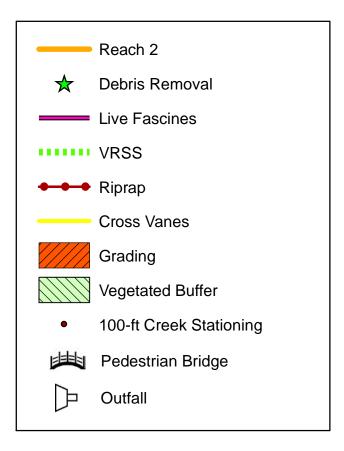


Note 1: Any Soil removals from Sites 2 & 4 are anticipated to require landfill disposal.

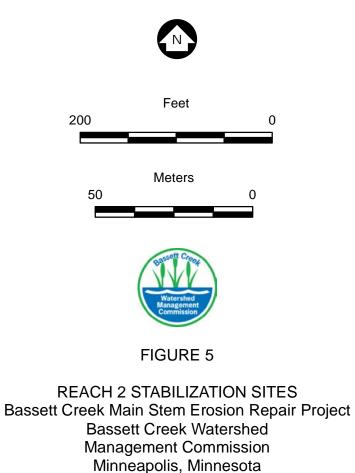


REACH 1 STABILIZATION SITES Bassett Creek Main Stem Erosion Repair Project Bassett Creek Watershed Management Commission Minneapolis, Minnesota

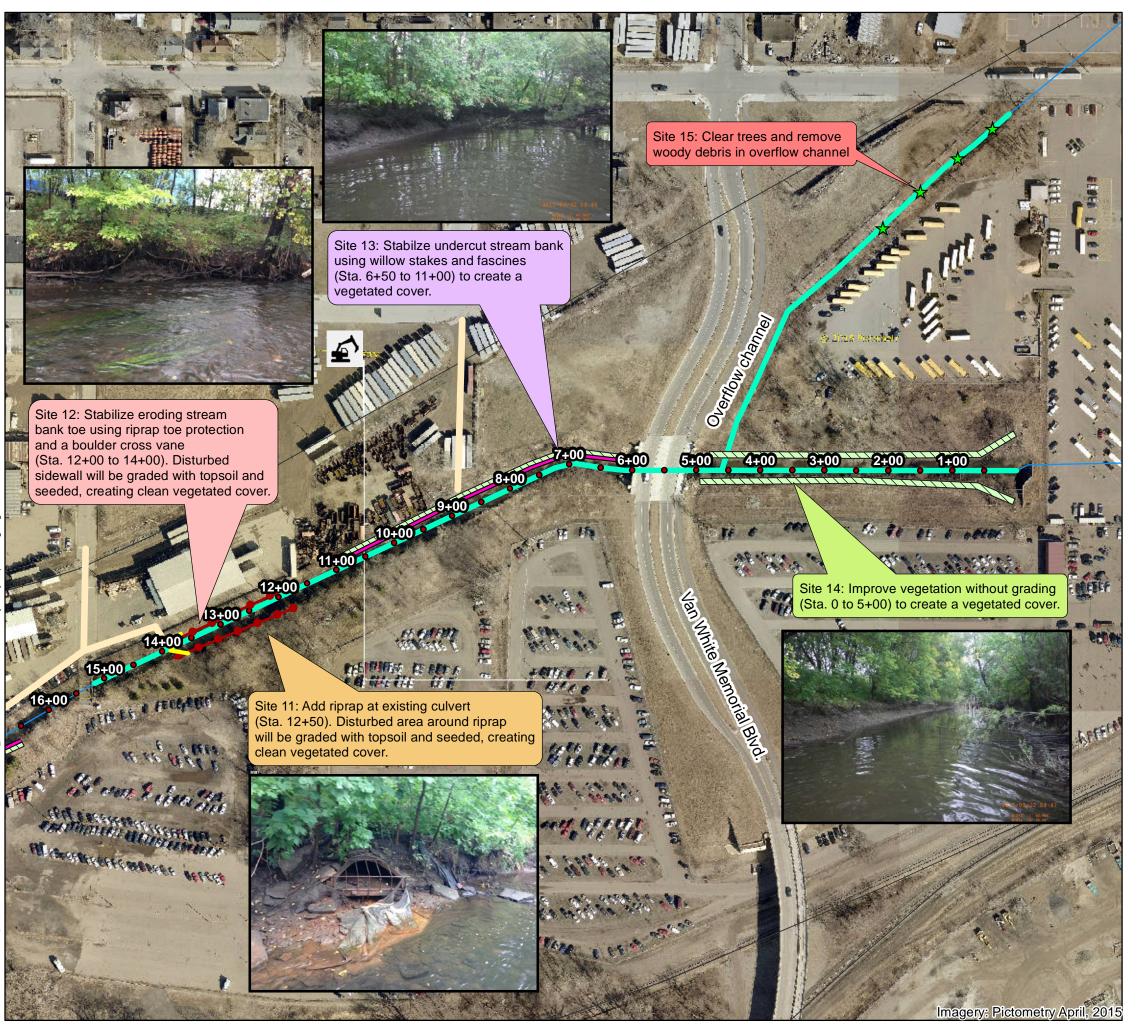


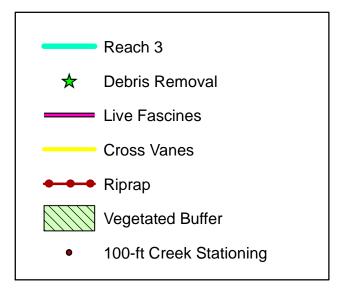


Note: Soil removals from Reach 2 are assumed to require landfill disposal.

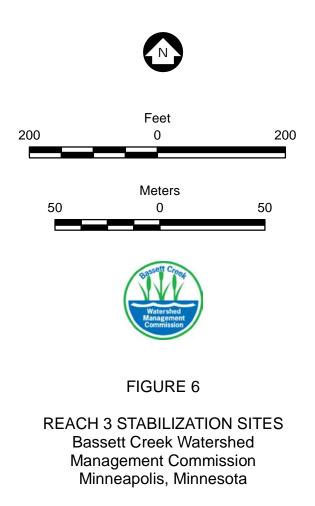


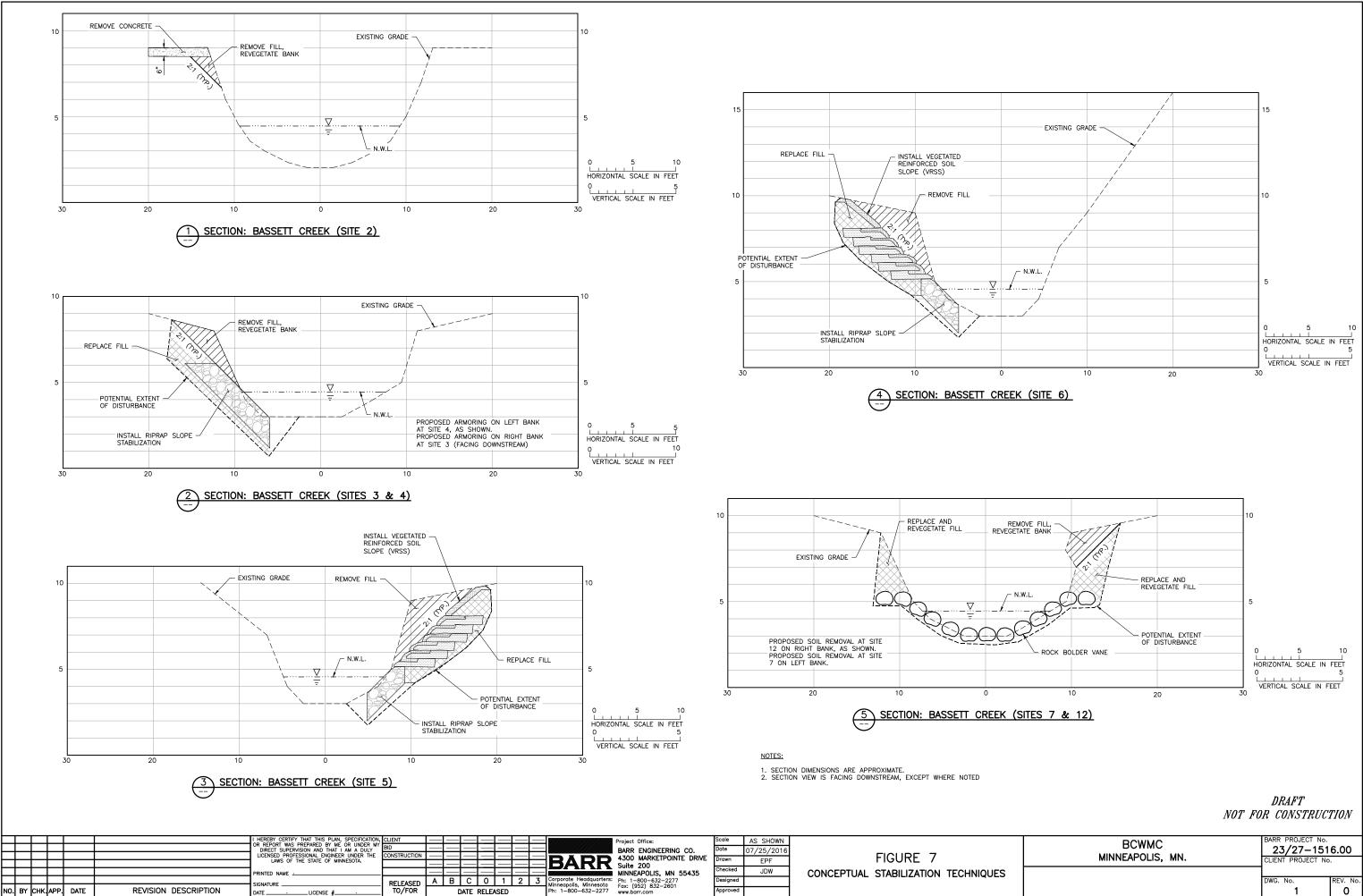
Imagery: Pictometry April, 2015



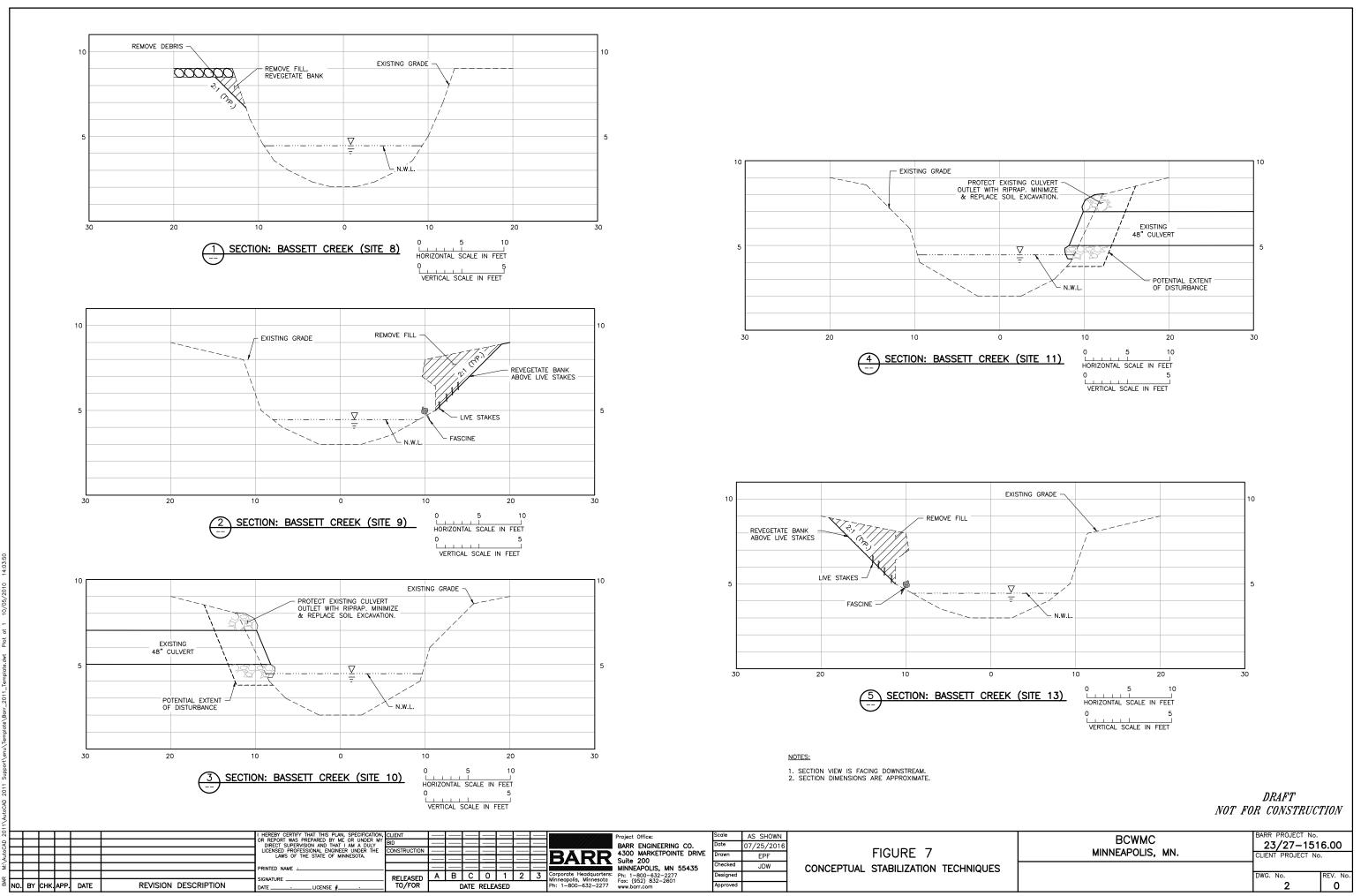


Note: Soil removals from Reach 3 are assumed to require landfill disposal and may require stabilization prior to disposal.





BB

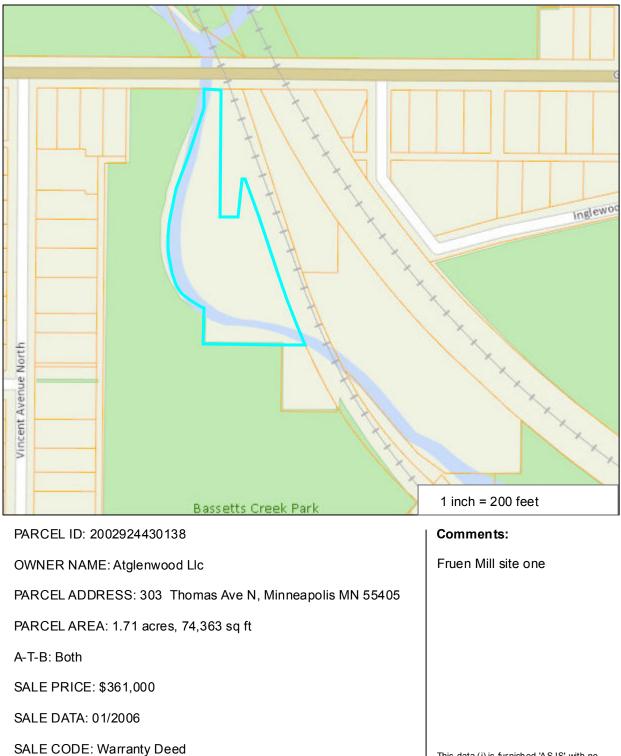


CADD





Date: 10/25/2016



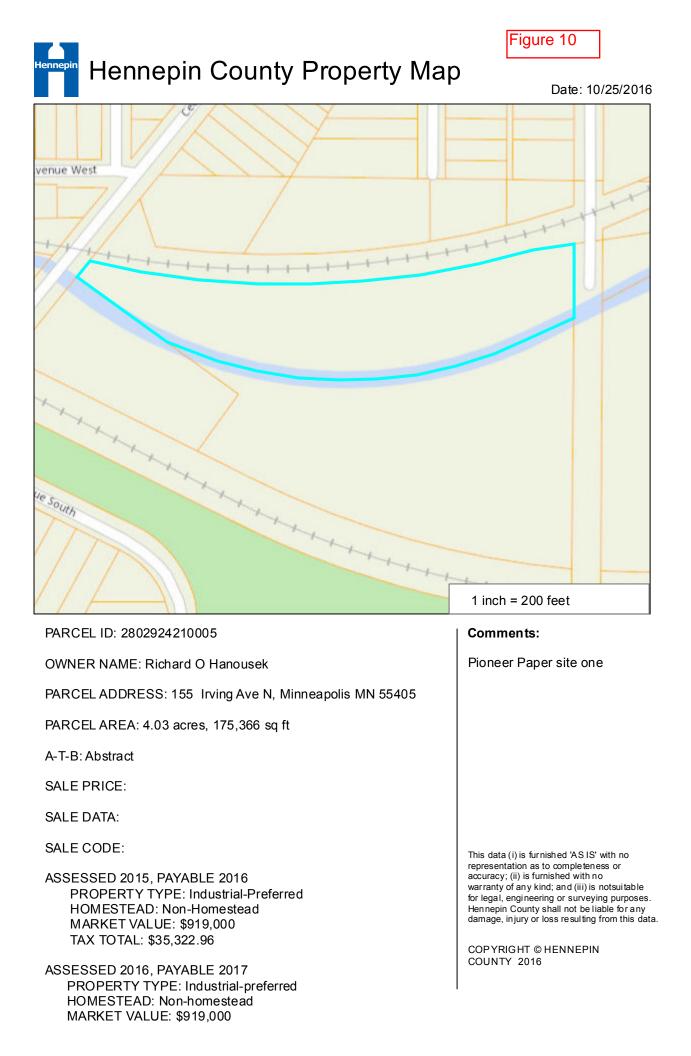
ASSESSED 2015, PAYABLE 2016 PROPERTY TYPE: Industrial-Preferred HOMESTEAD: Non-Homestead MARKET VALUE: \$407,100 TAX TOTAL: \$31,657.50

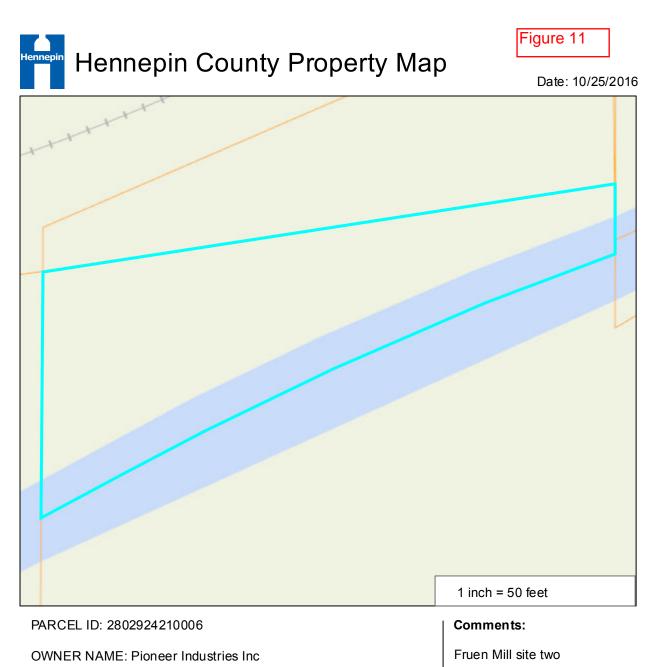
ASSESSED 2016, PAYABLE 2017 PROPERTY TYPE: Industrial-preferred HOMESTEAD: Non-homestead MARKET VALUE: \$407,100 This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

COPYRIGHT © HENNEPIN COUNTY 2016



ASSESSED 2016, PAYABLE 2017 PROPERTY TYPE: Vacant Land-industrial HOMESTEAD: Non-homestead MARKET VALUE: \$51,900 COPYRIGHT © HENNEPIN COUNTY 2016





PARCEL ADDRESS: 156	Irving Ave N, Minneapolis MN 55405	

PARCEL AREA: 0.53 acres, 23,165 sq ft

A-T-B: Abstract

SALE PRICE:

SALE DATA:

SALE CODE:

ASSESSED 2015, PAYABLE 2016 PROPERTY TYPE: Industrial-Preferred HOMESTEAD: Non-Homestead MARKET VALUE: \$362,500 TAX TOTAL: \$13,074.68

ASSESSED 2016, PAYABLE 2017 PROPERTY TYPE: Industrial-preferred HOMESTEAD: Non-homestead MARKET VALUE: \$384,500 This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

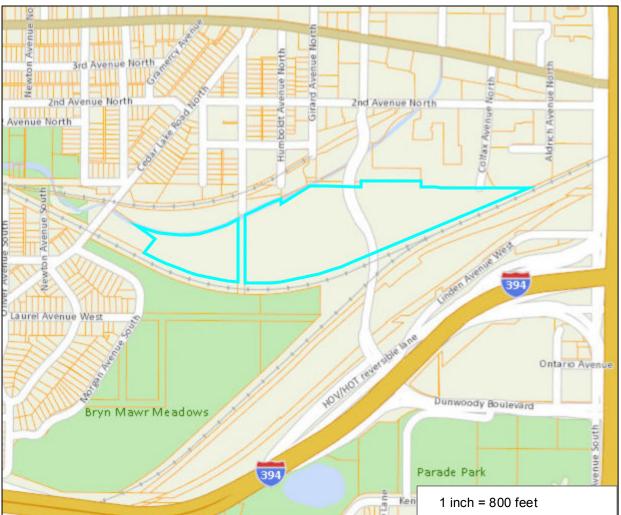
COPYRIGHT © HENNEPIN COUNTY 2016





Hennepin County Property Map

Date: 10/25/2016



PARCEL ID: 2802924120024

OWNER NAME: City Of Minneapolis

PARCEL ADDRESS: 50 Dupont Ave N, Minneapolis MN 55405

PARCEL AREA: 30.99 acres, 1,349,956 sq ft

A-T-B: Both

SALE PRICE:

SALE DATA:

SALE CODE:

ASSESSED 2015, PAYABLE 2016 PROPERTY TYPE: Commercial-Preferred HOMESTEAD: Non-Homestead MARKET VALUE: \$0 TAX TOTAL: \$0.00

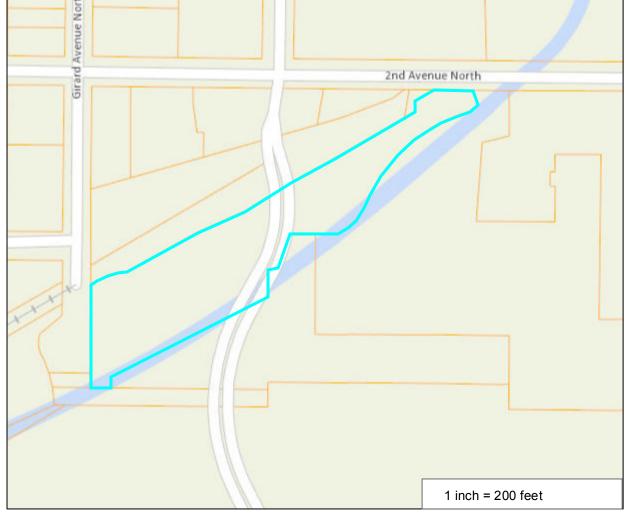
ASSESSED 2016, PAYABLE 2017 PROPERTY TYPE: Commercial-preferred HOMESTEAD: Non-homestead MARKET VALUE: \$0 This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

COPYRIGHT © HENNEPIN COUNTY 2016

Comments:

Irving Ave. Dump



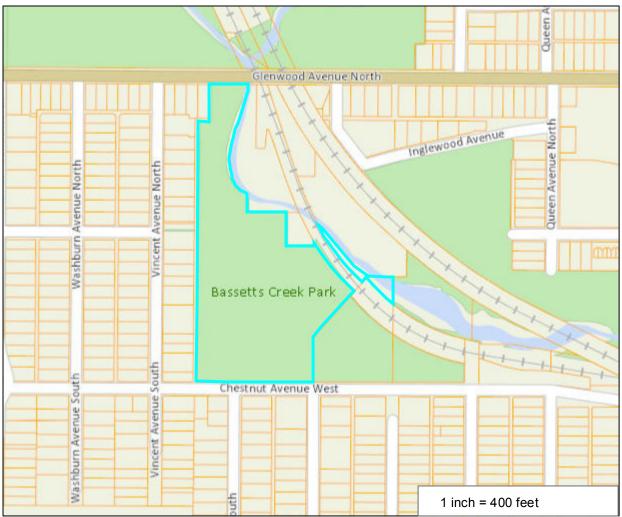


PARCEL ID: 2102924430096	Comments:
OWNER NAME: City Of Minneapolis	Scrap Metal Processors
PARCEL ADDRESS: 1129 2nd Ave N, Minneapolis MN 55405	
PARCEL AREA: 2.81 acres, 122,214 sq ft	
A-T-B: Both	
SALE PRICE:	
SALE DATA:	
SALE CODE:	This data (i) is furnished 'ASIS' with no
ASSESSED 2015, PAYABLE 2016 PROPERTY TYPE: Vacant Land-Apartment HOMESTEAD: Non-Homestead MARKET VALUE: \$0 TAX TOTAL: \$0.00	representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.
ASSESSED 2016, PAYABLE 2017 PROPERTY TYPE: Vacant Land-apartment HOMESTEAD: Non-homestead MARKET VALUE: \$0	COUNTY 2016



Date: 10/26/2016

Figure 15



PARCEL ID: 2002924430129

OWNER NAME: City Of Mpls Park Board

PARCEL ADDRESS: 2700 2nd Ave N, Minneapolis MN 55405

PARCEL AREA: 10.47 acres, 456,081 sq ft

A-T-B: Both

SALE PRICE:

SALE DATA:

SALE CODE:

ASSESSED 2015, PAYABLE 2016 PROPERTY TYPE: Vacant Land-Residential HOMESTEAD: Non-Homestead MARKET VALUE: \$0 TAX TOTAL: \$0.00

ASSESSED 2016, PAYABLE 2017 PROPERTY TYPE: Vacant Land-residential HOMESTEAD: Non-homestead MARKET VALUE: \$0 This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

COPYRIGHT © HENNEPIN COUNTY 2016

Comments:

Bassetts Creek Park



Date: 10/26/2016



PARCEL ID: 2802924210024

OWNER NAME: City Of Minneapolis Pk Board

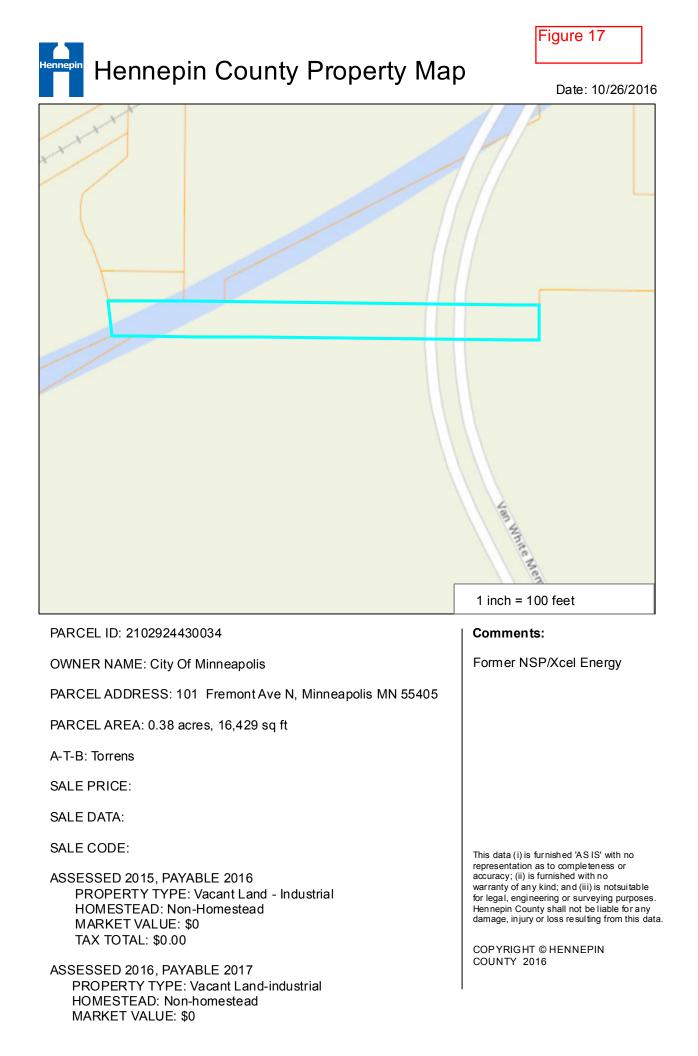
- PARCEL ADDRESS: 10 Cedar Lake Rd N, Minneapolis MN 55405
- PARCEL AREA: 1.75 acres, 76,369 sq ft
- A-T-B: Torrens
- SALE PRICE: \$95,000
- SALE DATA: 12/1997
- SALE CODE: Contract For Deed
- ASSESSED 2015, PAYABLE 2016 PROPERTY TYPE: Vacant Land - Industrial HOMESTEAD: Non-Homestead MARKET VALUE: \$0 TAX TOTAL: \$0.00
- ASSESSED 2016, PAYABLE 2017 PROPERTY TYPE: Vacant Land-industrial HOMESTEAD: Non-homestead MARKET VALUE: \$0

Comments:

Impound Lot West Parcel

This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

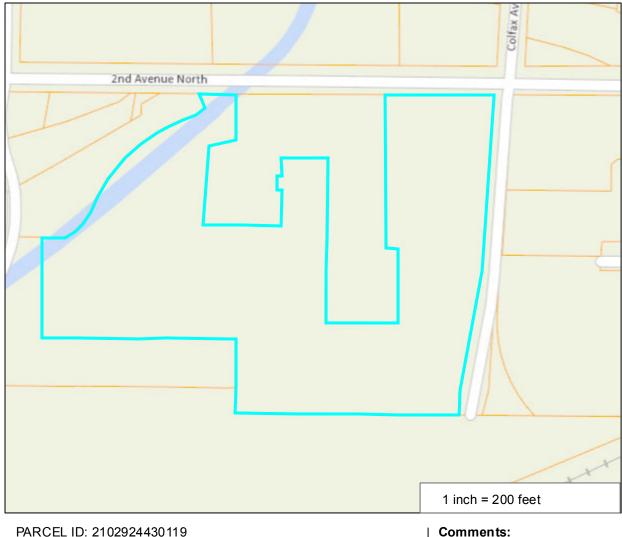
COPYRIGHT © HENNEPIN COUNTY 2016



Hennepin Happanin County Droparty Ma	Figure 18
Hennepin County Property Ma	Date: 10/26/2016
	1 inch = 200 feet
PARCEL ID: 2102924430118	Comments:
OWNER NAME: City Of Minneapolis	City of Minneapolis CPED
PARCEL ADDRESS: 105 Fremont Ave N, Minneapolis MN 55405	
PARCEL AREA: 2.4 acres, 104,382 sq ft	
A-T-B: Both	
SALE PRICE:	
SALE DATA:	
SALE CODE: ASSESSED 2015, PAYABLE 2016 PROPERTY TYPE: Vacant Land - Industrial HOMESTEAD: Non-Homestead MARKET VALUE: \$0 TAX TOTAL: \$0.00	This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.
ASSESSED 2016, PAYABLE 2017 PROPERTY TYPE: Vacant Land-industrial HOMESTEAD: Non-homestead MARKET VALUE: \$0	COUNTY 2016



Date: 10/26/2016



Minneapolis Public Schools Transportation Center

This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

COPYRIGHT © HENNEPIN COUNTY 2016

OWNER NAME: MpIs Board Of Edu. Sp Dist 1

PARCEL ADDRESS: 1001 2nd Ave N, Minneapolis MN 55405

PARCEL AREA: 8.69 acres, 378,409 sq ft

A-T-B: Both

SALE PRICE:

SALE DATA:

SALE CODE:

ASSESSED 2015, PAYABLE 2016 PROPERTY TYPE: Industrial-Preferred HOMESTEAD: Non-Homestead MARKET VALUE: \$0 TAX TOTAL: \$0.00

ASSESSED 2016, PAYABLE 2017 PROPERTY TYPE: Industrial-preferred HOMESTEAD: Non-homestead MARKET VALUE: \$0

Attachments (on CD only)

Legal description of the site (See Figures 8 – 19)

Copy of municipal land use approval (See Section II)

Written neighborhoods statements of support (See Section II)

City resolution

Environmental documents identified in Section IV:

Phase I Environmental Site Assessment

Phase II investigation work plan

Phase II investigation report

Response Action Plan

MPCA RAP approval letter

City Resolution

Phase I Environmental Site Assessment

Phase II Investigation Work Plan

Phase II Investigation Report

Response Action Plan

MPCA RAP Approval Letter