

PREPARED FOR:



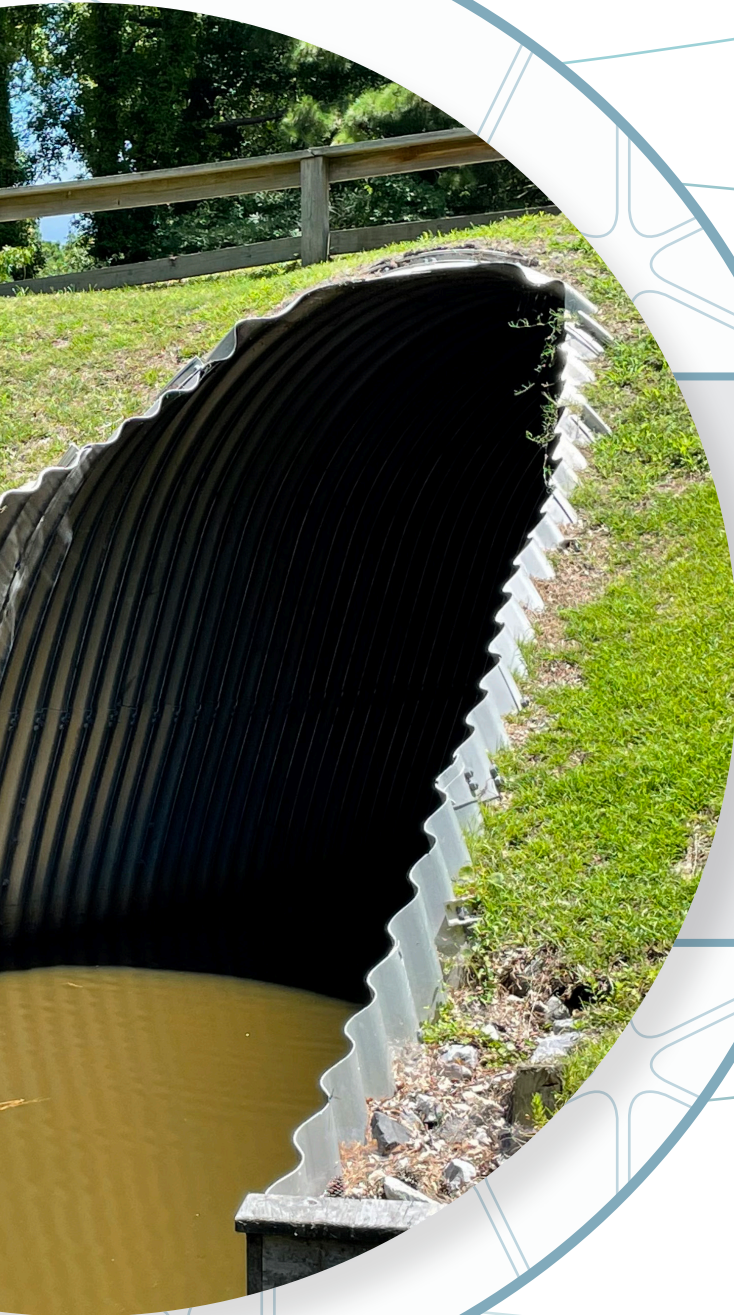
STATEMENT OF QUALIFICATIONS

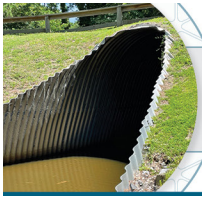
*Planning and Design Services for the*  
**Juniper/Trinitie  
Trail Bridge  
Replacement Project**

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

**Kimley-Horn**  
421 Fayetteville Street  
Suite 600  
Raleigh, NC 27601

**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 quality 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.

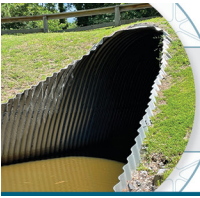
**Commitment/Certification of Submission:** By signing this letter, I, Andrew Phillips, P.E., am authorizing Kimley-Horn to submit these qualifications for the purpose of negotiating and entering a contract with the Town of Southern Shores. I certify that the information included within this document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

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

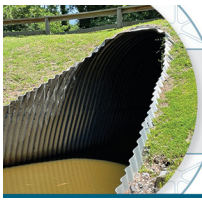
We acknowledge receipt of Addendum No. 1, dated October 20, 2022.



## Table of Contents

- 1. Company Experience and Qualifications .....4
  - Professional Service References ..... 6
  - Legal Judgments Statement ..... 6
  - Trade Secrets Statement..... 6
- 2. Professional Experience..... 7
  - Team Organization Team ..... 12
- 3. Project Understanding and Approach ..... 13
- 4. Quality Assurance/Quality Control (QA/QC) ..... 16
  - Firm Proximity Statement ..... 16
  - Capacity Chart/Staffing Availability..... 16





## 1. Company Experience and Qualifications

### 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 projects are funded using 80% Federal-Aid Highway 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

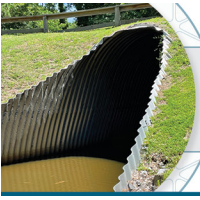
Kimley-Horn was selected and has nearly completed turn-key professional engineering services for the following bridge replacement projects in Bertie and Tyrrell Counties in Division 1.

- 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



## 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

hfyung@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





## 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



## ANDREW PHILLIPS, P.E. | Project Manager

### Professional Credentials

B.S., Civil Engineering, NC State University, 2008

Professional Engineer in NC and MI

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



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

### 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 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





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

### Professional Credentials

B.S., Civil Engineering,  
Virginia Polytechnic and  
State University, 1986  
Professional Engineer in NC

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



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

### 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 has 27 years of experience as a project manager for NEPA/SEPA, roadway design, high-speed 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



STATEMENT OF QUALIFICATIONS

Planning and Design Services for the

Juniper/Trinitie Trail Bridge Replacement Project



TYLER SPRING, P.E. | Roadway Design Lead

Professional Credentials

B.S., Civil Engineering, NC State University, 2016

Professional Engineer in NC

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

- 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



NATE HARVEY, P.E. | Utility Coordination Lead

Professional Credentials

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

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

Professional Engineer in NC

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

Professional Credentials

B.S., Environmental Technology, NC State University, 2011

Professional Wetland Scientist

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



STATEMENT OF QUALIFICATIONS

Planning and Design Services for the

Juniper/Trinitie Trail Bridge Replacement Project



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

Professional Credentials

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

B.S., Civil Engineering, NC State University, 2003

Professional Engineer in NC, GA, MA, MI, MN, NJ, OH, SC, TX, and VA

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



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

Professional Credentials

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

Professional Engineer in NC and VA

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

Professional Credentials

AAS, Civil Engineering Technology and Surveying Technology, Central Piedmont Community College, 1997

Professional Land Surveyor in NC

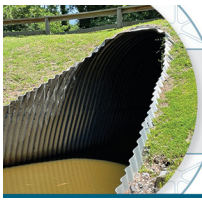
Certified Floodplain Surveyor in NC

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





**STATEMENT OF QUALIFICATIONS**

Planning and Design Services for the

**Juniper/Trinitie Trail Bridge Replacement Project**



**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.



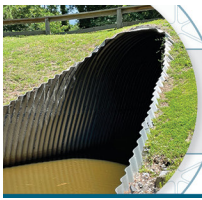
Because of our team's history with the Town and the project site, we offer an unmatched ability to provide the Town of Southern Shores a high quality bridge replacement project that meets your needs and exceeds your expectations. We understand the concerns of the Town and its residents when it comes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



## 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.

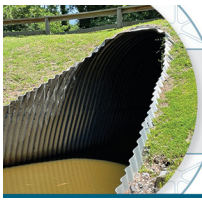
**Kimley-Horn staff have been involved in more than 70 bridge and 60 culvert projects in North Carolina during the last 10 years.**

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 NCDWM 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 NCDWM 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

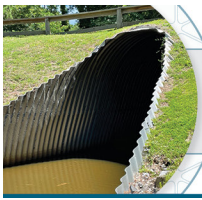
Before beginning any preliminary engineering work, Kimley-Horn will coordinate with the Town to solidify the study area and confirm the appropriate NEPA document type, which is expected to be a Categorical Exclusion (CE)—this will enable the use of federal funding on the project. With a refined study 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.



### 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.

