



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

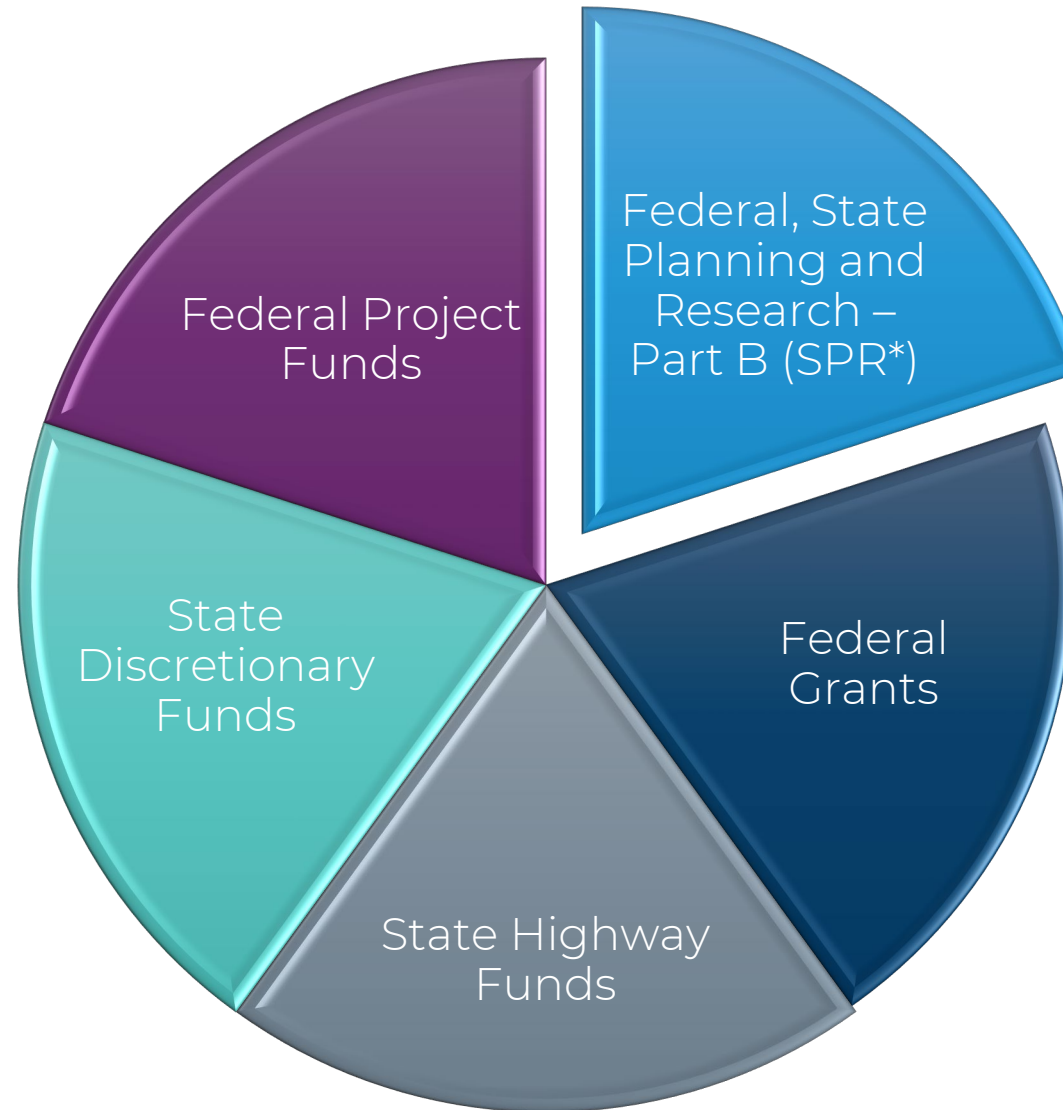


Introduction to Research & Development

Research is conducted on NCDOT Business Needs



How is NCDOT Research Funded?



Who conducts the Research?



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?



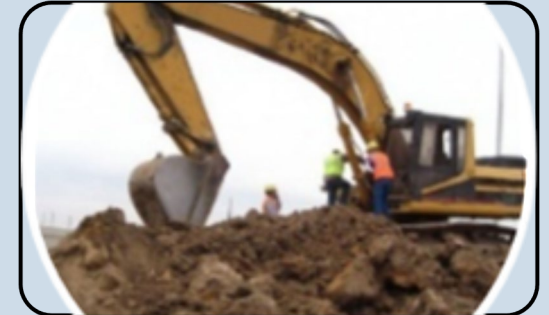
Collaborate with
NCDOT Subject
Matter Expert



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

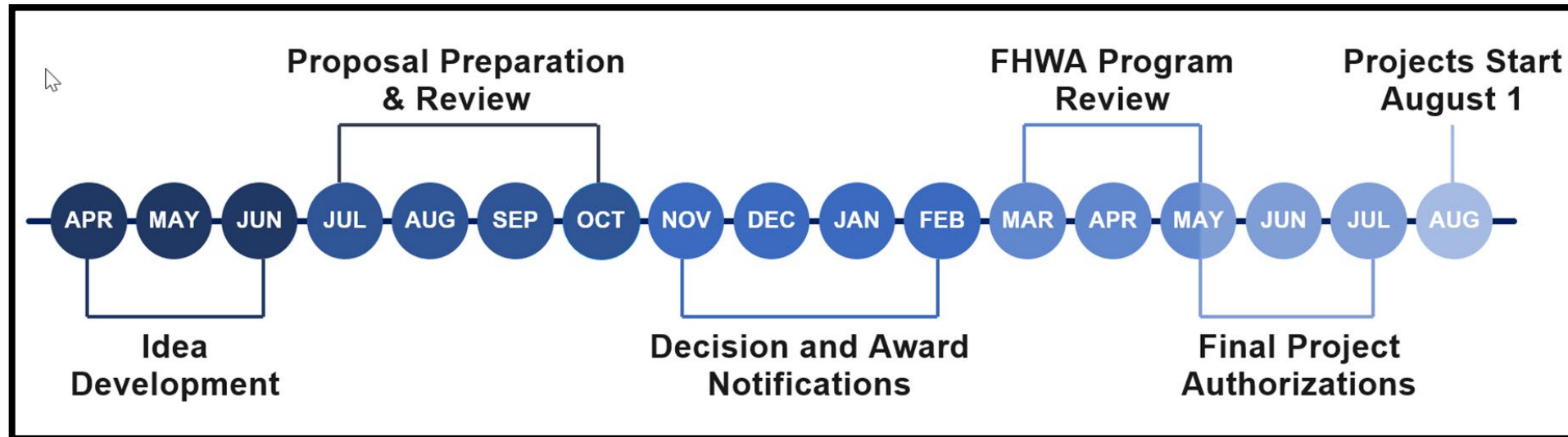
- Matching Funds & Collaborations with Universities



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



Development



Workshops /
Training



Conferences



Pilots



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>

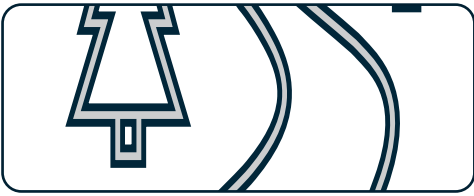


Pooled Fund Studies

· <https://www.pooledfund.org/>

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

Cooperative Research Programs



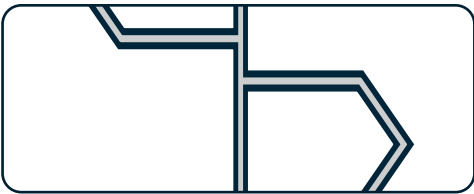
National Cooperative Highway Research Program (NCHRP)*

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



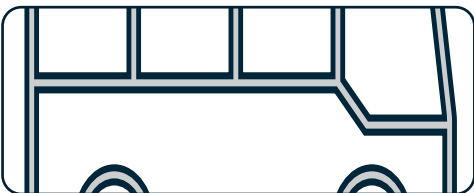
Airport Cooperative Research Program (ACRP)

• <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>

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