

Memorandum

To: Bassett Creek Watershed Management Commission (BCWMC)
From: Barr Engineering Co.
Subject: Item 5A: Consider Approval of 90% Design Plans for Bassett Creek Main Stem Restoration, Regent Avenue to Golden Valley Road (CR-M 2024) – Golden Valley, MN
BCWMC November 19, 2025 Meeting Agenda
Date: November 13, 2025
Project: 23272114.00

5A Consider Approval of 90% Design Plans for Bassett Creek Main Stem Restoration Project, Regent Avenue to Golden Valley Road (CR-M 2024), Golden Valley, MN

Summary:

Proposed Work: Bassett Creek Main Stem Restoration Project, Regent Avenue to Golden Valley Road (CR-M 2024), Golden Valley

Basis for Review at Commission Meeting: 90% Design Plans Review

Change Impervious Surface Area: N/A

Recommendations for Commission Action:

- 1) Approval of 90% design plans
- 2) Authorize Commission Engineer to develop 100% plans for bidding and construction by City of Golden Valley

At the September 21, 2023 meeting, the Commission passed resolution 23-06 officially ordering the Bassett Creek Main Stem Restoration Project (2024 CIP Project CR-M), at an estimated total project cost (including feasibility study, design and engineering services, and construction) of \$2,241,000. The project's funding sources include:

- Up to \$1,741,000 available to the Commission through a Hennepin County tax levy on watershed taxpayers (CIP levy), with \$434,000 levied in 2024, \$653,500 levied in 2025, and an estimated \$653,500 to be levied in 2026.
- Up to \$200,000 from the Commission's Closed Project Account.
- \$200,000 from the City of Golden Valley's portion of the Commission's Channel Maintenance Fund.
- Up to \$100,000 from the City of Golden Valley's capital improvement program.

The Commission executed a cooperative agreement with the City of Golden Valley (City) that specifies the Commission will provide engineering services for the project and the City will bid, award, and administer construction of the project, and provide long term maintenance. With the Commission-approved increased cost of the project, the cooperative agreement may need to be updated/amended (see discussion under the "90% Plans" section).

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In March 2025, the Commission approved a scope of work for engineering services to be provided by the Commission Engineer including project design, preparation of bid documents, assistance with community engagement, preparation of exhibits for necessary property rights, permitting and environmental review, construction observation, environmental oversight, and inspections, all in cooperation and close coordination with the City. Per a June 2025 Commission-approved amendment to the engineering services scope, the Commission Engineer's services also include performing a field wetland delineation, an architectural survey, and corresponding reports. Also in June, the Commission Administrator administratively approved the scope for a Phase I archeological survey that was included within the project's contingency budget.

At the July 2025 meeting, the Commission Engineer presented the 50% design plans and reported on additional and expanded areas of erosion since the feasibility study, potential plans for an expansion of restored riparian areas, and increases to construction costs. The Commission approved the 50% designs and ordered a reprioritization of eroded sites and budgeting options.

At the August 2025 meeting, the Commission approved moving forward with restoring all low, medium, and high priority areas plus vegetation restoration on public and private property adjacent to the creek. An updated budget of \$2,592,000 was approved for construction + contingency.

The Commission Engineer completed the 90% design plans, which must be reviewed and approved by the Commission. The remainder of this memo presents information about the prior feasibility study, the design changes from the 50% plans to 90% plans, cost, schedule, BCMWC floodplain analysis, modeling results, and approval/permitting needs.

Feasibility Study and Selected Project

The Commission completed a feasibility study (Feasibility Report for Bassett Creek Main Stem Restoration, Regent to Golden Valley Road, June 2023) that identified, mapped, and prioritized stream sections in need of restoration along a 7,000-foot section of Bassett Creek (known as *Hańá Wakpádaŋ* in the Dakota language) in Golden Valley from Regent Avenue to Golden Valley Road (see attached figure). The feasibility report and further project information can be found online at [Bassett Creek Watershed Management Commission :: Bassett Creek Restoration Project: Regent Ave. to Golden Valley Rd.](#)

The approximately 7,000-foot reach is located on a combination of privately-owned and publicly-owned properties, including portions of land owned by Golden Valley, and operated in partnership with Three Rivers Park (TRPD) through the Sochacki Park Joint Powers Agreement. The creek maintains a steady base flow year-round and meanders through neighborhoods and wooded backyards and alongside a wooded reach of Sochacki Park. Erosion of the stream banks varies along the reach from mild to severe, with eroding bank heights varying from approximately 2.5 to 8 feet. The goal of the study and the project was to identify methods to reduce sediment load and associated nutrient and contaminant loading to Bassett Creek, preserve and enhance in-stream and riparian habitats, and prevent future channel erosion.

The feasibility study identified 79 unique locations for stabilization, which were grouped into 40 restoration areas within the approximately 7,000-foot assessed reach. The restoration areas included a variety of stream restoration methods such as grading, vegetation establishment (plantings, fascines, etc.), riprap, j-hook vanes, cross vanes, and toe wood. The restoration areas were ranked from low to high priority depending on several factors, including the severity of erosion, protection of existing infrastructure, and

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public vs. private ownership. The Commission Engineer developed three alternatives using the ranked restoration areas:

- Alternative 1 – completing restoration in high priority areas only
- Alternative 2 – completing restoration in high and medium priority areas
- Alternative 3 – completing restoration in high, medium, and low priority areas

At their June 15, 2023 meeting, the Commission approved the implementation of Alternative 3, to stabilize all eroding streambanks including those ranked high, medium, and low priority. The feasibility study predicted the proposed project to reduce pollution in Ĥaĥá Wakpádaŋ / Bassett Creek and downstream in the Mississippi River by an estimated 82 lbs. of total phosphorus and 136,000 lbs. of total suspended solids on an average annual basis. The predicted pollution reduction tied to the 90% design is significantly higher, as noted below.

90% Plans

Since the July 2025 Commission meeting, the Commission Engineer completed 90% design plans which incorporates comments from the public and recent comments and direction from City staff.

The City and BCWMC held a public open house on October 30th, with approximately 29 people attending. Most residents adjacent to the project were supportive. Some attendees had questions about specific site layout, access routes, impacts and restoration of properties, etc. –

Similar to the 50% design, the main components of the 90% design include:

- Stream bank grading and establishing vegetation
- Protecting existing utility infrastructure with rock riprap armoring and/or in-stream rock cross vanes to maintain stream bed elevation
- Installing a variety of stream bank stabilization elements including riprap, root wads and toe wood, coir logs, rock j-hook vanes and cross vanes, fascines, and live stakes
- Enhancing protection near pipe outfalls and street crossings
- Stabilizing channels that carry parking lot runoff
- Establishing new vegetation in areas disturbed by construction
- Buckthorn removal and vegetation restoration in floodplain areas adjacent to the creek

Updates from the 50% to the 90% design included:

- Revising the design, as feasible, to incorporate comments from City staff and members of the public, including feedback received from the October 30, 2025 public meeting including:
 - Construction access route modifications. Feedback was received at the meeting about whether homeowners would allow construction access through their properties
 - Vegetation was updated to reflect homeowner preferences such as high versus low vegetation and protecting specific trees.
 - The extents of restoration were extended in various locations based on feedback from the public.
- Refining the design to incorporate the most appropriate stabilization methods for the current site conditions
- Developing surface models to tie the proposed restoration into existing conditions

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- Adding stormwater pollution prevention plan (SWPPP) sheets
- Adding cross-section sheets
- Updating channel and bank stabilization measures to prevent erosion under anticipated proposed conditions velocities and shear stresses, modeled in HEC-RAS. Velocities within the channel range from 2 to 8 feet per second, with the highest velocities generally located in the center of the channel. Shear stresses are typically below 1 lb/ft² but can be as high as 4 lb/ft².
- Updating tree removals to align with proposed surface grading (surface model updated for 90% design) and enhancing restoration potential by opening up canopy.

The table below highlights changes from the feasibility study to the 90% design plans for construction cost, restoration length, pollutant removal, and tree removal:

Item	Feasibility Study	50% Plans	90% Plans
Construction Cost with Contingency	\$1,568,700	\$2,592,000	\$2,677,000
Length of Restoration	7,370 feet	8,610	8,150 feet
Annual Pollutant Removal ²	82.4 pounds total phosphorus 164,820 pounds total suspended solids	190.6 pounds total phosphorus 381,130 pounds total suspended solids ³	193.4 pounds total phosphorus 386,570 pounds total suspended solids
Tree Removals ¹	88	57	138

[1] Tree removal quantities do not include the removal of buckthorn or dead/dying trees. Additional trees identified for removal between feasibility and 90% design are limited to less desirable species, including mulberry, green ash, box elder, and elm.

[2] Pollutant reductions from the feasibility study to 50% and 90% plans have increased due to increased length of bank stabilization (thereby reducing phosphorus and total suspended solids loading downstream). In addition, the 50% and 90% plans reflect changes in bank erodibility category along the reach since the feasibility study (higher bank erodibility means more potential for pollution reduction); the 2025 field evaluation resulted in shifting the erosion potential category for several banks from moderate to high or very high, with corresponding increases in estimated pollutant reductions..

[3] Pollutant reductions based on the August 2025 BCWMC meeting

Opinion of Cost for 90% Design Plans

Description	Estimated Cost
Mobilization / Demobilization	\$209,000
Traffic Control	\$30,000
Erosion & Sediment Control	\$93,000
Removals (clearing / grubbing, trees, excavation)	\$345,000
Stream Restoration (grading, installing structures, etc.)	\$1,083,000
Restoration and Vegetation Management ^[1]	\$471,000
Estimated Construction Cost	\$2,231,000
Construction Contingency (approximately 20%)	\$446,000
Total Estimated Construction Cost	\$2,677,000

[1] This work will be completed under a separate bid and contract and includes mobilization, demobilization, traffic control and other related items to the restoration and vegetation management

The detailed cost estimates are attached as an appendix. Although this cost estimate is slightly higher than estimates at the 50% plans, staff recommends moving forward to 100% plans and bidding. Administrator Jester will bring a review of total project budgets and funding sources to the December

meeting including budgets for engineering services, budgets for construction costs, a revision to the cooperative agreement with Golden Valley, and options for funding sources.

BCWMC Floodplain Analysis

The proposed project includes work in the BCWMC 100-year floodplain; therefore, the proposed project must adhere to the BCWMC’s floodplain requirements. Due to the nature of the proposed work, the main requirements from the BCWMC are that:

- the project must maintain no net loss in floodplain storage, and
- no increase in flood level at any point along the trunk system, managed to a precision of 0.00 feet.
- decrease in flood level shall be less than 0.1 feet

Floodplain Storage

The proposed project will result in approximately 3,797 cubic yards of floodplain fill due to the placement of in-stream structures including cross-vanes and J-hooks, as well as toewood and rock riprap. The proposed project will create 5,358 cubic yards of compensating storage due to grading throughout the channel, resulting in a net gain of approximately 1,561 cubic yards of floodplain storage as a result of the project.

Floodplain Elevation (No Rise)

The Commission Engineer used 2D HEC-RAS to assess the impact of stream restoration. The Commission Engineer developed two models: an existing conditions model and a proposed conditions model. The existing conditions HEC-RAS model was developed using the BCWMC XPSWMM model as a base and updating the model to include survey data acquired as part of the project. The proposed conditions model was developed by revising the updated existing conditions HEC-RAS model to reflect the proposed stream restoration structures and grading.

Table 1 shows the preliminary modeling results for the 100-year high water elevations throughout the reach. Currently the design does not meet the BCWMC requirements due to a more than 0.01-foot flood increase from downstream of Dresden Lane to Upstream of Golden Valley Road. Minor revisions will be made to the design during the 100% design stage to comply with BCWMC requirements.

Table 1 Comparison of Existing and Proposed 100-Year High Water Elevation

FEMA Cross Section	Location	100-Year High Water Elevation (ft) – Existing Conditions	100-Year High Water Elevation (ft) – Proposed Conditions	Increase in Flood Level from Existing to Proposed Conditions (ft)
FEMA_AL_266	Station 9+00, Upstream of Noble Avenue North	842.47	842.41	-0.06

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FEMA_AK_201	Station 22+00, Downstream of Noble Avenue	839.12	839.05	-0.07
FEMA_AJ_169	Station 31+00, Between Noble Avenue and Bassett Creek Drive	837.63	837.61	-0.02
FEMA_AI_202	Station 40+00, Upstream of Bassett Creek Drive	837.52	837.51	-0.01
FEMA_AH_267	Station 49+00, Upstream of Dresden Lane	834.31	834.30	-0.01
FEMA_AG_168	Station 50+00, Downstream of Dresden Lane	833.36	833.38	0.02
FEMA_AF_167	Station 65+00, Between Dresden Lane and Golden Valley Road	832.94	832.99	0.05
FEMA_AE_208	Station 71+00, Upstream of Golden Valley Road	832.33	832.43	0.10

Schedule

The table below outlines the tentative schedule included in the engineering services work scope approved at the March 20, 2025 BCWMC meeting alongside the updated project schedule as of November 2025. At the March 2025 meeting, the Commission engineer noted that the schedule was subject to change based on various factors such as permitting, design changes, and unforeseen circumstances. The updated schedule outlined below incorporates schedule changes to date and accounts for anticipated delays related to permitting. This revised schedule also takes advantage of a more favorable bidding environment in late winter or early spring of next year, rather than this fall.

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Tasks and milestones	Schedule as of March 2025	Recommended Revised Schedule, as of November 2025
Design – complete 50% plans for review and permitting	Summer 2025	July 2025 (complete)
Permitting	Summer / Fall 2025	Ongoing through Spring 2026
Public Meeting #2	Not set	October 2025 (complete)
Design – complete 90% plans for review	Fall 2025	November 2025
Design – complete 100% plans for review	Fall 2025	December 2025 / January 2026
Bidding	Fall 2025	January/February 2026
Construction	Fall 2025 / Winter 2025/2026	Tree clearing in March or early April 2026, Construction in late Summer / Fall 2026
Restoration, Planting and Vegetation Establishment	2026-2028	2026-2030 (Planting to occur as soon as possible following completion of construction)
Record construction drawings, final restoration, project closeout	Fall 2025 / Winter 2026	Spring 2027

Approvals/permits required

In addition to Commission approval of the plans, other permits/approvals will be required for this project, including the following:

- Compliance with the Minnesota Wetland Conservation Act (WCA)
- US Army Corps of Engineers (USACE) Permit (Section 404 permit, Section 401 Certification, and Section 106)
- Minnesota Department of Natural Resources (MDNR) Public Waters Work Permit
- Minnesota Pollution Control Agency (MPCA) Construction Stormwater General Permit
- City of Golden Valley Right-of-Way Permit
- City of Golden Valley Stormwater Permit
- City of Golden Valley Buffer Ordinance Requirements
- Bassett Creek Watershed Management Commission Floodplain Requirements

As part of the permitting process a field wetland delineation was completed to meet requirements by USACE. In addition, the field wetland delineation was used in the 90% design to meet Golden Valley buffer ordinance requirements. Other noteworthy field work for permitting was the archeological and architectural survey that were completed in September 2025. The archeological survey did not find cultural resources within the project area, and the architectural history survey did not identify properties that need phase II evaluations.

Status of Property Easements

Project construction requires coordination with private property owners to secure temporary easement rights, which allow for mobilization and construction access, installation of erosion and sediment controls, removals, stream restoration, and vegetation management activities associated with the project.

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Throughout planning and design, City staff and the Commission Engineer worked closely to maximize use of areas where the City already has existing drainage and utility easements or property ownership. However, much of the proposed work is located on private properties with minimal existing easements.

During the 50% design and prior to the first public open house, City staff contacted affected property owners by mail and in person to inform the nature of the project and discuss the need for temporary construction easements. Property owners were asked to provide preliminary feedback on whether they would be willing to allow construction access in support of the project. Responses were documented in a spreadsheet and considered when developing alternative access routes. In addition to access considerations, any concerns related to construction access and design details were also recorded, and this feedback was incorporated into the project design where appropriate.

Between the 50% and 90% design milestones, City staff developed a Temporary Construction Easement template and the Commission Engineer prepared supporting exhibits. In October 2025, City staff mailed a follow-up letter to property owners where construction access was proposed in the draft 90% plans. This letter provided a project update, notice of the upcoming public open house, and a draft Temporary Construction Easement template for informational purposes only. The letter provided instructions to access the updated project website, and steps to complete an online feedback form to indicate willingness to grant access in support of the project.

There are approximately 61 properties identified as part of the project area. Approximately 20 property owners have already indicated willingness to provide construction access. Approximately 39 property owners have not yet responded to any outreach. Of those, 20 properties are located where the existing City easements already allow construction activities. The other 19 properties are located where the City does not have an existing easement. There are 2 property owners who have indicated they may not grant access for the project and no easements currently exist. The City is working with these residents to understand concerns and provide reassurance and potential solutions in coordination with Commission Engineer.

Following approval of the 90% design plans, City staff will contact property owners to formalize temporary construction easements. Easement coordination will continue until all required easements are secured. If access cannot be obtained from certain property owners, project construction limits may be reduced accordingly. Easement agreements are expected to be finalized gradually, generally beginning with property owners who have expressed willingness to provide construction access, and continuing as additional property owner concerns are addressed throughout the project corridor. In addition to coordination efforts with private property owners, the City and Commission Engineer will also be coordinating with Three Rivers Park District where property access is required for the project.

Anticipated Work for 100% Plans

If the Commission approves the 90% plans and directs the Commission Engineer to move forward with 100% plans the following tasks will be necessary:

- Revise proposed-conditions hydraulic model to reflect the 100% design
- File permit applications
- Assist the City with easement acquisition
- Update plans to 100% design for bidding

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- Update cost estimates for the 100% design (for bidding)
- Finalize technical specifications
- Assist the City with bidding and selection of contractor
- Support the City with construction

Recommendation for Commission Action

- 1) Consider approval of 90% design plans
- 2) Authorize Commission Engineer to complete 100% plans and contract documents for bidding and construction by the City of Golden Valley

Attachments

Engineer's Opinion of Probable Costs – 90% Design

PREPARED BY: BARR ENGINEERING COMPANY				SHEET:	1	OF	1	
BARR ENGINEER'S OPINION OF PROBABLE PROJECT COST	PROJECT:	Bassett Creek Main Stem Restoration Project, Regent Avenue to Golden Valley Road (CR-M 2024)			CREATED BY:	ADB2	DATE:	11/2/2025
	LOCATION:	City of Golden Valley			CHECKED BY:	JCO	DATE:	11/13/2025
	PROJECT #:	23272114.00			APPROVED BY:	JCO	DATE:	11/13/2025
	PHASE ONE EARTHWORK AND STRUCTURES - 90% PRELIMINARY DESIGN OPINION OF COST - SUMMARY				ISSUED:	FOR REVIEW	DATE:	11/13/2025
				ISSUED:		DATE:		
				ISSUED:		DATE:		

Section Title	Item Code	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	ITEM COST	NOTES
GENERAL							
	A	MOBILIZATION/DEMobilIZATION	LS	1	\$159,000	\$ 159,000.00	1,2,3,4,5,6
	B	CONTROL OF WATER	LS	1	\$50,000	\$ 50,000.00	1,2,3,4,5,6
	C	TRAFFIC CONTROL	LS	1	\$30,000	\$ 30,000.00	1,2,3,4,5,6
EROSION CONTROL AND REMOVALS							
	D	CONSTRUCTION ENTRANCE	EA	19	\$2,500	\$ 47,500.00	1,2,3,4,5,6
	E	SILT FENCE	LF	2,370	\$4	\$ 9,480.00	1,2,3,4,5,6
	F	SEDIMENT CONTROL LOG	LF	3,410	\$4	\$ 13,640.00	1,2,3,4,5,6
	G	INLET PROTECTION	EA	13	\$200	\$ 2,600.00	1,2,3,4,5,6
	H	TEMPORARY STREAM CROSSING	EA	5	\$4,000	\$ 20,000.00	1,2,3,4,5,6
	I	HERBICIDE APPLICATION	AC	6	\$5,500	\$ 35,200.00	1,2,3,4,5,6
	J	CLEARING AND GRUBBING TREES/SHRUBS LESS THAN 8" DIAMETER (MEDIUM DENSITY)	AC	6	\$6,000	\$ 38,400.00	1,2,3,4,5,6
	K	SELECT TREE REMOVAL AND SALVAGE WITH ROOT WAD (<12")	EA	63	\$250	\$ 15,750.00	1,2,3,4,5,6
	L	SELECT TREE REMOVAL AND SALVAGE WITH ROOT WAD (>12")	EA	51	\$300	\$ 15,300.00	1,2,3,4,5,6
	M	COMMON EXCAVATION - EXCAVATE, HAUL, AND DISPOSE OFFSITE	CY	2,673	\$90	\$ 240,570.00	1,2,3,4,5,6
CIVIL							
	N	GRADING (P)	SY	4,229	\$15	\$ 63,435.00	1,2,3,4,5,6
	O	FURNISH AND INSTALL GRANULAR FILTER	TON	684	\$121	\$ 82,764.00	1,2,3,4,5,6
	P	FURNISH AND INSTALL FIELDSTONE RIPRAP	TON	2,736	\$120	\$ 328,320.00	1,2,3,4,5,6
	Q	FURNISH AND INSTALL BOULDER CROSS VANE (P)	LF	675	\$120	\$ 81,000.00	1,2,3,4,5,6
	R	FURNISH AND INSTALL J-HOOK BOULDER VANE	EA	42	\$2,000	\$ 84,000.00	1,2,3,4,5,6
	S	FURNISH AND INSTALL LIVE FASCINES	LF	490	\$56	\$ 27,562.50	1,2,3,4,5,6
	T	FURNISH AND INSTALL COIR LOGS	LF	0	\$35	\$ -	1,2,3,4,5,6
	U	FURNISH AND INSTALL TOE WOOD (INCLUDES 173 ROOT WADS)	LF	1,596	\$75	\$ 119,700.00	1,2,3,4,5,6
	V	FURNISH AND INSTALL ROOTWAD FROM OFF-SITE SOURCE	EA	113	\$294	\$ 33,222.00	1,2,3,4,5,6
	W	INSTALL ROOTWAD FROM ON-SITE SOURCE	EA	114	\$235	\$ 26,790.00	1,2,3,4,5,6
	X	FURNISH AND INSTALL VRSS LIFTS	LF	3,200	\$68	\$ 216,000.00	1,2,3,4,5,6
	Y	FURNISH AND INSTALL RAIN GARDEN	LS	1	\$20,000	\$ 20,000.00	1,2,3,4,5,6
		CONSTRUCTION SUBTOTAL				\$1,760,000	1,2,3,4,5,6,7
		CONSTRUCTION CONTINGENCY (20%)				\$352,000	1,4,8
		ESTIMATED CONSTRUCTION COST				\$2,112,000	1,2,3,4,5,6,7
ESTIMATED ACCURACY RANGE				-5%		\$2,007,000	1,2,3,4,5,6,7
				10%		\$2,324,000	1,2,3,4,5,6,7

Notes

- Quantities based on design work completed (90%).
- Unit prices based on information available at this time.
- Limited soil boring and field investigation information available.
- This design level (Class 1, 70-100% design completion per ASTM E 2516-11) cost estimate is based on concept designs, alignments, quantities and unit prices. Costs will change with further design. Time value-of-money escalation costs are not included. A construction schedule is not available at this time. Contingency is an allowance for the net sum of costs that will be in the Final Total Project Cost at the time of the completion of design, but are not included at this level of project definition. The estimated accuracy range for the Total Project Cost as the project is defined is -5% to +10%. The accuracy range is based on professional judgement considering the level of design completed, the complexity of the project and the uncertainties in the project as scoped. The contingency and the accuracy range are not intended to include costs for future scope changes that are not part of the project as currently scoped or costs for risk contingency. Operation and Maintenance costs are not included.
- Estimate assumes that projects will not be located on contaminated soil.
- Estimate costs are to construct the project. The estimated costs do not include maintenance, monitoring or additional tasks following construction.
- Estimate costs are reported to nearest thousand dollars.

BARR		PREPARED BY: BARR ENGINEERING COMPANY		SHEET:	1	OF	1
				CREATED BY:	DRM3	DATE:	11/5/2025
ENGINEER'S OPINION OF PROBABLE PROJECT COST				CHECKED BY:	BHD	DATE:	11/6/2025
PROJECT:	Bassett Creek Main Stem Restoration Project, Regent Avenue to Golden Valley Road (CR-M 2024)			APPROVED BY:	JCO	DATE:	11/13/2025
LOCATION:	City of Golden Valley			ISSUED:	FOR REVIEW	DATE:	11/13/2025
PROJECT #:	23272114.00			ISSUED:		DATE:	
PHASE TWO RESTORATION - 90% PRELIMINARY DESIGN OPINION OF COST - SUMMARY				ISSUED:		DATE:	

Section Title	Item Code	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	ITEM COST	NOTES
GENERAL							
	A	MOBILIZATION/DEMOBILIZATION	LS	1	\$43,000	\$ 43,000.00	1,2,3,4,5,6
	B	TRAFFIC CONTROL	LS	1	\$6,000	\$ 6,000.00	1,2,3,4,5,6
	C	REMOVAL OF TEMPORARY EROSION CONTROL	LS	1	\$18,000	\$ 18,000.00	1,2,3,4,5,6
LANDSCAPE AND RESTORATION							
	D	INVASIVE PLANT REMOVAL AND HERBICIDE APPLICATION	ACRE	6.4	\$5,500	\$ 35,200.00	1,2,3,4,5,6
	E	FURNISH AND PLANT TREES (#10 CONT.)	EA	15	\$750	\$ 11,250.00	1,2,3,4,5,6
	F	FURNISH AND INSTALL SHRUBS (#2 CONT.)	EA	400	\$100	\$ 40,000.00	1,2,3,4,5,6
	G	FURNISH AND INSTALL PLUGS	EA	11,281	\$6.00	\$ 67,686.00	1,2,3,4,5,6
	H	FURNISH AND INSTALL SEED MIX (RIPARIAN SEED MIX AND WOODLAND SEED MIX)	ACRE	7.8	\$5,200	\$ 40,560.00	1,2,3,4,5,6
	I	FURNISH AND INSTALL LIVE STAKES	EA	1,690	\$12	\$ 20,280.00	1,2,3,4,5,6
	J	TURF ESTABLISHMENT (REPAIR CONSTRUCTION ENTRANCES, FURNISH AND INSTALL TURF SEED MIX)	ACRE	1	\$7,500	\$ 7,500.00	1,2,3,4,5,6
	L	FURNISH AND INSTALL EROSION CONTROL BLANKET	SY	3,896	\$4	\$ 13,636.00	1,2,3,4,5,6
	K	HYDROMULCH	ACRE	7	\$8,500	\$ 59,500.00	1,2,3,4,5,6
	M	ANNUAL VEGETATION ESTABLISHMENT AND MAINTENANCE	EA	3	\$36,000	\$ 108,000.00	1,2,3,4,5,6
		CONSTRUCTION SUBTOTAL				\$471,000	1,2,3,4,5,6,7
		CONSTRUCTION CONTINGENCY (20%)				\$94,000	1,4,7
		ESTIMATED CONSTRUCTION COST				\$565,000	1,2,3,4,5,6,7
ESTIMATED ACCURACY RANGE			-5%			\$537,000	1,2,3,4,5,6,7
			10%			\$622,000	1,2,3,4,5,6,7

Notes

¹ Quantities based on Design Work Completed (90%).

² Unit Prices Based on Information Available at This Time.

³ Limited Soil Boring and Field Investigation Information Available.

⁴ This design level (Class 1, 70-100% design completion per ASTM E 2516-11) cost estimate is based on concept designs, alignments, quantities and unit prices. Costs will change with further design. Time value-of-money escalation costs are not included. A construction schedule is not available at this time. Contingency is an allowance for the net sum of costs that will be in the Final Total Project Cost at the time of the completion of design, but are not included at this level of project definition. The estimated accuracy range for the Total Project Cost as the project is defined is -5% to +10%. The accuracy range is based on professional judgement considering the level of design completed, the complexity of the project and the uncertainties in the project as scoped. The contingency and the accuracy range are not intended to include costs for future scope changes that are not part of the project as currently scoped or costs for risk contingency. Operation and Maintenance costs are not included.

⁵ Estimate assumes that projects will not be located on contaminated soil.

⁶ Estimate costs are to construct the project. The estimated costs do not include maintenance, monitoring or additional tasks following construction.

⁷ Estimate costs are reported to nearest thousand dollars.