RFP NO. 320005

DANE COUNTY DEPARTMENT OF PUBLIC WORKS,
HIGHWAY AND TRANSPORTATION

PUBLIC WORKS
ENGINEERING DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WISCONSIN 53713

REQUEST FOR PROPOSALS NO. 320005
CAPITAL CITY STATE TRAIL ROUNDABOUT
HYDROLOGY STUDY
4789 CRESCENT ROAD
DANE COUNTY PARKS
FITCHBURG & MADISON, WISCONSIN

Due Date / Time: **TUESDAY, JUNE 23, 2020 / 2:00 P.M.** Location: **PUBLIC WORKS OFFICE**

FOR INFORMATION ON THIS REQUEST FOR PROPOSALS, PLEASE CONTACT:

RYAN SHORE, PROJECT MANAGER
TELEPHONE NO.: 608/445-0109
FAX NO.: 608/267-1533
E-MAIL: SHORE@COUNTYOFDANE.COM

Department of Public Works, Highway & Transportation
Public Works Engineering Division
608/266-4018

Gerald J. Mandli, P.E.
Commissioner / Director

Joseph T. Parisi
County Executive

Deputy Director
Todd Draper

1919 Alliant Energy Center Way
Madison, Wisconsin 53713
Fax: 608/267-1533
https://pwht.countyofdane.com/public_works.aspx#engineering

May 19, 2020

INVITATION FOR PROPOSALS

You are invited to submit a Proposal for RFP No. 320005 to provide professional engineering design services for the Capital City State Trail Roundabout Hydrology Study. The Proposals are due on or before **2:00 p.m., Tuesday, June 23, 2020**. No performance bond is required for this project.

Dane County is inviting proposals for professional engineering services to provide a hydrologic review, site investigation, and design of solutions for stormwater conveyance and ponds in the area of the Capital City State Trail and Southwest Bike Path intersection in the cities of Fitchburg and Madison**,** Wisconsin.

SPECIAL INSTRUCTIONS

Please provide the entire proposal package in these formats: one (1) unbound original hard copy, four (4) bound hard copies and an electronic version on a USB flash drive or compact disk. Follow these instructions when submitting your proposal:

1. Place the signed Proposal Form on top as page 1.
2. Place the signed Fair Labor Practices Certification after the Proposal Form as page 2.
3. Place the Proposal information after Fair Labor Practices Certification.
4. Clearly label your envelope containing your proposal in the lower left-hand corner as follows:
   Proposal No. 320005
   Capital City State Trail Roundabout Hydrology Study
   June 23, 2020, 2:00 p.m.
5. Mail or deliver to:
   Ryan Shore, Project Manager
   Dane County Department of Public Works, Highway & Transportation
   1919 Alliant Energy Center Way
   Madison, Wisconsin 53713

If any additional information about this Request for Proposals is needed, please call Ryan Shore at 608/445-0109 or send email: shore@countyofdane.com.

Sincerely,

Ryan Shore
Project Manager

Enclosure: Request for Proposals No.320005 Package

SECTION 00 01 10

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END OF SECTION

REQUEST FOR PROPOSAL

LEGAL NOTICE

Dane County Dept. of Public Works, Hwy & Transp., 1919 Alliant Energy Center Way, Madison, WI 53713, will receive sealed Proposals until:

2:00 P.M., TUESDAY, JUNE 23 , 2020

RFP NO. 320005

HYDROLOGY STUDY

CAPITAL CITY STATE TRAIL ROUNDABOUT

FITCHBURG AND MADISON, WI

Dane County is inviting proposals for professional engineering services to provide a hydrologic review, site investigation, and design of solutions for storm water conveyance and ponds in the area of the Capital City State Trail and the Southwest Bike Path in Cities of Fitchburg and Madison, Wisconsin. Only firms with capabilities, experience & expertise with similar projects should obtain this RFP document & submit Proposals.

RFP document may be obtained after **2:00 p.m. on Tuesday, May 19, 2020** by downloading it from bids-pwht.countyofdane.com. Please call Ryan Shore, Project Mgr., at 608/445-0109, or our office at 608/266-4018, for any questions or additional information.

An informational site tour will be held June 10, 2020 at 1:00 p.m. at Dawley Bike Hub, 3041 S. Seminole Hwy, Fitchburg. Interested firms are strongly encouraged to attend this tour.

PUBLISH: MAY 19 & MAY 26, 2020 - WISCONSIN STATE JOURNAL

MAY 20 & MAY 27, 2020 - THE DAILY REPORTER

SECTION 00 24 16

SCOPES OF PROPOSALS

1. GENERAL INFORMATION

A. Dane County is inviting proposals for professional engineering design services for the Capital City State Trail Roundabout Hydrology Study.

B. Dane County is partnering with the Cities of Madison and Fitchburg on a Request for Proposals (RFP) for a consultant firm or team to provide hydrologic/hydraulic review and alternative conceptual design solutions for stormwater conveyance and ponds in the area of the intersection of the Capital City Trail, Cannonball and Southwest Paths in Madison, Wisconsin. With this partner agreement, Dane County is responsible for soliciting and contract administration of this Request for Proposal, while the City of Madison will be responsible for the project management and coordination of the study.

C. Dane County, the Cities of Madison and Fitchburg, and WDNR have multiple trails that intersect at a bicycle / pedestrian roundabout that is underneath the Badger State Trail overpass bridge. The area draining to the roundabout is largely residential to high density residential land use and is located on the southwest side of Madison, Wisconsin (See Attachment B). A large portion of the watershed draining to this location was developed prior to detention requirements. As a result of age of the development in the watershed, many of the pipes are undersized and unintended detention occurs throughout the watershed. The pipes that drain the roundabout area were left impassable during the 2016 and 2018 historic rain events. During both of those events the corrugated metal pipe culverts at the base of the Badger State Trail southern bridge abutment and under the Capital City Trail immediately downstream were washed out and bent vertical to the flow path. New pipe has since been installed and temporary concrete headwalls were poured in an effort to stabilize the site during future flood events. Since these recent historic events, the City of Madison has started the Dunn's Marsh Watershed Study that includes the roundabout location. As part of this study, an existing condition survey and investigation will be undertaken to provide a baseline stormwater hydraulic conditions model to provide basic data for the replacement or upgrading of existing drainage facilities or for the design of new stormwater drainage systems. This data and information is anticipated to be completed by June of 2020 and will be made available to the selected consultant for use with this project. In addition to the City of Madison study, the Madison Metropolitan Sewage District will be undertaking field surveying, mapping and design services for the Nine Springs Valley Interceptor from Mckee Road to Dunn's Marsh that will include the roundabout location. This data and information is anticipated to be completed by June of 2020 and will be made available to the selected consultant for use with this project.

D. Dane County and the Cities of Madison and Fitchburg are requesting proposals for an alternatives analysis of stormwater facility design recommendations that will address these conveyance limitations. It is anticipated that the results of this study will be used as the basis for a forthcoming future request for proposals to prepare construction documents for the preferred design alternative solution.

E. To be considered for this project, the Consultant must meet or exceed the following criteria:

1. Have at least one registered professional engineer as lead responsible member of the firm or project team.

2. Have been in business for a period of not less than five (5) years.

3. Must have been responsible for the design and completion of at least three (3) stormwater studies of similar design scope and size of the Capital City State Trail Roundabout Hydrology Study.

4. Consideration may be given to joint ventures consisting of two or more firms organized for the purpose of furnishing professional services as a single entity, providing the assignment of and provisions for continuity of the various responsibilities within the joint venture are approved by the County, and further providing that either of the individual firms constituting the joint venture meets the eligibility requirements listed above.

2. SCOPE OF WORK

A. Project deliverables and specific tasks are detailed in the *Engineering Professional Services Agreement*.

B. Study Phase:

1. Review of existing reports and data, survey of pertinent infrastructure, updating the existing hydrologic/hydraulic model for the watershed, and preparing a draft report summarizing existing conditions and stormwater limitations.

2. Existing plans/reports include:

   a. WisDOT US 18/151 Verona Road EIS-Section 13 (Exhibit 1)
   b. City of Fitchburg Cannonball Path Drainage Improvement Plan (Exhibit 2).
   c. Site photos (flood damage) from June 2016 and August 2018 (Exhibit 3).

3. Additional available data sets include:

   a. The Dunn's Marsh Watershed stormwater existing conditions hydrologic/hydraulic model conducted in XPSWMM 1D & 2D that will provide baseline conditions for the watershed and roundabout location.
   b. Madison Metropolitan Sewage District existing non-stormwater utilities survey available in AutoCAD.
   c. GIS files used to develop the hydrologic parameters for the model, provided by City of Madison.
   d. Full, uncalibrated, existing conditions model, anticipated to be available by June 17th, provided by City of Madison

4. Study Phase Report shall contain the following sections at a minimum:

   a. Data Summary
   b. Hydrology and Hydraulic Modeling results
   c. Limitation(s) of Existing Conveyance System(s)
   d. Draft Hydrologic / Hydraulic Report
   e. Final Hydrologic / Hydraulic Report

C. Conceptual Design Phase

1. This task includes an alternatives analysis for storm water facility design recommendations that address conveyance limitations identified within the Hydrology/Hydraulics Report prepared under the Study Phase. Storm water facility and pipe recommendations are expected to safely convey the 25-yr, 24-hr storm event, with

all storm water facility recommendations stable up to and including the 100-yr, 24-hr storm event.

2. Model Alternatives:

    a. The Consultant shall develop two (2) stormwater facility design alternatives and modify the existing conditions XPSWMM model to simulate the proposed changes. One alternative shall make recommendations for an upstream detention facility and the other shall be without upstream detention.

3. Conceptual Plans:

    a. The Consultant shall prepare two (2) storm water facility design alternative conceptual site development plans. Concept drawings shall be of known scale and sufficient detail to prepare engineer's opinion of probable cost and shall graphically depict all proposed civil/site and storm water facility improvements including but not limited to:
        - culverts, swales, storm sewers, required utility relocations (if any), detention ponds, berms, paved trail realignments, trail bridges (if any) and existing storm water facility conveyance system modifications.
    b. This task does not include cross sections, profiles, construction documents or permitting.

4. Alternatives Analysis Report:

    a. The Consultant shall prepare an alternatives analysis report that includes the following:
        1. Description of proposed alternatives
        2. Performance of existing vs. proposed for both with and without detention alternatives
        3. Engineering feasibility assessment for each alternative
            A) Feasibility assessment should include analysis of permitting requirements, land ownership, and existing utilities.
        4. Engineer's opinion of probable cost for both capital and annual maintenance costs.

    b. This report shall be added to the report developed in Task 1 to produce one contiguous report document for the project.

5. Deliverables

    a. Submittal of the digital XPSWMM files of the models for the two conceptual plans for project team review.
    b. A map (PDF format) of the XPSWMM model superimposed on aerial imagery showing watershed boundaries and locations of all nodes that were modeled.
    c. Submittal of a digital files of the draft conceptual plans (pdf, CAD, GIS as applicable) for project team review.
    d. Submittal of a digital copy of the draft alternatives analysis report summarizing alternatives analysis, feasibility assessment, and cost estimate for Project Team review.
    e. Revisions as necessary and submittal of final digital copy of alternatives analysis model, plans, and report.

3. MEETINGS

A. The Consultant will be required to attend meetings with the Project Team at various points throughout the project. The Project Team may be comprised of staff from the following organizations:

1. Dane County Land and Water Resources
2. Dane County Public Works
3. City of Madison Engineering
4. City of Fitchburg Engineering
5. Madison Metropolitan Sewage District
6. Wisconsin Department of Natural Resources
7. Wisconsin Department of Transportation

B. The meetings listed below will be used to discuss the status of the project. This task includes the preparation of electronic exhibits for discussion purposes, agendas, and meeting summaries. The Project Team will be responsible for producing printed materials and for any stakeholder outreach/coordination or public information meetings necessary. All meetings listed below will be within the Madison metro area.

C. Anticipated meetings and subjects are:

1. Study Phase:

   a. Initial Kick Off Meeting
   b. On-Site Conveyance Limitation Review Field Meeting
   c. Draft Hydrology/Hydraulics Report Review Meeting

2. Concept Design Phase:

   a. Draft Alternatives Plan Report Review Meeting
   b. On-Site Draft Alternatives Plan Review Field Meeting
   c. Alternatives Plan Report Final Review

4. PROPOSAL CONTENT

A. Proposals should be organized to comply with the section numbers and names as shown below. Each section heading should be separated by tabs or otherwise clearly marked. Accordingly, graphics, tables and charts are encouraged, but the page limitations shall include these as well. Hardcopies shall be bound in an 8½" x 11" format, but 11"x17" pages for graphics may be included.

B. The RFP sections which should be submitted/responded to are:

1. Table of Contents

   Provide a table of contents that, at a minimum, includes all of the sections as identified below. Listings of sub-sections and graphics/tables also may be included. Section dividers are encouraged.

2. Introduction

   Provide a one page overview of the firm's background, history and familiarity with completing similar stormwater studies.

3. Organization Capabilities

   Provide a one page overview of the firm's stormwater planning program area, including number and type of professional staff who are routinely engaged in providing similar services.

4. Staff Qualifications

   Provide resumes describing professional registrations, education and work experiences for each of the key staff who would be assigned to the project and the role they would have on the project team. Only include staff who will be assigned to this project and the location of the office(s) out of which they work. Include resumes for subconsultants if applicable.

5. Related Design and Engineering Project Experience

   Provide an overview of up to three similar projects the assigned project team has completed that demonstrate relevant project experience in both scale and scope. Be specific and only identify projects completed within the past 10 years.

6. Related Stormwater Planning Experience

   The proposed watershed drainage study area is approximately 688 acres in size and contains diverse stormwater management facilities ranging from single culverts to regional detention facilities. Provide a narrative to demonstrate comparable stormwater hydrologic planning and modeling experience for similar size watersheds.

7. Proposer References

   Proposers must include a list of at least three organizations, including points of contact (name, address, and telephone number), which can be used as references for work performed in the area of service required. Provided organizations may be contacted to inquire about the quality of work performed and capabilities of the personnel assigned to the project.

8. Cost Proposal:

   Proposers shall include Fee for Services as detailed in the Professional Services Agreement. Fee for services stated as fixed fee.

9. State clearly any limitations you wish to include in *Architectural / Engineering Professional Services Agreement* and advise of any conditions that you may have.

5. EVALUATION CRITERIA

A. Proposing consultants will be evaluated on this criteria:

Organizational Capabilities	10%
Staff Qualifications	20%
Design & Engineering Project Experience	30%
Stormwater Planning Experience	30%
Pricing / Cost Proposal	10%
Total	100%

6. PRICING

A. Additional details about project phases, pricing & payments are detailed in the *Architectural / Engineering Professional Services Agreement*.

7. SITE TOUR

A. A proposing company site tour will be held on June 10, 2020 at 1:00 p.m. at the Dawley Bike Hub, 3041 S. Seminole Hwy, Fitchburg, Wisconsin, starting in the parking lot. This cursory tour will go until approximately 2:00 p.m. Proposing companies are strongly encouraged to attend this tour, however attendance is optional.

8. OWNER'S RESPONSIBILITY

A. Dane County will provide all available site drawings and specifications to selected A/E firm. These drawings and specifications may not be complete or in an as-built condition. A/E firm will need to confirm accuracy of drawings and specifications.

9. TIMETABLE

A. Listed below are specific and estimated dates and times of events related to this RFP. The events with specific dates must be completed as indicated unless otherwise changed by Dane County. In the event that Dane County finds it necessary to change any of the specific dates and times in the calendar of events listed below, it will do so by issuing an addendum to this RFP. There may or may not be a formal notification issued for changes in the estimated dates and times.

DATE	EVENT
May 19, 2020	RFP issued
June 10, 2020 - 1:00 p.m.	Site tour
June 16, 2020 - 2:00 p.m.	Written inquiries due
June 19, 2020	Latest addendum (if necessary)
June 23, 2020 - 2:00 p.m.	Proposals due
June 30, 2020 (estimated)	Notification of intent to award sent out
October 15, 2020 (estimated)	Study Phase complete
February 15, 2021 (estimated)	Conceptual Design Phase complete

10. ADDITIONAL INFORMATION

A. Dane County Department of Public Works, Highway & Transportation, 1919 Alliant Energy Center Way, Madison, Wisconsin 53713, will receive your Proposal.

B. Information regarding this project may be obtained from Ryan Shore, Public Works, Project Manager, 608/445-0109, shore@countyofdane.com.

C. Since RFP documents are obtained from the Dane County web site, proposing company is responsible to check back there regularly for Addenda.

D. All Proposals must be submitted by 2:00 p.m., Tuesday, June 23, 2020

E. Dane County reserves the right to accept or reject any Proposal submitted.

F. Information submitted by consultants will be reviewed and candidates may be scheduled to appear before an interview panel. Those appearing for an interview shall be prepared to discuss their approach for the design of this work, methodology, project team, a timetable, the basis of their fee schedule and answer questions from our staff.

G. Dane County reserves the right to negotiate an Agreement after the successful firm is selected. Selection will be based only on the proposal submitted and subsequent interviews. Therefore, the proposals must be complete. Submission of a proposal shall constitute a valid offer, which may be accepted by the County for a period of ninety (90) calendar days following the proposal due date.

H. Dane County is an Equal Opportunity Employer.

END OF SECTION

Department of Public Works, Highway & Transportation
Public Works Engineering Division
608/266-4018

Gerald J. Mandli, P.E.
Commissioner / Director

Joseph T. Parisi
County Executive

Deputy Director
Todd Draper

1919 Alliant Energy Center Way
Madison, Wisconsin 53713
Fax: 608/267-1533
https://pwht.countyofdane.com/public_works.aspx#engineering

SECTION 00 42 13

PROPOSAL FORM

PROPOSAL NO. 320005
PROJECT: CAPITAL CITY STATE TRAIL ROUNDABOUT ENGINEERING HYDROLOGY STUDY FITCHBURG & MADISON, WI

The undersigned, submitting this Proposal, hereby agrees with all terms, conditions and requirements of the above referenced Request for Proposals, and declares that the attached Proposal and pricing are in conformity therewith.

SIGNATURE: _____
(Proposal is invalid without signature)

Print or Type Name: _____ Date: _____

Title: _____

Company: _____

Address: _____

Telephone No.: _____ Fax No.: _____

Email Address: _____

Contact Person: _____

Receipt of the following addenda and inclusion of their provisions in this Proposal is hereby acknowledged:

Addendum No(s). _____ through _____

Dated _____

All Proposers are strongly encouraged to be a registered vendor with Dane County. Registering allows vendors an opportunity to receive notifications for RFPs & RFBs issued by the County and provides the County with up-to-date company contact information. Complete a new form or renewal online at: danepurchasing.com/Account/Login?.

COUNTY OF DANE

PROFESSIONAL SERVICES AGREEMENT

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COUNTY OF DANE

PROFESSIONAL SERVICES AGREEMENT

SIGNATURE PAGE

Date: [Date]

Project No.: [No.]

Agreement No.:

THIS AGREEMENT is between the County of Dane, by its Department of Public Works, Highway & Transportation, hereinafter referred to as "COUNTY", and Engineer Name, Address, City, State, Zip, hereinafter called the "ENGINEER".

WITNESSETH

WHEREAS, COUNTY proposes securing engineering services for a project described as follows:

Capital City Trail Roundabout Hydrology Study

WHEREAS, COUNTY deems it advisable to engage the services of the ENGINEER to furnish professional services in connection with this project, and

WHEREAS, COUNTY has authority to engage such services, and

WHEREAS, the ENGINEER represents that it is in compliance with the applicable Wisconsin Statutes relating to the registration of architects and professional engineers and designers, and has agreed to furnish professional services for COUNTY,

NOW, THEREFORE, in consideration of the premises and to their mutual and dependent agreements, the parties hereto agree as set forth in the following pages, which are annexed hereto and made a part hereof.

IN WITNESS WHEREOF, COUNTY and the ENGINEER have executed this Agreement as of the above date.

ENGINEER Firm Name	**COUNTY OF DANE**
Signature Date	Joseph T. Parisi, County Executive Date
Printed Name	Scott McDonell, County Clerk Date
Title	
Federal Employer Identification Number (FEIN)	

1. ARTICLE 1: SCOPE OF AGREEMENT

1.A. This Agreement between COUNTY and the person or firm, duly licensed under the laws and in accordance with the regulations of the State of Wisconsin, hereinafter referred to as the "ENGINEER" shall be governed by the following Terms and Conditions.

1.B. The ENGINEER shall provide technical and professional services under this Agreement. The Terms and Conditions of this Agreement shall apply to modifications made to this Agreement and shall apply to both the services rendered in the creation of the design and to the additional services called for in carrying out the design.

1.C. The ENGINEER shall serve as the professional technical advisor and consultant to COUNTY in matters arising out of or incidental to the performance of this Agreement and in that capacity, the ENGINEER shall not have a contractual duty or responsibility to any other person or party or individual regarding the services under this Agreement, except as that duty may arise under the laws of the State of Wisconsin. The ENGINEER is not an agent of the COUNTY within the meaning of s. 893.80 or 895.46, Wis. Stats.

1.D. Professional services performed or furnished under this Agreement shall be based on the care and skill ordinarily used by members of the profession involved, who practice under the authority of and who are governed by the license issued under the Wisconsin Statutes and the Wisconsin Administrative Code. The standard of care for architectural and engineering services under this Agreement shall include designing buildings, structures and / or related infrastructural systems that comply with all applicable building and safety codes.

1.E. By accepting this Agreement, the ENGINEER represents possession of the necessary skill and other qualifications to perform work under this Agreement and is familiar with the practices in the locality where such services and work shall be performed.

1.F. The ENGINEER shall review and become familiar with the current Division 00 & 01 requirements utilized by COUNTY in construction contracts and shall provide services and work, consistent with such requirements, so that the Contractor's schedule is not negatively impacted.

1.G. The ENGINEER shall be professionally responsible for work performed under this Agreement. Upon written approval of COUNTY, the ENGINEER may subcontract work to an approved consultant under this Agreement, to the specific extent authorized by COUNTY. The authorization to subcontract shall not relieve the ENGINEER of professional or contractual responsibility for any work performed or delivered under this Agreement. The authorization to subcontract shall not be construed to create any contractual relationship between COUNTY and such consultant.

1.H. Subcontracts for services under this Agreement shall provide that work performed under such subcontract, shall be subject to provisions of this Agreement and shall also provide that any professional duty or responsibility pertaining thereto shall be accomplished to the benefit of COUNTY. Upon request, an electronic copy of each such subcontract for which COUNTY approval is granted shall be furnished to COUNTY.

1.I. The ENGINEER may substitute consultants or professional staff under this Agreement only to the specific extent authorized by COUNTY in writing.

1.J. In the performance of this Agreement, the ENGINEER shall become familiar with and perform such services in accordance with the specifications set forth in the Request for Proposals document. The COUNTY reserves the right to update County Master Specifications Division 00 and Division 01 at any time, including after the signing date of

this Agreement. The ENGINEER shall use and conform to the most current County Master Specifications Division 00 and Division 01 available at the time of Final Review Documents and the ENGINEER shall not be eligible for a change order based upon alterations to said County Master Specifications Division 00 and Division 01 occurring after the date of Agreement signing.

2. ARTICLE 2: SCOPE OF THE SERVICES TO BE PROVIDED

2.A. General:

2.A.1) Services are to be provided by the ENGINEER in each of the following phases:

Study Phase
Conceptual Design Phase

2.A.2) An assigned COUNTY Public Works Project Manager will be the ENGINEER's contact in securing COUNTY direction and for arranging the necessary meetings with COUNTY or other County Departments and obtaining the approvals required by COUNTY.

2.A.3) The ENGINEER shall create a log of all COUNTY and ENGINEER generated design changes resulting from meetings and communications from COUNTY. This log shall be kept throughout the entire design process and submitted to COUNTY every two (2) months.

2.A.4) The term "written" or "in writing" may be either electronic or hard copy documentation, unless otherwise stated or directed by COUNTY.

2.B. Study Phase:

2.B.1) The ENGINEER shall obtain from COUNTY information and materials necessary to ascertain scope of the Project and shall verify with COUNTY program and functional requirements of the Project.

2.B.2) Based on information, materials and requirements as verified by COUNTY, ENGINEER shall prepare a Summary and Study consisting of text, drawings and other documents illustrating scale and relationship of the Project components. Draft version of Study shall be submitted to COUNTY for review, modifications and written approval before submitting Final version.

2.B.3) The ENGINEER shall submit to COUNTY in the Summary and Study, a construction cost estimate based on information provided by COUNTY and gathered by ENGINEER for Final version of Study.

2.B.4) Study Phase deliverables shall be:

a) Initial Kick Off Meeting

b) On-Site Conveyance Limitation Review Field Meeting

c) Draft Hydrologic/Hydraulic Study, electronic copies

d) Draft Hydrology/Hydraulics Report Review Meeting

e) Final Hydrologic/Hydraulic Study

2.C. Conceptual Design Phase:

2.C.1) The ENGINEER shall obtain from COUNTY information and materials necessary to ascertain scope of the Project and shall verify with COUNTY program and functional requirements of the Project.

2.C.2) Based on information, materials and requirements as verified by COUNTY, the ENGINEER shall prepare Conceptual Design Documents consisting of drawings and other documents illustrating scale and relationship of the Project components. Conceptual Design Documents shall be submitted to COUNTY for written Approval.

2.C.3) The ENGINEER shall submit to COUNTY construction cost estimates based on information provided by COUNTY and approved Conceptual Design Documents.

2.C.4) Conceptual Design Phase deliverables shall be:

a) Submittal of the digital XPSWMM files of the models for the two conceptual plans for project team review.

b) A map (PDF format) of the XPSWMM model superimposed on aerial imagery showing watershed boundaries and locations of all nodes that were modeled.

c) Submittal of a digital files of the draft conceptual plans (pdf, CAD, GIS as applicable) for project team review.

d) Submittal of a digital copy of the draft alternatives analysis report summarizing alternatives analysis, feasibility assessment, and cost estimate for Project Team review.

e) Draft Alternatives Plan Report Review Meeting

f) On-Site Draft Alternatives Plan Review Field Meeting

g) Revisions as necessary and submittal of final digital copy of alternatives analysis model, plans, and report.

2.D. Design Development Phase:
Not Applicable

2.E. Construction Documents Phase:
Not Applicable

2.F. Bidding Phase:
Not Applicable

2.G. Construction Phase:
Not Applicable

2.H. Commissioning Phase:
Not Applicable

3. ARTICLE 3: COUNTY'S RESPONSIBILITIES

3.A. COUNTY will determine the project scope for which the professional design services are required and will fully cooperate in achieving completion of that work.

3.B. COUNTY will establish an internal operating procedure for timely and proper performance of any COUNTY duty required to fulfill the needs of the project.

3.C. COUNTY will provide available information regarding the requirements for the project, which set forth COUNTY's objectives for program, schedule and overall budget. COUNTY will make available to the ENGINEER data known to COUNTY or requested by the ENGINEER, which may be needed for the fulfillment of the professional responsibility of the ENGINEER. This data may include, but is not limited to, prints of existing buildings or record drawings and COUNTY standards and guides. Such documents will be the most recent and accurate available. The use of any such data by the ENGINEER shall be without contractual or legal significance unless otherwise established elsewhere in this Agreement. However, providing of documents by COUNTY shall not relieve the ENGINEER from the responsibility for conducting a field survey to verify existing conditions as specified herein.

3.D. COUNTY will communicate to the ENGINEER the format of the documents required to be submitted.

3.E. COUNTY will examine documents submitted by the ENGINEER and will render decisions regarding them promptly, to avoid unreasonable delay in the progress and sequence of the ENGINEER's work. COUNTY will coordinate review comments from the User agency and COUNTY staff prior to issuance to the ENGINEER.

3.F. COUNTY will distribute Construction Documents and any necessary addenda to prospective bidders, and conduct the bid opening for the project.

3.G. COUNTY will prepare and process the Agreements between COUNTY and ENGINEER, and between COUNTY and construction contractor(s).

3.H. Unless otherwise specified in this Agreement, COUNTY will arrange for services of a testing laboratory to furnish structural, chemical, mechanical and other laboratory tests, inspections and reports as required by law or deemed necessary by COUNTY.

4. ARTICLE 4: COMPENSATION

4.A. Fees for basic services will be compensated by COUNTY in accordance with the Terms and Conditions of this Agreement as follows:

4.A.1) COUNTY will pay the ENGINEER a lump sum fee of $[ ].

4.B. The ENGINEER's Compensation for Additional Services, as described in Article 4.D., will be computed as follows:

4.B.1) Principals' time at a fixed rate of $[ ] per hour, unless separate amounts are provided for each Principal. For the purposes of this Agreement, the Principals are:

[ ]

[ ]

[ ]

4.B.2) Other design staff shall be billed at these fixed rates:

Senior design architect / engineer: $[ ] per hour

Junior design architect / engineer: $[ ] per hour

Senior designer: $[ ] per hour

Junior designer: $[ ] per hour

Drafting: $[ ] per hour

Clerical: $[ ] per hour

4.B.3) Employee's time shall be computed using the employee's basic hourly salary and include overhead costs for clerical support and mandatory and customary benefits such as statutory employee benefits, insurance, sick leave, holidays and vacations, pensions and similar benefits for persons in consultation, research and design in producing drawings, specifications and other documents pertaining to the project and for services during construction at the site.

4.C. Reimbursable Expenses:

4.C.1) Reimbursable Expenses are actual, incidental expenses incurred by the ENGINEER, its employees or consultants, in the interest of the project and are not included in overhead costs for the Fees for Basic Services (4.A.) and Additional Services (4.D.). Reimbursable Expenses shall be incurred or contracted for only with PRIOR written approval from COUNTY. Such approval shall be based on a written proposal delineating the nature of the services, the time involved, the estimated cost thereof, and the individuals or firms involved. Payment Requests from consultants and construction contractors providing these Reimbursable Expenses shall be reviewed by the ENGINEER to check the accuracy of and entitlement to the sums requested. Reimbursable Expenses may include, but are not limited to, the following incidental expenses:

a) Expense of reproduction of drawings and specifications, excluding the review sets required in Article 2.

b) Expense of a site survey when needed.

c) Expense of a geotechnical investigation and soils and material testing when required.

d) Expense of State and / or City review fees when required.

4.C.2) Expenses not eligible for reimbursement shall include, but are not limited to, indirect project overhead costs associated with the Fees for Basic Services (4.A.) and Additional Services (4.D.) such as mileage, travel, lodging, replication of drawings for the design development meetings and subsequent design meetings, preliminary and final review document printing, handling and postage, cost of correspondence transmittals, telephone expenses, and CAD / electronic graphic services. Such expenses shall be included as part of the Lump Sum fee.

4.D. Additional Services:

4.D.1) The following services are in addition to but are not covered in Article 4.A. These services may be identified as part of the ENGINEER's fee proposal and included with the lump sum fee as such. Compensation for these additional services or other services must be requested by the ENGINEER, and subsequently approved by COUNTY PRIOR to proceeding with the work. If the additional services are requested after the Agreement has been issued, such authorization shall be based on a written proposal delineating the nature of the services, the time involved, the estimated cost thereof, the effect on the project schedule and the individuals or firms involved. When authorized, an Agreement Change Order will be used to modify the ENGINEER's Agreement.

a) Providing planning surveys, program revision, site feasibility, or comparative studies of prospective sites.

b) Revising previously approved drawings, specifications or other documents after written approval of Design Development Phase, to accomplish changes not initiated by the ENGINEER other than record documents and revisions normally to be expected or required to correct deficiencies in the approved drawings and specifications.

c) Preparing detailed models, perspective or renderings.

d) Preparing documents for alternate bids or petitions for waiver when requested by COUNTY and, requiring significant additional time and expense on the part of the ENGINEER or its consultants.

e) Obtaining or participating in third party Value Engineering / Enhancement of the project when directed by COUNTY.

f) Providing services other than corrective design work and record documents, after final payment to the construction contractor(s).

4.E. Payments to the ENGINEER:

4.E.1) Payments of the ENGINEER's lump sum fee will be made monthly, in proportion to services performed as confirmed by COUNTY, to increase the compensation to the following percentages of the lump sum fee at the completion of each phase of the work.

Draft Study	25%
Final Study	50%
Conceptual Design Draft	75%
Conceptual Design Final	100%

4.E.2) No more than ninety percent (90%) of the ENGINEER's lump sum fee shall be paid out prior to substantial completion of the project.

4.E.3) Payments for COUNTY-approved Reimbursable Expenses as defined in Article 4.C. and Additional Services of the ENGINEER as defined in Article 4.D., will be made monthly upon request.

4.E.4) An ENGINEER whose work is found deficient or fails to conform to the requirements set forth in the Agreement, is not entitled to further payments, until corrected to the satisfaction of COUNTY.

a) Payments to the ENGINEER may be withheld for damages sustained by COUNTY due to error, omission, unauthorized changes or negligence on the part of the ENGINEER. COUNTY will notify the ENGINEER in writing of the alleged, specific damages and amounts involved, on a timely basis.

4.E.5) If the project is suspended for more than three (3) months in whole or in part, the ENGINEER will be paid fees for services performed prior to receipt of written notice from COUNTY of the suspension, together with Reimbursable Expenses then due and reasonable expenses resulting from this suspension, as approved by COUNTY. If the project is resumed after being suspended for more than three (3) months, the ENGINEER's compensation will be subject to renegotiation.

5. ARTICLE 5: ACCOUNTING RECORDS

5.A. Records of the ENGINEER's direct personnel, consultants, and reimbursable expenses pertaining to the project shall be kept in accordance with Generally Accepted Accounting Principles (GAAP) and shall be available to COUNTY or an authorized representative throughout the term of this Agreement and for at least three (3) years after final payment to the ENGINEER.

6. ARTICLE 6: TERMINATION OF AGREEMENT

6.A. This Agreement may be terminated by COUNTY without cause upon ten (10) calendar days written notice to the ENGINEER. In the event of termination, the ENGINEER will be paid fees for services performed to termination date, reimbursable expenses then due, and termination expenses as approved by COUNTY. Work performed prior to the date of termination shall be in accordance with the terms and conditions of this Agreement. Upon termination, the results of such work shall immediately be turned over to the COUNTY Project Manager and is a condition precedent to further payment by COUNTY.

6.B. In the event the Agreement between the ENGINEER and any consultant on this project is terminated, the results of work by that consultant shall immediately be turned over to the ENGINEER.

7. ARTICLE 7: OWNERSHIP OF DOCUMENTS

7.A. All drawings and specifications, renderings, models, scale details, approved copies of shop drawings and other such documents prepared by the ENGINEER or any consultant pursuant to this Agreement shall become the property of COUNTY on completion and acceptance of any of the ENGINEER's work, or upon termination of the Agreement, and shall be delivered to COUNTY upon request.

7.B. Documents prepared under this Agreement may be used by COUNTY for informational purposes without additional compensation to the ENGINEER.

7.C. Specifications and isolated, detail drawings inherent to the [architectural / engineering, engineering] design of the project, whether provided by the COUNTY or generated by the ENGINEER, shall be available for future use by the parties to this Agreement and other parties, each at their own risk.

8. ARTICLE 8: LIABILITY- HOLD HARMLESS AND INDEMNIFICATION

8.A. ENGINEER shall indemnify, hold harmless and defend COUNTY, its boards, commissions, agencies, officers, employees and representatives against any and all liability, loss (including, but not limited to, property damage, bodily injury and loss of life), damages, costs or expenses which COUNTY, its officers, employees, agencies, boards, commissions and representatives may sustain, incur or be required to pay by reason of ENGINEER furnishing the services required to be provided under this Agreement, provided, however, that the provisions of this paragraph shall not apply to liabilities, losses, charges, costs, or expenses caused or resulting from the acts or omissions of COUNTY, its agencies, boards, commissions, officers, employees or representatives. The obligations of ENGINEER under this paragraph shall survive the expiration or termination of this Agreement.

9. ARTICLE 9: PROFESSIONAL LIABILITY INSURANCE

9.A. The ENGINEER and its consultants retained under the terms of this Agreement shall procure and maintain a professional liability insurance policy with at least $1,000,000 in coverage that provides for payment of the insured's liability for errors, omissions or negligent acts arising out of the performance of the professional services required under this Agreement. The ENGINEER shall provide up-to-date, accurate professional liability information on the ENGINEER's Data Record, including amount of insurance, deductible, carrier and expiration date of coverage. Upon request by COUNTY, the ENGINEER shall furnish COUNTY with a Certificate of Insurance showing the type, amount, deductible, effective date and date of expiration of such policy. Such certificate shall also contain substantially the following statement: "The insurance covered by this certificate shall not be canceled, the coverage changed or reduced by endorsement, by the insurance company, except after thirty (30) calendar days written notice has been received by COUNTY." The ENGINEER shall not cancel or materially alter this coverage without prior written approval by COUNTY. The ENGINEER shall be responsible for consultants maintaining professional liability insurance during the life of their Agreement.

10. ARTICLE 10: OTHER INSURANCE

10.A. The ENGINEER and its consultants retained under terms of this Agreement shall:

10.A.1) Maintain Worker's Compensation Insurance:

a) Procure and maintain Worker's Compensation Insurance as required by State of Wisconsin Statutes for all of the ENGINEER's and consultant's employees engaged in work associated with the project under this Agreement.

b) Maintain Employer's Liability Insurance with a policy limit of not less than $1,000,000 per occurrence and $2,000,000 in the aggregate.

10.A.2) Procure and maintain during the life of this Agreement, and until one year after the completion of this Agreement, Commercial General Liability Insurance, including Products and Completed Operations for all claims that might occur in carrying out the Agreement. Minimum coverage shall be $1,000,000 per occurrence, $1,000,000 general aggregate, combined single limit for bodily injury, personal injury, and property damage. Such coverage shall be of the "occurrence" type form and shall include the employees of the ENGINEER as insureds.

10.A.3) Procure and maintain Commercial Automobile Liability Insurance for all owned, non-owned, and hired vehicles that are used in carrying out the Agreement.

Minimum coverage shall be $1,000,000 per occurrence combined single limit for bodily injury and property damage.

10.A.4) Provide an insurance certificate indicating the above Commercial Liability Insurance and property damage coverage, countersigned by an insurer licensed to do business in Wisconsin, covering and maintained for the period of the Agreement. Upon request by COUNTY, the insurance certificate is to be presented on or before execution of the Agreement.

11. ARTICLE 11: MISCELLANEOUS PROVISIONS

11.A. ENGINEER warrants that it has complied with all necessary requirements to do business in the State of Wisconsin, that the persons executing this Agreement on its behalf are authorized to do so.

11.B. Legal Relations. The ENGINEER shall comply with and observe federal and state laws and regulations and local zoning ordinances applicable to this project and in effect on the date of this Agreement.

11.C. Approvals or Inspections. None of the approvals or inspections performed by COUNTY shall be construed or implied to relieve the ENGINEER from any duty or responsibility it has for its professional performance, unless COUNTY formally assumes such responsibility in writing from COUNTY so stating that the responsibility has been assumed.

11.D. Successors, Subrogees and Assigns. COUNTY and ENGINEER each bind themselves, their partners, successors, subrogees, assigns, and legal representatives to the other party to this Agreement and to the partners, successors, subrogees, assigns and legal representatives of such other party with respect to covenants of this Agreement.

11.E. Claims. The ENGINEER's project manager will meet with COUNTY's Project Manager to attempt to resolve claims, disputes and other matters in question arising out of, or relating to, this Agreement or the breach thereof. Issues not settled are to be presented in writing to the COUNTY Deputy Director of [Public Works, Waste & Renewables] for review and resolution. The decision of the Deputy Director of [Public Works, Waste & Renewables] shall be final. Work shall progress during the period of any dispute or claim. Unless specifically agreed between the parties, venue will be in Dane County, Wisconsin.

11.F. Amendment of Agreement. This Agreement may be amended in writing by both COUNTY and ENGINEER.

11.G. It is expressly understood and agreed to by the parties hereto that in the event of any disagreement or controversy between the parties, Wisconsin law shall be controlling. Venue for any legal proceedings shall be in the Dane County Circuit Court.

11.H. This Agreement is intended to be an agreement solely between the parties hereto and for their benefit only. No part of this Agreement shall be construed to add to, supplement, amend, abridge or repeal existing duties, rights, benefits or privileges of any third party or parties, including but not limited to employees of either of the parties.

11.I. The entire agreement of the parties is contained herein and this Agreement supersedes any and all oral agreements and negotiations between the parties relating to the subject matter hereof. The parties expressly agree that this Agreement shall not be amended in any fashion except in writing, executed by both parties.

12. ARTICLE 12: NONDISCRIMINATION IN EMPLOYMENT

12.A. During the term of this Agreement, ENGINEER agrees not to discriminate on the basis of age, race, ethnicity, religion, color, gender, disability, marital status, sexual orientation, national origin, cultural differences, ancestry, physical appearance, arrest record or conviction record, military participation or membership in the national guard, state defense force or any other reserve component of the military forces of the United States, or political beliefs against any person, whether a recipient of services (actual or potential) or an employee or applicant for employment. Such equal opportunity shall include but not be limited to the following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation or level of service(s). ENGINEER agrees to post in conspicuous places, available to all employees, service recipients and applicants for employment and services, notices setting forth the provisions of this paragraph. The listing of prohibited bases for discrimination shall not be construed to amend in any fashion state or federal law setting forth additional bases and exceptions shall be permitted only to the extent allowable in state or federal law.

12.B. Civil Rights Compliance:

12.B.1) If ENGINEER has twenty (20) or more employees and receives $20,000 in annual contracts with COUNTY, the ENGINEER shall submit to COUNTY a current Civil Rights Compliance Plan (CRC) for Meeting Equal Opportunity Requirements under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title VI and XVI of the Public Service Health Act, the Age Discrimination Act of 1975, the Omnibus Budget Reconciliation Act of 1981 and Americans with Disabilities Act (ADA) of 1990. ENGINEER shall also file an Affirmative Action (AA) Plan with COUNTY in accordance with the requirements of Chapter 19 of the Dane County Code of Ordinances. ENGINEER shall submit a copy of its discrimination complaint form with its CRC/AA Plan. The CRC/AA Plan must be submitted prior to the effective date of this Agreement and failure to do so by said date shall constitute grounds for immediate termination of this Agreement by COUNTY. If an approved plan has been received during the previous calendar year, a plan update is acceptable. The plan may cover a two-year period. If ENGINEER has less than twenty (20) employees, but receives more than $20,000 from the COUNTY in annual contracts, it may be required to submit a CRC Action Plan to correct any problems discovered as the result of a complaint investigation or other Civil Rights Compliance monitoring efforts set forth herein below. If ENGINEER submits a CRC/AA Plan to a Department of Workforce Development Division or to a Department of Health and Family Services Division that covers the services purchased by COUNTY, a verification of acceptance by the State of ENGINEER's Plan is sufficient.

12.B.2) ENGINEER agrees to comply with the COUNTY's civil rights compliance policies and procedures. ENGINEER agrees to comply with civil rights monitoring reviews performed by the COUNTY, including the examination of records and relevant files maintained by the ENGINEER. ENGINEER agrees to furnish all information and reports required by the COUNTY as they relate to affirmative action and non-discrimination. ENGINEER further agrees to cooperate with COUNTY in developing, implementing, and monitoring corrective action plans that result from any reviews.

12.B.3) ENGINEER shall post the Equal Opportunity Policy, the name of ENGINEER's designated Equal Opportunity Coordinator and the discrimination complaint process in conspicuous places available to applicants and clients of services, applicants for

employment and employees. The complaint process will be according to COUNTY's policies and procedures and made available in languages and formats understandable to applicants, clients and employees. ENGINEER shall supply to COUNTY's Contract Compliance Specialist upon request a summary document of all client complaints related to perceived discrimination in service delivery. These documents shall include names of the involved persons, nature of the complaints, and a description of any attempts made to achieve complaint resolution.

12.B.4) ENGINEER shall provide copies of all announcements of new employment opportunities to COUNTY's Contract Compliance Specialist when such announcements are issued.

ATTACHMENT A

PROFESSIONAL SERVICES AGREEMENT

ENGINEER / CONSULTANT AGREEMENT

Date: [Date]

Project No.: [No.]

Agreement No.: [No.]

THIS AGREEMENT is between [ENGINEER Name], hereinafter called "ENGINEER", executing this Agreement, and [Consultant Name] hereinafter called the "Consultant".

WITNESSETH

WHEREAS, the ENGINEER has entered into an Agreement with COUNTY to furnish professional services with a project, hereinafter named "Project", which is described as follows:

Capital City Trail Roundabout Hydrology Study

WHEREAS, the ENGINEER deems it advisable to engage the services of a Consultant to furnish professional services in connection with this project, and

WHEREAS, the ENGINEER and Consultant agree that the terms of the Agreement between COUNTY and the ENGINEER also apply to this Agreement as though fully set forth and binding upon the Consultant, and

WHEREAS, the Consultant agrees that in the event of conflict between the ENGINEER's Agreement with COUNTY and the ENGINEER's Agreement with the Consultant, the ENGINEER's Agreement with COUNTY shall take precedence, and

WHEREAS, the Consultant has signified willingness to furnish services for the ENGINEER;

NOW, THEREFORE, in consideration of the premises and to their mutual and dependent agreements, the parties hereto agree as set forth in the Agreement between COUNTY and the ENGINEER which are annexed hereto and made a part hereof.

IN WITNESS WHEREOF, the ENGINEER and the Consultant have executed this Agreement.

[Consultant Firm Name]	**[ENGINEER Firm Name]**
Signature Date	Signature Date
Printed Name	Printed Name
Title	Title

Providing the following services:
[Describe services]

SECTION 00 73 11

FAIR LABOR PRACTICES CERTIFICATION

The undersigned, for and on behalf of the BIDDER, APPLICANT or PROPOSER named herein, certifies as follows:

A. That he or she is an officer or duly authorized agent of the above-referenced BIDDER, APPLICANT or PROPOSER, which has a submitted a bid, application or proposal for a contract or agreement with the county of Dane.

B. That BIDDER, APPLICANT or PROPOSER has (check one):

_____ not been found by the National Labor Relations Board ("NLRB") or the Wisconsin Employment Relations Commission ("WERC") to have violated any statute or regulation regarding labor standards or relations in the seven years prior to the signature date of this Certification.

_____ been found by the National Labor Relations Board ("NLRB") or the Wisconsin Employment Relations Commission ("WERC") to have violated any statute or regulation regarding labor standards or relations in the seven years prior to the signature date of this Certification.

_____ _____

Officer or Authorized Agent Signature Date

_____

Printed or Typed Name and Title

_____

Printed or Typed Business Name

NOTE: You can find information regarding the violations described above at: www.nlrb.gov and werc.wi.gov.

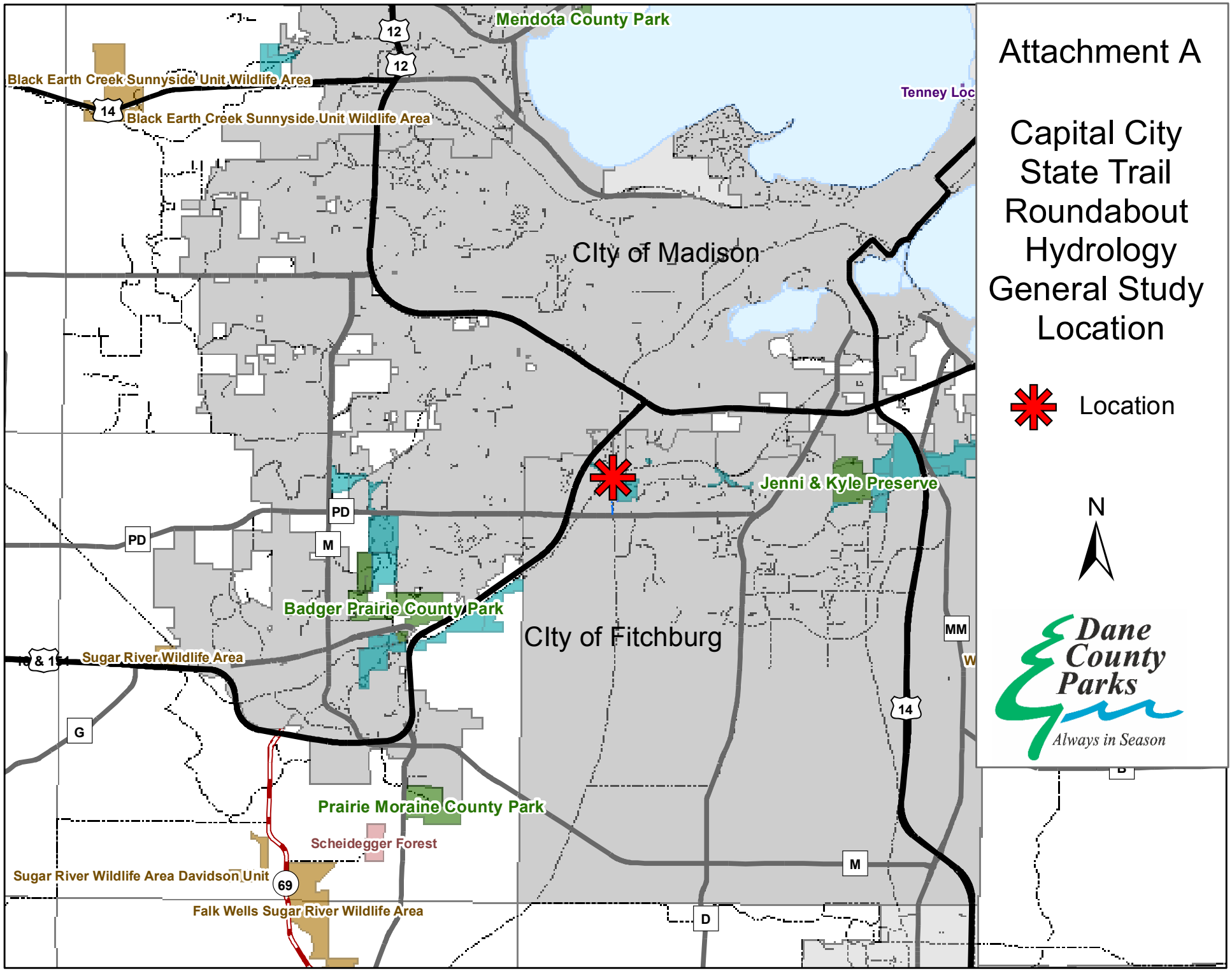
For reference, Dane County Ordinance 25.09 is as follows:

(1) BIDDER RESPONSIBILITY. (a) Any bid, application or proposal for any contract with the county, including public works contracts regulated under chapter 40, shall include a certification indicating whether the bidder has been found by the National Labor Relations Board (NLRB) or the Wisconsin Employment Relations Committee (WERC) to have violated any statute or regulation regarding labor standards or relations within the last seven years. The Controller shall investigate any such finding and make a recommendation to the committee, which shall determine whether the conduct resulting in the finding affects the bidder's responsibility to perform the contract.

If you indicated that the NLRB or WERC have found you to have such a violation, you must include copies of any relevant information regarding such violation with your proposal, bid or application.

Include this completed Certification with your bid, application or proposal.

END OF SECTION


Attachment A
Capital City State Trail Roundabout Hydrology General Study Location
Location
N
Dane County Parks
Always in Season
Mendota County Park
Black Earth Creek Sunnyside Unit Wildlife Area
Black Earth Creek Sunnyside Unit Wildlife Area
Tenney Loc
City of Madison
Jenni & Kyle Preserve
Badger Prairie County Park
City of Fitchburg
Sugar River Wildlife Area
Prairie Moraine County Park
Scheidegger Forest
Sugar River Wildlife Area Davidson Unit
Falk Wells Sugar River Wildlife Area
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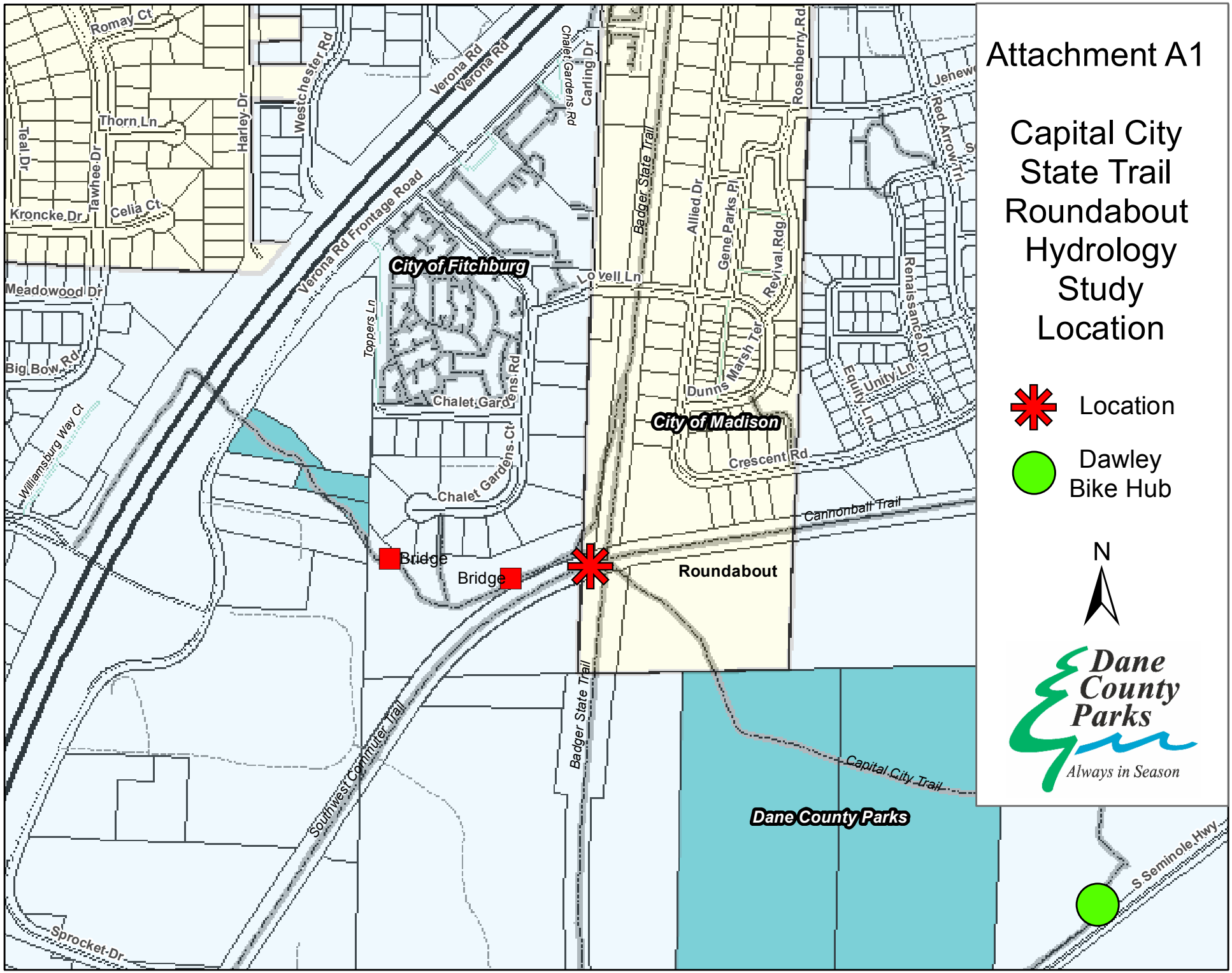

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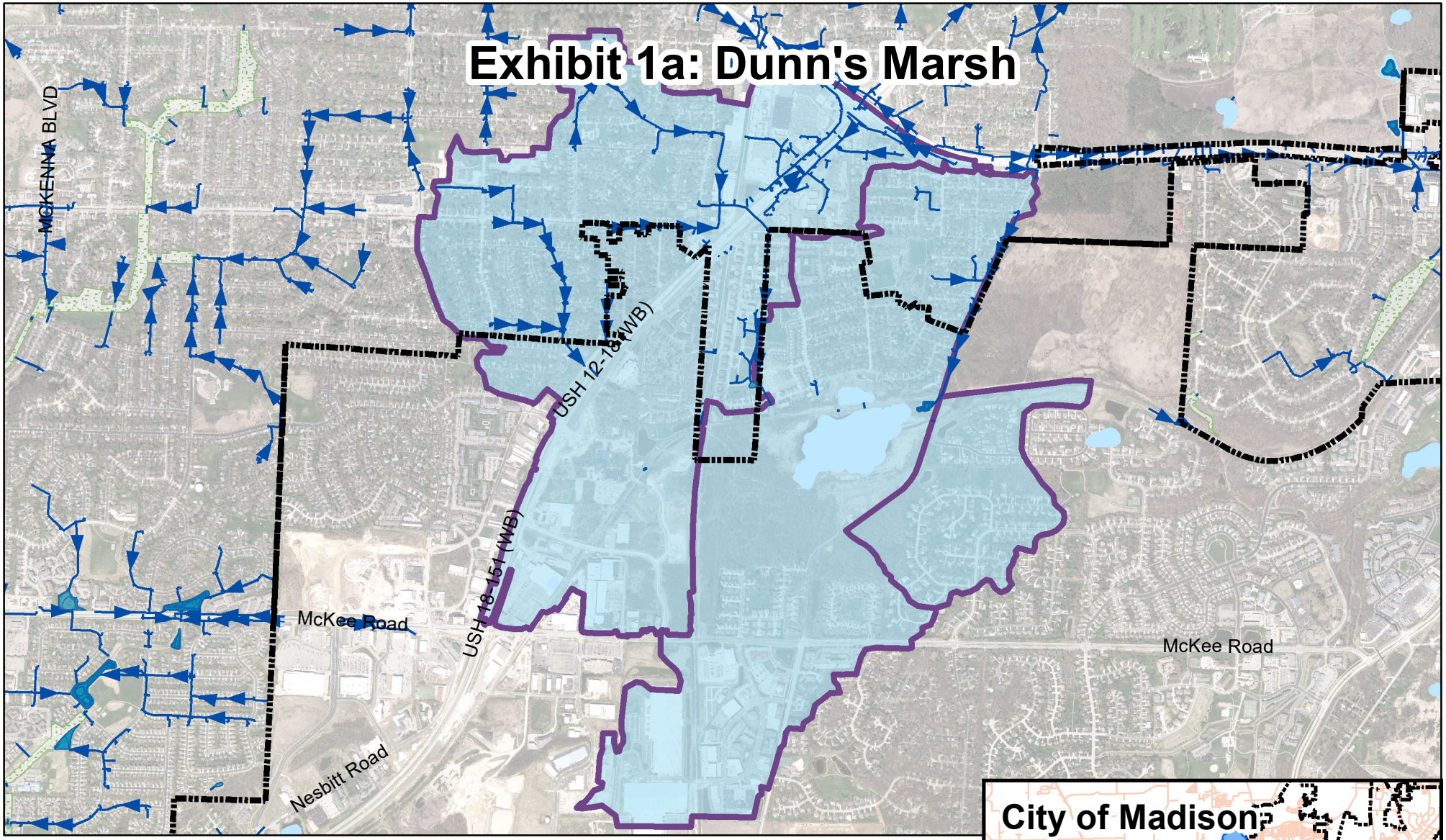
Exhibit 1a: Dunn's Marsh

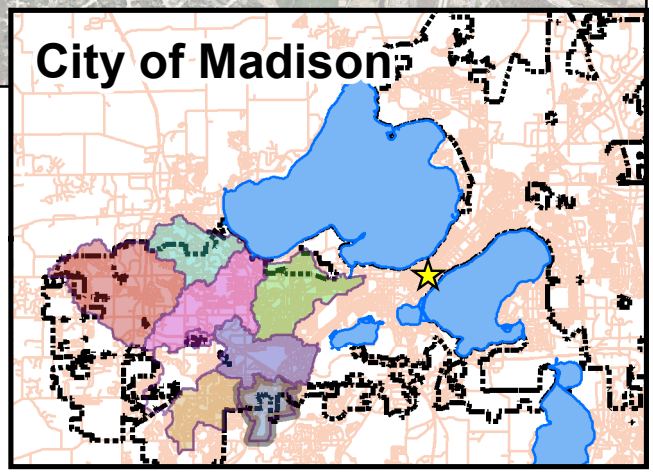


Study Area
Stormwater Treatment Ponds
Storm Sewer
Greenways
City of Madison Boundary

N

0 0.25 0.5 Miles

Study Area: ~ 1,493 acres



APPENDIX E
STORMWATER REPORT

13.01 INTRODUCTION

This section describes existing stormwater and drainage facilities near the US 12/14 (Beltline) and US 18/151 (Verona Road) Interchange and provides a summary of the Preliminary Stormwater Management Study as presented in the Draft Environmental Impact Statement (DEIS). Potential stormwater impacts to adjacent waterways and stormwater facilities that are associated with Stages 1, 2, and 3 of the Preferred Alternative are summarized in the following narrative. Conceptual plans for postconstruction stormwater best management practices (BMP) to meet stormwater management goals and objectives within the project corridor are also evaluated and discussed in this section.

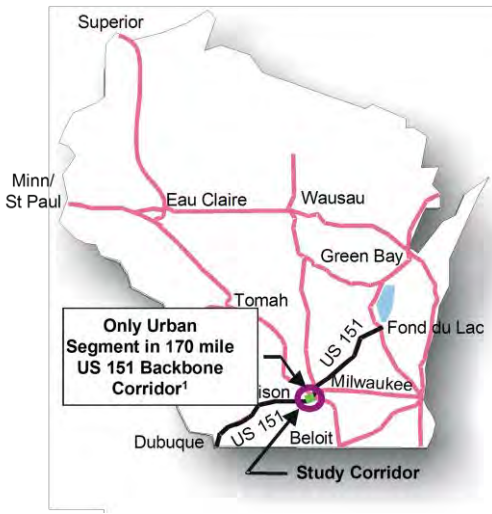


Figure 13.01-1 Study Corridor Location

13.02 EXISTING DRAINAGE CHARACTERISTICS

A. General

The majority of the drainage within the Project Corridor (Verona Road south of the Beltline interchange) is ultimately directed in a southerly direction to Dunn's Marsh (see Figure 13.02-1). Dunn's Marsh is a 30-acre deep-water wetland that drains approximately 1,000 acres of primarily urban lands and it serves as the headwaters of Nine Springs Creek. Nine Springs Creek generally drains to the east and enters the Yahara River upstream of Mud Lake and ultimately discharges into Lake Waubesa. Existing slopes within the Nine Springs Creek watershed are moderately steep and erosive. As a result, significant sediment accumulation has occurred within Dunn's Marsh.

B. Watershed Subbasin NS01

Watershed Subbasin NS01 (see Figure 13.02-1) west of Verona Road and generally south of Raymond Road currently drains to an existing riprap ditch located downstream of twin 29-inch by 45-inch horizontal elliptical reinforced concrete pipe (HERCP) cross culverts under Verona Road at the bike underpass near Williamsburg Way. The existing HERCP cross culverts are located adjacent to the Capital City Bike Path. The slope of the existing ditch is moderately steep (6 to 8 percent) and erosive and has experienced frequent washouts as a result. The City of Fitchburg has maintained this ditch in the past by placing additional stone riprap to stabilize the channel; however, additional channel improvements may be required.

Two existing wet detention stormwater ponds are located downstream of the ditch within Arrowhead Park east of Williamsburg Way. These ponds were constructed to serve existing development within the City of Fitchburg including Arrowhead Park. The ponds were designed to provide 80 percent removal efficiencies for total suspended solids (TSS) of size 5 micron or larger for these developed areas within the City. To provide additional sediment removal, retrofitting of the existing ponds may be necessary.

C. Watershed Subbasin NS02 and NS03

Watershed Subbasin NS02 generally west of Verona Road and north of Raymond Road and Subbasin NS03 west of Verona Road and south of Raymond Road (see Figure 13.02-1) drain approximately 270 acres of primarily residential and commercial developed lands including the Home Depot and former Cub Foods developments. This subbasin is drained by an existing 72-inch-diameter storm sewer system owned by the City of Madison. This storm sewer outlets into a depressional area located north of an abandoned railroad bed along the north side of Dunn's Marsh. The portion of Verona Road that is drained by this storm sewer system is located within a kettle that does not have a positive overland flow route. Minor flooding during extreme storm events within Verona Road near the intersection of Summit Road has been experienced in the past.

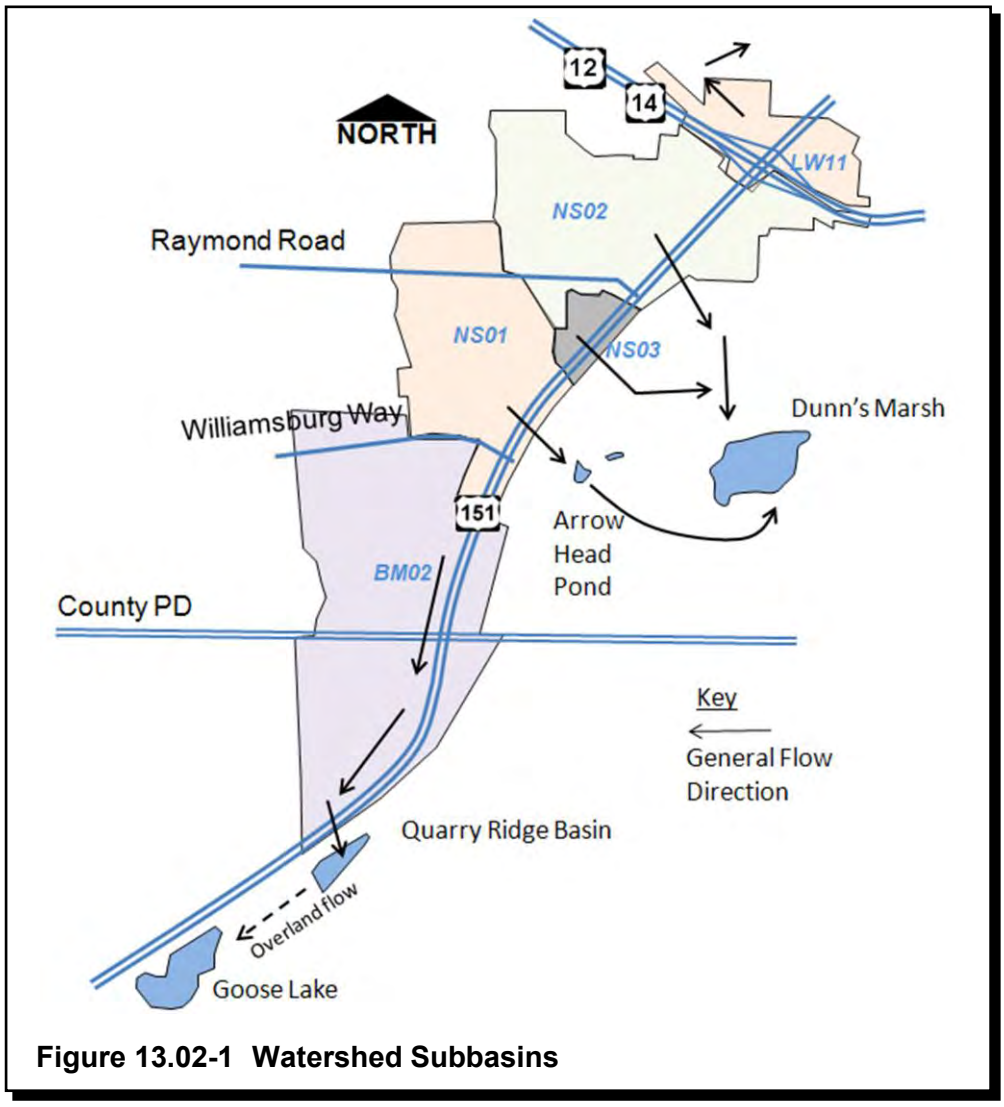


Figure 13.02-1 Watershed Subbasins

D. Watershed Subbasin LW11

The majority of the US 12/14 (Beltline) and US 18/151 (Verona Road) Interchange is located within Subbasin LW11, generally north of the Beltline and south of Hammersley Road (see Figure 13.02-2), and drains via storm sewer to the northwest into an existing ditch located along the Southwest Bike Path. Ultimately this drainage is directed via a series of open channels and enclosed storm sewer systems to UW-Arboretum Secret Pond wet detention pond and Lake Wingra. There are no waterways present in this basin.

Figure 13.02-2 Watershed Subbasin LW11

E. Watershed Subbasin BM02

The southwesterly portions of the South Verona Road Corridor are located within the Badger Mill Creek Watershed, which is located within the Upper Sugar River Watershed. Subbasin BM02, located south of Williamsburg Way and west of Verona Road (see Figure 13.02-3), generally drains via open grassed channels to an existing 6-foot by 4-foot box culvert under Verona Road. This culvert drains through a series of existing retention ponds (Quarry Ridge Stormwater Facilities) owned by the City of Fitchburg. This series of ponds ultimately drain to Goose Lake, a closed system prairie-pothole, which is located south of Verona Road and west of Fitchrona Road in the Town of Verona.

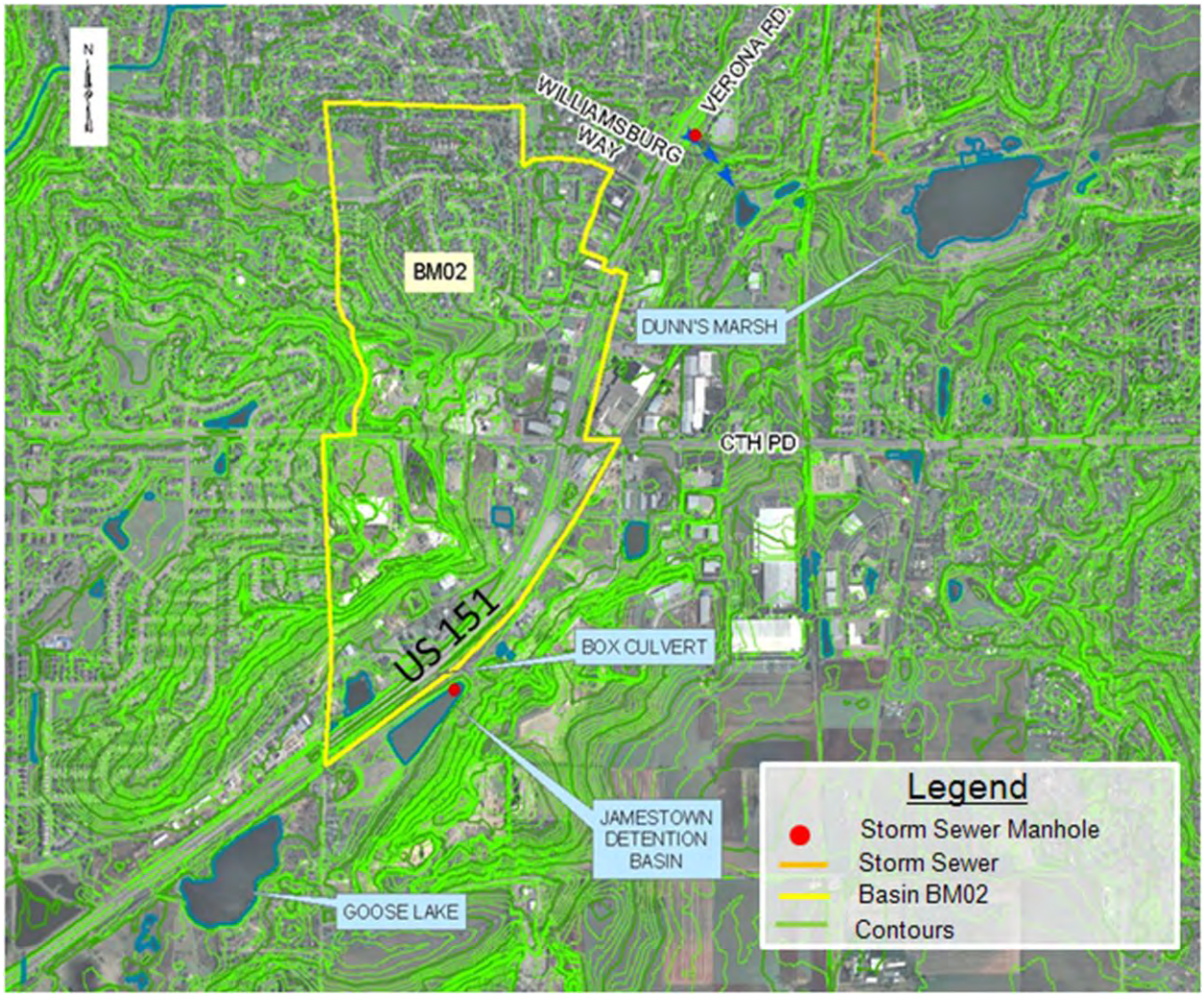


Figure 13.02-3 Watershed Subbasin BM02

13.03 DESIGN CRITERIA

By definition, Stages 1, 2, and 3 of the project may be classified as highway "reconstruction" projects under WI Admin Code Trans 401. As stated in the Trans 401.03 (Applicability) section, this project is not a "minor reconstruction of a highway" and therefore Trans 401 fully applies.[1]

Stage	Maximum Amount Roadbed Widened (feet)	Total Length of Added Through Lanes (miles)
1	36	2.30
2	90	2.01
3	140	4.58

Table 13.03-1 Trans 401 Reconstruction Determination

Since this project is classified as a reconstruction project, Trans 401.106 requires that "the department shall develop and implement a written plan that includes the requirements of subs. (3) to (10) for each transportation facility." Agreements and regulations will be followed with this document. Requirements of 401 are listed below in a summary of subs. (3) through (10) that applies to Stages 1, 2, and 3 of this project.

(3) Total Suspended Solids (TSS)–Best management practices (BMP) shall be designed, installed, and maintained to control TSS carried in runoff from the transportation facility as follows:

a. For highway reconstruction and nonhighway redevelopment, by design, reduce to the maximum extent practicable the TSS load by at least 40 percent, based on an average annual rainfall, as compared to no runoff management controls.

(4) Peak Discharge–By design, BMP shall be employed to maintain or reduce the runoff discharge rates, to the maximum extent practicable, as compared to predevelopment site conditions for the 2-year, 24-hour design storm or to the 2-year design storm with a duration equal to the time of concentration applicable to the transportation facility. Trans 401.106(4)(b)(2) states that peak discharge requirements do not apply to highway reconstruction sites. However, the stormwater plan for the project will be developed to attempt to meet peak discharge requirements to the maximum extent practicable.

(5) Infiltration–Section Trans 401.106 (5)(e) states that projects undertaken in the following areas are not required to meet the infiltration requirements outlined in Trans 401:

[1]"Minor reconstruction" means reconstruction, as defined in section 84.013(1)(c), Stats., of any length of highway that does not widen the roadbed by more than 100 feet, and for which the total length of relocated highway and any added through travel lane does not exceed 1.5 miles. Based on the potential roadway improvements being proposed, Stages 1, 2, and 3 each have added through travel lanes that exceed 1.5 miles (see Table 13.03-1) and are therefore not classified as "minor reconstruction" projects.

a. Highways. Generally speaking, the majority of the potential roadway improvements can be classified as a "highway."

b. Roads in commercial, industrial, and institutional land uses and arterial residential roads. Potential frontage roads not classified as a "highway" are generally located within commercial land uses.

Consequently, infiltration requirements outlined in Trans 401.106(5) do not need to be met for this project. However, the stormwater plan for the project will be developed to implement infiltration measures by providing pretreatment BMP.

(6) Buffer Areas–A "buffer area" means an area of land that commences at the ordinary high-water mark of lakes, streams, and rivers or at the delineated boundary of wetlands. No lakes, streams, rivers, or delineated wetlands have been identified within the potential roadway corridor that would be impacted. Consequently, no buffer areas will be required.

(7) Fueling and Vehicle Maintenance Areas–The potential project does not involve construction of any fueling and vehicle maintenance areas.

(8) Location and Regional Treatment Exclusion–The potential project does not qualify for any of the location and regional treatment exclusions stated in this section. Consequently, postconstruction runoff from a transportation facility first constructed after January 1, 2003, shall meet the requirements of Trans 401.106 before entering a navigable surface water.

(9) Swale Treatment–Transportation facilities that use swales for runoff conveyance and pollutant removal satisfy all the requirements of Trans 401.106 if the swales are designed to the maximum extent practicable to do all the following:

a. Be vegetated. However, where appropriate, nonvegetative measures may be employed to prevent erosion or provide for runoff treatment such as rock riprap stabilization or check dams.

b. Carry runoff through a swale for 200 feet or more in length that is designed with a flow velocity no greater than 1.5 feet per second based on a 2-year, 24-hour design storm or on a 2-year design storm with duration equal to the time of concentration. If a swale of 200 feet length cannot be designed with a flow velocity of 1.5 feet per second or less, the flow velocity shall be reduced to the maximum extent practicable.

Generally speaking, the majority of the potential roadway improvements will not utilize swales for runoff conveyance and pollutant removal. Consequently, this section of Trans 401.106 does not apply. In lieu of swale treatment, potential stormwater facilities will be proposed to provide sediment and pollutant removal.

In addition to meeting minimum Trans 401 postconstruction stormwater requirements, the stormwater management plan for each stage of the project, WisDOT will work with the City of Fitchburg, City of

Madison, and Dane County stormwater management design standards to the maximum extent practicable. The City of Fitchburg has developed plans for several urban stormwater quality improvement projects that are located in areas adjacent to the project corridor (the Nicolet Detention Basin Retrofit and the Dunn's Marsh Management). The potential postconstruction stormwater BMP for this project does not appear to conflict with the City's potential projects. However, coordination will occur with WisDOT BMP projects that are described in this report with City of Fitchburg, City of Madison, and Dane County staff to confirm that mutual stormwater management goals and objectives will be met.

13.04 STAGE 1 STORMWATER IMPACTS

Stage 1 will result in roadway construction primarily associated with the US 12/14 (Beltline) and US 18/151 (Verona Road) Interchange improvements and the potential jug-handle at the intersection of Verona Road and Summit. Land disturbance from Stage 1 roadway construction is estimated to be approximately 51 acres. The increase in impervious area will result in peak stormwater flows and increases in suspended solids. Stormwater runoff associated with Stage 1 roadway construction will be drained by two primary stormwater conveyance systems. Roadway improvements to the southeast portion of the US 12/14 (Beltline) and US 18/151 (Verona Road) Interchange and the Verona Road and Summit intersection are planned within Watershed Subbasin NS02 and will result in approximately 33 acres of land disturbance and a net increase of 5.7 percent in the 10-year peak discharges (Table 13.04-1). As previously mentioned, stormwater runoff from this area will drain to an existing 72-inch-diameter storm sewer owned by the City of Madison that ultimately outlets to Dunn's Marsh.

Stage 1: Peak Flow Analysis

Basin ID	2-Year			5-Year			10-Year		
	Exist. (cfs)	Prop. (cfs)	% Inc.	Exist. (cfs)	Prop. (cfs)	% Inc.	Exist. (cfs)	Prop. (cfs)	% Inc.
LW11	45.9	49.1	7.0	60.4	63.6	5.3	72.8	75.9	4.3
NS02	69.3	75.5	8.9	94.7	101.3	7.0	116.8	123.5	5.7

Table 13.04-1 Stage 1 Stormwater Impacts

Because of the highly urban nature of the existing roadway corridor where Stage 1 improvements are proposed, there is little available open space and therefore, very few opportunities for providing permanent stormwater facilities within the right-of-way. A wet detention basin is being proposed south of the former Cub Foods parking lot. The detention basin will provide both water quality and quantity treatment for portions of the Stage 1 roadway improvements. The basin will also help address flooding problems that have occurred on the west side of Verona Road near Summit Road. See Figure 13.04-1.

Two alternative sites were considered for regional stormwater detention facilities, one immediately northwest of Dunn's Marsh and one immediately north of the railroad bed on the north side of Dunn's Marsh. The site northwest of Dunn's Marsh was dismissed because of the presence of field-delineated wetlands and potential impacts to the adjacent residential neighborhood. The site north of the railroad bed was dismissed because of the substantial wetland impacts and permitting challenges. The

currently proposed basin south of the former Cub Foods site avoids both wetland and permitting challenges.

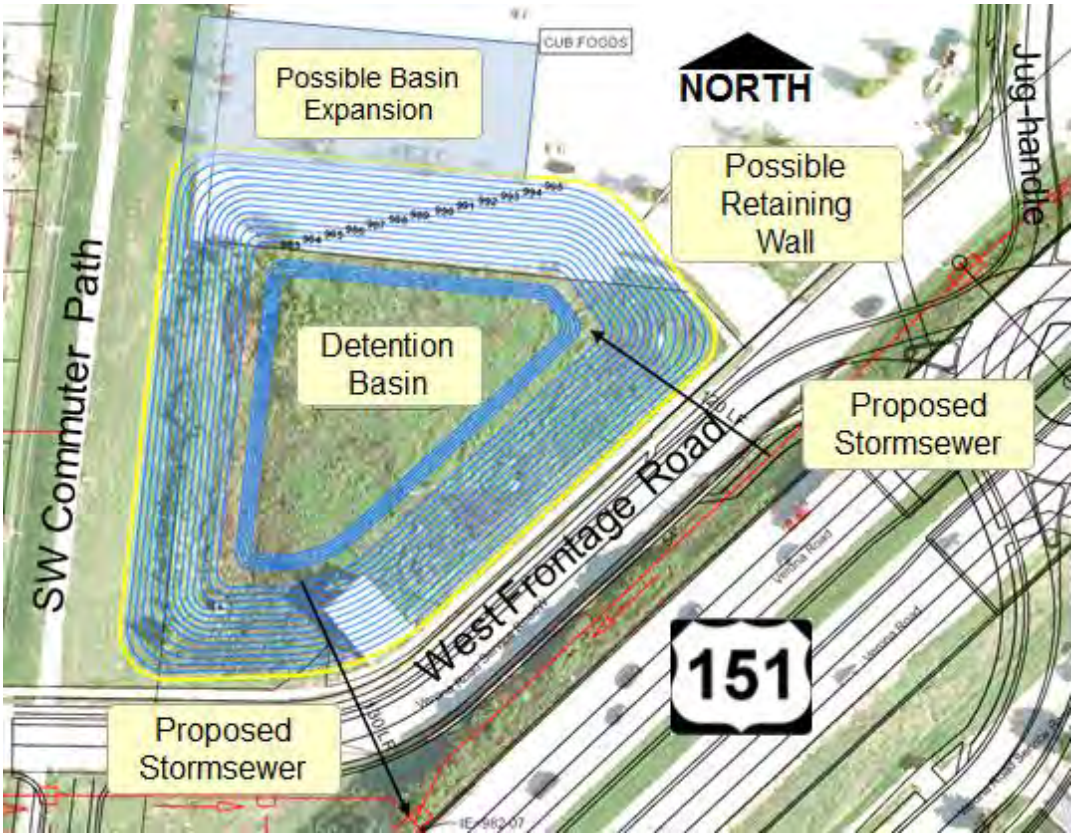


Figure 13.04-1 Stage 1 Proposed Stormwater Basin

Some possibilities for stormwater treatment may include locating smaller bioretention basins or bioswales within the potential southeast and northeast infield areas of the jug-handle interchange.

Stage 1 roadway improvements in the northwest portion of the US 12/14 (Beltline) and US 18/151 (Verona Road) Interchange are planned within Watershed Subbasin LW11 and will result in approximately 18.3 acres of land disturbance and a 4.3 percent increase in the 10-year peak discharge. Stage 1 improvements will require the reconstruction of various elements of the existing series of open channels and enclosed storm sewer systems to accommodate the new interchange. However, drainage patterns should generally remain similar to the existing condition.

Stormwater runoff from this area is drained via a storm sewer system that ultimately discharges into an existing drainage ditch located along the Southwest Bike Trail located north of the Beltline. At the ultimate outfall into Lake Wingra (located immediately east of the intersection of Manitou Way and Nakoma Road), the University of Wisconsin and City of Madison intend to rehabilitate a stormwater detention basin (Secret Pond) primarily for water quality purposes. Implementation of the Secret Pond

project is expected to occur within the next year, so there is potential for WisDOT to participate in cost-sharing with the UW Arboretum to account for the additional 1.4 acres of Stage 1 impervious surface being added in the Secret Pond watershed. This funding would be through an existing intergovernmental agreement for construction of stormwater management facilities at the UW-Arboretum between the UW-Arboretum and WisDOT. Furthermore, it may be possible for WisDOT to implement BMP such as a bioswale or bioretention adjacent to the Southwest Bike Path (see Figure 13.04-2).

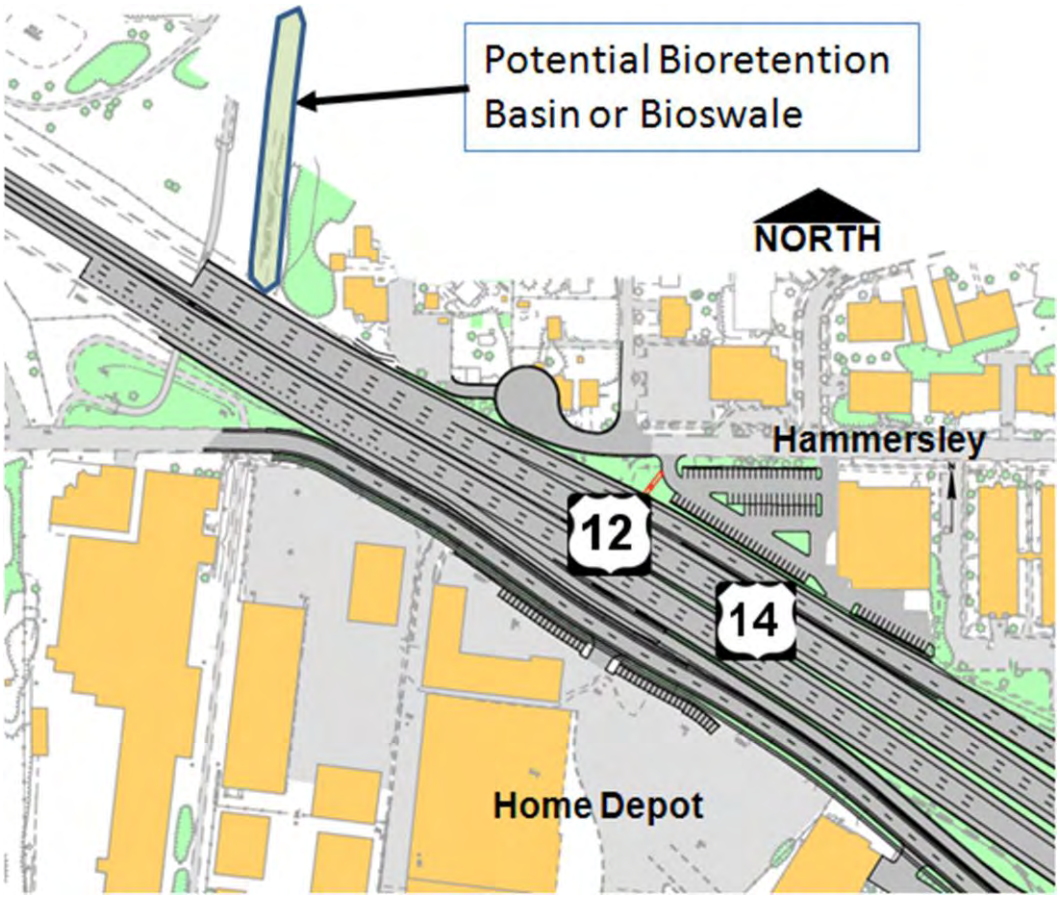


Figure 13.04-2 Stage 1: Potential Bioretention or Bioswale Along Southwest Bike Path

13.05 STAGE 2 STORMWATER IMPACTS

Stage 2 roadway construction includes the Verona Road and County PD interchange. Land disturbance from the Stage 2 roadway construction is estimated to be approximately 38.4 acres. The project is expected to increase the 10-year peak discharge to Subbasin BM02 by 13 percent (Table 13.05-1). Furthermore, the Stage 2 improvements will entail conversion from a rural-type drainage system consisting of open ditches and cross culverts to an urban drainage system consisting of curb and gutter and storm sewer. Potential storm sewer draining the South Verona Road and County PD interchange will most likely be directed to the southwest into existing roadside ditches along South Verona Road. Stormwater runoff from this area would ultimately be directed to an existing 6-foot by 4-foot box culvert under Verona Road that drains to a 7-acre wet stormwater detention pond that was constructed and is maintained by the City of Fitchburg (Quarry Ridge Basin, see Figure 13.02-3). The Quarry Ridge Basin ultimately overflows to the south to Goose Lake at an elevation that is approximately 5 feet above the normal operating water surface elevation.

Stage 2: Peak Flow Analysis

Basin ID	2-Year			5-Year			10-Year		
	Exist. (cfs)	Prop. (cfs)	% Inc.	Exist. (cfs)	Prop. (cfs)	% Inc.	Exist. (cfs)	Prop. (cfs)	% Inc.
BM02	49.8	60.1	20.7	69.9	81.0	15.9	87.6	99.0	13.0

Table 13.05-1 Stage 2 Stormwater Impacts

Based on review of available information, there are concerns regarding the current performance of the Quarry Ridge Basin and Goose Lake. The potential impacts from future development in the watershed, particularly with respect to increases in runoff volume increase these concerns. Because the Quarry Ridge Basin primarily relies on infiltration and evaporation to draw down basin levels below the overflow, the basin frequently overtops following extreme rainfall events. Consequently, additional runoff volume resulting from the Stage 2 improvements should be addressed. We have estimated the increase in runoff volume for Stage 2 for a 2-year and 100-year storm event is approximately 1.7 and 4.4 acre-feet, respectively. A possible measure to mitigate the increase in runoff volume would be to enlarge the Quarry Ridge Basin to the south. Based on preliminary calculations, the surface area of the basin would need to be enlarged by approximately 1 acre to the southwest (see Figure 13.05-1).

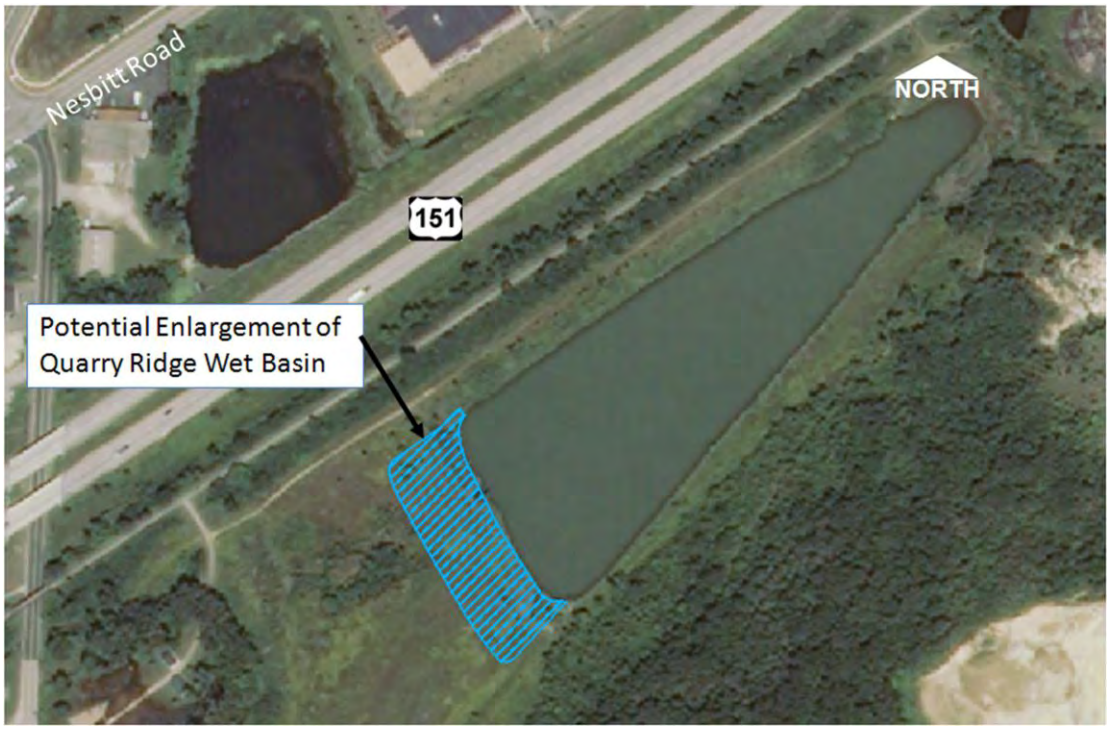


Figure 13.05-1 Stage 2: Potential Expansion of Quarry Ridge Basin

Few opportunities exist to provide permanent BMP within WisDOT right-of-way. However, it may be possible to expand or retrofit the existing dry detention basin located between Nesbitt Road and eastbound South Verona Road (see Figure 13.05-2). Both the Quarry Ridge Basin and the existing dry basin are owned and maintained by the City of Fitchburg. Coordination with City of Fitchburg engineering and public works staff for potential modifications to these stormwater facilities will be needed.

Figure 13.05-2 Stage 2: Potential Retrofit of Existing Dry Detention Basin

13.06 STAGE 3 STORMWATER IMPACTS

Stage 3 roadway construction includes the freeway conversion of US 151 between County PD and the US 12/14 (Beltline) and US 18/151 (Verona Road) Interchange. Land disturbance from the Stage 3 roadway construction occurring within Watershed Subbasins NS02 and NS03 is estimated to be approximately 65.7 acres. The improvements will result in a net flow increase of 12 percent in the 10-year peak discharge for Subbasins NS01, NS02, and NS03 (Table 13.06-1). Stormwater runoff associated with Stage 3 roadway construction is drained by two primary stormwater conveyance systems. Roadway improvements occurring between the Westchester Road cul-de-sac located north of Verona Road and the US 12/14 (Beltline) and US 18/151 (Verona Road) Interchange will result in approximately 46.4 acres of land disturbance. Stormwater runoff from this area is currently drained by an existing 72-inch-diameter storm sewer that outlets into Dunn's Marsh (see Figure 13.06-1). Note that the potential roadway profile of the depressed freeway lanes has been developed to accommodate the existing 72-inch storm sewer so that adequate pipe cover is provided and the hydraulic performance of the storm sewer system is maintained. Because approximately 25 acres of drainage area are being removed from the existing 72-inch storm sewer system, hydraulic capacity will not be impacted.

Stage 3: Peak Flow Analysis									
Basin ID	2-Year			5-Year			10-Year		
	Exist. (cfs)	Prop. (cfs)	% Inc.	Exist. (cfs)	Prop. (cfs)	% Inc.	Exist. (cfs)	Prop. (cfs)	% Inc.
NS01	28.7	44.5	55.1	42.4	59.7	40.8	54.7	72.8	33.1
NS02	72.5	72.5	0	99.2	99.2	0	122.4	122.4	0
NS03	20.2	27	33.7	29.2	36.6	25.3	37.1	44.8	20.8

Table 13.06-1 Stage 3 Stormwater Impacts

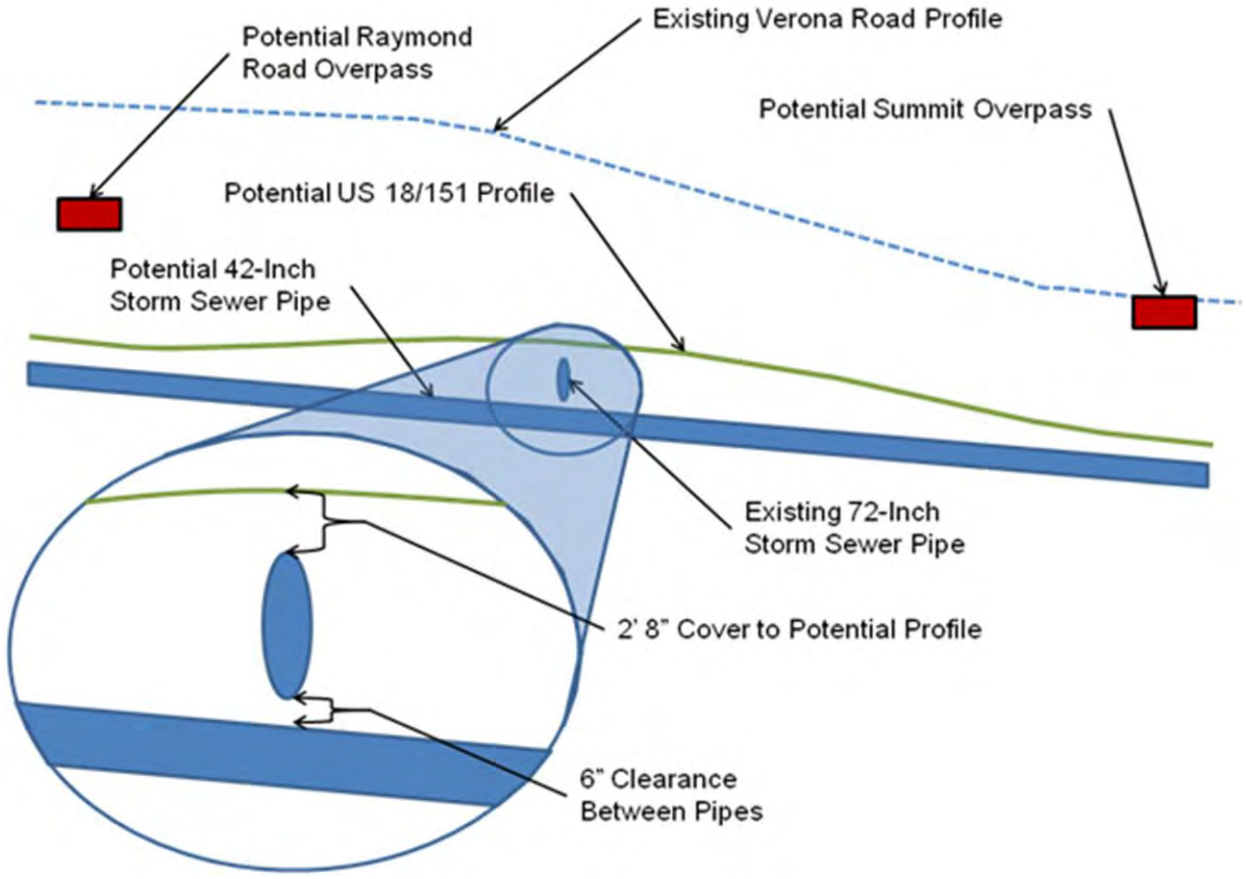


Figure 13.06-1 Stage 3: Potential Freeway Profile Versus Existing 72-Inch Storm Sewer

The elevation of the existing 72-inch storm sewer is not low enough to drain the low point of the converted freeway lanes. Consequently, a new gravity storm sewer system will be required to drain the 25-acre depressed freeway portion of US 151. Based on preliminary calculations, at its largest point, a 60-inch-diameter storm sewer pipe would be required to convey the peak runoff discharge for a 100-year storm event. Note that because of the depth of the potential storm sewer and natural topography, it is not feasible to construct the new storm sewer system via open trenching. A trenchless technology such as microtunneling will need to be implemented. A possible alignment for the

4,300-lineal-foot tunneled storm sewer would generally be from the low point of the freeway to the potential detention basin west of Dunn's Marsh (see Figure 13.06-2). The approximate cost of the trenchless installation of the storm sewer is approximately $3,700,000. Note that as part of the Stage 1 improvements, a wet detention basin with approximately 4.5 acre-feet of detention volume was recommended. To account for the additional 3.0 acres of impervious surface for Stage 3, we have estimated that approximately 1.0 acre-feet of additional storage volume would need to be provided in Dunn's Marsh. This could be done by enlarging the Stage 1 wet detention pond to the west.

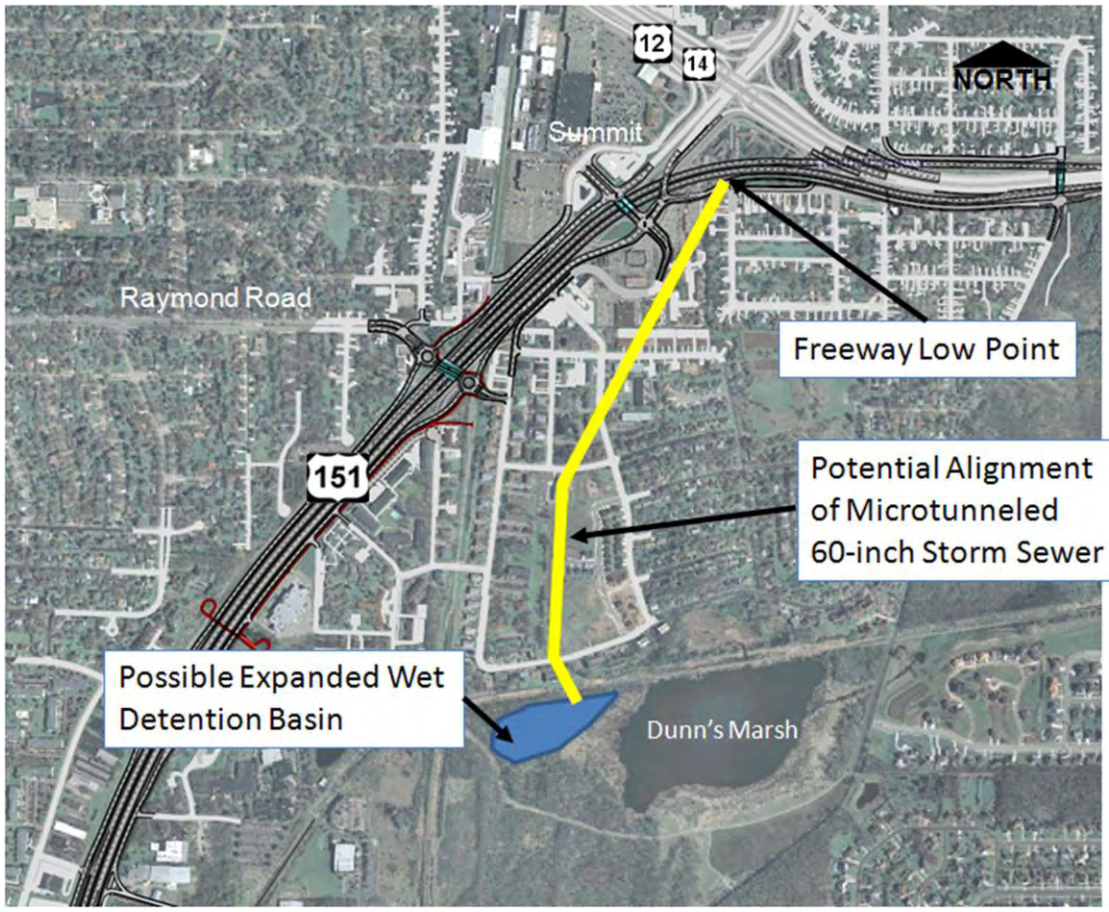


Figure 13.06-2 Stage 3: Alignment of Microtunneled Storm Sewer

Roadway improvements occurring between the Westchester Road cul-de-sac, located west of Verona Road, and County PD are within Watershed Subbasin NS01 (see Figure 13.02-1) and will result in approximately 19.3 acres of land disturbance. Stormwater runoff from this area is directed to an existing riprap ditch that is located adjacent to the Capital City Bike Trail (see Figure 13.06-3). The slope of the existing ditch is moderately steep and erosive and has experienced frequent washouts in the past. Additional measures may need to be incorporated to adequately stabilize the channel that may include the placement of very large riprap (2- to 4-foot-diameter boulders, gabion mattresses, or cabled cellular blocks). The existing riprapped channel outlets into the westerly Arrowhead Pond, a wet detention facility that has an approximate surface area of 1.5 acres. To account for higher peak runoff discharges,

increases in runoff volume, and higher TSS loadings, it is suggested that opportunities be evaluated to rehabilitate and/or enlarge the existing pond. If sufficient detention volume to account for a 100-year event is provided, we have estimated that approximately 1.7 acre-feet of storage volume would need to be added. The existing pond is owned and maintained by the City of Fitchburg, so coordination with City of Fitchburg engineering staff will be needed.

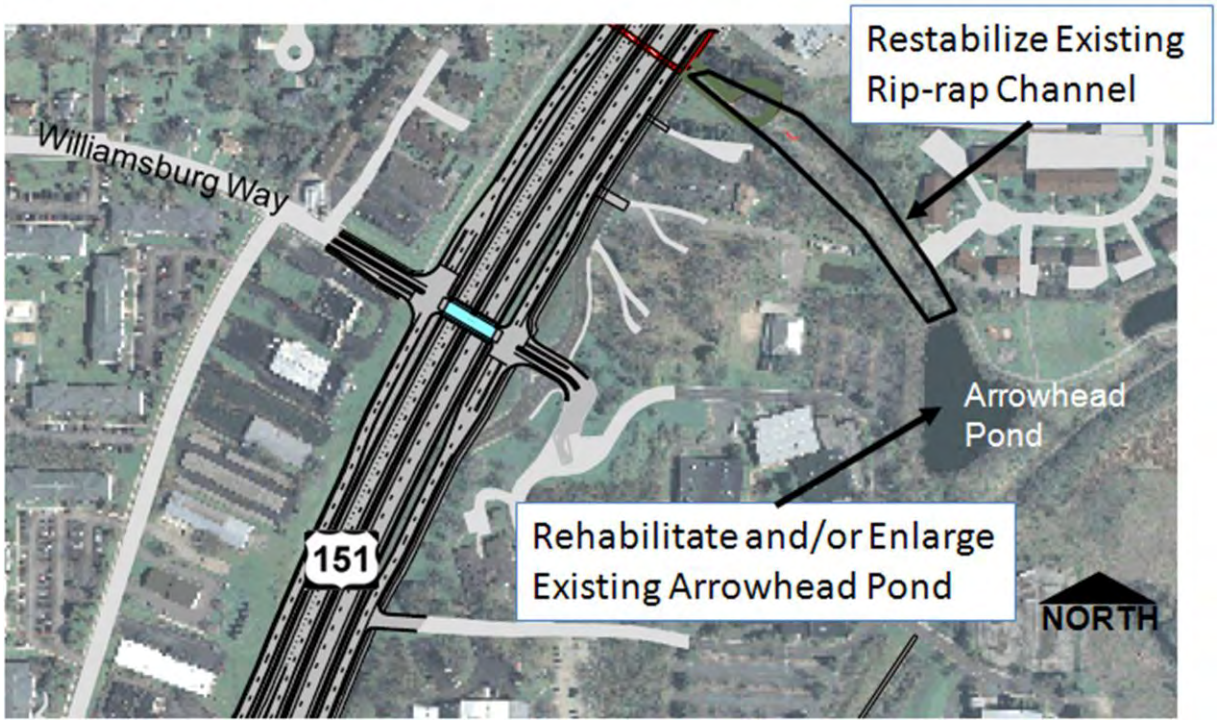


Figure 13.06-3 Stage 3: Potential Improvements to Existing Riprap Channel and Arrowhead Pond

13.07 OVERALL STORMWATER MANAGEMENT STRATEGY

Current WisDOT guidelines for soil erosion control measures and stormwater runoff and Wis. Admn Code Trans 401 standards for postconstruction stormwater runoff measures will be incorporated into the stormwater management strategy. Additionally, coordination with the City of Madison, City of Fitchburg, and Dane County for stormwater management and soil erosion control will occur.

The Preferred Alternative of the US 18/151 (Verona Road) project consists of Stages 1, 2, and 3. The stormwater impacts from these stages including basin ID and increased peak discharges are summarized in Tables 13.04-1, 13.05-1, and 13.06-1. The stormwater strategy for the Preferred Alternative would include implementation of permanent BMP that include either new, enlarged, or retrofitted wet detention basins that may provide runoff treatment prior to discharge to the surrounding waters or wetlands. BMP including bioretention basins or bioswales would be designed, installed, and maintained to infiltrate runoff to the MEP. The receiving ditch located immediately adjacent to the Capital City Bike Path is very steep and has experienced significant erosion and washouts in the past. Stabilization and energy dissipation measures may need to be incorporated to mitigate further negative impacts associated with increased runoff volumes and rates.

10' x 11' - 8" CONCRETE PAD.
SEE DETAIL SHEET 205
FOR KIOSK DETAILS

SPLITTER ISLAND
HIGH FRICTION COLORED SURFACE SURROUNDED BY
PAVEMENT MARKING EPOXY 4-INCH YELLOW.
SEE SHEET 208 FOR DETAILS

12-INCH REJECTING CONCRETE BAND
WITH PRAIRIE PLANTING INFIELD
SEE SHEET 208 FOR DETAILS

EXISTING PAVEMENT REMOVAL (TYP.)

SOUTHWEST PATH CONNECTION

SOUTHWEST PATH OVERPASS

21" CMP APRON ENDWALL ST4
STA = 88+82.34 @ 57.68' LT
I.E. = 958.18 (21" S)

29 L.F. - 21" CMP @ 8.08%

EXISTING CULVERT
TO BE REMOVED

SAWCUT EXISTING PAVEMENT

EXTEND 21" CMP 7 LF AND
MAKE BLIND CONNECTION

R/W

CANNONBALL PATH

90+00

21" CMP APRON ENDWALL ST3
STA = 88+71.28 @ 31.45' LT
I.E. = 960.49 (21" N)

CAPITAL CITY TRAIL

54" HERCP APRON ENDWALL ST1
STA = 88+71.31 @ 9.36' LT
I.E. = 957.83 (54" SE)

EDGE OF PAVEMENT (TYP.)

GRADING LIMITS (TYP.)

REMOVE ABUTMENTS AND PILINGS
TO A DEPTH OF 3' BELOW GRADE
MINIMUM.

89+00

SEE SHEET 207 FOR TRESTLE
INTERSECTION SIGNAGE PLAN (TYP.)

SAWCUT EXISTING PAVEMENT

25 L.F. - 43" x 68" HERCP @ -2.07%

54" HERCP APRON ENDWALL ST2
STA = 88+87.09 @ 9.59' RT
I.E. = 957.32 (54" NW)

88+00

MILITARY RIDGE PATH

WETLANDS (TYP.)

R/W

BADGER STATE TRAIL OVERPASS

WETLANDS (TYP.)

CAPITAL CITY TRAIL

0 5 10 20

PROJECT NO.: 07729018	SCALE: AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE: 07/31/2012	DRAWN BY: JTB	----	----	----	
CHECKED BY: KCL					

PLOT DATE: 1/22/14, P:\7700s\7720s\7729\07729018\CADD\Construction Documents\Intersections\Plan2.dwg

MSA PROFESSIONAL SERVICES

THE CITY OF Fitchburg PUBLIC WORKS

ID 5849-00-08 - TRESTLE

CANNONBALL PATH
CITY OF FITCHBURG
DANE COUNTY, WISCONSIN

FILE NO.
07729018

SHEET
603