

REQUEST FOR PROPOSAL

Underwater Dive Inspections

for

CITY OF MILWAUKEE-OWNED BRIDGES

ISSUED BY:
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION



Proposals to be submitted:

No Later Than 4:00pm CST

March 6, 2013

LATE SUBMITTALS WILL BE REJECTED

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REQUEST FOR PROPOSAL

Introduction and Background

The City of Milwaukee is requesting proposals to perform the 60-month underwater dive inspection for all 31 applicable City of Milwaukee-owned bridges. The City of Milwaukee additionally is requesting proposals to perform hydraulic analysis for two City of Milwaukee bridges, per Appendix A of this document.

Scope of Services

Underwater Dive Inspections

The scope of the work pertaining to the underwater dive inspections will include planning, preparing, scheduling and performance of the dive inspections using experienced diving teams and the necessary dive and inspection equipment, preparation of written reports, which may include sketches of deficiencies, recommendations for completing and scheduling corrective action, a cost estimate for accomplishing the corrective action and scheduling corrective action. Upon request of the City, the consultant shall also be prepared to produce, in a timely manner, detailed repair plans for correcting any serious deficiency found during the course of the inspections as a separate work order. The inspections must be accomplished, and the reports must be written, under the direction of a Wisconsin registered Professional Engineer. All diving and inspections are to be performed in accordance with the standards and techniques outlined in the Request for Proposal.

The schedule of the bridges to be inspected is given in Appendix A.

Hydraulic Analysis

The City is requesting a hydraulic analysis to be performed on two bridges.

1. North 43rd Street over the Kinnickinnic River (B-40-561):

The 43rd Street Bridge has a shallow streambed. The bridge foundations are typically inspected via underwater probe and streambed profile inspections. The 2012 inspection has determined there is a large area of scour west (upstream) of the south abutment. Due to the depth of the streambed at the southwest corner of the abutment, the footings cannot be safely inspected using an underwater probing method. The

bridge is on spread footings, with no piling. A hydraulic analysis is being requested to determine the calculated potential depth of the scour, and recommendation and type of streambed stabilization, if needed (e.g., rip rap, etc.).

2. West Becher Street over the Kinnickinnic River (P-40-794):

The Becher Street Bridge is a scour-critical bridge (NBIS Code 113 = 3). A scour analysis was performed on the bridge in 1997, which suggested that rip rap be placed at the piers. Due to the recommendation being suggested 16 years ago, a hydraulic analysis is being requested to determine the size and amount of rip rap recommended for the piers.

The Kinnickinnic River was dredged during a sediment remediation project in 2009. Streambed profile and hydraulic information can be provided by the City of Milwaukee.

Diving Inspector Qualification and Safety Standards

The inspections must be done under the direction of a registered professional engineer. Divers must be bridge inspectors certified by the National Highway Institute or registered professional engineers who are certified divers. The responsible registered engineer must have five years experience in bridge inspection or equivalent underwater structure inspection experience.

All diving operations shall be performed in accordance with the applicable Occupational Safety and Health Administration (OSHA) standards and the Wisconsin Department of Transportation (WisDOT) Dive Manual, as well as local safety standards.

Project Timetable

It is expected that the selected consultant will perform underwater dive inspection of the bridges and will have a final report submitted by November 4, 2013. Per Federal Highway Administration inspection interval requirements, each bridge shall be inspected this year in the calendar month that the bridge was inspected in 2008. See Appendix A for the inspection schedule. The procurement schedule for services is as follows:

- | | |
|---|-------------------|
| 1. Availability of RFP | February 14, 2013 |
| 2. Written Requests for Clarification | February 25, 2013 |
| 3. Response to Requests for Clarification | February 28, 2013 |
| 4. Submittal Due Date | March 6, 2013 |
| 5. Oral Interviews (if necessary) | March 18, 2013 |
| 6. Notification of Selected Firm | March 22, 2013 |

- | | |
|--------------------------------|------------------|
| 7. Submission of Draft Reports | October 7, 2013 |
| 8. Submission of Final Reports | November 4, 2013 |

Changes in the RFP

The City reserves the right to make changes, issue supplementary information or guidelines relating to this RFP.

Type of Contract

The contract resulting from this RFP will be a lump sum contract. Compensation for extra work will be negotiated on the basis of detailed man-hour and equipment costs.

Project Administration

The City of Milwaukee Infrastructure Services Division is the lead administrative agency for this project. The consultant will report directly to the City Engineer or his designee.

Design of Detailed Repair Scheme and Construction Inspection

The Consultant shall be prepared to produce detailed repair plans for fixing any deficiencies as recommended above and shall provide diving services for construction inspection of the repairs. This shall be done by a separate work order from the inspections.

Critical Conditions

The owning agency, City of Milwaukee, shall be contacted immediately when structural deficiencies serious enough to cause a current or imminent traffic safety hazard are detected.

Meetings

Progress meetings will be held to answer questions, provide information to both parties and discuss schedules. It is anticipated that one meeting will be required at the start of the contract work and one meeting will be required after submission of the final contract documents. Other meetings will be scheduled as needed.

The Engineering Consultant performing the underwater bridge inspection shall attend all meetings scheduled in connection with this inspection when required by the City.

Underwater Bridge Inspections

General

Inspection shall be done in accordance with the National Bridge Inspection Standards (NBIS), the AASHTO Manual for the Condition Evaluation of Bridges, FHWA Report FHWA-DP-80-1 “Underwater Inspection of Bridges”, the WisDOT Structure Inspection Manual, the Wisconsin Bridge Inspection Manual, and the Bridge Inspection Pocket Manual.

All portions of all faces of all underwater structural elements including the portion of these elements subjected to periodic submersion shall be inspected at Level 1. Members that cannot be examined because of debris, vegetation or other reasons should be cleaned and inspected at Level 2 if it can be done with the use of hand tools. Where zebra mussels are required to be removed, a 1-foot wide vertical strip will be cleaned every 10 feet around the perimeter of the substructure unit. If additional cleaning, or extraordinary removals are required, work will be completed under a separate work order. Level 3 inspections shall be conducted where appropriate. Scuba or surface supplied diving equipment shall be used for the inspection of all underwater structural elements.

The inspection techniques used shall be sufficient to yield information necessary to make a general condition assessment of the underwater structural elements of each bridge listed. Any areas of mechanical damage or deterioration shall be identified and assessment made of the reasons for an extent of this damage or deterioration. In making the inspection, the diver shall have tools necessary for probing, measuring and recording the conditions found.

Concrete members shall be struck with a hammer to gauge the soundness of the concrete and to detect any softness that might be present. Only non-destructive methods of inspection shall be employed.

Deficiencies shall be described in enough detail to allow rates of change to be monitored over consecutive inspections. This requires use of size and location, dimensions, sketches, photographs or videos. Deficiencies shall be compared to similar areas above water.

Spalled areas shall be measured on a square foot basis. Depth of spalled areas shall be measured in inches. Location of damage or deterioration shall be accurately recorded utilizing sketches, photographs or video.

Areas of exposed reinforcing steel shall be documented and recorded as to location.

Steel members will be inspected for corrosion, distortion and section loss. Marine growth shall be documented and inspected. Deficiencies shall be measured in inches and compared to similar areas above water.

Timber members shall be checked for damage, soundness, decay and section loss. The presence of fungi or marine growth shall be documented. Timber members shall be probed with an awl in splash zone areas to check for structural integrity. Deficiencies will be measured in inches and compared to similar areas above water.

Scoured areas at the base of support piers and abutments shall be measured in inches and feet as to depth, width and penetration beneath the substructure. Sketches, photographs or videos shall be made of these areas. The area around the supports shall be inspected for mussels. The presence or absence shall be noted on the report.

Provide elevation of streambed profile and in relation to the bottom of substructure foundation. Provide elevation plan of streambed profile at fascia of both ends of bridge and 100 feet and 200 feet upstream and downstream of bridge.

When required, photographs and/or video should be used to illustrate typical examples of severe and/or common type deficiencies. Also, for the most severe deficiencies, one photograph illustrating a typical example should include a scale, such as a ruler or common hand tool. The essential features of a deficiency shall be emphasized by making arrows, or dimensions directly on the photograph or video.

The City of Milwaukee will provide previous underwater inspection reports in electronic format where available, as well as a general plan sheet and details of underwater elements to the Consultant. The Consultant shall review these documents prior to the dive. Where plans are not available, the Consultant shall provide sketches of underwater elements as part of the report.

Complete underwater substructure inspection services shall be provided including the use of experienced diving teams and equipment necessary to inspect the underwater structural elements of the bridges per the list in the Bridge Inspection Schedule in Appendix A of this RFP. The City of Milwaukee shall be provided with a comprehensive report that details the general condition of the substructure and channel, the relative elevation of the streambed in relation to the bottom of the substructure foundation, identifies areas of

damage and deterioration and outlines the required corrective action. The report shall be signed and stamped by a Wisconsin registered Professional Engineer.

Report

General

The finds of this investigation shall be assembled in report form, which shall be signed and stamped by a registered professional engineer. Five paper copies and two electronic copy of the report shall be submitted to the City of Milwaukee. Two copies will be for the City of Milwaukee's use, one copy for Milwaukee County, one copy for the WisDOT regional office, and one copy to the WisDOT Bureau of Structures. Each report shall contain original photographs.

Each report shall contain the bridge name, city identification number, state identification number, feature on, feature under and date of inspection.

In addition, the consultant shall prepare a summary report. The cost of this report shall be incidental to the fee for the individual inspections and no additional compensation will be made. New terminology not commonly understood by non-inspection personnel should be minimized in the report, and values of rating shall be defined. The underwater substructure inspection report shall provide a comprehensive description of all underwater substructure and channel deficiencies, shall indicate the cause of deficiencies and shall specify required corrective action.

Format

The report for each bridge shall contain the following standard sections arranged in the indicated sequence.

Cover page

The cover page shall include bridge information, photograph showing the elevation of the bridge, consultant's name, and professional engineer's stamp.

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NBIS Coding Information

Based on the findings of the inspection, record the value of NBIS Item 60 (Substructure), 61 (Channel and Protection), 92B (Critical Feature Inspection), 93B

(Underwater Inspection Date). Item 113 (Scour Critical Bridges) shall be recorded for applicable bridges.

Comprehensive Report of Deficiencies

This section shall contain a comprehensive description of deficiencies that are significant. Descriptions shall provide details. The cause of deficiencies shall also be identified.

In addition, the report shall include comment and/or conclusions on the significance of the streambed profiles. It shall also include observations of any dikes, jetties, riprap or other flood control devices or conditions affecting the flow of the river under the bridge.

Photographs

The report shall contain original photographs of the bridge, taken during the inspection. Provide photographs showing the overall view of both elevations of the bridge, the abutments, piers, and dolphins (if applicable).

Recommendation Including Corrective Action

The identity of deficiencies requiring maintenance, repair or rehabilitation (corrective action) shall be contained in this section including the methods, quantities and approximate costs of such action. Of all deficiencies identified, only those requiring corrective action shall be contained in this section. Structural deficiencies serious enough to cause a current or imminent traffic safety hazard must be flagged in the left margin with the word "CRITICAL" in capital letters adjacent to the element number. Also, the City should be immediately notified.

Streambed Profile Inspection Report

Based on findings from the inspection, the WisDOT DT2012 form shall be used to record the data for each bridge.

Underwater Bridge Inspection Dive Log

Based on findings from the inspection, the WisDOT DT2013 form shall be used to record the data for each bridge.

Underwater Dive Inspection

The Wisconsin Department of Transportation's Highway Structures Information System (HSIS) shall be used to enter and record the underwater dive inspection. The inspection shall be printed from the HSIS site on form WisDOT DT2007.

Underwater Inspection Plan and Profile

A plan and profile of the bridge shall be included in the report. The plan shall show the abutments, piers and dolphins (if present), the outline of the bridge deck above, and the direction of channel flow. The profile shall show the location and elevation of the abutment, piers, footings and piling (if present) of the bridge. Additionally, the plan and profile shall depict the following:

- a. Water elevation at the time of inspection.
- b. 2013 streambed profile.
- c. 2008 streambed profile. The 2008 streambed profile will be provided by the City of Milwaukee to be incorporated into the new profile drawings.

Channel Cross Sections

Drawings shall be included to depict the channel cross section. Cross sections shall be provided to depict the channel cross section at fascia of the bridge, and upstream and downstream of the bridge.

Execution

Prosecution and Progress

1. Work under this contract will be completed by November 4, 2013.
2. The consultant, or through the use of sub-consultants, is expected to furnish all manpower equipment material, supplies and other resources required to complete the work within the term of the contract. The consultant will obtain approval of the City prior to subcontracting any work after the contract has been awarded.

Contract Payment Schedule

Payment for any contract entered into as a result of this RFP will be made monthly upon receipt of the contractor's billing statement and progress report.

Basis of Payment

For work under this contract, the basis of payment will be a lump sum for each bridge per the following schedule, unless otherwise agreed. Partial payment of 70% will be made upon completion of the fieldwork. A 20% payment will be issued upon submitting the

draft report. The final 10% payment shall be issued upon completion and acceptance of the final report.

Proposal

Selection Process

Consultant selection will be based on qualifications, experience and the proposed work scope without emphasis on any one factor to the exclusion of others.

The proposals will be ranked and the selection of the most qualified consultant will be made based on the selection criteria.

Contract terms will be negotiated with the highest ranked consultant and will proceed until reaching an agreement on all provisions of the proposed contract. If contract negotiations cannot be satisfactorily completed within an appropriate timeframe, then negotiations will commence with the second ranked consultant.

Selection Criteria

Selection criteria used to evaluate proposals and select consultants will include, but not be limited to, the following:

1. Adherence to the intent of the RFP.
2. Objectivity of proposal.
3. Design of proposed work program.
4. Suitability of the project schedule.
5. The firm's general experience.
6. The firm's experience with similar projects and past performance on related assignments.
7. Current workload.
8. Qualifications of the consultant's staff (project manager, key personnel and subcontractors).
9. Local presence to coordinate and administer the project.

Preparing and Submitting Proposal

General

All proposals shall comply with the following instructions. These instructions are intended to ensure that submissions contain the information and documentation

required by the City of Milwaukee, and submissions have a degree of uniformity in the presentation of material, which will facilitate evaluation by the City's Evaluation and Selection Committee.

The evaluation and selection of a consultant and the contract will be based on the information contained in the proposals plus references. Failure to respond to each of the requirements in this RFP may be basis for rejecting a response.

Elaborate submittals beyond that sufficient to present a complete and effective proposal, are not necessary nor are desired. Emphasis should be on completeness and clarity of content.

All material submitted pursuant to the RFP shall become the property of the City of Milwaukee. All documents pertaining to the RFP shall be kept confidential during the selection process. No information about any proposals shall be released until the selection process is complete. The successful proposal may become public through an open records request after the selection has been made.

The contents of this RFP, including any changes/additions, and the proposal will become contractual obligations if a contract ensues. Changes to the proposal will not be allowed without prior written consent. Failure to adhere to these obligations may result in cancellation of a contract offer.

The selected consultant will be required to assume responsibility for all services offered in their proposal whether or not they perform them directly or through a sub-consultant.

The City is not liable for any costs incurred by the prospective consultants in response to this RFP, or any costs incurred in connection with any discussions, correspondence or attendance at interviews or negotiation sessions. Total liability of the City is limited to the terms and conditions of any contract resulting from this RFP.

Clarification and/or Revisions to the Specifications and Requirements

Any questions concerning this RFP must be submitted in writing or via e-mail no later than 4:00PM CST, February 25, 2013 to:

Mr. Craig Liberto, P.E.
Structural Design Manager
City of Milwaukee
Infrastructure Services Division
841 North Broadway, Room 907
Milwaukee, WI 53202
Fax: (414) 286-0475
Email: craig.liberto@milwaukee.gov

If a consultant discovers any significant ambiguity, error, conflict, discrepancy, omissions, or other deficiency in the RFP, the consultant should immediately notify the above named individual of such error and request modification or clarification of this RFP Document.

In the event that it becomes necessary to provide additional clarifying data or information, or to revise any part of this RFP, revisions/amendments and or addendums will be provided to all recipients of this initial RFP.

Proposal Format and Content

The proposal should be typed and submitted on 8.5 x 11-inch paper bound securely. Proposals should be organized and presented in the order and by the number assigned in this RFP. Proposals must contain the following information arranged in the following order. Each heading should be separated by tabs or otherwise clearly marked.

Cover Letter

The cover letter or executive summary should state briefly the key points of the firm's proposal.

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Introduction/Identification

- Name and addresses of all firms working on the job and where they are incorporated.
- Where the firms are licensed to operate
- Contact information of individual authorized to negotiate a contract for the firm or team.

Project Approach

- A general description of the firms approach to completing each of the objectives / tasks outlined in the Scope of Work.
- The consultant should provide information for addressing each of the tasks identified in the Scope of Work. Include a discussion of any substantive or innovative ideas that could be used on this project. The consultant is encouraged to present suggestions that they believe will simplify the project and result in lower costs of the work

Firm/Team Background, Qualifications, and Experience

- General description of the firm/team's background, specialties, etc.

- Approximate percentage and responsibilities for each firm on the team, if more than one firm is identified on the project.
- Identification of the firm/teams' recent experience on similar projects.

Team Staff – Experience and Qualifications

- Organization chart of key team members with a brief description of the project organization and management plan, including the respective functions of all team members. If subcontracts will be required, a detailed description of functions should be provided.
- The name of the proposed project manager, and an outline of the project staffing plan indicating the level of personnel to be involved in the project and the role that each member is anticipated to spend on the project. The outline of the project staffing plan should also include every party of a subcontractor arrangement. The project manager shall have at least 3-years of actual experience in administering projects of this scope.
- Resumes and relevant experience of key team members.

Schedule

The program schedule should include a proposed ordering of the tasks, length of time to complete each task, and proposed completion date for each task. The schedule should be provided in Gantt chart format.

Summary of Manpower Requirements

Provide a summary of manpower requirements with an hourly breakdown of the tasks set forth in the Scope of Work by each team member. Provide an initial estimated level of effort in man-hours by employee classification as well as rates of pay, overhead, profit, and a total guaranteed Maximum Price. Include a breakdown of expected reimbursement expenses, including equipment and travel. Further negotiations with the consultant selected to complete this project will establish the final level of effort and compensation for it.

Conflict of Interest Statement

The consultant should provide a list of any contracts with any entities in the adjacent area and a statement of no conflict of interests regarding this project and any other contracts.

Submitting the Proposal

- Consultants must submit an original and four copies (five total) of all materials required for acceptance of their proposal by 4:00PM CDT on March 6, 2013, to:

Mr. Jeffrey S. Polenske, P.E.
City Engineer
City of Milwaukee
Infrastructure Services Division
841 North Broadway, Room 701
Milwaukee, WI 53202

- The proposal must conform to the format and content prescribed in this RFP. The City reserves the right to reject any or all proposals that fail to adhere to this format and content.
- Proposals must be received in the above office by the specified time stated above. All submittals must be time-stamped in the City Engineers office by the stated time.
- Proposals received after the deadline will be returned to the sender unopened.

Questions about this RFP

All questions regarding this RFP from prospective consultants must be directed to the City Engineer. Any questions and answers, which, in the opinion of the City Engineer, require clarification to the RFP, will be provided to all recipients of the RFP in a timely fashion.

Equal Employment Opportunity

The consultant shall abide by all existing Federal, State and local laws. Due to the specialized nature of this RFP scope, this project will not have a Small Business Enterprise (SBE) or Resident Preference Program (RPP) participation requirement.

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Appendix A: Bridge Inspection Schedule

Appendix B: Bridge Location Maps

Appendix A
Bridge Inspection Schedule

Per the Federal Highway Administration, underwater dive inspections must be performed at an interval no greater than 60 months. This has been interpreted to mean an underwater dive inspection must be performed no later than the calendar month five years after the original inspection was performed.

Appendix A gives a schedule of the month that the bridges must be inspected by in order to be compliant with FHWA inspection intervals. Inspections can be performed prior to the calendar month the inspection is due.

Consultant shall inform the City and the Coast Guard as to dive schedule. The City of Milwaukee may provide a diver for observation and quality assurance.

Note that the East Pleasant Street Bridge (City No. 112, State No. B-40-406) will be under construction during the time of the dive inspection. The West St. Paul Avenue Bridge (City No. 103, State No. P-40-523) is scheduled for rehabilitation in August 2013. Please provide a one-week advance notice to the City for coordination with the bridge contractor.

Schedule of Bridges for Inspection

| City No. | State No. | Feature On | Feature Under | Last Inspection |
|----------|-----------|------------|---------------|-----------------|
|----------|-----------|------------|---------------|-----------------|

May Inspections

| | | | | |
|-----|------------|-------------------|-----------------|-----------|
| 305 | B-40-513-2 | South 27th Street | Menomonee River | 5/29/2008 |
| 306 | P-40-847 | South 35th Street | Menomonee River | 5/29/2008 |

June Inspections

| | | | | |
|------|-------------|-----------------------------------|-----------------------|-----------|
| 302 | B-40-560 | South 11th Street | Burnham Canal | 6/2/2008 |
| 301 | B-40-414-B | North 6th Street | Menomonee River | 6/2/2008 |
| 303 | B-40-605 | North Emmber Lane | Menomonee River | 6/2/2008 |
| 304 | B-40-550-14 | North 16th Street | Menomonee River | 6/2/2008 |
| 318 | P-40-654 | North 25th Street | Menomonee River | 6/2/2008 |
| 301 | B-40-413-B | South 6th Street | South Menomonee Canal | 6/2/2008 |
| 200 | B-40-591 | South Kinnickinnic Street | Kinnickinic River | 6/3/2008 |
| 201 | P-40-830 | South 1st Street | Kinnickinnic River | 6/3/2008 |
| 202 | P-40-794 | West Becher Street | Kinnickinnic River | 6/3/2008 |
| 300 | P-40-539 | North Plankinton Avenue | Menomonee River | 6/5/2008 |
| 103 | P-40-523 | West St. Paul Avenue | Milwaukee River | 6/5/2008 |
| 104 | P-40-868 | East Clybourn Avenue | Milwaukee River | 6/5/2008 |
| 105 | P-40-886 | East Michigan Street | Milwaukee River | 6/6/2008 |
| 106 | B-40-488 | West Wisconsin Avenue | Milwaukee River | 6/6/2008 |
| 107 | B-40-544 | West Wells Street | Milwaukee River | 6/25/2008 |
| 109 | B-40-980 | West State Street | Milwaukee River | 6/25/2008 |
| 110 | B-40-757 | West Juneau Avenue | Milwaukee River | 6/25/2008 |
| 111 | P-40-864 | West Cherry Street | Milwaukee River | 6/26/2008 |
| 112 | B-40-406 | East Pleasant Street | Milwaukee River | 6/26/2008 |
| 1018 | B-40-907 | West Highland Avenue | Milwaukee River | 6/26/2008 |
| 100 | B-40-952 | North Broadway Street | Milwaukee River | 6/30/2008 |
| 101 | B-40-548 | North Water Street | Milwaukee River | 6/30/2008 |
| 113 | P-40-875 | North Holton Street | Milwaukee River | 6/30/2008 |
| 114 | B-40-726 | North Humboldt Avenue | Milwaukee River | 6/30/2008 |
| 118 | B-40-062 | West McKinley Ave./East Knapp St. | Milwaukee River | 6/30/2008 |

August Inspections

| | | | | |
|-----|----------|----------------------|-----------------|-----------|
| 319 | B-40-711 | West Canal Street | Menomonee River | 8/10/2008 |
| 108 | P-40-881 | West Kilbourn Avenue | Milwaukee River | 8/19/2008 |

Open Date (No Previous Underwater Inspection)

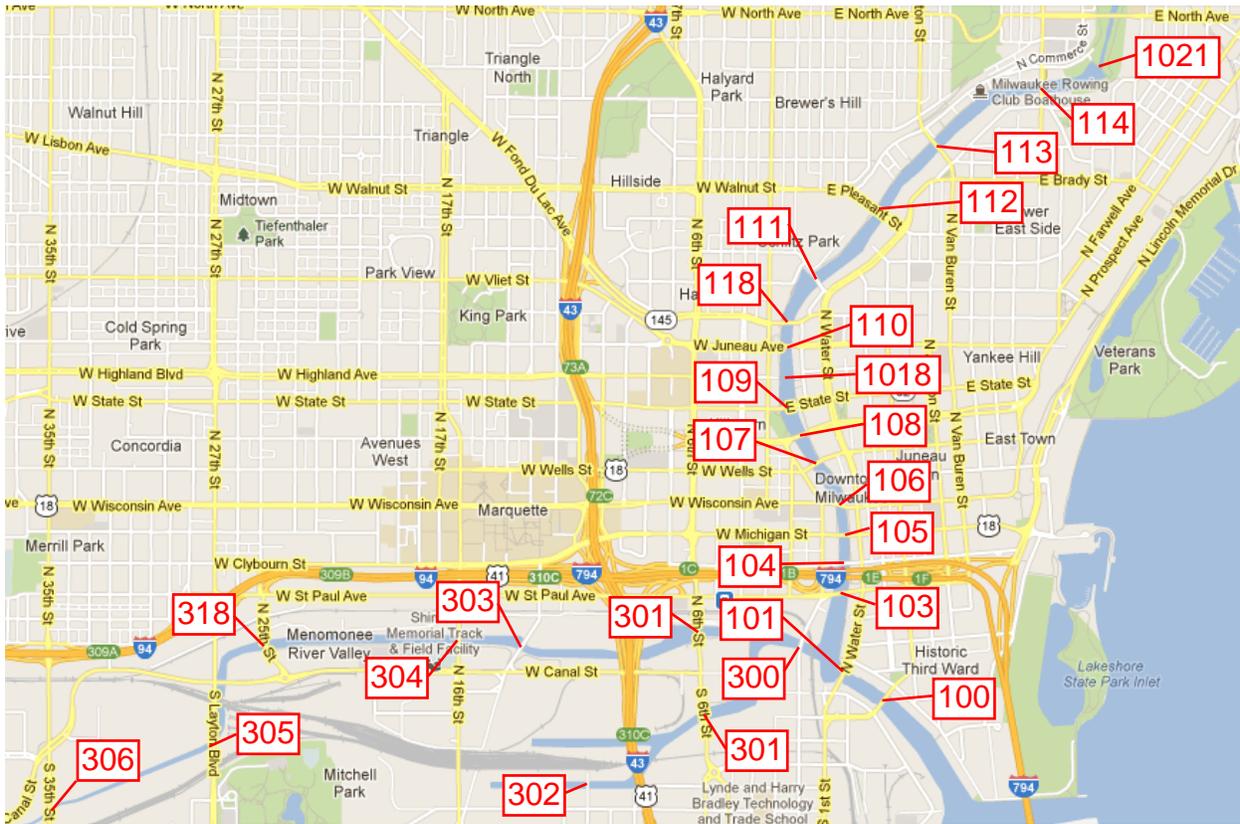
| | | | | |
|------|----------|-----------------------|-----------------|--|
| 925 | P-40-873 | North Hawley Road | Menomonee River | |
| 1021 | B-40-909 | West North Avenue Dam | Milwaukee River | |

Schedule of Bridges for Hydraulic Analysis

| | | | |
|-----|----------|--------------------|--------------------|
| 202 | P-40-794 | West Becher Street | Kinnickinnic River |
| 227 | B-40-561 | North 43rd Street | Kinnickinnic River |

Appendix B
Bridge Location Maps

Milwaukee and Menomonee River Bridges



Milwaukee River Bridges

| | |
|-----|--|
| 100 | North Broadway Street |
| 101 | North Water Street |
| 103 | West St. Paul Avenue |
| 104 | East Clybourn Avenue |
| 105 | East Michigan Street |
| 106 | West Wisconsin Avenue |
| 107 | West Wells Street |
| 108 | West Kilbourn Avenue |
| 109 | West State Street |
| 110 | West Juneau Avenue |
| 111 | West Cherry Street |
| 112 | East Pleasant Street |
| 113 | North Holton Street |
| 114 | North Humboldt Avenue |
| 118 | West McKinley Avenue/East Knapp Street |

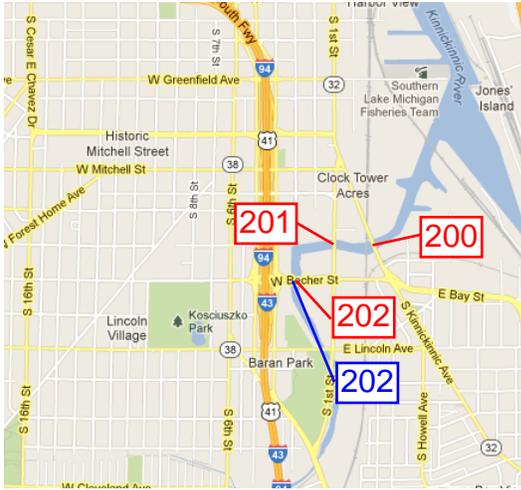
Menomonee River Bridges

| | |
|-----|-------------------------------|
| 300 | Plankinton |
| 301 | North 6 th Street |
| 301 | South 6 th Street |
| 302 | South 11 th Street |
| 303 | Emmber Lane |
| 304 | North 16 th Street |
| 305 | South 27 th Street |
| 306 | South 35 th Street |

Pedestrian Bridges

| | |
|------|------------------|
| 1018 | Highland |
| 1021 | North Avenue Dam |

Kinnickinnic River Bridges

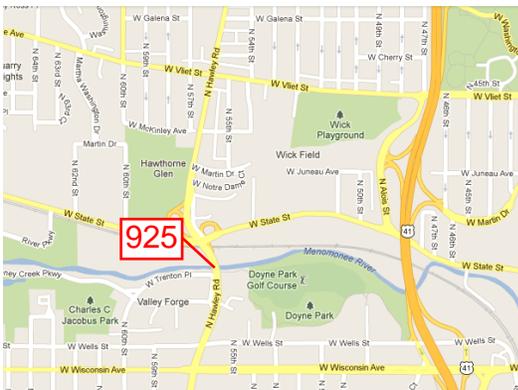


- 200 South Kinnickinnic Street
- 201 South 1st Street
- 202 West Becher Street (UW Dive Inspection and Hydraulic Analysis)



- 227 North 43rd Street (Hydraulic Analysis only)

Menomonee River Bridge



- 925 North Hawley Road