

EVALUATION PANEL REPORT

Project(s): Badger Mill Creek Watershed Models Update
Location: Upper and Lower Badger Mill Creek Watersheds; West Madison
Aldermanic District: 1, 7, 9, and 20
RFP: 15034-0-2026-BG
Date: 7/27/2026

This Evaluation has been reviewed and approved by a Principal Architect 2, Principal Engineer 2, Deputy City Engineer, Deputy Division Manager, or the City Engineer. ☒ Yes ☐ No

A. Project Details

1. Background Information

In response to the damage incurred from extreme rainfall events in recent years, most notably 2018, as well as the increasing frequency of such events, the Madison Common Council authorized the City of Madison Engineering Division (City) to develop watershed models and plans for watersheds of greatest concern in the Madison area via the Watershed Study Program.

The City initiated watershed studies on the west side of the city in 2019 and progressed east across the City. During the subsequent years, there have been substantial changes to the land use, land cover, and storm water infrastructure in the early watershed study areas due to new development, redevelopment, and construction of new stormwater management practices. The far west and southwest side of the city have experienced some of the most rapid development in the city, and that growth is expected to continue.

Much of this rapidly developing area is located within the Badger Mill Creek Watershed. For the purposes of the Watershed Study Program four sub-watersheds were delineated and separately studied: Lower Badger Mill Creek (LBMC), Upper Badger Mill Creek (UBMC), East Badger Mill Creek (EBMC) and McKenna Greentree (MGT). EBMC and MGT drain into the UBMC sub watershed. UBMC and LBMC include the most extensive areas of recent and ongoing development, while EBMC and MGT were nearly fully developed prior to beginning of the Watershed Study Program.

Multiple previous studies have been completed in this area, however, additional study is needed due to the rapid changes in the watersheds and to provide a complete picture of the potential need for stormwater improvements to meet the current Watershed Study Program objectives. The LBMC Watershed Study modeling was completed in 2021 while the UBMC Study modeling was completed in 2022 by consultants contracted by the City. Those studies only modeled the existing watershed conditions at the time and did not evaluate the stormwater management system against the Watershed Study Program system performance targets. Previous modeling completed in 2001 and 2003 by Earth Tech recommended several proposed regional stormwater practices and plat level peak runoff controls up to the 100-yr 24-hour storm.

Engineering would like to update the UBMC and LBMC watershed models to include developments and regional stormwater ponds planned or constructed since the initial model build as part of the Watershed Study Program (2021-2022). Additionally, the City would like to assess the stormwater system against current performance targets and identify potential improvement projects that may be needed to meet these targets. Finally, due to the rapid urbanization of the watersheds and changing City ordinance requirements, the City would like to understand how the overall development and management of stormwater within the LBMC watershed has impacted the overall watershed hydrology compared to predeveloped conditions; and the overall change in flows leaving the City of Madison.

The Badger Mill Creek Watershed Model Update Study described in this Evaluation Panel Report is an update of two models (Upper Badger Mill Creek and Lower Badger Mill Creek) built early in the Watershed Study Program. See Figure A for the locations of the watersheds.

Most of the watershed is within the City of Madison Municipal limits, there are areas of the study that encompass the Town of Middleton and Town of Verona. The watershed's conveyance system varies widely with urban curb and gutter and storm sewer,

open channels, rural ditches, and intermittent waterways. The age of the infrastructure varies and data regarding the infrastructure size, materials.

The proposal review and selection process has followed the approach established in the selection of engineering consultants for previous studies.

2. Role of Watershed Studies

The watershed studies are complex hydrologic and hydraulic analysis that help identify the causes of flooding and identify potential solutions to reduce flood risk. All watershed studies include an extensive public outreach effort.

The scope of work is consistent with the scopes of other watershed study efforts but has been modified because existing models were previously built for the area. The consultants will be updating the existing models to current conditions and then identifying potential recommendations for flood mitigation measures where they identify a need.

The watershed study main webpage is found here: <https://www.cityofmadison.com/flooding/city-initiatives/watershed-studies>

B. Purchasing Details

1. Guidelines for RFP Evaluation

The watershed study projects require highly technical staff with expertise in hydrologic and hydraulic modeling, geographic information systems (GIS), and public outreach and education techniques. As such, Engineering utilizes the City's Competitive Selection process.

The projects will be more than \$100,000 and last longer than 1 year, therefore the competitive process outlined in the Purchasing Guidelines (<https://www.cityofmadison.com/employeeenet/toolkit/contracts-purchasing/contracts-quick-chart>), *Greater than 5 calendar/budget years or 1-5 years and averaging more than \$100,000 per year – PO, RFP, Purchase of Services Contract, and Council Resolution*, was used.

The City of Madison solicited proposals from qualified vendors through a Request for Proposals (RFP) process. The RFP and associated materials were posted on the City's webpage and two distribution networks, VendorNet and DemandStar, on Tuesday, May 20, 2026. Prospective RFP respondents could submit questions about the RFP, due by Monday, June 1 to be responded to by Wednesday, June 3, 2026. RFP responses were due to Purchasing on Wednesday, June 17, 2025.

Section B5. Evaluation Structure and Scoring describes the process used to select the consultant team for each watershed study.

2. RFP Respondents

The list below shows the consultant teams that proposed for the study.

Baxter & Woodman
Brown & Caldwell
Carollo Engineers
MSA Professional Services
SRF Consulting Group
Stanely Consultants
Strand, Inc

3. Disqualifications

No firms were disqualified.

4. Evaluation Panel

The evaluation panel for each study was composed of three City Staff from the Engineering Division Storm Section and one member outside of Engineering from the Planning Division. The two Storm Section Staff on the panel bring previous experience in the watershed program, including watershed study project management, extensive watershed modeling experience, previous RFP review, and stormwater project design. The Planning Division staff understands the current development plans and progression and existing areas of stormwater concerns.

5. Evaluation Structure and Scoring

Per instruction within the Request for Proposals (attached to this document in Appendix A), respondents were asked to provide a proposal to be evaluated by the evaluation panel. Proposals were initially provided to a Purchasing Agent whom facilitated the review process.

Panelists followed City Purchasing Guidelines when evaluating the proposals. A maximum of 100 points were available. Cost was assigned a weight of 30%, Local Preference was assigned a weight of 5% per Resolution [#05943](#), Project Understanding and Approach was assigned a weight of 25%, Project Team was assigned a weight of 20%, and Relevant Project Experience was assigned a weight of 20%. Please note the RFP provided detailed instruction and grading scales to each evaluated category.

Each member of the review panel first reviewed and scored each proposal for each study independently for technical content only (Approach, Team, and Relevant Project Experience), with costs removed. Scores were submitted to the Purchasing Agent for compiling. Following completion of the individual review, the Review Panel met to discuss the proposals and at that time were provided the costs and local preference scores for each proposal. Following the meeting reviewers were allowed to review the detailed cost breakdowns and revise their technical scores if they wanted.

Additional email questions were sent to the top three scoring firms from the initial review and discussion. The review panel felt that additional clarity was needed to better compare the varied approaches. Each of the three top scoring firms proposed to use a different modeling software to complete the work. The RFP did not specify a preferred software, each with different strengths and weaknesses and staff has varying levels of knowledge on each. The panel asked each of the top three scoring firms to submit a cost for converting the Badger Mill Creek Watershed models to XPSWMM (the software platform used for most of the Watershed Study Program, but which is only supported in a limited manner by the developer) as well as the cost to convert the XPSWMM models to ICM Infoworks (which is the current anticipated future industry standard, but City staff only has very limited experience in to date).

The responses and revised costs were discussed by the review panel to determine if additional scoring adjustments were warranted. Based on the responses and budgets provided by the responding firms, the review panel recommended a the additional task of converting the models to ICM. Including those costs did not result in a change to the ranking of the top three firms.

Evaluations were documented through a quantifiable scoring mechanism – see Section C of this document. The evaluation was conducted in a structured manner that facilitated object comparison between proposals. Individual scores of each panel member were averaged to create the Combined Score for each Proposer for each Watershed Study.

Section C1 shows the proposal scoring for each watershed study.

All proposals are available for review. Due to the large size of the documents, there were not included with this Evaluation Panel Report.

6. Evaluation Timeline

May 20, 2026	– RFP issued
June 1, 2026	– Questions from Consultants due
June 3, 2026	– Answers to Consultant questions and Addendum 1 posted
June 17, 2026	– Proposals due
June 21, 2026	– Distribute proposals to evaluation panel for review and scoring prior to evaluation meeting
July 17, 2026	- Preliminary Technical Scores due to Purchasing
July 21, 2026	– Evaluation panel meets to discuss proposals and scores
July 23, 2026	- Additional questions asked of top three scoring firms
July 27, 2026	- Responses due from top three firms, panel discusses and recommends selection
July 28, 2026	– Review of Evaluation by Managing Engineers and revisions based on review
July 28, 2026	– Notify selected team of Intent to Award
July 29, 2026	– Notify teams not selected; results posted

C. Summary of Evaluation Panel Findings

1. Evaluation and Scoring

The selection process was competitive as three qualified proposals were received and multiple respondents have extensive knowledge or worked on watershed studies in the past. There was a wide range of costs across the three proposals representing three relatively different approaches to meeting the stated performance targets.

The combined scoring of the panel can be found in the table below.

15034-0-2026-BG																	
		Baxter & Woodman				Brown & Caldwell				Carollo Engineers				MSA			
Criteria	Weight	Weighted Average				Weighted Average				Weighted Average				Weighted Average			
Project Understanding and Approach	25	8.00	6.00	8.00	18.33	9.00	8.00	8.00	20.83	9.00	7.00	8.00	20.00	10.00	8.00	8.00	21.67
Team Composition, Performance and Key Personnel	20	9.00	7.00	7.00	15.33	8.00	7.00	7.00	14.67	9.00	6.00	8.00	15.33	8.00	7.00	9.00	16.00
Relevant Project Experience	20	8.00	6.00	7.00	14.00	9.00	7.00	9.00	16.67	9.00	6.00	9.00	16.00	9.00	7.00	9.00	16.67
Total	65	47.67				52.17				51.33				54.33			

		SRF Consulting Group				Stanley Consultants				Strand Associates			
Criteria	Weight	Weighted Average				Weighted Average				Weighted Average			
Project Understanding and Approach	25	8.00	7.00	8.00	19.17	6.00	8.00	5.00	15.83	9.00	8.00	8.00	20.83
Team Composition, Performance and Key Personnel	20	8.00	7.00	9.00	16.00	7.00	7.00	6.00	13.33	9.00	7.00	7.00	15.33
Relevant Project Experience	20	7.00	7.00	9.00	15.33	7.00	6.00	6.00	12.67	9.00	6.00	9.00	16.00
Total	65	50.50				41.83				52.17			

Criteria	Weight	Baxter & Woodman	Brown & Caldwell	Carollo Engineers	MSA	SRF Consulting Group	Stanley Consultants	Strand
Technical score	65	47.67	52.17	51.33	54.33	50.50	41.83	52.17
Cost score	30	30.00	24.79	24.21	24.02	25.73	24.33	25.86
Local Vendor Preference	5	0.00	0.00	0.00	0.00	0.00	0.00	5.00
Total score	100	77.7	77.0	75.5	78.4	76.2	66.2	83.0

Notes:

1. Proposal review is the primary basis for evaluating the respondents (based on response to the RFP guidelines in Section 4)
2. Discussion among the panelists was held to share perspectives noted from the proposals during review and to deliberate over selecting a firm to recommend.
3. A full description of requested material and grading weights can be found in this resolution's associated RFP documents.

2. Fee Breakdown

The table below shows the fee break down for each firm.

		Baxter & Woodman	Brown & Caldwell	Carollo Engineers	MSA
	Task or Item	Cost	Cost	Cost	Cost
PHASE 1	Task 1 - Review Existing Watershed Models and GIS Data	\$12,210.00	\$15,680.00	\$13,738.00	\$19,440.00
	Task 2 - Update Existing Conditions Models	\$21,390.00	\$41,141.00	\$21,588.00	\$62,640.00
	Task 3 - Execute Existing Conditions Models	\$14,950.00	\$28,263.00	\$32,693.00	\$2,880.00
PHASE 2	Task 4 - Evaluate Flood Mitigation Alternatives	\$57,140.00	\$78,989.00	\$64,044.00	\$57,420.00
	Task 5 - Public Engagement	\$22,310.00	\$17,887.00	\$13,031.00	\$13,210.00
	Task 6 - Lower Badger Mill Creek Pre-Development Hydrology Analysis	\$13,770.00	\$20,035.00	\$21,484.00	\$25,440.00
PHASE 3	Task 8 - Final Report	\$15,950.00	\$9,779.00	\$48,396.00	\$30,860.00
PHASE 4	Task - 9 Progress and Coordination Meetings	\$41,380.00	\$29,118.00	\$31,782.00	\$36,780.00
TOTAL COST		\$199,100.00	\$240,892.00	\$246,756.00	\$248,670.00
LOCAL VENDOR		0	0	0	0
COST POINTS		30	24.79	24.21	24.02
Unit Costs	Cost per Progress Meeting	\$1,160.00	\$570.00	\$925.00	\$1,410.00
	Cost per Public Information Meeting	\$5,000.00	\$5,750.00	\$6,285.00	\$7,440.00
	Cost per Focus Group or Stakeholder Meeting	\$6,000.00	\$6,220.00	\$3,373.00	\$2,885.00
Additional Tasks	Additional Task 1	\$	\$11,651.00	\$5,725.00	\$
	Additional Task 2	\$	\$8,270.00	\$	\$
	Additional Task 3	\$	\$	\$	\$

		SRF Consulting Group	Stanley Consultants	Strand
	Task or Item	Cost	Cost	Cost
PHASE 1	Task 1 - Review Existing Watershed Models and GIS Data	\$18,734.00	\$11,006.00	\$11,820.00
	Task 2 - Update Existing Conditions Models	\$17,680.00	\$7,317.00	\$13,350.00
	Task 3 - Execute Existing Conditions Models	\$28,712.00	\$14,058.00	\$22,520.00
PHASE 2	Task 4 - Evaluate Flood Mitigation Alternatives	\$95,144.00	\$104,210.00	\$117,040.00
	Task 5 - Public Engagement	\$12,368.00	\$6,721.00	\$11,100.00
	Task 6 - Lower Badger Mill Creek Pre-Development Hydrology Analysis	\$18,772.00	\$41,062.00	\$13,100.00
PHASE 3	Task 8 - Final Report	\$14,946.00	\$20,045.00	\$21,160.00
PHASE 4	Task - 9 Progress and Coordination Meetings	\$25,392.00	\$41,068.00	\$20,910.00
TOTAL COST		\$232,093.00	\$245,487.00	\$231,000.00
LOCAL VENDOR		0	0	5
COST POINTS		25.73	24.33	25.86
Unit Costs	Cost per Progress Meeting	\$1,000.00	\$1,711.00	\$970.00
	Cost per Public Information Meeting	\$45,258.00	\$6,721.00	\$6,000.00
	Cost per Focus Group or Stakeholder Meeting	\$2,640.00	\$1,711.00	\$2,500.00
Additional Tasks	Additional Task 1	\$	\$19,662.00	\$
	Additional Task 2	\$	\$12,944.00	\$
	Additional Task 3	\$	\$	\$

3. Local Preference

The City of Madison has adopted a local preference purchasing policy granting a scoring preference to local suppliers. Only suppliers who meet the criteria and are registered as of the bid's due date will receive preference.

www.cityofmadison.com/business/localPurchasing

Was the outcome of this bid changed by the local purchasing ordinance?

☒ Yes

☐ No

While the result of this evaluation was changed as a result of the local purchasing ordinance Engineering does feel the selected consultant still is well qualified to complete the work and provided a lower cost than the firm that was highest scoring before application of the additional points for local preference.

4. Recommendation

Strand Inc

Based on the evaluation, scoring, and discussion, the evaluation panel recommends that Strand, Inc be approved as the consultant for the professional services required for the Badger Mill Creek Watershed Models Update Study. Based on the questions and follow up with the Firms it is also recommended that the total contract amount for Strand be \$248,000.

5. Additional Proposal Discussion

All members of the review team felt Strand would likely be able to deliver a successful project based on their response to the RFP. They provided a thorough and comprehensive project approach and provided a good value in their total budgeted price. They had a well-qualified project team, and extensive relevant experience. Their team has strong top to bottom experience using the desired modeling software and previous experience completing watershed studies within the City of Madison. While they were not the absolute lowest cost proposer, they scored significantly higher on the technical aspect of the review than the lowest cost proposer.

Appendix A – 2026 Badger Mill Creek Watershed Models Updates RFP



Department of Public Works

Engineering Division

James M. Wolfe, P.E., City Engineer

City-County Building, Room 115
210 Martin Luther King, Jr. Boulevard
Madison, Wisconsin 53703
Phone: (608) 266-4751
Fax: (608) 264-9275
engineering@cityofmadison.com
www.cityofmadison.com/engineering

Assistant City Engineer

Bryan Cooper, AIA
Gregory T. Fries, P.E.
Chris Petykowski, P.E.

Deputy Division Manager

Kathleen M. Cryan

Principal Architect

Amy Loewenstein Scanlon, AIA

Principal Engineer 2

Janet Schmidt, P.E.

Principal Engineer 1

Kyle Frank, P.E.
Mark D. Moder, P.E.
Fadi El Musa Gonzalez, P.E.
Andrew J. Zwieg, P.E.

Financial Manager

Steven B. Danner-Rivers

DATE: May 20, 2026

TO: Consultants Submitting Proposals for Badger Mill Creek Watershed Models Updates

FROM: James M. Wolfe, P.E., City Engineer

SUBJECT: **Request for Proposals**

The City of Madison Engineering Division is requesting consultant proposals for watershed modeling for Badger Mill Creek Watershed Models Updates. Please refer to the RFPs for pertinent information and dates. The following items are included with the RFPs and considered part of it:

Form A: Price Proposal and Signature Affidavit
Form B: References
Form C: Vendor Profile
Exhibit 1 - Recent Developments and Modeling Update Plan
Exhibit 2 – Data Provided by City
Exhibit 3 – Modeling Guidance Document

The RFP responses for both watersheds are due in in pdf format via email to the buyer as described in the RFP, by 2:00 p.m., June 18, 2026. The selection is anticipated to be made before July 15, 2026.

Questions regarding this project shall be directed to City as described in the RFP document. Please submit any questions by June 1, 2025 at 2:00 PM.

Sincerely,

James M. Wolfe, P.E., City Engineer

cc: Janet Schmidt, City

CITY OF MADISON

REQUEST FOR PROPOSALS



RFP #: 15034-0-2026-BG

Title: 2026 Badger Mill Creek Watershed Study

City Agency: Engineering Division

Due Date: Thursday, June 18th, 2026
2:00 PM Central Time

Our Madison – Inclusive, Innovative, & Thriving

1 OPPORTUNITY AND WELCOME

Thank you for your interest in bidding on a City of Madison contract opportunity. The City's [mission](#) is to provide the highest quality service for the common good of our residents and visitors.

The City of Madison Engineering Division is seeking proposals from qualified vendors for 2026 Badger Mill Creek Watershed Study.

1.1 Background

In response to the damage incurred from extreme rainfall events in recent years, as well as the increasing frequency of such events, the Madison Common Council authorized the City of Madison Engineering Division (City) to develop watershed models and plans for watersheds of greatest concern in the Madison area via the Watershed Study Program.

The City initiated watershed studies on the west side of the city in 2019 and progressing east across the City. During the subsequent years, there have been substantial changes to the land use, land cover, and storm water infrastructure in the early watershed study areas due to new development, redevelopment, and construction of new stormwater management practices. The far west and southwest side of the city have experienced some of the most rapid development in the city, and that growth is expected to continue.

Much of this rapidly developing area is located within the Badger Mill Creek Watershed. For the purposes of the Watershed Study Program four sub-watersheds were delineated and separately studied: Lower Badger Mill Creek (LBMC), Upper Badger Mill Creek (UBMC), East Badger Mill Creek (EBMC) and McKenna Greentree (MGT). EBMC and MGT drain into the UBMC sub watershed. UBMC and LBMC include the most extensive areas of recent and ongoing development, while EBMC and MGT were nearly fully developed prior to beginning of the Watershed Study Program.

Multiple previous studies have been completed in this area, however, additional study is needed due to the rapid changes in the watersheds and to provide a complete picture of the potential need for stormwater improvements to meet the current Watershed Study Program objectives. The LBMC Watershed Study modeling was completed in 2021 while the UBMC Study modeling was completed in 2022 by consultants contracted by the City. Those studies only modeled the existing watershed conditions at the time and did not evaluate the stormwater management system against the Watershed Study Program system performance targets. Previous modeling completed in 2001 and 2003 by Earth Tech recommended several proposed regional stormwater practices and plat level peak runoff controls up to the 100-yr 24-hour storm.

The City would like to update the UBMC and LBMC watershed models to include developments and regional stormwater ponds planned or constructed since the initial model build as part of the Watershed Study Program (2021-2022). Additionally, the City would like to assess the stormwater system against current performance targets and identify potential improvement projects that may be needed to meet these targets. Finally, due to the rapid urbanization of the watersheds and changing City ordinance requirements, the City would like to understand how the overall development and management of stormwater within the LBMC watershed has impacted the overall watershed hydrology compared to predeveloped conditions; and the overall change in flows leaving the City of Madison.

Additional information and key locations within the watersheds are provided in the attached **Exhibit 1**. Additional data provided by the City to support the analysis and modeling efforts is provided in the attached **Exhibit 2**. The current City Stormwater Modeling Guidance Document is provided as **Exhibit 3**.

The City has budgeted an estimated \$200,000-\$250,000 to complete the scope of work described herein.

1.2 Existing Studies and Watershed Models

The City currently maintains the following stormwater models relevant to this study:

- Upper Badger Mill Creek: PCSWMM model developed 2020–2022 by Brown & Caldwell. This model was uncalibrated as part of the original watershed study. The original study produced models using both SCS and SWMM hydrology methods. The City would like to update this model to current conditions and use it as the basis for identification of proposed new stormwater management improvement projects. Only the SWMM runoff methodology will be used for this updated study.
- Lower Badger Mill Creek: PCSWMM model developed 2020–2021 by Strand Associates, Inc. This model was uncalibrated as part of the original watershed study. The original study produced models using both SCS and SWMM hydrology methods. The City would like to update this model to current conditions and use it as the basis for identification of proposed new stormwater management improvement projects. Additionally, the City is interested in constructing a “predeveloped watershed conditions” model for this area. Only the SWMM runoff methodology will be used for this updated study. Only the SWMM runoff methodology will be used for this updated study.
- East Badger Mill Creek: PC-SWMM model developed by City staff in 2022. Outflows from this subwatershed flow into the UMBC watershed at a culvert at East Pass. The City will provide updated inflow hydrographs for use in the UBMC model.
- McKenna/Greentree: XP-SWMM model completed by MSA Professional Services in late 2022. Outflows from this subwatershed flow into the UMBC watershed at a culvert under Raymond Rd, west of Marty Rd. The City will provide updated inflow hydrographs for use in the UBMC model.

The City will provide the Consultant with existing PC-SWMM models for both UBMC and LBMC. For purposes of this RFP, the 100-year storm input/output files will be provided (each design storm event from the original studies were modeled within separate stand-alone models). All additional storm event input/output files can be provided to the selected Consultant during the project, as needed.

Thank you for considering this opportunity to work with the City and further our mission!

2 IMPORTANT INFORMATION

DEADLINE FOR PROPOSALS: Thursday, June 18th, 2026 at 2:00 PM Central Time.

The City will not accept late proposals. Any changes to the deadlines will be posted as an addendum on the bid distribution websites listed below. See [Section 3.1](#) for instructions for using these websites.

RFP NAME: 2026 Badger Mill Creek Watershed Study	
DEADLINE FOR QUESTIONS:	The deadline for questions is Monday, June 1st, 2026 at 2:00 PM Central Time. Questions and/or inquiries must be submitted by email.
CITY'S ANSWERS POSTED BY:	The City's answers to your questions will be posted as an addendum by Wednesday, June 3rd, 2026. You must check the bid distribution websites for any addendums.
DUE DATE FOR PROPOSALS:	Thursday, June 18th, 2026 2:00 PM Central Time
BID DISTRIBUTION WEBSITES:	https://vendornet.wi.gov/Bids.aspx https://www.demandstar.com/
CONTACT INFORMATION:	Brittany Garcia Purchasing Services 210 Martin Luther King, Jr. Blvd. Room 407 City-County Building Madison, WI 53703-3346 Phone: (608) 243-0529 Email: bids@cityofmadison.com

Table of Contents

1	OPPORTUNITY AND WELCOME	i
1.1	Background	i
1.2	Existing Studies and Watershed Models	i
2	IMPORTANT INFORMATION	ii
3	HOW TO FIND RFP DOCUMENTS AND CONTACT THE CITY OF MADISON	1
3.1	Official Bid Distribution Websites – IMPORTANT	1
3.2	Contact Information	1
4	OUR PURCHASING VALUES	2
4.1	Local Preference Purchasing Policy	2
4.2	Equity in Contracting	2
4.3	Equitable Hiring & Affirmative Action Plan	2
4.4	Limitations on Nuclear Weapons Producers	2
4.5	Sweatfree Purchasing	2
5	SCOPE OF WORK AND REQUIRED INFORMATION	3
5.1	Scope of Work	3
5.2	Anticipated Project Timeline	12
5.3	Required Information and Content of Proposals	13
5.4	Basis for Selection	14
6	HOW TO SUBMIT YOUR PROPOSAL	16
6.1	Proposal Checklist	16
6.2	Submit your Proposal by the Deadline	16
6.3	Format	17
6.4	Questions	17
6.5	Addendum (Changes or Clarifications to this RFP)	17
6.6	Multiple Proposals	17
6.7	Changing or Withdrawing your Proposal	17
6.8	Correcting Errors in your Proposal after the Due Date	17
6.9	No Exceptions from Bidders	18
6.10	You are Responsible for all of your Costs in Making a Proposal	18
6.11	Public Records and Trade Secrets	18
7	RULES FOR THE SELECTION PROCESS	19
8	LEGAL CONTRACT REQUIREMENTS	20
8.1	Sample Contract	20
8.2	Affirmative Action Requirements for Contractors	20
8.3	Insurance	20

Sample Contract

Form A: Price Proposal and Signature Affidavit

Form B: References

Form C: Vendor Profile

Exhibit 1 - Recent Developments and Modeling Update Plan

Exhibit 2 – Data Provided by City

Exhibit 3 – Modeling Guidance Document

3 HOW TO FIND RFP DOCUMENTS AND CONTACT THE CITY OF MADISON

3.1 Official Bid Distribution Websites – IMPORTANT

The City of Madison posts all requests for proposals (RFPs), addendums, updates, awards, and announcements on two websites: VendorNet and DemandStar. Both sites are free to register for City of Madison bids.

These two websites are the only places to get the official RFP and updates to the RFP.

Updates and addendums will only be posted on these websites. It is your responsibility to check the websites for updates and “addendums.” An addendum is a document that answers questions from bidders. It could make important changes to the RFP. **If the addendum requires a response, and you fail to respond to it, you could be disqualified.**

State of Wisconsin VendorNet System	State of Wisconsin and local government bid network. Registration is free. Search for City of Madison in the Agency search field.
VendorNet link	https://vendornet.wi.gov/Bids.aspx
DemandStar by Onvia	National bid network. Free subscription is available. Sign up for the free “Basic Plan” and select Wisconsin Association for Public Procurement (WAPP) as the agency to access City of Madison RFPs.
DemandStar link	https://www.demandstar.com/app/agencies/wisconsin/city-of-madison-purchasing-services/procurement-opportunities/573ff565-ce2b-4c75-86ec-401cd5abf736/
Register on DemandStar	www.demandstar.com/app/registration

3.2 Contact Information

City of Madison Purchasing Contact (Buyer)	Brittany Garcia Purchasing Services 210 Martin Luther King, Jr. Blvd. Room 407 City-County Building Madison, WI 53703-3346 PH: (608) 243-0529 bids@cityofmadison.com
Questions about Affirmative Action Plans	Contract Compliance, Department of Civil Rights 210 Martin Luther King, Jr. Blvd. Room 523 City-County Building Madison, WI 53703 PH: (608) 266-4910 dcr@cityofmadison.com
Email note	Some email to the City gets lost in “spam.” If you send the City an email and you do not hear back within 3 days, please call the Buyer at (608) 243-0529.

4 OUR PURCHASING VALUES

4.1 Local Preference Purchasing Policy

The City of Madison gives preference to local vendors and suppliers. You must be registered with the City as a local vendor by the RFP due date to get preference points. Learn more and register at the City of Madison website: www.cityofmadison.com/finance/purchasing/local-businesses/register-business/

If you are a local vendor, be sure to complete the Local Vendor section on Form C.

4.2 Equity in Contracting

The mission of the City of Madison is to provide the highest quality service for the common good of our residents and visitors. The City's [values](#) include

- Equity - fairness, justice and equal outcomes for all, and
- Shared prosperity - where all are able to achieve economic success and social mobility.

It is our goal to spend money equitably, including among businesses owned by women, people of color, and small businesses. Our contractors should reflect shared dedication to equity in their work and employment practices, and we invite you to become part of this mission!

4.3 Equitable Hiring & Affirmative Action Plan

Affirmative Action Plan The City of Madison values diversity in hiring and contracting. We expect our contractors to do the same. Contractors with 15 or more employees and more than \$50,000 in annual contracts with the City (each calendar year) must submit an **Affirmative Action Plan**.

Information about the Affirmative Action Plan and how to comply is found here: <https://www.cityofmadison.com/civil-rights/contract-compliance/affirmative-action-plan/vendors-suppliers>

Or call the Affirmative Action Division at (608) 266-4910.

See **Section 13. B. of the Sample Contract** for Affirmative Action Plan requirements.

Job Openings in Dane County You must notify the City of openings for jobs in Dane County, Wisconsin if you have 15 or more employees. You must agree to interview candidates that we refer to you through our Referrals and Interviews for Sustainable Employment (RaISE) program. Information is here: <http://www.cityofmadison.com/civil-rights/programs/referrals-and-interviews-for-sustainable-employment-raise-program>

The job posting requirement is found in **Section 13 A. of the Sample Contract**.

4.4 Limitations on Nuclear Weapons Producers

It is the City's policy not to make purchases from companies that produce nuclear weapons, or their subsidiaries. See [Common Council Resolution 79719](#) for more information.

4.5 Sweatfree Purchasing

It is the City's policy not to purchase apparel (clothes made from textiles, shoes, footwear) from vendors who source their materials from sweatshops, where labor practices are inconsistent with international standards of human rights. See Madison General Ordinances Section 4.25 (https://library.municode.com/wi/madison/codes/code_of_ordinances?nodeId=COORMAWIVOICH1--10_CH4FI_4.25PRITAP) for more information.

5 SCOPE OF WORK AND REQUIRED INFORMATION

5.1 Scope of Work

The Upper Badger Mill Creek (UBMC) and Lower Badger Mill Creek (LBMC) Watersheds on the west side of Madison are some of the most rapidly developing portions of the City (Exhibit 1). The City of Madison Engineering Division (CITY) previously developed detailed stormwater models of these and upstream sub-watersheds as part of the Watershed Study Program. However, due to the rapid development portions of these models are no longer up to date and the CITY would like to update the existing models to the current conditions. Additionally, the CITY would like to identify areas of the stormwater management system that do not meet the current performance targets. Finally, the CITY would like to understand how the current stormwater management system functions within the Lower Badger Mill Creek Watershed relative to the pre-developed conditions.

The Consultant shall complete the following tasks. All tasks shall be performed in accordance with the City of Madison Modeling Guidance document (most recent version, currently v2025_05_08), which will be provided to the selected Consultant. Where the Consultant determines that deviations from the Modeling Guidance are warranted, these must be discussed with and approved by City staff prior to proceeding.

Please note, the Scope of Services outlined below is distinct to the Upper and Lower Badger Mill Creek Watershed Study. It is the responsibility of the CONSULTANT to read and understand differences in the Scope of Services from past RFP issuances.

PHASE 1 EXISTING CONDITIONS MODEL UPDATES

TASK 1 Review Existing Watershed Models and GIS Data

1.1 CONSULTANT shall review the existing UBMC and LBMC PC-SWMM models and supporting GIS data provided by the City. The review shall identify the following:

- Areas of the models where updates are required due to development activity since completion of the previous modeling efforts.
- Infrastructure constructed since model development that has not yet been incorporated (pipes, ponds, greenways, road crossings).
- Discrepancies between the current model topography and more recent available topographic data.
- Locations where subcatchment delineations may require revision due to grading associated with new development.
- Any additional missing data that may need to be collected to meet CITY objectives for the updated watershed modeling efforts.

CITY has completed an initial review of the existing models and ongoing development plans and provided a summary in Exhibit 1. CONSULTANT shall base their estimated level of effort this list and taking into account the remainder of this scope of work.

TASK 1 Deliverables:

- 1) Technical memorandum summarizing review findings, including a list of areas requiring updates and recommended approach for each.
- 2) Meeting with City staff to present review findings and confirm update priorities.

TASK 2 Update Existing Conditions Models

CONSULTANT will update the UBMC and LBMC models to reflect current conditions based on the review completed in TASK 1 and the City-provided list of developments and infrastructure projects provided in Exhibit 1.

CONSULTANT will conduct hydrologic and hydraulic modeling as described in this project using Computational Hydraulics Inc. PCSWMM software, Version 7.7.3920 or newer. CONSULTANT may propose to use a different software for this scope of work. However, CONSULTANT shall provide a detailed scope of work and budget for the conversion of the models prior to commencing with modeling work. Work may not proceed with any other software platform unless agreed to by the City in writing prior to beginning work.

2.1 CONSULTANT will update the modeled 2D surface in areas where the topography has changed since the initial modeling effort. CONSULTANT may use the 2022 City of Madison LiDAR DEM, or more recently available LiDAR data where it captures current topography. CITY may be able to provide as-built or grading plans in AutoCAD format for more recent land developments on a case-by-case basis.

2.2 CONSULTANT will incorporate pipes larger than 12" in diameter and storm structures that are not reflected in the existing models as identified in TASK 1.

2.3 CONSULTANT will update greenways and pond geometries and outlet structures for features not represented in the original models as identified in TASK 1 or described in Exhibit 1. CITY will provide as-built, or as-designed plans in AutoCAD format where available.

The City prefers greenways and ponds are represented in the 2D model domain, however, features may be represented 1D links or storage nodes to manage model run times and model numerical stability and errors. CONSULTANT shall confirm with CITY locations where surface conveyance or storage features will be modeled in 1D prior to proceeding.

2.4 CONSULTANT will update model hydrology in areas where land use or land cover has changed since the original modeling effort using the SWMM hydrology methods as described in the Modeling Guidance Document.

CONSULTANT will update subcatchment delineations in areas where grading associated with new development has altered drainage patterns as identified in TASK 1.

Subcatchment land use, impervious area, and hydrologic parameters will be updated by CONSULTANT to reflect current development.

For areas of new or ongoing development, assume full buildout conditions unless otherwise directed by City staff.

CITY will provided full buildout HydroCAD stormwater models and grading plans for recently developed areas, or areas with currently approved development plans, where the current land cover and topography are not well represented in the most aerial images and/or LiDAR DEM.

TASK 2 Deliverables:

- 1) Updated GIS shapefiles/feature classes for subcatchments, flow paths, and modeled conveyance network for both UMBC and LBMC Watersheds Non-Calibrated Existing Conditions Model output files
- 2) GIS shapefiles and feature classes including (if revised from what city provided in TASK 1):
 - a. Subbasins
 - b. Flow paths
 - c. Modeled conveyance network (pipes, structures, greenways, etc)

TASK 3 Execute Updated Existing Conditions Models

3.1 CONSULTANT will execute the updated existing conditions models for the 1-, 2-, 5-, 10-, 25-, 100-, 200-, and 500-yr, 24-hr design events using the MSE4 rainfall distribution and the rainfall depths provided by the City in the Modeling Guidance document.

3.2 CONSULTANT shall also run one long-duration (>24-hr) event as described in the Modeling Guidance document for the existing conditions model.

3.2.1 For the LBMC Watershed CONSULTANT shall instead execute the model using a 13.2-inch depth 36-hour (MSE4 distribution) rainfall event. Which is approximately a 0.023% AEP event.

3.2.2 For the UBMC Watershed CONSULTANT shall execute the back to back 100-yr storm event.

3.3 CONSULTANT will review model results with City Engineering staff. This meeting may be done in conjunction with the monthly progress meetings.

CONSULTANT will use the preferred symbology for inundation depth mapping provided by the CITY.

3.4 CONSULTANT will review collected monitoring data and select three (3) storm events to use for model validation. If CITY and CONSULTANT agree that insufficient data is available to select three (3) storms, fewer storm events may be selected and run.

CITY in cooperation with the USGS has installed one level loggers and one rain gauge near the outlet of each watershed. The instrumentation and locations are:

- 1) Feather Edge Pond System: A rain gage and level logger in channel at newly constructed Blue Harvest Ln. (West of Feather Edge Drive). USGS Monitoring Location 430219089335301
- 2) Nesbitt Pond: A rain gage, a level logger in the Nesbitt Pond near the outlet structure, a level logger in the channel downstream of the Nesbitt Pond, upstream of USH18/151. USGS Monitoring Location 05435935

3.5 CONSULT will perform up to three validation model runs for each watershed model using monitored precipitation and stage data.

CONSULTANT will provide a summary of the model results compared to monitored data, including description and summary statistics and discuss with CITY. CONSULTANT will not be required to make hydrologic or hydraulic modifications to calibrate the models, but should be able to confirm differences between observed and modeled inundation results are not due to errors in data input.

3.6 CONSULTANT will prepare a written Report Amendment for each Watershed and provide draft documents for City staff review. The Amendment report shall include the following:

- 1) Introduction
- 2) Specific descriptions and figures describing revisions to existing conditions models.
- 3) Maximum extent of flooding figures / inundation mapping under the 1-, 2-, 5-, 10-, 25-, 100-, 200-, and 500-yr, 24-hr design events
- 4) Description and discussion of modeling validation runs compared to monitored results.
- 5) Peak flood levels and flow rates at 25 locations determined by the city for each modeling run (for each watershed). The existing UBMC and LBMC Watershed Study reports have identified these 25 locations for each watershed.
- 6) Modeling Guidance documentation (if revised for any reason).

TASK 3 Deliverables:

All Deliverables shall be provided for each watershed separately.

- 1) Color figures showing the maximum extent of flooding during each storm event. The figures shall be color coded to show depth of flooding (CITY will provide typical inundation depth ranges and preferred color symbology).
- 2) Table and figure showing structures flooded during the 100-yr storm event.
- 3) Table and figure showing streets not meeting 10-year goal.
- 4) Table and figure showing 25 target locations and model results for each watershed.
- 5) Model files and documentation. All files shall be delivered to the City on an external hard drive.
- 6) GIS files generated for model development.
- 7) Draft Watershed Study Report Amendment for existing conditions modeling update

PHASE 2 FLOOD MITIGATION SOLUTIONS AND PREDEVELOPED CONDITIONS MODELING

CONSULTANT shall not move on to Phase 2 without express direction by the City. All comments and changes as identified by the City in Phase 1 and any respective modeling, and draft report modifications shall be addressed prior to starting the mitigation alternative analysis.

TASK 4 Evaluate Flood Mitigation Alternatives

4.1 Peak Flow Control

For purposes of this watershed study, Peak Flow Control (PFC) is considered any stormwater control measure that can store or convey water but is not intended to infiltrate water. These types of stormwater control measures could be referred to as Grey Infrastructure.

This Task has subtasks. First, the Consultant will identify possible causes of flooding in Task 4.1.1. Then, in Task 4.1.2, the Consultant will identify potential locations for solutions. Task 4.1.3 will combine Tasks 4.1.1 and 4.1.2 to develop and evaluation solutions to mitigate the potential causes.

4.1.1 Identify Causes of Flooding

The objective of this subtask is to identify the major causes of flooding but not necessarily solve them. This will:

- Guide later sections of this scope
- Provide big picture causes such that if the solutions presented in the final report cannot be implemented, then other options targeting the issue can be developed at a later date

General causes include but are not limited to:

- Undersized surface storage – insufficient above-ground storage capacity (ponds, etc)
- Insufficient surface-to-underground conveyance capacity – insufficient inlet/pond discharge/etc. capacity to allow water to exit the above-ground system and enter the below-ground system
- Restrictions in underground system – undersized trunk line conveyance
- High tailwater at discharge point

Use the inundation maps and flooding locations table generated in TASK 3, Deliverables 1 and 2 in the Scope of Work to identify problem flooding areas throughout the watershed.

Using professional judgement and drainage network properties (including but not limited to contributing area and existing storm infrastructure), identify locations where flooding occurs and the identified reason(s) for flooding throughout the watershed for the 10-yr, 25-yr, and 100-yr, 24-hour MSE4 storm events. It is understood that locations may vary in meeting the City's Goals based on the storm event.

The Consultant should use the City of Madison Flood Mitigation Goals in the Modeling Guidance Document to guide selection of the locations.

Prior to finalizing the selection of locations, the CONSULTANT should meet with City staff to review locations and discuss the identified reasons for flooding.

Deliverables for this step shall include:

- 1) Color map of watershed with selected locations clearly identified for each storm event.
- 2) For each selected point, a brief description of why that point was selected for further study.

4.1.2 Develop Solutions for PFC

The City's preferred approach to developing a set up flood mitigation solutions is provided below. If the CONSULTANT prefers an alternate approach it shall be documented in writing and approved by the City prior to proceeding.

Step 1: Create a Model with All Potential Peak Flow Control Infrastructure.

This step creates a theoretical scenario to understand what the outcome would be if all available Peak Flow Control Infrastructure (PFCI) were implemented.

The first part of Step 1 will be to meet with City staff for a brainstorming session. Consultants should be prepared with high-level, idyllic solutions to solve flooding. For example, a solution that could solve flooding would be to install 6' x 10' box culverts under every street in a watershed. Although this could solve flooding, it may not be feasible for a particular watershed. During this meeting, high-level, idyllic solutions will be discussed and guidance will be given to the consultant on which to further evaluate.

Using the information from the meeting, maximize a PFCI in each watershed. These solutions may "oversolve" the flooding; this is okay for this step as it will be refined in subsequent steps.

Solutions offered shall not make conditions worse downstream (worse is defined as increased peak water surface elevations), unless the upstream solution is paired with a downstream solution that mitigates the worsened condition.

For this step, assume solutions may not increase peak flows to a downstream municipality.

A solution may solve flooding at multiple locations or there may be a solution for each identified location.

This model will be called the *Maximum PFCI Model*. Run the model for the 10-yr, 25-yr, 100-yr and 500-yr, 24-hour MSE4 storm events. Note: solutions do not need to be provided for the 500-year, 24-hour event. The purpose of the model run is to understand the effect the solutions have on that storm.

Deliverables for this step shall include:

- 1) A spreadsheet, list, brief description, or other exhibit for each PFCI that includes rough sizing/dimensions where applicable (approximate storage volume required, increase in pipe size, diversion pipe size, etc.).
- 2) Figures showing the maximum extent of flooding during each storm event. The figures shall be color coded to show depth of flooding (typical ranges utilized are: 0.01'-0.25', 0.25'-0.5', 0.5'-1.0', and greater than 1').
- 3) Table noting the flooding depth for the locations identified in TASK 3 for each design storm.
- 4) Table and figure showing structures flooded and removed during the 100-yr storm event.
- 5) Model files and documentation as requested by CITY.
- 6) GIS files generated for model development as requested by CITY.

At this point, Consultants the City may pause on proposed tasks to conduct internal meetings or solicit feedback from other City agencies including, but not limited to, the Parks, Forestry and Streets Departments, Planning and Zoning Division, and the Office of the Mayor. Consultants are not expected to attend these meetings.

Step 2: Develop PFC Solutions Model

Using the information identified in Task 4.1.1 and the information the City collects during its internal meetings, develop “feasible” solutions to solve the identified causes of flooding. Solutions could include:

- Above-ground detention basins
- Additional inlets
- Underground storage
- Enlarged greenways and pipes
- Pumping
- Locations to purchase property that is repeatedly flooded
- Other solutions the consultant deems sound

It is expected that one (1) holistic set of solutions will be developed for the watershed.

The consultant shall develop conceptual solutions to meet the goals of the watershed studies as outlined in the Modeling Guidance. The holistic set of solutions should include conceptual solutions to meet all City Goals in all areas of the watershed unless a location(s) is explicitly discussed with City staff and removed from the solutions set.

Conceptual solutions should consider:

- Utility conflicts (using available data)
- Topographic relief (if pumps are required to get stormwater runoff to/from PFCI)
- Downstream flood impacts
- Environmental concerns (using available data including CARPC info, wetland indicators, etc)
- Permitting concerns

This model will be called the *PFC Solutions Model*. Run the model for the 2-yr, 5-yr, 10-yr, 25-yr, 100-yr and 500-yr, 24-hour MSE4 storm events. The purpose of the model run is to understand the effect the solutions have on each incremental storm event.

Develop conceptual (30%) cost estimates for each proposed PFCI included in the *PFC Solutions Model*.

Deliverables for this step shall include:

- 1) A spreadsheet, list, brief description, or other exhibit for each PFCI that includes rough sizing/dimensions where applicable (approximate storage volume required, increase in pipe size, diversion pipe size, etc.).
- 2) Conceptual (30%) drawings (1 per PFCI) showing (if applicable):
 - a. The footprint and inlet/outlet information for storage or greenway modifications
 - b. Tie-in and required changes (increased size, decreased size, abandonment, etc) to existing storm sewer system
 - c. Locations of additional inlets
 - d. Location of pump station, pump station footprint, and inlet/outlet pipes
 - e. Locations of properties to be purchased
 - f. Utility conflicts from existing available GIS data
 - g. Known wetlands/FEMA floodplains/environmental areas of concern
- 3) Conceptual (30%) cost estimates utilizing unit costs provided by the City for items identified by the Consultant.
- 4) Color figures showing the maximum extent of flooding during each storm event. The figures shall be color coded to show depth of flooding (typical ranges utilized are: 0.01'-0.25', 0.25'-0.5', 0.5'-1.0', and greater than 1').
- 5) Table noting the flooding depth for the 25 locations identified during TASK 3.
- 6) Table and figure showing number of structures flooded and removed from flooding during the 100-year event.

- 7) Figure showing streets meeting and still not meeting goal during the 10-year storm event.
- 8) Model files and documentation.
- 9) GIS files generated for model development.

4.1.3 Assess the 500-yr Storm and Potential Upgrades

The purpose of this subtask is to further understand where it may be practical to purchase property and/or where PFCI could be maximized to achieve additional flood control benefits. In some cases this may not be practical or feasible, therefore solution is considered partially theoretical.

Using the model from Task 4.1.2, Step 2 (PFC Solutions Model) as a base, increase the capacity of all conveyance, storage, and/or pumps in the model to relieve as much flooding as possible for the 500-yr event while staying within the ownership boundaries of the PFC devices. For example, if a PFCI is going to be proposed for an open lot owned by the City of Madison, maximize the PFCI on the land owned by the City but do not go outside those boundaries. This model is called the *Upsized PFC Solutions Model*.

The solutions may involve increase infrastructure upstream and/or downstream of the solutions identified in Task 4.1.2, Step 2, as long the solution stays within the ownership boundaries.

Run the *PFC Solutions Model* from Task 4.1.2, Step 2 for the 500-yr event. Compare the results from this model to the results of the *Upsized PFC Solutions Model* run for the 500-yr storm.

As part of the comparison, identify the location and number of buildings that are no longer inundated with the upsized PFCI. For purposes of this analysis, inundation will be identified as water touching a structure.

Prepare a conceptual (30%) cost estimate for upsized PFCI identified in Task 4.1.2.

Deliverables

- 1) Comparison of infrastructure costs between the *PFC Solutions Model* and the *Upsized PFC Solutions Model* for the 500-yr event
- 2) Count of buildings inundated in *PFC Solutions Model* compared to the *Upsized PFC Solutions Model* during the 500-yr event
- 3) Model files and documentation

4.2 Draft Watershed Proposed Solutions Report:

4.2.1 CONSULTANT will provide a draft document for the proposed mitigation alternatives to be reviewed by the City. A Separate document will be provided for each of the UBMC and LBMC Watersheds. These documents will eventually be incorporated into the final project reports.

The document shall include the following:

- 1) Overview and description of the modeling approach and selection of solution locations.
- 2) Proposed solutions for deficiencies.
- 3) Maximum extent of flooding/inundation maps comparing existing and proposed alternatives.
- 4) Critical elevations in areas where structural flooding is occurring for the 500-year flood extent.
 - a. Critical elevations for structures will be based on available data provided by the City and/or from field survey work conducted by the survey firm under City contract.

TASK 4 Deliverables

- 1) Color figures showing the maximum extent of flooding during each storm event for each alternative. The figures shall be color coded to show depth of flooding (typical ranges utilized are: 0.01'-0.25', 0.25'-0.5', 0.5'-1.0', and greater than 1.0').
- 2) Table noting the flooding depth for up to 25 locations identified during TASK 3 for each design storm.

- 3) Table and figure showing number of structures flooded and removed from flooding during the 100-year event.
- 4) Figure showing streets meeting and still not meeting goal during the 10-year storm event.
- 5) Figures representing proposed conceptual flood mitigation projects.
- 6) Draft Cost Estimates for proposed conceptual flood mitigation projects.
- 7) Draft Watershed Proposed Solutions Section of Final Report.

TASK 5 Public Engagement

5.1 CONSULTANT will provide information materials and three (3) staff people to help conduct one virtual Public Information Meeting (PIM). The purpose of the PIM is to present the existing conditions modeling results, present proposed projects, and ask for public feedback regarding these results.

PIM will be held after the completion of the proposed conditions modeling. CONSULTANT will create materials including a PowerPoint presentation and a map showing each proposed project area. CONSULTANT shall provide draft PowerPoint presentation to the City and work with City staff to finalize the presentation.

5.2 CONSULTANT will provide information materials and three (3) staff people to help conduct two in person stakeholder or focus group meeting. The purpose of the meeting will be to present and discuss potential impacts from proposed flood solutions projects and/or collect feedback from stakeholders or residents on a specific area or flood solution. CONSULTANTS will collect notes from the meeting and summarize for CITY Staff. CONSULTANT will create materials including a PowerPoint presentation and a map showing each proposed project area. CONSULTANT shall provide draft PowerPoint presentation to the City and work with City staff to finalize the presentation.

5.3 Additional public information, stakeholder, or focus group meetings may be required based on feedback from the City, policy makers or the public. Additional meetings are not budgeted under the initial contract. A contract amendment for additional meetings will be executed by CITY if additional meetings are requested. Costs for additional public information or stakeholder meetings will be paid based on the Unit Prices provided in the Cost Proposal Sheet.

TASK 5 Deliverables:

- 1) Public feedback from implemented public outreach and engagement plan
- 2) PIM presentation in PowerPoint format.
- 3) Other PIM presentation materials as necessary.
- 4) Compile feedback and responses to questions from PIM#2 and focus groups and provide report to the City. This report shall include an executive summary that can be posted to the City website.

TASK 6 Lower Badger Mill Creek Pre-Development Hydrology Analysis

The City is interested in understanding how development within the LBMC watershed has affected peak stormwater discharged into the City of Verona at the western boundary of the study area (Shady Oak Lane). The Consultant shall develop pre-development hydrology scenarios for comparison against the updated existing conditions model.

6.1 CONSULTANT may propose an approach that deviates from what is described in Tasks 6.2 and 6.3. Approach must be approved by CITY prior to beginning work on the predeveloped conditions model.

6.2 CONSULTANT will develop estimated predevelopment conditions hydrology for the full LBMC watershed to estimate predevelopment flows out of the watershed.

As necessary sub catchments will be combined, adjusted, or re-delineated.

SWMM methodology shall be used following the recommendations in the modeling guidance document.

All land use shall be assumed to be either row crop, meadow, or wooded. CONSULTANT may use historical aerial imagery or other available data to determine appropriate land use

6.3 CONSULTANT will update the conveyance network to approximate pre developed conditions of the watershed.

CITY recognizes the difficulty in approximating pre developed topography and critical drainage feature geometry. CONSULTANT may propose an alternative approach in writing to CITY for approval prior to beginning work on this task. However, the following suggested approach has been provided.

- Remove all storm sewer pipe from the existing conditions model except culverts at major road crossings. Assume current inverts and sizes for culverts except if earlier data is available.
- Use 2005 LIDAR (CITY can provide a 5-meter resolution DEM), to initially update topography. For areas developed prior to 2005, the 1998 statewide 30m DEM may be used.

6.4 CONSULTANT will execute the predeveloped conditions model for the 1-, 2-, 5-, 10-, 50-, 100, and 200-yr 24-hr MSE 4 storm events.

6.5 CONSULTANT shall provide a draft technical memorandum summarizing the analysis for review and comment by CITY. CITY comments shall be addressed and then incorporated into the final report.

TASK 6 Deliverables:

- 1) Meeting with City to discuss approach and modeling results.
- 2) Technical Memorandum summarizing the LBMC predeveloped conditions modeling approach and results.
- 3) Final predeveloped conditions PCSWMM model(s) for the LBMC Watershed.

PHASE 3 FINAL REPORT

CONSULTANT shall not move on to Phase 3 without express direction by the City. All comments and changes as identified by the City in both Task 3 and Task 4 and the respective modeling, alternative analysis and draft report shall be addressed prior to final preparation of the final deliverables in TASK 8.

TASK 7 Detailed Written Report and Final Model Delivery

CONSULTANT will prepare a detailed Watershed Report Amendment for both UBMC and LBMC Watersheds that includes the existing conditions model updates, modeling results, maximum extent of flooding/inundation maps, and proposed mitigation alternatives, as detailed in TASK 3 and TASK 4.

7.1 The report shall also include an executive summary that identifies and prioritizes the recommended improvements and, if necessary, identifies improvements that would need to be completed in a specific order. A draft report will be prepared for City review, and a final report will be prepared based on City review comments.

7.2 The final report will also refine cost estimates as identified in TASK 4 for the improvements identified in the summary. The cost refinements will be based upon updated unit cost information provided by the City.

TASK 7 Deliverables:

Report will be provided to the City as follows (separate report for each of the LBMC and UBMC watersheds) :

- 1) One (1) copy of a colored, bound hard copy report, including all necessary maps, exhibits, etc. as identified in the Scope of Services.
- 2) One (1) digital copy of the document in the software in which it was prepared.
- 3) One (1) digital copy of the document in PDF format. **The PDF Document shall conform to federal regulations and City Policy for accessibility.**

CONSULTANT will also provide:

- 1) The final models, fully QA/QC'ed, to the City including the existing conditions models for the respective storms as identified in TASK 4 and all alternative analyses or scenarios as identified in Task 6. The model(s) shall be provided to the City on a hard drive.

- 2) All related files used in the creation of the model shall be provided to the City as part of the final deliverables, including but not limited to GIS, CADD, topographic surveys, Access database, or Excel files.

PHASE 4 PROJECT COORDINATION

TASK 8 Progress Meetings and Coordination

8.1 CONSULTANT will attend the kick-off meeting and up to eighteen (18) additional virtual or in-person monthly progress meetings as requested by the City. CONSULTANT shall provide an agenda prior to progress meetings and prepare meeting minutes summarizing the discussions held during the meetings.

8.2 CONSULTANT will attend up to five (5) additional progress meetings via conference call as-needed and participate in preparing meeting minutes summarizing the discussions held during the meetings.

TASK 8 Deliverables:

- 1) Cooperation and Coordination by phone or email with the City and other consultants as needed.
- 2) Meeting agendas prior to progress meetings.
- 3) Meeting minutes or summaries within 3 days of each meeting.

5.2 Anticipated Project Timeline

An anticipated project timeline for issuance of the RFP, Proposal Review, major project phases, and some intermediate stages. The dates provided below may be adjusted during the course of the study based on unanticipated opportunities or challenges that arise. However, proposing firms shall confirm that they are able to meet the desired timeline or propose modifications. Overall, the anticipated project timeline is expected to be roughly 17 months.

ANTICIPATED TIMELINE	
RFP released	May 20, 2026
Submission deadline	June 18, 2026
Selection of Consultant(s)	by July 15, 2026
Anticipated Project Start/Project Kick off Meeting	Mid August 2026
Anticipated Completion of Phase 1 work	Winter 2026/27
Completion Phase 2	Fall 2027
Project Completed by	December 2027

Phase	TASK	2026					2027											
		Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Phase 1	Kick off Meeting																	
	1																	
	2																	
	3																	
Phase 2	4																	
	5											PIM						
	6																	
Phase 3	7																	
Phase 4	8																	

5.3 Required Information and Content of Proposals

Below is a detailed list of items required in each submittal section.

1. Cover Letter

- Lead Consultant name and mailing address
- Contact person's name, title, phone number, and email address
- Signature of the individual(s) authorized to negotiate and bind the Consultant contractually

2. Project Understanding and Approach (25%)

- Describe the Team's understanding of the unique conditions in the watershed and how they will be accounted for.
- Describe the Team's approach for reviewing and completing QA/QC of models.
- Describe the Team's anticipated approach for developing the predeveloped conditions model as described in Task 6.
- Describe the opportunities or challenges related to the anticipated work, or unique issues related to specific watershed conditions.
- Describe how your team will ensure Racial Equity and Social Justice is a core principle throughout the duration of this project. Further explain strategies and techniques intended to encourage inclusive stakeholder engagement, just decisions making processes, and equitable environmental planning.
- Describe Team's understanding of scope of work.
 - If Consultant proposes to follow scope of work as stated, there is not a need to reiterate scope.
 - If comments are provided on the proposed scope of work, organize comments by task number as identified in the Scope of Services.
 - If the proposed scope or work sequence differs from what is identified in this RFP the Consultant shall identify any areas in the scope that they do not intend to follow and provide reasoning.
 - Any additional scope items should be summarized in a separate section in the Attachments/Appendices Section.

3. Team Composition, Performance, and Key Personnel (20%)
 - a. Summarize the Consultant Team's background and focus.
 - b. Provide a Team organizational chart that identifies a project manager and the relationship among consulting team members, including sub-consultants.
 - c. Briefly summarize the Key Personnel's role for this project.
 - d. Provide documentation showing adequate staff capacity to complete the work within the proposed schedule.
4. Relevant Project Experience (20%)
 - a. Provide up to 5 relevant projects, including Client and Project information, Team's responsibility in the projects, the challenges presented by each project, and the results. Include which Key Personnel were involved.
 - b. Limit project examples to those completed within the last 10 years.
 - c. List the project year(s), Key Personnel, and Client contact person and telephone number for each.
5. Local Vendor Preference (5%)

See Section **Error! Reference source not found.**
6. Schedule, Level of Effort, and Costs (30%)
 - a. Include schedule for completion by Task.
 - b. Provide information showing Team can meet schedule outlined in this RFP. For example, include percent availability for Key Personnel.
 - c. Complete attached Cost Proposal and include with submittal.
 - d. Costs to include:
 - i. List proposed costs by Main Task (1-8)
 - ii. Provide unit costs for meetings
 1. Public information meetings
 2. Stake holder or focus group meetings
 3. Monthly progress meetings with City staff
 - iii. Provide a total not-to exceed dollar value for any reimbursable expenses associated with each individual task, including the type of expense, such as mileage, printing expenses, etc.
 - iv. Provide detailed project budget, estimated hours by position title per task, and billing rates for all personnel to be assigned to the project.
7. Attachments/Appendices
 - a. Resumes (suggested length: 2 pages maximum per resume)
 - b. References: Provide three references for the consultant team. Include the reference contact's name, address, phone number and relationship to the firm/team.
 - c. Additional Tasks or Services: Consultants may offer suggestions for additional tasks to be conducted during the watershed study. Provide a summary of the tasks that were not identified in the provide Scope of Work, along with a separate line item with costs for those services they wish the City to consider.
 - d. Comments on Contract Standard Terms and Conditions: The entity that would enter into the contract with the City for the RFP will need to be able to meet the City's Standard Terms and Conditions or be able to come to a mutual agreement with the City on the Standard Terms and Conditions. If they are not able to meet those conditions it may impact the City's selection. Firms should acknowledge if they are able to meet the City's Standard Terms and Conditions or if they have had experience with successfully negotiating mutually agreeable exceptions to the City's standard language.

5.4 Basis for Selection

Responses to this RFP will be reviewed by a Selection Committee, chosen by the City Engineer and following City Purchasing guidelines, based on the appropriateness of the Proposal, budget, and ability to meet the proposed timeline.

If necessary, the City Selection Committee may elect to interview a subset of respondents to this RFP to better understand differing proposed approaches to the projects. Each interview will be scheduled by the City following submission of all proposals. The City reserves the right to interview any subset of respondents the Selection Committee chooses for further review.

There are no page limits for the Proposal submission. Please keep responses clear and concise. Proposals should not only include information regarding complex hydrologic and hydraulic modeling, but also the design of both green (volume control) and grey (peak flow control) infrastructure.

Evaluation Criteria

Scoring will be weighted as follows:

1. 25% for Project Understanding and Approach
2. 20% for Team Composition, Performance, and Key Personnel
3. 20% for Relevant Project Experience
4. 5% for Local Vendor Preference
5. 30% for Cost

6 HOW TO SUBMIT YOUR PROPOSAL

6.1 Proposal Checklist

Required Documents to Submit:		
Your Technical Proposal		
Technical Requirements spreadsheet (if any)		
Any other info / questionnaires required for this RFP?		
Required Forms to Submit:		
Form A: Price Proposal and Signature Affidavit		
Form B: References		
Form C: Vendor Profile		
RFP ADDENDUM Check the bid websites for any addendum. See Section 3.1 . - You can use the area below to track addendums. - An addendum might require you to submit additional documents. Make sure to read it carefully and send any additional documents.		
Addendum # (if any)	Have you read it?	Have you submitted any documents required by the addendum?
Addendum # _____		
Addendum # _____		

6.2 Submit your Proposal by the Deadline

Submit your proposal by email to City of Madison Purchasing Services by Thursday, June 18th, 2026 at 2:00 PM Central Time.

- Make sure your proposal is complete (see [checklist](#) above) and readable.
- Include RFP 15034-0-2026-BG in the email subject line.**
- Email proposals to:** bids@cityofmadison.com
- Do not send your proposal to any other City email or agency
- If you cannot send your proposal by email, please contact the Buyer at (608) 243-0529

You must include RFP 15034-0-2026-BG on your proposal and all other communication to the City. **For email, include RFP 15034-0-2026-BG in the subject line.**

For example, an email subject line could read: RFP 15034-0-2026-BG 2026 Badger Mill Creek Watershed Study Questions

6.3 Format

- **Electronic** – proposals are submitted electronically. Exceptions can be made for paper submittals but you must contact the Buyer ahead of time to make those arrangements.
- **Legible and readable** – if not the City might reject it.
- **Simple** – not necessary to include elaborate/ high tech/ expensive graphics or similar features.
- **Complete** – your proposal must include all required sections and forms. See [checklist](#).

6.4 Questions

You can ask questions about the RFP until the **deadline for questions of Monday, June 1st, 2026 at 2:00 PM Central Time**.

Email questions to Brittany Garcia at bids@cityofmadison.com. Remember to include RFP 15034-0-2026-BG in the subject line.

Any questions that are asked in person, over the phone, or on-site visits, and subsequently answered by City staff are considered "off the record" and "unofficial". The only official answers must be submitted through email and answered on the addendum(s).

We post answers to bidder questions as an **addendum** on the bid websites. Check the websites regularly.

6.5 Addendum (Changes or Clarifications to this RFP)

RFP addendums make clarifications, answer bidder questions, make changes to RFP timeline, and provide other important information. Addendums are posted on the bid websites listed in [Section 3.1](#).

IMPORTANT: It is your responsibility to check for addendums. An addendum might require you to submit additional information. Your proposal could be disqualified if you do not:

- **Check the bid websites regularly during the posting period**
- **Read all addendum**
- **Follow the instructions in the addendum**

6.6 Multiple Proposals

You may submit more than one proposal if you are proposing more than one way to fulfill the scope requested by this RFP. If so, each proposal must meet the requirements of the RFP. Clearly label each proposal by number (Proposal #1, Proposal #2) and submit each separately.

6.7 Changing or Withdrawing your Proposal

You may make changes to your proposal before the due date of Thursday, June 18th, 2026 at 2:00 PM Central Time.

You may withdraw your proposal before the due date. After the due date, no proposals may be withdrawn for 90 days or as otherwise provided by law.

6.8 Correcting Errors in your Proposal after the Due Date

The City will notify you if we believe you made an error in your proposal and may allow you to correct the error. The City will decide if correcting the error is in the City's best interest, is fair to the other bidders, and preserves competition. The City will decide whether an error can be corrected and will notify you.

6.9 No Exceptions from Bidders

Exceptions to this RFP are not permitted. The City of Madison reserves the right to reject bids that take exceptions or don't follow the requirements of this RFP. If you ask to change the requirements, specifications, sample contract, or legal terms, that is considered an "exception." A statement that you will not or cannot comply with any part of this RFP or the sample contract will also be considered an "exception." *(If this RFP allows substitutions or alternate solutions, the Scope of Services ([Section 5](#)) will make this clear, and that is not considered an "exception.")*

6.10 You are Responsible for all of your Costs in Making a Proposal

You participate in this RFP at your own expense. You may be asked to attend virtual or in-person meetings, make presentations, give demonstrations, inspect City locations, or make your facilities available for a site inspection. The City will not pay any costs incurred in your preparation of bids, even if this RFP is changed or cancelled.

6.11 Public Records and Trade Secrets

Your response to this RFP is a public record. Wisconsin and other public records laws may require the City to share your proposal or the resulting contract if someone makes a public records request. If a public records request is made, the City's Records Custodian applies the law to decide whether the record must be disclosed, or if any part of the record can be redacted or not disclosed. There are very few exceptions to disclosure under Wisconsin law. One exception is for "trade secrets" as defined by sec. 134.90(1)(c) of the Wisconsin Statutes. It is your responsibility to research trade secrets as defined by Wisconsin law if you think any part of your proposal might be a "trade secret." The City cannot give private legal advice to you. Most things will NOT meet this exception.

You may label items you believe meet this definition as a "trade secret" and submit them separately from the rest of your proposal, **but the City cannot guarantee that information will be treated as a trade secret or confidential.**

Things that are not considered confidential: your proposal or bid in its entirety, price proposal, pricing information, references, or the resulting contract. This is not a complete list.

Preserving competition: To the extent permitted by law, the City intends to withhold proposals under this RFP from public view until competitive or bargaining reasons no longer require it, in the City's opinion. At that time, all proposals will be available for review in accordance with public records laws.

The City will not provide advance notice to bidders prior to releasing any requested public record.

7 RULES FOR THE SELECTION PROCESS

This RFP does not commit the City to award a contract. The City can cancel this RFP at any time. There is no guarantee that the City will award any contract as a result of this RFP. While the City considers this procurement important to City operations, the circumstances could change.

The City might make a partial award. By submitting a proposal you are willing to accept an order for all or part of the items/services. Note in your proposal if you do not agree to accept a partial award.

The City reserves the right to make changes to this RFP. Any changes will be made with an Addendum. Changes could impact due dates or specifications, or could require additional information from all bidders.

The City reserves the right to reject any proposal. We can reject all or part of a proposal without explaining the reason. Proposals could be rejected if they are missing information (non-responsive) or fail to demonstrate that the bidder is responsible and capable of doing the work (not responsible.)

The City may negotiate with finalists or the selected vendor. One or more bidders may need to submit additional technical proposals, best and final price proposals, or other changes to their bids.

Federal or State Laws may apply to this RFP (such as federal regulations or procurement policies that apply to grant funding). Those laws will apply over any conflicting procedure in this RFP.

Responsible and Responsive Bidders You should read the Scope of Work ([Section 5](#)) carefully to determine your ability to perform and complete the work required. This contract will only be awarded to a bidder who is “responsible” and “responsive” and whose bid is most advantageous to the City, with price and other factors considered. This RFP is designed to help the City select responsive and responsible bidders.

“Responsive” means that your proposal responds to all parts of this RFP – it is complete, not missing any information, and addresses all of the required work. Failure to provide all of the information requested in this RFP could result in being considered “not responsive.”

A “Responsible” bidder has demonstrated the ability to perform successfully under the terms of the proposed contract. This includes having adequate financial resources or the ability to obtain them; can perform and deliver on time, delivery taking into account other business commitments; has a satisfactory performance record; has a satisfactory record of integrity and business ethics; and has the necessary organization, experience and technical skills. A bidder that cannot demonstrate these things may be considered “not responsible.”

Contractors with past problems with the City The City reserves the right to refuse to accept any bid from any person, firm or corporation who

- owes the City money
- is in default to the City
- has been debarred through an official process such as through the Department of Civil Rights
- has had performance or other problems on past contracts with the City

Such bidders may be deemed “not responsible.”

8 LEGAL CONTRACT REQUIREMENTS

8.1 Sample Contract

You must review the Sample Contract attached to the end of this RFP. This contract* will be used for the work resulting from this RFP.

By submitting a proposal, you are willing to enter into a contract with the terms found in the Sample Contract. Exceptions to the legal terms are not allowed and may result in your proposal being rejected. The City does not negotiate legal terms prior to award.

**While the City strives to provide the most appropriate sample contracts, the City reserves the right to modify the form for any contract resulting from this RFP.*

8.2 Affirmative Action Requirements for Contractors

City contractors must show they hire and promote employees equitably and make their best efforts to have a diverse workforce.

Affirmative Action Plan: Bidders with 15 or more employees that will earn \$50,000 or more in total contracts with the City in the calendar year must file an Affirmative Action Plan (AA plan) with the City. Submit your AA plan online using the form provided by the City. See the sample AA plan for “vendors and suppliers” at: <https://www.cityofmadison.com/civil-rights/contract-compliance/affirmative-action-plan/vendors-suppliers>

Exemptions: Bidders who have fewer than 15 employees or will earn less than \$50,000 in total contracts with the City in the calendar year will be exempt from filing a full AA plan. You will need to fill out a request for exemption form. If you have 15 or more employees, you must complete an exemption form, provide some workforce statistics, and participate in the “RaISE” program.

Release of Payment: The City cannot make any payments under a contract until the Affirmative Action plan or request for exemption form are completed.

Referrals and Interviews for Sustainable Employment (RaISE) Program: The RaISE program is designed to match qualified people to employment. If you have 15 or more employees and are awarded the contract, you must let the City know about all external job openings in Dane County, Wisconsin. You must also agree to interview candidates the City refers to you. See this link for information and instructions: <https://www.cityofmadison.com/civil-rights/programs/referrals-and-interviews-for-sustainable-employment-raise-program>

The City has a **Small Business Enterprise program** described here: <https://www.cityofmadison.com/civil-rights/contract-compliance/targeted-business-enterprise-programs>. You will be encouraged to provide opportunities for small business enterprises (SBE) to compete for any subcontracts allowed in the contract.

See the Sample Contract, section 13, for all requirements for the City’s Affirmative Action program for contractors. Call the Contract Compliance Specialist at (608) 266-4910 with questions.

8.3 Insurance

All City contractors must provide a Certificate of Insurance. You must carry the insurance policies required by section 27 of the **Sample Contract**. This includes general liability insurance, workers compensation, and could include automobile and professional liability insurance. Please see the instructions and section 27 of the Sample Contract for the insurance requirements.



CONTRACT INSTRUCTIONS

(REMOVE THIS PAGE BEFORE SIGNING CONTRACT)

FOR CITY STAFF:

The City Agency preparing this contract is responsible for these steps:

- ☐ Complete the "City Use Only" box at the top of page 1.
- ☐ Complete sections 3, 4, 5, and the City part of 15. Review Sec. 4 carefully and follow instructions.
- ☐ Review final POS: make sure Contractor has completed all steps below, **before** you prepare PDF and **BEFORE** routing for City signatures. An incomplete contract will be rejected and not signed.
- ☐ All attachments & exhibits in sec. 3 must be attached to the final, clean contract to form a single PDF.
- ☐ City agency staff are responsible for these things:
 - Determine if contract requires a resolution, draft complete resolution,
 - Determine who will sign for the City (see signature page.)
 - Confirm COI (certificate of insurance) from contractor was delivered to Risk Management.
 - Obtain contractor signature on final, clean contract PDF with all exhibits attached.
 - Contracts signed by Mayor/Clerk – agency must enter contract into **Accela** for signatures.
 - Contracts signed by Purchasing – agency must enter contract in **Munis** with **Requisition**.
 - Return fully signed contract to Contractor, save a copy for yourself, monitor expiration date.

FOR CONTRACTOR: Please complete all steps below:

- ☐ Check one box at top of Page 1 to identify the correct type of business entity.
- ☐ Sections 3, 4, & 5 will be completed by the City and must be complete before you sign.
- ☐ Put a name in Sec. 8 – person responsible for administering the contract.
- ☐ **Affirmative Action:** Check the appropriate box in Sec. 13.B., Article IV, and complete the appropriate online form for the box you have checked:

Affirmative Action compliance forms are at this link: www.cityofmadison.com/civil-rights/contract-compliance/affirmative-action-plan/vendors-suppliers. If you do not already have an approved, current Affirmative Action Plan on file with the City of Madison, read the "Instructions for Completing City of Madison Affirmative Action Plan" at the above link. This will direct you to register for an account. If you already have an account, select "Affirmative Action Plan for Vendors and Suppliers" and complete that form. If you have never filed a plan or request for exemption with Madison, you must create an account first. If you are exempt under Article IV box C or D, you still must create an account and complete some steps to confirm your exemption. Register for an account here: <https://elam.cityofmadison.com/citizenaccess>.

Affirmative Action Questions? Contact Dept. of Civil Rights, Contract Compliance: (608) 266-4910.

- ☐ Complete Section 15 – Official Notices. This is a person or place for the City to send official legal notices to the Contractor (not the same as the person in 8).
- ☐ Section 27 –CERTIFICATE OF INSURANCE (COI) must be provided before City signs contract.
Certificate Holder: City of Madison, Attn: Risk Manager
210 Martin Luther King Jr. Blvd. Room 406, Madison, WI 53703

All insurance required by Section 27 must be shown on the certificate. Can use City's certificate at this link: <https://www.cityofmadison.com/finance/documents/certinsurance.pdf>

Email certificate to City Risk Management at certificates@cityofmadison.com and cc: your City contact person on the email. Call Risk Management at (608) 266-9668 with insurance questions.

- ☐ Signatures. Work with City to prepare a final clean PDF for signature. Contractor signs first, City signs last. Use any electronic method to sign where indicated and complete other fields for the Contractor signature. Email signed PDF to your City contact, unless otherwise instructed. City will sign last, and will email you an electronic signed copy unless otherwise requested.

For City Use Only:

Contract Expiration Date: _____ Contract/Project Name: _____
 Does the contract include renewals? ☐ Yes ☐ No Are the
 renewals Automatic or Optional? ☐ Automatic ☐ Optional
 No. of renewals: _____ Duration of each renewal: _____

City of Madison CONTRACT FOR PURCHASE OF SERVICES

1. PARTIES.

This is a Contract between the City of Madison, a Wisconsin municipal corporation ("City") and _____ ("Contractor").

The Contractor is a: ☐ Corporation ☐ Limited Liability Company ☐ General Partnership ☐ LLP
 (to be completed by contractor) ☐ Sole Proprietor ☐ Unincorporated Association ☐ Other: _____

2. PURPOSE.

The purpose of this Contract is as set forth in Section 3.

3. SCOPE OF SERVICES AND SCHEDULE OF PAYMENTS.

Contractor will perform the following services and be paid according to the following schedule(s) or attachment(s):

Attachment A: (name) (List all attachments here by name, and label and attach them, in order.)

Attachment B: (name)

Order of Precedence: In the event of a conflict between the terms of this Contract for Purchase of Services and the terms of any document attached or incorporated herein, the terms of this Contract for Purchase of Services shall control and supersede any such conflicting term.

4. TERM AND EFFECTIVE DATE.

This Contract shall become effective upon execution by the Mayor, (or the Purchasing Agent, if authorized) on behalf of the City of Madison, unless another effective date is specified in the Attachment(s) incorporated in Section 3, however in no case shall work commence before execution by the City of Madison. The term of this Contract shall be complete the sentence using one of the sample clauses below; and the renewal clause only if renewals are part of this contract. Delete the clauses you are NOT using.

from _____ to _____.

_____ year(s) from the date of final signature by the City.

_____ months from the date of final signature by the City.

_____ year(s) from (insert a hard start date) _____.

_____ months from (insert a hard start date) _____.

As set forth in (reference exhibit or attachment above and the section number of that document where the contract term is described).

Add this language only if renewal terms have been agreed and authorized:

This contract may be renewed in writing, signed by authorized representatives of each party, for up to (number of total renewal terms) of renewal terms of (length of each renewal such as one (1) year) year(s) each.

5. CONTRACT PRICE.

It is expressly understood and agreed that in no event will the total Contract price paid by the City exceed:

- ☐ a total of \$_____.
- ☐ The pricing set forth in (refer to an exhibit/attachment listed above)_____.
- ☐ Other: (specify details here)_____.

6. **BASIS FOR PAYMENT.**

A. **GENERAL.**

- (1) The City will pay Contractor for completed and accepted services rendered and any goods or products under this Contract at the Contract Price set forth in Section 5. Such payment shall be full payment for services rendered and for all labor, material, supplies, equipment and incidentals necessary to complete the services. Payment in excess of the total Contract price will not be allowed unless authorized by a formal amendment signed by authorized representatives of both parties.
- (2) **Payment Schedule:** The City will pay the Contractor in accordance with the schedule, if any, set forth in Section 3. Final payment of any balance due the Contractor will be made upon acceptance by the City of the services and any deliverables required by the Contract and upon receipt by the City of documents required to be returned or to be furnished by the Contractor.
- (3) **Invoicing:** The Contractor shall submit invoices in a format approved by the City and as may be further specified in Section 3 of this Contract. Invoices shall include date(s) services are performed. If this Contract contains more than one product or service, invoices shall be itemized accordingly. The final invoice, if applicable, shall be submitted to the City in accordance with any agreed invoicing schedule but in no case later than thirty (30) days after completion of services and delivery of any goods.
- (4) Payment shall not be construed as City acceptance of unsatisfactory or defective services or improper materials.
- (5) The City has the equitable right to set off against any sum due and payable to the Contractor under this Contract, any amount the City determines the Contractor owes the City, whether arising under this Contract or under any other Contract or otherwise.
- (6) The City will not compensate for unsatisfactory performance by the Contractor.

B. **EXTRA SERVICES OR DECREASED SERVICES.**

- (1) The City may request, in writing, extra services or decreased services, as defined in Section 10 of this Contract. Unless the Contractor believes the extra services entitle it to extra compensation or additional time, the Contractor shall proceed to furnish the necessary labor, materials, and professional services to complete the services within the time limits, if any, specified in this Contract.
- (2) If in the Contractor's opinion the order for extra service would entitle it to extra compensation or extra time, or both, the Contractor shall not proceed to carry out the extra service, but shall notify the City, pursuant to Section 15 of this Contract. The notification shall include the justification for the claim for extra compensation or extra time, or both, and the amount of additional fee or time requested.
- (3) The City shall review the Contractor's submittal and respond in writing, either authorizing the Contractor to perform the extra service, or refusing to authorize it. The Contractor shall not receive additional compensation or time unless the extra compensation is authorized by the City in writing.

7. **ASSIGNABILITY/SUBCONTRACTING.**

Contractor shall not assign or subcontract any interest or obligation under this Contract without the City's prior written approval or unless expressly stated otherwise in an attachment incorporated in Section 3. Unless the City has expressly approved subcontracting, all of the services required hereunder will be performed by Contractor and employees of Contractor.

8. **DESIGNATED REPRESENTATIVE.**

Contractor designates _____ as Contract Agent with primary responsibility for the performance of this Contract. If the Contract Agent resigns, is replaced, or is no longer acting as Contract Agent for any reason, Contractor will notify the City in writing of the change, and propose a replacement Contract Agent within seven (7) calendar days. The City may accept another person as the Contract Agent or may terminate this Contract under Section 25, at its option.

9. **PROSECUTION AND PROGRESS.**

- A. Services under this Contract shall commence upon written order from the City to the Contractor, which order will constitute authorization to proceed; unless another date for commencement is specified elsewhere in this Contract including documents incorporated in Section 3.
- B. The Contractor shall complete the services under this Contract within the time for completion as specified in the attachment(s) listed in Section 3. The Contractor's services are completed when the City notifies the Contractor in writing that the services are complete and are acceptable. The time for completion shall not be extended because of any delay attributable to the Contractor, but it may be extended by the City in the event of a delay attributable to the City, or in the event of unavoidable delay caused by war, insurrection, natural disaster, or other unexpected event beyond the control of the Contractor. If at any time the Contractor believes that the time for completion of the work should be extended because of unavoidable delay caused by an unexpected event, or because of a delay attributable to the City, the Contractor shall notify the City as soon as possible, but not later than seven (7) calendar days after such an event. Such notice shall include any justification for an extension of time and shall identify the amount of time claimed to be necessary to complete the work.
- C. Services by the Contractor shall proceed continuously and expeditiously through completion of each phase of the work.
- D. Progress reports documenting the extent of completed services shall be prepared by the Contractor and submitted to the City with each invoice, and at such other times as the City may specify, unless another procedure is specified in Section 3.
- E. The Contractor shall notify the City in writing when the services under this Contract have been completed. When the City determines that the services are complete and are acceptable, the City will provide written notification to the Contractor, acknowledging formal acceptance of the completed services.

10. **EXTRA SERVICES.**

The City may require the Contractor to perform extra services or decreased services, according to the procedure set forth in Section 6. Extra services or decreased services means services which are not different in kind or nature from the services called for in Section 3, but which may increase or decrease the quantity and kind of labor or materials or expense of performing the services. Extra services may not increase the total Contract price set forth in Section 5, unless the Contract is formally amended.

11. **NO WAIVER.**

No failure to exercise, and no delay in exercising, any right, power or remedy hereunder on the part of the City or Contractor shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy. No express waiver shall affect any event or default other than the event or default specified in such waiver, and any such waiver, to be effective, must be in writing and shall be operative only for the time and to the extent expressly provided by the City or Contractor therein. A waiver of any covenant, term or condition contained herein shall not be construed as a waiver of any subsequent breach of the same covenant, term or condition.

12. **NONDISCRIMINATION.**

During the term of this Contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, religion, marital status, age, color, sex, handicap, national origin or ancestry, income level or source of income, arrest record or conviction record, less than honorable discharge, physical appearance, sexual orientation, gender identity, political beliefs or student status. Contractor further agrees not to discriminate against any subcontractor or person who offers to subcontract on this Contract because of race, religion, color, age, disability, sex, sexual orientation, gender identity or national origin.

13. **AFFIRMATIVE ACTION.**

- A. The following language applies to all contractors employing fifteen (15) or more employees (MGO 39.02(9)(c):

The Contractor agrees that, within thirty (30) days after the effective date of this Contract, Contractor will provide to the City of Madison Department of Civil Rights (the "Department"), certain workforce utilization statistics, using a form provided by the City.

If the Contract is still in effect, or if the City enters into a new Contract with the Contractor, within one year after the date on which the form was required to be provided, the Contractor will provide updated workforce information using a second form, also to be furnished by the City. The second form will be submitted to the Department no later than one year after the date on which the first form was required to be provided.

The Contractor further agrees that, for at least twelve (12) months after the effective date of this Contract, it will notify the Department of each of its job openings at facilities in Dane County for which applicants not already employees of the Contractor are to be considered. The notice will include a job description, classification, qualifications, and application procedures and deadlines, shall be provided to the City by the opening date of advertisement and with sufficient time for the City to notify candidates and make a timely referral. The Contractor agrees to interview and consider candidates referred by the Department, or an organization designated by the Department, if the candidate meets the minimum qualification standards established by the Contractor, and if the referral is timely. A referral is timely if it is received by the Contractor on or before the date stated in the notice.

The Department will determine if a contractor is exempt from the above requirements (Sec. 13.A.) at the time the Request for Exemption in 13.B.(2) is made.

B. Articles of Agreement, Request for Exemption, and Release of Payment:
The "ARTICLES OF AGREEMENT" beginning on the following page, apply to all contractors, unless determined to be exempt under the following table and procedures:

NUMBER OF EMPLOYEES	LESS THAN \$50,000 Aggregate Annual Business with the City*	\$50,000 OR MORE Aggregate Annual Business with the City*
14 or fewer	Exempt**	Exempt**
15 or more	Exempt**	Not Exempt

*As determined by the Finance Director

**As determined by the Department of Civil Rights

(1) Exempt Status: In this section, "Exempt" means the Contractor is exempt from the Articles of Agreement in section 13.B.(5) of this Contract and from filing an Affirmative Action plan as required by Section IV of the Articles of Agreement. The Department of Civil Rights ("Department") makes the final determination as to whether a contractor is exempt. If the Contractor is not exempt, sec. 13.B.(5) shall apply and Contractor shall select option A. or B. under Article IV therein and file an Affirmative Action Plan.

(2) Request for Exemption – Fewer Than 15 Employees: (MGO 39.02(9)(a)2.) Contractors who believe they are exempt based on number of employees shall submit a Request for Exemption on a form provided by the Department within thirty (30) days of the effective date of this Contract.

(3) Exemption – Annual Aggregate Business: (MGO 39.02(9)(a)c.): The Department will determine, at the time this Contract is presented for signature, if the Contractor is exempt because it will have less than \$50,000 in annual aggregate business with the City for the calendar year in which the contract is in effect. CONTRACTORS WITH 15 OR MORE EMPLOYEES WILL LOSE THIS EXEMPTION AND BECOME SUBJECT TO SEC. 13.B.(5) UPON REACHING \$50,000 OR MORE ANNUAL AGGREGATE BUSINESS WITH THE CITY WITHIN THE CALENDAR YEAR.

(4) Release of Payment: (MGO 39.02(9)(e)1.b.) All non-exempt contractors must have an approved Affirmative Action plan meeting the requirements of Article IV below on file with the Department within thirty (30) days of the effective date of this Contract and prior to release of payment by the City. Contractors that are exempt based on number of employees agree to file a Request for Exemption with the Department within thirty (30) days of the effective date and prior to release of payment by the City.

(5) Articles of Agreement:ARTICLE I

The Contractor shall take affirmative action in accordance with the provisions of this Contract to ensure that applicants are employed, and that employees are treated during employment without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin and that the employer shall provide harassment-free work environment for the realization of the potential of each employee. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship insofar as it is within the control of the Contractor. The Contractor agrees to post in conspicuous places available to employees and applicants notices to be provided by the City setting out the provisions of the nondiscrimination clauses in this Contract.

ARTICLE II

The Contractor shall in all solicitations or advertisements for employees placed by or on behalf of the Contractors state that all qualified or qualifiable applicants will be employed without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin.

ARTICLE III

The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining Agreement or other Contract or understanding a notice to be provided by the City advising the labor union or workers representative of the Contractor's equal employment opportunity and affirmative action commitments. Such notices shall be posted in conspicuous places available to employees and applicants for employment.

ARTICLE IV

(This Article applies to non-public works contracts.)

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison (MGO 39.02) including the Contract compliance requirements. The Contractor warrants and certifies that one of the following paragraphs is true (**check one**):

- ☐ A. Contractor has prepared and has on file an affirmative action plan that meets the format requirements of Federal Revised Order No. 4, 41 CFR part 60-2, as established by 43 FR 51400 November 3, 1978, including appendices required by City of Madison ordinances or it has prepared and has on file a model affirmative action plan approved by the Madison Common Council.
- ☐ B. Within thirty (30) days after the effective date of this Contract, Contractor will complete an affirmative action plan that meets the format requirements of Federal Revised Order No. 4, 41 CFR Part 60-2, as established by 43 FR 51400, November 3, 1978, including appendices required by City of Madison ordinance or within thirty (30) days after the effective date of this Contract, it will complete a model affirmative action plan approved by the Madison Common Council.
- ☐ C. Contractor believes it is exempt from filing an affirmative action plan because it has fewer than fifteen (15) employees and has filed, or will file within thirty (30) days after the effective date of this Contract, a form required by the City to confirm exempt status based on number of employees. If the City determines that Contractor is not exempt, the Articles of Agreement will apply.
- ☐ D. Contractor believes it is exempt from filing an affirmative action plan because its annual aggregate business with the City for the calendar year in which the contract is in effect is less than fifty thousand dollars (\$50,000), or for another reason listed in MGO 39.02(9)(a)2. If the City determines that Contractor is not exempt, the Articles of Agreement will apply.

ARTICLE V

(This Article applies only to public works contracts.)

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison, including the Contract compliance requirements. The Contractor agrees to submit the model affirmative action plan for public works Contractors in a form approved by the Director of Affirmative Action.

ARTICLE VI

The Contractor will maintain records as required by Section 39.02(9)(f) of the Madison General Ordinances and will provide the City's Department of Affirmative Action with access to such records and to persons who have relevant and necessary information, as provided in Section 39.02(9)(f). The City agrees to keep all such records confidential, except to the extent that public inspection is required by law.

ARTICLE VII

In the event of the Contractor's or subcontractor's failure to comply with the Equal Employment Opportunity and Affirmative Action provisions of this Contract or Sections 39.03 and 39.02 of the Madison General Ordinances, it is agreed that the City at its option may do any or all of the following:

- A. Cancel, terminate or suspend this Contract in whole or in part.
- B. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.
- C. Recover on behalf of the City from the prime Contractor 0.5 percent of the Contract award price for each week that such party fails or refuses to comply, in the nature of liquidated damages, but not to exceed a total of five percent (5%) of the Contract price, or ten thousand dollars (\$10,000), whichever is less. Under public works contracts, if a subcontractor is in noncompliance, the City may recover liquidated damages from the prime Contractor in the manner described above. The preceding sentence shall not be construed to prohibit a prime Contractor from recovering the amount of such damage from the noncomplying subcontractor.

ARTICLE VIII

(This Article applies to public works contracts only.)

The Contractor shall include the above provisions of this Contract in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor shall take such action with respect to any subcontractor as necessary to enforce such provisions, including sanctions provided for noncompliance.

ARTICLE IX

The Contractor shall allow the maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this Contract. (In federally funded contracts the terms "DBE, MBE, and WBE" shall be substituted for the term "small business" in this Article.)

14. **SEVERABILITY.**

It is mutually agreed that in case any provision of this Contract is determined by any court of law to be unconstitutional, illegal or unenforceable, it is the intention of the parties that all other provisions of this Contract remain in full force and effect.

15. **NOTICES.**

All notices to be given under the terms of this Contract shall be in writing and signed by the person serving the notice and shall be sent registered or certified mail, return receipt requested, postage prepaid, hand delivered to the addresses of the parties listed below, or via email if the party has provided an email address for the purpose below. Email notices are presumed delivered on the date the email is sent by the sender.

FOR THE CITY:

(Department or Division Head)

Email address if
electing to receive
notice via email:

FOR THE
CONTRACTOR:

Email address if
electing to receive
notice via email:

16. **INDEPENDENT CONTRACTOR AND TAX INFORMATION.**

It is agreed that Contractor is an independent contractor and not an employee of the City, and any persons who the Contractor utilizes or provides for services under this Contract not employees of the City of Madison.

Contractor shall provide its taxpayer identification number (or social security number) to the Finance Director, 210 Martin Luther King Jr. Blvd, Room 406, Madison, WI 53703, prior to payment.

The Contractor is informed that as an independent contractor, Contractor may have a responsibility to make estimated tax returns, file tax returns, pay income taxes and make social security payments on the amounts received under this Contract. No amounts will be withheld by the City for these purposes and payment of taxes and making social security payments are solely the responsibility and obligation of the Contractor. The Contractor is further informed that they may be subject to civil and/or criminal penalties if they fail to properly report income and pay taxes and social security taxes on the amount received under this Contract.

17. **GOODWILL.**

Any and all goodwill arising out of this Contract inures solely to the benefit of the City; Contractor waives all claims to benefit of such goodwill.

18. **THIRD PARTY RIGHTS.**

This Contract is intended to be solely between the parties hereto. No part of this Contract shall be construed to add, supplement, amend, abridge or repeal existing rights, benefits or privileges of any third party or parties, including but not limited to employees of either of the parties.

19. **AUDIT AND RETAINING OF DOCUMENTS.**

The Contractor agrees to provide all reports requested by the City including, but not limited to, financial statements and reports, reports and accounting of services rendered, and any other reports or documents requested. Financial and service reports shall be provided according to a schedule (when applicable) to be included in this Contract. Any other reports or documents shall be provided within five (5) working days after the Contractor receives the City's written requests, unless the parties agree in writing on a longer period. Payroll records and any other documents relating to the performance of services under the terms of this Contract shall be retained by the Contractor for a period of three (3) years after completion of all work under this Contract, in order to be available for audit by the City or its designee.

20. **CHOICE OF LAW, VENUE, AND FORUM SELECTION.**

This Contract shall be governed by and construed, interpreted, and enforced in accordance with the laws of the State of Wisconsin, without regard to conflict of law principles. For any claim or suit or other dispute relating to this Contract that cannot be mutually resolved informally, the venue shall be Dane County, Wisconsin, and the parties agree to submit themselves to the jurisdiction of a court of competent jurisdiction in said venue, to the exclusion of any other forum that may have jurisdiction over such a dispute according to any law.

21. **COMPLIANCE WITH APPLICABLE LAWS.**

The Contractor shall become familiar with, and shall at all times comply with and observe all federal, state, and local laws, ordinances, and regulations which in any manner affect the services or conduct of the Contractor and its agents and employees.

22. **CONFLICT OF INTEREST.**

- A. The Contractor warrants that it and its agents and employees have no public or private interest, and will not acquire directly or indirectly any such interest, which would conflict in any manner with the performance of the services under this Contract.
- B. The Contractor shall not employ or Contract with any person currently employed by the City for any services included under the provisions of this Contract.

23. **ENTIRE AGREEMENT.**

This Contract for Purchase of Services, including any and all attachments, exhibits and other documents referenced in Section 3 ("Agreement" or "Contract ") is the entire Contract of the parties and supersedes any and all oral contracts and negotiations between the parties. If any document referenced in Section 3 includes a statement that expressly or implicitly disclaims the applicability of this Contract for Purchase of Services, or a statement that such other document is the "entire agreement," such statement shall be deemed rejected and shall not apply to this Contract.

24. **AMENDMENT.**

This Contract shall be binding on the parties hereto, their respective heirs, devisees, and successors, and cannot be varied or waived by any oral representations or promise of any agent or other person of the parties hereto. Any change in any provision of this Contract may only be made by a written amendment, signed by the duly authorized agent or agents who executed this Contract.

25. **TERMINATION.**

- A. In the event of a breach by the Contractor any of the covenants, agreements, commitments, or conditions of the Contract, if any such breach shall continue unremedied for a period of ten (10) days after written notice to Contractor, the City may, at its option and in addition to all other rights and remedies which it may have at law or in equity against Contractor, including expressly specific enforcement terminate this Contract and all rights of Contractor under this Contract.
- B. Notwithstanding paragraph A., above, the City may in its sole discretion and without any reason terminate this Contract at any time by providing the Contractor not less than ten (10) days' written notice of termination. In the event of termination under this subsection, the City will pay for all work completed by the Contractor and accepted by the City through the effective date of the termination.

26. **INDEMNIFICATION AND HOLD HARMLESS.**

- A. Indemnification. Subject to Wis. Stat. Sec. 443.20, the Contractor shall be liable to and hereby agrees to indemnify the City of Madison, and its officers, officials, agents, and employees against all loss or expense (including attorney's fees) by reason of any claims, suits, liability, demands,

losses, costs, damages, and expenses of every kind and description upon the City or its officers, officials, agents or employees for (i) losses proximately caused by the Contractor's and/or any subcontractor's negligent performance of the design professional services and only such losses that do not exceed the proportion of a loss caused by the negligent performance, and (ii) damages caused by Contractor's and/or any subcontractor's acts or omissions if such acts or omissions involve reckless, wanton, or intentional misconduct.

- B. Hold Harmless. The Contractor agrees to hold harmless the City of Madison and its officers, officials, agents and employees from any and all claims, suits, liability, demands, losses, costs, damages, and expenses of every kind and description, arising from the negligent acts or omissions of the Contractor, its officers, officials, employees, or agents.
- C. Survivability. This section 26 shall survive the termination or expiration of this Contract.

27. **INSURANCE.**

The Contractor will insure, and will require each subcontractor to insure, as indicated, against the following risks to the extent stated below. The Contractor shall not commence work under this Contract, nor shall the Contractor allow any Subcontractor to commence work on its Subcontract, until the insurance required below has been obtained and corresponding certificate(s) of insurance have been approved by the City Risk Manager.

Commercial General Liability

The Contractor shall procure and maintain during the life of this Contract, Commercial General Liability insurance including, but not limited to bodily injury, property damage, personal injury, and products and completed operations (unless determined to be inapplicable by the Risk Manager) in an amount not less than \$1,000,000 per occurrence. This policy shall also provide contractual liability in the same amount. Contractor's coverage shall be primary and non-contributory and list the City of Madison, its officers, officials, agents and employees as additional insureds. Contractor shall require all subcontractors under this Contract (if any) to procure and maintain insurance meeting the above criteria, applying on a primary basis and listing the City of Madison, its officers, officials, agents and employees as additional insureds.

Automobile Liability

The Contractor shall procure and maintain during the life of this Contract Business Automobile Liability insurance covering owned, non-owned and hired automobiles with limits of not less than \$1,000,000 combined single limit per accident. Contractor shall require all subcontractors under this Contract (if any) to procure and maintain insurance covering each subcontractor and meeting the above criteria.

Worker's Compensation

The Contractor shall procure and maintain during the life of this Contract statutory Workers' Compensation insurance as required by the State of Wisconsin. The Contractor shall also carry Employers Liability limits of at least \$100,000 Each Accident, \$100,000 Disease – Each Employee, and \$500,000 Disease – Policy Limit. Contractor shall require all subcontractors under this Contract (if any) to procure and maintain such insurance, covering each subcontractor.

Professional Liability

The Contractor shall procure and maintain professional liability insurance with coverage of not less than \$1,000,000. If such policy is a "claims made" policy, all renewals thereof during the life of the Contract shall include "prior acts coverage" covering at all times all claims made with respect to Contractor's work performed under the Contract. This Professional Liability coverage must be kept in force for a period of six (6) years after the services have been accepted by the City.

Acceptability of Insurers. The above-required insurance is to be placed with insurers who have an A.M. Best rating of no less than A- (A minus) and a Financial Category rating of no less than VII.

Proof of Insurance, Approval. The Contractor shall provide the City with certificate(s) of insurance showing the type, amount, effective dates, and expiration dates of required policies prior to commencing work under this Contract. Contractor shall provide the certificate(s) to the City's representative upon execution of the Contract, or sooner, for approval by the City Risk Manager. If any of the policies required above expire while this Contract is still in effect, Contractor shall provide renewal certificate(s) to the City for approval. Certificate Holder language should be listed as follows:

City of Madison
 ATTN: Risk Management, Room 406
 210 Martin Luther King, Jr. Blvd.
 Madison, WI 53703

The Contractor shall provide copies of additional insured endorsements or insurance policies, if requested by the City Risk Manager. The Contractor and/or Insurer shall give the City thirty (30) days advance written notice of cancellation, non-renewal or material changes to any of the above-required policies during the term of this Contract.

28. OWNERSHIP OF CONTRACT PRODUCT.

All of the work product, including, but not limited to, documents, materials, files, reports, data, including magnetic tapes, disks of computer-aided designs or other electronically stored data or information (the "Documents"), which the Contractor prepares pursuant to the terms and conditions of this Contract are the sole property of the City. The Contractor will not publish any such materials or use them for any research or publication, other than as expressly required or permitted by this Contract, without the prior written permission of the City. The grant or denial of such permission shall be at the City's sole discretion.

The Contractor intends that the copyright to the Documents shall be owned by City, whether as author (as a Work Made For Hire), or by assignment from Contractor to City. The parties expressly agree that the Documents shall be considered a Work Made For Hire as defined by Title 17, United States Code, Section 101(2).

As further consideration for the City entering into this Contract, the Contractor hereby assigns to City all of the Contractor's rights, title, interest and ownership in the Documents, including the right to procure the copyright therein and the right to secure any renewals, reissues and extensions of any such copyright in any foreign country. The City shall be entitled to the sole and exclusive benefit of the Documents, including the copyright thereto, and whenever required by the City, the Contractor shall at no additional compensation, execute all documents of assignment of the full and exclusive benefit and copyright thereof to the City. Any subcontractors and other independent contractors who prepare portions of the Documents shall be required by the Contractor to execute an assignment of ownership in favor of the City before commencing work.

29. BAN THE BOX - ARREST AND CRIMINAL BACKGROUND CHECKS. (Sec. 39.08, MGO. Applicable to contracts exceeding \$25,000.)

A. DEFINITIONS.

For purposes of this section, "Arrest and Conviction Record" includes, but is not limited to, information indicating that a person has been questioned, apprehended, taken into custody or detention, held for investigation, arrested, charged with, indicted or tried for any felony, misdemeanor or other offense pursuant to any law enforcement or military authority.

"Conviction record" includes, but is not limited to, information indicating that a person has been convicted of a felony, misdemeanor or other offense, placed on probation, fined, imprisoned or paroled pursuant to any law enforcement or military authority.

"Background Check" means the process of checking an applicant's arrest and conviction record, through any means.

B. REQUIREMENTS. For the duration of this Contract, the Contractor shall:

- (1) Remove from all job application forms any questions, check boxes, or other inquiries regarding an applicant's arrest and conviction record, as defined herein.
- (2) Refrain from asking an applicant in any manner about their arrest or conviction record until after conditional offer of employment is made to the applicant in question.
- (3) Refrain from conducting a formal or informal background check or making any other inquiry using any privately or publicly available means of obtaining the arrest or conviction record of an applicant until after a conditional offer of employment is made to the applicant in question.
- (4) Make information about this ordinance available to applicants and existing employees, and post notices in prominent locations at the workplace with information about the ordinance and complaint procedure using language provided by the City.
- (5) Comply with all other provisions of Sec. 39.08, MGO.

C. EXEMPTIONS: This section does not apply when:

- (1) Hiring for a position where certain convictions or violations are a bar to employment in that position under applicable law, or
- (2) Hiring a position for which information about criminal or arrest record, or a background check is required by law to be performed at a time or in a manner that would otherwise be prohibited by this ordinance, including a licensed trade or profession where the licensing authority explicitly authorizes or requires the inquiry in question.

To be exempt under sec. C.(1) or (2) above, Contractor must demonstrate to the City that there is a law or regulation that requires the hiring practice in question. If so, the contractor is exempt from this section for the position(s) in question.

30. **WEAPONS PROHIBITION.**

Contractor shall prohibit, and shall require its subcontractors to prohibit, its employees from carrying weapons, including concealed weapons, in the course of performance of work under this Contract, other than while at the Contractor's or subcontractor's own business premises. This requirement shall apply to vehicles used at any City work site and vehicles used to perform any work under this Contract, except vehicles that are an employee's "own motor vehicle" pursuant to Wis. Stat. sec. 175.60(15m).

31. **IT NETWORK CONNECTION POLICY.**

If this Contract includes software or technology services that require a Network Connection the City Network (as defined in the following link), the City's Network Connection Policy found at this link: www.cityofmadison.com/employeenet/documents/contracts/posNetworkConnection.docx is hereby incorporated and made a part of this Contract and Contractor agrees to comply with all of its requirements.

32. **AUTHORITY.**

Contractor represents that it has the authority to enter into this Contract. If the Contractor is not an individual, the person(s) signing on behalf of the Contractor represents and warrants that they have been duly authorized to bind the Contractor and sign this Contract on the Contractor's behalf.

33. **COUNTERPARTS, ELECTRONIC SIGNATURE AND DELIVERY.**

This Contract may be signed in counterparts, each of which shall be taken together as a whole to comprise a single document. Signatures on this Contract may be exchanged between the parties by facsimile, electronic scanned copy (.pdf) or similar technology and shall be as valid as original; and this Contract may be converted into electronic format and signed or given effect with one or more electronic signature(s) if the electronic signature(s) meets all requirements of Wis. Stat. ch. 137 or other applicable Wisconsin or Federal law. Executed copies or counterparts of this Contract may be delivered by facsimile or email and upon receipt will be deemed original and binding upon the parties hereto, whether or not a hard copy is also delivered. Copies of this Contract, fully executed, shall be as valid as an original.

IN WITNESS WHEREOF, the parties hereto have set their hands at Madison, Wisconsin.

CONTRACTOR:

(Type or Print Name of Contracting Entity)

By: _____

(Signature)

(Print Name and Title of Person Signing)

Date: _____

**CITY OF MADISON, WISCONSIN
a municipal corporation:**

By: _____

Satya Rhodes-Conway, Mayor

Date: _____

Approved:

David P. Schmiedicke, Finance Director

Date: _____

By: _____

Lydia A. McComas, City Clerk

Date: _____

Approved as to Form:

Eric T. Veum, Risk Manager

Date: _____

Michael Haas, City Attorney

Date: _____

For City Use Only: SIGNATURE INSTRUCTIONS FOR CONTRACTS SIGNED BY MAYOR/CLERK:
Obtain contractor's signature first. Route this contract with all of its attachments for City signatures using Accela. Provide authorizing resolution and Certificate of Insurance as instructed in Accela.

NOTE: Certain service contracts may be executed by the designee of the Finance Director on behalf of the City of Madison:

By: _____

Mary Richards, Procurement Supervisor

Date: _____

MGO 4.26(3) and (5) authorize the Finance Director or designee to sign purchase of service contracts when all of the following apply:

- (a) The funds are included in the approved City budget.
- (b) An RFP or competitive process was used, or the Contract is exempt from competitive bidding by 4.26(4)(a) (contracts up to \$75,000 in total or up to \$75,000 per year for software and technology services are exempt).
- (c) The City Attorney has approved the form of the Contract.
- (d) The Contract complies with other laws, resolutions and ordinances.
- (e) The Contract is for a period of 1 year or less, OR not more than 5 years AND the average cost is not more than \$100,000 per year, AND was subject to competitive bidding when required by 4.26(4)(a). (If over \$75,000 and exempt from bidding under 4.26(4)(a), regardless of duration, the Common Council must authorize the Contract by resolution and the Mayor and City Clerk must sign, per 4.26(5)(b).)

Emergency Service contracts may also be signed by the designee of the Finance Director if the requirements of MGO 4.26(3)(c) are met.

For City Use Only: SIGNATURE INSTRUCTIONS FOR CONTRACT TO BE SIGNED BY FINANCE (PURCHASING):

Obtain contractor's signature first. Attach the contractor-signed contract with all attachments/exhibits and the certificate of insurance to the requisition in MUNIS.



Form A: Price Proposal and Signature Affidavit

RFP #:

This form must be returned with your response.

PRICE PROPOSAL

Prepare your price proposal as follows:

- **All Inclusive** – Your price proposal must cover all direct and indirect necessary expenses including but not limited to; travel, telephone, copying, and other out-of-pocket expenses.
- **Not To Exceed** – The actual fees must not exceed the amount specified in your price proposal.
- **Fixed Fee** – All prices outlined in your proposal must remain fixed and valid for the entire length of the contract and any/all renewals.
- **Unit Pricing, where applicable** - For any given item, the quantity multiplied by the unit price establishes the extended price. If an apparent mistake exists in the extended price, the unit price will be used in the bid/proposal evaluation.
- **FOB (Free on Board) Destination Freight Prepaid and Allowed** – If goods are included, you are responsible for the cost of delivering all goods to our location, including handling, delivery, transportation, and insurance charges. Failure to bid FOB Destination Freight Prepaid and Allowed may disqualify your proposal.
- **Do not include sales tax in your proposal.** The City of Madison is exempt from federal excise taxes and State of Wisconsin taxes per section 77.54(9a) of the Wisconsin Statutes.
 - CES No. 008-1020421147-08
 - Wisconsin Department of Revenue Form S-211:
<https://www.cityofmadison.com/finance/purchasing/vendor-resources/letter-of-credit/wisconsin-department-of-revenue-form-s-211>.

COMPANY NAME



Form A: Price Proposal and Signature Affidavit

RFP #:

SIGNATURE AFFIDAVIT

Proposer's Certification:

By submitting this proposal, we certify that:

- This entire proposal, including the Price Proposal, has been developed independently and not in collusion with other proposers or anyone competing for the award of this RFP.
- We have not knowingly disclosed the contents of this proposal to any other proposer, anyone competing for the award of this RFP.
- We have not taken any action that would interfere with free competition on this RFP.
- We have not violated any laws in the submission of this proposal or participation this RFP.
- All information in this proposal is true and accurate to the best of our knowledge.

Agreement to comply with all terms of RFP: By submitting this proposal, we agree to comply with all of the terms, conditions, and specifications of this RFP, the sample contract, and any contract awarded under this RFP.

COMPANY NAME

SIGNATURE

DATE

NAME OF PERSON SIGNING

TITLE OF PERSON SIGNING



Form B: References

RFP #:

This form must be returned with your response.

Please list three references that are **NOT** from the City of Madison. If you wish to highlight any additional work experience for the City of Madison, please list it on a separate page.

REFERENCE #1 – CLIENT INFORMATION	
ORGANIZATION/COMPANY NAME	PROJECT MANAGER
TELEPHONE NUMBER	EMAIL
PROJECT START DATE	PROJECT END DATE
PROJECT DESCRIPTION	

REFERENCE #2 – CLIENT INFORMATION	
ORGANIZATION/COMPANY NAME	PROJECT MANAGER
TELEPHONE NUMBER	EMAIL
PROJECT START DATE	PROJECT END DATE
PROJECT DESCRIPTION	

REFERENCE #3 – CLIENT INFORMATION	
ORGANIZATION/COMPANY NAME	PROJECT MANAGER
TELEPHONE NUMBER	EMAIL
PROJECT START DATE	PROJECT END DATE
PROJECT DESCRIPTION	

ORGANIZATION/COMPANY NAME



Form C: Vendor Profile

RFP #:

This form must be returned with your response.

COMPANY INFORMATION

COMPANY NAME (Make sure to use your complete, legal company name.)			
FEIN	(If FEIN is not applicable, SSN collected upon award)		
CONTACT NAME (Able to answer questions about proposal.)	TITLE		
TELEPHONE NUMBER	EMAIL		
ADDRESS	CITY	STATE	ZIP

AFFIRMATIVE ACTION CONTACT

If the selected contractor employs 15 or more employees and does aggregate annual business with the City of \$50,000 or more, the contractor will be required to file an Affirmative Action Plan and comply with the City of Madison Affirmative Action Ordinance, Section 39.02(9)(e), within thirty (30) days contract signature. Vendors who believe they are exempt based on number of employees or annual aggregate business must file a request for exemption. Link to information and applicable forms:

<https://www.cityofmadison.com/civil-rights/contract-compliance/affirmative-action-plan/vendors-suppliers>

CONTACT NAME	TITLE		
TELEPHONE NUMBER	EMAIL		
ADDRESS	CITY	STATE	ZIP

ORDERS/BILLING CONTACT

Address where City purchase orders/contracts are to be mailed and person the department contacts concerning orders and billing.

CONTACT NAME	TITLE		
TELEPHONE NUMBER	EMAIL		
ADDRESS	CITY	STATE	ZIP

LOCAL VENDOR STATUS

The City of Madison has adopted a local preference purchasing policy granting a scoring preference to local suppliers. Only suppliers registered as of the bid's due date will receive preference. Learn more and register at the City of Madison website.

<https://www.cityofmadison.com/finance/purchasing/local-businesses/register-business/>

CHECK ONLY ONE:

☐ **Yes**, we are a local vendor **and** have registered on the City of Madison website under the following category: _____

☐ **No**, we are not a local vendor or have not registered.

Exhibit 1a: Recent Development Lower Badger Mill Creek Watershed

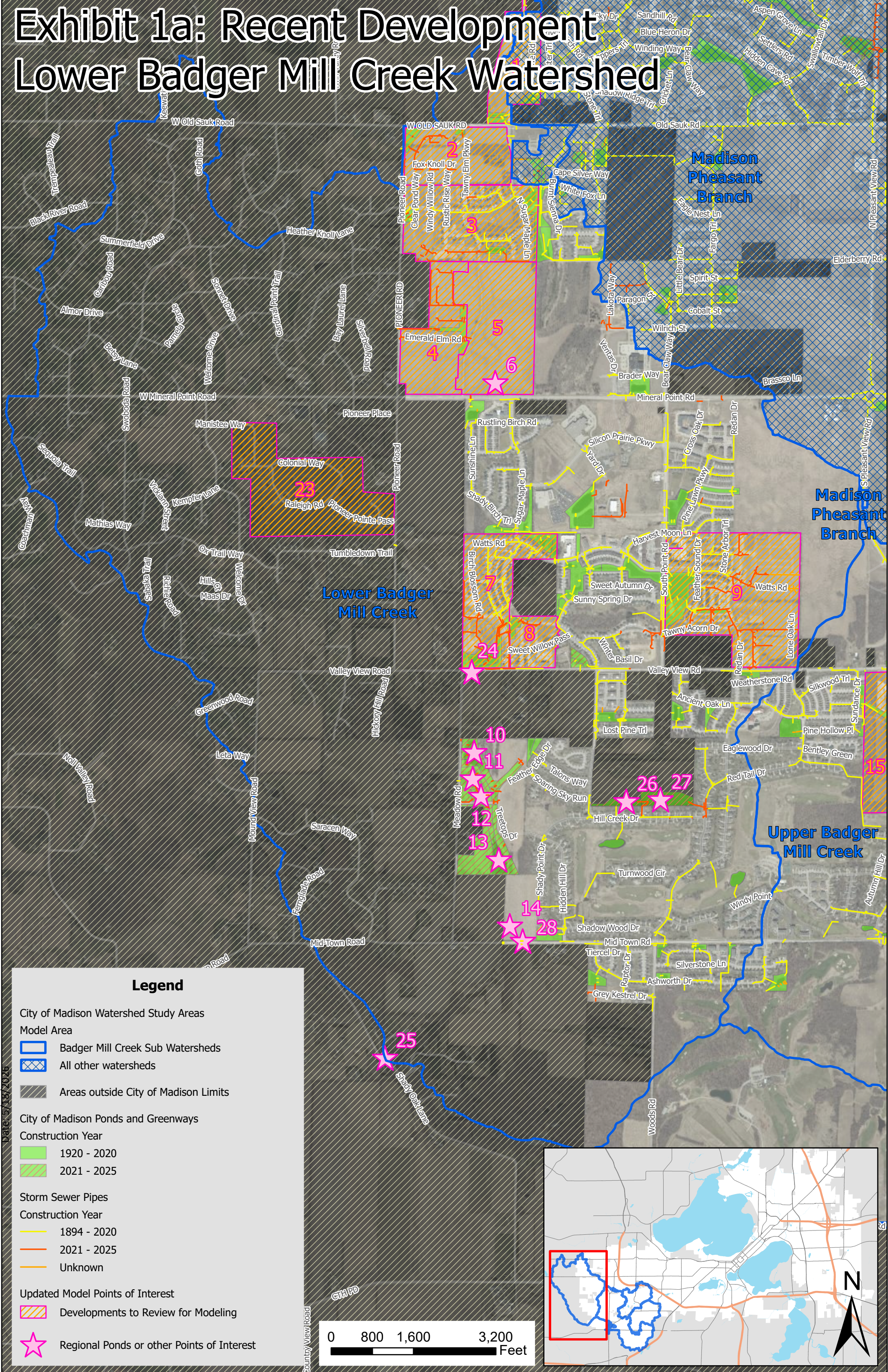


Exhibit 1b: Recent Development Upper Badger Mill Creek Watershed

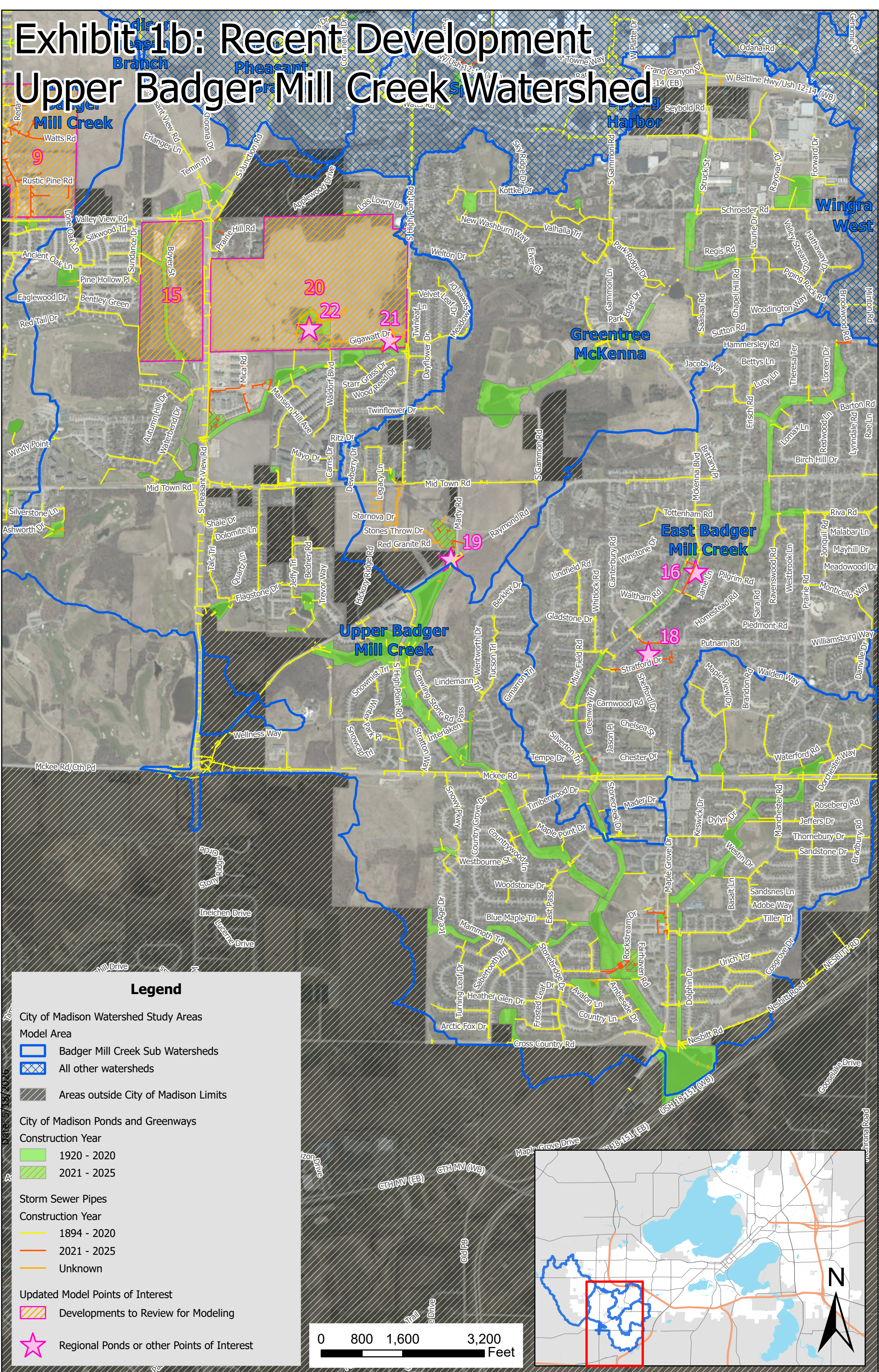


Exhibit 1c – Recent Badger Mill Creek Developments and modeling update plan

ID	Name	Notes
1	Pope Farm Estates	Development was in design/construction during the previous watershed study. The southern ponds in are included in the models. However please review topography and hydrology to ensure they match current conditions and update in existing conditions model
2	Fox Knoll	Development not previously modeled. Construction began in 2023. Add ponds, update hydrology, topography, and sewers in existing conditions models (assuming full residential lot build out). City received as-built pond certification and will provide plans.
3	Eagle Trace	Phase 1 of construction began in 2018. Subsequent phases of development were in design/construction during previous modeling effort. The area was included in the previous models as was planned at the time. However, topography, hydrology, and pond geometries shall be reviewed to determine if additional revisions are needed and models shall be updated accordingly. City will provide pond as-builts.
4	Westwind Plat	Development currently under construction (began in 2023). Not previously modeled in watershed study. Add ponds, update hydrology, topography, and sewers in existing conditions models assuming full residential lot buildout.
5	Herrling Property	Development in planning/design. City has draft stormwater management plans. Timeline of development is uncertain. Hired consultant shall plan to add designs to existing conditions models, but if the developer's design does not sufficiently proceed through the approval process in time, City may elect to not include it in the scope of this study.
6	Herrling Regional Pond	Regional Peak Detention Pond identified in 2003 Lower Badger Mill Creek Report (Facility PP2). City is planning to purchase land for the pond and has preliminary designs and sizing. City would like to confirm pond sizing and design as part of this study, to be added to proposed conditions modeling.
7	Birchwood Point	Plat construction began in 2018 and continued to 2024. Ponds and development were included in original model as planned for full build out, however, please review topography and hydrology and update models if needed. City will provide pond as-builts.
8	Thousand Oaks	Ponds were included in the previous models. However, hydrology should be reviewed to confirm it matches current conditions and updated in models as needed.
9	Acacia Ridge	Ongoing development began in 2019 and continued through 2026. Plat ponds were included in the previous models. Review modeled topography and hydrology to determine if they match full build out conditions and update models as needed.

Exhibit 1c – Recent Badger Mill Creek Developments and modeling update plan

10-13	Feathers Edge Pond System	Constructed regional ponds. Not previously modeled. Add to Existing Conditions Models. Identified in 2003 LBMC Report as Facilities EP5 and EP6
14	Unnamed	Regional Peak Detention Pond identified in 2023 LBMC Report as Facility EP7. Add to proposed conditions model.
15	UW Research Park 2 – Pioneer Addn	Development in design. City will provide design details to add to existing conditions models.
16	Mckenna and Pilgrim Storm Improvements	Storm sewer improvements constructed in 2025 Add to existing East Badger Mill Creek Models
17	Tanger Trail Storm Improvements	Storm sewer improvements were constructed in 2022. City will add to existing East Badger Mill Creek Models
18	Putnam and Stratford Storm Improvements	Storm sewer improvements were constructed in 2024. City will add to existing East Badger Mill Creek Models
19	Inflows from McKenna Greentree Model	New regional ponds identified near outlet of watershed from 2003 Lower Badger Mill Creek Report. Additional projects identified in McKenna Greentree Watershed Study. City will update models and provide inflows from existing and proposed conditions watershed models.
20	Hill Valley	Plat with ongoing development, will be approximately 40% complete in 2026. Will need to add completed design and constructed ponds to existing conditions models. Will need to update sub catchments, hydrology, and ponds/sewers. This includes the ponds identified in #21 and #22 below. Additional ponds currently completed preliminary design to be added as well (plat grading plan will be provided by City).
21	Hill Vally – Gigawatt Dr Ponds	Stormwater ponds were constructed in first phase of Hill Vally Plat. Will need to add to existing conditions models.
22	Hill Valley – Enchantment Rd Ponds	Ponds constructed in first phase of Hill Valley Plat will need to be added to existing conditions models.
23	Pioneer Pointe	Plat in the Town of Middleton Developed 2020-2022, update LBMC model to include new topography, ponds and land use. City will be requesting H&H model of the development to provide to consultant selected for this study.
24	Valley View Rd Crossing	Road is known to overtop during large events. City has evaluated potential solutions in the past but would like to look at potential sizing of infrastructure here and to the south for potential future road crossings as part of new development.
25	Outlet of Lower Badger Mill Creek Study Area	City is interested in understanding how development within watershed had impacted flows to Verona
26-27	Hawks Landing North Flood Mitigation West (26) and East (27) Ponds	Flood mitigation ponds constructed in 2023. City will provide as-built plans.
28	Mid-Town Rd Box Culvert	The City does not desire proposed improvements that would significantly increase the capacity of the Box Culvert as it would result in higher flows downstream of the City.

Exhibit 2: Data Provided by City

City of Madison PCSWMM Models, and GIS and Related Data for 2026 Badger Mill Creek Watershed Models Update

The following data are provided to the consultants for use in responding to the RFPs and developing watershed models under contract with the City. The consultant shall not use these data for any other purpose or share this data with anyone else.

The available data is not a complete dataset. The City is in process of updating and consolidating data. This document describes much of what is currently available. Updated data will be supplied to the consultant as it becomes available during the studies.

Data are stored in two locations.

1. Some can be downloaded from the City's Open Data (<https://cityofmadison.maps.arcgis.com/home/index.html>) portal via links shown with each dataset.
2. Others are only available via visiting the City's File Sharing (FTP) site (including the existing PCSWMM models). Link: <https://sftp.cityofmadison.com:443/ui/#/syncplify/share?N=gSuDYkR8PaiVT5M7YhtbBk>

Where applicable, data for other municipalities within the watersheds will need to be obtained from that municipality.

Existing Upper and Lower Badger Mill Creek Watershed Models

Existing PCSWMM models - to be used as the basis of this study are provided on the FTP Site at the following location:
FTP/PCSWMM_Models

Subwatershed	PCSWMM Model location	Description
Upper Badger Mill Creek	<i>/UMBC_Watershed_Existing_Conditions.zip</i>	Packaged Upper Badger Mill Creek PCSWMM model input and output files for the 100-yr 24-hr storm event.
Lower Badger Mill Creek	<i>/Lower Badger Mill Creek SWMM-100yr.2D Cells.7z.001 through .003</i>	Packaged Lower Badger Mill Creek PCSWMM model input and output files for the 100-yr 24-hr storm event. This zip file was broken into three pieces to get under the FTP file sharing site upload limit. Files can be recombined using an applications such as 7zip. If the model cannot be downloaded and recombined successfully please send an email to rstenjem@cityofmadison.com with the subject line "Lower Badger Mill PCSWMM model request" with a file sharing link that can support an individual file size of at least 7.2 GB

City Ownership and Geo Data

City does have rest services available for some datasets: <https://maps.cityofmadison.com/arcgis/rest/services/Public/>

- **EngineeringOpenData.lyr** is also hosted as a rest service: *Public/OPEN_DATA_ENGR2*
- **City Owned_Draft.lyr** (*FTP/Watershed Studies Folder*)
 - Source File TaxParcels, definition query on property owned by various City of Madison agencies. Symbology based on ReportName1 field.

- **TaxParcels Feature Class** (*FTP/Geodata in FloodStudies_2026.gdb*) is hosted as an ArcGIS rest service here: https://maps.cityofmadison.com/arcgis/rest/services/Public/Property_Lookup/MapServer
- **Park_Land_polygons Feature Class** (*FTP/Geodata in FloodStudies_2026.gdb*)
- **Eng_Parks_MOU_Areas Feature Class** (*FTP/Geodata in FloodStudies_2026.gdb*)
 - Draft Memorandum of Understanding regarding public property that has multiple functionality as a combination of either right of way, park use or stormwater use.

Pond and Greenway Data

- **Pond_Greenway Feature Class** (*FTP/Geodata in FloodStudies_2026.gdb*)
 - Ponds and greenways polygons in layer as Type This includes official pond name, year built, node number, etc. The node number is how the City tracks pond data, therefore specific data is stored in folders titled per pond node. Parcel_owner of MAD-C generally identifies that this pond is under the jurisdiction of the City of Madison Engineering Division or Parks Division. Maintenance responsibilities and deed restrictions are generally noted, but require further investigation.
- **Pond As-Built Information**
 - Data can be retrieved from the City upon request as-needed when consultant is selected.

Watershed/Outfall Data

- **Subcatchments** (*FTP/Geodata in FloodStudies_2026.gdb*)
 - Subcatchments is the City's most up-to-date subcatchment basin information. This information can be dissolved to treatment basins, HH model watershed boundaries, and watershed boundaries. These recently were merged to drain to the first treatment device.
 - The City anticipates the Consultant will use the subcatchments previously delineated and used in the existing models, however, if consultant uses an alternate approach the newly delineated subcatchments will need to match existing subcatchments from adjoining watershed studies for the model.
- **Historic watershed studies/watershed information**
 - Final report from the Upper Badger Mill Creek Watershed Study can be found here: <https://www.cityofmadison.com/engineering/projects/upper-badger-mill-creek-watershed-study>
 - Final Report from the Lower Badger Mill Creek Watershed Study can be found here: <https://www.cityofmadison.com/engineering/projects/lower-badger-mill-creek-watershed-study>
 - *FTP/PreviousStudies.zip*
 - Includes watershed modeling reports for Upper and Lower Badger Mill Creek Completed by Earth Tech in 2001 and 2003 respectively

Storm Pipe and Structure Data

- **Storm_Pipes** (*FTP/Geodata/WatershedStudies_2026.gdb and downloadable as a shapefile on [City of Madison Open Data website](#)*)
 - Citywide Storm pipes are mapped by the City of Madison's mapping division. The invert data is based on as-built information. Due to an updated process in 2005, the City has the most confidence in data from 2005 forward.
 - The City Surveyors started using GPS (Global Positioning System- Survey Grade) to set Control for the 2005 construction Season. This system provided uniform elevations all over the City of Madison. Prior to 2005 Hydrants were used as benchmark elevations for projects; hydrant elevations came from a variety of sources and were inconsistent over the City.

- The City is modifying its data per the schema that is downloadable from the Open Data portal. Based on available data, consultants may need to infer elevations or request survey for important locations within the modeled conveyance system.
- **Storm_Structures** (*FTP/Geodata/WatershedStudies_2026.gdb* and downloadable as a shapefile on [City of Madison Open Data website](#))
 - Storm structures are mapped by the City of Madison's mapping division. The invert data is based on as-built information. Due to an updated process in 2005, the City has the most confidence in data from 2005 forward.
 - The City Surveyors started using GPS (Global Positioning System- Survey Grade) to set Control for the 2005 construction Season. This system provided uniform elevations all over the City of Madison. Prior to 2005 Hydrants were used as benchmark elevations for projects; hydrant elevations came from a variety of sources and were inconsistent over the City.
- **Storm_Pipes_Private** (*FTP/Geodata/WatershedStudies_2026.gdb*)
 - Citywide Data was mapped where private storm connects into the public storm sewer. This data is from parking lot construction plans from private development and does not always reflect what was built
- **Storm_Struct_Private** (*FTP/Geodata/WatershedStudies_2026.gdb*)
 - Citywide Data was mapped from parking lot construction plans from private development and does not always reflect what was built

STO_Modeling_Impervious (*FTP/Geodata/ FloodStudies_2026.gdb*)

- This citywide data was created in 2022 and represents the land cover and connectedness of impervious surfaces in the city based on 2020 aerial imagery

Aerial Photograph, DEM, Contours, LiDAR

- **2022 imagery** (and older images) hosted as an image server by Dane County here:
<https://dcimapapps.countyofdane.com/arcgisimg/rest/services>

Flooding Data (*FTP/Geodata in Flood_Data.gdb*)

Feature Class Name	Description
FEMA_Reported_Aug20_Public	Public flood damage locations reported to FEMA. Codes: ○ A-Debris Removal ○ B- Emergency Protective Measures ○ C-Roads and Bridges ○ D-Water Control Facilities ○ E-Buildings and Equipment ○ F-Utilities ○ G-Parks, Recreation, Other
FEMA_CityDamage_Aug20	Public infrastructure damaged in the flood with repair reimbursements submitted to FEMA. Some overlap with FEMA public reported points.
OtherCollected_FloodPts_Aug20	Locations of issues received (emails/calls) by City Engineering staff as a result of the August 20, 2018 flood event (some overlap with FEMA reported points).
Official_Flood_Report_Pts	Locations of issues received via the City's online flood reporting form; date attached to feature class is the date that the data was pulled from the flood report form.

Feature Class Name	Description
Historic_FloodPts	Intersections, points, and areas that have been noted over the years as having some flood/drainage related issue; includes 911 calls from June 16, 2018 event; attribute data is variable
Operations_FloodPts	Locations generated from City of Madison Operations work orders and calls received requiring flood/drainage related maintenance issues over the years.
Priority_Inlets	City Engineering Operations priority inlets for maintenance.
BI_FloodPts_Aug20_Private	2-1-1 and Building Inspection collected private damage information from Aug 20 th storm damage. BI used this data to create preliminary damage estimates based on FEMA's flood damage calculator.
Street_Flooding	Layer generated manually by looking at historic data points to determine streets that have had flooding issues, plus institutional knowledge.
Business_FloodPts_Aug20	Businesses that had direct impact on their properties from the August 20, 2018 flooding

MODELING GUIDANCE

Version 2024_01_28(DRAFT)

Version Revision	Purpose	Changes	Author
V2024_02_19	Issued round 7 RFP (Nine Springs, Pennito Creek)	Added Item 10.c. under "Modeling Parameters"	RSS
V2028_01_28	Updating for issuing Starkweather and Olbrich RFP to complete existing conditions modeling and develop solutions	Added item 14.e.i	RSS

Round 8 Watershed Studies

The City recognizes that an important aspect of modeling is professional judgement; and it will be up to the Consultant to appropriately define parameters, variables, and methodology. However, it is in the City's best interest to have relative uniformity amongst City models. This guidance document was developed to provide uniformity. Where inputs and assumptions differ from those outlined in this document, the Consultant will be expected to justify and document the differences and reasons for the differences.

The purpose of the watershed modeling is to construct planning-level models of the watershed to identify locations with significant conveyance system deficiencies. The identified solutions will be conceptual solutions, not design-level solutions.

City of Madison Flooding Level of Service Goals

1. 10-year design storm event:
 - a. No surcharging onto the street for up to the 10-year design storm; water shall be contained within the pipes and structures.
 - i. When using rain-on-grid hydrology, the goal is met if there is less than 0.25' of curb depth using the FHA method.
 - b. There are locations within the City where low points exist that pond water; these low points are excluded from this goal and will be addressed as streets are redesigned.
 - c. For locations limited by known inlet capacity, allow no more than 0.5 feet of water above storm sewer inlet rim.
2. 25-year design storm event:
 - a. Street to remain passable for emergency vehicles during 25-year design storm.
 - i. This is defined as no more than 0.5 feet of water on the centerline of the street for a length of 100-feet using the depth raster.
 - ii. To define the centerline of street, the County's centerline data (Dane County SDE – GISdw.DCL.RoadCenterline) should be used.
 - b. Note that the Watershed Study modeling approach will not explicitly account for cross flow conditions where more gutter flow on one side of the street can overtop the crown.
3. 100-year design storm event:
 - a. No home or business will be flooded during the 100-year design storm.
 - i. This is defined as no more than 0.5 feet of water at the 5-foot buffer around a structure.
 - b. Enclosed depressions to be served to the 100-year design storm (which can include safe overland flow within street, easements, greenways or other public lands).
 - i. For purposes of the watershed studies, enclosed depressions are defined as depressions in public right-of-way where stormwater needs to reach private property to overflow from the depression.
 - ii. Solutions will also be developed for enclosed depressions where the stormwater collected is solely from private property. In these cases, the solutions may be

implemented thru public-private cooperation or solely by the private property owners.

- c. Greenway crossings at streets to be served to the 100-year design storm.
4. 500-year design storm event:
 - a. Safely convey stormwater; i.e. limited impact on private property.
 - b. Limited impact is defined as no more than 0.5 feet of water at the 5-foot buffer around a structure.
5. Provide flooding solutions that do not negatively impact downstream properties.

Due to the inherent variability and complexity of stormwater conveyance systems, it is understood it may not be practical to meet the above level of service goals in all areas of the City.

Guidance for Solutions

1. For the purpose of the watershed studies "deficiencies" in the system shall be defined as existing infrastructure, drainage capacity, or system limitations that fail to meet the goals stated in 1-5 above.
2. Watershed deficiencies will be reviewed, and solutions will be provided up to, the 100-yr design storm.
3. In areas where flooding occurs in events exceeding the 100-year storm, those areas will not be prioritized for engineering solutions, but will be identified in existing conditions model for 500-year event storms.
4. Proposed solutions will be identified for only the publicly owned drainage system.
5. Drainage issues that are private (water from the public infrastructure such as streets, greenways, ponds and/or easements is not the cause of the drainage issue) will not require modeling solutions but should be noted, where possible, in the existing conditions analysis so staff may work with property owners if necessary. (See Also Hydraulics section of Modeling Guidance for discussion on private system existing conditions modeling.)

Emergency Vehicle Allowable Flood Depths (email from Fleet on 5/12/2020)

1. SUVs – up to 6-inches
2. Large Trucks – up to 3-feet
3. Ambulances, vans, and pick-up trucks – between 6-inches and 3-feet

MODELING PARAMETERS:

Initial model parameters are the following items:

1. Include storm sewers and culvert segments for the trunk line drainage system and major conveyance to that system. Additional conveyance components may be included if felt necessary by the modeler to understand the conveyance system drainage.
2. Inlet capacity will not be included in the model. It is assumed that sufficient inlets are present to accommodate stormwater. In areas where there is known chronic flooding that has been reported to Engineering, additional detail may be requested.
3. Incorporate significant existing storm water management facilities (public and private) into the model.
4. Subdivide provided outfall basins into smaller watersheds as needed in order to properly execute the model.
5. Coordinate System and Vertical Datum
 - a. Horizontal Coordinate System: NAD 1983 HARN WISCRS Dane County Feet (WKID 103412).
 - b. Vertical Datum: NAVD88 (pre 2007 adjustment) ft (City of Madison Datum + 845.6)
 - c. Various data sources have different horizontal and vertical datums, check datum for each data source prior to use.
 - d. When setting up PC-SWMM Models, the default coordinate system that looks like it matches the City's preferred coordinate system is not the same. PC-SWMM's default coordinate system is State Plane and the exact coordinate system the City uses is not in

- PC-SWMM's database. To create a PC-SWMM model with the same coordinate system:
- i. Open up a new, blank model.
 - ii. Add one of the City's shapefiles with the preferred coordinate system.
 - iii. Then, in PC-SWMM, select that coordinate system as the default.
6. Monitoring Data Time Zone: Different sources of monitoring data use different time zones. Also, some adjust for daylight savings time whereas others do not. When using the monitoring data, check both the time zone and if the data is adjusted for daylight savings time.
7. Monitoring Data Review: Familiarize yourself with the location of the monitoring gage at each site. Also, visit the monitoring site following a rain event to review the site conditions for things that would impact the measurements. For example, is there debris clogging anything?
8. Naming convention
- a. Names are limited to 20 characters where possible. Both PC-SWMM and XP-SWMM can take lengthy names but both indicate shorter is better for avoiding truncating names.
 - b. Subcatchments:
 - i. Begin with Subcatchments naming convention provided by the City in the Outfall Basin feature class.
 1. Add a three-digit designator to the end of the name, beginning with 000
 2. As subcatchments are subdivided, increase the added designator by 1.
 3. Example: ME04-A-0014-H (*Provided by City*) → ME04-A-0014-H-MAD-C-000 (*For the original basin*) → ME04-A-0014-H-001 (*For first subdivision*)
 - ii. Final outfall basin feature class file, including supporting files used to compute runoff timing and volume parameters shall be part of the deliverables provided to the City of Madison.
 - iii. Note first downstream stormwater control practice as attribute in subcatchment feature class.
 - c. Structures and Junctions:
 - i. Node (Junction/Storage/Outfall) names for existing structures shall retain the asset identification provided by the City.
 - ii. Proposed Structure names are to be determined by the Consultant but shall be given a "logical" name that reflects general location, function, or other.
 - iii. For junctions that need to be added that are storm sewer tees as constructed, use the downstream manhole / structure with "_01" added in increasing order moving from downstream to upstream. For example, the first junction added for a tee upstream of MI3350-001 would be MI3350-001_01
 - d. Pipes:
 - i. Conduit names for existing pipes shall retain the asset identification provided by the City, except that:
 1. The first two letters (i.e AE, IN, etc) can be removed
 2. Leads with an asset ID that takes up all 20 characters can be shortened to the corresponding assigned ID. For example, IN3350-032_AS3350-007_3350-001 can be changed to 3350-032_3350-001_001
 - ii. Proposed Pipe names are to be determined by the Consultant but shall be named in a manner similar to the City pipe naming convention, which includes the upstream and downstream structure names.
 - e. Channel/Street Flow Segments:
 - i. Conduit names for drainage-ways shall be named in a manner that identifies the greenway segment it represents by Greenway Node Number and the distance from the upstream end. Example: GR7541-062_125 would represent a channel segment that begins 125 feet into the North Door Creek Greenway – Sprecher Road Section.
 - ii. Conduit names for streets shall be named with "Rd_"[US_Node_Name]_[DS_Node_Name] and remove the first two letters in the node name similar to how pipes are named.
 - f. Natural Channels:
 - i. Natural channel transects shall be named with the same ID as the conduit name.
 - ii. Street models as natural channels shall be named in a manner that is easily

identifiable for the street or street type it represents.

- iii. A shapefile shall be created documenting where natural channel transects are cut.
- g. Other SWMM Features (Weirs, orifices, etc)
 - i. Other SWMM features shall have readily identifiable names corresponding to the type of feature they are trying to model. For example, an orifice for a detention pond should have an ID that is "<Detention Pond ID>_ORIF_01", keeping within a 20 character limit.
- h. Ponds
 - i. Use the pond name identifier from GT-Viewer combined with a common name. For example, the ponds at Odana Hills Golf Course would be "PD3461-001_OdanaHills"
 - ii. Use abbreviation of name if unofficial full name creates a model name longer than 20 characters.
- i. Non-City owned infrastructure
 - i. Consultant may choose name if consistent naming convention is not created by entity that owns infrastructure
 - ii. If Consultant chooses name, all infrastructure owned by another entity shall start with the same few characters. For example, DOT infrastructure could all start with "DOT-" or Fitchburg owned infrastructure could start with "Fit-"

9. Data Notation

The GIS data describing the conveyance system is not complete. In some instances the modeler will be able to make assumptions based on available data. In other locations, the data will require survey. The City is tracking the accuracy of the data with the ultimate goal of having a complete record.

When the modeling is creating the GIS data describing the structures and pipes, they shall create a new attribute in their GIS data and categorize the data as the following:

- a. Structures:
 - Source_IE
 - Source_Rim
- b. Pipes:
 - Source_ToIE
 - Source_FromIE
- c. Private:
 - Notes
- d. Source –enter Number and text in bold in attribute
 - 0. **Converted:** legacy EI's taken from the structure, all EI's received the structures outgoing EI by default when converted in 2020. *This does not mean this data is ***better*** than the survey data, if it looks suspect, you should investigate and try to clarify the source (especially for pre-2005 data, or structures/pipes within ponds/gwys)*
 - 1. **Survey:** Survey data (current)
 - 2. **AsBuilt >2004:** As-Built (2005-present) since City used GPS-Survey Grade to set control improving consistency citywide
 - 3. **AsBuilt pre-2005:** As-Built (pre-2005)
 - 4. **ConstPlan:** Construction plans
 - 5. **GTV:** GTV in-line text, no plans to support
 - 6. **Interpolate:** interpolated (saddled structure had inverts on either side and interpolated—should eventually be surveyed)
 - 7. **Inferred:** best guess, (can't get survey now or is pulled from LiDAR, but should eventually be surveyed)
 - 8. **No data:** Needs survey (searched and unable to find—should eventually be surveyed, but a higher priority)
- e. When creating a model, Engineers will verify/update:
 - i. Structures:
 - Source_IE
 - Source_Rim

- Project_No
- ii. Pipes:
 - Source_ToIE
 - Source_FromIE
 - Project_No
- iii. Private:
 - Notes
 - PLP_address
 - GTV
 - Survey (survey will need to confirm all fields)

10. Rainfall

a. MSE4 24-hour Distribution and NOAA Atlas 14 Depths

Recurrence Interval (years)	Rainfall Depth (inches)
1	2.49
2	2.84
5	3.45
10	4.09
25	5.02
50	5.74
100	6.66
200	7.53
500	8.94

- b. Long-Duration Storm – Two 24-hour, 100-year MSE4 storm events with the time between peak rainfalls shorted from 24 hours to 12 hours.
- c. When using the MSE Rainfall distribution the timestep used for representing the distribution within the model shall be 0.1 hours (or 6 minutes).

11. Hydrology (SWMM Method with Horton Infiltration) (References: A, B, C, J, L)

- Parameters listed are default parameters and may need to be adjusted based on calibration data.
- a. Subcatchment Detail for Street Drainage
 - i. Contributing area to the existing storm sewer system that is to be modeled (Determined on a watershed by watershed basis)
- b. SWMM Routing Parameters (if calibration is not available to adjust parameters)
 - i. Percent Impervious:
 - 1. In areas where impervious areas are delineated:
 - a. Use impervious/Pervious areas from City provided feature class.
 - 2. In areas where Impervious areas are not delineated:
 - a. Use City provided WinSLAMM land use file and the “HowTo_CalculateCN” Document.
 - b. Areas not delineated in City Provided WinSLAMM land use file shall defer to Dane County Land Use Map.
 - c. Match WinSLAMM land uses with Dane County Land Use.
 - 3. Note: The City had a set of surface cover data built off the 2018 ortho image. The deliverables from Task 4 are the easiest to utilize in models. The impervious type is defined in a domain and to use it you may need to [“Export a table to include domain descriptions and coded values”](#)
 - ii. DCIA
 - 1. In areas where impervious areas are delineated:
 - a. Use impervious/Pervious areas from City provided feature class.

2. In areas where Impervious areas are not delineated:
 - a. Reference WinSLAMM Standard Land Use DCIA Spreadsheet
- iii. Width – Estimated based on subcatchment shape. Estimation methodology shall be documented.
A single width shall be calculated for the entire subcatchment and used for all three sub-areas.
It is expected Width is one of the first calibration parameters for peak flow.
- iv. Slope – Computed manually or estimated based on LiDAR. Computation or estimation methodology shall be documented.
- v. In XP-SWMM, each subcatchment is to be split into area of (1) DCIA, (2) non-DCIA, and (3) pervious area. Within the model, the non-DCIA shall be routed to the pervious area.
- vi. In PC-SWMM, indicate the percent being routed to pervious in the subcatchment attribute.
- c. Horton Infiltration
 - i. For typical urban pervious area (Based on range of values for different soil types, moisture conditions, and vegetation conditions found in Reference A):

HSG Group ^a	Max Infil. Rate (in/hr)	Min Infil. Rate (in/hr)	Decay Rate (1/hr)	Dry Days ^b	Maximum Infiltration Volume (in)
A	4.0	1.0	4.0	3.1	
B	2.0	0.5	4.0	4.4	
C	1.0	0.2	4.0	7.0	
D	0.5	0.1	4.0	9.9	
Water	0	0	0	0	

^aFor HSG listed as A/D, B/D, C/D, the default approach will be to assume the HSG associated with the lower infiltration rate (HSG D).
^bUse equation 4-12, pg 99, SWMM Reference Manual Volume 1 – Hydrology (Revised), January 2016
 - ii. Impervious Manning's n – 0.016
 - iii. Pervious Manning's n – 0.20
 - iv. Depression Storage for Impervious – 0.05 inches
 - v. Depression Storage for Pervious – 0.15 inches
 - vi. Zero Depression Storage – 25 percent
 - vii. Factors for adjusting (L)
 1. Forest – Multiply max and min infiltration rates by 2.
 2. Farmland (row crops) – Multiply max and min infiltration rates by 1.2.
 3. Farmland (close crops) - Multiply max and min infiltration rates by 1.8.
 4. Other land uses – discuss with City staff
 - viii. Area-weight the Horton Infiltration parameters for each subcatchment based on the area of each soil type within a subcatchment. Remove impervious area from area-weighting.
 - ix. It is understood the NRCS/SCS updates the soil mapping at various times. The project teams will identify a date the soils data will be downloaded and that will be the data used for the duration of the project.
- d. Evaporation: Turn off evaporation from calibration and design storm event runs.

12. Hydrology (SCS CN Hydrology – ONLY USE WHERE DESIGNATED BY CITY) (References B, K)
 - a. Runoff Curve number, Percent Impervious, Directly Connected impervious Area
 - i. In areas where impervious areas are delineated:
 1. Use impervious/Pervious areas from City provided shapefile.
 2. Impervious areas shall use a runoff curve number of 98.
 3. Urban pervious areas that are mowed and maintained can assume the area is Open Space in good condition listed in Table 4-9 of Reference B.
 4. All other pervious land uses shall match descriptions listed in Table 4-9 of Reference B.

5. Create a composite subbasin runoff curve number that incorporates both impervious and pervious areas.
 - ii. In areas where Impervious areas are not delineated:
 1. Use City provided WinSLAMM land use file and the "HowTo_CalculateCN" Document.
 2. Areas not delineated in City Provided WinSLAMM land use file shall defer to Dane County Land Use Map.
 3. Match WinSLAMM land uses with Dane County Land Use and repeat item "i." of this section.
 4. Impervious areas shall use a runoff curve number of 98.
 5. Urban pervious areas that are mowed and maintained can assume Open Space in good condition listed in Table 4-9 of Reference B.
 6. All other pervious land uses shall match descriptions listed in Table 4-9 of Reference B.
 7. Create a composite subbasin runoff curve number that incorporates both impervious and pervious areas.
- b. Routing Parameters
 - i. Width - In PC-SWMM only, Estimated based on subbasin shape. Estimation methodology shall be documented. It is expected that width is one of the first calibration parameters to be adjust for peak flow.
 - ii. Slope - In PC-SWMM only, computed manually or estimated based on LiDAR. Computation or estimation methodology shall be documented.
 - iii. Time of Concentration - In XP-SWMM only, calculate each watershed time of concentration based on equations listed in SCS Urban Hydrology for Small Watershed, 2nd Ed., (TR-55), June 1986 (Reference K). The max flow length for sheet flow is 75 feet in urban areas and 150 feet in agricultural/natural areas.
 - iv. In XP-SWMM and PC-SWMM, the percent impervious shall be zero and the composite runoff curve number shall incorporate impervious and pervious areas.

13. 1D Hydraulics (References: A, B, D, E, F, G)

- Dynamic mode with constant / variable timestep sufficient to model system accurately.
 - Conduit lengthening shall not be used unless prior approval from City on reason.
 - Parameters are default parameters and may need to be adjusted based on calibration data.
 - This list is not intended to be exhaustive.
- a. System to be Modeled
 - i. Public
 1. Standard: Trunk line and major conveyance components to trunk line.
 2. Process for Exceptions: Provide justification for conveyance components not included.
 3. Use engineering judgement for inclusion of additional detail beyond this standard.
 - ii. Private
 1. Standard: Not included
 2. Process for requiring inclusion of private pipes:
 - a. Stormwater management detention facilities providing significant detention.
 - b. When necessary to understand the functioning of the public system. For example, the West Towne Mall parking lot drainage system.
 - iii. Greenways and major surface drainages
 - iv. Significant stormwater detention facilities (public and private).
 1. Private systems may be simplified if serving a single site.
 2. Provide justification for detention facilities not included.
 - b. Loss Coefficients (see drawing at end of document)
 - i. Entry
 1. Culverts – Select Inlet Type based on the Help File or HEC-RAS Hydraulic

Reference Manual

2. Storm Sewer (internal at MHs) = 0.05
 3. Storm Drainage Structures (MH) at 45 degree bend = 0.25
 4. Storm Drainage Structures (MH) at 90 degree bend = 0.5
 5. For culverts and entrances to storm sewer from an open channel or pond, both the energy loss coefficient and the inlet control (culvert code) shall be used.
- ii. Exit
 1. Culverts –
 - a. Exit closed conduit to open channel = 0.5
 - b. Exit closed conduit to lake or pond = 1.0
 2. Storm Sewer (internal at MHs) = 0.05
 3. Storm Drainage Structures (MH) at 45 degree bend = 0.25
 4. Storm Drainage Structures (MH) at 90 degree bend = 0.5
- c. Coefficient of Discharge
 - i. Weirs
 1. Sharp Crested – 3.0
 2. Roadway embankment – 2.6
 3. Flatter overflow – Use engineering judgment
 - ii. Orifices
 1. 0.6
- d. Manning's n
 - i. Pipes
 1. Concrete Pipe: 0.013
 2. Other n values shall be chosen within generally acceptable ranges.
 - ii. Channels
 1. Use Chow's Open Channel Hydraulics, Reference E
 - iii. Bank Flow, including developed urban areas
 1. Use Chow's Open Channel Hydraulics, Reference E
- e. Transect Placement and Modifiers
 - i. Splitting long open channels
 1. Changes in cross section
 2. Significant changes in slope and roughness
 3. Overflow points
 - ii. Segment Lengths
 - iii. Channel Geometry
 - iv. Provide shapefile where natural channel transects are selected along with XS Identifier
- f. Tailwater Conditions:
 - i. Lake Mendota: one foot over Summer Maximum
 1. NGVD 29 Datum: 851.10
 2. NAVD 88 (1991) Datum: 850.9
 - ii. Lake Monona: one foot over Summer Maximum
 1. NGVD 29 Datum: 846.2
 2. NAVD 88 (1991) Datum: 846.0
 - iii. Lake Wingra (100-year WSE): 848.0
 - iv. Yahara River between Lakes Mendota and Monona: TBD
- g. Inlet Clogging Factors
 - i. Continuous Slopes
 1. Street slope < 1% - 25% Clogging
 2. Street slope >= 1% - No Clogging
 - ii. Sags – 50% Clogging

14. 2D Data (References: A, G, H, I)

- a. Surface Roughness – The average Manning's n may vary by land cover / land use. Referencing TR-55, the following roughness can be used for sheet flow conditions. Choose

based on professional judgement and document in the report.

- i. Impervious areas - 0.1
 - ii. Turf grass areas - 0.24
 - iii. Wooded – 0.4
 - iv. Prairie – 0.15
 - v. Other – reference TR-55
 - b. Channel Roughness - Where the 2D surface experiences channel flow, rather than sheet flow, utilize the Manning's n values for open channels
 - c. Impervious Area/Inactive Areas - The City had a set of surface cover data built off the 2018 ortho image. The deliverables from Task 4 are the easiest to utilize in models. The impervious type is defined in a domain and to use it you may need to "[Export a table to include domain descriptions and coded values](#)"
 - i. Average the roughness within the ROW based impervious and pervious area.
 - d. Blocked Obstructions – enter roofs as Inactive Areas in XP-SWMM and Obstructions in PC-SWMM
 - i. Non-residential – use City impervious area data for roofs
 - ii. Residential – use Dane County roof layer
 - e. Grid cell/mesh size: Use size that balances model run time and sufficient 2D overland flow detail.
 - i. Consultant shall confer with City prior to utilizing a variable grid mesh size. City does not currently have an XPSWMM license that supports that capability.
 - f. Grid/mesh orientation: Where possible, align grid/mesh with major channel flow direction. If not practical, then use orientation that minimizes run time.
15. Rain-on-Grid Analysis (Do not use without discussion with City)
 - a. Hydrology

For a full study area Rain-on-Grid model, no nodes or pipes should be active within the Runoff Mode.

 - i. Rainfall - All runoff is generated using Rainfall / Flow Area layers. Individual layers shall be created for each rainfall event, with only the applicable one active during each scenario. Rainfall distributions stated above in Section 9 shall be used.
 - ii. Landuse – Layers for the following land uses must be created: Buildings, Impervious, Turf Grass, Wooded, Prairie, Water and any other applicable layers. Land use layers for Turf Grass, Wooded, Prairie, and any other pervious land coverage, shall be additionally divided up into Hydrologic Soil Groups A, B, C, and D. These layers should cover the entire study area. Under the Land use data tab, inputs for Manning's Roughness, Rainfall Abstraction, and Infiltration must be completed.
 1. Manning's Roughness:
 - a. Buildings – Variable roughness must be used. A Depth-Roughness relationship as follows is appropriate:

Depth (ft)	Roughness
0.00	0.01
0.30	0.01
0.31	0.1
10.0	0.3
 - b. Impervious – A constant roughness of 0.016
 - c. Turf Grass, Prairie, Wooded, and other Pervious – Variable roughness must be used to account for sheet flow at low flow depths. The consultant shall use roughness coefficients stated above in Sections 10.c and 12.a to develop these roughness curves.
 - d. Water – A constant roughness of 0.01.
 2. Rainfall Abstraction:
 - a. Buildings and Impervious – Initial Abstraction of 0.04 inches (XP-

SWMM Default). Continuing loss should remain 0.0.

- b. Pervious - This shall remain unchecked, as Initial and Continuing losses will be accounted for via the Horton Infiltration parameters.

3. Infiltration:

- a. Buildings and Impervious – This shall remain unchecked
- b. Pervious – Horton Infiltration as described above in Section 10.c shall be created for each pervious land use layer.

b. 2D Model Settings

- i. Grid extent shall cover the entire study area.
- ii. Default area type shall be set to Active Area. There should not be any inactive areas within the model.
- iii. Default land use should be set to one of the pervious layers (suggested to use layer with largest total area). However, this should not have any impact on the modeling if there is full coverage of land use layers.
- iv. Head boundaries shall be set anywhere where surface flow is able to leave the study area.

c. 1D Model Network

- i. The 1D storm sewer network shall be extensive enough to include enough inlets throughout the watershed so that surface water can adequately pass from the 2D surface into the 1D model. Multiple inlets at the same location may be combined to a single node. Inlets either side of the street shall remain separate nodes.
- ii. Each inlet node must have Link Spill Crest to 2D checked. Each culvert inlet/outlet must have Link Invert to 2D checked. If calibration shows not enough flow is entering each inlet node, Spill Crest elevations may be lowered below the 2D cell elevation (0.5 ft is an acceptable initial lowering value)

d. 1D/2D Interface Lines at Intersections

- i. In steeper watersheds, the water on the grid may not enter the pipe due to the limitations of the xp2d grid module. Pipes should be reviewed after a simulation for this occurrence. Where this occurs, add 1D/2D interface lines to connect the flow at appropriate intersections to the 1D node.

16. Suggested Proposed Solutions Organization

- a. The Proposed Solutions simulations should be set up in the following way (unless discussed with City staff first). The purpose is to have a model with just the proposed storm sewer improvements, just the regional improvements, and then both.
 - i. Add the proposed storm sewer to the Existing Conditions Model as a Scenario.
 - ii. Once complete, save the model file with a new name. Add the regional solutions in the Base Scenario, keeping the proposed storm sewer as a scenario.

17. Non-Modeling Data

- a. When utilizing XP-SWMM, provide attributed describing the source of data in the representative GIS feature classes
- b. When utilizing PC-SWMM, also add attributes to the entities describing their data sources.

18. Solutions

- a. Analysis – what are the underlying causes of flooding in:
 - i. Areas reported in the “Flood Download” from City staff
 - ii. Other flooded areas in the modeling not identified in the “Flood Download”
 - 1. If more than 10 total areas, work with City staff to prioritize locations to evaluate
 - iii. City to identify suggested solutions and provide to Consultant for consideration
 - iv. Consultant to identify solutions independently and take lead on overall solutions for watershed
- b. Prioritize Solutions
 - i. Property Damage
 - ii. Major arterials where emergency vehicles cannot get through

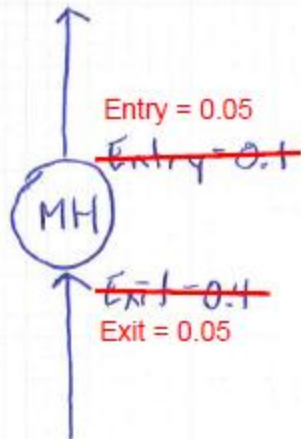
- iii. More criteria - TBD
 - c. Displaying solutions/Order of solutions
 - i. Show each solution independently and then combined
 - ii. Order
 - 1. Property/pipe owned by Stormwater Utility
 - 2. Pipe size needed to solve remainder of issues
 - 3. Other public properties
 - a. Janet will provide areas where there are non-starters in Parks
 - 4. Private properties
 - iii. Show structures removed from the 100-yr event
 - 1. Intersect the flood raster with the building outlines
 - 2. Buffer buildings by 5-feet to account for inaccuracies of building footprint layer
 - 3. Any building outline that intersects the buildings is considered "flooded" if depth of intersection is 6 inches or greater.
 - d. In SWU-owned land all proposed grading must have the following conditions for maintenance access:
 - i. be offset from the property line on 1 side by 15 feet (parallel to channel flow, from Pond access to pond outlet)
 - 1. Shall be extended to reach all priority inlets or sanitary access structures within greenway
 - ii. All proposed berms must be 10 feet wide @ top of berm
 - iii. Slopes no steeper than 4:1
 - e. Overlay TIP map with inundation mapping to understand where immediate future project opportunities are
 - f. Freeboard – City does not have a minimum freeboard requirement
 - g. Properties adjacent to greenway and new greenway crossings – Current ordinance states property low building opening must be 4' above invert of downstream greenway street structure crossing. Therefore, may need to make structures wider, instead of deeper, to not flood upstream properties
- 19. Water that overflows Watershed Study Boundaries
 - a. There may be locations along a watershed study boundary where water overflows that boundary and enters an adjacent watershed. When this occurs
 - i. 2D outflow boundaries should be drawn in the locations to allow the water to leave the model as it would normally.
 - ii. A 2D flow recording line should be added in this location, just upstream of the 2D outflow boundary.
 - iii. The model should be run for all design storm events.
 - 1. If flow is found to be significant, hydrographs should be exported from the model and provided to the City Project Manager so they can be inserted into the adjacent watershed study model.
 - 2. If flow is not found to be significant, the flow can be ignored.
 - iv. The watershed report should include a section showing the locations of the overflow. Text and tables in the report should briefly describe the magnitude of the overflow and the duration.

REFERENCES

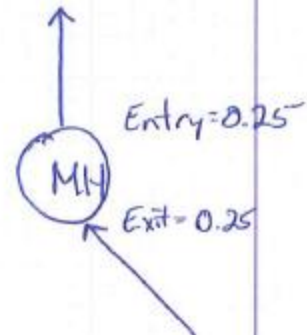
- A. Model Help Files and User Forums
- B. Storm Water Management Model version 5.1 User's Manual. (Available at: <https://www.epa.gov/water-research/storm-water-management-model-swmm-version-51-users-manual>)
- C. SWMM reference manual volume I – hydrology (Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100NYRA.txt>)

- D. SWMM reference manual volume volume II – hydraulics (Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100S9AS.PDF?Dockkey=P100S9AS.PDF>)
- E. Chow, Open Channel Hydraulics, 1959
- F. HEC-RAS Hydraulic Reference Manual. (Available at: <https://www.hec.usace.army.mil/software/hec-ras/documentation/HEC-RAS%205.0%20Reference%20Manual.pdf>)
- G. ASCE Two-Dimensional Modeling Using HEC-RAS, Lecture 8 – Troubleshooting and Reviewing, Page 31; 2017.
- H. Australian Rainfall & Runoff Revision Projects, Project 15: Two Dimensional Modeling in Urban and Rural Floodplains, November 2012.
- I. FLO-2D Reference Manual, FLO-2D Software, 2012.
- J. ASCE Manual of Engineering Practice No 28.
- K. SCS Urban Hydrology for Small Watershed, 2nd Ed., (TR-55), June 1986
- L. Found during calibration in the Pheasant Branch Watershed. Area underlain with Prairie du Chein geology. Areas with other geology will need to select appropriate multipliers.

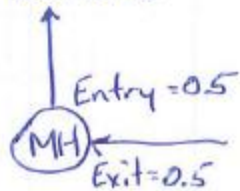
Straight-Through Manhole



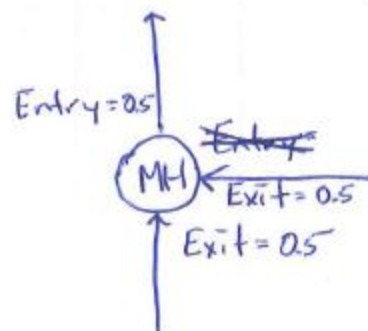
45° Bend Manhole



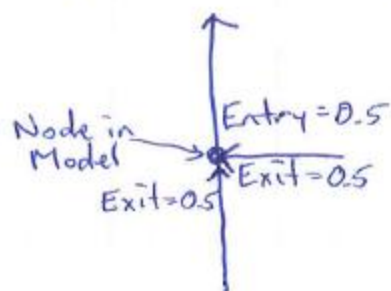
90° Bend Manhole



TEE Manhole



TEE (No Manhole)





Finance Department

David P. Schmiedicke, Finance Director

City-County Building, Room 406
210 Martin Luther King, Jr. Boulevard
Madison, Wisconsin 53703
Phone: (608) 266-4521
Fax: (608) 266-5948
finance@cityofmadison.com
www.cityofmadison.com/finance/purchasing

Purchasing Services

DATE: Wednesday, June 3rd, 2026

RE: **ADDENDUM 1**
15034-0-2026-BG
Badger Mill Creek Watershed Study

Notice to All Bidders:

Please note the following responses to the questions received:

Question 1: Could the City provide examples of PFCI (Peak Flow Control Infrastructure) that have been used to date for flood mitigation?

Answer 1: Typically, these have been improvements to replace or upsize existing City infrastructure such as proposed larger storm sewer pipes or greenway/channel conveyance improvements. These improvements are usually located within existing right of way or city owned lands, but staff is always open to brainstorming additional solutions for consideration. Examples can be found in previously completed watershed study reports located on their respective watershed study pages. (<https://www.cityofmadison.com/flooding/city-initiatives/watershed-studies>). Additionally, shapefiles from the City's database of proposed improvements identified from watershed studies is included at the FTP Link: <https://sftp.cityofmadison.com:443/ui/#/syncplify/share?N=aFywVDgbyuLk5daVEPGW67>

Question 2: Are the models in 1D or 2D?

Answer 2: The existing PCSWMM models are combined 1D/2D models. Most overland flow (including channels and greenways) and large ponds are represented in the 2D domain in PCSWMM. Engineering has the objective of representing most of the surface inundation within the 2D domain to allow for easy sharing of mapping with residents, but exceptions are made in some areas to improve model stability and reduce model run times.

Question 3: What is the acreage and grid cell resolution of the PCSWMM models?

Answer 3: The PCSWMM models use a variable grid cell layout in the models with most of the watershed represented with PCSWMM's standard hexagonal grid cell shape. Resolution within the models does vary with higher levels of resolution where it is needed to best represent potential street and structure flooding. The grid spacing is generally 10-ft within the areas of highest resolution and about 20-ft in lower resolution areas. Engineering would generally like to maintain this level of resolution as it is similar to what has been done throughout the rest of the City.

Question 4: For Task 4 will there still be two separate models for the two watersheds?

Answer 4: Yes, the City anticipates that due to the limitations of PCSWMM the watersheds will have separate models for "Existing Conditions" and "Proposed Conditions"

Question 5: Are the task meetings the same as the monthly progress meetings or separate?

Answer 5: For the sake of planning and budgeting task meetings may be combined with the monthly progress

meetings. The City finds that specific task meetings often take much longer than regular progress update meetings.

Question 6: Is the racial equity and social justice portion only geared towards public and stakeholder engagement or also to the modeling results/weighting?

Answer 6: The intent is to have proposers describe how racial equity and social justice may guide all parts of the project decision making and process.

Question 7: Who will be on the selection committee?

Answer 7: City Purchasing policy is to not disclose specific members of the selection committee. The team includes two members from the Engineering Division and one member from the Planning Division.

Question 8: Will outside stakeholders be included? County, DNR, others?

Answer 8: Depending on the projects that are identified the City may engage with outside stakeholders such as friends groups, groups of residents, or others interested in the potential project once potential projects are identified. The City will generally assist in identifying and coordinating with the stakeholders.

Question 9: Is there a cost proposal format to use?

Answer 9: Yes, please use the Form A: Price Proposal excel spreadsheet. The spreadsheet can be found on both VendorNet and DemandStar.

Question 10: Can you provide the name of the project manager for the City?

Answer 10: Phil Gaebler will be managing the project for the City.

Question 11: The City has impervious area data for developments through 2020. Will the City be able to provide site plans for full development, to account for very recent construction that is not visible or under construction on aerial imagery?

Answer 11: The City will provide information for recent developments during the project at the request of the selected consultant. This may include pdf site plans, stormwater reports, and other documentation provided to Engineering by developers as part of the plat approval or permitting process.

Question 12: Does the City have the CAD files used to update the DEM with existing ponds? Updating the model with more recent LiDAR will require modifying the new DEM in the same manner. Using the CAD files is not the only path forward but would like to consider all options.

Answer 12: The city does have as-built CAD files of all accepted ponds for recent development. For ponds not formally accepted the City will provide the best available information, which may be PDF or CAD grading plans.

Question 13: Is the City amenable to changing the existing grid cell size to improve model run times?

Answer 13: Yes, the City is willing to consider changing the grid size to improve run times. However, the City would still like to maintain a 10-15 ft grid spacing size to represent inundation in streets and around structures.

Question 14: The RFP indicates that the City has water level monitoring data for sites within the study area. Can the City provide this data prior to the RFP deadline?

Answer 14: Yes, all data is being collected by the USGS and publicly available through <https://waterdata.usgs.gov/>. Data can also be obtained from the National Water Dashboard (<https://dashboard.waterdata.usgs.gov/app/nwd/en/>), or the City of Madison USGS Dashboard (<https://geonarrative.usgs.gov/madisonflooding/>). Specific locations and links are provided below as well.

Location	Monitoring	Link
Feather's Edge Ponds (at Blue Harvest Lane)	Channel Level and Precipitation	https://waterdata.usgs.gov/monitoring-location/USGS-430219089335301/#period=P7D&dataTypeId=continuous-00065-0&showMedian=true&showFieldMeasurements=true
Upper Badger Mill Creek Ponds (@Nesbit Rd)	Pond Stage, Downstream Channel Stage, and Precipitation	https://waterdata.usgs.gov/monitoring-location/USGS-05435935/#period=P7D&dataTypeId=continuous-00045-0&showMedian=true&showFieldMeasurements=true

Please direct any other questions to the Purchasing contact person below.

Brittany Garcia
City of Madison Purchasing Services
PH: (608) 243-0529
bgarcia@cityofmadison.com