



From the Manager

A Short FAQ on NCHRP (and Cooperative Research Programs)



NCDOT employees have multiple avenues to participate in external research projects, including National Cooperative Research Programs. The [National Cooperative Highway Research Program \(NCHRP\)](#) is one of the largest transportation research efforts in the world. States voluntarily contribute 5.5% of their Federal State Planning and Research (SPR) allocation to pursue work in areas with a national, regional or global scope. All results from NCHRP studies are published in NCHRP digests and are freely available to participating State DOTs in electronic and print formats. The NCDOT Research Library also has a collection of reports. Our librarian can provide those or assist you in obtaining your own copies.

We often get asked – why should I participate in NCHRP Oversight Panels and “How can I submit research ideas?” Below is a short FAQ that focuses on NCHRP Panels. Much of this can be extended to other CRPs for Transit and Aviation.

1. What is NCHRP?

- a. The [National Cooperative Highway Research Program](#).
- b. NCHRP is funded by the states and administered by TRB. This is typically a \$35-\$40M annual program that focuses on critical highway and transportation research issues.

2. How long do projects typically last?

- a. Synthesis projects typically last one year. These usual involve surveys of best current practices and can be used to identify gaps in needs in those practices.
- b. Full Projects vary but are usually between 2 to 5 years based on scope. They are full blown research projects and/or major ongoing support programs.

3. What is the personal time commitment?

- a. Typically, one face to face meeting per year
- b. Quarterly or monthly web meetings/conference calls

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Photo: Croatoan Ferry at Sunrise

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A Short FAQ on NCHRP (and Cooperative Research Programs) (cont.)

- c. Whatever time is needed to review documents and provide feedback.
4. **Do I or DOT have to pay for anything?**
 - a. No. TRB/NAS covers all expenses as part of the program.
5. **What are panel member responsibilities?**
 - a. Attend teleconference and physical meetings
 - b. Review and approve Project RFPs
 - c. Review proposals and select contractors
 - d. Review progress reports and provide technical feedback as the project progresses
 - e. Review and approve the final report.
6. **What's the benefit to me?**
 - a. Networking with peers at other agencies
 - b. Exposure to national level topics of interest
 - c. Bringing back new information to your DOT position both from the projects themselves and from peers.
7. **What's the benefit to the agency?**
 - a. Having a voice in national transportation matters
 - b. Providing "bang for the buck" to NCDOT for our substantial annual contribution.
 - c. Bringing in and implementing new knowledge in the agency.
 - d. National exposure for NCDOT

State DOT employees can also submit new research and synthesis ideas via TRB and AASHTO committees or working with the NCDOT Research and Development Office. The NCHRP program will make an official solicitation later this summer and ideas are due in October.

Research ideas are rated by state agencies each spring. The highest scoring and highest priority research needs are selected for development into Requests for Proposals (RFPs) based on those evaluations and feedback from appropriate AASHTO committees. The idea selection is made by the [AASHTO Special Committee on Research and Innovation \(R&I\)](#), with advice provided by the

[AASHTO Research Advisory Committee \(RAC\)](#).

RFPs are advertised on the NCHRP website and the responses are evaluated by the selected project panels.

In addition to [NCHRP](#), there are opportunities to participate in cooperative research involving, [Rail \(NCRRP\)](#), [Airports \(ACRP\)](#), and [Transit \(TCRP\)](#). I invite you to explore these programs on their linked websites. As always, if you have any questions, please feel free to contact me at jmas-tin@ncdot.gov.

Neil Mastin

Research & Development Unit Manager

NCHRP Publications

NCHRP Reports, Syntheses of Practice, Research Results Digests, Web-Only Documents, and Legal Research Digests contain the findings of individual research projects managed by TRB's Cooperative Research Programs.

[Reports](#): Reports are the main product of the research project and are often written as guidebooks or manuals.

[Synthesis of Practice](#): Syntheses report on the state of the practice based on literature reviews and surveys of recent activities about innovations being used by others to solve problems.

[Research Results Digest \(RRDs\)](#): RRDs are used to promote early awareness of project results in order to encourage implementation.

[Legal Digests \(LRDs\)](#): LRDs report on timely legal issues, compile case law, or recommend specific solutions to specific problems.

[Web-Only Documents](#): Web-only documents are fully searchable PDFs of contractor-prepared reports or supporting appendix materials.

[Selected Studies in Transportation Law](#): The SSTL series is jointly published by the National Cooperative Highway Research Program (NCHRP) and the Transit Cooperative Research Program (TCRP).

NCDOT R&D launches Transportation Technology (T²) Program

The NCDOT Research & Development section is launching its Technology Transfer (T²) program. The design of this program is to provide technology transfer services including:

- Workshops
- Trainings
- Conferences
- Developments
- Pilots

These services provide an avenue to assist NCDOT with implementing research. This program may be used for NCDOT sponsored research as well as nationally sponsored research including NCHRP.


In order to participate in this program, please send a request to Curtis T. Bradley (Implementation Manager) at cbradley8@ncdot.gov and research@ncdot.gov. A research Project Engineer will respond to your request accordingly, then they will send you a Technology Request Form (**see portion of form below**). This form should take approximately ten minutes to fill out. It asks for basic information including (but not limited to):

- A brief description of the technology transfer request.
- Who will be conducting the technology transfer?
- What sort of assistance is needed?
- What is the makeup of potential attendees?

Please take advantage of this great opportunity as the NCDOT Research & Development will provide funding for selected technology transfer efforts.

Dr. Curtis Bradley

Research Implementation Manager

	RESEARCH & DEVELOPMENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
		TECHNOLOGY TRANSFER REQUEST
Submission Date:	_____	T²#: (R&D Use) <input type="text"/>
Submitter Name:	_____	Phone: _____
Division / Unit:	_____	Email: _____
Technology Transfer Title:	_____	
What technology transfer effort would you like to pursue?	Provide an explanation.	
<input type="text"/>		

Recently Completed Research Projects

Project Manager: John Kirby

RP 2014-08 “The Effects of Lane Merges on Travel Times”

Principal Investigator: Chris Vaughn

This study observed various treatments on roadways that affect merging behavior in order to improve travel times. Treatments included zipper merge signage, wide dotted white lane lines and elongated route shields for pavement markings. The zipper merge was implemented at three sites across central and eastern North Carolina. Travel times at these sites generally decreased modestly, with some increases as well. The increases may be due to outside factors like crashes, but the actual cause is unknown. The biggest improvement observed with the implementation of the zipper merge was the safety improvement, as far fewer vehicles entered the shoulder in order to merge after implementation of the zipper merge. The wide dotted line sites concluded entering vehicles merged sooner and exiting vehicles merged later. The elongated route shield sites studied did not appear to see a significant change in crashes after having these pavement markings installed.



Photo: “Merge like a Zipper” Sign



Photo: Example of elongated route shield

Librarian's Corner

by Lamara Williams-Jones

A Brief History of North Carolina Welcome Centers

The May-June 1969 issue of *Roadways*, a monthly publication for Employees of The State Highway Commission now known as the North Carolina Department of Transportation features an article about N.C. Welcome Centers, here is a snippet of that article:

The State Highway Commission welcomed North Carolina's first Welcome Center August 1, 1968, when it was officially dedicated. A month later in September 1968, the second center was opened. The centers are located on I-85 and I-95 near the Virginia line. Built at Highway Commission Rest Area sites, the Centers were financed by the N.C. Department of Conservation & Development and are operated by the Travel and Promotion Division of that agency, directed by William F. Hensley and Welcome Center Supervisor Sara A. Harison.

Both centers are identical in traditional design and each contains about 2,800 square feet of floor space. Most of the space is utilized by the reception area, where travel literature, weather information and scenes from various sections of the State are displayed. They are situated on 16-acre sites in existing highway rest areas now maintained by the State Highway Commission. The cost of each center was about \$85,00, exclusive of paving and grading.

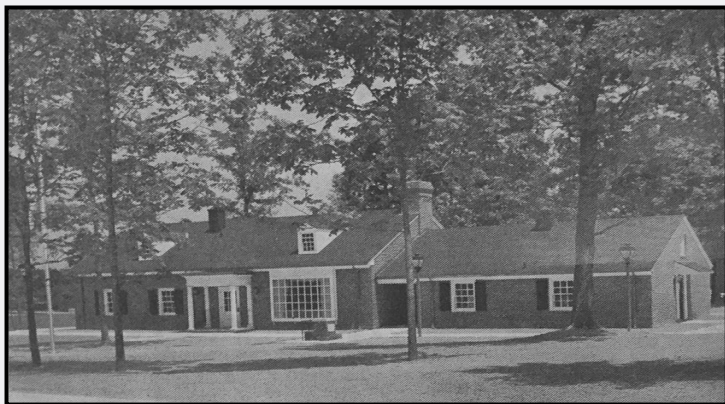


Photo: North Carolina's first Welcome Center located on Interstate 85, two miles from the Virginia line, was officially opened and dedicated August 1, 1968.



Photo: The States' second Welcome Center was officially opened September, 1968. It's located on Interstate 95 just one-half mile from the Virginia line.

Today, according to the [NC Department of Commerce](#), there are nine Welcome Centers that promote thousands of tourism-related businesses such as attractions, accommodations, events and more to visitors in the state already seeking travel information. Professional, nationally-certified counselors are located at each Welcome Center to distribute the state's Official North Carolina Travel Guide, the Department of Transportation's official state map, and other marketing publications exclusively about North Carolina, to offer detailed travel information in clean, modern facilities and to book room reservations at no charge for visitors staying overnight in the state.

Library Notes

- Come across a resource you need that's not available in our [Online Catalog](#)? I may be able to get the item for you via Interlibrary Loan at minimal or no cost to you.
- Contact the NCDOT Librarian, [Lamara Williams-Jones](#), for assistance: 919-508-1820, Monday through Friday from 8:30 to 4:30. Since there is only one Librarian, customers should call before visiting the Library.

New Publications from Transportation Research Board

[Investment Prioritization Methods for Low-Volume Roads](#)-National Cooperative Highway Research Program (NCHRP)

Synthesis 521: This synthesis documents current practices used by transportation agencies to make investment decisions about low-volume roads. Current transportation asset management practices for low-volume roads typically use asset condition, traffic, and safety metrics to prioritize investment decisions for preservation, maintenance, repair, and replacement projects. However, these metrics do not fully measure the significant value for the wider economy and society that low-volume roads can provide. This publication also addresses the challenges that decision makers may face to communicate the value of such investments to stakeholders in an era of limited funds and constantly changing demands on the transportation system.

[Long-Term Aging of Asphalt Mixtures for Performance Testing and Prediction](#)-

National Cooperative Highway Research Program (NCHRP) Research Report 871:

This report presents a proposed standard method for long-term laboratory aging of asphalt mixtures for performance testing. The method is intended for consideration as a replacement for the method in AASHTO R 30, "Mixture Conditioning of Hot Mix Asphalt (HMA)," which was the most commonly used method for aging asphalt materials for performance testing for input to prediction models for the past 25 years. The method improves on R 30 in that the laboratory aging time is specifically determined by the climate at the project location. This report will be of immediate interest to materials and design engineers in state highway agencies.

Many more publication links can be found at [TRB Publications by Subject](#)

Calendar of Events 2018

July 2018

- National RAC and TRB State Reps Meeting , July 23-26, Wichita, Kansas
- Transportation Research Board Summer Meeting, July 15-17, Spokane, WA

August 2018

- NC DOT Board of Transportation Meeting, August 1-2.

September 2018

- NC DOT Board of Transportation Meeting, September 5-6.



NCDOT Research and Development Unit General Information

How to find us:

We are located at 104 Fayetteville Street, Raleigh, in the Transportation Technology Center (formerly The Raney Building).

The Research & Development [web page](#) contains more information about the Unit and what we do.

The Research Library's [catalog](#) is also available on the web.

NCDOT RESEARCH AND DEVELOPMENT

The Research & Development Unit oversees transportation-related research that investigates materials, operations, planning, traffic and safety, structures, human environments, natural environments, and more. Please contact one of our engineers listed on this page if you have questions.

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