NORTH CAROLINA
Department of Transportation

North Carolina Department of Transportation Research & Development NCDOT Research and Innovation

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Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina

Research Programs

Annual Research Program
· Typically, 18 – 20 Research Projects Annually

Technical Assistance Program
· Short Term Research

Technology Transfer
· Implementation, Training, Workshops, Pilots
· Technology Transfer

University Collaboration/Match Funds
· University Transportation Centers (UTC)

Pooled Fund / National Programs
· Coordinated National Research (partnerships with other states)

Types of Research Projects

Pavement, Materials, & Maintenance

Structures, Construction, & Geotechnical

Traffic, Roadway Design, & Safety

Planning, Programming, Policy, & Multimodal

Environmental & Hydraulics

What kinds of projects does NCDOT research?

Pavement
- Pavement Strength
- Pavement Performance
- Pavement Management

Structures
- Unmanned Aircraft Systems for Inspections
- Bridge Design
- Innovative Materials

Traffic
- Crash Factors
- Roadway Design Alternatives
- Work Zone Safety

Planning/ Multimodal
- CLEAR Program
- Connected & Autonomous Vehicles
- Equity

Environmental
- Flora and Fauna
- Air Quality
- Noise Quality

And Many More

Universities Engaged In Research for NCDOT

Appalachian State

East Carolina

Elizabeth City State

Fayetteville State

NC A&T

NC Central

UNC-Charlotte

UNC-Greensboro

UNC-Wilmington

UNC – Chapel Hill

NC State

UNC-Asheville

Out of State Partners

What Makes a Good Research Project?

<u>Innovative</u>
Collaborate with NCDOT Subject Matter Experts (SME) to clearly articulate ideas and understand needs

<u>Integrity</u>
Lines up with ongoing initiatives and supports NCDOT's current mission and goals

<u>Importance</u>
Clearly articulated methodology and needs to be useable for NCDOT

<u>Implementable</u>
Implementation is possible via tangible and useable deliverables

Past 4 NCDOT Research & Innovation Summits

NC A&T University (2019)
- In-Person with 187 Attendees

UNC – Chapel Hill (2020 and 2021)
- Virtual with 356 & 347 Attendees
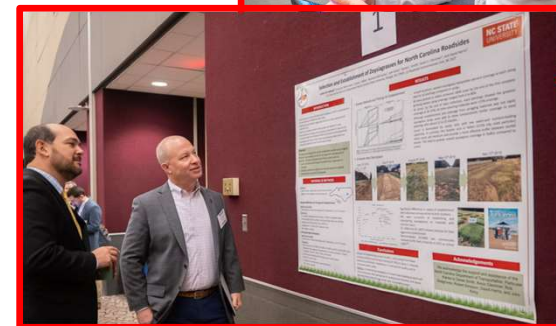
NC State University (2023)
- Hybrid with 305 Attendees
- 254 In-Person / 51 Virtual

Future 5ᵗʰ NCDOT Research & Innovation Symposium

NC State University (2025)

- Save The Date: February 11-12, 2025
- McKimmon Center in Raleigh, NC
- Hybrid (In-Person and Virtual)
- Breakout Sessions and PDHs
- Poster Sessions and Scholarships
- Keynote Speakers on AI and Highly Automated Systems
- NCDOT and Researchers Networking
- Demonstrations
  - Connected & Autonomous Vehicles (CAV)
  - Unmanned Aerial Systems (UAS)
  - Robotics
- Offsite Lab Tours
  - UAS for Inspections
  - Accessibility for the Visually Impaired
- Call for Proposals Open: October 1, 2024
- Registration Open By: October 2024
- Call for Proposals Due: November 3, 2024

Thank you!

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https://connect.ncdot.gov/projects/research/Pages/default.aspx

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