

January 5, 2013

**Subject: Letter of Interest – 2014-2017 On-Call Contract for Structural Engineering
Missouri's Local Program**



Dear Local Program Administrators and Representatives:

As requested in the October 1, 2013 solicitation, **Amec Foster Wheeler Environment and Infrastructure, Inc. (Amec Foster Wheeler)** is providing this letter of interest to provide structural design services for the above-referenced on-call contract. Amec Foster Wheeler has an experienced team of professionals to execute this contract, which will be managed and executed from Amec Foster Wheeler's St. Louis area office.

1) GENERAL EXPERIENCE OF FIRM

Amec Foster Wheeler has had a presence in the St. Louis market since 1975. We currently employ over 80 engineers, professionals and technicians. The Amec Foster Wheeler team has been assembled with the objective of providing Local Agencies with accessibility and responsive service from day one of this contract. With that goal in mind, we have selected professional and support personnel who have demonstrated expertise in their respective fields and on projects of similar scope and complexity and are familiar with Federal and MoDOT requirements. Our structural design team includes a combined 25 years design experience and our CADD technicians offer 50 plus years CADD experience. Additionally, the St. Louis-Ballwin office has a transportation design support staff of project managers, planners, roadway engineers, hydrologists, construction managers, safety officers, and traffic engineers. Amec Foster Wheeler also has additional bridge engineers nationwide with a wide array of expertise and project experience who can be utilized for individual tasks, if necessary.

Amec Foster Wheeler offers our clients comprehensive structural engineering services for bridges, culverts, retaining walls, sound walls, and other ancillary structures. We are able to provide proven expertise to our clients in virtually every facet of structural inspection, design, and construction. The result is peace of mind for our clients, with an emphasis on creative and cost-effective solutions. Our team considers practical design on every project and has the experience to understand the difference between applying a cost effective solution versus simply cheapening the construction cost. Amec Foster Wheeler's DOT and municipal clients face smaller budgets year after year. As such, they look to Amec Foster Wheeler's expertise in structural condition evaluation, structural analysis, application of new materials, construction methods, and project life cycle cost analysis to assist them with making smart, efficient, and prioritized decisions regarding their structural inventory. At Amec Foster Wheeler, we understand that most of a project's value is created during the conceptual and preliminary stages, and most decisions that affect project cost are resolved at this stage. Therefore, we take a very systematic approach to developing bridge alternatives and selecting the right solution during the structure selection process.

Amec Foster Wheeler's structural engineering services include:

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| <ul style="list-style-type: none">➤ Bridge inspection reports and ratings➤ Structural inspection, rehabilitation, and repair➤ Proof load testing➤ Steel and concrete bridge design for urban, rural, and low-volume roads➤ Unique structure design, including pedestrian and bikeway bridges➤ Design of retaining walls, including cast-in-place and MSE walls, and sound walls➤ Construction engineering, management and materials testing | <ul style="list-style-type: none">➤ Hydraulic, geotechnical, civil and roadway design services related to structural/bridge projects➤ Rehabilitation of historic structures➤ Hydraulic modeling➤ Scour analysis➤ Any and all aspects of NEPA, including State and Federal permitting➤ Structural detailing➤ Sustainable design➤ FHWA/NBIS certified Program Managers and Team Leaders for routine, fracture critical and special inspections |
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Equality and Diversity

Amec Foster Wheeler is committed to, and proud of, creating a culture of inclusion to ensure we attract and retain a diverse workforce. Amec Foster Wheeler's local office is comprised of people with wide variances in age, religion, education, social and community backgrounds, and ethnicities. As an illustration, there is a 40-year difference in age between our oldest and youngest employees, and our associates hail from nearly a dozen states. Amec Foster Wheeler is currently working with Marks & Associates on our Southwest Illinois Levee District Project to help promote diversity and local workforce participation. Participating in such Minority Outreach Programs is encouraging more participation on this project that does not include federal funding or a mandatory goal. **From the Amec Foster Wheeler Employee Business Code of Ethics:**

"Ensuring equal opportunity means that all employees and job applicants are afforded fair and non-discriminatory treatment for both employment and advancement, irrespective of race, ethnic or national origin, age, gender, religion, sexual orientation, disability or other qualities and traits irrelevant to performing the tasks required. Employment, advancement and termination or retirement must be based on aptitude, abilities, skills and qualification."

2) PAST PERFORMANCE

The Amec Foster Wheeler Team is extremely capable of performing this work and routinely provides these services for other agencies both locally and nationwide. Our St. Louis-Ballwin transportation/structural group is currently providing, or has recently completed, design and/or planning services for three Illinois DOT Regions, the Illinois State Toll Highway Authority, Ameren, Norfolk Southern Railway, and the City of Kansas City, MO. For MoDOT, Amec Foster Wheeler has completed numerous final design projects in both bridge and roadway. Other services include 27 separate EIS and EA documents in the past 22 years. Amec Foster Wheeler has completed five projects for St. Louis District under the on-call program. This puts Amec Foster Wheeler in excellent position to develop alternative bridge concepts and cost estimates for evaluation. We feel our past performance on similar projects, and understanding of MoDOT and Federal expectations will enable our Team to be versatile, adaptable, and responsive to various tasks under this on-call contract. Our most recent project experience is listed below. You will see that Amec Foster Wheeler bridge engineers have project experience with everything from hyper-complex urban projects to modest rehabilitation of historic pedestrian bridges.

- **Access Road Bridge (2015), Panoche Valley Solar Project, San Benito County, CA:** As part of a \$250 million EPC contract Amec Foster Wheeler provided bridge design, plans and specifications for a 58ft single span, adjacent box beam bridge with integral abutments and steel H-piles foundations. The box beams were designed and detailed to carry multiple electrical transmission lines through the bridge superstructure. The bridge was laid out to span the ordinary high water mark and received severe oversight from fish and wildlife officials.
- **Toledo Inter-Modal Facility Roadway Bridge over N Fearing St. (2014-2015), Norfolk Southern, Toledo OH:** Amec Foster Wheeler designed a 66 ft span adjacent box beam bridge with a CIP composite concrete overlay connecting two portions of a large inter-modal facility. The design rehabilitated the existing abutments. The load capacity of the bridge was increased to account for 300,000 pound container handling vehicles with loaded containers.
- **Brandywine Falls Pedestrian Bridge (2013), National Park Service (Cuyahoga Valley National Park):** Services included bridge inspection, load rating, load testing, rehabilitation design, and construction inspection of an existing pedestrian bridge over Brandywine Creek. Amec Foster Wheeler was the prime contractor and designer for this design-build bridge rehabilitation. The 80-year old concrete bridge had significant deterioration of the cast-in-place concrete t-beam superstructure. Amec Foster Wheeler assessed the bridge's condition, and performed a load rating that yielded unsatisfactory results for pedestrian loads. As such, Amec Foster Wheeler developed and performed a load test to verify the bridge's structural capacity under anticipated pedestrian loading. Repairs to the bridge were designed and constructed in accordance with strict environmental oversight from local park staff.
- **New Base Entry Gate Design Services (2009-2015), U.S. Department of the Navy NAVFAC – Camp Lejeune, North Carolina:** Amec Foster Wheeler is the majority partner in a Joint Venture (JV) Team that was awarded a \$19 million contract by the Naval Facilities Engineering Command (NAVFAC) to provide A&E design services for a new base entry point, 6.5-mile interior roadway, and 15 bridge structures including three new bridges spanning navigable water bodies and creeks with lengths ranging from 2,000 feet to 700 feet at Marine Corps Base Camp Lejeune, North Carolina. North Carolina DOT standards and details were used. Project required coordination with multiple engineering disciplines spread out through several different cities, offices, and companies within the JV Team. Bridge plans for all 15 structures had to be coordinated for consistency of information and detailing. "Top down" construction will be used to construct the longer causeway bridges and Amec Foster Wheeler's bridge engineers incorporated the construction loads for this method into the design.
- **Bridge Design, Rehabilitation and Inspection Services (2007-2013) U.S. Forest Service (Southeastern U.S. Forests):** Over a six-year contract, Amec Foster Wheeler executed multiple task orders for structural on-call services for the U.S. Forest Service related to bridge design, low water crossing design, and bridge inspection in multiple National Forests in the southeastern U.S. Services were provided in eight states under more than 20 task orders valued from \$6,000 to \$99,500 (average value: \$40,000 to \$50,000), demonstrating Amec Foster Wheeler's ability to perform multiple, small projects in various locations simultaneously. Task orders included inspection of 83 structures in six National Forests in Mississippi, bridge rehabilitation in Texas, and design of more than two dozen bridge structures in Florida, Kentucky, Arkansas, and Oklahoma. Structure types included precast deck beams, steel girders, precast concrete bottomless culverts, and cast-in-place concrete deck bridges.
- **Bridge Inspection Services for the United States Air Force (2007-2011):** Amec Foster Wheeler procured multiple task orders (2008 – 2011) to provide National Bridge Inspection Standards (NBIS) inspections of structures located at U.S. Air Force Bases nationwide. Services provided included bridge inspection, inventory, bridge load rating, photo documentation, and reports for multiple structures. All assessment and inspection activities were performed in conformance with local and Air Force standards and regulations, as well as with NBIS. Services also included inspection, reports, plans for future special inspection of fracture critical members (FCM) and scour critical bridges (SCB), seismic evaluations, and underwater inspection plans. Repair recommendations and estimates were prepared. All data was prepared in GIS format from existing base maps and AutoCAD. In all 48 structures were inspected including 17 bridges and 31 culverts in Illinois, New Jersey, Arizona, Texas, Florida, Kansas, California, and South Carolina.

3) QUALIFICATIONS OF PERSONNEL

Key Personnel:

Project Manager and Senior Structural Engineer: Ryan Kane, PE: Mr. Kane has 15 years of experience designing and inspecting various transportation facilities structures. As a senior structural designer Mr. Kane has designed, repaired, retrofit, and inspected bridges, culverts, foundations, retaining walls, floodwalls and other related structures. He has designed all facets of bridge structures with spans from 20 feet to 1,500 feet and including all commonly acceptable geometries, materials and construction methods. His clients range from private owners to local agencies, state DOTs, federal agencies and joint venture partners. Mr. Kane is a certified NBIS Bridge Inspector and Fracture Critical Bridge Inspector. He also has experience proof load testing bridges.

Bridge Engineer: Eric Pilger, PE: Mr. Pilger has 10 years of experience as a structural engineer. He is knowledgeable in the design of bridge superstructures and bridge substructures, culverts, retaining walls, and foundations. His bridge superstructure experience includes both steel and concrete design. He has worked on rural highway bridge projects with the U.S. Forest Service and both the Missouri and Illinois Departments of Transportation. He is also a NBIS certified bridge inspector and has performed inspections for the U.S. Department of Agriculture and the U.S. Air Force.

Bridge Engineer: Daniel O'Connell, EIT: Mr. O'Connell has experience in the design, manufacturing, maintenance, management, and construction of civil and private infrastructure, agricultural, and roadway sectors featuring heavy truck and equipment loads and projects designed for maximum durability. His duties have included: design of structural steel, reinforced concrete, pre-stressed concrete, project management, plan preparation, and construction inspection. His varied background includes field work in construction and manufacturing, as well as the design, detailing and installation of individual parts and structural systems.

CADD Technician: Jeffery Johnson: Mr. Johnson has 23 years of experience in civil engineering design as a CADD technician. He has extensive experience with CADD management, standards development, land planning, legal aspects of boundary surveys, derivation of field survey information, surveying, site grading, retaining wall design, bridge design, and street design. His design software knowledge includes: MicroStation, AutoCAD, and GEOPAK.

CADD Technician: Michael Conroy, PLS: Mr. Conroy is currently responsible for providing drafting and design support for various infrastructure improvements to Amec Foster Wheeler clients. Mr. Conroy has over 30 years experience in the design, plan preparation, and management of varied public works and private development projects. Mr. Conroy has participated in the design of transportation projects including local arterial and collector roads, state and federal highway improvements, and light rail and commercial railroad projects.

4) FAMILIARITY/CAPABILITY

Every member of our transportation design team has an established performance record of collaboration with MoDOT and performing on federally-funded projects while at Amec Foster Wheeler and/or working for previous employers. **Additionally, three members of our transportation office team (Brad Loomis, Steve Coates and Ryan Kane) have completed the MoDOT Local Public Agency, Person in Responsible Charge training.**

5) ACCESSIBILITY

Amec Foster Wheeler's strong reputation for delivering high quality service and value for our clients will ultimately be the greatest asset for MoDOT with this structural design on-call contract as indicated by these testimonials:

"The US Forest Service, Southern Region, selected Amec Foster Wheeler (2006-2013) to provide architectural and engineering consultant services for highway and geotechnical projects. In addition to providing the traditional engineering services, Amec Foster Wheeler has been extremely helpful in providing project management expertise to coordinate the project objects through the design phase and when necessary, oversee the project during construction. The services are provided by knowledgeable, senior Amec Foster Wheeler employees who developed comprehensive planning outlines to meet the project schedule and budget constraints. To date, their technical expertise and professional approach to accomplish the identified work has been excellent."

– **Martin (Mac) McCann, Ph.D., PE, Highway Engineer, USDA Forest Service, Engineering Division**

"Amec Foster Wheeler has done an above average job with the design and construction support they have provided the Dept of the Navy on this project. They have been willing to go the extra mile to ensure the government gets the full support needed on this project."

– **Chris Workman, Project Manager, Naval Facilities Engineering Command**

Amec Foster Wheeler appreciates the opportunity to submit this Letter of Interest. We look forward to serving various Local Agencies with its upcoming structural design needs. Please contact Ryan Kane at (636) 200-5115 if you have any questions or need additional information.

Sincerely,

Amec Foster Wheeler Environment & Infrastructure, Inc.


Jon Omvig
Office Manager


Ryan Kane, PE
Project Manager

St. Louis Engineering and Transportation Services

Amec Foster Wheeler's St. Louis office, with over 80 professional and support personnel, provides excellence in engineering and professional consulting services to public and private sector clients in Missouri and throughout the Midwest.



Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) is a leader in providing engineering and consulting services to government and industry, and offers complete professional services in civil engineering, structural engineering, transportation engineering, water resources, environmental, geotechnical, surveying and construction management/materials disciplines.

Amec Foster Wheeler is a recognized leader in the areas of water and wastewater systems, water resources (drainage and flood control), roadway and highway design, transportation studies, planning (site, land use and regional) and construction management. Our offices have established a track record of completing our clients' projects within budget and on schedule. Our success is based upon:

- Partnering approach of working with our government agency and private industry clients
- Extensive experience with a variety of projects
- Understanding our clients' time requirements
- Project management structure that ensures accountability
- Commitment to innovative problem-solving and cutting-edge technology

With Amec Foster Wheeler's global structure, our clients benefit from experts with a broad understanding of local conditions coupled with easy access to some of the world's most renowned experts in their fields.

With 229 offices and over 7,400 personnel throughout the U.S., Canada, South America, Europe, Asia and Australia, Amec Foster Wheeler manages large and small projects worldwide. Our 4,200 employees in 110 U.S. locations serve a diverse client base in the transportation, federal, water, clean energy, industrial/commercial, mining, and oil and gas sectors.

Local presence

Amec Foster Wheeler has had a presence in St. Louis since 1975. This office currently houses a staff of over 80 professionals, including professional engineers, professional land surveyors, certified floodplain managers, environmental scientists, planners, landscape architects, designers, technicians, and administrative personnel.

The Amec Foster Wheeler St. Louis office provides comprehensive civil engineering, transportation, structural and environmental services to public and private sector clients

throughout the Midwest and nationwide. Civil Engineering/Transportation expertise includes feasibility/location studies with NEPA documentation, roadway and structure design and inspection, sanitary sewer and storm water facility design, trail planning and design, and utility management services.

Amec Foster Wheeler has consistently added staff in St. Louis with proven experience on a variety of projects for local municipalities, DOTs, sewer and drainage districts, and institutions, as well as public and private land development clients.

Effective project management is a commitment we make to each and every client, regardless of project size. Our project managers understand the importance of quality, budgets and schedules and consider them critical performance objectives.



Awards and rankings

Amec Foster Wheeler is regularly recognized by industry groups, clients and safety organizations for our excellence in project execution and health and safety culture.

Recent awards include the National Safety Council's (NSC) Occupational Excellence Achievement Award for 2013 in recognition of exceptional safety performance in the workplace. The NSC also awarded Amec Foster Wheeler a Certificate of Merit in 2012 for distribution of a monthly Safetygram as a best safety practice.

Amec Foster Wheeler has also been named to the list of America's eight safest corporate companies by a U.S. magazine dedicated to the management of risk in the workplace and environment.

Based on annual revenue, Engineering News-Record (ENR) consistently ranks Amec Foster Wheeler in the top two percent of the world's Top 500 Design Firms; we are currently ranked at #6 in this category. We have also ranked at the top of our sector in the Dow Jones Sustainability Index since 2004.

Key St. Louis personnel

Jon Omgig, AICP - Mr. Omgig has been the Office Manager of the St. Louis office since 2004, with experience in public works projects dating to 1983. Mr. Omgig is an Urban Planner with significant experience as a Project Manager on NEPA documents, with an area of specialization in socioeconomic impact analysis, community planning, and cost benefit studies. Other projects include transportation planning studies, comprehensive plans, environmental impact studies, and various other planning projects.

James Solari, PE - Mr. Solari has over 30 years of professional experience in construction management, project management, and various engineering responsibilities in water, wastewater, hazardous waste, construction, and utility industries. He is regarded as persistent and quality oriented with a strong passion to always complete projects on-time and within budget. Mr. Solari's proven skills in bringing parties together to achieve mutually beneficial solutions while accomplishing project objectives has benefited clients throughout his career.

Steve Coates, PE - Mr. Coates has 25 years of experience in transportation engineering and planning, including environmental compliance and stormwater management and design. His expertise includes planning and design of urban and rural highway projects; co-authoring over 25 NEPA documents for highway projects in the Midwest; traffic studies including accident analyses and capacity analyses; stream bank restoration; and natural trail design. Mr. Coates managed the award-winning Route 54 Environmental Assessment, as recognized by the American Consulting Engineers Council of Missouri (ACEC Missouri).

Ryan Kane, PE - Mr. Kane has experience as a structural designer dating to 2001. He has designed, repaired, retrofitted, and inspected bridges, culverts, foundations, retaining walls, floodwalls and other related structures. Mr. Kane has designed all facets of bridge structures with spans from 20 feet to 1,500 feet, including all commonly acceptable geometries, materials and construction methods. His clients have included local agencies, state DOTs, federal agencies, private owners, and joint venture partners. Mr. Kane is an NBIS certified bridge inspector and has experience proof load testing bridges.

Brad Loomis, PE - Mr. Loomis has experience dating to 2002 in all aspects of civil engineering design, including storm sewer design, sanitary sewer design, roadway and highway design, airport facilities and site design, railroad design, federal and military facilities, and permitting. Other areas of expertise include intelligent transportation systems (ITS) design, traffic engineering and operational analysis, cost estimating, and floodplain management.

Recent St. Louis projects

Roadway design

Osage Street/I-44 Phase II Engineering; Missouri Department of Transportation; Pacific, Missouri

Amec Foster Wheeler provided design services for the relocation of the eastbound on- and off-ramps of Interstate 44 at Osage and Viaduct Streets in Pacific, Missouri. The project also included the expansion of one mile of the outer road (Osage Street) from a three-lane section with open drainage to a five-lane section with enclosed drainage, and the realignment of Lamar Parkway, a local road, to tie in to the relocated ramps. Efforts were made to reduce right of way and easement takings by means of the design of the enclosed drainage system, and a construction staging plan that minimized construction costs and business disruptions. Additional design elements included the extension of a double box culvert, numerous driveway entrances and sidewalks. Amec Foster Wheeler also performed subsurface utility engineering (SUE) for the



project, which allowed for design improvements that reduced the need to relocate existing utilities.

Parkwood Lane/Doddridge Avenue Reconstruction; City of Maryland Heights; Maryland Heights, Missouri

Engineering and design services were provided by Amec Foster Wheeler for reconstruction of Doddridge Avenue and Parkwood Lane from Hollycrest Drive to Old St. Charles Road. Improvements include upgraded two- and three-lane sections of 3,400 LF of roadway, including concrete pavement, sidewalks, an enclosed drainage system subject to MSD's Phase II Stormwater Management requirements involving water quality, and tree lawns and landscaping. Extensive public involvement took place during the conceptual phase of the project, which ultimately changed the design of the roadway sections. Design and coordination of the project was in accordance with the Missouri DOT's LPA policy.



Structural engineering / construction inspection

Brandywine Falls Pedestrian Bridge; National Park Service; Cuyahoga Valley National Park

Services included bridge inspection, load rating, load testing, rehabilitation design, and construction inspection of an existing pedestrian bridge over Brandywine Creek. Amec Foster Wheeler was the prime contractor and designer for this design-build bridge rehabilitation. The 80-year old concrete bridge had significant deterioration of the cast-in-place concrete t-beam superstructure.

Amec Foster Wheeler assessed the bridge's condition, and performed a load rating that yielded unsatisfactory results



for pedestrian loads. As such, Amec Foster Wheeler developed and performed a load test to verify the bridge's structural capacity under anticipated pedestrian loading. Repairs to the bridge were designed and constructed in accordance with strict environmental oversight from local park staff.

Toldeo Intermodal Facility Roadway Bridge over N. Fearing Blvd; Norfolk Southern; Toledo, Ohio:

Design of a 66 ft span adjacent box beam bridge with a CIP composite concrete overlay connecting two portions of a large inter-modal facility. The design rehabilitated the existing abutments. The alignment was changed from a skewed structure to a tangent alignment and the abutments were widened to accommodate the wider alignment. The load capacity of the bridge was increased to account for 300,000 pound container handling vehicles with loaded containers. The bridge was constructed in three stages to maintaining critical intermodal traffic during all stages of construction.

Jefferson National Expansion Memorial Tunnel Project; National Park Service; St. Louis, Missouri:

Amec Foster Wheeler recently completed a \$340,000 tunnel rehabilitation design/build project for the U.S. Department of Interior, National Park Service on the St. Louis Gateway Arch Grounds. This project consisted of the removal and replacement of the existing expansion joints and patching concrete spalls in three active railroad tunnels. Amec Foster Wheeler utilized the best local resources, the best current industry and engineering practices to meet the NPS's multiple objectives. This project was completed under budget and several months ahead of schedule. Kevin Williams was the lead construction inspector for this project.

Trails and greenways

St. Vincent Greenway Trail; Great Rivers Greenway District; St. Louis County, Missouri

Great Rivers Greenway District, the metropolitan trails and greenways district for the St. Louis metro area, selected Amec Foster Wheeler to develop conceptual trail layouts for a 2.5-mile portion of the St. Vincent Greenway. The trail corridor, which is part of a greenway that extends from the University of Missouri-St. Louis to Forest Park, runs through the communities of Pagedale and Wellston and connects to St. Vincent County Park.



The trail corridor runs along Engelholm Creek, which is a tributary of River Des Peres. The land use in the project area is a mix of residential and industrial containing several brownfields. The residential area, which has suffered from decay, is showing signs of renewal and some of the brownfields have been cleaned up.

Amec Foster Wheeler prepared a conceptual trail plan that included plan and profile layouts and renderings of the proposed trail. One key element of the plan was a new trail crossing over the MetroLink light rail line.

Other engineering services

- Transportation engineering
 - Transportation planning
 - Parking lots and pedestrian access
 - Recreational facilities
- Hydrology, stormwater and sanitary sewer engineering
- Sediment and erosion control services
- Utility management services

Other clients served

- Federal: U.S. Air Force, U.S. Navy, U.S. Forest Service
- State Departments of Transportation: Missouri, Illinois, Kansas, Tennessee
- County agencies: St. Louis County, Jefferson County, St. Charles County
- Municipal: University City, MO; Kansas City, MO; Belleville, IL
- Other clients: Ameren; Great Rivers Greenway; Metropolitan St. Louis Sewer District; Parkway School District

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