



# POPLIN ENGINEERING

ENGINEERING ANALYSIS OF ACCIDENTS



**COLBY A. POPLIN, BSCE**

**Engineer: Civil**

**Vehicle Accident Reconstruction**

Vehicle Accident Reconstruction  
Technical Investigation  
Hazards Identification & Analysis  
Mechanical/Structural Analysis  
Failure Analysis  
Machine Design  
Products Liability

## Education

- 2021 Bachelor of Science in Civil Engineering  
*Summa Cum Laude*, The Citadel
- 2019 Associate of Science  
*Summa Cum Laude*, Trident Technical College

## Experience

W POPLIN ENGINEERING, Charleston, SC June 2022 – Present

### Associate Engineer

- Conduct motor vehicle accident reconstruction
- Download Engine Control Modules (ECM) and Airbag Control Modules (ACM) “black box” data
- Analyze data from onboard computers for use in dynamic calculations
- Utilize simulation software to verify calculations of accident kinematics
- Produce detailed documentation of procedures alongside written and graphical summaries of findings

**TERRACON CONSULTANTS, Greenville, SC May 2021 – June 2022**

**Geotechnical Engineer**

- Direct field exploration staff and coordinate with subcontractors for drilling, site clearing, and utility locates
- Provide oversight and technical consulting for laboratory staff
- Perform geotechnical analysis of field and laboratory testing data to provide recommendations for design parameters and constructability concerns
- Write detailed geotechnical reports including subsurface soil and groundwater conditions, excavation considerations, seismic site classification, lateral earth pressures, foundations, floor slab, and pavement design and construction
- Conduct forensic investigation of pavements, concrete floor slabs, and perched water conditions

**W POPLIN ENGINEERING, Charleston, SC March 2019 - May 2021**

**Engineering Technician**

- Collect and document physical evidence including site layout and vehicle damage by means of traditional measurement and photography in addition to total station measurements and drone photography
- Utilize CAD and photogrammetry to create scaled drawings
- Create 3D animations of vehicle accidents using a variety of 3D modeling and simulation software

**TERRACON CONSULTANTS, North Charleston, SC November 2016 - March 2019**

**Laboratory Technician, August 2017 – March 2019**

- Perform laboratory testing of soils including index testing, compaction, organic content, California bearing ratio, consolidation, direct shear, permeability, triaxial testing, and unconfined compression
- Perform laboratory testing of concrete including compressive strength, tensile strength (split tensile and third-point beam methods), and rapid freeze/thaw
- Perform laboratory testing of aggregate including gradation, specific gravity, absorption, sulfate soundness, alkali-silica reactivity, LA abrasion, flat and elongated particles, and fractured faces
- Perform tensile testing of rebar including welds and couplers
- Perform laboratory testing of asphalt including Rice testing, Superpave, and Marshall testing
- Create detailed reports of laboratory results
- Perform internal calibrations and coordinated external calibrations for all field and laboratory equipment
- Trained and scheduled field technicians

**Field Technician, November 2016 – August 2017**

- Performed field testing of construction materials
  - i. Concrete air, slump, temperature, and casting cylinders
  - ii. Concrete floor flatness and levelness with Dipstick and F meter
  - iii. Concrete and asphalt coring

- iv. Rebar inspection
- v. Nuclear density testing of soils and asphalt
- vi. Hand auger borings with visual soil classification and DCP testing
- Communicated with project managers and client representatives through daily reports
- Worked extensively on SCDOT projects including Wando River Bridge, Forest Acres Drainage Improvements, and Volvo Interchange

### **Professional Organizations**

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- National Association of Accident Reconstruction Specialists
- South Carolina Association of Reconstruction Specialists

### **Certifications**

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- Engineer-in-Training (SC License # 21366)
- FAA Part 107 Commercial Drone Pilot
- ACI Concrete Field-Testing Technician Grade 1
- ACI Concrete Strength Testing Technician
- ACI Aggregate Testing Technician Level 1
- ACI Concrete Laboratory Testing Technician Level 1
- SCDOT Earthworks and Base Course Technician
- SCDOT Asphalt Roadway Technician
- SCDOT Concrete Field Technician Level 1 and 2
- SCDOT Nuclear Gauge Hazmat Certification

### **Continuing Education**

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|-----------|-----------------------------------------------------------------------------------------------------------------------------|
| June 2019 | Advanced Driver Assist Systems and Calibrations, Charleston, SC                                                             |
| May 2022  | WATAI Spring Conference – Advanced Reconstruction with EDR Applications and Using Excel in Traffic Collision Reconstruction |
| June 2022 | Recon-3D Training Course, Online                                                                                            |