

November 15, 2013



Missouri Department of Transportation  
Central Office  
105 W. Capitol Avenue  
Jefferson City, MO 65102

Attn: Ms. MaryAnn Jacobs  
E: [MaryAnn.Jacobs@modot.mo.gov](mailto:MaryAnn.Jacobs@modot.mo.gov)

Re: Letter of Interest to Provide Professional Services  
for MoDOT – LPA On-Call Consultants Program  
Professional Services Work Category: **Construction Materials Testing & Inspection**  
Terracon Proposal No. P15130451

Dear Ms. Jacobs:

Terracon is pleased to submit this letter of interest to the Missouri Department of Transportation (MoDOT) LPA Program to be considered to provide professional Construction Inspection services for MoDOT – LPA in the Construction Inspection work category.

Terracon is a 100-percent employee-owned consulting engineering firm that has been providing quality services to clients since 1965. From its roots in geotechnical engineering, Terracon has evolved into a successful multi-discipline firm with over 3000 employees specializing in construction materials engineering and testing, geotechnical engineering, environmental services, pavement analysis and design, and facilities services. Terracon currently ranks 38th in Engineering News-Record's 2013 listing of the "Top 500 Design Firms" and a ranking of 19th of the "Top 100 Pure Designers."

**QUALIFICATIONS:** Terracon has proven MoDOT experience, providing construction materials testing for:

- numerous Wal-Mart roadway projects (where connecting to MoDOT roadways),
- the widening of Highway 63 from 2 to 4 lanes between Macon and Kirksville
- Schifferdecker Avenue and 26<sup>th</sup> Street widening in Joplin
- Bailey Road and Douglas Street Lighting and Roadway Project in Lee Summit
- US 65 and Evans Road and College Street Scape Phase IV in Columbia
- City of Webster Groves Murdoch Bridge and St. Charles County Ehlmann Road Testing Projects in St. Louis
- our AASHTO certified labs are frequently used for test result dispute resolution between MoDOT and general contractors.

Terracon offers a single point of contact for multiple service lines, and maintains company-wide internal quality assurance procedures to provide consistency between offices. Terracon's experts have decades of experience working with local conditions allowing us to offer practical solutions for a wide array of engineering problems.

**OFFICE LOCATIONS:** Terracon has 140 offices nationwide and 5 offices in Missouri, including St. Louis, Columbia, Kansas City Metropolitan, Joplin, and Springfield, Missouri. Over 150 employees are located in these offices and work on projects located throughout the State of Missouri. Each of these offices is uniquely qualified to provide full-service construction materials testing services for MoDOT; however, should the need arise, we could draw technical support from any of our offices nationwide in an efficient and seamless manner.

Our Columbia, St. Louis, Springfield, and Kansas City metro area offices maintain on-site AASHTO, AMRL, and CCRL accredited soil/aggregate-testing laboratory at each location. Terracon also performs its own internal proficiency program



annually in each of our testing laboratories.

**SAFETY & TRAINING:** All of our construction materials inspection and materials testing technicians are continuously trained. All of our technicians have completed the 10-hour OSHA safety training. In addition, Terracon recorded over 5,000 man-hours in training of our technicians in monthly brown-bag seminars/training sessions. In addition to technical training, Terracon has established a Safety Awards Program to instill safe work habits in our employees and also to reward employees with excellent safety records.

**KEY PERSONNEL:** Key construction materials inspection and testing services personnel that will be assigned to manage MoDOT projects include Jesse Kocher, P.E. and Mr. Allen Minks, P.E. (St. Louis), Brian Robben, P.E. (Columbia), and John Thomas, P.E. (Kansas City), and Ty Alexander P.E. (Springfield & Joplin).

Mr. Jesse Kocher, P.E. is the construction materials testing manager and in the St. Louis, Missouri office. Mr. Kocher has over 10 years of progressive construction materials inspection and testing services experience. Mr. Kocher also worked for the Missouri Department of Transportation in the Construction Division. As a senior construction inspector, he managed several projects in the St. Louis area providing testing and observation services along with construction inspection and construction management. Mr. Kocher is assisted by Mr. Allen Minks, P.E..

Mr. Allen Minks, P.E. is the geotechnical manager and too is in the St. Louis, Missouri office. Mr. Minks brings over 30 years of experience in a wide variety of geotechnical studies ranging from home foundation distress investigations to foundation analysis, design, and construction monitoring of multi-million dollar projects. His responsibilities have included project initiation, proposals, supervision, and performance of field and laboratory investigations; geotechnical analysis and design; reports; and construction monitoring and supervision. Mr. Minks provided geotechnical consulting services during the preparation of the design-build proposals for the Daniel Boone Bridge in Chesterfield, Missouri. Services focused on new pavement design utilizing a wicking geosynthetic material that had not yet been used by MoDOT. Various options were provided utilizing the geosynthetic as compared to a granular drainage layer and how these materials affected the base rock and pavement sections. Both flexible and rigid pavement alternates were included. High plasticity subgrade also needed to be addressed for the St. Charles County approach.

Mr. Brian Robben, P.E. is the construction services and geotechnical department manager in Terracon's Columbia, Missouri office. Mr. Robben has over 15 years of combined engineering experience in the environmental and geotechnical fields. Mr. Robben's expertise includes numerous construction projects such as elevated parking structures, ethanol plants, landfills, large retail, heavy highway, mid-rise post-tension, pipelines, residential, steepened slopes, and wind turbine farms. Mr. Robben provided provided post-design services for Segment 2 reconstruction of Highway 64. QA activities included directing engineers and technicians observing deep and shallow foundations being constructed, unsuitable subgrades, construction of 2H:1V (horizontal to vertical) slopes, ground improvement (stone trenches) and MSE/gabion wall construction. Reported and provided oversight for slope stabilization due to shales and groundwater including a large failed section west of Hanley Road.

Mr. John Thomas, P.E. is the office manager and a principal in the Kansas City Metropolitan Missouri and Kansas offices. Mr. Thomas has over 15 years of progressive construction materials inspection and testing services experience. Mr. Thomas has been involved in geotechnical projects that include mid to high rise towers, commercial/retail buildings, industrial facilities, airport structures, public works facilities, elevated water storage tanks, communication towers, schools, residential subdivisions, apartment complexes, bridges, pavements, and slope stability for excavations and embankments. The scope of these projects has varied from the routine to the complex requiring sophisticated geotechnical analysis. Mr. Thomas has also been involved in the evaluation and stabilization of three large existing concrete dams in Central Texas, the design and construction of a large earth dam in central Florida, and design of over 30 miles of the US 70 realignment in New Mexico. His duties consisted of conducting numerous design and value engineering analyses, report preparation and preparation of construction documents, as well as on-site construction management.

Mr. Ty Alexander, P.E. is the office manager in the Joplin and Springfield, MO offices. Mr. Alexander has over 18 years of progressive construction materials inspection and testing services experience. He provides technical review, direction and management of major construction materials inspection and testing services projects. Mr. Alexander is the Geotechnical and Materials engineer overseeing subcontract soils, concrete, and asphalt testing and inspection for various projects for the City of Springfield, Missouri Public Works Department On-Call Testing Contract for the City of Springfield, Missouri.

**Familiarity, Capability, and Accessibility:** The services being requested by the LPA, including Construction Materials Testing and Inspection, are all “core services” that Terracon routinely provides to clients throughout the State of Missouri. Terracon is committed to provide the essential staff, equipment, and other resources necessary to serve the Missouri Local Program. Our Missouri offices are equipped to provide the cost effective level of service and responsiveness required by the Missouri LPA. Additionally, where beneficial to LPA, Terracon can also draw upon our staff resources from each of our Missouri offices and from our additional 140 offices nationwide, all having specialized manpower and professionals for unique projects. The key personnel presented in this Letter of Interest are available to work on your projects and are committed to meeting your expected needs. Each professional listed has ample additional resources to draw from to keep Missouri LPA projects on time and on budget.

Because of projects federal funding, which is intended to stimulate economic activity, the LPA's projects frequently have tight deadlines that must be met in order for the state and municipalities to receive ongoing funding for the project. We regularly communicate our progress via email, written documentation, and weekly conference calls. In addition, we are readily-available to the Missouri Department of Transportation when needed. Terracon's ability to quickly expand our capacity relies on two practices that provide significant competitive advantages for the company.

- First, we have built-in systems to share work between all of our offices. This is accomplished by rewarding both the office supporting projects and the office requesting help, creating a culture that supports a seamless sharing of employees. The team has sufficient professional resources to accomplish the work in the required time, including the ability to complete more than one delivery order at a time, and to react quickly and efficiently when working within an accelerated schedule. No individual office within Terracon receives a Profit & Loss statement, thus increasing the likelihood and willingness of offices to cooperate and share resources.
- Second, in short-term periods of heavy workload, our employees are willing to work overtime hours. Terracon pays our professional employees overtime based upon exceeding certain chargeable hours, making it possible to expand our capacity without the need to hire for short term increases in work load. While Terracon has a strong philosophy of providing a consistent team of professionals in order to ensure consistency and familiarity with the client and their projects in a geographic area, both of these systems allow us to provide experienced Terracon employees to the project manager on short notice to achieve the consistent quality deliverables in a timely manner when workloads and schedules require additional support.

In closing, we believe that Terracon has the manpower, expertise, and equipment necessary to continue to be a full-service construction materials inspection and testing services provider for Missouri Local Programs. We look forward to developing a relationship with regards to one of our major service lines, construction materials inspection and testing services. We will welcome the opportunity to provide any additional information you may require.

Respectfully submitted,  
**Terracon Consultants, Inc.**

Chawn Stich  
Client Development Manager

Attached;      Cover Sheet  
                    Company Brochure



Jesse Kocher, P.E.  
Senior Associate

Construction Services Manager – St. Louis

# Innovative Delivery Team

# Terracon

## Our People



**JAMES M. SCHMIDT, P.E., P.ENG., D.GE.**, Director of Transportation and Infrastructure

Mr. Schmidt has more than 30 years of experience as a geotechnical and environmental engineer. He has provided technical expertise and has managed a wide variety of transportation projects including bridges, highways, and roads. Mr. Schmidt's geotechnical management experience has included inventories of soil, geologic, seismologic, and hydrologic conditions. His areas of technical expertise include evaluating criteria for design and construction of driven and auger-cast pile foundations, high capacity pavements, slope stabilization, soil nail design, liquefaction evaluation, MSE wall systems, and excavation support.

**DAVID S. LIPKA, P.E.**, National Program Manager, Transportation

Mr. Lipka has more than 27 years of experience and is a national program manager providing geotechnical engineering, construction materials engineering and testing, and Special Inspections services for Terracon. Mr. Lipka provides oversight and support to verify that appropriate personnel are assigned and projects are executed successfully and in a timely manner, while providing engineering review and quality assurance oversight to each project. Mr. Lipka has worked on multiple bridge and highway projects, including serving as the senior engineer on multiple bridges at Charlotte-Douglas International Airport and the State Route 85/McWhorter Avenue Interchange at Eglin Air Force Base in Florida. He is active in professional engineering organizations, including the Professional Engineers of North Carolina and American Council of Engineering Companies. Mr. Lipka also has extensive experience working on design-build and public-private partnership (P3) pursuits.



**DAVID D. HARWOOD, P.E., P.ENG.**, Senior Vice President

Mr. Harwood is a senior vice president and the director of Terracon's strategic business sectors. He has 23 years of engineering design and construction experience. He has managed projects involving highways, rail systems, airports, seaports, military installations, pipelines, transmission lines, power generation facilities, refineries, commercial development, and master planned communities. His experience includes project planning, management, engineering design, technical review, quality assurance, and construction oversight.

**TY G. ALEXANDER, P.E.**, Springfield, Mo. Office Manager

Mr. Alexander is the Office Manager of Terracon's Springfield, Missouri office. He provides project management and oversight for subsurface investigations, construction materials engineering, laboratory testing, sample evaluation and report preparation. During the past sixteen years, Mr. Alexander has gained diverse project experience as a geotechnical and materials engineer. He has served as the geotechnical engineer for vast transportation projects, dams, airports, pavements, and municipal utility projects. Further, Mr. Alexander has experience in the field and laboratory, performing a full range of materials testing and quality control. He has served as project engineer for several projects in Southwest Missouri, Kansas, Arkansas, Oklahoma, Colorado, Nebraska, and Wyoming.



**JESSE M. KOCHER, P.E.**, St. Louis, Mo. Materials Services Department Manager

Mr. Kocher is the Materials Services Department Manager for Terracon's St. Louis, MO offices. He has more than 10 years of professional experience with construction observation/testing industry. Mr. Kocher also worked for the Missouri Department of Transportation in the Construction Division. As a senior construction inspector, he managed several projects in the St. Louis area providing testing and observation services along with construction inspection and construction management. Areas of expertise include construction materials testing, materials selection consulting, mix design review, construction inspection, and quality control/quality assurance programs with both public and private sector clients.

## Why Terracon?

With more than 3,000 employees and more than 140 offices, Terracon has provided environmental, facilities, geotechnical, and materials engineering and sciences services to assist with increasing the durability and stability of roads and highways, bridges, railroads and light rail, airports, and marine and docking facilities. Our clients rely on our expertise to meet objectives through the following key principles:

**Responsiveness.** When Flatiron Constructors needed an emergency shoring design for the I-35E bridge in Minneapolis, they called Terracon. We mobilized to the site within 12 hours. Arriving onsite the Wednesday before Thanksgiving, our team of experts assessed the client's needs and available materials, developed a draft design on Thanksgiving Day, with a final design ready for implementation on Monday morning when crews arrived.

**Resourcefulness.** When Granite Construction was faced with a logistics problem on unsuitable soils for the first critical path bridge on I-64, they turned to Terracon. With no room for a conventional over-excavation and no time to bring in a specialty contractor, Terracon assessed the equipment, skills, and materials available to the team. Terracon developed a controlled modulus trench solution that was completed in less than half the time of a more conventional solution, at a significantly reduced cost.

**Reliability.** Terracon noticed early on that alternative delivery projects required a different approach than our traditional transportation services for design, bid, build. To provide a consistent and reliable approach for our clients, Terracon invested in the innovative delivery team you see here. Combining the best of Terracon's more than 140 local offices with a national and international team of experts gives our clients a reliable and competitive advantage.

Terracon provides services for thousands of projects each year for a diverse client base that includes local highway departments, state DOTs, private highway (turnpike) authorities, engineering firms, property owners, managers, contractors, and infrastructure specialists. Recently completed projects include:

- **Hurricane Deck Bridge, Lake Ozark, MO** - Terracon performed Level I and Level III underwater assessments of four bridge piers and caissons on this five-span steel truss bridge.
- **SR-525/SR-99 Interchange, Lynnwood, WA** - Terracon was heavily involved in the planning, design, development of specifications, and construction monitoring on this recent WSDOT cement-treated soil embankment project.
- **Florida High Speed Rail, Hillsborough/Polk County, FL** - Terracon was responsible for the geotechnical investigation and contamination screening through the Program Management team for construction of the western half of the Tampa-Orlando line which ran 84 miles from downtown Tampa to Orlando International Airport.
- **I-15 CORE Project, Utah County, UT** - Terracon provided design quality assurance and construction quality control services on this \$1.2 billion, highly successful Fixed Price/Best Design project. This is only the second Fixed Price/Best Design procurement project in the nation, and Utah's first.

Terracon Consultants, Inc.  
(314) 692 8811

Services available  
in all **50** states



More than 140 Offices Nationwide

## Contact Information

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## Terracon Facts

- Maintains a fleet of more than 100 drill rigs, probe rigs, or CPT rigs
- 70 independently accredited CMET laboratories in 33 states
- 19 Certified Industrial Hygienists and 13 Certified Safety Professionals
- Completed geotechnical and CQC/COA services on more than \$10 billion in alternative delivery projects since 2006

terracon.com

# Terracon

Environmental ■ Facilities ■ Geotechnical ■ Materials

# Transportation Services



## Why Terracon?

Saving our clients time and money through tailored services that meet their objectives: It's a belief we've put into practice since our inception more than 45 years ago. Today, Terracon has grown into a national leader in consulting engineering, with more than 3,000 employees and more than 140 offices in 40 states. Our clients rely on our expertise to meet objectives through the following key principles:

**Responsiveness.** Acting quickly to meet your deadlines, our employee owners are always available to you. With convenient locations across the country, we're able to quickly mobilize a workforce to respond to accelerated schedules and your changing needs.

**Resourcefulness.** Applying new processes, methodologies, and techniques allows us to take a proactive approach to solving project challenges and deliver your projects better and faster. With our nationwide network of offices, we can initiate services easily on one or multiple projects simultaneously.

**Reliability.** With vast experience working in local conditions, Terracon is a dependable partner throughout the life of your project. We deliver practical and constructible solutions, while avoiding delays, surprises, and costly mistakes down the road.

## Tailored Services to Meet Your Objectives

From major highway projects to bridge inspections, Terracon is a proven leader in the transportation industry providing geotechnical, environmental, construction materials, and pavement related services. Terracon has provided support services to assist with increasing the durability and stability of roads and highways, bridges, railroads and light rail, airports, and marine and docking facilities.

Terracon provides services for thousands of projects each year for a diverse client base that includes local highway departments, state DOTs, private highway (turnpike) authorities, engineering firms, property owners, managers, contractors, and infrastructure specialists.



**I-64 Design-Build**  
St. Louis, Missouri



**Hurricane Deck Bridge**  
Lake of the Ozarks, Missouri



**kcICON Bridge**  
Kansas City, Missouri

## Engineering Success

"Terracon has consistently been an outstanding performer, and their highly experienced staff have a keen understanding of the design-build process and the goals and objectives of the lead designer, contractor, and owner."

*-Jim Klemz, Parsons Transportation Group*

### Awards

#### 2013 Engineering News-Record Rankings

Top 500 Design Firms	#38
Environmental	#68
Transportation	#45
General Building	#15
Top 100 Pure Designers	#19

Environmental



Facilities



Geotechnical



Materials

## Transportation Expertise

We have experienced leaders who specialize in transportation work and understand the design-build process as well as the demands of accelerated schedules. Terracon also has experience in emergency response and will work quickly to mobilize a workforce to turn around design and implementation quickly. We work with the whole team to find solutions to the most challenging problems, bringing national talent together with local experience to create value.

### Geotechnical

- Subsurface Exploration and Testing
- In-situ Testing/Performance Monitoring
- Field/Laboratory Soils Testing
- Foundation Analysis
- Earth Structures, Slopes, and Retention Systems
- Soil Stabilization and Ground Improvement
- Groundwater Control and Pavement Design
- Pavement Analysis and Design
- Seismic Design

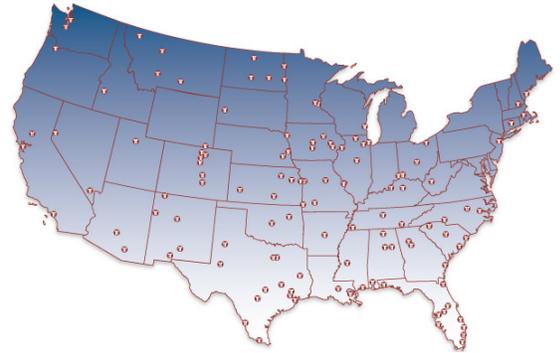
### Environmental

- Environmental Site Assessment (ESA)
- Environmental Site Investigation (ESI)
- Brownfields/Site Redevelopment
- Groundwater Assessment/Remediation
- Natural Resources/Wetlands Delineation
- NEPA Reviews
- Inspection/Compliance Permitting (NPDES, SWPPP, SPCC)
- Asbestos/Lead/Mold/Indoor Air Quality
- Remedial Design and Implementation

### Materials

- Construction QA/QC Programs
- Field/Laboratory Materials Testing
- Roof Installation Monitoring
- On-site Observation and Monitoring
- Structural Steel Nondestructive Testing
- Field/Laboratory Design/Review
- Materials Mixes
- Diving Inspections and Monitoring Utilizing Surface-Supplied Equipment (Hard Hat Diving)

Services available  
in all **50** states



Offices Nationwide

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