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November 15, 2013

MaryAnn Jacobs
Intermediate Planning Technician
MoDOT–Design
105 West Capitol Avenue
Jefferson City, MO 65102

Re: Missouri Local Program (LPA) On-Call Traffic Engineering & TEAP Services

Selection Committee:

128
2013 RANKING
ENR
Engineering News-Record
THE TOP 500 DESIGN FIRMS

ROADS&BRIDGES
Go-To LIST
2013 Top 18 Design Firm

Alfred Benesch & Company is excited about the opportunity to assist communities throughout Missouri with traffic engineering and planning services. Our transportation experts are accustomed to working as an extension of local staff to provide you with resources and experience in a variety of traffic engineering services. This letter will provide information regarding our firm including personnel, capacity, expertise, experience, office location, and past performance.

Benesch's strength lies in the depth and breadth of work completed by our staff as well as the number of complex projects that our team has completed. Our project manager will make sure that the right person from our team is working on the task assigned. Jim Jussel, PE, PTOE will serve as your main point of contact and project manager. He will lead the Benesch team as we overcome challenges, develop solutions and assist you with proactive planning efforts.

GENERAL EXPERIENCE OF FIRM & STAFF

Since 1946, Benesch has worked with counties, cities, municipalities and local agencies throughout the Midwest on multiple traffic engineering and safety projects. We are currently ranked #128 among the top 500 consulting engineering firms in the country by Engineering News Record Magazine. Benesch employs more than 500 professional and support personnel including engineers, construction managers, planners, designers and scientists. We have completed transportation projects throughout the Midwest and take pride in providing quality services to communities of all sizes.

QUALIFICATIONS OF PERSONNEL

Jim Jussel, P.E., PTOE - Project Manager: Jim Jussel will serve as project manager for any Traffic Engineering Assistance Program projects. Mr. Jussel has over 18 years of experience working on a variety of traffic engineering and design projects throughout the Midwest. His experience includes corridor studies, safety studies, traffic impact studies, parking studies, traffic signal design, pavement marking and signage design, roundabout design and traffic control.

Mr. Jussel has over 15 years of experience working in the Kansas City metropolitan area and throughout the State of Missouri. Jim led the corridor study on Missouri Route 13 in Warrensburg, MO. The project was initially completed for a new development but the corridor had significant traffic operation concerns. The corridor study included calibrating the Synchro traffic model for six intersections, including the Missouri Route 13 and US Hwy 50 interchange.

Jim's experience includes the research and development of an ITS project for 287th Street and Old Kansas City Road in Miami County, Kansas. Due to funding constraints, the County sought alternatives to improve the safety at the intersection without geometric improvements. The solution presented to the Miami County Public Works Department included the development of advanced, intersection-ahead, warning signs with flashing beacons that are activated by the side street traffic.

Equally pertinent, Jim recently led a safety study in Lincoln, NE for Van Dorn Street and Coddington Ave. This intersection has a history of a significant number of right-angle crashes. The intersection safety study was completed to determine the best improvement to reduce the number of severe crashes. A single lane roundabout was the preferred alternative that was carried forward to design.

Jim's experience includes several corridor and safety analysis studies in Kansas, Missouri, Nebraska, Nevada and North Dakota. He has completed a variety of traffic engineering studies and has designed intersection improvements that include traffic signals, roundabouts, and geometric lane improvements.

Mike Gorman, P.E. – Principal in Charge and QA/QC: Mr. Gorman, Executive Vice President, will provide quality assurance and quality control for the project team. Mr. Gorman has over 30 years of experience in the field of traffic engineering and will serve as an additional resource to the project team.

Austin Yates, P.E. – Project Engineer: Mr. Yates has over four years of experience in the traffic engineering field. His recent experience includes completing the traffic analysis of the downtown corridors of NP Avenue and 1st Avenue North in Fargo, North Dakota. This project evaluated the impacts of converting existing, one-way pairs to two-way traffic. He has also worked on several corridor studies, traffic impact studies, and traffic signal design projects. In addition to Synchro/SimTraffic, Mr. Yates is experienced in TSIS-CORSIM, TNM Noise and SIDRA software.

Don Butler, EI – Project Engineer: Mr. Butler has been involved in the traffic engineering support for the Lincoln South Beltway project. Mr. Butler is involved in the 66th Street and Fremont Street intersection safety project in Lincoln, NE.

Michele Keal, P.E. – Geometric Design: Ms. Keal is the Roadway Group Leader in Missouri and has over 16 years of experience. Michele has led the design on several interchange projects, often working at an accelerated pace. Her recent experience includes a DDI design in Branson, MO, and interchange design at I-435 and I-70.

RELATED PROJECT EXPERIENCE

K-18 and K-113 Interchange Improvement Study: The City of Manhattan, Kansas is seeking improvements at the K-18 and K-113 interchange. Currently, the left turn movement for southbound traffic on K-113 to the on-ramp for eastbound K-18 experiences significant congestion during the peak traffic conditions. The City of Manhattan and KDOT are pursuing improvements to increase capacity and improve traffic operations. Citizen input, traffic data and design analysis was completed as part of the project and was utilized in a value planning workshop that resulted in a recommended alternative that provides the best solution for existing and future conditions.

Route 248 at Business Route 65 Branson, Missouri: Benesch, formerly DRG, was directed to re-examine the design to find cost savings. The innovative solution was a modification of the existing diamond interchange to a Diverging Diamond Interchange. Since the existing configuration was a traditional diamond, existing ramps were left in place and widened to accommodate the new design. One westbound and two eastbound lanes were provided and no turn lanes were necessary on the bridge. Traffic modeling showed that only one lane would be required to significantly improve the lighter flow of westbound traffic.

Leavenworth Truck Route Study: A traffic study was completed to evaluate the existing truck route within the City of Leavenworth. The study included completing an origin/ destination study to gain a better understanding of the actual route the trucks were using. The documented data was used to evaluate existing traffic conditions and make recommendation to move the industrial traffic located in the existing neighborhood back onto 4th Street.

Van Dorn Street and S. Coddington Avenue., Lincoln, NE: An intersection safety study was completed for this high crash location. The intersection had a history of several right angle crashes per year. An alternative analysis study was completed to evaluate traffic control and intersection geometric modification to improve safety. A single lane roundabout was the preferred alternative carried forward.

NP Avenue and 1st Avenue North, Fargo, ND: Benesch completed a corridor study for the downtown business area to evaluate converting the existing one-way pair streets to two-way traffic. The study evaluated three alternatives to serve the downtown area. The alternative approved by the City was a two plus one alternative. Two lanes will serve traffic in the same direction as the existing one-way streets, to serve the travel demand, while a single lane in the opposite direction will serve the vehicles wishing to circulate in downtown in the opposite direction to access the place of business.

ACCESSIBILITY & MoDOT INITIATIVES

Jim Jussel, project manager, is based in our Omaha, NE division. Key Benesch team members are conveniently located in Kansas City. All team members are available to coordinate with you in person, through video conferencing, email or phone. Creativity and innovation often results from diversity of thought. To foster innovation and promote MoDOT's diversity initiative, our firm is committed to developing and maintaining a diverse workforce through hiring and retention programs.

CONCLUSION

Our corporate philosophy is based on not making commitments we cannot fulfill. Our project team is ready and able to commit the necessary time and resources to keep your projects on schedule. We maintain a current database of all staffing commitments to ensure we do not over commit. We can provide a detailed breakdown of our individual commitments over the next two years upon request. The Benesch team is prepared to deliver what you need; when you need it.

Respectfully,

James Jussel, PE, PTOE | Project Manager

PERFORMANCE RECORD

The frequency of repeat clients is indicative of our steadfast dedication to providing quality services. We are proud of the work we have completed in Missouri for MoDOT and communities of all sizes. Additionally, we provide traffic engineering services to multiple surrounding state DOTs and municipalities. Below is a list of current clients that we invite you to contact to discuss our past performance:

Rob Ott, PE
City Engineer
Manhattan, Kansas
785-587-2415

Randy ElDorado, PE
NDOR
Lincoln, Nebraska
402-479-4417

Chris Brungardt
City of West Fargo
West Fargo, ND
701-433-5400

David Miller
City Engineer
Branson, MO
417-337-8559

benesch
engineers · scientists · planners

Alfred Benesch & Company

specializes in quality civil and structural engineering services to clients in transportation and infrastructure development.

Benesch

Since 1946, Benesch has successfully completed thousands of design and engineering projects throughout the United States. We are ranked among the top 500 consulting engineering firms by Engineering News Record and recently received recognition for the third year in a row as one of the nation's Top 20 "Go-To" bridge design firms by *Roads & Bridges* magazine.

Benesch designs and inspects complex highway interchanges, major river bridges, parking structures and structural systems for high- and low-rise buildings. Benesch has an established track record for using value planning and value engineering effectively on both transportation and building projects. Benesch employs approximately 500 professionals including engineers, construction managers, planners, designers and scientists. Benesch has offices in Colorado, Connecticut, Illinois, Kansas, Massachusetts, Michigan, Missouri, Nebraska, Ohio, Pennsylvania, Tennessee, Wisconsin and Washington D.C.

ROADWAY

Hundreds of interstate miles have been designed by Benesch engineers.

We routinely work with state Departments of Transportation and their FHWA counterparts to rehabilitate, modify or create new roadways that effectively connect people and places. Our road and highway projects traverse farm lands, urban cities and everything in between.

We provide much more than geometric solutions, however. You can consider Benesch a one-stop shop for all civil infrastructure needs. Within our civil division, we have staff experts in MOT, drainage, traffic engineering, electrical engineering, surveying and geotechnical.

Quality is our top priority. We deliver plans that are quality-checked for constructability, enabling clients to use a low-bid system to their advantage. In addition, we go the extra mile to ensure minimal change orders and field issues during construction.

Our areas of expertise include:

- Highway and Toll Roads
- Interchanges
- Utility Coordination
- Horizontal and Vertical Alignment
- Drainage
- Maintenance of Traffic
- Agency Coordination and Permitting
- Surveying
- Transportation Project Plats
- Specification Development
- Construction Plans and Estimates
- Geotechnical Services

STRUCTURES

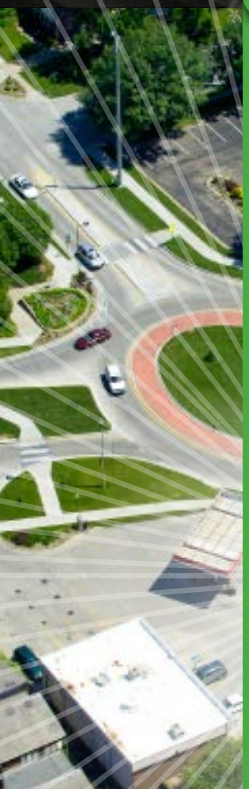
From road stream crossings to high-profile arch bridges, the structural team at Benesch has designed thousands of bridge structures ranging from 35 to 2,000 feet.

Our engineers are proficient in the study and design of continuous complex structures, including plate girder, tied arch, segmental box girder, continuous/cantilever truss and cable stay bridges. In addition, we specialize in high order finite element analysis associated with various forms of nonlinear and buckling behavior. We are relentless in the pursuit of industry advancements, and pride ourselves on implementing innovative solutions.

Benesch has been awarded several Eminent Conceptor awards from the American Council of Engineering Companies and has consistently been named a top 20 "Go To" firm for bridge design by government subscribers of Roads and Bridges magazine.

Our areas of expertise include:

- Simple, Typical and Complex Bridges
- Major River Crossings
- Railroad Bridges
- Pedestrian Bridges
- Inspections and Ratings
- Bridge Retrofit and Rehabilitation
- Retaining Walls
- Culverts
- Seismic Analysis
- Bridge Modeling
- Structural Survey
- Value Engineering
- Geotechnical Services



TRAFFIC ENGINEERING

The Benesch team combines traffic engineering expertise with real world experience to develop innovative, practical, sustainable and cost-effective solutions.

Our team is committed to staying at the forefront of the latest traffic engineering technologies. We use advanced tools like Miovision traffic cameras and sophisticated in-house simulation software such as Synchro, SimTraffic, Vissim and HCS. These tools enable us to better understand design implications and meet project needs. Benesch engineers strive to develop practical, sustainable solutions. Tackling traffic issues from the "demand side" to encourage multi-modal and environmentally friendly solutions is just as important as looking at traditional "supply side" solutions that involve physical improvements.

Our areas of expertise include:

- Traffic Impact Studies
- Origin and Destination Studies
- New and Modernized Signal Design
- Highway Operational Analysis
- Travel Demand Modeling
- Safety Studies
- Access Management Studies
- Gap Analysis
- Traffic Signal Coordination and Timing (SCAT)
- Signal Timings
- Intersection Analyses
- Corridor Progression Analysis
- Level of Service Analysis
- Traffic Data Collection
- Maintenance of Traffic Plans

CONSTRUCTION INSPECTION

Benesch brings knowledge of construction and expectations associated with federal aid, and a commitment to excelling that separates us from other consulting engineers.

Our team has completed hundreds of DOT and LPA federal aid construction engineering projects. We have the experience and background to work successfully with the Federal Highway Administration, DOT Construction staff and Local Public Agencies. We are a full-service provider that brings a proven approach, based on efficient operations and utilizing versatile, knowledgeable, experienced staff who understand the work being performed and the construction engineering services required to satisfy project oversight requirements.

Construction rarely goes exactly as planned. We have experts on staff who are able to provide assistance should major changes or unanticipated situations arise. Besides construction, our staff includes designers and scientists ready to provide support. Their proximity and accessibility to our team allows for rapid response and accurate advice. This prevents surprises, helps avoid lengthy delays, and ultimately leads to successful projects.

Our areas of expertise include:

- Construction Observation
- Design-Build
- Shoring Tower Design
- Schedule Management
- Earthwork Quantities
- Temporary Earth Retention Systems
- Cost Management
- Pavement Quantities
- Demolition Plans
- Structural Engineering
- Value Engineering

GENERAL CIVIL AND STRUCTURAL ENGINEERING

Benesch prides itself on providing a wide array of civil engineering services, quality based engineered solutions and client satisfaction.

Our expertise lies in most all areas of civil and structural engineering including geotechnical engineering, environmental assessments, sustainable design and value engineering. Our responsiveness to short term, long term and emergency needs is well known among our clients. In addition, our clients will tell you that attention to detail in our engineering documents sets the standard for quality.

The Benesch team resume includes a variety of civil/structural studies and designs for many clients across the United States. Our experience in municipal engineering provides a solid knowledge base that will be a valuable resource. Additionally, our work with numerous small and large scale commercial developments is particularly important. Many of our projects have involved public involvement and environmental permitting efforts that required specialists within Benesch. Further, managing and improving infrastructure facilities requires knowledge not only of pertinent design standards but also sustainability. Our engineers are well versed in designs that accommodate all types of users including complying with the Americans with Disabilities Act and the pursuit of LEED certified projects.

Benesch has been named one of the nation's Top 20 Go-To Bridge Design Firms by Road and Bridges Magazine for three years in a row. Our nationally recognized expertise in structural design will be at your disposal.

MECHANICAL ELECTRICAL PLUMBING

Benesch offers a full spectrum of MEP services to our clients.

Professionals in our Kansas City office provide design, consulting and sustainable solutions for mechanical, electrical and plumbing systems. Our services include design drawing preparation, specifications, and cost estimates. We bring a strong foundation of industrial and commercial engineering experience, including both new construction and renovation of existing facilities. Over the past twenty years we have completed projects in wastewater treatment plants, hospitals, schools, military facilities, vehicle maintenance buildings, telecommunication facilities, correctional institutions and various commercial buildings.

Mechanical Practice Areas

- Heating, Ventilating, and Air Conditioning Systems
- Exhaust Systems
- Chilled Water Systems
- Heating Water Systems
- Facility Assessment & Energy Audits
- Life Cycle Cost Analysis
- Industrial Ventilations
- Energy Recovery
- Temperature Controls
- Solar Thermal Systems
- Direct Digital Control (DDC) Systems
- Odor Control Systems

Electrical Practice Areas

- Power Distribution
- System Analysis, Assessment and Planning
- Interior and Exterior Lighting Design and Controls
- Energy Code and LEED Compliance
- Fire Alarm Systems
- Paging, Public Address, and Sound Systems
- Uninterruptible Power Supply
- Programmable Logic Controls
- Facility System Controls
- SCADA Systems
- Emergency Power Systems

Plumbing Practice Areas

- Facility Plumbing Systems Design
- Process Systems Piping
- Site Utilities and Yard Piping Systems
- Distribution Systems
- Grey Water Storage Systems
- Low-Flow Fixture Installation
- Water Usage Audits
- Storm Water Systems
- Fuel Piping Systems
- Chemical Piping