

July 8, 2021

**MEMORANDUM**

To: Members, TRB Executive Committee  
TAC Representatives to TRB Executive Committee

From: Neil Pedersen *Neil J. Pedersen*  
Executive Director

Subject: Agenda for TRB Executive Committee Meeting  
July 19 & 20, 2021

Enclosed or attached is the agenda book for the Executive Committee meeting on July 19 & 20 (all day Monday and Tuesday until noon). For those who will be attending in person, the meeting will be held in the Carriage House at the Woods Hole Study Center, Woods Hole, Massachusetts. Zoom invitations have been sent to those who will be participating online.

All of you are receiving this information electronically. Chair Susan Shaheen urges all members to review the agenda material prior to the meeting so that time spent in oral briefings can be reduced to a minimum. This will also expedite the handling of the more routine items on the agenda, allowing more time for discussion of substantive transportation issues.

At its spring meeting, the Subcommittee on Planning and Policy Review (SPPR) began work on developing a new TRB strategic plan that will be in alignment with the new National Research Council strategic plan. We will discuss the drafts key elements of the new TRB strategic plan. We will also start the process for developing the next edition of *Critical Issues in Transportation*.

In addition to our traditional policy session on the afternoon of June 19th, which will be on racial equity issues in transportation, we will be having an one hour panel discussion with four USDOT senior leaders on the Biden Administration's priorities related to transportation on Monday morning. You are asked to bring your agenda material with you as only late items or corrected material will be distributed at the meeting. (A few extra agendas will be available in case you forget yours.).

Please note that the electronic PDF version of the agenda book includes bookmarks. In the left column, please click the “Bookmark” icon to find tabs that will take you directly to each agenda item.

On **July 19 (Monday)**, the meeting will start promptly at 8:30 a.m. Breakfast will be served in the Main House starting at 7:30 a.m.

We will break for evening activities at 5:30 p.m. The reception/dinner for members of the TRB Executive Committee and the Technical Activities Council and their guests will begin immediately after the policy session at 5:30 pm in the Main House. For those allergic to shellfish, chicken, steak, or vegetarian meals will be available. If you have not already submitted your and your guest’s menu preference, please let Cindy Baker know by July 9<sup>th</sup> at [cbaker@nas.edu](mailto:cbaker@nas.edu).

On **July 20 (Tuesday)**, the meeting will start at 8:30 a.m. and adjourn by 1:00 pm. Breakfast (7:30 a.m.) and lunch (12 noon) will be served. If you are not planning to stay for lunch on Tuesday, but would like to take a boxed lunch with you, and did not RSVP yet, please let Cindy know.

Business casual resort wear is appropriate at the meetings, as well as the local restaurants. Low, comfortable shoes are suggested, as are sweaters and jackets; it can be windy and the evenings are usually cool. Ties are very strongly discouraged!

Wireless internet will be available at no charge.

I look forward to seeing you either in Woods Hole or online and to having a productive meeting.

*Note: If you find your plans change and you cannot attend the meeting, please call the hotel directly— Inn on the Square (508-457-0606). You must cancel 48 hours prior to your arrival. I would appreciate your letting us know also.*

AGENDA  
 TRB EXECUTIVE COMMITTEE MEETING  
 Woods Hole Study Center, Woods Hole, Massachusetts  
 July 19-20, 2021

**MONDAY, JULY 19, 2021**

Item	Time	Page	Speaker	Type
1. Welcome and Announcements	8:30 a.m.		Shaheen	Information
2. Self-Introductions	8:35		All	Discussion
a. Cover Memo		1		
b. Agenda		3		
c. Zoom Instructions		6		
d. Policy Statement on Preventing Discrimination, Harassment, and Bulling		7		
e. Bias and Conflict Discussion		8		
3. Approval of January 26-28, 2021 Minutes	8:50	10	Shaheen	Action
4. Approval of Consent Agenda	8:55	16	Shaheen	Action
5. Executive Director's Report	9:00	28	Pedersen	Information
6. TRB Division Committee Report	9:20	39	Hendrickson	Information
7. TRB Communications Strategic Plan	9:30	52	Mackie	Action
8. Break	10:00			
9. Development of New TRB Strategic Plan	10:15	92	Turnbull	Discussion
10. Biden Administration Priorities	11:00	100	Hampshire, Pollack, Cliff, Mims	Discussion
11. Lunch	12:00 pm			
12. Policy Session on Racial Equity		104		
a. Introduction	1:30		Ford	
b. NASEM's DE&I priorities	1:35		Castillo-Page	Information
c. Update of TRB's DE&I strategic plan	1:40	109	Lewis	Information
13. Minority Student Fellows	1:50	116	Febey	Information
14. TRB Activities on Equity	1:55		Febey	Information
15. Panel Session on Equity	2:00	119	Ford	Presentations
16. Administration Perspective on Equity	3:00		Hampshire	Presentation/ Discussion
17. Consensus Study on Equity Metrics	3:15		Menzies	Discussion

18. Plenary Discussion	3:30		All	Discussion
19. Concluding Remarks	5:25		Ford	
20. Break for Evening Activities	5:30			
21. Reception/Dinner	5:30			

## TUESDAY, JULY 20, 2021

Item	Time	Page	Speaker	Type
22. Policy Session Follow Up Discussion	8:30 a.m.		Shaheen	Information
23. January 2022 Policy Session	8:55	124	Houston	Information
24. Technical Activities Update a. 2022 TRB Annual Meeting Plans	9:00	126	Grimes/Brach	Information
25. Next <i>Critical Issues in Transportation</i>	9:30	129	Turnbull/Pedersen	Discussion
26. Break	10:00			
27. CRP Update	10:15	132	Hedges	Information
28. Marine Board Update	10:40	144	Grabowski	Information
29. International Subcommittee	10:55	150	Iwasaki	Information
30. Young Member's Council	11:05	160	Kontou	Information
31. Consensus and Advisory Studies Update	11:15	161	Menzies	Information
32. Other Business	11:45		Shaheen	Information
33. Lunch	12:00 pm			
34. Adjournment	1:00			
<b>Consent Agenda Items</b>				
SPPR Meeting Minutes		182	Menzies	
Appendix - Compendium of TRB Activities in Four Priority Areas		207	Pedersen	

### BACKGROUND ATTACHMENTS:

Rosters and Staff – page 229

Organization Charts – page 237

Division Descriptions – page 238

Purpose and Duties of Executive Committee – page 246

Standing Oversight Committees – page 249

Project Approval Processes – page 252

Policy on Executive Committee Participation – page 254

**Next Meeting:** **January 12 & 13, 2022 (Wednesday & Thursday)**  
**Marriott Marquis**  
**Washington, DC**

**Next Summer Meeting:** **June 15 & 16, 2022 ((Wednesday & Thursday)**  
**Woods Hole, MA**

## TRB EXECUTIVE COMMITTEE ZOOM MEETING INSTRUCTIONS

Neil J Pedersen is inviting you to a scheduled Zoom meeting.

**Topic: TRB Executive Committee Winter Meetings – Day 1 and 2**

**Time: Monday, July 19, 2021 8:30 AM Eastern Time (US and Canada)**

**Time: Tuesday, July 20, 2021 8:30 AM Eastern Time (US and Canada)**

Join from PC, Mac, Linux, iOS or Android:

<https://nasem.zoom.us/j/94384055739?pwd=cEM2d1pXb1JoR1JHRlhpSSStsR29uZz09>

Password: 095179

Or iPhone one-tap :

US: +16465189805,,94384055739# or +16465588656,,94384055739# Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 646 518 9805 or +1 646 558 8656 or +1 651 372 8299 or +1 301 715 8592 or +1 312 626 6799 or +1 470 250 9358 or +1 971 247 1195 or +1 213 338 8477 or +1 253 215 8782 or +1 602 753 0140 or +1 669 219 2599 or +1 669 900 6833 or +1 720 928 9299

Meeting ID: 943 8405 5739

Password: 095179

International numbers available: <https://nasem.zoom.us/u/aJVygMKyp>

Would you like to test your Zoom connection? Please click on the link below.

<https://nasem.zoom.us/test>

NOTICE: The Zoom service allows audio and any materials exchanged or viewed during the session to be recorded and shared. Please be aware that by participating in this activity, you consent to your voice, likeness, and any materials you provide, being recorded for use and dissemination, without payment of any compensation for such use, in any language, format, or media now known or later devised, and you release the National Academies of Sciences, Engineering, and Medicine from any and all claims, liability, or damages arising from any such use. The Academies will proceed in reliance upon such consent and release. If you do not consent to the foregoing, please do not join the session.

Code of Conduct: The National Academies of Sciences, Engineering, and Medicine (NASEM) follows the NASEM guidelines in preventing discrimination, harassment, and bullying of participants at NASEM events, including conferences. [http://www.nationalacademies.org/about/NA\\_186023.html](http://www.nationalacademies.org/about/NA_186023.html)

## **PREVENTING DISCRIMINATION, HARASSMENT, AND BULLYING EXPECTATIONS FOR PARTICIPANTS IN NASEM ACTIVITIES**

The National Academies of Sciences, Engineering, and Medicine (NASEM) are committed to the principles of diversity, integrity, civility, and respect in all of our activities. We look to you to be a partner in this commitment by helping us to maintain a professional and cordial environment. All forms of discrimination, harassment, and bullying are prohibited in any NASEM activity. This commitment applies to all participants in all settings and locations in which NASEM work and activities are conducted, including committee meetings, workshops, conferences, and other work and social functions where employees, volunteers, sponsors, vendors, or guests are present.

**Discrimination** is prejudicial treatment of individuals or groups of people based on their race, ethnicity, color, national origin, sex, sexual orientation, gender identity, age, religion, disability, veteran status, or any other characteristic protected by applicable laws.

**Sexual harassment** is unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature that creates an intimidating, hostile, or offensive environment.

**Other types of harassment** include any verbal or physical conduct directed at individuals or groups of people because of their race, ethnicity, color, national origin, sex, sexual orientation, gender identity, age, religion, disability, veteran status, or any other characteristic protected by applicable laws, that creates an intimidating, hostile, or offensive environment.

**Bullying** is unwelcome, aggressive behavior involving the use of influence, threat, intimidation, or coercion to dominate others in the professional environment.

### **REPORTING AND RESOLUTION**

Any violation of this policy should be reported. If you experience or witness discrimination, harassment, or bullying, you are encouraged to make your unease or disapproval known to the individual, if you are comfortable doing so. You are also urged to report any incident by:

- Filing a complaint with the Office of Human Resources at 202-334-3400, or
- Reporting the incident to an employee involved in the activity in which the member or volunteer is participating, who will then file a complaint with the Office of Human Resources.

Complaints should be filed as soon as possible after an incident. To ensure the prompt and thorough investigation of the complaint, the complainant should provide as much information as is possible, such as names, dates, locations, and steps taken. The Office of Human Resources will investigate the alleged violation in consultation with the Office of the General Counsel.

If an investigation results in a finding that an individual has committed a violation, NASEM will take the actions necessary to protect those involved in its activities from any future discrimination, harassment, or bullying, including in appropriate circumstances the removal of an individual from current NASEM activities and a ban on participation in future activities.

### **CONFIDENTIALITY**

Information contained in a complaint is kept confidential, and information is revealed only on a need-to-know basis. NASEM will not retaliate or tolerate retaliation against anyone who makes a good faith report of discrimination, harassment, or bullying.

*Updated June 7, 2018*

# Conflict of Interest and Bias Definitions

- “Conflict of interest” means any financial or other interest which conflicts with the participation of an individual in particular decisions of the institution because the interest (1) could significantly impair the individual's objectivity or (2) could create an unfair competitive advantage for any person or organization.
- “Bias” ordinarily relates to views stated or positions taken that are largely intellectually motivated or that arise from the close identification or association of an individual with a particular point of view or the positions or perspectives of a particular group.



# Conflict of Interest

- Financial in nature;
- For individual and immediate family;
- Includes *current* employment, investment, and property interests and only lasts for the duration of the project;
- Details provided on forms are confidential;
- Financial conflicts are usually disqualifying

## Bias

- Perspective -- point of view;
- Expertise -- relevant to understanding and analyzing the issues;
- Goal is to achieve balance, not disqualify.

*The National Academies of*  
SCIENCES • ENGINEERING • MEDICINE



TRANSPORTATION RESEARCH BOARD

**Executive Committee Meeting Minutes**

January 26-28, 2021

Online, Zoom

**January 26, 2021, Tuesday**

11:30 a.m.

Introductions and Announcements (Braceras) Information

- a. Policy Statement on Preventing Discrimination, Harassment, and Bullying was noted.
- b. Bias/Conflict of Interest Discussion – There were no conflicts of interest reported.

12:05 p.m.

Approval of August 17-19, 2020 Minutes (Braceras) Action

- The minutes were approved.

12:07 p.m.

Approval of Consent Agenda (Braceras) Action

12:09 p.m.

Executive Director's Report (Pedersen) Information

- Very proud of the TRB staff for everything it has done to convert everything into virtual work and a virtual Annual Meeting.
- We have really ramped up our Communications activities.
- We had brainstorming sessions on COVID-19 and Equity in Transportation, which are resulting in Critical Issues addendums.
- Technical Activities highlights include the two top-performing webinars we've ever had; they were both on COVID-19 issues.
- SHRP 2 Safety Database has been transferred to FHWA.
- Consensus Studies and Marine Board highlights also briefly mentioned, as were Diversity, Equity, and Inclusion Strategic Plan; new National Research Council Strategic Plan, TRB Centennial; and TRB finances, which have been impacted by the TRB Annual Meeting revenue shortfall.

12:16 p.m.

TRB Division Committee Report (Hendrickson) Information

- a. Conference approvals were made.
- b. Monitoring diversity. We are seeing more and more diversity participating in TRB activities. Even a 1 percent increase in African-Americans involved with TRB is an increase of more than 100 people.

12:26 p.m.

#### Technical Activities Update (Park and Brach) Presentation

- A major focus this past year on responding to major issues: COVID-19 and Equity.
- Committee restructuring enhanced relevance of many committees.
- COVID-19 impact on specialty conferences means these will continue to be virtual at least through the first half of 2021.
- There is a new Blue Ribbon Award diversity category.
- The next Spotlight theme, for TRBAM 20222, will be “Innovating a more just, resilient, and safe transportation system.”
- For this year, we developed a month-long agenda to accommodate attendees.
- We have a new record of nearly 20,000 attendees this year (versus 14,000 late year), including more than double the attendance for Sponsor attendees. The feedback has generally been positive and people are happy that we have decided to hold the meeting. Some people really like the spread-out sessions and more people can attend the keynote sessions.
- Other early results of what attendees are saying in having a virtual event rather than an in-person one. Also, what might a “hybrid” event look like and whether we need to consider for next year.
- Discussion ensued on the virtual format, with a lot of positivity about turnout and how we can continue down this good path.

12:55 p.m.

Break

1:10 p.m.

#### Marine Board Update (Grabowski) Presentation

- The Board has been asked by the U.S. Coast Guard to have a meeting in May to discuss issues to address, and other upcoming developments were detailed.

1:20 p.m.

#### Emerging Trends in Goods Movement (Grabowski, Evans, Kruger, and Gray) Presentations and Discussion

- There have been huge bottlenecks and impacts from COVID-19 for maritime freight. There is an ongoing shift to contactless operations. There are enormous needs for storage of bottlenecked containers. There are also enormous quantities of returns happening in the industry to deal with. There are lots of studies being done but we will discuss ways to aggregate the studies at our June TRB meeting. Another emerging issue is the mental health of the workforce.
- Severe reductions in passenger markets has disrupted air cargo, but air cargo growth continues to grow and is expected to keep growing over the projected next 20 years. Disruptions in air cargo affects roadways. There are major changes in cargo facilities.
- The UPS COVID-19 vaccination distributions efforts were detailed.

2:20 p.m.

#### Policy Priorities of the Biden Administration and Congress (Jeff Davis, Jim Tymon, Paul Skoutelas) Discussion

- There will be more focus on climate change and race and equity goals from this administration than from the last administration, and you can see that by the appointees that have already been named. There does not appear to be risks of getting COVID-19 because of taking public transportation.

3 p.m.  
Adjournment (Braceras)

### **January 27, 2021, Wednesday**

11:30 a.m.  
Chair's Plenary Session

- Keynote Speaker, Dr. Marcia McNutt, President, National Academy of Sciences

1 p.m.  
Break

1:30 p.m.  
Policy Session on COVID-19 Impacts on Mobility and Equity (Braceras) Presentations and Discussion

- Shaheen presentation: She detailed the makeup of a study she led to examine possible scenarios up to 6 years out post-COVID. She discussed next steps to take for addressing equitable mobility.
- Turnbull presentation: She presented changes in travel behavior during COVID, including a major drop in VMT in Texas but a return of VMT recently. She said there have been significant increases in bicycling in Texas. There is an uptick in slower, healthy street programs. The overnight change in an increase in telework has been a success, although some are going back to an office or more hybrid setting. E-commerce and curbside pickup have increased in the area of goods movement. Travel spending and hotel occupancy were down, festivals and events were cancelled, and rural and smaller communities have been hit hard economically; however, RV sales, tent camping, and national park visitation areas are up.
- Wilson and Ford offered reactions.
- Discussion points included:
  - Electric bikes is an under-explored topic. There has been an increased interest in recreational transportation. As a result, e-bikes are currently difficult to purchase.
  - More broadband should be one focus as we see the upturn trend of telework.
  - The drop in airport use is significant and some of it could be permanent.
  - Bike lanes and the Slow Streets Movement are major areas of interest. Seattle is leading the charge.
  - Demand for regional rail could increase while demand for commuter rail could decrease. There are mixed opinions among the Executive Committee on this.
  - The nation needs transportation research. Not TRB's places but organizations represented on the Committee should advocate for that.
- Ford presentation: He presented ways for public transportation to work with health officials and to be a key part of vaccination distribution. Diversity and inclusion programs need to be implemented across the board, including vendors and partnerships.
- Wilson presentation: He presented about urban and non-urban challenges, specifically for African-Americans. Rural economic growth in the service sector lags behind urban economic growth across the U.S. Access to jobs, public transportation, and others is much lower in rural areas.

5:30 p.m.

## Executive Director's Reception

**January 28, 2021, Thursday**

11:30 a.m.

## Discussion of Implications of COVID-19 for TRB (Braceras) Discussion

- What policy or research issues should TRB be addressing? What should the new normal be?  
How should TRB change?
  - TRB has to continue to do well what it already does.
  - Look at ways to diversify since TRBAM is losing so much money this year, such as perhaps moving to more virtual meetings somehow.
  - Focus more on development of “content as a product” to package and professional development opportunities. Providing and charging for that content is how we grow.
  - The conference has more attendees than ever and the content is good, but there might be funding opportunities that could be further explored.
  - We should continue to have an in-person TRBAM, but let's figure out how to work some virtual into the meeting, such as perhaps some virtual meetings beforehand, for example.
  - Think about which activities could really thrive in a virtual world versus what would work better in-person.
  - January 2022 will still be difficult and people will still be fearful of travel, so having short-term and longer-term plans is important. Hopefully over a 2-3 year period we will be able to go back to the full in-person conference.
  - More customer segmentation and tiered pricing are things to examine.
  - The conversation veering toward a recommendation of a “hybrid” conference.
  - There are two different audiences: the kind that is used to flying and going to conferences and the more technical people who are used to sitting at their computer and getting things down.
  - We have heard from TRB staff that a “hybrid” approach is very difficult. Maybe we could combine with another meeting, such as an AASHTO meeting, so people can more easily attend, and have different opportunities throughout the year for the technical experts.
  - TRB has a contract for the next 12 years with the Washington Convention Center (and the contracts with the 12 hotels is also relevant).

12 p.m.

## Future Policy Sessions (Houston) Discussion

- There was a discussion of the topics that could be included in the upcoming Social and Racial Equity Critical issues Addendum, including environmental justice, structural racism, affordable housing and development, and Native American equity issues. A self-funded special report related to equity is also potentially being planned. This might also be the topic for the next SPPR meeting.
- Feedback included:
  - Under the concept of environmental justice, it would be good to include the concept of climate justice.
  - Structural racism could include more on zoning issues, redlining, and systemic racism.

12:20 p.m.

#### Final Report of TRB's Centennial Task Force (Larson) Presentation

- Potential future uses of Centennial products was presented, including the "Tell Us 'Our' Story" quotes that can be used for ongoing marketing, Century Club funding contributions, a distribution plan for remaining copies of the coffee-table TRB history book, continued promotion of the "Your Future in Transportation" video (especially each year as school goes back into session and by working through key partners), further promotional opportunities for Centennial Papers, and additional opportunities.

12:30 p.m.

#### Implications of Biden Administration Priorities for TRB (Braceras) Discussion

- What interesting questions should TRB focus on?
  - Science, unity, and equity are major focuses of Biden administration that are relevant to TRB.
  - Can the Executive Committee use its own members and RB Volunteers to unite people across sectors of the transportation industry? Perhaps forums could be created where various levels of government can get together on crucial issues. The Academies was able to set up rapid response processes (and CRP's Insight Events that result in summary reports on issues in which there isn't a lot of existing research) that might be helpful to the administration.
  - There will be a shift from a focus on rural to a focus on urban issues.
  - Immigration and workforce and technology transfer with autonomous vehicles are other timely, important issues.
  - Scenario planning is even more important now given all we've gone through with the changes because of COVID-19.
  - We should not be shy about asking for funding for the many rapid research needs.
  - Review Biden's Executive Orders to make sure TRB can help where possible.

1 p.m.

Break

1:20 p.m.

#### Cooperative Research Program Update (Hedges) Presentation

- The CRP statistics were presented, including 445 active projects in 2020 as well as the prominent reports and activities.

1:30 p.m.

#### Committee on Diversity, Equity, and Inclusion Update (Lewis) Presentation

- The Committee's seven strategies were detailed on plans to get more diverse audiences involved in TRB and Academies activities and getting much more DE&I information distributed through various channels and mediums.
- This important work is very much taking hold and happening across the Academies.

1:50 p.m.

#### Minority Student Fellows Program Update (Febey) Presentation

- A program overview was given on the 12-year-old program, which moved considerably to a virtual space this year and included 25 students from 17 schools.

1:55 p.m.

Young Member's Coordinating Council Update (Ivanov) Presentation

- A new leader will take over the YMCC in April.

2 p.m.

International Subcommittee Update (Ford) Presentation

- A presentation was given on what the international events throughout 2021 will be like, and that there could start to be more in-person meetings beginning around May. Engagement with international partners hasn't been affected too much despite COVID-19 in 2020.

2:10 p.m.

Communications Update (Mackie) Presentation

- Five communications objectives have been developed, with TRB's participation, that pertain to all of the Academies' communications efforts. These objectives and the ways TRB reached them in 2020 were presented. The 5 are related to the strengthening the Academies' brand and reputation, benchmarking against communications industry best practices, enhancing relationships with key stakeholders, enhancing support for programs, and improving coordination across the Academies.

2:30 p.m.

Consensus and Advisory Studies Update (Menziez) Presentation

- A presentation was given on key special reports and upcoming ideas for a self-initiated report on racial equity. A conversation ensued about ideas for this work.

Other Business and Announcements (Braceras) Discussion

- The schedule is tentatively to meet June 9-10, 2021. The sense of the Committee is that most people would prefer to meet in person, to push it back later in the summer until possibly July, and to meet in Wood's Hole instead of DC.

3 p.m.

Adjournment

AGENDA ITEM 4  
CONSENT AGENDA

The consent agenda consists of two items:

- Approval of conferences and workshops listed immediately after this page
- Approval of the minutes of the April 26, 2021 SPPR Meeting, which are in the Appendix.



### **Proposals for TRB-Convened Conferences (ACTION – Consent Agenda)**

*The following criteria are used in evaluating proposals for conferences, workshops, and similar activities. In general, an activity should not be proposed unless it draws a favorable response to all applicable criteria. The TRB staff and the proposing committees feel that the conferences being proposed satisfy these criteria.*

1. Is the proposed activity consistent with TRB's mission?
2. Does it have a high probability of producing worthwhile results?
3. Is the purpose of the activity objective and noncommercial? (Might the undertaking of the activity or the potential result give TRB an image of bias in an area in which it must remain neutral?)
4. Are the available time and funding adequate to conduct it in a proper manner and to carry it to a logical conclusion?
5. Is it within the existing staff capability of TRB or a capability that can reasonably be established?
6. Can committee members necessary to guide it be identified and their services obtained?
7. Does TRB retain the requisite control? Alternately, in case where TRB is not the lead organization, will TRB be involved in developing the program, and will TRB receive appropriate recognition?
8. Does it duplicate other efforts? Has the subject received all of the attention that is justified for the present time?
9. Is there a more appropriate organization, within the National Research Council or elsewhere, to handle it?

Executive Committee approval is requested for four TRB-Convened and two TRB-Cosponsored conferences as part of the consent agenda.

<b>CONFERENCES PROPOSED FOR SPONSORSHIP BY TRB</b>		
<b>Title</b>	<b>Date</b>	<b>Location</b>
1. 2022 Automation in Road Transportation Symposium	July 2022	TBD
2. AKD70 Summer Meeting Geospatial Data Acquisition Technologies in Design and Design	July 2022	Austin, Texas
3. 61st Annual Workshop on Transportation Law	July/August 2022	Portland Oregon
4. National Aviation System Planning Symposium	May 2023	Irvine, California
5. 3rd International Conference of International Society for Intelligent Construction (ISIC 2022)*	September 6-9, 2022	Guimaraes, Portugal
6. Advances in Materials and Pavement Performance Prediction*	December 12-14, 2022	Hong Kong

\*TRB participates as a cosponsor

Title:	<b>2022 Automation in Road Transportation Symposium</b>
Location:	TBD - probably California
Date (two month range):	July 2022
Description (overview and the objective of conference):	<p>The subject of road vehicle automation continues to be of high interest to the public, media, and the transportation profession. With the announced developments by all the major automobile manufacturers and other technology developers on this topic, TRB has identified this as a transformational technology and a strategic priority.</p> <p>This Symposium will build on the highly successful 2012 - 2020 Automated Vehicle Symposia and the 2021 Automated Road Transportation Symposium. ARTS22 will provide updates on the current research and development, advanced engineering progress, and field deployment results. The Symposium will also provide a strong focus on issues impacting the USDOT and State DOTs resulting from road vehicle automation advancements.</p> <p>NOTE: this is the continuation of the Automated Vehicle Symposia that TRB co-sponsored with AUVSI for the prior 5 years. That co-sponsoring relationship was ended in 2021 and TRB is now sole sponsor.</p>
Attendees (anticipated number and target audience):	1000+ Federal and State DOT employees, researchers, private sector automotive OEMs and suppliers, and international participants
Admission:	<input checked="" type="radio"/> Open to all <input type="radio"/> By Invitation
Anticipated Products:	Web-posting of presentations from the various speakers and Breakout Report Summaries
Convening Organization:	<b>TRB is the convening organization for this event.</b>
Other Sponsors:	
Funding (including any specific commitments):	<input checked="" type="checkbox"/> Registration Fees <input checked="" type="checkbox"/> Patrons/Exhibits <input type="checkbox"/> Sponsors/Other:
TRB Standing Committees (full names of committees involved in conference and their committee codes):	Intelligent Transportation Systems (ACP15), Vehicle-Highway Automation Systems (ACP30), TRB Joint Subcommittee on Challenges and Opportunities for Road Vehicle Automation (ACP30(1)), Emerging and Innovative Public Transport and Technologies Committee (APO20), Emerging Technology Law Committee (AJL40), Traffic Control Devices Committee (ACP55), Traffic Flow Theory Committee (ACP50), and others
TRB Role:	<input checked="" type="checkbox"/> Logistics/registration <input checked="" type="checkbox"/> Develop program <input type="checkbox"/> Other:
TRB Staff (SPO who is the key contact for the conference):	Richard Cunard, Engineer of Traffic and Operations, rcunard@nas.edu, 202-334-2965

Title:	
Location:	
Date <i>(two month range)</i> :	
Description <i>(overview and the objective of conference)</i> :	
Attendees <i>(anticipated number and target audience)</i> :	
Admission:	Open to all                      By Invitation
Anticipated Products:	
Convening Organization:	<b>TRB is the convening organization for this event.</b>
Other Sponsors:	
Funding <i>(including any specific commitments)</i> :	Registration Fees              Patrons/Exhibits              Sponsors/Other:
TRB Standing Committees <i>(full names of committees involved in conference and their committee codes)</i> :	
TRB Role:	Logistics/registration              Develop program              Other:
TRB Staff <i>(SPO who is the key contact for the conference)</i> :	

**TRB-Convended Conference Approval Form**

Title:	<b>61st Annual Workshop on Transportation Law</b>
Location:	Portland, OR.
Preferred Dates ( <i>at least two month</i> )	July/August, 2022
Description ( <i>overview and the objective of conference</i> ):	The Annual Workshops on Transportation Law provide a forum in which attorneys from federal, state, and local transportation and transit agencies as well as private sector practitioners come together once a year to get the latest information on the issues at the forefront of transportation law as well as discuss problems and proposed solutions. The workshops afford significant educational opportunities in a variety of substantive areas of transportation law. They also provide extensive intellectual and practical content. Sessions are developed and presented at the initiative of the TRB Legal Resources committees.
Attendees ( <i>anticipated number and target</i> )	This workshop typically attracts 160-190 lawyers, engineers, and transportation planners.
Admission:	<input checked="" type="radio"/> Open to all <input type="radio"/> By Invitation
Anticipated Products:	The Law Workshops are a major source of continuing legal education credits for attorneys in the transportation sector. They also provide a forum for the mid-year meetings of the Legal Resources Section committees and the development of potential topics for TRB's legal research programs.
Convening Organization:	<b>TRB is the convening organization for this event.</b>
Other Sponsors:	N/A
Funding ( <i>including any specific commitments</i> ):	<input checked="" type="checkbox"/> Registration Fees <input checked="" type="checkbox"/> Patrons/Exhibits <input type="checkbox"/> Sponsors/Other:
TRB Standing Committees ( <i>full names of committees involved in conference and their committee codes</i> ):	General Law (AJL10); Transit and Intermodal Transportation Law (AJL20); Contract Law (AJL30); Emerging Technology Law (AJL40); Environmental Issues in Transportation Law (AJL50); Eminent Domain and Land Use (AJL60) and Tort Liability and Risk Management (AJL70).
TRB Role:	<input checked="" type="checkbox"/> Logistics/registration <input checked="" type="checkbox"/> Develop program <input type="checkbox"/> Other:
TRB Staff ( <i>SPO who is the key contact for the conference</i> ):	Robert J. Shea, SPO/Counsel for Legal Research

TRB Conferences, Webinars, and Recordings  
January 16, 2021 – July 20, 2021

**Conferences**

(\*indicates event cosponsored by TRB)

How We Move Matters: Exploring the Connections between New Transportation and  
Mobility Options and Environmental Health

July 13, 16, and 21, 2021

online

Automated Road Transportation Symposium 2021

July 12-15, 2021

online

International Symposium on Frontiers of Road and Airport Engineering\*

July 12-14, 2021

online

Joint Committee Meeting: TRB Roadside Safety Design and AASHTO Roadside

July 12-21, 2021

online

10th International Conference on Structural Health Monitoring of Intelligent  
Infrastructure\*

June 30-July 2, 2021

Porto, Portugal

6th International Symposium on Highway Geometric Design\*

June 23-26, 2021

online

TRB Conference on Transportation Planning Applications

June 21-24, 2021

online

International Conference on Resource Sustainability: Sustainable Pavement  
Technologies\*

May 26-28, 2021

online

4th International Conference on Transportation Geotechnics\*

May 24-27, 2021

online

2021 NAEP Annual Conference and Training Symposium\*  
May 16-20, 2021  
online

Research Day at ITF Annual Summit\*  
May 11, 2021  
online

Joint Rail Conference\*  
April 20-21, 2021  
online

10th International Conference on Bridge Maintenance, Safety, and Management  
(IABMAS2020)\*  
April 11-18, 2021  
online

Measuring and Managing Freight System Resilience Workshop  
April 6-8, 2021  
online

Advancing the Marine Transportation System through Automation and Autonomous  
Technologies: Trends, Applications, and Challenges  
March 15, 2021  
online

Geosynthetics Conference\*  
February 22, 2021  
Online

### **Webinars**

TRB Webinar: One Pack to Rule Them All–The Cone Penetration Test Expansion Pack  
June 29, 2021

TRB Webinar: Addressing Justice in Transportation  
June 28, 2021

TRB Webinar: Compost It! Environmental Benefits of Compost in Highway Roadside  
June 23, 2021

TRB Webinar: The Future of Bridge Foundation Designs with Artificial Intelligence  
June 22, 2021

TRB Webinar: State & Local Deployments of Connected & Automated Vehicle Infrastructure  
June 21, 2021

TRB Webinar: Casting Connections – Improving Performance and Durability of Steel Bridges  
June 17, 2021

TRB Webinar: Rapid Testing for Asphalt-Treated Cold Recycled Pavements  
June 16, 2021

TRB Webinar: Redesigning Transit Networks for the New Mobility Future  
June 14, 2021

TRB Webinar: Airport Law Enforcement Models  
June 10, 2021

TRB Webinar: Catching Up on Low-speed Automated Vehicles in Public Transit  
June 8, 2021

TRB Webinar: Trust But Verify–Validating Contractor Test Data  
June 3, 2021

TRB Webinar: Not Easy Being Green–Colorizing Bicycle Lanes to Enhance Safety  
June 2, 2021

TRB Webinar: Enhancing the Capacity for Transportation System Resilience  
May 26, 2021

TRB Webinar: Drilled Shaft Design for Durability, Mix Stability, and Thermal Criteria  
May 25, 2021

TRB Webinar: Geotechnical Responses to Extreme Events  
May 24, 2021

TRB Webinar: Visualizing Transportation System Performance  
May 17, 2021

TRB Webinar: How Ridehailing Companies Affect Airport Revenues and Operations  
May 13, 2021

TRB Webinar: Increasing Return on Investment through Geotechnology  
May 12, 2021

TRB Webinar: Senior Leadership’s Role in Embedding Transportation Resilience  
May 6, 2021



TRB Webinar: Washout! Infiltration-caused Failure of Slopes Made of Plastic Clay  
April 29, 2021

TRB Webinar: Strategically Implementing Transportation Security Measures  
April 28, 2021

TRB Webinar: The Day of the Drones - Airports and Unmanned Aircraft Systems, Part 2  
April 27, 2021

TRB Webinar: Paving the Way to Successful AASHTOW are Pavement ME Implementation  
April 26, 2021

International Transportation Finance Summit\*  
April 19-21, 2021  
online

TRB Webinar: Geochemistry and Mineralogy in Chemical Soil Stabilization  
April 14, 2021

TRB Webinar: Minutes Matter – Bus Service Reliability  
April 13, 2021

TRB Webinar: Technical and Sustainability Aspects of Lightweight Concrete Bridges  
April 12, 2021

TRB Webinar: Truck Assumptions for Roundabout Design  
April 8, 2021

TRB Webinar: Advances in Pavement Condition Surveys  
April 7, 2021

TRB Webinar: Evaluating Tack Coat Materials' Durability in Asphalt Pavements  
March 31, 2021

TRB Webinar: Real-Time Response - A Pandemic Playbook for Public Transportation Agencies  
March 30, 2021

TRB Webinar: Analyzing Corridors and Systems with the Highway Capacity Manual  
March 25, 2021

TRB Webinar: Emerging Challenges for Congestion Pricing on Managed Lanes  
March 24, 2021

TRB Webinar: The New Virtual Reality for Public Meetings and Social Distancing  
March 23, 2021

TRB Webinar: Measuring Resiliency – Tools for Analyzing Resilient Transportation Systems  
March 18, 2021

TRB Webinar: The Ubiquitous Unmanned Aerial Vehicle – UAVs for Infrastructure Monitoring  
March 16, 2021

TRB Webinar: Texting While Driving – Implications of Legislation on Electronic Devices  
March 15, 2021

TRB Webinar: Concrete Overlays of Asphalt  
March 11, 2021

TRB Webinar: Diversity in Airport Business Contracting and Workforce Programs  
March 10, 2021

TRB Webinar: Visualizing Effects of COVID-19 on Transportation: A One-Year Retrospective  
March 8, 2021

TRB Webinar: Transportation Impacts in Managing Retreat from High-Risk Areas  
March 4, 2021

TRB Webinar: Chemical Treatments on Low-Volume Roads  
March 3, 2021

TRB Webinar: Developing Airport Emergency Plans  
March 2, 2021

TRB Webinar: Retrospective, Perspective, & Prospective of Transit-Oriented Development  
February 25, 2021

TRB Webinar: Using Artificial Intelligence to Predict Deterioration of Highway Bridges  
February 22, 2021

TRB Webinar: A Two-Way Ticket – Collaborative Planning Among Airports & Public Agencies  
February 18, 2021

TRB Webinar: Centering Seams – Maintaining Centerline Joints in Asphalt Pavements  
February 17, 2021

TRB Webinar: Driving Toward the Truth - Dispelling the Myths About Cannabis Products  
February 10, 2021

TRB Webinar: People Movers and Shakers - Quality of Life in Airport Communities  
February 8, 2021

TRB Webinar: Understanding Pavements – Long-Term Pavement Performance Program  
Updates  
February 4, 2021

TRB Webinar: Rock On - The Impacts of the Mischaracterization of Rock  
February 3, 2021

TRB Webinar: Options for Reducing Lead Emissions from Piston-Engine Aircraft  
February 2, 2021

**Straight to Recordings**

None since last Executive Committee Meeting

**MEMORANDUM**

TO: TRB Executive Committee

FROM: Neil J. Pedersen *Neil J. Pedersen*  
Executive Director

DATE: July 7, 2021

SUBJECT: Executive Director's Report

I am pleased to submit this Executive Director's Report for the TRB Executive Committee meeting that will be held July 19-20, 2021 at the National Academy of Sciences, Engineering, and Medicine's Jonsson Center in Woods Hole, Massachusetts. This report summarizes the status of a number of TRB activities, provides a financial report for TRB, and identifies several items for discussion at the upcoming meeting, including development of a new strategic plan for TRB and initiation of the process to develop a new *Critical Issues in Transportation* document. More detailed information is provided for most of the items covered in this report in the remainder of the agenda book, and most of the items will be discussed more in depth during the course of the Executive Committee meeting.

**Moving Toward a "New Normal"**

At the time of my last Executive Director's Report to the TRB Executive Committee in January, we were nearing the end of TRB's first ever virtual Annual Meeting. All TRB activities were being conducted online. I reported on the resilience and adaptability of TRB's volunteers and staff and the fact that we had been able to continue all of TRB's programs and activities with far less impact than anyone would have expected when COVID-19 shut down all in person activities in March 2020.

Based on the feedback that we received, as well as attendance numbers, the virtual 2021 TRB Annual Meeting has to be considered a resounding success. Over 20,000 persons participated, with many attending their first TRB Annual Meeting ever. Many committee meetings had two to three times as many attendees, with many new Friends being added to committee rosters. Many of TRB's standing technical committees have taken advantage of Zoom technology to meet more often and to increase their activities. TRB's Cooperative Research Programs have been able to continue their research and produce large numbers of reports during the past year and a half. The CRP program, which had

been dependent on hundreds of in person committee meetings and paper-based processes, adapted quickly and remarkably seamlessly to a virtual and digital business model. Although some contractor-based research that was dependent on in person activities was delayed in 2020, contractors are starting to catch up and all four programs are producing highly relevant and useful products. TRB's consensus and advisory studies continued with virtually no delays, again with all committee meetings having been held virtually. TRB's webinar program, library services, international activities, and communications offerings all adapted to the virtual environment and to ensuring that highly relevant information on current issues like COVID-19 and equity were being featured. The Marine Board has continued to have compelling programs and to address critical marine transportation issues and engage in discussions that its federal government sponsors find helpful. All of these activities have continued at a high level during the first half of 2021. More detailed reports regarding these activities are contained elsewhere in the agenda book, and you will hear presentations about many of them during the course of the Executive Committee meeting.

The National Academies of Sciences, Engineering, and Medicine (TRB's parent organization) have started the process of slowly reopening their facilities, transitioning to having staff on site in its buildings, and conducting in person and/or hybrid meetings. All National Academies buildings have reopened as of July 6<sup>th</sup>, with appropriate COVID-19 related safety protocols in place. On July 6<sup>th</sup> a TRB consensus study committee held the first meeting to occur at the Jonsson Center since the pandemic began, and the TRB Executive Committee meeting will be the first large meeting that will be held in a National Academies facility. All meetings through at least September will offer a hybrid option for those who cannot, or choose not to, travel to the site of the in person meeting. Although some TRB staff have been permitted to work on occasion in the Keck Building with prior approval, July 6<sup>th</sup> was the first day that the building was open to any staff member who wishes to work at the Keck Building. All staff, with relatively few exceptions, will be expected to return to work on site in the Keck Building at least 50 percent of the time as of October 1<sup>st</sup>.

Most TRB conferences through the end of 2021 will be held online, although there will be a few conferences in which TRB is a co-sponsor that will be held in person by other organizations. TRB's first in person conference, "Conference on Transformative Times in Transportation Security," will be held November 2-4 in Washington, DC. TRB has announced that the 2022 TRB Annual Meeting will be held in person in Washington, DC January 9-13, 2022. Ann Brach will provide more information about plans for the 2022 Annual Meeting, although final decisions on many details will not be made until closer to the time of the meeting, based on what local government officials, the Convention Center, and National Academies COVID-19 related policies are at the time.

### Addressing Critical Issues

TRB programs and activities have continued to address the issues identified in the *Critical Issues in Transportation 2019*. Based on events associated with the pandemic and with racial and social equity issues in 2020, TRB prepared two addenda to the 2019 edition. Critical issues related to COVID-19 were discussed in an addendum issued in conjunction with the 2021 TRB Annual Meeting. The addendum can be accessed at <http://www.trb.org/Main/Blurbs/181670.aspx>. TRB also has developed an addendum which addresses racial equity issues in transportation, which has cleared the National Academies report review process and should be issued around the time of the Executive Committee meeting.

The Biden Administration has identified four topics that are their top policy priorities:

- Equity
- Climate Change
- Covid-19
- Economic Recovery

In conjunction with a meeting of the Research and Technology Coordinating Committee, a TRB advisory committee on FHWA's research, development, and technology program, TRB compiled a list of work that it has recently completed or that is currently ongoing related to each of these topic areas. The list is included as an appendix to the agenda book. These topic areas have been and will continue to be focus areas for TRB for some time to come. You will hear more about some of these activities during the reports from each of TRB's senior staff during the meeting. I am especially pleased that the policy session on the afternoon of July 19<sup>th</sup> is on the topic of racial equity. We have four very knowledgeable speakers who are thought leaders on this topic and it should be an engaging discussion.

Given the rapidity with which issues are evolving or emerging and the length of time it takes to undertake an inclusive process for development of a new edition of *Critical Issues in Transportation*, we have concluded it is time to begin the process for the next edition. At the July 19-20 TRB Executive Committee meeting, we will initiate the process for developing the next edition. We intend to discuss both the process for developing the next document, as well as ideas for issues that we should include. The objective of *Critical Issues in Transportation* is to provide a high level overview of the most important policy and research issues in transportation for the next 10 to 20 years in the United States; to provide guidance regarding the issues that the Executive Committee would like to see TRB's programs and committees focus on during the next five years; and to provide a broader audience where TRB's view of the most important issues that transportation policy makers need to address at all levels of government.

In a separate memorandum from Katie Turnbull, Chair of the Subcommittee on Planning and Policy Review (SPPR), and me, we asked each of you to identify the top ten most critical specific issues from your perspective. We intend to synthesize the input received into a preliminary draft set of issues to help spur discussion at the meeting. Our intention is to publish a new edition of *Critical Issues in Transportation* sometime in late 2022 prior to the 2023 TRB Annual Meeting. More information, as well as a copy of Katie's and my memo can be found under Tab 25 in the agenda book.

#### Development of a New TRB Strategic Plan

In February the NRC Governing Board adopted a new strategic plan for the National Research Council, TRB's parent organization. TRB had previously committed to updating its strategic plan to be in alignment with the new NRC strategic plan once it was adopted. This new plan would replace the last TRB strategic plan, which was adopted by the Executive Committee in June 2019. The SPPR met on April 26, 2021 to begin the process of drafting a new plan. Based on the results of that brainstorming session, TRB senior staff synthesized the input and developed a draft set of vision, mission, values, and goals statements for the Executive Committee to consider at its July 19-20 meeting. In addition, TRB staff is proposing a set of principles that would be incorporated into the strategic plan. Text from the 2019 TRB strategic plan is shown, together with the text from the NRC strategic plan, and the proposed text for an updated TRB strategic plan for each section under Tab 9 of the agenda book. Information is shown on strategies and actions in the current TRB strategic plan and the NRC strategic plan, but work has not yet started on that portion of the new TRB strategic plan at this time.

Following revisions based on input from the Executive Committee, the draft statements will be circulated to a larger group of TRB volunteer leaders and stakeholders for review and comment. At the same time, TRB staff will begin work on drafting strategies and actions under each of the goals and will later propose performance measures to track progress on the plan. Based on past experience with developing TRB strategic plans, it is critical to have an inclusive process, in order to have buy in and commitment from the hundreds of volunteer leaders in TRB to a common set of goals, strategies, and actions. Our goal is to have the Executive Committee adopt a new strategic plan at its June 2022 meeting.

#### Adoption of a TRB Communications Strategic Plan

Paul Mackie, TRB's Director of Communications, has provided the Executive Committee progress reports at its last several meetings on development of new TRB Communications Strategic Plan. A draft plan has been completed and is contained in Tab 7 of the agenda book. It is based on communications strategies that are being developed for the entire National Academies of Sciences, Engineering, and Medicine, as well as

TRB's specific audiences and needs. Paul will be providing an overview, and we will be asking the Executive Committee to adopt the plan at the July 19-20 meeting. The plan is quite comprehensive, and as Paul emphasizes it will be a living document that will continue to evolve. I would especially ask that you look at the first two sections, the Executive Summary, and Communications Objectives and goals prior to the meeting.

### Federal Funding Outlook for Transportation

The federal funding picture for transportation and for infrastructure more broadly is continually evolving and is likely to change between the date this memorandum is being written (July 6<sup>th</sup>) and the Executive Committee meeting. We will endeavor to provide the most up- to- date information at the meeting.

Over the course of the COVID-19 pandemic, three stimulus bills passed and were signed into law which provided a total of \$171 billion in funding for transportation. The modes that had the greatest revenue impacts were transit and aviation, and these modes received the largest portion of the stimulus funding.

Funding for transportation is being discussed in Congress in three major categories, an infrastructure bill that is intended to provide an economic stimulus; reauthorization of surface transportation funding, which expires on September 30, 2021; and the FY2022 transportation appropriations bill.

President Biden's proposed \$2.3 trillion American Jobs Plan included \$471 billion for transportation infrastructure. A group of 21 U.S. Senators negotiated a bipartisan framework for infrastructure funding that adds \$298.7 billion in surface transportation infrastructure funding over five years above baseline funding and which President Biden has now endorsed. The Senate bipartisan framework also includes an additional \$25 billion for airports, \$16 billion for ports and waterways, and \$20 billion for an infrastructure financing authority. The House last week passed a five-year surface transportation reauthorization bill that would add \$232 billion in surface transportation funding. The amounts of increases in surface transportation funding for five years in both the bipartisan framework and HR 3684 as passed are shown by mode in the following table, which was produced by Jeff Davis of the *Eno Transportation Weekly* (Note: all amounts are in \$ billions):

	Baseline	Bipartisan Framework		HR 3684 As Passed	
		Increase	Total	Increase	Total
Roads, Bridges, Major Projects	251.0	+110.0	361.0	+77.5	328.5
Safety	10.0	+11.0	21.0	+0.5	10.5



Public Transit	66.0	+48.5	114.5	+38.4	104.4
Passenger and Freight Rail	15.0	+66.0	81.0	+84.6	99.6
EV Infrastructure	0.0	+7.5	7.5	+17.7	17.7
Low-No Carbon Bus, Ferry	0.0	+7.5	7.5	+4.1	4.1
Reconnecting Communities	0.0	+1.0	1.0	+3.0	3.0
Resiliency	0.0	+47.2	47.2	+6.3	6.3
Total, These Modes	342.0	+298.7	640.7	+232.2	574.2

Responsibility for surface transportation reauthorization in the U.S. Senate is divided among four committees. The Committee on Environment and Public Works has passed a \$303.5 billion bill to fund highway programs. The Committee on Commerce, Science, and Transportation has passed a \$78 billion bill to fund rail infrastructure, multi-modal grant programs, and safety programs. The Committee on Banking, Housing, and Urban Affairs has not introduced a bill regarding transit, nor has the Senate Committee on Finance introduced a bill for the revenue portion of the reauthorization bill as of the date of this memorandum.

Although the appropriations process has started in the House, it is anticipated that transportation will be one of the last appropriations bills to be dealt with for FY2022, pending resolution of surface transportation reauthorization and infrastructure funding bills. TRB's consensus studies often come from provisions in appropriations bills.

### TRB Finances

Part of the reason for providing so much detail on the status of federal funding for transportation is that it demonstrates the degree of uncertainty regarding federal funding, which TRB is highly dependent on either through direct federal funding from federal agencies or through indirect funding from Statewide Planning and Research Funds that state DOTs use to fund their contributions to TRB programs. Adding to this uncertainty are questions about what impact pandemic restrictions and reluctance to travel, and gathering in large crowds might have on attendance and revenues for the TRB Annual Meeting and conferences. Anticipating that attendance and revenues from the 2022 TRB Annual Meeting could be considerably lower than in the years before the pandemic, TRB staff is looking at a number of cost cutting measures associated with the TRB Annual Meeting. Ann Brach will discuss some of these potential measures at the Executive Committee meeting.

Information on TRB revenues and expenditures is contained in Attachment 1 to this report. As can be seen in the table "TRB Spending by Program and Source(s) of Funds," TRB's total spending for calendar year 2020 decreased by \$8.988 million (9.0%) from 2019 levels. Part of this is due to the SHRP 2 program ending in 2020 (a decrease of \$3.102 million), but a larger part is due to impacts of COVID-19 on TRB activities.

Expenditures in the Cooperative Research Programs decreased by \$2.964 million, mostly due to delays in contractors not being able to do their research on schedule. Expenditures for conferences, workshops, and forums decreased by \$2.147 million. There are some smaller decrease in several other categories as well. We are continuing to show reduced spending in 2021 in all of these categories, with the greatest reductions having occurred in the first six months of the year. As COVID restrictions begin to ease, we anticipate that expenditures will start increasing in the second half of 2021 and will start to return to a “new normal” in 2022. As shown in the pie chart in Table 1, 62 percent of TRB’s revenues come from state DOTs with another 29 percent coming from USDOT. The large majority of funding from state DOTs and from USDOT comes from funding in surface transportation authorization bills.

The second table in Attachment 1 shows the TRB Core Budget for TRB’s core technical activities. This budget is projected by fiscal year for a six-year period. TRB does a six-year projection to help it manage a reserve fund, which is designed to provide insurance against unplanned disruptions, such as a snowstorm during the TRB Annual Meeting. Although a pandemic had not been anticipated, the reserve fund is maintained for the type of disruption that was caused by the pandemic. As can be seen in the second table in Attachment 1, FY2021 is expected to have \$5.808 million less in revenues, and \$2.094 million less in expenses than FY 2020. The largest decrease in revenues, \$3.799 million, will be from reduced TRB fees and sales, and most of that is from the 2021 TRB Annual Meeting. The second largest decrease was from reduced USDOT support of \$0.654 million. We are in active discussions with each of the USDOT agencies whose funding had been cut by the previous Administration, and we are optimistic that we will be able to restore this funding soon. The projections for future years are based on an assumption that USDOT funding support will be restored at or above previous levels. I particularly want to thank Robert Hampshire, Acting Assistant Secretary for Research and Technology, for his leadership in working to restore USDOT funding.

Fortunately, with the Executive Committee’s support, TRB had maintained a healthy balance in its reserve fund, knowing that USDOT contributions were going to be reduced and knowing there were uncertainties associated with federal surface transportation legislation. We have been able to manage the impacts of the pandemic on TRB revenues because the Executive Committee had supported TRB maintaining a healthy reserve fund. Once new surface transportation legislation has passed, and USDOT contributions to the core technical program have been restored, the long term strategy for revenues, expenses, and reserve fund levels for the core technical program will need to be reassessed. Meanwhile, TRB will continue to be prudent with its expenditures and management of its funds.

### Executive Committee Meeting Discussion Items

On the first day of the Executive Committee meeting, we have set aside time to have a panel of senior USDOT officials discuss Biden Administration priorities. We are fortunate to have Robert Hampshire, Acting Assistant Secretary for Research and Technology; Stephanie Pollack, Acting FHWA Administrator; Steve Cliff, Acting NHTSA Administrator; and Brad Mims, Deputy FAA Administrator join us for the panel discussion.

The Executive Committee meeting policy session will be on transportation-related racial equity issues. The session will examine how transportation equity fits into the broader context of societal equity issues and how we need to consider and analyze transportation equity issues, will highlight how a large transit agency is making decisions that consider equity, and will address how transportation equity issues in the Boston area are being analyzed from a technical perspective and how the results of that analysis being used to make policy decisions. The panelists include Tierra Bills, Assistant Professor, Wayne State University; Dorval Carter, President, Chicago Transit Authority; Liz Williams, Director of Data and Policy, Massachusetts DOT; and Betsy Harvey, Transportation Equity Program Manager, Boston Regional Metropolitan Planning Organization. This should be an interesting and timely session as TRB thinks about issues related to equity in transportation.

We have also reserved sufficient time for discussions regarding development of the new TRB strategic plan and critical issues in transportation.

### Upcoming Transitions and TRB Awards

The terms of a number of the appointed Executive Committee members will end on January 13, 2022. Executive Committee Chair Susan Shaheen, Vice Chair Nat Ford, Division Committee Chair Chris Hendrickson, and Subcommittee on Planning and Policy Review Chair Katie Turnbull will convene in August to nominate the Chair and Vice Chair of the Executive Committee and persons to fill vacancies on the committee, including re-nominations for those who have not served two terms. Their nominations will be submitted to Dr. Marcia McNutt, Chair of the National Research Council for her approval. The same committee will serve as the selection committee for the W. N. Carey, Jr., Distinguished Service Award and the Roy W. Crum Distinguished Service Award.

### Concluding Thoughts

I would like to thank each of you for your support and for the direction that you have provided to TRB during the past year and a half. Although our normal way of doing

business has been disrupted for the past 16 months, TRB has been able to continue to provide products and services that are valued by its sponsors, volunteers, and customers, albeit in a somewhat different format. We continue to have challenges and face a great deal of uncertainty, particularly regarding the continued impact of the pandemic and uncertainty associated with our finances, but given the dedication, creativity, and commitment of TRB's volunteers and staff, I know that we have a bright future in front of us. I look forward to seeing all of you, either in person or online, at the Executive Committee meeting on July 19<sup>th</sup> and 20<sup>th</sup>, and to engaging in fruitful discussions.

#### Attachments

cc: Mr. Gregory Symmes, Chief Program Officer

Table 1

### TRB Spending by Program and Source(s) of Funds

	2019 act.	2020 act.	2021 est.	Source(s) of Funds
Core Technical Activities	\$15,497,000	\$14,759,000	\$15,204,000	State DOTs (53%), Fees & Sales (28%), FHWA (10%), Other (9%)
Cooperative Research Programs				
NCHRP	\$45,100,000	\$43,620,000	\$40,686,000	State DOTs (99.5%) FHWA (.5%)
ACRP	\$14,059,000	\$12,503,000	\$12,383,000	FAA
TCRP	\$5,451,000	\$5,327,000	\$5,002,000	FTA
NCFRP	\$224,000	\$32,000	\$0	OST-R
BTSCR	\$775,000	\$1,163,000	\$1,386,000	NHTSA/GHSA
Rail Safety IDEA	\$446,000	\$367,000	\$288,000	FRA
Evaluation of FHWA Research Projects	\$0	\$791,000	\$1,053,000	FHWA
Policy Studies	\$3,416,000	\$2,737,000	\$2,397,000	FAA (29%) FHWA(26%), Policy Fund (16%), Coast Guard (16%), FRA (7%), BSEE (6%)
Conferences, Workshops, Forums & Centennial	\$3,548,000	\$1,401,000	\$1,068,000	Registration Fees/Core (65%), State DOTs (13%), OST-R (12%), FHWA (4%), Other (6%)
SHRP2 (Safety Database)	\$4,494,000	\$1,392,000	\$0	FHWA
Marine Board	\$259,000	\$189,000	\$211,000	Army (24%), Coast Guard (24%), ONR (20%), NOAA (13%), BSEE (9%), MARAD (6%), SUPSALV (4%)
<b>Total</b>	<b>\$93,269,000</b>	<b>\$84,281,000</b>	<b>\$79,678,000</b>	

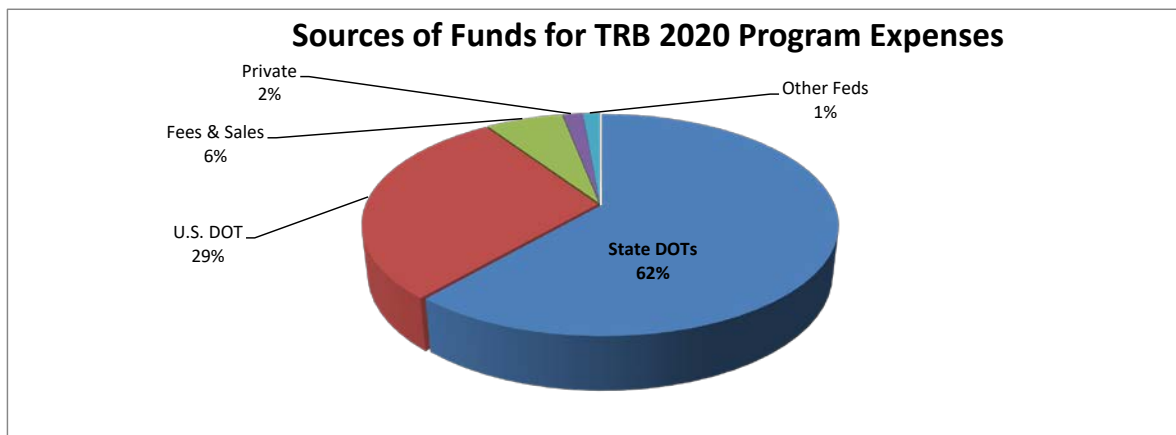


Table 2

TRB CORE BUDGET ESTIMATE FOR SIX FISCAL YEARS (July 1 - June 30)

	FY2020 (act)	FY2021	FY2022	FY2023	FY2024	FY2025
<b>Revenue</b>						
State Highway & Transportation Departments (State DOTs)	7,817,000	8,004,000	8,004,000	8,004,000	8,004,000	8,004,000
Federal Highway Administration (FHWA)	1,450,000	1,425,000	1,400,000	1,400,000	1,400,000	1,400,000
Other Federal Agencies						
Office of the Assistant Secretary for Research and Technology (OST-R)	300,000	81,000	231,000	300,000	300,000	300,000
Federal Transit Administration (FTA)	250,000	81,000	312,000	250,000	250,000	250,000
National Highway Traffic Safety Administration (NHTSA)	216,000	73,000	222,000	250,000	250,000	250,000
Federal Motor Carrier Safety Administration (FMCSA)	75,000	38,000	63,000	79,000	81,000	83,000
Federal Aviation Administration (FAA)	73,000	36,000	63,000	79,000	81,000	83,000
Federal Railroad Administration (FRA)	60,000	36,000	63,000	79,000	81,000	83,000
Department of The Interior (DOI)	85,000	85,000	85,000	85,000	85,000	85,000
Air Force Civil Engineer Center (AFCEC)	73,000	75,000	77,000	79,000	81,000	83,000
Department of Energy (DOE)	73,000	75,000	77,000	79,000	81,000	83,000
Environmental Protection Agency (EPA)	73,000	75,000	77,000	79,000	81,000	83,000
Army Corps of Engineers (COE)	-	62,000	77,000	79,000	81,000	83,000
	<u>1,278,000</u>	<u>717,000</u>	<u>1,347,000</u>	<u>1,438,000</u>	<u>1,452,000</u>	<u>1,466,000</u>
Other Non-Federal						
Association of American Railroads (AAR)	73,000	75,000	77,000	79,000	81,000	83,000
American Public Transportation Association (APTA)	73,000	75,000	77,000	79,000	81,000	83,000
California Air Resources Board (CARB)	78,000	80,000	82,000	84,000	86,000	88,000
	<u>224,000</u>	<u>230,000</u>	<u>236,000</u>	<u>242,000</u>	<u>248,000</u>	<u>254,000</u>
TRB Fees & Sales	6,696,000	2,897,000	4,482,000	6,100,000	6,283,000	6,471,000
	<u>17,465,000</u>	<u>13,273,000</u>	<u>15,469,000</u>	<u>17,184,000</u>	<u>17,387,000</u>	<u>17,595,000</u>
<b>Expenses</b>						
Personnel Related Expenses	11,930,000	12,456,000	13,838,000	14,520,000	14,956,000	15,405,000
AM Logistics and Travel	2,328,000	425,000	2,025,000	2,398,000	2,446,000	2,519,000
Library, Publishing & Report Production	1,220,000	975,000	1,100,000	1,122,000	1,144,000	1,178,000
Staff/Committee Travel & Meetings	233,000	25,000	195,000	347,000	354,000	365,000
Other Costs	395,000	131,000	215,000	280,000	286,000	295,000
	<u>16,106,000</u>	<u>14,012,000</u>	<u>17,373,000</u>	<u>18,667,000</u>	<u>19,186,000</u>	<u>19,762,000</u>
<b>Reserves</b>						
Yearly Surplus/(Deficit)	1,359,000	(739,000)	(1,904,000)	(1,483,000)	(1,799,000)	(2,167,000)
Reserve Fund Balance	19,878,869	19,139,869	17,235,869	15,752,869	13,953,869	11,786,869
Percent of Core Operating Year	123%	137%	99%	84%	73%	60%

## REPORT OF THE TRB DIVISION COMMITTEE January through June 2021

### BACKGROUND

The TRB Division Committee (Div-Comm) liaises between the Governing Board of the National Research Council (NRC) and TRB. Div-Comm ensures that TRB meets the NRC's standards for objectivity and ensures that its activities are appropriate for the NRC and assists the Executive Committee with special project approvals requested of the NRC Governing Board. In addition, Div-Comm monitors TRB's consensus committees and project panel appointments, report review, and programs approved by the NRC Governing Board.

Members of the 2021/2022 Div-Comm are Chris Hendrickson (NAE), Chair; Susan Shaheen, Executive Committee Chair; Patrick McKenna, State DOT Representative; and James Tien (NAE). The *ex officio* non-voting members are Carlos Braceras, Outgoing Executive Committee Chair; Nathaniel Ford, Incoming Executive Committee Chair; and Carol Lewis, TRB Special Committee on Diversity, Equity, and Inclusion.

### OVERSIGHT ACTIVITIES

Div-Comm activities and demographic data on TRB volunteer participation are discussed below. From January through June 30, 2021, the Div-Comm Chair approved appointments to 109 Cooperative Research Program (CRP) project panels.

#### Cooperative Research Programs (CRP) (Division D)

- 6 from the Airport Cooperative Research Program (ACRP),
- 4 from the Behavioral Traffic Safety Cooperative Research Program (BTSCR),
- 91 from the National Cooperative Highway Research Program (NCHRP), and
- 8 from the Transit Cooperative Research Program (TCRP).

### Report Review

From January 1- June 30, 2021, Div-Comm oversaw reviews of 57 reports from CAAS and the CRPs. Of those reports, 52 were from the CRPs:

Program	Research	Syntheses	Legal	Totals
ACRP	7	0	2	<b>9</b>
NCHRP/TCRP	0	0	1	<b>1</b>
NCHRP	19	14	0	<b>33</b>
TCRP	6	2	1	<b>9</b>
<b>Totals</b>	<b>32</b>	<b>16</b>	<b>4</b>	<b>52</b>

In CAAS, there were five monitored reviews—reviews overseen by both the National Academies' Report Review Committee and the Div-Comm Chair:

- Investing in Transportation Resilience: A Framework for Informed Choices
- Preparing for LNG by Rail Tank Car: A Review of a U.S. DOT Safety Research, Testing, and Analysis Initiation
- Review and Update of the Inspection Program for Offshore Oil and Gas Operations
- Technical Feasibility of a Wheelchair Securement System Concept for Airline Travel
- TRB Critical Issues in Transportation: 2021 Equity Addendum

### Diversity Tweets

As highlighted in the report from the Special Committee on Diversity, Equity, and Inclusion, topics related to diversity, equity, and inclusion are increasingly becoming a part of many aspects of TRB's work and its social media accounts, especially its Twitter account. To highlight some of the activity on its Twitter account, a sample of tweets from the 2021 Annual Meeting is provided below:

Sometimes the impact of inequitable policies are not only foreseeable, but also the result of intentional and racist policies, says Dorval Carter of [@cta](#) [#TRBAM](#)



2021 **TRB**  
ANNUAL MEETING  
Transportation Research Board

**A Spectrum of Modern Equity Issues  
from Overtly Racist Policies to  
Unintended Consequences**

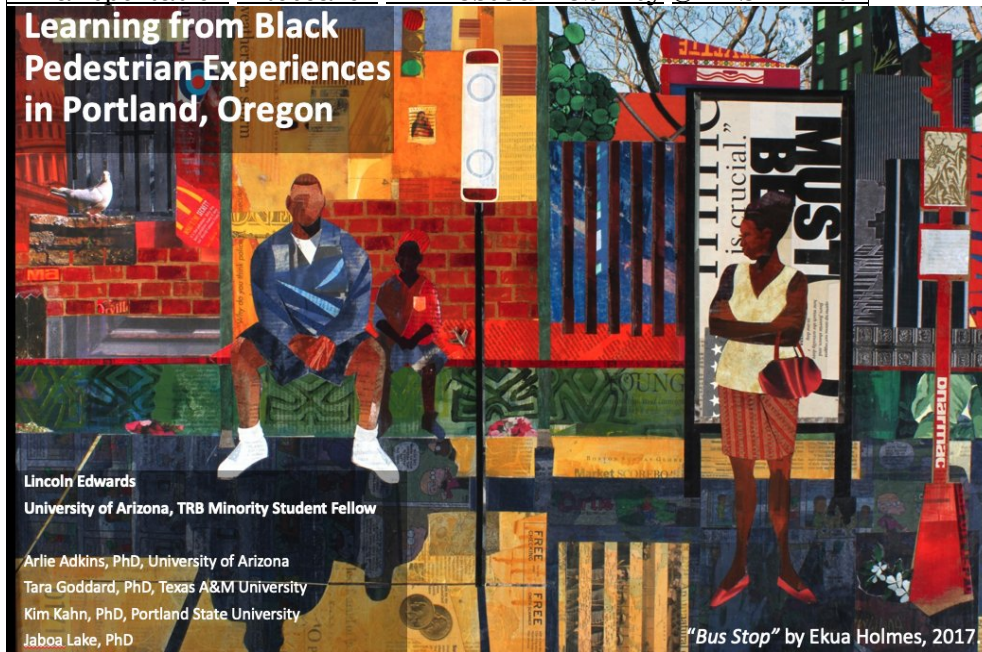
-DORVAL R. CARTER, JR. 2021 THOMAS B. DEEN DISTINGUISHED LECTURESHIP



TRB Executive Committee Chair @CarlosUDOT welcomes the 2021 Class of Minority Fellows. "One of the most amazing things about TRB for me... is its ability to bring people together.... As long as you're trying to improve people's quality of life, you belong at TRB." #TRBAM



Learn more about @uarizona's Lincoln Edwards research on "Learning from Black Pedestrian Experiences in Portland, Oregon" in #TRBAM poster session 1153. #Transportation #Research #ArrestedMobility @NASEMTRB



How 100 yrs can change the #TRBAM. The commitment is strong for more #diversity - the panoramic view of just a 2k slice of the over 14k attendees this year contrasts with the photo of what looks like fewer than 100 getting together for the first #TRBAM. #WomenInSTEM



## Involvement of Minorities and Women in TRB

The Div-Comm monitors TRB's progress in broadening the representation of minorities and women, both as members and as chairs of all of its standing committees, consensus committees, and CRP panels.

The four tables on the following pages show the composition of members and friends on Technical Activities committees and members on CRP panels by gender and by race/ethnicity. The denominator for the percentages of women and for race/ethnicity is for those whose race/ethnicity is known as they reported those data in TRB's online database (MyTRB), not the total number of those who are on the committees or panels. Both domestic and international members are included. A complete report for 2021, including data on the Consensus Studies and Advisory Committees, will be available at the January 2022 Annual Meeting.

### *Diversity in Participation on Committees in the Technical Activities Division*

Members of the 176 committees in TAD are appointed at the TRB level. Each committee is allotted 36 slots and selects its own members while working with its TRB staff member; the same is not true for the chairs as they are approved by TRB's TAD director. Individuals can also become involved in committees through becoming a "friend of a committee" which allows them to sign up for an unlimited number of committees. Friends can attend meetings and participate in committee activities, and can be considered for committee membership—so are often considered a pipeline for the committees. Table 1 provides data on friends of committees and Table 2 provides data on members of standing committees.

**Table 1**

Participation by Gender and Race/Ethnicity of Friends

	<i>Total N</i>	<i>% Women</i>	<i>% African Amer.</i>	<i>% AI/AN*</i>	<i>% Asian</i>	<i>% Hisp.</i>	<i>% 2 or More</i>	<i>% White</i>	<i>% Not Known</i>
<b>2015</b>	6035	25.8	3.4	0.3	16.5	4.2	1.3	73.8	30.3
<b>2016</b>	7929	26.4	3.9	0.3	17.3	4.6	1.4	72.1	32.3
<b>2017</b>	9606	26.6	4.1	0.3	18.5	4.7	1.6	70.1	33.4
<b>2018</b>	11262	27.5	4.2	0.4	18.6	4.9	1.7	69.3	34.6
<b>2019</b>	12801	28.5	4.3	0.3	19.5	5.0	1.9	67.4	26.8
<b>2020</b>	14541	29.1	4.5	0.3	20.3	5.1	1.8	65.7	22.0
<b>2021</b>	16345	30.0	4.6	0.4	20.0	5.2	2.5	65.6	19.9

\*American Indian/Alaskan Native

**Table 2**  
Participation by Gender and Race/Ethnicity of Members

	<i>Total N</i>	<i>% Women</i>	<i>% African Amer.</i>	<i>% AI/AN*</i>	<i>% Asian</i>	<i>% Hisp.</i>	<i>% 2 or More</i>	<i>% White</i>	<i>% Not Known</i>
<b>2015</b>	4830	25.8	2.9	0.4	13.5	3.2	1.3	78.5	12.0
<b>2016</b>	4880	26.5	3.2	0.4	14.0	3.3	1.2	77.6	13.6
<b>2017</b>	4976	27.2	3.2	0.4	14.6	3.5	1.3	76.6	14.9
<b>2018</b>	5136	27.6	3.3	0.3	14.8	3.7	1.2	76.5	15.9
<b>2019</b>	4989	28.2	3.2	0.3	16.2	4.1	1.5	74.0	11.3
<b>2020</b>	4714	29.4	3.5	0.3	16.8	4.6	1.4	72.4	10.2
<b>2021</b>	4828	29.4	3.5	0.2	16.3	4.3	1.5	73.0	11.1

\*American Indian/Alaskan Native

### *Diversity in Participation on Cooperative Research Program Panels*

Between 2015 and June 2021, data on race/ethnicity and gender of a) new panel members are shown in Table 3 and b) all members (new and existing) are shown in Table 4. Those included are individual people (rather than panel slots) who serve as either a chair, member, GHSA monitor, or AASHTO monitor on panels that that oversee contract projects.

While there is a greater number of panel members in the data as a result of including the Executive Office-approved panel members, a comparison of the categories for race and ethnicity of only Div-Comm approved panel members versus both Div-Comm- and Executive Office-approved panel members showed nearly identical percentages of race/ethnicity and gender. Table 3 show data of new panel members—so member approved just in that calendar year, while Table 4 shows the total number of panel members participating in all active panels.

The data reported in 2020 and 2021 include Div-Comm approved panel members as they have in the past, but also members from Executive Office-approved panels (e.g., topic panels and synthesis panels). These panel members are included so as to reflect the full range of recruitment efforts by CRP program officers and panel participation in the CRPs. As the 2021 data reflect new panel members through June 15, 2021, the final 2021 data, available at the 2022 Annual Meeting, will likely shift.

**Table 3**

## Participation by Gender and Race/Ethnicity of New Panel Members

	<i>Total N</i>	<i>% Women</i>	<i>% African Amer.</i>	<i>% AI/AN*</i>	<i>% Asian</i>	<i>% Hispanic</i>	<i>% 2 or More</i>	<i>% White</i>
<b>2015</b>	561	27.4	4.8	0.2	12.5	4.1	1.7	76.5
<b>2016</b>	436	30.7	7.9	0.2	12.8	4.2	1.4	73.5
<b>2017</b>	572	31.3	5.1	0.5	15.1	3.9	2.0	75.0
<b>2018</b>	732	35.3	6.1	0.8	11.5	6.1	1.5	73.9
<b>2019</b>	730	38.2	8.0	0.7	12.7	4.9	2.7	71.0
<b>2020</b>	752	35.1	9.0	0.6	12.1	5.9	1.7	69.9
<b>2021</b>	259	43.4	14.6	0.3	9.3	6.5	2.4	66.8

\*American Indian/Alaskan Native

**Table 4**

## Participation by Gender and Race/Ethnicity of All Panel Members

	<i>Total N</i>	<i>% Women</i>	<i>% African Amer.</i>	<i>% AI/AN*</i>	<i>% Asian</i>	<i>% Hispanic</i>	<i>% 2 or More</i>	<i>% White</i>
<b>2015</b>	1906	26.3	4.1	0.2	8.1	3.9	0.8	82.9
<b>2016</b>	2058	25.5	5.7	0.3	9.8	4.2	0.9	79.1
<b>2017</b>	2199	25.5	4.5	0.2	8.4	3.3	0.8	82.8
<b>2018</b>	2367	26.4	4.5	0.2	8.8	3.1	0.9	82.5
<b>2019</b>	2794	33.1	6.2	0.7	12.9	5.0	2.2	73.1
<b>2020</b>	3267	32.9	6.8	0.4	11.4	4.7	1.3	75.0
<b>2021</b>	2864	34.7	7.8	0.3	10.9	5.1	1.3	74.0

\*American Indian/Alaskan Native

**Diversity in CRP Contractors and Approaches to CRP Projects**

TRB encourages participation of women and minorities as principal investigators on university teams and of disadvantaged business enterprises (DBEs) and women's business enterprises (WBEs) so as to represent a variety of perspectives on CRP projects. (DBEs are small businesses that have at least a 51% interest and control of daily business operations by those who identify as African American, Hispanic, Native American, Asian-Pacific and Subcontinent Asian American, or women. WBEs are small businesses that are at least 51% owned by a woman, or a group of women.) Therefore, TRB collects data on contract funding that goes to DBEs and WBEs from new ACRP, BTSCR, NCHRP, and TCRP contracts.

Since July 2019, all organizations submitting proposals to CRP have had to respond to a question that asks how their team would bring a diverse and inclusive approach to their research, and policies or programs that they have in place to promote diversity and inclusion. Details about DE&I elements in the 34 winning proposals (12 of which were from universities and 22 of which from consulting firms) selected between January 1 and June 20, 2021 are in Table 5 below.

**Table 5**  
DE&I Elements in Winning Proposals

Consulting Firm Submitting Proposal is a DBE*	0
Using a DBE subcontractor	14
Consulting Firm Submitting Proposal is a WBE*	1
Using a WBE Subcontractor	9
General Statement of Commitment to DE&I	17
Plan for Diverse Team Working on the CRP Project	12
Plan for a Research Approach to Project that Includes DE&I	6
Organizational Policies & Procedures for DE&I	20
DE&I Strategic Plan within the Organization	2

\*By definition, consulting firms, not universities, can be DBEs or WBEs. Thus, the universe for counting whether the organization was a DBE or WBE was the 22 consulting firms in this analysis.

Some examples of how two organizations are addressing DE&I in their research:

*We understand that meeting research challenges is best accomplished by considering a broad range of diverse approaches. In addition to the racial and gender composition of our staff, we will use personnel with a variety of educational levels, years of experience, and socioeconomic backgrounds. All staff will be considered for inclusion in this project, based on their abilities to contribute and bring diverse viewpoints.*

*We are all committed to fair treatment, access to opportunity, and advancement for all employees. As an integrated team, we understand a successful project incorporates diversity, not just in terms of racial and ethical considerations but in the broader sense including such items as socio-economic status, mental and physical ability, and gender.*

# July 2021 Report of the TRB Division Committee (Div-Comm)

## Div-Comm members

- Chris Hendrickson, chair
- Carlos Braceras (ex officio)
- Nathaniel Ford (ex officio)
- Carol Lewis (ex officio)
- Patrick McKenna
- Susan Shaheen
- James Tien

### National Academies of Sciences, Engineering, and Medicine



## Overview of Div-Comm's Functions

- Review and approve panel/committee composition and reports
- Approve committees/panels and then reports
  - Cooperative Research Program (CRP)
  - Consensus and Advisory Studies (CAAS)
  - Technical Advisory Division (TAD) symposium planning committees
- Monitor diversity of CRP contractors
- Monitor diversity of TRB volunteers and staff

## Reports Reviewed January 1-June 30

### Oversaw reviews of 57 reports

#### 52 from the CRPs:

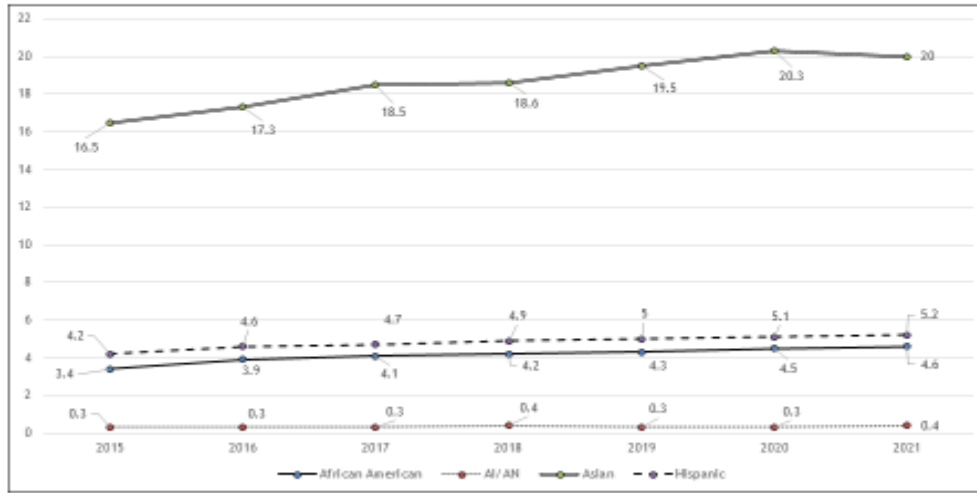
- 9 ACRP                      - 1 NCHRP/TCRP
- 33 NCHRP                 - 9 TCRP

#### 5 from CAAS:

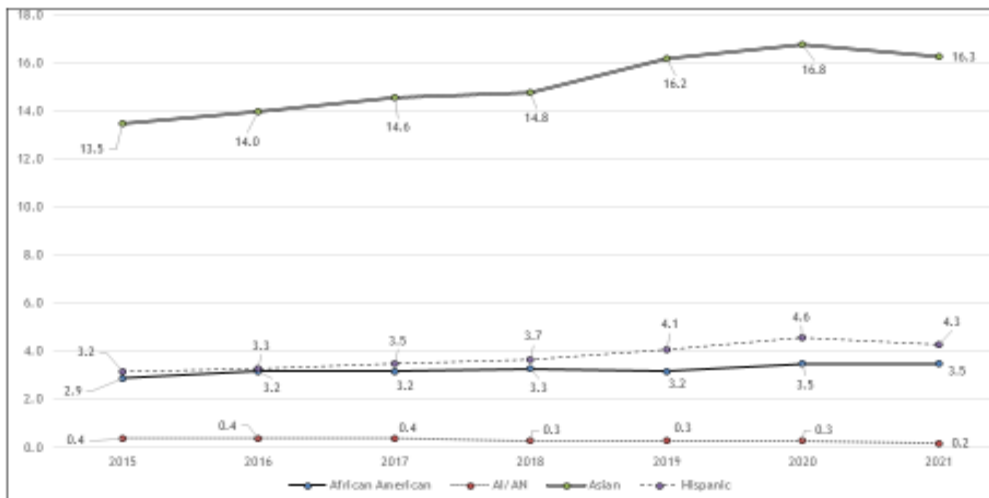
- Investing in Transportation Resilience
- Preparing for LNG by Rail Tank Car
- Inspection Program for Offshore Oil and Gas Operations
- Wheelchair Securement Systems for Airline Travel
- TRB Critical Issues: 2021 Equity Addendum



## Race/Ethnicity of **Friends** on TAD Standing Committees, 2021 N=16,345 2021 Response rate: 80.1%

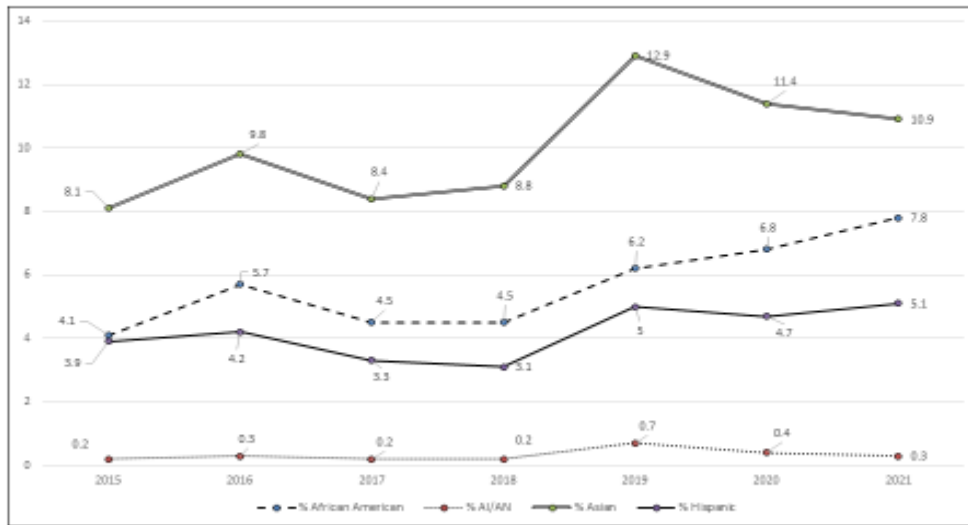


## Race/Ethnicity of **Members** on TAD Standing Committees, N=5,371 2021 Response rate: 98.6%



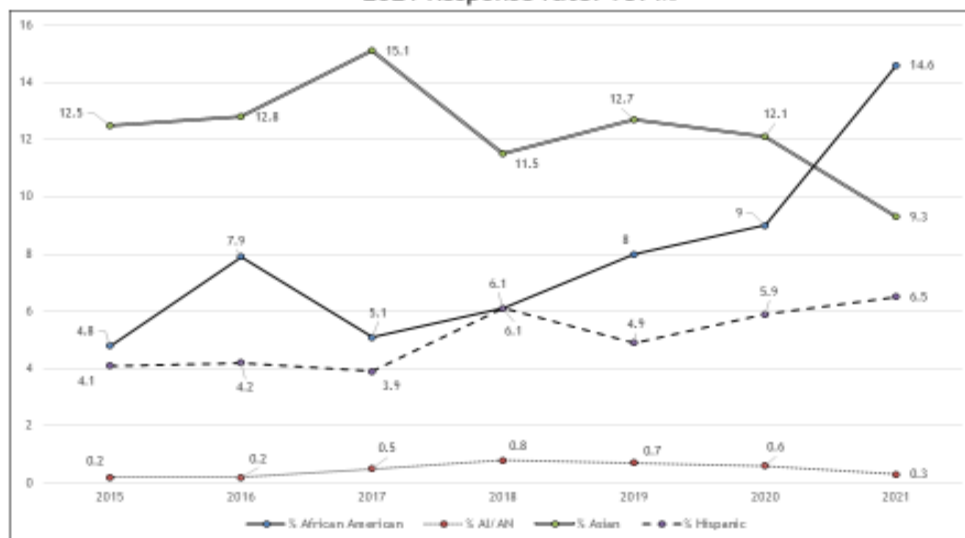
## All CRP Panel Members, 2021 N=2,684

2021 Response rate: 94.1%

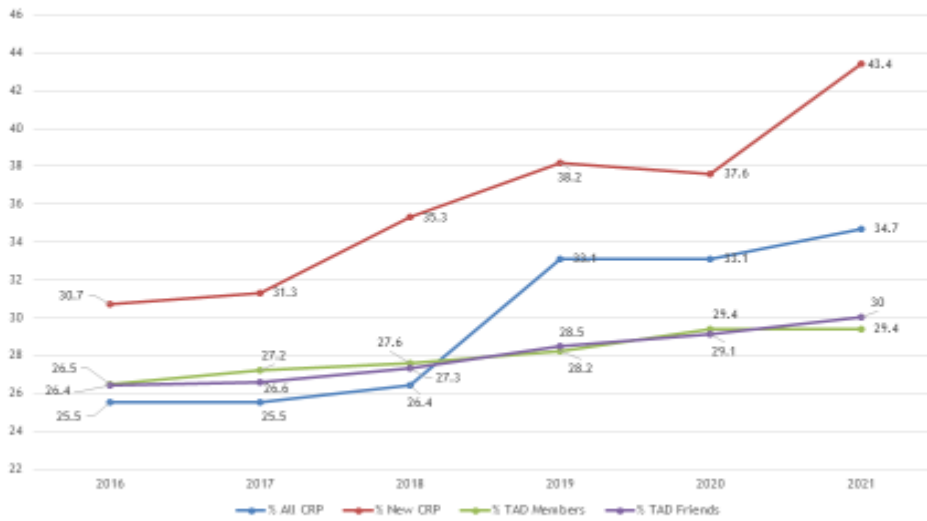


## New CRP Panel Members, 2021 N=259

2021 Response rate: 95.4%



# TRB Women Participation



*The National Academies of*  
**SCIENCES • ENGINEERING • MEDICINE**



TRANSPORTATION RESEARCH BOARD

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# **DRAFT**

## **Communications Strategic Plan**

**Updated: June 24, 2021**

**Date to take Plan from draft to formal implementation: July 2021**

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# 1. Executive Summary

Communications is one of the Transportation Research Board's six top-level goals in its **2019-2024 Strategic Plan**. It states that our communications should

“Enhance the transportation community's knowledge of TRB activities and their impacts, the nation's leaders' and public's awareness of the contributions of research to transportation's value, and their understanding of the importance of transportation to society.”

The **objective of communications**, across any organization or industry, is to help drive real business results and to increase our reach and impact. For TRB, this translates to keeping and further engaging those already associated with or aware of TRB. It also means that we identify those within the transportation community, the nation's leaders, and members of the public who are not aware of TRB's value and the many ways they could benefit from exposure to TRB.

We have learned a lot since 2019 about how our audiences like to be communicated to and what information they like to hear about, but we still have work to do in **understanding our audiences**. We are working to better identify how many existing “customers” we have and how we might grow and continue to engage them and their networks. We also need to determine how many new customers we would like – by age group, race, ethnicity, geography, organization, industry, and other categories. This will better allow us to set goals and truly know the effectiveness of our communications.

**This plan incorporates the many new priorities** identified by TRB since 2016, when the first TRB communications strategic plan was developed. There is an emphasis on reaching, building trust with, and engaging audiences that have been traditionally under-represented at TRB. The plan also includes a focus on messaging, branding, and positioning, as well as TRB's value proposition for involvement with sponsors, affiliates, volunteers, and “friends of committees” (who can participate in the same activities as committee members; often a good path into TRB for early-career professionals). TRB has made aggressive efforts to ramp up communications, such as improving the website, introducing new and better designed newsletters and other products, and significantly increasing our reach and influence across social media. (An ongoing list of communications achievements from 2020 onwards can be found in Appendix A.)

The plan includes a **detailed situational analysis** that incorporates information discovered by communications staff in interviews with TRB and Academies staff, the 2016 TRB strategic communications plan, the 2020 newsletter subscriber survey, and an awareness of general opportunities and threats identified across the transportation industry. Some of our findings:

- TRB produces an overwhelming amount of content
- The majority of our audience has some connection to TRB (they're more than subscribers, they're volunteers, funders, etc.) and they are or could be motivated to share our materials, and
- We need to reach more under-represented audiences.

It would have been difficult to predict, for example, the massive scale of COVID-19 or the growth of fake news, so the plan needs to evolve in real time to incorporate outside forces that will affect the plan. In this strategy, there is a **focus on developing content** for TRB's identified [Critical Issues](#), research projects, and policy studies for use in print, online, blogs, social media, audio/video, marketing, and more. Core audiences to receive this material are federal, state, and local stakeholders; Congressional

staff; and additional key and diverse (international, race, gender, ethnicity, generational, industries) audiences as identified in this plan. Other important parts of the plan are to:

- Improve TRB's digital and mobile communications capabilities, in conjunction with the NRC's Transformation efforts
- Collaborate with others to inform about the value of transportation to society
- Communicate the benefits of volunteer opportunities
- Equip TRB staff and volunteers to be communications ambassadors for TRB's programs, products, and activities, and
- Evolve the marketing strategies for the TRB Annual Meeting and other conferences and assets.

We have made strides in developing messaging and determining **what makes TRB different, unique, and valuable**. For starters, TRB provides materials that practitioners can use and reference frequently and that cross modes and disciplines. Materials we have developed such as talking points and blogs should continue to be adopted and utilized across the organization. There is much work to do on our branding, which will further give TRB a strong sense of where it fits in the world and how it can be even more influential. (More information on our messaging can be found in Appendix B.)

We use a number of **communication tactics** to amplify our impact, including email newsletters, audio and videos products, media relations, social media, other digital initiatives, and internal efforts that help everyone at TRB see their roles in communications. We think these tactics are appropriate based on what we've learned from colleagues and our audience survey. We constantly stay atop industry trends so that we can always be thinking forward and using the best and appropriate mediums for TRB's work.

This plan identifies the challenges we still face; however, with each challenge, **there are many opportunities**. As the TRB Communications team has been incorporated into the larger Academies' [Office of the Chief Communications Officer \(OCCO\)](#), where more capacity and collaboration is being explored. The Academies' increased focus on Diversity, Equity, and Inclusion (DEI) is helpful as we try to reach new audiences and so too is an increased interest in transportation in general (perhaps due in part to the new U.S. Transportation Secretary Pete Buttigieg). There are some areas in which improving our technological capabilities, our metrics and analytics, and our documented processes and guidelines will streamline communications efforts across the organization.

There are plenty of things TRB Communications **hasn't gotten to yet and will hopefully help with in the future** but are not yet much of a part of this plan, including further recruitment of Friends and volunteers, helping shepherd the full transfer of the old website to the unified web, and undertaking a deeper competitor analysis and a detailed influencer expansion strategy, to name a few.

**We hope this plan will be formally adopted by the TRB Executive Committee in July 2021.** Prior to then, input was collected from a small select committee of TRB Staff, the TRB Executive Staff, OCCO Leadership, and OCCO Division Communications staff. Upon adoption, we will constantly evolve the strategy to make sure we're where we should be and if any strategic updates need to be made based on business objectives or unexpected events. The strategy is never "finished." We will update staff on key metrics each week in the internal communications newsletter and each month by posting key metrics on the intranet, on the monitor in the 4<sup>th</sup> floor lobby of the Keck Center, and presenting to staff. Communications staff will discuss the status of the communications strategy multiple times each week. Regularly throughout the year, we will share the plan and updates with TRB and OCCO leadership.

## 2. Communications Objectives and Goals

Let's start with making clear what the Academies' and TRB's stated missions and goals are:

### **THE NATIONAL ACADEMIES/NRC MISSION STATEMENT**

The National Academies provide independent, trustworthy advice and facilitate solutions to complex challenges by mobilizing expertise, practice, and knowledge in science, engineering, and medicine.

### **THE NATIONAL ACADEMIES/NRC GOAL**

To anticipate and prepare society for future challenges and opportunities, expand the NRC's influence and impact on the world, and strengthen the NRC's creativity, resilience, and sustainability. The 2021 [NRC Strategic Plan](#) focuses on how to more strategically reach the right audiences. It is a complementary plan to the Transformation efforts, which focus more on integration (such as bring division communications staff into the Office of the Chief Communications Officer), strategic development, and technology and digital communications.

### **TRB MISSION STATEMENT**

The Transportation Research Board provides leadership in transportation improvements and innovation through trusted, timely, impartial, and evidence-based information exchange, research, and advice regarding all modes of transportation. TRB is a program division of the National Academies of Sciences, Engineering, and Medicine (NASEM).

### **TRB'S GOAL**

To conduct research and exchange knowledge on transportation and its nexus with many social, economic, and environmental issues that are relevant to all our lives. This, in turn, helps save lives, reduces traffic congestion, conserves energy, protects the natural environment, and boosts the effectiveness and the efficiency of the transportation system.

With those missions and goals in mind, the following five objectives have been developed by TRB Communications, in partnership with TRB leadership and staff as well as OCCO staff representing the other Academies' divisions. TRB's Communications Objectives are intended to be largely in alignment with the Communications Objectives of other divisions within the Academies.

### **TRB's Communications Objectives are:**

- 1.** Increase awareness of TRB products, activities, and services among transportation professionals and researchers.
- 2.** Communicate the value of TRB to TRB sponsors, potential sponsors, and the larger transportation community.
- 3.** Make TRB the "go to," essential, up-to-date source for information on transportation research related issues.
- 4.** Increase the impact that TRB is having in solving transportation and societal problems/issues.

5. Increase the influence that staff, partners, and collaborators have to communicate TRB's information and messaging and to help protect and enhance the reputation of TRB and the Academies.

While the Communication Objectives are similar across the Academies' divisions, the following means for reaching TRB's Objectives can be quite different. Because this strategic plan is designed to look forward, past achievements under these goals are listed and regularly updated in Appendix A. (As we accomplish the activities under each Objective, they will be moved to Appendix A and new activities will take their place in this section.)

#### **1. Increase awareness of TRB products, activities, and services among transportation professionals and researchers.**

- Strengthen and implement effective ways to deliver content
- Explore partnerships that help amplify TRB content – with media organizations, MOU partnerships, and staff and volunteer networks
- Continue to further develop documented mini-strategies under this overall strategy for select products, including publications and events
- Actively develop trust in TRB from traditionally under-represented TRB audiences and partners
- Continue refining our targeted media contact lists and use those lists more often when publicizing topical materials
- Continue exploring ways to share other Academies work that is tangentially related to transportation, and likewise share the work of other Academies divisions when appropriate
- Continue exploring opportunities with ONPI like a transportation tip sheet
- Continue to actively seek volunteers earlier in their careers to be featured on website, newsletter, and blogs
- Continue to find new ways to communicate our programs that engage students and emerging transportation professionals
- Improve coordination with partners/MOU organizations to identify new audiences and influences
- Monitor and respond to stakeholder sentiment

#### **2. Communicate the value of TRB to TRB sponsors, potential sponsors, and the larger transportation community.**

- Identify the brand attributes that relate to TRB's unique value proposition
- Diagnose and close gaps in stakeholders' perceptions of our differentiated brand
- Continue to re-design and re-brand the weekly TRB E-Newsletter, moving it into Mailchimp system
- Begin including the annual number of state DOT employees (and other key, trackable attendees) who attend TRB webinars in the TRB Annual Report
- Continue to create compelling videos from conferences, about TRB, and that help people better engage with TRB
- Explore ways to illustrate data in more visual ways
- Explore other opportunities in which email newsletters could be beneficial, such as the ARTS automated vehicles conference



- Continue moving content from the old site (TRB.org) to the unified web (nationalacademies.org)

### **3. Make TRB the “go to,” essential, up-to-date source for information on transportation research related issues.**

- Continue to develop and refine ways to produce and deliver compelling content for TRB and the Academies websites
- Continue to increasingly develop compelling materials in partnership with NAP
- Continue to disseminate TRB materials that are valuable to journalists
- Continue to reach goals of total webinars and other A/V products, and maintain or increase satisfaction rate, estimated attendance, quality of attendees, and revenue numbers
- Identify new ways and methods to market and disseminate webinars, including through under-represented communities
- Help make sure we have the right processes in place and documented for the creation and dissemination of TRB communications products, because not having good processes in place could hinder us from being the go-to place for various audiences
- Help determine if pricing structures for our products are correct
- Help make sure we are using the best software to deliver our communications products
- Continue to better understand the stories our data are telling us and how to use Google Analytics and other analysis tools
- Continue refining our experts/spokespeople lists so it’s easy for us to offer them to the media, invite on podcasts and webinars, and possibly more opportunities

### **4. Increase the impact that TRB is having in solving transportation and societal problems/issues.**

- Help people see how TRB’s research is being used in the real world. Significantly ramp up our efforts to collect real-world impacts from TRB’s work (and how our communications played a role). This is an opportunity to document and implement a process for TRB Communications working with TRB Program Staff regularly to find, communicate, and track these impacts
- Refine our metrics spreadsheet – such as what kinds of blogs and social-media posts do well, when they do well, and lessons learned, in order to strengthen strategies going forward
- Continuously assess whether we are producing and delivering webinars, podcasts, and videos in the best ways possible
- Strategically “audit” who our social media “influencers” are and plan how we can amplify our messages through them
- Improve and start refining metrics and performance analysis of newsletters through Mailchimp
- Continue to develop better metrics and performance analysis of webinars, podcasts, and web traffic
- Improve understanding of analytics tools OCCO uses (TalkWalker, Hootsuite, DataStudio, etc.)
- Explore ways to decrease the amount of administrative work that TRB Communications staff performs so that we can focus more on strategy and results

**5. Increase the influence that staff, partners, and collaborators have to communicate TRB's information and messaging and to help protect and enhance the reputation of TRB and the Academies.**

- Improve staff understanding of this Communications Strategy and connect their roles and work to the strategy →
- Continue to innovate—build a culture of communication—with our staff newsletter *Goin' Places* and other ways to deliver internal communications
- Help educate staff on communications policies and guidelines
- Continue to develop a documented “roles and responsibilities” checklist for communications staff and others such as the communications coordinators of the Standing Technical Committees, staff communications liaisons to TRB Divisions, and other OCCO staff
- Develop a documented policy and guidelines for better promoting TRB's specialty conferences, co-sponsored events, and webinars
- Communications Staff will continue developing new skills and certifications to improve skill set and abilities to be successful contributors to the Academies' mission
- Continue to improve the ways we communicate TRB's commitment to DEI
- Explore ways for team to continuously improve creativity and practical skills at offering strong consultation to Academies colleagues
- In order to continue learning communications skills and to also offer the best possible advice to non-communications professionals that we work with, continue identifying and taking additional training from outside organizations for content marketing, digital marketing, software like InDesign, and social media
- Develop documented processes and guidance that will help Leaders, Program Staff, and Volunteers improve communications skills, have strong messaging, and be TRB ambassadors
- Help set organizational crisis protocols
- Continue refining website content and content organization, and content management processes
- Explore sponsorship advertising in the new TRB Annual Meeting Express newsletters
- Continue to refine and improve how we internally report our monthly and annual communications results (Powerpoint presentations)
- Continue making communications best practice and other information more accessible and available for staff to benefit from or use
- Implement communications staff attending TRB divisional meetings with a clear agenda of discussing what work to highlight, collaborating, and offering advice

“What have I got to do with communications? – TRB Associate Program Officer, during development of this strategy.

The answer: Everyone at TRB has a lot to do with this strategy

Crucial for our Communications Objectives is the setting of quantitative and qualitative goals. These may be separate goals for some of our existing, core audiences and new ones we would like to attract. There is more on this in Section 7 and Appendix D.

We need to continue building upon our understanding of who needs to be reached, why they need to be reached, and how we want them to act. For example, there are ways we could build further awareness

at state DOTs of TRB's materials so they implement them into practice and there are ways we can reach the private sector that encourage them to fund TRB's activities.

From there, we need to continue to find ways to measure impact. How will we measure how we're doing with Diversity, Equity, and Inclusion growth? How are we growing internationally? How are we growing and measuring ourselves with early-career professionals?

Although we have made progress in identifying which metrics to *quantitatively* track, we are still working to determine how much we need to increase those numbers, set goals for what those increases should be and when, and, most importantly, develop tracking of our most desired audiences so we better measure qualitative influence and impacts.

Here is a brief status report of key metrics and where we are in our development of tracking them, with more on this in Section 6:

- **Track communications efforts to real-world impacts and outcomes.** This is part of all the following bullets and is perhaps the most important element—no matter how qualitative or anecdotal – of the influence we are attempting to garner through our communications efforts.
- **Increase website traffic from XX to XX.** While we have some website traffic metrics, the complete picture has been elusive as it appears some of our Google Analytics have not been accurate for a variety of possible reasons. The causes need to be investigated and resolved. Getting our web analytics right will allow us to fill in these XXs, and begin focusing on key audiences, influence, and impacts.
- **Build email subscribers from XX to XX.** We have had unreliable analytics for our weekly newsletter. As we move to a new software delivery platform (Mailchimp), we will be able to baseline, track, and set goals for these numbers, and we will also have valuable information on who is reading and clicking on our newsletter. Further, we soon will be using a software in connection with Mailchimp and MyTRB that will allow for a more sophisticated demographic understanding of our subscribers.
- **Build webinar audiences from XX to XX.** We already have most of the numbers, quantity-wise, to set goals and reach them in this category. We know they are successful and have high satisfactory rates. Some ways we can build upon our key webinar metrics is to make sure the quality of our attendees continues to improve.
- **Build social media audiences from XX to XX.** This is a category in which we have excellent analytics. We have been setting goals since 2019, have been far exceeding them, and can begin to analyze who these audiences are and how we might leverage them to build TRB's influence and create real-world impacts that we can measure.
- **Build media coverage and relations from XX to XX.** We have great analytics here as well. Media coverage took a dip in 2020, for not-entirely-clear reasons, but likely related to COVID-19 and a reduction in journalists on the transportation beat. But we still received good coverage and a lot of it. We will work hard in this category to strengthen media relations as a path forward.

- **Track publications metrics:** NAP has good analytics on publication downloads and opens and we are developing good ways to monitor how our communications impacts engagement with publications.
- **Track advertising metrics:** TRB does not do much paid advertising at this time; however, we can track our own banner advertising in our newsletter, website TR News, and other properties.

It is important that we ensure our objectives and goals are always tied closely into the overall TRB Strategic Plan so that they amount to a vision—where we want to be in six months, a year, five years.

The plan places an increasing emphasis on not simply pushing our materials haphazardly out into the world as they are ready, but instead strengthening clear internal processes that better allow us to strategically plan how we disseminate our materials.

Communications is a fast-changing landscape, in general, and TRB's efforts naturally change directions frequently. Those changes need to be reflected in this strategy—with that in mind, the document has been designed to allow for constant evolution and it is never final.

### 3. Current Landscape

Let's now step back to the 10,000-foot view. TRB is a communicators' dream. There is so much content that needs to be easily findable, embraced and influential, and used in the real world by many audiences. The job of TRB's communications team is to make our content and resources as easy as possible to find, embrace, and put into practice.

Having so much content is nice, but it creates an even more crucial imperative to build a strategic-communications plan that includes editorial and tactical planning for different kinds of content; for example, highly technical content will likely need to be delivered in different ways than content on broader topics with more general audiences. Building – between program staff and leadership, TRB leadership, and communications staff – a strengthened understanding, clearer processes, and, in fact, this strategy itself are crucial elements on the road to utilizing communications in ways that are impactful.

Also, we need to think clearly about how influential we are and how much more influential we can be and want to be. TRB is too often thought of as an organization that merely operates a yearly conference. People often think TRB and the National Academies are government agencies. People are often confused who we are by things like volunteer efforts and our many diverse product lines. People often don't know TRB is part of the National Academies. We often don't think of the huge audience that is interested in science as an audience; there are opportunities there for influence as well as within our focused governmental, industry, and academic sectors. A much more robust audience inventory and audience understanding is necessary in boosting TRB's influence.

Where does communication fit into the overall picture for TRB? For one, it is a major part of [TRB's Strategic Plan](#) adopted in June 2019. It is one of the seven key objectives noted in the Plan. The focus of the communications goal is to promote:

- research
- transportation, and
- TRB.

There is also clearly an undercurrent in the plan of “broadening the umbrella,” meaning we will seek to continue engaging our existing audiences and aggressively pursue new ones, particularly diverse ones such as professionals new to the transportation industry, and international and traditionally underrepresented ethnicities in the transportation industry.

[TRB's first-ever Communications Strategic Plan](#) was adopted in 2016. It was developed by staff and a consultant, Julie Lorenz (currently Kansas' transportation secretary), and included a survey of about 60 high-level stakeholders. It asked them what they believed TRB excels at and how TRB could improve in terms of communicating to our audiences.

Using that plan as a base to evolve this plan, TRB Communications also embarked on a listening tour for nearly two years to understand what various stakeholders—including TRB staff, volunteers, TRBAM attendees, and general comparative analyses to communications best practices—think about TRB communications and how they would like TRB to communicate to them.

One major common theme: TRB's audiences experience an overwhelming amount of TRB content. This is both a good and bad problem to have. Good because, as has been noted, we have lots to offer. Bad because it's not always easy to find and utilize. Frequent examples of this feedback include:

- The website needs to be redesigned, reorganized, and refreshed to make it easier to find content, in both desktop and mobile formats. (The survey occurred before TRB's new site was launched.)
- The weekly newsletter needs to be redesigned, reorganized, and refreshed to make it easier to read, mobile friendly, and highlight original content that can't be found elsewhere that will make it even more of a "must read."
- TRB's webinars set an industry standard. Still, there is room to examine how we do them – for example, whether they should be part of a fuller video/audio strategy – and whether they can become more "can't miss" for target audiences.
- An enhanced focus on social media is an exciting opportunity for an organization that has so much content ripe for being "translated" to new, youthful, and diverse audiences. Better reaching those audiences is, in fact, increasingly becoming important to TRB's mission. For existing followers and practitioners, there is no reason to think that these "translations" of our often nuanced and technical content will not be appreciated. Further, communications-industry data and trends indicate that social media needs to be taken seriously, embraced, enhanced, and, perhaps most importantly, invested in.

In March 2020, TRB undertook a [survey of all our E-newsletter subscribers](#) (a PDF of the highlights is available [here](#)). This gave us a different view than the 2016 survey of which directions to take TRB's communications efforts. TRB/OCCO Communications staff – with advisement from CNSTAT/DBASSE survey-methodology experts at the National Academies and others – issued a survey of TRB's E-Newsletter subscribers to ask them what they think of TRB's communications products.

Top takeaways included:

- 60% of newsletter subscribers identify themselves as **TRB volunteers**.
- The products we offer are the favorite types of products our newsletter subscribers claim to desire.
- Perhaps not surprisingly, our newsletter subscribers' overwhelming like to keep up with transportation news through **newsletters**.
  - TRB's E-Newsletter is by far the main source for our audiences to get news about TRB.
  - Very few subscribers like the readability of our newsletter on their mobile phones. That said, the vast majority didn't have an opinion on the newsletter's readability. (This is a surprising finding, but it presents an opportunity to improve the mobile-phone readability and then market that element in the future.)
  - The overwhelming majority like the quality of the content and the ability to choose their topics of interest for the newsletter.
- Our **webinars** are seen as high quality, but they could be better publicized, more interactive, and somewhat more timely.
- About half of our audience gets news through **TRB.org (note this survey was before the launch of the unified web)**, but that number could arguably be higher and presents us with an opportunity.
  - 79% of our subscribers utilize the TRB.org website, but a lower number than that like the quality of the material on our site, and the quality of how our site looks, the ease

- of finding information, and the mobile-phone readability each performed unfavorably with our readers.
- There also appears to be opportunities with improving our website’s resources provided, convening opportunities, and advice provided.
- With **social media**, they use LinkedIn far more than Facebook and Twitter.
  - A small percentage of subscribers (11% utilize our social-media channels. But of those who do, we heard extremely encouraging feedback, including 80% like the quality of the content and 67% like how our channels introduce new industry ideas and trends.
- Most people know TRB is **part of the National Academies**, but 43% say that doesn’t make TRB information more valuable to them or they have no opinion about the relationship. This is an opportunity to better explain why the TRB/NASEM connection is important to the nation.
- There are major challenges – or one could say opportunities – to increase the percentages of **the diversity of our subscribers (and audiences overall)**: female, 37 and younger (early-career professionals and students), and non-white audiences.

There is a more detailed analysis of the results included in Appendix A at the end of this strategy document, and an even fuller analysis of the results on [AcademyNet](#).

Along with following the advice in those surveys, the 2016 strategy, and other noted input, TRB’s Communications Strategic Plan is aligned with:

- The NRC Strategic Plan, adopted in February 2021
- The TRB Strategic Plan, adopted in June 2019
- The Communications Strategic Plan of the National Academies of Sciences, Engineering, and Medicine
- The latest communications-industry trends
- The ever-evolving feedback of TRB staff and NASEM’s Office of the Chief Communications Officer

If we place what we know from all of this information into a **SWOT Analysis** format, this is what it looks like, in terms of our communications efforts and products:

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>● Quality of content</li> <li>● Diversity of topics</li> <li>● Trusted Independent and non-partisan source</li> <li>● Real-world relevant topics</li> <li>● We’re at the center of the U.S. transportation research universe</li> <li>● Passionate, devoted audiences</li> <li>● Volunteer network to amplify the messages</li> <li>● Talented communications staff</li> </ul>	<ul style="list-style-type: none"> <li>● Website is difficult to navigate</li> <li>● Newsletter is not easy to read</li> <li>● Our brand look is outdated</li> <li>● Ability to stay ahead of communications (and even transportation) industry trends</li> </ul>

Opportunities	Threats/Challenges
<ul style="list-style-type: none"> <li>• Interdisciplinary work across topics</li> <li>• Public trust in research and science is high</li> <li>• Lots of key experts still to reach</li> <li>• Lots of new audiences still to reach</li> <li>• Heightened volunteer communications</li> <li>• Talented staff that can help communication efforts</li> </ul>	<ul style="list-style-type: none"> <li>• For non-technical audiences, science and TRB’s research isn’t always relevant and doesn’t always fit the interest/news cycle</li> <li>• We don’t make staff spokespeople, which makes it more difficult to cite TRB related to media interviews in feature news</li> <li>• We are mode agnostic (which is also a strength), but can leave us open to criticism, especially in that we are too highway-centric</li> <li>• TRB funding levels from government sources and funding from TRB for communications</li> </ul>

Moving beyond and outside of the survey findings, it is important to list (keeping TRB’s list of [Critical Issues](#) in mind) and be aware of the existing **major risks for the transportation industry in general:**

- The big one is **politics**. Everything is political and divisive these days – including transportation.
- The other big risk is **demand**, especially for the modes that have suffered through the pandemic: public transportation and aviation.
- The **funding** of transportation is always something to be sensitive about because advocates can be extremely vocal on pitting one mode against the others.
- Transportation plays a major role in **climate change** and it will largely need to be addressed through technological changes.
- Transportation **infrastructure** continues to get very low grades in the U.S., and roads, bridges, and rail systems continue to get more outdated with insufficient funding to make repairs.
- Transportation often does not provide **equity** in access to opportunities. Also, the **lack of diversity** in the transportation workforce inhibits good innovation and multiple perspectives from underrepresented and disadvantaged communities.
- **Cyber attacks** are a risk because of the connections between transportation companies and supply chains and the internet of things. This is a growing problem as automation continues moving forward with driverless vehicles and smart streets and other networks.
- The **shortage of operators** continues to be a problem, and as it continues, the threat of cutting jobs and moving more towards automation looms.
- **Slow adaptation** on the ground for the electric-vehicle industry is a risk as more companies make commitments away from the fossil fuel industry without sufficient availability of charging stations and other infrastructure in place, including the removal of traditional gas stations.
- With so many changes in the transportation industry, one risk is that **research can’t keep up** with all the research needs.

#### **A quick summary of how this strategy was and is being built**

This strategy is being established and will evolve. These are the main elements—in a nutshell—along the path to creating this strategy:



1. Listen (meet with key staff, review existing strategies, survey audiences)
2. Evaluate and establish goals (determine TRB's influence levels, broaden audiences within and beyond transportation, review branding needs, determine competition, refine and establish metrics, consider internal communications, prioritize tactics, audit key communications channels)
3. Organize content (repurpose reports and event summaries, TRID Hot Topics and Snap Searches, TRR and *TR News*; identify content sharing relationships; develop messaging, talking points, positioning, promotional materials to explain ourselves; assess and determine dissemination avenues/mediums)

## 4. Key Audiences and Stakeholders

To be realistic, it is difficult to always reach all of the audiences that you would like to all of the time. That said, it is still good to know who all those audiences may be and to keep them in mind. Generally speaking, communications professionals tend to think of audiences in three buckets: **Creators** who have a hand in developing the information to be communicated and can take a role in communicating it themselves, **Translators** who haven't created the information but have an interest in it and may be helpful in communicating it, and **Amplifiers** who may be able to take the information and give it an even larger stage because they play a role in society as significant influencers. (Sometimes, as in TRB's case, these buckets/roles may overlap.)

This strategic plan envisions a lot of effort through 2021 and 2022 in better categorizing and classifying our audiences, and then beginning to lay out a plan for how we better and more regularly reach them, especially the most influential of them.

### Creators include:

- TRB staff
- Technical Activities' Standing Committee members and Friends
- Cooperative Research Program panel members
- Cooperative Research Program principle investigators
- Consensus Study Committee members

### Translators (some of whom can sometimes fall under Creators) include:

- NASEM (whose audience is 55% male; a large percentage of social followers are 18-35 in age)
  - TRB and NASEM have strong overlap in content, especially in the areas of COVID-19, Diversity, Economic Recovery, and Climate Change, but in many other areas as well
- TRB Patrons
  - AECOM
  - Aimsun/Siemans
  - HNTB
  - Jacobs
  - PTV Group
  - Transoft Solutions
- TRB Global Affiliates
  - Caliper
  - HDR
  - HNTB
  - Jacobs

### A note about a Key Audience: DOTs and Transit Agencies

One reason we know DOTs are such a key audience for us is that a count in early 2020 of our newsletter subscribers found:

- 1,982 for USDOT and FHWA combined (a couple hundred of those are from FHWA but it's difficult to count because some FHWA employees appear to have FHWA email addresses and some appear to have U.S. DOT email addresses)
- Subscribers from state DOTs totaled 8,431 across all states, just as a comparison
- Also of note, transit agencies don't follow TRB or TCRP as much as they used to, according to TCRP.

- Kittelson & Associates
- Michael Baker International
- Texas A&M Transportation Institute
- Port Authority NY NJ
- VHB
- WSP
- TRB Sponsors
  - AASHTO
  - APTA
  - U.S. DOT
  - FHWA
  - Federal Transit Administration
  - Federal Aviation Administration
  - Governors Highway Safety Association
  - State DOTs
- TRB's international MOU partners (per the terms of our MOUs/LOIs)
  - PIARC
  - CHTS
  - ITF
  - IRF (Geneva)
  - ECTRI
  - COTA
  - CTW
- TRB's domestic MOU partners
  - COMTO
  - Council of University Transportation Centers
  - Eno Center for Transportation
  - Women's Transportation Seminar (WTS)
  - Latinos in Transit
- Other international organizations who could help
  - World Bank
  - UITP
  - ICAO
  - International Transport Forum
- Academia (see all top highway and transportation engineering colleges [here](#))
  - NYU
  - MIT
  - New Jersey Institute of Technology
  - University of California-Davis
  - USC
  - Rensselaer Polytechnic Institute
  - Catholic University
  - University of Washington-Seattle
  - Illinois Institute of Technology
  - UNLV
  - University Transportation Centers (UTCs)
- Other federal, state, and local transportation agency professionals

- Which airports, transit agencies, and state DOTs could/should we prioritize?
  - Amtrak
- This is trickier because they often have “skin in the game,” but there may be some private sector transportation professionals we would want to work with
- Journalists (our full lists are available by request)
- Other transportation organizations (these will be good to further break down in our future audience analyses as to which topics, events, and other things we align with or compete against regarding these organizations. For one example out of many, we can categorize who at Eno works on AVs and/or when their bus-access-related events take place during the year and see if there are ways to better complement each other)
  - Brookings
  - Transportation for America
  - NACTO
  - ITS America
  - Pew Research Center
  - World Resources Institute Ross Center for Cities
  - TRIP – National Transportation Research Group
  - Union of Concerned Scientists
  - Women in Aerospace
  - Aircraft Owners & Pilots Association
  - American Association of Port Authorities
  - Chamber of Shipping of America
- Diverse and Inclusive Organizations
  - AARP
  - African-American Jobsite
  - American Indian Science & Engineering Society (AISES)
  - AsianAvenueJobs
  - Asian Diversity Magazine
  - Asians in Higher Ed
  - Airport Minority Advisory Council, (AMAC)
  - Association of University Centers on Disabilities
  - The Black Collegian
  - The Black Doctoral Network
  - BlackEngineer.com
  - Black Enterprise
  - The Black E.O.E. Journal
  - The Black Perspective
  - Blacks in Higher Ed
  - Cardozo High School
  - Catalyst
  - COMPTO
  - DisabilityInfo.gov
  - Disabled in Higher Ed
  - Diverse - Issues in Higher Education (formerly known as Black Issues in Higher Education)
  - Diversity Search
  - Equal Opportunity Publications, Inc.
  - Hispanic Association of Colleges and Universities

- Hispanic Engineer & Information Technology Magazine
- Hispanic Network Magazine
- Hispanic Outlook in Higher Education
- Hispanics in Higher Ed
- IHispano.com
- Indian Country Today
- Job Accommodation Network (JAN)
- Job and Career Resources for Mature and Older Job-Seekers
- Journal of Blacks in Higher Education
- Latina Researchers
- LatPro
- LGBT in Higher Ed
- National Alliance of Black School Educators
- National Association of Asian American Professionals
- National Association of Black Accountants
- National Association of Multicultural Engineering Programs, NAMEPA, Inc.
- National Action Council for Minorities in Engineering (NACME)
- National Black Nurses Association
- National Black MBA Association, Inc.
- National Business & Disability Council
- National Forum for Black Public Administrators
- National Council of La Raza Annual Conference and Latino Expo (NCLR)
- National Society of Black Engineers (NSBE)
- Transportation Special Interest Group NSBE Professional Development
- National Society of Black Physicists (NSBP)
- National Society for Hispanic Professionals (NSHP)
- National Society of Hispanic MBA's (NSHMBA)
- National Urban League
- Native American Employment Opportunities
- Native Americans in Higher Ed
- Native Research Network
- Saludos Web
- Society of Asian Asian Scientists and Engineers
- Society of Hispanic Professional Engineers
- Society of Mexican American Engineers and Scientists (MAES)
- Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)
- Veteran's Enterprise
- Veteran's Vision
- Veterans in Higher Ed
- Women and Higher Ed
- Women-Focused Organizations
  - American Association of University Women
  - American Association for the Advancement of Science
  - American Medical Woman's Association
  - American Business Women's Association
  - Association for Women in Computing
  - Association for Women in Mathematics (AWM)

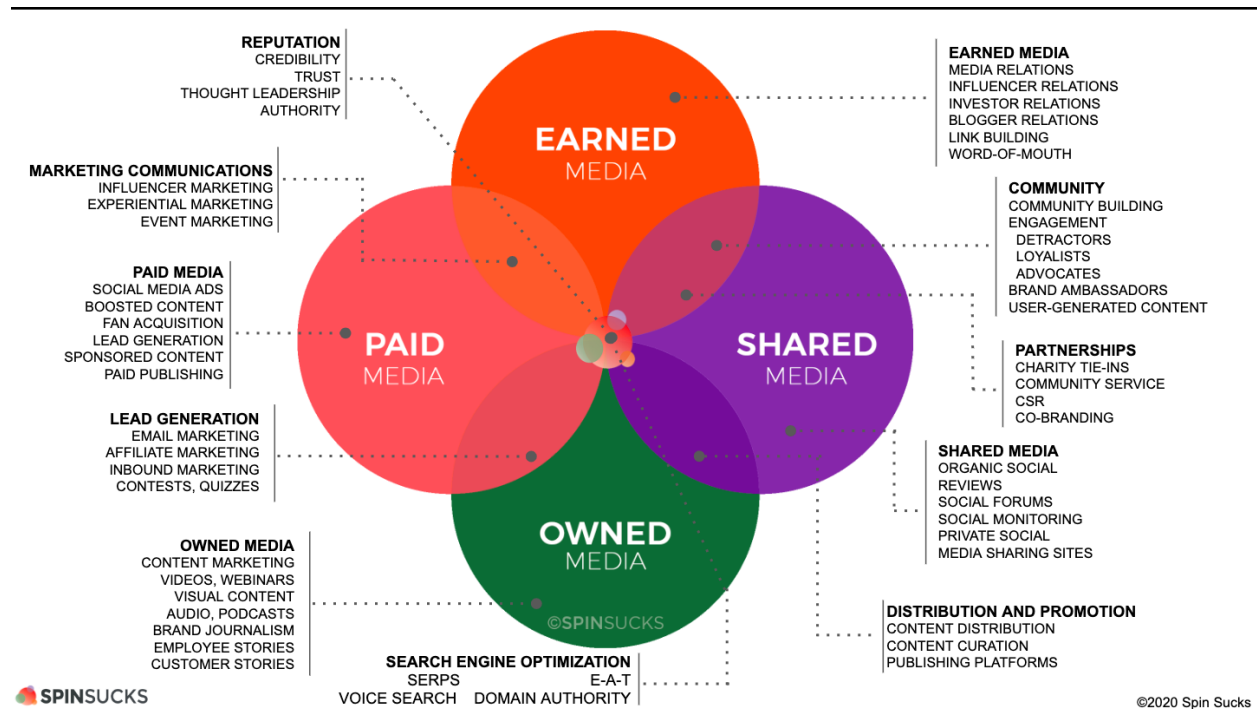
- Association for Women in Science (AWIS)
- Black Career Women
- Business and Professional Women/USA
- EDGE - Enhancing Diversity in Graduate Education
- Forté Foundation
- MentorNet
- NRC's Committee on Women in Science and Engineering
- Self-Employed Women's Association
- Society of Women Engineers (SWE)
- Women's Business Enterprise Council
- Women's Job List
- Women in Business & Industry
- Women in Engineering Organization (WIEO)
- Women in Engineering Programs & Advocates Network (WEPAN)
- Women in Technology International (WITI)
- Often translators can be determined on a case-by-case basis, and can be listed, for example, in a specific publication's launch strategy

**Amplifiers include:**

- Some of our Amplifiers are sometimes likely to be above, under Patrons, Global Affiliates, and Sponsors
- Others not listed above include Cambridge Systematics, Texas Transportation Institute, Center for Urban Transportation Research at USF
- Influencers (who may or may not also be in the Translators category)
- Active citizens

## 5. Tactics

TRB has a lot of communications tactics and mediums that we use to reach various audiences. Moving forward, we are interested in incorporating the popular (amongst communicators) PESO model, which is a strategy that touts the integration of paid, earned, shared, and owned media to deliver integrated marketing programs, enhance and extend reach, and strengthen TRB as the leading brand in the transportation research industry. Going forward, we will map out all our tactics that fit within a PESO model, are integrated, and will align with what we determine to be measurable. It will include roles and responsibilities (who will implement specific elements) and a timeline. Ideally it will allow us to also see how our tactics align with TRB's five overall Communications Objectives.



Using the PESO chart above, we can see TRB has robust Owned Media. This is excellent because it allows us to experiment. If one is not doing well, it could at least theoretically go away and more emphasis could be placed on other Owned Media properties, so that the properties we own should always be achieving a certain level of success in order to stay in rotation.

Under Paid Media, we have:

- Facebook advertising
- TRBAM advertising in select media

Under Earned Media, we have:

- Media relations
- Word-of-mouth

Under Shared Media, we have:

- Internal staff newsletter

- 4<sup>th</sup> floor monitor
- Academies communications
  - What's New (Christian Dobbins)
  - The Week Ahead (Katie Hines)
  - *Issues in Science & Technology* (Bill Kearney)
  - *National Academies In Focus* (Bill?)
- Potential content sharing partnerships such as with Great Courses

Owned Media includes:

- Website
- E Newsletter content
- E Newsletter banner
- Webinars
- Podcast
- Blog
- Videos/YouTube
- Twitter
- Facebook
- LinkedIn, including both TRB's account and individual staff accounts
- TRID banner on Website
- *TR News*
- TRR homepage?
- ACRP Twitter?
- ACRP Facebook?
- ACRP LinkedIn?
- Flyers
- Annual Meeting exhibit
- Wikipedia

There is a lot more to strategize about and plan for under the PESO model. But we have a good start.

When an organization has so much already in the Owned Media circle, we can be sure we are practicing something that, in communications-speak, has been popularly labelled "content marketing." (See Appendix D for more on current communications industry trends that help inform this strategy.)

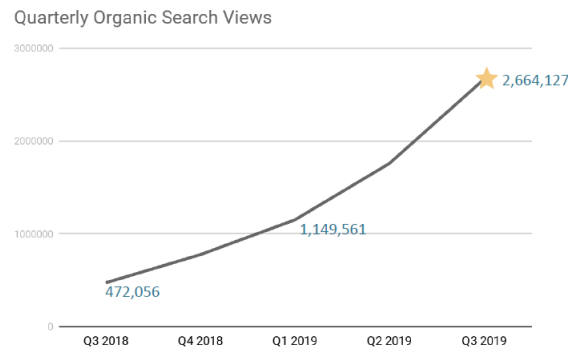
#### **A little background on content marketing**

With the COVID-19 pandemic, communicators at organizations like TRB doubled down on the importance of content strategy. When asked how they would spend an unexpected 50% increase to their communication budget, 60% of the 3,000 respondents in the [Naylor/Association Adviser 2020 Association Communications Benchmarking Report](#) said they would improve their content strategy and content curation – a 10 percentage point increase over 2019 responses for this option. This has been steadily increasing over the past decade.



A similar content marketing approach to TRB's was presented by Skyword at Content Marketing World 2020. A new focus on quality content for Skyword's audiences began driving organic search views and, in turn, revenue. While we're not necessarily trying to drive revenue through TRB's website content, per se, we are increasingly looking at ways our website can contribute to driving influence and, especially, engagement.

## Compounding search growth

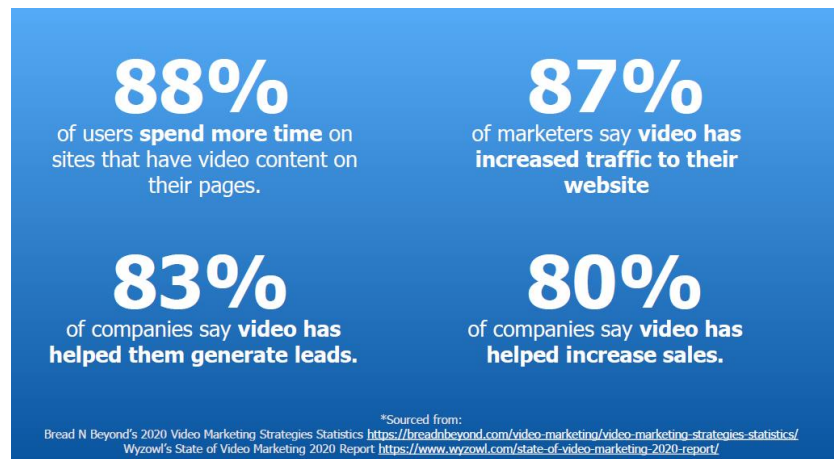


**\$15M**  
Average annual  
keyword value

SKYWORD

Another example of the many examples showing why content marketing can not only help but is likely crucial: Alamo Rent-a-Car's strategic content program, it was noted at Content Marketing World 2020, "generated 245K over the past two years in attributed reservations [and a] 118% increase in organic and social traffic.

Video is also an important part of content marketing, as noted in the [State of Video Marketing 2020 report](#) and in the graphic to the right. Many TRB staff have indicated enthusiasm for more videos and that they feel there used to be more options and funding for making videos at the Academies than there is now.



### As of now, what content goes into which tactics for TRB?

What goes in the TRB newsletter?

- TRB reports and products
- TRB and Academies news (board appointments, major hires)
- RFPs
- Webinar and podcast information
- TRB-related events
- *TR News* information
- TRR information
- Some third-party research and announcements

What goes in the staff newsletter?

- Exceptional news about TRB volunteers and staff
- Exceptional social media mentions
- High-level mentions of TRB in the news

- Milestones (well-attended conference/webinar, awards, etc.)
- Major upcoming TRB events and publications
- New resources from NASEM
- Communications updates and resources
- To add: Staff recognition for professional and personal achievements

What goes on social media (not counting our qualifications for retweeting others' information)?

- TRB reports of interest, including *TR News* and TRR information
- TRB webinars/events of interest
- TRB blog posts
- Podcast information
- Milestones
- Volunteer awards/accomplishments
- Board appointments, major hires
- Third-party reports relevant to TRB/transportation
- High-level mentions of TRB in the news (in a major media source or heavily featuring TRB)
- We have a social media strategy (separate from this overall strategy) and have incorporated many industry best practices detailed in this article on [building a social media plan](#) by Content Marketing World

What goes in Asana, the OCCO's editorial planning system?

- Major events (i.e. Annual Meeting, Centennial)
- Events/webinars of interest to larger audience (i.e. deal with COVID, equity, climate change, economic recovery)
- Events/webinars about hot topics in transportation (i.e. AVs, drones, ridehailing)
- Press releases
- Broadly applicable publications
- Blog posts
- Podcast episodes
- National events like "Car free day"
- Major news coverage (i.e. interviews with Neil, heavily featuring TRB, etc.)

There are several other key points and challenges to keep in mind for our content and communications strategies, as highlighted recently by an [Association Adviser](#) survey:

- Seventy percent of association marketers and communicators said combatting information overload is a challenge. → We too want to be careful on this point. The fact that we have a once-weekly newsletter as our main communications property helps assure that we are not overloading people with newsletters.
- We want to give clear information on how people can



engage with us and how doing so will benefit them. Moving this information into the unified web is allowing us to clean up our information and make it clearer online and offering opportunities to appear on our podcast and possibly in the future on our blog, as well as new offerings like 2021’s first-ever TRB Annual Meeting Express newsletter and our rapid-response webinars, offer real benefits. →



- We need to have a better understanding of whether and how much our customization of content for different audiences is effective. → Since more than 80 percent of our newsletter subscribers, for example, are choosing to subscribe to all information, we will continue to monitor whether our many topical subcategories is creating the best way to present this information. We met with a representative from SmartBrief – which creates newsletters for organizations like TRB – and he told us “segmentation used to be a thing but it really doesn’t work anymore.” Mailchimp consultants also say they’ve never seen any newsletter segmentation anywhere near as complex as TRB’s. Part of it is that best practice would dictate that TRB should be making these content decisions for our audiences rather than TRB forcing our audiences to make these decisions for themselves.

Organizations do think about segmenting their audiences in their products, but the ones that seem to have the most success do so with far fewer segments than we do and not with topical segmentation like we do but rather with segments like



geography, demographics, and behavioral variables. As we compile better analytics about how much our audiences are demanding segmentation or various subscription options, we’ll get a more scientific reading on whether segmentation fits our audiences well, does not serve them well, or could be further refined and improved.

## 6. Metrics for Success

### How we track our results

TRB has implemented a process to track communications results and report them out monthly and yearly by posting on TRB's intranet, in the Goin' Places staff newsletter, in the TRB and TRB divisional annual reports, on the monitor on the 4<sup>th</sup> floor of Keck, and in person at monthly TRB All Staff meetings and TRB divisional meetings. These include:

- Key milestones
- Top media and social media hits
- Website, newsletter, webinar, podcast, and social media metrics over time
- Publication downloads and sales, and
- Upcoming information.

### How we would like to continue improving this tracking

We would like to [get better](#) at telling more full-bodied stories based on our data collection. These impacts include (and can, in part, be understood better by mastering [various features of Google Analytics](#)):

- Whether we're capturing the right people's attention
- How they're behaving in response, and
- The outcomes.

These are admittedly very difficult to track, but they are the valuable metrics and worth prioritizing over trying to track every little outcome in the universe. A potential way forward is to create a systemic conversation with the three divisions of TRB about what they plan to focus on in the coming months, aligning the focus of our communications with that "business-outcome" work, and then forming a tracking system. Along these lines, for example, TRB communications staff, through social-media tracking systems purchased by the OCCO called Hootsuite and Talkwalker, have begun systematically "tagging" social media posts to track how reports and other TRB products are performing.

Another possibility is to implement a systematic polling - about impacts and outcomes – perhaps of standing committees and panel members or target audiences six months after the release of reports, events, and other dissemination efforts that have had significant focus from TRB Communications. This polling process could happen again each six months for up to 5 years after the release of materials. The key point: We will brainstorm and discuss ways we can bake communications-related questions into the tracking of real-world impacts as a way to better understand how communications drives results.

Importantly, we have created a metric/results tracking dashboard (see Appendix E), with dozens of metrics – with various baseline years – in which we can track our results over time to make sure our communications efforts are paying off, expanding our influence, and furthering our real-world impacts. Along with that numbers-based dashboard, here is more information on some of our TRB communications efforts that are important to have goals for and track over time:

### Setting strong goals and metrics to track monthly, yearly, and over time

Along with the result metrics listed in Appendix E, it is important that we establish aggressive yet realistic goals for communications that will be baselined and tracked over time within this working strategy document.

**Communications strategy development:** As noted earlier, by June 1, 2021, we plan to have most of the key input from the recruited TRB Communications Committee, the TRB Executive Staff, OCCO Leadership, and OCCO Divisional Communicators included into this strategy and have it in the hands of the TRB Executive Committee for review. By June 1, 2022, we plan to evolve the strategy to include all the ways we can improve alignment with real-world and current events, including how we can better leverage influencers to communicate our messages.

**Messaging development:** We are working with the OCCO on new graphical branding for the Academies and will turn to potentially new TRB graphical branding once this work is accomplished, hopefully sometime in 2021. We developed messaging about TRB in 2020 (see Appendix B) and will continue developing messaging guidance based on TRB's [Critical Issues](#)— including COVID-19; Diversity, Equity, and Inclusion; Economic Recovery; and Climate Change – after we have adopted this strategic plan. This messaging will also be useful as we develop future editions of the TRB Annual Report, which we will also think more about as a helpful marketing tool.

**Marketing and promotional material development:** Along with the development of more strategy for items like the TRB Annual Meeting, Critical Issues, and the Annual Report, we will work to develop the identification of all our products and events that need new or additional marketing material.

**Newsletters:** We are redesigning and moving the newsletter to a different platform (Mailchimp) and plan to launch there in Summer 2021. This will give us a better way to set goals and track results. The current system is unreliable in these respects. We will also continue to monitor the effectiveness of our two new newsletters – Goin' Places (for staff) and Express (for TRBAM attendees) – which had favorable results with their introductions in 2020 and 2021 respectively.

**Website:** By June 1, 2021, we will have refined how we publish new or strategically repurposed blogs featured on our homepage, with the content being updated at a minimum of weekly. We will also have improved the indexing and findability of information on the blog by then. We will also have a significant amount of priority content moved from the old website to the new website.

**Webinars:** As we continue to refine our processes and standards for webinar production, we will continue to measure whether we are doing the right number each year, attracting enough key attendees, and receiving continued excellent satisfactory ratings. We will also continue to develop how we produce rapid-response webinars, which we introduced in 2020 to great success, with each one ranking among our most popular webinars ever. We will continue to work to better understand when our audiences need rapid-response webinars or podcasts or Straight to Recordings or some other product that may need to be accessible in different ways to more key audiences.

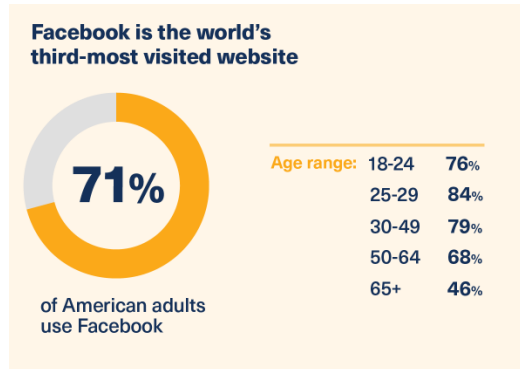
**Podcast:** We began TRB's Transportation Explorers in January 2021 as a way to highlight and feature the many TRB volunteers contributing important research on topics that fit what's newsworthy and relevant. Early data suggests it is a good idea to continue airing podcast episodes on a somewhat regular schedule. We will set goals for June 1, 2022 after we have compiled several months of early data on the number of episodes we should produce each year, the number of total listens, the number of total subscribers, the average time spent listening, and other insightful metrics.

**Traditional media:** Our current goal is to have at least 100 mentions of TRB in the media per month, with at least 10 being very high quality influence-wise. We will also work to develop a strategy to go into this plan for continuing to increase media coverage and building closer relationships with journalists.

This will include documentation of how we will work more strategically and effectively at identifying influencers on social media and partners, Patrons, Global Affiliates, volunteers, academia, and other transportation organizations in order to amplify our information.

**Social media:** Total followers is an important metric for our three primary social networks, but we will increasingly focus on ways to track our key followers and engagers.

- Facebook: Large amounts of people are on Facebook (see the graphic to the right). Our strategy is to not be too invasive, since people mostly want to engage with friends and family there, but because our information tells a good story (and we aren't exclusively selling a product), it is valuable to be on Facebook. On June 1, 2019, we had 8,400 friends. We set a goal of 9,000 total by June 1, 2020, which we exceeded by 22%. We got a little more aggressive with our goal of 9,800 friends by June 1, 2021.
- LinkedIn: This is a nearly perfect social network for TRB. It is a major destination for people looking for professional information, resources, and connections. There are many groups that we participate in that focus on very specific issues within the transportation field. We have aggressively increased our engagement on LinkedIn over the past two years and it is paying off. On June 1, 2019, we had 5,900 followers. We set a goal of 7,000 total by June 1, 2020, which we exceeded by 32%. We set a goal of 9,000 followers by June 1, 2021.
- Twitter: This network can be a bit maddening and time sucking. That said, TRB has to be here. There is no better social platform for engaging one-on-one with followers and being able to respond to crises and other inquiries in rapid-response time. It also is essential for communicating with the younger and more diverse demographics that TRB seeks to continuing strengthening. On June 1, 2019, we had 21,800 followers. We set a goal of 23,000 total by June 1, 2020, which we exceeded by 5%. We set a goal of 24,600 followers by June 1, 2021.



## **APPENDIX A – AN ONGOING LIST OF COMMUNICATIONS ACHIEVEMENTS FROM 2020 ONWARD**

The following are the top achievements in TRB Communications, organized by year and Communications Objective, as was described in Section 2 of this plan.

### **2021 (to be added)**

**1. Increase awareness of TRB products, activities, and services among transportation professionals and researchers.**

**2. Communicate the value of TRB to TRB sponsors, potential sponsors, and the larger transportation community.**

**3. Make TRB the “go to,” essential, up-to-date source for information on transportation research related issues.**

**4. Increase the impact that TRB is having in solving transportation and societal problems/issues.**

- Began collecting real-world impacts that we find from news articles and other sources and including them in the staff newsletter
- Began working with Program Staff to implement a process for finding, publicizing, and tracking real-world impacts from TRB work

**5. Increase the influence that staff, partners, and collaborators have to communicate TRB’s information and messaging and to help protect and enhance the reputation of TRB and the Academies.**

### **2020**

**1. Increase awareness of TRB products, activities, and services among transportation professionals and researchers.**

- Continued developing this TRB Strategic Communications Plan
- Attracted 6.4 million page views to TRB and the Academies’ new website, which continues to bring our two entities closer together and can allow us to benefit from each other in building awareness of our organizations
- As part of our DEI efforts, significantly promoted the Minority Student Fellows Program and the ACRP student programs
- Contributed content to Academies homepage and [COVID](#), [Climate](#), and [Equity](#) webpages

- The [COVID Transportation](#) page was among the top 5 pages on the Academies unified website in 2020
- Reached our annual follower-growth goals with flying colors:
  - on LinkedIn (a 32% increase in total followers over the end of 2019)
  - Facebook (22% increase), and
  - Twitter (5% increase)
- In December, created [TRBAM promo video](#), which had over 3,500 views by 12/31
- Media ads placed in outlets for 2020 and 2021 TRBAMs
- In December, created [webinar promo video](#)
- Created a TRB Wikipedia strategy and significantly updated [TRB Wikipedia page](#)
- Worked to promote TRBAM with multiple MOU partners and other external organizations
- Began exploring the possibility of content partnerships – like with Issues in Science & Technology – to broaden our audience
- Began developing a list of most influential social media followers so we can strategically work closer with them in efforts to expand our brand

## **2. Communicate the value of TRB to TRB sponsors, potential sponsors, and the larger transportation community.**

- Launched [new and improved TRB.org homepage](#), with several sub-pages created
- The continuing transition of information from TRB's old website to its new one is proving to be attractive to users, with a significant decrease in bounce rate and significant increases in time spent on the site and average pages viewed per visit. Old site also has 508 Compliance issues
- Managed the publishing of about 200 publications, 100 webinars, and 50 events online – while considering and sometimes enacting ways to make the material easier to find and use
- Developed a strategy for the first-ever newsletter for TRBAM registrants, for during the conference
- Created a [podcast](#) strategy (launching in January 2021)
- Won three Telly Awards for [“Your Future in Transportation” video](#), which had more than 12,000 views by the end of 2020
- Launched the Global Affiliate strip of logos on the bottom of the homepage

## **3. Make TRB the “go to,” essential, up-to-date source for information on transportation research related issues.**

- Launched [blog](#), with approximately 50 articles published in 2020
- Top 5 [webinars](#) of the year – including 2 that were TRB's biggest ever – were “rapid response-style” COVID-19 episodes
- Attracted 39,256 total attendees to our webinars, with 93% satisfaction rate, and \$138,055 total revenue
- Drafted strategy for redesigning the weekly [TRB E-Newsletter](#) (52 issues, ~70k subscribers)
- TRB was cited in 1,803 media articles (down from 2,615 in 2019), including most of the top mainstream media, such as the New York Times, Washington Post, USA Today, and C-SPAN2



- Garnered major press coverage of TRBAM 2020 and developed [webpage compiling it](#)
- Created, implemented TRBAM Marketing Plan (TRBAM trended on Twitter 2 days)
- 5,305 books distributed during TRBAM, with significant help from social media effort
- Began a directory of TRB's most marketable publications
- Began a list to track and contact expert TRB Volunteer spokespeople

#### **4. Increase the impact that TRB is having in solving transportation and societal problems/issues.**

- Took on the writing responsibilities of the [TRB Annual Report](#) (2020)
- Surveyed TRB Newsletter subscribers, 264 fully completed surveys
- Developed a Communications Results spreadsheet that allows us to now track more than 100 metrics year over year, starting with 2020
- Developed standardized Monthly Communications results in PowerPoint format that we place on Intranet for staff access
- Submitted [TRB's curated Coronavirus/COVID-19 materials](#), in collaboration with NASEM, to the U.S. House Science, Space, Technology Committee
- At a hearing, U.S. Sen. John Barrasso (R-WY), chairman of the Senate Committee on EPW cited TRB's 2014 special report *Transportation Investments in Response to Economic Downturns*

#### **5. Increase the influence that staff, partners, and collaborators have to communicate TRB's information and messaging and to help protect and enhance the reputation of TRB and the Academies.**

- Released TRB Talking Points 1-pager to all staff
- Launched Goin' Places, a weekly staff newsletter for TRB and OCCO
- Presented communications strategy updates and audience survey findings to the TRB Executive Committee
- Presented audience survey and communications best practices to OCCO staff
- Announced NASEM's social media policy/guidelines
- Developed standard process and launch document for key publications and projects
- Created promotional materials for use by staff, including:
  - 5 new physical banners, unveiled at TRBAM
  - A website/newsletter banner strategy and several subsequent digital banners
  - Research Pays Off and *TR News* flyers
  - *TR News* full-page ad about new blog/website
  - Numerous TRBAM session digital banners
  - Special TRB Zoom backgrounds and PowerPoints (with OCCO help)
- Significantly revised communications materials available to staff on the AcademyNet Intranet
- Identified TRB staff to provide input and feedback for TRB Strategic Communications Plan
- Created TRB.org Style Guide
- Attended virtual [Content Marketing World](#) conference to stay fresh on communications and content industries best practices
- Worked with OCCO team to draft Communications Objectives template across the Academies
- Started using Asana for project management throughout the OCCO

## APPENDIX B – DESCRIPTION OF TRB

### WHAT IS TRB?

The Transportation Research Board – located online at [trb.org](http://trb.org) – provides leadership in transportation improvements and innovation through trusted, timely, impartial, and evidence-based information exchange, research, and advice regarding all modes of transportation.

TRB is a program division of the National Academies of Sciences, Engineering, and Medicine (NASEM). The National Academies provide independent, objective analysis and advice to the nation; conduct activities to solve complex problems; and inform policy decisions on matters related to science, engineering, and medicine.

### WHY TRB MATTERS

- Transportation is **essential** to personal mobility and the movement of goods.
- TRB helps the research community build the **sound science, engineering, and innovation** needed for advancements in transportation.
- TRB provides practitioners, policy makers, and the public with a **stronger voice** through access to trusted research and analysis.
- TRB **addresses issues** across boundaries – multi-modal, multi-disciplinary – engaging a unique variety of audiences from the public, private, and academic sectors.

### HOW TRB WORKS

- TRB applies **NASEM's high standards** for quality, objectivity, and independence.
- TRB **tackles critical and challenging issues** across all of transportation.
- TRB **convenes experts** to examine and seek solutions to some of transportation's most pressing problems.
- TRB **provides advice** through consensus studies on policy issues of national significance.
- TRB **manages research programs** that address problems faced by professionals working in a wide array of transportation fields.

### WHO IS INVOLVED

- TRB works with a **vast and diverse pool of experts** – with approximately 8,000 volunteers who recognize the value of collaborating with TRB and NASEM through our research committees and panels.
- TRB has a **talented staff** of about 150 people, most of whom are based in Washington DC.
- TRB is **supported** by sponsoring agencies and private-sector patrons and affiliates.

### WHAT TRB ACCOMPLISHES

- TRB **conducts research and exchanges knowledge** on transportation and its nexus with many social, economic, and environmental issues that are relevant to all our lives.
- Each year in January in Washington DC, TRB holds **the world's largest transportation-research conference**, enabling a platform for research into practice.
- TRB's Technical Activities Division **reviews more than 6,000 research papers** each year to determine if they will appear in TRB's journal and/or be presented at the TRB Annual Meeting.
- TRB's Cooperative Research Programs – on highways, transit, airports, and more – combine to publish **two to three new research reports each week** throughout the year.

- TRB operates the TRID database, providing **more than 1.2 million records of transportation research**.
- TRB works to **educate** future transportation-industry leaders and **enhance diversity** in the field.
- TRB strengthens **public awareness** of transportation's importance and the crucial role of research.
- The research TRB delivers **helps** save lives, reduces traffic congestion, conserves energy, protects the natural environment, and boosts the effectiveness and the efficiency of the transportation system.

## APPENDIX C – 2020 NEWSLETTER AUDIENCE SURVEY

### **A more complete analysis of the findings from the 2020 E-Newsletter Subscriber Audience Survey**

The survey was fully completed by 264 of our subscribers. The largest segments of survey takers were members of standing committees, friends of committees, and state transportation agency professionals. A significant amount of other audiences also completed the survey, including CRP panel members, local transportation agency professionals, private sector transportation professionals, academics, active citizens, federal transportation agency professionals, and “others.”

Of our subscribers, by far the most popular way they keep up with transportation news is through newsletters (89% do so). Email (78%), journals (54%), Google or other search engines (51%), and magazines (50%) were the only mediums above the 50% mark. But of note, LinkedIn is by far the most popular social-media source, at 27% in comparison to 15% for Facebook and 14% for Twitter.

For how our subscribers find out about TRB news, the weekly E-newsletter is the favorite, with 77% citing it as a source. TRB.org is clearly important as well, with 45% using it as a source. But that number could be construed as low and it presents an opportunity. It will be interesting to see how people in future surveys answer this question in light of the March 2020 launch of our updated website. E-mail is cited by 38%, word-of-mouth by 23%, *TR News* magazine by 21%, TRR journal by 15%, news articles by 12%, and the TRID database by 10%.

Our audiences' favorite types of media are the web (74% cite it as one of their favorites), newsletters (70%), webinars (58%), conferences (50%), reports (47%), presentations (45%), journals (44%), and magazines (42%). Our audiences may be somewhat unlike more mainstream audiences, as the popularity of mediums such as videos, infographics, podcasts, and social media are relatively low but still not insignificant.

With webinars, 60% of our audience utilizes our webinars. Of those who utilize them, 85% like the quality, 83% like the topics covered, and 79% like the timeliness of the topics. Only 34% say our webinars help advance attendees in their careers, with 51% being neutral about that. 51% say they are a value for the money but 9% say they are not. Only 53% say they are well publicized and 42% are neutral. 58% say they are neutral about the interactivity of the webinars.

With our weekly E-Newsletter, 92% utilize it, which is not particularly surprising, since this was a survey of our E-Newsletter subscribers. That said, a large percentage “utilize” it, or find it useful, so that is encouraging. 84% like the ability to select their preferred topics. 86% like the quality of content. Only 16% like the mobile-phone readability of the newsletter; that said, only 3% dislike it. Most readers must view the newsletter on desktop computers because 37% are neutral about mobile-phone readability and 44% say the question is not applicable to them. Somewhat related, only 56% like the quality of how the newsletter looks, with 7% disliking it, and 37% being neutral. 7% dislike appears rather low on first blush, but it should be lower because that many people disliking it is a sign that we're on the verge of losing 7% of our subscribers because of the look, which is unacceptable. There are several other elements of the newsletter that have lower favorability than they should and are signs that changes should be made: only 65% like the tone, only 59% like the non-TRB research, and only 44% like the RFP announcements (with 4% actively disliking them). Some findings are concerning,

but less so: 74% like the length, 81% like the frequency, 69% like the timing, and 73% like the event announcements.

With TRB.org, 79% of our subscribers utilize the website. 66% like the quality of the content, with 23% neutral about it. The most striking, if not surprising, findings about the website are in regard to how it looks and how easy it is to find information. Only 41% like the quality of how it looks, with 15% actively disliking how it looks. The ability to easily find information is an even bigger issue, with only 31% saying it's easy to do so and 17% saying it is not. For the mobile-phone readability of the website, 8% say they like it, 7% dislike it, and the overwhelming majority say it's not applicable or they're neutral about it, meaning that most don't look at our site on mobile – very much outside the trends of contemporary website usage. While 63% like the research provided at the website, convening opportunities (30%) and advice provided (27%) appear to be much less useful services that we provide online.

Only 11% our newsletter subscribers utilize TRB's social-media channels. But of those who do, we heard extremely encouraging feedback. Every question we asked had a 0.0% of "dislikes." 80% like the quality of the content, 67% like how our channels introduce new ideas and trends in the field, 60% like the range of content, 54% like the frequency, 48% like the opportunity to connect with others involved with TRB, and 38% like the amount of TRB self-promotion. That last number likely means we could continue to increase our news about other organizations and topics to better balance news about ourselves. Then again, the high percentage of people who like our quality of content means we don't want to mess with the formula we have too much.

Most people (89%) are aware that TRB is part of the National Academies. 57% say that makes TRB's information more valuable to them, 13% say it doesn't, and 30% say they have no opinion. This could present an opportunity for us to do a better job of explaining to people what NASEM is and why it's so important to the nation.

On demographics, email domains with multiple subscribers leaned heavily from state DOTs and Gmail account users; popular zip-codes outside of the U.S. included especially Canada but also India, Spain, and Australia; our major audiences are 54- to 74-year-olds (46%) and 38- to 53-year-olds (29%); 61% are male and 30% are female; and 73% are white, 8% are Asian, 4% are Hispanic/Latino, and 3% are black/African-American. There are major opportunities to increase the percentages of our female, 37 and younger, and non-white audiences.

## APPENDIX D – COMMUNICATIONS INDUSTRY TRENDS

Communications is a faster moving industry than ever before and the winners will be separated from the losers by keeping up and innovating. According to the head of the Content Marketing Institute, Robert Rose: “Old Rule: A Satisfied Audience Is Loyal. New Rule: A Fan Is Not Just Satisfied But Has Desire For More.”

### *The need for a robust and documented strategy*

At the 2020 Content Marketing World conference, it was noted that “Only 35% of content marketers have a clearly defined content strategy.” Those who do have **significantly more effective communications results**. Having that documented strategy starts here – and it will map out our paths to influence and success.

### *The right technologies must be in place*

PR executives overwhelmingly (around 70 percent) say the next five years will bring “considerable” to “drastic” change to the industry. Further, they say that most of that change (about 80 percent) will be driven by technological innovation – major [USC global-communications survey](#) from May 2019

### *The right team must be in place*

TRB has a small but talented team on staff and works to continuously tweak its commitments and workflow. Recent research from Gartner (subscription required) breaks down the responsibilities of corporate communications professionals. The organization asked the question, “What activities are lean teams responsible for, and how many FTEs are allocated to each activity?” (See the graphic to the right.)

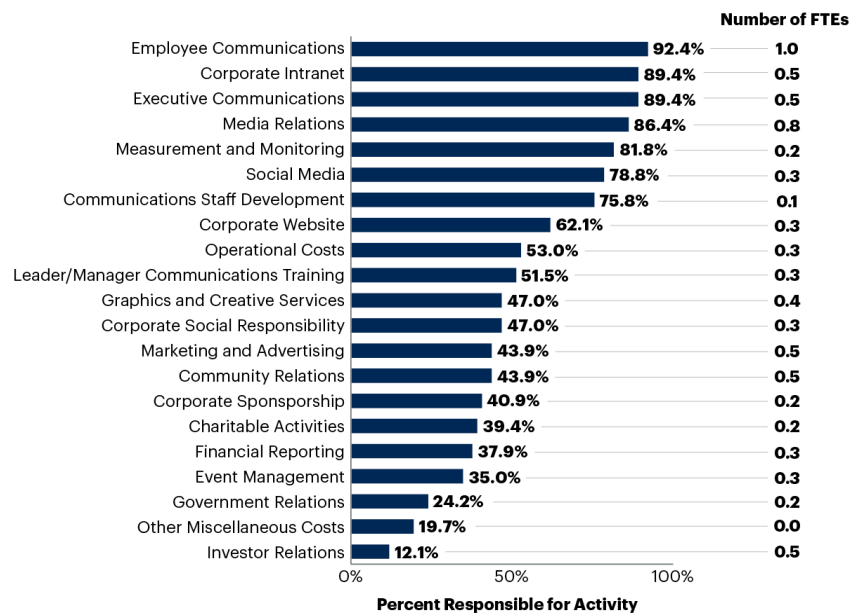
### *The right tactics must be in place*

Over 25% of communicators are increasing their investments in social media and corporate websites in 2020, and over 20% are increasing their investments in media relations. These increased investments are arriving during a challenging time – Gartner’s 2019 Resource Allocation Benchmarking Study (subscription required)

### *Prepared for change = Being an influencer*

CEOs in the USC study also see these fast-moving changes and are preparing for them. Earned and paid media, such as advertising, were once the primary communications strategies of organizations. They are both still unquestionably important, but the value of “content marketing” on

**Lean Communications Team Activities and FTEs per Activity**



n = 66  
 Q: What activities are lean teams responsible for, and how many FTEs are allocated to each activity?  
 Source: 2018-2019 Gartner Resource Allocation Benchmarking Reports  
 721745\_C

shared (social media) and owned (TRB's website, newsletter, webinars, and podcast) have skyrocketed. A major challenge now becomes doing these newer elements of communications strategy well. Those who do – and connect with younger generations and students who are entering the workforce and who have been digital all their lives – are becoming the leading influencers.

*The right metrics and why the science behind communications is important*

The more that communications teams can make the case of the value of their work, the more communications investment a company is likely to make. So it is no surprise that two of the top items mentioned in the USC study for categories of day-to-day work that will change for communications professionals over the next five years include:

- Data tracking and measurement and
- Website and search engine optimization (SEO)

The more we can incorporate metrics that follow TRB information from the point of release, through the communications, and into real-world impacts, the more we can make convincing arguments to fund our work and to also see the work turn into policy and society outcomes.

*Has COVID-19 changed these trends and our communications priorities?*

Aligning these industry trends – which, frankly, don't change much in light of COVID-19, as people are [consuming even more content now](#) than they were prior to the pandemic – with the TRB Communications Strategic Plan allows us to prioritize how we do communications. This is detailed later in this strategy but, for now, there are four major areas of focus for this plan:

1. Make our information *findable* (through mobile, social, and an owned-media focus)
2. Make our information *optimized for digital* (both on the front and back ends with the latest in digital technologies to better disseminate our materials)
3. Measure and report our success by using *the best possible impact metrics*
4. Build creative content that *packages, repurposes, and tells compelling stories* about TRB research

## APPENDIX E – METRICS DASHBOARD

RESULTS CATEGORY	2020 METRIC	2019 METRIC	NOTES
<b>AWARDS</b>			
Total # won	3		Telly Awards for Future video
<b>MEDIA RELATIONS</b>			
Total # media citations	1803	2615	
Total # major media citations			
Total # TRBAM media citations			
Total # media registrants for TRBAM			
Total # ads placed in media			
Total # NASEM/TRB press releases			
Total # press notes sent to press lists			
Total # TRB spokespeople on our list	54	NA	
Total # of content partnerships	0	0	
<b>NEWSLETTERS</b>			Baseline #s created with introduction of Mailchimp in late 2020
Total # of E-Newsletters sent	52		
Total # of E-Newsletter subscribers	65768*		
Average open rate of E-Newsletter	15.6%*		
Average click rate of E-Newsletter	65.67%*		
# of sponsor employees subscribed to E-Newsletter			
# patrons			
# Global Affiliates			
Total # of Goin' Places staff newsletters sent	29	NA	
Total # of Goin' Places staff newsletter subscribers	211	NA	
Average open rate of Goin' Places	34.01%		
Average click rate of Goin' Places	5.68%		



Total # of TRBAM Express newsletters sent	NA	NA	
Total # of TRBAM Express newsletter subscribers	NA	NA	
Average open rate of TRBAM Express newsletter			
Average click rate of TRBAM Express newsletter	NA	NA	
<b>PARTNERSHIPS/MOU</b>			
<b>PODCAST</b>			
Total # of episodes	NA	NA	
Total # of listens	NA	NA	
Total # of subscribers	NA	NA	
Average time per listen	NA	NA	
Top-performing service	NA	NA	
<b>POLICY</b>			
Total # times TRB cited by Congress			
Total # times TRB testified to Congress			
<b>PRESENTATIONS</b>			
To TRB Executive Committee			
To TRB/OCCO/Other staff			
To External Audiences			
Non-Academies events/conferences attended			
<b>PROMO MATERIALS</b>			
Banners created (physical)	5	0	
TRID Banners created (website)	6		*do you want blog banners created?
Banners created (newsletters)	20		
Flyers created	4		Beth did 2, I think Elaine did 1?
TR News ads created			

Zoom backgrounds created	3	NA	
Rapid response webinar graphics	6		
<b>SOCIAL MEDIA</b>			
<b>Twitter</b>			
Total # of followers	23,848	22,654	5% increase
Total # of polls			
ACRP total # of followers	1,082		
ACRP percent increase/decrease			
<b>Facebook</b>			
Total # of followers	9,510	7,814	22% increase
ACRP total # of followers	771		
ACRP percent increase/decrease			
<b>LinkedIn</b>			
Total # of followers	10,949	8,294*	32% increase
ACRP total # of followers	3,622		
ACRP percent increase/decrease			
TCRP total # of followers	579		
TCRP percent increase/decrease			
<b>STRATEGY</b>			
Total # of strategies (branding/comms) developed			
Total # of publication-launch strategies			
Total # of audience surveys	1		
<b>VIDEOS</b>			
Total # of videos released	3		
<b>Your Future in Transportation</b>			
YouTube total views	6228		
Facebook total views	3479		
Twitter total views	966		
LinkedIn total views	955		

<b>What To Expect at a Virtual TRBAM</b>			
YouTube total views	1614		
Facebook total views	1986		
Twitter total views	990		
LinkedIn total views	764		
<b>Do you know about TRB's webinar program?</b>			
YouTube total views	22		
Facebook total views	113		
Twitter total views	159		
LinkedIn total views	158		
<b>WEBINARS</b>			
Total # of webinars	112	89	26% increase
Total # of attendees	39256	21037	87% increase*
Top webinar # of attendees	1590	1456	9% increase
Rapid response average # of attendees	1269	NA	
Regular webinar average # of attendees	367	351	5% increase
<b>WEBSITE</b>			
Total # of pageviews old site	5,835,787		Autumn suggested looking at just those over 5 seconds
Total # of pageviews new site			
Bounce rate on old site	80.72%		
Bounce rate on new site			
Average time on page on old site	2:16		
Average time on page on new site			
Average # of pages visited on old site			
Average # of pages visited on new site			
Total # of blog articles	37		
Total times blogs re-publicized to the public			
Total # of priority webpages created			

## **2022-2027 TRB STRATEGIC PLAN**

### **PROPOSED VISION, MISSION, VALUES, PRINCIPLES, AND GOALS**

June 30, 2021

The Transportation Research Board (TRB) is one of seven program divisions of the National Research Council (NRC), which is the operating arm of the National Academies of Sciences, Engineering and Medicine. The NRC Governing Board adopted a new strategic plan for the National Research Council in February 2021. TRB had previously committed to updating its strategic plan to be in alignment with the new NRC strategic plan once it was adopted. This new plan would replace the last TRB strategic plan, which was adopted by the Executive Committee in June 2019.

The TRB Executive Committee will have ultimate responsibility to adopt the new TRB strategic plan, but lead responsibility to develop a new plan is delegated to the Subcommittee on Planning and Policy Review (SPPR). The SPPR met on April 26, 2021 to begin the process of drafting a new plan. At that meeting SPPR conducted a brainstorming session regarding potential vision, mission, values, and goals statements for the new TRB strategic plan.

TRB senior staff reviewed the ideas generated during the brainstorming session and synthesized the results into a draft set of vision, mission, values, and goals statements for the Executive Committee's to consider at its July 19-20 meeting. In addition, TRB staff is proposing a set of principles that would be incorporated into the strategic plan.

In the following section on the vision, mission, values, and goals portion of the strategic plan, the text from the 2019 TRB strategic plan is shown, followed by the text from the NRC strategic plan, and proposed text for an updated TRB strategic plan. The proposed draft set of principles is also outlined together with related information contained in the NRC Strategic Plan. Information is shown on strategies and actions in the current TRB strategic plan and the NRC strategic plan, but work has not begun on strategies or actions for the new TRB strategic plan at this time.

Following a discussion about the plan by the TRB Executive Committee at its July 19-20, 2021 meeting, the draft statements will be circulated to a larger group of TRB volunteer leaders and stakeholders for review and comment. Following revisions based on input from the Executive Committee, TRB staff will begin work on drafting strategies and actions under each of the goals and will later propose performance measures to track progress on the plan.

## Vision

**Current TRB Vision:** TRB is where the nation's leaders and the global transportation community turn for information exchange, research, innovations, and advice on current, emerging, and critical transportation issues to foster a high-performing multimodal transportation system that enhances society.

**NRC Vision:** A nation and a world that rely on scientific evidence to make decisions that benefit humanity.

**Proposed TRB Vision: A nation and a world that rely on scientific evidence and expertise to enhance a sustainable transportation system that benefits individuals and society.**

## Mission

**Current TRB Mission:** Provide leadership in transportation improvements and innovation through trusted, timely, impartial, and evidence-based information exchange, research, and advice regarding all modes of transportation.

**NRC Mission:** The National Academies provide independent, trustworthy advice and facilitate solutions to complex challenges by mobilizing expertise, practice, and knowledge in science, engineering, and medicine.

**Proposed TRB Mission Statement: TRB mobilizes expertise, practitioner experience, and knowledge in pursuit of solutions to complex transportation-related challenges.**

## Values

**Current TRB Values:** TRB does not currently have a values statement.

**NRC Values:** Independence, Objectivity, Rigor, Integrity, Inclusivity, Truth

**Proposal Regarding Values: TRB, being a program division of the NRC, will use the NRC values as TRB's values: Independence, Objectivity, Rigor, Integrity, Inclusivity, and Truth.**

## **Guiding Principles for TRB**

**Current TRB Principles:** The current TRB strategic plan does not contain a set of principles.

**NRC Principles:** The NRC Strategic Plan had what it called “Enduring Tenets to Guide the Strategic Goals.”

- Expand with whom and how we engage and partner
- Design for diversity, equity, and inclusion in all we do
- Embrace continuous innovation and learning
- Enhance the NRC's capabilities through strategic investments in advanced technologies

The NRC Strategic plan also contained the following principles to serve as guardrails to protect the reputation and the legacy of the NRC. The NRC strategic plan said that they will be particularly important when embarking on new work and engaging with new stakeholders.

- Seek the truth in conducting the work of the NRC, but acknowledge uncertainties presented in the evidence.
- Remain nonpartisan and evidence based to continue to serve as a neutral objective source of advice.
- Honor the charter and applicable laws. The NRC was established through Executive Order 2859 by President Woodrow Wilson in 1918. The importance of the NRC was further affirmed by Executive Orders 10668 and 1283 by President Dwight D. Eisenhower in 1956 and President George H.W. Bush in 1993, respectively. The work of the NRC must align with the functions identified in these executive orders. As part of a charitable organization under 501(c)(3), the NRC must avoid political campaigning or lobbying for specific legislation. Other laws that apply to the work of the NRC include Section 15 of the Federal Advisory Committee Act.
- Manage and disclose conflicts of interest. The NRC must carefully consider and manage any conflicts of interest—actual or perceived—in its volunteers, staff, and sponsors.

**TRB Principles:** The following set of principles are proposed for the TRB strategic plan:

1. **Adhere to the National Academies’ and TRB’s high standards for objectivity, independence, non-partisanship, integrity, excellence, and an evidence-basis in all that we do;**

- 2. Leverage being part of the National Academies of Sciences, Engineering, and Medicine, and the expertise available to TRB throughout the National Academies;**
- 3. Facilitate researchers and practitioners interacting with and learning from each other;**
- 4. Enable the nation and the world to benefit from the multi-disciplinary and multi-modal expertise and commitment of TRB's participants, and the multi-disciplinary and multi-modal scope of its portfolio;**
- 5. Produce high quality products and services that meet the needs of TRB's sponsors and the transportation professional community;**
- 6. Offer professional development and growth opportunities for transportation professionals at all stages of their careers;**
- 7. Continually evaluate and improve TRB's services to maximize value to TRB's sponsors and participants; and**
- 8. Leverage diversity of thought, background, and perspective throughout TRB; eliminate barriers to full and active participation in TRB; and facilitate development of a diverse set of TRB volunteer leaders.**

## **Goals**

### **Current TRB Goals:**

1. Information Exchange. Provide an impartial forum for the sharing of information across all disciplines and modes on current and emerging transportation issues and related research and innovation, including transportation's relationship with social, economic, environmental, and other issues important to society.
2. Research. Create and expand access to knowledge by conducting, sharing, and promoting research on current and future issues in transportation, particularly focused on innovative, implementable practices and technologies.
3. Advice. Provide timely and trusted advice to inform the choices facing decision makers across all modes of transportation.
4. Collaboration. Promote collaboration on transportation research, education, and technology transfer at international, national, regional, state, and local levels; across public and private sectors; and among transportation providers, users, and other stakeholders.

5. **Workforce Development.** Develop transportation professionals by providing lifelong learning opportunities and by fostering and promoting an environment that continually enhances the diversity, inclusivity, skills, and capacity of the transportation professional community.
6. **Communications.** Enhance the transportation community's knowledge of TRB activities and their impacts, the nation's leaders' and public's awareness of the contributions of research to transportation's value, and their understanding of the importance of transportation to society.

### **NRC Goals:**

1. Anticipate and prepare society for current and future challenges and opportunities.
2. Expand the NRC's impact in the world.
3. Strengthen all aspects of the NRC to achieve Goals 1 and 2 and ensure its continued creativity, resilience, and sustainability.

### **Proposed TRB Goals:**

1. Anticipate and prepare transportation professionals and decision makers for current and future transportation-related challenges and opportunities.
2. Expand TRB's impact and influence through its research, information exchange, and advisory activities, and through effective communications about its work, its products, and the resources it makes available.
3. Assure TRB's continued creativity, resilience, and sustainability in an ever changing world.

### **Strategies**

**Objectives in the Current TRB Strategic Plan.** The current TRB strategic plan uses the term objectives, rather than strategies.

1. Address emerging and critical transportation issues in a strategic, forward looking, proactive, and timely manner.
2. Involve a broad and diverse cross section of stakeholders and constituencies in TRB programs and activities.



3. Pursue continuous improvements and efficiencies in TRB programs, products, and activities to increase effectiveness, usefulness, and timeliness.
4. Introduce new programs, products, and activities to meet the priorities of TRB sponsors and stakeholders, taking into consideration resource availability.
5. Systematically identify and track the usefulness and impacts of TRB's programs, products, and activities, and adjust them to provide the greatest value for the investments made.
6. Use means that are effective in reaching diverse audiences to communicate timely information about TRB' programs, products, activities, and about transportation issues and policy research.
7. While pursuing additional resources, balance TRB's programs, products, and activities with available financial, volunteer, and staff resources to achieve the goals and objectives in this strategic plan.

### **NRC Strategies under Each Goal:**

1. Anticipate and prepare society for current and future challenges and opportunities
  - a. Proactively identify critical current and emerging problems and opportunities facing humanity and identify appropriate responses
  - b. Build diverse and deep networks of partners to develop a forward-looking portfolio
  - c. Develop new mechanisms and use state-of-the-art methodologies to anticipate and solve problems
2. Expand the NRC's impact in the world
  - a. Design NRC activities to be diverse and inclusive to enhance impact
  - b. Enhance the impact of the NRC
  - c. Adopt advanced technologies for communication
3. Strengthen all aspects of the NRC to achieve Goals 1 and 2 and ensure its continued creativity, resilience, and sustainability
  - a. Strengthen the governance of the NRC
  - b. Sustain, support, and enhance staff

- c. Provide relevant and timely evidence-based guidance through continuous innovation and learning
- d. Develop new business models and methods
- e. Deploy technology to improve NRC operations
- f. Balance priorities

## **Proposed Strategies under Each TRB Goal**

TRB staff will work on proposed strategies and actions under each goal, once the Executive Committee has had an opportunity to weigh in on the proposed TRB goals.

## **Actions**

**Current TRB Actions:** A series of 66 action items were contained under each of the seven objectives in the TRB strategic plan.

**NRC Actions:** The following actions are contained in the NRC Strategic Plan with a linkage back to which strategies that each action supports. They are listed based on the order of the goals and strategies as presented in the strategic plan, not priority.

1. Horizon-scanning projects. Develop new mechanisms and use state-of-the-art methodologies to anticipate and solve problems facing humanity. (Strategies 1a, 1c, 2a)
2. Partnerships and collaborations. Develop strategies to build broad and deep networks of partners and collaborators within the NRC, as well as international, philanthropic, and business communities. (Strategies 1a, 1b, 2a)
3. Diversity, equity, and inclusion. Aggressively advance diversity, equity, and inclusion in the NRC among staff and volunteers. (Strategies 1a, 2a, 3b)
4. Increase impact. Develop ways to reach and be inclusive of a broader range of audiences. (Strategies 2a, 2b, 2c)
5. Evaluate and improve governance. Strengthen the governance and oversight of the NRC. (Strategies 3a1, 3a2, 3a3, 3f)
6. Continuously learn and innovate. Identify a strategy for fostering a culture of continuous learning and innovation. This strategy should include incentives to back innovative products and processes and support for high-risk projects. (Strategies 1c, 2b, 3c)

7. Sustain, support, and enhance staff. Provide training and development to cultivate staff skills and build clear career paths. (Strategies 2a, 3b)
8. Develop new business models. Develop new, innovative business models to fulfill the mission, taking into account financial and staffing constraints, including the perverse incentives embedded in a soft money environment. (Strategies 1c, 3d)
9. Adopt new technologies and methods. Launch an initiative on new technologies and methods for continuous improvement to accelerate the National Academies' product workflows and transform publications, convening methods, online communication, and impact. (Strategies 1c, 2c, 3e)

**Proposed TRB Actions:** Once strategies have been identified under each goal, TRB staff will identify a series of draft actions and review them with SPPR.

## **Agenda Item 10**

### **Panel Discussion Regarding Biden-Harris Administration Transportation-Related Priorities**

#### **Dr. Robert Hampshire**

#### **Deputy Assistant Secretary for Research and Technology**



Robert Hampshire serves as the Deputy Assistant Secretary for Research and Technology. Hampshire was previously an associate professor at the Gerald R. Ford School of Public Policy at the University of Michigan. He was also a research associate professor in both the U-M Transportation Research Institute (UMTRI) and Michigan Institute for Data Science (MIDAS), and an affiliated faculty member in the Department of Industrial and Operations Engineering (IOE).

## Stephanie Pollack, Acting Administrator, FHWA



Stephanie Pollack was named Acting Administrator of the Federal Highway Administration (FHWA) on February 24, 2021. In this role, Ms. Pollack provides executive leadership and strategic direction within FHWA to advance the goals and priorities of the Department.

Ms. Pollack brings more than 30 years of executive experience in transportation and transit, sustainability, environmental health and public policy strategy to the 2,700-person agency, and oversees an annual budget of \$49 billion.

Most recently, Ms. Pollack served as Secretary and Chief Executive Officer of the Massachusetts Department of Transportation, where she was responsible for a fully multimodal state transportation department, oversaw the leadership of the Massachusetts Bay Transportation Authority and served on the board of the Massachusetts Port Authority.

Previously, Ms. Pollack taught and led transportation research at Northeastern University's School of Public Policy and Urban Affairs and the Dukakis Center for Urban and Regional Policy in Boston. She was a partner with BlueWave Strategies and, for nearly two decades, held increasingly senior leadership positions at the Conservation Law Foundation, a regional environmental advocacy organization.

Ms. Pollack earned a J.D. from Harvard Law School and a Bachelor of Science in Mechanical Engineering and a Bachelor of Science in Public Policy from the Massachusetts Institute of Technology.

## Dr. Steven Cliff, Acting Administrator, NHTSA



Dr. Steven Cliff, Acting Administrator of the National Highway Traffic Safety Administration, oversees the nation's vehicle safety agency that sets vehicle safety standards, identifies safety defects and manages recalls, and educates Americans to help them drive, ride, and walk safely. NHTSA's work also includes establishing fuel economy regulations and helping facilitate the testing and deployment of advanced vehicle technologies. The agency has a budget of more than \$1 billion and more than 600 full-time employees across the country.

Cliff brings an extensive scientific and regulatory background to his leadership role at NHTSA. Most recently, he served as the deputy executive officer at the California Air Resources Board, an organization he first joined in 2008 as an air pollution specialist. Since then, he held a variety of positions at CARB, eventually overseeing its climate program. From 2014 to 2016, Cliff joined the California Department of Transportation as the assistant director for sustainability. He returned to CARB in 2016 when then-Governor Jerry Brown of California appointed him senior advisor to CARB's board chair.

Cliff's most recent work as deputy executive officer at CARB included program oversight of regulations for passenger vehicle emissions, medium- and heavy-duty engine emissions, implementation of vehicle and engine emissions and on-board diagnostics certification, transportation land-use planning and analysis, and incentive and investment programs for reducing emissions. He worked with environmental and equity advocates, senior industry officials, association representatives, and other stakeholders on program development.]

Cliff played an active role at the University of California, Davis for nearly two decades. In 2001, he joined the school's Applied Sciences department as a research professor, later becoming affiliated with the school's Air Quality Research Center. Through the years, he has supported independent air quality and climate research programs while balancing his time at CARB, including being an approved program coordinator at the Lawrence Berkeley National Laboratory's Advanced Light Source.

Cliff received a bachelor's degree and doctorate in chemistry from the University of California, San Diego. He then completed a postdoc on atmospheric sciences at the University of California, Davis' Department of Land, Air and Water Resources.

## A. Bradley Mims, Deputy Administrator, FAA



In February 2021, A. Bradley Mims assumed his current position as the Federal Aviation Administration (FAA) Deputy Administrator. Mims has served as a transportation professional in government and the private sector for over 40 years. As a government relations specialist with a multi-modal transportation background, Mims holds a special affinity for the aviation industry.

In addition, to working for a number of firms and organizations related to transportation/aviation, Mims served as the head of government relations for the FAA during the Clinton Administration. He served as transportation staff for members of Congress in his early career (representing the late congressman John Lewis — GA and Julian Dixon — CA). Mims served as a congressional liaison for the Smithsonian Institution's National Air and Space Museum. At the conclusion of the Clinton Administration, 2001–2005 Mims served as the Transportation Specialist on the IT and Transportation Teams at Booz Allen Hamilton. In 2005, Mims joined Parsons Brinckerhoff, Inc. in serving as the Aviation Markets Vice President until 2010.

An appointee of the governor of Maryland, Mims joined the Washington Metropolitan Airports Authority Board of Directors in 2014 and has served as the co-chair of the Dulles Corridor and Finance Committees, as well as chair of the Nominations Committee. Mims also sat on the Business Administration, Executive and Governance, Human Resources, Strategic Development Ad Hoc Labor Committee and Sustainability committees. In addition, Mims served as the transportation subject matter expert with Laborers' International Union of North America (LIUNA) from 2014–2016. Prior to his appointment at FAA, Mims served as the President/CEO of Conference of Minority Transportation Officials (COMTO) from 2016–2021. He graduated from Allegheny College with a bachelor's degree in political science.


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TRANSPORTATION RESEARCH BOARD

June 24, 2021

**MEMORANDUM**

TO: Members, TRB Executive Committee  
FROM: Russell Houston   
SUBJECT: July 19 & 20, 2021, Policy Session on Racial Equity

As stated in the *Equity Addendum to Critical Issues in Transportation 2019*, “the Black Lives Matter movement and other current events have made clear that the United States continues to struggle with racism. Racism manifests itself in different ways, from the biased attitudes and prejudiced behaviors of individuals to the policies, practices, and norms of institutions and society that create and maintain racial inequalities. Many of the deep racial and ethnic inequalities that exist today are a direct result of systemic racism -- a series of discriminatory policies and practices that provide differential access to goods, services, and opportunities. As the subject of a wide range of public policies and a major area of government and private sector effort and investment, the country’s transportation enterprise warrants critical scrutiny both as a potential contributor to systemic racism and as a means for reducing the inequalities stemming from it.”

The session will examine how transportation equity fits into the broader context of societal equity issues and how we need to consider and analyze transportation equity issues. In addition, the session will highlight how a large transit agency is making decisions that consider equity. The session will also address how transportation equity issues in the Boston area are being analyzed from a technical perspective and how the results of that analysis being used to make policy decisions.

The session will begin with some brief presentations on the National Academy of Sciences, Engineering, and Medicine’s priorities for diversity, equity, and inclusion; and on TRB-specific diversity, equity, and inclusion activities. We will then hear the seeding presentation from our invited panel members, learn the U.S. Department of Transportation’s perspective on equity issues in transportation, and then hold the plenary discussion.

A detailed agenda for the session is below. Brief biographies on our panel members are included after the agenda.



## *Session Agenda*

- | <b>Time<br/>(Eastern)</b> | <b>Monday, July 19, 2021</b>  |
|---------------------------|---|
| 1:30 p.m.                 | <u>Nathaniel Ford</u> , Chief Executive Officer, Jacksonville Transportation Authority; and Vice Chair, TRB Executive Committee<br><i>Welcome and Session Introductions</i>   |
| 1:35 p.m.                 | <u>Laura Castillo-Page</u> , Chief Diversity and Inclusion Officer, National Academies of Sciences, Engineering, and Medicine (NASEM)<br><i>NASEM's priorities for diversity, equity, and inclusion</i>   |
| 1:40 p.m.                 | <u>Carol Lewis</u> , Professor & Director, Center for Transportation Training and Research, Texas Southern University; and Chair, TRB Diversity, Equity, and Inclusion Committee.<br><i>Update on implementation of TRB's Diversity, Equity, and Inclusion Strategic Plan</i>   |
| 1:50 p.m.                 | <u>Karen Febey</u> , Senior Report Review Officer, TRB; and lead staff for TRB's DE&I Committee<br><i>Overview of TRB's existing diversity, equity, and inclusion activities</i>  |
| 2:00 p.m.                 | <u>Tierra Bills</u> , Assistant Professor, Wayne State University<br><i>General Overview – How do transportation equity issues fit into the broader context of societal equity issues? How do we need to think about and analyze transportation equity issues as part of consideration of analyzing and evaluating broader equity issues that would be desirable?</i>   |
| 2:20 p.m.                 | <u>Dorval Carter</u> , President, Chicago Transit Authority<br><i>Equity in Transit – Examples of how a large transit agency is making decisions that take into account equity considerations.</i>  |
| 2:40 p.m.                 | <u>Liz Williams</u> , Director of Data and Policy, MA DOT; and <u>Betsy Harvey</u> , Transportation Equity Program Manager, Boston Regional Metropolitan Planning Organization<br><i>Equity in Regional Decision Making - How are transportation equity issues in the Boston area being analyzed from a technical perspective and how are the results of that analysis being used to make policy decisions?</i> |
| 3:00 p.m.                 | <u>Robert Hampshire</u> , Deputy Assistant Secretary for Research and Technology, U.S. Department of Transportation<br><i>Initial Reactions and the U.S. Department of Transportation's perspective on equity issues in transportation.</i>   |
| 3:15 p.m.                 | <i>Plenary Discussion – Moderated by <u>Nathaniel Ford</u>, Chief Executive Officer, Jacksonville Transportation Authority; and Vice Chair, TRB Executive Committee</i>   |
| 5:25 p.m.                 | <u>Nathaniel Ford</u><br><i>Concluding Remarks</i>  |
| 5:30 p.m.                 | <u>Nathaniel Ford</u><br><i>Adjourn</i>   |

**Time  
(Eastern)**

**Tuesday, July 20, 2021**

- 8:30 a.m. *Plenary Discussion* – Moderated by Nathaniel Ford; and Susan Shaheen, Professor, CEE, and Co-Director, Transportation Sustainability Research Center, University of California, Berkley and Chair, TRB Executive Committee
- 9:00 a.m. End of Policy Session Discussion

## ***Policy Session Panelists Biographies***

### **Tierra Bills**

Assistant Professor, Wayne State University



Dr. Tierra Bills is a former Michigan Society Fellow and Assistant Professor at the University of Michigan. She also worked as a Research Scientist at IBM Research Africa.

Much of Dr. Bills' current research focuses on investigating the social impacts of transportation projects. She uses an activity-based travel-demand modeling approach to investigate individual and household-level transportation-equity effects, for the purpose of designing transportation systems that will provide more equitable returns to society.

Her other areas of interest include public transit, transit reliability, and emerging data sources for travel demand modeling. She is a member of TRB's Standing Technical Committees on Equity in Transportation and on Transportation Demand Forecasting.

Dr. Bills obtained her Bachelor's degree in Civil Engineering Technology from Florida A&M University, and her Master's degree and Ph.D. in Civil and Environmental Engineering from the University of California, Berkeley.

### **Dorval Carter**

President, Chicago Transit Authority



As the head of the nation's second largest transit agency, Mr. Carter oversees the delivery of some 500 million rides annually within Chicago and its 35 surrounding suburbs.

Prior to his appointment as President of the CTA, Mr. Carter served in numerous leadership roles with the U.S. Department of Transportation (USDOT) including Chief Counsel of the Federal Transit Administration (FTA), Acting FTA Administrator and Acting Chief of Staff to former USDOT Secretary Anthony Foxx. Mr. Carter has more than 30 years of combined public service with both the CTA and FTA. Throughout his career he has been a tireless promoter of the critical role public transportation plays in our society.

As a nationally-recognized transit legal and policy expert, Mr. Carter helped develop the national transit safety program instituted by the FTA, led the use of performance measures to implement public transportation projects, enhanced State of Good Repair programs at the local and national levels, and implemented the nation's first multi-modal real-time trip planner for transit riders.

Mr. Carter is an active TRB volunteer and has uninterrupted service as a member of a TRB committee, section, group, or panel since 1992. He is a past chair of the Standing Technical Committee on Transit and Intermodal Transportation Law and served as a member of the Standing Technical Committee on Emerging Technology Law, the Legal Resource Group, and the Transit Cooperative Research Program (TCRP) Project Panel on Legal Aspects of Transit and Intermodal Transportation Program. He currently serves as a member of the Legal Resources Section and the TCRP Oversight and Project Selection Commission. Dorval was the 2021 recipient of the TRB Thomas B. Deen Distinguished Lectureship Award.

Mr. Carter obtained his Bachelor's degree from Carroll University in Waukesha, Wisconsin, and is currently its Chair of the Board of Trustees. He holds a Juris Doctor Degree from Howard University School of Law.

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### **Liz Williams**

Director of Data and Policy, Massachusetts Department of Transportation



Dr. Elizabeth (Liz) Williams is responsible for coordinating projects and data within and between Massachusetts Department of Transportation (MassDOT) offices and partner agencies and ensuring objectives and strategies are consistent.

Dr. Williams has fifteen years' experience in the economic and social policy and research field and has held positions with the Massachusetts Bay Transportation Authority, the University of Massachusetts Donahue Institute, the Dukakis Center for Urban and Regional Policy, and the American Institutes for Research before arriving at MassDOT.

Dr. Williams is a member of TRB's Standing Technical Committees on Economic Development and Land Use, and on Community Resources and Impacts. She is a friend of several other committee as well as the City Transportation Issues Coordinating Council.

Dr. Williams is trained as an urban sociologist and has a Bachelor's degree from Clark University, a Master's degree from George Washington University, and her Ph.D. from Northeastern University.

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**Betsy Harvey**

Transportation Equity Program Manager, Boston Regional Metropolitan Planning Organization



Ms. Elizabeth (Betsy) Harvey is responsible for ensuring that the transportation programs, plans, and activities at the Metropolitan Planning Organization comply with all state and federal nondiscrimination regulations, including Title VI and environmental justice.

Ms. Harvey helps ensure that federally-funded activities, programs, and projects meet the needs of all residents of the Boston metro area (101 municipalities), regardless of age, sex, race, nationality, income, or disability.

Ms. Harvey's strengths center on analyzing and reporting on equity and environmental justice concerns of corridor- and region-wide transportation projects. She also has expertise in conducting qualitative and quantitative studies of both primary and secondary data collection and analysis, including from focus groups, surveying, and analyses of an array of Census datasets.

In addition, Ms. Harvey has served as project coordinator for bicycle and pedestrian resources for New Brunswick, New Jersey as well as a project coordinator at the Alan M. Voorhees Transportation Center at Rutgers, The State University of New Jersey.

Ms. Harvey obtained her Bachelor's degree in English from the University of New Hampshire and a Masters of City and Regional Planning degree from the Bloustein School of Planning and Public Policy at Rutgers University.

## **Diversity, Equity, and Inclusion (DE&I) Strategic Plan Update Transportation Research Board**

### **Background**

TRB's Diversity, Equity, and Inclusion Initiative's mission of creating and fostering an inclusive environment that leads to increased diversity and equitable outcomes for all participants is a top priority for TRB. The TRB DE&I Strategic Plan provides a roadmap for building such an environment at all levels of the organization. Successful implementation of the strategies and actions in the plan requires coordination across the entire organization, including volunteers, contractors, and staff. TRB management will hone each strategy, identify priorities, and assign action items to appropriate staff and committee/panels. TRB's Special Committee on Diversity, Equity, and Inclusion will monitor progress on the plan's strategies and will report to the TRB Division Committee and the Executive Committee.

The Executive Committee approved the TRB Inclusion and Diversity Strategic Plan at its January 2018 meeting and the Special Committee on Inclusion and Diversity was subsequently formed. In fall 2020, the special committee recommended that "equity" be added to its name and to several of the strategies in the plan to better respond to calls for social justice throughout the country. The committee wants to reflect that we, as transportation professionals, must attend to equity issues in order to identify and eliminate barriers to full and active participation in TRB, and development of volunteer leaders from underrepresented groups. In January 2022, the Committee will start rotating members to ensure continuous flow of new ideas and sustain racial/ethnic representation across different transportation modes and industries.

The Special Committee meets at the Annual Meeting and holds quarterly conference calls to review and propose action items. The chair is Carol Lewis, Texas Southern University, and members are as follows:

- Gloria Bender, TransSolutions LLC
- Andrew Braham, University of Arkansas
- Alva Carrasco, WSP
- Tanisha Hall, Fairpointe Planning, LLC
- Susan Hanson, Clark University (emerita): member of Executive Committee and SPPR
- Chris Hendrickson, Carnegie Mellon University: member of Executive Committee, SPPR, and Chair of the TRB Division Committee
- Hyun-A Park, Spy Pond Partners, LLC: Chair of TAC
- Natalie Stiffler, City of Boulder
- Kimberly Webb, Michigan Department of Transportation

Karen Febey is staff to the committee.

## **Working Definitions**

To guide its work, the committee agreed on the following definitions:

Diversity is defined as the variety of experiences, cultures, and physical attributes that influence interactions within a community including, but not limited to, race, language, sexual orientation, age, culture, socioeconomic status, gender, religion, perspective, ability, and experience.

Inclusion means that all individuals and groups are welcomed, valued, respected, and supported equally as they contribute to the mission and success of a community.

Equity is the process of ensuring that individuals, especially those from traditionally marginalized groups, have equal access to opportunities to advance, contribute, and develop in a group, organization, or function. Achieving equity involves dismantling the barriers that have prevented equality of access to opportunity, participation, and outcomes for members of disadvantaged groups.

## **Updates on Strategies and Associated Action Items**

The following are the seven strategies and associated actions that have been accomplished or are underway in TRB:

### Strategy 1

*Identify practices and develop primers for committee and panel chairs, and TRB staff that ensure equitable opportunities for all, and highlight strategies and resources used to recruit, welcome and actively involve a more diverse committee and panel membership.*

- NCHRP staff and AASHTO Research and Innovation (R&I) committee continue to consider strategies to recruit more panel members who are underrepresented minorities from their state DOTs. At their April 2021 meeting, R&I members formed a working group to review the R&I Strategic Plan and Action Plan, of which NCHRP Manager Lori Sundstrom is a member. They will meet in July 2021 and DE&I issues are on their agenda.
- TRB staff are considering strategies to disseminate best practices of standing committees receiving the Technical Activities Council's new Blue Ribbon Award for Diversity (which recognizes committees that use innovative strategies to improve their membership's diversity, to be awarded in late 2021).
- Developed a database of mentors from the Minority Student Fellows Program and all alums of the program from 2010-2018, which includes links to their contact information, online bios, and previous TRB service (if any).
- Some of the practices that CRP Senior Program Officers have been employing to increase diversity on their panels include the following:

- Adding younger members with fewer years of work experience to give an opportunity to gain experience as they advance in their careers.
- Asking unselected nominees from underrepresented populations if they are interested in another related panel aligned with their skill set.
- Searching faculty directories in related departments at Minority Serving Institutions.
- Searching LinkedIn for memberships in related professional organizations that represented diverse populations for a given area of expertise.
- Searching membership rosters of other NASEM committees and TRB Standing Committee membership rosters.
- Reviewing blog posts, press releases, conference programs and similar from relevant sources.

### Strategy 2

*Engage with transportation-related organizations and other appropriate organizations that serve women and members of minority groups that are underrepresented in TRB to increase their members' awareness of and participation in TRB.*

- TRB staff continues to address items in the TRB-COMTO MOU, including attending each other's Annual Meetings, providing content for each other's newsletters, and drawing on COMTO's membership for TRB volunteers.
- Neil Pedersen and Ann Brach were moderators of different Council of University Transportation Centers webinars on equity and the Black experience in transportation.
- TRB is entering into an MOU with Latinos In Transit, an organization that promotes the development and advancement of Latinos and other minorities in the transportation profession.
- To recruit panel members, CRP program officers are also actively introducing themselves to presenters, panelists, moderators and others who are from underrepresented populations and who seem like good candidates for a panel while at events run by related professional organizations (e.g., WTS, COMTO).
- TRB continues to contribute to NASEM-wide efforts to expand its volunteer and participant base including through contributing to toolkits about practices across NASEM to recruit diverse volunteers.

### Strategy 3

*Find new ways for Annual Meeting and specialty conference attendees to engage in a way that creates openings for everyone to have equal opportunities to make connections and feel included, welcomed, and able to participate.*

- TAD staff met with FHWA Dwight David Eisenhower Transportation Fellowship Program (DDETFP) staff to identify ways to involve the 200+ DDETFP fellows in standing committees' meetings and activities, and in other Annual Meeting sessions/events, especially those planned by YMC.

- Some standing committees and YMC continue work on mentoring initiatives for young professionals who are members and friends of their committees.

#### Strategy 4

*Identify practices/and develop primers for TRB staff and the contracting office to identify and minimize barriers to achieving greater diversity among TRB contractors and their lead staff, whether they are suppliers or research consultants.*

- TRB's Director of Strategic Program Development is vetting an Inclusive and Equitable Contracting Initiative to encourage participation in TRB proposals, projects, and awarded contracts by firms that are 51% or more owned by African Americans, Hispanics, Native Americans, Asian-Pacific and Subcontinent Asian Americans, and women. The goal of the initiative will be to make the new program a strategic addendum to current DE&I strategy.

#### Strategy 5

*Identify and minimize barriers to achieving greater TRB staff diversity.*

- The National Academies now has a Chief Diversity Officer, Dr. Laura Castillo-Page and a Director of Workforce Diversity and Inclusion, Mr. Zach Thomas, who will support and develop DE&I training and ensure consistent DE&I policies and strategies across NASEM.
  - In TRB and throughout NASEM, strategies are being developed to widely advertise positions so as to attract a more diverse pool of applicants.

#### Strategy 6

*Ensure that technical activities and research projects address diversity, equity, and inclusion.*

- The Special Committee has published its May/June 2021 *TR News* theme issue on diversity and inclusion in the transportation profession.
- The CRPs have a robust array of ongoing, anticipated, and newly funded projects that address DE&I-related topics. (See the appendix on pp.7-8)
- TRB's "Critical Issues in Transportation 2019" now includes an addendum on Equity. The date of public release is July 15, 2021.
- TRB hosted a webinar on June 28, 2021 entitled [Addressing Justice in Transportation](#).
- ACRP's Insight Event and subsequent conference proceedings report about systemic racism issues at airports is in progress, with the event likely happening in early 2022.
- Transportation Research Record (TRR) staff are incorporating DE&I work in the following ways:
  - developing an equity-related section in the open-access COVID-19 special issue covering the impact of the virus on transportation in low-income countries;
  - developing a collection of papers related to transportation equity that will be available via open access for three months; and



- maintaining an open-access compendium of [TRR papers](#) by Minority Student Fellows, of which three were added from the 2021 cohort.
- The Standing Committee on Equity in Transportation will host the (virtual) [Advancing Transportation Equity Conference](#) in September 2021.

### Strategy 7

*Improve existing data, information, and communication mechanisms to support all strategies.*

- TRB Division Committee continues to collect racial/ethnic and gender data for CRP panel members, consensus committee members, and members and friends of TAD standing committees. New data being reported includes: data on organizations' responses to CRP RFPs about how they will address a diverse and inclusive approach in their research.
- TRB's Communications Department has released the following articles on its blog (on TRB's webpage):
  - [Building Socioeconomic Equity through Transportation Research](#)
  - [Finding, Keeping, and Advancing Women in the Transportation Workforce](#)
  - [Steps for Transportation Workforce Diversity Outlined in TRB's Research](#)
- TRB communications staff ensured that DE&I was included in all aspects of its new Strategic Communications Plan, including through the objectives, goals, and tactics.

### **Moving Forward**

The Special Committee will continue to monitor action items in progress and those planned, while considering other action items that may be feasible. Its work intersects with existing inclusion and diversity work both in TRB and throughout the Academies: TRB's Division Committee continues to monitor involvement of women and minorities on TRB panels and committees and is collecting new data on DE&I-related issues. The upcoming Advancing Equity in Transportation in September provides a unique opportunity for transportation professionals to showcase a range of equity research and issues related to transportation. CRP program officers have been utilizing a variety of creative strategies to identify potential panel members. CRP and R&I leaders will be moving forward with new strategies to increase diversity of state DOT panel members. The Communications staff has made a concerted effort to include DE&I as a key part of its Strategic Communications Plan, thus ensuring that TRB will focus on DE&I through both its reports and other products but also in its outreach strategies for dissemination. To learn more about experiences of underrepresented minorities in establishing their careers and becoming TRB volunteers, we will explore partnering with an organization like CUTC to do a webinar before the Annual Meeting. The Executive Committee will receive another update at its January 2022 meeting.

## Appendix: Projects in Progress, Anticipated Projects, and Newly-Funded Projects

### Projects in Progress

- [ACRP 01-48](#) - Assessing Airport Programs for Travelers with Disabilities and Older Adults
- [ACRP 04-24](#) - Guidelines to Develop an Anti-Human Trafficking Action Plan for Airports
- [BTSCR P BTS-13](#) - Communicating Safe Behavior Practices to Vulnerable Road Users
- [BTSCR P BTS-15](#) - Highway Safety Behavioral Strategies for Rural Areas
- [NCHRP Synthesis 20-05/Topic 52-13](#) - Micromobility Policies, Permits, and Practices
- [NCHRP 20-65/Task 78](#) - Impact of Decline in Volunteerism on Rural Transit Systems
- [NCHRP 20-65/Task 81](#) - Best Practices in Rural Service Assessment
- [NCHRP 20-113F](#) - Topical White Papers for the TRB Forum on Automated Vehicles and Shared Mobility
- [NCHRP 08-125](#) - Attracting, Retaining, and Developing the Transportation Workforce: Transportation Planners
- [NCHRP 08-131](#) - Access to Jobs, Economic Opportunities, and Education in Rural Areas
- [NCHRP 20-121](#) - State DOT Contributions to the Study, Investigation, and Interdiction of Human Trafficking
- [NCHRP 20-122](#) - Rural Transportation Issues: Research Roadmap
- [TCRP A-45](#) - Measuring and Managing Fare Evasion
- [TCRP B-46](#) - Tactile Wayfinding in Transportation Settings for Travelers Who Are Blind or Visually Impaired
- [TCRP B-47](#) - Impact of Transformational Technologies on Underserved Populations
- [TCRP B-48](#) - The Provision of Alternative Services by Transit Agencies: The Intersection of Regulation and Program Objectives
- [TCRP Synthesis J-07/Topic SA-52](#) - Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns
- [TCRP Synthesis J-07/Topic SB-32](#) - Use of Agency Trip Agreements in ADA Paratransit Service Delivery and Addressing Changing Demographics
- [TCRP Synthesis J-07/Topic SB-34](#) - Coordination of Public Transit Services and Investments with Affordable Housing Policies
- [TCRP Synthesis J-07/Topic SH-19](#) - Considering the Unbanked in Cashless Fare Payment at Point of Service for Bus/Demand Response Services
- [TCRP Synthesis J-07/Topic SH-21](#) - Transit Fare Capping: Balancing Revenue and Equity Impacts
- [Transit IDEA J-04/IDEA 91](#) - Comprehensive Wayfinding for All (CWall)

- [Transit IDEA J-04/IDEA 98](#) - Safety Assessment of the Interaction Between the Autonomous Shuttle Bus and Vulnerable Road Users
- [TCRP J-11/Task 41](#) - Pathways to Effective, Inclusive, and Equitable Virtual Public Engagement for Public Transportation
- [TCRP J-11/Task 35](#) - Resource Guide for Improving Diversity and Inclusion Programs in the Public Transportation Industry
- [TCRP J-11/Task 40](#) - Homelessness: A Guide for Public Transportation
- [TCRP J-11/Task 42](#) - Maintaining Transportation Services for People With Disabilities, Paratransit, and Other Service Needs During a Pandemic
- [TCRP J-05/Topic 20-03](#) - Policing and Public Transportation

### Anticipated Projects

- [NCHRP 08-150](#) - Valuation of Transportation Equity in Active Transportation and Safety Investments
- [NCHRP 08-152](#) Strategies for Advancing Equity in Transportation Planning by Increasing Diversity, Equity, and Inclusiveness in The Transportation Planning Profession
- [NCHRP 08-155](#) - Researching and Responding to Racial Disparities in Construction
- [NCHRP 08-159](#) - Understand How Accessibility to Employment, Health Care, Education, and Other Vital Needs Vary for Different Population Groups in Different Settings, and Methods for Effectively Assessing Mobility and Accessibility Needs
- [NCHRP 08-160](#) - Understand the Role of Transportation Infrastructure Investment in Gentrification and Displacement and Identify Effective Policies and Strategies to Address These Effects
- [NCHRP 08-161](#) - Identify Emerging Approaches for Public Engagement to Meaningfully Involve Minorities, Low-Income, and Other Vulnerable Populations
- [NCHRP 08-162](#) - Identify Practices and Policies to Advance Social Justice and Equity into Transportation Decision-Making
- [NCHRP 20-102\(33\)](#) - Safety of Vulnerable Road Users in a C/AV Future
- [TCRP H-59](#) - Racial Equity, Black America and Public Transportation

### Newly-Funded Projects

- [NCHRP 08-130](#) - Best Practices in Coordination of Public Transit and Ride Sharing
- [NCHRP 08-142](#) - Virtual Public Involvement: A Manual for Effective, Equitable, and Efficient Practices for Transportation Agency
- [NCHRP 08-147 / TCRP B-49](#) - Improving Public Transportation in Rural Areas and Tribal Communities
- [TCRP H-60](#) - Addressing Disproportionate Share of Health, Economic, and Transportation Impacts for Lower-Income Households and Communities of Color

## **Update on TRB Minority Student Fellows Program**

The TRB Minority Student Fellows Program, now in its thirteenth year, promotes minority participation in transportation and TRB. This year, the program is planning for 28 students from 14 institutions which include historically black colleges and universities, Hispanic-serving institutions, and American Indian/Alaska Native-serving institutions. While at the Annual Meeting, student will present their research and participate in a number of other activities and sessions.

The 14 institutions planning to participate this year are Arizona State University; California State Polytechnic University, Pomona; California State University, Los Angeles; City College of New York; Florida A&M University; Florida International University; Morgan State University; North Carolina A&T University; North Central Carolina University; Tennessee State University; Texas Southern University; University of Arizona; University of New Mexico; and University of Texas at El Paso.

This year's cohort of 28 undergraduate and graduate come from not only civil engineering and planning, but also from construction management, sustainable build environments, electrical engineering, industrial and systems engineering, and environmental and geographic sciences.

The largest source of program funding for the students has come from FHWA's Dwight David Eisenhower Transportation Fellowship Program. Other key sources of funding expected for this year are from organizations that have earmarked money for students at particular schools: Arizona Department of Transportation; Center for Transportation Infrastructure Systems at the University of Texas at El Paso; Michigan Department of Transportation; North Carolina Department of Transportation; North Central Texas Council of Governments; and Tennessee Department of Transportation. The final source of funding is individual contributions—some made throughout the year but most from individual registrants to the Annual Meeting who donate when registered.

A number of changes are planned for this year's program. First, their Annual Meeting experience will begin with a daylong orientation on Sunday that will include interaction with alums of the Program, a workshop with a mentor from a participating university, attendance at the New Attendee Orientation, and the Fellows Welcome Reception. Second, fellows will be presenting together in the same poster session to better showcase their research and allow them more interaction with one another and their mentors. Third, fellows will be required to become a friend of a standing committee and attend the committee's yearly meeting. In partnership with AASHTO and several other organizations and volunteers, fellows

will be matched with a mentor with whom they can interact with while attending various Annual Meeting events together.

Similar to previous years, special sessions planned for the fellows will be the FHWA/DOE/EPA career panel (which they will attend with the Dwight David Eisenhower Transportation Program [DDETFP] fellows), a networking luncheon, and attendance at the Chair's Luncheon. In addition, throughout the Annual Meeting, fellows will also be attending Young Members Council sessions, sessions aligned with their career and academic interests, and DDETFP presentations.

The 22 students and 12 schools anticipated in this year's cohort (which will be finalized after students submit their research papers by the August 1 deadline) are fewer than TRB staff had planned for. Faculty mentors and other university officials cited a number of reasons for not being able to identify eligible students. These include students take a leave of absence from school, lack of access to lab facilities, reduced contact with students resulting from online teaching, reduced funding for research activities, and lack of engagement from students.

## Minority Student Fellows Program

- Review of 2021 program
- Donations from 2021 AM
- Allow up to five 2020 fellows to attend AM
- 28 students  
(16 undergrad, 12 grad; 16 male, 12 female)
  - Civil Engineering, Electrical Engineering, Planning, Construction Management, Geographic Sciences, Sustainable Build Environment, Industrial and Systems Engineering
- 14 schools (HBCUs, HSIs, AIANSIs)

## Program Changes for 13<sup>th</sup> year

- Full-day Orientation
- Fellow-only Poster Session
  - Need your help promoting and attending
- Closer Ties to Committees in Partnership with AASHTO
  - Assigned mentors
  - Committee involvement
- FHWA/DOE/EPA Career Panel with DDETFP Fellows

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TRANSPORTATION RESEARCH BOARD

June 24, 2021

**MEMORANDUM**

TO: Members, TRB Executive Committee  
FROM: Russell Houston *RH*  
SUBJECT: July 19 & 20, 2021, Policy Session on Racial Equity

With the help of a panel of experts, the TRB Executive Committee will explore racial equity issues within the context of transportation.

Equity was identified as one of the major topics in *Critical Issues in Transportation 2019*. An addendum focusing on this topic is being prepared for release this summer.

Since the killing of George Floyd at the hands of police in Minneapolis this summer, there has been much focus on issues of social and racial justice and equity throughout the nation, including in transportation.

This session will examine how transportation equity fits into the broader context of societal equity issues and how we need to consider and analyze transportation equity issues and highlight how a large transit agency is making decisions that take into account equity considerations. The session will also address how transportation equity issues in the Boston area are being analyzed from a technical perspective and how are the results of that analysis being used to make policy decisions.

The session will begin with some brief presentations on the National Academy of Sciences, Engineering, and Medicine's priorities for diversity, equity inclusions; as well as on TRB specific diversity, equity and inclusion activities. We will then hear from our panel of experts, learn the U.S. Department of Transportation's perspective on equity issues in transportation, and then begin the plenary discussion.

A detailed agenda for the session is below. Brief biographies on our panel of experts is included after the agenda.

***Session Agenda***

**Time  
(Eastern)**

**Monday, July 19, 2021**

1:30 p.m. Nathaniel Ford, Chief Executive Officer, Jacksonville Transportation Authority;  
and Vice Chair, TRB Executive Committee  
*Welcome and Session Introductions*

- Time**  
**(Eastern)**
- Monday, July 19, 2021**
- 1:35 p.m. Laura Castillo-Page, Chief Diversity and Inclusion Officer, National Academies of Sciences, Engineering, and Medicine (NASEM)  
*NASEM's priorities for diversity, equity, and inclusion*
- 1:40 p.m. Carol Lewis, Professor & Director, Center for Transportation Training and Research, Texas Southern University; and Chair, TRB Diversity, Equity, and Inclusion Committee.  
*Update on implementation of TRB's Diversity, Equity, and Inclusion Strategic Plan*
- 1:50 p.m. Karen Febey, Senior Report Review Officer, TRB; and lead staff for TRB's DE&I Committee  
*Overview of TRB's existing DE&I activities*
- 2:00 p.m. Tierra Bills, Assistant Professor, Wayne State University  
*General Overview – How do transportation equity issues fit into the broader context of societal equity issues? How do we need to think about and analyze transportation equity issues as part of consideration of analyzing and evaluating broader equity issues that would be desirable?*
- 2:20 p.m. Dorval Carter, President, Chicago Transit Authority  
*Equity in Transit – Examples of how a large transit agency is making decisions that take into account equity considerations.*
- 2:40 p.m. Liz Williams, Director of Data and Policy, MA DOT; and Betsy Harvey, Transportation Equity Program Manager, Boston Regional Metropolitan Planning Organization  
*Equity in Regional Decision Making - How are transportation equity issues in the Boston area being analyzed from a technical perspective and how are the results of that analysis being used to make policy decisions?*
- 3:00 p.m. Robert Hampshire, Deputy Assistant Secretary for Research and Technology, U.S. Department of Transportation  
*Initial Reactions and the U.S. Department of Transportation's perspective on equity issues in transportation.*
- 3:15 p.m. Tom Menzies, Director, Consensus and Advisory Studies, TRB  
*Overview of TRB Consensus Study on Equity Metrics*
- 3:30 p.m. *Plenary Discussion – Moderated by* Nathaniel Ford, Chief Executive Officer, Jacksonville Transportation Authority; and Vice Chair, TRB Executive Committee
- 5:25 p.m. Nathaniel Ford  
*Concluding Remarks*
- 5:30 p.m. Nathaniel Ford  
*Adjourn*



**Time  
(Eastern)**

**Monday, July 19, 2021**

- 8:30 a.m. *Plenary Discussion* – Moderated by Susan Shaheen, Professor, CEE, and Co-Director, Transportation Sustainability Research Center, University of California, Berkley; and Chair, TRB Executive Committee and Nat Ford
- 9:00 a.m. End of Policy Session Discussion

***Policy Session Panelists Biographies***

**Tierra Bills**

Assistant Professor, Wayne State University



Dr. Tierra Bills is a former Michigan Society Fellow and Assistant Professor, at the University of Michigan. She also worked as a Research Scientist at IBM Research Africa, from 2013 to 2016.

Much of Dr. Bills' current research focuses on investigating the social impacts of transportation projects. She uses an activity-based travel-demand modeling approach to investigate individual and household-level transportation-equity effects, for the purpose of designing transportation systems that will provide more equitable returns to society.

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Dr. Bills obtained her B.S. in Civil Engineering Technology from Florida A&M University, and her M.S. and Ph.D. in Civil and Environmental Engineering from the University of California, Berkeley.

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President, Chicago Transit Authority



As the head of the nation's second largest transit agency, Mr. Carter oversees the delivery of some 500 million rides annually within Chicago and its 35 surrounding suburbs. In addition to day-to-day operations, Mr. Carter is in charge of the Chicago Transit Authorities (CTA's) ongoing \$8 billion customer experience and renovation program that includes rehabilitation of nearly 30 percent of its stations, the acquisition of new state-of-the-art vehicles, and the enhancement of amenities designed to enrich the ridership experience of CTA's customers.

Prior to his appointment as President of the CTA, Mr. Carter served in numerous leadership roles with the U.S. Department of Transportation (USDOT) including Chief Counsel of the Federal Transit Administration (FTA), Acting FTA Administrator and Acting Chief of Staff to USDOT Secretary Anthony Foxx. Overall, Mr. Carter has more than 30 years of

combined public service with both the CTA and FTA. Throughout his career he has been a tireless promoter of the critical role public transportation plays in our society.

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Transportation Equity Program Manager, Boston Regional Metropolitan Planning Organization



Elizabeth (Betsy) Harvey is responsible for ensuring that the transportation programs, plans, and activities at the MPO comply with all state and federal nondiscrimination regulations, including Title VI and environmental justice.

Ms. Harvey helps ensure that federally-funded activities, programs, and projects meet the needs of all residents of the Boston metro area (101 municipalities), regardless of age, sex, race, nationality, income, or disability.

Betsy's strengths center on analyzing and reporting on equity and environmental justice concerns of corridor-, and region-wide transportation projects. She also expertise in conducting qualitative and quantitative studies of both primary and secondary data collection and analysis, including from focus groups, surveying, and analyses of an array of Census datasets.

Betsy has also served as project coordinator for bicycle and pedestrian resources for New Brunswick, New Jersey as well as a project coordinator at the Alan M. Voorhees Transportation Center at Rutgers, The State University of New Jersey.

Ms. Harvey obtained her undergraduate degree in English from the University of New Hampshire and a Masters of City and Regional Planning degree from the Bloustein School of Planning and Public Policy at Rutgers University.

*The National Academies of*  
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TRANSPORTATION RESEARCH BOARD

June 24, 2021

**MEMORANDUM**

TO: Members, TRB Executive Committee  
FROM: Russell Houston *RH*  
SUBJECT: January 12 & 13, 2022, Policy Session on Decarbonization of the Transportation Sector

Due to the late date of the Executive Committee's summer 2021 meeting, the Subcommittee on Planning and Policy Review has selected on the Executive Committee's behalf, *Decarbonization of the Transportation Sector* as the topic for the January 2022 policy session.

According to the U.S. Environmental Protection Agency, when electricity emissions are considered separately and not part of a cradle to grave calculation, transportation is the top source of direct greenhouse gas emissions (28 percent), followed by the electric power sector (27 percent), industry (22 percent), commercial and residential buildings (12 percent), and agriculture (10 percent).

According to *Accelerating Decarbonization of the U.S. Energy System*, a new report from the National Academies of Sciences, Engineering, and Medicine, achieving net-zero carbon emissions in the U.S. by 2050 is feasible and would not only help address climate change but also build a more competitive economy, increase high-quality jobs, and help address social injustices in the energy system.

The committee that produced the report suggest that electrification of the transportation sector would primarily be accomplished by manufacturing and performance standards for electric vehicles (powered by electricity and hydrogen).

The worldwide decarbonization of the transportation sector is critical to mitigating climate change, protecting human health, and revitalizing the world economy.

At its January 2022 Policy Session, the TRB Executive Committee will explore efforts within the transportation sector to reduce its dependence on fossil fuels and those policies that the transportation sector will need to accommodate in order to meet the goal of net-zero carbon emissions by 2050.

The Policy Session panelists will cover the following issues in their seeding discussions:

- (Confirmed) Chris Hendrickson, Hamerschlag University Professor Emeritus, Civil and Environmental Engineering, Carnegie Mellon University

Summary of the transport technology and research related recommendations included in the NASEM's *Accelerating Decarbonization of the U.S. Energy System*.

- (Confirmed) Young Tae Kim, Secretary-General, International Transport Forum  
The leading decarbonization initiatives taking place internationally, as well as ITF's Decarbonizing Transport Initiative.
- Amazon's corporate carbon footprint quantifies the total greenhouse gas emissions attributed to its direct and indirect operational activities. They measure total impact on the climate, map the largest activities contributing to this impact, and use this information to develop meaningful carbon reduction goals, including its overall goal to reach net-zero carbon across the company by 2040. A major portion of Amazon's strategy is to convert their entire fleet, including their delivery fleet to zero emission vehicles. A representative from Amazon would address the broad, science-based approach to measuring and reducing carbon emission in Amazon's worldwide operations, particularly focusing on reducing its transportation carbon footprint.

Following the panel presentations, we would ask a representative of the Administration to present information on policy initiatives designed to set the United States on a course to meet President Biden's goal to reach carbon neutrality by 2030.

Transportation Research Board  
**Technical Activities Division Report to Executive Committee**  
June 23, 2021

Note: This is read-ahead material and will not be presented during the meeting in Woods Hole. The TAD presentation during the meeting will relate the results of the Technical Activities Council meeting, which will have taken place the week before. Of course, Avery Grimes (TAC chair) and Ann Brach (TAD Director) are happy to answer questions and hear comments about any of the written or presented material.

### **2021 Annual Meeting**

The 2021 Annual Meeting, TRB's 100<sup>th</sup> annual meeting, was held as an entirely virtual event over a period of three and half weeks in January. TRB's main objective in going ahead with a meeting despite the pandemic was to maintain continuity in fulfilling our mission and in all our important relationships with sponsors, volunteers, exhibitors, patrons, etc. Despite a few technical glitches, we believe we achieved this objective and feedback from attendees has been overwhelmingly positive.

Some of the Annual Meeting numbers include:

- 20,000 participants
- 410 virtual committee meetings
- 260 virtual sessions and workshops
- 110 virtual exhibitor booths
- 23 Annual Meeting patrons

Not surprisingly, the content of the meeting stressed issues related to the pandemic and to equity in transportation, along with the full range of issues that our committees always address at the meeting.

The virtual format allowed TRB to have true plenary sessions for the first time in anyone's memory. The two plenary sessions were:

- The Chair's Plenary, with Dr. Marcia McNutt, President of the National Academy of Sciences, as keynote speaker
- The Deen Distinguished Lecture, with Mr. Dorval Carter, President of the Chicago Transit Authority speaking on the topic "Our Work is Never Done: Examining Equity Impacts in Public Transportation." The session also included a discussion between Mr. Carter and former US Secretary of Transportation Anthony Foxx, moderated by then-TAC chair, Hyun-A Park.

A report on the 2022 Annual Meeting will be provided in Woods Hole.

## Specialty Conferences

The pandemic required the cancellation of approximate 40 smaller TRB conferences and mid-year committee meetings. Most of the committee meetings were converted to virtual meetings. Some conferences were delayed because the responsible committees felt they needed to be conducted in person, however many were converted to virtual conferences, including:

- Commodity Flow Survey Workshop,
- 59th Annual Workshop on Transportation Law
- Environmental Analysis and Ecology Virtual Seminar
- Transit Safety and Security Conference
- Workshop on Traffic Simulation and CAV Modeling
- Maritime Education, Training, Research & Innovation (METRI) Virtual Summit
- Advancing the Marine Transportation System through Automation and Autonomous Technologies: Trends, Applications, and Challenges
- Conference on Transportation Planning Applications
- Measuring and Managing Freight System Resilience Workshop

Upcoming conferences in 2021 include the following (all are virtual except the last). The first conference listed—Automated Road Transportation Symposium—is a refashioning of the Automated Vehicle Symposium that TRB co-sponsored with Association for Unmanned Vehicle Systems International for a number of years. This year it is solely TRB-sponsored.

- Automated Road Transportation Symposium 2021, *July 12-15*
- National Conference on Transportation Asset Management, *August 10-12*
- Conference on Advancing Transportation Equity, *September 8-10*
- Annual Workshop on Transportation Law, *September 13-15*
- Innovations in Freight Data Workshop, *September 21-23*
- National Conference on Rural Public and Intercity Bus Transportation, *October 25-27*
- Conference on Transformative Times in Transportation Security, *November 2-4, in Washington, D.C.*

## Transportation Research Record (TRR)

The TRR is TRB's peer-reviewed journal. Over the last few years, we have been improving the management and marketing of the journal as well as the processes that ensure the quality and relevance of the material published. Some actions include:

- Established an Editorial Board of approximate 200 volunteers to oversee and manage the paper review process.
- Converted our Review Advisory Board to a Publications Advisory Board to advise TAD on publication strategies in general.
- Worked with our publisher, Sage, to provide a site for pre-reviewed materials and to provide open access to selected materials, for example materials related to the pandemic and to equity.
- Developed specialty theme issues, for example issues on COVID and on freight.
- Began including papers from our specialty conferences in addition to paper submitted for the Annual Meeting.
- Highlighted work by students, including papers by TRB's Minority Student Fellows and TRB's Airport Cooperative Research Program Graduate Research Award winners.
- Worked with authors' institutions to publicize their papers.

The result of these efforts can be seen in several dimensions:

- A doubling of the journal impact factor over the last five years; the impact factor is an important measure for academics and relates to the citations of a journal's work in other journals.
- The TRR continues to be the #1 transportation journal in policy citations, which is a measure of the usefulness of the journal's papers to policy makers, think tanks, etc.
- The TRR ties with one of IEEE's journals as the #1 transportation journal in patent applications, a measure of the potential practical usefulness of the journals papers.
- The TRR is the #5 transportation journal in news mentions, which is a measure of the journal's work being seen by the public.

Updated impact factors are usually reported in late June but were not yet available as of this writing. We hope to be able to report the latest impact factor in Woods Hole.



The Executive Committee will begin the process of developing the next edition of *Critical Issues in Transportation* at the July 19-20 Executive Committee meeting. The process was explained in the following June 25, 2021 memorandum from Katie Turnbull and Neil Pedersen, together with a request for each member to identify the top ten critical issues from their perspective. The input received from members will be synthesized and made available at the meeting and form the basis for a discussion about any issues that may be missing or that should be modified or clarified.

#### MEMORANDUM

TO: TRB Executive Committee Members

FROM: Katie Turnbull, Chair, Subcommittee on Planning and Policy Review  
Neil J. Pedersen, Executive Director

DATE: June 25, 2021

SUBJECT: Next edition of *Critical Issues in Transportation*

At the July 19-20 TRB Executive Committee meeting, we will initiate the process for developing the next edition of *Critical Issues in Transportation*. The last edition was published in January 2019 and was released at the 2019 TRB Annual Meeting. An addendum on COVID-19 related issues was released at the 2021 TRB Annual Meeting, and we will be releasing an addendum on racial equity issues very shortly. Given the rapidity with which issues are evolving or emerging and the length of time it takes to undertake an inclusive process for development of the document, we have concluded it is time to begin the process for the next edition.

At the Executive Committee meeting, we hope to discuss both the process for developing the next edition, as well as ideas for issues that we should include. *Critical Issues in Transportation* is intended to provide a high level overview of the most important policy and research issues in transportation for the next 10 to 20 years in the United States; to provide guidance regarding the issues that the Executive Committee would like to see TRB's programs and committees focus on during the next five years; and to provide a broader audience TRB's view of the most important issues that transportation policy makers need to address at all levels of government.

The 2019 edition identified 63 issues organized under 12 topic areas. The topic areas were

- Transformational Technologies and Services
- Serving a Growing and Shifting Population
- Energy and Sustainability

- Resilience and Security
- Safety and Public Health
- Equity
- Governance
- System Performance and Asset Management
- Funding and Finance
- Goods Movement
- Institutional and Work Force Capacity
- Research and Innovation

The complete list of issues under each of these topics can be found at <https://www.nap.edu/catalog/25314/critical-issues-in-transportation-2019>. Although all of these topics are still relevant, some may be more important today than they were in 2018 when the original list was developed, and there may be some topics that we would want to reframe, add, or remove. Given that many of the specific issues that were identified in the 2019 were enduring issues, they may once again be among the highest priority issues, but other issues will have evolved, and new issues will have emerged. Priorities regarding what issues are most important will also have evolved.

*Critical Issues in Transportation* is issued as a report of the National Academies of Sciences, Engineering, and Medicine, with the TRB Executive Committee being the authoring committee. In the past, the Subcommittee on Planning and Policy Review has had lead responsibility for development of the document, with the full Executive Committee being kept up to date throughout the process and given opportunities for review and comment. We propose that we follow that process this time as well. The document will need to meet all requirements of a report issued by the National Academies, including going through the rigorous NASEM report review process.

As we did in developing the 2019 report, we also propose that we provide the opportunity for oversight committees for TRB's programs (the Technical Activities Council and the four CRP oversight committees), as well as the Marine Board and chairs of TRB's standing technical activities, be given opportunities for input regarding potential issues.

In order to keep both the process of developing the list of issues and the list of potential issues manageable, we propose that the following criteria be used regarding potential issues for inclusion:

- Issues of strategic importance from a policy or research perspective
- Important policy or research questions that result from changes that have occurred outside transportation that affect transportation
- Changed policy priorities have made an issue important or have raised questions or that warrant attention
- New knowledge or innovations that have created new issues related to transportation
- Issues previously identified that are still important, but have not gotten the attention they deserve or insufficient progress has been made in resolving the issue
- Issues that are important across multiple modes of transportation

- New issues that have surfaced from research or the implementation of research or technology since the last edition

Although many of the issues that were identified in the 2019 edition would meet these criteria, given the major changes that have occurred that both directly and indirectly affect transportation, we would expect there will also be some new issues, an evolution of other issues, and different priorities regarding what the most important issues are. One of the challenges we will have is how to position this refresh of the list of issues, so it does not come across as being overly repetitive of the 2019 list of issues.

Since we are just starting the process of compiling and developing issues for the next edition, we would like to ask for the assistance of Executive Committee members, by asking each of you what you consider to be the top ten critical issues in transportation from your perspective. They should be specific issues and not broad topics. For example, rather than saying goods movement, or even e-commerce, as an issue, indicate automation of first mile-last mile e-commerce deliveries as an issue. You can use the topic areas from the 2019 edition as listed above to help you think about categories of issues, but please be more specific than just identifying a topic area. You can also identify additional topic areas if you think there is one or more that is important that is not in the list above. For example, it has been suggested that we should make "Changes in Travel Demand" a separate topic area. Please send your top ten list (you can identify more than ten if you want) to Neil at [npedersen@nas.edu](mailto:npedersen@nas.edu) by Friday, July 9<sup>th</sup>. We will synthesize the list we receive before the Executive Committee meeting. If you are not able to submit your list by July 9<sup>th</sup>, please bring your list to the Executive Committee meeting.

Thank you for your assistance in helping us jump start the process for the next edition of Critical Issue in Transportation. We both look forward to seeing you in Woods Hole or online on July 19<sup>th</sup>.

**TRB Cooperative Research Programs (CRP)****Status Report to Executive Committee**

July 20, 2021

**New Staff Members 2021:**

Richard Retting, NCHRP/BTSCRCP

Jordan Christensen, ACRP

**New Panel Members Appointed last 12 months: 925****TRB-CRP 2021 PUBLICATIONS**

(as of June 22, 2021)

**NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM****NCHRP Research Reports**

- 948 Guide for Pedestrian and Bicyclist Safety at Alternative and Other Intersections and Interchanges, 222 p. (01/2021)  
<http://www.trb.org/Main/Blurbs/181781.aspx>
- 956 Guidebook for Data and Information Systems for Transportation Asset Management, 338 p. (03/2021)  
<http://www.trb.org/Publications/Blurbs/181816.aspx>
- 957 Utilization Measurement and Management of Fleet Equipment, 94 p. (01/2021)  
<http://www.trb.org/Main/Blurbs/181743.aspx>
- 958 Electrochemical Test Methods to Evaluate the Corrosion Potential of Earthen Materials, 92 p. (02/2021)  
<http://www.trb.org/Main/Blurbs/181629.aspx>
- 959 Diverging Diamond Interchange Informational Guide, 2nd Edition, 252 p. (01/2021)  
<http://www.trb.org/Publications/Blurbs/181562.aspx>

- 960 Proposed AASHTO Practice and Tests for Process Control and Product Acceptance of Asphalt-Treated Cold Recycled Pavements, 162 p. (01/2021)  
<http://www.trb.org/Main/Blurbs/181389.aspx>
- 961 Entrained Air-Void Systems for Durable Highway Concrete, 84 p. (01/2021)  
<http://www.trb.org/Main/Blurbs/181668.aspx>
- 962 Proposed Modification to AASHTO Cross-Frame Analysis and Design, 158 p. (02/2021)  
<http://www.trb.org/Main/Blurbs/181600.aspx>
- 963 A Pandemic Playbook for Transportation Agencies (joint with TCRP Rep. 225), 90 p. (04/2021)  
<http://www.trb.org/Main/Blurbs/182018.aspx>
- 965 Mitigation of Weldment Cracking in Steel Highway Structures Due to the Galvanizing Process, 98 p. (06/2021)  
<http://www.trb.org/Main/Blurbs/181974.aspx>
- 966 Posted Speed Limit Setting Procedure and Tool: User Guide (& WOD 291), 72 p. (06/2021)  
<http://www.trb.org/Main/Blurbs/182038.aspx>
- 967 Asphalt Binder Aging Methods to Accurately Reflect Mixture Aging, 230 p. (04/2021)  
<http://www.trb.org/Main/Blurbs/181836.aspx>
- 974 Application of Crash Modification Factors for Access Management, Volume 1: Practitioner's Guide, XX p. (XX/2021)
- 974 Application of Crash Modification Factors for Access Management, Volume 2: Research Overview, XX p. (XX/2021)
- 975 Transportation System Resilience: Research Roadmap and White Papers, XX p. (XX/2021)

### **NCHRP Synthesis**

- 560 Practices for Construction-Ready Digital Terrain Models, 92 p. (02/2021)  
<http://www.trb.org/Main/Blurbs/181735.aspx>
- 561 Use of Vehicle Probe and Cellular GPS Data by State Departments of Transportation, 108 p. (03/2021)  
<http://www.trb.org/Main/Blurbs/181749.aspx>
- 563 Performance Metrics for Public-Private Partnerships, 120 p. (04/2021)  
<http://www.trb.org/Publications/Blurbs/181942.aspx>

- 564 Practices for Selecting Pedestrian and Bicycle Projects, 134 p. (05/2021)  
<http://www.trb.org/Main/Blurbs/181973.aspx>

### **NCHRP Web-Only Documents**

- 286 Principles and Guidance for Presenting Active Traffic Management Information to Drivers, 190 p. (03/2021)  
<http://www.trb.org/Publications/Blurbs/181479.aspx>
- 291 Development of a Posted Speed Limit Setting Procedure and Tool (& Rep. 966), 190 p. (06/2021)  
<http://www.trb.org/Main/Blurbs/182154.aspx>
- 292 Roadside Hardware Replacement Analysis: User Guide, 30 p. (02/2021)  
<http://www.trb.org/Main/Blurbs/181809.aspx>
- 293 Deploying Transportation Resilience Practices in State DOTs (& Rep. 970), 133 p. (XX/2021)
- 294 Revised Clear-Water and Live-Bed Contraction Scour Analysis Training Manual (& Rep.971), 121 p. (XX/2021)
- 295 Improved Prediction Models for Crash Types and Crash Severities, 138 p. (04/2021)  
<http://www.trb.org/Publications/Blurbs/182085.aspx>
- 296 Guidelines for Cost-Effective Safety Treatments of Roadside Ditches, 282 p. (04/2021)  
<http://www.trb.org/Main/Blurbs/181975.aspx>
- 297 Intersection Crash Prediction Methods for the Highway Safety Manual, 222 p. (04/2021)  
<http://www.trb.org/Main/Blurbs/182055.aspx>
- 299 Investigating the Relationship of As-Constructed Asphalt Pavement Air Voids to Pavement Performance, 209 p. (06/2021)  
<http://www.trb.org/Main/Blurbs/182244.aspx>

## TRANSIT COOPERATIVE RESEARCH PROGRAM

### TCRP Research Reports

- [219 Guidebook for Deploying Zero-Emission Transit Buses, 186 p. \(02/2021\)](http://www.trb.org/Publications/Blurbs/180811.aspx)  
<http://www.trb.org/Publications/Blurbs/180811.aspx>
- [220 Low-Speed Automated Vehicles \(LSAVs\) in Public Transportation, 124 p. \(01/2021\)](http://www.trb.org/Publications/Blurbs/181659.aspx)  
<http://www.trb.org/Publications/Blurbs/181659.aspx>
- [221 Redesigning Transit Networks for the New Mobility Future: Resource and Toolkits, 158 p. \(01/2021\)](http://www.trb.org/Main/Blurbs/181561.aspx)  
<http://www.trb.org/Main/Blurbs/181561.aspx>
- [222 Analysis of Green Bond Financing in the Public Transportation Industry, 50 p. \(01/2021\)](http://www.trb.org/Main/Blurbs/181632.aspx)  
<http://www.trb.org/Main/Blurbs/181632.aspx>
- [223 Guidebook and Research Plan to Help Communities Improve Transportation to Health-Care Services, 192 p. \(01/2021\)](http://www.trb.org/Main/Blurbs/181416.aspx)  
<http://www.trb.org/Main/Blurbs/181416.aspx>
- [224 Guide to Joint Development for Public Transportation Agencies \(& WOD 73\), XX p. \(XX/2021\)](http://www.trb.org/Main/Blurbs/181416.aspx)  
<http://www.trb.org/Main/Blurbs/181416.aspx>
- [225 A Pandemic Playbook for Transportation Agencies \(joint with NCHRP Rep. 963\), 90 p. \(04/2021\)](http://www.trb.org/Main/Blurbs/182018.aspx)  
<http://www.trb.org/Main/Blurbs/182018.aspx>
- [226 An Update on Public Transportation's Impacts on Greenhouse Gas Emissions, 122 p. \(05/2021\)](http://www.trb.org/Main/Blurbs/181941.aspx)  
<http://www.trb.org/Main/Blurbs/181941.aspx>

### TCRP Synthesis

- 152 Transit Agency Relationships and Initiatives to Improve Bus Stops and Pedestrian Access, 208 p. (05/2021)  
<http://www.trb.org/Main/Blurbs/182090.aspx>
- 153 The Transit Analyst Toolbox: Analysis and Approaches for Reporting, Communicating, and Examining Transit Data, 102 p. (04/2021)  
<http://www.trb.org/Publications/Blurbs/181833.aspx>
- 154 Innovative Practices for Transit Planning at Small to Mid-Sized Agencies, 162 p. (05/2021)  
<http://www.trb.org/Publications/Blurbs/181971.aspx>

- 155 Intelligent Transportation Systems in Headway-Based Bus Service, 98 p. (04/2021)  
<http://www.trb.org/Publications/Blurbs/181965.aspx>

### **TCRP Web-Only Documents**

- 73 Guide to Joint Development for Public Transportation Agencies: Appendices (& Rep. 224), 186 p. (XX/2021)

## **AIRPORT COOPERATIVE RESEARCH PROGRAM**

### **ACRP Research Reports**

- 220 Guidebook for Developing a Zero- or Low-Emissions Roadmap at Airports (On hold)
- 225 Rethinking Airport Parking Facilities to Protect and Enhance Non-Aeronautical Revenue, 150 p. (03/2021)  
<http://www.trb.org/Main/Blurbs/181748.aspx>
- 226 Planning and Design of Airport Terminal Restrooms and Ancillary Spaces, 124 p. (01/2021)  
<http://www.trb.org/Publications/Blurbs/181630.aspx>
- 227 Evaluating and Implementing Airport Privatization and Public-Private Partnerships, 194 p. (04/2021)  
<http://www.trb.org/Publications/Blurbs/181861.aspx>
- 228 Airport Microgrid Implementation Toolkit, 112 p. (04/2021)  
<http://www.trb.org/Main/Blurbs/181834.aspx>
- 229 Airport Collaborative Decision Making (ACDM) to Manage Adverse Conditions, 68 p. (04/2021)  
<http://www.trb.org/Publications/Blurbs/181702.aspx>
- 230 Enhancing Academic Programs to Prepare Future Airport Industry Professionals, 126 p. (04/2021)  
<http://www.trb.org/Publications/Blurbs/181835.aspx>
- 231 Evaluating the Traveler's Perspective to Improve the Airport Customer Experience, 200 p. (06/2021)  
<http://www.trb.org/Aviation1/Blurbs/182037.aspx>
- 232 Playbook for Cultivating Talent in the Airport Environment, 108 p. (05/2021)  
<http://www.trb.org/Main/Blurbs/181964.aspx>



## **ACRP Synthesis**

- 115 Practices in Airport Emergency Plans, 170 p. (02/2021)  
<http://www.trb.org/Main/Blurbs/181633.aspx>

## **ACRP Legal Research Digests**

- ?? Compilation of DOT and FAA Airport Legal Determinations and Opinion Letters as of December 31, 2019, 2 p. (05/2021)
- 41 Legal Issues Relating to Airport Commercial Contracts, 32 p. (02/2021)  
<http://www.trb.org/Aviation1/Blurbs/181703.aspx>
- 42 Legal Implications of Data Collection at Airports, 80 p. (05/2021)  
<http://www.trb.org/Main/Blurbs/182059.aspx>

## **ACRP Web-Only Documents**

- 51 Commercial Space Vehicle Emissions Modeling, 107 p. (04/2021)  
<http://www.trb.org/Main/Blurbs/181750.aspx>

## **ACRP WebResources**

- ?? ACRP LRD 21: Compilation of DOT and FAA Airport Legal Determinations and Opinion Letters as of December 31, 2019, 2 p. (05/2021)  
[https://crp.trb.org/acrp\\_lrd21/](https://crp.trb.org/acrp_lrd21/)

## **BEHAVIORAL TRAFFIC SAFETY COOPERATIVE RESEARCH PROGRAM**

### **BTSCRP Research Reports**

- 1 Using Electronic Devices While Driving: Legislation and Enforcement Implications, 264 p. (02/2021)  
<http://www.trb.org/Publications/Blurbs/181698.aspx>

## **TR News Magazine**

- 330 Recycled Materials Web Map (Nov/Dec 2020), 56 p. (01/2021)  
<http://www.trb.org/Publications/Blurbs/181728.aspx>

- 331 Challenges of Truck Size and Weight (Jan/Feb 2021), 64 p. (03/2021)  
<http://www.trb.org/main/blurbs/182002.aspx>
- 332 2021 Virtual Event: TRB's 100th Annual Meeting, 56 p. (05/2021)  
<http://www.trb.org/Publications/Blurbs/182193.aspx>

### **Transportation Research Circulars (E-Circulars)**

- E-C268 6th International Conference on Women's Issues in Transportation: Insight, Inclusion, and Insights: Framing the Future for Women in Transportation, 150 p. (01/2021)  
<http://www.trb.org/Main/Blurbs/181597.aspx>
- E-C269 2020 Commodity Flow Survey Workshop, 43 p. (01/2021)  
<http://www.trb.org/Publications/Blurbs/181730.aspx>
- E-C270 Opportunities for Research on Transportation and Equity, 40 p. (05/2021)  
<http://www.trb.org/Publications/Blurbs/182089.aspx>
- E-C271 Critical Issues in Aviation and the Environment 2021, 123 p. (05/2021)  
<http://www.trb.org/Main/Blurbs/182198.aspx>
- E-C272 Technology Exchange on Local Road Bridge Programs, XX p. (05/2021)  
<http://www.trb.org/Main/Blurbs/182200.aspx>

### **PRE-PUBLICATIONS**

#### **NCHRP**

- 967 Short- and Long-Term Binder Aging Methods to Accurately Reflect Aging in Asphalt Mixtures, 244 p. (02/2021)
- 968 LED Roadway Lighting: Impact on Driver Sleep Health and Alertness, 71 p. (03/2021)
- 970 Mainstreaming System Resilience Concepts into Transportation Agencies: A Guide, 249 p. (03/2021)
- 973 Long-Term Aging of Asphalt Mixtures for Performance Testing and Prediction: Phase III Results, 158 p. (03/2021)
- 974 Application of Crash Modification Factors for Access Management, Volume 1: Practitioner's Guide, 240 p. (04/2021)
- 974 Application of Crash Modification Factors for Access Management, Volume 2: Research Overview, 226 p. (04/2021)

- 975 Transportation System Resilience: Research Roadmap and White Papers, 124 p. (04/2021)
- 976 Resilience Primer for Transportation Executives, 39 p. (05/2021)

## **TCRP**

- 224 Guide to Joint Development for Public Transportation Agencies, 228 p. (01/2021)
- 226 An Update on Public Transportation's Impacts on Greenhouse Gas Emissions, 131 p. (03/2021)
- 227 Prioritization of Public Transportation Investments: A Guide for Decision-Makers, 88 p. (06/2021)

## **OTHER**

- TRB Annual Report + Overview
- ACRP Annual Report of Progress
- NCHRP Annual Report of Progress
- TCRP Annual Report of Progress (online only)
- 3 IDEA Annual Reports (online only)

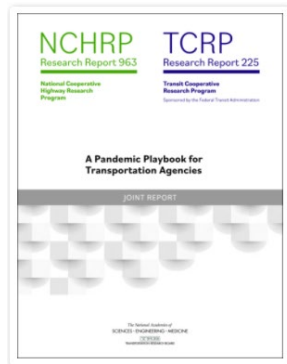
**CRP Contractors CY 2021**

Contractor	Name	SPO	Value
University of Kansas Center for Research	NCHRP Subaward 20-030/IDEA 223	Inam Jawed	\$135,000
Mark O'Neill LLC	NCHRP Subaward 20-030/IDEA 228	Inam Jawed	\$129,267
Texas A&M Transportation Institute	NCHRP Subaward 20-030/IDEA 224	Inam Jawed	\$135,000
Old Dominion University Research Foundation	NCHRP Subaward 20-030/IDEA 225	Inam Jawed	\$135,000
University of New Hampshire	NCHRP Subaward 20-030/IDEA 229	Inam Jawed	\$135,422
C&S Engineers, Inc	ACRP Subaward 02-90	Joseph Navarrete	\$349,982
Public Knowledge LLC	NCHRP Subaward 20-123(09)	Sid Mohan	\$99,865
Toole Design Group LLC	NCHRP Subaward 20-005/Topic 52-15	Leslie Harwood	\$45,000
Colorado State University	NCHRP Subaward 20-006/Topic 25-06	Gwen Chisholm-Smith	\$100,000
University of Nevada - Las Vegas	ACRP Subaward 09-20	Matthew Griffin	\$299,705
Georgia Institute of Technology	NCHRP Subaward 20-030/IDEA 226	Inam Jawed	\$100,000
Texas A&M Transportation Institute	NCHRP Subaward 17-071A	Richard Retting	\$480,000
Metro Analytics PLLC	NCHRP Subaward 20-126(02)	Waseem Dekelbab	\$348,929
The Cadmus Group LLC	NCHRP Subaward 13-08	Amir Hanna	\$350,000
University of New Mexico	Rail Safety Subaward IDEA-43	Inam Jawed	\$100,000
Resource Systems Group Inc.	NCHRP Subaward 08-133	Stephan Parker	\$599,994
GLASSRATNER ADVISORY & CAPITAL GROUP LLC dba B. RILEY ADVISORY SERVICES	ACRP Subaward 04-19B	Joseph Navarrete	\$5,000
Palo Alto Trans Mgmt Assoc (TMA)	TCRP Subaward J-04/IDEA 99	Gwen Chisholm-Smith	\$100,000

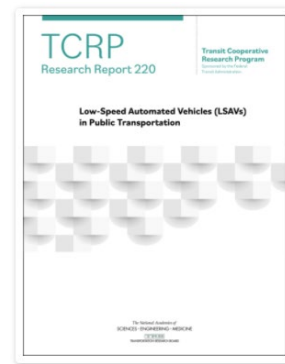
Monarch Joint Venture	NCHRP Subaward 20-044(33)	Trey Wadsworth	\$162,800
Fehr & Peers	NCHRP Subaward 20-102(26)	Ann Hartell	\$249,923
University of South Florida	NCHRP Subaward 20-005/Topic 52-13	Leslie Harwood	\$45,000
ICF Consulting Inc	ACRP Subaward 11-02/Task 40	Marci Greenberger	\$99,998
Texas A&M Transportation Institute	NCHRP Subaward 20-007/Task 358	David Jared	\$100,000
Mead & Hunt, Inc.	ACRP Subaward 10-30	Theresia Schatz	\$400,000
Barich, Inc.	ACRP Subaward 11-02/Task 41	Theresia Schatz	\$99,961
Spy Pond Partners LLC	ACRP Subaward 01-49	Theresia Schatz	\$350,000
Ricondo & Associate, Inc.	ACRP Subaward 10-31	Theresia Schatz	\$350,000
Larry Thomas w/ The Thomas Law Firm (ePro)	TCRP Subaward J-05/Topic 20-03	Gwen Chisholm-Smith	\$70,000
Texas A&M Transportation Institute	NCHRP Subaward 09-65	Edward Harrigan	\$750,000
Kaplan Kirsch Rockwell	ACRP Subaward 11-01/Topic 11-03	Theresia Schatz	\$75,000
Harris Miller Miller Hanson Inc.	ACRP Subaward 11-08 (21-01)	Matthew Griffin	\$119,468
University of Houston	NCHRP Subaward 12-121	Waseem Dekelbab	\$540,000
Applied Engineering Management Corporation	NCHRP Subaward 20-044(39)	Lawrence Goldstein	\$365,700
Applied Research Associates Inc.	NCHRP Subaward 20-044(34)	Camille Crichton-Sumners	\$190,000
Auburn University	NCHRP Subaward 09-66	Edward Harrigan	\$500,000
Auburn University	NCHRP Subaward 12-123	Waseem Dekelbab	\$300,000
Virginia Polytechnic Institute & State University	NCHRP Subaward 10-109	Camille Crichton-Sumners	\$600,000
Applied Research Associates, Inc.	NCHRP Subaward 20-126(03)	Waseem Dekelbab	\$150,000
Texas A&M Transportation Institute	NCHRP Subaward 20-123(06)	David Jared	\$75,000
Woolpert, Inc.	ACRP Subaward 01-46A	Matthew Griffin	\$349,911

Texas A&M Transportation Institute	NCHRP Subaward 07-29	Camille Crichton- Sumners	\$1,000,000
Mead & Hunt, Inc.	ACRP Subaward 04-27	Theresia Schatz	\$300,000
Michael Baker International	NCHRP Subaward 12- 122	Waseem Dekelbab	\$340,000
Cadmus Group LLC	ACRP Subaward 03-59	Joseph Navarrete	\$400,000
Kittelson & Associates	NCHRP Subaward 17- 098	Amir Hanna	\$400,000
Terracon Consultants, Inc.	ACRP Subaward 02-91	Joseph Navarrete	\$299,838
Milestone Solutions LLP	NCHRP Subaward 19-18	Dianne Schwager	\$599,932
<b>Total:</b>			<b>\$12,930,695</b>

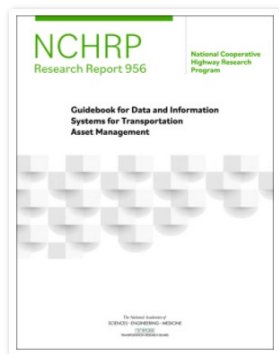
## Notable Products 2021:



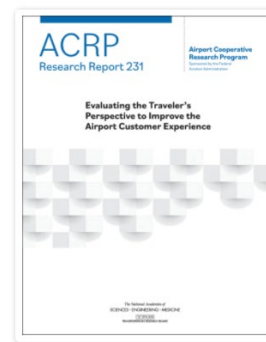
<https://www.nap.edu/catalog/26145/a-pandemic-playbook-for-transportation-agencies>



<https://www.nap.edu/catalog/26056/low-speed-automated-vehicles-lsavs-in-public-transportation>



<https://www.nap.edu/catalog/26126/guidebook-for-data-and-information-systems-for-transportation-asset-management>



<https://www.nap.edu/catalog/26222/evaluating-the-travelers-perspective-to-improve-the-airport-customer-experience>



# MARINE BOARD

of the

TRANSPORTATION RESEARCH BOARD

TRB Executive Committee Meeting  
July 2021

*M. Grabowski, Chair*  
*S. Brotemarkle, Program Director*



# 2021 Marine Board Areas of Interest

- Autonomous Shipping / Future of Navigation
- Maritime Resilience
- Future of the Maritime Supply Chain
- U.S. Offshore Wind Energy Development
- Towards Zero Emissions Shipping
- U.S. Maritime Policy
- Arctic Maritime Operations

## Crosscutting Elements

- Human and Intellectual Capital
- Safety Management, Culture and Inspections
- Cyber in the Marine Transportation System

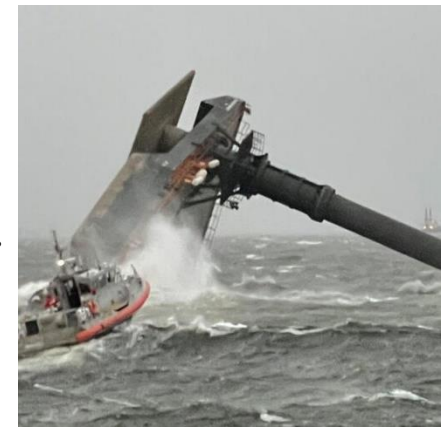
# Marine Board Virtual Spring Meeting

## June 17-18, 2021

### *Focus Session: Emerging Challenges in the Maritime Domain*

Agencies with stewardship, safety and regulatory missions over coastal areas are being challenged by fast moving industries seeking to capitalize on activities that impact traditional waterways management and users.

- Offshore Wind Energy Development
- Autonomous Vessel Testing and Operations
- Aquaculture/Fish Farming
- Commercial Space Transportation
- Offshore Hydrokinetic Energy – Waves and Currents
- Alternative Uses of Existing Oil and Gas Platforms



Impacts to involved federal agencies (*U.S. Coast Guard, National Oceanic and Atmospheric Administration, Department of the Interior, U.S. Army Corps of Engineers, Maritime Administration, U.S. Navy, Federal Aviation Administration and the Department of Energy*), states, ports, industry, academia, partnerships, stakeholders, public

<https://www.dw.com/en/how-do-offshore-wind-farms-affect-ocean-ecosystems/a-40969339#>

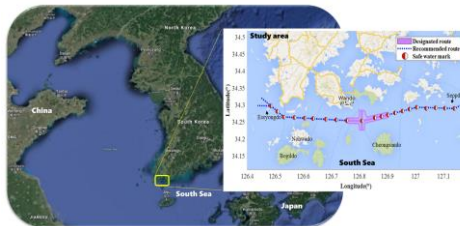
Retrieved 16 April 2021

# Marine Board Virtual Spring Meeting Page 147 of 255 *June 2021*

## Maritime Emerging Challenges – R&D Needs, Gaps

RE Executive Committee Meeting, July 15, 2021

- Data-informed **risk assessment frameworks** for navigation safety, waterways management and search and rescue (SAR)
- Frameworks and standards for **governance**
- Regional differences vs. scalable national frameworks
- **Agency authorities, mission alignment, and capacity alignment** to meet future challenges and growing activity.
- **Human capital** capabilities and competencies, workforce development, education and training pipelines
- **Lessons learned**, templates for successful/failed partnerships
- **Non-traditional partnerships and coalitions** beyond regulators and geographic political entities



<https://youtu.be/IEr9cPpuAx8>,  
Retrieved 16 April 2021



[https://www.google.com/url?sa=i&url=http%3A%2F%2Fventurashellfishenterprise.com%2Fpdf%2FCOWI.pdf&psig=AOvVaw1I0-MSfS8sUvLW1Eb4Nn51&ust=1618669157826000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCNiA\\_-b6gvACFQAAAAAdAAAAABAD](https://www.google.com/url?sa=i&url=http%3A%2F%2Fventurashellfishenterprise.com%2Fpdf%2FCOWI.pdf&psig=AOvVaw1I0-MSfS8sUvLW1Eb4Nn51&ust=1618669157826000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCNiA_-b6gvACFQAAAAAdAAAAABAD), retrieved 16 April 2021

# Marine Board Virtual Spring Meeting Page 148 of 255 June 17, 2021

## Outcomes and Observations

- **Agencies in working in partnership** and with overlapping stewardship roles could benefit from scalable and more effective interagency frameworks and mechanisms for regulatory cooperation, data harmonization/interchange, mission clarity, and appropriate authorities.
- **Potential for a more specific funded standalone workshop** under the auspices of the Marine Board to further explore these concepts, identify gaps and potential framework elements that could underpin a consensus study.



[https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.marinelink.com%2Fnews%2Funnamed-dawningship436398&psig=AOvVaw1IMsIS8sUvLW1Eb4Nn51&ust=1618669157826000&source=images&cd=vfe&ved=0CAIQiRxfFwoTCNiA\\_-b6qvACFQAAAAAdAAAAABAZ](https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.marinelink.com%2Fnews%2Funnamed-dawningship436398&psig=AOvVaw1IMsIS8sUvLW1Eb4Nn51&ust=1618669157826000&source=images&cd=vfe&ved=0CAIQiRxfFwoTCNiA_-b6qvACFQAAAAAdAAAAABAZ), retrieved 16 April 2021



[https://www.google.com/url?sa=i&url=http%3A%2F%2Fwww.fao.org%2F3%2Fi6043e%2Fi6043e.pdf&psig=AOvVaw1I0-MSIS8sUvLW1Eb4Nn51&ust=1618669157826000&source=images&cd=vfe&ved=0CAIQiRxfFwoTCNiA\\_-b6qvACFQAAAAAdAAAAABAZ](https://www.google.com/url?sa=i&url=http%3A%2F%2Fwww.fao.org%2F3%2Fi6043e%2Fi6043e.pdf&psig=AOvVaw1I0-MSIS8sUvLW1Eb4Nn51&ust=1618669157826000&source=images&cd=vfe&ved=0CAIQiRxfFwoTCNiA_-b6qvACFQAAAAAdAAAAABAZ), retrieved 16 April 2021

- **Leadership meetings** with core sponsors on Administration priorities, current areas of interest
  - ONR, MARAD, *June 2021*
    - *Diversity, Equity, Inclusion*
    - *Workforce and Education Pipeline*
    - *Supply chain*
  - *NOAA, USCG, USACE, BSEE, SUPSALV, Fall 2021*
- **Fall 2021 Marine Board Meeting** *November 17-18, 2021 – Keck DC*
  - Decarbonization, Zero Emissions Focus Session
  - R&D Gaps, Needs – biofuels, port and vessel design and infrastructure, energy storage/distribution/generation
  - Workforce development, education – offshore wind + vessel wind
  - MARAD, ONR, DOE, NOAA, EPA, states, ports, energy industry, academia, training institutions, regional coalitions
- **Spring 2022 Marine Board Meeting**
  - Diversity, Equity and Inclusion in Marine Transportation as potential focus session topic

SUBCOMMITTEE: Coast Guard and  
Maritime Transportation  
DATE: Thursday, April 15,  
2021  
TIME: 11:00 AM  
LOCATION: 2167 Rayburn House  
Office Building and Virtually



# EXECUTIVE SUB-COMMITTEE ON INTERNATIONAL ACTIVITIES (E0004)

**JULY BRIEFING**  
**TRB EXECUTIVE COMMITTEE**

**JULY 2021**



- **Status of New International Agreements**
- **TRB Activities in International Partner Events**
- **Joint Webinars**
- **Successes of TRB Engagement**

# At beginning of 2021 the following are active partner agreements:

- China Highway and Transportation Society (CHTS)
- China Overseas Transportation Association (COTA)
- European Conference of Transport Research Institutes (ECTRI)
- International Road Federation - Geneva (IRF)
- International Transport Forum (ITF)
- World Road Association (PIARC)



## Signed New Agreements:

- Pan-American Society of Transportation Research (PANAMSTR)
- World Conference on Transport Research Society (WCTRS)

## Agreements in a drafting process:

- The World Bank
- International Civil Aviation Organization (ICAO)

# Introducing TRB Partners



# International Activities in 2021 Events

PARTNER	EVENT	DATE	TRB SUPPORT AND RESOURCES	NOTES
TRB	Annual Meeting	January 5-29		Virtual
CHTS	MMM5 Webinar	April 29	<ul style="list-style-type: none"> <li>• TRB Co-sponsorship</li> <li>• Promotion of event</li> </ul>	Virtual – No registration fee
ITF	Pre-Summit Research Day at ITF Annual Summit	May 11-12	<ul style="list-style-type: none"> <li>• TRB Co-Sponsorship</li> <li>• Promotion of event and call for abstracts and support for reviewing abstracts</li> </ul>	Virtual – <a href="https://www.itf-oecd.org/pre-summit-research-days-2021">https://www.itf-oecd.org/pre-summit-research-days-2021</a>
ITF	Annual Summit	May 17-28	<ul style="list-style-type: none"> <li>• TRB Co-sponsorship</li> <li>• Promotion of event</li> </ul>	Virtual – <a href="https://www.2021.itf-oecd.org/">https://www.2021.itf-oecd.org/</a>
ECTRI	Open Science Webinar	June 9	Promotion of event	<a href="https://beopen-project.eu/events/making-open-science-the-new-normal-for-transport-research">https://beopen-project.eu/events/making-open-science-the-new-normal-for-transport-research</a>
CHTS	World Transport Convention	June 15-19, Xi'an, China	<ul style="list-style-type: none"> <li>• TRB Co-sponsorship</li> <li>• MMM6 at WTC</li> </ul>	<a href="https://en.wtc-conference.com/">https://en.wtc-conference.com/</a>
IRF/SATC	Annual Southern Africa Transport Conference	July 5-7	<ul style="list-style-type: none"> <li>• Promotion of event</li> <li>• Participate in IRF Africa Board Meeting</li> </ul>	<a href="https://irfnet.ch/event/southern-africa-transport-conference/">https://irfnet.ch/event/southern-africa-transport-conference/</a>

# Upcoming International Activities Events

PARTNER	EVENT	DATE	TRB SUPPORT AND RESOURCES	NOTES
TRB	ICC Mid-Term Meeting	July 15	<ul style="list-style-type: none"> <li>Zoom Meeting account</li> <li>Promote event to TRB committees</li> </ul>	Partner to provide space and telecom at no charge
PANAM	XXI Conference	August 11-13 Lima, Peru	<ul style="list-style-type: none"> <li>TRB Co-sponsorship</li> <li>Promotion of event and call for abstracts</li> </ul>	<a href="https://panamstr.org/en/">https://panamstr.org/en/</a>
ECTRI	Young Researchers Seminar	September 15-17	Submission of Young researcher abstracts and support in tutoring	
IRF	Annual Autumn Conference	October 20-21	Promotion of event	<a href="http://www.irfnet.ch">www.irfnet.ch</a>
APTA	TRANSform conference and Expo	November 7-11 Orlando, FL	Promotion of event	<a href="https://www.aptaexpo.com/apta2021/public/enter.aspx">https://www.aptaexpo.com/apta2021/public/enter.aspx</a>
COTA	20 <sup>th</sup> & 21 <sup>st</sup> Joint CICTP Conference (CICTP 2020-21)	December 16-19 Xi'an, China	<ul style="list-style-type: none"> <li>TRB Co-sponsorship</li> <li>Promotion of event</li> </ul>	<a href="http://www.cota-home.org/cictp/cictp2020-21.html">http://www.cota-home.org/cictp/cictp2020-21.html</a>

## TRB – China Highway Transportation Society Mobility Management Meeting (MMM Series)

- *MMM Webinar 4: Road Safety and Mobility – Planning for the Future, February 24*
  - Organized by TRB CHTS, IRF Geneva, PIARC, Tongji Univ. and Didi Chuxing
  - Reached over 3000 attendees on Bilibili and 120 on Zoom
- *MMM Webinar 5: Re-Imagining Integrated Mobility Management Systems, April 29*
  - Organized by TRB, CHTS, ECTRI, ERTICO, COTA

**COTA-TRB-ITE Webinar:  
Committee Service and Involvement, June 17**

## **TRB Committee on Transportation in Developing Countries – World Bank Webinar:**

*Challenges and Future Possibilities: Improving “Informal”  
Public Transport in Developing Countries, May 20*

## **TRB-PIARC Webinar:**

*Disaster Management: The effects and management of  
Covid-19 whilst looking to the future, June 30*

## **ITF Research Day Workshop, May 11-12**

- Hosted by TRB, ECTRI, ITF, and WCTRS
- ITF stated quality of presentation have greatly improved
- Presenters are asking for opportunities to publish work in TRB, ECTRI, and WCTRS Journals

## **TRB Participating in PIARC Advisory Group Meetings**

- PIARC formed DEI Task Force, Co-chaired by Christos Xenophontos
- TRB Shared its Diversity, Equity, and Inclusion Strategic Plan

## **TRB Participating in IRF Africa Board Meeting, July 6**

## **NASEM Communications Staff sharing Open Rates for Marketing of International Partner Events**

## Young Members Coordinating Council Report, July 2021

In its twelfth year, the Young Members Coordinating Council (YMCC) has continued to develop and promote opportunities for involvement, resources, connections, and representation in all levels of TRB. Evolution of YMCC continues following the Technical Activities Division's Strategic Alignment effort.

### Organization

Following the Strategic Alignment effort, YMCC is one of four Coordinating Councils and continues to have representation from most TAC Groups, although, the level of participation varies. Some newly established Group level subcommittees began meeting at the 2021 January Annual Meeting and are continuing with regular discussions. Other new Group subcommittees are still under consideration.

Eleftheria (Ria) Kontou effectively assumed the YMCC Chair position April 15, 2021. Under Dr. Kontou's leadership, YMCC continues to hold periodic meetings and to promote and maintain young professional involvement at an effective level of young member activity including:

- Documenting key points for YMCC and its Subcommittees to provide input to Group and Section leadership, as well as TAC and the Executive Committee
- Mentoring Programs organized at the Group Subcommittee level
- Exploring strategies and platforms to help foster effective communication with young members and friends

The YMCC Chair continues to serve as an active member of TAC and ex officio member of the Executive Committee. This action has helped establish young member representation at all levels and spheres of TRB, offering the opportunity to share young member input and to communicate directly back to young members with relevant information.

### 2022 Annual Meeting Activities

While the TRB Annual Meeting returns to in-person for 2022, session and workshop allocations remain limited. Young members continue to be actively engaged in several program elements, including:

- Meetings of Young Members Coordinating Council and the following Group-level Young Member Subcommittees: Aviation, Freight Systems/Marine, Policy and Organization, Public Transportation, Safety and Operations, Transportation Infrastructure
- YMCC has been holding 'idea generator' discussions to narrow down to a single session topic as allocated for the 2022 Annual Meeting.
- Young Member Subcommittees are exploring opportunities to engage with their respective Groups to engage in session planning.
- The YMCC Chair will participate in meetings of TAC and the Executive Committee.

### Other Activity

YMCC is gathering feedback from the Young Member Subcommittees to consolidate and provide feedback to the next edition of *Critical Issues in Transportation*.

A number of Young Member Subcommittees continue to have active mentorship programs. These programs match young members with experienced professionals for annual meeting and/or career advice and guidance.

YMCC continues to explore strategies and platforms to help foster effective communication with young members and friends.



**CONSENSUS AND ADVISORY STUDIES DIVISION**  
**Director, Thomas Menzies**

*The Consensus and Advisory Studies Division provides consensus advice to the federal government and the transportation community more broadly based upon the deliberations of special, ad hoc committees appointed by the chair of the National Research Council.*

**INFORMATION AND DISCUSSION ITEMS**

Studies Under Way

Status of Pending Studies

Proposed Study on Equity Metrics

Discussion

<u>PROJECT</u>	<u>SPONSOR</u>	<u>FUNDED AMOUNT</u>	<u>SPENT</u>	<u>SCHEDULE BEGAN</u>	<u>EXPECTED COMPLETION</u>	<u>STATUS</u>
1. Research and Technology Coordinating Committee	FHWA	\$200,000 (per year)	20%	10/2003	9/2023	Next meeting 12/2021
2. Long-term Infrastructure Performance	FHWA	\$320,0000 annually for 5 years (\$1.6 million total)	50% of annual	7/2017	6/2022	Next meeting 7/2021
3. Transit Research Analysis Committee	FTA	\$200,000 per year	25%	9/2003	7/2022	Next meeting pending FTA guidance
4. AV/Shared Mobility Forum	Multiple	\$650,000	75%	1/2018	Continuing	Webinars summer
5. Coast Guard Oversight of Recognized Organizations	USCG	\$500,000	45%	9/2020	9/2021	Next meeting 7/2021
6. Emerging Trends Symposia	FHWA	\$250,000	65%	7/2019	8/2022	Event held 11/2020; Next event pending
7. In-Cabin Wheelchair Restraint Systems	US Access Board	\$800,000	80%	9/2019	9/2021	Report in final stages of peer review
8. Gulf of Mexico Offshore Energy Production Safety Risks	Gulf Research Program	\$962,000	45%	1/2020	5/2022	Next meeting 7/2021

9. Transportation Resilience Metrics	OST-R	\$1,000,000	55%	4/2020	7/2021	Report being edited for delivery. Contract extension being sought for dissemination activity.
10. Safe Transportation of LNG by Rail	PHMSA	\$1,000,000	30%	8/2022	8/2022	First phase report was delivered 6/2021. Work on second phase report underway
11. Safety Improvements for DUKW boats (Duck Boats)	USCG	\$175,000	50%	9/2020	9/2021	Final meeting 7/2021
12. Emerging Trends in Aviation	FAA	\$3,100,000	0%	6/2021	6/2026	Committee being formed

**SUMMARY OF PENDING AND POTENTIAL STUDIES**

<u>Study</u>	<u>Sponsor</u>	<u>Scope</u>	<u>Status</u>
1.. Coast Guard Authorities	USCG	Examine emerging issues that may require Coast Guard oversight, regulation, or action; describe potential limitations and shortcomings of relying on current Coast Guard authorities to address emerging issues	<u>Enacted</u> in Section 8249, National Defense Authorization Act for FY 2021. <b>Initial engagement with USCG. Waiting for solicitation.</b>
2. Certificate of Compliance Inspection Program for LNG tank vessels	USCG	Evaluate the constraints and challenges to maintaining examination efficiency under the Certificate of Compliance program for bulk liquefied gases cargo, liquefied natural gas exports, and associated vessel traffic at United States ports.	<u>Enacted</u> in Section 8254, National Defense Authorization Act for FY 2021. <b>Initial engagement with USCG. Waiting for GAO study due in October before this study can be scoped out.</b>
3. Repurposing plastic waste in asphalt	OST-R	Examine the uses of plastic waste in transportation infrastructure, especially asphalt mixes	<u>Enacted</u> in Section 303, Save Our Seas Act 2.0. THUD Appropriations Act for FY 2021, Joint Explanatory Statement, Section L, limits the study to asphalt and directs it to

**TRB. Waiting for OST-R to assign to agency, probably FHWA**

4. Use of Automatic and Remote-Controlled Pipeline Shut-off Valves

PHMSA

Feasibility of the installation of automatic or remote-controlled shut-off valves on existing transmission pipelines crossing sensitive and high-consequence areas

Enacted in Section 119, Pipes Act of 2020. **Proposal submitted end of May: waiting for award.**

5. Emerging Trends in Aviation

FAA

Develop an annual report on emerging safety trends in air transportation, considering accident investigations, information provided by operators on their safety management systems, and FAA annual safety culture assessments. After first report, additional reports will be issued biennially through 2031.

Enacted in Section 132, THUD Appropriations Act for FY 2021. **Awa. Award received June 26.**

## **Data, Metrics, and Analytic Methods for Assessing Equity Impacts of Surface Transportation Funding Programs**

### **Proposed Statement of Task**

The study committee will identify and advise on opportunities for using data, metrics, and analytic methods to better inform decisions for allocating and programming federal surface transportation funds to enhance equity for underserved communities. The committee will consult the definitions of equity and underserved communities contained in Executive Order 13985 and consider the U.S. Department of Transportation's (USDOT) interest in ensuring that its funding programs produce outcomes that are equitable for underserved communities in terms of environmental justice and access to jobs, school, food, health care, and other life needs and services.

In focusing on the surface modes, the committee will examine USDOT funding programs for highways, public transportation, and passenger rail service. While the study scope will not include programs for funding maritime and aviation infrastructure and services, it will include programs for funding surface transportation access to marine ports and airports. To keep the scope manageable, the committee will pay particular attention to those funding programs that it believes are likely to have the greatest impacts on equity for underserved communities.

The committee will review equity-related data, metrics, and analytic methods that have been proposed by researchers and that are being used in transportation and other sectors, by other federal agencies, and by state and local governments. The committee will examine the applicability of these data, metrics, and methods to USDOT decision-making criteria, assessing their practical value by considering how they could be used in administering some specific USDOT programs. On the basis of its review and assessments, the committee will advise on the most promising methodological approaches and requisite data for analyzing equity impacts considered at the national, state, and local levels.

In keeping with the Executive Order's interest in ensuring that prompt actions are taken to account for equity in federal transportation funding, the committee will consider how existing data sources, metrics, and analytic methods can be used for this purpose by USDOT in making decisions for its discretionary funding programs. Accordingly, it is expected that early in its deliberations, the committee will convene a public information-gathering session in which experts in transportation equity issues and analysis will be consulted for their ideas on how existing data sources, metrics, and analytic methods applicable to equity can be used in administering USDOT's discretionary funding programs.

While the application of existing data and analytic tools to discretionary programs can provide the earliest opportunities to elevate equity in federal surface transportation funding, it is expected that the committee will also consider and advise on ways that state and local governments can measure, analyze, and account for equity when using federal surface transportation funds that are allocated by formula. Should it find that existing data sources are insufficient and that new sources of data are needed to better account for equity in USDOT's discretionary and formula funding programs, the committee may recommend options for meeting these needs.

### **Proposals for TRB-Convened Conferences (ACTION – Consent Agenda)**

*The following criteria are used in evaluating proposals for conferences, workshops, and similar activities. In general, an activity should not be proposed unless it draws a favorable response to all applicable criteria. The TRB staff and the proposing committees feel that the conferences being proposed satisfy these criteria.*

1. Is the proposed activity consistent with TRB's mission?
2. Does it have a high probability of producing worthwhile results?
3. Is the purpose of the activity objective and noncommercial? (Might the undertaking of the activity or the potential result give TRB an image of bias in an area in which it must remain neutral?)
4. Are the available time and funding adequate to conduct it in a proper manner and to carry it to a logical conclusion?
5. Is it within the existing staff capability of TRB or a capability that can reasonably be established?
6. Can committee members necessary to guide it be identified and their services obtained?
7. Does TRB retain the requisite control? Alternately, in case where TRB is not the lead organization, will TRB be involved in developing the program, and will TRB receive appropriate recognition?
8. Does it duplicate other efforts? Has the subject received all of the attention that is justified for the present time?
9. Is there a more appropriate organization, within the National Research Council or elsewhere, to handle it?

Executive Committee approval is requested for four TRB-Convened and two TRB-Cosponsored conferences as part of the consent agenda.



<b>CONFERENCES PROPOSED FOR SPONSORSHIP BY TRB</b>		
<b>Title</b>	<b>Date</b>	<b>Location</b>
1. 2022 Automation in Road Transportation Symposium	July 2022	TBD
2. AKD70 Summer Meeting Geospatial Data Acquisition Technologies in Design and Design	July 2022	Austin, Texas
3. 61st Annual Workshop on Transportation Law	July/August 2022	Portland Oregon
4. National Aviation System Planning Symposium	May 2023	Irvine, California
5. 3rd International Conference of International Society for Intelligent Construction (ISIC 2022)*	September 6-9, 2022	Guimaraes, Portugal
6. Advances in Materials and Pavement Performance Prediction*	December 12-14, 2022	Hong Kong

\*TRB participates as a cosponsor

Title:	<b>2022 Automation in Road Transportation Symposium</b>
Location:	TBD - probably California
Date (two month range):	July 2022
Description (overview and the objective of conference):	<p>The subject of road vehicle automation continues to be of high interest to the public, media, and the transportation profession. With the announced developments by all the major automobile manufacturers and other technology developers on this topic, TRB has identified this as a transformational technology and a strategic priority.</p> <p>This Symposium will build on the highly successful 2012 - 2020 Automated Vehicle Symposia and the 2021 Automated Road Transportation Symposium. ARTS22 will provide updates on the current research and development, advanced engineering progress, and field deployment results. The Symposium will also provide a strong focus on issues impacting the USDOT and State DOTs resulting from road vehicle automation advancements.</p> <p>NOTE: this is the continuation of the Automated Vehicle Symposia that TRB co-sponsored with AUVSI for the prior 5 years. That co-sponsoring relationship was ended in 2021 and TRB is now sole sponsor.</p>
Attendees (anticipated number and target audience):	1000+ Federal and State DOT employees, researchers, private sector automotive OEMs and suppliers, and international participants
Admission:	<input checked="" type="radio"/> Open to all <input type="radio"/> By Invitation
Anticipated Products:	Web-posting of presentations from the various speakers and Breakout Report Summaries
Convening Organization:	<b>TRB is the convening organization for this event.</b>
Other Sponsors:	
Funding (including any specific commitments):	<input checked="" type="checkbox"/> Registration Fees <input checked="" type="checkbox"/> Patrons/Exhibits <input type="checkbox"/> Sponsors/Other:
TRB Standing Committees (full names of committees involved in conference and their committee codes):	Intelligent Transportation Systems (ACP15), Vehicle-Highway Automation Systems (ACP30), TRB Joint Subcommittee on Challenges and Opportunities for Road Vehicle Automation (ACP30(1)), Emerging and Innovative Public Transport and Technologies Committee (APO20), Emerging Technology Law Committee (AJL40), Traffic Control Devices Committee (ACP55), Traffic Flow Theory Committee (ACP50), and others
TRB Role:	<input checked="" type="checkbox"/> Logistics/registration <input checked="" type="checkbox"/> Develop program <input type="checkbox"/> Other:
TRB Staff (SPO who is the key contact for the conference):	Richard Cunard, Engineer of Traffic and Operations, rcunard@nas.edu, 202-334-2965

Title:	
Location:	
Date (two month range):	
Description (overview and the objective of conference):	
Attendees (anticipated number and target audience):	
Admission:	Open to all                      By Invitation
Anticipated Products:	
Convening Organization:	<b>TRB is the convening organization for this event.</b>
Other Sponsors:	
Funding (including any specific commitments):	Registration Fees              Patrons/Exhibits              Sponsors/Other:
TRB Standing Committees (full names of committees involved in conference and their committee codes):	
TRB Role:	Logistics/registration              Develop program              Other:
TRB Staff (SPO who is the key contact for the conference):	

**TRB-Convended Conference Approval Form**

Title:	<b>61st Annual Workshop on Transportation Law</b>
Location:	Portland, OR.
Preferred Dates ( <i>at least two month</i> )	July/August, 2022
Description ( <i>overview and the objective of conference</i> ):	The Annual Workshops on Transportation Law provide a forum in which attorneys from federal, state, and local transportation and transit agencies as well as private sector practitioners come together once a year to get the latest information on the issues at the forefront of transportation law as well as discuss problems and proposed solutions. The workshops afford significant educational opportunities in a variety of substantive areas of transportation law. They also provide extensive intellectual and practical content. Sessions are developed and presented at the initiative of the TRB Legal Resources committees.
Attendees ( <i>anticipated number and target</i> )	This workshop typically attracts 160-190 lawyers, engineers, and transportation planners.
Admission:	<input checked="" type="radio"/> Open to all <input type="radio"/> By Invitation
Anticipated Products:	The Law Workshops are a major source of continuing legal education credits for attorneys in the transportation sector. They also provide a forum for the mid-year meetings of the Legal Resources Section committees and the development of potential topics for TRB's legal research programs.
Convening Organization:	<b>TRB is the convening organization for this event.</b>
Other Sponsors:	N/A
Funding ( <i>including any specific commitments</i> ):	<input checked="" type="checkbox"/> Registration Fees <input checked="" type="checkbox"/> Patrons/Exhibits <input type="checkbox"/> Sponsors/Other:
TRB Standing Committees ( <i>full names of committees involved in conference and their committee codes</i> ):	General Law (AJL10); Transit and Intermodal Transportation Law (AJL20); Contract Law (AJL30); Emerging Technology Law (AJL40); Environmental Issues in Transportation Law (AJL50); Eminent Domain and Land Use (AJL60) and Tort Liability and Risk Management (AJL70).
TRB Role:	<input checked="" type="checkbox"/> Logistics/registration <input checked="" type="checkbox"/> Develop program <input type="checkbox"/> Other:
TRB Staff ( <i>SPO who is the key contact for the conference</i> ):	Robert J. Shea, SPO/Counsel for Legal Research

Title:	<b>National Aviation System Planning Symposium</b>
Location:	Irvine, CA
Date (two month range):	May 2023
Description (overview and the objective of conference):	<p>A symposium will be organized to evaluate the latest developments in technology and policy as they affect the challenges of planning the national aviation system for the initial decades of the 21st century. The symposium will provide a forum for industry experts to exchange ideas and information relative to ways to improve existing aviation planning processes to address the critical issues in the coming decades. This will be the eleventh symposium of this series, the last one being held in 2018. Future research needs will also be discussed.</p> <p>*NOTE - this is being rescheduled from May 2022 to May 2023.</p>
Attendees (anticipated number and target audience):	100+
Admission:	<input checked="" type="radio"/> Open to all <input type="radio"/> By Invitation
Anticipated Products:	Presentations will be posted on the OpenWater website (pending approval of each presenter).
Convening Organization:	<b>TRB is the convening organization for this event.</b>
Other Sponsors:	(Anticipated) Federal Aviation Administration, Airports Council International – North America, National Association of State Aviation Officials, the Airports Consultants Council
Funding (including any specific commitments):	<input checked="" type="checkbox"/> Registration Fees <input checked="" type="checkbox"/> Patrons/Exhibits <input type="checkbox"/> Sponsors/Other:
TRB Standing Committees (full names of committees involved in conference and their committee codes):	Aviation System Planning (AV020), Intergovernmental Relations in Aviation (AV010), and [Invited] Environmental Issues in Aviation (AV030), [Invited] Aviation Economics and Forecasting (AV040), [Invited] Airport Terminals and Ground Access (AV050), [Invited] Airfield and Airspace Performance (AV060), [Invited] Aircraft/Airport Compatibility (AV070), [Invited] Aviation Safety, Security and Emergency Management (AV090), and [Invited] New Users of Shared Airspace (AV095)
TRB Role:	<input checked="" type="checkbox"/> Logistics/registration <input checked="" type="checkbox"/> Develop program <input type="checkbox"/> Other:
TRB Staff (SPO who is the key contact for the conference):	Christine Gerencher, phone 202-334-2970, fax 202-334-2030, cgerencher@nas.edu

Title:	<b>3rd International Conference of International Society for Intelligent Construction (ISIC 2022)</b>
Location:	Guimaraes, Portugal
Date:	September 6 - 9, 2022
Description ( <i>overview and objective of the conference</i> ):	The theme of ISIC 2022 is "Trends on Construction in the Post-Digital Era.". The International Society for Intelligent Construction (ISIC) provides a forum for disseminating knowledge concerning the collection, analysis, and application of intelligent construction technologies (ICT) for infrastructure. ICT is a combination of modern science and innovative construction technologies. ISIC's mission is to promote ICT applications to the life-cycle of infrastructure: from the survey, design, construction, operation, and maintenance/rehabilitation by adapting to environments and minimizing risks. The goals of its mission are to improve the quality of construction, cost-saving, and safety. This event is the third international conference of ISIC (conference website: <a href="https://www.is-ic.org/conferences/isic-international-conferences/2022-conference/">https://www.is-ic.org/conferences/isic-international-conferences/2022-conference/</a> ).
Attendees ( <i>anticipated number and target audience</i> ):	300 to 500,
Admission:	<input checked="" type="radio"/> Open to all <input type="radio"/> By Invitation
Anticipated Products:	Workshops and session presentations will be posted on the ISIC website. Full-length papers will be published after a rigorous peer-review process on the Advanced Engineering Informatics journal and indexed by Scopus and Web of Science.
Convening Organization:	International Society for Intelligent Construction <a href="https://www.is-ic.org/about/">https://www.is-ic.org/about/</a>
Other Sponsors:	University of Minho, Portugal (Prof. Antonio Correia, Vice President of ISIC); The Transtec Group, Inc., U.S.A. (George K. Chang, President of ISIC); University of Texas at El Paso, U.S.A. (Prof. Soheil Nazarian, Vice President of ISIC); Harbin Institute of Technology, China (Prof. Guanghui Xu, Vice President of ISIC).
Funding:	<b>TRB has no financial responsibility for this Co-Sponsored event.</b>
TRB Standing Committees ( <i>full names of committees involved in conference &amp; their committee codes</i> ):	Flexible Pavement Construction and Rehabilitation (AKC60), Aggregates (AKM80), Geospatial Data Acquisition Technologies in Design and Construction (AKD70), Geotechnical Instrumentation and Modeling (AKG60). Geology and Geotechnical Engineering Section (AKG00)
TRB Role ( <i>must be meaningful in planning of conference program, not just marketing</i> ):	<input checked="" type="checkbox"/> Committee member(s) to serve on program committee <input checked="" type="checkbox"/> Committee member(s) to organize or participate in session(s) <input checked="" type="checkbox"/> Committee member(s) to review papers/abstracts. <input type="checkbox"/> TRB staff to be invited speaker(s) <input type="checkbox"/> Other:
TRB Staff ( <i>SPO who is the key contact for the conference</i> ):	Nancy Whiting, Sr. Program Officer - Soils, Geology and Foundations, 202-334-2956   <a href="mailto:nwhiting@nas.edu">nwhiting@nas.edu</a>

Title:	<b>Advances in Materials and Pavement Performance Prediction</b>
Location:	Hong Kong
Date:	12-14 Dec 2022
Description ( <i>overview and objective of the conference</i> ):	<p>Given the international interest in design and construction of sustainable pavement systems, the AM3P conference offers an international forum for exchange of ideas on various approaches to predict pavement performance. It will promote linkages and interactions between material characterization methods, mechanistic modeling, and empirical predictions. The conference will emphasize comparisons between modeling results and observed performance.</p> <p>The topics of the conference include experimental laboratory material characterization, field measurements and in-situ material characterization, constitutive modeling and simulation, empirical predictions, statistically sound calibration and validation methods, innovative pavement materials and interface systems, non-destructive measurement techniques, surface characterization, tire-surface interaction, pavement noise, pavement rehabilitation and case studies.</p> <p><a href="https://www.am3p.com/home">https://www.am3p.com/home</a></p>
Attendees ( <i>anticipated number and target audience</i> ):	250
Admission:	<input checked="" type="radio"/> Open to all <input type="radio"/> By Invitation
Anticipated Products:	conference proceedings
Convening Organization:	Academy of Pavement Science and Engineering (APSE), Hong Kong Polytechnic University, or ASCE Grater China Section
Other Sponsors:	
Funding:	<b>TRB has no financial responsibility for this Co-Sponsored event.</b>
TRB Standing Committees ( <i>full names of committees involved in conference &amp; their committee codes</i> ):	Standing Committee on Asphalt Mixture Evaluation and Performance AKM40
TRB Role ( <i>must be meaningful in planning of conference program, not just marketing</i> ):	<input checked="" type="checkbox"/> Committee member(s) to serve on program committee <input checked="" type="checkbox"/> Committee member(s) to organize or participate in session(s) <input checked="" type="checkbox"/> Committee member(s) to review papers/abstracts. <input type="checkbox"/> TRB staff to be invited speaker(s) <input type="checkbox"/> Other:
TRB Staff ( <i>SPO who is the key contact for the conference</i> ):	Nelson Gibson

TRB Conferences, Webinars, and Recordings  
January 16, 2021 – July 20, 2021

**Conferences**

(\*indicates event cosponsored by TRB)

How We Move Matters: Exploring the Connections between New Transportation and  
Mobility Options and Environmental Health

July 13, 16, and 21, 2021

online

Automated Road Transportation Symposium 2021

July 12-15, 2021

online

International Symposium on Frontiers of Road and Airport Engineering\*

July 12-14, 2021

online

Joint Committee Meeting: TRB Roadside Safety Design and AASHTO Roadside

July 12-21, 2021

online

10th International Conference on Structural Health Monitoring of Intelligent  
Infrastructure\*

June 30-July 2, 2021

Porto, Portugal

6th International Symposium on Highway Geometric Design\*

June 23-26, 2021

online

TRB Conference on Transportation Planning Applications

June 21-24, 2021

online

International Conference on Resource Sustainability: Sustainable Pavement  
Technologies\*

May 26-28, 2021

online

4th International Conference on Transportation Geotechnics\*

May 24-27, 2021

online



2021 NAEP Annual Conference and Training Symposium\*  
May 16-20, 2021  
online

Research Day at ITF Annual Summit\*  
May 11, 2021  
online

Joint Rail Conference\*  
April 20-21, 2021  
online

10th International Conference on Bridge Maintenance, Safety, and Management  
(IABMAS2020)\*  
April 11-18, 2021  
online

Measuring and Managing Freight System Resilience Workshop  
April 6-8, 2021  
online

Advancing the Marine Transportation System through Automation and Autonomous  
Technologies: Trends, Applications, and Challenges  
March 15, 2021  
online

Geosynthetics Conference\*  
February 22, 2021  
Online

### **Webinars**

TRB Webinar: One Pack to Rule Them All–The Cone Penetration Test Expansion Pack  
June 29, 2021

TRB Webinar: Addressing Justice in Transportation  
June 28, 2021

TRB Webinar: Compost It! Environmental Benefits of Compost in Highway Roadside  
June 23, 2021

TRB Webinar: The Future of Bridge Foundation Designs with Artificial Intelligence  
June 22, 2021

TRB Webinar: State & Local Deployments of Connected & Automated Vehicle Infrastructure  
June 21, 2021

TRB Webinar: Casting Connections – Improving Performance and Durability of Steel Bridges  
June 17, 2021

TRB Webinar: Rapid Testing for Asphalt-Treated Cold Recycled Pavements  
June 16, 2021

TRB Webinar: Redesigning Transit Networks for the New Mobility Future  
June 14, 2021

TRB Webinar: Airport Law Enforcement Models  
June 10, 2021

TRB Webinar: Catching Up on Low-speed Automated Vehicles in Public Transit  
June 8, 2021

TRB Webinar: Trust But Verify–Validating Contractor Test Data  
June 3, 2021

TRB Webinar: Not Easy Being Green–Colorizing Bicycle Lanes to Enhance Safety  
June 2, 2021

TRB Webinar: Enhancing the Capacity for Transportation System Resilience  
May 26, 2021

TRB Webinar: Drilled Shaft Design for Durability, Mix Stability, and Thermal Criteria  
May 25, 2021

TRB Webinar: Geotechnical Responses to Extreme Events  
May 24, 2021

TRB Webinar: Visualizing Transportation System Performance  
May 17, 2021

TRB Webinar: How Ridehailing Companies Affect Airport Revenues and Operations  
May 13, 2021

TRB Webinar: Increasing Return on Investment through Geotechnology  
May 12, 2021

TRB Webinar: Senior Leadership’s Role in Embedding Transportation Resilience  
May 6, 2021

TRB Webinar: Washout! Infiltration-caused Failure of Slopes Made of Plastic Clay  
April 29, 2021

TRB Webinar: Strategically Implementing Transportation Security Measures  
April 28, 2021

TRB Webinar: The Day of the Drones - Airports and Unmanned Aircraft Systems, Part 2  
April 27, 2021

TRB Webinar: Paving the Way to Successful AASHTOW are Pavement ME Implementation  
April 26, 2021

International Transportation Finance Summit\*  
April 19-21, 2021  
online

TRB Webinar: Geochemistry and Mineralogy in Chemical Soil Stabilization  
April 14, 2021

TRB Webinar: Minutes Matter – Bus Service Reliability  
April 13, 2021

TRB Webinar: Technical and Sustainability Aspects of Lightweight Concrete Bridges  
April 12, 2021

TRB Webinar: Truck Assumptions for Roundabout Design  
April 8, 2021

TRB Webinar: Advances in Pavement Condition Surveys  
April 7, 2021

TRB Webinar: Evaluating Tack Coat Materials' Durability in Asphalt Pavements  
March 31, 2021

TRB Webinar: Real-Time Response - A Pandemic Playbook for Public Transportation Agencies  
March 30, 2021

TRB Webinar: Analyzing Corridors and Systems with the Highway Capacity Manual  
March 25, 2021

TRB Webinar: Emerging Challenges for Congestion Pricing on Managed Lanes  
March 24, 2021

TRB Webinar: The New Virtual Reality for Public Meetings and Social Distancing  
March 23, 2021

TRB Webinar: Measuring Resiliency – Tools for Analyzing Resilient Transportation Systems  
March 18, 2021

TRB Webinar: The Ubiquitous Unmanned Aerial Vehicle – UAVs for Infrastructure Monitoring  
March 16, 2021

TRB Webinar: Texting While Driving – Implications of Legislation on Electronic Devices  
March 15, 2021

TRB Webinar: Concrete Overlays of Asphalt  
March 11, 2021

TRB Webinar: Diversity in Airport Business Contracting and Workforce Programs  
March 10, 2021

TRB Webinar: Visualizing Effects of COVID-19 on Transportation: A One-Year Retrospective  
March 8, 2021

TRB Webinar: Transportation Impacts in Managing Retreat from High-Risk Areas  
March 4, 2021

TRB Webinar: Chemical Treatments on Low-Volume Roads  
March 3, 2021

TRB Webinar: Developing Airport Emergency Plans  
March 2, 2021

TRB Webinar: Retrospective, Perspective, & Prospective of Transit-Oriented Development  
February 25, 2021

TRB Webinar: Using Artificial Intelligence to Predict Deterioration of Highway Bridges  
February 22, 2021

TRB Webinar: A Two-Way Ticket – Collaborative Planning Among Airports & Public Agencies  
February 18, 2021

TRB Webinar: Centering Seams – Maintaining Centerline Joints in Asphalt Pavements  
February 17, 2021

TRB Webinar: Driving Toward the Truth - Dispelling the Myths About Cannabis Products  
February 10, 2021

TRB Webinar: People Movers and Shakers - Quality of Life in Airport Communities  
February 8, 2021

TRB Webinar: Understanding Pavements – Long-Term Pavement Performance Program  
Updates  
February 4, 2021

TRB Webinar: Rock On - The Impacts of the Mischaracterization of Rock  
February 3, 2021

TRB Webinar: Options for Reducing Lead Emissions from Piston-Engine Aircraft  
February 2, 2021

**Straight to Recordings**

None since last Executive Committee Meeting

**Subcommittee on Planning and Policy Review**

Spring Meeting: Monday, April 26, 2021

11:00 am to 3:00 pm EDT, on Zoom

**ATTENDEES**

**Carlos Braceras**, Utah DOT  
**Ann Brach**, TRB  
**Michael Covington**, TRB  
**Patrice Davenport**, TRB  
**Ginger Evans**, Carlyle Airport Group  
**Karen Febey**, TRB  
**Nat Ford**, Jacksonville Transit Authority  
**Steve Godwin**, TRB  
**Martha Grabowski**, Rensselaer Polytechnic Institute  
**Avery Grimes**, Patriot Rail  
**Chris Hedges**, TRB  
**Chris Hendrickson**, Carnegie Mellon  
**Russell Houston**, TRB  
**Randy Iwasaki**, Amazon Web Services  
**Katherine Kortum**, TRB  
**Julie Lorenz**, Kansas DOT  
**Paul Mackie**, TRB  
**Patrick McKenna**, Missouri DOT  
**Tom Menzies**, TRB  
**Brian Ness**, Idaho DOT  
**Neil Pedersen**, TRB  
**Craig Philip**, Vanderbilt  
**Susan Shaheen**, UC Berkeley  
**Katie Turnbull**, TTI  
**Gary Walker**, TRB

**CONSENT AGENDA**

Eight conferences/workshops are on the consent agenda, five of which are co-sponsored. All approved unanimously.

**EXECUTIVE DIRECTOR'S REPORT**

**Neil Pedersen:** My colleagues will cover some TRB details later. First, we have friends in high places at USDOT. Polly Trottenberg is now confirmed as deputy secretary. Acting Assistant Secretary for Research and Technology is Robert Hampshire, from the University of Michigan. Susan and I have spent a lot of time talking to Robert; he's a real friend of TRB. Stephanie Pollock, who's been involved in TRB for more than 20 years, is Acting FHWA Administrator. Nuria Fernandez just stepped off TRB's executive committee and is now Administrator at FTA. Steve Cliff is Acting NHTSA Administrator. Brad

Mims most recently was CEO of COMTO, and he is now Deputy Administrator of FAA. And Vicki Arroyo, also recently on the executive committee, is Deputy Administrator at EPA Policy.

As to federal funding, more detailed information is in the memo. To put some information into context, the three covid-19 stimulus bills provided \$171B for transportation in less than a year. In comparison, the total annual budget for USDOT is \$80b, so there was about twice as much money provided in the three stimulus bills than in a typical annual budget. Now the American Jobs Plan is getting a lot of attention with its proposal for \$2.3T. The amount for transportation depends on what exactly you count, but about \$476B is traditional transportation, with a heavy emphasis on state of good repair, transit, intercity rail, megaprojects, equity, and electric vehicles. After I completed this powerpoint, Republicans came out with a proposal that's much more about highways and less about transit. Most of what they have proposed actually would be covered through traditional authorization; they are not providing additional money. If that interpretation of the proposal is correct, it actually results in a reduction in funding for transit.

Both the Senate and House are holding hearings on reauthorization, which has an expiration date of Sept 30, 2021. Anytime we go through reauthorization, there is uncertainty about the potential impact on TRB's finances. The FY 2022 appropriations process is behind schedule, and I suspect we'll have extensions on both authorization and appropriations. In terms of administration proposals so far, they reflect the big priorities: safety, covid recovery, economic recovery, climate change, and equity.

Regarding TRB and covid, we've had good continuity of operations during the pandemic. I had a more detailed report at our January 2021 Executive Committee meeting. Unless there is a significant change in the pandemic, we expect our facilities to reopen on Tuesday, July 6 with staff in the office by Oct 1; telework arrangements are still to be determined. We are still planning for an in-person Executive Committee meeting in Woods Hole on Monday and Tuesday, July 19-20, 2021. Based on current restrictions, we might have to split the meeting up with some in the carriage house and some in the main house, but we hope for more relaxation of restrictions by then. More covid updates will come from other staff members throughout this meeting. International travel has been suspended, but we continue to be involved in several international activities virtually. Just before this call I was preparing my powerpoint for the China Highway and Transportation Society on Thursday. I am very pleased that Randy Iwasaki has agreed to become the new international subcommittee chair, and we thank Nat Ford for his service as chair.

In terms of finances, I'll cover some top line items. More detailed tables are in the agenda book. Annual meeting and conference revenues decreased by \$3.843M. We depend on those revenues to help support the Technical Activities division. Revenue from sponsors in CY 2021 decreased by \$350k. Total expenses decreased by \$1.749M, mostly from the annual meeting and conferences. Net revenues for the core technical program decreased by \$2.443M, out of a total program of \$60M+. USDOT sponsor revenues, if not restored, will decrease by \$799k per year. At this point, we're having very constructive discussions with most of the former sponsors, and I'm cautiously optimistic that we will be able to restore most of those revenues. With reauthorization there is always uncertainty about the State Planning and Research funding, and there's still uncertainty about the 2022 TRB Annual Meeting. All of this has had an impact on our reserve fund, which is now lower than we'd like. However, it's premature for us to determine how to address that impact until we have more certainty about reauthorization.

Relative to 2019 and 2020, the phase out of the SHRP2 safety program resulted in a reduction of about \$3M and CRP expenditures declined by about \$3M. The reduction in core technical activities, conferences, and workshops is \$2.8M. Therefore the total reduction in our spending reduction is \$9M. We will make up for most of the CRP expenditures because they stem from delays, and not cancellations. But we will not make up for the phase out of SHRP2 and the reduced core technical program.

I want to wrap up my report with my thanks to the staff for their perseverance, resilience, and adaptability, and my thankfulness for their good health. We have had good support from NASEM leadership, including Greg Symmes as the NASEM Chief Program Officer and Jim Hinchman as the Chief Operating Officer. Given all of the impacts we've had to our programs, including the TRB AM, our many volunteers have really stepped up and been understanding. Technology has allowed for our continuity of operations, and you all have provided wise counsel and guidance. So thank you to everyone in this meeting.

**Katie Turnbull:** We also thank you and your staff who have been able to make everything continue. People who depend on those research projects for those jobs have stayed employed. Thank you and everyone who works for you.

**Craig Philip:** About the \$130B that flowed from covid legislations last year - I didn't see that in your enumerated report. I'd love to see a breakdown of that number in terms of where it went. Did all of it get out to people actually spending it on transportation?

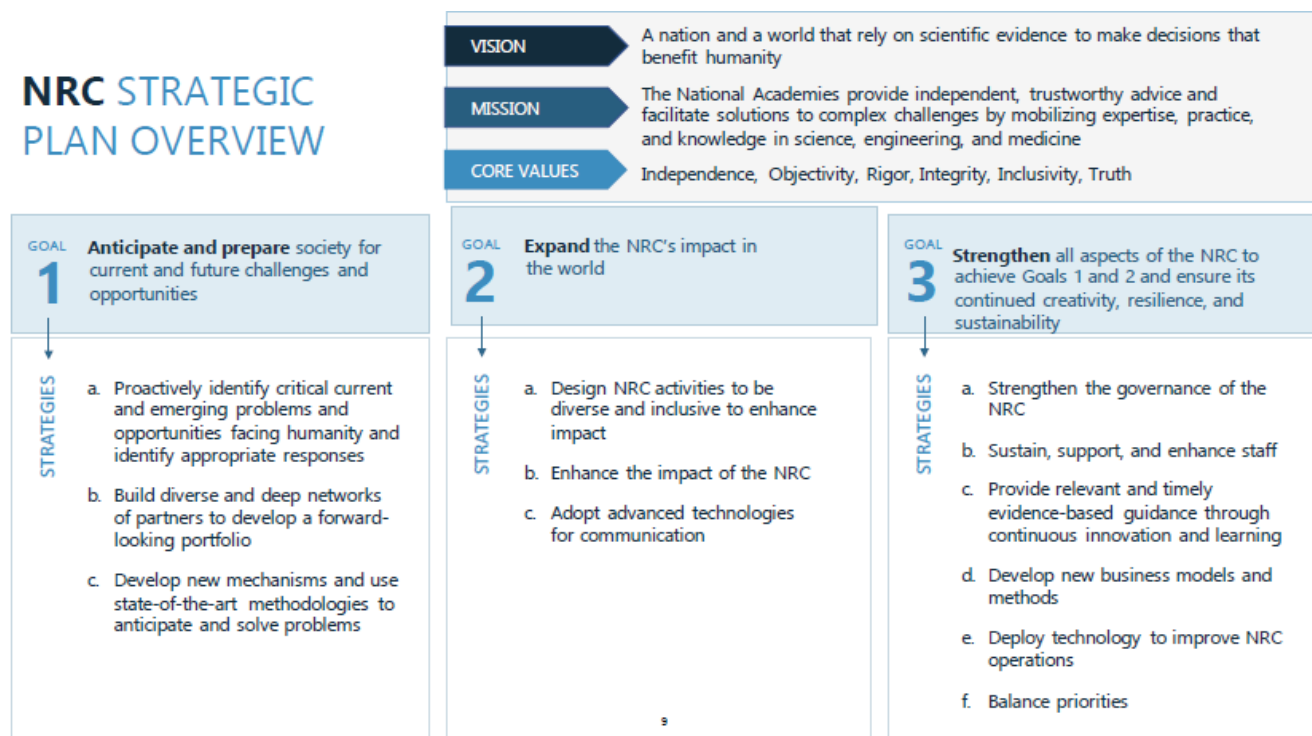
**Neil Pedersen:** I can provide that. But if you look at page 2 of my report, at least for the American Rescue plan portion, it shows the breakdown, but I'll provide that for all three bills.

## TRB STRATEGIC PLAN

**Neil Pedersen:** When we last met, the NRC was expected to adopt the new strategic plan on Feb 8, 2021. They did that. TRB is now set to develop a new strategic plan in alignment with the NRC plan. This is our first major discussion on this realignment, and I want to remind you that one of the major functions of SPPR is to take the lead in development of TRB's strategic planning. The other two major functions are to act as oversight for the CAAS division and to act on behalf of the Executive Committee between meetings. Our goal is to have a draft vision, mission, values, and goals for the July 2021 Executive Committee meeting, with the aim of adopt a plan by June 2022, depending on the progress we make in July and at the October SPPR meeting. To socialize this plan, especially with volunteer leaders, it will likely take us until June 2022. Today we want to have a discussion of ideas and concepts about vision, mission, values, and goals. I don't anticipate we would try to reach an agreement on them, but I want to get your input for staff to draft the statements that we can run by all of you before discussing with the Executive Committee during the summer meeting.

A summary of the strategic plan is shown below.





With regard the first goal, among the seven program divisions, I believe TRB is the only one that produces a *Critical Issues* document. So to some extent, we already furthering goal one.

The second goal is to expand the NRC's impact in the world. The discussion among those who developed this plan was that NRC does great work in developing and issuing reports. However, the institution does not do nearly as much in working to ensure the reports have the intended impact. What are the activities we undertake after a report is delivered to ensure that the content is widely dissemination, especially to the relevant actors? I am a co-chair of one of five NRC teams working on means for achieving this important goal.

The third goal is more internally focused, to strengthen all aspects of NRC.

**Julie Lorenz:** On the discussion of NRC's impact in the world - I think of NASEM as providing information in an objective way. How do we square offering up objective information and having an intended impact?

**Neil Pedersen:** Most of the NRC does consensus study work. Those consensus studies have recommendations in them. We do very little after the report is issued in terms of socializing those recommendations to the intended audiences to make sure that they both know about them and are acting upon them. Part of the challenge is identifying those partners we should be working with who might have an interest in a report's recommendations, and thus advocate for them. This requires effective communications and advance thinking about implementation. Some of my fellow action group members have raised concerns about recommendations getting watered down in report review so they don't end up being as actionable as they could. And at times our committees don't pay as much attention to implementation when drafting their reports.

**Julie Lorenz:** Good action words are helpful - facilitate, prepare, impact, etc.

**Susan Shaheen:** I am dovetailing with Julie's comments. I was also curious what we'd do to go beyond what we currently do. It sounds like a really good plan of action to start to bake it into the cake as we work on reports. I want to share that I work with the Institute of Transportation Studies across the UC system. We get a lot of state funding to do work on improving highways and transit in real-time, not in the future. We're hearing more and more from legislatures and technical agencies that we need to provide more technical assistance around reports so people can digest them.

**Chris Hendrickson:** What do you mean by alignment? I've been looking at the NRC plan as it was developed and was checking off how it coincided with TRB's activities. I thought all of it melds well with what TRB is doing, but TRB might want to add in more. So what are you thinking about alignment?

**Neil Pedersen:** Well, you're going to help us. I hope today's discussion can be about that. Tom Menzies reacted to my powerpoint by saying that, in the current TRB strategic plan, it looks like we already are doing many of the things in the NRC strategic plan. One reason I am a co-chair of the partnership and impact working group is that Greg Symmes wants some of what we do in TRB to be done more widely throughout the NRC. Really, we want to ensure that the areas that the NRC strategic plan emphasizes are reflected in whatever modifications we make to our own strategic plan. We particularly want the vision mission and values to be aligned with NRC's.

**Katie Turnbull:** They did a super job of getting key words and points on one slide. When I look at it, many things I see in the TRB plan are reflected in the NRC plan.

**Neil Pedersen:** Let's compare NRC and TRB point by point.

NRC vision: A nation and a world that rely on scientific evidence to make decisions that benefit humanity.

Current TRB vision: TRB is where the nation's leaders and the global transportation community turn for information exchange, research, innovations, and advice on current, emerging, and critical transportation issues to foster a high-performing multimodal transportation system that enhances society.

I've been told that visions should be short and punchy and memorable. The NRC vision is currently much shorter than TRB's, which surely tried to be comprehensive. It tries to cover everything we do and what we're trying to achieve.

NRC mission: The National Academies provide independent, trustworthy advice and facilitate solutions to complex challenges by mobilizing expertise, practice, and knowledge in science, engineering, and medicine.

Current TRB mission: Provide leadership in transportation improvements and innovation through trusted, timely, impartial, and evidence-based information exchange, research, and advice regarding all modes of transportation.

TRB's mission statement is much more aligned with the NRC mission statement than our vision statement is.

NRC values: independence, objectivity, rigor, integrity, inclusivity, truth

Current TRB values: a values statement is not included in the current TRB strategic plan.

There are no values in the current TRB plan. We can talk about whether the NRC values are the right ones for us too, but they are independence, objectivity, rigor, integrity, inclusivity, and truth. In developing those values, rigor probably received more debate than any other value.

NRC goals:

- Anticipate and prepare society for current and future challenges and opportunities
- Expand the NRC's impact in the world
- Strengthen all aspects of the NRC to achieve Goals 1 and 2 and ensure its continued creativity, resilience, and sustainability

Current TRB goals:

- Information exchange
- Research
- Advice
- Collaboration
- Workforce development
- Communications

We don't want to be repetitive of the NRC goals, but we do want to compare them. Ours are very different in nature and try to cover all of the different things we do. We often talk about our 3 major functions being information exchange, research, and advice, but we added the others because of our current strategic plan and the activities that we've been emphasizing lately.

The seven objectives in the TRB strategic plan do not fall under the goals. These objectives do not nest under the goals, but after we have our goal discussion, we should talk about whether we want nested objectives or not. They are:

1. Address emerging and critical transportation issues in a strategic, forward looking, proactive, and timely manner
2. Involve a broad and diverse cross section of stakeholders and constituencies in TRB programs and activities
3. Pursue continuous improvements and efficiencies in TRB programs, products, and activities to increase effectiveness, usefulness, and timeliness
4. Introduce new programs, products, and activities to meet the priorities of TRB sponsors and stakeholders, taking into consideration resource availability
5. Systematically identify and track the usefulness and impacts of TRB's programs, products, and activities, and adjust them to provide the greatest value for the investments made
6. Use means that are effective in reaching diverse audiences to communicate timely information about TRB programs, products, and activities, and about transportation issues and policy research

7. While pursuing additional resources, balance TRB's programs, products, and activities with available financial, volunteer, and staff resources to achieve the goals and objectives in this strategic plan.

We can go through the vision, mission, values, and goals now.

**Katie Turnbull:** Thoughts on condensing the TRB vision to make it more memorable?

**Julie Lorenz:** Whether in the vision or mission, transportation is a means to an end. It's the connecting fiber that lets us live our lives better, drives our economy, and makes things possible. But I would advocate for it being a more human-centered vision.

**Susan Shaheen:** The NRC vision connects scientific evidence to the benefit of humanity. It would be great if we could talk more about the science in the TRB statement.

**Avery Grimes:** Can we take the NRC vision, which is broad and powerful, and modify it to fit our vision? The scientific part is really powerful, and in a nutshell, that's what we're doing.

**Patrick McKenna chat:** If we develop values, some of these descriptions in the vision can fall to these - also taking out critical issues can be in goals

**Ginger Evans chat:** The last part of the current TRB Vision is the strongest part.

**Julie Lorenz chat:** science / to improve transportation / for people, Trying to capture a couple of key words. I admit to being fuzzy on vision versus mission, but keying in on a few words might be helpful.

**Ann Brach:** The NRC vision is a vision of the world; TRB's is a vision of TRB and of the world. What if we focus on the world? That would shorten the statement. The mission should talk about TRB.

**Susan Shaheen chat:** Agree with Ann, the vision is more about the world; TRB's could be more specific to transportation impacts/benefits.

**Nat Ford:** In both the vision and mission, when I look at the NRC versions, they speak to the nation and the world. They seem large in terms of what they're trying to capture. Is it the vision of the impact on the world? Our TRB vision speaks to what we're doing as TRB. Are we talking about TRB related to the nation and world, or are we talking about specifically what we do? I see TRB as being a single source of truth. Are we trying to be that single source of truth on things transportation related?

**Ann Brach:** A vision is supposed to be how you see things ending up because you exist. For us, it could be the transportation part of the world. When you talk about your mission, that's how you contribute to your vision. If we separate those two, it could help us be punchier.

**Susan Shaheen:** Role of science is very important in understanding benefits and impacts of transportation for society. Something like that.

**Patrick McKenna:** Convening the global transportation community to foster a high performing multimodal transportation system that enhances society through research and science....

**Patrick McKenna:** It's more about condensing than changing what's there. I like how the NRC vision talks about global impacts. TRB is a convener of experts. It captured that really well in the last piece about fostering a high performing transportation system that enhances society. I would hate to lose that component piece. So we can condense, align with the good NRC vision, and retain that high-performing part of the current one.

**Brian Ness:** Using sound scientific evidence to foster a high performing multimodal transportation system that enhances society.

**Susan Shaheen:** The role of science to maximize social and environmental benefits of transportation

**Julie Lorenz:** We should start with improving people's lives. That's the goal. Whatever the most important part of the vision is should come first. We improve lives through science and convening, which are the two hallmarks and strengths of TRB. The mission and goals can go into the "how."

**Susan Shaheen:** I like adding emphasis around multimodal transportation

**Paul Mackie:** I really like using the first part of the NRC's vision in regards to the science and then Julie's end to it about people and transportation.

**Paul Mackie:** As we try to shorten the TRB vision, the NRC's purpose is science. We want to strengthen science and research. And then to benefit humanity, insert Julie's ideas about improving the transportation system for people. For the mission, we'd like to have a catchphrase or slogan we can use in lots of places. That should come out of the vision or mission. We've been saying things like "a must-read resource for transportation research." We want TRB to be the home base for anyone doing transportation research across the world.

**Susan Shaheen:** A nation and world that rely on scientific evidence to maximize the social and environmental benefits of multimodal transportation

**Craig Philip:** Maybe a rabbit hole, but is it mobility of goods and people rather than transportation?

**Craig Philip:** Also, we have many things happening about TDM, where our mission isn't to make more transportation. It might be a semantic point. Don't want to exclude the goods and just focus on people.

**Nat Ford:** improving people's lives by fostering high performing multimodal transportation systems through data-driven scientific research

**Brian Ness:** I like that.

**Avery Grimes:** The main missing item from the vision is research

**Ginger Evans:** I like Nat's wording as well but I prefer society to people. In context of transportation - people and business both needed to benefit.

**Susan Shaheen:** I like environment being part of this. Impacts of transportation are on living ecosystems too not just people.

**Neil Pedersen:** Like Avery, I think we need to consider whether the word research should be in there. Does scientific evidence capture that? I think research is more than just evidence.

Moving onto the mission statement. In the NRC mission, we're particularly focused on complex challenges. TRB's current mission statement is where we capture the info exchange, research, and advice as our three big things.

**Julie Lorenz:** I really like leadership. I would like to discuss the word "solution." I like leadership - that is spot on. NRC is talking about solving problems, and ours is about making things better. Solving problems is big and important. I'd welcome an idea around including solving problems. Helping the world solve problems, leadership in solving transportation problems, etc. That's a step beyond providing advice and information.

**Neil Pedersen:** Providing information to help solve problems is certainly part of our role. And hello, Carlos.

**Julie Lorenz:** I see more actionable, problem-solving language in NRC mission. It's less on advice and more on action. Though I really like the "leadership" in our current mission statement. This doesn't need a lot of work compared to others.

**Katie Turnbull:** "provide leadership and solutions..."

**Patrick McKenna:** I agree with Julie. "Facilitate solutions in transportation through research that enhance the quality of life of all people." Helping to solve problems is a critical role. Research is the focus to do that, but it also ties back to the mission and enhancing quality of life. You don't have to get too specific, but keeping it broad gives us the room to pursue our goals and objectives.

**Susan Shaheen:** I like helping to solve problems. We don't always come up with solutions in our work vs. strategies. Many times one size does not fit all.

**Chris Hendrickson:** I like ours and it's close to the NRC mission. We could add "solutions" after "innovation."

**Ginger Evans:** However solving problems sounds backward focused - innovation is forward leaning

**Julie Lorenz:** have we moved past "all modes of transportation"? Those feel like throwaway words. It would help if we didn't feel we had to say that all the time. We could be more direct without it.

**Neil Pedersen:** Four years ago when we developed this mission, we were still concerned about the perception of TRB being too highway oriented.

**Susan Shaheen:** Provide leadership in helping to solve problems through innovation and evidence based research, exchange, and advice

**Neil Pedersen:** What do you think about the NRC values, and are any missing? I really like AASHTO's values: safety; trust and integrity; transparency; collaboration; and diversity, equity, and inclusion.

**Nat Ford:** Empathy is missing, recognizing that this list could be a hundred words long.

**Ginger Evans:** I like the NRC values, but I don't like starting with independence. It's not the most important thing.

**Neil Pedersen:** And what about goals?

**Chris Hendrickson:** We can call our goals strategies, and adopt the NRC goals.

**Susan Shaheen:** I agree. TRB goals are strategies and should these be expanded?

**Ginger Evans:** I agree as well.

**Carlos Braceras:** I agree with Chris that TRB goals are more strategies

**Neil Pedersen:** Suggested in your memo/meeting package:

- Anticipating and preparing the transportation professional community and society for future challenges and opportunities; (Neil: this pairs with the first NRC goal)
- Leveraging advances in technology to facilitate communications, collaboration, data collection and analysis, and information exchange and knowledge transfer; (Neil: this falls under third NRC goal)
- Diversifying those who participate in TRB in terms of professional disciplines, gender, racial and ethnic minorities, and participants from outside the United States;
- Expanding TRB's impact and influence through the work that it does, and through effective communications about its work, its products, and resources that it makes available; (Neil: this falls under impact) and
- Assuring TRB's continued creativity, resilience, and sustainability in an ever changing world. (Neil: this falls under third NRC goal)

We could try to take those five ideas and see how we can align them with the NRC goals. We don't have to have exactly three goals, and those five areas are very important to our future.

**Martha Grabowski:** We don't go anywhere alone, and are much more effective at dissemination and impact when we go with others. So "expanding partnership for..."

**Susan Shaheen:** I really like NRC's goals and blending with Neil's remarks from Chair's lunch

**Martha Grabowski:** Wish this process worked as well in my institutions...!

**Julie Lorenz:** yes, Martha! 1000%

**Ginger Evans:** I agree....this was painless

**Neil Pedersen:** This was painless due to all of you.

**Katie Turnbull:** This worked very well. Moving on to Ann's update now.

## **TAD UPDATE AND OVERVIEW OF 2021 TRBAM**

**Ann Brach:** There has been a very significant increase in circulation in the TRR due to working with Sage, our publisher. We're making it available for free in developing countries through a program called Research4Life. That aligns us with what our sister journal, PNAS, does. 251 volunteers are now on an editorial board, and the average time from acceptance to publication is down to 36 days. We also have 3x downloads in 2020 as compared to 2018. In last three years, the TRR has been the #1 transportation journal cited by policy sources like think tanks, #1 transportation journal (tied with IEEE) for citations in patent applications (so people find practical and usable things in it), and #5 among transportation journals in citations in news services (so the public also gets input from our journal). We have also been expanding the journal. It's long been the place where TRBAM papers might be published and that was almost the only source of content. We're now branching out. Patti Lockhart, the journal's managing editor, realized we have many smaller conferences with new people and ideas who would never submit for the annual meeting. So we're now doing special issues that come out of specialty conferences, like the conference on visualization in transportation. We're also working with other organizations that don't have a journal and publishing high quality papers from their conferences.

**Susan Shaheen:** Ann, 36 days to publication is remarkably fast! This is by far the fastest I have seen.

New products include focus issues on covid, freight, and equity. There's not really a go-to journal on freight issues our communities are interested in. There's a special collection for the papers from our minority student fellows and from our ACRP graduate research award program. Patti is doing a lot to work with young researchers. We also put together a women's history month issue.

***Avery Grimes chat:** The improvements in TRR are remarkable. Thanks to Ann and Patty!*

**Ann Brach:** Regarding the TRBAM, we had a 40% increase in registrants over the 2020 meeting. We had twice the sponsor staff and 3x the number of state DOT staff. The not-so wonderful news is that we had a 160% increase in non-paying attendees but a 20% decrease in paying attendees. At the same time, we reduced the registration cost because we were virtual. In combination, that's why we didn't do very well with the budget this year.

On the positive side, some committees had more than 250 people attend and the committee chairs were thrilled. Much of this was state DOT people who finally had a chance to attend. We had many positive comments on the technical content. Having something virtual meant we could invite people who would never travel to DC to speak. People got good information exchange, and attendees appreciated that the meeting was held at all.

But not everything was positive. Exhibitors were not satisfied with the virtual event, though that's not unique to our meeting. Networking tools are better than nothing but definitely not the same as in person interaction. The vendor platform was not quite ready for prime time. Our problems were mainly because they were not well integrated. And it was an extremely staff intensive meeting. In January, we didn't do a lot of other things that we have obligations to do through our various contracts. Now we are



scrambling to catch up on those obligations. The strain on staff was quite significant. We also had kids who were at home, spouse teachers at home who were trying to teach, a staff person got covid, someone lost a family member...the same things everyone else went through, we went through, but we did an astonishingly good job of delivering. But if there's any way to avoid it, I absolutely do not want to do it again.

There's nothing to report on the 2022 meeting yet. We're doing a lot of planning and data gathering and looking at a wide variety of options. The one thing we're not looking at is a fully hybrid meeting, meaning an in-person meeting that has a virtual participation option for everything. That's really two separate meetings and is prohibitively expensive. It also will be a smaller meeting in terms of content, like last year's, because even an in-person meeting is likely to be socially distanced with fewer rooms. If we have to go virtual, there will not be an exhibit. Other than that, we have made no decisions about either the format or a date by which we will have a format decision.

**Katie Turnbull:** You and your staff did a great job with this year's annual meeting. The circumstances were terrible but attendance was fantastic, even though most people would agree with the limitations.

**Susan Shaheen:** I want to commend you with what you're doing with Sage and TRR. Those turnaround rates are crazy. Do we have insights yet on changes in the impact factor?

**Ann Brach:** Last year we finally broke 1, so now it's a little over 1. Each year we expect it to get better because the things we've done will start showing. The impact factor looks a couple of years back so it takes time to see the results of changes you make. Patti also told me the impact factor calculation will be changing. In a few years, we're all supposed to see an artificial increase, and then it will probably go back down again. But I do expect it to go up again this year. We want to get up to 2 as quickly as possible, and then beyond.

**Susan Shaheen:** Congrats on that. And one of the big wins from the virtual meeting was the committee meetings. So many people attended those. Several committees I'm involved with have adopted a notion of doing more zoom meetings in between the in-person meetings. Do you see trying to institutionalize that more, so those benefits can carry forward?

**Ann Brach:** I want to encourage committees to do as much virtual work during the year as possible to keep people engaged. There are no hard and fast policies yet, and people are assuming virtual for at least next few months anyway. It would be great if committees can do their mid-year meetings virtually. That would save everyone time and money and allow more people to be involved.

**Avery Grimes:** Based on the professors and students I've talked to, the rising importance of the TRR will attract higher quality submissions. Because of these initial investments, this Record will continue to become more and more important in the nation's and world's transportation research areas.

**Ann Brach:** I have to give all credit to Patti. She came to us from other journals with impact factors much higher than ours. She was ready for a challenge and is turning everything around.

**Avery Grimes:** It's one of our most important products. And for the TRBAM, the committee meetings were great because we could get so many additional people to join. As far as I could tell, those people were not disruptive.

**Katie Turnbull:** TRR speciality issues have gotten a lot of attention and are great. Other topics beyond freight would also make great specialty issues. So there are more opportunities there.

**Susan Shaheen:** The Special Issues can also help raise our impact factor by drawing attention to the journal.

**Ann Brach:** Feel free to email me with suggestions for focus areas and I'll get Patti to put her strategic mind on that.

## **SUMMER EXECUTIVE COMMITTEE MEETING/POLICY SESSION**

**Russell Houston:** We'll talk about equity as it relates to transportation during our July 2021 meeting. We have Tierra Bills, an assistant professor at Wayne State, who will give us a general overview of activities related to transportation equity fitting into the broader context of social equity. Dorval Carter was our speaker at the Thomas Deen Lecture at the TRBAM. On Youtube, his lecture has over 6500 views, which doesn't include the people who saw it on the TRBAM platform. My guess is we're approaching 10,000 views. He will do a great job. We also have Liz Williams with MassDOT and Betsy Harvey, a transportation equity program manager with Boston's metropolitan planning organization, to give us an equity perspective from a state and regional perspective. All of those discussions will hopefully be at Woods Hole, with more information as we get closer.

We need to talk about potential topics for the January 2022 policy session. I would like to get an SPPR decision. We normally ask you to suggest a topic, but because we're meeting six weeks after we normally do, we have less planning time. So instead, I'm asking you to have a recommendation for the Executive Committee. Staff will write up that recommendation for the Executive Committee and start working on it in the next month or so. Your briefing memo includes two suggestions, though they aren't the only two you can consider. Critical issues are also in the memo, as are past policy session topics.

The two recommendations are decarbonization of the transportation sector and long term changes in travel demand as a result of the covid recovery.

On the topic of decarbonization, OEMs are making announcements about going all electric in the coming decades. In August 2020, we talked about urban air mobility, using a NASEM report as the basis for a policy session. On decarbonization, we have a recent NASEM report on decarbonization in the transportation, building, and electricity sectors. We can use that as a basis for the policy sector and engage other parts of NASEM. Plus it crosses all modes.

On the topic of long-term changes in travel demand, some offices are shrinking by half because of telework and pandemic effects. The airline industry is starting to see a bit of recovery. Transit recovery is slower than in the aviation industry. Supply chain and freight issues would also be part of this topic. We could bring in non-transportation people to talk about the underlying economic conditions that will drive travel demand in the future.

**Ginger Evans:** I support the Decarbonization topic - so critical- we could add a couple of the COVID related issues - like reduction of surface transportation demand. Decarbonization is so critical. I have a

strong reaction towards doing everything we can there. Some of the subtopics on covid could be incorporated into that. Covid recovery is happening so fast with so many secondary issues that it would be a very difficult thing to forecast.

**Susan Shaheen:** Love decarbonization topic, but COVID recovery will continue to be of interest, particularly in context of American Jobs Plan

**Chris Hendrickson:** As a member of the NASEM committee, I would support decarbonization. The pandemic will still be on in January unfortunately, at least in a good portion of the world.

**Julie Lorenz:** It seems like we can do more to move the needle with decarbonization. Long-term, given that the transportation sector contributes more than any other to greenhouse gas, we can have an impact. Covid will still be with us in January. We can take some actions to respond to changes in travel demand, but decarbonization is likely to have a larger role. However, both are good topics.

**Randy Iwasaki:** I like both topics. In California, lots of transit funding comes from different sources. It's not just from state and federal sources, but also local agencies with sales tax money. It will be interesting to see how people are approaching recovery and how it will affect future funding.

**Brian Ness:** I like the COVID 19 recovery, especially after I heard the suggestion about bringing in non-transportation experts. This provides us with a different perspective than we usually have. After 40 years of attending transportation conferences, it would be nice to have a different perspective.

**Susan Shaheen:** I love both topics and can see arguments for both. I do a lot of work on covid recovery and we just did a big webinar for the Telemobility UTC. Hani Mahmassani and I moderated; we had developers and real estate folks and it was fascinating. I learned so much about how external entities are viewing this. If we are looking at a massive infusion of funds to our economy through the American Rescue Plan, what implications will that also have for covid recovery? But I believe decarbonization is important and should be addressed.

**Carlos Braceras:** I would put Decarbonization 1st, I think that we will need a few years of data before we have an idea on trends with the changes to travel demand.

**Ginger Evans:** I agree with Carlos - the swings will not stop swinging from COVID for a while

**Katie Turnbull:** We can also make suggestions for June 2022, with one suggestion for January and the other for June. Decarbonization in January might have some discussion of covid, followed by a June session more focused on covid. We may have a better idea of how things are going in June than in January. Or you could flip the two sessions.

**Avery Grimes:** These are two great topics. If we talk about decarbonization, we need to talk about total lifecycle carbon emissions from everything it takes to move, especially on freight. Decarbonization needs to include total lifecycle cost to facilitate certain forms of transportation.

**Susan Shaheen:** I agree about the lifecycle perspective; net carbon neutrality

**Carlos Braceras:** Both are good topics. We're seeing that we'll need a lot more data before we have a good indication about the trends of covid for travel demand. We need to keep measuring it. The carbon subject is timely and pressing.

**Martha Grabowski:** I agree with both topics -- timely and impactful. Decarbonization has (administration, currency) momentum; COVID has a longer timeframe for consideration.

**Katie Turnbull:** Sounds like decarbonization in January and potentially covid for June, depending on how the next year goes.

## **BREAK**

## **EQUITY-RELATED ACTIVITY AT TRB**

**Neil Pedersen:** In January, we decided to set aside money for a self-funded study on equity. We talked about potential topics and staff were asked to develop two statements of tasks further. We circulated those among SPPR to see which you all preferred. It's fair to say that it was a split vote. There was pretty even support for both projects, and those who voted generally liked both no matter which they voted for.

Susan and I talked with Stephanie Pollock and Robert Hampshire. Among other things, we talked about these two proposed equity SOTs to see if there was interest from USDOT in funding at least a portion of one of them. As we got more into the discussion, it became apparent that both Robert and Stephanie were interested in equity metrics and data requirements for trying to measure transportation-related equity. What are the appropriate metrics and analysis methods? In the second discussion we had with Robert, he clarified for us that they were especially interested in the topic of how to try to develop equity metrics that would help inform decision making for use of USDOT funds. In the short-term, they recognize that the greatest impact would be on allocation of discretionary funds, but he didn't want to limit it just to that. They also want to think about decisions made either by recipients of federal funds or about changes in distribution of statutorily allocated funds.

Since then, Tom Menzies and other CAAS staff have developed a draft statement of task. Susan and I edited it and sent it to you yesterday afternoon. We have not gotten Robert's feedback yet, but given the timing of this meeting and since this is a change in direction for us, I wanted to share our thinking.

After the vote you all took, the AASHTO Special Committee on Research and Innovation, which provides oversight on NCHRP, met and made their decisions about what projects to fund this upcoming year. They selected two projects that are very close to the scopes that you had previously voted on. So in a way we will still be going forward with those two projects that you voted on.

You had allocated \$500k for the equity study in January. Robert has indicated to us that, though he can't yet make a commitment, he's trying to match that \$500k, giving us a \$1M study. One of the things we discussed with him was that, relatively early in the study, maybe in September 2021, we would try to have a workshop. This workshop would likely include discussions and presentations that would help

USDOT in the short term, especially in terms of decisions around their discretionary funds and taking equity into account in that decision making.

**Susan Shaheen:** Early in our discussions with Robert and Stephanie, it became clear that there was an executive order on equity driving the federal government forward. They're moving aggressively to develop internal documents, to assess data and the gaps, and to understand where biases might lie. Robert reported that they had just filed their 90 day report. Another report will be filed in 200 days. Robert shared that there will be an official notice in the federal register that documents the importance of this particular effort. There are 25 action items in this notice. We can't share them with you, but we did provide comments to him and we integrated the most salient of those action items into this edited statement of task. The statement of task thus closely reflects the conversation that we had with Robert just Wednesday of last week. On a personal level, it feels so good to know that this work is relevant and useful for the USDOT. They really want our help.

**Ginger Evans:** Great initiative and progress with US DOT Neil and Susan. Great news about AASHTO progressing the other topics. These are the ultimate partners for TRB's forward leaning work on equity

**Katie Turnbull:** You deserve a lot of credit to get this moving as fast as it has with the visibility it has.

**Tom Menzies:** For us, with self-initiated studies, the challenge is to have someone on the other end who cares. To supplement DOT's money with our own makes it more motivating to the committee and gives us a clear goal. DOT has a desire for early feedback, which is always a challenge for us because of our process. We wish we could be fast and furious but we're not. But we can hold workshops early in the study process that would help them, especially on metrics for their discretionary money where they have a lot more flexibility. We can't call it real-time advice, but it's helpful. Steve Godwin helped pick up the ball and get this SOT going. This could still change in conversations with DOT, but it's a start.

**Julie Lorenz:** This is excellent - highly responsive and exactly the kind of research/problem solving support that will keep TRB relevant. The workshops will provide quick feedback and offer two-way engagement

**Patrick McKenna:** Hopefully this interface with USDOT in such a positive way can be successful in resetting the TRB funding support by the administration as well. Great job Neil and Susan!

**Susan Shaheen:** Yes, things are evolving very nicely with TRB and USDOT

**Chris Hendrickson:** The exec order includes a broad range of groups, including rural residents. This will be a sizable project!

**Craig Philip:** Did the DOT conversations inform or suggest changes to the other two statements of work that were developed earlier?

**Susan Shaheen:** Craig, I'd say the DOT conversations informed the development of the call.

**Neil Pedersen:** USDOT viewed the other two SOTs as being much more focused on state and local DOT actions and decisions. They really wanted to know what could be done at a federal level.

**Susan Shaheen:** That's absolutely correct. Also, only one of the two previous scopes really honed in on the data metric piece. They wanted a much more centered focus on that. The study will be very broad, so having \$1M to do this study properly is important to me and to Robert. Robert kept talking about this study having "long standing effects" on the field.

**Ginger Evans:** Great initiative to engage while they're making their plans and splitting things up. Great job being so proactive, as that's opened up a huge opportunity.

**Julie Lorenz:** As much as USDOT is seeking assistance in figuring out some data metrics, we should also think about how to share the development. It's a good opportunity for two-way engagement. Some DOTs are very interested in what they could put forward. How do you set the stage so it's a good information exchange so state DOTs can be learning along with USDOT? We all will do better if we learn collaboratively.

**Neil Pedersen:** Robert did share an RFI that we're not allowed to share. The nature of the questions makes it clear they're interested in best practices, both at the state and regional level; sharing what those best practices are; and determining how to scale up/down to national or local levels to do the analysis. The data sources will be the biggest challenge. Some data comes from the census, some from the Department of Labor. But for the most part, the data has to come from the state and local level for the types of analyses they seem to be thinking about.

**Patrick McKenna:** Great reaction and work to interface with them. It's a good example of how reestablishing that relationship and strengthening the existing relationship shows the importance of TRB. I hope that being very responsive to their needs will translate into renewed financial support for TRB. Trying to work together cooperatively and driving some of this basic research that will be fundamental for the next several years is a great opportunity. Thanks to Susan and Neil for seizing on that opportunity.

**Neil Pedersen:** We're very optimistic.

**Chris Hedges:** Page 29 of the briefing book lists current CRP projects on equity. Page 30 is recent reports on equity, and projects selected by the AASHTO R&I committee are listed on page 31. It's \$3.5M in seven projects (see table below).

Equity-Related Research Selected by the AASHTO Research & Innovation Committee April 15, 2020		
NCHRP Project Number	Title	Budget
08-150	Valuation of Transportation Equity in Active Transportation and Safety Investments	\$650,000
08-152	Strategies for Advancing Equity in Transportation Planning by Increasing Diversity, Equity, and Inclusiveness in the Transportation Planning Profession	\$350,000
08-155	Researching and Responding to Racial Disparities in the Construction of Expressways ( <i>will be modified to focus on the impacts of construction activity, during construction, and not limited to a particular type of facility</i> )	\$400,000
08-159	Understand how accessibility to employment, health care, education, and other vital needs varies for different population groups in different settings, and methods for effectively assessing mobility and accessibility needs	\$500,000
08-160	Understand the role of transportation infrastructure investment in gentrification and displacement and identify effective policies and strategies to address these effects	\$400,000
08-161	Identify emerging approaches for public engagement to meaningfully involve minorities, low-income, and other vulnerable populations	\$500,000
08-162	Identify practices and policies to advance social justice and equity into transportation decision-making	\$750,000
	TOTAL	\$3,550,000

All of these will be assigned to panels of experts. I will let SPPR members know when we have nominations open for these panels. The panels will work on the statement of work and refine them so they will be valuable to all jurisdictions and do as much as possible with the budgets provided.

**Neil Pedersen:** There are pretty healthy budgets associated with these projects. We can do some important work here.

**Katie Turnbull:** The 2021 TRBAM also had many sessions and speakers on the topic. TRB is on top of things. It would be interesting to see what impact the Deen Lecture had - it might be more than we think. At the executive committee meeting after that, Leslie Richardson was late because she was in a meeting with her staff to make sure things in his presentation weren't happening at SEPTA.

**Susan Shaheen:** This list of CRP projects is so impressive, and I'm digesting it. One of the things Robert shared with Neil and me was recognition that what we would do with a consensus study would not be duplicative of what we're doing with AASHTO/CRP funds. Neil reassured him we'd coordinate to complement one another. What are the time frames for these projects?

**Chris Hedges:** We need to get the programs approved by AASHTO Board of Directors, which can take time, and then by NASEM. And simultaneously we offer a month for nominations of panel members. It's likely late summer or the end of the year before these get started. Tom Menzies and I speak frequently and we'll make sure there's no duplication of efforts.

**Avery Grimes:** I want to speak from a committee viewpoint. At every meeting I could attend at the TRBAM, equity came up. I want this group to know how important that is to the committees.

**Neil Pedersen:** An earlier version of this SOT included the definition of equity and underrepresented communities. We decided to take it out because it didn't belong in an SOT, but it's very expansive. It includes rural, LGBTQ, every ethnic minority group, and more. In our discussions with Robert, he made clear that we would scope this study in a way that wasn't trying to cover everything in the executive order. We should scope it in a way where we can get in depth into the issues we do address. So that will be an initial challenge - what is the scope so we can limit it to a topic where we can do an in-depth assessment?

**Katie Turnbull:** Great job by everybody. We'll look forward to updates.

## MARINE BOARD REPORT

**Martha Grabowski:** I'm joined by Craig Philip, the vice chair of the Marine Board. Scott Brotemarkle can't join us but he's here in spirit.

Marine Board areas of interest include (1) autonomous shipping and the future of navigation, (2) maritime resilience, (3) the future of the maritime supply chain, (4) US offshore wind energy development, (5) towards zero emissions shipping, (6) US maritime policy, and (7) Arctic maritime operations. All of these topics dovetail with what we've been talking about today. There are also cross-cutting elements including human and intellectual capital; safety management, culture, and inspections; and cyber in the marine transportation system. All of that is in addition to the diversity and inclusion issues we've been talking about.

Our next virtual spring meeting will be on Zoom in June. This topic was teed up for us by a core sponsor. In November, the Coast Guard asked us to address a pressure point they're seeing: competing uses for the same restricted space. This includes vessels operating in offshore wind farms, and the challenges of maritime rescue in the middle of a wind farm. Plus there are aquaculture settings, and Elon Musk is landing space vessels there. We'll host a focus session in June that includes federal agencies (US Coast Guard, National Oceanic and Atmospheric Administration, Department of the Interior, US Army Corps of Engineers, Maritime Administration, US Navy, Federal Aviation Administration, and the Department of Energy), states, ports, industry, academia, partnerships, stakeholders, and the public.

These agencies are seeing lots of challenges. There are challenges associated with developing risk frameworks using not only archival data but real-time data. The Coast Guard received notice about the space rocket landing via tweet. The Coast Guard had already denied a permit for an autonomous barge for this rocket to land on, but SpaceX did it anyhow. There are lots of issues ripe for discussion. There are also human capital issues. These offshore and emerging maritime areas are where diversity and



inclusion are very important. The workforce issues and development of labor pools are also a part of this conversation. These challenges are not unique to the US, as they exist around the world. Nontraditional partnerships and coalitions that have developed to address these challenges are something we intend to look at in June.

**Susan Shaheen:** Disrupters getting ahead of policy again and now in the marine space. It's shocking when it first happens. Good luck!

We'll have people at the Marine Board meeting from NASA. That's not usual for us, but we're going to have to broaden the conversation to ensure all stakeholders are talking. We'll also have discussions about partnerships with middle and high school students and shipping companies to provide education and training pipelines. There are interesting coalitions and partnerships developing.

**Chris Hendrickson:** NASA is now in the transportation world with rovers and helicopters...

Beyond June, our next steps are to continue conversations with core leadership. Some nontraditional partners are interested in not only participating in our workshops but possibly sponsoring additional work. We had a meeting on March 25 with Michael Berube, Acting Deputy Assistant Secretary for Transportation in the Office of Energy Efficiency and Renewable Energy, Department of Energy. (And you think we have long titles.) He brought six technical staff to the meeting for ideas about what's going on in maritime/offshore with respect to design and infrastructure of novel ship design and alternative fuels. We'll likely be holding another session in the fall at our Fall 2021 Marine Board Meeting on decarbonization and zero emissions. The time to build a ship and the lifetime of a ship are much longer than the timelines for decarbonization. MARAD, ONR, DOE, NOAA, EPA, states, ports, energy industry, academia, training institutions, and regional coalitions will all be involved in the fall meeting.

We, like all of TRB, are wondering what our fall meeting will be like, whether in DC or via Zoom. We'll know more as the summer progresses.

**Neil Pedersen:** NASA has expressed interest in getting more involved with TRB. They're close partners with one of the boards in our Division of Engineering and Physical Sciences. We want to nurture that relationship.

**Nat Ford:** There's an opportunity for collaboration with maritime and trucking on AVs. Is there some work to be done on where there should be collaboration on basic platforms around communication protocols? We could end up with disparate silos and governance that will make things harder to unravel later on. There's a need for a global discussion here, not each of our modes tackling it on their own.

**Martha Grabowski:** Maritime discussions to date have been around automation at the port interfaces. But the US is very far behind on autonomous vessels. Considering what's happening in the rest of the world, it would be helpful to see what's happening globally and to work across the sectors. The maritime industry looks to the SAE levels, but in terms of working levels and frameworks, Nat's suggestion would be a great step forward. We can suggest closer ties to our autonomous groups, and might get funding chances.

**Ginger Evans:** I wonder if human factors engineering is the common thread with autonomous vehicles - different modes

**Martha Grabowski:** Ginger, definitely--human factors is common across modes, topics.

**Nat Ford:** Is there a place where AVs in every mode come together within TRB?

**Neil Pedersen:** There have been limited attempts at doing that, but nothing has been sustained. It's occurring to me as you make that point that the USDOT JPO is intended to be the place where these issues come together from all the modes. That's also under Robert Hampshire, so that might be an issue Susan and I raise next time we talk to him.

**Susan Shaheen:** Fabulous idea.

**Neil Pedersen:** In our discussions with Robert on the equity study scope, it would not include the waterside of maritime, but would include the land side of the ports. That's another issue that the Marine Board may want to stay plugged into.

**Martha Grabowski:** Where do offshore wind and air development fall?

**Neil Pedersen:** We can talk about the equity issues of that offline.

**Susan Shaheen:** Robert mentioned they're having lots of discussions about the disproportionate impacts of ports on underserved communities.

## COOPERATIVE RESEARCH PROGRAMS

**Chris Hedges:** I've been to a lot of SPPR meetings now. Neil starts with his introductory remarks. He almost always tells you what I will say, and it's almost never what I'm planning to report on. This year I tried to outsmart him and wait until I saw his remarks before I completed my presentation, and then he didn't do the part where he predicted my presentation.

We have 445 active projects in NCHRP. 128 are new projects, including 58 new and continuation projects selected by AASHTO's R&I for FY 2021. (Note: other numbers about CRP stats are available in Chris Hedges slides.) We had similar growth and activity in our other CRP divisions. There were 41 ACRP reports, 81 NCHRP reports, and 22 TCRP. The total of 144 reports was a record year for us.

How are we doing it? We've implemented and integrated many software programs. Workfront is the largest program we implemented. We use that for project and program management, contract packages and amendments, and electronic report distribution and storage. All panel members can access project reports the same way in the same place. We joined Aptify, or what you know as MyTRB, about a year ago to form and approve panels. We use Workfront Proof to request proposals and do report forewords. However, you can't do blind reviews within Workfront. So the first person gives good comments and everyone else just says "yeah, I agree." Alchemer, formerly SurveyGizmo, is how we collect panel comments. And we collect electronic proposals in Dropbox. It's a common application but there were lots of aspects to think about for years. But that's what we did nearly overnight when we realized nobody would be in the office. There have been no major complaints; everyone knows what we have to do to deal with the pandemic. And this will likely be the norm going forward. A few years ago,

we were almost completely paper-based. Implementing all of this over the last few years has made us look pretty smart now.

**Martha Grabowski:** Kudos, Chris Hedges, on the move to digital platforms!

**Susan Shaheen:** Chris, love the push to use e-platforms, including digital proposals (reduces TRB's carbon footprint)

In mid-April, the AASHTO R&I committee met. We picked 48 new projects and 12 continuing projects like syntheses, DOT administration support, domestic scans, AASHTO committee supports, IDEA, and implementation. It's \$31.9M. And as mentioned before, we selected seven projects on equity.

We also selected six off-cycle COVID-related projects. Each year the R&I committee holds back some money for time-sensitive issues that come in off cycle. So we gave them a slate of covid-related issues. These were all endorsed before the meeting two weeks ago.

Some recent reports are summarized in the slides. Sorry that I didn't have it done in time to include in your meeting book; you'll get the powerpoint after this meeting.

We started putting together BTSCRIP in 2017 and are now up to 19 projects that have been funded. Our first report was out a couple of months ago. Our industry partner, the Governors Highway Safety Association, is really excited about it. That report is on using electronic gadgets while driving and looks at model legislation to prevent and enforce it.

Also, a few years ago, Turner Fairbank asked us to do some work for them. One project is an assessment of lab facilities at Turner Fairbank. These assessments had been done by Volpe, but that wasn't very objective, as Volpe is another branch of the USDOT. The second project is a series of individual infrastructure-related research projects. Turner Fairbank had several retirements and it's hard to replace staff, so we picked up a couple of projects for them. The governing group of the group of projects is meeting later this week. We are nearing the completion of a couple of those projects and CRP will probably start up a new report series for these one-off projects. We also completed a report for the Association of Motor Vehicle Administrators. It was a thought piece on the DOT of the future, using scenario planning. That report is out and being distributed through AMVA, alongside us.

**Avery Grimes:** We are working on redeveloping interest in the NCRRP

**Chris Hedges:** Avery, I knew that some activity was underway on reviving the rail program. I know we could do a lot of good work that would benefit the industry.

## **TRB COMMUNICATIONS PLAN**

**Paul Mackie:** The TRB communications strategic plan connects to the overall strategic plan. It identifies the many strategic communications changes since 2016 and talks about the objectives of communications in general. TRB communications did a lot of work with other communications staff around NASEM. We want to streamline our objectives across the Academies. In recent edits we've identified that TRB is a little different than the others. There's a SWOT analysis to help us figure out

how TRB can affect the world through communications. We have three major focuses: messaging what makes TRB unique, developing content that connects with key audiences, and developing greater insights into our audiences and how to reach them. The plan also has details on our communications tactics like email blasts and the podcast, along with aspirations for our strategic communications.

Regarding logistics for this plan, we are incorporating edits from TRB leadership, the Office of the Chief Communications Office, and other divisions around the Academies. We also have a small committee of TRB staff to work with us over the next month to make sure that staff have input and that the plan will work for them. You don't see the executive committee listed as authors, but your voices are in the draft. In June, with all of this feedback incorporated, we will deliver it to you all and hopefully formally adopt it at the July executive committee meeting. Formal adoption is important, but the document will be live and frequently evolve. We're doing a good job of keeping staff involved and informed. We have an internal weekly staff newsletter about communications and we report out at all staff meetings. When we're back to the office, there's a screen in the lobby to continually update staff about how TRB is influencing and affecting the world.

**Neil Pedersen:** I reviewed the initial draft and you all will be very impressed with the breadth of the activity going on and the strategies contained within.

**Julie Lorenz:** I look forward to reading the draft and have certainly seen lots of progress in communications/outreach / engagement

**Susan Shaheen:** It would be great to integrate this strategic plan with the NRC strategic plan goal #2 about our impact on the world. Have you considered that?

**Paul Mackie:** There's a lot of that in the strategy. Our Chief Communications officer, David May, is putting a lot of thought into how we can influence the world more. We have a powerful forum here as NASEM and TRB. On a surface level, he's focused now on branding and logos, along with many other things. That discussion will move to TRB later. There's a lot of thought into that second goal. There are 60 or so communicators around NASEM, and we're all now in a central unit. We get to learn a lot from all of the expertise of the others and there's a lot of thought of how to make NASEM a bigger powerhouse in the world of science and research. You'll see more of the details in the strategy when we get it to you.

**Susan Shaheen:** As an academic and researcher, I often hear that we produce these reports and articles but don't have time to digest them. How can we tell more stories about the impact of our research at TRB on the real world?

**Paul Mackie:** Great point. It's an information person's dream here at NASEM. We've started trying to package the stories of all the different topics that TRB touches on in narrative formats. That's often in blog posts that include links to the many resources that TRB has on the topic. We need to do a better job of organizing that content - even though the blog is a new project there's already so much information there. Continuing to refine how we package the content will also help us deliver it better.

**Neil Pedersen:** The NRC strategic plan has put a lot of emphasis on developing metrics around impact. The qualitative and anecdotal information about how our products have been used are often far more compelling than statistics like how many reports have been downloaded. We're making the point

that qualitative information about our impact is likely a far better way of measuring impact than just using quantitative metrics.

**Paul Mackie:** We have a metrics spreadsheet with 70-80 communications metrics. Probably about 5-10 of those are really important and tell the story of how we're having an influence. But it's important to have all of those metrics and track them, even if we don't talk about them much. We live in a research and science world. We want to show that communications is a real value and there are real numbers backing this up. You might need the 80 numbers to tell the one or two really good numbers or stories.

**Martha Grabowski:** Do we analyze social media (qualitative) content and use those metrics in measuring impact? Also, there's an increasing amount of unstructured data. What about tiktoks and instagram posts? NSF and NOAA sponsored a competition a few years ago to determine the impacts of a STEM program they ran.

**Paul Mackie:** Social media is one of the best ways we can influence new audiences and bring in new diverse people. TRB's metrics are pretty messy in many ways, but they're not messy at all in social media. We do have a good understanding there. We have put a big emphasis on social media in the last two years. We had more Facebook and LinkedIn posts than NASEM over the last year, and we just recently passed NASEM in the number of LinkedIn followers. LinkedIn is probably our most key network because it's such a professional network. It's where you can build your career. There are so many niche audiences, and we have so many niche topics. Our growth in social media has been huge in the last few years, and we do keep close tabs on that.

## CONSENSUS AND ADVISORY STUDIES

**Tom Menzies:** Chris puts up huge numbers of published reports; we've had one since the TRBAM. It's on modernizing offshore oil and gas inspection. The report was released in February 2021. The offshore industry is now dominated by deepwater facilities, which results in lots of challenges for enforcement officials. The facilities are large and complex and there are many such facilities in the Gulf. Inspector can't just go out in helicopters now but need to use technology and other things to ensure safety. This study is very strategic on how to do such enforcement, and now that there's a new director at the Bureau of Safety and Environmental Enforcement, it will be helpful.

Three studies are close to being finished. Two were requested by appropriations. One, chaired by Craig Philip, is on liquefied natural gas movements by rail tank car. That's a two-phase study. The first phase looks at PHMSA's and FRA's actions on safety, and will enter review in the next few weeks. Another study, chaired by Joe Schofer, is developing metrics on transportation resilience, and is also likely entering review in May. The third study nearing completion looks at whether people in wheelchairs can get on airplanes and be secured within the cabin. There are issues about available space getting in and out, the floor structure for these heavy wheelchairs, and whether the wheelchair would function safely in a crash. We've gone through these complex issues one by one, and the committee has some clear insights into the feasibility of these systems. That study will be released in September.

Next is the status of new study requests that came in legislation at the end of last year. We have two in the National Defense Authorization Act. One is for the Coast Guard, identifying emerging issues that may require new Coast Guard oversight, regulation, or action. These include issues Martha mentioned,

plus Arctic use, autonomous vessels, and more. This study is likely to start up this summer. The second is the certificate of compliance inspection program for LNG tankers, looking at constraints and challenges to ensuring that LNG tankers can be inspected efficiently as vessel traffic grows.

In FY 2021 transportation appropriations, there are three studies. One is an annual report on emerging safety trends in air transportation, including biennial reports through 2031. This project has lots of life in it and we're looking for additional staff. There's also a study on the feasibility of automated and remote control shutoff valves on oil and gas transmission pipelines, likely starting up by June. And the third is on the use of plastic waste in transportation infrastructure, especially asphalt pavement.

## **CONCLUSION**

**Neil Pedersen:** Thank you for all your comments, especially on the strategic plan. Katie, thank you for your leadership and doing a great job chairing. For Woods Hole, most of us would likely prefer to go there. But we'll be setting it up so there will be a hybrid option. We'll ask everyone to bring their laptops and be on Zoom, even if you're in the room, so those who are virtual can see everyone speaking. We'll do everything we can to hold the meeting in Woods Hole in July. Travel plans might not be until the later part of May. We don't want to incur a lot of cancellation fees if we determine the meeting has to be virtual. Even though prices will be going up, it will still be better for us to avoid the cancellation fees.

# TRB Activity on Equity, Climate, Change, Covid-19, and Economic Recovery

TRB's Core Program includes the work of our 175 standing technical committees (the Annual Meeting and smaller conferences the committees plan, the papers they review for our *Transportation Research Record* journal, the Research Needs Statements and webinars they create, etc.). Products in each of these categories are listed below for each of four priority areas: equity, climate change, COVID-19, and economic recovery. In some cases, especially for economic recovery, the activities contribute to issues that are essential to the priority area even if they are not directly focused on the goal of the priority area.

TRB's Cooperative Research Programs include NCHRP, TCRP, ACRP, and several smaller programs. Under all of these programs, TRB organizes panels of experts to provide guidance on technical aspects of problems that are translated into research projects that produce reports and other products. Ongoing and pending projects on each of the four priority areas are listed next, followed by listings of relevant report issued during that 3 to 5 years.

## Equity

### TRB Technical Activities Division

#### Standing Technical Committees

- Sustainability and Resilience Group (AM000) Transportation and Society Section (AME00)
- Equity in Transportation (AME10)
- Women and Gender in Transportation (AME20)
- Native American Transportation Issues (AME30)
- Accessible Transportation and Mobility (AME50)
- Community Resources and Impacts (AME80)

2021 Annual Meeting Sessions (search 2021 Annual Meeting program at <https://annualmeeting.mytrb.org/OnlineProgram/Browse?ConferenceID=9>)

- Thomas B. Deen Distinguished Lecture: Our Work is Never Done: Examining Equity Impacts in Public Transportation
- 1010 - Identifying Systemic Transportation-Related Health Effects of COVID- 19 to inform Interdisciplinary Research
- 1048 - Navigating a New Normal in Public Transit and Shared Mobility
- 1079 - Women and Gender in Transportation
- 1094 - Advancing Transportation Equity
- 1118 - Mobility for Older Adults and People with Disabilities
- 1123 - Arrested Mobility: Exploring the Impacts of Over-Policing (i.e., policy, police and polity) BIPOC Mobility in the US

- 1127 - The Impact of the 2020 U.S. Supreme Court Opinion of *McGirt v. Oklahoma* on Transportation Issues within the Newly Recognized “Indian Country.”
- 1151 - Equity of Innovative Mobility Services and Technologies
- 1226 - Transportation Equity: Addressing Equity Issues in New Mobility Systems
- 1227 - Transportation Equity: Incorporating Equity into the Transportation Decision-Making Process
- 1228 - Transportation Equity: Understanding and Addressing Transportation Disadvantage
- 1229 - Transportation Equity: Community Resources and Services
- 1230 - Native American Transportation
- 1232 - Planning for Diversity: Facilitating Transit Connections
- 1236 - Equitable Recovery: Reimagining City DOTs
- 1315 - Health, Equity, Resilience and Community Impacts
- 1324 - Transit Interactions Reimagined: Art, COVID and Equity
- 1346 - Transportation as a Social Determinant of Health
- 1381 - The Influence of Discrimination and Civil Rights Laws on Shaping our Transportation Systems
- 1386 - Trending Topics in Tribal Transportation
- 1416 - Contract Equity Poster Session
- 1429 - Built Environment, Accessibility, and Equity Considerations in Public Transportation
- 1445 - Step In and Step Up: Sexual Harassment on Transit - What We Know, What We Need to Know, and a Call to Action

Recent Specialty Conferences (search for conferences at <http://www.trb.org/Calendar/Calendar.aspx>)

- Conference on Advancing Transportation Equity

Recent Webinars (search for webinars at <http://www.trb.org/Calendar/Calendar.aspx>)

- Determining Social and Economic Qualifications in the DBE Program
- Advancing Transportation Equity
- Human Trafficking and Mobility of Missing and Murdered Indigenous Women
- Evaluating Goals Under the Disadvantaged Business Enterprise Program
- Evaluating Goals Under the Disadvantaged Business Enterprise Program
- Exploring equity implications of emerging transportation technologies

Transportation Research Record Journal The papers listed are a sample from the last few years.

Search for more at <https://journals.sagepub.com/home/trr>

- Transit Economic Equity Index: Developing a Comprehensive Measure of Transit Service Equity
- Incorporating Equity into Pedestrian Master Plans
- Social Equity and Bus On-Time Performance in Canada’s Largest City
- Planning for Social Equity and Emerging Technologies
- Equity of Bikeway Distribution in Minneapolis, Minnesota
- Equity Effects of Congestion Charges: An Exploratory Analysis with MATSim



- Performance-Based Methodology for Evaluating Equity for Transportation System Users
- Comparison of Two Common Approaches to Public Transit Service Equity Evaluation
- Exploring the Equity of Traditional and Ride-Hailing Taxi Services during Peak Hours
- The Geography and Equity of Crowdsourced Public Participation for Active Transportation Planning
- Examining the Equity Impacts of Autonomous Vehicles: A Travel Demand Model Approach
- Equity in Spatial Access to Bicycling Infrastructure in Mid-Sized Canadian Cities
- Our Work Is Never Done: Examining Equity Impacts in Public Transportation (Deen Lecture)

Research Needs Statements Search database and read statements at <https://rns.trb.org/>

- Social Equity in Pedestrian Collision Trends, Reporting and Decision Making
- Bicycle Network Planning: Validating and Extending Bicycle Level of Traffic Stress Analysis

## **TRB Cooperative Research Programs**

### **Ongoing Projects**

Virtual Public Involvement: A Manual for Effective, Equitable, and Efficient Practices for Transportation Agencies. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 15 Feb. 2021.

<https://trid.trb.org/view/1707207>

Synthesis of Information Related to Highway Practices. Topic 52-13. Micromobility Policies, Permits, and Practices. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 9 Feb. 2021.

<https://trid.trb.org/view/1707243>

Improving Public Transportation in Rural Areas and Tribal Communities. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration, Transit Cooperative Research Program, Federal Transit Administration. Start date: 14 Jan. 2021.

<https://trid.trb.org/view/1707212>

Policing and Public Transportation. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 14 Dec. 2020.

<https://trid.trb.org/view/1722785>

Maintaining Transportation Services for People With Disabilities, Paratransit, and Other Service Needs During a Pandemic. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 23 Nov. 2020.

<https://trid.trb.org/view/1753484>

Addressing Disproportionate Share of Health, Economic, and Transportation Impacts for Lower-Income Households and Communities of Color. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 23 Nov. 2020.

<https://trid.trb.org/view/1753481>

Racial Equity, Black America and Public Transportation. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 23 Nov. 2020.

<https://trid.trb.org/view/1753480>

Synthesis of Information Related to Transit Practices. Topic SH-21. Transit Fare Capping: Balancing Revenue and Equity Impacts. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 13 Oct. 2020.

<https://trid.trb.org/view/1708345>

Synthesis of Information Related to Transit Practices. Topic SB-34. Coordination of Public Transit Services and Investments with Affordable Housing Policies. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 6 Oct. 2020.

<https://trid.trb.org/view/1708343>

Synthesis of Information Related to Transit Practices. Topic SA-52. Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 30 Sep. 2020.

<https://trid.trb.org/view/1708340>

Research Roadmap -- Transformational Technologies (other than CV/AV). Topical White Papers for the TRB Forum on Automated Vehicles and Shared Mobility. [Project]. National Cooperative Highway Research Program, Federal Highway Administration, American Association of State Highway and Transportation Officials (AASHTO). Start date: 18 Feb. 2020.

<https://trid.trb.org/view/1657853>

Impact of Transformational Technologies on Underserved Populations. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 5 Nov. 2019.

<https://trid.trb.org/view/1577715>

Synthesis of Information Related to Transit Practices. Topic SH-19. Considering the Unbanked in Cashless Fare Payment at Point of Service for Bus/Demand Response Services. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 24 May. 2019.

<https://trid.trb.org/view/1630012>

Synthesis of Information Related to Transit Practices. Topic SB-31. Implementing the US DOT Reasonable Modification Rule. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 2 Jun. 2017.

<https://trid.trb.org/view/1467325>

Synthesis of Information Related to Airport Practices. Topic S04-19. Incorporating ADA and Functional Needs in Emergency Exercises. [Project]. Airport Cooperative Research Program, Federal Aviation Administration. Start date: 18 May. 2017.

<https://trid.trb.org/view/1427754>

### **Pending/New Projects**

Equity-Related Research Selected by R&I April 15, 2020		
NCHRP Project Number	Title	Budget
08-150	Valuation of Transportation Equity in Active Transportation and Safety Investments	\$650,000
08-152	Strategies for Advancing Equity in Transportation Planning by Increasing Diversity, Equity, and Inclusiveness in the Transportation Planning Profession	\$350,000
08-155	Researching and Responding to Racial Disparities in the Construction of Expressways (will be modified to focus on the impacts of construction activity, during construction, and not limited to a particular type of facility)	\$400,000
08-159	Understand how accessibility to employment, health care, education, and other vital needs varies for different population groups in different settings, and methods for effectively assessing mobility and accessibility needs	\$500,000
08-160	Understand the role of transportation infrastructure investment in gentrification and displacement and identify effective policies and strategies to address these effects	\$400,000
08-161	Identify emerging approaches for public engagement to meaningfully involve minorities, low-income, and other vulnerable populations	\$500,000
08-162	Identify practices and policies to advance social justice and equity into transportation decision-making	\$750,000
	TOTAL	\$3,550,000

## **Issued Reports**

Guidebook and Research Plan to Help Communities Improve Transportation to Health-Care Services. TCRP Research Report, KFH Group, Incorporated; NORC at the University of Chicago, Issue 223, 2021, 191p  
<https://trid.trb.org/view/1748355>

Wood, Nick; McGee, Jordan; Geiselbrecht, Tina; Simek, Chris. Emerging Challenges to Priced Managed Lanes. NCHRP Synthesis of Highway Practice, Issue 559, 2020, 99p  
<https://trid.trb.org/view/1738034>

Krop, Richard A; Rooke, Jaime; Emil, Elise; Leahu-Aluas, Oana; McDonnell, Jon; West, Nancy K; Rosales, Mara. Guidance for Diversity in Airport Business Contracting and Workforce Programs. ACRP Research Report, Issue 217, 2020, 165p  
<https://trid.trb.org/view/1727479>

Twaddell, Hannah; Zgoda, Beth. Equity Analysis in Regional Transportation Planning Processes, Volume 2: Research Overview. TCRP Research Report, Issue 214, 2020, 178p  
<https://trid.trb.org/view/1725583>

Twaddell, Hannah; Zgoda, Beth. Equity Analysis in Regional Transportation Planning Processes, Volume 1: Guide. TCRP Research Report, Issue 214, 2020, 129p  
<https://trid.trb.org/view/1721178>

Thomas, Larry W. Update of Selected Studies in Transportation Law, Volume 8, Section 1: Civil Rights and Transportation Agencies. NCHRP Legal Research Digest, Issue 77, 2019, 150p  
<https://trid.trb.org/view/1666109>

Chia, David. Administration of ADA Paratransit Eligibility Appeal Programs. TCRP Synthesis of Transit Practice, Issue 133, 2018, 98p  
<https://trid.trb.org/view/1508551>

# Climate Change

## TRB Technical Activities Division

### Standing Technical Committees

- Environmental Issues in Transportation Law (AJL50)
- Environmental Analysis and Ecology (AEP70)
- Hydrology, Hydraulics, and Stormwater (AKD50)
- Transportation and Public Health (AME70)
- Critical Transportation Infrastructure Protection (AMR10)
- Disaster Response, Emergency Evacuations, and Business Continuity (AMR20)
- Extreme Weather and Climate Change Adaptation (AMR50)
- Air Quality and Green House Gas Mitigation (AMS10)
- Transportation Energy (AMS30)
- Alternative Fuels and Technologies (AMS40)
- Environmental Issues in Aviation (AV030)
- Marine Environment (AW030)
- Asphalt Materials Selection and Mix Design (AKM30)
- Design and Rehabilitation of Concrete Pavements (AKP20)
- Design and Rehabilitation of Asphalt Pavements (AKP30)
- Road Weather (AKR50)

2021 Annual Meeting Sessions (search 2021 Annual Meeting program at <https://annualmeeting.mytrb.org/OnlineProgram/Browse?ConferenceID=9>)

- 1007 - Emerging Sustainable Technologies for Cement and Concrete
- 1011 - A Marriage of Convenience: Partnering Greenhouse Gas and Air Quality Management, Lessons Learned and Future Research Needs
- 1045 - Climatic Impacts on Performance of Road Foundation
- 1047 - Electrification of Fleet and Rideshare Vehicles
- 1050 - Impacts of COVID- 19 on Decarbonization of Transportation
- 1058 - Decarbonization Challenges and Opportunities in Marine Transportation
- 1107 - Understanding Mobile Source Emissions and Air Pollution Exposure
- 1120 - Current Issues in Transportation Energy
- 1131 - Community and Transportation Systems Decision Making for Climate Change
- 1139 - Innovations in Sustainable and Resilient Pavement Systems
- 1150 - Greenhouse Gas Reduction Pathways: Where We Are Now and Plans For Long-Term Mitigation
- 1253 - Advances in Mobile Source Emissions and Air Quality Modelling
- 1262 - Recycling/Upcycling, Reuse and Repurposing of Waste and Industrial By-Products as Aggregates
- 1266 - The Environmental Impacts of Aviation During and After COVID- 19
- 1316 - Alternative Fuel Vehicle Applications
- 1373 - Alternative Fuel Refueling and Infrastructure
- 1385 - Incorporating Weather & Climate Research into Transportation

- 1387 - Resource Conservation and Recovery in Action: Current Trends in Recycling and Upcycling in Transportation
- 1437 - Alternative Fuel Consumer Perceptions and Modeling
- 1463 - Strategies to Mitigate Mobile Source Emissions, Improve Air Quality and Address Climate Change

Recent Specialty Conferences (search for conferences at

<http://www.trb.org/Calendar/Calendar.aspx>)

- Virtual Forum on Sustainability and Emerging Transportation Technology (in 2 parts)
- TRB Committee on Environmental Analysis and Ecology Virtual Seminar
- 2022:
- Conference on Sustainability and Emerging Transportation Technology

Recent Webinars (search for webinars at <http://www.trb.org/Calendar/Calendar.aspx>)

- Modeling Long-Distance Intercity Travel for Sustainable Global Travel
- What Role Does Ecology Have in Sustainable Transportation?

Transportation Research Record Journal The papers listed are a sample from the last few years.

Search for more at <https://journals.sagepub.com/home/trr>

- Quantifying the Impact of Climate Change on Flexible Pavement Performance and Lifetime in the United States
- Climate Projections for Transportation Infrastructure Planning, Operations and Maintenance, and Design
- Prioritization of Climate Change Adaptation Interventions in a Road Network combining Spatial Socio-Economic Data, Network Criticality Analysis, and Flood Risk Assessments
- Pavement Risk Assessment for Future Extreme Precipitation Events under Climate Change
- Evaluation of the Metropolitan Transportation Commission's Climate Initiatives Program
- Integrating Climate Change into Scenario Planning: Can Mitigation Measures Also Make a Region More Resilient?
- Hurricane Wind and Storm Surge Effects on Coastal Bridges under a Changing Climate
- Seasonal and Long-Term Changes to Pavement Life Caused by Rising Temperatures from Climate Change

Research Needs Statements Search database and read statements at <https://rns.trb.org/>

- Science-Based Targets for Greenhouse Gas Emissions at Airports
- Designing Resilient Infrastructure for an Uncertain Future: When the 100 Year Storm Occurs Every 10 Years
- Airport Risk Assessment Tool for Future Environmental Threats
- Measuring Airport Resiliency to Natural Disasters and Other Hazards
- Custom Climate Change Adaptation Tool

## TRB Cooperative Research Programs

### Ongoing Projects

Considering Greenhouse Gas Emissions and Climate Change in Environmental Reviews: Resources for State DOTs. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 31 May. 2021.

<https://trid.trb.org/view/1707244>

Synthesis of Information Related to Highway Practices. Topic 52-13. Micromobility Policies, Permits, and Practices. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 9 Feb. 2021.

<https://trid.trb.org/view/1707243>

Design Guidance and Standards for Resilience. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 11 Jan. 2021.

<https://trid.trb.org/view/1707225>

Updates to the Design Practices Guide for Applying Climate Change Information to Hydrologic and Coastal Design of Transportation Infrastructure. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 12 Oct. 2020.

<https://trid.trb.org/view/1696716>

NCHRP Implementation Support Program. Pilot Test of Climate Change Design Practices Guide for Hydrology and Hydraulics. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 30 Sep. 2020.

<https://trid.trb.org/view/1664452>

E-Scooter Safety: Issues and Solutions. [Project]. Behavioral Traffic Safety Cooperative Research Program, Governors Highway Safety Association, National Highway Traffic Safety Administration. Start date: 5 Jun. 2020.

<https://trid.trb.org/view/1632551>

Quick-Response Research on Long-Term Strategic Issues. Task 36. An Update on Public Transportation's Impacts on Greenhouse Gas Emissions. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 29 Oct. 2019.

<https://trid.trb.org/view/1607207>

Electric Aircraft of the Horizon -- An Airport Planning Perspective. [Project]. Airport Cooperative Research Program, Federal Aviation Administration. Start date: 14 Jun. 2019.

<https://trid.trb.org/view/1528525>

Methods for State DOTs to Reduce Greenhouse Gas Emissions from the Transportation Sector. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 1 May. 2018.

<https://trid.trb.org/view/1467498>

Transportation System Resilience: CEO Primer & Engagement. [Project]. American Association of State Highway and Transportation Officials (AASHTO), National Cooperative Highway Research Program, Federal Highway Administration. Start date: 1 Mar. 2017.

<https://trid.trb.org/view/1439859>

### **Issued Reports**

Considering Greenhouse Gas Emissions and Climate Change in Environmental Reviews: Resources for State DOTs. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 31 May. 2021.

<https://trid.trb.org/view/1707244>

Synthesis of Information Related to Highway Practices. Topic 52-13. Micromobility Policies, Permits, and Practices. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 9 Feb. 2021.

<https://trid.trb.org/view/1707243>

Design Guidance and Standards for Resilience. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 11 Jan. 2021.

<https://trid.trb.org/view/1707225>

Updates to the Design Practices Guide for Applying Climate Change Information to Hydrologic and Coastal Design of Transportation Infrastructure. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 12 Oct. 2020.

<https://trid.trb.org/view/1696716>

NCHRP Implementation Support Program. Pilot Test of Climate Change Design Practices Guide for Hydrology and Hydraulics. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 30 Sep. 2020.

<https://trid.trb.org/view/1664452>

E-Scooter Safety: Issues and Solutions. [Project]. Behavioral Traffic Safety Cooperative Research Program, Governors Highway Safety Association, National Highway Traffic Safety Administration. Start date: 5 Jun. 2020.



<https://trid.trb.org/view/1632551>

Quick-Response Research on Long-Term Strategic Issues. Task 36. An Update on Public Transportation's Impacts on Greenhouse Gas Emissions. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 29 Oct. 2019.

<https://trid.trb.org/view/1607207>

Electric Aircraft of the Horizon -- An Airport Planning Perspective. [Project]. Airport Cooperative Research Program, Federal Aviation Administration. Start date: 14 Jun. 2019.

<https://trid.trb.org/view/1528525>

Methods for State DOTs to Reduce Greenhouse Gas Emissions from the Transportation Sector. [Project]. National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration. Start date: 1 May. 2018.

<https://trid.trb.org/view/1467498>

Transportation System Resilience: CEO Primer & Engagement. [Project]. American Association of State Highway and Transportation Officials (AASHTO), National Cooperative Highway Research Program, Federal Highway Administration. Start date: 1 Mar. 2017.

<https://trid.trb.org/view/1439859>

### **Ongoing Projects**

Incorporating the Costs and Benefits of Adaptation Measures in Preparation for Extreme Weather Events and Climate Change—Guidebook. NCHRP Research Report, Dewberry Engineers; Venner Consulting; Impact Infrastructure, Incorporated; McVoy Associates, Issue 938, 2020, 193p

<https://trid.trb.org/view/1695365>

Erdakos, Garnet; Chang, Shih Ying; Eisinger, Douglas; Heller, Adrienne; Unger, Heather; Berger, Louis. Zero Emission Vehicles: Forecasting Fleet Scenarios and their Emissions Implications. NCHRP Web-Only Document, Issue 274, 2019, 110p

<https://trid.trb.org/view/1682231>

Morrison, Geoff; Fields, Cian; Blynn, Kelly; Patel, Toral; Fordham, Damon; Schroll, James; Preston, Katherine; Klauber, Adam; Lemaster, Kristin; Epstein, Alexander. Guidebook for Developing a Zero- or Low-Emissions Roadmap at Airports. ACRP Research Report, Issue 220, 2019, 107p

<https://trid.trb.org/view/1681500>

Alternative Jet Fuels Emissions: Quantification Methods Creation and Validation Report. ACRP Web-Only Document, Booz Allen Hamilton; Environmental Consulting Group, LLC; Missouri University of Science & Technology, Rolla; Csonka Aviation Consultancy, Issue 41, 2019, 122p

<https://trid.trb.org/view/1650773>

Preston, Katherine B; Nagy, Julia; Crites, Jim M; Barrett, Steve. Optimizing the Use of Electric Preconditioned Air (PCA) and Ground Power Systems for Airports. ACRP Research Report, Issue 207, 2019, 147p  
<https://trid.trb.org/view/1665779>

Barrett, Stephen. Airport Greenhouse Gas Reduction Efforts. ACRP Synthesis of Airport Practice, Issue 100, 2019, 123p  
<https://trid.trb.org/view/1660826>

Foreseeing the Impact of Transformational Technologies on Land Use and Transportation. NCHRP Research Report, Kittelson & Associates; Bluemac Analytics; Irwin Writing/Editing, Issue 924, 2019, 155p  
<https://trid.trb.org/view/1658689>

Climate Resilience and Benefit–Cost Analysis: A Handbook for Airports. ACRP Research Report, GRA, Incorporated; LMI; RFMarchi Aviation Consulting; AECOM; CHPLanning, Issue 199, 2019, 163p  
<https://trid.trb.org/view/1638205>

Porter, Christopher; Grose, Timothy; Koupal, John; Boriboonsomsin, Kanok; Noel, George; Eilbert, Andrew. Guide to Truck Activity Data for Emissions Modeling. NCHRP Research Report, Issue 909, 2019, 79p  
<https://trid.trb.org/view/1633874>

Thé, Jesse L; Thé, Cristiane L; Johnson, Michael A; Chamberlin, Robert. Volume 2: TRAQS: A Combined Interface for Project-Level Air Quality Analysis. NCHRP Web-Only Document, Issue 246, 2018, 59p  
<https://trid.trb.org/view/1543649>

Thé, Jesse L; Thé, Cristiane L; Johnson, Michael A; Chamberlin, Robert. Volume 1: TRAQS User Guide. NCHRP Web-Only Document, Issue 246, 2018, 152p  
<https://trid.trb.org/view/1543648>

Guidelines to Incorporate the Costs and Benefits of Adaptation Measures in Preparation for Extreme Weather Events and Climate Change. NCHRP Web-Only Document, Dewberry Engineers; Venner Consulting; Impact Infrastructure, Incorporated; McVoy Associates, Issue 271, 2018, 157p  
<https://trid.trb.org/view/1716817>

Airport Air Quality Resource Library. ACRP WebResource, Issue 4, 2018, n.p.  
<https://trid.trb.org/view/1522875>

State of the Industry Report on Air Quality Emissions from Sustainable Alternative Jet Fuels. ACRP Web-Only Document, Booz Allen Hamilton; Environmental Consulting Group, LLC;

Missouri University of Science and Technology; Csonka Aviation Consultancy, Issue 35, 2018, 44p

<https://trid.trb.org/view/1509795>

Using Existing Airport Management Systems to Manage Climate Risk. ACRP Research Report, ICF; Gresham, Smith and Partners; Faith Group LLC, Issue 188, 2018, 108p

<https://trid.trb.org/view/1573565>

Airport Air Quality Management 101. ACRP Research Report, Booz Allen Hamilton; Environmental Consulting Group, LLC; Vanasse Hangen Brustlin, Incorporated; DW Environmental Consulting, Issue 185, 2018, 67p

<https://trid.trb.org/view/1522874>

Browning, Louis; Sheehy, Philip; Ang-Olson, Jeffrey; O'Rourke, Lawrence; Choe, James; Tunnell, Michael. Guide to Deploying Clean Truck Freight Strategies. NCHRP Research Report, Issue 862, 2017, 71p

<https://trid.trb.org/view/1491282>

Arunachalam, Saravanan; Valencia, Alejandro; Woody, Matthew C; Snyder, Michelle G; Huang, Jiaoyan; Weil, Jeffrey; Soucacos, Philip; Webb, Sandy. Dispersion Modeling Guidance for Airports Addressing Local Air Quality Health Concerns. ACRP Research Report, Issue 179, 2017, 44p

<https://trid.trb.org/view/1486808>

Morrison, Geoff; Fordham, Damon; Fields, Cian. Alternative Fuels in Airport Fleets. ACRP Synthesis of Airport Practice, Issue 85, 2017, 55p

<https://trid.trb.org/view/1482521>

## COVID-19

### TRB Technical Activities Division

#### Standing Technical Committees

- Transportation and Public Health (AME70)

2021 Annual Meeting Sessions (search 2021 Annual Meeting program at <https://annualmeeting.mytrb.org/OnlineProgram/Browse?ConferenceID=9>)

- 1018 - The Future of Travel in a Post- COVID- 19 Pandemic World
- 1024 - Food Deliveries in Times of Uncertainty
- 1004 - Strategic War Games: Prepare Yourself for the Next Global Pandemic
- 1010 - Identifying Systemic Transportation-Related Health Effects of COVID- 19 to Inform Interdisciplinary Research
- 1039 - Rapid Repurposing of Urban Streets for COVID- 19 Emergency Response
- 1042 - Pandemics, Storms, and Recessions: Estimating and Mitigating Significant Revenue Risks
- 1048 - Navigating a New Normal in Public Transit and Shared Mobility
- 1026 - Adapting Managed Lanes in the Era of Transformational Technologies and Unforeseen Events
- 1035 - A Disaster During Lockdown: An Exercise in Managing the Logistics, Potential Evacuations and Key Aspects of Multiple Disruptive Events
- 1036 - Pandemics and Public Health in Integrated Transport Modeling
- 1038 - Freight Planning & Operational Logistics for the "New Normal"
- 1096 - Freight Day, Part 1: Atypical Disruptions in Supply Chains
- 1102 - COVID- 19 Policies and Transportation Impacts
- 1129 - Social Distancing and Emerging Trends in Street Design for 2020 and Beyond
- 1126 - CEO Responses to Major Events- An Opportunity for Innovation
- 1132 - Managing Public Transportation Disruptions
- 1050 - Impacts of COVID- 19 on Decarbonization of Transportation
- 1053 - Traffic Counting and Volume Estimation During Extraordinary Conditions
- 1191 - Legal Lessons Learned From the Pandemic
- 1195 - COVID- 19 Pandemic Effects on Maintenance and Operations
- 1197 - Planning for Transit in a Post-Pandemic Future
- 1190 - Confronting Uncertainty in Transportation Decision Making – Experiences and Opportunities
- 1214 - Changes in Activity Patterns, Use of ICT and Advanced Mobility during the COVID- 19 Pandemic
- 1216 - Engagement in a Virtual New Normal
- 1240 - Legal Issues Confronting our Transit Systems During and After Recovery from the Pandemic
- 1236 - Equitable Recovery: Reimagining City DOTs
- 1247 - Airfield and Airspace Management: Responding to the Unexpected and Getting Ready for Recovery and Growth

- 1149 - Effective practices and lessons learned: Humanitarian relief and evacuations during the Pandemic
- 1144 - Planning for a New Normal
- 1171 - Travel Time, Speed, and Reliability Student Data Challenge: COVID- 19 Impacts on Travel
- 1173 - The Times They are a Changing - Workforce Development and Organizational Excellence as Impacted by COVID- 19
- 1282 - Data Assessing Impacts of COVID on Long Distance, Regional and International Travel Patterns
- 1283 - Communicating with John and Jane Q. Public - - 2020 Competition Results: Successful Communication During Disruptive, Crisis Situations
- 1288 - COVID- 19's Impacts on Pavement Maintenance Activities
- 1291 - Managing Transit in the Age of Covid
- 1293 - COVID- 19 Impacts on Bicycling (and vice versa)
- 1324 - Transit Interactions Reimagined: Art, COVID and Equity
- 1326 - Impacts of a Pandemic on Aviation Policy
- 1323 - Transportation Adaptation: Response and Reflection in Times of Change
- 1256 - Perspectives in Traffic Safety Management During a Pandemic
- 1264 - COVID- 19: Impact on Travel and Transport Policy in South Asia and Africa
- 1266 - The Environmental Impacts of Aviation During and After COVID- 19
- 1382 - Pandemic Impacts on Asphalt Paving Operations
- 1388 - Urban Rail Transit in a COVID- 19 World: Its Present and Possible Futures
- 1389 - Freight Day, Part 4: Atypical Disruptions Reshaping Freight Systems
- 1400 - Mobility Changes and Community Impacts of COVID- 19
- 1405 - Measuring Transportation Needs and Performance in the Era of the Pandemic
- 1408 - Diminished, Diseased, and Defunded: Critical Issues in the Emergency Responder Workforce
- 1409 - Macro Impacts of COVID- 19 on the New Technology Market
- 1411 - Pandemic Impacts on Agriculture and Food Supply Chains
- 1350 - COVID- 19: The Role of Uncrewed Aircraft Systems (UAS) in Addressing a Pandemic
- 1351 - FHWA Leadership in Innovation [focused on management in face of pandemic impacts]
- 1358 - Covid & Transit Operations and Management
- 1376 - Planning Urban Rail Transit Service in a COVID- 19 World
- 1460 - COVID- 19: Modeling Travel, and Social and Economic Impact and Diffusion
- 1462 - Mobility and COVID: Urban form, travel patterns, and health consequences
- 1424 - Hindsight is 20/20: How Did Organizations Manage Section 106 with the COVID- 19 Outbreak?
- 1425 - Air Carrier Business Models for Recovery and Post COVID- 19

Recent Webinars (search for webinars at <http://www.trb.org/Calendar/Calendar.aspx>)

- Visualizing Effects of COVID-19 on Transportation: A One-Year Retrospective
- COVID-19 Impacts on Managed Lanes
- Transportation Experiences and Next Steps in the COVID-19 Pandemic
- The intersection between health and transportation

- The New Virtual Reality for Public Meetings and Social Distancing

Transportation Research Record Journal The papers listed are a sample from the last few years. Search for more at <https://journals.sagepub.com/home/trr>

- A special issue on COVID-19 is under development. The following are 2 papers already published in the TRR:
- COVID-19 Impact on Transport: A Paper from the Railways' Systems Research Perspective
- Investigation of Breaking Points in the Airline Industry with Airline Optimization Studies Through Text Mining before the COVID-19 Pandemic

Research Needs Statements Search database and read statements at <https://rns.trb.org/>

- Planning Flexible/Responsive Transit Service Concepts (Hybrid, On-Demand, MAAS) to Environmental/Societal Disruptions (post-pandemic environment)
- Pandemic: Recalibrating Public Transportation's Response to New Realities: Lessons Learned, Best Practices

Research Needs Statements (RNS) Express. Short research needs statements put together as soon as COVID-19 hit. These can be found at

<http://www.trb.org/main/CallforRNSTransportationAndPandemics.aspx>

#### Leadership and Administration (8)

- Aircraft Parking Communication and Management
- Communications: Best Practices during a Pandemic
- Customer Facing Innovations: Implementing Changes Post-Pandemic
- Effects of Lease Agreements and Rates & Charges Policies on COVID-19 Responses
- Equitable public participation in the time of social distancing and Zoom.
- Going Virtual : the New World Order
- Implement and Sustain Workforce-Facing Innovations Post-Pandemic
- Improving Airline-Airport Communication During Crises

#### POST COVID-19 Future System Implications (22)

- Adjusting to the "new normal" to protect the traveling public and transportation professionals
- Assessment of Advanced Vehicle Technology Solutions for Mobility Disadvantaged Populations During a Pandemic
- Better Understanding of Travel Demand and Behavior for Future Crises
- Changing Behaviour of the rich because of COVID-19 and the impact on their air travel mode selection
- COVID-19: Mid-Range Scenario Planning
- Determining the Impact and Cost of Accelerated Education, Training and Workforce Development Programs for National and Global Logistics in a Post-Pandemic World
- Efficacy of Facility Closures Due to COVID-19
- Environmental impacts of COVID-19
- Future Supply Chains Post-Pandemic
- Impact of Social Distancing on Law Enforcement and Incident Management
- Impacts of Pandemics on the Future of Automated Vehicles

- Impacts on Public Transportation from the COVID-19 Pandemic
- Implications of COVID-19 on Public Attitudes Toward Shared-Ride Services
- Managing Traffic Control and Transportation Facilities
- Preliminary Implications for Freight Autonomous Vehicles
- Shared Mobility in a Post-COVID World
- Societal Benefits Resulting from the Required Social Distancing and Teleworking
- Strategies to encourage safe ridership regrowth following COVID19
- Study the Implications of COVID-19 on Public Attitudes Toward Shared-Ride Services
- Study the Implications of the COVID-19 Travel Disruptions for Longer-Term Changes in Long-Haul Passenger Travel Demand.
- Study the Implications of the COVID-19 Travel Disruptions for Longer-Term Changes in Urban Trip-Making Behaviors
- Transit after COVID-19

#### Supply Chain (8)

- Cargo Fluidity as Non-essential Businesses Shut Down
- Freight Planning for Service Corridors during a Pandemic
- Impacts of International Supply Chain Sourcing Changes in the Post Pandemic Environment
- New Freight Corridors Arising from Recovery/Stimulus/Emphasis on Domestic Supply Chain Sources
- Short and Intermediate Term Impact on Freight Transportation and Ports of Policy Moves (in reaction to COVID-19 related issues) to Bring the Supply Chain for Specified Commodities Back into the Country
- Supply Chain Impacts Related to COVID-19
- The Implications of the Post Pandemic Economy on US Supply Chains
- Transportation and Supply Chains in a Millions of Markets Future

#### Technology Applications (18)

- Assessment of Advanced Vehicle Technology Solutions for Mobility Disadvantaged Populations During a Pandemic
- Automated Contactless Refueling/Recharging of Vehicles
- Contactless Actuation of Pedestrian Phases
- Coordinated Swarm Operations of Ultra-Small Automated Surface Vehicle for Public Works Purposes.
- COVID-19: Preliminary Implications for Freight Autonomous Vehicles
- Deploying Autonomous Vehicles in Neighborhoods and in Urban and Campus Environments.
- Developing Real-Time Predictive Analytics and Actionable Decision Support at Scale - Identifying and Addressing Vulnerabilities and Opportunities in the Systems of Systems that Comprise Global Logistics, Commercial Shipping and Supply Chains
- Improved Physical Designs of Transportation and Related Infrastructure: Best Practices for Design of Drive-Through Pandemic Test and Evaluation Facilities
- Overcoming Barriers to Providing Deliveries of Critical Goods
- Potential Benefits in Light of COVID-19: Autonomous and Automated Technologies, AI and Machine Learning Applications for Global Logistics

- Remote Inspections and Audits
- Shared Mobility in a Post-COVID World
- Supervised Automated Public Transit Vehicles
- Swarm Operations of Ultra-Small Automated Delivery Vehicle on Existing Right Of Way.
- The Role of Surface Collaborative Decision Making in Crisis Management
- Using AVs to Mitigate the Impacts of Pandemics
- Virtualization of Traffic and Incident Management During Pandemics
- What Are Best Practices for Ensuring Quick Recovery for Airlines

#### Tracking Data, Reporting Methods, and Evaluations (8)

- Accounting gender dimensions in commuting and activity patterns
- Correlation of Early 2020 Pandemic Transmission Patterns to Regional Travel Model Outputs Based on Live, Work, Shop, and School Patterns
- Effects of the COVID-19 Pandemic on Small, Medium, and Large Hub Airports
- Evaluate Ways to Better Connect Transportation Infrastructure to Hospitals And Medical Facilities to Better Track Movement of Supplies, and Movement of Those Infected
- Expediting Data and Science to Inform Crisis Management Decisions and Risk Models
- How did schedule reductions evolve among the carriers, and were their differential impacts on profitability across different carrier types
- How Travel Behavior Changed as Shifting Priorities Changed Throughout the Pandemic.
- Predicting future airline demand

#### Transportation and Health (4)

- Carpooling During a Respiratory Pandemic
- COVID-19 Locality Vulnerability Assessment
- Reducing the Risk to Passengers and Operators by Designing Easily Disinfected Transit Interiors
- Understanding pollution's role in the spread of COVID-19

#### Transportation System Resilience (14)

- Evaluation of How Travel Behavior Changed as Shifting Priorities Changed Throughout the Pandemic.
- All Hazards Resilience and the Marine Transportation System
- Americans with Disabilities and Travel Navigating in a Pandemic Environment Requiring Social Distancing
- Determining the Impacts of Global Disruptions and Vulnerability Threats on Transportation Infrastructure Elements, Nodes and Modes
- Evaluate the Benefits of Keeping Ongoing, Large, Infrastructure Projects Under Construction Moving During Pandemic or Similar Events.
- Evaluate the Need and Benefits of Coordinating Essential Transportation Services During A National, Statewide, or Regional Emergency, Including Public and Private Transportation Services.
- Optimizing Operational Performance: Sharing Best Practices
- Organizational resiliency planning for airports
- Prepare a National Aviation Pandemic Preparedness Plan



- Provide Immediate Grants and Matches to Local Agencies and State DOTs for Maintenance of Roadways
- Provide Immediate Grants for Programs Deploying Autonomous Vehicles in Neighborhoods and in Urban and Campus Environments.
- Rethinking Emergency Corridors: All Modes and User Focused
- Short Term Infrastructure Requirements Related to Surges in Economic Activity
- Supervised Automated Public Transit Vehicles

#### Workforce (10)

- 3 Day Work Week: An Alternative Solution for Reopening the Economy
- Addressing Aging Marine Transportation Infrastructure within Post Pandemic Infrastructure-Jobs-Stimulus-Recovery Bill
- Crew Safety Risk Management Framework
- Impact on Businesses from Increased Telework
- Impact of Pandemics on Mariners
- IT/Virtual Meetings and Engagement: Best Practices on Virtual Meetings
- Managing Workforces Safely
- The Effects of the COVID-19 Pandemic on Defense Readiness
- The Linchpin of U.S. Logistics: Truck Drivers — How Vulnerable Are They?
- Effects of Labor Agreements on Airline Responses to COVID-19

## **TRB Cooperative Research Programs**

### **Ongoing Projects**

Airports and Pandemics---Reducing the Spread of Communicable Diseases. [Project]. Airport Cooperative Research Program, Federal Aviation Administration. Start date: 9 Feb. 2021.

<https://trid.trb.org/view/1729491>

Toward a Touchless Airport Journey. [Project]. Airport Cooperative Research Program, Federal Aviation Administration. Start date: 11 Jan. 2021.

<https://trid.trb.org/view/1729498>

Transportation Research Related to COVID-19. [Project]. National Cooperative Highway Research Program, Federal Highway Administration, American Association of State Highway and Transportation Officials (AASHTO). Start date: 6 Oct. 2020.

<https://trid.trb.org/view/1709366>

Synthesis of Information Related to Transit Practices. Topic SA-52. Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns. [Project]. Transit Cooperative Research Program, Federal Transit Administration. Start date: 30 Sep. 2020.

<https://trid.trb.org/view/1708340>

Effective Collaboration to Plan and Respond to Communicable Disease Threats. [Project]. Airport Cooperative Research Program, Federal Aviation Administration. Start date: 15 Mar. 2019.

<https://trid.trb.org/view/1528523>

### **Issued Reports**

Matherly, Deborah; Bye, Patricia; Benini, Janet. A Pandemic Playbook for Transportation Agencies. NCHRP-TCRP Research Report, Issue NCHRP 963; TCRP 225, 2020, 81p

<https://trid.trb.org/view/1751851>

Barraza, Leila; Zuckerman, Mel; Zuckerman, Enid; Hall-Lipsy, Elizabeth. Airport Public Health Preparedness and Response: Legal Rights, Powers, and Duties. ACRP Legal Research Digest, Issue 34, 2018, 60p

<https://trid.trb.org/view/1533040>

Henson, Trudy C; Timmons, Megan. Public Transit Emergency Preparedness Against Ebola and Other Infectious Diseases: Legal Issues. TCRP Legal Research Digest, Issue 50, 2017, 58p

<https://trid.trb.org/view/1479277>

Smith, James F; Greenberg, Joshua. Preparing Airports for Communicable Diseases on Arriving Flights. ACRP Synthesis of Airport Practice, Issue 83, 2017, 105p

<https://trid.trb.org/view/1487625>

# Economic Recovery

## TRB Technical Activities Division

### Standing Technical Committees

- Economics, Revenue, and Finance (AJE50)
- Economic Development and Land Use (AMS50)
- Freight Transportation Data (AED70)
- Data for Decision Making (AJE70)
- Traveler Behavior and Values (AEP30)
- Effects of Information and Communication Technologies (ICT) on Travel Choices (AEP35)
- Freight Transportation Economics and Regulation (AT010)
- International Trade and Transportation (AT020)
- Urban Freight Transportation (AT025)
- Agriculture and Food Transportation (AT030)
- Intermodal Freight Transport (AT045)
- Trucking Industry Research (AT060)
- Aviation Economics and Forecasting (AV040)

### 2021 Annual Meeting Sessions (search 2021 Annual Meeting program at <https://annualmeeting.mytrb.org/OnlineProgram/Browse?ConferenceID=9>)

- 1319 - Future of Highway Investment and Its Impact on Economic Growth
- 1438 - Firm Location Decisions and Market Responses to Transportation Infrastructure
- 1013 - International Trade and Transport and Resilience of Supply Chains to Political, Natural and Health Related Hazards
- 1246 - International Trade and Transportation Impacts of the USMCA in the North American Auto Industry

### 2021 Specialty Conferences (search for conferences at <http://www.trb.org/Calendar/Calendar.aspx>)

- Innovations in Freight Data
- Measuring and Managing Freight System Resilience Workshop

### Transportation Research Record Journal The papers listed are a sample from the last few years. Search for more at <https://journals.sagepub.com/home/trr>

- A Framework to Operationalize a Deep and Vast Literature for Practice: Translating Land Value Uplift Literature to Estimate Economic Impacts of Multimodal Transportation System Projects
- Integrating Multiple Economic Analysis Methods for More Effective Decision Making: Three-Dimensional Framework

### Research Needs Statements Search database and read statements at <https://rns.trb.org/>

- Economic development impact of active transportation infrastructure in rural communities
- The Relationship between Investments in U.S. Transportation Infrastructure and Competitiveness of U.S. Exports
- Evaluating how transportation design can effectively maintain or improve the social, economic, and environmental functions of Main Street

Snap Searches Created by TRB's library, these searches provide links to TRB products in a given area, across TRB. Link to Snap Searches at <http://www.trb.org/InformationServices/Snap.aspx>

- Capital Investments
- Economic Impact

Freight Transportation

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## **Changes in Executive Committee Membership**

### **New Officers**

**Dr. Susan Shaheen**, Professor and Co-Director, Transportation Sustainability Research Center, University of California, Berkeley (Chair)

**Mr. Nathaniel P. Ford**, Chief Executive Officer, Jacksonville Transportation Authority (Vice Chair)

### **New Incoming Members**

**Mr. Kevin J. Thibault**, Secretary, Florida Department of Transportation

### **New Ex Officio Members**

**Dr. Martha R. Grabowski**, McDevitt Assoc. Chair in Information Systems, Professor & Chair, Business Administration Department, Dir., Information Systems Program, LeMoyne College

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EXECUTIVE COMMITTEE MEETINGS****EXECUTIVE OFFICE**

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- Committee and Panel Approvals
- Communications
- Information Technology
- Transportation Research Information Services

### STRATEGIC PROGRAM DEVELOPMENT DIRECTOR

**Patrice Davenport**

- Revenue Development
- Strategic Initiatives

### SR. REPORT REVIEW OFFICER

**Karen Febey**

- Report Review
- Minority Student Fellows Program
- Inclusion & Diversity
- TRB Division Committee

### HR DIRECTOR

**Claudette Louard-Clarke**

- Human Resources
- Staff Development Training

### TECHNICAL ACTIVITIES

**Ann Brach**

- Annual Meeting Program
- Conferences and Workshops
- Marine Board
- Standing Technical Committees
- State Visits
- Transportation Research Record: Journal of the Transportation Research Board

### Consensus and Advisory Studies Division

**Thomas Menzies**

- Consensus Studies
- Forums and Roundtables
- Research Program Advisory Committees

### ADMINISTRATION AND FINANCE

**Gary Walker**

- Budgets and Finance
- Affiliates Accounts
- Publications Sales and Distribution
- Administrative Services

Note: organizationally is part of the Office of the Chief Financial Officer

### COOPERATIVE RESEARCH PROGRAMS

**Christopher Hedges**

- National Cooperative Highway Research Program
- Airport Cooperative Research Program
- Transit Cooperative Research Program
- Behavioral Traffic Safety Cooperative Research Program

## **DESCRIPTIONS OF TRB DIVISIONS**

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## **EXECUTIVE OFFICE**

**Neil J. Pedersen, Executive Director**

### **TRB Executive Office**

TRB's Executive Office is headed by Executive Director Neil Pedersen. The TRB Executive Office provides policy and operational guidance for programs and activities; oversees committee and panel appointments and report review; provides support and direction for human resource issues and staffing needs; directs the Board's communications and information technology efforts; operates a bibliographic database of transportation research and provides library reference services; provides staff support to the Executive Committee and the TRB Division Committee; and maintains liaison with the executive offices of the National Academies of Sciences, Engineering, and Medicine, the Board's parent institution.

### **Oversight Activities**

The Executive Office supports the work of the TRB Executive Committee, which provides policy direction to TRB programs and activities within the overall policies of the Academies. Oversight of committee and panel appointments and of report review is the responsibility of the TRB Division Committee, which ensures that TRB meets institutional standards and that its activities are appropriate for the Academies. As part of its oversight function, the committee monitors the Board's progress in expanding the representation of minorities and women on TRB committees and panels.

Chris Hendrickson, Chair, TRB Division Committee, represents TRB as an ex officio member on the NRC Governing Board. The Executive Office processes the Board's large volume of committee and panel appointments and maintains committee membership records. A hallmark of the Academies is its institutional process to ensure the independent, rigorous review of reports. In maintaining these high standards, TRB follows Academies' guidelines that carefully match the review criteria and procedures to the type of report.

### **Program Development and Strategic Initiatives**

In addition, the Executive Office is responsible for ensuring stable, long term revenue streams for TRB and for coordinating strategic initiatives across the board's various divisions. To carry out these responsibilities, the EO helps facilitate the increased use of technology to deliver TRB products and services; oversees the development and implementation of action plans for strategic, long term, cross cutting, and critical issues; encourages the exploration of new and innovative ways to facilitate information transfer within the rules of the Academies; helps promote the value of TRB products and services; oversees TRB's international participation strategy; administers the Minority Student Fellows Program; and is responsible for helping to ensure the continued development of the next generation of TRB volunteers.

## Communications

The Executive Office is charged with developing, coordinating, and carrying out communications activities that span the entire organization. The following communications activities conducted by the NASEM's Office of the Chief Communications Officer are overseen by the Executive Office:

- The [Transportation Research E-Newsletter](#) is a free weekly electronic service designed to keep individuals up-to-date on TRB activities and to highlight selected transportation research related activities taking place at the federal and state levels, and within the academic and international transportation communities. More than 67,000 people from around the world receive the E-Newsletter.
- The [TRB Webinar Series](#) produces approximately 100 webinars per year on a variety of topics. TRB's webinars are produced with funding received from TRB Sponsors and TRB Sustaining Affiliates. Accordingly, employees of TRB Sponsors and TRB Sustaining Affiliates may attend the session without a fee. TRB is authorized to issue Professional Development Hours (PDH) for select, live webinars. TRB is also a registered with the American Planning Association's professional institute, the American Institute of Certified Planners (AICP), to provide Certification Maintenance credits.
- TRB uses [Social Media](#) such as Twitter, Facebook, and LinkedIn to help our audience stay connected to transportation research. Social media also helps TRB to better understand how its reports and products are being used.

## Information Technology and Research Services

TRB has a consolidated Information Technology (IT) and Transportation Research Information Services (TRIS) department. Both groups had key responsibilities that included the development, maintenance, and application of software in support of various TRB missions.

The IT group's primary focus systems operation, maintenance, and management. The focus aligns with the TRIS staff's responsibilities in relation to the Transport Research International Documentation ([TRID](#)) database, the Research in Progress ([RiP](#)) database and website, the Research Needs Statements ([RNS](#)) database, and the TRB [Publications Index](#).

The responsibilities of the IT and Research Services groups include customer support for internal and external users of TRB's software systems; software enhancement and development; server and website monitoring and security; general IT support activities, such as training, documentation, and troubleshooting; and management and operation of transportation research services, bibliographic databases, and the [TRB Library](#).

### [TRID](#)

In January 2011, TRB and [ITRD](#) released [TRID](#), the TRIS and ITRD Database. TRID is the world's largest and most comprehensive bibliographic resource on transportation research information. It is produced and maintained by the Transportation Research Board of the US



National Academies with sponsorship by State Departments of Transportation, the various administrations at the U.S. Department of Transportation, and other sponsors of TRB's core technical activities. ITRD is produced by ITRD member organizations under the sponsorship of Joint Transport Research Centre (collectively JTRC) of the International Transport Forum and Organisation for Economic Cooperation and Development (OECD) and ITRD. The records comprise published or ongoing research in English, German, French, or Spanish; more than 200,000 records link to full-text publications. The service offers simple and advanced searching and allows users to download and e-mail results, as well as to share via social media. TRID is available free of charge on TRB's website.

### **Publications Index**

The TRB Publications Index includes more than 65,000 citations and abstracts for all TRB, Highway Research Board (HRB), SHRP, and Marine Board publications since 1923. The index offers simple and advanced searching and allows users to download and e-mail the results in a variety of formats. Records contain links to available full-text documents and to ordering information.

### **Research Needs Statements Database**

The RNS database is a dynamic collection of highest-priority topics developed by TRB technical standing committees. The database serves as a tool for reviewing research needs, setting research priorities, and identifying gaps in current research.

### **Research in Progress Database**

RiP is a searchable database of records of active or recently completed research projects from State Departments of Transportation, the modal administrations at the U.S. Department of Transportation, the Transportation Research Board, and university transportation centers. The current awareness service notifies users about new and updated project records in specified subject areas. [TRID](#) offers users an option for searching the [RiP](#) database or the [RiP](#) and [TRID](#) databases simultaneously.

### **TRB Library**

The TRB Library provides research and reference services to TRB sponsors, committee members, and staff. The library subscribes to almost 250 serial titles and contains the complete collection of TRB, HRB, SHRP, and Marine Board publications.

The TRB Library participates in the Eastern Transportation Knowledge Network and in the National Transportation Knowledge Network.

## TECHNICAL ACTIVITIES

**Ann Brach, Director**

### About the Technical Activities Division

#### Who We Are

The Technical Activities Division provides a forum for transportation professionals to identify, facilitate, and share research and information related to transportation. The Division carries out activities on behalf of TRB sponsors and the transportation community through a network of over 200 [standing committees](#) comprised of more than 5,000 volunteers.

#### Our Mission

The Technical Activities Division supports TRB's mission of promoting innovation and progress in transportation through research and information exchange by identifying [needed research](#) and [research in progress](#), and disseminating [completed research results](#).

#### Our Staff

The [Technical Activities Division staff](#) consists of specialists within each transportation mode and topic, as well as specialists in publishing, meeting logistics, and business operations. They oversee the activities of the Division's network of volunteers, who carry out the following activities:

#### Our Activities

- **Standing committees and task forces** provide an opportunity for you to network with others in your field, and stay current on emerging issues while contributing to the continuing evolution of transportation research and practice. Learn [how to get involved in standing committees](#)
- **Technical Activities Council**, consisting of the overall Chair and the Chairs of each of the [Groups of committees](#), provides a forum for interchange between the Groups of committees. They assist in identifying emerging topics of interest to the transportation community and cross-cutting issues, and foster outreach efforts to other transportation organizations.
- **Conferences, Meetings, Webinars, and Workshops** are sponsored and cosponsored by many of the Division's standing committees.
- **TRB Annual Meeting** is hosted every year and is the largest transportation conference in the world with over 700 sessions, workshops and 300 meetings that attracts over 14,000 professionals from around the globe. The Annual Meeting is held in January of every year in Washington, DC.
- **Supporting State DOT Representatives & Our Field Visit Program** serves as a major source of information collected and disseminated by TRB. Transportation professionals on the TRB staff meet on site with representatives of state departments of transportation,

and with representatives of universities, transit and other modal agencies and industry.  
Annual results of field visits are published each year

- **Publications** are disseminated by the Technical Activities Division that showcase transportation research results through [Transportation Research Records](#), [Conference Proceedings](#), and [Transportation Research Circulars](#).

July 8, 2021

## **CONSENSUS AND ADVISORY STUDIES**

**Tom Menzies, Director**

### **Consensus and Advisory Studies Division**

The Consensus and Advisory Studies Division conducts consensus and advisory studies at the request of the U.S. Congress, executive branch agencies, states, and other sponsors.

## **CONSENSUS AND ADVISORY STUDIES**

With the guidance of committees drawn from the nation's leading experts, [the Consensus and Advisory Studies unit](#) produces reports examining complex and controversial transportation issues. Studies cover all modes of transportation and a variety of safety, economic, environmental, and research policy issues. The U.S. Congress and the executive branch have adopted many recommendations from the reports, attesting to the substantive value of the studies. The TRB Executive Committee's Subcommittee on Planning and Policy Review provides oversight for the unit. All completed consensus reports, dating from 1982, are posted on the [TRB website](#). (can this link be added to this red text?: <http://www.trb.org/Publications/PubsPolicyStudiesSpecialReports.aspx>

## **Cooperative Research Programs Division**

### **Christopher Hedges, Director**

The Cooperative Research Programs Division of the TRB, led by Director Christopher Hedges, administers a number of major research programs sponsored by other organizations.

#### **National Cooperative Highway Research Program**

Sponsored by the member departments of the American Association of State Highway and Transportation Officials (AASHTO) in cooperation with the Federal Highway Administration, the NCHRP was created in 1962 as a means to accelerate research on problems that affect highway planning, design, construction, operation, and maintenance nationwide. All of the state highway and transportation departments contribute to an annual cooperative pool to fund the program's activities. AASHTO committees and member departments and the Federal Highway Administration recommend research topics each year, and the AASHTO Special Committee on Research and Innovation (R&I) determines both the projects to be funded and the levels of funding for those projects. A close working relationship with AASHTO during execution of the projects and the participation of experienced practitioners on project panels help ensure the application of completed NCHRP study results.

#### **Transit Cooperative Research Program**

The TCRP was initiated in 1992 by three cooperating organizations: the Federal Transit Administration, the program sponsor; the Transit Development Corporation, a nonprofit educational and research organization established by the American Public Transportation Association, which provides program governance through the TCRP Oversight and Project Selection (TOPS) Committee; and the National Academies of Sciences, Engineering, and Medicine, acting through TRB, which serves as program manager. Under TCRP, the transit industry develops innovative near-term solutions to operating problems and adapts appropriate new technologies and approaches to help meet the demands placed on the nation's public transit systems. The program's research covers topics relating to all aspects of public transportation, including planning, service configuration, equipment, facilities, operations, human resources, maintenance, policy, and administrative practices. Each year, the TOPS Committee selects a program of research from the large number of candidate research problem statements submitted by organizations and individuals in the transit community.

#### **Airport Cooperative Research Program**

The ACRP was authorized in federal aviation legislation and funding is made available through the annual federal appropriations process. ACRP, which began in 2006, is an industry-driven applied research program that develops near-term, practical solutions to problems faced by airport operators. The program is sponsored by the Federal Aviation Administration (FAA). Research topics are selected by an independent governing board appointed by the U.S. Secretary of Transportation that includes individuals from airports, universities, FAA, and the aviation industry..

## PURPOSES AND DUTIES OF THE TRB EXECUTIVE COMMITTEE

The TRB Executive Committee is the senior policy body of TRB, composed of approximately 25 members appointed by the Chairman of the National Research Council (NRC). These members are selected so as to provide balanced representation of transportation modes, academic disciplines, private and public sectors, levels of government, geographical regions, and other relevant factors. Members are appointed for a term of three years and may be reappointed for one term. In addition, approximately 20 *ex officio* members serve on the Executive Committee; these members have no vote but otherwise participate fully in Executive Committee activity. *Ex officio* members include the representatives of the Board's various sponsoring organizations.

The Executive Committee meets twice a year, once at TRB's Annual Meeting in Washington each January and once in June. The Chair of TRB's Executive Committee, appointed by the Chairman of the NRC, serves a one-year term, and presides over the Committee discussions, which are directed toward obtaining consensus on issues wherever possible. When formal rules of debate are required, Roberts' Rules of Order are employed.

The Executive Committee performs a number of functions in serving four different constituencies — the National Research Council (NRC), TRB, TRB's sponsors, and itself.

### Executive Committee Responsibilities to the NRC

The TRB Executive Committee is officially an advisory group to the Chairman and the Governing Board of the NRC, who look to the Executive Committee to provide oversight of TRB's activities. Such oversight is intended to ensure that TRB's activities are appropriate for the NRC and constructive to the transportation system and the nation. Reports (both written and oral) regarding ongoing and proposed TRB projects are brought to the Executive Committee at each meeting and are approved, rejected, or accepted after modification. The Board is also expected to note new opportunities for TRB to provide its services or projects and, where appropriate, to find ways to bring such projects into being.

The TRB Division Committee is charged to ensure that NRC procedures and policies are faithfully employed with respect to study and project committee appointments and report review. The membership of the TRB Division Committee is drawn from the membership of the TRB Executive Committee. The Division Committee is chaired by the TRB Division Chair, who must be a member of the National Academy of Sciences or the National Academy of Engineering and a member of the TRB Executive Committee. The TRB Division Chair serves as an *ex officio* member of the NRC Governing Board.

The Executive Committee has a Subcommittee on Planning and Policy Review (SPPR), which reviews and approves proposed projects and studies, develops lists of Critical Issues in Transportation, plans and develops opportunities for new Executive Committee initiatives, and generally handles those substantive transportation issues that require action during the interval between the twice-yearly meetings of the Executive Committee. The SPPR generally meets in April and October in Washington, DC.

The Executive Committee has a Subcommittee on International Activities, which provides oversight of TRB's international activities, including review of Memoranda of Understanding and Letters of Intent with international organizations, and monitoring progress in implementation of the Executive Committee's Strategic Plan for International Activities.

The Executive Committee has also established a Special Committee on Diversity, Equity, and Inclusion, which provides oversight of implementation of the Executive Committee's Diversity, Equity, and Inclusion Strategic Plan.

### **TRB's Expectations of the Executive Committee**

Most TRB projects and activities are conducted by expert volunteers who agree to serve on TRB technical standing committees, study committees, panels, task forces, and other similar groups. At any one time, about 500 such groups are in existence, composed of more than 7,000 professionals serving without compensation. The Executive Committee, either directly or through the TRB Division Committee or the CAAS, provides oversight on the formation, termination, and membership of committees and on the review of projects undertaken and reports produced. The Executive Committee can also influence committee and other TRB activities by developing and monitoring strategic plans, preparing the critical transportation issues, and undertaking special activities of its own. From time to time, Executive Committee members are also called on to perform special duties, such as assisting with report review or fundraising for special projects.

The Executive Committee also serves as a symbol of the prestige attached to serving on TRB committees. Executive Committee members are selected in part because they occupy some of the most prestigious and influential positions in the industry. Their participation on the Executive Committee demonstrates support for research and cross-modal dialogue at the highest levels, and thereby provides motivation for the uncompensated service of otherwise highly paid experts on whom TRB depends for its products and services.

### **Sponsors' Expectations**

At the core of TRB, and perhaps its most visible feature, is a collection of Technical Activities, which include more than 175 TRB standing committees, the TRB Annual Meeting, publications programs, field visits to organizations conducting transportation research, and information services. About \$17 million—approximately one-fifth of TRB's total budget—is spent annually on these activities, supported by funding from individual states, federal agencies, private transportation organizations, local governments, individual affiliates, publication sales, and conference registration fees. These funds are pooled and spent in accordance with budgets approved by the Executive Committee. TRB's sponsors look to the Executive Committee to ensure that these funds are spent in ways appropriate to TRB's mission and in ways that encourage research and its dissemination.

### **Executive Committee's Own Expectations**

Although the responsibilities summarized above indicate that the Executive Committee has more than enough duties for a group that only assembles twice a year, members often comment that their greatest personal satisfaction in serving comes from participating in discussions of substantive transportation issues and that they would like to devote more time at meetings to such discussion. The caliber and diversity of talent represented on the Executive Committee make serving on it a unique experience for

most members, providing an unusual opportunity to share different perspectives in far-reaching discussions of major transportation issues. Thus, an effort is made to conduct the Executive Committee's official business expeditiously at meetings, in order to leave time for these other important activities of the Board. Executive Committee policy sessions and other discussions of substantive issues have led to the initiation of important TRB projects and other activities.

Last updated July 8, 2021



## TRB STANDING OVERSIGHT COMMITTEES

### TRB Division Committee

#### Composition

The Division Committee's membership, drawn from the TRB Executive Committee, consists of a chair who is an *ex officio* member of the Governing Board, a member of one of the Academies, the chair of the TRB Executive Committee, and a representative from a state department of transportation. The chair of the TRB Executive Committee serves a one-year term as a full member, while the other full members serve three-year terms. The Division Committee also includes the TRB Executive Committee's vice chair and immediate past chair as *ex officio* non-voting members who serve one-year terms.

#### Function

To ensure that TRB meets NRC standards for objectivity and that its activities are appropriate for the NRC; to monitor TRB with respect to specially funded project committee and panel appointments, report review, and the summary of Division programs presented to the NRC Governing Board. The Division Committee Chair serves as the TRB Division Chair for NRC Oversight and as an *ex officio* member of the NRC Governing Board.

#### Appointment Procedure

Appointed by NRC Chair upon recommendation of Executive Director in consultation with NRC and Chair of TRB Executive Committee, subject to approval of the NRC Governing Board. Appointment letters signed by NRC Chair. Selection of members complies with TRB *Terms of Reference*.

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### Subcommittee on Planning and Policy Review (SPPR)

#### Composition

Subcommittee of the TRB Executive Committee, composed of 11 members. The Chair and 10 other members serve 3-year terms.

#### Function

To advise the Executive Committee and staff on matters relating to selection, scope, and execution of policy-oriented studies within TRB; establish goals and directions for those parts of TRB engaged in policy studies; plan and develop opportunities for new Executive Committee initiatives; identify critical transportation issues warranting TRB consideration; act for Executive Committee on all matters requiring its attention between regular Executive Committee meetings; advise the Chairs of the Executive Committee and the Division Committee of actions taken; and report to the Executive Committee on all of its activities at each Executive Committee meeting. The SPPR is also charged to identify major transportation problems, with particular attention to multimodal and intermodal issues; propose action plans for TRB that address these problems; and suggest sources for the funds needed to pursue these plans. The SPPR also oversees TRB's strategic planning process,

including development of TRB Strategic Plans, and develops policy session agendas and other program initiatives of the TRB Executive Committee.

#### **Appointment Procedure**

Appointed by Chair of the TRB Executive Committee following guidelines approved by the Executive Committee. Bias/conflict-of-interest statements are not required.

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## **Technical Activities Council (TAC)**

#### **Composition**

The Technical Activities Council consists of the overall Chair, the Chairs of each of the eleven Groups, and one or more at-large members. All serve 3-year terms. Members who are in the second year of their 3-year term serve as the Council's representatives to the TRB Executive Committee, along with the Technical Activities Council Chair.

#### **Function**

***Program Function:*** Provides a forum for interchange and interaction among the Groups, between the Groups and the TRB Executive Committee, and between the Groups and TRB staff. Assists in identifying emerging topics of interest to the transportation community and cross-cutting issues. Facilitates interaction among Groups, Sections, and committees to address cross-cutting issues and opportunities. Fosters outreach efforts to other transportation organizations and groups.

***Administrative Function:*** Plays a significant role in refining and implementing processes and techniques for improving the quality of meetings and publications emanating from Technical Activities Division volunteer activities. Serves as a focal point for the continuing review in each of the Group Executive Boards of the need for establishing new committees and for discharging those that are no longer necessary.

#### **Appointment Procedure**

Appointed by the TRB Executive Director with approval by Division Committee Chair. Bias/conflict of interest statements are required.

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## **MARINE BOARD**

### **Composition**

15-20 members. The Chair and the other members serve 3-year terms.

### **Function**

To identify research and policy study needs and provide a forum for the exchange of information relating to new technologies, laws and regulations, economics, the environment, and other issues affecting the marine transportation system, port operations, coastal engineering, and marine governance. Also, to oversee standing technical committees in related areas.

### **Appointment Procedure**

Appointed by NRC Chair following recommendation of TRB Executive Director in consultation with NRC and members of Marine Board. Appointment letters are signed by the TRB Executive Director. Bias/conflict of interest statements are required.

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## **COOPERATIVE RESEARCH PROGRAM OVERSIGHT COMMITTEES**

### **Composition**

Varies according to program and origin. Some oversight bodies (NCHRP, TCRP, and ACRP) are entities that are appointed and exist outside the NRC/TRB. Others may be internally appointed.

### **Function**

To select research problems and program the funding for them, on behalf of the constituent user groups associated with the program.

### **Appointment Procedure**

Varies according to program and origin. Internally appointed committees are appointed by TRB Executive Director following approval by SNO Chair and, as appropriate, by NRC Chair. Appointment letters are signed by the TRB Executive Director. Bias/conflict of interest statements are required.

## TRB PROJECT APPROVAL PROCESSES

### **Policy Studies and Program Reviews**

#### Description

Projects conducted by NRC-appointed committees that provide consensus findings, recommendations, advice

#### Approval Steps

Approval by TRB Executive Committee or Subcommittee on Planning and Policy Review; approval by Executive Committee of NRC Governing Board

#### Product

Full-length study reports, interim reports, letter reports

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### **Conferences and Workshops**

#### **I. Organized by TRB Standing Technical Committees**

##### Description

Outgrowth of standing committee activity; no significant outside funding; often self-supporting; no consensus findings, recommendations, or advice

##### Approval Steps

Approval by TRB Executive Committee or Subcommittee on Planning and Policy Review

##### Product

Transportation Research Circular

#### **II. Organized by Other Organizations and Cosponsored by TRB**

##### Description

Conference formats vary, but TRB must have a role in conference planning

##### Approval Steps

Approval by TRB Executive Committee or Subcommittee on Planning and Policy Review

##### Product

No TRB publication

#### **III. Organized by Specially Appointed (“Ad Hoc”) TRB/NRC Committee**

Description

Supported by outside funding; may or may not lead to consensus findings, recommendations, or advice (most are not authorized to do so)

Approval Steps

Approval by TRB Executive Committee or Subcommittee on Planning and Policy Review; approval by Executive Committee of NRC Governing Board

Product

Conference or workshop report, summary, or proceedings (in the TRB Conference Proceedings series)

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**Cooperative Research Program Projects**Description

Supported by NCHRP, TCRP, ACRP, NCFRP, or HMCPR funding; projects selected by NRC/TRB-appointed oversight committees or by non-NRC/TRB entities representing the user communities; research conducted by contractors selected by individual project panels, which oversee the work and review final report

Approval Steps

Approval by the TRB Division Committee Chair of research problems selected by the non-NRC/TRB entities (SCOR, TOPS, and AOC Committees)

Product

CRP Reports, Research Results Digests

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**Synthesis Projects**Description

Supported by NCHRP, TCRP, ACRP, or FMCSA funding; projects selected by oversight panels representing the user communities; research conducted by contractors under the guidance of individual topic panels. Umbrella panels review final documents.

Approval Steps

Approval by the TRB Executive Director of research topics selected by oversight panels.

Product

Synthesis report

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**TRB POLICY ON EXECUTIVE COMMITTEE PARTICIPATION IN  
COOPERATIVE RESEARCH PROGRAM (CRP) PROJECTS  
Revised 1/8/2021**

In the administration of its contract research programs, TRB wishes to maximize both the substance and the appearance of fairness in the selection and management of its contractors, at the same time ensuring the quality and expanding the number of potential researchers as much as possible.

It is in TRB's interest to use the expertise of the best qualified individuals and organizations available to perform its research programs, where no actual or apparent conflicts of interest exist. However, conflicts may arise or appear to exist if members of TRB's Executive Committee or organizations with which they are affiliated submit proposals on projects.

To prevent such problems in the administration of the Cooperative Research Programs (CRP) administered by TRB, members of the Executive Committee are not permitted to serve as principal investigators on any CRP projects. Additionally, the following rules will apply to all members of the Executive Committee:

1. No involvement is permitted in the selection process for CRP contractors, where the individual Executive Committee member or an affiliated organization is being considered.
2. No involvement is permitted in TRB's administration of a contract in which the individual or an affiliated organization is involved.
3. No involvement is permitted in setting or modifying administrative policies that would directly or materially affect either the administration of existing contracts with the individual or affiliate organization, or the individual's or affiliate organization's ability to submit proposals.

The Chair of the TRB Executive Committee, serving a one-year term; the Chair of the TRB Division Committee, serving a three-year term; and the Vice Chair of the Division Committee, serving a three-year term, have close ties to the Executive Director and to the activities of TRB. Neither of the Chairs nor the Vice Chair has any role in the selection of contractors for CRP projects. Nevertheless, because of these special relationships, the following additional rules also will apply to their activities on CRP projects during their terms as Executive Committee Chair, Division Committee Chair, and Division Committee Vice Chair:

4. Individuals serving in these positions may not personally propose on any CRP project during their years of service as Executive Committee Chair, Division Committee Chair, and Division Committee Vice Chair. This limitation on their right to propose on a CRP project as an individual does not extend to a governmental or academic entity with which they are affiliated provided that the individuals in question do not hold a significant financial interest (other than their salaries) in the governmental entity or academic institution of higher learning. Affiliated organizations in which an Executive Committee Chair, Division Committee Chair, or Division Committee Vice Chair holds a significant financial interest, other than a salary derived from a position in a governmental entity or an academic institution of higher learning, may also propose, but only in accordance with case-specific guidelines established by the Division Committee in advance of that individual's appointment as Executive Committee Chair, Division Committee Chair, or Division Committee Vice Chair to ensure that there is neither actual nor perceived conflict of interest.
5. They may not be personally consulted or participate in any way in the preparation of a proposal, or otherwise provide information that would be advantageous to a proposal team.
6. They may not work on a project as a member of the research team or as a consultant to the team.

Where a newly appointed Chair of the Executive Committee, Chair of the Division Committee, Vice Chair of the Division Committee, or other member of the Executive Committee has existing activities or commitments covered in the foregoing list of rules on a CRP project at the time of appointment, those activities will be reviewed and recommendations made on a case-by-case basis by the members of the Division Committee (exclusive of a newly appointed chair, vice chair, or member if his/her activities are being considered).

July 8, 2021