Hg Consult Inc engineers

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November 12, 2013

Ms. MaryAnn Jacobs
Missouri Department of Transportation
105 West Capitol Avenue
Jefferson City, Missouri 65102

Re: **LPA On-Call Professional Services**
Structures

Dear Ms. Jacobs and Selection Committee Members:

Hg Consult, Inc. is a recently formed civil/transportation engineering firm founded in 2010. We are on MoDOT's Approved Consultant Prequalification List for Roadway Design. We are also certified with MRCC as a **Disadvantaged Business Enterprise**. Nearly 80% of our professional service fees are from MoDOT projects, either as a sub consultant or a prime. We currently enjoy a MOU on-call contract in the Kansas City District.

Almost by definition, Hg exemplifies workforce diversity. Earl Harrison, PE, our president and majority owner, embraces diversity and encourages it through his actions at work and in the community. Earl is a member of the Black Engineers and Architects Society of Kansas City and serves on the Diversity Committee of the American Council of Engineering Companies of Missouri. He actively encourages diversity in our small workforce and in our approach in our professional associations on MoDOT projects.

But above all else, the most important test of Hg is how we perform. How responsive are we to MoDOT and all our clients? Do we meet our deadlines? Do we embrace and practice Practical Design? Can we be creative in our approach to even the simplest of assignments? How much engineering can we squeeze into the limited cost-box allowed by the MOU contracts?

To help answer these questions, we encourage you and the Selection Committee to discuss the performance of Hg with the Kansas City District design and management staff. We are well known in Kansas City and are confident you will receive a very positive confirmation of our track record. We understand that this on-call is for statewide services, but most of our previous MoDOT experience has been in Kansas City. Whether working as a sub to a prime consultant or working directly for the MoDOT Kansas City staff, we have enjoyed success on all of our projects. In fact, we recently received a 4.5 of 5.0 rating from MoDOT for a roadway corridor study on Route 7 in Harrisonville. We were able to deliver a timely project and provide cost-effective ideas for future design and construction. This comprehensive corridor study was done within the engineering cost cap of our MOU.

On all of our projects we use the following company guideline and approach:

- Define the need
- *Communicate*
- Discover the conditions
- *Communicate*
- Design a practical solution
- *Communicate*

Define the need. Often the consultant's PM and the MoDOT PM may have different ideas on the goals of a project. Starting from a sometimes necessarily loose description in the RFP, a consultant can go far astray from the intent of MoDOT. Valuable time and effort is used to bring the PM's together on the desired course after design begins. Hg staff will take time during the initial stage of a project to ensure the goals and the process to achieve the goals is clearly defined. How much new survey is required? Is new right-of-way an option or does the project need to stay within the existing confines? Are environmental permitting issues anticipated depending on what design option is selected? How much stakeholder involvement is necessary? After constructing the scope and need, we then have complete confidence in the agreed-upon goals and move forward with a detailed scope and working agreement.

Communicate. Agreement of a detailed, written, expanded scope needs to be reached by Hg and the MoDOT PM. This can only happen with candid, routine communications, from both face-to-face meetings and written communications. Emails alone are too easy and too easily misinterpreted.

Discover the conditions. Hg staff has found that the more time we spend in the field, the less time we spend in costly re-designs. What seems obvious in a conference room often is markedly different when a detailed discovery is performed. This is not just the physical field condition for a new roadway or culvert, but also the total environment of the proposed project. A study of the unique aspects of the local utilities and their future plans often prevent changes late in the design process. A review of right-of-way costs may lead to an innovative solution to saving total project costs and minimize impacts on adjacent property owners. A study of the larger watershed and the means and methods for conveyance beyond the local system can avoid future lawsuits.

Communicate. Findings from the discovery phase of the project must be documented in design memoranda, models, as-built drawings, zoning documents, utility agreements, or any other means necessary to assure minimal changes once design begins.

Design a Practical Solution. Within all agencies over the past several years, emphasis is now placed in stretching available construction budgets to provide equal value at reduced cost. While the most practical solution is often the cheapest in capital cost, it always must first bring value to the owner and meet the requirements of the intended design criteria. Practical Design must insure a successful project that meets the project goals and does so in a way that guarantees MoDOT is protecting the public safety and trust. Practical Design begins early in project

development, as our design team draws upon our experience in creating strategies to save on cost while still achieving the established project goals. When needed, Hg will evaluate solutions through modeling, to show three-dimensional results and not solely rely on two-dimensional layouts. For example, a Practical Design solution can be as direct as evaluating a different and more modern type of bridge structure. Or, it can be more intuitive and involve considering a solution such as roadway narrowing or a "road diet" as opposed to purchasing new right-of-way and relocating utilities.

Communicate. Our best ideas can get lost and muddied by a failure to communicate. Our final PS&Es are the ultimate communication device. They must have a practical quality that assures bidding contractors clearly know our intent, assuring the most complete and informed bids possible. Bid items, quantities, and specifications must be clear and accurate enough to make sure bidders have everything included in their prices to prevent costly disagreements during construction.

Scott Heavin, PE, is one of our firms Project Managers, and has many years of managing LPA projects in the Kansas City region. Scott has managed over 8 LPA projects, including intersection geometric improvements, arterial streets, access management, bridges, trails, and sidewalks. Scott is experienced in assisting projects like these through the NEPA process and environmental clearance requirements. He has also completed MoDOT LPA Basic Training Level 1, and is a member of the MoDOT Kansas City District LPA Advisory Committee.

Hg has additional staff with valuable LPA project experience. Eric Reinkemeyer, PE, PTOE, our traffic engineer, has also performed traffic and pedestrian signal design and traffic analysis for many Kansas City area LPA projects. Richard Michael, an Hg civil designer, has performed trail, sidewalk, and ADA curb ramp design on many LPA projects as well. Terry Hood is Hg's bridge and structural engineer lead. Terry also has many years of experience in both design and management of LPA bridge projects including county bridges, arterial street bridges, and railroad overpasses.

Ms. Jacobs and Selection Committee Members, preparing a proposal for on-call projects is very challenging, since there is no specific project to dissect and approach. It is impossible to set ourselves apart with a unique project approach or a specific demonstration of special capabilities. We hope that our attempt to show a journeyman approach to any project, along with our reputation in the Kansas City District, will demonstrate that we are worthy of again being selected as an on-call provider of engineering services. We have been very pleased and proud to be a MoDOT partner and look forward to your consideration of Hg Consult, Inc.

Sincerely,

Hg Consult, Inc.
Engineers

Bob Goodwillie, PE

Company Profile

Missouri
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Registrations

Missouri
Licensed to Practice Engineering
Certified DBE with MoDOT, Kansas City, MARC,
KCATA, Certified MBE with KCMO

Kansas
Licensed to Practice Engineering
Certified DBE with KDOT, Unified Government

Oklahoma
Licensed to Practice Engineering
Certified DBE with ODOT, Certified MBE with Tulsa

Iowa
Licensed to Practice Engineering
Certified DBE with Iowa DOT

Hg Consult, Inc. is a recently formed consulting engineering firm based in Kansas City, Missouri. We were incorporated January 14th, 2010, in Missouri, with offices in Kansas City, Missouri and Lenexa, Kansas. Our small staff is well known and highly respected in the local engineering community, derived from our extensive background in transportation planning and design. We are fully committed to provide professional consulting services based on three key factors; **responsiveness, quality, and open communication.**

Hg has several areas of competency in transportation design and we continue to grow our professional offerings as our firm grows. We have roadway and bridge design capabilities for both highways and municipal roadways. Our traffic design capabilities include traffic analysis, traffic operations, signals, and construction sequencing and traffic control. In addition our firm possesses substantial experience with support disciplines such as drainage, public involvement, utility coordination, trails, NEPA documentation and transportation planning. We have a wide range of experience from small roadway reconstructions to major interchanges and understand the varying requirements of each.

Our primary clients include the City of Kansas City, Missouri, the Unified Government of Kansas City, Kansas/Wyandotte County, MoDOT, and most major transportation consultants in the Kansas City area.

As a **certified DBE and MBE**, we often serve as a sub consultant to other engineers that have DBE participation requirements from their clients. We pride ourselves in our successful completion of several complex projects to the complete satisfaction of our prime consultant clients. Our staff also possesses the experience and successful track record to lead as prime consultant on design projects as well.

As an employer, we have taken a modern approach to our operations and staff. We have complete workplace flexibility and all of us office remotely. We are completely cloud-based in our operations. The trust and flexibility placed with our employees pays dividends to us in efficiencies and to our clients in the quality of our product.

Earl Harrison, Jr, PE, is our company President and **Bob Goodwillie, PE**, is our Vice President. Earl, Bob, and the **Hg** staff are committed to providing the appropriate professional services and resources for a variety of transportation projects.

I-70 over Manchester Trafficway – MoDOT Kansas City District

Hg Consult, as a sub-consultant to HTNB on the MoDOT design-build project, provided structural design services for all facets of the bridge replacement project, including the following: bridge deck, prestressed girder, elastomeric bearing, sub-structure and foundation design. The completed project will replace existing twin bridges with two multi-unit pre-stressed girder structures, each approximately 2,390 feet in length and using skewed bents, to carry East and West bound I-70 over Manchester Trafficway, the Blue River and four railroads.

Broadway Bridge over I-670 – MoDOT Kansas City District

Hg Consult, Inc. as a sub consultant to GBA, provided traffic control, erosion control, and Public Involvement for the bridge reconstruction over I-670 near Bartle Hall in downtown Kansas City. This joint MoDOT/Kansas City project was completed within a very short timeframe for the grand opening of the Performing Arts Center. Public Involvement included coordination with the Downtown Council, Bartle Hall, Performing Arts Center, as well as businesses and neighborhood organizations. Hg also facilitated input sessions with stakeholders to provide feedback to guide aesthetics.

Route 7 Concept Study – MoDOT Kansas City District

Hg Consult, Inc. was hired by the Missouri Department of Transportation (MoDOT) and the City of Harrisonville for a conceptual study of Route 7 (Mechanic Street) from Independence Street to Stella Street. The goals of the concept phase were to study corridor deficiencies, pedestrian traffic in the corridor and safety enhancements, and to recommend improvements. One goal was to study non-vehicular transportation improvements near the Harrisonville Middle School and central downtown business district. The project included layout of an enhanced sidewalk/trail. The study included concept plans for a three-lane minor arterial with curb and gutter, sidewalks/trail and pedestrian safety improvements.

169 Highway and 96th Street Interchange – MoDOT Kansas City District

Hg Consult, Inc., as part of a multi-company team, was responsible for the complete design of 96th Street. Design consisted of a four-lane divided parkway with a multi-use trail and sidewalks. This project also included modifications to signals at N. Oak and 96th Street, along with a multi-lane roundabout. Provisions allow for future landscape beautification of the roundabout by KCMO Parks. The design and project requirements included reviews from all related local, state, and federal agencies.

Downtown Streetcar, Main Street Starter Route - Kansas City, MO

Hg Consult, Inc. is part of a multi-disciplined team that performed concept study and preliminary track layout. During the conceptual phase, Hg was responsible for utility base mapping and drawings. The utility coordination role also included relocation and mitigation of facilities impacted by the project. In 2013 the project transitioned into the final design phase. Hg is performing design and plans for ADA compliant curb ramps at over 25 intersections along the route from Crown Center to River Market. Many of these intersection corners have limited right-of-way and difficult topography. The design also includes coordination with pedestrian signals and traffic signal modifications. The construction documents will be completed in early 2014.

Minor Park Connector Trail – Kansas City Parks and Recreation

Hg Consult, Inc. was hired by Kansas City Missouri Parks and Recreation in early 2013 to design 1.25 miles of trail improvements near Minor Park. The project is along the Blue River Greenway and begins at Alex George Lake, extending south of Red Bridge Road through Minor Park. Hg is preforming geometric design, grading, and drainage. The project is using federal funds. Hg is assisting with the NEPA process, environmental clearances, and MoDOT LPA requirements. This includes Section 106 (historic/cultural resources), floodplain development permit, and Section documentation.

Jersey Creek/MO River Bridge Connector Trail – Unified Government

Hg Consult, Inc. was hired by the Unified Government of Wyandotte County/Kansas City, KS in early 2013 to design 1 mile of trail improvements along 5th Street just north of downtown. The project begins at Jersey Creek and extends north on 5th Street to Rowland and west to 7th Street. Hg is performing geometric design for the trail, grading plans, and drainage. The project will utilize federal funds for construction, so Hg is assisting the Unified Government with the required environmental clearances and following the KDOT LPA process. Once completed, the project will add to recent trail improvements and extend the existing. Construction will being in 2014.

Thunderbird Road/Route 150 Interchange – MoDOT Kansas City District

Hg Consult, Inc. was part of a design team hired to design and prepare construction plans for the proposed Thunderbird Road and Route 150 Half-Diamond Interchange project in Jackson County, MO. The project was led by the Missouri Department of Transportation and the Kansas City Southern Railroad. Hg was responsible for the preparation of the traffic control design, signing, pavement marking and lighting plans as part of the overall design team. The total project cost was $3.6 million.

The Hg Consult Team

Earl Harrison, PE - As President of Hg Consult, Earl is dedicated to building our professional relationship with MoDOT and local municipalities. Earl has a substantial background in transportation engineering. His experience includes transportation facility design and project management, preparation of NEPA documentation, and transportation location studies. Earl has a well-rounded experience LPA experience and has performed environmental studies, EIS/EA documents, geometric design, conducted public hearings, and client coordination.

Bob Goodwillie, PE - As Vice President of Hg Consult, Bob supports our clients and project managers to ensure that all projects have the professional resources to meet the requirements. Bob is a civil engineer with 40 years of engineering and management experience that includes directing complex multidiscipline projects. He has a client-oriented approach to leadership and proven ability to manage staff of 50 multidiscipline professionals as a former CEO of a multi-disciplined engineering company.

Terry Hood, PE - Terry is Hg Consult's senior structural engineer with 23 years of design experience. His experience includes the structural design, detailing, plan and specification preparation for cast-in-place, drilled shaft and MSE retaining walls and bridges. Terry has a broad range of experience including county bridges, municipal roadway and water crossing structures, highway interchange and freeway bridges, widening and repairs, LPA bridge projects, and design-build.

Melanie Townsend, PE – Melanie is also one of Hg Consult's senior structural engineers. Melanie has over 15 years of bridge and bridge component design experience, and has worked on numerous projects for MoDOT, KDOT, and the Iowa Department of Transportation. In addition to design and plan production, Melanie has also performed bridge ratings and bridge inspections on her previous assignments. Retaining wall designs and municipal and county bridge design projects are other examples of Melanie's capabilities.

Scott Heavin, PE - Scott has 15 years of experience as Project Manager and roadway engineer. Scott has performed as project manager on a wide variety of successful LPA projects including arterial streets, intersections, bridge overpasses, and biking trails. Scott is experienced with the NEPA process for federal funded projects and environmental clearance requirements with local, state, and federal permitting agencies. Scott also has many examples of providing design services assistance to the contractor and construction manager during construction.

Bill Blackwell, PE - Bill is Hg Consult's water resources Project Manager and has over twenty years of experience in project management in both consulting and municipal environments. Bill possesses wealth of knowledge of design, procurement, and erosion control practical design and construction practices. Bill performs the drainage and erosion control design for all of our transportation projects. Prior to joining Hg Consult, Bill was the Deputy County Engineer for the Unified Government of Wyandotte County and Kansas City, Kansas.

Jake Potter, APR - Jake Potter is our public involvement manager. Jake is experienced on a broad range of government and community projects in the areas of public and stakeholder engagement, as well as strategic communication and media relations. Jake has designed, implemented and managed public involvement programs for multiple transportation, stormwater and infrastructure projects. He is well versed in identifying and engaging stakeholder groups and special populations on behalf of agencies and organizations.