



NORTH CAROLINA
Department of Transportation

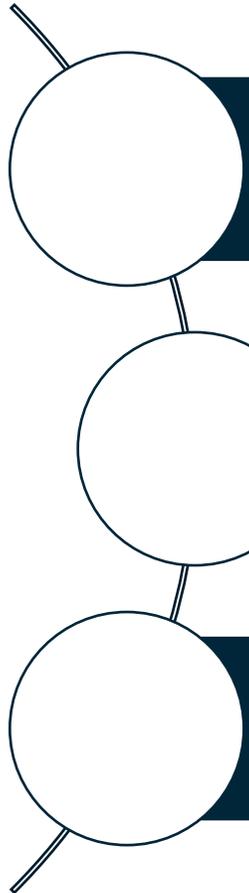
North Carolina Department of Transportation – Research & Development

Research & Development Unit

October 2024

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

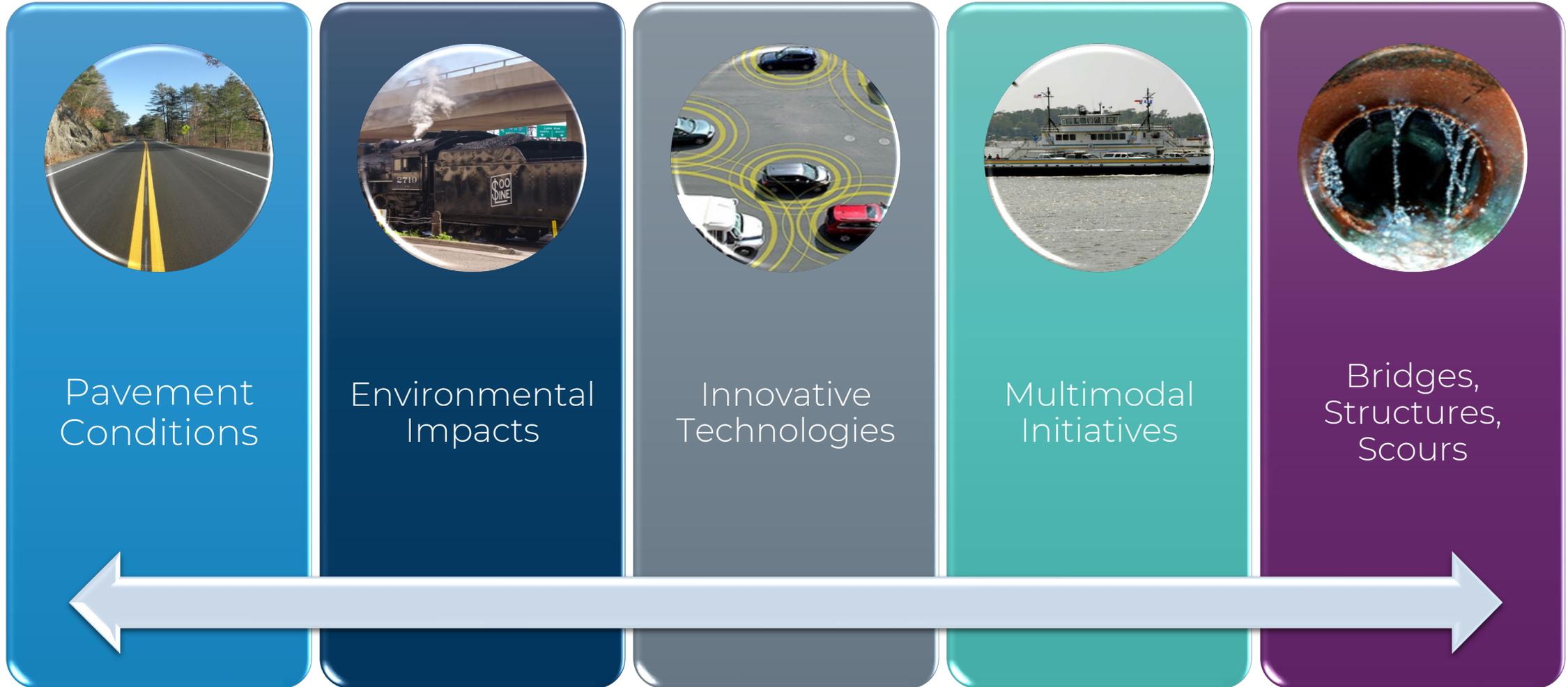
Contents



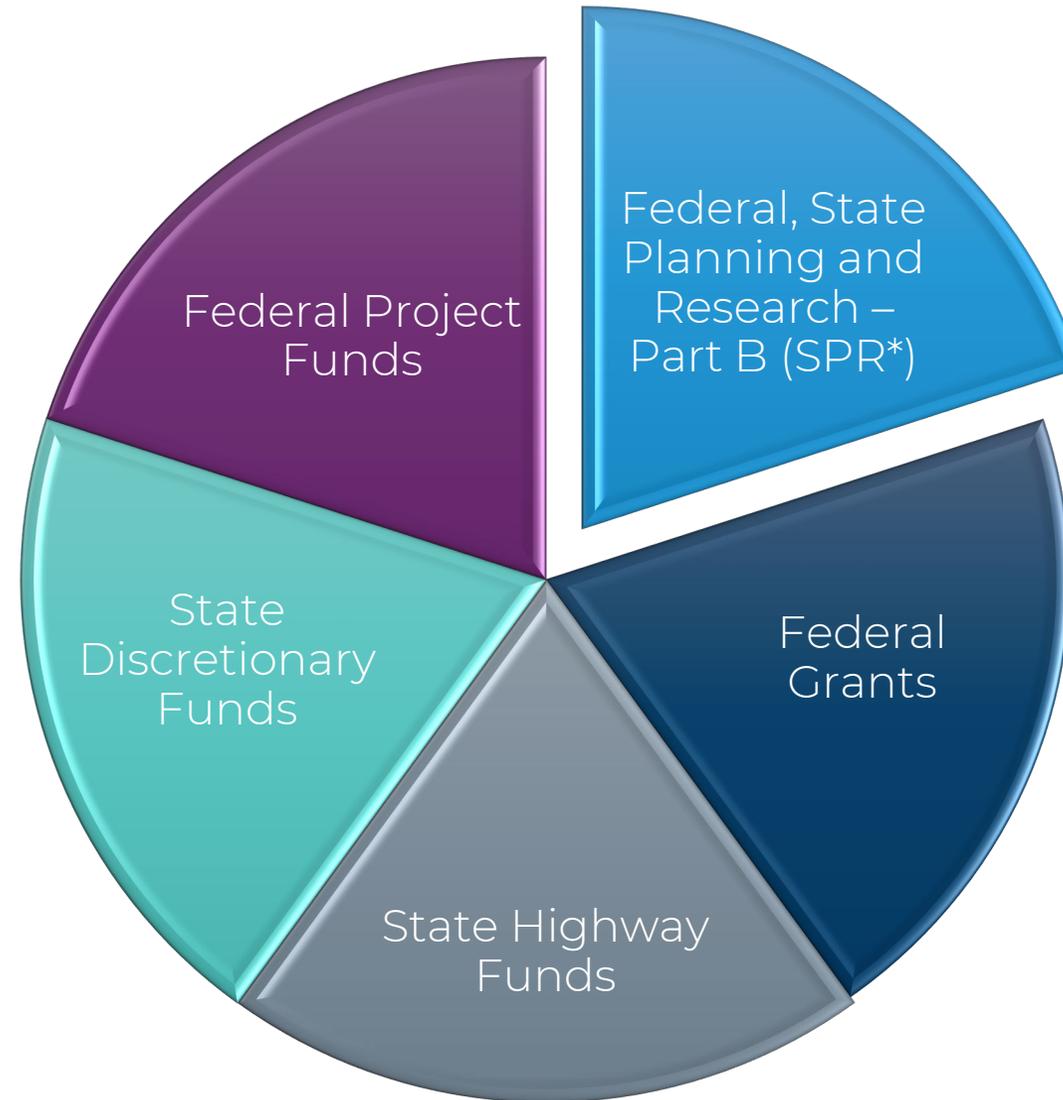
- Introduction to Research & Development
- Overview of Research Programs
- Points of Contact

Introduction to Research & Development

Research is conducted on NCDOT Business Needs



How is NCDOT Research Funded?



Who conducts the Research?



Universities



Consultants



Universities Engaged In Research

-  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 Idea / Proposal for NCDOT?



Collaborate with
NCDOT Subject
Matter Expert



Lines up with
ongoing
initiatives and
supports
NCDOT's current
mission and goals



Clearly
articulated
methodology:
Needs to be
useable for
NCDOT



Tangible /
Useable
Deliverables
(Implementation)

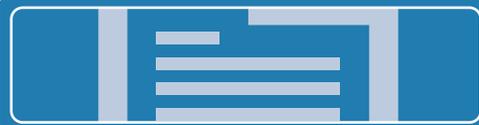
Overview of Research Program

Overview of Research Programs



Annual Research Program

- Typically, 18 – 20 Research Projects Annually



Technical Assistance Program

- Short Term Research



Technology Transfer

- Implementation, Training, Workshops, Pilots



Pooled Fund / National Programs

- Coordinated National Research (partnerships with other states)



University Collaboration

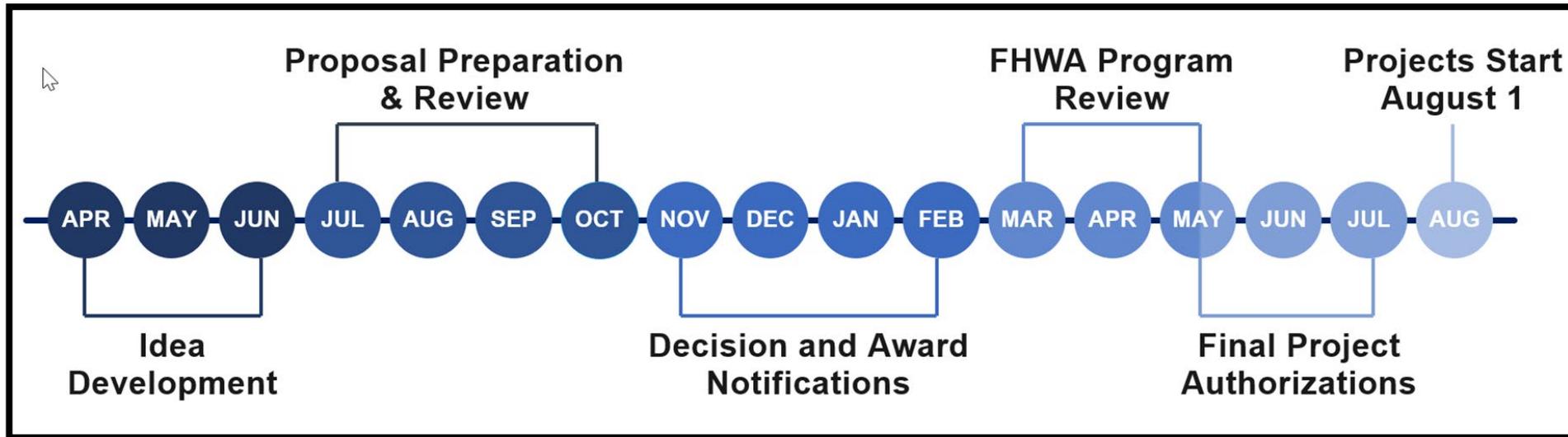
- Matching Funds & Collaborations with Universities



Library

- Subscriptions, Journals, Literature Searches

Annual Research Projects



- Idea – Project Start: ~18 months
- Idea Solicitation Start Date: March – April
- Project Start Date: August 1
- Project Duration: 2 – 3 Years (no longer than 4 years)
- Typical Cost: \$200K - \$400K

Technical Assistance Program

- Short Term Research Projects / Quick Response to Problems
- Up to 120 Hours of Researcher Time
- Capable of working with any researcher in North Carolina



Synthesis



Surveys



Misc. Studies

Technology Transfer (Implementation) Program



Pooled Fund and Other National Programs



National Cooperative Highway Research Program (NCHRP)

· <https://www.trb.org/NCHRP/NCHRPOverview.aspx>



American Association of State Highway Transportation Officials – Technical Services Program

· <https://www.transportation.org/technical-service-programs/>



Transportation Research Board

Transportation Research Board

· <https://www.nationalacademies.org/trb/transportation-research-board>



Pooled Fund Studies

· <https://www.pooledfund.org/>

· TPF – 5(493) – “Investigation of Dual Grade / Hybrid Steel Plate Girders Utilizing Stainless Steel”

Cooperative Research Programs



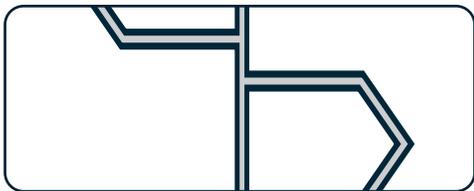
National Cooperative Highway Research Program (NCHRP)*

• <https://www.trb.org/NCHRP/NCHRPOverview.aspx>



Airport Cooperative Research Program (ACRP)

• <https://www.trb.org/ACRP/ACRP.aspx>



Behavioral Traffic Safety Cooperative Research Program (BTSCRCP)

• <https://www.trb.org/BTSCRCP/BTSCRCP.aspx>



Transit Cooperative Research Program (TCRP)

• <https://www.trb.org/TCRP/TCRP.aspx>

University Collaboration

Basic Research

- Disruptive / Innovative / Futuristic Technologies & Methodologies

University Lead Research

- Match Funding Opportunities
- NCDOT must be part of the project (i.e., board, committee, proposal review, etc.)

Thank you!

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

Points of Contact for Programs



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Implementation & Technology Transfer – Catherine
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