

BID OF _____

2023

PROPOSAL, CONTRACT, BOND AND SPECIFICATIONS

FOR

**CIPP WATER MAIN REHAB 2023
FISH HATCHERY ROAD/LAKE MENDOTA DRIVE**

CONTRACT NO. 9319

PROJECT NO. 14643 & 14659

IN

MADISON, DANE COUNTY, WISCONSIN

AWARDED BY THE COMMON COUNCIL
MADISON, WISCONSIN ON _____

CITY ENGINEERING DIVISION
1600 EMIL STREET
MADISON, WISCONSIN 53713

<https://bidexpress.com/login>

**CIPP WATER MAIN REHAB 2023 - FISH HATCHERY ROAD/LAKE MENDOTA
DRIVE
CONTRACT NO. 9319**

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This Proposal, and Agreement have
been prepared by:

**MADISON WATER UTILITY
CITY OF MADISON
MADISON, DANE COUNTY, WISCONSIN**



05/11/2023

Adam Wiederhoeft, P.E.
Madison Water Utility
Design & Construction Engineer

ARW: rjn

SECTION A: ADVERTISEMENT FOR BIDS AND INSTRUCTIONS TO BIDDERS

REQUEST FOR BID FOR PUBLIC WORKS CONSTRUCTION CITY OF MADISON, WISCONSIN

A BEST VALUE CONTRACTING MUNICIPALITY

PROJECT NAME:	CIPP WATER MAIN REHAB 2023 – FISH HATCHERY ROAD/LAKE MENDOTA DRIVE
CONTRACT NO.:	9319
SBE GOAL	2%
BID BOND	5%
SBE PRE BID MEETING	See Pre Bid Meeting info below
PRE BID SITE MEETING (1:00 P.M.)	May 18, 2023
PREQUALIFICATION APPLICATION DUE (2:00 P.M.)	May 18, 2023
BID SUBMISSION (2:00 P.M.)	May 25, 2023
BID OPEN (2:30 P.M.)	May 25, 2023
PUBLISHED IN WSJ	May 11, 2023 & May 18, 2023

SBE PRE BID MEETING: Small Business Enterprise Pre-Bid Meetings are not being held in person at this time. Contractors can schedule one-on-one phone calls with Tracy Lomax in Affirmative Action to count towards good faith efforts. Tracy can be reached at (608) 267-8634 or by email, tlomax@cityofmadison.com.

PRE BID SITE MEETING: For the Fish Hatchery Road project area, Madison Water Utility will be hosting a pre-bid site meeting to review the site and the associated project challenges, at the date and time listed above. Meet at 1508 W. Badger Rd. **Interested participants must contact the Engineer at least 24-hours prior to the site meeting to confirm their attendance.** Contact:

- Ryan Newman
(608) 261-9640
rnewman@madisonwater.org

PREQUALIFICATION APPLICATION: Forms are available on our website, www.cityofmadison.com/engineering/developers-contractors/contractors/how-to-get-prequalified. If not currently prequalified in the categories listed in Section A, an amendment to your Prequalification will need to be submitted prior to the same due date. Postmark is not applicable.

BIDS TO BE SUBMITTED: by hand to 1600 EMIL ST., MADISON, WI 53713 or online at www.bidexpress.com.

Bids may be submitted on line through Bid Express or in person at 1600 Emil St. The bids will be posted on line after the bid opening. If you have any questions, please call Alane Boutelle at (608) 267-1197, or John Fahrney at (608) 266-9091.

STANDARD SPECIFICATIONS

The City of Madison's Standard Specifications for Public Works Construction - 2023 Edition, as supplemented and amended from time to time, forms a part of these contract documents as if attached hereto.

These standard specifications are available on the City of Madison Public Works website, www.cityofmadison.com/engineering/developers-contractors/standard-specifications.

The Contractor shall review these Specifications prior to preparation of proposals for the work to be done under this contract, with specific attention to Article 102, "BIDDING REQUIREMENTS AND CONDITIONS" and Article 103, "AWARD AND EXECUTION OF THE CONTRACT." For the convenience of the bidder, below are highlights of three subsections of the specifications.

SECTION 102.1: PRE-QUALIFICATION OF BIDDERS

In accordance with Wisconsin State Statutes 66.0901 (2) and (3), all bidders must submit to the Board of Public Works proof of responsibility on forms furnished by the City. The City requires that all bidders be qualified on a biennial basis.

Bidders must present satisfactory evidence that they have been regularly engaged in the type of work specified herein and they are fully prepared with necessary capital, materials, machinery and supervisory personnel to conduct the work to be contracted for to the satisfaction of the City. All bidders must be pre-qualified by the Board of Public Works for the type of construction on which they are bidding prior to the opening of the bid.

In accordance with Section 39.02(9)(a)l. of the General Ordinances, all bidders shall submit in writing to the Affirmative Action Division Manager of the City of Madison, a Certificate of Compliance or an Affirmative Action Plan at the same time or prior to the submission of the proof of responsibility forms.

The bidder shall be disqualified if the bidder fails to or refuses to, prior to opening of the bid, submit a Certificate of compliance, Affirmative Action Plan or Affirmative Action Data Update, as applicable, as defined by Section 39.02 of the General Ordinances (entitled Affirmative Action) and as required by Section 102.11 of the Standard Specifications.

SECTION 102.4 PROPOSAL

No bid will be accepted that does not contain an adequate or reasonable price for each and every item named in the Schedule of Unit Prices.

A lump sum bid for the work in accordance with the plans and specifications is required. The lump sum bid must be the same as the total amounts bid for the various items and it shall be inserted in the space provided.

All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered when the proposal is submitted. The plans, specifications and other documents designated in the proposal form will be considered a part of the proposal whether attached or not.

A proposal submitted by an individual shall be signed by the bidder or by a duly authorized agent. A proposal submitted by a partnership shall be signed by a member/partner or by a duly authorized agent thereof. A proposal submitted by a corporation shall be signed by an authorized officer or duly authorized registered agent of such corporation, and the proposal shall show the name of the State under the laws of which such corporation was chartered. The required signatures shall in all cases appear in the space provided thereof on the proposal.

Each proposal shall be placed, together with the proposal guaranty, in a sealed envelope, so marked as to indicate name of project, the contract number or option to which it applies, and the name and address of the Contractor or submitted electronically through Bid Express (www.bidexpress.com). Proposals will be accepted at the location, the time and the date designated in the advertisement. Proposals received after the time and date designated will be returned to the bidder unopened.

SECTION 102.5: BID DEPOSIT (PROPOSAL GUARANTY)

All bids, sealed or electronic, must be accompanied with a Bid Bond (City of Madison form) equal to at least 5% of the bid or a Certificate of Annual/Biennial Bid Bond or certified check, payable to the City Treasurer. Bid deposit of the successful bidders shall be returned within forty-eight (48) hours following execution of the contract and bond as required.

MINOR DISCREPENCIES

Bidder is responsible for submitting all forms necessary for the City to determine compliance with State and City bidding requirements. Notwithstanding any language to the contrary contained herein, the City may exercise its discretion to allow bidders to correct or supplement submissions after bid opening, if the minor discrepancy, bid irregularity or omission is insignificant and not one related to price, quality, quantity, time of completion or performance of the contract.

Bidders for this Contract(s) must be Pre-Qualified for at least one of the following type(s) of construction denoted by an

Building Demolition

- 101 Asbestos Removal
- 120 House Mover

- 110 Building Demolition

Street, Utility and Site Construction

- 201 Asphalt Paving
- 205 Blasting
- 210 Boring/Pipe Jacking
- 215 Concrete Paving
- 220 Con. Sidewalk/Curb & Gutter/Misc. Flat Work
- 221 Concrete Bases and Other Concrete Work
- 222 Concrete Removal
- 225 Dredging
- 230 Fencing
- 235 Fiber Optic Cable/Conduit Installation
- 240 Grading and Earthwork
- 241 Horizontal Saw Cutting of Sidewalk
- 242 Hydro Excavating
- 243 Infrared Seamless Patching
- 245 Landscaping, Maintenance
- 246 Ecological Restoration
- 250 Landscaping, Site and Street
- 251 Parking Ramp Maintenance
- 252 Pavement Marking
- 255 Pavement Sealcoating and Crack Sealing
- 260 Petroleum Above/Below Ground Storage Tank Removal/Installation
- 262 Playground Installer

- 265 Retaining Walls, Precast Modular Units
- 270 Retaining Walls, Reinforced Concrete
- 275 Sanitary, Storm Sewer and Water Main Construction
- 276 Sawcutting
- 280 Sewer Lateral Drain Cleaning/Internal TV Insp.
- 285 Sewer Lining
- 290 Sewer Pipe Bursting
- 295 Soil Borings
- 300 Soil Nailing
- 305 Storm & Sanitary Sewer Laterals & Water Svc.
- 310 Street Construction
- 315 Street Lighting
- 318 Tennis Court Resurfacing
- 320 Traffic Signals
- 325 Traffic Signing & Marking
- 332 Tree pruning/removal
- 333 Tree, pesticide treatment of
- 335 Trucking
- 340 Utility Transmission Lines including Natural Gas, Electrical & Communications
- 399 Other WATER MAIN LINING

Bridge Construction

- 501 Bridge Construction and/or Repair

Building Construction

- 401 Floor Covering (including carpet, ceramic tile installation, rubber, VCT)
- 402 Building Automation Systems
- 403 Concrete
- 404 Doors and Windows
- 405 Electrical - Power, Lighting & Communications
- 410 Elevator - Lifts
- 412 Fire Suppression
- 413 Furnishings - Furniture and Window Treatments
- 415 General Building Construction, Equal or Less than \$250,000
- 420 General Building Construction, \$250,000 to \$1,500,000
- 425 General Building Construction, Over \$1,500,000
- 428 Glass and/or Glazing
- 429 Hazardous Material Removal
- 430 Heating, Ventilating and Air Conditioning (HVAC)
- 433 Insulation - Thermal
- 435 Masonry/Tuck pointing

- 437 Metals
- 440 Painting and Wallcovering
- 445 Plumbing
- 450 Pump Repair
- 455 Pump Systems
- 460 Roofing and Moisture Protection
- 464 Tower Crane Operator
- 461 Solar Photovoltaic/Hot Water Systems
- 465 Soil/Groundwater Remediation
- 466 Warning Sirens
- 470 Water Supply Elevated Tanks
- 475 Water Supply Wells
- 480 Wood, Plastics & Composites - Structural & Architectural
- 499 Other _____

State of Wisconsin Certifications

- 1 Class 5 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for quarries, open pits and road cuts.
- 2 Class 6 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for trenches, site excavations, basements, underwater demolition, underground excavations, or structures 15 feet or less in height.
- 3 Class 7 Blaster - Blasting Operations and Activities for structures greater than 15 ' in height, bridges, towers, and any of the objects or purposes listed as "Class 5 Blaster or Class 6 Blaster".
- 4 Petroleum Above/Below Ground Storage Tank Removal and Installation (Attach copies of State Certifications.)
- 5 Hazardous Material Removal (Contractor to be certified for asbestos and lead abatement per the Wisconsin Department of Health Services, Asbestos and Lead Section (A&LS).) See the following link for application: www.dhs.wisconsin.gov/Asbestos/Cert. State of Wisconsin Performance of Asbestos Abatement Certificate must be attached.
- 6 Certification number as a Certified Arborist or Certified Tree Worker as administered by the International Society of Arboriculture
- 7 Pesticide application (Certification for Commercial Applicator For Hire with the certification in the category of turf and landscape (3.0) and possess a current license issued by the DATCP)
- 8 State of Wisconsin Master Plumbers License.

SECTION B: PROPOSAL

Please refer to the
Bid Express Website
at <https://bidexpress.com>
look up contract number
and go to
Section B: Proposal Page

You can access all City of Madison bid solicitations for FREE at www.bidexpress.com

Click on the “Register for Free” button and follow the instructions to register your company and yourself. You will be asked for a payment subscription preference, since you may wish to bid online someday. Simply choose the method to pay on a ‘per bid’ basis. This requires no payment until / unless you actually bid online. You can also choose the monthly subscription plan at this time. You will, however, be asked to provide payment information. Remember, you can change your preference at anytime. You will then be able to complete your free registration and have full access to the site. Your free access does not require completion of the ‘Digital ID’ process, so you will have instant access for viewing and downloading. To be prepared in case you ever do wish to bid online, you may wish to establish your digital ID also, since you cannot bid without a Digital ID.

If you have any problems with the free registration process, you can call the bidexpress help team, toll free at 1-888-352-2439 (option 1, option1).

SECTION C: SMALL BUSINESS ENTERPRISE

Instructions to Bidders City of Madison SBE Program Information

2 Small Business Enterprise (SBE) Program Information

2.1 Policy and Goal

The City of Madison reaffirms its policy of nondiscrimination in the conduct of City business by maintaining a procurement process which remains open to all who have the potential and ability to sell goods and services to the City. It is the policy of the City of Madison to allow Small Business Enterprises (SBE) maximum feasible opportunity to participate in City of Madison contracting. The bidder acknowledges that its bid has been submitted in accordance with the SBE program and is for the public's protection and welfare.

Please refer to the "ADVERTISEMENT FOR BIDS" for the goal for the utilization of SBEs on this project. SBEs may participate as subcontractors, vendors and/or suppliers, which provide a commercially useful function. The dollar value for SBE suppliers or 'materials only' vendors shall be discounted to 60% for purposes of meeting SBE goals.

A bidder which achieves or exceeds the SBE goal will be in compliance with the SBE requirements of this project. In the event that the bidder is unable to achieve the SBE goal, the bidder must demonstrate that a good faith effort to do so was made. Failure to either achieve the goal or demonstrate a good faith effort to do so will be grounds for the bidder being deemed a non-responsible contractor ineligible for award of this contract.

A bidder may count towards its attainment of the SBE goal only those expenditures to SBEs that perform a commercially useful function. For purposes of evaluating a bidder's responsiveness to the attainment of the SBE goal, the contract participation by an SBE is based on the percentage of the total base bid proposed by the Contractor. The total base bid price is inclusive of all addenda.

Work performed by an SBE firm in a particular transaction can be counted toward the goal only if it involves a commercially useful function. That is, in light of industry practices and other relevant considerations, does the SBE firm have a necessary and useful role in the transaction, of a kind for which there is a market outside the context of the SBE Program, or is the firm's role a superfluous step added in an attempt to obtain credit towards goals? If, in the judgment of the Affirmative Action Division, the SBE firm will not perform a commercially useful function in the transaction, no credit towards goals will be awarded.

The question of whether a firm is performing a commercially useful function is completely separate from the question of whether the firm is an eligible SBE. A firm is eligible if it meets the definitional criteria and ownership and control requirements, as set forth in the City of Madison's SBE Program.

If the City of Madison determines that the SBE firm is performing a commercially useful function, then the City of Madison must then decide what that function is. If the commercially useful function is that of an SBE vendor / supplier that regularly transacts business with the respective product, then the City of Madison will count 60% of the value of the product supplied toward SBE goals.

To be counted, the SBE vendor / supplier must be engaged in selling the product in question to the public. This is important in distinguishing an SBE vendor / supplier, which has a regular trade with a variety of customers, from a firm which performs supplier-like functions on an ad hoc basis or for only one or two contractors with whom it has a special relationship.

A supplier of bulk goods may qualify as an eligible SBE vendor / supplier if it either maintains an inventory or owns or operates distribution equipment. With respect to the distribution equipment; e.g., a fleet of trucks, the term "operates" is intended to cover a situation in which the supplier leases the equipment on a regular basis for its entire business. It is not intended to cover a situation in which the firm simply provides drivers for trucks owned or leased by another party; e.g., a prime contractor, or leases such a party's trucks on an ad hoc basis for a specific job.

If the commercially useful function being performed is not that of a qualified SBE vendor / supplier, but rather that of delivery of products, obtaining bonding or insurance, procurement of personnel, acting as a broker or manufacturer's representative in the procurement of supplies, facilities, or materials, etc., only the fees or commissions will apply towards the goal.

For example, a business that simply transfers title of a product from manufacturer to ultimate purchaser; e. g., a sales representative who re-invoices a steel product from the steel company to the Contractor, or a firm that puts a product into a container for delivery would not be considered a qualified SBE vendor / supplier. The Contractor would not receive credit based on a percentage of the cost of the product for working with such firms.

Concerning the use of services that help the Contractor obtain needed supplies, personnel, materials or equipment to perform a contract: only the fee received by the service provider will be counted toward the goal. For example, use of a SBE sales representative or distributor for a steel company, if performing a commercially useful function at all, would entitle the Contractor receiving the steel to count only the fee paid to the representative or distributor toward the goal. This provision would also govern fees for professional and other services obtained expressly and solely to perform work relating to a specific contract.

Concerning transportation or delivery services: if an SBE trucking company picks up a product from a manufacturer or a qualified vendor / supplier and delivers the product to the Contractor, the commercially useful function it is performing is not that of a supplier, but simply that of a transporter of goods. Unless the trucking company is itself the manufacturer or a qualified vendor / supplier in the product, credit cannot be given based on a percentage of the cost of the product. Rather, credit would be allowed for the cost of the transportation service.

The City is aware that the rule's language does not explicitly mention every kind of business that may contribute work on this project. In administering these programs, the City would, on a case-by-case basis, determine the appropriate counting formula to apply in a particular situation.

2.2 Contract Compliance

Questions concerning the SBE Program shall be directed to the Contract Compliance Officer of the City of Madison Department of Civil Rights, Affirmative Action Division, 210 Martin Luther King, Jr. Blvd., Room 523, Madison, WI 53703; telephone (608) 266-4910.

2.3 Certification of SBE by City of Madison

The Affirmative Action Division maintains a directory of SBEs which are currently certified as such by the City of Madison. Contact the Contract Compliance Officer as indicated in Section 2.2 to receive a copy of the SBE Directory or you may access the SBE Directory online at www.cityofmadison.com/civil-rights/contract-compliance/targeted-business-enterprise-programs/targeted-business-enterprise.

All contractors, subcontractors, vendors and suppliers seeking SBE status must complete and submit the **Targeted Business Certification Application** to the City of Madison Affirmative Action Division by the time and date established for receipt of bids. A copy of the Targeted Business Certification Application is available by contacting the Contract Compliance Officer at the address and telephone indicated in Section 2.2 or you may access the Targeted Business Certification Application online at www.cityofmadison.com/civil-rights/contract-compliance/targeted-business-enterprise-programs/targeted-business-enterprise. Submittal of the Targeted Business Certification Application by the time specified does not guarantee that the applicant will be certified as a SBE eligible to be utilized towards meeting the SBE goal for this project.

2.4 Small Business Enterprise Compliance Report

2.4.1 Good Faith Efforts

Bidders shall take all necessary affirmative steps to assure that SBEs are utilized when possible and that the established SBE goal for this project is achieved. A contractor who self performs a portion of the work, and is pre-qualified to perform that category of work, may subcontract that portion of the work, but shall not be required to do so. When a bidder is unable to achieve the established SBE goal, the bidder must demonstrate that a good faith effort to do so was made. Such a good faith effort should include the following:

- 2.4.1.1 Attendance at the pre-bid meeting.
- 2.4.1.2 Using the City of Madison's directory of certified SBEs to identify SBEs from which to solicit bids.
- 2.4.1.3 Assuring that SBEs are solicited whenever they are potential sources.
- 2.4.1.4 Referring prospective SBEs to the City of Madison Affirmative Action Division for certification.
- 2.4.1.5 Dividing total project requirements into smaller tasks and/or quantities, where economically feasible, to permit maximum feasible SBE participation.
- 2.4.1.6 Establishing delivery schedules, where requirements permit, which will encourage participation by SBEs.
- 2.4.1.7 Providing SBEs with specific information regarding the work to be performed.
- 2.4.1.8 Contacting SBEs in advance of the deadline to allow such businesses sufficient time to prepare a bid.
- 2.4.1.9 Utilizing the bid of a qualified and competent SBE when the bid of such a business is deemed reasonable (i.e. 5% above the lowest bidder), although not necessarily low.
- 2.4.1.10 Contacting SBEs which submit a bid, to inquire about the details of the bid and confirm that the scope of the work was interpreted as intended.
- 2.4.1.11 Completion of Cover Page (page C-6), Summary Sheet (page C-7) and SBE Contact Reports (pages C-8 and C9) if applicable.

2.4.2 Reporting SBE Utilization and Good Faith Efforts

The Small Business Enterprise Compliance Report is to be submitted by the bidder with the bid: This report is due by the specified bid closing time and date. Bids submitted without a completed SBE Compliance Report as outlined below may be deemed non-responsible and the bidder ineligible for award of this contract. Notwithstanding any language to the contrary contained herein, the City may exercise its discretion to allow bidders to correct or supplement submissions after bid opening, if the minor discrepancy, bid irregularity or omission is insignificant and not one related to price, quality, quantity, time of completion, performance of the contract, or percentage of SBE utilization.

2.4.2.1 If the Bidder meets or exceeds the goal established for SBE utilization, the Small Business Enterprise Compliance Report shall consist of the following:

2.4.2.1.1 **Cover Page**, Page C-6; and

2.4.2.1.2 **Summary Sheet**, C-7.

2.4.2.2 If the bidder does not meet the goal established for SBE utilization, the Small Business Enterprise Compliance Report shall consist of the following:

2.4.2.2.1 **Cover Page**, Page C-6;

2.4.2.2.2 **Summary Sheet**, C-7; and

2.4.2.2.3 **SBE Contact Report**, C-8 and C-9. (A separate Contact Report must be completed for each applicable SBE which is not utilized.)

2.5 Appeal Procedure

A bidder which does not achieve the established goal and is found non-responsible for failure to demonstrate a good faith effort to achieve such goal and subsequently denied eligibility for award of contract may appeal that decision to the Small Business Enterprises Appeals Committee. All appeals shall be made in writing, and shall be delivered to and received by the City Engineer no later than 4:30 PM on the third business day following the bidder's receipt of the written notification of ineligibility by the Affirmative Action Division Manager. Postmark not acceptable. The notice of appeal shall state the basis for the appeal of the decision of the Affirmative Action Division Manager. The Appeal shall take place in accordance with Madison General Ordinance 33.54.

2.6 SBE Requirements After Award of the Contract

The successful bidder shall identify SBE subcontractors, suppliers and vendors on the subcontractor list in accordance with the specifications. The Contractor shall submit a detailed explanation of any variances between the listing of SBE subcontractors, vendors and/or suppliers on the subcontractor list and the Contractor's SBE Compliance Report for SBE participation.

No change in SBE subcontractors, vendors and/or suppliers from those SBEs indicated in the SBE Compliance Report will be allowed without prior approval from the Engineer and the Affirmative Action Division. The contractor shall submit in writing to the City of Madison Affirmative Action Division a request to change any SBE citing specific reasons which necessitate such a change. The Affirmative Action Division will use a general test of reasonableness in approving or rejecting the contractor's request for change. If the request is approved, the Contractor will make every effort to utilize another SBE if available.

The City will monitor the project to ensure that the actual percentage commitment to SBE firms is carried out.

2.7 SBE Definition and Eligibility Guidelines

A Small Business Enterprise is a business concern awarded certification by the City of Madison. For the purposes of this program a Small Business Enterprise is defined as:

- A. An independent business operated under a single management. The business may not be a subsidiary of any other business and the stock or ownership may not be held by any individual or any business operating in the same or a similar field. In determining whether an entity qualifies as a SBE, the City shall consider all factors relevant to being an independent business including, but not limited to, the date the business was established, adequacy of its resources for the work in which it proposes to involve itself, the degree to which financial, equipment leasing and other relationships exist with other ineligible firms in the same or similar lines of work. SBE owner(s) shall enjoy the customary incidents of ownership and shall share in the risks and profits commensurate with their enjoyment interests, as demonstrated by an examination of the substance rather than form or arrangements that may be reflected in its ownership documents.
- B. A business that has averaged no more than \$4.0 million in annual gross receipts over the prior three year period and the principal owner(s) do not have a personal net worth in excess of \$1.32 million.

Firm and/or individuals that submit fraudulent documents/testimony may be barred from doing business with the City and/or forfeit existing contracts.

SBE certification is valid for one (1) year unless revoked.

**CIPP WATER MAIN REHAB 2023 - FISH HATCHERY ROAD/LAKE MENDOTA
DRIVE
CONTRACT NO. 9319**

Small Business Enterprise Compliance Report

**This information may be submitted electronically through
Bid Express or submitted with bid in sealed envelope.**

Cover Sheet

Prime Bidder Information

Company: _____

Address: _____

Telephone Number: _____ Fax Number: _____

Contact Person/Title: _____

Prime Bidder Certification

I, _____, _____ of
Name Title

_____ certify that the information
Company

contained in this SBE Compliance Report is true and correct to the best of my knowledge and belief.

Witness' Signature

Bidder's Signature

Date

**CIPP WATER MAIN REHAB 2023 - FISH HATCHERY ROAD/LAKE MENDOTA
DRIVE
CONTRACT NO. 9319**

Small Business Enterprise Compliance Report

Summary Sheet

SBE Subcontractors Who Are NOT Suppliers

Name(s) of SBEs Utilized	Type of Work	% of Total Bid Amount
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
Subtotal SBE who are NOT suppliers:		_____ %

SBE Subcontractors Who Are Suppliers

Name(s) of SBEs Utilized	Type of Work	% of Total Bid Amount
		%
		%
		%
		%
		%
		%
		%
		%
		%
Subtotal Contractors who are suppliers:	_____ % x 0.6 = _____	% (discounted to 60%)

Total Percentage of SBE Utilization: _____%

**CIPP WATER MAIN REHAB 2023 - FISH HATCHERY ROAD/LAKE MENDOTA
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Small Business Enterprise Compliance Report

SBE Contact Report

Submit separate copy of this form for each SBE which you are not able to utilize towards meeting the SBE goal for this project. Attach separate sheets if necessary.

SBE Information

Company: _____

Address: _____

Telephone Number: _____

Contact Person/Title: _____

1. Outline below all efforts to solicit a bid from the above SBE. Include date, means of contact, who from your company made this contact and the result.

2. Describe the information provided to the aforementioned SBE regarding the scope of work for which he/she was to provide a bid.

Is this the same scope of work on which the subcontractor you intend to utilize based his/her bid?

Yes No

3. Did this SBE submit a bid? Yes No

4. Is the General Contractor pre-qualified to self-perform this category of work?

Yes No

5. If you responded "Yes" to Question 3, please check the items below which apply and provide the requested detail. If you responded "No" to Question 3, please skip ahead to item 6 below.

- The SBE listed above is unavailable for work on this project for the following reasons. Provide specific detail for this conclusion.

- The SBE listed above is unqualified for work on this project. Provide specific details for this conclusion.

- The SBE listed above provided a price that was unreasonable (i.e. more than 5% above the lowest bidder). Provide specific detail for this conclusion including the SBE's price and the price of the subcontractor you intend to utilize.

- A contract with the SBE listed above may constitute a breach of the bidder's collective bargaining agreements. Provide specific detail for this conclusion including, but not limited to, correspondence from the SBE indicating it will not sign a project labor agreement and/or correspondence from the applicable trade union indicating a project labor agreement will not be allowed at the time of project bidding.

- Other; please specify reason(s) other than listed above which made it impossible for you to utilize this SBE on this project.

6. Describe any other good faith efforts:

SECTION D: SPECIAL PROVISIONS

CIPP WATER MAIN REHAB 2023 - FISH HATCHERY ROAD/LAKE MENDOTA DRIVE CONTRACT NO. 9319

It is the intent of these Special Provisions to set forth the final contractual intent as to the matter involved and shall prevail over the Standard Specifications and plans whenever in conflict therewith. In order that comparisons between the Special Provisions can be readily made, the numbering system for the Special Provisions is equivalent to that of the Specifications.

Whenever in these Specifications the term "Standard Specifications" appears, it shall be taken to refer to the City of Madison Standard Specifications for Public Works Construction and Supplements thereto.

There are two distinct projects areas within this contract; everything stated under these special provisions applies to both projects unless specified as otherwise.

SECTION 102.11: BEST VALUE CONTRACTING

This Contract shall be considered a Best Value Contract if the Contractor's bid is equal to or greater than \$74,000 for a single trade contract; or equal to or greater than \$360,500 for a multi-trade contract pursuant to MGO 33.07(7).

ARTICLE 104: SCOPE OF WORK

The rehabilitation of these water mains is to be completed by lining the existing water mains with a Class IV structural cured-in-place pipe (CIPP), certified for the conveyance of drinking water. Temporary water service is to be provided to all affected properties during the rehabilitation of these water mains.

The work in this Contract will include, but is not limited to, the following:

- Mobilization, shoring and maintaining water main access pits.
- Installing, disinfecting, protecting and maintaining temporary water service.
- Railroad Insurance
- Traffic control and work site protection.
- Cleaning, televising and recording the existing and new water mains.
- Furnishing and installing a structural CIPP water main liner.
- Internally reinstating service laterals.
- Field and laboratory documentation/testing.
- Site restoration (NOT to include pavement restoration).
- Delivering submittals and obtaining approvals (both Madison Water Utility and WI-Dept. of Natural Resources) as specified in these Contract documents.

View the site prior to bidding to become familiar with the existing conditions. It will be the responsibility of the Contractor to work with the utilities located in the right of way to resolve conflicts during the construction process.

LAKE MENDOTA DRIVE

This water main rehabilitation project consists of coordination with Madison Water Utility for the work plan and execution of rehabilitating approximately 1,500 linear feet of 8-inch and 250 linear feet of 12-inch cast-iron water main in the City of Madison, WI. The project consists of rehabilitating water main and reinstating service laterals on the following streets:

- Lake Mendota Drive (Spring Harbor Park to Epworth Ct)
- Approximately 32 services within the above limits; records indicate most are ¾-inch laterals and 1-inch, however there may be 1½-inch, and 2-inch laterals as well and they are noted on the plan

set.

FISH HATCHERY ROAD

This water main rehabilitation project consists of coordination with Madison Water Utility for the work plan and execution of rehabilitating approximately 2,300 linear feet 12-inch PVC water main underneath the cannonball bike path located north of the West Beltline Frontage Road. The project consists of rehabilitating water main and reinstating service laterals in the following locations:

- Cannonball Bike Path (Fish Hatchery Rd to W Beltline Frontage Rd)
- One service within the above limits; this service will be a minimum of 6" and connected to the service lateral that goes to the Waste Management property located at 2200 Fish Hatchery Road.

ARTICLE 105.12: COOPERATION BY THE CONTRACTOR

As defined in these Special Provisions, Madison Water Utility is providing portions of work and select materials related to the scope of this Contract (i.e. excavation, backfilling, pavement restoration, permanent water main reconnections, water sampling/testing etc.). Coordinate with Madison Water Utility to establish mutually acceptable scheduling and work procedures.

Per Madison General Ordinance Section 13.205, make no unauthorized alterations to the water system. Only when properly authorized to proceed may any work on the water system occur. Provide the Engineer notice of at least two working days prior to beginning any work affecting the water system. Additionally, any work related to emergency repairs and/or Contractor proposed water system or construction plan alterations, shall be done in accordance with Section 703.3 'Repairs and Alterations' of the Standard Specifications.

Use care around existing trees, plantings, fences, walls, steps and driveways that are not indicated on the plans to be removed. Damage to these items during construction shall be repaired or replaced at no cost to the City. No trees shall be cut without approval of the Engineer and City Forester; the abutting property owners shall be notified in accordance with the City's Administrative Procedure Memorandum No. 6-2.

Maintain access for mail delivery and garbage and/or recycling pickup for all properties in the project area. Garbage and/or recycling collection will be every Friday in this area.

SECTION 107.7: MAINTENANCE OF TRAFFIC

Signs indicating construction nearby shall be placed in visible locations. The Contractor shall ensure that there is a minimum 10ft path available for access by bicycles, vehicles, and pedestrians. All signing and barricading shall conform to Part VI of the Federal Highways Administrations "Manual on Uniform Traffic Control Devices" (MUTCD), the State of Wisconsin Standard Facilities Development Manual (including Chapter 16 - Standard Detail Drawings) and the City of Madison Standards for sidewalk and bikeway closures.

LAKE MENDOTA DRIVE

Access to property entrance driveways shall be maintained whenever possible. Any closure of driveways shall require notice to the affected property owners at least three (3) working days prior to this occurring.

Install type A low intensity flashing lights on all barricades used in the project per State of Wisconsin S.D.D. 15C2-4B. Install type C low intensity steady-burn lights on all barrels used in tapers as shown on the traffic control plan.

Closing the project area to through traffic will be permitted.

Maintain emergency vehicle access at all times.

Do not store construction equipment and materials within street right-of-way that is outside the project limits.

FISH HATCHERY ROAD

Maintain two-way bike path traffic at all times through the project limits. Do not attempt to close the path. Maintain a minimum 5' path around each work location. The 5' path may be on rubber mats off the existing pavement.

Place "BIKE PATH WORK AHEAD" and "NARROW PATH AHEAD" warning signs in advance of each work location with an approximate sign spacing of 100'. Place "TWO-WAY TRAFFIC" warning signs at each location the path narrows.

Submit a Traffic Control Plan, including all necessary phases, to Tom Mohr, tmohr@cityofmadison.com, prior to the pre-construction meeting. The Traffic Control Plan shall address all requirements of this section of the Special Provisions. The Contractor shall not start work on this project until the Traffic Engineering Division has approved a traffic control plan and traffic control devices have been installed, in accordance with the approved plan. Failure of the Contractor to obtain approval of a Traffic Control Plan, as specified above, may prevent the Contractor from starting work and shall be considered a delay of the project, caused by the Contractor.

Alter traffic control from the provided Traffic Control Plan as conditions change in the field or as unexpected conditions occur. This includes relocating existing traffic control or providing additional traffic control. Install and maintain any necessary modifications or additions to the traffic control, as directed by the City Traffic Engineer, at no cost to the City. Conform all signing and barricading to the Federal Highways Administrations "Manual on Uniform Traffic Control Devices" (MUTCD).

Measure traffic control as a lump sum. Payment for traffic control is full compensation for constructing, assembling, hauling, erecting, re-erecting, maintaining, restoring, and removing non-permanent traffic signs, drums, barricades, and similar control devices, for providing, placing, and maintaining work zone. Maintaining shall include replacing damaged or stolen traffic control devices. Measure temporary pavement markings, electronic arrow boards and changeable message signs as separate bid items.

Backfill, plate or protect work areas with traffic control devices during non-working hours. If steel plates are used, notify the City of Madison Streets Division, 266-4681, one working day prior to placement of the plates.

Contact Tom Mohr, Traffic Engineering Division, with any questions concerning traffic control specifications.

- Tom Mohr
(608) 267-8725
tmohr@cityofmadison.com

ARTICLE 107.11: USE OF CITY WATER

Any Madison Water Utility charges associated with the installation, use and removal of the reduced pressure zone (RPZ) valve and water usage will be waived for all work included in this contract. Any use of City of Madison water will still require request and notification procedures indicated in the City of Madison Construction Specifications.

Properly dispose of any highly-chlorinated water in accordance to Section 703 of the Standard Specifications. Contact the Water Utility Engineering Department at (608) 266-4646 to coordinate the installation of the RPZ valves. Contractor-furnished RPZ valves are not to be connected to City hydrants unless authorized in writing by the Engineer. Adequately protect and support City RPZ valves at all times; any RPZ valve damage resulting from negligence shall be repaired or replaced at no cost to the City.

SECTION 108.2: PERMITS

Section NR811.69 (6), Wisconsin Administrative Code states, "All materials used for the interior

rehabilitation of water mains shall meet ANSI/NSF standards and may not be used until specifically approved by the department.”

This water main rehabilitation project is intended to allow the Wisconsin Department of Natural Resources and the Madison Water Utility to evaluate the performance and potential opportunities of rehabilitating deteriorated water mains in-place through structural CIPP lining technology. As identified above per NR811.69 (6), this project requires consent approval from the Wisconsin Department of Natural Resources (WI-DNR).

In order to obtain consent approval from the department, submit documentation to the WI-DNR that the proposed structural CIPP liner is comparatively similar to an AWWA pressure class 150 pipe rating through pipe design calculations based on at least a 50-year service life at an internal working pressure of 100 psi with a safety factor of 2.5. The submittal must include the pipe design calculations and the basis for the long-term strength value used in the design calculations.

Construction may not begin until the WI-DNR has approved the pressure class submittal, even if all additional submittals have been reviewed and approved by the Engineer. See Section 702.3 of these Special Provisions for more detailed information regarding the requirements of the WI-DNR submittal and Section 701.3 for more detailed information regarding submittals to the Engineer.

It is the responsibility of the Contractor to identify and obtain any other permits needed for construction.

ARTICLE 109.2 PROSECUTION OF WORK

Work shall begin after the pre-construction submittals are approved and the start work letter is received. Submit the proposed construction schedule to the Engineer prior to mobilization.

Work on this contract shall begin on or after July 10, 2023.

All work at the Lake Mendota Drive site shall be completed no later than September 1, 2023

All work under this contract shall be completed no later than October 1, 2023.

SECTION 701 PROVISIONS FOR WATER INSTALLATION AND ABANDONMENT

For questions related to this Contract, contact the Project Engineer:

LAKE MENDOTA DRIVE

- Nathan Mendez
Madison Water Utility
(608) 266-4467
nmendez@madisonwater.org

FISH HATCHERY ROAD

- Ryan Newman
Madison Water Utility
(608) 261-9640
newman@madisonwater.org

The CIPP liner system shall consist of either a spin-cast monolithic surfacing system or a resin-impregnated flexible tube system, which when cured, forms a hard, impermeable, corrosion resistant pipe-within-a-pipe. The new CIPP liner shall be designed as a Class IV structural liner, not relying on the remaining strength of the host pipe to withstand long-term external loading and internal pressure per AWWA M-28 and as required in the Contract documents.

As the piping system is intended for the conveyance of potable water, the proposed CIPP liner system must be certified as complying with the requirements of NSF/ANSI Standard 61 and be listed on the NSF Approved Product Listing website:

- <http://www.nsf.org/Certified/PwsComponents>

Failure of the selected CIPP lining system to be satisfactorily installed in the existing water main shall not relieve the responsibility to provide satisfactorily reconstructed water mains. Any cost associated with the removal of the unsatisfactorily installed liner and the subsequent, satisfactory reinstallation of an approved liner shall be borne solely by the Contractor, and no claims shall be made against Madison Water Utility or the City of Madison, WI for such required work.

During the warranty period, any defects that might affect the integrity or strength of the CIPP shall be repaired or replaced at no cost to Madison Water Utility or the City of Madison, and are to be executed in accordance to the manufacturer's recommendations and to the satisfaction of the Engineer.

SECTION 701.1 REFERENCE SPECIFICATIONS AND STANDARDS

The following references apply to CIPP lining work and are to be the latest edition and revision.

American Society for Testing and Materials (ASTM):

- F1216: Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube
- F1743: Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP)
- D2837: Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
- D2992: Obtaining Hydrostatic or Pressure Design Basis for "Fiberglass" (Glass Fiber Reinforced Thermosetting Resin) Pipe and Fittings
- D5813: Cured-In-Place Thermosetting Resin Sewer Piping Systems (Section 6.4)
- D7065: Determination of Nonylphenol, Bisphenol A, p-tert-Octylphenol, Nonylphenol Monoethoxylate and Nonylphenol Diethoxylate in Environmental Waters by Gas Chromatography Mass Spectrometry
- D7574: Determination of Bisphenol A in Environmental Waters by Liquid Chromatography/Tandem Mass Spectrometry

American Water Works Association (AWWA):

- M28: Rehabilitation of Water Mains
- C600: Installation of Ductile-Iron Water Mains and Their Appurtenances
- C602: Cement Mortar Lining of Water Pipelines in Place – 4-in and Larger
- C651: Disinfecting Water Mains

Environmental Protection Agency (EPA):

- Method 524.2: Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry

NSF/American National Standards Institute (ANSI):

- 61: Drinking Water Components

In case of conflicting requirements between the Contract Special Provisions and the referenced specifications and standards, these Special Provisions will govern.

SECTION 701.2 QUALIFICATION REQUIREMENTS FOR CIPP REHABILITATION

Installer:

- The liner installer must be certified or licensed by the liner manufacturer to perform the installation and rehabilitation work. The installer and/or their subcontractor shall have a minimum of three years of active experience in the installation of structural CIPP water main liners in pressure pipe applications and shall have completed at least five projects of similar size as required for this project, unless otherwise authorized by the Engineer in writing.
- The installer shall install the liner in accordance with the liner system manufacturer's

requirements, NSF requirements, and Section 703 of these Special Provisions.

Product:

- The CIPP system to be installed must be certified as complying with the requirements of NSF/ANSI Standard 61 drinking water components.
- The CIPP liner must meet the requirements of AWWA M-28 Liner Classification IV (Structural), capable of withstanding all external loads and internal design pressure for a minimum of 50-years.
- The Class IV structural CIPP liner must demonstrate comparable similarity to AWWA pressure class 150 rated pipe, based on criteria defined by WI-DNR. Liner design requires WI-DNR approval prior to installation (See sections 108.2 and 702.3 of these Special Provisions).
- The product shall meet the material requirements identified in Section 702 of these Special Provisions.

SECTION 701.3 SUBMITTALS

At least 20 working days prior to the planned start of construction, deliver the WI-DNR submittal to the department. It should be considered advantageous to submit the WI-DNR submittal prerequisite as early as possible to minimize risk of construction delay (see section 108.2 and 702.3 of these Special Provisions for instructions).

At least two weeks prior to the planned start of construction, deliver the submittals designated in 701.3 (a) to the Engineer. The Engineer will review the required submittals and respond to the Contractor in writing within two weeks of receipt. Submittals to the Engineer shall be electronic (unless specified otherwise) and delivered to the Project Engineer.

It is the Contractor's sole responsibility to obtain approval for all required submittals identified in this contract; no claim shall be made against the Department of Natural Resources, the Madison Water Utility or the City of Madison if authorization to proceed is not granted due to unsatisfactory submittals.

Construction may not begin until the pre-construction submittal package is accepted in writing by the Engineer and the WI-DNR submittal has been accepted in writing by the WI-DNR. Once authorized to proceed with construction, the submittal requirements identified in Sections 701.3 (b) and 701.3 (c) shall be required in accordance with section 703 – Construction Methods.

SECTION 701.3(A) PRE-CONSTRUCTION SUBMITTAL REQUIREMENTS

CIPP product data:

- WI-DNR Submittal per Section 108.2 and Section 702.3 of these Special Provisions.
- ANSI/NSF Standard 61 certificate for the proposed CIPP liner system and any associated installation products such as liner lubricant (Section 702.1). Include any NSF 61 installation/curing requirements for the proposed CIPP liner system.
- CIPP liner design and thickness calculations prepared and stamped by a Professional Engineer (per design criteria of Section 702.2).
- Manufacturer's technical data and applicable product testing data for the proposed CIPP liner system, including all applicable instructions for installation, handling, storing, and inspecting the product.
- Manufacturer's recommended procedures for future 1-inch to 2-inch service taps and recommended procedures for 4-inch to 8-inch pressure tapping using a Mueller CL-12 Drilling Machine (Section 702.1).
- Documentation of compliance with ASTM F1216 Standards or ASTM F1743 Standards, as applicable.
- Documentation of compliance with AWWA Liner Structural Classification IV - Structural (AWWA M-28: Rehabilitation of Water Mains – Appendix A).
- Documentation of compliance with chemical resistivity requirements of ASTM D5813 Section 6.4, including chemicals commonly used to treat drinking water (Section 702.1).

Quality Assurance Submittals:

- Manufacturer's certification, identifying the Contractor as a licensed installer and list of at least five successfully completed projects of similar scope (Section 701.2).
- Blank copy of field installation log for liner segments identifying all QA/QC verifications, measurements and tolerances which will be monitored & recorded by the installer during installations.
- Traffic Control Plan (Section 107.7).
- Temporary Water Service Plan including the proposed bypass disinfection methods and the contact information for the Contractor's 24-hour maintenance representative (Section 703.3).
- CIPP Liner Disinfection Plan (Section 703.14)
- Customer Meter Coordination Plan (required only if meters will be affected by lining activities).
- Proposed construction schedule, with including phases (Section 109.2).
- Proposed location and dimension of access pits and vehicle/equipment storage (Section 703.4)

SECTION 701.3(B) CONSTRUCTION SUBMITTAL REQUIREMENTS

- Pre-Installation CCTV recording to the Engineer and WI-DNR (Section 703.5).
- Resin material quantities for the tube to be installed (Section 703.8).
- Copy of CIPP field curing data log (Section 703.9 (b)).
- Copy of hydrostatic pressure test log and test results (Section 703.10)
- Post-Installation CCTV recording to the Engineer and WI-DNR (Section 703.5 and Section 703.12)
- Physical product samples from each liner segment installed (Section 703.15)

SECTION 701.3(C) POST-CONSTRUCTION SUBMITTAL REQUIREMENTS

- Product Evaluation Test Data (Section 703.15):
- Short Term Flexural Properties Report
- Tensile Properties Report
- CIPP Wall Thickness Report

SECTION 702 MATERIALS

In addition to the Standard Specifications, these Special Provisions apply to CIPP lining materials and all associated materials required under this Contract.

See the Plans and Standard Specifications for material requirements including but not limited to pavements, granular materials, ductile iron water main pipe, valves, hydrants, and fittings identified to be installed under this Contract.

SECTION 702.1 CIPP MATERIALS

For resin-impregnated flexible tube systems, the CIPP liner shall consist of one or more concentric layers of an absorbent material (i.e. felt, synthetic fiber), and may also contain additional materials such as glass fiber reinforcement or polymeric membranes. The CIPP tube is to be impregnated with an epoxy resin system that is compatible with the proposed installation procedures. For spin-cast surfacing systems the epoxy resin CIPP material shall yield a structural, monolithic pipeline surfacing with proper sealing connections to un-surfaced areas and a hard, impermeable surface that is suitable for water service.

The CIPP lining system must be certified for use in potable drinking water applications by NSF/ANSI 61: Drinking Water Components, which is standard for health effects of all devices, components, and materials to ensure that these products do not contribute contaminants to drinking water that could cause adverse health effects. The product shall also be listed on the NSF Approved Product Listing website, <http://www.nsf.org/Certified/PwsComponents/>.

The liner shall form tightly to the internal circumference of the host pipe without leaving annular space that could compromise the liner system performance in a pressurized environment.

The liner shall not leach organic compounds (volatile organic compounds or bisphenol A) into the potable water system. Pre-installation and post-installation water quality sampling shall be performed to verify that the installed liner system is consistent with NSF/ANSI 61 certification requirements. See Section 703.15 of these Special Provisions for more information.

The CIPP liner system, when cured, shall be chemically resistant to internal exposure to drinking water treated with common chemical additives and meet the sewer corrosion performance requirements of ASTM D5813, Section 6.4.

The resin impregnated tube shall have a relatively uniform thickness that when compressed at installation pressures (and after curing is completed) will equal or exceed the approved minimum design thickness, excluding the thickness of any polymeric membranes or any other non-structural surface coatings.

The use of a lubricant during the installation process may be needed to reduce friction. The lubricant used shall be a nontoxic, NSF/ANSI 61 certified product compatible for use with the approved CIPP liner system. If lubricated installation will be considered, submit the lubricant's NSF certification with the preconstruction submittals identified in Section 701.3 (a) of these Special Provisions.

The wall color of the interior pipe surface of CIPP after installation shall be a relatively light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

The proposed CIPP liner system shall be compatible with and include manufacturer's recommended installation procedures for future service-line corporation stop tapping in 1-inch, 1 ½-inch and 2-inch diameters.

The proposed CIPP liner system shall be compatible with and include manufacturer's recommended procedures for 4-inch to 6-inch pressurized live-taps using a Mueller CL-12 drilling machine and cutting head.

SECTION 702.2 DESIGN PARAMETERS

The design of the CIPP liner shall be based on the following design conditions, in addition to the manufacturer's standards and referenced standards:

LAKE MENDOTA DRIVE

Host Pipe Diameter / Material / Length (approx. total length lined)	8-inch Cast-Iron & 12-inch Cast-Iron (1500 LF) (250 LF)
Internal Operating Pressure	100 psi
Ovality of Existing Pipe	2% Minimum
Soil Modulus	700 psi
Soil Unit Weight	120 pcf Minimum
Soil Depth (above top of pipe)	7-feet
Safety Factor	2.5
Design Condition	Fully Deteriorated, Pressure Pipe
Live Loads	AASHTO HS20-44 Loading Under Roadways

FISH HATCHERY ROAD

Host Pipe Diameter / Material / Length (approx. total length lined)	12-inch PVC (2300 LF)
Internal Operating Pressure	100 psi
Ovality of Existing Pipe	2% Minimum
Soil Modulus	700 psi
Soil Unit Weight	120 pcf Minimum
Soil Depth (above top of pipe)	7-feet

Safety Factor	2.5
Design Condition	Fully Deteriorated, Pressure Pipe
Live Loads	AASHTO HS20-44 Loading Under Roadways

The CIPP liner design and thickness calculations are to be prepared and stamped by a Professional Engineer actively licensed in the State of Wisconsin and submitted to the Engineer and WI-DNR for approval in accordance with the submittal requirements of Section 701.3 (a) of these Special Provisions.

SECTION 702.3 WORKING PRESSURE REQUIREMENT

As identified in Section 108.2 of these specifications, the proposed structural CIPP liner system must demonstrate comparative similarity to an AWWA pressure class 150 requirements in order to be approved for installation as a Class IV structural liner by WI-DNR.

Section NR811.69 (2), Wis. Adm. Code, states in part, "All pipe shall be minimum AWWA pressure class 150 and shall be designed for a minimum 100 psi working pressure except as approved by the Department for special low pressure applications."

The department's working pressure criteria for considering the installation of structural CIPP liners is that the CIPP liner must sufficiently demonstrate that it is designed, at a minimum, for a 50-year service life with 100 psi internal working pressure and a design safety-factor of 2.5.

WI-DNR requests the working pressure class verification of the proposed CIPP liner is to be demonstrated based on pressure rating and design calculations that use long-term hydrostatic strength data obtained through hydrostatic design basis (HDB) testing procedures, such as:

- Procedure B in ASTM D2992: Obtaining Hydrostatic Design Basis for Glass Fiber Reinforced Thermosetting Resin Pipe and Fittings, OR;
- ASTM D2837: Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials

Submit the CIPP liner design calculations based on the design conditions described above, and in Section 702.2. The submittal shall include the calculated pressure rating and the HDB Test Report per Sections 5.7 & 6 of ASTM 2837 or Sections 14 & 15 of ASTM D2992.

For CIPP liners designed without long-term hydrostatic strength data obtained through HDB test methods, submit the CIPP liner design calculations (based on the design conditions described above, and in Section 702.2) using the Fully Deteriorated Pressure Pipe Condition formula (Section X1.3.2 in ASTM F1216). In lieu of HDB strength data, submit documentation to confirm the value and the method used to obtain the value used as the '50-year tensile strength' in the formula. The submittal must include the pipe design calculations and the basis for the long-term strength value used in the design calculations.

The pressure class verification documents are to be submitted to the WI-DNR and to the Engineer as part of the initial submittal package required in Section 701.3 (a) of these Special Provisions. Construction may not begin until the WI-DNR has approved the pressure class verification, even if all additional submittals have been reviewed and approved by the Engineer. WI-DNR will respond to the Contractor regarding their submittal within 20-business days of receipt.

Submit the WI-DNR pressure class verification documents by certified mail:

- James Witthuhn
Public Water Supply Section
Wisconsin Department of Natural Resources
PO Box 7921
Madison, WI 53707-7921

Or submit electronically to:

- James.Witthuhn@wisconsin.gov

SECTION 702.4 DELIVERY, STORAGE, AND HANDLING OF CIPP LINER

Transport, handle, and store the liner and thermosetting resin, and other materials as recommended by the manufacturers to prevent damage.

CIPP liner materials that are defective or damaged prior to installation shall be rejected and replaced at the no expense to the City. Liner materials damaged during installation shall be repaired or replaced as recommended by the manufacturers and approved by the Engineer.

SECTION 702.5 TEMPORARY BYPASS SERVICE MATERIALS

All materials furnished for use as temporary bypass pipe, service hose, connections and related appurtenances that come into contact with drinking water are to be certified for compliance with ANSI/NSF Standard 61. All materials shall be fully adequate to withstand the required water pressure and all other conditions of use, and shall provide adequate water tightness before being put into service. All previously used materials may only have been used in potable water applications.

All sample taps shall be smooth-bore taps.

All materials for use as main temporary bypass lines, service lines, connections and related appurtenances shall have a minimum working pressure rating of 200 psi and be made of materials that will not have an adverse effect on the taste or odor of the water.

The temporary bypass lines must be at least 2-inches in diameter for the Lake Mendota Drive project, and at least 4-inches in diameter for the Fish Hatchery Road project.

Match the diameter of the temporary service line with the existing service lateral diameter for all services 1½-inch diameter to ¾-inch diameter. Use a ¾-inch temporary service line for any service lateral smaller than ¾-inch diameter. Use hoses or piping that are hydraulically equivalent to the service size for all services 2 inch in diameter and larger.

SECTION 703 CONSTRUCTION METHODS

In addition to the Standard Specifications, these Special Provisions apply to CIPP lining activities and all associated construction activities required under this Contract.

See the Plans and Standard Specifications for construction and installation requirements for any pavements, granular materials, ductile iron water main pipe, valves, hydrants, and fittings identified to be installed under this Contract by the Contractor.

SECTION 703.1 SAFETY

Carry out all operations in strict accordance with all applicable OSHA and manufacturer's safety requirements. Emphasis shall be placed upon safety requirements for excavations; entering confined spaces; air quality; and working with chemicals, hot water, hot air and/or steam.

Erect such signs and other related devices as necessary for the safety of the work site and to secure the site. All work shall conform to the safety requirements of pertinent regulations and as identified in these specifications.

SECTION 703.2 PRE-CONSTRUCTION RESPONSIBILITIES

Provide adequate notice to Madison Water Utility prior to mobilization. Madison Water Utility will schedule and conduct a preconstruction meeting with the Contractor at a mutually acceptable time.

Prior to construction, Madison Water Utility will deliver an informational letter to inform affected residents and emergency services regarding the water main rehabilitation project. It will be the responsibility of the Contractor to notify residents at least 48-hours prior to any planned interruption of service, or immediately

upon and throughout any unplanned service interruption.

Do not operate water main valves, curb stops, or fire hydrants without direct authorization from a Madison Water Utility representative

Provide Madison Water Utility at least one (1) working-day notice prior to transferring any water services from the water main to the temporary bypass piping system. For any other work affecting the water system, provide the Engineer at least two (2) working-days' notice prior to beginning, per Section 105.12 of these Specifications or as applicable to Section 703.3 of the Standard Specifications.

Water necessary for cleaning, disinfection and flushing, etc. will be available, at no cost per Special Provision Section 107.11, from one location prior to the start of construction. Contact Madison Water Utility to schedule the installation of RPZ valves at least two (2) working-days' notice prior to the time water service is needed. The provided water source shall be in close proximity to the lines being rehabilitated. Furnish any necessary piping or flexible hoses, fittings, required for connection between the RPZ valve on the fire hydrant and where water is required.

SECTION 703.3 TEMPORARY WATER SERVICE

As required in Section 701.3 (a), submit a proposed Temporary Water Service plan depicting the proposed components, configuration/locations, protection measures, proposed disinfection methods, bulk chlorine disinfection station(s) and contact information for the Contractor's representative(s) responsible for routine maintenance and emergency response. The temporary water service plan must also indicate if any customer water meters are to be temporarily removed or otherwise affected in order to accommodate the temporary water service or other construction activities. The Temporary Water Service Plan must be approved by the Engineer before installing any section of the temporary distribution piping.

The temporary bypass system shall maintain a continuous supply of water to all affected customers for the duration of time the existing main is out-of-service for rehabilitation. The temporary bypass system shall be maintained in a safe and operative condition at all times. For protection of the work and the public, flashers and barricades shall be installed at apt locations and as directed by the Engineer or Construction Inspector. The flashers and barricades shall be in proper operating condition. Temporary water piping shall be protected from extreme temperatures at all times.

Additionally, the work is to be in conformance with the requirements of the Standard Specifications, Provisions and AWWA C602 Cement Mortar Lining of Water Pipelines in Place – 4 In. and Larger, Section 4.6 Temporary Bypass to Customers.

If any water meters are to be removed or otherwise affected to establish temporary water service or accommodate any other construction activities, notify the Madison Water Utility Meter Shop according to Section 703.3(a) and coordinate with Madison Water Utility prior to performing any meter related work.

Perform any required or indicated meter removals on the approved Temporary Water Service Plan. Notify the Madison Water Utility Meter Shop of all meter removal appointments and allow the Water Utility to inspect the existing conditions during the removal appointment. Do not reinstall any meter which has been removed. See Section 703.3(e) for meter reinstatement requirements.

If customer water meters are not affected or removed to accommodate construction, the meter reinstatement requirements of Section 703.3(e) shall still apply.

All associated temporary water bypass work, including any work required to schedule appointments and coordinate with Madison Water Utility for meter removals and reinstallations, will be paid under Bid Item 90160 – Temporary Water Service.

SECTION 703.3(A) NOTICE REQUIREMENTS & RESTRICTIONS OF SERVICE INTERRUPTIONS:

Notify the Madison Water Utility Meter Shop at least three (3) working-days in advance of any anticipated work involving or affecting customer water meters. Notify and coordinate all subsequent water meter

related work with the Madison Water Utility Meter Shop as customer appointments are scheduled or as otherwise directed.

Notify the Madison Water Utility Meter Shop at least three (3) working-days in advance of any anticipated work involving the installation of meters on bypass fire hydrants per section 703.3(B).

Meter Shop contact:

- Shawn Bonjour
608-266-4297
sbonjourmadisonwater.org

Notify the Construction Inspector and the Engineer at least two (2) working-days in advance of any planned service interruption.

Provide affected customers at least 72-hours of advanced notice of any planned service interruption. The notice shall include the delivery of a door-hanger or similar pamphlet which indicates the date and time of the planned service interruption and, as applicable, the proposed location of temporary service connection and the proposed route of the temporary service line and main bypass line. The notice shall attempt to coordinate the service interruption at a time that is convenient to the customer. Include contact information for the Contractor's field representative and the Engineer.

Whenever possible, make connections to the customer's water service line on a day and at a time that is convenient to the customer. Make satisfactory arrangements with the customer so that stop and waste valves shall be accessible at all times.

Immediately prior to individual service work, attempt to notify the customer again to verify that all water use has been stopped.

Do not interrupt any customer's service until it is certain that all labor, material and equipment necessary to perform the work are present at the work site.

Restore water service as soon as possible. Immediately notify the Madison Water Utility's Project Representative regarding the restoration of service.

For emergency shutdowns and notifications:

In the event of a break on a water main, service, bypass pipe, temporary service or other failure of a Madison Water Utility facility, whether the result of the Contractor's activities or other unrelated matters, act in accordance with the following procedure:

- Immediately notify Madison Water Utility's 24-hour Operator at (608) 266-4667 and inform them of the situation, the affected area, estimated duration, and if there is a need for an immediate water main shutdown.
- Do NOT operate any valves unless directly authorized to do so by a Madison Water Utility representative.
- Notify all residents affected by the emergency service interruption.

SECTION 703.3(B) TEMPORARY BYPASS WATER SYSTEM SET-UP

Disinfect hydrant standpipes prior to connecting bypass pipes to the hydrants, by pouring 1 quart of commercially available bleach (solution containing approximately 5% sodium hypochlorite) into each hydrant. The hydrants shall be filled with clean water that is allowed to stand for a minimum of 20 minutes. The hydrants shall then be flushed and the bypass pipes connected to it. All hydrant nozzles shall be capped when not in use.

All connections to fire hydrants shall be first metered by Madison Water Utility staff. Refer to Section

703.3(A) for coordination requirements.

Connect only to the 2½-inch hydrant nozzles; the 4½-inch nozzles shall remain capped and accessible for Fire Department use unless a written statement is supplied from the Fire Department stating otherwise. Support, as necessary, all appurtenances attached to hydrants.

All temporary water service connections to hydrants shall be made in such a manner that they can be removed with minimum effort so that the hydrants can be fully used for firefighting purposes.

When a connection cannot be made on hydrants, a bulkhead connection may be required. Install compatible bulkheads (temporary line caps) on the existing water main in place of a solid cap or plug fitting to keep the section of the existing water main pressurized and capable of supplying a continuous flow of water. The bulkheads shall be fitted with a compatible outlet fitting so the temporary bypass pipe can be fed through the end of the bulkhead. The coupling shall be slid over the end of the water main, and braced or restrained so that it will support normal operating pressure without leaking.

Temporary valves shall be installed on the temporary bypass pipe at all appropriate locations and as designated on the approved Temporary Bypass Service Plan. Valve spacing should, at a minimum, schematically match the existing water main configuration, and also as required to isolate the temporary piping from the existing system. Spacing between adjacent valves shall not exceed 500 feet, unless approved by the Engineer.

Any hydrants within the project taken out of service shall be reported to the Engineer and the City of Madison Fire Department. Completely cover and secure black plastic sheeting around all existing or newly-installed hydrants while they are out-of-service. Maintain the plastic covering until the hydrant is returned to service or removed and salvaged.

Hydrants must remain in service such that no property within the project is within less than 1,000-feet (measured from the hydrant to the property along accessible streets) from an active hydrant.

All hydrants are subject to inspection at any time by either the Madison Water Utility or the City of Madison Fire Department. If they are found to be unserviceable or unsatisfactory in any way, immediate correction shall be made.

Install bypass piping on the house-side of terrace or along City-owned greenways whenever possible to minimize or avoid crossing traffic or pedestrian routes. Where not possible, provide a ramping system to protect the bypass pipe at each location where pipe crosses roads or driveways. All piping and/or hosing crossing a Metro Transit or MMSD school bus service route or regularly traveled roadway shall be trenched, buried, and backfilled to adequately withstand the traffic loads and be flush to the existing pavement grade. ADA compliance shall be provided at sidewalk or sidewalk ramp crossings per Section 107.7 of these Special Provisions.

All ramping material is to be furnished, installed, maintained and removed by the Contractor. Any required trenched roadway crossings, including pavement cutting, excavation, backfill, maintenance and removal are the responsibility of the Contractor, not Madison Water Utility. Madison Water Utility will provide the final pavement restoration at these locations.

Water from the temporary bypass pipes will NOT be allowed for any purpose other than to supply the bypass pipes. Water for filling water tanks or any other purpose other than supplying water to bypass pipes must be obtained from a hydrant with a Madison Water Utility approved backflow preventer installed per Section 107.11 of the Standard Specifications and these Special Provisions.

Any unconnected threaded main taps must be capped prior to disinfecting the temporary system, and remain capped for the duration of the time that the temporary system is in place.

Under no circumstances shall any portion of the temporary water system lie in a gutter, ditch or any other line of surface water flow.

If previously used material is employed for use in the temporary bypass water system, clean and/or pressure wash the piping such that it inspires confidence in the system.

SECTION 703.3(C) TEMPORARY CUSTOMER SERVICE LINES

Connect customer services that are 1½ inch and smaller, to the temporary bypass system using a hose connected to an outside hose bib. Use a double-valved "Y" connector to connect temporary hose to the customer's hose bib. When a hose bib connection is not possible, an alternate manner of connection shall be reviewed and approved by the Engineer.

After completing the temporary bypass disinfection per Section 703.3(D) of these Special Provisions, thoroughly flush hoses to be used for temporary services with potable water immediately prior to connection to the customer's service. Notify customers in accordance with 703.2(A) prior to shutting off and transferring the service to the bypass. Do not transfer services to the bypass earlier than necessary to allow the work to progress without delay.

SECTION 703.3(D) BYPASS SYSTEM DISINFECTION

All bypass pipes and services shall be properly disinfected and yield a safe-water sample prior to connecting any customers to the temporary bypass system. The temporary service connections shall have valves at both the connection to the bypass pipe and near the point of connection to the private plumbing system so the entire bypass system including temporary service lines can be disinfected.

Install a bulk chlorine disinfection station or stations for the disinfection of temporary service laterals. Stations shall consist of a large drum or container filled with disinfectant solution with an attached spigot. Disinfect and flush each lateral adequately before entering it into service

As part of the Temporary Water Service plan, required by Section 701.3(A) and described in Section 703.3 of these Special Provisions, include the proposed disinfection, flushing, and applicable customer notification procedures required for the proposed temporary bypass system. These procedures shall be in accordance with AWWA C651 – Disinfecting Water Mains and the Standard Specifications, which require 48-hours of disinfection prior to flushing and sampling.

Properly dispose of any highly-chlorinated water in accordance with Standard Specification 703.14(C). Sampling and testing will be done according to the Standard Specifications.

SECTION 703.3(E) RETURN SERVICE LINE TO NEW WATER MAIN

Schedule all appointments and any necessary customer notifications at all properties being served by the temporary water system prior to reconnection to the existing water system. Notify the Madison Water Utility Meter Shop in accordance with Section 703.3(A) and coordinate with Madison Water Utility prior to performing any meter-related work.

Prior to transferring service lines from the bypass system to the existing water system, clear lines by back flushing with potable water or as otherwise approved in the disinfection and flushing plan. Disconnect the hose, restore the water service line back to normal conditions, and restore water flow. All areas used while providing temporary service shall be properly restored to pre-construction status, or better.

After flushing is completed and service lines have been restored to the permanent laterals, remove the bypass and all associated materials used for maintenance and ramping. Complete the restoration of all areas damaged by temporary bypass pipe and service connections.

SECTION 703.3(F) 24-HOUR MAINTENANCE

Maintain and repair as necessary all components of the temporary bypass system and all associated protective equipment (barricades, flashers, ramps etc.) at all times. Be equipped to make all repairs necessary at the project site through the duration of the project.

Designate a permanent company employee or subcontractor available and able to maintain the bypass system and services 24 hours every day, seven days a week (including holidays). Provide Madison Water Utility with the applicable emergency and after-hours phone numbers as part of the proposed Temporary Water Service Plan submittal required in Section 701.3(A) of these Special Provisions.

SECTION 703.4 EXCAVATION OF CIPP LINER INSERTION/EXTRACTION PITS

Based on the information represented on the Plans, the field conditions of the work-site and any design/manufacturing limits of the CIPP liner, identify the number and location of access pit points required to rehabilitate the designated water main. Submit the proposed locations and dimensions to the Engineer for approval as part of the pre-construction submittal requirements in Section 701.3(A) of these Special Provisions.

Madison Water Utility will provide the excavation and water removal, if necessary, for establishing the approved water main access pits, and other approved excavations on the site. Provide at least two (2) working days' notice prior to the anticipated start of the work to coordinate work schedules. The Madison Water Utility coordinator for this work is:

- Dan Wagner
608-266-4651
dwagner@madisonwater.org

Excavation by Madison Water Utility will not begin until all underground facilities have been marked through Digger's Hotline (three working days' notice required). Excavation work, other than emergency repairs, that is needed outside of normal work hours (Monday-Friday 7:30 AM to 3:30 PM) or excavations requested with less than two working days' notice shall be the responsibility of the Contractor if Madison Water Utility resources are unavailable.

Coordinate the work on-site with Madison Water Utility to ensure that the ditch dimensions adequately allow for the Contractor's proper installation and maintenance of shoring/trench protection and also that the proper length of existing pipe is exposed in the pit based on the manufacturer's recommended installation procedures.

Madison Water Utility will also provide the backfilling work including backfill material, compacting the backfill material, removal of excess ditch/backfill material, final restoration of the access pit, and other work deemed incidental to preparing the ditch and/or pavement base.

The Contractor shall be required to furnish, install, and maintain the shoring/trench protection in the access pits, as well as any other maintenance associated with the access pits after they are excavated.

Shoring/trench protection shall comply with the Standard Specifications and applicable OSHA regulations. Shoring shall be installed such that it completely fills the trench from the bottom of the excavation to a height 1-foot above finished grade. Shoring shall be free of any holes or defects that would otherwise allow standard clear stone to pass through. Minimum inside rectangular dimensions of all shoring enclosures shall be 5.5-feet by 7.5-feet.

Install chain link fencing around all access pits while the pits are open and shored. The chain link fencing shall also be wrapped with high-visibility orange safety fencing. Mount reflective signage on all sides of the fencing to warn of an open excavation. Install barricades as needed on streets where additional traffic control may be required.

The existing water main shall be cut square using an appropriate cutting device which leaves no split or fractured ends. All cut faces of the existing water main shall be chamfered on the inside surface to a suitable profile to prevent damage to the liner pipe during or after insertion. Edge guards, approved lubrication, or other means shall be used as needed to protect the liner from damage caused by the host pipe edges at insertion points.

Immediately upon opening the host main at the liner insertion points, the ends of the adjacent existing water main that are not to be lined at the insertion/extraction points shall be covered/plugged by the Contractor so that no debris or animals shall enter into them during reconstruction work.

A thorough examination of the route of the existing water main shall be made after cutting the existing water main. This should include a pipeline location survey with equipment capable of locating any changes in direction, valves, bends, intrusions, and other fittings that may impede the insertion and/or proper inflation of the CIPP liner.

SECTION 703.5 CLEAN AND INSPECT THE EXISTING WATER MAIN

Remove all internal debris from the pipeline that will interfere with the CIPP liner installation. Pipes shall be adequately cleaned with high-velocity jet cleaners; mechanically powered equipment; cable-attached devices; or fluid-propelled devices (e.g., pipe pigs).

The cleaning method shall remove all rust; scales; tuberculation; deposits; loose or deteriorated remains of any original coatings; and other foreign materials from the inside of the pipe so as to produce a smooth metal surface finish that will allow the new CIPP liner to adhere and securely bond to the existing host pipe.

Lawfully dispose of all materials removed from the pipe during the cleaning operation at an off-site location, and pay all associated landfill fees and taxes. Lawfully dispose of any and all leftover materials and/or byproducts of the rehabilitation process at an off-site location, and pay all associated landfill fees and taxes. Cleanup of any soil contamination caused by or encountered during the excavation and/or water main lining process is to be the responsibility of the Contractor.

Verification of readiness to install the liner shall be performed by experienced personnel trained in locating services, breaks, obstacles, etc. This will include closed-circuit television (CCTV) and possibly also include pipe mandrels or other devices. The interior of the pipeline shall be carefully inspected to determine the location of any conditions that may prevent proper installation of the CIPP liner. These conditions shall be noted and brought to the attention of the Engineer so that they may be corrected. Copies of CCTV inspection DVD's and related reports shall be made available to the Engineer as soon as possible for review and approval prior to commencement of lining activities.

It shall be the responsibility of Madison Water Utility to remove any unforeseen obstructions that might prevent the liner installation. Madison Water Utility shall have the right to make corrective repairs using in-house staff; a third-party contractor; or if it is deemed to be in Madison Water Utility's best interest to do so, the Engineer may authorize the Contractor to make repairs and compensate the additional work under the terms of this Contract.

Any external water leaking back into the existing pipeline shall be removed so as not to interfere with the proper installation and curing of the CIPP liner.

Verify the length of water main sections to be cleaned and lined. Flush the host pipe with clean water to remove any loose debris from the interior surface of the pipe, and remove all standing water from the inside surfaces of the cleaned water main by passing a sufficient number of oversized foam swabs through the main. A progressive expansion method to remove standing water is also allowed.

Perform and submit to the Engineer video recording files of the closed circuit television (CCTV) inspection of existing water mains at two intervals:

1. Prior to water main lining, per Section 703.5 of these Special Provisions.
2. The finished pipeline after service reinstatement, per Section 703.5 and Section 703.12 of these Special Provisions.

Provide Madison Water Utility and the Wisconsin Department of Natural Resources with a complete set of all required inspection video recording files. The picture quality and definition shall be clear and

acceptable for viewing and the files shall be compatible with Microsoft Windows operation systems. Information in the files shall identify the water main section, direction of travel, and the date of inspection. Where applicable, the files shall include a voice description of the location of any identified defects.

SECTION 703.6 PREPARE WATER SERVICE CONNECTIONS FOR LINING

Prior to installing the CIPP liner, locate all existing water service laterals, and plug the service laterals as recommended by the manufacturer and approved by the Engineer. The insertion of plugs into the service connections may be done simultaneously with the pre-installation CCTV inspections.

The plugs, or other approved devices, shall prevent any accumulation of resin inside the service lines that may otherwise obstruct them, and shall also prevent water infiltration from a leaking curb-stop service valve.

The plugs, or other approved devices, shall make visible any non-penetrating service connections in the lined pipe, to ensure that operators are able to accurately locate the non-penetrating service connections after they have been covered with the CIPP liner.

SECTION 703.7 EQUIPMENT SUFFICIENCY

Provide a suitable quantity of temperature and pressure gauges, capable of meeting or exceeding the manufacturer's standards and specifications for monitoring installation and curing of the CIPP liner. Puller units and winch cables shall be equipped with manufacturer-recommended tension gauges, and shall be smooth running and variable speed. The cutting devices shall be remotely-monitored devices for use inside the lined pipes.

Prepare and inspect all necessary tools and any spare parts that are required for equipment which suffers recurring breakdowns, and ensure that said tools and spare parts are available at the work-site. Prepare and make operable all necessary communication equipment for the installation field crew.

SECTION 703.8 RESIN MATERIAL INSPECTION

Ensure that the Engineer and other Madison Water Utility representatives are able to inspect the epoxy resin materials and/or the chemical impregnation procedures of the CIPP liner tube or spin-cast surfacing liners. The resins and catalyst systems shall be prepared as recommended by the liner manufacturers, NSF, and as approved by the Engineer and shall be monitored and documented for each installation.

The quantities of the resins and catalyst systems must be prepared in accordance to the manufacturer's standards and NSF requirements to yield liners that, when cured, provide at least the lining thickness specified in the approved liner designs plus additional allowances for polymerization shrinkage and the loss of resins through irregularities in the deteriorated host pipe walls. Liner thickness measurements shall exclude the thickness of any polymeric membranes or any other non-structural surface coatings. Ratios of the epoxy resin mixtures shall be documented for each installation and verified for consistency with ratios identified on the product's NSF/ANSI 61 certification.

If any chemical impregnation procedures are done onsite, the impregnation shall be done in an enclosed vehicle or other controlled environment approved by the Engineer. On-site impregnation in open air space is not acceptable.

SECTION 703.9 INSTALLING THE CIPP LINER

Prior to installing the CIPP liner, verify full compliance with the approval requirements of the Engineer as specified in Section 701.3 of these Special Provisions; also verify full compliance with the approval requirements of the WI-DNR as specified in Sections 108.2 and 702.3 of these Special Provisions. Do not proceed with the installation of liners until the Engineer, in writing, certifies compliance and gives direction to proceed with the CIPP liner installations. The approved liners shall be installed pursuant to the specific provisions set forth for the approved lining methods.

SECTION 703.9(A) PREPARING AND INSERTING THE CIPP LINER

The CIPP liner system shall be installed within the existing water main through the insertion point by either spin-casting, inversion or by the pull-in-place method, as recommended by the manufacturer and as specified in ASTM F126/1723 and/or other applicable ASTM Standards required by the Engineer.

The liner dimensions shall be sufficient enough to fully extend the liners within the host pipe both circumferentially and longitudinally. Liner dimensions must also ensure that the proper finished pipe thickness will be obtained, with the liners either adhering to or fitting tightly against the interior walls of the existing pipes and without creating annular spaces between the liners and the host pipes.

Before installation begins, confirm as applicable the minimum pressure required to hold the liners tight against the existing pipeline and the maximum allowable pressure so as not to damage the liner materials. In order to ensure a proper fit of the liners, pressure shall be maintained between the recommended minimum and maximum pressures through the duration of the installation process. As applicable, verify that field installation data-logs and installation procedures are consistent with manufacturer recommendations and any installation/curing requirements identified in the NSF/ANSI 61 certifications for the liner products.

SECTION 703.9(B) CURING THE CIPP LINER

The equipment used to execute the curing of the CIPP liners shall be in accordance with the liner manufacturer's equipment requirements. As applicable, the equipment shall be capable of uniformly raising the temperature in the entire liner above the temperature required to initiate and complete the curing of the resin system. The required temperatures shall be determined by the manufacturer requirements of the approved resin/catalyst systems. The heat source shall be fitted with suitable monitors to gauge the temperature and pressure of the incoming and outgoing heat exchanger circulating heating medium. The monitoring devices shall be in accordance to Section 703.6 of these Special Provisions. Thermocouples or temperature gauges or infra-red guns shall be used at the insertion and extraction points to determine and record the temperature of the liners and times of exotherm.

Sufficiently monitor and document the pressure readings, temperature readings and the time of readings throughout the duration of the curing process (from before the initiation of the heat source through the cool-down phase). A copy of the documentation shall be submitted to the Engineer in accordance with Section 701.3(B) of these Special Provisions.

The cure periods shall be of a duration recommended by the resin manufacturers and/or the NSF/ANSI 61 certification. Extend the duration as necessary for the site specific conditions at the time of curing (temperature, moisture level, thermal conductivity of soil, etc.). During this cure time, it is required that the temperature inside the liner be continuously maintained at or above the temperature required by the manufacturer and/or NSF/ANSI 61 requirements for curing the product.

The curing shall be considered complete when inspection of the exposed portions of the liner show it to be hard and sound, and the temperature readings at the interface of the liners with the host pipes show that enough heating had occurred to ensure that no portions of the CIPP liner have not been fully cured.

Once the cures are ensured to be 100% complete, cool the hardened liners to a temperature below one hundred degrees Fahrenheit (100°F) before relieving the internal pressure. The cool-down shall be accomplished as recommended by the manufacturers. Care shall be taken during the release of the internal pressure so that a vacuum does not develop that could damage the newly installed liner.

After the liners are sufficiently cooled to below one hundred degrees Fahrenheit (100°F), and before beginning to reinstate the service laterals, a CCTV inspection of the newly installed liners shall be performed to confirm that the liners were properly installed and completely cured. If no services are involved, then this inspection is to be recorded and delivered to the Engineer on file as the final TV inspection submittal.

The finished lining segments shall be continuous over their entire lengths and be free from visual defects such as foreign inclusions, dry spots, pinholes and de-laminations. All lining shall be impervious and free of any leakage.

If at the insertion/extraction ends the lining fails to make a tight seal, notify the Engineer and apply a seal of a resin mixture compatible with the CIPP liner or repair using manufacturer's approved methods if different from above.

SECTION 703.10 PRESSURE TESTING

Pressure testing for water-tightness is required on all CIPP sections installed, and shall be completed after the preliminary video inspection but before the reinstatement of service connections, unless otherwise directed by the Engineer.

Remove any trapped air and stabilize the CIPP liner prior to beginning hydrostatic pressure testing.

Perform hydrostatic pressure test on the lined water main at a hydrostatic pressure of 25% greater than the normal area pressure, for a period of one hour.

After the one-hour test, the quantified make up water shall be calculated and if the loss at test pressure exceeds what is acceptable (up to 20 gallons per inch diameter, per mile, per day) identify the source of the loss and minimize it in a manner acceptable to the Engineer.

SECTION 703.11 REINSTATE SERVICE OPENINGS

Upon completion of installation and pressure testing of the CIPP liner, reconnect existing services from the interior of the water main using a television camera directed robotic cutting device that removes a small section of the liner to expose the corporation valve opening. All connections that are to be re-opened shall be satisfactorily opened to the size of the original opening, and to the depth required to completely open the water service connection to its pre-lining state. The reinstated service opening shall be circular, smooth and flush.

Each successful service reinstatement will be paid under Bid Items 90162 and 90165 – Reinstatement Service Opening. In the event that a service cannot be successfully reinstated from within the pipeline, the service must either be connected using manufacturer's recommended methods and as approved by the Engineer, or a new service must be tapped into the newly rehabilitated water main. Provide the Engineer at least two working-days' notice prior to beginning any such work, per Section 105.12 of these Specifications or as applicable to Section 703.3 of the Standard Specifications.

Any additional cost resulting from unsuccessfully reinstating a service opening from within the pipeline shall be borne solely by the Contractor, and there shall be no claim against Madison Water Utility for any additional required work associated with the service lateral reinstatement.

SECTION 703.12 FINAL TELEVISION INSPECTION

A final television inspection and video recording of the rehabilitated water main, including the restored service connections, shall be performed immediately after work is completed. The final CCTV recording files shall be submitted to the Engineer in accordance to Sections 701.3(B) and 703.5 of these Special Provisions.

Should the results of this final inspection reveal any defects that are determined by the Engineer to be repairable, repair these defects as directed by the Engineer. Should the results of this final inspection reveal any defects that are determined by the Engineer and manufacturer not to be repairable, remove and replace the existing water main as ordered by the Engineer. Any repairs or replacements, as directed, shall be completed at no cost to Madison Water Utility or the City of Madison.

SECTION 703.13 RECONNECT WATER MAIN

After the final television inspection is completed, Madison Water Utility will furnish and install new water main and reinstall the removed sections of the existing pipeline (e.g. at insertion/reception pits, valves, connections, etc.) as indicated on the Plans. Any required cutting or removal of lined water main will be done in accordance to the manufacturer's recommendations provided to Madison Water Utility. Any additional shoring or trench protection needed for installing/reconnecting water mains will be the responsibility of Madison Water Utility. Provide at least two (2) working-days' notice to the Madison Water Utility contact listed in Section 703.4 prior to the anticipated start of the water main work, to coordinate work schedules.

Madison Water Utility main installation/reconnection work, other than emergency repairs, shall only occur during normal working hours (Monday-Friday 7:30 AM to 3:30 PM) unless otherwise approved by the Madison Water Utility.

The Contractor shall be responsible for furnishing and performing water main disinfection according to the Standard Specifications and these Special Provisions. Coordinate and work with Madison Water Utility during the water main installations/reconnections to properly perform disinfection procedures and to ensure the adequacy of the new materials furnished and installed by Madison Water Utility.

SECTION 703.14 DISINFECTION

All rehabilitated water mains, newly installed water mains, or reinstalled existing water mains shall be properly disinfected by the Contractor and produce a safe-water sample before any customers may be reconnected to the water system. Coordinate this work with Madison Water Utility to properly disinfect and ensure the adequacy of all new water mains being furnished and installed by Madison Water Utility or others.

As part of the submittals required under Section 701.3(A) of these Special Provisions, include the proposed CIPP Lining Disinfection Plan to the Engineer for approval. The plan shall identify the disinfection, flushing, and applicable customer notification procedures required to properly disinfect all water main work included in this Contract. These procedures shall be in accordance with AWWA C651 – Disinfecting Water Mains.

Once all of the pipe work is completed, perform chlorine disinfection of the newly installed pipe and CIPP liner in accordance with the approved CIPP Liner Disinfection Plan.

Properly dispose of any highly-chlorinated water in accordance to Standard Specification 703.14(C). Sampling and testing will be done according to the Standard Specifications.

Customer service lines shall be transferred from the temporary bypass system to the newly-rehabilitated system after both of the following occur:

1. Acceptable water samples have been obtained and approved by the Engineer in accordance to Section 703.14(A) of these Special Provisions.
2. The line has been flushed following the 24-hour stagnation sampling procedures in Special Provisions Sections 703.15.

SECTION 703.15 MADISON WATER UTILITY WATER QUALITY SAMPLING AND TESTING

Madison Water Utility may sample and test the rehabilitated drinking water system to ensure that the CIPP lining system is not leaching any volatile organic compounds (VOCs) and/or Bisphenol A (BPA) into the water. Sampling may occur after the disinfection and flushing of the rehabilitated water main. Locations (and number of samples) to be taken would be determined by the WI-DNR.

After approved disinfection and flushing, allow the water within the filled rehabilitated pipe sections to stagnate for at least 24-hours before Madison Water Utility takes the post-lining testing samples. Notify the Engineer prior to beginning the stagnation period.

Madison Water Utility will pay for all fees associated with this testing. **VOC/BPA samples shall only be allowed to be taken between Mondays and Wednesdays of the work week.**

After the post-lining VOC and/or BPA samples have been collected and the Engineer has authorized proceeding, the customer service lines shall be transferred from the temporary bypass system to the permanent service lines on the rehabilitated water main.

SECTION 703.16 QUALITY ASSURANCE TESTING

A thorough evaluation of the CIPP liner is intended and considered incidental to the installation of the CIPP liner. Prepare and collect all product/material samples required herein, complete all requested testing procedures, and submit to the Engineer all associated test results, data, and reports in a timely manner.

Product / Material Samples:

- Collect and submit one restrained tube sample prepared as specified in ASTM F1216 for each liner segment installed. Notify the Engineer if a restrained tube sample cannot be prepared due to physical constraints; a flat plate sample shall be prepared in lieu of the restrained tube. These samples will be in addition to any samples required for required product evaluation testing.

Product Evaluation Testing / Test Data:

- CIPP flat plate samples shall be prepared and physical properties tested in accordance with ASTM F1216 Section 8.1.3.1 – Short Term Flexural Properties, and ASTM F1216 Section 8.1.3.2 – Tensile Properties.
- CIPP liner wall thickness shall be tested for each liner segment installed in accordance with ASTM F1216 Section 8.6 – CIPP Wall Thickness. The minimum wall thickness at any point shall not be less than the approved minimum design wall thickness, excluding the thickness of any polymeric membranes or any other non-structural surface coatings.
- Test results from the VOC analysis (Section 703.14(B)).
- Test results from the BPA analysis (Section 703.14(C)).

SECTION 703.17 ACCEPTANCE

Site restoration is considered incidental to the installation of the CIPP liner. Ensure that the entire work-site is sufficiently restored to pre-construction conditions or better. Upon the expiration of the parks temp land permit or, if the work of construction is completed before the permit expires, the completion of the work, the permitted area occupied under this Section shall be restored to its original condition and left in good repair and condition. The Permittee shall be responsible for the repair of any damage noted by City staff and shall restore and repair it to the satisfaction of the Administrative Agency. The Administrative Agency shall inspect the area upon completion of the restoration and the Permittee shall make any further repairs required by the Administrative Agency needed to address any deficiencies that did not exist prior to the occupation. If Permittee does not adequately restore the permitted area as required, the City may perform any necessary repairs or restoration and either recover the costs thereof as a special charge under [Sec. 4.09\(13\)](#) against the benefitting property, from the damage deposit or surety bond, if applicable, or by any other legal means available to the City. Any excavated areas and other work areas prepared or maintained by Madison Water Utility will be restored by Madison Water Utility.

The CIPP liner shall be deemed acceptable when the installation is performed according to these Special Provisions and Contract documents, and when the applicable tests data submittals are satisfied according to Section 703.16 of these Special Provisions.

Any remaining work pertinent to backfilling excavations, pavement milling, placing asphalt, placing concrete, etc. shall be the responsibility of Madison Water Utility and/or the City of Madison.

BID ITEM 90160: PROVIDE & MAINTAIN TEMPORARY WATER SERVICE - WASTE MANAGEMENT BUILDING

1. Description.

This bid item will apply to the Fish Hatchery Road / bike path area as described in Article 104 of these Special Provisions, and consist of the cost of furnishing, installing, maintaining and removing:

- All temporary bypass pipe and pipe fittings
- Valves including large service valves as required
- Service lines
- General hardware
- Water supply connection backflow preventers and reduced pressure zone devices
- Testing, flushing, and sampling taps

Work may also include but is not limited to:

- Disinfecting, scheduling and assisting with obtaining health samples
- Ramping, pavement cutting, excavation, and burial at road crossings/sidewalks/driveways
- Preparation and distribution of service interruption notices
- Maintenance of the bypass system throughout the duration of project
- Site restoration excluding final pavement restoration
- Furnishing all labor, additional material and equipment necessary to complete work as described

2. Materials.

Materials under these bid items shall be in accordance to Section 702 of these Special Provisions and applicable Standard Specifications.

3. Construction Methods.

Construction methods under these bid items shall be in accordance to Section 703 of these Special Provisions and applicable Standard Specifications.

4. Method of Measurement.

These bid items are measured as one lump sum to include all temporary water service work performed in accordance with these Special Provisions.

5. Basis of Payment.

These bid items shall be paid for at the Contract lump sum unit price. Lump sum payment shall be full compensation for all temporary water service work as specified.

A partial payment of 50 percent of the unit price bid may be made for the bypass pipe system after assembly has been completed, disinfected, tested and safe water samples have been obtained. The remaining 50 percent of the unit price may be paid when the bypass system has been removed and associated site restorations have been completed.

BID ITEM 90161: PROVIDE & MAINTAIN TEMPORARY WATER SERVICE – LAKE MENDOTA DRIVE

1. Description.

This bid item will apply to the Lake Mendota Drive area as described in Article 104 of these Special Provisions, and consist of the cost of furnishing, installing, maintaining and removing:

- All temporary bypass pipe and pipe fittings
- Valves including large service valves as required
- Service lines

- General hardware
- Water supply connection backflow preventers and reduced pressure zone devices
- Testing, flushing, and sampling taps

Work may also include but is not limited to:

- Disinfecting, scheduling and assisting with obtaining health samples
- Ramping, pavement cutting, excavation, and burial at road crossings/sidewalks/driveways
- Preparation and distribution of service interruption notices
- Maintenance of the bypass system throughout the duration of project
- Site restoration excluding final pavement restoration
- Furnishing all labor, additional material and equipment necessary to complete work as described

2. Materials.

Materials under these bid items shall be in accordance to Section 702 of these Special Provisions and applicable Standard Specifications.

3. Construction Methods.

Construction methods under these bid items shall be in accordance to Section 703 of these Special Provisions and applicable Standard Specifications.

4. Method of Measurement.

These bid items are measured as one lump sum to include all temporary water service work performed in accordance with these Special Provisions.

5. Basis of Payment.

These bid items shall be paid for at the Contract lump sum unit price. Lump sum payment shall be full compensation for all temporary water service work as specified.

A partial payment of 50 percent of the unit price bid may be made for the bypass pipe system after assembly has been completed, disinfected, tested and safe water samples have been obtained. The remaining 50 percent of the unit price may be paid when the bypass system has been removed and associated site restorations have been completed.

BID ITEM 90162: STRUCTURAL REHABILITATION OF 8-IN WATER MAIN
BID ITEM 90163: STRUCTURAL REHABILITATION OF 12-IN WATER MAIN

1. Description.

This bid item will apply to the areas as described in Article 104 of these Special Provisions and includes all labor, materials, plant, equipment, samples, tests, and insurance required and necessary for the designing, fabricating, furnishing, delivering, mobilization, traffic control, cleaning, inspecting/surveying, installing, field and lab testing and reporting, reconnecting, disinfecting, site restoration, and re-commissioning of the existing water main reconstructed by using an approved CIPP liner method and all work incidental thereto, all in accordance with the Plans, Special Provisions, and applicable Standard Specifications, and as directed by the Engineer.

Included in these bid items shall be the cost of all labor, material and equipment required to locate and set-up insertion and receiving pits (excavated by Madison Water Utility) with sheeting/bracing in accordance to OSHA and the Standard Specifications (See Section 703.2 – Excavation and Section 703.3 – Sheeting, Bracing and Shoring), carefully hand excavating if required, removal of existing pipe, cleaning up, disposal of any removed materials-, and cut/remove portions of the existing water main at insertion and extraction points.

In addition, included in these bid items shall be the cost for mobilization, traffic and site control, signage, miscellaneous site facilities and equipment, all required submittals, notifications, CCTV inspection and

video recording, field and lab testing as required in the Contract documents, and other incidentals required to complete the work. No separate or additional payment will be made for this work.

2. Materials.

Materials under these bid items shall be in accordance to Section 702 of these Special Provisions and applicable Standard Specifications.

3. Construction Methods.

Construction methods under these bid items shall be in accordance to Section 703 of these Special Provisions and applicable Standard Specifications.

4. Method of Measurement.

The quantity of these bid items to be measured for payment shall be the number of linear feet of existing water main actually reconstructed by the approved CIPP lining method, complete, all in accordance with the Contract documents and to the satisfaction of the Engineer, measured along the centerline of the water main from insertion point to extraction point.

5. Basis of Payment.

These bid items shall be paid for at the Contract unit price per linear foot. Payment per linear foot shall be full compensation for all work in furnishing and installing the liner as specified.

BID ITEM 90164: REINSTATE SERVICE OPENING

1. Description.

This bid item will apply to the areas as described in Article 104 of these Special Provisions and include all labor, materials, equipment, tools, and incidentals required to re-open existing services (two-inch diameter or smaller) from the interior of the CIPP lined water main.

2. Materials.

Materials under these bid items shall be in accordance to Section 702 of these Special Provisions and applicable Standard Specifications.

3. Construction Methods.

Construction methods under these bid items shall be in accordance to Section 702 of these Special Provisions and applicable Standard Specifications.

4. Method of Measurement.

The quantity of these bid items to be measured for payment shall be the number of service locations which are re-opened to the size and depth of the original opening and are satisfactorily circular, smooth and flush.

5. Basis of Payment.

These bid items shall be paid for at the Contract unit price per each re-opened service. Payment per each shall be full compensation for all work in furnishing and installing the liner as specified.

In the event a service cannot be successfully reinstated from within the pipeline, the service must be connected using manufacturer's recommended methods and as approved by the Engineer or a new service must be tapped into the newly rehabilitated water main, including all required excavation and surface restoration.

Any additional cost resulting from repairing and/or re-tapping a new service connection due to an unsuccessfully reinstated service opening shall be bore solely by the Contractor, and there shall be no claims against Madison Water Utility for any additional required work associated with the service lateral reinstatement.

SECTION E: BIDDERS ACKNOWLEDGEMENT

**CIPP WATER MAIN REHAB 2023 - FISH HATCHERY ROAD/LAKE MENDOTA DRIVE
CONTRACT NO. 9319**

Bidder must state a Unit Price and Total Bid for each item. The Total Bid for each item must be the product of quantity, by Unit Price. The Grand Total must be the sum of the Total Bids for the various items. In case of multiplication errors or addition errors, the Grand Total with corrected multiplication and/or addition shall determine the Grand Total bid for each contract. The Unit Price and Total Bid must be entered numerically in the spaces provided. All words and numbers shall be written in ink.

1. The undersigned having familiarized himself/herself with the Contract documents, including Advertisement for Bids, Instructions to Bidders, Form of Proposal, City of Madison Standard Specifications for Public Works Construction - 2023 Edition thereto, Form of Agreement, Form of Bond, and Addenda issued and attached to the plans and specifications on file in the office of the City Engineer, hereby proposes to provide and furnish all the labor, materials, tools, and expendable equipment necessary to perform and complete in a workmanlike manner the specified construction on this project for the City of Madison; all in accordance with the plans and specifications as prepared by the City Engineer, including Addenda Nos. _____ through _____ to the Contract, at the prices for said work as contained in this proposal. (Electronic bids submittals shall acknowledge addendum under Section E and shall not acknowledge here)
2. If awarded the Contract, we will initiate action within seven (7) days after notification or in accordance with the date specified in the contract to begin work and will proceed with diligence to bring the project to full completion within the number of work days allowed in the Contract or by the calendar date stated in the Contract.
3. The undersigned Bidder or Contractor certifies that he/she is not a party to any contract, combination in form of trust or otherwise, or conspiracy in restraint of trade or commerce or any other violation of the anti-trust laws of the State of Wisconsin or of the United States, with respect to this bid or contract or otherwise.
4. I hereby certify that I have met the Bid Bond Requirements as specified in Section 102.5. *(IF BID BOND IS USED, IT SHALL BE SUBMITTED ON THE FORMS PROVIDED BY THE CITY. FAILURE TO DO SO MAY RESULT IN REJECTION OF THE BID).*
5. I hereby certify that all statements herein are made on behalf of _____ (name of corporation, partnership, or person submitting bid) a corporation organized and existing under the laws of the State of _____ a partnership consisting of _____; an individual trading as _____; of the City of _____ State of _____; that I have examined and carefully prepared this Proposal, from the plans and specifications and have checked the same in detail before submitting this Proposal; that I have fully authority to make such statements and submit this Proposal in (its, their) behalf; and that the said statements are true and correct.

SIGNATURE

TITLE, IF ANY

Sworn and subscribed to before me this _____ day of _____, 20_____.

(Notary Public or other officer authorized to administer oaths)

My Commission Expires _____

Bidders shall not add any conditions or qualifying statements to this Proposal.

SECTION F: BEST VALUE CONTRACTING

**CIPP WATER MAIN REHAB 2023 - FISH HATCHERY ROAD/LAKE MENDOTA DRIVE
CONTRACT NO. 9319**

Best Value Contracting

1. The Contractor shall indicate the non-apprenticeable trades used on this contract.

2. Madison General Ordinance (M.G.O.), 33.07(7), does provide for some exemptions from the active apprentice requirement. Apprenticeable trades are those trades considered apprenticeable by the State of Wisconsin. Please check applicable box if you are seeking an exemption.

- Contractor has a total skilled workforce of four or less individuals in all apprenticeable trades combined.
- No available trade training program; The Contractor has been rejected by the only available trade training program, or there is no trade training program within 90 miles.
- Contractor is not using an apprentice due to having a journey worker on layoff status, provided the journey worker was employed by the contractor in the past six months.
- First-time Contractor on City of Madison Public Works contract requests a onetime exemption but intends to comply on all future contracts and is taking steps typical of a "good faith" effort.
- Contractor has been in business less than one year.
- Contractor doesn't have enough journeyman trade workers to qualify for a trade training program in that respective trade.
- An exemption is granted in accordance with a time period of a "Documented Depression" as defined by the State of Wisconsin.

3. The Contractor shall indicate on the following section which apprenticeable trades are to be used on this contract. Compliance with active apprenticeship, to the extent required by M.G.O. 33.07(7), shall be satisfied by documentation from an applicable trade training body; an apprenticeship contract with the Wisconsin Department of Workforce Development or a similar agency in another state; or the U.S Department of Labor. This documentation is required prior to the Contractor beginning work on the project site.

- The Contractor has reviewed the list and shall not use any apprenticeable trades on this project.

LIST APPRENTICABLE TRADES (check all that apply to your work to be performed on this contract)

- BRICKLAYER
- CARPENTER
- CEMENT MASON / CONCRETE FINISHER
- CEMENT MASON (HEAVY HIGHWAY)
- CONSTRUCTION CRAFT LABORER
- DATA COMMUNICATION INSTALLER
- ELECTRICIAN
- ENVIRONMENTAL SYSTEMS TECHNICIAN / HVAC SERVICE TECH/HVAC INSTALL / SERVICE
- GLAZIER
- HEAVY EQUIPMENT OPERATOR / OPERATING ENGINEER
- INSULATION WORKER (HEAT & FROST)
- IRON WORKER
- IRON WORKER (ASSEMBLER, METAL BLDGS)
- PAINTER & DECORATOR
- PLASTERER
- PLUMBER
- RESIDENTIAL ELECTRICIAN
- ROOFER & WATER PROOFER
- SHEET METAL WORKER
- SPRINKLER FITTER
- STEAMFITTER
- STEAMFITTER (REFRIGERATION)
- STEAMFITTER (SERVICE)
- TAPER & FINISHER
- TELECOMMUNICATIONS (VOICE, DATA & VIDEO) INSTALLER-TECHNICIAN
- TILE SETTER

SECTION G: BID BOND

LET ALL KNOW BY THESE DOCUMENTS PRESENTED, THAT Principal and Surety, as identified below, are held and firmly bound unto the City of Madison, (hereinafter referred to as the "Obligee"), in the sum of five per cent (5%) of the amount of the total bid or bids of the Principal herein accepted by the Obligee, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that, whereas the Principal has submitted, to the City of Madison a certain bid, including the related alternate, and substitute bids attached hereto and hereby made a part hereof, to enter into a contract in writing for the construction of:

CIPP WATER MAIN REHAB 2023 - FISH HATCHERY ROAD/LAKE MENDOTA DRIVE CONTRACT NO. 9319

1. If said bid is rejected by the Obligee, then this obligation shall be void.
2. If said bid is accepted by the Obligee and the Principal shall execute and deliver a contract in the form specified by the Obligee (properly completed in accordance with said bid) and shall furnish a bond for his/her faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be void.

If said bid is accepted by the Obligee and the Principal shall fail to execute and deliver the contract and the performance and payment bond noted in 2. above executed by this Surety, or other Surety approved by the City of Madison, all within the time specified or any extension thereof, the Principal and Surety agree jointly and severally to forfeit to the Obligee as liquidated damages the sum mentioned above, it being understood that the liability of the Surety for any and all claims hereunder shall in no event exceed the sum of this obligation as stated, and it is further understood that the Principal and Surety reserve the right to recover from the Obligee that portion of the forfeited sum which exceed the actual liquidated damages incurred by the Obligee.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the Obligee may accept such bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year set forth below.

Seal PRINCIPAL

Name of Principal

By _____ Date _____

Name and Title

Seal SURETY

Name of Surety

By _____ Date _____

Name and Title

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under National Provider No. _____ for the year _____, and appointed as attorney in fact with authority to execute this bid bond and the payment and performance bond referred to above, which power of attorney has not been revoked.

Date

Agent Signature

Address

City, State and Zip Code

Telephone Number

NOTE TO SURETY & PRINCIPAL

The bid submitted which this bond guarantees shall be rejected if the following instrument is not attached to this bond:

Power of Attorney showing that the agent of Surety is currently authorized to execute bonds on behalf of the Surety, and in the amounts referenced above.

Certificate of Biennial Bid Bond

TIME PERIOD - VALID (FROM/TO)
NAME OF SURETY
NAME OF CONTRACTOR
CERTIFICATE HOLDER <p style="text-align: center;">City of Madison, Wisconsin</p>

This is to certify that a biennial bid bond issued by the above-named Surety is currently on file with the City of Madison.

This certificate is issued as a matter of information and conveys no rights upon the certificate holder and does not amend, extend or alter the coverage of the biennial bid bond.

Cancellation: Should the above policy be cancelled before the expiration date, the issuing Surety will give thirty (30) days written notice to the certificate holder indicated above.

Signature of Authorized Contractor Representative

Date

SECTION H: AGREEMENT

THIS AGREEMENT made this _____ day of _____ in the year Two Thousand and Twenty-Three between _____ hereinafter called the Contractor, and the City of Madison, Wisconsin, hereinafter called the City.

WHEREAS, the Common Council of the said City of Madison under the provisions of a resolution adopted _____, and by virtue of authority vested in the said Council, has awarded to the Contractor the work of performing certain construction.

NOW, THEREFORE, the Contractor and the City, for the consideration hereinafter named, agree as follows:

1. **Scope of Work.** The Contractor shall, perform the construction, execution and completion of the following listed complete work or improvement in full compliance with the Plans, Specifications, Standard Specifications, Supplemental Specifications, Special Provisions and contract; perform all items of work covered or stipulated in the proposal; perform all altered or extra work; and shall furnish, unless otherwise provided in the contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to the prosecution and completion of the work or improvements:

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2. **Completion Date/Contract Time.** Construction work must begin within seven (7) calendar days after the date appearing on mailed written notice to do so shall have been sent to the Contractor and shall be carried on at a rate so as to secure full completion SEE SPECIAL PROVISIONS, the rate of progress and the time of completion being essential conditions of this Agreement.
3. **Contract Price.** The City shall pay to the Contractor at the times, in the manner and on the conditions set forth in said specifications, the sum of _____ (\$_____) Dollars being the amount bid by such Contractor and which was awarded to him/her as provided by law.
4. **Affirmative Action.** In the performance of the services under this Agreement the Contractor agrees not to discriminate against any employee or applicant because of race, religion, marital status, age, color, sex, disability, 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. The 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.

The Contractor agrees that within thirty (30) days after the effective date of this agreement, the Contractor will provide to the City Affirmative Action Division certain workforce utilization statistics, using a form to be furnished by the City.

If the contract is still in effect, or if the City enters into a new agreement 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 City Affirmative Action Division 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 City Affirmative Action Division 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. The Contractor agrees to interview and consider candidates referred by the Affirmative Action Division 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 started in the notice.

Articles of Agreement

Article I

The Contractor shall take affirmative action in accordance with the provisions of this contract to insure 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 worker's 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 V

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 Affirmative Action Division Manager.

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 Affirmative Action Division 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 Section 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:

1. Cancel, terminate or suspend this Contract in whole or in part.
2. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.
3. 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 non-complying subcontractor.

Article VIII

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.)

5. Substance Abuse Prevention Program Required. Prior to commencing work on the Contract, the Contractor, and any Subcontractor, shall have in place a written program for the prevention of substance abuse among its employees as required under Wis. Stat. Sec. 103.503.
6. **Contractor Hiring Practices.**

Ban the Box - Arrest and Criminal Background Checks. (Sec. 39.08, MGO)

This provision applies to all prime contractors on contracts entered into on or after January 1, 2016, and all subcontractors who are required to meet prequalification requirements under MGO 33.07(7)(l), MGO as of the first time they seek or renew pre-qualification status on or after January 1, 2016. The City will monitor compliance of subcontractors through the pre-qualification process.

- 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 shall 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, Contractor has the burden of demonstrating that there is an applicable law or regulation that requires the hiring practice in question, if so, the contractor is exempt from all of the requirements of this ordinance for the position(s) in question.

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DRIVE
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IN WITNESS WHEREOF, the Contractor has hereunto set his/her hand and seal and the City has caused this contract to be sealed with its corporate seal and to be executed by its Mayor and City Clerk on the dates written below.

Countersigned:

	Company Name
Witness	Date
Witness	Date

Company Name

Witness

Date

President

Date

Witness

Date

Secretary

Date

CITY OF MADISON, WISCONSIN

Provisions have been made to pay the liability that will accrue under this contract.

Approved as to form:

	City Attorney
Finance Director	Date
Witness	Date
Witness	Date

City Attorney

Date

Finance Director

Date

Mayor

Date

Witness

Date

City Clerk

Date

SECTION I: PAYMENT AND PERFORMANCE BOND

LET ALL KNOW BY THESE DOCUMENTS PRESENTED, that we _____
as principal, and _____
Company of _____ as surety, are held and firmly bound unto the City of
Madison, Wisconsin, in the sum of _____ (\$_____) Dollars, lawful money of the United
States, for the payment of which sum to the City of Madison, we hereby bind ourselves and our
respective executors and administrators firmly by these presents.

The condition of this Bond is such that if the above bounden shall on his/her part fully and faithfully
perform all of the terms of the Contract entered into between him/herself and the City of Madison for the
construction of:

**CIPP WATER MAIN REHAB 2023 - FISH HATCHERY ROAD/LAKE MENDOTA
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in Madison, Wisconsin, and shall pay all claims for labor performed and material furnished in the
prosecution of said work, and save the City harmless from all claims for damages because of negligence
in the prosecution of said work, and shall save harmless the said City from all claims for compensation
(under Chapter 102, Wisconsin Statutes) of employees and employees of subcontractor, then this Bond is
to be void, otherwise of full force, virtue and effect.

Signed and sealed this _____ day of _____

Countersigned:

Company Name (Principal)

Witness

President Seal

Secretary

Approved as to form:

Surety Seal
 Salary Employee Commission

City Attorney

By _____
Attorney-in-Fact

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under
National Producer Number _____ for the year _____, and appointed as attorney-in-fact
with authority to execute this payment and performance bond which power of attorney has not been
revoked.

Date

Agent Signature