

Motorcyclist Advisory Council – Meeting #4

August 15, 2019
9:00 a.m. – 1:00 p.m.

Agenda

The fourth meeting of the Motorcyclist Advisory Council (MAC) was held on Thursday, August 15, 2019 via Adobe Connect, online web presentation and telephone conference. The following document provides a summary of the presentations, discussions, and comments received during the meeting.

Twenty-four people attended the meeting including 9 MAC members, 8 US Department of Transportation staff, 2 members of the public, 2 guest presenters, and 3 contractor staff. Meeting attendees included:

Motorcyclist Advisory Council (MAC) Members:

- Mr. Michael Sayre, MAC Chairperson, American Motorcyclist Association (DC)
- Mr. Joel Provenzano, MAC Vice Chairperson, Florida Department of Transportation (FL)
- Mr. Michael Canchola
- Dr. Chanyoung Lee, University of South Florida, Center for Urban Transportation Research (FL)
- Mr. Eric Line, Michigan Department of Transportation (MI)
- Dr. Shane McLaughlin, Virginia Technical Transportation Institute (VA)
- Ms. Jane Lundquist, Texas Department of Transportation (TX)
- Dr. Craig Shankwitz, Western Transportation Institute at Montana State University (MT)
- Ms. Fay Taylor, Ohio Department of Transportation (retired) (OH)

Other Meeting attendees including the following:

- Ms. Catherine Chestnut (VHB)
- Mr. Greg Cohen (Roadway Safety Foundation)
- Mr. Mike Griffith (FHWA)
- Mr. Jeremy Gunderson (NHTSA)
- Mr. Dough Harwood (MRI Global)
- Mr. John Harding (FHWA)
- Mr. Yusuf Mohamedshah (FHWA)
- Norah Ocel (FHWA)
- Ms. Kara Peach (VHB, facilitator)
- Ms. Edith Peters (Florida Department of Transportation)
- Dr. Bob Scopatz (VHB, facilitator)
- Ms. Allison Steil (Harley Davidson)
- Ms. Carol Tan (FHWA)
- Ms. Kathryn Wochinger (NHTSA)
- Ms. Guan Xu (FHWA)



1. Welcome and Agenda Overview

Welcome

Mr. Michael Griffith (FHWA), who serves as the Designated Federal Officer (DFO), provided an introduction and welcome to the meeting. He stated this was the fourth meeting of the MAC. The meeting is open to the public and he asked that all participants introduce themselves for the record.

Agenda

Dr. Bob Scopatz, contractor and meeting facilitator, reiterated that the meeting is public and noted that time was reserved on the agenda for public comment. He announced that the meeting was being recorded and then reviewed the flow of the meeting. After each presentation, time was reserved for discussion, first for the MAC members and as time allowed for additional comments. All phone lines were muted so Dr. Scopatz asked that anyone interested in speaking use the comment box function on the online platform.

Mr. Michael Sayre welcomed everyone to the meeting. Mr. Joel Provenzano also welcomed the MAC members and thanked guests and attendees for their participation. He reminded participants of the MAC's task to discuss engineering solutions—infrastructure, countermeasures, ITS solutions—to improve motorcycle safety. He asked that discussion remained focused on those topics, though all questions are relevant.

2. Road Risk Assessment Tool (Roadway Safety Foundation)

Mr. Gregory Cohen (Roadway Safety Foundation) and Mr. Doug Harwood (MRI Global) presented on the usRAP (Road Assessment Program) Road Risk Assessment tool. The tool is produced by the Roadway Safety Foundation, a non-profit, charitable education foundation that uses the 4 E approach and engineering solutions for reducing roadway fatalities.

The usRAP is a free program supported by the FHWA. It is a data-driven safety improvement program with rational assessment of risk focused on long-term needs (not just short-term like maintenance concerns). MRI Global, Iowa State University, and University of Kentucky are partners in usRAP.

The tool is driven by ViDA, an online software package that produces a map with star ratings for roadway segments (1 being the lowest, 5 the highest). It includes protocols for motorcycle safety that help practitioners making decisions and improvements consider the safety of motorcyclists. Star ratings (1-to-5) are based on the presence or absence of design and traffic control features known to be related to safety. Ratings are a function of speed, traffic, and crash risk for a single trip—not historical crash data. A roadway with a 1-star rating is likely a two-lane, undivided road segment with very few safety features, compared to a 5-star that is likely a controlled freeway with many safety features. There are overall star ratings as well as specific star ratings for different road user types—bicycles, pedestrians, motor vehicles, motorcycles.

Users can develop maps for different roadway user types, including motorcycles. usRAP reviews maps for quality. Maps are coded from aerial and street level photographs and additional LiDAR and video data if added by the user. Users will receive star ratings, tables, infrastructure improvements, and an investment plan for practitioners to use for an engineering team to use when conducting more extensive evaluations. Outputs are available to download into Excel or GIS. The software is

relatively new, with State or local governments from 12 States asking for training (OR, UT, NM, NE, IA, IL, WI, MI, KY, VA, FL, AL).

After the presentation, Mr. Sayre opened the remaining time to discussion. Mr. Line asked if the usRAP uses analytic methods in the Highway Safety Manual (HSM) in determining locations. Mr. Harwood explained that the software is risk-based that includes predictive models developed on a broad range of international research, including some that contributed to the HSM. However, usRAP uses different safety model that provides practitioners with the initial information needed to conduct detailed safety study, which is where use of the crash data would be best suited.

Dr. Shankwitz asked if the ViDA included a KMZ or KML option to virtually drive a section of road. Mr. Harwood answered that this is an option they are exploring with Google.

Dr. Shankwitz also asked if the tool considers vertical curvature. Mr. Harwood explained that vertical curvature is not available since there is no vertical alignment data, but practitioners could explore that in the detailed engineering studies that follow the outputs. As an answer to a follow up question from Dr. Shankwitz, Mr. Harwood explained that presence of median type is a factor in the star ratings; therefore, acknowledging the presence of centerline rumble strips.

Mr. Sayre was interested in the agencies that have used the tool and some limitations or barriers preventing others. Mr. Harwood showed a map highlighting the 12 States where the tool has been downloaded either by State DOTs or county agencies with limited resources for detailed software or analysis. He does not have an exact number of users but noted that Utah DOT has been single biggest user and completed their entire state network and starting on their county roads. Both the software and the training are free, though each road segment can take approximately 20 or 30 minutes to complete so labor is the only cost.

Dr. Shankwitz observed the MAC frequently discusses road surface friction and asked if there is an indicator for tar snakes. Mr. Harwood explained that road surface friction is a visual input so the user may input tar snakes; however, there is no flag or changes to the star rating when present. Friction is input as low, medium, and high and the user can use that information as part of considering the cost effectiveness of pavement resurface improvements.

The discussion was then open to all others in attendance, including the public. Mr. Mohamedshah (FHWA) asked if the star rating changed based on the rural and urban setting. The answer is “not explicitly”—the star rating changes based on speed and cross section of the road, which are likely characteristics to differ between rural and urban settings.

3. Preliminary Results of MAC Survey

Dr. Chanyoung Lee (University of South Florida, MAC Member) presented preliminary results of a survey developed by the MAC and distributed, with assistance of Ms. Kelly Hardy (AASHTO). The purpose of the survey was to understand how States account for motorcycle safety in terms of resources and staffing. Of the 114 contacts, 48 respondents completed full or partial surveys. There were instances where States were represented with multiple responses but only one answer was selected. Dr. Lee noted that in several cases, the responses were contradictory. In such cases, ‘yes’ and ‘not sure’ were coded as ‘yes,’ ‘no’ and ‘not sure’ were coded as ‘no,’ and ‘yes’ and ‘no’ answers were coded as ‘unknown.’ Traffic and Safety Engineers made up 58 percent of respondents. Results indicated that approximately 80 percent of the States represented do not have designated staff responsible for motorcycle infrastructure issues. Nearly half of the respondents did not have

guidance specifically for motorcycle infrastructure, with 25 percent not sure if those resources were available. Stakeholder engagement accounts for one-third of how motorcycle and transportation practitioners interact to improve motorcycle safety and one-quarter reported feedback from a motorcycle-specific commission, committee, or coalition. Overall, the greatest need reported by respondents is for more information (e.g., data, best practices, strategies).

The MAC members had detailed discussion regarding several themes that arose from the survey results. The following subsections summarize the discussions by topic.

Guidance and Policies

With nearly half of the respondents reporting not having access to design manuals, Dr. Lee suggested a MAC recommendation to distribute known resources, such as TRB's National Cooperative Highway Research Program (NCHRP) Program *Guidance for Implementation of the AASHTO Strategic Highway Safety Plan: A Guide for Assessing Collisions Involving Motorcycles* (http://www.trb.org/Publications/Public/Blurbs/A_Guide_for_Addressing_Collisions_Involving_Motorc_160626.aspx), to Governor's Highway Safety Programs and State DOTs. Mr. Line observed that one challenge is turnover within State DOTs and noted preference for policies and procedures, such as AASHTO's Green Book. Ms. Lundquist agreed, observing that there is historical knowledge that retires with staff and written policies or documents are more well received by leadership.

State DOT Staffing and Communication

Mr. Provenzano noted that he was surprised to see Florida's responses, making him more aware that the Central Office was unaware of motorcycle-specific projects his Division Office completed. This highlighted the importance of communication within the DOTs. He also observed that unlike statewide bicycle and pedestrian coordinators, there is no database of State motorcycle safety staff so it is possible the survey was not distributed to the most knowledgeable staff members.

MAC members had an extensive discussion on the merits and possibility of designated motorcycle safety staff positions. Mr. Provenzano explained that Florida DOT Central Office houses a staff funded by FHWA safety grants to maintain the State's motorcycle coalition. This position is the main point of contact and manages all contacts with universities, trainings, research, engineering, and law enforcement. Dr. Lee agreed but noted that while many States have similar positions, they are focused on behavioral safety and not engineering solutions. There is variation in State DOT and State Highway Office structure making coordination and outreach more difficult.

MAC members agreed that one opportunity for change is improving communication between research agencies and highway safety engineers. This can best be accomplished through motorcycle safety included in design guidelines.

Vision Zero/Toward Zero Death Initiatives

Dr. Shankwitz observed that motorcycle fatalities represent 15 percent of all roadway fatalities, but States are not responding with resources. With many States and communities developing Vision Zero Plans and Toward Zero Death initiatives, there are opportunities to communicate behavioral and engineering solutions. Dr. Lee agree, noting that motorcycle safety is often overlooked, and these initiatives present the opportunity to gain traction from broader audiences.

Federal Funding

Mr. Provenzano recalled previous MAC discussions on State laws that define bicyclists and pedestrians as vulnerable road users, which is tied to Federal funding for DOT staff positions and projects. While categorizing motorcyclists as vulnerable may elicit some pushback, Mr. Provenzano posited the benefit of adding motorcyclists into the group. This elicited conversation on the MAC developing recommendations for requiring States establish a motorcycle safety coordinator. Mr. Griffith responded that such requirements and funding for positions need to come from legislative requirements.

Similarly, Dr. Lee asked about consequences for States when they do not meet performance measures. Mr. Griffith answered that States are required to designate a certain percent of Highway Safety Improvement Program (HSIP) funds to spend on safety. Funds cannot be dedicated to motorcycle specific projects, but FHWA can encourage States to develop data-driven SHSPs and to spend funds that align with the emphasis areas. For State DOTs interested in existing funding streams, Mr. Provenzano reminded MAC members that NHTSA offers funding for behavioral safety projects under Section 402 funding (<https://safety.fhwa.dot.gov/legislationandpolicy/policy/section402/>).

The line was opened to comments from the public. No comments were received.

4. Discussion on MAC Progress and Goals

Following a break, the MAC engaged in group discussion on how the survey results inform potential recommendations, the draft recommendations and work plan to submit to FHWA, and goals for the next (fifth) MAC meeting.

Mr. Griffith explained that the final recommendations can come in the form of a letter report with enough information and context for FHWA to understand the recommendations and include suggestions on implementation (where known). FHWA is not expecting a large report and the MAC determines the length, but Mr. Griffith noted that appendices like reports, links to reports, or other useful resources to support the recommendations are acceptable.

Mr. Sayre suggested that the MAC members revise draft recommendations during the call, then individually provide comments and edits before the next meeting in December, and the final in-person meeting will be dedicated to finalizing the letter report. Once delivered, FHWA will need some time to review and provide response to the recommendations. They may request a final conference call to discuss additional information or confirmation, which may only involve the MAC co-chairs.

Once the recommendations are finalized and approved, the next steps depend on the recommendations. As one possible example, Mr. Griffith suggested, if the MAC developed a recommendation that addressed providing State DOTs information on a specific countermeasure or infrastructure that worked well with motorcycles, FHWA could potentially draft a memo and circulate the information to Division Offices to send to their State DOTs.

Mr. Provenzano asked about appropriate follow up to the survey responses with the summary results and additional information and links to helpful resources. Mr. Griffith said the MAC is welcome to produce additional products and can send on behalf of the MAC membership as long as it is informational and not directive in nature. He cautioned that making recommendations directly to the State exceeds the boundaries of the MAC and that is the role of FHWA to determine the appropriate channel.

Next, MAC members discussed a potential framework for draft recommendations under three categories: barrier design; road design, construction, and maintenance; and Architecture and implementation of intelligent transportation system technologies. Recommendations were developed based on presentations, MAC discussions, research, and survey results presented at previous meetings. The following sub-sections were discussed as part of a potential framework to include draft recommendations. The subsequent decision points are described in brief following the recommendations.

Barrier Design

1. Existing designs that take motorcycles into consideration should be incorporated into standard design practices.
2. Existing barrier add-ons that mitigate motorcycle crashes should become part of the tool kit for safety planners.
3. New barrier designs must take motorcycles into account during development.
4. Consider need for motorcycle specific barriers in specific applications.

Dr. Shankwitz suggested the MAC follow up with Mr. Mohamedshah and TTI regarding the FHWA-supported roadside barrier research. MAC members also stated they will investigate further if any States are using motorcycle attenuators. Mr. Line cautioned that any hardware add-ons need to be MASH compliant, which is a timely and expensive process that may prevent some States from implementing. However, these could gain traction with State DOT if included in written policies, procedures, and design manuals.

Road Design, Construction, and Maintenance Practices

1. Considerations for motorcycle safety should be incorporated into all aspects of road design, construction, and maintenance practices.
2. Tools for evaluating the motorcycle safety of a given road, intersection, construction, and maintenance practice should be available and used by planners.
3. Reporting tools for the public to report unsafe conditions with motorcycle specific concerns should be created and publicized.
4. Stakeholders should make use of existing research and build upon it to further develop best practices for motorcycle safety in road design, construction, and maintenance practices.

Mr. Griffith added that 'road design' includes both the roadway and roadside. Topics discussed by the MAC that fall under this category include signage, traffic control detectors, offsets, clear zones, sight triangles, and more. Specific road design, construction, and maintenance practices discussed included:

- Motorcycle-specific signage.
- Road friction in regard to painted surfaces and either increased friction or warning signs for painted surfaces.
- Tar snakes.

- Use of steel plates in work zones and the application of friction material. Mr. Sayre recommended reviewing the NCHRP report for images and treatments, as well as case studies like New York City where there are monetary fines if not applied.
- Chip seal is a significant concern of American Motorcyclist Association members.
- Combination of countermeasures such as temporary pavement changes and motorcycle signage.

Mr. Sayre noted that the second framework for recommendations was drafted prior to the usRAP presentation, indicating that this recommendation can undergo edits to recommend or further encourage distribution and adoption of the tool. Generally, Mr. Provenzano reminded the MAC that the need for additional research is a valid recommendation.

Mr. Sayre also suggested that edits to the third recommendation could emphasize the tools be more available to the public.

Dr. Shankwitz noted that while tar snakes have been a point of discussion and the concern is evident; therefore, the recommendations should focus on the need for supporting data to validate the concern. Mr. Provenzano volunteered to help shape any engineering-related recommendation in a way most useful to the engineering community.

Architecture and Implementation of Intelligent Transportation System Technologies

1. Any ITS technology must be required to be developed with motorcycles as a specific vehicle class.
2. Motorcycles must be detected and treated as motorcycles by ITS technology rather than as a generic passenger vehicle.

Mr. Sayre explained that the draft recommendations were written to emphasize the difference between motor vehicles and motorcycles and that motorcycles should be treated differently. Mr. Provenzano agreed that motorcycles by law are defined as a specific vehicle class but are not counted differently like other users such as bicycles, pedestrians, or heavy trucks. He went on to say that exposure rates would help researchers and States better understand crash rates and data.

Mr. Line reminded the MAC members of the National Transportation Safety Board presentation at a previous meeting. There may be opportunity to link the recommendations with NTSB's efforts to address motorcycle vehicle-to-infrastructure technologies. Mr. Provenzano suggested adding specific language to address vehicle-to-infrastructure and vehicle-to-vehicle technologies in the recommendations. Mr. Griffith provided a link to a USDOT report that identifies different ITS technologies that could address motorcycle issues. (<https://rosap.ntl.bts.gov/view/dot/37089>)

5. Public Comments

No requests for comment were received prior to the meeting. The line was open to public comment. No comments were received

6. Next Steps

The next meeting is an in-person meeting and is anticipated to take place in Washington, DC in December 2019. Prior to the meeting, Mr. Sayre will send revised draft recommendations with supporting reports and information for review. MAC members will have time for consideration and edits, which will be compiled into final draft recommendations. The meeting will focus on finalizing the recommendations. Although, time may be scheduled for updates from FHWA-sponsored motorcycle projects.

Mr. Griffith noted that the MAC memberships were extended through July 2020, which would allow for some follow up after the December meeting, as needed. The December 2019 meeting is anticipated as the last in-person meeting and will be a culmination of the great work the MAC has accomplished.

Several MAC members asked clarifying questions on the scope of the recommendations and responsible parties. Mr. Griffith provided the following responses:

- MAC recommendations should be consistent with the FHWA's authority. For example, a recommendation may ask FHWA to provide guidance to States on ITS or infrastructure topics but the agency will likely not be able to hold States accountable for implementation.
- MAC recommendations do not have to fit the three topic areas. They can identify areas for future research or pilot studies.
- The MAC can use the introduction cover letter narrative to explain the need for motorcycle topics. For instance, the letter may explain that motorcycles account for 15 percent of all roadway fatalities and therefore, States should remember the topic in Strategic Highway Safety Plans and Vision Zero.
- FHWA can circulate relevant information, guidance, and recommendations to State DOTs through FHWA Division Offices.

In preparation for the final meeting, Mr. Provenzano reminded the MAC members about text in the charter stating that consensus is achieved if there is no dissent among the members.

Mr. Griffith concluded the meeting reminding the MAC members that the intent was to present as much information about ongoing efforts, recommendations, tools, reports, and information for the MAC to decide how to use the information for developing recommendations. He thanked everyone for their efforts.

Adjourn

12:35 p.m.