

Minutes of September 5, 2006 Meeting of AASHTO  
Technical Committee on Nonmotorized Transportation in Madison, WI

**Attendance:**

Committee Members: Chair: Dick Albin (WA) Caryn Giarratan0 (MO), Tom Dodds (SC), Amy Bell (VT), Tom Huber (WI), Darryl Anderson (MN), Bob Laurie (AK), Scott Woodrum (VA), Dave Bachman (PA), Dwight Kingsbury (FL), Eric Glick (NV), Richard Moeur (AZ), Jim McDonnell (AASHTO) John Fegan (FHWA)

Guests: David Patton (VA), Peter Lagerwey (Seattle), Ray Derr (NCHRP), Charlie Zegeer (Univ of NC), Mary Ann Fowler (Rails to Trails Conservancy) and Ginny Sullivan (Adventure Cycling)

**Agenda Items:**

**Review of Activities and On-Going Research**

Status of Changes Regarding Railing Heights for Bicyclists: As reported by Jim McDonnell, the AASHTO Bridge Group voted to accept the modified language at their meeting in May 2006. The new language will be in the 2007 Edition of the LRFD Bridge Design Specs as follows:

In Article 13.9.2, revise the first paragraph as follows: “The height of a bicycle railing shall be not less than 42.0 in., measured from the top of the riding surface.”

Add the following paragraphs as new commentary to Article 13.9.2:

“Railings, fences or barriers on either side of a shared use path on a structure, or along [a] bicycle lane, shared use path or signed shared roadway located on a highway bridge should be a minimum of 42.0 in. high. The 42.0 in. minimum height is in accordance with the AASHTO Guide for the Development of Bicycle Facilities, 3<sup>rd</sup> edition, (1999).

On such bridge or bridge approach where high-speed high-angle impact[s] with a railing, fence or barrier are more likely to occur (such as short radius curves with restricted sight distance or at the end of a long descending grade) or in locations with site-specific safety concerns, a railing, fence or barrier height above the minimum should be considered.”

A new research need of determining barrier warrants for trails and shared use paths was noted.

NCHRP Project 17-37 Pedestrian Predictive Crash Methodology for Urban and Suburban Arterials (Tom Huber and Michael Ronkin on panel): This project was initiated five months previously and is developing a model for predicting pedestrian crashes using geometric and general area characteristics. It is investigating using existing data bases for two conditions:

- Intersections (using Toronto and Charlotte data bases)
- Non Intersections (using MN data base)

The completion date is February of 2007. Doug Harwood of Midwest Research is the PI and the Highway Safety Research Center of the Univ of NC is a subcontractor. Charlie Zegeer mentioned that area type is also being investigated as a surrogate for behavior. A stand alone report will be produced and the methodology may be incorporated into the Highway Safety Manual.

NCHRP Project 15-37, Revision of the AASHTO Guide for the Development of Bicycle Facilities (Dwight Kingsbury is to chair the panel with Eric Glick and Tom Huber also on the panel.) First panel meeting is the week of September 11, and proposals will be evaluated in December 2006. Several technical issues were discussed:

- John discussed the need to determine which are the critical design user characteristics (i.e. other users besides bicyclists have characteristics that could affect shared use path design).
- The need to look at existing State DOT Bicycle Guides for available information for the new AASHTO Bike Guide
- Warrants for barriers on shared use paths or trails (Amy Bell noted that she had a research project underway on this topic.)
- Relation of AASHTO Bike Guide and the requirements of the Americans with Disabilities Act (ADA) especially on trails or shared use paths
- Dick noted that there are conflicting existing messages on clear zones that need to be resolved and that better information on barriers separating highways and trails is needed.
- Dick also noted that the AASHTO Subcommittee on Design noted several issues: There is conflicting information for vertical clearance for underpasses; horizontal clearance on bridges of 14 feet is currently recommended but 10 feet should be considered; shy distance on long structures need to be reconsidered; guidance on when not to provide nonmotorized facilities is needed; further guidance on ADA requirements is needed; and guidelines for prioritizing when to provide routes and facilities for bicyclists are needed.
- John Fegan brought up the need for warrants for grade separation of bicycle (and pedestrian) facilities.
- Peter Lagerwey noted several issues relating to sidepath design: sidepath design speeds; safety of bicycle use on sidewalks; and which signage should be used.
- Caryn asked about the basis for the 14 foot recommendation for wide outside curb lanes. It was noted that this was based on research conducted by Steve McHenry in Maryland several years ago.

NCHRP Project 17-32 Rumble Strips - Balancing Trade-Offs (Dave Bachman is on the panel.) This research has been underway for about a year and a half, and is assessing the safety and effectiveness of centerline and edge rumble strips. The contractor is Midwest Research Institute. Phase 1 which was completed in March was a review of the practices of State and provincial DOTs. 25-30 research topics were suggested and these were condensed into three areas: safety effectiveness of shoulder rumble strips; noise levels

inside vehicles, and determining the minimum auditory cues needed by motorists. Additional funding is being requested for four additional areas of research: effects of angle of incidence and roadway characteristics; safety and effectiveness of centerline rumble strips; effects of using both centerline and edge rumble strips; and determining the optimum gap placement between rumble strips.

NCHRP Project 15-35 Geometric Design of Driveways (Tom Dodds is on the panel.) Contractor is the Univ of Arkansas. The existing AASHTO design guide for driveways was done long ago and needs updating. The existing Guide does not take bicyclists into account. A questionnaire will be sent to the State Highway Engineers to determine their policies on driveways. The Bike/Ped Coordinators asked to be informed when the questionnaire goes out. Peter Lagerwey brought up the issue of who stops for whom at the intersection of trails and driveways, or when one leg of an intersection is a private driveway.

AASHTO Domestic Scans: Four were proposed: Traffic control devices for bicycle facilities; best practices in reconstruction; effectiveness of safe routes to school programs in rural Western States; and effects of traffic calming measures on bicyclists and pedestrians. They were not selected for funding. The two selected ones were: asset management; and accelerating utility and right-of-way issues in project delivery.

For the coming year it was decided that the proposals from last year will be resubmitted. Eric will revise the one on Effectiveness of Safe Routes to School Programs before its resubmittal.

Standing Committee on Design: The SCOD met in June and discussed current AASHTO publication names (e.g. specs, guides, manuals), and the variance in terminology across committees. More consistency is needed in terminology. A hierarchy for publications was presented. It will be voted on at subcommittee meetings and a formal proposal will be presented at the AASHTO Annual Meeting. Whether the AASHTO Bike Guide should be a guide was discussed.

2007 NCHRP Projects: Ray Derr reported on several projects:

- Report 652 on unsignalized crossings will study various types of pedestrian crossings (hawks, pelicans, etc) and develop warrants for pedestrian signals to be considered for inclusion in the MUTCD. A brief discussion indicated that their inclusion may not be in the 08/09 MUTCD.
- Project 3-70 Multimodal Level of Service for Urban Streets – is developing a level of service model that is comparable across modes.
- Project 3-78 Pedestrians with Disabilities at Roundabouts and Free Flow Right Turn Lanes –to be in done 2009. A brief discussion of the recommendations of the US Access Board regarding signalization based on number of lanes in roundabouts ensued.

2008 NCHRP Project Process: the deadline is September 15 for problem statements and they come from State DOTs, AASHTO Committees (including Nonmotorized) and

FHWA. Ballots go to the State Directors of Research in December and are due back by the end of February. The Nonmotorized Committee will also rank the bike/ped ones. At the AASHTO Standing Committee on Research uses the priority rankings received to make selections which are sent to the Research Advisory Committee. 2008 Research Problem Statements are due by Sept 30, 2006.

Surface Transportation Environment and Planning Cooperative Research Program (STEP) Outreach: John explained the new process for obtaining input on the amount of funding and the topics to be funded by FHWA on environmental research. He requested feedback for the bike/ped area.

Pedestrian and Bicycle Information Center (PBIC): John reported on the reprocurement of this national clearinghouse. After a competitive procurement process, the new grant was awarded to the Highway Safety Research Center of the University of North Carolina. The family of websites can be found at [www.pwdbikeinfo.org](http://www.pwdbikeinfo.org)

US Bike Routes Task Force: Ginny Sullivan of Adventure Cycling presented a status report. The Task Force was convened in 2004 to develop a recommended national systems-level or corridor-level plan for use by the State DOTs and other agencies in designating potential future US bicycle routes. The plan of action is to:

- Collect, compile, and review information on existing and proposed multi-state bicycle routes
- Develop recommended corridors for a national system
- Develop a logical system of designations for routes
- Produce a map of the draft US Bicycle Route Corridor Plan
- Distribute the draft Corridor Plan for Review by the Joint Task Force on Nonmotorized Transportation, Subcommittee on Design, and Subcommittee on Traffic Engineering.
- Present revised draft Corridor Plan for review by the Standing Committee on Highways

To date the draft corridor plan is completed. Submission of the subsequent materials for AASHTO review is expected within the next year. Once the final Corridor Plan is developed, State DOTs, other agencies and non-profits can use the plan to develop more specific routes. AAHSO will use either its existing process or a modification to approve and designate new routes.

#### **Pedestrian Safety Action Plan (PSAP) Guide:**

Charlie Zegeer explained the development of this Guide for FHWA. It is a guide for States and localities to develop a pedestrian safety plan based on analyses of their own crash data. It covers spot locations, corridors, targeted areas, and entire jurisdictions. Short, medium and long term changes are highlighted in the Guide. The AASHTO Technical Committee on Nonmotorized transportation was asked to:

- Endorse (PSAP) training courses
- Help promote these courses

- Provide instructors to be trained for PSAP workshops
- Help generate interest in the 37 States not currently in this effort.

The cost for a week of training (2 2-day and 1 1-day course) was reported to be about 20K. Questions included how other States could be part of the effort; whether it could become a National Highway Institute (NHI) course, and whether NHTSA 402 funding could be used. A couple of States indicated an interest in pursuing this training. Tom Huber and Tom Dodds indicated an interest in becoming instructors. Dick will discuss with Jim if there is a process for AASHTO adopting this training.

### **Results of Balloting for 2007 NCHRP Projects:**

Comments of the Standing Committee and the Research Advisory Committee for each proposed bike/ped project were presented:

- Item 143 “User Volumes and Mode Shifts as a Result of Bicycle Networks” was found to be redundant with the Nonmotorized Transportation Pilot Program being administered by FHWA and was not recommended for funding.
- Item 69 “Right Turn Interactions and Channelized Right Turns” was not recommended for funding and may be resubmitted next year.
- Item 128 “Quantitative Assessment Tool and Guidance for Sidepaths” was not selected for funding. It was suggested that sidewalks be added to this effort and it be resubmitted for funding.
- Item 111 “Safety and Operational Effects of Properly Designed Bicycle Lanes” was not funded and could be redrafted.
- Item 8 “Revision of the AASHTO Guide for the Development of Bicycle Facilities” was funded.
- Item 95 “A Program to Promote Traffic Safety Awareness Among Middle School Children” was not felt to be research and was not funded.

**Voting on Topics for New Research Problem Statements:** Topics developed by the TRB Pedestrian and Bicycle Committees were presented, discussed, and voted upon.

The following topics were selected for the development of research problem statements:

- “Review and Evaluation of Bicycle Law Enforcement and Training Programs” Eric to lead and make some revisions to the existing write up.
- “Liability Aspects of Bikeway Designation Updates” Dick to submit for consideration as an NCHRP 20-6 project.
- “Quantitative Assessment Tool and Guidance for Sidepaths” Dwight and Tom (Huber) to review and revise to address comments from SCOR.
- “Safety and Operational effects of Properly Designed Bike Lanes” Dwight will review to determine if changes are needed before resubmitting it.
- “Data Needs and Methodologies for Bike and Ped Issues” This new problem statement to be drafted by Amy, John, Tom (Huber) and Eric.

### **Next Year's Meeting**

The next meeting is planned for the week of June 18-22 in Lake Tahoe, NV to allow for a joint meeting with the AASHTO Standing Committee on Traffic Engineering. A one and a half day meeting is tentatively scheduled for all day Monday June 18 and half of Tuesday June 19. John is pursuing whether the meeting of all 50 State DOT Bicycle and Pedestrian Coordinators will happen later that week or at another time.