

Statement of Work
Rustic Wooden Bridge Restoration
Lake Park, Milwaukee, Wisconsin
July 2018



Background

Lake Park's Rustic Wooden Pedestrian Bridge (Bridge) is located within the Locust Street Ravine in Lake Park, Milwaukee, WI. Lake Park is a Fredrick Law Olmsted-designed park owned by Milwaukee County and is on the National Register of Historic Places. Olmsted's original design plans for the park includes a rustic bridge in this location, and a bridge similar in rustic style to the current bridge has existed in this location since approximately 1893.

Plans are not available for either the existing bridge (Photo A) or the original bridge (circa 1906) (Photos Bi and Bii). The existing bridge is believed to have been constructed in the 1970's and is wood framed with three spans, each approximately 19-feet long. The bridge deck sits on, and the wood railings are bolted to, a timber joist and beam system supported by concrete foundations and wood columns. There are two sets of two square cast-in place concrete piers at the north and south ends of the Bridge, each with a rough grade beam poured over, connecting the two piers. The grade beams support the bridge joists. The piers and grade beams have tipped in the downhill direction, and there is evidence of historical attempts to repair this with concrete blocks (see Photos C and D). The timber columns sit on concrete piers set in the bottom of the ravine (see Photos E and F). The Milwaukee County engineer believes these piers may be shifting, although this has not been verified. The timber columns and the beams, which span between the columns, are in poor condition or rotted. As a result, the deck drops to the south and the entire bridge tilts to the west. At both ends of the Bridge, the walking paths slope towards the bridge, which is putting pressure on and undermining the piers and grade beams. Because it is dangerous, Milwaukee County closed the bridge in 2016.

Because of Milwaukee County budget shortfalls, Lake Park Friends, the non-for-profit steward of Lake Park, is issuing this request for proposal (RFP) to design and restore the Bridge. Lake Park Friends will be using funds raised through fundraising efforts to pay for this project. Milwaukee County, as owner of Lake Park, will review

and approve all design plans and certify construction completion. Because Lake Park is a historically significant park, the bridge design will also undergo review by the City of Milwaukee Historic Preservation Commission and possibly by the State Historic Preservation Officer. This historic preservation review coordination is not part of this statement of work and will be performed by Lake Park Friends, using the design plans prepared by the Contractor.

This Statement of Work outlines the project objective and project requirements, but does not specify the tasks or means and methods to achieve the project objective. It is the Contractor's responsibility to propose those tasks and identify the appropriate means and methods needed to implement those tasks.

Project Objective

The objective of this contract is to restore pedestrian and bike traffic across this stretch of the Locust Street Ravine with a rustic wooden bridge similar in style and appearance to the existing bridge. Lake Park Friends is also requesting Contractors provide an alternate proposal to restore the bridge in a similar style/appearance to the circa 1906 bridge (see the Request for Proposal).

The Contractor will design and construct a bridge to meet this primary objective, including, but not limited to the following: coordinating design reviews with Lake Park Friends and Milwaukee County and obtaining design approval from Lake Park Friends; obtaining certification of construction complete from Milwaukee County; obtaining any applicable environmental permits; and completing any needed geotechnical testing and/or analyses.

Project Requirements

1. The Contractor must have the capability and experience to perform or provide the necessary project design and construction experience needed to meet the project objective, including having a WI-licensed Professional Structural Engineer who will be required to certify the design plan with the licensee's valid seal.
2. The bridge design shall meet a target design service life of 75 years.
3. The Contractor shall coordinate design reviews with Lake Park Friends and Milwaukee County and obtain design approval from Lake Park Friends and obtain certification of construction complete from Milwaukee County.
4. Consistent with the AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges, the pedestrian live load shall be 90 pounds per square foot; and, assuming a bridge width of 10 feet, which is consistent with the current bridge width, there shall also be a vehicle live load for an occasional single maintenance vehicle of a 10,000 lb truck. Bridge railings shall be at least 42-inches high.
5. The Contractor's proposal shall address the grading issues identified at the north and south ends of the bridge (see Background section) to help ensure the target design service life can be achieved.
6. Design plans shall be developed and submitted electronically and in hard copy using AutoCAD 13 (or later version) software. Final as-built drawings shall be prepared but can be red-lined final design plans.
7. The Contractor shall complete any needed testing and/or analyses for bridge design and construction (for example, geotechnical or other).
8. The Contractor shall obtain any applicable environmental permits and utility clearances (for example erosion control, right of entry permit, dig permits, etc.)

9. The Contractor shall dispose of off-site all waste generated during the project, including any vegetation removed for site access.
10. The Contractor shall restore any area impacted by construction to as near to pre-construction condition as possible. For clarification, if tree removal is needed for site access, the Contractor is not responsible for replacing a tree, however, if the Contractor damages grassy areas, the Contractor shall restore ruts and seed the damaged area, or if the Contractor removes or damages asphalt, this will need to be replaced/repared to pre-construction condition.
11. The Contractor shall provide at least a 1 year warranty on bridge construction.

Project Schedule

It is anticipated that construction would occur in fall/winter season to avoid impacts to sensitive wildlife (for example, plants and migrating birds). Milwaukee County's anticipated design plan review schedule is expected to be less than 2 weeks. City of Milwaukee Historic Preservation reviews are conducted monthly.



Photo A. Existing Bridge.

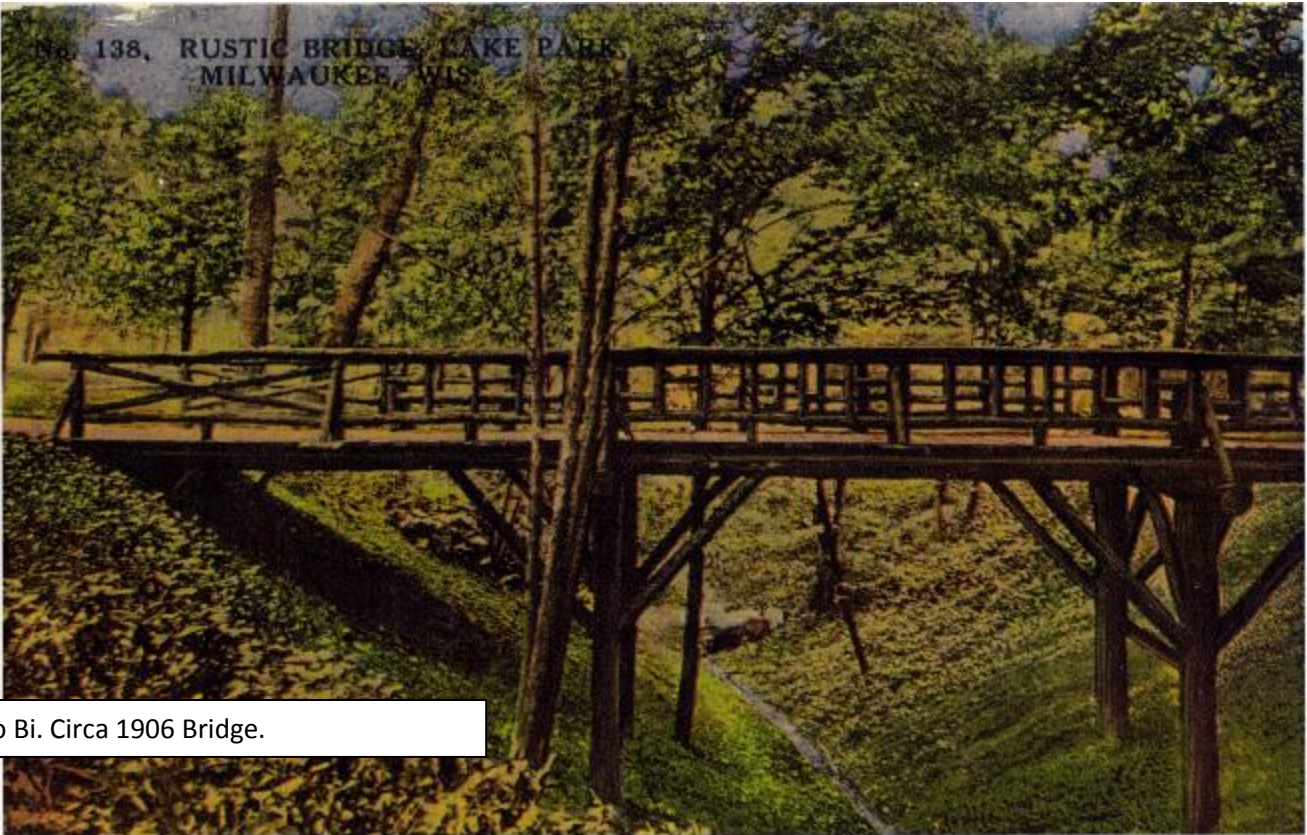


Photo Bi. Circa 1906 Bridge.



Photo Bii. Circa 1906 Bridge.



Photo C. North Concrete Foundation.



Photo D. South Concrete Foundation.



Photo E. Wood Columns/Concrete Piers.



Photo F. Wood Columns/Concrete Piers.