

November 15, 2013

MoDOT Central Office—Local Programs Administrator  
c/o MaryAnn Jacobs  
Intermediate Planning Technician  
105 West Capitol Ave.  
PO Box 270  
Jefferson City, MO 65102-0270

RE: Missouri's LPA On-Call Services, Structures

Dear Ms. Jacobs and Members of the Selection Committee:

Thouvenot, Wade & Moerchen, Inc. (TWM) is a 100% employee-owned firm providing Civil & Structural Engineering, Land Surveying, and Planning Services to the St. Louis metropolitan area, as well as throughout Missouri, Illinois, and the Midwest. Since our inception in 1946, TWM has expanded into five primary disciplines – Transportation, Structures, Land Development, Water / Wastewater, and Surveying. All of our five offices are local, making us the 13th largest engineering firm in the entire St. Louis region. Either our downtown St. Louis office or St. Charles office will lead any structural design projects with collaborative support from our full Structural Department.

Please accept this letter as our expressed interest in providing professional services to Missouri's Local Program Agencies for structural design projects.

#### GENERAL PROJECT EXPERIENCE

TWM designs hundreds of projects each year for a wide spectrum of clients. Over more than 65 years, that adds up to a wealth of experience. Included within that are some recent structural design projects such as these:

##### ***Glen Carbon Covered Bridge (Co. Hwy Funds)***

Provided preliminary design and construction engineering services for replacement of historical landmark in the Village of Glen Carbon, IL. In its latest Bridge Sufficiency Review, the Village's covered bridge carrying Main Street over Judy's Branch did not meet current structural standards and was recommended for near-term replacement. TWM designed the PPC deck beam bridge as well as a replica of the original wooden cover.

##### ***Wellington Avenue Bridge Over River des Peres (City STL Funds)***

The designers of the Wellington Ave bridge replacement chose a concrete slab structure because of site constraints. To support the massive concrete pour during construction, TWM's structural engineers designed an intricate falsework using steel beams the contractor had salvaged from other projects to create a shoring system that supported the uncured concrete. TWM also provided the necessary formwork heights at over 200 locations so the top of the completed slab would follow the proposed profile and superelevation.

##### ***U.S. Route 51 Over I-72 (Federal and State Funds)***

The complete removal and replacement of the US Route 51 bridge over I-72 south of Forsyth, IL was fast-tracked because concrete spalls were falling onto I-72 below. Despite the tight schedule and heavy traffic loads, the project was completed with just over 1% in extras - a testament to the thoroughness of the plans. The 2-span steel web girder (composite) bridge is 253' in length and 117' wide. Elevation of road profile was adjusted 3' to accommodate minimum clearance requirements over I-72.

##### ***Morgan Avenue Over I-57 (Federal and State Funds)***

TWM designed the Morgan Ave. bridge over I-57 in Marion, IL. The structure is comprised of 4 spans totaling 370' back-to-back of abutments with an out-to-out width of 38'. The superstructure consists of 54" PPC I-beams with a 7½" thick, cast-in-place, reinforced



#### PROJECT MANAGER

Sheila Kimlinger, PE, SE

#### Professional Licensure

PE: MO 2007, IL 1994, IN 2012  
SE: IL 1995

#### Education

MS, Civil Engineering - 1991  
BS, General Engineering - 1989

#### Contact:

Ph. (314) 241-6300  
F. (314) 241-2391  
skimlinger@twm-inc.com

#### TYPICAL STRUCTURAL DESIGN PROJECTS:

- Bridges
- Retaining Walls
- Culverts & Headwalls
- Temporary Shoring
- Overhead Signs
- Inspections & Evaluation
- Load Ratings
- Cost Estimates & Comparisons
- Value Engineering
- Staging Analysis

#### SUPPORT SERVICES:

- Surveys
- Hydraulic Analysis & Permitting
- Environmental Clearances
- Right of Way Documents
- Land Acquisition
- Coord. for Geotechnical Studies
- Coord. with Existing Utilities
- Roadway & Traffic Engineering
- Construction Inspection

**THOUVENOT, WADE & MOERCHEN, INC.**

■ 720 Olive Street, Suite 200A, St. Louis, MO 63101  
■ Phone: (314) 241-6300 Fax: (314) 241-2391 [www.twm-inc.com](http://www.twm-inc.com)

**EXCEPTIONAL SERVICE.  
NOTHING LESS.**

concrete deck. The substructure consists of integral abutments and multi-column piers on spread footings. TWM also designed modifications to the westbound State Route 13 access to and from I-57 to include collector-distributor roadways to provide access to and from the new Morgan Avenue bridge. Designed for Seismic Performance Category B loads.

#### ***Township Road 22 Bridge Over Fountain Creek (Co. Hwy Funds)***

As a result of the Great Flood of 1993, TWM was tasked with determining the most appropriate and cost effective solution to an unusual problem with the bridge carrying Township Road 22 over Fountain Creek in Monroe County, IL. Approximately 20' of the piles at the existing west abutment had been exposed by scour due to a levee break upstream. TWM's solution was to add piles to the existing pile bent abutment, transforming it into a pier, and allowing the addition of a 40' span and new abutment. The cost to do so was far less than the cost of complete replacement with a new structure.

#### ***Valmeyer Road Over Carr Creek (Federal and Co. Hwy Funds)***

TWM designed the replacement of this three-span deteriorating superstructure with PPC deck beams and an HMA surface. The existing abutments and piers were re-used. Riprap in the channel was replaced and new guardrail was installed. TWM conducted scour hydraulic survey and analysis, prepared a Bridge Condition Report and Preliminary Bridge Design & Hydraulic Report, obtained the necessary permits and approvals, and prepared the project development report along with plans, specifications, and estimate of cost.

#### **PAST PERFORMANCE**

Our 65+ year history of serving public sector clients includes countless instances of our ability to deliver 'on time', 'in budget' and 'done right.' For example, TWM value engineered the replacement of Union Road over I-55 in St. Louis County for MoDOT and Fred Weber, Inc. Under a condensed time schedule, TWM designed the structural steel and sent the plans to the steel fabricator for production while TWM continued designing the rest of the bridge. Redesigning for efficiency and economy, TWM lowered the project cost by \$430,000. Our engineers worked long hours and remained dedicated to the effort to assure that the project was done right and on time, because that's what we mean by "Exceptional Service. Nothing Less." As an additional indication of past performance, note that only about 15% of TWM's workload each year comes from new clients. The rest - 85% - is repeat business.

Many municipal clients will tell you that TWM is their 'go-to' firm and that client satisfaction with the design process is one of our greatest strengths. We engineer quality plans that result in minimal change orders during construction, efficiently and effectively planning and designing with the owner's needs, budget, and schedule as the highest priorities.

As a part of this on-call submittal process, we have provided three reference forms, all of which have rated TWM as "Excellent" for our structural design work. In addition, each of the descriptions of similar projects within our marketing brochure includes client contact information. We encourage you to call them for their candid opinion of our past performance. Or visit our webpage at [www.twm-inc.com](http://www.twm-inc.com) and choose any of the many projects we have listed, then call those clients and ask them for an unvarnished perspective.

#### **QUALIFICATIONS AND KEY PERSONNEL**

We have proposed that Sheila Kimlinger, P.E., S.E., serve as Project Manager. Sheila has 22 years of experience in designing and managing transportation and structural projects throughout the Midwest. Sheila will be supported by a full team of local TWM engineers, surveyors, and technical staff, including Scott Goforth, P.E., who will serve as Deputy Project Manager. The table on the following page depicts the breadth and depth of the experience among our staff, any of whom would be available to work on the project team or lend their expertise to your structural design projects.

While TWM can handle nearly every aspect of a structural design project, we frequently partner with other firms for services, such as geotechnical engineering and environmental reports, and to fulfill DBE goals. Depending on the client's specific needs, we have the flexibility and established relationships to build the team best suited to the project at hand.

TWM is proud to be an equal opportunity employer and never bases hiring decisions on race or gender. We have a voluntary affirmative action plan in place to encourage applications from a diverse population, and we actively recruit through channels that help reach those potential applicants. We also seek talented women within the engineering community. Currently, 36% of our individual shareholders, 31% of our managers, and 31% of our professional engineers are female—nearly double the St. Louis Metropolitan Statistical Area (MSA) availability figure of 16% female engineers. TWM strives to achieve a mixture of backgrounds and experience on every project in order to broaden the dynamics of the project team. By building a project team where age and background ranges significantly, TWM is able to combine conventional engineering methods with today's



TWM Experience	Years Experience	MODOT LPA Management Class	Bridges	Walls	Culverts / Headwalls	Temporary Shoring	Overhead Signs	ROW -Land Acq	Environ Clear	Hydraulic Studies	Surveying	Structural Cost Estimates
Sheila Kimlinger, PE, SE	22	X	X	X	X		X		X			X
Scott Goforth, PE	9	X		X	X				X	X		X
Mike Barnal, PLS	40							X			X	
Rusty Christmann, PE, SE	29		X	X	X	X	X					X
Angie Nemsky, PE, SE	28		X	X	X	X	X					X
Suzanne Goldak, PE	20									X		
Tony Erwin	20							X				X
J.R. Landeck, PE, PLS	12	X						X			X	
Dave Holdener, PE, SE	9		X	X	X	X	X					X
Matt Joost, PE, SE	8		X	X	X	X	X		X	X		X
Josh Stein, PE	7	X		X	X		X	X	X	X		X
Adam Rutz, EI	5		X	X	X	X	X					X
Tom Packman, EI	1		X	X	X	X	X					X

technology, resulting in a more efficient and higher quality product. TWM's current mentoring practices enhance professional growth among our diverse workforce of experienced managers as well as staff who are in earlier stages of their careers.

**FAMILIARITY & CAPABILITY**

We understand that the new LPA on-call list will become effective in Spring 2014. At this time all of our key personnel have the availability to be dedicated to their respective roles on the project team of any project for which we are selected. In addition, because our staff is all local to the greater St. Louis area, TWM is able to temporarily reassign and/or relocate staff as necessary to complete short project deadlines, a common occurrence for on-call type projects. Based on our committed workload to date, our availability firm-wide is 44.1% for 2014 and 97.7% for 2015.

Because TWM is quite familiar with working on federal projects, you can rest assured that your structural design project will be compliant with federal law. In the last 10 years, we have completed 15 bridge / structural design projects for Local Public Agencies using State and / or Federal funds, plus an additional 19 bridges on the DOT system. We are fully capable of providing the full range of services required to produce plans, specifications, and estimates to meet federal requirements. We have an impressive record of keeping projects on time and in budget for the Local Agencies we serve, and we will work diligently to meet your needs.

**ACCESSIBILITY**

TWM will manage your project from either our St. Louis or St. Charles office, depending on the project location. As mentioned above, however, our staff is readily available to easily shift locations to form project teams or to work closer to specific projects. We are also able to quickly establish new locations if required by a specific project or client. We aim to remain flexible in order to quickly respond to changing needs.

Our mission at TWM is "Exceptional Service, Nothing Less." The success of a project has a direct correlation to the quality of service and deliverables provided by the chosen consultant. A part of providing Exceptional Service to our clients is being 100% accountable for the deliverables that we provide over the course of our partnership. Therefore, in order to fulfill our mission, quality must be and is a top priority in our daily efforts.

All of the employee owners of TWM appreciate the opportunity to submit this LOI and welcome the possibility of demonstrating to you firsthand our capabilities and our level of client service on your projects. Should you need additional information or have questions, please feel free to contact me by phone at (314) 241-6300 or by email at [skimlinger@twm-inc.com](mailto:skimlinger@twm-inc.com).

Sincerely,

Sheila Kimlinger, P.E., S.E.

Manager, Transportation Engineering / Proposed Project Manager



**Missouri's  
Local  
Program**  
for community  
development



## STRUCTURES

Crucial to public safety, structural engineering demands attention to detail and a commitment to getting it right. Whether a building, a bridge or some other structure, TWM's structural engineers ensure that our designs are safe, meet or exceed the specified design parameters, perform in predictable ways during natural disasters, and make cost effective use of materials and resources. That is especially true in our value engineering services, where we analyze the design of others on behalf of a contractor and DOT, to make it more efficient and cost-effective. TWM examines both the cost and worth of each component of the original project design and brings those two measures as close to equal as possible, while still keeping public safety as our top priority.



Our expertise also includes field investigations, bridge condition reports, capacity ratings and evaluations, reconstruction of existing bridges, planning and design for new bridges, the design of earth retaining structures, box culverts, cut and cover type tunnels, overhead sign structures and foundations, detailed seismic analysis, pump stations, and design-build initiatives. In addition, our engineers have extensive experience with structural steel erection plans, especially for curved girder bridges.



These kinds of critical designs require a trusted partner like TWM.



### Structural Services

*New bridges for local, state, Interstate highways*

*Reconstruction of existing bridges*

*Culverts & Headwalls*

*Temporary Shoring*

*Retaining Walls*

*Overhead Signs*

*Staging Analysis*

*Seismic Analysis*

*Value Engineering*

*Cost Estimates & Comparisons*

*Inspections & Load Ratings*

### THOUVENOT, WADE & MOERCHEN, INC.

■ 720 Olive Street, Suite 200A, St. Louis, MO 63101  
■ Phone: (314) 241-6300 Fax: (314) 241-2391

■ 400 N. Fifth Street, Suite 101, St. Charles, MO 63301  
■ Phone: (636) 724-8300 Fax: (636) 724-8304

[www.twm-inc.com](http://www.twm-inc.com)

**OWNER:**  
Village of Glen Carbon, IL

**CONTACT:**  
Robert Jackstadt  
Mayor  
151 North Main Street  
Glen Carbon, IL 62034  
(618) 288-1200

**COMPLETION DATE:**  
2008

**CONSTRUCTION COST:**  
\$750,000

**TWM RESPONSIBILITIES:**  
Structural Engineering  
Civil Engineering  
Land Surveying

**TWM CONTACTS:**  
Rusty Christmann, P.E., S.E.  
Robert S. DeConcini, P.E.  
Angela L. Nemsy, P.E., S.E.  
Matthew J. Joost, P.E., S.E.



### GLEN CARBON COVERED BRIDGE

TWM provided preliminary design and construction engineering services for the replacement of a historical landmark in the Village of Glen Carbon, Illinois. In its latest Bridge Sufficiency Review, the Village's covered bridge carrying Main Street over Judy's Branch did not meet current structural standards and was recommended for near-term replacement. TWM designed the PPC deck beam bridge as well as a replica of the original wooden cover. The original bridge was built in 1976 to commemorate the nation's bicentennial, but vandals burned the bridge down within a few months of its opening and it was rebuilt in 1979.

**OWNER:**  
City of St. Louis, MO

**CLIENT:**  
Fred Weber Construction, Inc.

**CONTACT:**  
Justin Zimpfer  
Fred Weber, Inc.  
2320 Creve Coeur Mill Road  
Maryland Heights, MO 63043  
(314) 344-0070

**COMPLETION DATE:**  
2013 (est.)

**CONSTRUCTION COST:**  
\$5,220,000  
\$400,000 savings

**TWM RESPONSIBILITIES:**  
Structural Engineering

**TWM CONTACTS:**  
Rusty Christmann, P.E., S.E.  
David J. Holdener, P.E., S.E.  
Matthew J. Joost, P.E., S.E.



### WELLINGTON AVE BRIDGE OVER RIVER DES PERES

The designers of the Wellington Avenue bridge replacement chose a concrete slab structure because of site constraints. But when it came to actually supporting that massive concrete pour during construction, Fred Weber, Inc. turned to TWM. TWM's structural engineers designed an intricate falsework using steel beams the contractor had salvaged from other projects to create a shoring system that supported the uncured concrete. TWM also provided the contractor with the necessary formwork heights at over 200 locations so that the top of the completed slab would follow the proposed profile and superelevation.



**OWNER:**  
Illinois Department of  
Transportation, District 4

**CONTACT:**  
Joseph E. Crowe, P.E.  
Region 3 Engineer  
401 Main Street  
Peoria, IL 61602  
(309) 671-3333

**COMPLETION DATE:**  
2010

**CONSTRUCTION COST:**  
\$1,000,000 (full project)

**TWM RESPONSIBILITIES:**  
Civil Engineering  
Structural Engineering  
Land Surveying

**TWM CONTACTS:**  
Rusty Christmann, P.E., S.E.  
Sheila J. Kimlinger, P.E., S.E.  
Angela L. Nemsy, P.E., S.E.  
Matthew J. Joost, P.E., S.E.



### STATE ROUTE 94 BRIDGE OVER MIDDLE CREEK

TWM provided Phase I and Phase II services for the removal and replacement of the PPC deck beam structure over Middle Creek, in Henderson County, Illinois. Structural scope included: bridge inspection and condition report; hydraulic report; type, size, and location plan; preparation of bridge contract plans, as well as specifications and estimates adequate for competitive bids and a contract for the construction of the project. TWM's hydraulic report indicated the need to raise the grade. As a result the replacement structure was raised over 6' to meet minimum hydraulic clearances and sight distance requirements.

**OWNER:**  
St. Clair County Transit  
District

**OWNER CONTACTS:**  
Bill Grogan, Director  
1004 S. Lincoln Ave., Suite 1  
O'Fallon, IL 62269  
(618) 628-8090

Taulby Roach, Consultant  
705 Olive Street, Suite 820  
St. Louis, MO 63101  
(314) 621-0800

**COMPLETION DATE:**  
2012

**CONSTRUCTION COST:**  
\$1,336,000

**TWM RESPONSIBILITIES:**  
Civil & Structural Engineering  
Land Surveying  
Construction Phase Services

**TWM CONTACTS:**  
Rusty Christmann, P.E., S.E.  
Sheila J. Kimlinger, P.E., S.E.



### METROBIKELINK BRIDGE OVER FULLERTON ROAD

As part of the MetroBikeLink trail extension to the Memorial Hospital Station, TWM designed a 299', 4-span rolled steel beam bridge over Fullerton Road in Swansea, Illinois. The design included decorative fencing, "transit blue" girders, and signage. Scope included concrete box culvert extensions, retaining walls, pre-engineered bridge foundations, sizing hydraulic openings, and coordination with geotechnical engineers.

**OWNER:**  
Monroe County, IL

**CONTACT:**  
Aaron Metzger, P.E.  
County Engineer  
Monroe County  
Highway Department  
100 South Main Street  
Waterloo, IL 62298  
(618) 939-8681

**COMPLETION DATE:**  
1995

**CONSTRUCTION COST:**  
Unknown

**TWM RESPONSIBILITIES:**  
Structural Engineering

**TWM CONTACTS:**  
Rusty Christmann, P.E., S.E.



### TOWNSHIP ROAD 22 BRIDGE OVER FOUNTAIN CREEK

As a result of the Great Flood of 1993, TWM was tasked with determining the most appropriate and cost effective solution to an unusual problem with the bridge carrying Township Road 22 over Fountain Creek in Monroe County, Illinois. Approximately 20 feet of the piles at the existing west abutment had been exposed by scour due to a levee break upstream. TWM's solution was to add piles to the existing pile bent abutment, transforming it into a pier, and allowing the addition of a 40' span and new abutment. The cost to do so was far less than the cost of complete replacement with a new structure.

**OWNER:**  
Monroe County, IL

**CONTACT:**  
Aaron Metzger, P.E.  
County Engineer  
Monroe County  
Highway Department  
100 South Main Street  
Waterloo, IL 62298  
(618) 939-8681

**COMPLETION DATE:**  
2010

**CONSTRUCTION COST:**  
Unknown

**TWM RESPONSIBILITIES:**  
Structural Engineering

**TWM CONTACTS:**  
Rusty Christmann, P.E., S.E.  
Angela L. Nemsky, P.E., S.E.  
David J. Holdener, P.E., S.E.



### LEVEE ROAD OVER LONG SLASH CREEK

This project in Monroe County, Illinois, included the removal and replacement of an existing 9'-0" diameter by 40'-0" corrugated metal pipe culvert. TWM designed a replacement structure consisting of a single-span 17" precast prestressed deck beam superstructure on pile bent abutments, with back-to-back abutment length of 42' and out-to-out width of 24'. TWM was responsible for the preparation of the bridge plans including superstructure and substructure design and analysis, drafting of bridge plan drawings, and calculation of all bridge quantities.