



Lake County | **ON-CALL, TRANSPORTATION AND TRAFFIC ENGINEERING SERVICES** (RSQ 21-0940)

September 21, 2021



4 | Subcontractors



Connetics Transportation Group, Inc. (CTG) is a transportation planning firm focused on improving the way communities move. While they are most well-known for their unparalleled expertise in transit operations and service planning, their multi-disciplinary team of planners, schedulers, modelers, and data scientists bring a wealth of experience solving complex problems across all facets of the mobility spectrum. CTG prides itself on developing data-driven solutions that are practical, implementable, and above all, community-inspired. CTG performs survey expansion, travel demand modeling (TDM), traffic forecasting, and data analysis services for departments of transportation, transit agencies, the Federal Transit Administration, and Federal Highway Administration. They specialize in developing models and forecasts for transit, auto, and other transportation modes.

Established in 2005, CTG has 27 professionals in seven offices across the U.S. They are certified as a Disadvantaged Business Enterprise (DBE) in 36 states and the District of Columbia and are a Small Business Enterprise (SBE). CTG's service areas include:



Travel Demand Modeling

To assess the benefits that a new roadway project or a new transit line will provide, it is necessary to assess the travel demand. CTG develops and uses different methods of travel demand forecasting, depending on the project needs. They apply demand models to a wide variety of transportation plans, traffic forecasting studies, master plans, and transit corridor projects.



Traffic Forecasting

A growing part of CTG's business is developing traffic projections that help evaluate impacts to traffic flow. Their forecasts help others evaluate operational improvements that improve traffic flow without the need for extensive new facilities, identify projects for long-term capital programs, and help others improve the compatibility of traffic with other modes.



Service and Operations Planning

All transit services begin when a bus turns onto the street or a train slides down the tracks. CTG works with clients to identify measures that reduce inefficiencies in these services and address near-term changing needs, all with an eye towards balancing productivity, efficiency and accessibility.



Long-Range Systems Plans

Public transportation systems must look to the future when planning for bus and rail service and facility needs. This requires developing smart and visionary long-range plans. CTG works hand-in-hand with agencies across the country in the development of these plans, addressing all modes of transit.



Multimodal Corridor Plans

Planning for high-capacity bus and rail facilities in a corridor requires a thorough understanding of the corridor's travel characteristics and service needs. CTG works on numerous corridor projects for all modes of transportation, addressing service needs within the corridor and integration with the rest of the region.



Transit Implementation and Scheduling

CTG's primary focus for any project is to develop implementable service plans. They assist agencies with development of schedules (in Trapeze and Hastus), fare structure changes, and driver training. They also assist agencies with Title VI analysis that is often required prior to initiating service or fare changes.



TRAVEL DEMAND MODELING & TRANSPORTATION STUDIES

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Primary Contact

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Travel Data and Analytics

CTG strongly believes in a data-driven planning process. They are at the forefront of the industry in use of the most current data sources available, such as mobile tracking data, real-time traffic data, transit automatic passenger counters, and automatic vehicle locators. A thorough analysis process ultimately demonstrates to the public that transportation plan proposals are technically sound and defensible.



Ridership Forecasting and Capital Investment Grants

Major transit projects often look for federal assistance when determining funding sources; in particular, FTA's Section 5309 New Starts program. CTG understand FTA's Capital Investment Grant criteria process and have ridership forecast and CIG analysis tools in place to help agencies understand a project's likelihood of obtaining these funds.

Assigned Staff

Dave Schmitt, AICP | Travel Demand Modeling and Transportation Studies

Dave is Director of Travel Demand Modeling & Analytics at CTG. Mr. Schmitt has 26 years of transit and transportation planning experience and manages ridership and traffic forecasting activities for projects, including transit feasibility/long-range planning studies, state and National Environmental Protection Act (state EPA and NEPA) activities, and Capital Investment Grant/New Starts (CIG) studies. Dave has been a senior manager for dozens of transit projects around the country and was a project manager for three projects managed by the Federal Transit Administration (FTA) that which dealt with various aspects of the CIG program. He clearly understands the perspectives of the client and with his knowledge of transit operations, ridership/survey data, and models he can address a wide range of technical issues. Dave is proficient in the prevalent model structures, including STOPS and trip- and ABM-based models; demand software, and programming/scripting languages. He has developed and applied transit and mode choice models in dozens of urban areas around the country. He is a national leader in developing and applying STOPS models. Dave has managed the development and application of over 20 STOPS models around the country.

Hui Zhao, PE | Travel Demand Modeling

Hui is a registered Professional Engineer in Florida and has more than 15 years of professional experience in transportation planning and traffic engineering. He has a Master of Civil Engineering from Florida International University and a Bachelor of Science in Geosciences from Yangtze University (China). Hui is a proactive and responsive project manager who has led traffic tasks that support planning, PD&E, design, IAR, and concept development projects for departments of transportation nationwide. His proficiency in the traffic analysis software, demand software, and statistical software for data analytics helps ensure projects are performed efficiently and within the client's specifications. One characteristic that makes Hui distinctive is his knowledge of both travel model development and traffic procedures and guidelines. He had a leading role in the development of the activity-based model in the Miami/Ft. Lauderdale/West Palm Beach mega-region. He also helped validate the Central Florida Regional Planning Model assignments, which led to the discovery of multiple issues with the generation and distribution steps. This combined knowledge of modeling and traffic gives him the ability to detect and correct modeling issues that could impair traffic analysis before they negatively impact project deliverables and schedules. Hui's previous experience as a planning specialist includes managing planning and engineering services provided by consultants, such as traffic forecast and analysis and model development to support FDOT projects. He had proven success in the leadership and implementation of FDOT processes such as FDOT's Statewide Acceleration and Transformation process. As a result of this experience, Hui has managed more than 20 traffic forecasting projects that advanced to the next phase in project development.

Toole Design Group, LLC (TDG) is one of the nation's leading planning, engineering, and landscape architecture firm specializing in multimodal transportation planning and design. They have more than 200 professionals in 16 offices nationwide and are a Woman-owned Business Enterprise (WBE). For more than 17 years, their mission has been to create livable communities where transit, walking, and bicycling are safe, convenient, and enjoyable for everyone. They focus on developing cost-effective and implementable solutions that move people efficiently, while also improving health, quality of life, and economic vitality.

TDG believes that the transportation system is the backbone of all infrastructure, and that the key to creating vibrant places lies in how well people can get around. Their keen understanding of context sensitivity, placemaking, and safety shines through in each of their projects. Starting from the earliest planning stages and all the way through project completion, they consider all modes of transportation, as well as environmental and health impacts, to create functional and inviting public spaces for all. At TDG, they understand that access to transit services is a foundational component of a safe, sustainable transportation system. They conduct extensive studies on multimodal issues common to many U.S. transit corridors, such as bicycle and pedestrian crossings at transit corridors, bicycle, and pedestrian access to transit (including first- and last-mile access and bicycle parking), integration of transit and bike corridors, including shared bike and bus lanes, bicycle parking volume and design, wayfinding for station access, and bus stop location and design. TDG assists in the planning of new BRT systems to ensure bicycle and pedestrian access and circulation are incorporated from the outset and leveraged as crucial tools for reaching ridership goals. TDG has experience co-locating bikeshare with transit and have developed innovative designs for separated bike lanes and transit stops.

TDG's planning expertise includes:

- Active Transportation Planning
- Campus Transportation Planning
- Corridor Studies
- Data Science and GIS
- Multimodal Transportation Plans
- New Mobility and Curbside Management
- Private Development Master Plans
- Research
- Safe Routes to School
- Shared Mobility & Bikeshare
- Transit Planning
- Vision Zero and Crash Analysis

Assigned Staff

Andrea Schmitt, AICP, LEED AP | Transit Planning

Andrea is a transit and active transportation planner with 20 years of experience providing collaborative and solutions-oriented transportation planning. She is TDG's Transit Practice Leader and Central Florida Office Director. She has a unique collection of experience with transit and land use planning in both the public and private sectors, having served as the director of planning and engineering for a regional transportation authority, project manager for a wide variety of Bus Rapid Transit (BRT) and rail efforts, and a local government liaison for transportation issues. Andrea has seen a broad transportation initiatives through to implementation, proving her value on both project- and enterprise-level planning efforts. Andrea has a Master of Urban and Regional Planning from the University of North Carolina at Chapel Hill and a Bachelor of Arts in History and Environmental Studies from Emory University. In addition, she is a Leadership in Energy and Environmental Design LEED Accredited Professional, is certified by the American Institute of Certified Planners (AICP), and served as the chair of programs for the Urban Land Institute Central Florida Chapter.

TOOLE
DESIGN

TRANSIT PLANNING

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Ian Lockwood, PE | Transit Planning

Ian is a livable transportation engineer with TDG and has 34 years of experience in transit and transportation planning. He is a registered Professional Engineer in the State of Florida. In the 1990s, Ian was the city transportation planner for West Palm Beach, where he led some of the first arterial calming, road diet, and flush street projects in the country. He considers pedestrians to be the “canary in the coal mine” for cities. Over the last 20 years, he has honed a design approach for maximizing walkability that he applies to projects at every scale, ranging from trails, to campuses, to downtowns, to tourist areas. In 2005, Ian helped define the term “Complete Streets,” an idea about inclusive design that has spread across America. The Path-as-Place doctrine—that trails, corridors, and streets should be places to experience, rather than places to simply pass by—informs all of Ian’s work, which includes designing flexible-use public spaces, design of main streets, downtown revitalization initiatives, one-way to two-way street restorations, and highway removal projects—all with the goal of increasing social and economic exchange. He currently is interested in popularizing design techniques that ensure blind people can comfortably navigate and participate in the public realm. Ian has a Master of Civil Engineering and a Bachelor of Civil Engineering from Carleton University and was a Loeb Fellow in Advanced Environmental Studies at Harvard University.

Peggy Malone & Associates, Inc. (PMA) has been conducting traffic counts throughout the Southeastern and Mid-Atlantic region for more than 20 years. They have been a prime consultant or subconsultant for 2,008 projects in the past five years, ranging from small jobs with just a few tasks to large jobs with 250+ turning movements, or projects with more than 1,900 hose counts. They primarily serve as a subconsultant to full-service engineering firms on DOT and agency projects, as well as private sector projects requiring traffic data collection.

PMA has conducted tens of thousands of ADT counts, from 24-hour to multiple-week periods. They perform classification counts, speed counts, turning movement counts, spot speed studies, intersection delay studies, origin-destination studies, vehicle occupancy studies, travel time studies, and other miscellaneous traffic surveys. Their staff of 13 is trained to draw condition diagrams, perform signal timings, and supply digital photos. All data collection efforts follow MUTS specifications.

Their equipment inventory is continually upgraded and increased and currently, they have over 600 traffic counters, 50 electronic turning movement boards, and 85 automated video recording units for turning movements. PMA's field technicians are highly skilled and experienced, with an average of more than 10 years of service with PMA. They also have licenses of Tru-Traffic software to conduct travel time, speed, and delay studies in coordination with turning movement projects.

PMA offers strict quality control procedures, with all data verified in the field as it is set (before it is retrieved) and checked for accuracy during collection, then processed in their Jacksonville headquarters. Their extensive database of thousands of traffic counts conducted over the past 10 years allows them to easily search for historical data when applying quality assurance measures. Every single processed count is reviewed at least twice for accuracy. When appropriate, traffic counts are reviewed by a registered PE on staff. All these quality control measures take place before data is submitted to clients. As a result, they have an extremely high level of acceptance by clients.

PMA conducts 400+ projects annually, ranging in value from several hundred dollars to more than \$400,000. They have never accepted a project that was not completed on time and within budget. In addition, PMA is a certified Disadvantaged Business Enterprise (DBE) in Florida, Georgia, and Virginia, as well as being a SBE in Florida.

PMA is a full-service firm—traffic data collection is their only service. Some of the services offered include:

- Machine Hose/Tube Counts, tested/certified to DOT standards
- Non-intrusive Video Counts
- Video-based Turning Movements
- Spot Speed Studies
- Stop Sign Delay Studies
- Pedestrian and Bicycle Counts
- Origin Destination Studies
- Vehicle Occupancy Studies
- Parking Studies
- Queue Studies
- Condition Diagrams
- Digital Intersection and Approach Photographs
- Other misc. traffic surveys

PMA has an extensive inventory of traffic data collection equipment, allowing them to perform large projects in short time frames providing tight data for the traffic engineer.



TRAFFIC DATA COLLECTION

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Primary Contact

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Assigned Staff

Janette Simpson | Traffic Data Collection

Janette is project manager for PMA, with 15 years of experience in the traffic data collection field. Her responsibilities include coordinating schedule availability for new projects, managing projects with field operations managers, providing details and scope of each job to managers for their crews to perform their job in an effective and timely manner, and corporate management of the company. She is responsible for managing projects for both the Florida and Virginia office locations and assigned field staff. As project manager, she manages planning and scheduling of projects and assignment of resources for each project. Janette also is responsible for quality control over all projects she manages. She has had extensive training and hands-on experience in the placement of machine hose counts, conducting turning movement counts, travel time studies, pedestrian and bicycle studies, and the various other traffic data collection efforts that the company performs.

Rick Whitman | Traffic Data Collection

Rick is a field operations manager for PMA and oversees for all field technicians based in Florida and Virginia. He manages day-to-day field work for all data collection projects. Rick has 15 years of experience conducting all types of traffic counts. He trains new field technicians, manages field technicians and conducts safety and quality control inspections to ensure they are delivering the most accurate product to their clients in a timely fashion. His experience includes more than 10 years of experience as a project engineer at a large communications firm and three years of experience in customer relations and management of field crews at a landscape firm. Rick is a working manager and is usually found in the field working with field technicians to ensure the work is completed in a timely manner and data collected is accurate and in conformance MUTS requirements. Rick has a Bachelor of Science in Business Management from Old Dominion University, and an Associate of Science from Commonwealth Community College in Virginia Beach.