

## TOWN OF SOUTHERN SHORES TOWN COUNCIL REGULAR MEETING

5375 N. Virginia Dare Trail, Southern Shores, NC 27949 Phone 252-261-2394 / Fax 252-255-0876 www.southernshores-nc.gov PITTS CENTER

Tuesday, December 06, 2022 at 5:30 PM

# AGENDA

#### **Call Meeting to Order**

Pledge of Allegiance Moment of Silence

#### Amendments to / Approval of Agenda

#### **Consent Agenda**

- 1. Tax Pick ups & Releases
- Consideration Of a Resolution to Become A Member of The American Flood Coalition #2022.12.02
- 3. Approval of Minutes-November 1, 2022

#### Presentations

4. Employee Recognition-5 Year Service Recognition, Jamie Hines

#### **Staff Reports**

Deputy Town Manager/Planning Director Monthly Permit Reports Planning Board Update Police Chief Fire Chief Town Manager

Town Attorney

#### General Public Comment (Limit: 3 minutes per speaker.)

#### **Old Business**

- 5. Consideration of RFQ Juniper/Trinitie Culvert Bridge
- 6. Beach Nourishment Update

#### **New Business**

- 7. 2023 Town Council Meeting Schedule-Resolution 2022.12.01
- 8. Historic Landmark Commission Appointments

#### General Public Comment (Limit: 3 minutes per speaker.)

#### **Council Business**

**Closed Session**- § 143-318.11.(a)(3) to protect the attorney-client privilege and N.C.G.S. § 143-318.11(a)(5)

### Adjourn

#### TOWN OF SOUTHERN SHORES TAX DEPARTMENT

#### 12/6/2022

<u>PICKUPS</u>		<u>RELEASES</u>	
Sept. Real	\$428.09	August Real	\$ 74.47
		Sept. Real	\$ 224.64

TOTAL

\$428.09

\$ 299.11



### A RESOLUTION OF THE TOWN COUNCIL OF SOUTHERN SHORES PROVIDING FOR THE TOWN OF SOUTHERN SHORES TO BECOME A MEMBER OF THE AMERICAN FLOOD COALITION

#2022.12.02

WHEREAS, proactively investing to prevent flooding is a wiser use of resources than spending on flooding recovery, as exemplified by FEMA research showing that \$1 of spent on disaster prevention saves up to \$7 in recovery costs, and

WHEREAS, national coordination and support are necessary for communities to fully address the challenge of flooding and sea level rise, and the American Flood Coalition provides a platform advocating for national solutions to flooding and sea level rise that invest in and protect our coastal communities, and

WHEREAS, the American Flood Coalition is a no-cost forum for best practices and source of support in developing local and state-level responses to flooding and sea level rise that will enhance Southern Shores' resilience effort, and

WHEREAS, flooding and sea level rise are important issues that our residents deserve to understand and the American Flood Coalition provides opportunities and tools to communicate with residents on flooding challenges and solutions, and

WHEREAS, joining the American Flood Coalition will aid the Town of Southern Shores efforts to protect against flooding without requiring any financial support or dues from the Southern Shores Town Council, and

WHEREAS, the Southern Shores Town Council finds that joining the American Flood Coalition will promote the welfare of Southern Shores' residents and ensure the prosperity of the Southern Shores economy by accelerating solutions to sea level rise and flooding, and

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF SOUTHERN SHORES:

The Town of Southern Shores recognizes the need to advance national solutions to sea level rise and flooding and will work as a member of the American Flood Coalition to safeguard the welfare of the Southern Shores residents.

Adopted this 6<sup>th</sup> day of December 2022

SEAL

Elizabeth Morey, Mayor

ATTEST:

Sheila Kane, Town Clerk





# **OUR POLICIES**

A NONPARTISAN COALITION ADVOCATING FOR NATIONAL SOLUTIONS TO FLOODING AND SEA LEVEL RISE

**FloodCoalition.org** 

The American Flood Coalition is a nonpartisan group of political, military, business, and local leaders that have come together to unlock national solutions to flooding and sea level rise. We proactively address the growing cost of coastal, riverine, and flash flooding by advocating for smarter planning and investment before these disasters strike.



# **Our mission**

Protecting communities that are vulnerable to flooding and sea level rise is a national issue that must be met with national solutions—it is vitally important to our country's citizen well-being, economic strength, and security.

# In the last 10 years, all 50 states have had presidential disaster declarations from flooding<sup>1</sup>

# **Our 4 solutions pillars**



#### Economy

Invest in infrastructure and natural solutions that boost the economy and protect property values



#### Communities

Use smart planning to keep communities safe and save taxpayer dollars



#### Rebuilding

Build back stronger to protect communities from future flooding



#### Military

Ensure our military installations are ready to deploy 365 days a year

<sup>1</sup> FEMA, FEMA Disaster Declarations Summary - Open Government Dataset, 2018.

# Economy

# Invest in infrastructure and natural solutions that boost the economy and protect property values

Our national economy relies on our highways, ports, and other essential infrastructure, much of which is at risk from riverine, coastal, and flash flooding and sea level rise. The American Flood Coalition supports dedicated funding and incentives for resilience that will help prevent flood damage, ensure property values and coastal tourism remain strong, and spur innovation and job creation.

The construction of new infrastructure will create local employment opportunities that cannot be outsourced, bringing more jobs to the community. As our communities adapt to flooding and sea level rise, we'll also be able to build new businesses and innovation that we can export to others around the globe.



# **Policies**

- Support communities investing in adaptation through dedicated federal funding and incentives, such as adaptation trust funds, revolving loan funds, and tax breaks
- Increase innovation grants for research into flood mitigation technology
- Facilitate the exchange of best practices among flood-affected communities
- Broaden available financing methods for flood infrastructure projects in ways that engage the private sector, such as public-private partnerships and low-interest debt financing

Investing \$100M in water infrastructure creates an estimated 1500+ jobs in the local community<sup>2</sup>

<sup>2</sup> Value of Water Campaign. The Economic Benefits of Investing in Water Infrastructure. 2017.

# Communities

Use smart planning to keep communities safe and save taxpayer dollars



\$1 spent on pre-disaster mitigation saves \$4-7 in disaster relief<sup>3</sup> Investing in resilience can save taxpayer dollars and untold heartache for affected communities, but to plan smart our communities need accurate information and policies that empower them to act. As a first step, the Federal Emergency Management Agency (FEMA) should upgrade its flood maps, 15% of which reflect information from the 1970s and 1980s, and none of which include future sea level rise.

Once communities understand their risk, they need federal funding for smart investments. We need to dramatically increase FEMA's pre-disaster mitigation funding, which currently makes up less than 1% of its budget. Communities should also be empowered with the flexibility to invest in living shorelines and other natural infrastructure solutions by making the planning and permitting process more efficient.

### **Policies**

- Increase pre-disaster mitigation funding across agencies
- Adopt federal minimum flood standards across all major federal programs
- Update FEMA flood maps to reflect current data and include sea level rise projections
- Support efficient planning and permitting for living shorelines, including working with the Army Corps to expand the new living shoreline permit category

<sup>3</sup>National Institute of Building Sciences, Natural Hazard Mitigation Saves: 2017 Interim Report. December 2017.

# Rebuilding

# Build back stronger to protect communities from future flooding

When disaster strikes and the national government spends billions to rebuild, we need to build back stronger so our communities can withstand future flooding instead of drawing on taxpayer dollars to rebuild again and again. By creating federal standards for rebuilding that take a clear-eyed view of future risk, we can keep our citizens safe and prevent wasteful spending.

We need to improve Department of Housing and Urban Development (HUD), FEMA, and Small Business Administration (SBA) programs so that they allow and incentivize rebuilding to higher standards.

## **Policies**

- Create federal resilience standards for rebuilding after hurricanes and flood events
- Issue guidance from HUD on how the Community Development Block Grant program can be used to encourage adaptive rebuilding
- Have FEMA allow for and incentivize the adaptation of damaged facilities with Public Assistance funding
- Allow the SBA Disaster Loan Program to incentivize resilient construction



89% of registered voters support a requirement for all federally funded infrastructure to better withstand flooding<sup>4</sup>

# **Military**

# Ensure our military installations are ready to deploy 365 days a year



The DoD found that 931 military installations have experienced flooding<sup>6</sup> When military facilities are flooded, it puts our national security at risk. At Norfolk Naval Base, the main access road floods about 10 times per year, affecting the over 90% of servicemen who live off base<sup>5</sup>. Some installations are already taking action to protect against flooding, but we need coordinated national action.

The Department of Defense (DoD) must prioritize adaptation plans to ensure our military is prepared for the future, and we must give base commanders the flexibility to invest in critical infrastructure on and off the base.

## Policies

- Give the DoD the authority to assess the impact of flooding on our military installations
- Allow base commanders the flexibility to use mission funds to address flooding off-base by expanding programs such as Defense Access Roads
- Promote alternative funding mechanisms for our military through public-private partnerships

**Our progress:** We successfully advocated for the Defense Access Roads program amendment, which now allows bases to **address flooding impacts to roads leading into bases**, to be included in the Fiscal Year 2019 National Defense Authorization Act (NDAA) that was signed into law August 2018.

<sup>5</sup> Virginian-Pilot, Naval Station Norfolk's first 100 years: World's largest navy base anchored to community, June 2017.

<sup>6</sup> Department of Defense Climate-Related Risk to DoD Infrastructure Initial Vulnerability Assessment Survey (SLVAS) Report. January 2018.

# **Member benefits**



A strong platform to advocate, as part of a nonpartisan group, for national solutions to flooding that invest in and protect our communities

**A forum** for best practices and support in developing local and state-level responses to flooding and sea level rise





#### **Opportunities and tools**

to communicate with residents on challenges and solutions related to flooding

FloodCoalition.org



## TOWN OF SOUTHERN SHORES TOWN COUNCIL REGULAR MEETING

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Tuesday, November 01, 2022 at 5:30 PM

# MINUTES

- 1 Call Meeting to Order
- 2 Pledge of Allegiance
- 3 Moment of Silence
- 4
- 5 Amendments to / Approval of Agenda
- 6 Mayor Morey proposed a change to the order of presentations, number four before number three and
- an addition of a resolution for Council consideration in support of Dare County Elections staff to be
   added under New Business.
- 9 Council Member Holland **moved** to approve the agenda as amended, Seconded by Council Member
- 10 Batenic. The motion passed unanimously (5-0). Voting Yea: Mayor Morey, Mayor pro tem Neal, Council
- 11 Member Holland, Council Member Sherlock, Council Member Batenic
- 12
- 13 Consent Agenda
- 14 Council Member Sherlock moved to approve the consent agenda as presented, Seconded by Council
- 15 Member Holland. Motion passed unanimously (5-0). Voting Yea: Mayor Morey, Mayor pro tem Neal,
- 16 Council Member Holland, Council Member Sherlock, Council Member Batenic
- 17
- 18 1. Minute Approval-September 20, 2022 & October 4, 2022
- 19 2. Surplus Resolution 2022.11.01
- 20

#### 21 **Presentations**

- Intern Introduction-Administration Dept., First Flight High School Senior-Zoe Kane
   Town Manager Ogburn introduced the Town's administrative intern for the year.
- Recognition of 9-21-22 Ultralight Crash Responders
   Mayor Morey acknowledged all first responders for their support and mutual aid. The Town of
   Southern Shores is very grateful and appreciative for individuals involved in the rescue and recovery.

#### 28 Staff Reports

- 29 Deputy Town Manager/Planning Director Wes Haskett presented the permit report for the month
- 30 of October. The community kick-off day with the Land Use Plan consultant will be held on
- 31 November 15<sup>th</sup> in the Pitts Center. The day will consist of a joint Planning Board/Council meeting,
- followed by a department head meeting, community tour, and open house. The Town's Planning
- Board will hold their regular meeting on November 21<sup>st</sup> at 5:00 pm.
- 34

- 35
- 36

37	Po	lice Chie	ef David Kole presented the Police Department's report for the month of October.	Item 3.	
38	10			<u> </u>	
39	Fire	e Chief	Ed Limbacher presented the Police Department's report for the month of October.		
40					
41	То	Town Manager Cliff Ogburn provided updates to the following operational highlights:			
42		0	Beach nourishment update- currently, the dredge Magdalen is working at the		
43 11			Dolphin Pup to most the RE Lindholm that is pumping parth from about 60 Ocean		
44 15			Blvd Then the Magdalen will head to Duck The Magdalen will finish in Duck close to		
46			the same time that the BE Lindholm is finishing in Southern Shores but will come back	k	
47			to Southern Shores if it's not finished – around 12/15.	, , , , , , , , , , , , , , , , , , ,	
48			·		
49		0	Juniper culvert bridge-Staff will be reviewing the culvert bridge RFQ's when they are		
50			received and will have a recommendation for Council at their December meeting.		
51					
52		0	Tourism Bureau grant-If the town gets awarded the Tourist Bureau grant for the path	1	
53			from the triangle to East dogwood, work will need to start shortly after.		
54	_				
55	Co	Council Member Holland stated the Tourist Bureau has approved the grant but since it is coming			
56	tro	m the r	estricted fund, the Dare County Board of Commissioners must approve it.		
57	То	wn Atto	orney-no report		
58					
59	General Public Comment				
60	No com	ment			
61		_			
62	Old Bus	siness			
63	None				
64					
65	New Bu	isiness			
66	5.	Resolu	ution Showing Appreciation and Support for Dare County Elections Staff and Precinct		
67		Work	ers.		
68		Mayo	r Morey stated the resolution was generated by Dare County and it is in support of		
69		electio	on staff and precinct workers.		
70		Motio	n to approve Resolution Showing Appreciation and Support for Dare County Elections		
71		Staff (	and Precinct Workers made by Council Member Sherlock. Seconded by Mayor pro tem		
72		Neal.	The motion passed unanimously (5-0). Voting Yea: Mayor Morey, Mayor pro tem Neal,		
73		Cound	cil Member Holland, Council Member Sherlock, Council Member Batenic		
74					
75					
	-				
76 77	6.	Ebikes for dr	s-Educational presentation and definition of E-Bicycle, Proposal for revised ordinance iving on beach.	2	
78		Police	Chief David Kole presented an educational presentation and definition of E-Bicycle		

78 Police Chief David Kole presented an educational presentation and definition of E-Bicycle 79 which included a proposal for revised ordinance for driving on beach and riding E-Bikes on

- town sidewalks/multiuse paths. There are three cases of bikes, with class three being the
  ebikes that can travel at higher speeds.
- 82 Council Member Holland asked what the consequences would be? Police Chief Kole stated it 83 depends on how the ordinance is written but ultimately would be a civil fine of some sort.
- Council Member Batenic stated he could not imagine an officer checking the wattage on the bike. There is a big push for green and you are going to see more people utilizing e-bikes. There are some of the e-bikes that can obtain higher speeds, which is a concern.
- Police Chief Kole stated his concern is the narrow streets in town and the narrow sidewalks,
  there could be an issue if you put an electric bike that can travel 28 miles per hour on it.
- Mayor Morey asked to clarify some of the ordinance addressing e-bikes if adopted. She asked
  if it would apply to the multi-use path on NC12 or HWY158? Chief Kole stated it would apply
  to paths owned by the town.
- Police Chief Kole stated he would rather have e-bikes on the multi-use path along NC12 but
  utilize the interior streets instead of walkways on the interior of town.
- 94 Mayor pro tem Neal stated his wife would prefer to utilize the path on South Dogwood rather 95 than the street. His wife's bike will not go over 20 mph. He would rather not force anyone 96 onto the road but if we get e-bikes going 28 mph, that would be a concern.
- 97Mayor Morey asked how the enforcement would take place? Chief Kole stated it would be<br/>complaint driven.
- 99 Council Member Sherlock pointed out some elements in the proposed ordinance that are 100 unnecessary or outdated.
- 101 Mayor Morey stated the current ordinance needs modernization.
- 102Council Member Sherlock stated there is an element of risk to this and we need to see how103people in the community feel about it, one way or another.
- 104 Consensus of Council to direct staff to include an e-bikes discussion in the Land Use Plan
   105 update and get public input.
- 106

#### 107 7. Amendment to SSVFD Contract to Accommodate EMS Renovations at East Station.

108The agenda summary read as, Dare County is in the process of making several renovations and109improvements for buildings that house their Emergency Medical Services personnel and110equipment. The County is proposing to demolish the East Station in Southern Shores located111at 28 East Dogwood Trail. The County would then build a new facility for their use with space112provided for use by the Southern Shores Volunteer Fire Department, Inc. (SSVFD). The113property and building are owned by Fire Service Real Estate (FSRE) and utilized by the SSVFD.

- 114In February of 2019 the Town and FSRE entered a contract that will now need to be amended115to permit the EMS project described above to move forward. It is important to note that in116the event the contract is terminated as a result of the SSVFD no longer being able to provide
- 117 the Town fire protection services, the Town would have the right to take ownership of all Real
- 118Property and the Personal Property Assets including the East Station.
- 119Attached, you will find the current contract as well as the proposed contract. There are two120sections of the contract that need amending.
- 121 Section (9) Permission to Use facilities can now be removed entirely. When the 2019 contract 122 was approved, the new Fires Station was still under consideration. Once the Fire Station was

- built, an easement from the Town over property utilized by the Public Works Department
  would be provided. In exchange for the easement, the Town would be permitted to use a
  portion of the East Station. These items have been settled and therefore are no longer
  applicable to the contract.
- As mentioned above, the Town was granted use of the East Station as a condition of the provided easement. The new station is being designed to accommodate emergency services and meet the needs of Dare County EMS and the SSVFD. Providing space at this location for use by the Public Works Department would restrict the ability to meet those needs. Dare County has committed to providing the Town the equivalent space lost due to the new construction.
- Section (10) Additional Property Rights, Obligations and Covenants contains the other
   amendments needing your approval to address the demolition and future use of the building.
   The new contract addresses, among other things, the right for FSRE or the SSVFD to lease the
   East Station, requires Town Approval of all plans for use of the East Station moving forward,
   and acknowledges conditions of the mortgage currently held by the FRSE.
- 139 Staff recommends the contract be amended as presented.
- 140Council Member Batenic asked if this was the farthest north EMS station. Town Manager141Ogburn stated it was.
- 142 Council Member Holland asked if any of this needed to be reviewed with the county? Town 143 Manager Ogburn stated once this is approved the Fire Department will enter into a separate 144 lease with the Dare County for use of the EMS building.
- 145Motion made by Council Member Batenic to authorize the mayor to enter into the Amended146and Restated Fire Services Contract between the Town and the Southern Shores Volunteer147The Device Contract between the Town and the Southern Shores Volunteer
- Fire Department and Fire Service Real Estate and to enter the associated Memorandum of
   Contract for recording at the Dare County Register of Deeds., Seconded by Council Member
   Sherlock. The motion passed unanimously (5-0).
- Voting Yea: Mayor Morey, Mayor pro tem Neal, Council Member Holland, Council Member
   Sherlock, Council Member Batenic
- 152

133

#### 153 General Public Comment

Debbie Newberry-267 N. Dogwood-In favor of ebikes. Beneficial to the senior community in not just exercise, but socialization. There are three types of ebikes, the third being the type that can get up to higher speeds. If the town is going to regulate the use in town, we should word it so that only the type three ebikes are discouraged.

- Bill Feretti-296 Wax Myrtle-ebikes and bikes are included in the vehicle definition in NC but when you look at the motor vehicle definition, e-bikes and mopeds are excluded. The signs you see on the state
- multi-use paths that say no motor vehicles, do not include e-bikes and mopeds (they are allowed).
   Green transportation is everywhere. We have multiple type paths in town and there are multiple type
- bikes. Fully support it from a speed limit approach but does not want to send a wrong message as he
- 163 supports e-bikes in general.
- 164
- 165
- 166

Item 3.

#### 167 Council Business

- 168 Mayor Morey announced the next regular meeting of the Council will be December 6th. On November
- 169 15th at 10:00 a.m. the Planning Board and Council will conduct a joint meeting to kick off the Land Use170 Plan update.
- 171 Council Member Holland provided a Tourism Board report. For the month of August meals were up
- 172 15%, 7.9% year to date. Occupancy was down 9%, up 7.7% year to date. The Grant Committee did
- approve the town's request for the walking path from the triangle to East Dogwood. Council Member
- 174 Holland also covered the agenda for the Town's Friday, November 11 Veterans Day events.
- 175 Mayor pro tem Neal reminded the public to go out and vote on Election Day, November 8<sup>th</sup>.
- 176

#### 177

#### Mayor Morey called for a brief recess at 6:49 p.m. Reconvened at 6:57 p.m.

- 178 179
- 180 Closed Session-N.C.G.S. § 143-318.11(a)(5) Motion by Council Member Holland, Seconded by Council
- 181 member Sherlock. The motion passed unanimously (5-0). Voting Yea: Mayor Morey, Mayor pro tem
- 182 Neal, Council Member Holland, Council Member Sherlock, Council Member Batenic
- 183

#### 184 Adjourn

- 185 Upon returning to open session and taking no action, Motion made by Council Member Holland at 6:57
- p.m. to adjourn, Seconded by Council Member Sherlock. The motion passed unanimously (5-0).
- 187 Voting Yea: Mayor Morey, Mayor pro tem Neal, Council Member Holland, Council Member Sherlock,
- 188 Council Member Batenic
- 189



# AGENDA ITEM SUMMARY # 5

MEETING DATE: December 6, 2022

**ITEM TITLE:** Consideration of RFQ – Juniper/Trinitie Culvert Bridge

### **ITEM SUMMARY:**

At the September 20, 2022, workshop meeting, the Town Council received a presentation from Kimley Horn which included three alternatives for the replacement of the Trinitie/Juniper Bridge. The alternatives presented included a cast-in-place reinforced concrete flat slab bridge, a cored slab bridge, and a prefabricated buried arch structure. At the October 4 Regular Meeting, the Town Council directed town staff to advertise a Request for Qualifications to seek a qualified firm capable of providing planning and design services for a cored slab bridge for the Juniper/Trinitie Trail Bridge Replacement Project. The work will include, but is not limited to hydraulic design, geotechnical investigations with foundation recommendations, location and surveys, erosion control plans, roadway design, structure design, preparation of permit application, preparation of planning document, preparation of construction contract proposal and estimates, and utility conflict plans.

Four RFQs were received from the engineering firms SEPI, Kimley-Horn, TGS Engineers and Stewart. The RFQs were evaluated by the Town Manager, Town Engineer, Deputy Town Manager/Planning Director and the Public Works Director. The evaluation focused on company experience and qualifications, professional experience, project understanding and approach, and quality assurance and quality control. Kimley-Horn scored the highest in all four categories. Town staff has familiarity and experience working with three of these firms. Kimley-Horn was the firm that designed and managed the construction of the Tall Pine Bridge. Their familiarity with the area, building similar bridges in residential areas, their extensive work in the NCDOT Division One and excellent reference feedback are part of the reasons for their selection.

**STAFF RECOMMENDATION:** Staff recommends that the Town Council pass a motion to authorize the Town Manager to initiate a contract with Kimley-Horn for the construction of the

cored slab bridge for the culvert replacement at Trinitie/Juniper Trail. This contract will be brought back to the Council for their approval at a future meeting.

**REQUESTED ACTION:** Authorize the town manager to negotiate a contract with the recommended engineering firm, Kimley-Horn.





# Town of Southern Shores Planning and Design Services For Juniper/Trinitie Trail Bridge Replacement Statement of Qualifications



November 4, 2022

TGS Engineers 706 Hillsborough Street, Suite 200 Raleigh, North Carolina 27603 Item 5.



Town Clerk Town of Southern Shores 5375 N. Virginia Dare Trail Southern Shores, NC 27949 Electronic version to <u>skane@southernshores-nc.gov</u>

RE: Planning and Design Services for the Juniper/Trinitie Trail Bridge Replacement Project

Chapter 1 – INTRODUCTION

Dear Ms. Kane:

TGS Engineers (Thompson Gordon Shook Engineers, Inc.) is very interested in providing the requested services outlined in the recent advertisement for the project listed above. TGS Engineers (TGS) has been providing professional engineering services to municipalities and NCDOT since our founding in 1978.

TGS is owned and operated by North Carolina Registered Professional Engineers and Surveyors and is properly registered with the North Carolina Board of Examiners for Engineers and Land Surveyors [License Number C-0275]. TGS Engineers is properly registered as a corporation with the North Carolina Secretary of State's Office. Our accounting system is audited annually and found to be adequate for identifying contract chargeable costs.

TGS is a North Carolina firm with extensive structure design, bridge inspection and bridge replacement planning and design experience with more than 44 years of significant and complex projects. TGS is among the oldest top ten firms headquartered in North Carolina that is totally dedicated to the planning and design of transportation facilities. TGS Engineers is currently on register with the NCDOT, most recently dated May 19, 2022.

The TGS team members are all located within North Carolina and have the flexibility to be deployed across the state. This Statement of Qualifications outlines our capabilities, team structure and experience with similar projects.

TGS Engineers does not have any interests that could in any way be construed as a conflict of interest for any assignment received under this contract. To the best of my knowledge, there are no relationships, familial or otherwise, that could be construed as a conflict in project selection or negotiations.

I will serve as the local point of contact and can be reached via <u>araynor@tgsengineers.com</u> or 919.773.8887 ext. 115 or 706 Hillsborough Street, Suite 200, Raleigh, North Carolina 27603.

We sincerely appreciate your consideration of TGS Engineers for this contract.

Warmest Regards,

Robert allan Rayner . Jr.

Robert A. (Allen) Raynor, Jr., PE, MBA Vice President | Office Manager 919.773.8887 ext. 115 araynor@tgsengineers.com



#### **A: Biographical Information**

Thank you for considering TGS Engineers for this bridge replacement project. TGS has provided outstanding bridge engineering design services to many municipalities across the state as well as to NCDOT, Norfolk Southern Railroad and private clients for more than four (4) decades. Our dedication to our clients and our diligence in design, schedule and budget management is proven by the repeat business we have achieved. With over 44 years of transportation projects in our portfolio, we believe we are expertly suited for this project. It is our intent to showcase the best of the similar projects and our veteran team of experts in this response.

Our team of structural engineers with decades of experience will provide the Town with the ideal solution, complete construction drawings and documents as well as a final cost estimates.

#### **Office Locations**

Headquarters – Raleigh – 706 Hillsborough Street, Suite 200, Raleigh, NC 27603 – 919.773.8887

#### Branches:

**Shelby** – 201 W. Marion Street, Suite 200, Shelby, NC 28150 – 704.476.0003 **Morganton** – 107-A Mica Avenue, Morganton, NC 28655 – 828.437.4681

#### Year Founded:

1978

#### **Principal Officers:**

*Leonard Fletcher, PE, PLS* - 46 years of experience NC PE #011279; NC PLS #L-2974

*Jeff Brittain, PE* - 33 years of experience NC PE #020116

- Structure Design & Inspection
- Multi-Modal Transportation Planning & Design
- Project Development
- Feasibility Studies
- Environmental Compliance & Assessments
- Water Resources/Hydraulic Engineering
- Site Development/Infrastructure
- Rail Engineering
- Surveys & Subsurface Utility Engineering
- Construction Engineering & Inspection
- Cost Estimating

Headquarters:

Raleigh, NC

#### Areas of Specialization: Bridge Design & Inspection Roadway Design Multi-Use Path Design

Our **experienced team** of engineers and designers at TGS have performed on hundreds of multi-modal transportation projects across the state, are highly capable and have the capacity to assist the Town in meeting its goals. Our Raleigh staff is supported by team members in our Morganton and Shelby offices.



**Our team is comprised of seasoned experts.** Our experienced staff of engineering professionals include many **NCDOT retirees**: Jay Twisdale, PE (*Hydraulics*); Randy Henegar, PE (*Hydraulics*); Paul Fisher, PE, PLS (*Hydraulics*); Rusty Lassiter (*Hydraulics*); Marc Cheek, PE (*Structures*); Steve Williams (*Structures*); Dan Grissom, PE (*Construction Administration*); and, Stacy Oberhausen, PE (*Public Involvement/Environmental Documentation*).

#### **Team Organization**

This organizational chart, displayed by discipline, showcases the areas of specialty that each team member will provide on the City's pedestrian bridge project.





#### **B: Projects Within Last 10 Years**

#### **Similar Projects**

The list of projects our team of talented professionals have designed over the last forty-four years is long, but we hope the following snapshot provides insight into recent relevant examples. TGS has been providing turnkey design services to NCDOT and numerous municipalities throughout North Carolina for more than four (4) decades.

- Emergency Express Design-Build Bridge Replacements in Caldwell and Alexander Counties
- Express Design-Build Bridge Replacement projects total more than one hundred (100) in the last ten (10) years
- Cored Slab Bridge Replacements in the last <u>five</u> years total more than fifty (50)
  - B-4607 over Swift Creek in Pitt County Design completed in 2022
  - B-5303 over Island Creek in Duplin County Design completed in 2020
  - o B-4788 over Johnson Mill Run in Pitt County LET in 2018
  - B-4605 over Chicod Creek in Pitt County Design completed in 2020
  - o B-4433 over Durham Creek Tributary in Beaufort County Design completed in 2019
  - o B-4709 over Branch Durham Creek in Beaufort County Design complete in 2021
- Current projects include:
  - Three bridges in Northampton County over Occoneechee Creek, Wiccacanee Swamp & Potescasi Creek
  - $\circ$   $\;$  Two bridges in Wayne County over Dam Creek and The Slough
  - B-5835 over Elk River in Avery County
  - o B-4603 over Swift Creek in Pitt County
  - BP4.R013.1 over Deep Creek in Halifax County





# Bridge over Coweeta Creek in Macon County 2016-2017

This project involved the replacement of bridge #53 on SR 1119 (McClure Mill Road) over Coweeta Creek in the community of Otto, North Carolina. The original structure was a timber bridge that was washed out by heavy rains on December 24, 2015. TGS provided surveys, hydraulic design, roadway, and structure design on this fast-track project. The existing right of way was slightly increased, and the structure was replaced with a **cored slab bridge**. There were no utilities in conflict on this bridge. This \$1M bridge replacement project in a **residential community** was completed in 2019.

We invite you to reach out to Josh Deyton, Assistant Division Construction Engineer (was Division Bridge Manager at the time of this project), jbdeyton@ncdot.gov or 828.488.0902.







## B-5988 - Bridge Replacement for the Town of Wadesboro

### 2019 - 2022

This bridge (#030316) is located on Burns Street over Lampley Creek in Anson County, North Carolina. A single span 55' long by 30' wide structure was proposed to replace an existing single span 25' long by 29' wide structure in Wadesboro. The replacement is necessary to improve on the existing structure that was built in 1973 that is no longer deemed sufficient. The grade will increase by approximately one foot to maintain low chord. The proposed bridge does not overtop in the base flood event per HEC-RAS model results and will satisfy a No Rise for floodplain management purposes.

TGS provided hydraulic design engineering services for this project over a FEMA Limited Detailed studied stream. Performed HEC-RAS modeling and adjusted to successfully obtain a **No-Rise Certification**.

The TGS team provided turnkey planning and design services on this bridge replacement project included preparation of a Categorical Exclusion, surveys, natural resource surveys, roadway and structure design, hydraulic design, environmental permitting, traffic control plans and pavement design. Carolinas Geotechnical Group performed all geotechnical tasks. TGS staff members Jimmy Terry, PE, Marc Cheek PE, and David Petty, PE were all heavily involved in this project for roadway, structure, and hydraulic design, respectively.

Permitting on this project includes Nationwide Permit 3 and NC General Certifications 4132 without written notification. Agency coordination for this bridge replacement included USACE, NCDWR, Anson County Floodplain Administrator, Town of Wadesboro Floodplain Administrator, NCDOT, and NCDCR.

We invite you to reach out to Mr. Hugh James with the Town of Wadesboro.

Mr. Hugh James, Public Works Director Town of Wadesboro, 124 E. Wade Street, Wadesboro, NC 28170 <u>towwaterplant@windstream.net</u> or 704.694.5171





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# Bridge over French Broad River for Biltmore Farms in Buncombe County 2019 – 2022

The TGS Engineers team provided surveys, structural, roadway, geotechnical and hydraulic design, obtained permits, prepared the construction estimate for roadway approaches and a bridge on new location including a multi-use path over the French Broad River about 1,000 feet downstream of the Blue Ridge Parkway crossing.

There was extensive coordination with USACE, NCDENR, USFWS, and NCWRC. TGS prepared documents and drawings to successfully obtain 401/404 permits and a Biological Opinion from USFWS to satisfy the Endangered Species Act. TGS also managed the bid advertisement and is currently providing contract administration services. TGS has been on time and on budget with this project. Active staff members include Jimmy Terry, PE performed roadway approach design; Leonard Fletcher, PE, PLS and Ray Elliott, PE for structure design; John Thomas, PLS for surveys; and David Petty, PE on hydraulic modeling, design and permitting efforts.

FEMA modeling efforts were an important component. The French Broad River crossing involved fill in the floodway on a FEMA Detailed (Redelineated) studied stream. Upon due diligence with NC Floodplain Mapping, it was determined that a truncated Existing Conditions model would be created in HEC-RAS to extend up and down stream to cover the area of revision. Then a revised model was created to analyze the proposed bridge within the floodplain. Successful coordination and stakeholder input resulted in a design that ultimately avoided impacting any insurable structures in the floodplain. Applications were prepared and extensive coordination performed with NC Floodplain Mapping, Buncombe County Floodplain Administrator, Asheville Floodplain Administrator and FEMA to obtain a CLOMR as well as a County Floodplain Development Permit. A post construction LOMR will be required.

We invite you to reach out to Mr. Lee Thomason with Biltmore Farms.

Mr. Lee Thomason, VP Commercial and Residential Development, Biltmore Farms, One Town Square Boulevard, Suite 330, Asheville, NC 28803 828.209.2000 or <u>lthomason@biltmorefarms.com</u>







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### **Emergency Express Design-Build Replacement of Bridge over Old Mill Pond** 2017

On February 21, 2017, the North Carolina Department of Transportation opened bids for the Emergency Replacement of Bridge #262 in Caldwell County. The existing 400' bridge, built in 1949, had already been identified for repairs. The existing structure was built using timber piles and short spans to cross Old Mill Pond/Gunpowder Creek in the Town of Granite Falls. Over time, the timber piles decayed and deteriorated to the point of splitting and failure. In fact, the bridge was closed to traffic on October 4, 2016, while the Structures Management Unit worked with Inspections and local Bridge Maintenance staff to develop plans for the muchneeded repairs. One impact of this closed, now collapsed, bridge was the six (6) plus mile detour that not only inconvenienced area residents but also increased volumes on two nearby major secondary routes. Obvious now that the bridge needed replacing versus repairing, the Department decided to deliver this project using the Design-Build method.

Setbacks did occur during this project. With limited ability to control the pond elevation, the construction efforts were flooded out several times making accessibility a challenge thus jeopardizing the schedule. This stream-fed pond filled up following some significant rain events, even with the open valve. Another challenge to overcome was the limited access to the bridge ends that occurred when the concrete was placed in the bridge deck. In order to accomplish that task, over 200 feet was pumped. Even with the largest concrete pumps available, the crews had to handle the extended pump lines by hand to reach the furthest points in the deck.

The final challenge, a big setback, came on October 23, 2017, when the area was hit by a tornado. There was extensive damage to the bridge deck overhang forming system. The crews quickly cleared the debris and rebuilt the forms to further limit the delays.

> Despite the setbacks, the goal of opening the bridge to traffic prior to Christmas 2017 was met! The bridge was opened to vehicular traffic on December 22, 2017. This was a fast-track design project.

Mark Johnson was the Division Bridge Manager at the time of this project and Virginia Mabry was the Manager of Priority Projects. Both have retired.

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November 4, 2022







<u>Catlin Engineers and Scientists Relevant Projects</u> Geotechnical Investigations



#### B-4414 – Replace Bridge 43 over Pungo Creek, Beaufort, NC

Subsurface investigation and foundation design for proposed 150-foot, 3 span bridge over Pungo Creek in Beaufort County, NC. Project scope included: subsurface investigation, prepare a subsurface inventory report, selection of an appropriate and cost-effective foundation type, pile bearing capacity analysis, pile lateral stability analysis, pile drivability analysis and range of hammer energy, design scour for stream crossing, slope stability analysis, embankment settlement analysis, waiting period and settlement monitoring. The original investigation was completed in 2018, NCDOT asked for revised report for re-design in 2019. Contact: Tyler Bottoms, PG @ 252.439.2872 or tcbottoms@ncdot.gov.

#### B-4590 - Replace Bridge No. 29 over Smith Creek on SR 2812 / US 117 / NC 133, New Hanover County, NC

Bridge Subsurface Inventory Investigation and Foundation Design for a 275-foot three span bridge over Smith Creek. Field activities consisted of development of boring plans, boring layout, utility clearance coordination, two (2) SPT end bent borings 60 feet deep, two (2) SPT interior bent borings to 100 feet and two (2) SPT interior bent borings with core to 100 feet with 35 feet of rock coring for a total of 450 feet of SPT footage and 70 feet of core. CATLIN completed all field activities, geotechnical soil lab testing and prepared a scour memo, load request, Subsurface Bridge Inventory Report and Bridge Foundation Recommendations Report. Project completed in April 2018. Contact: Tyler Bottoms, PG @ 252.439.2872 or tcbottoms@ncdot.gov.



#### Wooten Company Relevant Projects Utility Conflict Plans

We

#### NCDOT Project B-571—Rockingham County—Bridge 140 Replacement

The Wooten Company performed work for Mott MacDonald on this project. For the project, TWC performed Utility Coordination for conflicts due to Electric Distribution, Communications, Water, Sewer, and Gas. This project also involved Historic Property and a recreational area beside the Dan River. Completion Status: Ongoing. NCDOT contact for this project: Tim Powers, PE, NCDOT Division 7 Bridge Program Manager @ 336.487.0000 or tpowers@ncdot.gov.

# Wooten

#### NCDOT Project BP2.R024—Craven County— Bridge 160 Replacement

For this project, The Wooten Company will be performing Utility Coordination for a bridge replacement with conflicts due to Electric Distribution, Phone, CATV, Gas, Water and a Vacuum Sewer line attached to existing bridge. Completion Status: Ongoing. NCDOT contact for this project: Michael Aman, PE, NCDOT Division 2 Bridge Program Manager @ 252.439.2812 or mcaman@ncdot.gov.

#### Surveys

#### Middlesex Corporate Centre Infrastructure

The Wooten Company assisted with the funding acquisition and prepared the necessary preliminary study. The County selected The Wooten Company to design water, sewer, and roadway infrastructure needed to not only serve the new shell building but also for future tenants. This included topographic survey of approximately 9,500 linear feet and one acre for an elevated tank. The contact for this project is Jonathan Boone, PE, Public Utilities Director @ 252.462.2436 or Jonathan.boone@nashcountync.gov

#### **C: Team Experience**

#### **Professional Staff**

The TGS team includes more than 100 professionals located in North Carolina. By partnering with our proposed subconsultants it is our belief that this team is strongly suited for this project. The following resumes of our key team personnel highlight relevant experience.



Burke Evans, PE – Project Manager | Design Engineer TGS Engineers Raleigh, NC NC PE #019724 Experience: 32 years

Burke has more than 30 years of experience with engineering and planning projects, developing functional, right of way and construction bridge replacement and roadway plans. His expertise includes the design of rural and urban projects from widening secondary roads to major interchange/interstate design. His experience also includes multi-use trail/greenway design, bridge replacement projects, interchange design, intersection improvements, superstreet design, traffic management, construction phasing, construction estimating and overall project management.

Recent similar projects include:

- ✓ B-4607 replace bridge #143 in Pitt County Project Manager
- ✓ Replace bridge #34 over Upper Little River in Lee County Project Manager
- ✓ **Replace 3 bridges in Northampton County** Project Manager
- ✓ Replace 2 bridges in Wayne County Project Manager
- ✓ B-5850 replace bridge #44 in Lincoln County Project Manager
- ✓ W-5704E roadway improvements to Covered Bridge Road in Johnston County Project Manager
- ✓ R-5705B roadway widening of NC 55 in Harnett & Wake Counties Co-Project Manager
- ✓ R-2307B roadway improvements to NC 150 in Iredell & Catawba Counties Project Manager



Jay Twisdale, PE – Hydraulic Design | QA/QC TGS Engineers Raleigh, NC NC PE #024897 Experience: 32 years

After 29 years with the NCDOT, Jay retired from his position of Assistant State Hydraulics Engineer to join TGS two years ago. With more than 30 years of experience with engineering and planning projects involving hydrologic/hydraulic design, his expertise includes design, project management, coordination of project development and merger projects, bridge, and culvert design, permitting, stormwater management, stream design, erosion control and interpretation of drainage laws. Due to his technical experience, he has served as an expert witness for the State Attorney General's office. Having spent

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a great deal of time in Western North Carolina in both his previous and current roles, Jay brings a wealth of knowledge and experience to this project from a hydraulic perspective.

Recent similar projects include:

- ✓ Bridge over French Broad River for Biltmore Farms Provided hydraulic design QA/QC for this connectivity project in Asheville.
- EB-6038 City of Hickory Multi-Use Trail and Pedestrian Bridge over US 321 Provided hydraulic design QA/QC for the pedestrian bridge over US 321 project in Hickory, NC.
- ✓ I-4700 I-26 Improvements Performed drainage design reviews and project oversight for the NCDOT Hydraulic Unit.



David Petty, PE – Hydraulic Design | Permitting TGS Engineers Raleigh, NC NC PE # 038697 Experience: 17 years

David has more than 17 years of experience with engineering and planning projects that have primarily been focused on water resources. One of TGS' lead Hydraulics Engineers, David has worked on bridge replacement projects along with rail and roadway improvement projects for the past nine (9) years. David leads the environmental permitting efforts at TGS, and his expertise includes FEMA submittal packages such as CLOMR/LOMR and NCDOT / NCFMP MOA submittals. Permitting experience includes buffer impacts, CAMA & 404 wetland impacts, trout streams and other environmentally sensitive areas.

Recent similar projects include:

- Bridge over French Broad River for Biltmore Farms David provided hydraulic design engineering services for this connectivity project in Asheville. Bridge and roadway approaches on new location included five lanes of traffic as well as a multi-use path over a FEMA Detailed (Redelineated) studied stream. Performed HEC-RAS modeling, adjusted design to avoid impacting any insurable structures in the floodplain, prepared requests, and guided efforts to successfully obtain a Conditional Letter of Map Revision (CLOMR) and Floodplain Development Permit.
- EB-6038 Multi-Use Trail Connector & Pedestrian Bridge over US 321 for City of Hickory Provided hydraulic design engineering services for this multi-use trail connector and pedestrian bridge project. Developed drainage design and permit drawings and completed the 401/404 permit application for a 3-mile multi-use path including pedestrian bridge over US 321 and a wetland. The project also included a boardwalk and roadway improvements through urban and historic areas. Additional complexities included design and coordination for numerous railroad crossings and design of storm drainage under embankments of significant heights.
- B-5988 Bridge Replacement for the Town of Wadesboro Provided hydraulic design engineering services for this project over a FEMA Limited Detailed studied stream. Performed HEC-RAS modeling and adjusted to successfully obtain a No-Rise Certification.
- Cleveland County Rail Trail for the City of Shelby Provided hydraulic design and environmental permitting for the Shelby portion of the Cleveland County Rail Trail project. This project is in design phase, on schedule and on budget.





Ray Elliott, PE – Structural Engineer TGS Engineers Shelby, NC NC PE #022992 Experience: 29 years

Ray has more than 29 years of progressive experience with all aspects of structural engineering projects – from inception to completion including maintenance and repair. As Project Engineer, Ray excels in understanding project goals, strict code adherence, technical details and certainly client relationships. His experience includes hundreds of projects for the many municipalities, NCDOT, US Forest Service and the Norfolk Southern Railroad. Ray's expertise on both bridges and culverts includes surveys, planning, plan production, design, plan review, construction engineering, in-service bridge inspections, in-service bridge load ratings, bridge repair design and design repair construction engineering.

Recent similar projects include:

- ✓ Bridge over French Broad River for Biltmore Farms Provided design engineering services for this connectivity project in Asheville.
- EB-6038 City of Hickory Multi-Use Trail and Pedestrian Bridge over US 321 Provided design engineering services for the pedestrian bridge over US 321 in Hickory, NC.
- RADTIP Pedestrian Bridge, City of Asheville Ray provided drafting services for the design of bridge bents for a pedestrian bridge for the City of Asheville on the River Arts District Transportation Project (RADTIP) in 2019 as a subconsultant to the contractor.
- Bald River Falls Bridge Replacement, USDA Forest Service Ray provided structural design engineering services for this bridge replacement in the Cherokee National Forest near Tellico Plains, NC. The new structure is currently under construction.
- ✓ B-5549 Falling Creek Road Bridge Replacement, City of Hickory Provided design engineering services for bridge replacement in Hickory, NC.
- ✓ Structural engineering design services on more than 100 design-build bridge replacement projects in the last few years.
- ✓ Structural engineering design services on hundreds of bridge replacement projects in Western North Carolina for NCDOT.



Marc Cheek, PE – Structural Engineer TGS Engineers Raleigh, NC NC PE #020125 Experience: 32 years Marc joined TGS Engineers following h

Marc joined TGS Engineers following his retirement from NCDOT in 2017 after 28 years of service, his last 18 of which he spent as project design engineer managing a design team preparing contract plans for the replacement of highway structures. Now Marc is a senior project engineer focused on structure design at TGS. His expertise with preservation and rehabilitation of existing structures is extensive as well as design and quality assurance in plan review. Milestone projects at NCDOT include U-4909 – SR 2643 over I-40 in Forsyth County (Diverging Diamond Interchange); R-2233AA & AB – US 221 Bridge Replacement in Rutherford County, and I-5746C & D – I-277 Rehabilitation/Preservation in Mecklenburg County.

Recent similar projects include:

✓ Bridge over French Broad River for Biltmore Farms – Provided engineering design services for this connectivity project in Asheville.



- Bald River Falls Bridge replacement, USDA Forest Service Marc provided structural design engineering and review services for this bridge replacement in the Cherokee National Forest near Tellico Plains, NC. The new structure is currently under construction.
- ✓ B-5988 Bridge Replacement for the Town of Wadesboro Provided structure design engineering services for this project.
- ✓ Structural engineering design services on dozens of design-build bridge replacement projects in the last few years.
- A-0009C Corridor K Improvements, Graham County Marc is providing structural design engineering services for a unique structure on this project that involves the Appalachian Trail.
- ✓ Structural engineering design services on hundreds of bridge replacement projects across North Carolina for NCDOT.

Stacy Oberhausen, PE – Planning / Environmental Document Compliance

**Experience: 35 years** Stacy has more than 35 years of experience in engineering, NEPA/SEPA compliance and project development documentation. Stacy excels in project scoping and negotiation, development of alternative solutions and management and coordination or complex projects with local, state, and federal agencies. Stacy's retired from the PDEA unit of NCDOT with 30 years of service.

#### Recent similar projects include:

TGS Engineers Raleigh, NC NC PE #023033

- ✓ A-0009C Corridor K in Graham County Project Management
- ✓ EB-6038 Multi-Use Trail & Pedestrian Bridge over US 321 for the City of Hickory Environmental Compliance
- ✓ Shelby Rail Trail to the SC State Line for the City of Shelby Environmental Compliance
- ✓ U-5839 US 276 Improvements in Haywood County Project Management
- ✓ U-5774 NC 54 in Orange / Durham Counties Project Management
- ✓ R-5839B NC 28 in Swain / Graham Counties Project Management
- ✓ B-5837 Bridge Replacement in Surry County Environmental Compliance
- ✓ R-2588B NC 191 Roadway Widening in Henderson County Environmental Compliance



#### **Proposed Subconsultant Partners**



#### **Catlin Engineers and Scientist – Geotechnical Investigations**

Key staff members include Lee Stone, PG as the Senior Engineering Geologist; Steve Hudson, PG, CWC as the Senior Geologist; and Ben Lackey, Jr., PE and Cindy Liu, PhD, PE as the Geotechnical Engineers.



#### Sage Ecological – Natural Systems Studies & Environmental Permitting

Key staff members include Sean Clark, PWS as the Project Manager. Kim Hamlin, PWS with more than 9 years of experience in natural resource identification, technical writing and permitting; and, Ryan Elliott. Cory Darnell, PWS has over 10 years of experience in natural resources, environmental regulation, and 404/401/10 and CAMA permitting. Abigail Sheffey is an environmental scientist with over 5 years of experience in natural resource identification and environmental regulation and permitting. David Gainey has more than 18 years of experience in natural resource identification, stream and wetland restoration monitoring and plan preparation.

## **Wooten** The Wooten Company – Surveys & Utility Conflict Plans

Team members for utility conflict plans include Ed Reams with over 30 years of experience; Webb White with more than 25 years of experience; and, Tommy Martin with almost 40 years of experience. Tommy's previous experience includes 30 years with the NCDOT. The team members to provide the survey efforts include Tim Ingold, PLS, CFS, Mike Davis, and Mark Hussey. Tim has more than 25 years of experience, Mike over 20 years and Mark over 30 years of experience. Their survey technician, Rick Denny, has almost 20 years of experience in land surveys and project management.



#### **D: Current Workload**

We understand the importance of maintaining project schedules. The TGS Capacity Chart below shows the workload availability of the key professional staff to be utilized for the project. Additional staffing is available through TGS as required by project demands. Our team will work together with the City to make sure that the schedules are met. Staff day estimate is based on an average of 20 working days per month. Total key staff days equals 440 days per month.

TGS staff as well as our proposed subconsultant partners have the bandwidth for the Town's bridge replacement project.



TGS Engineers is a progressive-minded firm with employees who look for opportunities for project innovation and new technologies as a part of the project development process towards client success. Our experience and relationships with numerous agencies allow us to make good decisions at early stages as projects develop, providing opportunities to investigate innovative alternatives and solutions to situations that arise.


## E: Cored Slab Bridge Design Experience

As mentioned on page 4, just in the last five (5) years, TGS has designed more than 50 cored slab bridges for replacement projects in North Carolina and more than one hundred (100) express design-build bridge replacement projects. Our team of senior engineers, many with years of NCDOT experience as well, can provide the Town of Southern Shores the most effective solution for the Juniper/Trinitie Trail bridge replacement.

The TGS team understands the need to significantly reduce local settlement and the need for gradual transition between roadway and bridge deck. With a cored slab bridge, the formwork is simpler and less expensive, and are excellent candidates for using prefabricated bridge elements. Cored slab bridges are very resilient and usually have very low maintenance costs depending on the environment. The reinforced slab bridges have a decreasing substructure configuration and a polished appearance while distributing the applied loads in all directions. This type of structure is generally suitable for bridges with individual span lengths of up to 75 feet.

# **F: Proprietary Property**

TGS Engineers acknowledges that any work product developed under contract for or on behalf of the Town of Southern Shores, will be retained and submitted to the Town or its specified agent or contract consultant.

## **G: References**

In addition to those **references included in section B**, please feel free to reach out to the following NCDOT representatives associated with our design efforts for their projects.

David Stutts, PE NCDOT Structures Management Unit 1581 Mail Service Center Raleigh, NC 27699-1581 <u>dstutts@ncdot.gov</u> 919.707.6442 Michael Aman, PE NCDOT Highway Division 2 2815 Rouse Road Extension Kinston, NC 28504 <u>mcaman@ncdot.gov</u> 252.439.2812



# **H: Defining Scope**

As hydraulic design is such an important component, TGS envisions that the following hydraulic design and environmental regulatory coordination/compliance activities will be required during the drainage design of the desired replacement structure.

The proposed bridge replacement structure will require coordination with NCDEQ Division of Coastal Management (NCDCM) as well as the US Coast Guard. Due to this crossing of Jean Guite Creek most likely being considered a navigable waterway, a US Coast Guard Bridge Permit will likely be required, and the existing navigation clearance will have to be maintained.

Additionally, coordination with the Division of Marine Fisheries (DMF) and the Wildlife Resource Commission (WRC) is recommended prior to proceeding with the General CAMA Permit process. Permit Drawings for any project related environmental impacts as well as a General CAMA Permit Application will have to be prepared, submitted, and approved by NCDCM prior to construction



of new structure beginning. General CAMA Permit Application would cover any required construction activities associated with the removal of the existing roadway embankment and structure as well as construction of the new bridge and associated roadway approaches/embankment.

Also, if an increase in built upon area is part of the associated adjacent roadway approaches /embankments and proposed replacement structure, a stormwater management plan will have to be submitted to NC Division of Water Resources (NCDWR) for review and approval before NCDCM can issue a CAMA Permit. Finally, until actual environmental impacts can be quantified and finalized, the need to prepare and submit an electronic Pre-Construction Notification (ePCN) to USACE and NCDWR cannot be determined. However, anticipated construction activities are likely to fall under a Nationwide Permit - most likely a NWP 3 or possibly a NWP 33.

We look forward to further defining the scope of this project!



PLANNING AND **DESIGN SERVICES FOR** THE JUNIPER/TRINITIE TRAIL BRIDGE REPLACEMENT PROJECT

**Statement of Qualifications** 

November 4, 2022



# CHAPTER | LETTER OF INTEREST



November 4, 2022

**David Bradley, Public Works Director** Town of Southern Shores 5375 N. Virginia Dare Trail, Southern Shores, NC 27949 | skane@southernshores-nc.gov

# Re: Request for Qualifications (RFQ) - Planning and Design Services for the Juniper/Trinitie Trail Bridge Replacement Project

Dear Mr. David Bradley + Selection Committee Members,

**SEPI Engineering & Construction, Inc. (SEPI)**, a Division of TranSystems, has assembled a highly qualified, multi-disciplined Team that possesses the knowledge and experience to perform all necessary engineering services for the Juniper/Trinitie Trail Bridge Replacement Project.

**EXPRESSION OF INTEREST** SEPI, a Division of TranSystems, is very pleased to submit our Statement of Qualifications to the Town of Southern Shores (Town) for the Planning and Design Services for the Bridge Replacement Project. TranSystems is ranked #9 on the ENR Top Design Firms for Structures. SEPI offers an exceptional team of engineers, planners, technicians, and support staff to deliver this project based upon our understanding and familiarity with the community having been selected for the Town of Southern Shores Pavement Condition Survey for Maintenance and Repair Treatment Recommendations.

**DEPTH OF EXPERTISE** SEPI offers a distinct Team of project focused experts that provide a comprehensive approach to project delivery. We have the capability to provide additional resources to meet future needs and the flexibility to adapt quickly. We enhanced our Team by adding Richard Catlin and Associates Inc. **(CATLIN)** for Geotechnical services.

**PROJECT LEADERSHIP** I will serve as Principal-in-Charge, allocating our depth of resources to appropriately staff this contract. Phil Harris PE, CPM, who is located in our Raleigh office, will serve as Project Manager and will be the primary point of contact for the Town during the course of the project. Phil has over 30 years of experience with both the natural and human environment, coastal engineering studies, planning, permitting and mitigation, and recently joined SEPI after his retirement from the NCDOT as the EAU Unit Head.

**CONFLICT OF INTEREST** The SEPI Team has no known conflict of interest with the Town for this contract. We are poised to deliver the requested services upon Notice-to-Proceed and maintain project schedules with the availability and depth of resources of our Team. Thank you for the opportunity to share our qualifications and we would be honored to collaborate with you.

**SUMMATION** SEPI acknowledges receipt of Addendum 1. Should you have any questions regarding our Team's submittal, please do not hesitate to contact me by phone at 252.394.4052 or via email at aroper@sepiinc.com. We look forward to this opportunity to continue our relationship with the Town of Southern Shores and ask for your strong consideration as you make your selection.

Sincerely,

Adding W. Roper

Anthony Roper, PE, CPM | Vice President | Principal-in-Charge

# SEPI is a Team of planners, designers, engineers, environmental scientists, landscape architects, and more.

# SEPI TEAM REGISTRATIONS SEPI

- Secretary of State (#0325524)
- NC Engineers/Land Surveyors (#F-0453)
- NC Landscape Architects (#C-685)
- NCDOT Prequalified through 8/31/2023

### CATLIN

- SPSF Firm
- Secretary of State (#0175745)
- NC Engineers/Land Surveyors (#C-0585)
- NCDOT Prequalification through 11/30/2022

# PRIMARY POINT-OF-CONTACT

#### PHIL HARRIS PE, CPM



 ✓ Project Manager
 ✓ 30+ Years of Experience
 ✓ Former NCDOT EAU Unit Head

1 Glenwood Avenue, Suite 600 Raleigh, NC 27603

☐ 919.637.8784
 ▲ pharris@sepiinc.com



# Anderson County, Minor Street Bridge Replacement, SC

TranSystems was part of the Bunnell Lammons Engineering (BLE/J. Bragg Consulting) team that was selected for a two-year On-Call contract with the Anderson CTC. Under this contract, TranSystems provided hydrology/ hydraulic and bridge design services for all bridge related task orders, provided roadway engineering support as requested, and provided inspectors to facilitate any construction inspection needs.

The bridge consisted of a 30' cored slab structure founded on R/C caps and steel piles. Multiple utilities ran in line with the roadway under the bridge and had to be designed around, including a gas line, abandoned terracotta water line, and multiple water/sewer lines.

### **RELEVANCE**

- ✓ Municipal Client
- ✓ Cored Slab Structure
- ✓ Structural
- ✓ Hydraulic/Erosion Control Design
- ✓ Roadway Design
- ✓ Construction Inspection
- ✓ Utility Coordination/Relocation

### **PROJECT DATES**

2018-2019

### **CONTACT**

Jennifer Bragg, PE, Anderson County 803.513.3777 jbragg@jbraggconsulting.com



TOWN OF SOUTHERN SHORES // SOQ FOR THE JUNIPER/TRINITIE TRAIL BRIDGE REPLACEMENT PROJECT



# City of Raleigh, Shelley Road Bridge Replacement

SEPI was selected as part of a multi-disciplinary team to provide design services for the Shelley Road Bridge over Mine Creek in Raleigh, North Carolina. The bridge provides the only connectivity across Mine Creek and the Mine Creek Greenway for the Ridgeloch neighborhood. The site is in a FEMA regulated floodplain and is located downstream from an earthen dam with multiple insurable structures located downstream. As part of this project, SEPI staff is providing survey, SUE, roadway design, environmental investigation, hydraulic design ("No-Rise" certification), drainage design, landscape architecture, permitting, traffic control, public involvement, bid documents, and bid support. MI Engineering is providing structure design, F&H is providing geotechnical services, and Hinde is providing utility coordination and design.



### **RELEVANCE**

- ✓ Municipal Client
- ✓ Residential Setting
- ✓ FEMA Regulated Floodplain
- ✓ Hydraulic/Erosion Control Design
- ✓ Roadway Design
- ✓ Survey/SUE
- ✓ Environmental/Permitting
- ✓ Landscape Architecture
- ✓ Bid Documents/Bid Support

#### **PROJECT DATES**

3/2021 - TBD

### **CONTACT**

Cordis Thompson, City of Raleigh 919.996.4055 cordis.yates-thompson@raleighnc.gov



# NCDOT Division 2, B-4926 Bridge Replacement #20 & #34 over Neuse River

SEPI was selected by the NCDOT to provide planning and design services for the replacement of two bridges carrying NC Hwy 55 over the Neuse River floodplain in Lenoir County, NC. This crossing of the Neuse River is very close to Kinston and is the only crossing of the Neuse 20 miles upstream of US 258 in Kinston. The selected alternative was a new location crossing just downstream of the existing crossing. In addition to replacing the main bridge over the Neuse, an overflow structure east of the main bridge is being replaced. The replacement structures are both multi-span concrete girder bridges 540' and 215' long respectively.

SEPI was responsible for Project Management, SEPA document, environmental investigations, road design, hydraulic design, erosion control, permitting, utility coordination, traffic management, pavement marking, signing, and public involvement. SEPI also managed the structural, geotechnical, and SUE subconsultants.

The river crossing has a drainage area of 2,800 square miles, an effective 100-year floodplain over 9,000 feet wide, is located within an expansive freshwater wetland network, and is designated as critical habitat for the Atlantic Sturgeon. The project area has been impacted multiple times by major flood events including Hurricane Floyd in 1999 and Hurricane Matthew in 2016. SEPI staff also successfully designed replacement structures for both the primary river crossing and one overflow bridge in accordance with NCDOT hydraulic design standards and in compliance with Federal Emergency Management Agency (FEMA) regulations. The hydraulic modeling demonstrated an improvement in the highway level of service, "No-Rise" in Base Flood Elevations (BFEs), and "No-Impact" to any of the multiple insurable structures identified within the floodplain.

SEPI evaluated two roadway alignments to avoid and minimize wetland and floodplain impacts. Through an extensive agency coordination process, a preferred alternative on new location was chosen by the agencies. The project required an individual permit (IP) from the US Army Corps of Engineers (USACE), water quality certification from North Carolina Department of Water Quality (NCDEQ), and the Atlantic Sturgeon coordination from NMFS.

### RELEVANCE

- ✓ Two Bridge Replacements with Multi-Span Concrete Girder
- ✓ SEPA Document
- ✓ Environmental/Permitting
- ✓ Hydraulic/Erosion Control Design
- ✓ Utility Coordination
- ✓ Traffic Management/Pavement Markings/Signing
- ✓ Public Involvement

### **PROJECT DATES**

2018 - 2022

### CONTACT

Casey Whitley, PE, NCDOT, 252.791.0295, ckwhitley@ncdot.gov



# NCDOT, Division 4, Express Design-Build Year 6

SEPI was the hydraulic design consultant for Vaughn & Melton the Design-Build team selected by Division 4 to replace nine bridges in Johnston and Wayne Counties, NC. Eight bridges were replaced in place with new precast concrete bridge structures, and one bridge was replaced with a reinforced concrete box culvert. SEPI was responsible for drainage and hydraulic design for eight of the nine project sites. All sites are within the Neuse River Basin and are subject to Statewide Buffer Rules. SEPI completed final hydraulic design, FEMA coordination, drainage design, and permit drawing preparation in accordance with the NCDOT Guidelines for Drainage Studies and Hydraulic Design and the requirements of the NCDOT Post-Construction Stormwater Program.

- B-4562, Bridge #216, Johnston County. Replace Bridge #216 on SR 2143 over Little Buffalo Creek.
- **B-5656, Bridge #133, Wayne County.** Replace Bridge #133 on SR 1127 over Yellow Marsh Branch.
- B-5659, Bridge #432, Johnston County. Replace Bridge #432 on SR 1738 over Cattail Creek.
- B-5661, Bridge #243, Johnston County. Replace Bridge #243 on SR 2123 over Little River.
- B-5663, Bridge #46, Johnston County. Replace Bridge #46 on SR 1124 over Mill Creek.
- B-5664, Bridge #145, Johnston County. Replace Bridge #145 on SR 1555 over Swift Creek.
- B-5667, Bridge #231, Johnston County. Replace Bridge #231 on SR 2159 over Little Buffalo Creek.
- **SF-950132, Bridge #132, Wayne County.** Replace Bridge #132 on SR 1127 over Edwards Branch. This project involved the replacement of an existing bridge with a reinforced concrete box culvert.

### RELEVANCE

- ✓ Eight Bridges Replaced with New Precast Concrete Bridge Structures, and One Bridge Replaced with a Reinforced Concrete Box Culvert
- ✓ Hydraulic/Erosion Control Design
- ✓ FEMA Coordination
- ✓ Permit Drawing Preparation

### **PROJECT DATES**

2017 - 2019

#### CONTACT

Paul Garrett, PE, Vaughn & Melton 919.977.9455 tpgarrett@vaughnmelton.com





# NCDOT, Division 9, Express Design-Build Year 4

SEPI was responsible for the replacement of 10 aging bridges throughout NCDOT Highway Division 9 with concrete box culverts using the NCDOT Low-Impact Bridge Replacement process. All sites are located within FEMA regulated floodplains and were designed and approved in accordance with NCDOT guidelines for drainage studies and hydraulic design.

FEMA coordination and final project acceptance was completed in accordance with the policies and procedures documented in a Memorandum of Agreement (MOA) between NCDOT and the North Carolina Floodplain Mapping Program with designated authority from FEMA. SEPI was responsible for roadway design, hydraulic design, traffic design, environmental permitting, and project management services. Projects included:

- Bridge #95, Davidson County. Replace Bridge #95, SR 1838 (Lake Leonard Road) over Leonard Creek.
- Bridge #149, Rowan County. Replace Bridge #149, SR 2132 (Union Church Rd) over Church Creek Tributary 1A.
- Bridge #315, Rowan County. Replace Bridge #315, SR 1225 (Patterson Street) over Grants Creek.
- Bridge #86, Davidson County. Replace Bridge #86, SR 1158 (Wilson Road) over Unnamed Tributary to South Potts Creek with a new reinforced concrete box culvert.
- Bridge #471, Davidson County. Replace Bridge 471, SR 2416 (Old Highway 109) over West Branch Lick Creek with a new reinforced concrete box culvert.
- Bridge #184, Rowan County. Replace Bridge 184, SR 2333 (Cannon Street) over Unnamed Tributary to Second Creek with a new reinforced concrete box culvert.
- Bridge #188, Rowan County. Replace Bridge 188, SR 2564 (Shive Road) over Second Creek with a new reinforced concrete box culvert.
- Bridge #236, Rowan County. Replace Bridge 236, SR 1221 (Bostian Road) over Unnamed Tributary to Cold Water Creek with a new reinforced concrete box culvert.
- Bridge #260, Rowan County. Replace Bridge 260, SR 1535 (Weaver Road) over Little Creek with a new reinforced concrete box culvert.
- Bridge #353, Rowan County. Replace Bridge 353, SR 1349 (Turkey Road) over Unnamed Tributary to Cold Water Creek with a new reinforced concrete box culvert.

### RELEVANCE

- ✓ 10 Bridge Replacements with Concrete Box Culverts
- ✓ Hydraulic Design/Erosion Control
- ✓ Roadway Design
- ✓ Environmental/Permitting
- ✓ Traffic Design

### PROJECT DATES

2015 -2017

### **CONTACT**

Eileen Fuchs, NCDOT 919.707.6613 eafuchs@ncdot.gov





# NCDOT, Division 11, Express Design-Build Year 6

The project consisted of the replacement of five bridges in Watauga and Avery Counties. SEPI provided environmental permitting for five sites; traffic control and pavement marking plans for four sites; hydraulic modeling, drainage and erosion control for two sites; and roadway design for two sites.

SEPI was the hydraulic design consultant for a Design-Build team selected by Division 11 to replace five bridges in Avery and Watauga Counties, NC. SEPI was responsible for drainage and hydraulic design for two of the five project sites. SEPI completed final hydraulic design, FEMA coordination, drainage design, and permit drawing preparation in accordance with the NCDOT Guidelines for Drainage Studies and Hydraulic Design and the requirements of the NCDOT Post-Construction Stormwater Program.

- Bridge #22, Watauga County. Replace Bridge #22, SR 1209 (Rush Branch Road) over Beaver Dam Creek.
- Bridge #36, Watauga County. Replace Bridge #36, SR 1533 (Aho Road) over Middle Fork South Fork River.
- Bridge #53, Watauga County. Replace Bridge #53, SR 1508 (Elk Creek Road) over Elk Creek.
- Bridge #56, Avery County. Replace Bridge #58, SR 1321 (Curtis Creek Road) over Curtis Creek.
- Bridge #83, Watauga County. Replace Bridge #83, SR 1340 (Meat Camp Road) over North Fork New River.

### RELEVANCE

- ✓ Replaced Five Bridges with Prestressed Concrete Cored Slab Replacement Structures
- ✓ Project Management
- ✓ Hydraulic/Erosion Control Design
- ✓ Roadway Design
- ✓ Environmental/Permitting
- ✓ Traffic Control/PMP
- ✓ FEMA Coordination
- $\checkmark$  Permit Drawing Preparation

### **PROJECT DATES**

2017 - 2020

#### CONTACT

Hardy Willis, PE, Vaughn & Melton 828.253.2796 hlwillis@vaughnmelton.com



# NCDOT, Division 8, Low Impact Bridge Replacements

SEPI was selected for the replacement of five aging bridges throughout NCDOT Highway Division 8 with structures of various types using the NCDOT Low-Impact Bridge Replacement process. SEPI was responsible for project management, roadway design, traffic management, hydraulic design, erosion control, utility design, utility coordination, and permitting. Each of these bridges was replaced in place while detouring traffic off-site.

All sites are located within FEMA regulated floodplains and were designed and approved in accordance with NCDOT guidelines for drainage studies and hydraulic design. FEMA coordination and final project acceptance were completed in accordance with the policies and procedures documented in a Memorandum of Agreement (MOA) between NCDOT and the North Carolina Floodplain Mapping Program with designated authority from FEMA.

#### Projects included:

- B-5739, Bridge #170, Randolph County. Replace Bridge #170, SR 2621 (Foushee Road) over Reed Creek.
- **B-5747, Bridge #157, Chatham County.** Replace Bridge #157, SR 2145 (R. Jordan Road) over Cedar Creek.
- B-5758, Bridge #13, Moore County. Replace Bridge #13, SR 1102 (Addor Road) over Aberdeen Creek.
- **B-5763, Bridge #129, Randolph County.** Replace Bridge #129, SR 2407 (Starmount Road) over Sandy Creek Tributary 3.
- **B-5760, Bridge #79, Richmond County.** Replace Bridge #79, SR 1424 (Jones Spring Church Road) over Naked Creek.

### RELEVANCE

- ✓ Replaced Five Bridges
- ✓ Project Management
- ✓ Hydraulic/Erosion Control Design
- ✓ Traffic Management
- ✓ Utility Coordination/Design
- ✓ Permitting

### **PROJECT DATES**

2016 - 2018

### CONTACT

Hardy Willis, PE, Vaughn & Melton 828.253.2796 hlwillis@vaughnmelton.com





# NCDOT, Division 14, Express Design-Build Bridges B-5554, B-5555

## **Project Overview**

SEPI was responsible for the replacement of 2 aging bridges in NCDOT Highway Division 14 using the NCDOT Low-Impact Bridge Replacement process. Both sites were located on NC 215 in Transylvania County. In addition to the severe existing horizontal alignments, the US Forest Service owns all of the surrounding property and required several specialized practices. Both projects were designed and approved in accordance with NCDOT guidelines for drainage studies and hydraulic design. Prestressed Concrete Cored Slab replacement structures were selected, designed to result in no impact to insurable structures. SEPI was responsible for roadway design, hydraulic design, traffic design, environmental permitting, and project management services. Projects included:

- **B-5554, Bridge #73.** NCDOT Low Impact Bridge project to replace Bridge 73 on NC 215 over Beetree Fork.
- **B-5555, Bridge #46.** NCDOT Low Impact Bridge project to replace Bridge 46 on NC 215 over North Fork French Broad River.



### **RELEVANCE**

- ✓ Two Bridge Replacements with Prestressed Concrete Cored Slab Replacement Structures
- ✓ Project Management
- ✓ Hydraulic/Erosion Control Design
- ✓ Roadway Design
- ✓ Environmental/Permitting
- ✓ Traffic Design

### **PROJECT DATES**

2015-2017

#### **CONTACT**

Russell Rockett, Mountain Creek Contractors, Inc. 828.241.2047 rrockett@mtcreekinc.com



# **PROFESSIONAL REFERENCES**

Client Name	Project Name	Contact Name, Phone Number, and Email
Anderson County	Minor Street Bridge Replacement, SC	Jennifer Bragg, PE, 803.513.3777, jbragg@jbraggconsulting.com
NCDOT, Division 2	B-4926 Bridge Replacement #20 & #34 over Neuse River	Casey Whitley, PE, 252.791.0295, ckwhitley@ncdot.gov
NCDOT, Division 2	B-4595/B-4596 Bridge Replacement #14 and #28, Pamlico	Michael Aman, PE, 252.439.2812, mcaman@ncdot.gov

# **INSURANCE REQUIREMENTS**

SEPI meets the insurance requirements to deliver this project.

# **LEGAL JUDGMENTS**

SEPI does not have any legal judgments against our firm within the last 5 years associated with project performance or professional liability.

# **REQUIRED STATEMENT**

The SEPI Team acknowledges that the Town is the proprietor of all work product developed for or on behalf of the Town by the selected firm or person, regardless of location, type, and format of the work product – and acknowledges that all work product will be retained and submitted to the Town, or a specified agent or contract consultant of the Town at the Town's direction, upon request, regardless of whether the work product is considered a "trade secret".



# **ORGANIZATIONAL CHART**

The SEPI Team provides a staff of highly qualified professionals consisting of individuals with the specialized experience required for this project. We have sufficient available staff capacity required to provide timely and responsive service to the Town of Southern Shores. In the event that our Team encounters personnel changes or any other changes of significance, the Town will be notified immediately.



Danny Gardner, PE (R) 🕬





# **ANTHONY ROPER, PE, CPM Principal-in-Charge Education:** BS, Civil Engineering Registrations: PE, NC (#021141); CPM

#### BIOGRAPHY

Anthony has over 31 years of experience in project administration, project management, and leadership in the public sector. As the Asset Management + Maintenance Director, he is responsible for overseeing SEPI's asset inventory and asset management services, maintenance operations, contract administration, and life-cycle cost analysis procedures for largescale transportation projects across North Carolina.

Anthony currently manages a staff of more than 70 technicians and administrative staff. His expertise spans State Transportation Improvement Program (STIP) projects, bridge replacements, construction administration, Federally-funded projects, municipal projects, and disaster/emergency response efforts.

Prior to joining SEPI, Anthony served as the Deputy Secretary for the NCDOT. He managed and directed activities for the Office of Civil Rights, Division of Business Opportunity and Workforce Development, Division of Safety and Risk Management, Facilities Management Division, Support Services Division, and the Historically Black College and University Program.

#### **RELEVANT PROJECTS**

- Town of Southern Shores, Pavement Condition Survey. Principal
- NCDOT, Division 1, CEI On Call Advance Tech (Bridge Maintenance Support). Principal
- NCDOT, Division 9, Bridge Maintenance Support. Principal ٠
- NCDOT, Statewide Asset Management Pipe Inventory + GIS. Principal



# PHIL HARRIS, PE, CPM

#### **Project Manager**

Education: Master. Coastal Registrations: PE, NC (#021086); CPM

#### BIOGRAPHY

Phil has over 30 years of environmental planning, mitigation, permitting, and preservation of wetlands and streams. Phil has completed numerous reviews of Nationwide permit applications/ Individual Permit applications, NC Division of Water Resources Buffer and Variance applications including extensive coordination with agency representatives.

Phil also has experience in public involvement and is proficient in state and federal policies and procedures. Phil's other expertise include developing scopes and cost estimates and proposal development. He has also worked previously as a coastal engineering where he focused on inlet dynamics and near shore beach mechanics

Phil is presently focused on scope and fee for existing environmental project work, internal QA/QC and developing proposals for potential clients. He is involved with NCDOT Ferry Division project work and his assistance extends across all of the eastern NCDOT Division Offices. Phil often is coordinating with existing clients and recruiting new talent to the company.

#### **RELEVANT PROJECTS**

- NCDOT, Division 2, B-4926 Bridge Replacement Project, Permitting & QA/QC. Environmental Practice Lead
- NCDOT, Division 11, Daniel Boone Parkway, Feasibility Study. **Environmental Practice Lead**
- NCDOT, Division 1, Bonner Bridge, Permitting, Mitigation, & QA/QC. Former NCDOT Environmental Analysis Unit Head



### **DAVIDIAN BYRD**

QA/QC Manager Education: AAS, Architectural Technology

#### BIOGRAPHY

Davidian has more than 43 years of work experience in both the public and private sectors, including design and management of preconstruction highway projects and utility and relocation coordination. He has extensive coordination with internal and external clients, including the Federal Highway Administration, Triangle Transit Authority, local municipalities, counties, units within NCDOT, private engineering firms, and NC citizens. Prior to joining SEPI, Davidian worked for 37 years with the NCDOT. At NCDOT he was a Transportation Engineering Supervisor where he supervised a design squad to coordinate contract preparation and execution with private engineering firms along with plan review and technical assistance to ensure quality control while meeting project schedules for consultant and in-house roadway design projects including bridge replacements. He also has extensive experience in utility coordination serving as a liaison to private power, telephone, telecom, and gas companies to evaluate impacts to existing facilities and to identify relocation options.

#### **RELEVANT PROJECTS**

- NCDOT, Division 2, B-4926 Bridge Replacement #20 & #34 over Neuse River. QA/QC Manager
- NCDOT, Division 8, Low Impact Bridge Replacements. QA/QC Manager
- NCDOT, Division 11, Express Design-Build Year 6. QA/QC Manager



# ANDY HOWELL, PLS

#### Hydrologic & Hydraulic Design/ Erosion Control Plan Lead

**Education:** BS, Environmental Engineering

**Registrations:** PE, NC (#035621), CFM (#NC-09-0355)

Andy is a Professional Engineer and Certified Floodplain Manager in North Carolina with over 18 years of specialized experience in hydraulic and water resources engineering.

Specialized experience includes hydrology/hydraulic analysis and design of major hydraulic roadway structures and urban and rural roadway facilities; sedimentation and erosion control design and permitting; flood modeling and FEMA compliance coordination for floodplain development projects; and stormwater design and permitting of industrial facilities under the NPDES program.

Additionally, Andy has extensive experience in planning level hydraulic design. His recent experience includes reviewing preliminary alignments for hydraulic controlled grades; developing alternatives analysis and structure recommendations for major stream crossings; identifying potential project impacts and required mitigation measures; and production of various hydraulic planning reports.

#### **RELEVANT PROJECTS**

- NCDOT, Division 3, Bridge Replacement of 20 & 34, NC 55, Lenoir County. Senior Hydraulics Engineer
- NCDOT, Division 4B Express Design-Build Year 6, Johnston/ Wayne Counties. Senior Hydraulics Engineer
- NCDOT, Division 8, Low Impact Bridge Replacement Group, Randolph, Chatham, Moore & Richmond Counties. Senior Hydraulics Engineer



# FABIEN LUKEBA, PLS

Location & Surveys Lead Education: AS, Civil Engineering; AS, Surveying Technology

**Registrations:** PLS, NC (#L-5448)

Fabien is an experienced Manager with over 24 years of surveying experience having managed design and constructions projects for municipalities, NCDOT, federal, and private sector clients. He has worked for the past 21 years in collaboration with the NCDOT on various projects.

Fabien's experience includes MicroStation/Geopak, High Definition Surveying, 3D Laser Scanning, Land Development, Construction Engineering, Transportation Engineering, and Highways. Fabien is a strong program and project management professional in the Geomatics field. He has stayed on the front of new technologies, from the latest surveying equipment and software, 3D terrestrial scanners, Mobile laser scanners, to the latest software in Laser Scanning.

#### **RELEVANT PROJECTS**

- City of Raleigh, Shelley Ridge Road Bridge Replacement. Survey Manager
- NCDOT, 97-0091 Bridge #91 over Tributary of Town Creek on SR 1339. Survey Manager
- NCDOT, 97-0092 for Bridge #92 over Town Swamp on SR 1339. Survey Manager
- NCDOT, 2021-2022 Location & Survey LSC On-Call, Statewide. Survey Manager



# **DANNY GARDNER, PE**

#### Roadway Design Lead/ Construction Contract/ Estimates Lead

**Education:** AAS, Civil Engineering **Registrations:** PE, NC (#033871)

#### BIOGRAPHY

Danny has over 38 years of experience as a transportation engineer for a wide variety of interstate, roadway, bridge, and civil engineering projects. His skills encompass highway design, transportation plan development, noise analysis, intersection/ roundabout design, and bicycle/pedestrian neighborhood connectivity improvement. Prior to joining SEPI, he worked with the NCDOT for 29 years.

Danny is experienced in producing bid advertisements, run pre-bid meetings, issue addenda, and conduct bid openings for the client. After the bids are received, Danny reviews the bids, prepares the certified bid tabulations, and provides a recommendation of award to the Town.

#### **RELEVANT PROJECTS**

- NCDOT, Division 3, Bridge Replacement of 20 & 34, NC 55, Lenoir County. Roadway Engineer
- NCDOT, Division 8, Low Impact Bridge Replacements, Randolph and Moore County. Roadway Engineer
- NCDOT, Division 9B, Express Design-Build Year 4, Rowan and Davidson County. Roadway Engineer
- NCDOT, Division 14, Express Design-Build Bridges B-5554, B-5555, Transylvania County. Roadway Engineer



# MATT REKERS, PE

#### **Structures Lead**

**Education: MS, Civil Engineering;** BS, Civil & Environmental Engineering **Registrations:** PE, NC (#050087)

BIOGRAPHY

Matt has eight years of structural and civil engineering design experience in bridge design and design-build projects. His experience includes finite element modeling, staged construction analysis, including construction stage and final stage analysis, superstructure design including: curved steel plate girder, bolted splice design, cross frame / diaphragm design, prestressed concrete design, elastomeric bearing design and deck design, steel plate girder design, AASHTO girder design, semi integral abutment design, substructure design including: jointless philosophy abutment design, multi-column and wall piers, pile and drilled shaft design and spread footing design, and bridge load ratings under the LRFR and LFR methodologies.

#### **RELEVANT PROJECTS**

- Anderson County, Minor Street Bridge Replacement, SC. Structural Engineer
- SCDOT, SC 34 Bridge Replacements over Wilson Creek, Greenwood County. Structural Engineer
- SCDOT, I-85 Rehabilitation/Improvements to MM77 to MM84, Spartanburg. Structural Engineer
- Greenwood County, Dillard Road Bridge Replacement, SC. Structural Engineer
- VDOT, I-64 over Route 156 Bridge Replacement Project, Richmond. Bridge Designer



# ANNA REUSCHE, PWS

#### **Environmental/Permitting**

**Education:** BS, Natural Resources Management, Water Resources Management

Registrations: PWS, NC (#2242)

Anna has over 17 years of environmental and technical experience. She has considerable knowledge of scientific principles related to the preservation, restoration, and mitigation of wetlands and streams as well as the function and importance of these systems in the ecosystem.

She is experienced in the completion of wetland and stream delineation, stream identification, 404/401 Nationwide permit applications/Individual Permit applications, NC Division of Water Resources Buffer and Variance applications, vegetative monitoring, endangered species surveys, and critical habitat assessments.

In addition, she has experience with AutoCAD, MicroStation, GPS data collection, and GIS analysis mapping.

#### **RELEVANT PROJECTS**

- City of Raleigh, Shelley Ridge Road Bridge Replacement. Senior Environmental Project Manager
- NCDOT, Division 2, Bridge Replacement #14. Senior Environmental Project Manager
- NCDOT, Division 2, Bridge Replacement #28. Senior Environmental Project Manager
- NCDOT, Division 2, Bridge Replacement #66. Senior Environmental Project Manager





# **RAJIT RAMKUMAR, PE, LEED AP**

#### **Preparation of Planning Document** Lead

Education: Bachelor of Technology Civil Engineering; Master of Civil Engineering

**Registrations:** PE, NC (#036810); LEED AP (#10454341)

BIOGRAPHY

Rajit has 18 years of transportation planning and engineering experience and has managed more than 100 projects of varying complexity for clients statewide. He is proficient in state and federal policies and procedures and has completed numerous projects involving Complete Streets, multimodal design, streetscapes, and bicycle and pedestrian improvements utilizing AASHTO and NACTO guidelines.

Additionally, Rajit's expertise spans greenway facilities, feasibility studies, cost estimates, public engagement, SEPA/NEPA, urban planning, environmental screening, permitting, parking, traffic noise analysis, and grant assistance. A proven project engineer, he leads multi-disciplinary teams with a focus on planning, collaboration, and engaging project stakeholders effectively.

#### **RELEVANT PROJECTS**

- City of Raleigh, Shelley Ridge Road Bridge Replacement. **Planning Lead**
- NCDOT, Division 3, Bridge Replacement of 20 & 34, NC 55, Lenoir **County.** Planning Lead
- NCDOT, Division 8, Low Impact Bridge Replacements, Randolph • and Moore County. Planning Lead
- NCDOT, Division 14, Express Design-Build Bridges B-5554, B-5555, Transylvania County. Planning Lead



# LAUREN DICKSON, PLA, ASLA

### Streetscape/Landscape Lead

**Education:** Bachelor of Landscape

**Registrations:** PLA, NC (#1816)

#### BIOGRAPHY

Lauren has over 14 years of landscape architecture experience. She recently joined SEPI, bringing with her experience on various types of projects including park master plans, site analysis, greenways, streetscapes, libraries, and various public facilities. Her experience includes taking a leading role in site analysis, design, preparation of master plans, construction documents, and construction administration. She has a passion for public spaces and promoting environmental awareness and stewardship. She works closely with municipalities to gain valuable perspective and insight to create meaningful designs that are rooted in the communities within which she works.

#### **RELEVANT PROJECTS**

- City of Raleigh, Lake Lynn Greenway Feasibility Study/Trail **Design.** Landscape Architecture
- City of Raleigh, Raleigh Streetscapes Hillsborough/Morgan Street Round About. Landscape Architecture
- City of Raleigh, Raleigh Streetscapes Wilmington Street. Landscape Architecture
- City of Raleigh, Raleigh Streetscapes Fayetteville Road. Landscape Architecture
- City of Greenville, West Fifth Street Gateway. Landscape Architecture



AL EDGERTON Utility Coordination Lead Education: BA, Geology

#### BIOGRAPHY

Al has 31 years of experience managing the funding and construction of bridges; approving plans and proposals; coordinating the planning, design, and construction of Division projects; and supervising contractors and inspectors.

As a Project Manager in the NCDOT Division 3 Office, responsibilities included the management of the TIP, Local Administered, Safety funded, Contingency funded and Enhancement funded projects. The responsibilities in the management of the local administered projects were as follows: assist with the creation and maintenance of the reimbursable agreements; track and address questions concerning funding; process monthly invoices; assist in determining project feasibility; submit and assist in the review/approval of plans; coordinate right-of-way acquisition issues with Division 3 right-of-way representatives; assist in the advertisement and letting of projects; provide contract administration oversight.

#### **RELEVANT PROJECTS**

• NCDOT, Division 3. Division Bridge Program Manager responsibilities included replacement of low impact bridges and the management of funding, design, and construction of approximately 38 bridges. Replacement prioritization included the maintenance of the bridge maintenance improvement plan (BMIP) in AMS. Pre-construction responsibilities included the selection of design firms, field scoping meetings, review and approval of man-day estimates, review and approval of plans and proposals, processing invoices and monitoring project milestones. Construction responsibilities included those as a Resident Engineer. \*\*While employed at NCDOT Division 3



# BEN LACKEY, JR., PE Geotechnical Lead

**Education:** BS, Civil Engineering **Registrations:** PE, NC (#011292)

#### BIOGRAPHY

Ben joined CATLIN upon his retirement from the USACE Wilmington District Office. He has 40+ years of experience working on civil works projects including design of embankments, retaining walls, pavements, excavations, settlement, and deep and shallow structure foundations.

His experience includes layout of subsurface investigation, analysis of the soil test results, design of retaining/sheetpile walls, shallow foundations for buildings, roadway design/ recommendations, preparation of the geotechnical design report, and inspection of the construction of the geotechnical aspects of the project. Additionally, he inspects the construction of structure foundations and other geotechnical aspects of civil engineering.

#### **RELEVANT PROJECTS**

- NCDOT, Division 2, NC 211 from West of NC 906 to East of NC 87 Bridge, Southport/Brunswick County. Geotechnical Engineer for Investigation of a Single Span Bridge
- NCDOT, Division 2, Replace Bridge #25 over Tyson Marsh on SR1149, Greene County. Geotechnical Engineer
- NCDOT, Division 1, R-5809, Three Sisters Bridge Embankment Investigation, Bertie County. Geotechnical Engineer
- NCDOT, Division 4, Bridge #75 on NC 42 over the Neuse River, Clayton NC, Johnston County. Geotechnical Engineer

# **KEY TEAM MEMBERS CURRENT WORKLOAD & CAPACITY**

All key individuals on the SEPI Team are 100% committed to fill their role in the Juniper/Trinitie Trail Bridge Replacement Project, regardless of the percentages that may be listed below.

NAME	ACTIVE PROJECTS	PERCENTAGE AVAILABILITY
Anthony Roper, PE, CPM Principal-in-Charge	Town of Southern Shores, Pavement Condition Study; NCDOT, Statewide Asset Management Pipe Inventory; NCDOT, Manns Harbor Water Tower Replacement	
Phil Harris, PE, CPM Project Manager	NCDOT, R-5915-Daniel Boone Parkway, Watauga County; Nine-Foot Channel, Dare County	
<b>Andy Howell, PE, CFM</b> Hydrologic & Hydraulic Design/Erosion Control	Conservation Commission Bridge Replacement; NCDOT R-2561CA, R-5858, U-4709, U-4726HO, U-5757, U-5770, U-5875, U-3400, B-4926 R, B-4595, B-4596	
Fabien Lukeba, PLS Location & Surveys	NCSU Centennial Plaza, NCDOT I-95, South Park Heritage Walk and Strollway	80%
<b>Danny Gardner, PE</b> Roadway Design// Preparation of Construction Contract Proposal and Estimates	COR Shelley Road Bridge Replacement, B-4926 Bridge Replacement of 20 & 34 on NC 55, Replace Pamlico Bridge 14, Replace Pamlico Bridge NC, NCDOT U-5875, R-5858, U-4709, R-5766, U-3400, U-5757	55%
Matt Rekers, PE Structures	NCDOT I-95 Bridge Replacements over Lake Marion Design-Build Support; SCDOT Load Rating and Evaluation Engineering Services; SCDOT Bridge Asset Management; SCDOT Statewide Scour Assessment; SCDOT Statewide Bridge Inspection and Evaluation Engineering Services	65%
Anna Reusche, PWS Environmental Permitting	Downing Creek Lift Station Replacement, NCDOT B-4926 Bridge Replacement of 20 & 34 on NC 55, SCDOT JD and Permitting, SCDOT S-23 (Bridge Replacement), Morgan Creek Sanitary Sewer Replacement, Replace Pamlico 28 on SR1005 Cedar Gut, Replace Bridge 66 over SR1232 (Cicero Riggs Road)	60%
<b>Rajit Ramkumar, PE, LEED AP</b> Preparation of Planning Document Lead	City of Raleigh, Shelley Ridge Road Bridge Replacement; NCDOT, Manns Harbor Water Tower Replacement; Town of Garner On-Call; City of Raleigh MSA	
Lauren Dickson, PLA, ASLA Streetscape/Landscape	Paseo/College Road Mixed Use, Turner Creek ES Master Plan, Oakview ES Master Plan, Michael Jordan Clinic Greenfield Site, Highway 70 Mixed Use Development	65%
Al Edgerton Utility Coordination	NCDOT, U-5729 US 421 Carolina, Beach Road Improvements; NCDOT, U-5734 Front Street Widening; NCDOT, U-5741, NC 24 Access Management Improvements; New Hanover County, Middle Sound Loop Road and North College Road	
Ben Lackey Jr, PE Geotechnical	MCB Camp Lejeune Task Force Florence Package 4 (3 Bridges); Monck Radio Tower Foundation; NCSPA Port of Morehead City Gate Design; UNCW Resurfacing	65%

# CHAPTER 4 TECHNICAL APPROACH



# **PROJECT UNDERSTANDING & APPROACH**

The SEPI Team approach in delivering this project will be to provide a quality product, at a competitive cost, with internal and external partners feeling heard, while critically focused on meeting project deadlines and the overall project schedule. We will lean on the many years of experience within the Team in planning, design, and permitting aspects. Having been involved with other projects in the Southern Shores area in the past, this will serve beneficial in coordination efforts and anticipating next steps. The Team will establish a consistent and regular communication plan with the Town of Southern Shores and will also establish a detailed outreach plan for the public including a managed and maintained project website. We will have a robust customer service plan and will be very responsive to all questions, comments, and concerns. Quality Assurance and Quality Control will also be a top priority and minimizing revisions and edits will be the focus – we will strive to provide things correctly the first time. It will be the intent of the Team to deliver a completed Categorical Exclusion within a 1-year period from NTP issuance.

During project initiation, we will confirm all the available desktop data for the project area and utilize NCDOT's ATLAS database to identify both natural and human resources within the project area. We will have a kickoff meeting where we engage the Town of Southern Shores and other key stakeholders. In this meeting, we will introduce key members of our Team and review our project schedule. As part of the schedule, we will have identified key deliverables, confirm responsibilities, and identify potential challenges that should be addressed.

We will also begin the public outreach process by engaging the public through a postcard notification and an informational public meeting. The SEPI Team is proposing an early notification to all property owners within ½ mile of the site early in the development phase so that the Town may control the public narrative. We will develop a mailing list for the project using the project study area plus a ½-mile buffer. Property owner residents and non-resident names and addresses will be derived from Dare County tax parcel data (GIS). It is estimated this list will contain no more than 300 separate names/addresses.

The SEPI Team will develop a 5.5" x 8.5" postcard to notify property owners of the project, logistical information for a forthcoming public meeting, and provide a SEPI email address to send responses. A draft will be submitted to the Town of Southern Shores for review before reproduction. The postcard will be printed, stamped, and mailed to appropriate property owners. Following anticipated receipt of these postcards by the public, the SEPI Team will coordinate with the Town in holding an informational public meeting. During this same time, we will also design and maintain a project website that will include project updates.



#### THREATENED & ENDANGERED SPECIES INVESTIGATIONS



We will initiate the Threatened & Endangered species investigations. Our wholistic approach is detailed as follows:

Based on a review of the US Fish and Wildlife Service database, "bald eagle (Haliaeetus leucocephalus), red cockaded woodpecker (Picoides borealis), piping plover (Charadrius melodus), red knot (Calidris canutus rufa), eastern black rail (Laterallus jamaicensis), northern long-eared bat (Myotis septentrionails), west Indian manatee (Trichechus manatus), green sea turtle (Chelonia mydas), hawksbill sea turtle (Eretmochelys imbricata), kemp's ridley sea turtle (Lepidochelys kempii) leatherback sea turtle (Dermochelys coriacea), Loggerhead sea turtle (Caretta caretta), seabeach amaranth (Amaranthus pumilus) have known habitat in the project area.

SEPI's unique Team of biological survey experts, led by our in-house aquatic biologist Chris Sheats, PWS (Permit # 19-ES00558), will oversee all surveys and documentation of any critical habitat assessments, microbenthic surveys, and specific species surveys. Concurrently, we begin the wetland and stream delineations. An explanation and the process steps are as follows: SEPI's Team of licensed Professional Wetland Scientists (PWS), led by Ms. Anna Reusche, PWS, will traverse the project area, including all access routes, on foot to conduct a field evaluation that will include stream and wetland delineations, and an inventory of natural communities. Identified streams and linear drainages will be evaluated using the current approved North Carolina Division of Environmental Quality (NCDEQ) and US Army Corps of Engineers (USACE) methodologies. Concurrent with the stream delineation, SEPI will assess areas within the project boundaries for the presence of wetlands. Areas will be evaluated using the regional supplement to the USACE's 1987 Wetland Delineation Manual. To assess the quality of each jurisdictional feature, wetlands will be classified and rated using the NC Wetland Assessment Method (NCWAM) classification system and streams will be assessed and rated using the NC Stream Assessment Method (NCSAM).

SURVEY SITE MAP OF FINDINGS



Working closely with SEPI's Geomatics Team, SEPI will prepare a detailed site map of our findings. Utilizing data collected during field reconnaissance, SEPI will prepare a Draft Preliminary Jurisdictional Determination (PJD) package and buffer determination for submittal to the appropriate federal, state and local agency stakeholders including the US Army Corps of Engineers and the NC Division of Environmental Quality. The package will include all required forms, mapping, and site photos.

Through our staff's extensive experience with this process, SEPI's Team is adept at completing tasks concurrently and expediting delivery. Our Team will be examining mitigation options for any unavoidable impacts and will coordinate this through the appropriate environmental resource agencies.



**Geotechnical** | The SEPI Team, which includes subconsultant CATLIN, will impart our geotechnical expertise to establish, refine, and conclude the subsurface condition such that a stable and longlasting foundation will be established. The Team will use the previous analysis and couple that with a field-testing program prior to construction to determine and confirm the subsurface conditions. This will include compaction testing and subgrade proofrolling.

During construction, all applicable testing, inspections, and evaluations will be performed as referenced in the North Carolina State Building Code and indicated in the NCDOT Standard Specifications for Roads and Structures. In confirming the seismic site classification, it may be necessary to bore a 100-foot deep SPT or CPT and/ or soil shear wave velocity testing.

CATLIN's In-House Geotechnical Laboratory supports engineering services for the evaluation of soil integrity. Their laboratory is located in Wilmington, NC and is certified by the NCDOT..

### LABORATORY CERTIFICATIONS

- Certified Soil Laboratory AASHTO, USACE, NCDOT
- NCDEQ Division of Water Resources Field
   Parameters Certification

#### ENGINEERING SOLUTIONS FOR ROADWAY DESIGN



**Utilities** Utilities can create major impacts to schedule and cost, so including them soon after project award is vital to the success of this assignment. Utilities in the project area are all underground and appears that all utilities will need to be relocated. To accomplish this, it takes constant communication and partnership. These key tools will continue through final resolution, package collections, and construction oversight. SEPI will work to identify utility owners in the area based on NC811 inquiry and field observations. The following utilities have been detected:

- Dare County Water Department Potable Water
- Dominion Energy Electric .
- Charter/Spectrum Telecommunications •



Roadway Design | We will use the NCDOT Complete Streets Guidelines and Context Sensitive Solution (CSS) process to identify solutions and achieve buy-in throughout the project development and design. The design Team members have a thorough understanding of the best practices to tackle any issues that may arise during the final design phase, including ADA accessibility standards. The Team's design approach will be consistent with the recently completed concepts and other ongoing Town plans that incorporate future transportation needs for the area.

The plans emphasize that while striving to enhance the quality of life for residents of the area, a balance must be maintained between fostering growth and development and preserving the natural and cultural resources of the Town, while also respecting the rights of individuals, including private property rights.

The following general approach applies to the advertised Bridge Replacement Project. Design project development will begin by reviewing and coordinating as noted above to identify design concerns and commitments requiring final plan incorporation. We will submit design assumptions in accordance with Town/NCDOT criteria for approval before performing any design. Surveys and subsurface utility engineering (SUE) will be initiated. We will assemble electronic data files of provided survey data and develop base plan sheets.

Preliminary plans (25%) will be prepared and submitted for review. Before 25% plans, the controlling structure grades will be modeled, analyzed, and approved for hydraulic opening size and clearances. Hydraulic analysis is required to determine the required conveyance area necessary to provide a No-Rise and no adverse impact certifications.

Careful coordination between hydraulic design, roadway vertical profile and structure type establishment is crucial to project success. A Bridge Survey Report (BSR) will be submitted for approval by the Town and NCDOT. After approval of the 25% plans and hydraulic grade control analysis, the roadway hydraulic design and preliminary right-of-way plans (65%) will be designed. Utility coordination, geotechnical investigation and recommendations, and the FEMA FIS CLOMR design and application process (if required) will be initiated

Structure design will be initiated once geotechnical structural foundation and roadway design recommendations are received, and the roadway drainage system and design will be completed. Stormwater management and erosion/sediment control design will follow roadway hydraulic design completion. Public and private utility relocation design will also occur between 25% and 65% plan development.

Before finalizing the pre-right-of-way 65% plans, preliminary traffic control design will be completed to identify use of on-site traffic control staging or of-site detour to assess impact to right-ofway. All services/design impacting right-of-way will be finalized and approved before completing 75% right-of-way plans. Final right-of-way plats will be prepared for recordation of right-of-way. MicroStation and GEOPAK software will be used to facilitate plan preparation and maintain files consistency with NCDOT guidelines. MicroStation files will be converted to AutoCAD files for the Town's use. The 2018 Standard Specifications for Roads and Structures and the Standard Special Provisions issued by the Division of Highways will be used for materials and construction methods on all work.

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# SEPI A Division of TranSystems

# #9 ENR's TOP DESIGN FIRM BRIDGES



Award winning, value quality, innovation, and safety in performing our services **Structure Design** | The structural design will be in accordance with the AASHTO LRFD Bridge Design Specifications, the NCDOT Structure Design Manual and policy memos. The SEPI Team will incorporate all previous bridge and foundation analysis and confirm original findings and recommendations.

As regards to structure type, we will move forward with design of a precast prestressed cored slab unit superstructure. The SEPI Team understands that construction cost is a primary concern for the Town and is prepared to develop a cost effective, context sensitive solution. The anticipated first step would be to submit preliminary structure plans indicating the type, size, and location of the proposed structure to the Town of Southern Shores and NCDOT for review. Upon receiving approval of the preliminary plans, we will begin the geotechnical investigation while final structure design is in progress.

The geotechnical and structural discipline leaders are poised to coordinate and create an economical substructure for the bridge. The structure foundation recommendations will be submitted for approval prior to completion of the structure plans, and final structure plans will also be submitted upon completion to the Town for review. The SEPI Team has the experience and qualifications to deliver a quality bridge design to the Town within schedule and budgetary requirements.

**Hydraulic Design** Our Team of engineers has extensive experience in developing bridge replacement plans in accordance with NCDOT hydraulic design guidelines and have completed projects of similar scope and scale over the past decade in multiple CAMA counties. We are well-versed in working within FEMA regulated floodplains and have demonstrated success with No-Rise Flood Studies reviewed at the state and local level. Our track record has earned us a place as a trusted partner in the transportation and floodplain management industries in North Carolina, and our experience informs our design decisions to produce results appropriate to each unique project location and owner.

In addition to hydraulic design and FEMA compliance, SEPI has the practical experience to understand how projects get constructed. We have developed construction sequences for countless similar project sites which ensure the protection of environmental resources from offsite sedimentation.



**Traffic Control** | Maintenance of Traffic (MOT) will be important for the success of this project. Proper analysis and selection of MOT methods is key to ensuring a safe, efficient, and cost effective project. SEPI staff will design traffic management, signing, and pavement marking plans. SEPI approaches each project by developing a detailed project scope taking into consideration constructability, safety, mobility, user cost, time restrictions, moratoriums, environmental considerations, and coordination. We have completed traffic control plans for projects of various sizes across North Carolina, ranging from small bridge replacement projects to large complex design build projects.

Our Team will utilize the most current MUTCD, NC Supplement to the MUTCD, and NCDOT WZTC Design Manual for developing traffic control/transportation management plans. In addition to our TMP expertise, our Traffic Design engineers are also proficient with signing, pavement marking, and signal designs.

**Permitting** | With the public outreach completed and the human and natural impacts collected, we will complete the Categorical Exclusion. Having previously had conversations with the permitting agencies concerning the development of the permit application, we will expedite the permitting process. Any proposed improvements for the project are anticipated to be permitted under a Nationwide 14 (Linear transportation projects) from the USACE, associated General Water Quality Certification (No. 4246). SEPI is thoroughly experienced at preparing permit applications and securing these permits. Our Team is well-versed in completing federal and state permitting in the USACE Wilmington District. SEPI's industry leading regulatory Team includes Phil Harris, retired NCDOT Environmental Analysis Unit Department Head, Bill Biddlecome, retired USACE Wilmington District Chief, and Ms. Anna Reusche, with over 18 years of direct experience with the regulatory process. Our Team has a thorough understanding of federal, state and local regulations and understands what is needed to be successful. The Section 404/401 permit process is as follows:

- Secure plan sheets and review plan sheets, environmental documentation and meeting minutes prior to site visit
- Visit project site, ensuring that the project avoids and minimizes wetland, stream and/or buffer impacts Preparation/Review of permit drawings – showing project location, impact site locations, impact site drawings, summary sheet and a property owner
- Hold pre-application consultation with the regulatory resource agencies
- Prepare pre-construction application packet: cover letter, standard forms, roadway & bridge designs, permit drawings, utility plans, erosion control plans, application fee, and property owner notification
- Revise permit application based on comments from the applicant
- Review approved permit associated conditions

Our Team's proactive coordination and strong, positive working relationship with the regulatory agencies has proven beneficial to our clients in procuring project permits in a timely manner. We are able to prepare a complete application by anticipating agency project specific requests. Thereby eliminate potential permitting delays.

# **Contract Proposal and Estimates**

**Approach** SEPI will produce bid advertisements, run pre-bid meetings, issue addenda, and conduct bid openings for the Town. After the bids are received, SEPI will review the bids, prepare the certified bid tabulations, and provide a recommendation of award to the Town.

The SEPI Team is keenly aware of the current construction climate, and client concerns about cost, as this issue is the most widely discussed topic for design projects. We have a number of strategies that we typically employ to control costs, including:

- Production of clear, understandable construction documents
- Design projects that promote cost reductions (including design innovations)
- Minimization of construction risk by the contractors to minimize opportunities for change orders
- Maximization of competition during bids (both materials and construction)

SEPI has been designing and bidding projects across North Carolina since 2010 and can pull on this historical data to help refine costs associated with bid items. Our Team is comprised of engineers that have worked for NCDOT, as well as contractors bidding on projects. We pull from this knowledge to provide cost estimates that are accurate and reflect the current state of the market. Our Team routinely delivers estimates that are less than 10% off from the construction cost.

**Post Bid Support** | The SEPI Team can provide construction administration and inspection services during the construction phase of work. At the completion of construction, SEPI will review the contractor's red-line drawings and provide final record drawings.



# WHY SEPI?

- SEPI has an understanding of the specific needs and expectations from our clients from our years of experience with similar contracts, for municipal clients and NCDOT.
- Relevant engineering, planning, and design experience for similar bridge and roadway projects.
- Ability to respond quickly, manage multiple tasks, and meet schedules while providing an excellent level of service.
- View each new project as a unique opportunity to enhance the quality of life for our community.

# **CONCEPT TO COMPLETION**

The SEPI Team is proud to offer industryleading expertise and full project delivery capabilities.

# **PROJECT MANAGEMENT + QA/QC**

### **PROJECT MANAGEMENT**

Phil Harris. PE. CPM will serve as the Project Manager and the primary Point-of-Contact with the Town. He will be responsible for all aspects of contract negotiation and performance, including the technical content of deliverables. cost control and efficiency, schedule control and variance reporting, and project management.

#### **QUALITY ASSURANCE/CONTROL PROCEDURES + PROCESSES**

Our systematic approach to quality control is more effective and less costly than an undefined approach. Initial accuracy and attention to detail creates a smoother process for all involved thereby producing a superior product.

SEPI's QA/QC program is designed to:

- Include all levels of project management in the program.
- Help ensure that QA and QC are an integral part of the project and not just an end of job review.
- Provide documents that are technically reviewed and within budgetary and scheduling guidelines.
- Review adequacy of budgets and schedules ٠ for performing the work.
- Commit the resources necessary to achieve the project objectives.
- Promote frequent communication ٠ on progress of work, problems, and accomplishments.
- Provide periodic review of project • performance related to the planned schedule and budget goals.

#### **PROJECT MANAGEMENT + COMMUNICATION PLAN IMPLEMENTATION**

### **PROJECT MANAGEMENT**

- Continuous communication with the SEPI Team and Town for the duration of the project
- Discussion with Town staff to work through and develop a thorough scope of work/fee
- Create achievable time lines with Town and notify of any issues in a timely manner

#### PROJECT COORDINATION 22

- Maintain coordination with the Team on any issues/ changes from initial scope of work
- When subconsultants are utilized, all data generated by the subconsultants will be verified and a QC review will be performed
- · Project schedule/budget are reviewed weekly and if necessary, resources are adjusted to help ensure the project stays on schedule and within budget

### PROJECT SCHEDULE

- Monitor project time + design effort against project schedule to meet delivery goals
- Provide accurate, timely, and complete up-to-date information to Team
- Verify action items are outlined, assigned for follow-up, tracked, and results recorded
- Monitor daily project reports

# QA/QC

- Review of work products by QA/QC Manager at appropriate intervals throughout the life of the project
- Reviews are ongoing as part of the process, not just at the end of the project
- Documents are reviewed for not only technical soundness, but to verify that the work remains within the established scope of work for budget and schedule considerations

# **SCHEDULE**

2023

### 1/1/23

Notice to Proceed

1/23 **Collect Desktop Data (ATLAS)** 

2/23

**Town & Stakeholders Kick of Meeting** 

Item 5.

#### 3/23

Informational Public Meetintg

#### 4/23

**Identify Project Area Boundaires** 

#### 4/23

Begin natural & human environment studies

**Geotechnical & Utility Investigations Conceptual Roadway Design &** Structure Design of Core Slab Bridge

#### 6/23

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**Categorical Exclusion Planning Document** 

#### 9/23

Preliminary Design of Cored Slab Bridge

#### 10/23

Town & Stakeholders Meeting/ Public Workshop on Detailed Alternatives

Complete Technical Reports/(All T&E surveys should be complete

#### 11/23Finalize Roadway & Structures Design

1/24

**Categorical Exclusion Completed and Approved** Hydraulics - Avoidance & Minimization; 30% Hydraulics structure design; permit drawings approval

#### 3/24

**Submit Nationwide Permit Application** 

#### 9/24

**Receive Permits** 

#### 2025

**Proposed Juniper Trinitie Trail Bridge** Replacement construction





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10/23

# JUNIPER/TRINITIE TRAIL BRIDGE

### **IDENTIFICATION & MANAGEMENT OF PROJECT RISKS**

All projects are susceptible to risks and they should be identified early in the project development process to properly manage them. The SEPI Team will proactively identify, analyze, respond to, monitor and control risks. Project risk will be effectively managed by understanding the potential risks, the likelihood of any particular risk occurring, and an action plan to deal with them if they do occur. While not all risks can be identified at this conceptual stage, several have been summarized below along with a risk level and management strategy.





# JUNIPER/TRINITIE TRAIL BRIDGE



### **RISK IDENTIFICATION & MANAGEMENT**

	RISK	DESCRIPTION	MANAGEMENT STRATEGY
Ø	SAFETY	Safety is our #1 priority! This project is in a heavily populated area. With structure demolition and construction of a new cored slab bridge, there will be safety challenges.	The SEPI Team will maintain the project website and keep the local homeowners and traveling public aware of the current project status and upcoming steps, and how both may affect them individually. Safety tape and construction delineation will be established well before work begins. These construction limits will be monitored throughout the project timeline as to not be trespassed and put the public in danger.
	COMMUNITY NOTIFICATION	This project is in a heavily populated area with much vehicular and pedestrian through traffic. During the planning and construction of the project, it will be critical that the public is kept informed and updated of schedules and next steps.	As part of our project website, we will include an updated planning and construction schedule. We will also have a project hotline open for real time communication via phone. We will also make every effort to keep the adjacent property owners aware of current and future steps on the project.
	DRAINAGE & GROUNDWATER	During construction, it is anticipated that excavation will extend near or below the existing groundwater table.	For this reason, de-watering may be required. To combat an influx of water, we will design for all building and site drainage away from the foundation. We will also slope all ground surfaces away from the foundation. It will be our intent to construct fill areas early in the construction phase and employ temporary drainage ditches to accentuate drainage during construction.
	MINIMIZING IMPACTS	Due to the location of the bridge replacement project in a heavily populated neighborhood, construction noise may be an issue.	The SEPI Team will maintain the project website and keep the local homeowners aware of the current project status and upcoming steps. Construction noise dampening techniques will be implemented and there will be specific daily moratorium on when loud construction may occur.
9	UTILITY RELOCATION	The existing stream crossing is a key utility corridor so temporary relocation without service stoppage will be critical.	Prior to construction beginning, a qualified inspector will identify utilities that need to be temporarily relocated. Coordination will occur with the private companies who own these services, and a schedule will be developed. This inspector will also verify that the bearing soils. If unstable, these soils will be stabilized through additional bedding material. The new utility trench may also need to be dewatered during utility re-installation.
	TRAFFIC CONTROL	During project construction, existing traffic patterns will be modified to the closest location that can hold increased traffic volumes including emergency vehicles.	This on-site detour will be clearly identified throughout the route. Emergency Response Units and local school systems (Fire, Police, Hospital) will be coordinated with directly to insure they are aware and updated. With a new traffic pattern, those effected homeowners will be notified of this temporary inconvenience and will be encouraged to monitor the project via the project website.



### **PREPARED FOR:**



STATEMENT OF QUALIFICATIONS

# Planning and Design Services for the Juniper/Trinitie Trail Bridge Replacement Project

prepared by: Kimley »Horn

November 2022



**STATEMENT OF QUALIFICATIONS** Planning and Design Services for the **Juniper/Trinitie Trail Bridge Replacement Project** 



November 4, 2022

David Bradley, Public Works Director Town of Southern Shores 5375 N. Virginia Dare Trail Southern Shores, NC 27949

### RE: Planning and Design Services for the Juniper/Trinitie Trail Bridge Replacement Project

Dear Mr. Bradley and Members of the Selection Committee:

For the Juniper/Trinitie Trail Bridge Replacement over Canvas Back Canal, the Town of Southern Shores needs a highly qualified, skilled consultant team. Kimley-Horn is ideally suited to deliver this project for the Town, and we are excited to provide our qualifications. A few key points are summarized below.

### **Summary of Key Qualifications**

Through previous interactions with the Town and information gathered, we have worked hard to understand your needs for this project. We then applied our experience and expertise to develop a tailored approach specific to this project that meets your goals. In addition, we have formed a team with previous knowledge of the site and a longstanding history with the Town. *Our approach focuses on solving the problems that are special to this site, while remaining mindful of project budget constraints and increasing construction costs.* 

- Andrew will use his previous bridge replacement project management experience (coupled with his extensive background in cored slab and other bridge design) to develop effective and efficient solutions to project development issues throughout the life of this project. You get a project manager who works with you—not just for you—to achieve project success.
- The Kimley-Horn team provides the right mix of disciplines and skills to produce a successful project. Our team is carefully structured to complete each individual task within the scope of work by assigning leads and others who are leaders in their respective fields.
- When it comes to meeting proposed project schedules, we are capable and practiced. Once Kimley-Horn is on board, we'll have this project up and running. Our experienced team members are wrapping up their current assignments and are ready for their next bridge replacement project.

**Expression of Interest:** Kimley-Horn is ready and eager to assist you with this important bridge replacement and wishes to continue our strong relationship with the Town of Southern Shores through exceptional client service and continued partnership.

**Statement of Commitment and Availability:** Our key personnel identified in this submittal are committed, available, and eager to perform their respective assignments while maintaining a high level of service for the duration of the project schedule to meet and exceed the Town's guality and schedule expectations.

**Prime Consultant Principal/Authorized Signer:** Kimley-Horn will serve as the lead design firm on this project and has assembled a strong team of subconsultants to provide the necessary services at a high level of quality and responsiveness. Andrew Phillips, P.E. will serve as project manager and primary point of contact for the Kimley-Horn team.

**Commitment/Certification of Submission:** By signing this letter, I, Andrew Phillips, P.E., am authorizing Kimley-Horn to submit these qualifications for the purpose of negotiating and entering a contract with the Town of Southern Shores. I certify that the information included within this document is, to the best of my knowledge, correct as of the date indicated.

Thank you for considering our qualifications. If you have any questions, please feel free to reach out to me directly. We look forward to providing the Town of Southern Shores, North Carolina and its residents with a successful project.

Sincerely, Kimley-Horn

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Andrew Phillips, P.E. | Project Manager 919 653 2979 | andrew.phillips@kimley-horn.com 421 Fayetteville Street, Suite 600, Raleigh, NC 27601

We acknowledge receipt of Addendum No. 1, dated October 20, 2022. Item 5.

421 Fayetteville Street Suite 600 Raleigh, NC 27601

Kimley **»Horn** 







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Juniper/Trinitie Trail Bridge Replacement Project



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# Relevant Project Experience (Last 10 Years)

Unless otherwise indicated, projects were free of major legal or technical problems and challenges.

### South Dogwood Trail over Snow Goose Canal Bridge Replacement, Southern Shores, NC

The Town of Southern Shores selected Kimley-Horn to provide planning and design services for the replacement of a bridge on South Dogwood Trail over the Snow Goose Canal. Bridge No. 17 was replaced with a 112.5-foot, three-span bridge. Kimley-Horn's services included preliminary and final design and bid phase services. This project was administered by the Town of Southern Shores through a municipal agreement with NCDOT. The project was funded through the Municipal Bridge Program, which provides federal aid funds for bridges that are located on municipal, **residential** streets and are not part of the state highway system. Bridge Program funds with 20% matching municipal funds.

Date Completed: January 2017

Schedule: March 2013–January 2017

# Mimosa Boulevard Bridge Replacement (B-5001), Pine Knoll Shores, NC

Kimley-Horn provided planning, permitting, and design services for the replacement of the **residential** Mimosa Boulevard Bridge over the Pine Knoll Waterway. This federally funded project was locally administered by the Town of Pine Knoll Shores through a municipal agreement with NCDOT. Specific services included an EA, NEPA documentation, structural design, roadway and hydraulic design, erosion control plans, and final bid documents.



Date Completed: July 2013 (construction) Schedule: January 2010–July 2013

### Project Athens (sub to McAdams Company), Raleigh, NC

Kimley-Horn provided professional design and engineering services to McAdams Company and East-West Partners for a single span cored slab bridge in Raleigh, NC. Services included bridge design, preparation of construction documents, coordination with other disciplines, and construction phase services. By being in constant coordination with partners in roadway and hydraulic design, Kimley-Horn was able to navigate this complicated site to provide a bridge that met all geometric and environmental constraints. In addition to the need for discipline specific coordination, the project was on a very aggressive schedule that the Kimley-Horn team was able to meet or exceed at each respective milestone. This new bridge and approach roadway provided connectivity for an existing parcel to proposed additional parking for the City of Raleigh.

Date Completed: Ongoing

Schedule: March 2021–Ongoing

### NCDOT Division 1 Bridge Replacements, Bertie and Tyrrell Counties, NC

Kimley-Horn was selected and has nearly completed turnkey professional engineering services for the following bridge replacement projects in Bertie and Tyrrell Counties in Division 1.

- BP1.R004.1 Bertie 9, Replacement of Bridge No. 070009 over Connaritsa Swamp on SR 1219 (Francis Mill Road) in Bertie County, NC
- BP1.R005.1 Tyrrell 23, Replacement of Bridge No. 880023 over Bonarva Canal on SR 1118 (South Fork Creek Road) in Tyrrell County, NC

The Kimley-Horn team has provided final roadway design, hydraulic design, bridge and culvert survey reports, structural design, erosion control, utility coordination, traffic control, and wetland delineation as part of our design services.

### Date Completed: Ongoing

Schedule: March 2021–Ongoing



STATEMENT OF QUALIFICATIONS

Planning and Design Services for the Juniper/Trinitie Trail Bridge Replacement Project



### NCDOT Division 2 Bridge 55, Lenoir County, NC

Kimley-Horn was selected by NCDOT Division 2 to complete turn-key professional engineering services for the replacement of Bridge 55 over Whitelace Creek on SR 1324 in Lenoir County. Kimley-Horn's services for this project included roadway design, hydraulic analysis and design and bridge survey report (BSR), erosion control plans, transportation operations plans, pavement marking plans, utility coordination, and structure design.

The new bridge consisted of a single span 50-foot cored slab bridge on reinforced concrete bent and end bent caps and is founded on steel H-piles.

### Date Completed: May 2018

Schedule: December 2016-May 2018

### Bridge 49, Lenoir County, NC

Kimley-Horn was selected by NCDOT Division 2 to complete turn-key professional engineering services for the replacement of Bridge 49 over Bear Creek on SR 1311 in Lenoir County. Kimley-Horn's services for this project included roadway design, hydraulic analysis and design and bridge survey report (BSR), erosion control plans, transportation operations plans, utility coordination, and structure design.

The new bridge consisted of a three-span cored slab bridge (2 @ 40', 1 @ 45') on reinforced concrete bent and end bent caps and is founded on steel H-piles.

Date Completed: August 2018

Schedule: December 2016–August 2018

### NCDOT Division 5 B-4839, Bridge 96 Replacement, SR 1006 (Grantham School Road) over Thoroughfare Swamp, Wayne County, NC

Kimley-Horn worked alongside Division 5 to replace Bridge 96 in Wayne County over Thoroughfare Swamp. Services included roadway design, traffic control plans, pavement marking plans, hydraulics design and FEMA coordination, structural design, and utilities coordination. The new bridge is a 24-inch cored slab with a 70-foot-long single span. The bridge sits on concrete caps with sloping abutments down to the swamp. Existing bents within the channel were cut off at the elevation of the water.

### Date Completed: February 2021

Schedule: March 2018–February 2021

### B-4840, Bridge 264 Replacement, SR 1117 (Thunder Swamp Road) over Thunder Swamp, Wayne County, NC

Kimley-Horn was selected by Division 5 staff to replace Bridge 264 in Wayne County over Thunder Swamp. Kimley-Horn completed roadway design, traffic control plans, pavement marking plans, hydraulics design and FEMA coordination, structural design, and utilities coordination. The new bridge is a 24-inch cored slab bridge with a 70-foot long main span and a 30-foot long secondary span. The bridge sits on concrete caps with a concrete bent between the two spans. Existing timber bents were to be removed down to the waterline.

Date Completed: February 2021

Schedule: March 2018–February 2021

# Rogers Road Bridge Replacement (Express Design-Build), Wake County, NC

As part of the Express Design-Build, Division 5B (17BP.5.R.47) contract, Kimley-Horn served as lead design firm for the replacement of eight low-impact bridges with Blythe Construction, Inc. as the prime contractor. Kimley-Horn was responsible for roadway, hydraulics, structures, traffic control, erosion control, and permitting for all eight bridges, including the Rogers Road Bridge. This project's purpose was to improve safety, meet increasing traffic demands, provide pedestrian access, update the bridge design to current standards, and reduce bottlenecks. The improved Rogers Road Bridge features a five-lane facility with a 5-foot sidewalk on both sides of the bridge and an underpass to accommodate pedestrians accessing Smith and Sanford Creek Greenway. Smith Creek Soccer Center, and Heritage Elementary and Middle Schools. The new 100-foot single span bridge crosses Smith Creek, a redelineated FEMA stream, and required FEMA coordination and approval. A 15'-4" x 6'-5" Aluminum Box Culvert was also designed for a tributary to Smith Creek.



Date Completed: November 2016 Schedule: July 2013–November 2016

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STATEMENT OF QUALIFICATIONS

Planning and Design Services for the Juniper/Trinitie Trail Bridge Replacement Project



# **Professional Service References**

### Town of Pine Knoll Shores

Brian J. Kramer, Town Manager 252 247 4353 ext. 15 manager@townofpks.com - Mimosa Boulevard Bridge Replacement (B-5001), Pine Knoll Shores, NC

### NCDOT Division 1

Ryan Shook, Project Engineer 252 482 1871 rlshook@ncdot.gov - Bridge Replacements, Bertie and Tyrrell Counties, NC

NCDOT Division 2 Hon F. Yeung, P.E., Division Project Development Engineer 252 439 2827 hfyeung@ncdot.gov - Bridge 55 and Bridge 49, Lenoir County, NC

### City of Greenville

Lisa Kirby, Director of Engineering 252 329 4683 lkirby@greenvillenc.gov

## Legal Judgments Statement

Not applicable. There has never been a legal judgment entered against Kimley-Horn.

## **Trade Secrets Statement**

Kimley-Horn acknowledges that the Town of Southern Shores, NC is the proprietor of all work product developed for or on behalf of the Town. Kimley-Horn further acknowledges that all work product will be retained and submitted to the Town, or a specified agent or contract consultant of the Town at the Town's direction, upon request.



Mimosa Boulevard Bridge in Pine Knoll Shores



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# 2. Professional Experience

### Biographical Information on Professional Staff

Kimley-Horn has assembled a team of professionals with the experience and availability necessary to successfully provide planning and design services for the Juniper/Trinitie Trail Bridge Replacement Project. Our team organization chart, with biographical information for all staff, appears below. Resumes for key personnel—including registrations/certifications, qualifications, and experience with similar projects—begin on page 8. The featured staff served as project managers or in a similar role for their respective projects.

Name	Classification	Location
Andrew Phillips	Professional Engineer	Raleigh
Vance Blanton	Professional Engineer, Certified Floodplain Manager, Stormwater Management Inspector, and LEED AP	Raleigh
Tyler Spring	Professional Engineer	Raleigh
Jason Hartshorn	Professional Wetland Scientist	Raleigh
Kristina Solberg	Professional Engineer	Raleigh
Nate Harvey	Professional Engineer	Durham
Greg Brew	Professional Engineer	Raleigh
Seth Denney	Professional Engineer	Raleigh
Jordan Bendl	Professional Engineer	Raleigh
Evan Parrott	Professional Engineer	Raleigh
Jeff Moore	Professional Engineer	Raleigh
Clay Poole	Professional Engineer	Raleigh
Eanas Alia	-	Charlotte
Mackenzie Richards	Professional Wetland Scientist	Raleigh
Kaitlyn Faugerstrom	Engineering Intern	Raleigh
David Hursey	Professional Engineer	Raleigh
Jack Crino	Engineering Intern	Raleigh
Sean Kane	Professional Engineer	Raleigh
Caleb Lowman	Professional Engineer	Raleigh
Jerry Stalls (GET Solutions)	Professional Engineer	Elizabeth City
Mark Scholfield (GET Solutions)	Professional Engineer	Virginia Beach, VA
Patrick Hartman (Rivers & Associates)	Professional Land Surveyor	Greenville
Randy Bieber (Rivers & Associates)	Professional Land Surveyor, Certified Floodplain Surveyor	Greenville


Planning and Design Services for the Juniper/Trinitie Trail Bridge Replacement Project



Item 5.



**Professional Credentials** 

B.S., Civil Engineering, NC

Professional Engineer in NC

State University, 2008

and MI

# ANDREW PHILLIPS, P.E. | Project Manager

With 13 years of experience as a structural engineer, Andrew has designed a variety of structural components consisting of reinforced concrete, prestressed concrete, and structural steel for projects varying in scope, budget, and complexity. He has acted as the lead structural engineer and project manager for Low Impact Bridge Replacement projects (LIBR) all over the state. As a result of his experience with LIBR projects, Andrew has significant exposure to setting bridge geometry, solving geometric and other site restrictive constraint and issues, and providing QC/QA reviews for project and discipline specific oversight. Andrew has an extensive working knowledge of the NCDOT bridge design standards and practices and has coordinated with clients, colleagues, subcontractors, and various state agencies to accommodate and resolve many site-specific engineering and design concerns for the projects on which he has worked.

## **Relevant Project Experience**

- NCDOT, Bridge Replacements, Bertie and Tyrrell Counties, NC
- NCDOT, Bridge Replacements of Bridge 49 and 55, Lenoir County, NC
- NCDOT, Bridge Replacements B-4839 and B-4840, Wayne County, NC
- B-5156, NC 210 Bridge Replacement Over Long Creek, Pender County, NC
- R-1015, US 70 Havelock Bypass, Craven County, NC
- B-5301, Bridge 87 over Norfolk Southern Railroad, Grimesland, NC
- BR-0074, US 70 Bridge Replacements over Slocum Creek, Havelock, NC
- NCDOT, B-5534, Bridge 82 over Burnt Coat Creek, Duplin County, NC



## **Professional Credentials**

M.S., Civil Engineering, NC State University, 2009

B.S., Civil Engineering, NC State University, 2007

Professional Engineer in NC and VA

Certified Floodplain Manager

Stormwater Management Inspector

LEED AP

# VANCE BLANTON, P.E., CFM, SMI, LEED AP | Hydraulics and Hydrology Lead

Vance has 15 years of design and engineering experience specializing in stormwater infrastructure and hydraulic design, NC Floodplain Mapping Program coordination, erosion/sediment control design, environmental permit preparation, and roadway horizontal and vertical geometry design. He has provided stormwater and roadway design services for numerous municipalities around North and South Carolina, including the North Carolina DOT and South Carolina DOT. Vance's project experience include various NCDOT bridge replacement projects around the state, U-4438 US 158 (East Elizabeth Street) project in Elizabeth City, NC, and the High Point Road/West Lee Street Streetscape Improvements in Greensboro, NC. Vance is proficient in MicroStation, Geopak, Geopak Drainage, AutoCAD, HEC-RAS, XPStorm, Culvertmaster, Flowmaster, PondPak, and StormCAD.

## **Relevant Project Experience**

- Mimosa Boulevard Bridge Replacement (B-5001), Pine Knoll Shores, NC
- South Dogwood Trail over Snow Goose Canal Bridge Replacement, Southern Shores, NC
- NCDOT, Express Design-Build, Division 5B (17BP.5.R.47), Division 5, Wake County, NC
- NCDOT, Bridge B-4839, Division 4, NC
- NCDOT, Bridge B-4840, Division 4, NC
- NCDOT, B-5119 and B-4756, Bridge Replacement Projects, Group 3, Guilford County, NC
- NCDOT, Division 12 Bridge Replacements (Four Bridges), Iredell County, NC



Planning and Design Services for the Juniper/Trinitie Trail Bridge Replacement Project





**Professional Credentials** 

Professional Engineer in NC

B.S., Civil Engineering.

State University, 1986

Virginia Polytechnic and

# GREG BREW, P.E. | QA/QC Lead

Greg has 35 years of experience as a NCDOT roadway design engineer prior to joining Kimley-Horn in April 2016. He most recently held a supervisory role providing design expertise and knowledge as well as quality control to roadway and transportation design projects. During his time with the Department, Greg was involved in the design and project management of major projects throughout the state. He has been involved in the planning and design of over 300 bridge replacement projects. Greg's knowledge of NCDOT's inner workings and preferences makes him invaluable to our team and will allow us to better serve you.

# **Relevant Project Experience**

- R-2530B/B-4974, NC 24-27 Widening and Culvert Design, Stanly and Montgomery Counties, NC
- NCDOT, U-6004, Lewisville-Clemmons Road Widening, Clemmons, NC
- R-5714, US 601 Improvements from Forrest Road to US 52, Mount Airy, NC
- R-5779, Crossroads Parkway Extension, Madison County, NC
- NCDOT Rail Division, P-5720 Durant Road Grade Separation, Raleigh, NC
- NCDOT Rail Division, P-5717 Supplemental No. 2, Raleigh, NC



# **Professional Credentials**

M.S., Environmental Law and Policy, NC State University, 2003

B.S., Civil Engineering, Virginia Polytechnic Institute and State University, 1994

B.S., Biology, Virginia Polytechnic Institute and State University, 1991

Professional Engineer in NC

# KRISTINA SOLBERG, P.E. | NEPA and Public Involvement Lead

Kristina has 27 years of experience as a project manager for NEPA/SEPA, roadway design, highspeed rail, construction, municipal drinking water system studies, erosion control plans, permitting, and other transportation-related projects. She has collaborated with MPOs, RPOs, federal, state, and local governments and agencies throughout her career. Prior to joining Kimley-Horn in November 2021, she held a supervisory role at NCDOT in the Project Management Unit. During her time with the Department, she provided expertise, knowledge, and quality control for environmental documentation, roadway, rail, and other transportation projects. Kristina was involved in the management of major projects throughout the state where her responsibilities included overseeing complex projects with multiple stakeholders and prioritizing multimodal transportation projects.

# **Relevant Project Experience**

- BR-0074, Replace Bridge Nos. 91 and 92 on US 70, Craven County, NC
- U-5760, Big Mill Farm Road & Hopkins Road Improvement Project, Kernersville, NC
- NCDOT, BR-0064, BR-0065, BR-0066, Replace Bridges in Division 2, Beaufort County, NC
- NEPA document preparation for NC Locally Administered Projects for municipalities statewide greenways, sidewalks, roadways
- 22nd Street Bridge, Rebuilding American Infrastructure with Sustainability and Equity (RAISE) FY 2022 Grant Preparation, Tucson, AZ



Planning and Design Services for the

Juniper/Trinitie Trail Bridge Replacement Project



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**Professional Credentials** 

B.S., Civil Engineering, NC

Professional Engineer in NC

State University, 2016

# TYLER SPRING, P.E. | Roadway Design Lead

Tyler has 5 years of experience working for a wide range of clients, ranging from NCDOT Divisions to private developers to local municipalities. He has held a variety of responsibilities, including fundamental vertical and horizontal geometry, Geopak Drainage design and layout, erosion control design, pavement marking and signing design, and utility coordination. His design resume includes, but is not limited to, bridge replacements, municipal roadways, greenways, interchanges, roundabouts, at grade traditional intersections, etc. Tyler has taken the lead on the roadway design of the most recent bridge replacement projects and has a strong understanding of the challenges these projects can encounter and how best to navigate them in an effective and efficient manner.

# **Relevant Project Experience**

NATE HARVEY, P.E. | Utility Coordination Lead

- NCDOT, Bridge Replacements, Bertie and Tyrrell Counties, NC
- NCDOT, Division 12 Bridge Replacements (Four Bridges), Iredell County, NC
- B-5156, NC 210 Bridge Replacement Over Long Creek, Pender County, NC



**Professional Credentials** 

M.S., Civil Engineering, NC State University, 2010

B.S., Civil Engineering, NC State University, 2007

Professional Engineer in NC

**Professional Credentials** 

B.S., Environmental

University, 2011

Technology, NC State

Professional Wetland

Nate's 14 years of experience in water/sewer design and construction and an additional 6 years as a licensed general contractor provide him with a valuable and unique perspective to utility design and constructibility. He specializes in roadway-related wet utility relocations and manages multiple complex projects. Nate brings to the team an extremely high level of detail and an eye for quality design and construction without losing focus on bigger picture concerns, such as meeting project objectives, maintaining system viability, and holistic effects of design choices.

## **Relevant Project Experience**

- B-5156, NC 210 Bridge Replacement Over Long Creek, Pender County, NC
- NCDOT, B-5534, Bridge 82 over Burnt Coat Creek, Duplin County, NC
- BR-0074, US 70 Bridge Replacements over Slocum Creek, Havelock, NC
- Bridge 254, Bridge over Third Creek, Iredell County, NC
- BL-0024, Cary Parkway Pedestrian Bridge, Cary, NC



# JASON HARTSHORN, PWS | Environmental Permitting Lead

Jason is an environmental scientist specializing in environmental investigations, due diligence assessments and Phase I environmental site assessments, environmental audits, stream, wetland, and riparian buffer delineation, wetland mitigation development, and protected species surveys. He has over 11 years of experience in the environmental regulatory arena, specializing in complex Section 404/401 permitting and riparian buffer authorizations, isolated wetland permitting, Section 9 and 10 permitting, enforcement actions, and developing environmental assessment documentation. Jason works extensively with public and private sector clients throughout the region.

# **Relevant Project Experience**

- Mimosa Boulevard Bridge Replacement (B-5001), Pine Knoll Shores, NC
- South Dogwood Trail over Snow Goose Canal Bridge Replacement, Southern Shores, NC
- NCDOT, Express Design-Build, Division 5B (17BP.5.R.47), Division 5, Wake County, NC
- U-5534B, Walkway Under the Heide Trask Drawbridge, Wilmington, NC
- NCDOT, Bridge Replacements, Bertie and Tyrrell Counties, NC

Scientist

**Kimley»Horn** 





Planning and Design Services for the

Juniper/Trinitie Trail Bridge Replacement Project



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**Professional Credentials** 

M.S., Civil Engineering, NC State University, 2006

B.S., Civil Engineering, NC

State University, 2003

OH, SC, TX, and VA

Professional Engineer in

NC, GA, MA, MI, MN, NJ,

# SETH DENNEY, P.E. | QA/QC Reviewer

Seth has 18 years of structural engineering experience, including design and production of plans and specifications. He has designed and managed projects across the U.S. that include roadway, railroad, and pedestrian bridges; culverts; retaining walls; and parking structures. These projects have been both hard bid and design-build. Seth's work has focused primarily on bridges, specifically prestressed. His experience also includes spliced bulb tee girder bridges and vessel collision applications.

## **Relevant Project Experience**

- South Dogwood Trail over Snow Goose Canal Bridge Replacement, Southern Shores, NC
- NCDOT, R-2635D, NC 540/Old Holly Springs Road Interchange, Apex, NC
- BR-0074, US-70 Bridge Replacements over Slocum Creek, Havelock, NC
- B-5156, NC 210 Bridge Replacement Over Long Creek, NC
- NCDOT, B-5534, Bridge 82 over Burnt Coat Creek, Duplin, NC



# Professional Credentials

B.S., Civil Engineering, Old Dominion University, 1997

Professional Engineer in NC and VA

**Professional Credentials** 

Technology and Surveying

Professional Land Surveyor

AAS, Civil Engineering

Technology, Central

Certified Floodplain

College, 1997

in NC

Piedmont Community

# JERRY STALLS, P.E. | Geotechnical Investigation and Engineering Lead

**GET Solutions, Inc.'s** Jerry has nearly 25 years of experience in geotechnical engineering and construction materials testing. His experience includes subsurface investigations, site characterization studies, and geotechnical engineering analysis for a multitude of small- to large-scale projects. These include shallow and deep foundation design (driven SPPC, timber, H-piles, and cast-in-place piles), pavement design, settlement analyses, slope stability analyses, soil liquefaction, seismic site investigation, and forensic evaluation of horizontal and vertical structures. Jerry's construction materials testing experience includes field and laboratory testing of soil and concrete, lime/cement stabilization, subgrade improvements, soil resistivity testing, and permeability testing.

# **Relevant Project Experience**

- Juniper Trail Street Improvements, Southern Shores, NC
- Sea Oats Trail, Southern Shores, NC
- Cape Hatteras Lighthouse Trail, Buxton, NC



# PATRICK HARTMAN, PLS, CFS | Location and Surveys Lead

**Rivers & Associates, Inc.'s** Patrick has 28 years of diverse experience, including surveys for land development projects for residential, commercial, education, healthcare, institutional, and industrial markets. His experience also includes various surveys for public works and utility infrastructure projects including water, sewer, and drainage networks; pump stations and treatment plants; streets, roadways, and streetscapes; and recreation parks, greenways, and athletic facilities. Patrick has extensive experience with taking projects from the initial boundary survey, to final platting, to design level surveying, construction staking, and as-built surveying. His experience includes wetland surveys, topographic surveys, boundary surveys, platting, utility easement mapping, roadway right-of-way mapping, construction surveying, drainage and utility as-builts, and physical/as-built/loan surveys.

## **Relevant Project Experience**

- Wildwood Park Improvements, Greenville, NC
- COG-4th Street Reconstruction, Greenville, NC
- Alice Keene Park Survey, Winterville, NC

Surveyor in NC

Kimley »Horn <sup>76</sup>



**STATEMENT OF QUALIFICATIONS** Planning and Design Services for the **Juniper/Trinitie Trail Bridge Replacement Project** 



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# **Team Organization**



**Project Manager** Andrew Phillips, P.E QA/QC Reviewers Greg Brew, P.E., CPM Seth Denney, P.E.

# Planning NEPA

Kristina Solberg, P.E. Eanas Alia

## Public Involvement Kristina Solberg, P.E. Eanas Alia

Environmental Permitting Jason Hartshorn, PWS Mackenzie Richards, PWS

## Design Structures

Andrew Phillips, P.E. Clay Poole, P.E.

# **Hydraulics**

Vance Blanton, P.E., CFM, SMI, LEED AP Jordan Bendl, P.E. Kaitlyn Faugerstrom, E.I.

# Roadway Design

Tyler Spring, P.E. Jeff Moore, P.E. Jack Crino, E.I.

# **Erosion Control** Jordan Bendl, P.E. David Hursey, P.E.

**Traffic Control** Evan Parrott, P.E. Sean Kane, P.E.

Utility Coordination Nate Harvey, P.E. Caleb Lowman, P.E.

## Data Collection Geotechnical Investigation and Engineering Jerry Stalls, P.E.<sup>1</sup> Mark Scholfield, P.E.<sup>1</sup>

# Location and Surveys Patrick Hartman, PLS<sup>2</sup> Randy Bieber, PLS, CFS<sup>2</sup>

Construction Bid Phase Services Andrew Phillips, P.E. Tyler Spring, P.E.

# Subconsultants

1 GET Solutions, Inc. 2 Rivers & Associates, Inc.





# 3. Project Understanding and Approach

At Kimley-Horn, we approach all projects with excitement and innovative ideas, never backing away from a challenge. Kimley-Horn is fortunate to have had the opportunity to work with Southern Shores and many of the Town's staff over the years. We always enjoy meeting with you and your staff; we work well together while striving for the best possible outcome for you and your community. We believe successful projects are realized more often in environments where open and honest communication, strong professionalism coupled with appropriate experience, and investment in the outcome are present. The Kimley-Horn team has a great head start in these foundational requirements! We greatly appreciated the opportunity to work with you to develop and present the conceptual design



of the Juniper/Trinitie Trail Bridge Replacement site and gained a tremendous amount of information about the project site, the Town's priorities regarding for the bridge replacement, and how critical the input of local stakeholders and other residents is to helping this project's overall success.

Because of our team's history with the Town and the project site, we offer an unmatched ability to provide the Town of Southern Shores a high quality bridge replacement project that meets your needs and exceeds your expectations. We understand the concerns of the Town and its residents when it comes to the nature of this type of project.

The Kimley-Horn team has significant experience with cored slab structures across the state of North Carolina. In particular, Kimley-Horn has designed several similar structures in eastern NC for municipal clients and for the North Carolina Department of Transportation. Our team has an outstanding track record on these types of projects, and we have put together a core group of engineers across all major design disciplines who understand not only the nature of cored slab bridge replacement projects, but also how to deliver construction documents that provide contractors with clear and accurate plans that limit change orders and cost overruns. This leads to more accurate bids and fewer construction delays.

Because of several specific aspects associated with the site and the proposed structure, Kimley-Horn has coordinated with local partners to make sure that the precast units required to meet the appropriate roadway grades, environmental constraints, and location limitations are readily available and can be utilized at this site. Based on past experience with this type of structure as well as knowledge and experience working in coastal environments, our team has an unmatched ability to effectively solve the problems that may be encountered during this bridge replacement project.

# Hydraulics and Hydrology

Kimley-Horn will perform hydrologic and hydraulic designs in accordance with the requirements of the NCDOT Guidelines for Drainage Study and Hydraulic Design. Our experience encompasses all design elements of Tier I and Tier II NCDOT pregualification work codes, including hydrologic and hydraulic analysis and design of storm drain systems, riverine modeling, sizing of culverts/bridges, and FEMA compliance. We also strive to incorporate holistic watershed-based solutions, including BMPs (in accordance with the Stormwater Best Management Practices Toolbox), stream restoration, wetland creation, natural systems rehabilitation design, permitting, and mitigation banking. Kimley-Horn staff have been involved in more than 70 bridge and 60 culvert projects in North Carolina during the last 10 years. Many of these structures were located on FEMA streams and required coordination and proper documentation through the North Carolina Floodplain Mapping Program. This experience in stream modeling, MOAs, and CLOMRs will benefit the Town as it continues to face the challenges of a growing community.

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## **STATEMENT OF QUALIFICATIONS** Planning and Design Services for the **Juniper/Trinitie Trail Bridge Replacement Project**



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# Roadway Design

Kimley-Horn will conduct a site visit to field verify the survey when survey is complete. Kimley-Horn will then conduct preliminary roadway design and internal Quality Assurance/Quality Control (QA/QC) before submitting preliminary plans to the Town for review and approval. Once the preliminary roadway plans are approved, Kimley-Horn will prepare and integrate hydraulic designs into the plan set.

No proposed right-of-way is expected to be required as a part of this project, but temporary and/or permanent easements will be added to the plans after drainage is approved and submitted to the Town for approval. Once permits are received and the environmental documentation is approved, easement acquisition will be completed. Kimley-Horn will submit final plans to the Town for review, approval, and letting.

Trinitie Trail has a posted speed of 25 MPH, with a desirable design speed of 30 MPH. The culvert settling issue at the Trinitie Trail crossing of Canvas Back Canal has resulted in an existing vertical curve that satisfies an approximate 20 MPH design speed, which presents significant sight distance issues for motorists in the area. Kimley-Horn has the knowledge and depth required to work collaboratively between disciplines (roadway, environmental, hydraulic, and structural) to propose a solution that solves the sight distance and design speed issue at hand while being budget conscious.

# Structure Design

Kimley-Horn has the knowledge and expertise to take on the full range of bridge replacement projects—from large, complex replacements to more streamlined Low Impact Bridge Replacements. In each of these scenarios and just about every situation in between, Kimley-Horn possesses the know-how and experience to successfully deliver bridge replacement projects within budget and on schedule. Because of our team's vast knowledge of cored slab bridge design, we are able to understand the nuances and site-specific constraints related to coastal cored slab bridge replacement projects. Kimley-Horn has successfully completed multiple bridge replacements along the North Carolina coast, most recently replacements in Bertie and Tyrrell Counties for NCDOT Division 1. In addition, Kimley-Horn completed a short span cored slab bridge replacement over a canal in Pine Knoll Shores, NC utilizing sheet pile and concrete coping to tie to the existing bulkhead, which has many similarities to the proposed project at Juniper/Trinitie Trail over Canvas Back Canal.

The Kimley-Horn team also offers specific knowledge of the Town's bridge replacement needs, having completed the replacement of the South Dogwood Trail bridge at Tall Pines Lane. As a result of our work on this project and others with the Town, the Kimley-Horn team understands the Town's needs when it comes to this type of project and what are the most critical features. Having this prior experience serving the Town on bridge replacement projects, we not only have the ability and expertise to perform the design and development of construction documents, but we also understand the issues that are most critical for the Town, the local residents, and all the stakeholders involved.

Kimley-Horn staff have been involved in more than 70 bridge and 60 culvert projects in North Carolina during the last 10 years.

Because of the residential location of the bridge replacement site, bridge aesthetics are something that should be considered during the early stages of design. For this type of structure, the most practical solutions for aesthetic consideration would be concrete form liners to give the exposed concrete a more pleasing and textured appearance. There are other aesthetic treatment options, such as rail type, masonry panels, painted concrete, etc., that can also be utilized if deemed appropriate. Stakeholder involvement will be a crucial factor to consider when it comes to any aesthetic treatments applied to the proposed bridge.

# **Environmental Permitting**

Kimley-Horn's environmental professionals anticipate that the potential impacts to Canvas Back Canal resulting from the bridge replacement project will require a Section 404 Nationwide Permit (NWP) 3 or 18 or a Regional General Permit (RGP) 198000291 from the US Army Corps of Engineers (USACE) and an associated Section 401 Water Quality Certification (WQC) from the NC Division of Water Resources (NCDWR). Additionally, Kimley-Horn anticipates that the proposed project will require a CAMA General Permit or a CAMA Major Permit from the NC Division of Coastal Management (NCDCM). Canvas Back Canal is not designated by the USACE as a Navigable Water under Section 10 of the Rivers and Harbors Act; however, it is likely still regulated by the US Coast Guard (USCG) due to use by small watercraft and center console boats. If the navigable opening can be maintained, an Advanced Approval Exemption is anticipated; however, Kimley-Horn understands that the Town is interested in investigating adjusting the navigable clearances to alleviate visibility issues along Trinitie Trail, which would likely trigger a Bridge Permit with the USCG. As part of the permit process, Kimley-Horn



will coordinate with the USCG to determine the permit type required and if a Navigation Impact Report (NIR) will be necessary based on the proposed navigable opening modifications and documented watercraft use along Canvas Back Canal.

To facilitate the future permitting process and avoid unexpected delays, Kimley-Horn believes it is critical to identify any potential environmental constraints early in the planning process. We recommend using GIS-level data reviews and database evaluations during the concept design phase to identify likely jurisdictional waters (streams, wetlands, and coastal wetlands) and FEMA-regulated floodways and floodplains, as well as CAMA-designated Areas of Environmental Concern (AEC) and other protected resources, including submerged aquatic vegetation (SAV) beds, primary nursery areas (PNA), and essential fish habitat (EFH). Kimley-Horn wetland scientists and natural resource specialists will work closely with the design team to make sure avoidance and minimization efforts are integrated into the design and an efficient permitting approach is well-defined from the beginning of the project, ultimately reducing costly rework from issues arising late in the permitting timeline.

Kimley-Horn's environmental professionals are accustomed to collaborating with roadway, hydraulic, structural, and utility engineers to help ensure the proposed design and permit approach minimizes impacts while still meeting the goals of the project. Our environmental team is thoroughly familiar with the species, habitats, jurisdictional features, and terrain of NC's Outer Banks. We have worked on numerous large-scale projects in coastal areas up and down the coast and we will not have any "learning curves" on your project. Kimley-Horn's environmental team has the distinct advantage of working under the same roof as our planning and design teams. This allows us to identify natural resource issues throughout the project design process so that we can streamline permitting, address potential design concerns in real-time, and, most importantly, meet the project's objectives.

Our team has built a strong relationship and trusted reputation with the USACE Washington Field Office staff that will be reviewing this project for jurisdictional determinations and Section 404 permitting. We have a proven track record of expedited reviews and minimal requests for additional information on our submittals—we know what the USACE is looking for. On the state level, we have a long and successful history working collaboratively with the NCDWR Washington Regional Office and NCDCM Elizabeth City District Office staff on projects throughout eastern and coastal NC. Our long history in the state includes projects in each of the 20 coastal counties subject to NCDCM regulation. This vast experience allows us to have a full understanding of the agencies' concerns relating to coastal regulations, Section 404/401, and CAMA permitting, leading to time-saving reviews on challenging projects and allowing us to better anticipate regulatory comments so we can reduce requests for additional information and expedite permit approvals.

## **NEPA** Documentation

Before beginning any preliminary engineering work, Kimley-Horn will coordinate with the Town to solidify the study area and confirm the appropriate NEPA document type, which is expected to be a Categorical Exclusion (CE)—this will enable the use of federal funding on the project. With a refined study area in mind, Kimley-Horn will begin NEPA documentation. We understand that it is critically important to discuss the project timeline with the Town prior to beginning planning and environmental studies to avoid schedule delays.

Kimley-Horn has skilled and specialized staff to address virtually any environmental issue that may arise; we are familiar with NEPA regulations and policies and have prepared all levels of documentation and agency coordination. Our environmental specialists are supported by geographic information system (GIS) and graphic design professionals who can provide both analysis of geographic information and effective graphic representations to enhance the understanding of environmental documents. Our environmental teams are guided by staff with extensive experience preparing and processing environmental documents and technical writers who assure that documents are written for public understanding.

# Utility Conflicts

All existing utilities in the project area are underground. Based on the depth of the existing culvert and the minimal cover to the existing roadway surface, it is anticipated that any existing underground utilities within the proposed bridge footprint would require relocation. We have determined through preliminary coordination that the existing water line crossing the canal was previously relocated and should pose no conflict for the bridge.

We will coordinate with telecommunications and electrical power utility owners, informing them of the project and determining the conflict status of their facilities. We will work to avoid conflicts where possible and coordinate any necessary relocations to help ensure compatibility with the proposed bridge design and project schedules.

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# 4. Quality Assurance/Quality Control (QA/QC)

Kimley-Horn's quality assurance program establishes the processes used to make sure that deliverables are of the highest quality. Beginning during scope development, the project manager identifies appropriate subject matter experts with experience and expertise to review project deliverables. Quality control staff are shown on project organizational charts and included in resumes to demonstrate to perspective clients that our experts are qualified for this important role. Prior to each deliverable milestone, the designated QC reviewer provides comments to the project or technical manager. Project and technical managers are charged with resolving each comment prior to sending deliverables to the client. This approach is designed to make sure the firm's senior subject matter experts are tasked with reviewing documents for quality, accuracy, and constructability prior to delivery to the client.

Development of effective and efficient designs and accurate construction documents requires quality control that goes a step further with respect to level of review detail. It is essential that the selected QC manager is not a part of the day-to-day project team and can bring an outside perspective to the overall design and plan production. The QC reviewer assigned to each discipline to extensively review the design and construction documents will typically have 15 years or more of experience with a focus on the subject matter being reviewed. In addition to the discipline-specific QC, we ask that one of the more senior QC reviewers with significant experience with the specific type of project review the overall plans from the perspective of an Inter-Disciplinary Review (IDR). This type of review helps ensure consistency between disciplines and that appropriate coordination takes place throughout the design and plan production phases. As a result, the combined plan set is cleaner and more consistent, which often leads to fewer change orders and errors during construction.

To allow the QC reviewers sufficient time for their reviews and any necessary revisions, we make every effort to schedule QC sessions a week or two (depending on overall project schedule) in advance of the actual submittal so that reviewers can allocate the time necessary for a proper QC review. To ensure a streamlined review and revision process, we will typically schedule a meeting between the QC reviewer and design team to flip through and discuss, as necessary, each of the reviewers, comments to avoid confusion and interpretation of the comments.

# Firm Proximity Statement

We know that a strong commitment to client satisfaction must be the foundation of our service to you. While our office is not within 30 miles of Southern Shores, NC, we have a large, highly qualified staff and we can respond quickly to your questions and concerns. We will be available to you on short notice to help you with whatever engineering challenges you may encounter.

We will be serving you from our Raleigh office, which is 208 miles away from the Town of Southern Shores. If necessary, we will be supported by our Virginia Beach office, 76.2 miles from the Town of Southern Shores.

# Capacity Chart/Staffing Availability

Kimley-Horn mainly uses a workload forecasting technique called "cast-aheads" to determine staff availability before proposing on a particular contract. It involves a meeting with relevant department managers and staff to examine the backlog, upcoming deadlines, production schedule, and several other factors. Our team has analyzed our current workload and determined that the proposed staff can be readily available for your project.



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# Kimley »Horn

KIMLEY-HORN.CO

# JUNIPER/TRINITIE TRAIL BRIDGE REPLACEMENT TOWN OF SOUTHERN SHORES

**Stewart** 223 S. West Street / Suite 1100 / Raleigh, NC 27603 O 919.380.8750 F 919.380.8752 stewartinc.com

**NOVEMBER 4, 2022** 



Item 5.



November 4, 2022

David Bradley, Public Works Director Town of Southern Shores 5375 N. Virginia Dare Trail Southern Shores, NC 27949

# RE: Request For Qualifications For Professional Engineering Services: Planning and Design Services for the Juniper/Trinitie Trail Bridge Replacement Project

Dear Mr. Bradley,

The Town of Southern Shores is embarking on an important project in the replacement of the Juniper/Trinitie Trail Bridge Replacement project. Stewart understands that the town has experienced a recent increase in vehicular traffic, as tourists choose to travel on town roads in lieu of US 158 and NC-12. This cored slab concrete bridge will serve to replace the failing culvert over Canvas Back Canal on Trinitie Trail, thus improving accessibility to residents and tourists alike.

We are familiar with the Town from our current work on the Southern Shores Comprehensive Plan. I am leading our team of planners working with the town, and I will also serve as Principal-in-Charge on this bridge replacement project. We would like to be the firm that can partner with you for al lof your needs, from long range planning to design projects that we shepherd to completion. We are committed to helping you achieve the vision you have for your town.

To complement our experience, we have partnered with **VHB** to provide natural systems, hydraulic design, permitting, and Erosion Control.

### ADDITIONAL INFORMATION

- Focus on Quality and Delivery The Stewart team prioritizes delivery of our client's needs with high quality deliverables ahead of schedule. We regularly receive evaluations of 8+ to 9+ on a scale of 1 to 10 before NCDOT revamped the evaluation process. Now, with the new scale, Stewart continues to receive high marks from our various NCDOT clients. Our highest marks are usually in the meeting schedule and responsiveness categories.
- Experienced Project Leadership I will serve as Principal-In-Charge. My 30 years with NCDOT allowed me to be involved in complex planning and design projects statewide and during my last 5 years at NCDOT I served as Assistant State Roadway Design Engineer, which allowed me to provide high level guidance on important projects to the mobility of the state. Our design managers both have significant experience on NCDOT projects, David Ruggles with over 40 years doing bridge designs and Andy Young with NCDOT experience in the Roadway Design and Design-Build Groups coupled with his private firm experience at Stewart.
- Strong Experienced Team The Stewart team brings many years of experience working together on multifaceted
  projects to deliver bridge replacement projects. The experience of Stewart's staff allows us to create a team that will bring
  new ideas and "out of the box" thinking to any on-call assignments.

We appreciate the opportunity to submit this Statement of Qualifications response. We look forward to the prospect of working with you on this project. Please call me at **919.866.4761** or email at **dtaylor@stewartinc.com** should you have any questions or need additional information.

Sincerely, **STEWART** 

**Doug Taylor, PE** Vice President | Practice Leader, Transportation

STEWART'S CONTACT PERSONS Principal-in-Charge: Doug Taylor, PE 919.866.4761 • dtaylor@stewartinc.com

Project Manager: **David Ruggles, PE, LEED AP** 919.866.4717 • druggles@stewartinc.com

Item 5.

**Doug Taylor, PE, CPM** – Doug has over 38 years of engineering and progressive leadership experience focused in staff development, change management, policy/program development and supervision. He is well-versed in AASHTO, Complete Streets, value engineering and context-sensitive guidelines with an emphasis on innovative solutions. Through the Greenway Task Force, he has provided advice and review for Greenville Loop and Masonboro Loop projects.

**David Ruggles, PE, LEED AP** – David has 44 years of experience. He has a comprehensive background in bridge and roadway design and has managed a large number of complex projects including multilevel interchanges, bridge rehabilitations and ratings, bridge and roadway widenings, steel curved continuous plate girders, and prestressed concrete girders, in addition to several complex pedestrian bridge projects.

**Jeff Wilson, PE** – Jeff has more than 12 years of experience specializing in bridge design. His background includes work with cored slab, prestressed concrete girders, steel plate girders, and substructure elements. In addition, he has experience in culvert design, retaining wall design, bridge widening projects, and greenway structures.

**Vivian Chung, PE** – Vivian has six years of experience in the structural engineering field, including four years with Stewart. Vivian has worked on various projects ranging from multi-family residential buildings, office buildings, as well as pedestrian bridges to grade separation bridges over interstates.

**Andy Young, PE** – Andy has more than 19 years of roadway design experience with The North Carolina Department of Transportation (NCDOT). His responsibilities included overseeing the design effort for Roadway, Traffic Management, Pavement Marking, and Signing disciplines. With this, he ensures projects schedules are maintained and/or advanced while producing plans that conform to the proper standards and are of the highest quality. He is well-versed in AASHTO, NCDOT Standards, NCDOT Policy and Procedures, MicroStation, Geopak, and Corridor Modeling.

**Michael Burns, PE** – Michael has nine years of engineering experience in both design and construction. He serves as a design engineer, who utilizes his strong knowledge of Microstation, GEOPAK, and Corridor Modeler to produce high quality roadway design for Bridge Replacements. He excels at project coordination activities including utility coordination, client communication, and schedule management.

**Josh Roemer, PE** – Joshua joined Stewart immediately after graduating from The Pennsylvania State University with a degree in Civil Engineering. Since joining Stewart in 2018, Joshua has served as a Roadway Designer for various NCDOT projects, including several bridge replacement projects.

**Harrison Wenchell** – Harrison is a transportation planner with more than six years of experience. He has established contacts across North Carolina with municipalities, utility owners, and NCDOT staff. Harrison's meticulous approach and effective communication have successfully proven that he is capable of leading projects with varying scale and complexity in order to deliver the highest quality product.

**Joan Lyons, AICP** – Joan currently serves as a Transportation Planner at Stewart where she develops various types of environmental and public participation planning documents. Her diverse portfolio of projects varies from bridge replacements and intersection improvements to interchange reconfigurations and lengthy widening projects throughout the State of North Carolina.

**Ryan Davenport, PLS** – With over 26 years of progressive surveying experience, Ryan has acquired skills in data collection and data processing as well as project management and business development. He has worked in varying capacities on high-profi le projects in and around North Carolina and the Research Triangle Park, including projects for the North Carolina Department of Transportation.

**Don Brown, PE, LEED AP** – Don is Practice Leader of the Geotechnical and Construction Services group. In this role he is responsible for ensuring client satisfaction, consulting, in-house interdisciplinary collaboration and training, managing personnel, and business development. Don is also the Senior Geotechnical Engineer at Stewart.

## **DIVISION 5 LOW IMPACT BRIDGE REPLACEMENTS** TRANSPORTATION PLANNING & DESIGN



Item 5.



# **Q** PROJECT OVERVIEW

Stewart designed 16 low impact bridge replacements in counties covered by Division 5. Stewart's scope included roadway design, structure design, traffic control, pavement marking, and utility coordination. The scope included one TIP project (B-5102) for replacement of a bridge on US 158 over South Hyco Creek. Bridge types included cored slab, box beam, and prestressed concrete girders. For the three most recent projects in Vance County, Stewart provided the functional planning, coordination and design required

## LOCATION

Person, Warren, Vance, Wake & Franklin Counties, NC

### OWNER

NCDOT Lisa Gilchrist Bridge Program Manager 2612 N. Duke Street Durham, NC 27704 919-317-4700

### DATES

Start: 2014 Completion: On-going Assignment

CONSTRUCTION COST \$30 M

to prepare for the field scoping meeting that begins the final planning and design process. (Assigned through the Central Region On-Call)

# BRIDGE NO. 37 ON NC 55 OVER BRANCH OF TRENT CREEK BRIDGE DESIGN





# **Q** PROJECT OVERVIEW

This project replaces bridge no. 37 on NC 55 over Branch of Trent Creek in Pamlico County. The proposed structure will be an approximately 85-foot-long, two-span, cored slab design. Since no reasonable off-site detour is available, the bridge will be stage constructed to allow traffic to continue through.



LOCATION Pamlico County, NC

## CLIENT/OWNER

NCDOT Structures Management Unit David Stutts, PE, Project Engineer - PEF/Program Management 1000 Birch Ridge Drive Raleigh, NC 27610 919.707.6442 dstutts@ncdot.gov

#### DATES

Start: 2019 Completed: 2024, Est.

CONSTRUCTION COST \$2.45 M

LENGTH 85 feet

Item 5.

STEWART

## BRIDGE NO. 8 ON NC 12 OVER THE SLASH **BRIDGE DESIGN**



## **Q** PROJECT OVERVIEW

This project replaces bridge no. 8 on NC 12 over the Slash in Dare County. The proposed structure will be an approximately 95-foot-long, two-span, pre-stressed concrete girder design. The roadway will be a curb and gutter section with 15-foot lanes and 5-foot sidewalks on both sides. With this project located on NC 12 in Hatteras, we are looking to provide increased pedestrian connectivity with construction in the winter months.

This project had a public request to reduce impacts late in the design process. The Stewart Team reacted to the request and we are taking a revised design to the public this month. Stewart is dedicated to providing the residents of Southern Shores with opportunities for involvement and will remain flexible in our approach until final drawings are approved.

## LOCATION Dare County, NC

## CLIENT/OWNER

NCDOT Structures Management Unit David Stutts, PE, Project Engineer - PEF/Program Management 1000 Birch Ridge Drive Raleigh, NC 27610 919.707.6442 dstutts@ncdot.gov

DATES Start: 2019 Completion: 2024, EST.

CONSTRUCTION COST \$3.3 M

**PROJECT SIZE** 95 feet

# BRIDGE NO. 9 ON SR 1112 OVER BLOUNTS CREEK BRIDGE DESIGN



# **Q** PROJECT OVERVIEW

This project replaces bridge no. 9 on SR 1112 over Blounts Creek in Beaufort County. The proposed structure will be an approximately 950-foot-long, eight-span, pre-stressed concrete girder design. The roadway alignment has been shifted to a new alignment to correct existing horizontal geometry in the area.



Highly Corrosive Zone, CAMA Coordination, Boater Safety Plan

# STEWART

LOCATION Beaufort County, NC

## CLIENT/OWNER

NCDOT Structures Management Unit David Stutts, PE, Project Engineer - PEF/Program Management 1000 Birch Ridge Drive Raleigh, NC 27610 919.707.6442

dstutts@ncdot.gov DATES

Start: 2019 Completion: 2023, Est.

CONSTRUCTION COST \$6.8 M

LENGTH 950 feet

## BRIDGE NO. 24 ON NC 222 OVER THE TAR RIVER **BRIDGE DESIGN**



Item 5.



# **Q** PROJECT OVERVIEW

This project replaces bridge no. 24 on NC 222 over the Tar River in Pitt County. The proposed structure will be an approximately 975-foot-long, ten-span, pre-stressed concrete girder design. The project will be constructed utilizing an off-site detour in which extra coordination was needed with local emergency services. In addition, there is an existing boat ramp with parking facility adjacent to the roadway. The horizontal alignment and rock plating were used to eliminate impacts to this facility.

When this project was delayed for 2 years due to funding, we initiated a public meeting to update the public on the current design. The Stewart team is a valued asset in developing cost effective design solutions and securing government funding for our clients.

#### LOCATION Pitt County, NC

## CLIENT/OWNER

NCDOT Structures Management Unit David Stutts, PE, Project Engineer - PEF/Program Management 919.707.6442 dstutts@ncdot.gov

DATES Start: 2019 Completion: 2024, Est.

CONSTRUCTION COST \$11.5 M

**PROJECT SIZE** 975 feet

# BRIDGE NO. 36 ON NC 55 OVER THE SOUTH PRONG BAY **RIVER** BRIDGE DESIGN



LOCATION Pamlico County, NC

## CLIENT/OWNER

**NCDOT Structures Management** Unit

David Stutts, PE, Project Engineer - PEF/Program Management 1000 Birch Ridge Drive Raleigh, NC 27610 919.707.6442 dstutts@ncdot.gov

#### DATES

Start: 2019 Completed: 2024, Est.

CONSTRUCTION COST \$5.3 M

**PROJECT SIZE** 85 feet



# **Q** PROJECT OVERVIEW

This project replaces bridge no. 36 on NC 55 over the South Prong Bay River in Pamlico County. The proposed structure will be an approximately 85-foot-long, three-span, prestressed concrete girder design. With the presence of an existing middle school, additional measures had to be used to insure connectivity during construction.



Coordinating with Environmental Agencies to balance capacity needs for the school with wetland impact reductions.

## NCDOT DIVISION 5 BALTIMORE ROAD BRIDGE REPLACEMENT | WARREN COUNTY, NC

VHB provided the performed hydraulic design, erosion control design, and permit drawings for the 60-foot single span cored slab bridge replacement carrying Baltimore Road over Richneck Creek in Warren County. The super structure sits on pile end bents. Stewart served as the prime consultant on this project, responsible for Roadway Design, Planning, Traffic Control, Pavement Marking, Structure Design, Geotechnical Engineering, Utility Design and Utility Coordination during design and construction.

OWNER

Lisa Gilchrist, EI, Bridge Program Manager 919.733.4699 Igilchrist@ncdot.gov DATE 2016-2020

2020

DISCIPLINES Hydraulic Design, Erosion Control, and Permitting



## NCDOT DIVISION 8 R-2527 | MONTGOMERY COUNTY, NC

VHB provided the hydraulic design of 9 miles of roadway widening on NC 24-27 through sections of the Uwharrie National Forest in Montgomery County. VHB conducted extensive coordination with environmental agencies to avoid and minimize environmental impacts throughout the project. The design included nine culvert replacements with four of the crossings located in FEMA Limited Detailed Studies. VHB also conducted the Sediment and Erosion Control Plans as well as Permit Drawings and agency coordination through the merger process.

OWNER Brook Anderson NCDOT Hydraulics Unit 919.707.6706 beanderson@ncdot.gov DATE Ongoing DISCIPLINES Hydraulic Design, Sediment and Erosion Control



# >> THE STEWART DIFFERENCE

Stewart is founded on collaboration, both internally and externally. We combine multiple disciplines under one roof in an effort to increase sharing of ideas and efficiency. Our Transportation Engineers, Planners, Geotechnical Engineers and Surveyors work in unison with team leaders from each

discipline. This creates a dynamic relationship of sharing of ideas and constraints. We collaborate with other consultants through every phase in order to bring everyone's expertise to the table, and create a richer experience for our clients. We work with consultants with whom we have previously worked and have developed a strong relationship.



## STEWART LITIGATION HISTORY

Stewart has performed thousands of projects over the last 28 years, the vast majority of which without any disputes or claims. A project for Wake Technical Community College involving two pedestrian bridges that were designed in 2013 resulted in claims and legal proceedings against Stewart Engineering and other parties. Since 2015, Stewart Engineering has reached confidential settlements with certain claimants including Wake Technical Community College. Settlement negotiations to resolve the remaining claims and legal proceedings are ongoing and Stewart Engineering remains confident in its ability to defend and/or reach a settlement that is satisfactory to all parties. It is important to note in the limited situations where a dispute has arisen that Stewart is proud of our past performance in resolving disputes quickly and amicably on behalf of all parties.



## TEAM ORGANIZATIONAL CHART



DAVID RUGGLES PE LEED AP PROJECT MANAGER



DOUG TAYLOR PE CPM PRINCIPAL-IN-CHARGE



Bridge Design

David Ruggles, PE LEED AP Project Manager

> Jeff Wilson, PE Bridge Engineer

Vivian Chung, PE Structural Engineer

George Rambouli Bridge Designer

#### **Utility Coordination**

David Ruggles, PE LEED AP Project Manager

Harrison Wenchell Transportation Planning Team Lead Roadway Design/Traffic Control

Andy Young, PE Lead Roadway Designer

> Michael Burns, PE Roadway Engineer

> Josh Roemer, PE Roadway Engineer

> Jeff Cooke, PE Roadway Engineer

Zach McKenzie Traffic Control

**Devyn Howe** Traffic Control

Natural Systems/Hydraulics/ Permitting/EC

Natural Resources Manager

Frank Flemming, PE Water Resources Manager

### **Planning Team**

Harrison Wenchell Transportation Planning Team Lead

> Joan Lyons, AICP Transportation Planner

> **Ryan Eldridge** *Transportation Planner*

#### Geotechnical

**Don Brown** *Sr. Geotechnical Engineer* 

Survey

Ryan Davenport, PLS Manager of Geospatial



# DOUG TAYLOR PE, CPM

# ROLE: PRINCIPAL-IN-CHARGE TITLE: VP | PRACTICE LEADER, TRANSPORTATION & PLANNING

Doug has over 38 years of engineering and progressive leadership experience focused in staff development, change management, policy/program development and supervision. He previously served as Assistant State Roadway Design Engineer with NCDOT, managing projects in Divisions 10 through 14. His responsibilities included managing the designs and schedules of highway projects, changes in staff, outsourcing project work to private engineering firms and delivering highway projects on budget and on schedule. He is wellversed in AASHTO, Complete Streets, value engineering and context-sensitive guidelines with an emphasis on innovative solutions. Before serving as Assistant State Roadway Design Engineer, he served as both Project Engineer and Project Design Engineer with NCDOT. He currently serves as Practice Leader of Transportation, which provides planning and design services to DOT, Municipal and private clients. As part of an internal initiative to ensure consistent multi-modal delivery, Doug leads a Mobility Task Force that meets regularly to review our greenway and multi-modal projects.

## **RELEVANT EXPERIENCE**

## B-5610, Bridge No. 8 on NC 12 over the Slash | Dare County, NC

Principal-in-Charge | This project replaces bridge no. 8 on NC 12 over the Slash in Dare County. The proposed structure will be an approximately 95-foot-long, two-span, prestressed concrete girder design. The roadway will be a curb and gutter section with 15-foot lanes and 5-foot sidewalks on both sides. With this project located on NC 12 in Hatteras, we are looking to provide increased pedestrian connectivity with construction in the winter months.

## B-5616, Bridge No. 37 on NC 55 over Branch of Trent Creek | Pamlico County, NC

Principal-in-Charge | This project replaces bridge no. 37 on NC 55 over Branch of Trent Creek in Pamlico County. The proposed structure will be an approximately 85-foot-long, two-span, cored slab design. Since no reasonable off-site detour is available, the bridge will be stage constructed to allow traffic to continue through.

## B-5613, Bridge No. 36 on NC 55 over the South Prong Bay River | Pamlico County, NC

Principal-in-Charge | This project replaces bridge no. 36 on NC 55 over the South Prong Bay River in Pamlico County. The proposed structure will be an approximately 85-foot-long, three-span, pre-stressed concrete girder design. With the presence of an existing middle school, additional measures had to be used to insure connectivity during construction.

## B-4830, B-4655, B-5166 & B-4943 | Division 5, NC

Principal-in-Charge | This assignment consisted of bridge replacements at various locations in Division 5. The projects included planning, roadway and hydraulic design, traffic management and pavement marking plans. (Assigned through the Planning and Design On-Call)

## B-5614, Bridge No. 9 on SR 1112 over Blounts Creek | Beaufort County, NC

Principal-in-Charge | This project replaces bridge no. 9 on SR 1112 over Blounts Creek in Beaufort County. The proposed structure will be an approximately 950-foot-long, eight-span, pre-stressed concrete girder design. The roadway alignment has been shifted to a new alignment to correct existing horizontal geometry in the area.

## B-5400, Bridge Replacement on SR 3466 | Candler, NC

Principal-in-Charge | This project replaces the existing bridge with a new structure in a new location. The project's schedule was very aggressive with Right of Way Plans being completed in six months. Along with completing the Roadway Design, we also completed the Signing and Pavement Marking Plans.

# **EDUCATION**

Associate of Applied Science in Civil Engineering Technology Asheville-Buncombe Technical Community College

# 

Professional Engineer (PE): North Carolina #30984

National Certified Public Manager's Consortium Certified Public Manager (CPM)



# DAVID RUGGLES PE, LEED AP

# ROLE: PROJECT MANAGER | BRIDGE DESIGN | UTILITY COORDINATION TITLE: MANAGER, BRIDGE DESIGN

David has practiced civil engineering for over 44 years, including 26 years with Stewart. He has a comprehensive background in bridge and roadway design and has managed a large number of complex projects including multi-level interchanges, bridge rehabilitations and ratings, bridge and roadway widenings, steel curved continuous plate girders, and prestressed concrete girders, in addition to several complex pedestrian bridge projects. David led the design effort for Neuse River Trail Project, which included seven bridges spanning the Neuse River, two of which were custom suspension bridge designs. He also has extensive experience in coordination with NCDOT.

## RELEVANT EXPERIENCE

## Bridge on Perry Road (SR 1514) over Big Swamp Tributary, NCDOT TIP B-3810 Beaufort County

Project Engineer | David served as project engineer for a replacement bridge utilizing prestressed cored slabs on concrete pile bents. The bridge was staged since there were no off-site detour routes available. Scope of work included roadway approaches, traffic control plans and utility coordination.

## **EDUCATION** Bachelor of Science in Civil Engineering University of Virginia

REGISTRATION Professional Engineer (PE): North Carolina #11725 South Carolina #19358 Virginia #13300

## NCDOT BD-5101E Division 1 Low Impact Bridge Replacements Design-Build | Eastern NC

Design Project Manager | Stewart provided structure design, roadway design, utility design, surveying, SUE and construction surveying for seven low impact bridge replacements in Division 1. This included the replacement of five Bridges in Bertie County, one Bridge in Chowan County and one Bridge in Martin County. The replacement structures utilize prestressed concrete cored slab and concrete box beams for the superstructure and pile bents for the substructure. Bridge lengths vary from 54 feet to 102 feet. The bridges were designed under the NCDOT Subregional Tier Design Guidelines.

## Bridge on Wilkinson Station Road (SR 1626) over Beach Stump Canal, NCDOT TIP B-4024 Beaufort County, NC

Project Engineer | David served as project engineer for a replacement bridge consisting of cored slab superstructure on pile bents. An asphalt overlay was placed on the cored slab surface. The project was designed to meet NCDOT standards. Also included in the scope of work was roadway approaches and utility coordination.

## Bridge on Perry Road (SR 1514) over Big Swamp Tributary, NCDOT TIP B-3810 | Beaufort County, NC

Project Engineer | David served as project engineer for a replacement bridge utilizing prestressed cored slabs on concrete pile bents. The bridge was staged since there were no off-site detour routes available. Scope of work included roadway approaches, traffic control plans and utility coordination.

## B-0413 Emergency Bridge Replacement | Buncombe County, NC

Project Manager | David served as Project Manager for this emergency bridge replacement, which was required when the existing bridge was washed away by Hurricane Charley. The replacement bridge utilized a three span cored slab structure with 25 ft, 60 ft, and 55 ft spans. The substructure utilized end bents and bents on HP 12 x 53 steel piles. The project design was fast tracked to minimize the time required to construct the replacement structure and open the roadway to traffic.

## B-4934 Bridge No. 85 on US 258 over Deep Creek | Edgecombe County, NC

Project Manager | David served as Project Manager for this project, which included the design of a three span cored slab bridge with span lengths of 60', 60' and 50' and 510' of roadway approaches. End bents and bents are on H piles.



## ANDY YOUNG PE



Andy has more than 19 years of roadway design experience both with Private Engineering Firms and The North Carolina Department of Transportation (NCDOT). His responsibilities included overseeing the design effort for Roadway, Traffic Management, Pavement Marking, and Signing disciplines. With this, he ensures projects schedules are maintained and/or advanced while producing plans that conform to the proper standards and are of the highest quality. He is wellversed in AASHTO, NCDOT Standards, NCDOT Policy and Procedures, MicroStation, Geopak, and Corridor Modeling.

# **EDUCATION**

Bachelor of Science in Civil Engineering The Pennsylvania State University

# 

Professional Engineer (PE): North Carolina #34407

## **RELEVANT EXPERIENCE**

- B-5610, Bridge No. 8 on NC 12 over the Slash | Dare County, NC Project Manager
- B-5614, Bridge No. 9 on SR 1112 over Blounts Creek | Beaufort County, NC Project Manager
- B-5613, Bridge No. 36 on NC 55 over the South Prong Bay River | Pamlico County, NC Project Manager
- B-5616, Bridge No. 37 on NC 55 over Branch of Trent Creek | Pamlico County, NC Project Manager
- B-4447 & B-5159, Final Plan Development for NCDOT | Varying Locations, NC Project Manager
- B-4448, Bridge Replacement Project on I-40 at Exit 112
   Valdese, NC
  - Project Manager
- B-5400, Bridge Replacement on SR 3466 | Candler, NC Project Manager
- NCDOT GESC On-Call | Division 14, NC Roadway Design Lead
- NCDOT Feasibility Studies Unit Express Design On-Call | Various Locations, NC Project Manager



## HARRISON WENCHELL

PLANNING | UTILITY COORDINATION



Harrison is a transportation planner with more than six years experience. Harrison has worked closely with municipal planning organizations and the NCDOT on various projects involving environmental planning, regional transit operations, and safety and mobility improvements. Harrison has led Stewart's utility coordination services for numerous projects with the City of Raleigh, Town of Chapel Hill, Town of Mooresville, as well as various NCDOT Divisions and the Structures Management Unit. Harrison has established contacts across North Carolina with utility owners, municipalities, and NCDOT staff. From initial outreach to utility construction, Harrison's meticulous approach and effective communication have successfully proven that he is capable of leading utility coordination for projects with varying complexity and scale.

# 

Bachelor of Arts in Environmental Design, Policy, and Planning SUNY Stony Brook University

## RELEVANT EXPERIENCE

 B-5610, Bridge No. 8 on NC 12 over the Slash | Dare County, NC

Lead Transportation Planner

- B-5613, Bridge No. 36 on NC 55 over the South Prong Bay River | Pamlico County, NC Lead Transportation Planner & Utility Coordinator
- B-5613, Bridge No. 36 on NC 55 over the South Prong Bay River | Pamlico County, NC Lead Transportation Planner& Utility Coordinator
- B-5616, Bridge No. 37 on NC 55 over Branch of Trent Creek | Pamlico County, NC Lead Transportation Planner & Utility Coordinator
- B-5614, Bridge No. 9 on SR 1112 over Blounts Creek | Beaufort County, NC
  - Lead Transportation Planner & Utility Coordinator
- NCDOT Division 5 On-Call Bridge Replacements | Various Locations, NC Transportation Planner
- B-5612, Bridge No. 24 on NC 222 over the Tar River | Pitt County, NC

Transportation Planning Team Lead



## C. RYAN DAVENPORT PLS

MANAGER OF GEOSPATIAL STEWART

Ryan serves as the Manager of Geospatial at Stewart. He is responsible for overseeing the Unmanned Aerial Systems (UAS), Geographic Information Systems (GIS) and High Definition Laser Scanning Services (HDS). Ryan has been with Stewart for over 17 years and has held previous roles in the Geomatics Group including Survey Project Manager and Manager of Survey. With over 26 years of progressive surveying experience, Ryan has acquired skills in data collection and data processing as well as project management and business development.

# **EDUCATION**

Bachelor of Arts in Geography University of North Carolina at Wilmington

# 

Professional Land Surveyor (PLS): North Carolina #4707 Virginia #3088

## RELEVANT EXPERIENCE

- NCDOT 17BP.2.R47, Division 2 Express Design-Build | Beaufort & Pitt County, NC Survey Project Manager
- NCDOT Division 13 I-40 (I-5008, I-5874, and I-5875) Interchange Realignments | Burke County, NC Survey Manager
- NCDOT Division 10 Bridges | Davidson and Stanly Counties, NC Survey Manager
- NCDOT B-6003 Franklin 78 | Franklin County, NC Survey Project Manager
- NCDOT EB4996 Green Mill Run Greenway/Bikeway Phase 2 Extension | Greenville, NC Survey Project Manager
- NCDOT Division 13 I-40 (I-5008, I-5874, and I-5875) Interchange Realignments | Burke County, NC Survey Manager
- NCDOT 17BP.2.R47, Division 2 Express Design-Build | Beaufort & Pitt County, NC Survey Project Manager



## DON BROWN PE, LEED AP

SR. GEOTECHNICAL ENGINEER

STEWART

Don is Practice Leader of the Geotechnical and Construction Services group, which is composed of three interrelated service offerings: Geotechnical Engineering, Construction Materials Testing (CMT), and Special Inspections (SI). Don is also the Senior Geotechnical Engineer at Stewart. He is heavily involved in all geotechnical work by personally managing many geotechnical engineering projects. He is also responsible for providing technical oversight for field operations and the testing of soil, concrete and other construction materials in Stewart's AASHTO and NCDOTaccredited laboratories.

## CERTIFICATIONS

NCDOT Chemical Stabilization; NCDOT QMS / HMA Roadway (Asphalt) Technician; NCDOT ABC Sampling; NCDOT Conventional Density; Settlement of Structures and Embankments Workshop; Earthquake-Induced Ground Motions Short Course; Geopier Foundation 3-Day Workshop; Foundation Testing and Analysis Workshops, Pile Dynamic, Inc. Workshop; Nuclear Gauge, Radiation Safety Officer (RSO)

## **EDUCATION**

Bachelor of Science in Civil Engineering University of North Carolina at Charlotte

# REGISTRATION

Professional Engineer (PE): North Carolina #28422, South Carolina #22714

USGBC LEED Accredited Professional

## RELEVANT EXPERIENCE

- NCDOT B-5342 Bridge 169 over Gum Creek on SR 1148
   | Alamance County, NC Geotechnical Project Manager
- NCDOT B-6003 Franklin 78 | Franklin County, NC Geotechnical Project Manager
- NCDOT B-5736 Bridge 38 over Beaver Creek | Guilford County, NC
   Contemporal Dreight Manager
  - Geotechnical Project Manager NCDOT B-4816 Bridge 65 over Juniper Creek on US
- 15-501 | Scotland County, NC Geotechnical Project Manager
- NCDOT B-5313 Bridge No. 109 over Town Creek on SR 1002 | Wilson County, NC Geotechnical Project Manager
- NCDOT Geotechnical Engineering Limited Services Agreements | Various Locations, NC Project Manager



# G. LANE SAULS, JR. NATURAL RESOURCES MANAGER

As Natural Resources Manager, Lane will handle all environmental permitting and natural systems. Lane's 28 years of experience includes stream and wetland restoration/mitigation, natural resources, environmental permitting, protected species identification, habitat assessment, and ecology. Lane has completed numerous Natural Resources Technical Reports for NCDOT during his career.

## 

Bachelor of Science in Natural Resources North Carolina State University

## CERTIFICATIONS

Stormwater Inspection and Maintenance Professional, NC Residential Rain Garden Certification, NC

## **AFFILIATIONS**

North Carolina Wildlife Resources Commission Nongame Wildlife Advisory Committee – Chairman and Executive Committee Member

Society of American Military Engineers, Fort Bragg Post – Executive Board Member

## **RELEVANT EXPERIENCE**

- NCDOT, Managed Bridge Replacements | Sampson, Duplin & Brunswick Counties, NC Natural Resources Manager
- NCDOT B-4943 Bridge #20 Over Dial Creek Replacement | Durham County, NC Natural Resources Manager
- NCDOT, 17BP Bridge Replacements | Sampson County, NC

Natural Resources Manager

 NCDOT R-2615 | Watauga County, NC Natural Resources Manager



## FRANK FLEMING PE

WATER RESOURCES MANAGER

whb.

As Water Resources Manager, Frank will manage all Hydraulic Design and Erosion Control. Frank has extensive experience in hydrologic and hydraulic design, roadway design, greenway, stormwater management, erosion control, and permitting. Frank has performed numerous bridge replacement projects, rural and urban roadway, and interstate drainage design for multiple municipalities and the North Carolina Department of Transportation (NCDOT).

## T EDUCATION

Bachelor of Science in Civil Engineering North Carolina State University

# C REGISTRATION

Professional Engineer (PE): North Carolina #020147

## RELEVANT EXPERIENCE

- NCDOT, Managed Bridge Replacements | Sampson, Duplin & Brunswick Counties, NC Water Resources Manager
- NCDOT, 17BP Bridge Replacements | Sampson, Duplin & Brunswick County, NC Water Resources Manager
- NCDOT, R-2250C, Southwest Bypass | Pitt County, NC Water Resources Manager



#### CURRENT PROJECTS IN PROGRESS DOUG TAYLOR, PE CPM Southern Shores Comprehensive Plan

B-5501 Bridge 3 Chowan B-5502 Bridge 13 Northampton B-5608 Bridge 10 Hertford B-5616 Bridge 37 Pamlico BR-0047 Kill Devil Hills ADA Transition Plan Anson County Bridge Project BR-0063

#### DAVID RUGGLES, PE LEED AP

Division 5 Warren 135 R.88 Division 5 Wake 405 Phase 1 R.85 Division 5 Wake 186 R.86 B-5323 Granville 143 B-4828 Vance 56 B-6003 Franklin 78 17BP.5.R.78 Warren 140 Blue Heron Trail at Bermuda Run, NC Oberlin Road Bridge 507 over Wade Avenue Durham LaSalle Bridge Sidewalk Upgrade Paddy's Creek Pedestrian Bridge

## STEWART'S STAFFING ABILITY

Our team typically has a workload ranging between 75-85% capacity. The amount of effort dedicated to any given project varies between staff members based on their position within each firm and their designated role for the project. For the Southern Shores Juniper/Trinitie Trail Bridge Replacement, we have selected a team that has the expertise and availability necessary to ensure a high level of customer service and quality work is achieved and that anticipated project schedules can be met.

Each of our proposed team members has an assigned workload of projects in various stages of design and development, which is updated on a weekly basis to ensure consistency and continuity. As necessary, our team has additional resources available that can be employed to ensure maximum utilization on all projects.

Item 5.

## TECHNICAL APPROACH STEWART STRONGER BY DESIGN

## UNDERSTANDING OF PROJECT BRIDGE DESIGN APPROACH

The existing structure at the site is a corrugated metal culvert with steel bulkheads on either side of the culvert. The roadway approaches to the culvert have experienced issues with settlement. The metal culvert is slightly collapsed. The replacement structure is proposed to be a prestressed cored slab bridge. The November 25, 2016 report prepared by Kitty Hawk Engineering provides detailed information on the site issues and recommendations.

In the planning stages, Bridge Engineers will coordinate very closely with Planners, Hydro Engineers, Roadway Engineers, and other disciplines to determine constraints and requirements for the site. The environmental investigation will identify environmental restrictions that must be followed during design. Existing utilities should be identified and studied to determine if utility locations will have any impact on design decisions. Stewart will coordinate closely with the Hydraulic Engineer, Frank Fleming, on bridge length and height above water surface. The planning process will consider all project parameters, including public impacts, environmental impacts, project costs, utility impacts, and stakeholder concerns.

The Hydro Engineer will prepare a report with recommendations. Once the planning and Hydro reports are approved, preliminary bridge plans will be prepared. The plans would be prepared in accordance with NCDOT standards and guidelines plus any applicable Southern Shores standards. Preliminary plans would then be submitted for review. The replacement bridge is anticipated to be a cored slab bridge, most likely a one-span structure.

GENERAL ENGINEERING SERVICES EXPERIENCE

The Stewart team is being utilized by NCDOT Units and Divisions for General Engineering Services. For Division 14, we have reviewed numerous turnkey design bridge replacement projects and provided plan review assistance. For the Structures Management Unit, we provided working drawing reviews on various projects. For Division 5, we are assisting Division 5 Staff

with project management and schedule maintenance. All of this experience strengthens our ability to design and complete bridge replacement projects on North Carolina Roadways.

After the Preliminary Bridge Plans are approved, Don Brown will perform a geotechnical exploration to evaluate the subsurface conditions. The geotechnical exploration will consist of two borings with standard penetration test (SPT) – one boring per abutment. In the unlikely event that an interior bent is required (for multi-span bridge), a boring would also be drilled at the interior bent location. The borings will have target drill depths of 60 feet each.

The information collected in the field will be examined and organized by our geotechnical staff to prepare foundation recommendations for the bridge. Foundation recommendations will be prepared and incorporated into a geotechnical report describing the work completed and our findings. As part of our evaluation, we will also consider the past settlement history at this site and work with our bridge designers closely to provide solutions that reduce the potential for such settlement in the future.

After preliminary bridge plan approval, final bridge plans would be developed in accordance with all applicable NCDOT and AASHTO standards and Southern Shores standards, including the NCDOT Structure Design Manual, LRFD Bridge Specifications, sub-regional tier guidelines (if applicable), and NCDOT Standard Drawings. Stewart will follow a formal QA/ QC process to ensure that high quality plans are produced.

If Southern Shores would like an investigation of alternative structures to reduce costs, Stewart has the capability to study alternatives and provide recommendations. Stewart completed a project utilizing a prestressed concrete (CONSPAN) arch bridge over a stream with footings founded on steel H piles. The H pile foundation would prevent settlement of the structure. Pile type selected would consider the corrosive nature of the site and prestressed concrete piles or galvanized steel piles would be considered for the foundation.

#### CORED SLAB BRIDGE EXPERIENCE

Stewart has significant cored slab bridge experience, including design of several bridges on the Outer Banks. Stewart is currently working on the design of a cored slab bridge in the town of Hatteras for the NCDOT. NCDOT criteria considers Outer Banks bridges to be in a zone designated as a "highly corrosive area", and there are a number of measures that are incorporated to provide enhanced bridge protection to resist corrosion. These measures include providing epoxy coated reinforcing steel and incidental steel, special admixtures for concrete, and other measures. This bridge would be designed in accordance with the guidelines provided in the NCDOT Structure Design Manual for bridges located in highly corrosive areas.

## ROADWAY DESIGN APPROACH

To reduce the amount of bridge approach work and to maximize the funds available for the bridge replacement project, our team will use the Sub Regional Tier Design Guidelines for Bridge Projects when applicable to establish minimum design values. These design values will allow the team to minimize changes in the geometry of the bridge and roadway while maintaining or improving the existing operating conditions. After reviewing the site, applying context sensitive design principles to the bridge replacement design will maintain the integrity of this area.

PROJECT APPROACH



Stewart's Andy Young who will be the Roadway Design and Traffic Control Lead, discussing proposed improvements with interested residents.

If desired as part of the scope of work, alternates will be considered with one being replace in place with an off-site detour and another being an alternate that maintains traffic on-site. Stewart will evaluate the alternatives and coordinate with the Town to determine the most feasible alternate.

## CATEGORICAL EXCLUSIONS

Depending upon the funding type, a NEPA document may be required for the project. Stewart has extensive experience in developing these documents and is prequalified with NCDOT. A Categorical Exclusion is the most likely type of document for this bridge replacement.

## ACTIVE COMMUNITY OUTREACH

We have learned over many years of reaching out to communities that the old, passive model of announcing a public meeting and asking interested citizens to make time after a busy day to come to a meeting is not an effective way to communicate about a project. This passive type of outreach consistently produces low participation and reaches only those who self-select as interested in the project. Stewart's public involvement specialists look for opportunities to go out into the community to inform about a project, solicit input, advertise formal meetings, deploy surveys and provide updates. This active model of community involvement reaches more citizens and members of the community who may not otherwise know about the project. Looking at this area, we believe some level of public involvement will inform the public and help them buy-in to the project design.

## UTILITY COORDINATION

Stewart recognizes the importance of utility coordination associated with bridge replacement projects. Initiating utility coordination early in the project is very important. Utilities must be considered in the planning process to ensure that any potential utility impacts are considered when evaluating alternatives. Stewart will contact each utility provider to confirm the status and future plans for respective utilities. Plans will be developed based on each utility provider's strategy for relocation as required. Should precise locations of below grade utilities be required, Stewart has experienced SUE staff in-house prepared to provide below grade utility locations. Stewart has extensive experience with coordinating PUE (Permanent Utility Easements) and URA (Utility Relocation Agreements) as well as designing public utility relocations on projects when necessary.

For this project, there appears to be possible underground telecommunications line(s) and a six-inch water line running along Juniper / Trinitie Road. The proposed plan must accommodate existing utilities, either via relocation or by attaching to the bridge structure. Attaching to the bridge structure should be avoided if possible since exposed utilities require maintenance. A better solution might be an underground bore beneath the canal to resolve potential utility conflicts. Clearing utility conflicts prior to construction is critical to a short construction timeline without delays.

## SURVEYING

Stewart will coordinate a survey of the project area. Stewart has extensive experience involving roadway and utility corridors as relates to property, deed, easement and right-of-way research. Should it be determined that limited verifications of below-grade utilities will be required, Stewart has experienced SUE staff inhouse prepared to provide below-grade utility locations.

## **GEOTECHNICAL INVESTIGATION & DESIGN**

Once the bridge bent locations are determined, Stewart will perform a geotechnical exploration to evaluate the subsurface conditions. The geotechnical exploration will consist of two borings with standard penetration test (SPT) – one boring per end bent. The borings will have target drill depths of 60 feet each.

The information collected in the field will be examined and organized by our geotechnical staff to prepare foundation recommendations for the pedestrian bridge. Foundation recommendations will be prepared using the standard NCDOT report format and incorporated into a geotechnical report describing the work completed and our findings.



*Doug Taylor and Andy Young sharing information to ensure good communication at a project site* 





Because Stewart can offer so many of the most commonly needed services in-house we are also able to offer measurable efficiencies in delivering projects. Our geotechnical and survey practice areas both currently have NCDOT or municipal on-calls for their respective disciplines and we chave crews with roadway and bridge project experience throughout the state, ready to mobilize.

#### **INNOVATIVE APPROACHES TO BE USED**

**Streamlining the Process** – Because of our experience with Central Unit and Division managed projects, we are able to develop aggressive schedules that combine tasks and develop design disciplines concurrently where possible to minimize the timeframe and deliver the design ahead of schedule. This fits in nicely with the Integrated Project Delivery process NCDOT has transitioned to.

**Innovative Procedures –** When Division 5 requested some Field Scoping Meetings be held in the office instead of on-site, Stewart developed a PowerPoint presentation incorporating the Field Scoping Worksheet data, mapping and site photos to replicate an on-site experience in the office setting. This procedure was highly successful and will continue to be used by Division 5 as needed to expedite projects.

Value Management – Our approach to the project will be based on the methodology of value management. We have designed a scoping checklist that our engineers fill out at site visits, which captures key information about each project and responds to the stakeholder expectations for a given assignment. Additionally, we maintain a "running lessons learned" list to expedite future projects.

**Public Involvement Aids –** When Division 13 asked us for ways to sell the roundabout designs on our I-40 interchange projects to the public, we worked with our Geomatics team to provide drone footage and develop a roundabout education video that could be played during the public meeting. Division 13's Jamille Robbins, NCDOT Public Involvement,

Community Studies & Visualization Group Leader, commented as follows: "Citizens expectations are changing about how they interact with public agencies. People are increasingly relying on digital video for news, information, and public discussion. Videos, such as this roundabout informational video, are effective in engaging and educating. Watching a short video is easier than reading through a plan or report. The greater utility of these types of videos is that they can be available 24 hours a day, 7 days a week, far beyond the time frame of a traditional public meeting."

"The Division was very impressed with the roundabout video that Stewart provided in a short amount of time. The video was essential in helping educate the public's understanding of how roundabouts function."

The video may be viewed here: https://bit.ly/2SwhqVh

#### Use of Latest Technology, Practices, & Procedures -

The Stewart Team has always embraced the opportunity to be at the forefront of new technology. When Open Roads became the next technology transition, we purchased the software bundle so we could begin practicing in preparation of the implementation. When alerted to the move to MS Project scheduling, we purchased the software and began using it before it became a requirement. We will always be proactive with implementing new technology, practices and procedures.

## SCHEDULE ADHERENCE

Stewart understands that one of the critical aspects of a project, from funding to stakeholder expectation, is adherence to the project schedule. From setting an aggressive schedule at inception to working critical paths concurrently, we are committed to providing high quality designs ahead of schedule. We will work with the Town to determine the best schedule to meet the Town's needs. This will involve developing a detailed project schedule that includes monthly project meetings to keep Southern Shores informed of the progress.

#### LOCATION LOGISTICS

The Stewart team is currently working in Southern Shores on the Comprehensive Plan and has demonstrated a dedication to being available and actively involved in the Town's process. Our Design Team is accustomed to working all across the state. We have developed procedures incorporating our offices across the state, specifically our Wilmington office, to ensure we maximize customer service to our clients and are available when needed. We recognize how virtual meetings have become part of how we work, but we understand the importance of being in-person and commit to continuing to be present to serve Southern Shores.

STATEMENT OF OWNERSHIP

Item 5.



Stewart understands that the Town of Southern Shores is the proprietor of all work product developed for or on behalf of the Town by the selected firm or person, regardless of location, type, and format of the work product – and acknowledges that all work product will be retained and submitted to the Town, or a specified agent or contract consultant of the Town at the Town's direction, upon request, regardless of whether the work product is considered a "trade secret".





At Stewart, we believe in servant leadership, continuous improvement, and our core values of Trust, Humility, Respect, Excellence, Accountability, and Discipline, or THREAD. We seek out opportunities to put those values into action in our communities and through our work. Above: team members remove invasive species from Durant Nature Preserve, talk with girl scouts about drones and aerial surveying, and volunteer at the Raleigh Food Bank.

# STRONGER BY DESIGN

stewartinc.com



MEETING DATE: December 6, 2022

ITEM TITLE: 2023 Council Meeting Schedule-Resolution #2022-12-01

ITEM SUMMARY: 2023 Council Meeting Schedule-Resolution #2022-12-01

§ 143-318.12. Public notice of official meetings

§ 160A-71. Regular and special meetings; recessed and adjourned meetings; procedure

## **STAFF RECOMMENDATION:**

Staff recommends approval of the meeting schedule as proposed. Two dates have been moved to accommodate a holiday and/or election. The third Tuesday of the month meetings are "as needed."

**REQUESTED ACTION:** Motion to approve the 2023 Council Meeting Schedule-Resolution #2022-12-01

Item 7.



Town of Southern Shores 5375 N. Virginia Dare Trail, Southern Shores, NC 27949 Phone 252-261-2394 / Fax 252-255-0876 www.southernshores-nc.gov

# COUNCIL MEETING SCHEDULE 2023 [NCGS §160A-71 and §143-318.12; Section 6. Rules of Procedure of Town Council] Resolution #2022-12-01

WHEREAS, the Town Council of Southern Shores hereby resolves to notice and implement the following meeting schedule for calendar year 2023, and;

**WHEREAS,** all Regular and Special Meetings of the Council are scheduled to be held in the Kern P. Pitts Center of the Town Hall complex at the address above unless noticed otherwise.

**BE IT RESOLVED** that the monthly Regular Meetings of the Town of Southern Shores Town Council will take place on the dates and times as follows:

- Tuesday, January 3, 2023, 5:30 p.m.
- Tuesday, February 7, 2023, 5:30 p.m.
- Tuesday, March 7, 2023, 5:30 p.m.
- Tuesday, April 4, 2023, 5:30 p.m.
- Tuesday, May 2, 2023, 5:30 p.m.
- Tuesday, June 6, 2023, 5:30 p.m.
- \*Tuesday, July 11, 2023, 5:30 p.m. Following Tues. due to July 4<sup>th</sup> holiday
- Tuesday, August 1, 2023, 5:30 p.m.
- Tuesday, September 5, 2023, 5:30 p.m.
- Tuesday, October 3, 2023, 5:30 p.m.
- \*Tuesday, November 14, 2023, 5:30 p.m. Following Tues. due to Municipal Election
- Tuesday, December 5, 2023, 5:30 p.m.

**BE IT RESOLVED** that Workshop Meetings of the Town of Southern Shores Town Council will take place as needed on the third Tuesday of each month at 9:00 a.m.

**BE IT FURTHER RESOLVED** that pursuant to North Carolina General Statute §143-318.10, each "official meeting" of the Council shall be open to the public regardless of whether such meeting is a "regular", "special", or "emergency" meeting, and regardless of whether any meeting is described informally as a "retreat", "forum", "session" or "workshop"; and pursuant to North Carolina General Statute §143-318.11, the Council may hold a "closed session" and exclude the public only when such closed session is required by law as enumerated in the referenced statute.

**BE IT FURTHER RESOLVED** that to process routine actions in an expeditious manner, a consent agenda will be utilized and administered as part of Council's regular meeting agenda.

**BE IT FURTHER RESOLVED**, allowance of public comment will be placed on the agenda for each Regular Meeting of the Council, pursuant to NCGS §160A-81.1 and consistent with Section 17 of the Rules of Procedure of Town Council, for any citizen to address the Council on any matter not noticed on the agenda for a public hearing; as the meeting presiding officer, the Mayor is authorized to establish Rules for any public comment period.

Adopted this 6<sup>th</sup> day of December 2022

SEAL

ATTEST:

Elizabeth Morey, Mayor

Sheila Kane, Town Clerk



# AGENDA ITEM SUMMARY #8

MEETING DATE: December 6, 2022

ITEM TITLE: Historic Landmarks Commission Appointments

# **ITEM SUMMARY:**

The terms for two positions on the Town's Historic Landmarks Commission will expire on December 6, 2022 and the terms for three positions will expire on December 11, 2022. All members except for Richard Perkins have indicated that they would like to continue serving on the HLC. Alternate member Michael Guarracino has indicated that he would like to fill the vacant position created by the departure of Richard Perkins.

# **STAFF RECOMMENDATION:**

Reappointment of Lee Whitley and Kristine Kiousis with terms that are valid until December 6, 2025. Reappointment of Charlie Andrews and Tony DiBernardo with terms that are valid until December 6, 2024. Appointment of Michael Guarracino to Position D with a term that is valid until December 6, 2024.

# **REQUESTED ACTION:**

Motion to reappoint Lee Whitley and Kristine Kiousis with terms that are valid until December 6, 2025, reappoint Charlie Andrews and Tony DiBernardo with terms that valid until December 6, 2024, and appoint Michael Guarracino to Position D with a term that is valid until December 6, 2024.

# SOUTHERN SHORES HISTORIC LANDMARKS COMMISSION MEMBER STATUS AS OF 11/30/2022

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POINTMENT	End	Term		6-Dec-22	6-Dec-22	11-Dec-22	00 0 FF	11-DeC-22	44 Dec 22	11-060-22		2 Eab 24	3-LEU-24											
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