



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

COVER SHEET

(This must accompany your firm's letter of interest and does not count in the page limit)

Firm's Full Legal
Name:

Bacon Farmer Workman Engineering & Testing, Inc.

Firm Contact Name:

Barry Horst, PE

Contact Email
Address:

bhorst@bfwengineers.com

Firm's Mailing Address:

3437 William Street

Cape Girardeau, MO 63701

Work Category:

- Roadway Design
- Trails & Sidewalks
- Construction Inspection
- Traffic Engineering & TEAP
- Structures
- Environmental
- Historic Preservation
- Multimodal Planning / Systems and Facilities Design
- Transportation Planning – **NEW CATEGORY**



CSRD Co. Road 643 Bridge over Juden Creek,
a 2026 ACEC Engineering Excellence Award Recipient

2026-2029 LPA On-Call Structures

Missouri's Local Program for
Community Development
LPAoncall@modot.mo.gov



Bacon Farmer Workman (BFW) is pleased to submit our Statement of Interest and Qualifications for providing bridge design engineering services under a three-year master agreement with the Missouri Department of Transportation (MoDOT). The BFW

team proposed for this project consists of highly experienced bridge engineers with extensive backgrounds working on Local program (LPA) projects with MoDOT oversight. With our seasoned staff, proven project history, and available capacity, BFW is fully prepared and committed to undertaking these projects for the local sponsor, delivering high-quality products on time and within the budget constraints established by the local sponsor.

Commitment to Workforce Diversity

Bacon Farmer Workman is committed to continually fostering a diverse workforce across all our office locations. We have an excellent record of minority and female hiring, with 28% of our current workforce comprised of these groups. We understand the importance of diversity and the value it brings through new ideas, innovation, and creativity. We believe that more varied perspectives lead to stronger teams, more satisfied clients, and the best possible solutions.

General Experience of Firm

BFW personnel have a comprehensive range of experience in providing conceptual, preliminary, and final plan designs for structures design projects, including bridges and boxes. Our team is familiar with procedures relative to the anticipated types of projects that will be available under this state-wide contract. BFW has a history of successful highway and bridge designs for MoDOT and local sponsors such as Cities and Counties over the last several years. Our projects regularly undergo post-construction reviews, a process we wholeheartedly embrace. These reviews help us sharpen and improve our design skills and development processes and to date have yielded virtually no major construction issues or design oversights. Our staff has designed many varied types of projects with large ranges in size and scope. Among this diverse collection of projects are bridge and culvert replacements, rural and urban roadway improvements, and large interstate improvements.

Our team has completed numerous projects in which traffic phasing and partial-width construction required special attention to detailing during plan development and structural analysis. Bridge hydraulic analyses will be performed in-house by an engineer fully trained and dedicated to this discipline.

In addition, not all consultants are experienced in the seismic analysis of bridges. Many of our engineers hold advanced engineering degrees with specialized training in structural dynamics, finite element analysis, and foundation-soil interaction. This training, combined with extensive experience designing structures in high-seismic zones, enables our engineers to efficiently design bridges throughout the New Madrid fault area and across the state of Missouri.

Past Performance

BFW has successfully completed bridge design, analysis, and plan preparation for numerous local program and MoDOT projects, including replacements, rehabilitations, and new structures. Our recent work demonstrates versatility, technical expertise, and a commitment to delivering quality designs on schedule.

Cape Special Road District

- CR 657 Scism Creek Bridge Replacement
- CR 643 Juden Creek Bridge Replacement, a 2026 ACEC Engineering Excellence Award Recipient
- Old Sprigg Street Sloan Creek Box Culvert Replacement

MoDOT SE District

- Route A, Dunklin County: Three-bridge package, Main Ditch new Bridge No. This includes Bridge No. A9312 and two box culvert designs for smaller channels.
- Route O, Pemiscot County: Box culvert replacement for bridge over Pemiscot Bayou.
- Route Z, Cape Girardeau County: Hubble Creek and Hubble Creek Overflow, two structures (one bridge and one box culvert).
- Route 25, Cape Girardeau County: LRDD Ditch #25, US 61 (Cape Girardeau County) over Erlide Creek, and Route NN (Perry County) over Saline Creek, three-bridge package.

MoDOT NE District

- MO 149, Adair County: Near Connelville over Shuteye Creek, new bridge.
- US 136, Schuyler County: Near Lancaster over Middle Fork Fabius River, new bridge.
- MO 6, Adair County: Over Chariton River, new bridge.

MoDOT SL District

- Route 364: Bennington Place Drainage Structure Modification.



CSRD Co. Rd. 657 Bridge over Scism Creek

Qualifications of Personnel



Brad Rotherham, PE, SE, MASCE
Bridge Department Manager

Brad serves as Lead Structural Engineer overseeing the Bridge Department. He has over 32 years of experience in structural design, with a focus on bridges and transportation projects. His expertise covers simple, typical, and advanced bridge design levels. Brad holds both a Bachelor's and a Master's degree in Civil Engineering with an emphasis on structures from the University of Illinois. He is proficient in the design and detailing of bridge and transportation structures utilizing structural steel, reinforced concrete, precast-prestressed concrete, and timber.



Tim Craven, PE
Structural Project Manager

Tim brings over 33 years of experience in bridge planning, design, and structural evaluation, joining Bacon Farmer Workman Engineering & Testing, Inc. after a 31-year career with the Illinois Department of Transportation (IDOT). As the former Bridge Project Planning Unit Chief in the Bureau of Bridges and Structures, Tim led the development and oversight of critical project documents, including Bridge Condition Reports (BCRs), Type, Size, and Location (TSL) plans, structural work estimates, and engineering consultant services.



Frederick Mensah, PE
Bridge Design Engineer

Frederick is a Civil Engineer with over 17 years of experience as a Structural and Construction Engineer. In addition to his strong design and analytical skills, he brings a solid background in leadership. In Ghana and Uganda, he supervised staff and managed projects from start to finish, including numerous bridges, buildings, and hundreds of miles of roadway.



Barry Horst, PE
Project QA/QC

Barry has 38 years of experience in the transportation engineering field. He joined BFW after a career with the Missouri Department of Transportation and later served as Executive Director of the Southeast Missouri Regional Planning and Economic Development Commission. At MoDOT, Barry held several key roles, including Design Team Leader, District Chief Designer, and ultimately Southeast District Design Department Manager.



Matt Voss, PE, CFM
Hydraulic Analysis

Matthew is a licensed Professional Engineer and Certified Floodplain Manager with 19 years of experience in both the public and private sectors. He has expertise in conceptual planning, civil design, engineering analysis, QA/QC reviews, and inspection, with additional background in industrial site layout, rural transportation, mine reclamation, rail loops, permitting, and construction administration. Matthew specializes in open-channel and bridge hydraulics as well as floodplain analysis.



Brian Holt, PE
Constructability Review

Brian has over 33 years of experience in the construction engineering field. He joined Bacon Farmer Workman Engineering & Testing after a 29-year career with the Missouri Department of Transportation, where he served as a Resident Engineer for 21 years in the Southeast District. Brian has extensive experience in contract administration, overseeing all aspects of bridge structure construction, including milestone management, pile driving, deck pours, staging, maintenance of traffic (MOT), work zone traffic control (WZTC), FHWA inspections, railroad permitting, contractor inquiries, change order processes, and dispute resolution.



Substructure Experience

- End Bearing Piles
- Friction Piles
- Drilled Shafts
- Breast Wall Abutments
- GRS Abutments
- Tall Wall Pile Abutments
- 2, 3, 4-Column Piers
- Hammer Head Piers
- W311 Piers
- Single Column Piers On
- Drilled Shafts
- Substructure
- Widening

Superstructure Experience

- Spread Box Beams
- Side-By-Side Box Beams
- AASHTO PCI Girders
- Hybrid Girders
- Steel Rolled I-Beams
- Straight & Curved Steel Plate
- Girders
- Railroad Bridges
- Pedestrian Bridges
- Timber Bridges
- Overlays
- Joint Replacements
- Superstructure Widening

Culvert Experience

- Single & Multi-Barrel
- Barrel Extensions
- Phased Construction
- Flow Diverters
- Yielding and Non-Yielding
- Foundations
- Three Sided Culverts
- Kinked Barrels
- Drainage Pipe through Barrels/Wing Walls

Familiarity & Capability

The BFW team possesses a wide range of structural experience, resources, and capacity, supported by a staff skilled in providing practical solutions to real-world problems while ensuring compliance with all applicable local, state, and federal requirements. Our portfolio includes a comprehensive variety of structure types, as listed below.

We are not hesitant to discuss substructure options and draw on the expertise of our in-house geotechnical department. At times, preliminary structure plans may be completed before the geotechnical recommendations are finalized, or the roadway or hydraulic engineer may overlook a structural layout nuance or the potential use of phased construction to reduce lengthy detours. In such cases, we will develop alternative concepts that include cost comparisons or phasing schemes and present them to the local program sponsor for feedback. Specific examples include switching from a breast wall abutment to a pile bent, changing from a four-span to a two-span layout, or evaluating the use of a block modular wall in place of a soldier pile wall. The BFW team understands that the structure ultimately belongs to the local sponsor, and we are committed to ensuring that you receive the best structure for each site.

Accessibility

Being able to respond to the local sponsor's need for design assistance is where the BFW team stands above others. Our current workload allows us to immediately begin work on the design and detailing of bridges that may be on a tight letting schedule. This ensures that turnaround time requirements can be met for projects of any size, whether a culvert extension or a major river crossing. Even with an accelerated schedule, quality

will never be compromised. All design calculations will be performed by a licensed professional engineer and checked by another licensed professional engineer. Quantities are always independently verified with separate calculations, and rebar lengths, sizes, and numbering are meticulously cross-checked to avoid construction issues.

Flexibility & Innovation

BFW continually strives to meet the needs of its clients by remaining available and adaptable to changing project requirements throughout each project's life. One example of this philosophy was the change in staging and traffic control at the Chariton River in Adair County, where public input resulted in a different bridge replacement solution than originally anticipated. Another example was the innovative use of storm sewer on the Route Y/BB intersection project in Scott County to reduce the project footprint, eliminate right-of-way acquisition, and avoid sensitive cultural resource features identified during project screening. In both cases, positive and proactive collaboration with District staff led to improved project outcomes.

The BFW team has a strong desire to build and maintain successful working relationships with Cities and Counties. Our team members are eager to begin work on these projects. Thank you for reviewing our qualifications.



Mark Workman
Chief Executive Officer



LPA On-Call

Engineering Services





Bacon Farmer Workman Engineering & Testing (BFW) is a multi-disciplinary engineering firm with office locations throughout MoDOT's geographic footprint. We provide a comprehensive suite of engineering services, addressing every project need with precision and expertise. At BFW, we are committed to delivering exceptional solutions. By leveraging the expertise of our highly skilled and knowledgeable team, we uphold a standard of excellence and a dedication to outstanding service on every project. Our client-centered approach is rooted in utilizing the latest technologies, building strong relationships with clients and communities, and ensuring full accessibility for both customers and end users.

Capabilities

- Asset & Infrastructure Management
Aviation
Civil Engineering & Site Development
Cultural Resources
Electrical Engineering
Environmental
Geospatial Technologies
Geophysical

- Geotechnical Engineering
Grant Coordination
Industrial
Landscape Architecture & Urban Planning
Maritime
Mechanical Engineering
Parks & Recreation
Renewable Energy
Strategic Energy

- Structural Engineering
Surveying
Technology
Testing & Inspections
Transportation Engineering
Stormwater & Wastewater Resources

Professionals

- Archaeologist
Aviation Engineers
Aviation Planner
Civil/Site Engineers
Ecologists
Electrical Engineers
Environmental Managers
Geologists
Geophysicists
Geotechnical Engineers

- Grants Administrator Specialist
Historic Preservation
Land Surveyors
Landscape Architect/Arborist
LEED Accredited
Legal Counsel/ Attorney at Law
Mechanical Engineers
OSHA Authorized Construction Trainer

- Park Specialist
Professional Wetland Scientist (PWS)
Project Management Professionals (PMP)
Professional Transportation Operations Engineer (PTOE)
Safety Professional (CSP)
Structural Engineers
Transportation Engineers
Water Distribution Operator

Support Professionals

- Accounting Staff
Administrative Staff
Construction Administrators

- Construction Inspectors
Geotechnical Drilling Staff
Mobile LiDAR Operators
Survey Field Staff

- Technical Writers
Technical Staff



Certificate of Commendation for Excellent Safety Record 2023 & 2024, National Award
MO Chapter Safety Award 2023 & 2024
W-KY Chapter Safety Award 2023



Locations

- Paducah, KY
Springfield, IL
Evansville, IN
Cape Girardeau, MO
Murray, KY
Jefferson City, MO
St. Louis, MO
Belleville, IL
Brentwood, TN
Champaign, IL
Knoxville, TN
Marion, IL

Transportation Engineering

Bacon Farmer Workman Engineering & Testing, Inc. (BFW) has built a solid reputation as a “go-to” firm in the transportation engineering field. BFW emphasizes attention to details, project milestones, and budgets, as reflected by our current ratings from our transportation clients.

Our broad background and expertise enable us to provide all required design services encompassing rural, urban, and limited access highway facilities. Our Transportation Division utilizes the latest state-of-the-art advancements in design and equipment technology to accomplish project requirements and client satisfaction.

Our Transportation Capabilities

Roadway Engineering

- Interstate, rural, and urban roadway design
- Phase I, II, III engineering
- Sidewalks, ADA upgrades, and multi-use trail design
- Corridor studies & safety improvements
- Complete Streets / multimodal design
- Drainage & stormwater analysis

Bridge & Structural Engineering

- New bridge design & replacement
- Rehabilitation, widening, & preservation
- Culverts, walls, foundations, hydraulic structures
- Load ratings & NBIS inspections
- Design-build alternative delivery

Traffic & Safety

- Traffic operations & modeling
- Signal design & ITS
- MOT/maintenance of traffic plans
- Speed, crash, and safety studies
- Access management & intersection improvements

Service Details

As a full-service firm, BFW can handle every phase of highway projects from route / corridor studies including environmental coordination / approvals through the final design and on to the contract bid letting and award process. We can also provide contract administration, inspection, and testing for any size or complexity of project.

Environmental & Geotechnical

- NEPA documentation
- ESA, cultural resources, ecological reviews
- 401/404 permitting & floodplain compliance
- Geotechnical drilling & lab testing
- Pavement/embankment/foundation recommendations

Survey, Lidar & Mapping

- Boundary & topo surveying
- UAV/drone mapping
- Mobile & Terrestrial LIDAR
- SUE coordination
- ROW plan development

Construction Inspection & Support

- CEI & materials testing
- QA/QC oversight
- Utility coordination
- As-built documentation
- Contractor support & field reviews

Specialized Transportation Facilities

- Port & riverport access roads and circulation
- Bulk yard, conveyor, and loading infrastructure support
- Runway, taxiway, and apron design
- Airfield grading, drainage & lighting systems
- Airport access roads and parking improvements
- Pavement evaluation and airfield improvements
- Site development for industrial and logistics users





Cape Special Road District County Road Bridge over Juden Creek



Rte 61 Cape Girardeau Kingshighway

Jackson East Main Street Pedestrian Facilities

Jackson, MO

City of Jackson & MoDOT TAP

- Surveying
- Roadway Design incl. ADA compliance
- Environmental, NEPA
- Construction Admin. and Inspection

Sikeston North West Street Pedestrian Facilities

Sikeston, MO

City of Sikeston & MoDOT

- Surveying
- Roadway Design incl. ADA compliance
- Utility Coordination
- Environmental, NEPA
- Construction Admin. and Inspection

Route 61 Signals & Geometric Improvements

Sikeston, MO

City of Sikeston & MoDOT

Cost Share

- Roadway Design
- Traffic Safety & Operations
- Surveying
- Utility Coordination
- Construction Materials Testing & Inspection

ACEC
2026

Cape Special Road District County Road Bridge over Juden Creek

Cape Girardeau, MO

- Bridge Design
- Roadway Design
- Geotechnical
- Utility Coordination
- Environmental, Hydrology/Floodplain
- Construction Admin. and Inspection

US 412 Corridor Study

Kennett, MO / Arkansas State Line

Dunklin County Commission and MoDOT Cost Share

- Environmental, NEPA
- Environmental, Threatened & Endangered
- Traffic Safety & Operations
- Surveying
- Roadway Design (Planning/ Alternatives)

ACEC
2026

Rte 61 Kingshighway Cape Rock Drive Intersection Improvements

Cape Girardeau County, MO

City of Cape Girardeau & MoDOT Cost Share

- Roadway Design
- Traffic Safety & Operations
- ADA/Pedestrian Facilities
- Environmental, NEPA
- Utility Coordination

Dexter Safe Streets for All (SS4A) Intersection Study

Dexter, MO

City of Dexter & MoDOT

- Traffic Safety and Operations
- Surveying
- Roadway Design (Alternatives)
- Public Involvement

Route 51 Traffic Study

Perryville, MO

City of Perryville & MoDOT Cost Share

- Traffic Safety & Operations
- Roadway Design (Alternatives)
- Surveying / Data Collection
- Environmental – NEPA considerations

US 67 Upgrades / Future I-57 Corridor Projects

Butler County, MO

City of Poplar Bluff & MoDOT Cost Share

- Roadway Design
- Geotechnical
- Bridge Design

