CBB Crawford, Bunte, Brammeier
Traffic and Transportation Engineers

Since 1973

November 15, 2013

Mr. Kenny Voss, P.E.
Local Programs Administrator
Missouri Department of Transportation
105 W. Capitol Avenue
Jefferson City, Missouri 65102

RE: Letter of Interest
Missouri's Local Program (LPA) On-Call Services – Traffic Engineering and TEAP – ALL DISTRICTS

Dear Mr. Voss:

Established in 1973, Crawford, Bunte, Brammeier (CBB) has since been a leader in transportation planning and engineering throughout the Midwest. Within this discipline, we are experts in the areas of traffic operations, control and safety; signal timing and coordination; design and modernization of roadways and traffic signals; lighting and interconnect systems; travel demand and simulation modeling; noise modeling and traffic data collection. Accordingly, we are pleased to express our interest in providing ***Traffic Engineering and TEAP*** services to the Local Public Agencies in all MoDOT districts.

CBB is currently prequalified as an approved consultant for MoDOT and has participated in their On-Call Services program since 1998. We believe our 40 years of knowledge, resources and experience in the region would continue to be of significant value to Missouri's Local Public Agencies. We have unique abilities and skill sets that are needed to complement and reinforce the LPA's efforts since many of them do not have those resources on staff. Our history of success in transportation engineering and planning is due in large part to an impeccable record of responsiveness to our clients' needs – always being accessible to them, listening and truly understanding their needs, and ultimately providing them with practical solutions to their transportation problems.

CBB's professional staff of traffic engineers, transportation planners and transportation designers includes 15 licensed Professional Engineers, 13 Professional Traffic Operations Engineers, and 3 Professional Transportation Planners. This staff is intimately familiar with the requirements necessary for federally funded projects or for projects where federal guidelines are required for approval. This requires a solid understanding of the processes involved and remaining current on the changes as these federal policies evolve.

We believe in and fully embrace workforce diversity both in our profession and for future projects under this program. We believe that a diverse workforce provides several different perspectives and ideas; resulting in a quality deliverable. Our team actively partners with academic institutions to not only promote technical disciplines but also to engage and recruit young engineers with diverse backgrounds. As reflected by the key-personnel listed in this letter, we are fully committed to ensuring diverse workforce participation for this study. We would submit diverse workforce participation percentages along with our monthly invoices. ***We are committed to providing a minimum 20% minority/women engineer workforce for this contract.***

1830 Craig Park Court - Suite 209
St. Louis, MO 63146
(T) 314-878-6644 (F) 314-878-5876

www.cbbtraffic.com

450 Cottonwood Road - Suite B
Glen Carbon, IL 62034
(T) 618-656-2612 (F) 618-659-0650

CBB has a long history of involvement with the Traffic Engineering Assistance Program (TEAP). We have assisted Cities and Counties throughout the state of Missouri with their individual traffic engineering needs since the inception of the program including. Our TEAP experience includes 42 projects since 2006 in a variety of areas in various districts including: intersection operation and safety studies, corridor/travel demand modeling studies, parking studies, traffic control sign inventories, other various types of traffic studies, pavement marking studies, and signal planning. Collectively, we have worked on numerous related projects focused on ***Traffic Engineering and TEAP***, including the following:

TEAP and Traffic Engineering: Rock Hill Road and Brownbert Lane – Rock Hill, MO

CBB evaluated the existing traffic conditions along Rock Hill Road (including inventorying existing roadway characteristics, quantifying existing traffic volumes, and reviewing historic crash data) to determine what improvements were needed to alleviate existing deficiencies and accommodate future traffic increases along the corridor. The study ultimately yielded concerns regarding pedestrian safety and school access at Steger School. It was recommended to pursue turn restrictions and a school traffic signal on Rock Hill Road, with further cooperation with the City and school. *TEAP.*

CBB then assisted Rock Hill in the preparation of a STP-S application which further evaluated the benefits of a traffic signal. Evaluations were performed indicating that by consolidating the school's entrance and exit at one signalized location on Rock Hill Road and converting the all-way STOP at Lithia Avenue to side-street STOP, there would be great operational and safety benefits. The project also promoted a safer environment for pedestrians, particularly school children, by allowing a signalized crossing of Rock Hill Road and by filling a gap in the sidewalk system. CBB also generated a conceptual layout and cost estimates for the STP-S application. *This project was complete in compliance with federal guidelines for STP funding.*

After the STP project was bid, CBB designed improvements that were recommended in the previous work including a new traffic signal with wireless detection, pedestrian enhancements, internal circulation modifications and parking lot improvement at Steger School on Rock Hill Road. This project was completely constructed in 2012 during the school's summer dismissal. *This project was partially funded by Federal Funds.*

TEAP Corridor Safety and Operational Analysis: McClay Road Corridor – St. Peters, MO

CBB evaluated safety and traffic operations along McClay Road between Jungermann Road and Harvester Road. The traffic volumes at the two study intersections exceeded their physical capacity. The study recommended short-term road improvements to improve current operating conditions and maximize safety along the corridor. Suggestions for longer-term, higher cost improvements were also made to minimize congestion, but right-of-way and utility constraints will likely limit the practicality/feasibility of some improvements. A conceptual layout and cost estimate was generated to further illustrate the potential impacts of the recommended improvements. *TEAP.*

TEAP Pedestrian/Bike Route Analysis: Sidewalk Inventory – City of Rock Hill, MO

CBB completed a safety inventory of the City-maintained sidewalk network. The desire was to prepare a comprehensive sidewalk inventory to address improved mobility and recreational opportunities throughout the City. The inventory established a baseline for increasing safety, identifying the locations and conditions of all City owned facilities, thereby providing the basis for making informed decisions on the need to remove, relocate, repair and/or replace existing facilities that the City maintains. The characteristics and functionality of existing segments were evaluated and documented in addition to the exploration of new connecting segments. CBB supplied the City of Rock Hill with key information to help prioritize both infrastructure maintenance and regional planning decisions with respect to their pedestrian system. *TEAP.*

Parking Issues: Promenade Shared Parking Study – Brentwood, MO

CBB completed a parking study to determine if an existing store could be demolished and replaced by larger retail space, while eliminating 16 parking spaces within the shopping center. The current parking utilization was recorded for the shopping center. Based on the current peak parking demands and the expected demand of the new larger space, it was concluded that there was adequate parking provided within the shopping center to accommodate the new retail space.

Traffic Data Collection

CBB regularly collects traffic data as part of traffic studies. CBB owns a variety of machine traffic counters for collecting continuous traffic counts, vehicle classifications and speed information. CBB also owns several hand-held data collectors for completing turning movement counts, gap studies, delay studies and queuing counts. Our technical staff is equipped and trained to place the equipment correctly with a high standard of safety for themselves and the traveling public.

CBB prides itself on the quality of its products and the commitment of our personnel to the specialized training that is needed to provide reliable results. The individuals listed below all have strong relationships with MoDOT and are well acquainted with the standards and procedures required for the successful completion of ***Traffic Engineering and TEAP*** projects:

Lee Cannon, P.E., PTOE Mr. Cannon is CBB's Principal focused on Traffic Engineering services to both public and private clients. Mr. Cannon has served dozens of local communities through hundreds of projects in his 19 years with CBB. He holds a Master's degree in traffic engineering. Mr. Cannon serves as the project coordinator for the current TEAP program and will continue in that role. He also works through CBB as third-party traffic engineer for the Cities of Clayton, Missouri; Brentwood, Missouri and O'Fallon, Illinois.	**Shawn White, P.E., PTOE** Ms. White is involved in various aspects of traffic and transportation engineering, including traffic impact studies, micro-modeling of roadway networks, parking analyses, optimization of traffic signal systems, traffic signal design, project management and client representation. Ms. White has specialized in analyzing the relationships between land use and traffic demand including trip generation, distribution and assignment.
Brian Rensing, P.E., PTOE Mr. Rensing has been involved in many facets of transportation engineering and has completed numerous traffic impact studies, operational improvement studies, traffic safety studies, and parking studies in his eleven years with CBB. Mr. Rensing has performed a wide range of traffic studies, including various TEAP projects; residential, commercial, industrial and institutional land use proposals and redevelopment projects. Mr. Rensing is CBB's expert on the Highway Safety Manual (HSM) and has experience performing safety data analysis for AJR's, interchanges and surface corridors as well as local intersections	**Srinivas Yanamanamanda, PE, PTOE, PTP** Srinivas leads the technical aspects of CBB's micro-simulation and travel demand modeling efforts and has been a pioneer in the integration of these modeling platforms. Mr. Yanamanamanda has over 9 years of experience including transportation travel demand modeling with software platforms such as CUBE Voyager, VISUM and TMODEL2; system analysis with microsimulation software such as VISSIM and CORSIM; and capacity analysis with tools like SYNCHRO, HCS and aaSIDRA. Mr. Yanamanamanda has been involved long range planning efforts, traffic studies, and traffic modeling project.
Carrie Falkenrath, PE, PTOE, PTP Ms. Falkenrath has over 15 years of engineering experience on transportation and traffic projects. Her projects have included traffic impact studies; transportation planning; operational analysis; NEPA studies; bicycle and pedestrian planning; signal planning, design, and retiming; traffic signing and pavement marking; maintenance of traffic and construction staging; highway geometric design; construction inspection; stakeholder outreach; and technical writing. Her work includes micro-simulation with VISSIM and macroscopic capacity analysis using HCS, SYNCHRO and SIDRA software.	

We appreciate the opportunity to express our interest in Missouri's LPA Program in the area of ***Traffic Engineering and TEAP***. We believe we are uniquely qualified and experienced to provide these services to Missouri's Local Public Agencies with a team that has an exceptional understanding of City, County and State level transportation issues.

Sincerely,

Jamie Wilson

Jamie Wilson, PE, PTOE
President/Chief Executive Officer

Providing
Traffic Solutions...

CBB
Crawford, Bunte, Brammeier
Traffic and Transportation Engineers

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CRAWFORD, BUNTE, BRAMMEIER (CBB), established in 1973, constantly strives to maintain its role as a regional leader in the highly specialized fields of traffic engineering and transportation planning. Through our integrity, innovation, and reliability, we are dedicated to raising the standards of our industry while achieving client satisfaction.

Transportation Planning

CBB's Transportation Planning Group is focused on providing ***innovative solutions*** for our clients. We regularly contribute to multiple stages of project development; including transportation ***comprehensive planning, "Great Streets"***, and the performance of location, corridor and NEPA studies.

Our philosophy is simple. We blend engineering and planning to develop ***visionary yet practical solutions to meet the needs of our clients*** and their citizens. Planning staff are ***regular users of multiple modeling software packages***.

CBB believes transportation concepts strengthen community connections, promote sustainability, enhance multi-modalism, and facilitate safe and efficient circulation.

Traffic Study Services

CBB's Traffic Studies Group develops ***practical solutions*** for a wide range of complex projects. We perform traffic impact studies, site access assessments, traffic operation and safety studies, parking studies, data collection analysis, grant writing , expert testimony, among other specialized services.

We commonly serve private businesses, developers and various government agencies and we enjoy a high level of repeat business due to the ***satisfaction of our clients.***

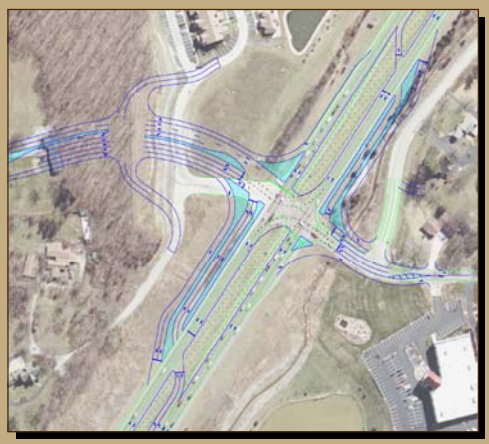
Our studies staff work with clients to address capacity and safety issues. We strive to develop ***solutions that balance emerging needs with available resources***.

Roadway Design Services

CBB's Roadway Design Group performs services for public and private projects, varying in size from interchanges to turn lanes to driveways.

Our design team has the capabilities to handle ***diverse applications***. In addition to performing geometric highway design, we design nature trails, retaining walls, parking lots, roundabouts, and perform floodplain studies. Many of our projects also incorporate aesthetic treatments.

Roadway Design projects have their own ***unique challenges*** and we approach our designs in this manner, often ***identifying alternatives*** that may result in lesser impacts and reduced construction costs by applying context sensitive solution principles.



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Signal & Lighting Design

CBB's Signal and Lighting Design Group has extensive experience in ***isolated intersections as well as complex area-wide systems***. Specific design requirements for each local agency, including ADA compliance issues, photometric lighting analyses, and detailed cabinet layouts are taken into account.

"Best-fit" designs are prepared for existing system infrastructure using our working knowledge of the industry's latest technologies in signal controllers and cabinets, vehicle and pedestrian detection, emergency preemption, video surveillance, fiber optic and wireless communications, ITS, and ATMS.

CBB incorporates ***"green" design principles*** for each lighting system. When applicable, LED and solar powered fixtures are utilized to further reduce power consumption.

Traffic Signal Operations

CBB's Signal Operations Group specializes in the ***analysis, optimization and synchronization*** of signalized intersections and signal corridors.

Our signature approach to signal timing optimization incorporates core traffic engineering practices with extensive ***in-field implementation*** experience.

In addition, the signal operations group specializes in ***traffic management*** during small and large scale construction projects including signal turn-on assistance and detour mitigation timing plans.

Our operations team is intimately familiar with the most ***current signal analysis software packages and current signal equipment specifications***.

Specialty Services

ADA Compliance
CBB's Design staff prepares ***detailed ramp designs*** which include signalized pedestrian crossings and plans including ***Accessible Pedestrian Signals*** (APS). CBB has the well rounded knowledge to meet the challenges unique to each location.

Construction Inspection
CBB's construction inspection personnel monitor the construction of transportation improvements for ***compliance with approved designs and agency standards*** to improve project implementation.

Noise Modeling
CBB provides complete traffic noise analysis including existing noise readings and future noise projections utilizing ***FHWA's Traffic Noise Model***. We have knowledge and experience with both MoDOT and IDOT guidelines, as well as certification for the TNM software.

CBB is an expert trusted advisor and friend to our clients.
We are a Midwest firm where free-thinking, innovation and collaboration merge with international best practices to provide traffic engineering and transportation planning solutions for safer, more sustainable, and economically vibrant communities.

- *Access Justification Reports*
- *ADA Compliance Issues*
- *Bicycle Studies*
- *Campus Master Planning*
- *"Complete Street" Designs*
- *Construction Review & Inspection*
- *Corridor Studies*
- *Data Collection*
- *Detour Mitigation Timing Plans*
- *Expert Witness Testimony*
- *Flood Plain Hydraulics*
- *Funding & Grant Applications*
- *Highway Sign Studies & Design*
- *Interchange Concept Studies*
- *Intersection Design Studies*
- *ITS Design*
- *Lighting Design*
- *LPA Documentation*
- *Multi-Modal Planning & Studies*
- *Noise Modeling*
- *Origin & Destination Studies*
- *Parking Studies*
- *Pedestrian Studies*
- *Retaining Wall Design*
- *Roadway & Highway Design*
- *Safety Studies*
- *Signal Turn-Ons & Programming*
- *Traffic Engineering*
- *Traffic Impact Studies*
- *Traffic Operation Studies*
- *Traffic Signal Design*
- *Traffic Signal Justification*
- *Traffic Signal Optimization & Synchronization*
- *Traffic Simulation Modeling*
- *Trail Planning and Design*
- *Transit Studies*
- *Transportation Planning*
- *Travel Demand Modeling*
- *Value Engineering Studies*

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