



Statement of Qualifications

General Services Agreement (GSA) for Professional Consultant Engineering Services for Regional Transportation Planning Related Projects

Submitted to:

Southeast Metropolitan Planning Organization
c/o Mr. Alexander S. McElroy, MPA
SEMPO Executive Director & City Grant Coordinator
City of Cape Girardeau
401 Independence Street
Cape Girardeau, Missouri 63703

Date:

September 28, 2021

Submitted by:



EXPERT | TRUSTED ADVISOR | FRIEND



September 28, 2021

Southeast Metropolitan Planning Organization
c/o Alexander S. McElroy, MPA
SEMPO Executive Director & City Grant Coordinator
City of Cape Girardeau
401 Independence Street
Cape Girardeau, Missouri 63703

**RE: Statement of Qualifications for General Services Agreement (GSA) to provide
Professional Consultant Engineering Services for Regional Planning Related Projects**

Dear Mr. McElroy:

CBB shares your vision for economically vibrant, sustainable, and healthy communities. To that end, we work every day to help create a transportation system that is safe, reliable, efficient, and robust. We are pleased to submit this Statement of Qualifications, outlining our professional qualifications, personnel, and project experience for regional transportation planning services for the City of Cape Girardeau and the Southeast Metropolitan Planning Organization (SEMPO).

CBB regularly performs traffic engineering, transportation planning, and engineering design work for many state, county, and municipal agencies in the Midwest. We have longstanding on-call service agreements with agencies in Missouri such as the Missouri Department of Transportation; Boone, Jefferson, and St. Charles Counties; and the Cities of St. Louis, Brentwood, Branson, Ellisville, University City, Des Peres, and Wentzville. We very much value our partnership and the opportunity to build on our general services agreement from 2017 with the City of Cape Girardeau and SEMPO.

Established in 1973, we are a regional leader in the fields of traffic engineering and transportation planning, and we are experts in preparation of specialized transportation plans, traffic studies, travel demand and simulation modeling, data collection and analysis, grant writing, public outreach, Smart City planning, traffic operations, signal timing and coordination, design and modernization of roadways and traffic signals, and lighting and interconnect systems. After reviewing these qualifications, you will see that CBB is well-suited to work with the City of Cape Girardeau and SEMPO on a wide variety of services in your continuous, cooperative, and comprehensive (3-C) transportation planning process.

Located in Southeast Missouri, Cape Girardeau has a long and rich history, dating back to French settlers. It is home to hundreds of homes and businesses, as well as Southeast Missouri State University. As the community continues to grow and change, it is important to maintain and update the transportation system in a way that is sustainable and maintainable. Transportation systems should be designed to enhance multimodal connections within communities to create better networks and travel. CBB knows the value of a healthy transportation system and recognizes the need to serve all modes of transportation efficiently.

CBB is a “boutique” firm wholly dedicated to transportation engineering and planning. We are well-known for our ability to develop innovative transportation solutions in cost-effective and efficient ways. Our staff includes traffic engineers, transportation planners, and transportation designers with the skills and experience needed to support your staff. We have 14 licensed Professional Engineers (PE), 10 certified Professional Traffic Operations Engineers



(PTOE), two Professional Transportation Planners (PTP), two Roadway Safety Professionals (RSP1 and RSP2I), as well as emerging young professional staff and several highly trained technical personnel. Additionally, our proposed project manager for this effort, Jacque Knight, is AICP-certified with the American Institute of Certified Planners.

Jacque brings a wealth of experience working on a wide range of planning projects, as well as significant experience and a deep understanding of working with various MPOs. Prior to CBB, Jacque was an intern with the Mid-American Regional Council (MARC) in Kansas City and leads many of our projects with the East West Gateway Council of Governments (EWGCOG), here in the St. Louis Region. Jacque has a passion for promoting vibrant, safe, and healthy communities and will bring that energy to our work with you.

CBB prides itself on our commitment to provide our staff with the specialized training that is needed to stay on top of a changing profession. Our active engagement in technical societies such as the Institute of Transportation Engineers (ITE), the National Association of City Transportation Officials (NACTO), American Public Works Association (APWA), International Municipal Signals Association (IMSA), American Planning Association (APA), and Transportation Research Board (TRB) keep us abreast of new trends, advancements, and technologies.

Furthermore, the staff of CBB has developed our communication styles to interact with stakeholders and the public. CBB routinely conducts public outreach and engagement. We have a wide range of experience including presentations and workshops, neighborhood “brainstorming” discussions, citizen surveys, public meetings, media (brochures, newsletters, social media), and focus group and stakeholder interest group sessions. We have in-house equipment needed for this work such as keypad polling. CBB understands the importance of public engagement, as projects enjoy a higher level of success when an appropriate level of outreach is conducted, and consensus is achieved with stakeholders.

Included in the following pages, you will find CBB qualifications, as outlined in your request for qualifications, along with our project understanding and approach. We appreciate the opportunity to assist the City of Cape Girardeau and SEMPO and welcome the opportunity to further discuss our qualifications with you.

If you have any questions about CBB or the information in this qualifications packet, please feel free to contact us.

Sincerely,

Shawn Leight, PE, PTOE, PTP
Vice President & Chief Operating Officer
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OUR MISSION



CBB is 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.



SECTION 1:

PROJECT UNDERSTANDING AND APPROACH



1. PROJECT UNDERSTANDING AND PROJECT APPROACH

PROJECT UNDERSTANDING

We understand as the Metropolitan Planning Organization (MPO), SEMPO is responsible for overseeing the regional transportation planning process for the Cape Girardeau region. We know that you all are mandated by federal law to conduct a continuous, cooperative, and comprehensive (3-C) transportation planning process that seeks to better the Cape Girardeau region and promote a better quality of life for all of the communities that are in your planning purview. We commend the Southeast Missouri and Southern Illinois community members for being committed to developing and improving transportation where they live.

Our team has significant experience working with MPOs and know the important role they play in transportation systems development in urbanized areas (UA). In general, we understand MPOs to have five core functions. These functions are:

1. **Establish a fair and impartial setting for effective regional decision making.**
2. **Evaluate transportation alternatives that are scaled to the region and realistic in nature.**
3. **Develop and update the region's Long Range Transportation Plan (LRTP), planning for a 20-year horizon that fosters enhanced mobility, efficient system performance, and enhanced quality of life.**
4. **Develop and maintain the Transportation Improvement Program (TIP).**
5. **Engage with the general public on the previous four functions**

We know that your team intends to select consultants to enter into a General Services Agreement (GSA) with the City and that task orders may be issued for specific work tasks. CBB is a specialized transportation engineering and planning firm, and we feel we are well suited to complete tasks in the following area:

1. **Preparing Mode-Specific (bicycle/pedestrian, freight, transit, etc.) and Other Specialized Plans**
2. **Traffic Studies and Modeling**
3. **Data Collection and Analysis**
4. **Public Outreach**

PROJECT APPROACH

CBB is 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. We promote the value of continuing education, and as such our staff are leaders in their fields. Our resume of past experience speaks volumes to our ability to serve as your on-call consultant in these areas. Our approach to each of these topics is included here:

1. **Preparing Mode-Specific (bike/pedestrian, freight, transit, etc.) and Other Specialized Plans**

CBB is well versed in designing transportation systems that support users of all ages and abilities. As such we have specific experience designing corridors that support Complete Streets elements, looking at enhancing mobility for people walking, biking, using transit and driving. Our data collection gives us a solid base for which to start.

We also understand that each project is context sensitive. What works in one location, may not work in another location. Thus, we approach each project with a new vision, equipped with a deep bench of technical skills and training, and ready to collaborate with impacted stakeholders.. We start by collecting data about the existing conditions and using that data to start a conversation about current functions and future needs. We merge the needs of the community, with the vision for the future to develop plan that supports the desired outcomes. These plans may be specific to bike/pedestrian plans, arterial management plans for motorists, public transit plans (including TOD and placemaking components), or freight management plans.



2. Traffic Studies and Modeling

We understand that transportation modeling is crucial in developing transportation solutions. CBB's staff are experts in the latest transportation modeling techniques and methodologies for analysis, planning, and communication. We are equipped to perform high level macroscopic analyses for concept level studies to in depth microsimulation models built with vehicular travel, parking, public transit and pedestrian behavioral features for specialized in-depth planning studies. We will work closely with your team to analyze realistic scenarios, using sound data to determine the best option for a path forward unique to each project.

We also have expertise in big data analytics which has become increasingly important in transportation industries. We can analyze large amounts of data to understand any correlation, hidden patterns, and other underlying insights to improve efficiency and flexibility in traffic operations and safety projects. Big data analytics can also improve the accuracy of travel demand models. CBB has experience in developing travel demand models that forecast future travel behavior based on socioeconomic, environmental, and financial factors. We are using data driven approaches to meet the needs of our clients. We are also collaborating with research institutions on data analytics research areas.

CBB emphasizes using cutting-edge technologies and up-to-date research methodologies to provide the best solutions for our clients and are well-versed in the following areas such as Data Analytics, Travel Demand Modeling, Microsimulation (e.g., VISSIM, VISUM), Macrosimulation (e.g., SYNCHRO, SIDRA, VISTRO, HCS, HSM), Pedestrian Modeling (e.g., VisWalk), Transportation Visualization and Animation, and Geographic Information Systems (GIS).

3. Data Collection and Analysis

CBB knows the importance of starting projects with accurate traffic data since it is the foundation for all transportation decision making. Whether it is collecting traffic data pre- or post- project construction, it is extremely important that these numbers are accurate and well-organized. For pre-implementation, CBB will analyze the data to identify problem areas and design ways to diagnose the issues with the intelligent traffic solutions that CBB has built its reputation on. Whereas, collecting data post project allows us to measure the impact of a project and validate the implemented solutions. Our staff performs speed studies, gap and delay studies, origin and destination studies, emissions reduction analysis, and more.

CBB has an extensive in-house inventory of traffic count equipment including cameras, pneumatic tubes, turning count boards, and drones. Our dedicated field staff use these devices collect counts and travel speeds for cars, heavy trucks, bicycles, and pedestrians. This data is processed and reported for clear and easy analysis. With big data becoming invaluable in today's transportation landscape, CBB has also begun working with other providers to acquire and utilize applicable transportation data to supplement our data collection methods. This data can include vehicle speeds, volumes, travel delays, traffic patterns, signal data collected for months or years at a time. With all the technological advances in data acquisition, the field of transportation engineering and planning is ever changing. CBB is capitalizing on these developing technologies helping to provide our clients with the data they need to implement their project goals. We have experience working with data providers such as Streetlight and Airsage as well as data software such as Jamar, Miovision, and Iteris.

4. Public Outreach

Projects enjoy a higher level of success when an appropriate level of outreach is conducted, and consensus is achieved with stakeholders. CBB routinely conducts public outreach and engagement through the planning process.

We have a wide range of experience including presentations and workshops, neighborhood "brainstorming charettes", citizen surveys, public meetings, media (brochures, newsletters, social media), and work with specific interest groups. We also own keypad polling equipment which we can use during public stakeholder meetings. CBB will work with you to develop the most appropriate public engagement process for your projects.



SECTION 2: **DESCRIPTION AND BACKGROUND INFORMATION**



2. DESCRIPTION AND BACKGROUND INFORMATION

ABOUT CBB

FIRM NAME: **George L. Crawford & Associates, Inc. dba CBB**
 ADDRESS: (314) 878-6644
 WEBSITE: www.cbbtraffic.com
 CONTACT: **Mr. Shawn Leight, PE, PTOE, PTP, Vice President and Chief Operating Officer**
 EMAIL ADDRESS: SLeight@cbbtraffic.com

DESCRIPTION OF CBB AND OUR SERVICES

Established in 1973, CBB is a leader in transportation engineering and planning. Several of our staff members have advanced professional accomplishments including post-graduate degrees in transportation engineering and planning; licensure as Professional Engineers (PE); and certifications as Professional Traffic Operations Engineers (PTOE), Professional Transportation Planners (PTP), Road Safety Professionals (RSP2I and RSP1), and American Institute of Certified Planners (AICP). Our active engagement in technical societies such as the Institute of Transportation Engineers (ITE), American Public Works Association (APWA), International Municipal Signals Association (IMSA), American Planning Association (APA), National Association of City Transportation Officials (NACTO), and the Transportation Research Board (TRB) keep us abreast of new trends, advancements, and technologies.

REPRESENTATIVE CLIENTS AND SERVICES: Our longstanding success can be attributed to our outstanding reputation, the quality and responsiveness of our service, and attentiveness to our clients, which have included private businesses, developers, landowners, government agencies, not-for-profit organizations, advocacy organizations, public institutions, engineering firms, and architects. We can offer our clients the following areas of services.

TRANSPORTATION STUDIES AND PLANNING



Parking Study
Webster Groves Business District

CBB blends transportation engineering and planning to develop visionary, practical solutions that meet the needs of our clients. CBB has participated in every stage of project development such as access management, safety studies, traffic impact studies, comprehensive transportation plans, public engagement, and the writing of grant applications. We are well versed in tackling projects in both the private and public sector. In the private sector, we have years of experience guiding clients through the process of site plan approvals, obtaining permits,

and acquiring funding. In the public sector, CBB's team of expert planners, engineers, and designers are well equipped to tackle projects of all levels, from Design-Build projects to Great Streets Initiatives. We are experienced in working with key stakeholders like State DOT's, Metropolitan Planning Organization, City Planning and Public Works Departments, School District, and Transit Agencies. CBB prides the work we do in creating holistic transportation solutions that serve every member of the community. With the latest analytical tools, we work to promote safe and efficient access, mobility, and circulation.



Wildhorse Village in Chesterfield Study
Chesterfield, MO

Several tools are employed to solve transportation problems as part of CBB's transportation studies and planning process. Our team members are experts in the use of transportation resources from agencies such as FHWA, AASHTO, and ITE. CBB staff is also proficient in transportation analysis software such as Synchro, VISSIM, Highway Capacity Software (HCS), and SIDRA. CBB provides an unparalleled level of expertise and attention to detail in transportation engineering and planning projects to ensure safe and efficient transportation solutions for all users.



Key studies and planning project areas include:

- Access Justification Reports (AJR)
- Access Management
- Campus Planning
- Comprehensive Transportation Plans
- Corridor and Alignment Studies
- Design-Build Projects
- Expert Witness Testimony
- Freeway Operations Studies
- Interchange Concept Development
- Intersection Design Studies (IDS)
- MoDOT Transportation Engineering Assistance Program
- Parking Studies
- Peer Reviews
- Planning for Connected and Autonomous Vehicles
- School Circulation and Operational Studies
- Signal Warrants Studies
- Site Plan Review/Refinement
- Smart Cities Planning
- Public Engagement
- Traffic Impact Studies
- Traffic Assessments

TRANSPORTATION DESIGN SERVICES

CBB's roadway, traffic signal, ITS, and lighting designers take an innovative and methodical approach to solving design challenges by understanding the fundamental needs of the project. We provide design services for both public and private clients, including DOTs, jurisdictions, and developers. The projects we complete range in size from interchanges to turn lanes and driveways. Each project is a unique assignment, and we strive to develop alternatives that minimize impacts and construction costs while maximizing safety and functionality.

We are committed to detail and coordination in our design process. We are well versed in completing high-level concept plans to final design plans for construction. We have been involved in high-level planning studies, design-bid-build projects, and design-build projects. We are adaptable to last minute changes that are inevitable during construction as well as finding ways to cut costs without sacrificing quality. CBB has years of expertise in a wide range of design experience including complex intersections and interchanges, roundabouts, traffic signals, lighting, and Intelligent Transportation Systems (ITS). Our staff is also skilled in the latest versions of powerful software tools such as AutoCAD Civil 3D, MicroStation and Autoturn. We also provide construction review and inspection services, which allows for a seamless transition from the project design phase to final implementation. At CBB, we are passionate about providing accurate and well-designed plans and are committed to accomplishing our client's goals within the required budget.

Key areas of design expertise include:

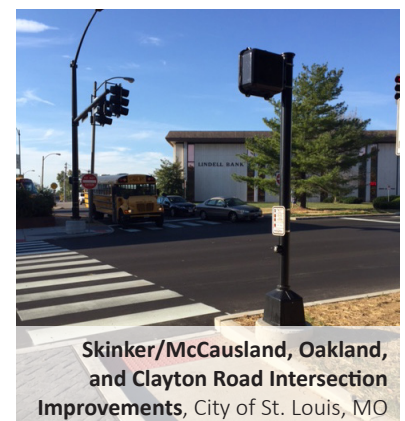
- ADA Compliance
- Bicycle and Pedestrian Facility Design
- Construction Review and Inspection
- ITS Design
- Lighting Design
- Retaining Wall Design
- Roadway and Highway Design
- Roundabout Design
- Signing and Striping Design
- Traffic Signal Design



**Kiener Plaza Intersection
Improvements, City of St. Louis, MO**



**Flashing Yellow Arrow
Phases 1 and 2
City of St. Charles, MO**



**Skinker/McCausland, Oakland,
and Clayton Road Intersection
Improvements, City of St. Louis, MO**

TRAFFIC SIGNALS AND TRANSPORTATION SYSTEMS OPERATIONS

At CBB we understand the importance of a smart and efficient transportation network. This involves everything from managing the traffic impacts that large scale projects have on our local roads, to maintaining Intelligent Transportation Systems (ITS) equipment to ensure proper functionality. With years of experience working in ITS and traffic signal technologies, CBB is an expert and trusted advisor when it comes to transportation operations. Our staff is experienced in traffic signal and intersection design, ITS network/device design and integration, signal turn-ons and on-call maintenance, traffic management center (TMC) operations, maintenance of traffic (MOT) during construction, signal coordination and timing projects and much more.



Signal Coordination and Timing (SCAT)
Illinois Department of Transportation (IDOT)

We have successfully managed traffic for countless large and small projects, municipal bodies, and government organizations. Our knowledge and experience of how drivers react to a closure, crash, or high-volume event allows us to mitigate traffic and reduce travel times. We pride ourselves on the ability to efficiently move traffic along planned detour and egress routes, but also the ability to find and manage nearby locations that are indirectly affected by the construction interruptions.

Having a safe, efficient, and intelligent traffic system is a must in today's travel demanding landscape. Our staff has the knowledge and experience to select, design, program, troubleshoot, and implement numerous ITS components. This allows our clients to focus on their daily tasks while CBB handles the problems of today and plans for the challenges of tomorrow.

We have deep expertise with several types of traffic management software including Tactics, Centrac, TransSuite, and MAXVIEW. We field program and troubleshoot signal detections software such as Iteris, and Autoscope cameras in addition to many types of traffic controllers including Siemens, Econolite, McCain, and Intelight. We are experts in several types of traffic operations software including Synchro, Tru-Traffic, VISSIM, HCS, and SIDRA and are well-versed in Traffic Signal Optimization and Synchronization, Maintenance of Traffic during Construction, Field Services / Signal Turn-Ons and Programming, and TMC Staffing.



Gateway Green Light (GGL)
St. Charles County, MO

TRANSPORTATION MODELING

We understand that transportation modeling is crucial in developing transportation solutions. CBB's staff are experts in the latest transportation modeling techniques and methodologies for analysis, planning, and communication. We are equipped to perform high level macroscopic analyses for concept level studies to in depth microsimulation models built with vehicular travel, parking, public transit and pedestrian behavioral features for specialized in-depth planning studies. We realize that once a transportation solution has been developed, that the next vital step is communicating the solution to the community. To that end, we are skilled in utilizing microsimulation models to create visual animations that can depict the benefits a transportation project has to offer.



We also have expertise in big data analytics which has become increasingly important in transportation industries. We can analyze large amounts of data to understand any correlation, hidden patterns, and other underlying insights to improve efficiency and flexibility in traffic operations and safety projects. Big data analytics can also improve the accuracy of travel demand models. CBB has experience in developing travel demand models that forecast future travel behavior based on socioeconomic, environmental, and financial factors. We are using data driven approaches to meet the needs of our clients. We are also collaborating with research institutions on data analytics research areas.



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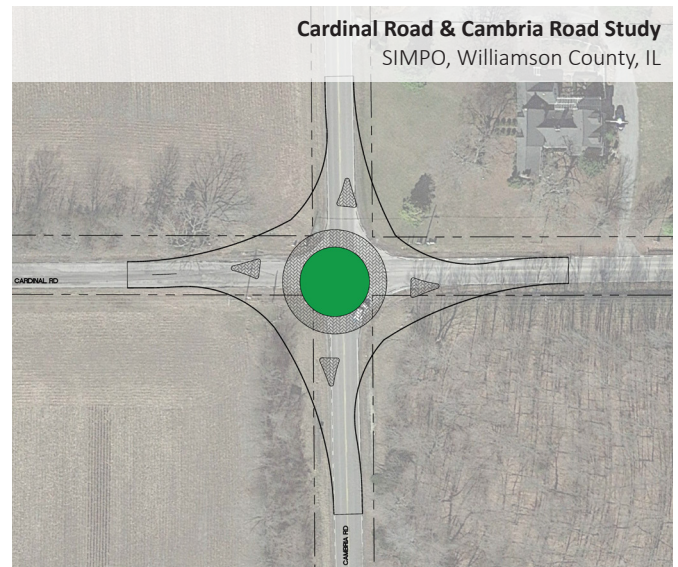
TRANSPORTATION SAFETY

CBB is committed to the importance of safety in the transportation network and understands the impacts it has on communities and its members of all ages and abilities. We put safety at the forefront in every aspect of transportation design. It is the foundation for our work from designing a full highway reconstruction project to determining the location of a new crosswalk. We understand that every detail can make the proposed improvement more intuitive to the user and ultimately safer for everyone. We strive to optimize the design for safety at the core of the design, but also have a toolbox of safety countermeasures that we pull from to help mitigate underlying safety issues. There are countless metrics with which to evaluate a road system: travel time, capacity, safety, etc. However, the most important goal is for road users to get to their destinations safely.

While numbers and monetary values are assigned to crashes to better facilitate crash evaluation, our team understands that every crash represents a real-life impact to one or more people. With this in mind, we strive to provide thorough safety recommendations and evaluations. We are well versed in all levels of safety analysis and design, from a localized crash analysis at an intersection to expansive network screenings of an entire Metropolitan Planning Organization that includes multiple counties. We have extensive experience in safety evaluations and use an innovative, data driven approach to safety analysis. Our staff is experienced and trained in the HSM Methodologies. We have been working in all the safety analysis software for years including HSM spreadsheets, ISATe, IHSDM and ArcGIS. Finally, we have certified Road Safety Professionals (RSP2I and RSP1) so that you can have confidence that all safety results are reliable and accurate.

We have extensive experience with the following safety tasks:

- Ball Bank Testing/Curve Inventories/Curve Analysis
- Before and After Safety Studies
- Crash Data Summary and Analysis
- Countermeasure Selection
- Countermeasure Design
- Innovative Technology Solutions for Safety
- Multimodal Safety Evaluations and Design
- Network Screening of Crashes
- Predictive Analysis/HSM Studies/ISATe/IHSDM
- Preparation of Applications for Safety Funds
- Roadway, Bicycle, and Pedestrian Safety Audits
- Safety Evaluations for Design Exception
- Sight Distance Measurements
- Sign Retro-reflectivity Analysis
- Systematic Safety Study and Improvements
- Traffic Calming
- Turn Lane Evaluation
- Vehicular Speed Studies



COMPLETE STREETS

CBB's mission is to develop sustainable transportation systems that support the health and well-being of our communities. We are committed to a holistic transportation system that provides for all modes of transportation, ensuring access to opportunity for everyone. Our team understands that as public spaces, streets should be designed to move people and goods efficiently, while providing the opportunity for everyone to get around, ages eight to 80. To that end, we are committed to our work in the areas of Complete Streets and Sustainable Transportation.

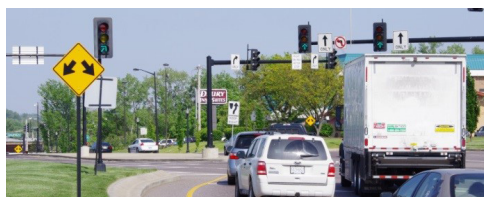
Transportation impacts everyone on a daily basis, from driving to work, to walking to the park or to the bus stop. Our team is committed to ensuring we design transportation systems in a context that is sensitive to all needs and to the environment. We are well versed in complete streets principles and have extensive experience working on multimodal transportation plans. CBB understands the impacts transportation has on many elements of communities, including health and equity. We strive to plan communities that are accessible, safe, equitable and vibrant.

Key project areas include:

- Bicycle System Planning
- Complete Street Design
- Great Street Studies
- Multi-Modal Planning
- Mobility as a Service (Maas) Planning
- Safe Routes to School
- Transportation and Health
- Transportation Equity
- Traffic Calming
- Trail Planning
- Transit Studies
- Walkability Audits and Studies



DATA COLLECTION



CBB knows the importance of starting projects with accurate traffic data since it is the foundation for all transportation decision making. Whether it is collecting traffic data pre- or post-project construction, it is extremely important that these numbers are accurate and well-organized. For pre-implementation, CBB will analyze the data to identify problem areas and design ways to diagnose the issues with the intelligent traffic solutions that CBB has built its reputation on.

Whereas, collecting data post project allows us to measure the impact of a project and validate the implemented solutions. Our staff performs speed studies, gap and delay studies, origin and destination studies, emissions reduction analysis, and more.

CBB has an extensive in-house inventory of traffic count equipment including cameras, pneumatic tubes, turning count boards, and drones. Our dedicated field staff use these devices to collect counts and travel speeds for cars, heavy trucks, bicycles, and pedestrians. This data is processed and reported for clear and easy analysis. With big data becoming invaluable in today's transportation landscape, CBB has also begun working with other providers to acquire and utilize applicable transportation data to supplement our data collection methods. This data can include vehicle speeds, volumes, travel delays, traffic patterns, signal data collected for months or years at a time. With all the technological advances in data acquisition, the field of transportation engineering and planning is ever changing.



CBB is capitalizing on these developing technologies helping to provide our clients with the data they need to implement their project goals. We have experience working with data providers such as Streetlight and Airsage as well as data software such as Jamar, Miovision, and Iteris.

Our staff are experts in the following areas:

- Drone Observation Studies
- Field Inventories (sidewalks, signs, parking)
- Origin and Destination Studies
- Parking Counts
- Pedestrian and Bicycle Counts
- Speed and Gap Studies
- Traffic Counts
- Travel Time Studies



GRANT WRITING

CBB realizes the need for communities to update and maintain quality infrastructure. We know that healthy, vibrant, and sustainable communities have quality infrastructure that provides for all of its residents. At the same time, we understand the significant expense this type of infrastructure can be on a local budget. Many of our partners look to the State and Federal governments to assist them with their infrastructure planning and building needs. Often, this assistance comes in the form of grants. CBB is well versed in grant writing and have successfully procured many grants for our clients during our nearly 50 years in business.

Grant writing is seldom an easy and straight forward process, and many times local agencies do not have the staff capacity to complete the process on their own. CBB is here to help you navigate that process. We have specialized skill and technical expertise to put together strong grant applications that are sound in their project description, cost estimation, and any additional needs. We can help in every stage of the process. Many times, we help clients identify a need and a solution to that need, locate a grant resource to further develop the project, complete the grant application, and upon award of the funding, help design the final product. CBB has experience working on small scale and large-scale grants, all while building consensus and support for projects.

We have extensive experience with the following grant opportunities:

- Congestion Mitigation and Air Quality (CMAQ)
- Surface Transportation Program (STP)
- Transportation Alternatives Program (TAP)
- MoDOT Cost Share Program
- RAISE Transportation Grants (formerly TIGER and BUILD America Grants)



TECHNICAL CAPABILITIES AND AGENCY EXPERIENCE:

The following is a listing of CBB's government agency work history within the past three (3) years and the various services we provided.

STATE AGENCIES

- Illinois Department of Transportation (IDOT)
- Missouri Department of Transportation (MoDOT)

COUNTIES

- Jefferson County, MO
- St. Charles County, MO

CITIES

- Arnold, MO
- Brentwood, MO
- Clayton, MO
- Collinsville, IL
- Creve Coeur, MO
- Dardenne Prairie, MO
- Farmington, MO
- Ferguson, MO
- Festus, MO
- Hazelwood, MO
- Kansas City, MO
- Ladue, MO
- Lake St. Louis, MO
- Maplewood, MO
- Maryland Heights, MO
- O'Fallon, IL
- O'Fallon, MO
- Olivette, MO
- Pacific, MO
- Pevely, MO
- St. Charles, MO
- St. James, MO
- St. Louis, MO
- St. Peters, MO
- Sunset Hills, MO
- Town and Country, MO
- University City, MO
- Washington, MO
- Wentzville, MO
- Woodson Terrace, MO

METROPOLITAN PLANNING ORGANIZATIONS

- East West Gateway Council of Governments
- Southern Illinois MPO

Access Management	ADA Compliance	Bicycle/ Pedestrian Plans & Facilities
Community & Stakeholder Engagement	Complete Streets	Construction Detour Mitigation
Construction Review & Inspection	Data Collection	Expert Witness Services
Freeway & Arterial Operations	Funding & Grant Applications	Geographic Information Systems (GIS)
Micro-simulation Modeling	Parking Studies	Roadway & Intersection Design
Roundabout Studies & Design	Safety Studies & Analysis	Signal Optimization & Synchronization
Smart Cities Planning	Sustainable Transportation Solutions	Traffic Calming
Traffic Impact Studies	Traffic Signal, Lighting & ITS Design	Traffic Signal Turn-Ons & Programming
Training & Professional Development	Transportation Planning	Travel Forecasting & Modeling

WE SUPPORT



**PRIVATE
BUSINESSES**



**ADVOCACY
ORGANIZATIONS**



DEVELOPERS



**PUBLIC
INSTITUTIONS**



LANDOWNERS



**ENGINEERING
FIRMS**



**GOVERNMENT
AGENCIES**



ARCHITECTS



**NOT-FOR-PROFIT
ORGANIZATIONS**

SECTION 3:

PREVIOUS EXPERIENCE





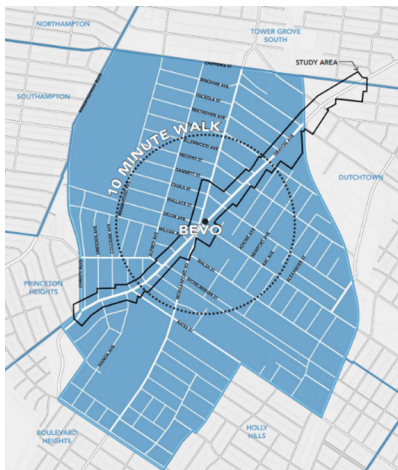
3. PREVIOUS EXPERIENCE

CBB has applicable similar experience with regional transportation planning projects and have included eight (8) examples for your reference. Each example includes the project name, dates of services, project reference and contact information, a description of the project, and our firm's role.

BEVO MILL EAST-WEST GATEWAY GREAT STREETS PROGRAM

City of St. Louis, Missouri (East-West Gateway Council of Governments)

CBB was a proud team member, serving as the transportation planning expert on the Bevo Great Streets project. Completed in 2019, the project examined Gravois Road, in South St. Louis, through the heart of the Bevo Mill neighborhood. Gravois Road is a significant north/south connector in the St. Louis region stretching from St. Louis County to Downtown St. Louis. The Bevo Great Streets project focused on the area from Christy to Chippewa, running through this historic neighborhood. The corridor is flanked with diversity in shops and businesses, with the iconic Bevo Mill situated at the intersection of Gravois and Morganford. Due to the unique ownership of the route (MoDOT and City of St. Louis maintained) the transportation component of the project was key in developing recommendations.



CBB was a subconsultant leading all the transportation work during the project. Our team completed detailed data collection looking at all modes of transportation, including walking, biking, public transit and driving. Using the data we collected, supplemented with MoDOT provided information, our team verified recommendations for implementable solutions. With many local relationships, CBB was critical in coordinating meetings with MoDOT, the City of St. Louis, and other stakeholders such as emergency officials and walking and biking advocates. CBB was heavily involved in the conceptual design charette, as well as all public engagement components. Additionally, CBB developed conceptual level plans to be used for public information and in the final plan.

The plan was completed in 2019 and represents a unique vision for moving the neighborhood and this historic corridor forward. The 'Bevo LOVE' theme that was adopted throughout the planning process has been embraced with the local community, and new wayfinding signage is currently being installed. The CID continues to look for ways to implement plan recommendations.

Learn more at: <https://www.ewgateway.org/transportation-planning/great-streets-initiative/gs-bevo/>

Project Completion: 2019

CBB Key Personnel:

Shawn Leight, PE, PTOE, PTP, Project Manager
Jacque Knight, AICP, Multimodal Planner

Reference:

Mr. Paul Hubbman

Senior Manager of Corridor and Long-Range Planning

East-West Gateway Council of Governments

T: (314) 421-4220

E: Paul.Hubbman@ewgateway.org

Firm Role: Transportation Planning Expert





MISSOURI DEPARTMENT OF TRANSPORTATION ON-CALL TRAFFIC ENGINEERING SERVICES

MoDOT, Multiple Districts

CBB has maintained an on-call traffic engineering services contract with the Missouri Department of Transportation since 1998. This contract has resulted in numerous projects throughout the St. Louis Region. Services provided through this contract include a wide range of traffic engineering and planning studies.

A sample is shown below.

- Access Justification Reports
- Continuous Contract since 1998
- Extension of MoDOT Staff
- Interchange Studies
- Microsimulation Modeling Services
- Traffic Counts
- Traffic Signal Coordination and Timing Plans
- Transportation Planning Studies
- Travel Demand Forecasting
- Value Engineering Studies

Project Completion: Ongoing Year-to-Year

CBB Key Personnel: Shawn Leight, PE, PTOE, PTP

Reference:

Mr. Edward W. Hassinger, PE

Deputy Director and Chief Engineer

Missouri Department of Transportation

T: (573) 751-2803

E: Ed.Hassinger@modot.mo.gov

Firm Role: On-Call Traffic Engineer



ON-CALL TRAFFIC ENGINEERING FOR MUNICIPALITIES

Various Municipalities, Various Locations

CBB maintains several on-call traffic engineering service contracts with various municipalities throughout the region, acting as an extension of the City/County staff. In this role, CBB is responsible for reviewing proposed developments and making recommendations to staff regarding the traffic, parking, and site circulation issues. Additionally, as an on-call traffic engineer, CBB represents many of the agencies with regards to traffic engineering issues at Planning and Zoning meetings, Council Meetings and Public Hearings. Duties include services from signal optimization, to safety analysis and studies, as well as grant writing and projects utilizing federal and state funds.

Current On-Call Contracts include:

- Boone County, MO
- Brentwood, MO
- City of St. Louis
- Clayton, MO
- Collinsville, IL
- Des Peres, MO
- Highland Park, IL
- Ladue, MO
- Maryland Heights, MO
- O'Fallon, IL
- Rockford, IL
- St. Charles County, MO
- St. Charles, MO
- St. Peters, MO
- University City, MO
- Wentzville, MO



Project Completion: On-Call Contracts

CBB Key Personnel:

Varies per Municipality

References:

Ms. Whitney Kelly

Director of Planning & Development

City of Brentwood

T: (314) 963-8626

E: WKelly@brentwoodmo.org

Mr. Matt Malick

Public Works Director

City of Clayton, MO

T: (314) 290-8540

E: MMalick@claytonmo.gov

Mr. Justin Randall, AICP

Community Development Director

City of O'Fallon, IL

T: (618) 624-4500 extension 4

E: JRandall@ofallon.org

Firm Role: On-Call Traffic Engineer



DOWNTOWN MULTIMODAL PLAN

City of St. Louis, Missouri

CBB completed this Congestion Mitigation Air Quality Improvement (CMAQ) program project for the City of St. Louis. The Phase 3 work is a continuation of previous work done within the City of St. Louis and focuses to make necessary updates as a result of recent changes to the grid network, including the City+Arch+River project, as well as the new Stan Musial bridge.

The on-going project includes three major components including (1) Downtown Multimodal Study and Signal Timing, (2) Fiber optic network enhancements, and (3) Traffic Information Center Operations. The project limits are generally bounded by Jefferson on the west, Cass on the north, Mississippi river on the east, and Chouteau on the south.



The Downtown Multimodal Study developed a robust multimodal system that enhances connections for pedestrians, bicyclists, transit users and motorists, of all ages and abilities, while improving quality of life, supporting economic growth and community development, easing congestion and bettering air quality, and improving public health. The study includes a thorough stakeholder engagement process, as well as traffic counts, and a complete infrastructure inventory to develop updated signal timing plans for Downtown St. Louis.

The plan was completed in June 2018 and adopted by the City's Planning Commission in December 2018. It provides a framework for the development of future transportation projects in the City of St. Louis. The plan has developed a hierarchy of streets by mode: walking, biking, transit and vehicular access. The team has developed recommendations for implementation on these corridors to enhance the traveling experience, improve safety, allow mode choice, promote economic growth, and foster a more vibrant Downtown St. Louis.

In addition to studying the Downtown network and making recommendations for enhanced transportation choices, CBB is working to design system updates to the downtown network, including ITS devices, cameras, and a more connected fiber network. Strategically placed throughout Downtown, these cameras will assist with enhanced traffic operations. CBB is also providing traffic information center staffing, co-located at the Real Time Crime Center in Downtown St. Louis, to monitor operations, and make necessary changes due to any special events or unplanned circumstances.

In 2019 the project, was recognized by the American Planning Association for Achievement in Transportation Planning – Silver; and by the East West Gateway Council of Governments (EWGCOG) for an Outstanding Local Government Achievement Award for Leadership in Planning and Design Innovation.

Project Completion: 2018

CBB Key Personnel: Shawn Leight, PE, PTOE, PTP and Jacque Knight, AICP

Reference:

Mr. Jamie Wilson, PE, PTOE

Traffic Commissioner

City of St. Louis

T: (314) 647-3111 extension 1108

E: WilsonJ@stlouis-mo.gov

Firm Role: Prime consultant, responsible for final plan development, including all plan components such as data collection and public engagement.



SOUTHERN ILLINOIS METROPOLITAN PLANNING ORGANIZATION (SIMPO) SAFETY STUDY

Williamson and Jackson Counties, Illinois

CBB analyzed crash data within the Southern Illinois Metropolitan Organization (SIMPO) Planning Area to make specific safety recommendations to reduce severe crashes at at-risk locations. To determine crash prone locations, a network screening was performed for the entire study area using crash data from 2014 to 2018. Crashes were analyzed to identify the frequency, crash type, severity, and locations on both the state and local roadways. A data driven approach was used to identify the priority locations for in-depth review and analysis to identify safety countermeasures. Since the SIMPO Area includes both rural and urban areas and the focus was to reduce severe crashes, locations were screened using the Equivalent Property Damage Only (EPDO) Method. Two types of locations were considered in this process, roadway segments and intersections which were further sub-categorized into local or state segments or intersections. The initial screening then resulted in a priority list of intersections and segments for both the local and state roadways.

The priority lists were presented to the SIMPO Technical Advisory Committee and based on their critical input refined the intersections and segments list to Top Priority Locations. Based on the crash data analyzed, the Top Priority list combined several segments and intersections that were adjacent to each other and considered these areas to be “corridors” which included both segments and intersections. The safety performance of the corridors and individual intersection/segments were investigated by reviewing and analyzing safety data (crash reports), evaluating supporting documentation, and assessing field conditions to select effective safety countermeasures for each specific location. Based on the diagnosis, a variety of safety countermeasures were suggested to provide a range of cost options for improving safety. Some solutions include signing and striping, physical road improvements, shoulder improvements, speed management solutions, signal improvements, pedestrian/bike improvements/accommodations and roundabouts.

After presenting a variety of safety countermeasures for all the Top Priority Locations the SIMPO Technical Advisory Committee provided additional input for some selected countermeasures for generating concepts. Then, CBB aided the cities, counties, and state in the completion of Highway Safety Improvement Program (HSIP) grant applications. CBB generated project narratives, summary of safety performances, countermeasure concepts, opinions of probable cost for the selected countermeasures, and project schedules. The potential safety benefits of the countermeasures were compared to the opinions of probable cost to calculate the benefit to cost ratio for the HSIP application.

Project Completion: June 30, 2021

CBB Key Personnel:

Brian Rensing, PE, PTOE, RSP2I, Project Manager

Reference:

Mr. Joe Zdankiewicz, PE

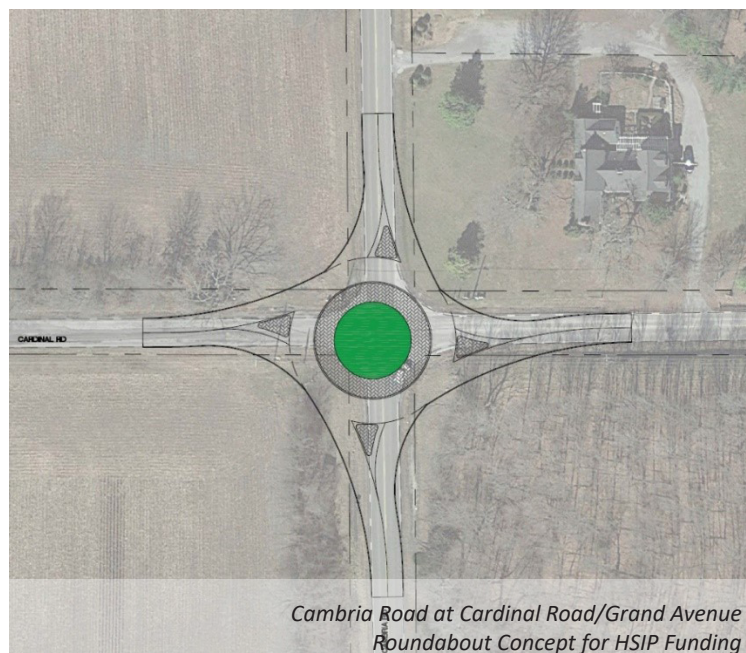
Director of Transportation Planning

Southern Illinois Metropolitan Planning Organization

T: (618) 997-9351

E: JoeZdankiewicz@greateregypt.com

Firm Role: Prime consultant responsible for safety analysis and final report.





WENTZVILLE HISTORIC DOWNTOWN TRANSPORTATION REVITALIZATION PROJECT

City of Wentzville, Missouri

CBB was the lead consultant on the Wentzville Historic Downtown Transportation Revitalization Project. The goal of this project is to ensure that Downtown Wentzville continues to be a vibrant and integrated part of the community with improved access, circulation, parking, walkability, wayfinding, gateway treatments, and streetscape. Wentzville was founded with the expansion of the railroads in the 1850s, and Downtown Wentzville has been the central gathering place for the city ever since. Downtown Wentzville is one of the authentic historic places that define the Midwestern United States. It is critical that these places are healthy, vibrant, and economically successful.

In the pre-interstate era, Pearce Boulevard was a principal thoroughfare for east-west traffic, serving as a site for businesses that served local residents and travelers alike. The expansion of the interstate system relocated through traffic to Interstate 70, leaving behind a grid of walkable, charming, and compact blocks, featuring an eclectic collection of pedestrian-scale buildings dating from different periods of Wentzville's development. Today, these buildings house a variety of independent businesses and function as a unique commercial center within Wentzville and the St. Louis region. Wentzville is one of the fastest growing cities in Missouri. The population of Wentzville has risen six-fold in less than 20 years, increasing from 6,900 residents in 2000 to more than 41,000 residents in 2019. The Wentzville population is projected to exceed 50,000 residents as early as 2024. Wentzville leaders, recognizing the opportunity to better capitalize on the downtown assets, partnered with CBB to develop transportation improvement recommendations that can be leveraged toward revitalization of the downtown district.



CBB conducted transportation planning studies, alignment studies, traffic operations studies, alternatives development/evaluation, and public engagement as a part of this project. CBB also submitted a \$11,789,124 Federal Build America 2018 Grant application on behalf of the City. Revitalization recommendations include:

- A better downtown environment for business and visitors by completing sidewalks; constructing a multi-use path; and installing amenities such as pocket parks, benches, and streetscape elements.
- Improved distribution/circulation of traffic on downtown streets by building stronger connections to Allen Street, which is currently underutilized. This allows for better management of the street network during events, maintenance activities, and daily use.
- Improved traffic flow by upgrading the corridor's four-way stop controlled intersections to traffic signals.
- Raising electric and other above-ground utilities by approximately 15 feet higher than the existing poles for better aesthetics. The taller poles will allow for longer spans reducing the total number of utility poles by about a third.
- Upgrading technology in downtown Wentzville through new fiber optic communications and 5G light poles.
- Implementation of a "quiet zone" and improving safety through four-quadrant gates at the Linn at-grade railroad crossing.
- New on-street parking.
- New gateway treatments that reflect Wentzville's unique character and history.
- Storm sewer repairs and replacements.

CBB completed the design for improvements to Allen Street, which was one recommendation that came from the revitalization plan. The Allen Street project was bid in November 2020 and is currently under construction.

Project Completion: 2020

CBB Key Personnel: Shawn Leight, PE, PTOE, PTP

Firm Role: Prime consultant responsible for plan development.

Reference: **Ms. Susan Spiegel**, Director of Public Works, **City of Wentzville** // T: (636) 639-2045 // E: Susan.Spiegel@wentzvillemo.org

WARD TRAFFIC CALMING STUDIES

City of St. Louis, Missouri

CBB has completed several traffic calming studies for multiple City of St. Louis Wards, analyzing traffic and developing recommendations for enhancing walkability in these neighborhoods. These studies are initiated by the aldermen, who are interested in enhancing safety within their neighborhood. CBB has completed studies for Wards 6, 14 & 16, 15, 20, and 24. These projects started with developing the overall goals and vision for the neighborhood with City staff and elected officials. The goal is to enhance pedestrian and bicycle safety and reduce conflict with motorists for a safe, sustainable, and vibrant communities.

CBB collects traffic data and analyzes existing conditions, as well as facilitates a robust public engagement process. For these efforts we developed surveys for the residents, as well as hosted multiple public meetings and information sessions on traffic calming techniques and neighborhood alternatives. The result was a planning report delivered to the City staff and elected officials to use in planning transportation improvement projects within their neighborhoods. Alternatives were developed in a way that identifies low, medium, and high-cost options, as well as a phasing plan for priority improvements. The plan can also be used to leverage potential future funding with various grant applications. As a result of these efforts, safety improvements have been implemented in all of the neighborhoods in which we have worked, enhancing safety for residents, and resulting in a more walkable community. The new updates enhance neighborhood quality of life and improve safety for everyone traveling within the area.

Project Completed: On-going

CBB Key Personnel:

Shawn Leight, PE, PTOE, PTP
Jacque Knight, AICP

Reference:

Mr. John Kohler, PE
Planning and Program Manager
City of St. Louis
Board of Public Service
T: (314) 589-6623
E: KohlerJ@stlouis-mo.gov

Firm Role: Prime consultant responsible for plan development.





SPRINGFIELD CITY-WIDE PEDESTRIAN SAFETY STUDY

City of Springfield, Missouri

In 2017, CBB partnered with the City of Springfield, Missouri, to expand the City's pedestrian safety program. Collisions between vehicles and pedestrians are a significant concern in the US and around the world. Pedestrian fatalities have been increasing. From 2006 to 2015 the percentage of US pedestrian fatalities, as compared to all roadway fatalities, increased from 11% to 15%. In 2015, there were 5,376 pedestrians killed in US traffic crashes, a 10% increase from 2014. In response, the City of Springfield launched SGF Yields in 2017, a pedestrian safety campaign aimed to foster an awareness in motorists and pedestrians to look out for one another by initiating a cultural change to be more pedestrian responsible and friendly. CBB's work built upon the SGF Yields program by investigating several elements affecting pedestrian safety and developing recommendations for pedestrian safety on roadways, medians, and islands located in the City.

CBB's work shows that special care for vehicular/pedestrian conflicts should be given under the following conditions:

1. Speeds on at least one approach of 35 mph or greater.
2. Traffic volumes greater than 15,000 vehicles per day on at least one roadway.
3. Median widths less than 6' wide.

Under these conditions' pedestrians should remain in designated pedestrian areas where motorists reasonably expect them to be located (e.g., sidewalks and crosswalks) unless one of the following conditions is present:

1. Temporary traffic control set up to warn drivers that pedestrians will be present (e.g., maintenance or special events).
2. The roadway has low traffic volumes and speeds and is designated as a shared space for both motorists and pedestrians.
3. Pedestrians are using a temporary pedestrian refuge as a part of the process of promptly crossing a road.

Based upon these factors CBB worked with the City of Springfield to update their pedestrian safety ordinance and create a safer environment for the City's pedestrians.

Project Completion: 2017

CBB Key Personnel:

Shawn Leight, PE, PTOE, PTP

Reference:

Mr. Martin Gugel, PE

Assistant Director of Public Works

City of Springfield

T: (417) 864-1020

E: MGugel@springfieldmo.gov



Firm Role: Prime consultant responsible for plan development.



SECTION 4:

KEY PERSONNEL





4. KEY PERSONNEL

CBB's proposed team for the City of Cape Girardeau and SEMPO General Services Agreement for professional services pertaining to regional transportation planning projects will include the following key personnel. We have included a resumes for each individual who will be assigned to SEMPO work tasks featuring their qualifications, professional registrations, and their respective roles.





Shawn Leight, PE, PTOE, PTP — Vice President and COO

Project Role: *Project Principal*

Shawn Leight works to develop transportation solutions that support community values by forging relationships and advancing forward thinking solutions. Shawn has more than 20 years of experience in transportation engineering and planning and has worked in every stage of project development. He is the vice president and a principal owner of CBB, where he manages project delivery and business development.

Shawn has played a key role in several innovative projects in the St. Louis region such as the reconstruction of I-64, which was awarded the 2010 AASHTO America's Best Transportation Project in the United States. Shawn also served as project manager for the development of the Downtown St. Louis Multi-modal Transportation Plan, which won the America Planning Association Silver Level Achievement in Transportation and an Outstanding Local Government Award for leadership in planning by East West Gateway in 2019.

Shawn has served as an adjunct professor of transportation engineering at Washington University in St. Louis since 2003, where many of his 350+ students are now leaders in the transportation profession. Shawn supports the transportation industry by serving on boards and committees for professional organizations. He was the 2017 International President of the Institute of Transportation Engineers (ITE). Shawn's work in the St. Louis region has been featured on KMOX and St. Louis Public Radio as well as in St. Louis Magazine and the River Front Times. The following projects represent Shawn's experience.

Education

M.S., Transportation Engineering, University of Wisconsin at Madison, 1997

B.S., Environmental Engineering, United States Military Academy at West Point, 1993

Academic Appointments

Adjunct Professor, Washington University and University of Missouri St. Louis Joint Civil Engineering Program (2003 to Present)

Registrations

Professional Engineer (PE) in CO, IL, KY, MN, MO, NV, NC, and WI

Professional Traffic Operations Engineer (PTOE)

Professional Transportation Planner (PTP)

Professional Activities

Institute of Transportation Engineers (ITE)
International President - 2017
Missouri Valley Section of ITE President - 2009

Gateway Section of ITE formerly, TEAM STL President — 2005
Administrator 2007-Present

Feonix Mobility Rising Board Member 2018 – Present

Transportation Research Board, Transportation for National Defense Committee 2013-Present

I-270 North Design Build Project, St. Louis County, MoDOT

Shawn is leading CBB's traffic engineering efforts for Millstone Weber's Design Build team on the I-270 North Design-Build Project in St. Louis County. The goal of the project is to improve safety, mobility, and travel reliability throughout the I-270 corridor for all users. This community is heavily reliant on multi-modal travel, so it was important to the team to enhance walking, biking, and transit operations through the corridor. The team created, designed, and is constructing a design that eliminates all crossover slip ramps on the outer roads through a one-way outer road system, mitigated bottlenecks on the freeway through widening and innovative interchange designs, and enhanced pedestrian and bike facilities through implementation of a multi-use path. The project includes several innovative features such as MoDOT's first counterflow bus-only lane and Dynamic Trailblazer signs. Learn more at: <http://www.i270north.org/>

Downtown St. Louis Multimodal Plan, City of St. Louis, MO

Shawn led the development of a transportation planning framework toward a robust multimodal system in downtown St. Louis. This plan enhances connections for pedestrians, bicyclists, transit users and motorists, of all ages and abilities, while improving quality of life, supporting economic growth and community development, easing congestion, and bettering air quality, and improving public health. The plan has developed a hierarchy of streets by mode: walking, biking, transit & vehicular access. The team developed recommendations for implementation on these corridors to enhance the traveling experience, improve safety, allow mode choice, promote economic growth, and foster a more vibrant Downtown St. Louis. The plan was adopted by the City's Planning Commission in 2018 and was awarded a Silver Level Achievement in Transportation Planning by the APA and an Outstanding Local Government Award for leadership in planning by the East West Gateway Council of Governments in 2019.

Springfield Pedestrian Safety Study, Springfield, MO

Shawn led a CBB study team in 2017 to expand the City's pedestrian safety program. CBB's work built upon the SGF Yields program by investigating several elements affecting pedestrian safety and developing recommendations for pedestrian safety on roadways, medians, and islands located in the City. CBB's work shows that special care for vehicular/pedestrian conflicts should be given under the following conditions: 1) speeds on at least one approach of 35 mph or greater, 2) traffic volumes greater than 15,000 vehicles per day on at least one roadway, or 3) median widths less than 6' wide. Under these conditions' pedestrians should remain in designated pedestrian areas where motorists reasonably expect them to be located. Based upon these factors CBB worked with the City of Springfield to update their pedestrian safety ordinance and create a safer environment for the City's pedestrians.

Boone County Northeast Transportation Plan, Boone County, MO

Shawn led the effort to develop a master transportation plan for the northeast portion of Boone County. The northeast subarea has come under increased development pressure and partnering agencies (the City of Columbia, Columbia Area Transportation Study Organization, and Missouri Department of Transportation) have recognized the need for collaborative planning to better facilitate the development of a coordinated and cohesive roadway network. CBB's work consisted of several tasks including: 1) forecasting future traffic volumes and patterns using the CATSO regional travel demand model, 2) identification and development of costs for needed roadway improvements and 3) development of a funding strategy. The result was the development of a \$70,000,000 master transportation plan which will guide the future development of the area's roadway network.



Jacquie Knight, AICP — Multimodal Planner

Project Role: *Project Manager, Bike/Pedestrian Planner and Public Outreach Lead*

Jacquie Knight has a passion for promoting transportation systems that put people first and create walkable, vibrant, and healthy communities. She works to support a better quality of life through projects that enhance active transportation and increase access to opportunity. Her communications and marketing experience give her a unique ability to communicate effectively with many stakeholders during an open public engagement process. She has knowledge in transportation demand modeling, growth management, real estate development, site planning, and public health. Recent projects include Louisiana Calm Streets, several Great Streets studies, and the Downtown St. Louis Multimodal Plan, which in 2018 was awarded a Silver Level Achievement Award in Transportation Planning by the American Planning Association, and an Outstanding Local Government Achievement Award by East West Gateway Council of Governments. Additionally, Jacquie serves as the Chair for the Community Mobility Committee, an advisory committee for the City of St. Louis on issued related to walking, biking, and micro mobility.

Education

M.U.P., Master of Urban Planning – Transportation Specialization, University of Kansas 2014

B.S., Journalism – Strategic Communications, University of Kansas, 2009

B.S., American Studies – Thesis emphasis: Gender and Advertising, University of Kansas, 2009

Certifications

American Institute of Certified Planners (AICP)

Professional Activities

American Planning Association (APA), St. Louis Metropolitan Section – 2018 Community Planning Champion Award

Community Mobility Committee, Chair

Focus St. Louis Emerging Leaders, 2020 Cohort

Gateway Section of ITE (GSITE) formerly, TEAM STL – TEAM Fair Planning Committee, 2015 – 2019

American Public Works Association, MO Chapter Young Professional Chair – 2018 MO APWA Young Professional of the Year

Association for Pedestrian and Bicycle Professionals – National PDS Planning Committee, 2015

Citizens for Modern Transit

Gateway Bike Plan Working Group, City of St. Louis Resident Rep.

Downtown Bike Commuter Station, Board of Directors

Bicycle Pedestrian Advisory Committee, City of St. Louis Rep.

Manchester Road Revitalization Project, Brentwood, MO

Jacquie led the public engagement effort and multimodal planning for this Great Streets style project along Manchester Road. The Manchester corridor is a significant east/west corridor in the St. Louis region that connects many municipalities along the central corridor. CBB led this process in conjunction with an ongoing MoDOT project to better plan for access management along the corridor, as well as plans to better accommodate bicycles and pedestrians. CBB ultimately delivered a set of recommendations to enhance the corridor, such as the addition of a shared use path to move users of all ages and abilities. The city is in the process of implementing the recommendations, including the shared use path throughout the project limits, which will significantly enhance bike and ped connectivity in the region.

St. Louis Road / Collinsville Avenue Great Streets Project

Collinsville, IL and East West Gateway Council of Governments

Recently, Jacquie worked with CBB as the lead transportation planner on the Collinsville, IL Great Streets Project. Managed by EWGCOG, and composed of consultants representing 4 disciplines, these projects started with team kick-off meetings to develop project vision. Existing conditions were analyzed, and stakeholder meetings were conducted. The projects involved a charrette week and culminated in a final report outlining high-level conceptual planning recommendations and a discipline specific white paper on each specialty area associated with the project. One recommendation of this work is the addition of a shared use path to connect Uptown Collinsville to the Cahokia mounds adjacent to the corridor.

Downtown Multimodal Study, City of St. Louis, MO

Jacquie recently led the public engagement for the Downtown Multimodal Study. The purpose of this is to develop a transportation plan for Downtown St. Louis, that supports a robust multimodal system, where users of all ages and abilities feel safe including pedestrians, bicyclists, transit users and motorists, and promotes economic growth, community development, better air quality, and improved public health. The plan includes a hierarchy of streets that prioritizes corridors by mode of transportation. The core team has collaborated with nearly 100 stakeholders, representing 40 agencies and organizations to develop this hierarchy, as well as strategies and elements to include mode specific upgrades to this corridor. The project was awarded a national APA award for achievement in transportation planning.

Ward Neighborhood Traffic Calming Studies, City of St. Louis, MO

Jacquie worked with CBB and the City of St. Louis Board of Public Service and various wards (6, 14, 15, 16, 20 & 24) to assess transportation and circulation issues within the neighborhoods. The process involved coordination with city employees, elected officials, and various neighborhood groups and stakeholders. Surveys were used to assess current perception of transportation patterns within the neighborhoods, as well as determine various traffic calming measures neighborhood residents would be interested seeing implemented. Additionally, CBB analyzed existing data. The process culminates a set of recommendations to the City and each Alderman outlining traffic calming measures. This report will serve as a plan for the use of Ward Capitol Project Improvement funds within the neighborhoods in the coming years.



Nirav Patel, PE — Transportation Engineer

Project Role: *Transportation Modeling Lead*

Nirav Patel joined CBB in June 2016 after receiving his Bachelor of Science in Civil Engineering from Saint Louis University. Nirav is primarily involved in CBB's transportation engineering and modeling efforts. Nirav has developed transportation operational models for several corridor and interchange planning studies as well as traffic impact studies in the St. Louis region. He is proficient in multiple modeling software packages including VISSIM, VISTRO, VISUM, SYNCHRO, SIDRA, and HCS. He excels in this position because of his knowledge of transportation engineering and modeling, as well as his passion within the field and careful attention to detail. The projects below are reflective of Nirav's experience.

Education

Bachelor of Science, Civil Engineering, Saint Louis University, 2016

Registration

Professional Engineer (PE) in Missouri

IMSA Work Zone Temporary Traffic Control Technician

Professional Activities
Institute of Transportation Engineers (ITE)

Gateway Section of the Institute of Transportation Engineers (GSITE)

American Public Works Association (APWA)

I-270 North Design Build

St. Louis, MO

Recently, Nirav worked with Shawn Leight and the CBB team on the traffic modeling effort for a \$278 million freeway reconstruction in St. Louis. This project includes the rebuilding of bridges and interchanges for a 7-mile urban freeway. The project includes a new system interchange connecting I-270 to 8 service interchanges. Nirav's team used Microsimulation Model (Vissim) to evaluate interchange concepts, ensure the acceptable operations for the freeway mainline, and optimize design details. Construction on the project is anticipated to be completed in 2023.

SLU Medical Hospital

St. Louis, MO

Recently, Nirav worked with Lee Cannon and the CBB team on the Traffic Impact Study for the SLU Medical Hospital campus development. During the project, Nirav worked on the Microsimulation Model (Vissim) in order to create a visual of how traffic in and out of the hospital will be affected, and how drop-off and pick-up of patients will work. He also worked on the evaluation of traffic at the site, including Level of Service (LOS) tables, a potential increase in turning lanes and side street stops, and signage along the cross streets to Grand Boulevard.

Centene Campus Project

Clayton, MO

Nirav worked with Srinivas Yanamanamanda on the Traffic Impact Study to analyze the effects of the campus development within the Clayton Central Business District. Nirav worked on the Microsimulation Model (Vissim) for the project; with it he verified trip generation reports, traffic increases due to the development, and potential added lanes and signalization at certain intersections.

Columbia Middle School

Columbia, MO

Nirav worked with Shawn White on a traffic impact study for a proposed middle school. The purpose of the evaluation was to determine the number trips that would be generated by the new school and to evaluate their impact on operating conditions along the adjacent roadways. Roadway improvements were recommended to mitigate the operational impact, including turning lanes to improve the efficiency of traffic flow.

Olive Boulevard and Lindbergh Boulevard Interchange

St. Louis, MO

Nirav worked with Lee Cannon and the CBB team on the traffic study for the Olive Boulevard and Lindbergh Boulevard Interchange Improvements. Nirav helped refine the initial concept by identifying future traffic levels, evaluating operating conditions under the proposed roadway configurations, and recommending mitigating measures to ensure safe and efficient traffic flow.





Lee Cannon, PE, PTOE — Principal, Traffic Engineer

Project Role: *Traffic Studies Lead*

Lee Cannon has been involved in nearly every facet of traffic engineering and transportation planning since joining CBB in 1994. He has completed hundreds of traffic impact studies, operational improvement studies, safety studies, comprehensive master plans, route and intersection concept layouts and parking studies both large and small in scale. Lee is the firm's lead on traffic studies. He has addressed residential, commercial, industrial, healthcare, educational and other land use proposals, expansions, and re-developments. He has also completed corridor studies (roadway realignment, relocation, and bypass studies) and roadway, intersection, and interchange geometric improvement projects.

Education

M.S., Civil Engineering,
University of Tennessee, 1994

B.S., Civil Engineering,
Christian Brothers University,
1992

Registration

Professional Engineer (PE)
in Idaho, Illinois, Indiana,
Kentucky, Missouri, Nevada,
North Dakota, Ohio, and
Texas

Certified Professional Traffic
Operations Engineer (PTOE)

Professional Activities

Institute of Transportation
Engineers (ITE)

Missouri Valley ITE (MOVITE)

Gateway Section of the
Institute of Transportation
Engineers (GSITE)

Past President, TEAM Fair
Planning Committee, 2003
- 2019

American Public Works
Association (APWA), Missouri
Board – Secretary

Chi Epsilon

Lee is well versed in the specialized requirements of federally funded projects and has completed multiple successful funding applications, prepared service contracts and supplemental agreements and overseen compliance with funding goals and requirements. Lee acts as a third-party traffic engineer for a variety of municipalities and often works closely with review agency officials to find reasonable and financially feasible solutions to complex access, congestion and safety issues on public agency and private projects. He routinely provides public hearing testimony in cases involving development projects and expert witness testimony for high profile developments, condemnation cases and vehicular crashes.

Danforth Plant Science Center and Wexford

Creve Coeur, MO

Lee led the initial traffic and parking studies for development of a consortium research facility for Danforth Foundation, Monsanto, Washington University, University of Missouri, and others. The study addressed access to the facility which was to be built in multiple phases. Access for the first phase was accommodated from Warson Road, but additional access to state Route 340 (Olive Boulevard) was recommended for future build-out. Later expansion of the project created a separate parcel for private business incubator space. Shared access with the Danforth site was recommended for phase one, and a second access from Warson Road was recommended for the second and third building phases. City, County and State approvals were required for the access serving these sites.

St. Anthony's Medical Center Traffic and Parking Study

St. Louis County, MO

As project principal, Lee oversaw a study of the new Master Plan at St. Anthony's Medical Center. Working with County and State Highway officials, mutually agreeable solutions were identified to mitigate existing deficiencies as well as impacts from nearly 700,000 square feet of improved medical space. An additional access point was necessary on the County route, and significant improvements were recommended at several intersections along the State Route. A roundabout and realigned loop road were proposed to solve traffic congestion and pedestrian conflicts on the south end of campus, while improving access to the medical center and alleviating concerns raised by adjacent residents.

Monsanto World Headquarters, Various Projects

Creve Coeur, MO

Lee has been involved in several projects completed for Monsanto's main campus, including a Master Planning Study and multiple individual building additions. In the planning study, he addressed external traffic impacts and recommended off-site improvements to accommodate large increases in campus population. He also forecasted on-site parking needs and recommended appropriate numbers and locations for new parking and considered on-site traffic flow and safety of pedestrians to recommend changes for on-site roadway alignments.



Christopher Brammeier, PE, PTOE — Principal, Roadway Engineer

Project Role: *Conceptual Design Lead*

Chris Brammeier has over 25 years of experience in the civil engineering field. He oversees all civil engineering design and construction engineering projects at CBB and serves as project manager on a variety of CBB efforts in multiple municipalities and counties. His areas of expertise include roadway design, hydraulics and hydrology, and floodplain management. Prior to CBB, he was employed by the St. Louis County Department of Highways and Traffic and by St. Louis County as the Airport Engineer at Spirit of St. Louis Airport. The following projects are typical of Chris' experience.

Education

M.S., Civil Engineering,
University of Missouri – Rolla,
1995

B.S., Civil Engineering,
Southern Illinois University-
Edwardsville, 1991

Registrations

Professional Engineer (PE)
in Arkansas, Illinois, Iowa,
Kansas, Kentucky, Missouri,
Oklahoma, South Dakota, and
Tennessee

Professional Traffic
Operations Engineer (PTOE)

Professional Activities

Gateway Section of the
Institute of Transportation
Engineers (GSITE)

American Public Works
Association (APWA)

Specialized Training

- FAA Standards
- AutoTurn
- GuideSign
- Roundabout Design
- AutoCad
- Stormwater and Floodplain Analysis (HEC2)

Skinker Boulevard/McCausland Avenue, Clayton Road, Oakland Avenue Intersection Improvements, CMAQ 5401 (707)

City of St. Louis, MO

As the project manager, Chris oversaw the design of three new traffic signals, including bicycle and pedestrian accessibility improvements, which enhanced the overall operation and safety at the 'front door to Forest Park'. Upon completion, the project will provide new traffic signals to replace the gaining system that currently controls the multi-legged complex intersection. In addition to signals, the pedestrian enhancements include the addition of marked continental crosswalks, as well as signalized pedestrian crossings, bump outs at Tamm, lane removals and the extension of a dual use trail that connects Forest Park to a mile of new sidewalk and buffered bicycle lanes, extending to Hampton Avenue.

Kiener Plaza Roadway Design

City of St. Louis, MO

Chris served as the project manager, overseeing the design of \$1.25 million CMAQ funded roadway improvements associated with the \$19 million Kiener Plaza redesign (as part of the \$380 million Gateway Arch Grounds renovation). CBB designed traffic signal improvements at five signals surrounding the park, ADA upgrades- curb ramps and sidewalks, and updated signal infrastructure to replace the current system. As a part of the sidewalk improvements, CBB designed curb 'bulb outs', where appropriate to enhance pedestrian visibility and shorten crossing distance. CBB's plans include updated medians and mid-block crossings, in addition to new bicycle facilities- a parking protected bicycle lane on Chestnut and the City's first bike signal at 6th and Chestnut, as well as wireless sensor detection for bicycles.

Wentzville Parkway and Pearce Boulevard, CMAQ 5437 (602)

Wentzville, MO

Chris served as project manager for the design of roadway, traffic signal and lighting improvements at the intersection of Wentzville Parkway and Pearce Boulevard. The design of this heavily congested intersection is providing dual left turns at all four approaches, decorative medians, sidewalk, as well as additional lanes recommended by the traffic study. Construction staging and traffic control were major parts of the design effort on this project to ensure minimum disruption during construction.

Broadway and Park – 7th Street, STP 5422(612)

City of St. Louis, MO

Chris served as project manager for intersection improvements for the City of St. Louis, Board of Public Service on this STP project. The improvements to the intersection included two new traffic signals, geometric modifications, decorative medians, sidewalk, ADA curb ramp design as well as street lighting, mill and repaving of the project limits with Enviropave material and a decorative, low maintenance tree lawn. Improvements required coordination with the adjacent expansion of the Clean Company building as well as construction of M and L Foods.



Brian Rensing, PE, PTOE, RSP2I — Associate, Sr. Transportation Engineer

Project Role: *Traffic Safety Lead*

Brian Rensing has over 18 years of experience in the traffic and transportation engineering field as an employee of CBB. He has been involved in many facets of transportation engineering and has completed numerous traffic safety studies, traffic impact studies, school safety studies, operational improvement studies, and parking studies. Brian has performed a wide range of safety studies, including analysis for Access Justification Reports (AJR), interchanges, corridors, as well as single intersections. He is knowledgeable with methodologies and procedures for using the Highway Safety Manual (HSM) and Interchange Safety Analysis Tool (ISATe) as well as performing Road Safety Audits (RSA). Additionally, Mr. Rensing has earned the Road Safety Professional certification from ITE. The following projects are typical of Brian's experience as transportation engineer.

Education

B.S., Civil Engineering,
Bradley University, Peoria,
Illinois, 2001

Registrations

Professional Engineer (PE) in
Illinois and Missouri

Professional Traffic
Operations Engineer (PTOE)

Road Safety Professional
Infrastructure (RSP2I)

Road Safety Professional
(RSP1)

Professional Activities

Institute of Transportation
Engineers (ITE)

Missouri Valley ITE (MoVITE)

Gateway Section of the
Institute of Transportation
Engineers (GSITE)

American Society of Civil
Engineers (ASCE)

TEAP Operational Study, Little Hills Expressway at Mel Wetter Parkway

St. Charles, MO

As part of the Traffic Engineering Assistance Program (TEAP), Brian led an operational study for the intersection of Little Hills Expressway and 5th Street (Mel Wetter Parkway) in St. Charles, Missouri. The purpose of this study was to determine the most appropriate traffic control, any roadway improvements needs as well as verify future operations in 20-year scenarios. Traffic counts were performed to fully assess the intersection needs. Ultimately, a separate left-turn lane was recommended on Little Hills Expressway due to safety concerns and would be necessary with any future traffic signal. Although a traffic signal was not warranted at that time, ultimately a signal is expected to be warranted in the 20-year conditions. A roundabout alternative was also evaluated and would operate well in the future scenario.

Operational and Safety Study, Tom Ginnever Avenue at Cool Springs Road

O'Fallon, MO

Brian led an operational and safety study for the intersection of Tom Ginnever Avenue at Cool Springs in O'Fallon, Missouri. The purpose of this study was to determine the most appropriate traffic control currently as well as into the future. Current traffic counts were performed. Sight distance and crash history was also considered to fully assess the intersection needs. Based on direction from City Staff and the Highway 79 Corridor Study, a 2023 traffic forecast was generated to determine the appropriate future traffic control. Although the current all-way STOP condition is less than desirable from an operations perspective, it is the best traffic control at this time. A potential side-street STOP does not have adequate sight distance, and a traffic signal is not warranted based on volumes at this time. A roundabout is not expected to operate well into the future. A traffic signal is expected to be warranted based on the build-out of the residential area and development of the vacant parcels near the intersection.

Safety Analysis for Interchanges

Various Locations

As traffic engineer, Brian was responsible for evaluating the safety needs for several interchange projects. Sample interchange projects include: I-270 North Design Build, I-70 at Fifth Street AJR, Mid Rivers Mall Drive/I-70 & Route 79/I-70 Interchange Study, The Highland Access Justification Report, I-44 Corridor Traffic Operation Analysis and Conceptual Improvement Study, Page Phase III AJR, and I-44 at Highway 141 Design-Build proposal. For each project area, three to five years of traffic crashes were summarized by location, crash type, severity, weather condition, pavement condition, and lighting condition to identify crash patterns at each of the interchanges. Crash rates were generated along the segments of interstate as well as the arterial cross streets. Fatal crashes were scrutinized in detail to determine if improvements could reduce the severity of crashes. Crash rates were utilized to determine if any of the study areas were a high crash location. The ISATe method was used for predicting the future crashes with specific changes to the interchanges while the HSM Methodologies for were also used to predict crashes along the cross streets and was utilized for the I-270 North Design Build, I-70 at Fifth Street, and I-44/141 Design Build project. Nonetheless, suggestions were made, and countermeasures were identified to reduce the number and severity of crashes based on the historic crash patterns and the predictive crash tools.



Jacob Kaltenbronn, EIT — Transportation Analyst

Project Role: *Data Collection Lead*

Jacob Kaltenbronn has over one year of experience in traffic and signal operations at CBB. In his role, he primarily works on signal timing and optimization projects along corridors and assists in maintenance of traffic (MOT) efforts during roadway construction projects. Jacob is also involved in roadway design projects and oversees CBB's data collection efforts. During his time at the University of Missouri, Jacob conducted research on innovative technologies such as drones, autonomous and connected vehicles and movement-as-a-service applications. As a result of his research, Jacob was selected as a Dwight D. Eisenhower Transportation Fellow by the FHWA and earned awards from the Intelligent Transportation Society of America and the American Traffic Safety Services Association.

Education

M.S., Civil Engineering –
Transportation Emphasis,
University of Missouri –
Columbia, 2019

B.S., Civil & Environmental
Engineering, University of
Missouri- Columbia, 2018

Registration

Engineer-in-Training (EIT)

FAA-Certified Drone Pilot

Professional Activities

Gateway Section of the
Institute of Transportation
Engineers (GSITE)

Institute of Transportation
Engineers (ITE)

American Society of Civil
Engineers (ASCE)

Specialized Training
IMSA Work Zone Safety

IMSA Traffic Signal Technician
Level I

Signal Coordination and Timing Improvement

Illinois Department of Transportation

Jacob has worked on signal coordination and timing (SCAT) projects for CBB and the Illinois Department of Transportation, including projects in Mount Vernon and Shiloh. His primary role in these projects involved data collection and analysis, including 24-hour hose volume analysis, turning movement counts, fuel cost and emissions savings calculations and analysis of various measures of effectiveness using Synchro 10 software. These efforts resulted in the selection of optimal cycle lengths and offsets throughout the project corridors for the various peak periods of traffic.

MO Route 141 Timing Improvement Project

Missouri Department of Transportation

This project consisted of developing optimized signal timing plans for a 31-mile section of MO Route 141 that included 80 intersections throughout St. Louis County and Jefferson County. Throughout the project, Jacob was heavily involved in data collection and analysis, which included the collection and analysis of 24-hour hose volumes, turning movement counts, intersection geometry, travel time delay studies and intersection delay studies. Additionally, Jacob was involved in the development of models using Synchro 10 software. These models were used to analyze various measures of effectiveness for existing timing plans and various alternative plans. Ultimately, optimal cycle lengths and offsets were chosen to determine the optimal timing plans for various peak periods. Jacob was also involved in programming the proposed timing plans in the signal controllers along the corridor using Transcore controller management software.

I-270 North Design-Build

Missouri Department of Transportation

Jacob is involved with maintenance of traffic (MOT) efforts during interstate closures and other major traffic events during this \$275mil design-build project along I-270 in North St. Louis County. His duties include monitoring traffic in the field and adjusting signal timing along detour routes, as necessary using Transcore controller management software and by programming timing changes in signal controllers in the field. Jacob also led the effort to implement a tethered drone. The drone operation assists MOT operations during construction by improving traffic monitoring capabilities. Jacob is responsible for planning all drone operations. He also acts as the remote pilot-in-command during all MOT operations and is responsible for all communications between the drone operation in the field, off-site CBB traffic engineers, and TMC operators.

Gateway Green Light (GGL) Phase 5, St. Charles County, MO

This project consisted of signal optimization along 4 priority corridors in St. Charles County, MO. Jacob was involved in the collection and analysis of data including 24-hour hose volume counts, intersection delay studies, and travel time delay studies. He was also involved in the development of models using the Synchro 10 software package that were used to select optimal signal timing plans for various peak periods. Jacob was also involved in the implementation of the proposed signal timing plans, which included programming the timing plans in the signal controllers using Transcore controller management software and conducting field observations of the corridors once the proposed timing plans had been implemented.

Evaluation of Benefits and Applications of Tethered Surveillance Drones (TSDs)

University of Missouri-Columbia, FHWA

Jacob completed a year-long study on tethered surveillance drones (TSDs) at the University of Missouri. This study was funded by the FHWA as part of the Dwight D. Eisenhower Transportation Fellowship Program. The study analyzed various potential uses for tethered drones in the transportation industry, finding that the use of tethered drones is not only feasible, but would provide substantial benefits for uses such as traffic monitoring, traffic incident management, and work zone management. Further, the study proposed guidelines and best practices for the implementation of tethered drones for transportation-related purposes.

SECTION 5:
**PREVIOUS PROJECT
TEAM EXPERIENCE**



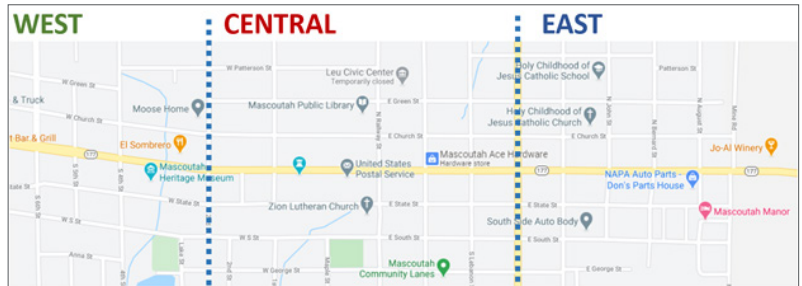
5. PREVIOUS PROJECT TEAM EXPERIENCE

Our team has a strong track record of completing projects on-time and within budget. The projects we have selected in this experience section were successfully completed on-time and in budget to client satisfaction. We start each project with a team kick-off meeting where we come prepared to discuss our DRAFT schedule based on project needs and staffing availability. We ensure this schedule is FINAL when the meeting ends, and will meet the schedule, as well as any project milestones during the project duration. The following are previous project examples that our proposed SEMPO team members were involved in as a team participant.

CITY OF MASCOUTAH EAST-WEST GATEWAY GREAT STREETS PROGRAM

Mascoutah, Illinois (East-West Gateway Council of Governments)

The City of Mascoutah was selected as part of the East-West Gateway Great Streets Program to revitalize Downtown Main Street. The EWG Great Streets Initiative was designed to envision streets as quality public spaces that support a variety of land uses, encourage economic development, environmentally friendly, and to support all modes of transportation, including bicyclists, pedestrians, motorists and transit users. CBB has worked as the expert transportation planner on nine of these projects. The Mascoutah project team encompassed a variety of disciplines including environmental, land use and urban design, market analysis and strategy. CBB led the transportation discipline.



CBB conducted site visits, analyzed the existing transportation network, and was active in the community engagement process to identify the goals, concerns, and ideas of the residents of Mascoutah. CBB led the development of all the transportation planning components utilized throughout the engagement process as well as during team design work sessions. Due to the Covid-19 pandemic, much of the engagement was conducted virtually, to which CBB was easily able to adapt. We developed a plan for a connected local and regional bike and pedestrian network, including wayfinding signage, made recommendations for parking supply, and identified improvements for the overall traffic circulation and safety of the project corridor. Lastly, we provided concrete implementation and funding strategies for the City of Mascoutah to put these plans into action. Learn more at: <https://www.ewgateway.org/transportation-planning/great-streets-initiative/gs-mascoutah/>

Project Completed: November 2020

CBB Key Personnel:

Shawn Leight, PE, PTOE, PTP, Project Manager

Jacque Knight, AICP, Multimodal Planner

Reference:

Mr. Paul Hubbman

Senior Manager of Corridor and Long-Range Planning

East-West Gateway Council of Governments

T: (314) 421-4220 // E: Paul.Hubbman@ewgateway.org

Firm Role: Transportation Planning Expert



NOTE: East West Gateway Council of Governments has completed 6 strategic planning Great Streets projects and CBB has been involved with 5 of those.



MANCHESTER ROAD REVITALIZATION

Brentwood, Missouri

As a third-party traffic engineer for the City of Brentwood, CBB recommended a Great Streets style study of an ongoing roadway enhancement project by the City. The City had begun a project to add amenities (landscaping, lighting, etc.) to a reconstruction project of Manchester Road being planned by MoDOT for 2020, but no public outreach had been made. Additionally, CBB recommended this robust Great Streets process to better accommodate for pedestrians and bicycles through the popular Manchester Road Corridor.

Lee Cannon our traffic engineer and Jacque Knight our multimodal planner led a public involvement program, organized by the City staff, through a series of Open Houses and small group meetings to understand the needs of the local stakeholders (property owners, businesses and the general traveling public) and to gain public support. Based on that input and sound traffic engineering principles, CBB suggested alternatives for consideration including access management improvements and reconfigured parking areas on a parcel by parcel basis as well as better bicycle accommodations.

CBB proposed the idea for the addition of a 10-foot shared use path adjacent to the roadway to accommodate users of all ages and abilities traveling by foot and bike. Ultimately, based on funding availability, the City chose to include many of the recommendations in their current project including closure of redundant driveways, narrowing oversized driveways and adding a shared-use path for bicycles and pedestrians along the entire length of the corridor through the City. Furthermore, the City has adopted several of the other recommendations in their master plan which will require private implementation as individual properties redevelop in the future.



Project Completed: November 2018

CBB Key Personnel:

Lee Cannon, PE, PTOE, Principal and Traffic Engineer

Jacque Knight, AICP, Multimodal Planner

Reference:

Ms. Whitney Kelly

Director of Planning and Development

City of Brentwood

T: (314) 963-8626

E: WKelly@brentwoodmo.org

Firm Role: On-call traffic engineer, responsible for plan development of the corridor.

I-270 NORTH DESIGN-BUILD

St. Louis County, MoDOT

MoDOT commissioned a design-build project for the enhancement of I-270 in North County St. Louis. The goal of the project is to improve safety, mobility, and travel reliability throughout the I-270 corridor for all users. This community is heavily reliant on multi-modal travel, so it was important to the team to enhance walking, biking, and transit operations through the corridor.

CBB worked on the conceptual study for the project during the pursuit phase. The team created a design that eliminated all crossover slip ramps on the outer roads through a one-way outer road system, mitigated bottlenecks on the freeway through widening and innovative interchange designs, and enhanced pedestrian and bike facilities through implementation of a multi-use path. One key feature of our team's proposal which set it apart from the competitor's was the implementation of a counter-flow bus lane. Through the EA/FONSI process of the original preferred alternative, Metro expressed concerns on the negative impact to their operations with the conversion to one-

way outer roads. To eliminate this issue for Metro while still maintaining the one-way outer road system necessary for optimized safety and local access through the corridor, our team is constructing a one-way counter flow bus lane from the Transit Center to West Florissant Road and the Florissant Valley Community College. The multi-use path will further enhance the multi-modal experience with dedicated facilities for all users and providing a safe space for transit riders to wait at bus stops, which are currently located in roadway shoulders. Our design provided the best mobility for both the local community and commuters traveling through the corridor. This proposal was selected as the winning design.

Post award, CBB was responsible for all safety evaluation and traffic modeling as well as the resubmission of the Access Justification Report to FHWA. CBB is currently responsible for the design of all traffic signals, overhead signage, freeway and arterial lighting, CCTV, Dynamic Message Boards (DMS), traffic detection equipment, and fiber/wireless communications for the project as well as for managing all traffic signal operations during construction. As one innovation CBB is operating a drone to observe traffic conditions during major construction events to provide better visibility on how traffic is moving in the corridor. As another, CBB is also developing a new Dynamic Trailblazer System which will be used by MoDOT's TMC staff to manage the traffic in the corridor during incidents. Construction began in April 2020 and is expected to be completed by 2023. Learn more at: <http://www.i270north.org/>

Project Completion: 2023

CBB Key Personnel:

Shawn Leight, PE, PTOE, PTP and Jacob Kaltenbronn, EIT

Reference:

Mr. Justin A. Wolf, PE

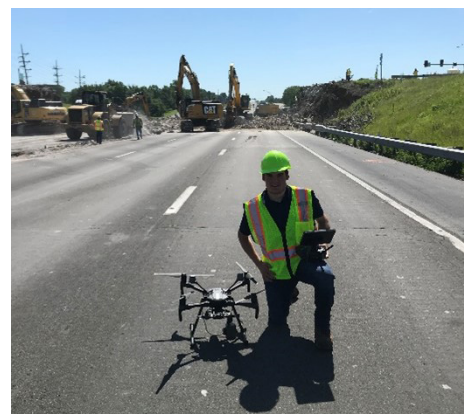
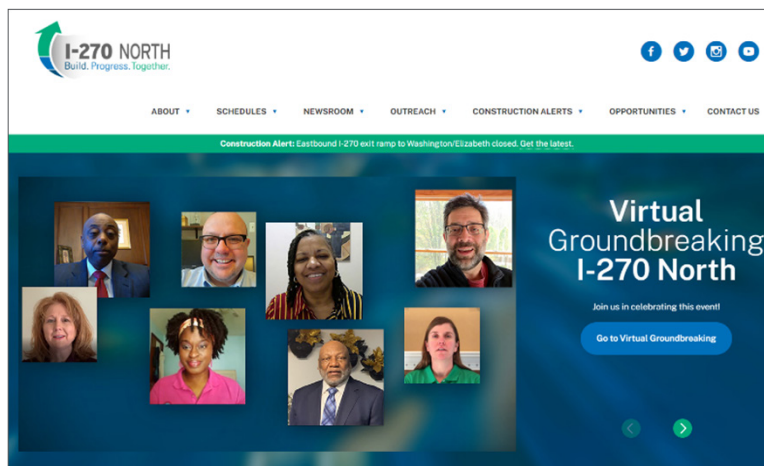
I-270 North Project Director

Missouri Department of Transportation

T: 314.453.5057

E: Justin.Wolf@modot.mo.gov

Firm Role: Traffic modeling, signals and lighting, signage design, and construction detour routing.



LET'S WORK TOGETHER



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