



1155 North Main Street
Waynesville, NC 28786
phone: (828) 456-8383
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September 18, 2020

Cliff Ogburn, Town Manager
Town of Southern Shores
5375 N. Virginia Dare Trail
Southern Shores, NC 27949

Re: J.M. Teague Engineering & Planning (JMTE) - Southern Shores Traffic Data Analysis

Dear Mr. Ogburn,

Thank you for the opportunity to share our qualifications with the Town of Southern Shores. We are excited about the prospect of conducting a traffic data analysis to help with your traffic concerns. From our brief introduction to the project, we believe our team is well qualified to provide the expertise you need. We look forward to an opportunity to collaborate with the Town of Southern Shores in the months ahead.

This package includes several items which will enable you to glean an understanding of who we are, our core values, mission and commitment to community, the services we provide, our relevant experience, and the depth of our professional knowledge. Most importantly, we understand the unique challenges and opportunities associated with transportation engineering and planning.

I started J.M. Teague Engineering & Planning in 2010 after almost 20 years of working across three NCDOT Divisions in WNC, including serving as NCDOT Traffic Engineer over Buncombe County and Asheville. The firm has enjoyed steady growth and an impressive amount of project work over the past 10 years. Our current staff of 18 engineers, planners, technicians, and support staff have managed a variety of projects throughout the Southeast serving both private and public clients. Our forensic engineering practice is recognized nationally.

JMTE is licensed to practice engineering in North Carolina, South Carolina, Georgia, Tennessee, Virginia, Kentucky, and Alabama and is prequalified by several State Departments of Transportation. Our engineers, planners and technicians embrace the need for safe, interconnected communities. Building and sustaining strong client relationships and fostering roadway safety are at the core of everything we do.

After reviewing this qualifications package, our team would welcome an opportunity connect with you in person or via Zoom conference to answer any questions you might have. Similarly, should you need additional information or client references in support of our strong interest in collaborating on this project, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Mark Teague", with a stylized flourish at the end.

J. Mark Teague, PE, CPM
Owner and Principal

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Juniper Trail

Source: Google

MISSION & VISION



OFFICE LOCATION:
1155 North Main Street
Waynesville, NC 28786
(828) 456-8383

MISSION STATEMENT:

To be a healthy transportation engineering and planning organization that measures success based on strong client relationships earned through exceptional communication, innovative solutions, on-time delivery, and project follow-up.

The vision of JMTE is to grow at a healthy and sustainable rate through client relationships, strategic alliances, additional staff, professional knowledge, financial capacity, fiscal prowess, and acquisitions.

Our services will continue to evolve and expand based on client needs, professional knowledge, and industry evolution. JMTE will continue to develop and expand our primary service area to encompass a regional level through the Southeast, Mid-Atlantic, and Ohio Valley regions with nationwide and international capabilities.

JMTE is committed to cultivating a healthy, happy, and quality lifestyle by providing employees a great place to work, competitive benefits, ample resources, empowering leadership, and a challenging work environment.



DEPENDABLE PLANNING · INNOVATIVE ENGINEERING · RELATIONSHIP BUILDING

FIRM INFORMATION



Located in beautiful Waynesville, North Carolina, J.M. Teague Engineering & Planning (JMTE) is a transportation engineering and planning firm that manages a variety of projects across the Southeast. Founded in 2010, JMTE specializes in providing transportation engineering & planning solutions to local municipalities, school systems, private institutions, and professional clients. Mark Teague, PE, is licensed to practice engineering in North Carolina, South Carolina, Georgia, Tennessee, Virginia, Kentucky, and Alabama. The engineers, planners, and technicians at JMTE embrace the need for safe, interconnected communities with inclusive policies in place that create a variety of transportation and development choices for everyone.

The JMTE team has completed projects in 20 states, and we are DOT Prequalified in North Carolina, Tennessee, and Georgia. JMTE is a Certified Small Professional Services Firm (SPSF) in North Carolina. US Military experience includes projects at Fort Bragg, North Carolina and Fort Stewart, Georgia.



DEPENDABLE PLANNING · INNOVATIVE ENGINEERING · RELATIONSHIP BUILDING

PROFESSIONAL SERVICES

- Traffic Data Collection Including Turning Movements
- Remote Sensing Data Collection and Processing
- Feasibility Studies
- Traffic Impact Analysis
- Traffic Control Plans
- Traffic Signal Warrant/ Operation
- Traffic Signal Design and Installation
- Traffic Calming
- Travel Demand Modeling
- Access Management Studies
- Crash Data Retrieval and Analysis
- Traffic Accident Reconstruction
- Commercial Vehicle Accident Inspection and Investigation
- Pedestrian and Bicycle Accident Analysis
- Motorcycle Crash Investigation
- Roadway and Intersection Safety Studies
- Sign Inventories
- Pavement Markings and Signing
- Parking Lot Design
- Parking Studies
- Corridor Studies
- Driveway Permits
- Capacity Analysis (Intersections & Corridors)
- Capacity Analysis (Freeways & Interchanges)
- Capacity Analysis (Roundabouts)
- GIS - Cartography
- Guide Sign Design
- Interchange Modification/ Justification Reports
- Landscape and Streetscape Preliminary Design

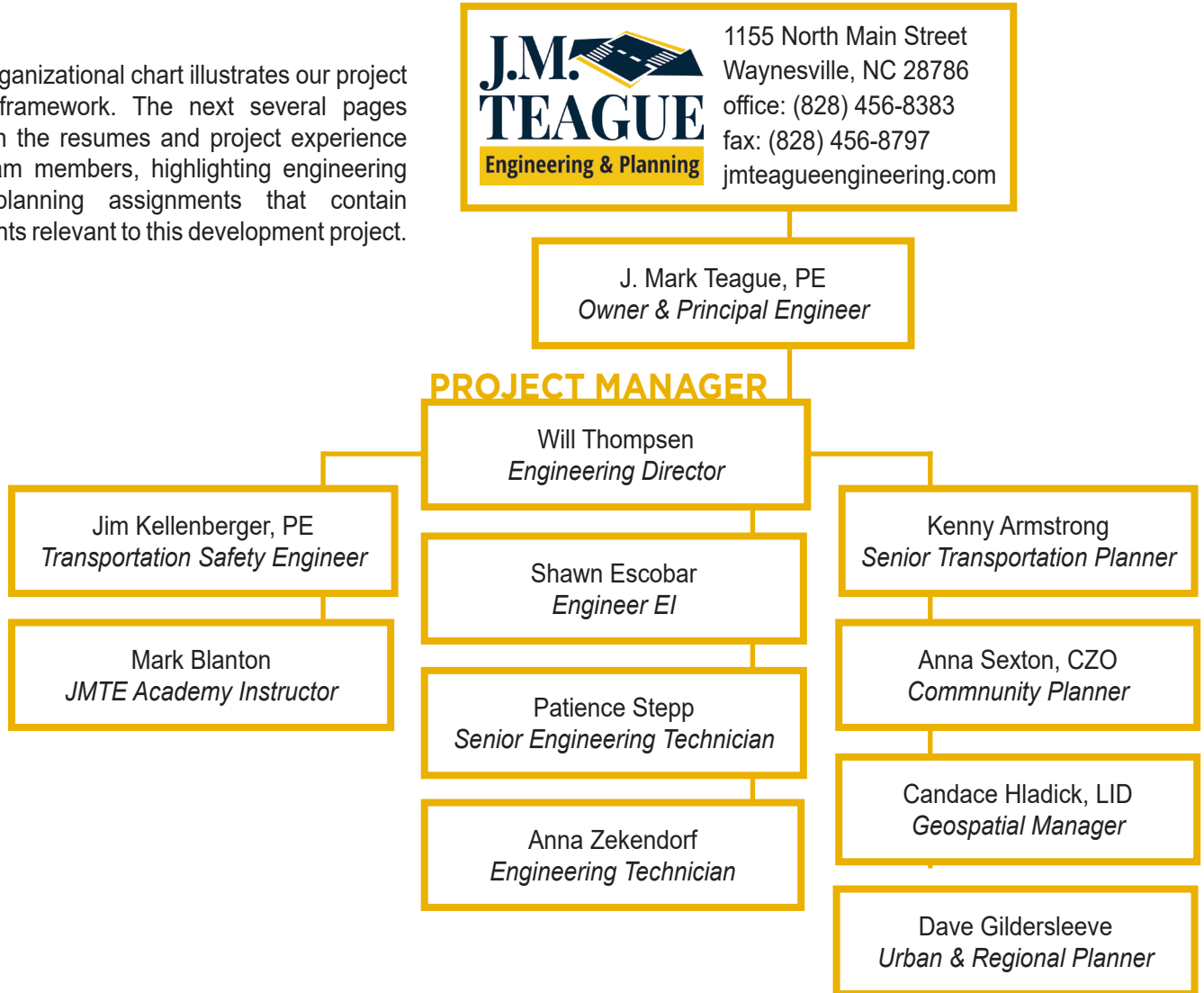
- Multimodal Transportation Planning
- Roadway Condition Studies
- Pavement Marking Plans
- Public Involvement
- School Traffic Operations Studies
- Long Range Transportation Planning
- Visualization
- Multi-use Trail Design, Survey and Layout
- Bicycle and Pedestrian Plans
- Maintenance Condition Assessment Surveys
- Event Operations and Logistics
- Railroad Crossings
- Pedestrian Safety Studies

- Complete Streets Design/ Planning
- Low Impact Design
- Roadway Diets
- Speed Studies
- Public Hearings and Expert Testimony
- Permitting
- Walk Audits & ADA Compliance
- Visioning
- Small Area Plans
- Work Zone Safety Training
- Flagger Certification
- MUTCD Compliance
- Risk Management
- Due Diligence Studies
- Public-Private Collaborations
- Government Relations



ORGANIZATIONAL CHART

The organizational chart illustrates our project team framework. The next several pages contain the resumes and project experience for team members, highlighting engineering and planning assignments that contain elements relevant to this development project.



REFERENCES

Dave Nicholson
Lake Junaluska, NC
(931) 452-5911
dnicholson@lakjunaluska.com

Joy Garland
Town of Clyde, NC
(828) 627-2566
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Town of Biltmore Forest, NC
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Rose Baugess
Southwestern Regional Commission
(828) 586-1962 x213
rose@regiona.org

Elizabeth Teague
Town of Waynesville, NC
(828) 456-2004
eteague@waynesvillenc.gov

Mark McDonald, PE
City of High Point
(336) 883-3225
mark.mcdonald@highpointnc.gov

PROJECT TEAM



J. MARK TEAGUE, PE
OWNER & PRINCIPAL ENGINEER

EDUCATION

B.S. in Civil Engineering, North Carolina State University

PRIOR EMPLOYMENT:

- NCDOT Division 13, Asheville, NC (2000-2009) **Division Traffic Engineer**
- NCDOT Division 14, Sylva, NC (1997-2000) **Assistant Division Traffic Engineer**
- NCDOT Division 11, North Wilkesboro, NC (1991-1997) **Assistant Division Traffic Engineer**

Mark has more than 18 years of experience as a transportation engineer with the North Carolina Department of Transportation (NCDOT). A primary role for Mark at NCDOT was working directly with other engineers on roadway issues such as geometric design, pavement condition, pavement maintenance, roadway striping, work zone safety, shoulder design, and vehicle crash analysis. As the Division Traffic Engineer with NCDOT, Mark was in charge of vehicle operation and safety on thousands of miles of roadway, both urban and rural, across 25 counties in western North Carolina. Some of his specific current project experience includes traffic impact analyses, mapping, traffic signal installation, turn lane design and construction, access management, work zone safety, traffic control, roadway design, and signing. Project experience also includes sign reflectivity and positioning analyses, pavement marking analyses, school operational analyses, intersection safety, traffic risk management, and data collection. He also regularly provides expert witness testimony in litigation cases.

HIGHLIGHTED EXPERIENCE

- **North Main Street Complete Streets Study | Waynesville, NC**
Conducted a Complete Streets study to address the need for multimodal accommodations to the intersection and the adjacent corridor of North Main & Walnut Street. Work included turning movement counts, intersection analysis, public input workshops, and final document presentation.
- **South Main Street Corridor Study | Waynesville, NC**
Participated as a project team member to assess existing and future traffic conditions on a section of US 23 Business in Waynesville. Work included data collection, signalized and unsignalized intersection analysis, cost estimation, capacity analysis, level of service calculation, lane use recommendation, traffic signal warrant analysis, and public input workshops.
- **Safety Review | Black Mountain, NC**
Conducted a town-wide safety review for signs, pavement marking, and pedestrian safety.
- **Traffic Calming | Marion, NC**
Developed a city-wide traffic calming procedure and standard practices after conducting a safety review of all existing 35 miles of city streets. The review determined safety issues related to traffic operations, signing, pavement markings, prevailing vehicle speeds, and pedestrian & bicycle facilities.

CERTIFICATIONS

- Licensed PE in NC, SC, GA, TN, AL, VA, KY
- Certified Public Manager - NC
- Context Sensitive Solution Certified - NC
- Small Professional Services Firm (SPSF) - NCDOT
- Complete Streets Certified

AREAS OF EXPERTISE

- Design and Operation of Traffic Control Devices including Traffic Signals, Pavement Markings, and Signing
- Traffic Data Collection including Turning Movements
- MUTCD Compliance
- Traffic Control Plans
- Agency Coordination
- Transportation Strategies

PROJECT TEAM



WILL THOMPSEN
ENGINEERING DIRECTOR

EDUCATION

Bachelor of Science in Urban & Regional Planning,
University of Illinois, Champaign - Urbana

Urban Geography, Western Illinois University

PRIOR EMPLOYMENT:

- CH2M Hill, Inc.
- Iteris/Meyer, Mohaddes Associates
- HDR, Inc.

Engineering Director William Thompsen joined the JMTE team in August 2018. He provides oversight for a wide array of traffic and transportation-related projects, such as traffic impact, corridor, feasibility and parking studies, and assessments for signs, pavement and sidewalk conditions, and traffic signal operations.

Will brings 33 years of experience as a planning professional to JMTE. He specializes in multi-modal transportation studies, travel demand modeling, environmental assessments, traffic impact studies, freight studies, parking studies, corridor planning, traffic operational analyses, land use and economic development studies, and public involvement.

Will moved to western North Carolina from Minneapolis, MN after serving in various professional positions from 2001-2014, including Senior Project Planner for CH2M Hill, Inc., Senior Transportation Planner/Project Manager with Iteris/Meyer, Mohaddes Associates and Project Manager with HDR, Inc.

HIGHLIGHTED EXPERIENCE

- **Habitat Subdivision Development Traffic Impact Analysis | Asheville, NC**
Conducted a traffic impact analysis for a proposed housing development that consist of 98 residential units. The study was to determine the impact of the anticipated traffic associated with this development and its effect on several intersections, including Patton Avenue, Smokey Park Highway and Eastview Circle at Old Haywood Road. Attended the Buncombe County Board of Adjustment meeting to address the findings of the Engineering Report.
- **Triangle Leicester Traffic Impact Analysis | Buncombe County, NC**
Conducted a traffic impact analysis for a proposed residential development consisting of 270 apartments on 16.8 acres. The proposed development will have two access points along New Leicester Highway. Four intersections were studied over a four-mile corridor to determine the impact of the anticipated traffic associated with this development. Peak hour volumes were gathered, Synchro and Sim Traffic software were used to analyze the data. Mitigation recommended a 125-foot left turn lane on both access sites with appropriate deceleration to accommodate safe ingress and egress to the site.
- **Jasper Swannanoa Traffic Impact Analysis | Swannanoa, NC**
Conducted a traffic impact analysis for a proposed 100-unit affordable residential housing development. Three intersections along US 40 were studied for peak hour volumes and Synchro & Sim Traffic software were used to analyze the data.
- **Left Turn Lane Warrant Analysis | Gastonia, NC**
Performed a turn lane warrant and storage analysis for a proposed 80-unit apartment development. The analysis demonstrated a minimal queue length anticipated for the left turn lane volumes anticipated to ingress traveling westbound.

PROJECT TEAM



SHAWN ESCOBAR
ENGINEERING INTERN

EDUCATION

Center for Transportation Research University of Tennessee - Knoxville, TN Traffic Signal Academy

A.A.S. Civil Engineering Technology, Asheville-Buncombe Technical Community College

Certificate Surveying Fundamentals, Asheville-Buncombe Technical Community College

Certificate Computer Aided Drafting & Design, Asheville-Buncombe Technical Community College.

CEPSCI Inspector – 2018 South Carolina



Shawn Escobar joined JMTE as an Engineering Intern. Shawn's responsibilities include performing traffic impact analyses, signal warrants, signal designs, intersection geometric layouts and working on miscellaneous traffic engineering tasks, i.e., turn lane warrant analyses. Shawn also provides critical research and input into the firm's Forensic Engineering practice.

Shawn has over 14 years of civil engineering design experience working with firms in western North Carolina, Charlotte, Charleston and upstate South Carolina. His previous employers include Bluewater Civil Design and CCAD Engineering in Greenville, SC, Blue Ridge Community College in Flat Rock, NC; Civil Design Concepts in Asheville, NC, and Mercer Design Group in Weaverville, NC.

His previous experience includes handling AutoCAD Civil 3D design for street plans; grading, site and demolition plans; development and concept plans; drainage reports and calculations and more for residential subdivisions in Greenville, SC; Coordinating communication with internal and external clients, such as developers, architecture, plumbing, gas, electric, survey and other engineering firms to design and complete projects in Huntersville and Asheville, NC; Teaching Mechanical Engineering Technology at Blue Ridge Community College in Flat Rock, NC; and drafting detailed dimensional drawings in LDD and AutoCAD Civil 3D for erosion control measures, water, force main and gravity sewer, road design and grading for Mercer Design Group in Weaverville, NC.

HIGHLIGHTED EXPERIENCE

- **City of New Bern Pedestrian Signals | New Bern, NC**

Performed a pedestrian phase design to five (5) City of New Bern-owned traffic signals and created as-built drawings for the five (5) traffic signals. Two (2) had previously been NCDOT-owned but were turned over to the City. Three (3) of the traffic signals had no existing plans on file with the City of New Bern, created complete as-built drawings of the existing signals including elevation drawings of the mast arms at each location. Once these as-built drawings were completed pedestrian phases were designed and added to each traffic signal for geometrical and electrical drawings with needed details for all necessary items to install the pedestrian phases.

- **Lincoln Charter School Traffic Impact Analysis | Lincolnton, NC**

Performed a traffic impact analysis for Lincoln charter School expansion located on Eagle Nest Road between NC 27 and NC 182. Provided analysis and recommendations for studied intersections which included turn lane warrant analysis and peak hour analysis for proposed signalized intersection.

- **Pearson Signal Design | Gaston County, NC**

Project Manager for two existing traffic signals adding a fourth leg to both intersections. NCDOT has approved and is currently under construction.

**Served as JMTE project manager*

PROJECT TEAM



PATIENCE STEPP
SENIOR ENGINEERING TECHNICIAN

EDUCATION

Amos P. Godby High School, Tallahassee, FL

CERTIFICATIONS & AFFILIATIONS

NCDOT Qualified Work Zone:

- Flagger #201-01413
- Installer #205-00012
- Supervisor #203-00756

Traffic Engineering Accident Analysis System (TEAAS)

WTS International – WNC Chapter Director at Large



Patience leads JMTE's data collection program. She has performed more than 100 miles of pavement condition surveys and regularly assists with pavement, curb, gutter, and sidewalk condition surveys, including assimilation of data collected to be used in prioritizing and budgeting future improvement projects. Patience also manages data collection for NCDOT Division 9 - 14, which includes scheduling, coordination, collection, processing, and client communication. She has completed 299 NCDOT data collection projects including turn movement counts, volume/speed/classification, delay studies, queue studies, and saturation flow studies. Patience assists with the data collection for many other types of projects for JMTE that include traffic impact analysis, traffic calming, community input, and crash report diagramming using AutoCAD.

HIGHLIGHTED EXPERIENCE

- **NCDOT Traffic Data Collection (2018-2021) | Divisions 9, 10, and 12**
Manages the data collection activities to collect compliance data, delay data, queue data, school operations data, and provide video 48 hours.
- **NCDOT Traffic Data Collection (2018-2021) | Divisions 11, 13, and 14**
Manages the data collection activities to collect compliance data, delay data, general traffic data, pedestrian corridor crossing data, queue, data, saturation flow data, school operation data, provide video, and volume/speed/class.
- **NCDOT Traffic Data Collection (2015-2018) | Divisions 11, 13, and 14**
Managed the data collection activities including data scheduling, coordination, collection, processing, and client communication. Data collection for 220 projects (turn movement counts, volume/speed/ class, compliances, and saturation flow rates).
- **Chestnut Park Traffic Calming | Waynesville, NC**
Gathered field data for a comprehensive analysis using pneumatic tubes and cameras to capture vehicle counts, speeds and interactions. Conducted a sight-distance survey to evaluate geographic impact on driver line-of-sight.
- **Granite Falls Pavement Condition Survey | Granite Falls, NC**
Inspected over 34 miles of paved roads with the Town of Granite Falls. The inspection rated eight different types of pavement distresses. Entered the ratings into a program similar to the one used by the North Carolina DOT to produce an overall pavement condition rating number for the road inspected. The ratings were tabulated for use in comparison of road conditions to advise on the priority for maintenance surfacing treatments.
- **Long Shoals Village Traffic Impact Analysis | Waynesville, NC**
Managed the data collection activities including data scheduling, coordination, collection, and processing for eight intersections included in the traffic impact analysis.

PROJECT TEAM



KENNY ARMSTRONG
SENIOR TRANSPORTATION PLANNER

EDUCATION

Master of Public Affairs, Western Carolina University
BFA in Illustration, Ringling College of Art & Design

AFFILIATIONS

Member, North Carolina Chapter of the American Planning Association
Member, City of Asheville Greenway Committee
Member, City of Asheville Multimodal Transportation Commission
Vice-President, 5 Points Neighborhood Association, Asheville, NC



Kenny is JMTE's Senior Transportation Planner with 14 years of experience in planning and professional graphic design work. His work focuses on multimodal transportation planning, wayfinding sign design, system planning that prioritizes accessibility and safety, and strategic prioritization of land use. He has managed and assisted with multiple bicycle and pedestrian plans as well as targeted land use, economic development, and transportation studies. Passionate about bicycling and pedestrian safety, many of Kenny's projects include recommendations for multimodal priorities, innovative parking standards, traffic calming, ADA compliance, planning for autonomous vehicles, and overall connectivity and accessibility.

During his project work at JMTE, Kenny has facilitated numerous stakeholder interviews (including groups of school-age children) and public workshops, developed budget prioritizations for municipal short-range goals, and recommended specific Main Street revitalization and community development action steps.

HIGHLIGHTED EXPERIENCE

- **Comprehensive Bicycle & Pedestrian Plans* | Spindale, NC, Canton, NC, & Franklin, NC**
Project manager on transportation plans to guide future investments in on- and off-road bicycling and pedestrian facilities and support programs that encourage alternative transportation options, with public input sessions, health impact assessments, safety analyses, project recommendations, and renderings.
- **Southern Blue Ridge Bike Plan* | Cherokee, Clay, Graham, and Macon Counties, NC**
Project manager on transportation plans to guide future investments in on- and off-road bicycling and pedestrian facilities and support programs that encourage alternative transportation options, with public input sessions, health impact assessments, safety analyses, project recommendations, and renderings.
- **Town of Waynesville Comprehensive Land Use Plan* | Waynesville, NC**
Worked with the primary consultant, Stewart, Inc., to develop content and formatting of the Transportation chapter, including recommendations for multimodal priorities, parking standards, autonomous vehicles, and overall connectivity. Facilitated public input sessions and steering committee meetings, including a business owner roundtable discussion.
- **US Highway 64 Corridor Study* | Laurel Park, NC**
Managed this targeted land use, demographic, economic development, and transportation study for US Route 64 through Laurel Park, NC. Recommendations included support for additional square footage of retail space in the town center, establishing mixed-use districts, planning to take advantage of a new rail-to-trail system, designing a gateway system for the town, and coordination with a NCDOT widening project.

**Served as JMTE project manager*

PROJECT TEAM



ANNA SEXTON, CZO
COMMUNITY PLANNER

EDUCATION

Master of Public Policy, Georgia State University
Concentration: Planning and Economic Development

BAs in Journalism and Political Science, University of Dayton

AFFILIATIONS

Member, North Carolina Chapter of the American Planning Association

Member, City of Asheville Neighborhood Advisory Committee

Member, City of Asheville Multimodal Transportation Commission

Anna is JMTE's Community Planner. Her work focuses on policy analysis and development, transportation issues, parking studies, housing policy, economic development, public input facilitation, and strategic prioritization of land use. Anna brings experience working with all levels of government and a clear personal and professional understanding of area transportation issues, further bolstered by serving on several resident-led city commissions in her hometown of Asheville.

She received her Master of Public Policy degree with a concentration in planning and economic development from the Georgia State University Andrew Young School of Policy Studies. While attending Georgia State, she was a Public Finance Fellow at the University's Center for State and Local Finance and also served as a Graduate Policy Intern for the DeKalb County Board of Commissioners, where she assisted with annual budget review and analysis, researched economic incentive models, and provided research and support for the County's SPLOST visioning sessions and ballot referendum.

HIGHLIGHTED EXPERIENCE

- **Downtown Parking Study* | Columbia, TN**

Managed this project to help the City of Columbia identify opportunities to improve public parking in their downtown and newly established Arts District. Facilitated the collection of current data for parking occupancy and turnover at downtown on-street locations. Developed recommendations for changes to on-street parking enforcement and access, cost-effective ways to improve existing City- and County-owned surface lots, and prioritization of long-term parking garage locations.

- **City Complete Streets Policy Manual* | High Point, NC**

Worked with the City of High Point to develop and adopt its first Complete Streets Policy, which streamlines roadway classification definitions to include preferred right-of-way widths and multimodal accommodations. Developed policy language for the entirety of this document, implemented an online survey to gauge stakeholder perceptions and garner feedback on preferences, and met with the project Steering Committee to craft a document reflective of the City.

- **Traffic Calming Study | Lake Junaluska, NC**

Coordinated and facilitated project report document with recommendations for specific traffic calming measures, in response to citizen concerns about unsafe behavior and speeding. Developed recommendations for new speed humps, targeted enforcement strategies, intersection redesigns, and a citizen traffic advisory group.

- **Strategic Vision Plan* | Mount Holly, NC**

Worked with Arnett Muldrow on this vision plan for the City of Mount Holly, which involved public charrettes, field work, and numerous meetings with City staff to develop recommendations about transportation and economic development. Developed the content and formatting for the document's Transportation chapter, which included recommendations for greenway standards, street design, park connectivity, and river access.

**Served as JMTE project manager*

PROJECT TEAM



CANDACE HLADICK
GEOSPATIAL MANAGER

EDUCATION

Associate of Applied Science in Low Impact Development, Haywood Community College

Certificate - GIS Specialist & Low Impact Development, Haywood Community College

AFFILIATIONS

WTS International - WNC Chapter Vice-President

Member, Haywood County Planning Board

Carolina URISA (The Urban and Regional Information Systems Association)

Candace spearheads many of JMTE's wayfinding planning projects and is highly experienced in coordinating with state DOTs, maintaining MUTCD compliance, and navigating encroachment permitting processes. She has designed and created GIS maps to accompany data collected for traffic and crash studies, tourism development initiatives, highway expansion projects, land use updates, and bicycle and pedestrian plans. Candace is adept at creating safety-focused traffic control plans and detailed CAD roadway and parking designs. She has also helped identify greenway and recreation facility locations for various projects and has facilitated event logistics and shuttle routing projects for private and governmental clients.

HIGHLIGHTED EXPERIENCE

- **Southern Blue Ridge Bike Plan | Cherokee, Clay, Graham, and Macon Counties, NC**
Provided Geospatial Mapping for the South Blue Ridge Bicycle plan through the Southwestern Regional Commission and prepared a geodatabase of the data to be integrated into NCDOT's Pedestrian and Bicycle Infrastructure Network (PBIN) geodatabase.
- **Richland Creek Greenway Feasibility Study | Waynesville, NC**
Provided research and data collection of existing land uses to include in the cultural analysis of the community near the proposed greenway corridor. Illustrated the analysis of parcel and cultural data using ArcGIS software. Provided low impact development recommendations and assisted with the final document review.
- **Town Center Master Plan and Pedestrian Safety Action Plan | Maggie Valley, NC**
Assisted in a review of existing land uses within the town. Prepared illustrative maps and drawings, using AutoCAD software for use during public input workshops. Drawings included existing land use, turning movement data and proposed recommendations. Provided low impact development recommendations and assisted with the final document presentation.
- **Haywood County Recreation Map | Haywood County, NC**
Worked on a team to develop a countywide map with turn-by-turn bicycle route directions, identified greenway and recreation locations, and bicycling safety information.
- **Franklin Comprehensive Bicycle and Pedestrian Plan | Franklin, NC**
Created maps for use during field assessment, public meetings and safety audits during project.
- **Tryon International Equestrian Center (TIEC) Mapping | Polk County, NC**
Created maps for use during the International World Equestrian Games, including versions for a diversity of audiences (security, food & beverage, emergency services, competitors, and other staff).
- **Sumter Wayfinding Plan Implementation | Sumter, SC**
Currently working with the City of Sumter to implement their wayfinding master plan. This includes overall management, coordinating with the sign fabricator and ensuring that locations and content are correct. Work also entails oversight of the sign installation, including work zone safety.

PROJECT TEAM



DAVE GILDERSLEEVE
URBAN & REGIONAL PLANNER
BUSINESS DEVELOPER

EDUCATION

Master of Urban & Regional Planning, California State Polytechnic University

Bachelor of Science in Urban & Regional Planning, California State Polytechnic University

AFFILIATIONS

Member, North Carolina Chapter of the American Planning Association

Member, Haywood County Planning Board

Dave brings more than 45 years of professional urban planning and client management experience to his roles as Urban and Regional Planner and Business Developer for JMTE. His technical expertise lies in the preparation of comprehensive plans, downtown redevelopment plans, vision plans, land development regulations, parks and recreation master plans, Project Development & Engineering studies, public meeting facilitation, and obtaining development entitlements. Dave is responsible for most client relations and development across all JMTE areas of service. This includes attending and presenting at public and client meetings; assisting in the preparation of master planning documents for bicycle, small area, pedestrian, parking and wayfinding projects; reviewing development proposals and site plans for conformance with codes, plans and regulations; conducting research and developing ordinances and standards for government clients; and preparing grant submittals. Before joining JMTE, Dave served in both public and private sectors including: 32 years with Wade Trim a national engineering, planning and landscape architecture firm where he served as a firm Principal, Chief Business Development Officer, and Professional Urban and Regional Planning project manager.

HIGHLIGHTED EXPERIENCE*

- “Oviedo Place” Downtown Development Plan | City of Oviedo, FL
- Thomas Ranch Mixed Use DRI (1,451 acres) Metro Development Co. | Hillsborough County, FL
- Corporex Business Park DRI, Corporex Development Services | Hillsborough County, FL
- Wesley Chapel Lakes Mixed Use DRI (948 acres), Lee Arnold & Associates | Pasco County, FL
- Tri-County Business Park DRI (346 acres) Rutenburg Corporation | Hillsborough County, FL
- River Club Residential DRI (1,000 acres) Manatee County Joint Venture | Manatee County, FL
- Manatee Park of Commerce DRI (245 acres) County Joint Venture | Manatee County, FL
- Sheraton Sand Key Resort Expansion DRI (750 suites) Grand Coulior Corporation | Clearwater, FL
- University Park Mixed Use DRI (1,058 acres) P.K. Neal Companies | Manatee County, FL
- ASI Commercial/Office Campus, (11 acres), Echelon Development | St. Petersburg, FL
- Park & Recreation Master Plans for: Sarasota County, Alachula County, Polk County, Pasco County, FL
- Comprehensive Plans for: Pasco County, FL, Hardee County, FL, City of Palmetto, FL, City of Clearwater, FL, Belleair Beach, FL, Belleair Shore, FL; City of Port Richey, FL
- Governor’s Task Force on Urban Growth Patterns, Florida Department of Community Affairs

**From previous employment*

RELEVANT EXPERIENCE



RIVER ARTS DISTRICT (RAD) LOFTS MIXED-USE DEVELOPMENT TIA

CLIENTS:

Delphi
Development, LLC

JMTE SERVICES:

- City Collaboration
- Trip Generation
- Trip Distribution
- Vehicle Queue
- Intersection Delay
- Intersection Capacity
- Roundabout Analysis
- Engineering Report

LOCATION:

Asheville, NC

J.M. TEAGUE
ENGINEERING
& PLANNING

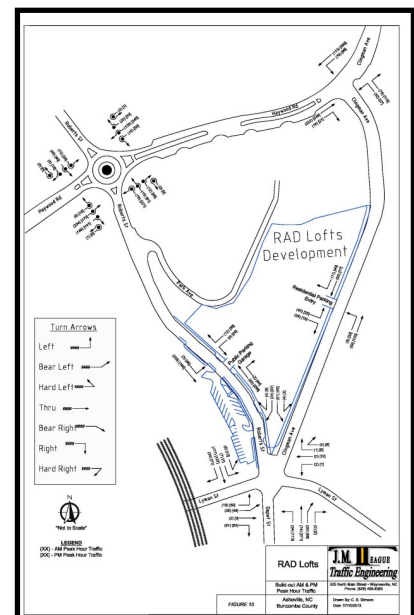
1155 North Main Street
Waynesville, NC 28786

Phone: (828) 456-8383
Fax: (828) 456-8797

J.M. Teague Engineering & Planning (JMTE) performed a traffic impact analysis for the River Arts District Lofts Mixed-Use development in Asheville, NC. The development consisted of a 210-unit apartment complex, 30,000 square-feet of retail space, multiple “live-work” units, and a 376 space parking garage. The parking garage layout required JMTE to split the parking deck into two sections for trip distribution calculations. Additionally, since a piece of the development’s parking garage provided public parking, a portion of the parking garage was actually utilized as a trip generator for anticipated site trip calculations. The intersection analysis for this project consisted of analyzing a roundabout, as well as a five-way intersection.

JMTE’s collaboration with City of Asheville officials was critical for this project because of multiple on-going developments and City greenway improvement projects.

JMTE incorporated recommendations from the City’s greenway improvement project report into the mitigation recommendations for the overall development.



RELEVANT EXPERIENCE



OLD COGGINS FARM TRAFFIC IMPACT ANALYSIS

CLIENTS:

Brooks Engineering
Associates

JMTE SERVICES:

- Agency Collaboration
- Trip Generation
- Trip Distribution
- Queue Analysis
- Intersection Delay
- Vehicle Queue
- Intersection Capacity
- Engineering Report

LOCATION:

Buncombe County, NC

J.M. Teague Engineering & Planning (JMTE) performed a traffic impact analysis (TIA) for the Old Coggins Farm development proposed in Buncombe County, NC along Old Farm School Road. The development consisted of around 169 acres of mixed residential, commercial, and institutional land uses. A sight-distance study was conducted to ensure that the proposed secondary access point location would provide enough stopping sight-distance and intersection sight-distance. JMTE had to utilize custom trip generation methodology because certain land uses within the development were unique.

During the approval stages of the project, JMTE attended a Buncombe County Board of Adjustments hearing to assist the developer in providing reason to approve the overall site development plan. North Carolina Department of Transportation and developer collaboration was crucial throughout the entirety of the study to ensure TIA approval.



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ENGINEERING
& PLANNING

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RELEVANT EXPERIENCE



MAGGIE VALLEY TOWN CENTER MASTER PLAN

CLIENT:

Town of
Maggie Valley, NC

JMTE SERVICES:

- Public Involvement & Planning
- Reverse Angle Parking
- Complete Streets
- Data Collection
- Roundabout Modeling
- Engineering & Surveying
- Landscape Architecture
- Strategy & Finance
- Planning & Policy Recommendations

LOCATION:

Maggie Valley, NC

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& PLANNING

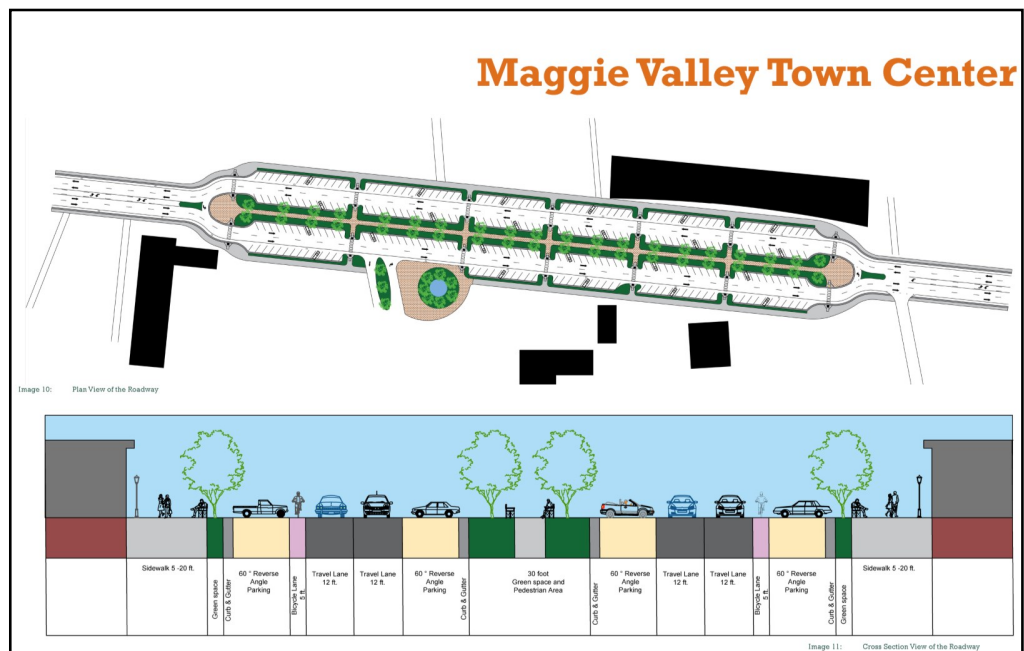
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J.M. Teague Engineering & Planning (JMTE) led a Town Center Plan for Maggie Valley with support from Kostelec Planning and Chipley Consulting. The Town Center vision called for a mixed-use commercial node along a 3-mile corridor that included an anchor destination (e.g. ice skating rink).

JMTE conducted detailed analyses of the Town's land development policies to identify amendments and a set of new policies to realize the Town Center's vision and goals. Development policy recommendations include changes to allowed uses, dimensional standards, policies to encourage greater pedestrian connectivity, and options for new zoning districts.

JMTE worked closely with NCDOT in modeling the corridor to ensure an adequate vehicular traffic level-of-service was maintained at key intersections along the project. The concept of reverse angle parking was also modeled and introduced.



RELEVANT EXPERIENCE



SUMMIT PARK SIGNAL DESIGN

CLIENT:

Berry Engineering, LLC

JMTE SERVICES:

- NCDOT Collaboration
- Base Maps
- Geometric Plans
- Electrical Plans
- Clearance Diagram
- Quantities Estimate

LOCATION:

Salisbury, NC

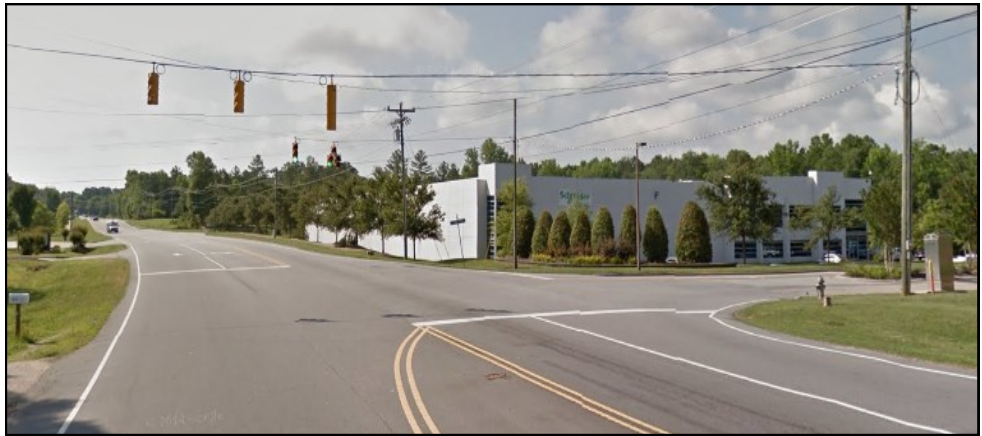
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J.M. Teague Engineering & Planning (JMTE) updated the signal plan of record for the intersection of Julian Road at Summit Park Drive in the City of Salisbury, North Carolina. This plan involved incorporating the addition of a southbound “U-Turn” lane and a westbound left turn lane. As part of this project, one of the signal supports were relocated to accommodate intersection geometric changes.

JMTE submitted a plan package which included the updated geometric plan, electrical detail plan, quantity estimate, and title sheet. In order for NCDOT to review, approve, and permit the plan package, agency coordination was required.



RELEVANT EXPERIENCE



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DATA COLLECTION

CLIENT:

NCDOT
Transportation Mobility
and Safety Division

JMTE SERVICES:

- Compliance Data
- Delay Data
- Saturation Flow Rate Data
- Spot Speed Data
- Standard Turn Movement Data
- Complex Turn Movement Data

LOCATION:

Western North Carolina
Division 11, 13, and 14

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J.M. Teague Engineering and Planning (JMTE) was awarded a three year contract to collect traffic data in Divisions 11, 13, and 14. Data collection included: compliance data, delay data, saturation flow rate data, spot speed data, standard and complex turning movement data, and volume/speed/class data.

JMTE completed 69 traffic studies in the first year of the contract.



RELEVANT EXPERIENCE



VALDESE-RUTHERFORD COLLEGE PEDESTRIAN PLAN

CLIENT:

Kostelec Planning

JMTE SERVICES:

- Transportation Planning
- Public Outreach
- Data Collection
- GIS Mapping
- Safety Analysis

LOCATION:

Valdese, NC
Rutherford College, NC

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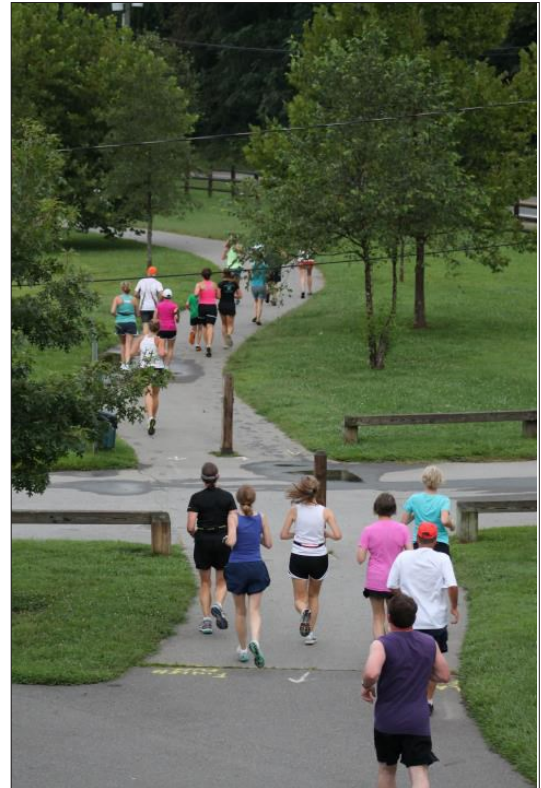
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J.M. Teague Engineering & Planning worked with Kostelec Planning to develop a Comprehensive Pedestrian Plan connecting the towns of Rutherford College and Valdese through a network of walking paths.

Residents voiced concerns about sidewalk safety and interest in developing greenways and trails to provide better access to parks, shopping districts and schools.

The project included public outreach and the analysis of existing street and sidewalk conditions, land use, greenways and open spaces.

Recommendations included short-term and long-term projects to improve pedestrian safety and develop pedestrian friendly infrastructure.



RELEVANT EXPERIENCE



LONG SHOALS VILLAGE TRAFFIC IMPACT ANALYSIS

CLIENT:

Market Center Holdings Inc.

JMTE SERVICES:

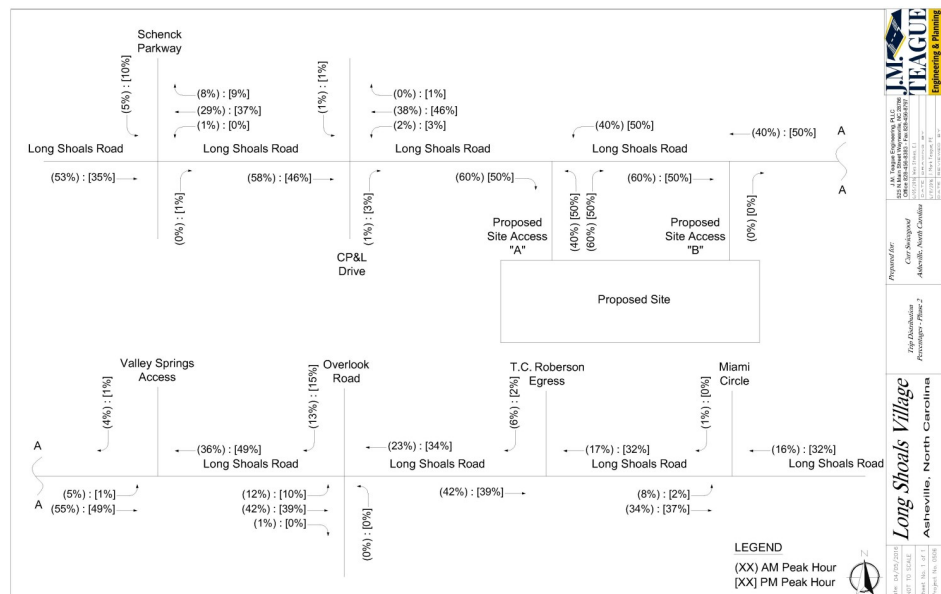
- Trip Generation
- Trip Distribution
- Vehicle Queue
- Intersection Delay
- Intersection Capacity
- Engineering Report
- Signal Warrant Analysis

LOCATION:

Asheville, NC

J.M. Teague Engineering & Planning performed a traffic impact analysis to determine any potential adverse traffic impacts associated with a proposed mixed-use development consisting of 8,734 square-foot of shopping center (retail), two 15,000 square-foot office buildings, four restaurants (50 seat, 40 seat, and two 100 seat restaurants), and a vehicle service station (4 service positions).

The analysis included trip generation, trip distribution, intersection delay, vehicle queue, intersection capacity, and signal warrant analysis.



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RELEVANT EXPERIENCE



COMPLETE STREET POLICY UPDATE

CLIENT:

City of High Point

JMTE SERVICES:

- Transportation Planning
- Bike & Pedestrian Planning
- Community Involvement
- Policy Development
- Collaboration

LOCATION:

High Point, NC

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J.M. Teague Engineering & Planning (JMTE) created a Complete Streets Policy document tailored to serve the transportation needs of the City of High Point and its stakeholders. The final deliverable contained a City-wide policy ultimately adopted by City Council as well as a menu of options consisting of best practice design element examples and sample cross sections incorporating Complete Streets elements into existing City street design standards.

The National Complete Streets Coalition's 10 elements of a comprehensive Complete Streets Policy provided the framework for policy development. The project involved conducting a comparative review of Complete Streets policies and programs within North Carolina and surrounding states and administering a Steering Committee survey. Survey results elucidated an overarching motivating vision for complete streets in High Point and guided development of the policy, which highlights the benefits of complete streets and prioritizes different modes of transportation based upon the context of the roadway.

The client expressed their goal to create a document to serve as a guideline that leaves room for professional judgement rather than a directive and is user friendly for public staff, consultants, and developers. The final deliverable also contains design options and streamlines roadway classification definitions to include preferred right-of-way widths and multimodal accommodations.

This project also revealed an opportunity for the City to update its Public Street Design Standards to better focus on lowering design speeds and built-in traffic calming without compromising safety or operational needs.



RELEVANT EXPERIENCE



WAYFINDING MASTER PLAN AND IMPLEMENTATION

CLIENT:

City of Sumter, SC

JMTE SERVICES:

- Community Planning
- SCDOT Permitting
- GIS Mapping
- RFP Development
- Project Management
- Work Zone Safety

LOCATION:

Sumter, SC

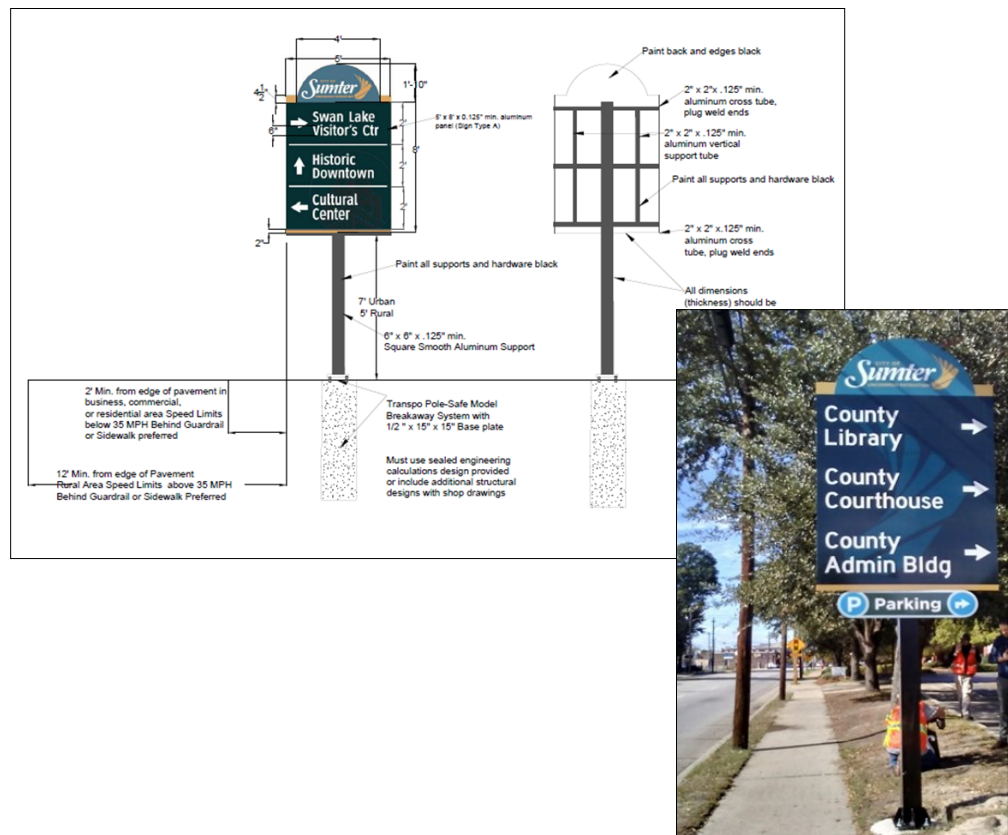
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J.M. Teague Engineering & Planning (JMTE) worked with Arnett Muldrow & Associates to develop a wayfinding master plan for the City of Sumter, South Carolina in 2015. The goal of the wayfinding master plan was to facilitate visitor navigation, generate community pride, and develop an attractive, consistent signage system to set Sumter apart as a unique destination. The process included conducting stakeholder roundtable sessions, identifying infrastructure and system destinations, designing sign typology, developing sign locations and phasing, providing accurate cost estimates for implementation.

In 2017, the City hired JMTE to manage the implementation of the plan. This included coordinating with SCDOT for encroachment agreements, developing bid documents for fabricators and installers, and managing the subcontractor work. This phased project is ongoing and includes the installation of 120 vehicular signs, 22 pedestrian signs, 22 parking signs and 15 gateway signs.



RELEVANT EXPERIENCE



TRAFFIC SIGNAL DESIGN

JMTE SERVICES:

- Isolated Simulation
- System Simulation
- Warrant Analysis
- Signal Operation
- Signal Design

LOCATIONS:

Asheville, NC
Brevard, NC
Chattanooga, TN
Fletcher, NC
Hendersonville, NC
Lake Wylie, SC
Salisbury, NC
Shelby, NC
Morristown, TN

J.M. Teague Engineering & Planning (JMTE) offers expert traffic signal services. Early company work involved simulation studies and warrant analysis, especially related to the traffic impacts of new developments. Over twenty Traffic Impact Analyses have involved Signal Warrant Evaluations. More recently JMTE has become prequalified with NCDOT and TDOT for traffic signal design. These projects included new timing, electrical, and phasing plans. JMTE's team includes two former NCDOT traffic engineers with a combined 43 years experience evaluating the operation of signalized intersections.



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RELEVANT EXPERIENCE



Traffic Impact Analysis

- Traffic Data Collection
- Trip Generation
- Trip Distribution
- Intersection Operations Analysis
- Queuing Analysis
- Turn Lane Warrants
- Synchro/Simulation Analysis
- Signal Warrant Analysis
- Street & Driveway Access Permits
- Determination of Mitigating Improvements



J.M. Teague Engineering & Planning (JMTE) has the skills and expertise required to perform thorough and accurate Traffic Impact Analyses (TIA). A traffic impact analysis is a study which determines the effects of a new development on community traffic. The mitigation recommendations for each study vary depending on the type, size and location of the development. JMTE's project experience in this particular service sector covers a broad range from educational facilities to residential and commercial developments.

PROJECT APPROACH

Project Understanding

J.M. Teague Engineering and Planning (JMTE) understands that the Town of Southern Shores (Town) has identified a traffic congestion issue on neighborhood streets due to drivers seeking alternate routes to access the northern North Carolina coast. Many of these alternate routes are narrow residential streets unsuitable for high volumes of through traffic. JMTE has been asked to examine previously collected traffic data and review the roadways affected to determine recommended mitigation strategies.



South Dogwood Trail at North Croatan Highway

Source: Google

Project Area

The project limits and scope were determined through a preliminary discussion with the Town, review of the affected area, and engineering judgment. The impacted/analyzed streets for this study include:

- 13th Avenue
- Sea Oats Trail
- Hickory Trail
- South Dogwood Trail
- Hillcrest Drive
- Wax Myrtle Trail
- Juniper Trail
- Trout Run
- Porpoise Run
- Dolphin Run
- East Dogwood Trail

Scope of Work

JMTE has been in discussions with the Town regarding this project. Prior to beginning and throughout the work process, the JMTE team will continue to coordinate with the Town to discuss the full extent of the project and to identify specific or unique elements that need to be incorporated into the analysis.

Since the analysis will be of existing traffic data, the Town will be responsible for providing JMTE with all available sources of data to include in the analysis. This will include existing traffic data from roads owned or managed by the North Carolina Department of Transportation (NCDOT). The existing traffic count data will be analyzed to determine the varying traffic patterns throughout different days and to compare peak traffic volumes

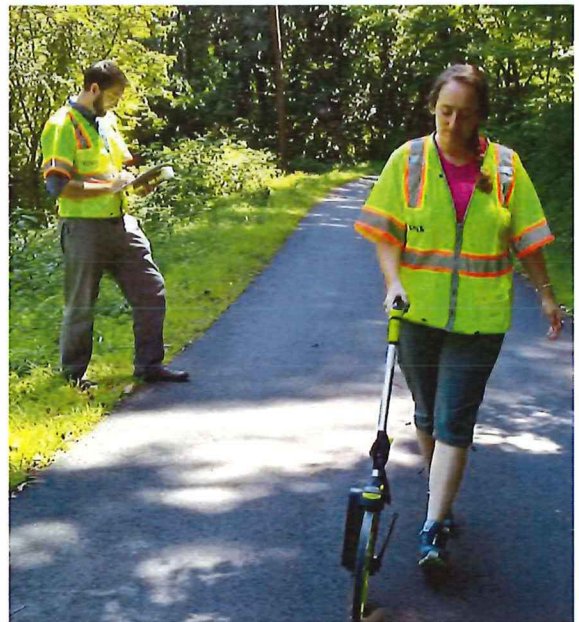
PROJECT APPROACH

to "normal" traffic volumes. The peak seasonal traffic has past for this year, however. a field visit will be performed to gather geometric data, current turning movement percentages, and to conduct observations of the current vehicular volumes and movement. It is anticipated that at least one day of the field visit will occur during a weekend travel day to ensure peak hour off-season travel volumes. The JMTE team will conduct an off-season travel time study of the preferred traffic routes and the alternate travel routes.

Once all existing and current data is collected, it will be analyzed, and traffic patterns defined and modeled using Synchro. Synchro is a specialized software package that allows the the JMTE team to model intersections and roadway networks to determine levels of service (LOS), based on the thresholds specified in the Highway Capacity Manual (HCM) published by the Transportation Research Board. Synchro also provides an analysis of capacity, vehicle delay, volume to capacity ratio (v/c), and vehicle flow rates. Synchro can also be used to analysis queue lengths and traffic signal timing. Sim Traffic may also be utilized. This is an extension of the Synchro program that allows the team to more accurately model closely spaced intersections. This animation software allows the user to view traffic circulation through the study of intersections.

Based on the data collected, various mitigation best practices will then be considered and modeled to show the impact on existing traffic. Based on the model results, one or more mitigation measures will be recommended that will best discourage use of the alternate residential routes and have the least impact on residents along the alternate routes.

While not included in this scope of services, it is recommended that JMTE coordinate with NCDOT during this project to ensure that final recommendations can align smoothly with any future NCDOT plans. This time can be negotiated with the Town prior to additional hours are billed.



The JMTE team is well-equipped and well-trained with transportation data collection tools.

Project Delivery

A report will be prepared showing the recommended mitigation measures including placement, conceptual drawings, implementation guidance, and rough cost estimates. The report will be submitted for review **within 120 days of notice to proceed from the Town.**

co 90 days

The project delivery does not include detailed drawings, detailed cost estimates, or construction documents. It is recommended that any proposed mitigation be supplemented with outreach to affected residents. Public input will provide clarity about the public's support for specific mitigation measures and can be gathered through various methods. This proposal does not include public involvement events or supplemental materials for such events. Effective and creative public involvement efforts (including surveys, informational posters/handouts, etc.) can be added to this scope at additional cost.

PROJECT APPROACH

Fee Structure

The estimate for this contract was developed using an approximation of person-hours required by JMTE. A professional fee scale of standard hourly rates is laid out in the table on page 36. This table provides an exhaustive list of positions within JMTE; however, not all positions will necessarily be utilized during the execution of this project contract.

Professional fees for the above stated work: \$4,200

Mobilization cost: \$1,850

TOTAL COST ESTIMATE: \$6,050

Additional Services that may be provided only with additional Town approval:

- ***Presentation of final recommendations to Town Council:***
 In-person presentation - \$3,700
 ---- OR ----
 Virtual presentation - \$800
- ***NCDOT coordination to be billed on an hourly basis per the chart provided below.***

If the Town changes the project scope or its parameters anytime during the project or requires additional or updated data collection, additional fees and time to completion may be required. The client will be provided with a quote of anticipated fee changes prior to any additional work. If this proposal is acceptable, please sign on page 29 and initial wherever indicated. Project work efforts will begin on the executed contract date.

JMTE Standard Rates

Job Title	Standard Rate per Hour
Principal Engineer	\$150
Transportation Safety Engineer	\$140
Finance Assistant	\$60
Engineering Director	\$125
Engineer EI	\$115
Senior Engineering Technician	\$90
Engineering Technician	\$75
Electrical Engineer	\$135
Electrical Engineer	\$135
Senior Transportation Planner	\$115
Community Planner	\$105
Senior Planning Technician	\$90
Planning Technician	\$75
Executive Assistant	\$60
Operations Manager	\$60
Business Developer	\$125
Finance Manager	\$60
Administrative Assistant	\$30
Assistant Office Manager	\$30

QUALITY ASSURANCE AND QUALITY CONTROL POLICY

Our company recognizes that the disciplines of quality, health and safety, and environmental management are integral parts of its management function. The successful delivery of an engineering, planning, or a JMTE Academy training project involves having in place adopted quality assurance and control processes and procedures. At JMTE, there are numerous processes and procedures that govern not only the health and safety of our employees and our environmental responsibility, but best practices from project pursuit through project execution. JMTE believes that our professional services and project deliverables must reflect and advance our company's mission and meet or exceed our Client's expectations.

Successful projects and long-term Client relationships happen because of due diligence, great communication, and intentional execution. Project delivery at JMTE begins with the execution of a Professional Services Agreement that reflects the respective interests of our Client and JMTE. We believe that spending the essential time at the project scoping and fee estimating phases ensures clarity by both parties and results in quality projects that are delivered on time, within budget, and to the full satisfaction of our Clients and Stakeholders. In addition to day-to-day internal operational policies and procedures, quality control processes and procedures are in place governing such activities as Client interaction, invoicing and progress reporting, formal presentations, traffic and pedestrian data collection and analysis, conducting traffic impact analysis and safety studies, preparing signal plans, providing forensic engineering services, CAD and graphic presentations, and ensuring safety in the field (e.g. all JMTE employees are certified flaggers). Safety is at the forefront of what we do.



Moreover, JMTE has a process in place to measure Client satisfaction during execution of the project and following delivery of the final product. Measuring such things as experience and knowledge of the firm, project manager and project team; understanding of local, state and federal requirements; meeting schedules; responsiveness, meeting budget, quality of products and services; invoicing and project status reporting; empathy toward Client and looking out for the Client's best interests; presentation skills; safety, and communications. Candid feedback is welcomed from the Client and used to implement steps toward continual improvement and monitoring performance to enhance the quality of our services and project delivery.

We look forward to sharing in greater detail our passion for quality, health and safety and environmental responsibility as they relate to your project.

CLIENT AND ENGINEER PROFESSIONAL SERVICES AGREEMENT

This agreement is made, entered into and effective this 29 day of September 2020 by and between:

ENGINEER:

CLIENT:

Firm: J.M. Teague Engineering, PLLC
Address 1: 1155 N Main St
Address 2: Waynesville, NC 28786
Phone: (828) 456-8383

Company: Town of Southern Shores
Address 1: 5375 N. Virginia Dare Trail
Address 2: Southern Shores, NC 27949
Phone: (252) 261-2394

Name: Will Thompsen
Title: Engineering Director

Name: Cliff Ogburn
Title: Town Manager

Signature: [Handwritten Signature]
Date: 9/30/2020

Signature: [Handwritten Signature]
Date: 9-29-2020

I accept the terms of this agreement

JMTE –WAYN 1076, Southern Shores Data Analysis Project

In addition to the matters set forth herein, our Agreement shall include, and shall be subject to the Standard Provisions, which are attached hereto and incorporated herein. If you concur and wish us to proceed with services described in the Agreement, please return a signed copy of this Agreement executed by a properly authorized individual in the space provided above.

The parties acknowledge and agree that the initial lines at the bottom of each page of this Agreement are merely evidence of their having reviewed the terms of each page on this Agreement.

Updated 10.15.19

This instrument has been preaudited in the manner required by The Local Government Budget and Fiscal Control Act.
[Handwritten Signature]
Finance Officer
Date: 9/24/20

STANDARD PROVISIONS

J.M. Teague Engineering, PLLC

(1) **Engineer's Scope of Services:** The undertaking of the Engineer to perform professional services extends only to those services specifically described in this Agreement. However, if requested by the Client and agreed to by the Engineer, the Engineer will perform additional services through individual arrangements and agreements.

(2) **Client's Responsibilities:** In addition to other responsibilities described herein or imposed by law, the Client may be required to:

(a) Designate in writing a person to act as its representative with respect to this Agreement, such person having complete authority to transmit instructions, receive information, and make or interpret the Client's decisions.

(b) Provide to the Engineer all previous studies, plans, or other documents pertaining to the project; Client's requirements and criteria; standards to be followed; and all new information reasonably necessary; upon all of which the Engineer may rely.

(c) Arrange for access to the site and other property and obtain approvals and permits required for the Engineer to provide its services.

(d) Review all documents or verbal reports presented by the Engineer and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of the Engineer.

(e) Provide such overall feasibility services such as independent accounting, legal, insurance, and cost estimating as the client may require or the Engineer may reasonably request.

(f) Give prompt written notice to the Engineer wherever the Client becomes aware of any development that affects the scope and timing of the Engineer's services or any defect or noncompliance in any aspect of the project.

(g) Bear all costs incident to the responsibilities of the Client.

(3) **Period of Services:** This Agreement has been entered into in anticipation of conditions permitting continuous and orderly progress through the completion of the Engineer's services. Times for performance shall be extended to the extent necessary for delays due to circumstances the Engineer does not control. If such delay or suspension extends for more than one year (cumulatively), the rates of compensation provided for in the Agreement shall be renegotiated.

(4) **Method of Payment:** Compensation shall be paid to the Engineer in accordance with the following provisions:

(a) Invoices will be submitted on a regular basis, usually monthly, by the Engineer to the Client for services performed and expenses incurred the previous month. If the final product has not yet been delivered upon the invoicing date, the invoice will reflect a percent complete, tasks complete, hours worked so far, or similar denotation. A final invoice will accompany the final product delivery and will be denoted as such. Payment of each invoice will be due within 30 days of receipt. Interest at the rate of 1.5% monthly will be added to accounts not paid within 30 days. If the Client fails to make any payment due the Engineer for services and expenses within 45 days after the Engineer's transmittal of its invoice, the Engineer may suspend services until all amounts are paid in full.

(b) If the Client objects to any invoice, it must advise the Engineer in writing giving its reasons within 14 days of receipt of the invoice or the Client's objections shall be waived, and the invoice shall conclusively be deemed due and owing.

(c) If the Engineer initiates legal proceedings to collect payment for services, it may recover in addition to all amounts due, its reasonable attorneys' fees, reasonable experts' fees, and other expenses related to the proceedings. Such expenses shall include the cost, at the Engineer's normal hourly billing rates, of the time devoted to such proceedings by its employees.

(d) The Client acknowledges and agrees that the payment for services rendered and expenses incurred by the Engineer pursuant to this Agreement is not subject to any contingency or conditions unless expressly set forth in this Agreement.

(5) **Use of Documents:** All documents, including but not limited to drawings, specifications and data or programs stored electronically, prepared by the Engineer are related exclusively to the services described herein. They are not intended or represented to be suitable for partial use or reuse by the Client or others on extensions of this project or on any other project. Any modifications made by the Client or any partial use or reuse without written authorization or adaptation by the Engineer will be at the Client's sole risk and without liability or legal exposure to the Engineer, and the Client shall indemnify, defend and hold the Engineer harmless from all claims, damages, losses and expenses, including but not limited to attorneys' fees, resulting therefrom. Any authorization or adaptation will entitle the Engineer to further compensation at rates to be agreed upon by the Client and the Engineer. Copies of Documents that may be relied upon by Client are limited to the printed copies (also known as hard copies) signed or sealed by the Engineer. Files in electronic media format of text, data, graphics, or of other types furnished by Engineer to Client are only for convenience of Client.

Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the Client, after receiving electronic files, agrees to perform acceptance tests or procedures within 60 days, after which the Client shall be deemed to have accepted the data. Any errors detected within the 60-day acceptance period will be corrected by the Engineer. Engineer shall not be responsible to maintain documents stored in electronic media format after acceptance by Client. When transferring documents in electronic media format, Engineer makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operation systems, or computer hardware differing from those used by Engineer at the beginning of this Project. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

(6) **Opinions of Cost:** Because the Engineer does not control the cost of labor, materials, equipment, services furnished by others, methods of determining prices, competitive bidding or market conditions, any opinion rendered as to costs shall be made on the basis of its experience and represent its judgment as an experienced and qualified professional, but the Engineer cannot and does not guarantee that proposals, bids or actual costs will not vary from its opinions of cost. If the Client wishes greater assurance as to the amount of any cost, it shall employ an independent cost estimator.

(7) Extension: If applicable, the terms of this Agreement may be extended for a period of time equal to the original agreement time frame or any portion thereof. In order to execute an Agreement extension both parties must sign and date an "Agreement Extension Addendum" as provided by the Engineer. An Agreement extension beyond the original terms can also be re-negotiated via the execution of a modified Agreement.

(8) Termination: This agreement may be terminated by either party upon seven days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. In the event of any termination, the Engineer will be paid for all services rendered and expenses incurred to the effective date of termination, and other reasonable expenses incurred by the Engineer as a result of such termination.

(9) Insurance: The Engineer is protected by professional liability insurance, and general liability insurance for bodily injury and property damage and will exchange certificates of insurance upon request.

(10) Expenses of Litigation: If the Client or its contractors initiate legal proceedings against the Engineer, its contractors, or its subcontractors related to the Engineer's services, and such proceedings conclude with the entry of a final judgment favorable to the Engineer, the Client shall reimburse the Engineer for all of its reasonable attorneys' fees, reasonable experts' fees, and other expenses related to the proceedings. Such expenses shall include the cost, at the Engineer's normal hourly billing rates, of the time devoted to the proceedings by the Engineer's employees.

(11) Dispute Resolution: If and to the extent that Client and Engineer have agreed on a method and procedure for resolving disputes between them arising out of or relating to this Agreement, such dispute resolution method and procedure, if any, is set forth in an Exhibit attached to this Agreement. Client and Engineer agree to negotiate in good faith for a period of thirty days from date of notice of all disputes prior to exercising their rights under any Exhibit or under law.

(12) Hazardous Substances: It is understood and agreed that in seeking the professional services of the Engineer, the Client does not request the Engineer to undertake to perform any services, studies, or tests, or to make any determinations involving hazardous substances or conditions, as defined by federal or state law. Therefore, the Engineer undertakes no such obligation, and the Client agrees to hold harmless, indemnify, and defend the Engineer from and against any and all claims, losses, damages, liability, and costs arising out of or in any way connected with the presence, discharge, release, or escape of hazardous substances or conditions of any kind, or environmental liability of any nature, in any manner related to services performed by the Engineer. If any hazardous substance or condition is observed or reasonably suspected by the Engineer, it shall have the right to cease all services until the hazardous substance or condition has been eliminated. The Engineer shall notify the Client of any such substance or condition of which the Engineer becomes aware, and the Client shall be solely responsible for its elimination.

(13) Assignment: Nothing in this Agreement shall be construed to give any rights or benefits in this Agreement to anyone other than the Client and the Engineer, and all duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of the Client and the Engineer and not for the benefit of any other party. Neither the Client nor the Engineer shall assign, sublet, or transfer any rights under or interest in this Agreement without the written consent of the other, except that the Engineer may retain sub-consultants as it deems appropriate.

(14) Confidentiality: The Client consents to the use and dissemination by the Engineer of photographs of the Project and to the use by the Engineer of facts, data and information obtained by the Engineer in the performance of its services. If, however, any facts, data or information is specifically identified in writing by the Client as confidential, the Engineer shall use reasonable care to maintain the confidentiality of that material.

(15) Miscellaneous Provisions: This Agreement is to be governed by the laws of the State of North Carolina. This Agreement shall bind, and the benefits thereof shall inure to the respective parties hereto, their legal representatives, executors, administrators, successors and assigns. This Agreement contains the entire and fully integrated agreement between the parties hereto and supersedes all prior and contemporaneous negotiations, representations, agreements, or understandings, whether written or oral. This Agreement can be supplemented or amended only by a written document executed by both the Engineer and the Client. Provided, however, that conflicting or additional terms on any purchase order issued by the Client shall be void and are hereby expressly rejected by the Engineer. Any provision in this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof or affecting the validity or enforceability of such provision in any other jurisdiction. Also, the non-enforcement of any provision by either party shall not constitute a waiver of that provision nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

(16) Liability: In performing its professional services, the Engineer will use that degree of care and skill ordinarily exercised, under similar circumstances, by reputable members of its profession practicing in the same or similar locality at the time the services are provided. No warranty, express or implied, is made or intended by the Engineer's undertaking herein or its performance of services hereunder, and it is agreed that the Engineer is not a fiduciary with respect to the Client. To the fullest extent of the law, and notwithstanding any other provisions of this Agreement, the total liability, in the aggregate of the Engineer and the Engineer's officers, directors, employees, agents and sub-consultants to the Client or to anyone claiming by, through or under the Client, for any and all claims, losses, costs or damages whatsoever arising out of, resulting from or in any way related to the services under this Agreement from any cause or causes including but not limited to, the negligence, professional errors or omissions, strict liability or breach of contract or any warranty, express or implied, of the Engineer or the Engineer's officers, directors, employees, agents, or sub-consultants shall not exceed the total compensation received by the Engineer under this Agreement or \$5,000 whichever is greater. Under no circumstances shall the Engineer be liable for lost profits, consequential damages or for extra costs or other consequences due to changed conditions or for costs related to the failure of the contractor to perform work in accordance with the plans and specifications.

(17) Client consents to the use of their name, logo, and/or project photographs as part of the creation and distribution of marketing materials by Engineer. These said materials will be used solely for marketing, portfolio presentation, and advertising purposes. Client understands that said materials will be made available to potential clients, on the Engineer's company website, and for conference presentation purposes.



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