

# **National Cooperative Highway Research Program (NCHRP)**

## **Update on Construction-Related Research**

**AASHTO Committee on Construction**

**August 12-16, 2018**

**Pittsburgh, Pennsylvania**

**(NCHRP Liaison: Amir N. Hanna)**



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# **NCHRP- National Cooperative Highway Research Program**

- **What is NCHRP**
- **Examples of NCHRP Projects Related to Construction**
- **Committee Role in the Dissemination/Implementation of Project Findings**
- **NCHRP FY 2019 and 2020 Programs**
- **NCHRP Resources Available to the Committee**



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# **NCHRP- National Cooperative Highway Research Program**

- **Part of the Transportation Research Board (TRB)**
- **Part of The National Academies of Sciences, Engineering, and Medicine**
- **Private, non-profit institution**
- **Independent, non-partisan, objective**



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# **NCHRP- National Cooperative Highway Research Program**

- **An AASHTO program sponsored by state DOTs**
- **Started in 1962**
- **Covers all aspects of highways.**
- **Considers problem statements ONLY from AASHTO member departments (individually or through AASHTO committees) and FHWA**
- **Annual funding ~ \$40 million/year**



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# NCHRP: Goal-Oriented Research

- **Responds to state DOT needs:**  
**DOTs and AASHTO committees propose research topics; AASHTO R&I Committee selects projects.**
- **Ensures applicability of the results:**  
**Practitioners from State DOTs and other sectors of the highway industry participate in monitoring the research.**
- **Produces practical, ready-to-use results:**  
**Research products are prepared as guides, manuals, specifications, test methods, tools, etc. for use by state DOTs and other organizations, and adoption by AASHTO.**



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# Examples of NCHRP Projects

- **NCHRP Project 20-07/386: *Proposed Guide Specifications for Highway Construction* – Completed (provided to AASHTO Committee on Construction)**
- **NCHRP Project 10-85: *A Guidebook for Construction Manager-at-Risk Contracting for Highway Projects* – Completed (published by AASHTO)**
- **NCHRP Project 14-37: *Guide Specifications for the Construction of Chip seals, Microsurfacing, and Fog Seals* – Completed (will be provided to AASHTO Committee on Materials and Pavements)**



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# Examples of NCHRP Projects - 2

- **NCHRP Project 10-83: *Alternative Quality Management Systems for Highway Construction* – Completed (NCHRP Report 808)**
- **NCHRP Project 10-91A: *Sustainable Highway Construction Practices* – In progress**
- **NCHRP Project 10-100: *Procedures and Guidelines for Validating Contractor Test Data* - In progress**



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# **NCHRP Products – Implementation-1**

**(Features of NCHRP Projects/Products)**

- **Many of NCHRP projects have been proposed by AASHTO Committees.**
- **Products are the result of research by experts in the field.**
- **Project oversight is provided by practitioners and experts.**
- **AASHTO committee members participate in panels and project oversight.**
- **Products are practical, ready-to-use; presented as proposed test methods, manuals, guides, guidelines, procedures, and tools suitable for adoption and publication by AASHTO.**



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# **NCHRP Products – Implementation-2**

**(Facilitating Implementation)**

**AASHTO Committee on Construction can facilitate dissemination/ implementation of NCHRP research findings/products:**

- **Identify products useful to construction personnel.**
- **Recommend/approve publication as AASHTO Guide, Manual, Guidelines, etc.**
- **Encourage dissemination/use through workshops, webinars, and other forums.**

**Resources Available for:**

- **Assistance with the publication process.**
- **Webinars, demos, workshops, etc.**
- **Training**
- **Briefing materials**



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# NCHRP Products – Implementation-3

(Examples of Candidate Projects)

**Recently completed projects are candidates for dissemination/implementation through AASHTO:**

- *Proposed Guide Specifications for Highway Construction (2018)*
- *Guide Specifications for the Construction of Chip Seals, Microsurfacing, and Fog Seals (2018)*



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# NCHRP FY 2019 - Summary

- **11 Continuation projects (\$10.320 million)**
  - **6 Special projects (\$7.430 million)**
  - **5 Continuation projects (\$2.890 million)**
- **47 New projects (\$24.109 million)**

**Total 58 projects (\$34.429 million) in about 20 problem areas (bridges, maintenance, construction, materials, pavements, traffic, security, safety, etc.)**



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# NCHRP Special Projects

- **20-05 Synthesis Program (\$1,830,000)**
- **20-06 Legal Studies (\$350,000)**
- **20-24 Administration of State DOTs (\$1,250,000)**
- **20-30 NCHRP-IDEA (\$1,400,000)**
- **20-44 Accelerating the Application of NCHRP Research Results (\$2,000,000)**
- **20-68 US Domestic Scan Program (\$600,000)**



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# NCHRP Special Projects

(Sunset of four committee support projects)

**Funds will no longer be provided annually to four AASHTO committees to address the specific support and research needs of the committees:**

- **Environment (NCHRP Project 25-25)**
- **Highways (NCHRP Project 20-07)**
- **Planning (NCHRP Project 08-36)**
- **Public Transportation (NCHRP Project 20-65)**

**NCHRP Project 20-123 (Support for AASHTO Committees) will make funding available to any AASHTO committee or council that requires support for advancing and implementing the vision, mission, and strategic goals of the committee or council. These funds are not for the conduct of research.**



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# NCHRP FY 2019 Program

	<u>Submitted</u>	<u>Programmed</u>
• <b>Continuations</b>	<b>16 (\$13.370)</b>	<b>11 (\$10.320)</b>
• <b>New Projects</b>	<b>95 (\$41.339)</b>	<b>48 (\$24.109)</b>
• <b>TOTAL</b>	<b>111 (\$54,709)</b>	<b>59 (\$34.429)</b>
• <b>FY 2018</b>	<b>124 (\$60.046)</b>	<b>64 (\$35.327)</b>



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# NCHRP FY 2019 New Projects

	<u>Submitted</u>	<u>Programmed</u>
• Member Dept.	39 (\$16.100)	10 (\$24.039)
• AASHTO Com.	54 (\$24.039)	38 (\$19.459)
• FHWA	2 (\$1.200)	0
• TOTAL	95 (\$41.339)	48 (\$24.109)
• CONSTRUCTION	2	2



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# **NCHRP FY 2019 Projects**

**(Related to Construction)**

- **Project 02-25: Workforce 2030: Recruiting and Training the Next Generation Transportation Construction Workforce**
- **Project 10-102: A Guidebook for Risk-Based Construction Inspection**



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# NCHRP FY 2019 Program

- **March 27-28, 2018: FY 2019 projects selected**
- **May 8, 2018: Program announcement**
- **May 8, 2018: Solicit panel nominees (closed June 15, 2018)**
- **July-August 2018: Panel formation**
- **September-December 2018: 1<sup>st</sup> and 2<sup>nd</sup> panel meetings (develop RFPs and select agencies)**
- **February-March 2019: Contracting**



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# NCHRP FY 2020 Program

- **July 3, 2018: Solicitation of FY 2019 problem statements**
- **Nov. 1, 2018: End date for problem statements**
  - **NCHRP & FHWA review**
  - **Review to submitter/submitter comment**
  - **Problem statements to R&I Committee and RAC for comment and ratings**
  - **Summary report with R&I/RAC comments and rating, and overall rankings to R&I.**
- **April 9, 2019: R&I Committee meeting/project selection**



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# NCHRP & Committee on Construction

- **Research Problem Statements**
  - **Due November 1, 2018**
  - **Concise, clear statement of objective**
- **Project 20-123 (Support for AASHTO Committees)**
  - **To support advancing Committee business**
  - **Not for the conduct of research**
- **Project 20-68 (Domestic Scan Program)**
- **Synthesis**
  - **Due February 18, 2019 (for the next round)**
- **Project 20-44 (Accelerating the Application of NCHRP Research Results):**
  - **Consider recently completed projects**
  - Publication as AASHTO documents**
  - Implementation activities**



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# More Information

*NCHRP: Advancing transportation and meeting states' needs for more than half a century*

- <http://www.trb.org> ..... **NCHRP**
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