NCHRP- National Cooperative Highway Research Program

- A few words about NCHRP
- Examples of NCHRP maintenance-related projects
- Committee dissemination of project findings
- Committee/member involvement in NCHRP
- NCHRP FY 2020 and 2021 Programs
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
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
NCHRP: Goal-Oriented Research

• **Responds to state DOT needs:** Research topics are proposed by state DOTs and AASHTO committees; research projects are selected by the AASHTO R&I Committee.

• **Ensures applicability of the results:** Research is monitored by panel of experts from State DOTs and other sectors of the highway industry.

• **Produces practical, ready-to-use results:** Research products are prepared as guides, manuals, specifications, test methods, tools, etc. for adoption by AASHTO and use by state DOTs and other organizations.
Examples of NCHRP Projects-1

General:

- NCHRP Project 14-42: *Determining the Impact of Connected and Automated Vehicle Technology on State DOT Maintenance Programs* – Pending

Bridges and Structures:

- NCHRP Project 14-36: *Proposed AASHTO Guide for Bridge Preservation Actions* - Completed
- NCHRP Project 20-07(399): *Bridge Maintenance and Preservation Activities which Minimize Environmental Impact* – Completed
- NCHRP Project 14-45: *Model Procedures for Post-Event Bridge Damage Assessment and Engineering Evaluation* - Pending
Examples of NCHRP Projects-2

Pavements:

• NCHRP Project 14-37: *Guide Specifications for the Construction of Chip Seals, Microsurfacing, and Fog seals* – Completed

• NCHRP Project 14-38: *Timing of Asphalt-Surfaced Pavement Preservation* – Completed

• Project 14-43: *Guide Construction Specifications for Cold-in-Place Recycling and Cold Central Plant Recycling* – Pending

• Project 14-44: *Construction Specifications for Pavement Treatments: Slurry Seals and Tack Coats* – Pending
Examples of NCHRP Projects-3

Operations:

• NCHRP Project 14-34: *Guide for Performance Measures in Snow and Ice Control* (NCHRP Research Report 879)

• NCHRP Project 06-18: *Guide for Snow and Ice Control Operations* – In progress

Roadside:

• NCHRP Project 14-41: *Permanent Vegetation Control Treatments for Roadsides* – In progress
Examples of NCHRP Projects-4

Equipment:


• NCHRP Project 05-24: *Guidelines for Vehicle and Equipment Colors, Marking, and Lighting* – In progress

• NCHRP Project 13-05: *Guide for Utilization Measurement and Management of Fleet Equipment* – In progress

• NCHRP Project 13-07: *Guide to Calculating Ownership and Operating Costs of Department of Transportation Vehicle and Equipment Fleet* – In progress

• NCHRP Project 13-08: *Guidelines for Decision Making for Repair vs. Replacement of Highway Maintenance Equipment* – In progress
NCHRP Products – Facts
(Features of NCHRP Projects/Products)

• MaC proposed about half of NCHRP projects related to maintenance.
• Research by experts in the field.
• Practitioners and experts oversee the research.
• MaC members participate in panels and project oversight.
• Products are practical, ready-to-use as manuals, guides, procedures, and tools suitable for adoption and publication by AASHTO.
NCHRP Products – Examples
(Products Published by AASHTO)

• Manual for Emulsion-Based Chip Seals for Pavement Preservation – 2012
• Guide for Snow and Ice Control – 1999
• Guidelines for the Selection and Application of Warning Lights on Roadway Operations Equipment – 2009
• Decision Making for Outsourcing and Privatization of Vehicle and Equipment Fleet Maintenance – 2012
• Guidelines for Vegetation Management - 2011
NCHRP Products – Role of MAC
(Facilitating Dissemination/Implementation)

Help disseminate research findings/products:
• Identify products useful to maintenance personnel:
  - Recommend publication as AASHTO Guide, Manual, etc.
  - Encourage dissemination/use through workshops, webinars, etc.

Resources Available for:
• Assistance with the publication process.
• Webinars, demos, workshops, etc.
• Training
• Briefing materials
Example of a candidate product for publication/dissemination through AASHTO is

**Guide for Performance Measures in Snow and Ice Control**

This *Guide* is available as Part II of NCHRP Research Report 889, *Performance Measures in Snow and Ice Control*. A Microsoft-Excel-based tool and user guide (available as Part III of the report) are also available.
Committee/Member Involvement

- Suggest research topics: Submit Problem Statements for projects, synthesis, 20-123, domestic scans, etc.
- Serve on panels for research projects, synthesis, etc.
- Assist with research activities: Provide case studies and data, complete surveys, etc.
- Implement Research Results: Identify relevant projects, recommend for AASHTO publication, recommend/participate in webinars, etc.
NCHRP FY 2020 - Summary

• 11 Continuation projects ($7.740 million)
  - 6 Special projects ($5.120 million)
  - 5 Continuation projects ($2.620 million)

• 58 New projects ($25.590 million) – includes 2 syntheses

Total 69 projects ($33.330 million) in about 20 problem areas (bridges, maintenance, materials, pavements, traffic, security, safety, etc.)
NCHRP Special Projects

- 20-05 Synthesis Program ($765,000)
- 20-06 Legal Studies ($350,000)
- 20-24 Administration of State DOTs ($1,250,000)
- 20-30 NCHRP-IDEA ($950,000)
- 20-68 US Domestic Scan Program ($1,200,000)
- 20-123 Support for AASHTO Committees and Councils ($605,000)
## NCHRP FY 2020 Program

<table>
<thead>
<tr>
<th>Category</th>
<th>Submitted</th>
<th>Programmed</th>
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<tbody>
<tr>
<td>Continuations</td>
<td>13 ($10.060)</td>
<td>11 ($7.740)</td>
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<tr>
<td>New Projects</td>
<td>114 ($46.130)</td>
<td>58 ($25.590)</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>127 ($56,190)</td>
<td>69 ($33,330)</td>
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<td>FY 2019</td>
<td>124 ($54.709)</td>
<td>64 ($34.429)</td>
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## NCHRP FY 2020 New Projects

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<th>Submitted</th>
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<td>• Member Dept.</td>
<td>34 ($14.025)</td>
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<tr>
<td>• AASHTO Com.</td>
<td>77 ($31.105)</td>
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<tr>
<td>• FHWA</td>
<td>3 ($1.000)</td>
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<td>• TOTAL</td>
<td>114 ($46.130)</td>
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<td>• MAC</td>
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NCHRP FY 2020 Projects
(Selected in April 2019)

• NCHRP Project 14-43, Guide Construction Specifications for Cold-in-Place Recycling (CIR) and Cold Central Plant Recycling (CCPR).

• NCHRP Project 14-44, Construction Specifications for Pavement Treatments: Slurry Seals and Tack Coats.

• NCHRP Project 14-45, Model Procedures for Post-Event Bridge Damage Assessment and Engineering Evaluation.

• NCHRP Project 23-08, Guidelines for incorporating Maintenance Costs into a Transportation Asset Management Plan.
NCHRP FY 2020 Program

• April 9-10, 2019: FY 2020 projects selected
• May 9, 2019: Program announcement
• May 9, 2019: Solicit panel nominees (closed June 17, 2019)
• July-September 2019: Panel formation
• September-December 2019: 1st panel meetings (develop RFPs)
• December 2019-January 2020: 2nd panel meetings (select contractors)
• March-May 2020: Contracting
NCHRP FY 2021 Program

- **July 15, 2019:** Solicitation of FY 2021 problem statements
- **Nov. 1, 2019:** End date for problem statements – New template
  - 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 14-15, 2020:** R&I Committee meeting/project selection
More Information

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


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