### STATEMENT OF QUALIFICATIONS



# TRAFFIC ENGINEERING

Type of Business: C Corporation Date of Establishment: 1961

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CFS Engineers is a leading provider of professional engineering, planning and surveying services. Our staff of approximately 100 professionals considers it a privilege to have partnered with communities for the past half-century, and we are just as committed today to our core-values of service, as when we began in 1961. To Cook, Flatt & Strobel, engineering is more than just an eyepleasing design. To us, engineering means relationships, community and trust while creating lasting, reliable partnerships with common goals. We work hard to deliver quality with passion while remaining flexible and dependable.

We strive to have excellent interactions with our clients, bringing them both our expertise and experience to create better neighborhoods, safer streets, and sound structures. Within each project, we strive to improve quality of life, protect natural resources and better the environment in which we all live. CFS integrates a broad range of services within one organization, offers comprehensive approaches to clients, and provides expertise to infrastructure challenges.

#### WORKFORCE DIVERSITY

CFS supports the individual characteristics and experiences of our diverse staff. Our leadership and staff proactively promotes recruitment and collaboration of diverse talent that will add to our firm's resiliency and dependability. Our hardworking attitude seeks new points of view to better serve our community, add to our range of professional capabilities, and provide comprehensive insightful planning and design services. We believe in the natural innovation that occurs by collaboration between unique educational, managerial, political, cultural, and socioeconomic backgrounds. By discovering how our differences, our experiences, and our work passions can interconnect, we bring out a stronger appreciation for all walks of life into our daily workflow and expand our staff's experiences through collaboration of diverse project teams. Our team is committed to equal opportunities, hiring highly qualified candidates, supporting employee efforts to contribute to our work environment, supporting employee advancement and enthusiasm to grow into management, strengthening our public engagement by supporting multiple languages, and advancing our internship and mentorship programs. We actively promote the growth of diversity in the workforce through our high school outreach programs and by partnering with institutions of education to encourage undergraduates and graduates to explore their engineering talents regardless of age, religion, gender, race, ethnicity, disability, sexual orientation, communication style, work style, economic status, and geographic origin.

#### **TRAFFIC PLANNING**

Our team leaders in Transportation Planning work closely with communities to prioritize traffic and transportation solutions in an implementation timeline. The implementation timeline outlines strategies for accomplishing near-term safety concerns with available staff resources and provides future costs for larger-scale reconstructions paired with revenue opportunities. By conceptualizing the character of the roadway, we develop solutions that focus on utilizing available space for easier travel by all mode choices. We look to create a street environment that is attractive for commercial and residential land uses and to reduce conflict points between vehicles, pedestrians, bicyclists, trains, and public transit users to provide a "complete street". Past projects have included addressing access management requirements for commercial development access, analysis of traffic arrival and dispersion operations, identification of traffic calming methods for optimized multimodal safety, and complete street design alternatives.

- » Master Plans
- » Coordination with State & Federal Agencies
- » Access Justification Reports
- » Multimodal Complete Streets
- » Downtown Development
- » Noise Studies
- » Parking Requirements
- » Walkability and interconnecting bike routes
- » Bus stop connectivity and bus terminals

#### Project Showcase - Gladstone, MO - September 2020 Gladstone Parkway Corridor Study

Previously adopted city planning efforts have called for a gateway arterial between the intersections of N. Broadway & NW 68th Street and the intersections of N. Oak Trafficway & NE 70th Street that will improve traffic circulation and multimodal accessibility. As a complete street with curb & gutter, storm sewer, green infrastructure solutions, multi-use path, street lighting, and tree canopy, Gladstone Parkway will be a two-lane parkway providing a more direct connection between the US-169 & NW 68th Street interchange and the central business district. This traffic corridor study for the proposed Gladstone Parkway focused on

the potential effects to the traffic network and travel time. This report provided an analysis of how the new direct route between Gladstone's Downtown District and US-169 will change traffic patterns and how the potential for the corridor matches community goals for walkability, transit reliability, local food accessibility, streamlined emergency services, and sustainable infrastructure. Gladstone Parkway would result in 111,325 hours per year in travel time savings for 2020 conditions and 149,650 hours per year for 2040 conditions. Total traffic network gas savings, considering 2020 prices and gas mileage, is about 42,705 gallons per year which is \$81,140. This equals a reduction of 884 barrels of oil per year.

#### **TRAFFIC SAFETY**

As communities change and grow, it is critical to maintain a safe and efficient transportation network. This effort often includes the analysis of traffic conditions with regards to flow, congestion, crashes, and changes in land use. Analyses involve the interplay of vehicles with pedestrians, bicyclists, and public transit. Solutions that can come from these types of studies can be signalization of intersections, roadway geometric improvements, enhanced signing, striping, and lighting.

- » Crash Analysis
- » Speed Surveys
- » Traffic Calming
- » Sightline Related Safety Problems
- » Access Management
- » Safety Projects for Schools

#### Project Showcase - Marshfield, MO - February 2021 Transportation Assessment for Schools

CFS Engineers produced a report for the Marshfield School District covering traffic improvements for the Early Childhood Education (ECE) Building within the Edwin Hubble Elementary School / Daniel Webster Elementary School / Marshfield Junior High School / R.A. Barr Stadium Complex. The ECE required construction of a new parking lot, new circulation loop, and new connection roadway. The layout provided by CFS provides more than enough storage length for the parent driver queue so that traffic is not expected to back up onto surrounding streets. During school hours, a swing gate will be installed to close off thru traffic to reduce any additional impact to the queue for Hubble Elementary. The proposed concept design eliminates the major point of conflict between the morning drop-off queue for Webster and the traffic trying to exit from the Hubble queue. The layout supports the turning movements of school buses and fire trucks while elevating the importance of student crossings with raised crossings within the parking lot. Signage improvements were recommended to increase safety and make the reduced speed school zone more consistent.

#### TRAFFIC DESIGN

CFS Engineers provides premium planning, design, and inspection for all aspects of roadway and transportation projects. Adapting to the ever-evolving life of a city, we take great strides in creating a roadway that not only elevates quality of life but also highlights the natural features and ecological habitat of the location. CFS specializes in complete streets that reduce congestion, reduce emissions, and provide improved access for all transportation modes. Roadway design goes beyond horizontal and vertical alignments as the roadside is often the most important aspect to ensure businesses and residents receive a facility that fits their needs. Roadside features need to be coordinated so the comprehensive design is balanced between vehicle demand, safety features, accessibility, utilities, and environmental conditions. To achieve the best quality for a design project, landscaping, stormwater flow, clear zone, topography constraints, lighting and fiber layouts, traffic signals and roundabouts, signage, and protection from hazards all need to be expertly evaluated.

- » ADA inspection and ADA access
- » Intersection Design including Traffic Signals and Roundabouts
- » Roadway design
- » Roadside safety and guardrail replacement
- » ITS installation and system integration
- » Traffic noise barriers
- » Railroads crossings
- » Fiber connectivity

#### Project Showcase - MoDOT & Kansas City, MO - May 2020 MO Route 1 & Parvin Road Roundabout

The project was focused around the intersection of Missouri Route 1 (Prather Road) and Parvin Road in Clay County, Missouri. The 4-way stop condition intersection was reconfigured to a single lane roundabout with a 130 ft inscribed circle and truck aprons inside and outside of the circle to accommodate the WB-67 design vehicle. The City of Kansas City, Missouri was a partner in the project providing a local match to the transportation funding. Both the KCMO Parks Department and the Public Works Department each have property adjacent to the project and were active in the planning and development of the project. Construction included clearing, removal of improvements, grading, enclosed storm sewer system, paving, retaining walls, erosion control, street lighting, permanent signing, and pavement markings. The project includes approximately 1,400 ft of roadway reconstruction, including a 5 ft cut in one leg of the intersection which has required significant utility coordination and relocation. MoDOT selected CFS to provide construction letting. These services included geotechnical services, survey, and utility coordination. CFS was also responsible for providing displays / layouts and information for right-of-way acquisition, environmental permit applications, and a public meeting.

#### **TRAFFIC OPERATIONS**

Good infrastructure is accessible to every member of the community. By integrating this simple philosophy in the development of our transportation and site development projects, our projects open the possibilities to safely use active transportation modes which has a tremendous impact on the vitality of the community.

- » Traffic Impact Studies & Memorandums
- » Turning Movement Data Collection
- » Trip Generation and Distribution
- » Simulation of Operations using VISSIM and Synchro software
- » Warrants for Traffic Signals, Roundabouts, and Auxiliary Turn Lanes
- » Corridor Studies
- » Traffic signal progression
- » Lane capacity, auxiliary turn lanes, and inclusion of pedestrian, bicycle, and transit user facilities
- » Utilization factor analysis for active transportation modes
- » Bus routing
- » Truck haul routes
- » Pavement & sidewalk investigation and checklist

## Project Showcase - North Central Missouri Regional Water Commission (NCMRWC) in Milan, Missouri - East Locust Creek Reservoir (ELCR) Transportation Planning Report for Infrastructure, Utility, Construction Access and Local Access Evaluation

This report examined the effect of several alternatives created due to inundation of state and local roadways by the ELCR and provides recommendations for improvements to traffic safety, access, and operations. This study covered the transportation planning for infrastructure, utilities, and construction access for the surrounding roadway network by utilizing a conceptual trip generation scenario to determine effects of traffic 20 years following completion of the dam. Modeling was performed using VISSIM software. Turn lane warrants, signalization warrants, construction access, construction phasing, and emergency travel times were evaluated. Coordination with MoDOT allowed this project to successfully move forward towards completion and leverage its financial strategy in tandem with MoDOT goals.