

Transportation Research Board
Highway Traffic Monitoring Committee (ABJ35)
3-year Strategic Plan: 2018-2020
Draft version 2: January 2018

The Committee's 3-year Strategic Plan comprises three sections:

- Section 1 provides an outlook regarding how the Committee's mission and scope fit within the context of key drivers in the field of traffic monitoring.
- Section 2 outlines the Committee's strategic goals over the upcoming three-year period (2018-2020, inclusive).
- Section 3 reviews current and historical committee information and activities.

Section 1: Future Outlook

Committee mission

The mission of the Committee is to provide resources, support and guidance to enhance, enable, and advance the state of the practice with regard to highway traffic monitoring and data collection technologies, methods, and management techniques.

Committee scope

The scope of the Committee is to address all aspects of research in the fields of highway traffic monitoring, including detection, counting, classification, and in-motion weighing of motorized or non-motorized travel. Its scope encompasses the full range of monitoring technology, including traffic sensors (both intrusive and non-intrusive), installation materials and techniques, signal processing algorithms, analysis and reporting techniques, and comprehensive monitoring programs. The committee is also concerned with highway traffic monitoring standards to ensure the applicability and quality of traffic data in all its applications. This Committee oversees three subcommittees including ABJ35(2) Weigh-In-Motion Subcommittee, ABJ35(3) Bicycle and Pedestrian Data Subcommittee, and ABJ30(3) Travel Time, Speed, and Reliability Subcommittee.

Key drivers

The Committee's mandate must fit within the context of current drivers for change within the field of traffic monitoring. In some cases, our efforts may contribute to these trends. Some key drivers expected to be relevant to ABJ35 in the coming three-year period include:

- improved traffic detection technologies;
- increased and changing demand for traffic data and more diverse models for data acquisition;
- improving data quality through process documentation;
- data management and visualization capacity;
- data sharing within and beyond a traditional traffic monitoring program;
- continued development and adoption of connected and automated vehicles; and
- constrained resources for research and funding.

Section 2: Committee Plan

The Committee plans to pursue the following six strategic goals over the upcoming three-year period (2018-2020, inclusive).

Goal 1: Prioritize and pursue the research needs identified in the e-circular

<p>Description: In 2017, the Committee published an e-circular entitled <i>Advancing Highway Traffic Monitoring Through Strategic Research</i>. This document identifies 49 topics in need of research (i.e., research gaps) based on a review of current research, practice, and emerging trends. This goal aims to prioritize topics urgently requiring research and develop appropriate ways to fill the research gaps.</p>		
Specific action	Timeline	Responsibility
1. Inform the Committee membership about the content of the e-circular	2018	Research subcommittee
2. Solicit Committee opinions to prioritize research topics in urgent need of research	2018	Research subcommittee
3. Determine appropriate ways (e.g., workshops, calls for papers, special sessions, Research Needs Statements) to pursue the prioritized research topics (cross-reference: Goals 3.1, 3.2, 4.2, 4.3)	2018	Research subcommittee
4. Develop processes to transform selected Research Needs Statements into funded research projects (e.g., through the Federal Highway Administration or the National Cooperative Highway Research Program)	2019	Research subcommittee
5. Draft and submit three priority Research Needs Statements for funding prior to 2020	2018 through 2020	Research subcommittee
6. Identify emerging trends and research needs in traffic monitoring that may not have been identified in the e-circular	2019, 2020	Research subcommittee

Goal 2: Provide traffic monitoring guidance and support to practitioners

<p>Description: The Committee will contribute to the state-of-the-practice of highway traffic monitoring by working strategically to promote the adoption of current traffic monitoring guidance, support efforts to periodically update guidance based on sound research and practice, and disseminate current guidance to practitioners. We plan to continue our close partnership with the Federal Highway Administration and its ongoing efforts to advance traffic monitoring practice through the <i>Traffic Monitoring Guide</i>. In addition, we plan to provide opportunities for other agencies (in the United States and elsewhere) to share their experiences regarding the development and advancement of traffic monitoring guidance.</p>		
Specific action	Timeline	Responsibility
1. Maintain agenda item at annual and mid-year meetings for updates from FHWA	Ongoing	Co-chairs
2. Strengthen relationship with relevant committees in the American Association of State Highway and Transportation Officials (AASHTO) to ensure that Committee remains up-to-	2019	Co-chairs

date on AASHTO’s efforts related to data and traffic monitoring (cross-reference: Goal 6.5)		
3. Identify traffic monitoring guidance being developed outside the United States and provide a platform to share this guidance within the Committee	2019	Co-chairs

Goal 3: Stimulate and disseminate leading-edge traffic monitoring research

Description: The Committee will continue to solicit, review, publish, and disseminate leading-edge research in the field of traffic monitoring. Through targeted calls for papers and the development of workshops and sessions that align with our priority research areas, we aim to advance the field of traffic monitoring nationally and internationally.		
Specific action	Timeline	Responsibility
1. Develop targeted calls for papers that solicit research on priority research topics (cross-reference: Goals 1.3, 4.2)	Annually by June	Paper review coordinator
2. Propose and develop workshop or session ideas that address priority research topics (cross-reference: Goals 1.3, 4.3)	Annually by June	Co-chairs, Subcommittee chairs
3. Coordinate the peer review process and publication decisions (cross-reference: Goal 4.4)	Annually by October 15	Paper review coordinator
4. Confer best paper award	Annually prior to annual meeting	Research subcommittee chair

Goal 4: Develop and support ABJ35 sub-committees in the development of their strategic plans

Description: The Committee will work collaboratively with its three sub-committees to develop and support their strategic mandates and actions. These mandates include promoting research within the specific field of interest of the subcommittee through soliciting and reviewing papers and developing sessions/workshops.		
Specific action	Timeline	Responsibility
1. Plan and execute annual sub-committee meetings	Ongoing	Subcommittee chairs
2. Develop targeted calls for papers that solicit research on priority research topics (cross-reference: Goals 1.3, 3.1)	Annually by June	Subcommittee chairs
3. Propose and develop workshop or session ideas that address priority research topics (cross-reference: Goals 1.3, 3.2)	Annually by June	Subcommittee chairs
4. Coordinate the peer review process and publication decisions (cross-reference: Goal 3.3)	Annually by October 15	Subcommittee chairs

Goal 5: Resource the Committee and its sub-committees with an active and diverse membership

Description:

<p>The success of the Committee stems from the efforts of its members and friends. Moreover, the Committee benefits when the membership comprises representatives with diverse skillsets and perspectives. The Committee expects and relies upon active participation by all Committee members.</p>		
<i>Specific action</i>	<i>Timeline</i>	<i>Responsibility</i>
1. Build a diverse and active Committee membership, ensuring an appropriate balance of practitioners, researchers, agency representatives, international members, and young members, by inviting, including, and engaging with existing and potential members	Ongoing	Co-chairs and committee members
2. In collaboration with efforts at the Section level, explore and execute opportunities to engage more young members in Committee activities	2019	Co-chairs
3. Appoint each Committee member for a specific role (e.g., participation in one of the Subcommittees) to ensure they have opportunity to meaningfully contribute to the Committee's mandate	2020	Co-chairs, Subcommittee chairs
4. Update and enhance the list of Committee friends	2018	Communications coordinator

Goal 6: Communicate and collaborate with traffic monitoring researchers and practitioners

<p>Description: The Committee will continue to actively communicate with its members and friends through regular meetings and the provision of resources through our website. The Committee will also strengthen strategic collaborative opportunities to extend our reach within our target community.</p>		
<i>Specific action</i>	<i>Timeline</i>	<i>Responsibility</i>
1. Plan and execute annual and mid-year meetings	Ongoing	Co-chairs
2. Maintain and enhance the existing Committee website to ensure that it remains a useful resource for Committee members, friends, and those considering membership.	Ongoing	Communication coordinator
3. Maintain partnership with the National Traffic Monitoring Exposition and Conference (NaTMEC) by encouraging attendance and supporting program development	2018, 2020	Co-chairs, Subcommittee chairs
4. Identify and strategically enhance collaborative opportunities with other TRB committees, particularly those with the Data and Information Systems Section	Ongoing	Co-chairs, Subcommittee chairs
5. Strengthen relationship with relevant committees in the American Association of State Highway and Transportation Officials (AASHTO) to ensure that Committee remains up-to-date on AASHTO's efforts related to data and traffic monitoring (cross-reference: Goal 2.2)	2019	Co-chairs

Section 3: Committee Information and Activities

Membership

The Highway Traffic Monitoring Committee has an active group of 27 members representing government agencies, university researchers, and private consultants/vendors working in the field of highway traffic monitoring. The following summarizes the current membership (as at January 2018):

- Total members: 27
- Regular member slots: 19
- International member slots: 3
- State DOT slots: 1
- Young member slots: 4
- Emeritus members: 3

Through active participation as members or friends of other committees and panels, the Committee shares information and interacts with research within the TRB community. The following list demonstrates the additional involvement of ABJ35 committee members within TRB; the membership is also involved in numerous initiatives beyond TRB.

- AT055 – Committee on Truck Size and Weight
- AFD30 – Committee on General and Emerging Pavement Design
- AFD60 – Committee on Design and Rehabilitation of Asphalt Pavements
- ABJ30 – Committee on Urban Transportation Data and Information Systems
- ANF20 – Committee on Bicycle Transportation
- ABJ45T – Task Force on Understanding New Directions for the National Household Travel Survey
- ABJ47T – National Household Travel Survey Workshop
- D0719 – NCHRP Project Panel on Methods and Technologies for Pedestrian and Bicycle Volume Data
- D03107 – NCHRP Project Panel on Work Zone Capacity Methods for the Highway Capacity Manual
- D1784 – NCHRP Project Panel on Pedestrian and Bicycle Safety Performance Functions for the Highway Safety Manual
- B0162 – Review of Federal Highway Administration Infrastructure R&D Expert Task Group on Bridges

Publications and sponsorship activities

This section summarizes ABJ35's activities from 2015 through 2017, and its anticipated activities in 2018.

2015

In 2015, ABJ35 reviewed 27 papers and recommended 4 for publication. It sponsored 2 podium sessions, 2 poster sessions, 2 workshops, 3 published meetings (ABJ35, ABJ35(2), ABJ35(3)), and co-sponsored 2 sessions/meetings (not listed). Details follow:

1. Podium session 550: Traffic data collection and analysis (4 presentations)
2. Podium session 762: Bicycle and pedestrian data collection methods, technologies, accuracy and warehousing (6 presentations)

3. Poster session 376: Highway traffic monitoring innovative and advanced methods and technologies (13 presentations)
4. Poster session 434: Bicycle and pedestrian information: Practical application of data collection and technology (9 presentations)
5. Workshop 153: Strategies for improved communication between traffic data practitioners and transportation decision-makers (4 presentations)
6. Workshop 154: Making bicycle and pedestrian data programs count (7 presentations)

2016

In 2016, ABJ35 reviewed 70 papers and recommended 11 for publication. It sponsored 2 podium sessions, 3 poster sessions, 1 workshops, 3 published meetings (ABJ35, ABJ35(2), ABJ35(3)), and co-sponsored 1 session/meeting (not listed). Details follow:

1. Paper session 834: Advances in traffic monitoring technologies and methods (5 presentations)
2. Paper session 335: Crowdsourced cyclist information as valuable data asset (4 presentations)
3. Poster session 301: Data collection: Foundation for a traffic monitoring program (8 presentations)
4. Poster session 302: Making traffic data work: Techniques, quality, and customer needs (13 presentations)
5. Poster session 303: Nonmotorized travel monitoring: Research convergence in bicycle and pedestrian modes (8 presentations)
6. Workshop 158: Leverage traffic count data and ITS data for shared usage (3 presentations)

2017

In 2017, ABJ35 reviewed 84 papers and recommended 13 for publication. It sponsored 2 podium sessions, 3 poster sessions, 1 workshops, 3 published meetings (ABJ35, ABJ35(2), ABJ35(3)), and co-sponsored 1 session/meeting (not listed). Details follow:

1. Podium session 360: The risk of not collecting weigh-in-motion data (5 presentations)
2. Podium session 863: Innovations in traffic data analytics (5 presentations)
3. Poster session 284: Traffic data collection, analysis, and applications (12 presentations)
4. Poster session 285: Exploring innovative data sources and approaches for bicycle and pedestrian data collection (25 presentations)
5. Poster session 286: What's the load? Monitoring and quantifying truck traffic flows, weights, and impacts (6 presentations)
6. Workshop 158: Quality volume data for bicycling and walking (8 presentations)

2018

In preparation for the 2018 annual meeting, ABJ35 reviewed 72 papers; publication recommendations are pending. It sponsored 2 podium sessions, 2 poster sessions, 3 published meetings (ABJ35, ABJ35(2), ABJ35(3)), and co-sponsored 4 sessions/meetings (not listed). One of the co-sponsored events was Workshop 155: Freight planning and data forum: Tailoring highway traffic monitoring data to serve the needs of freight planners (9 presentations). This workshop was developed in collaboration with the Freight Transportation Data Committee (ABJ90). Details follow:

1. Podium session 729: Applying research to improve traffic monitoring practices (5 presentations)

2. Podium session 200: Applications and characteristics of probe-based travel time data (4 presentations)
3. Poster session 309: Innovations in collecting and applying traffic data (19 presentations)
4. Poster session 310: Latest in bicycle and pedestrian data research (14 presentations)