

Minutes of the Spring 2003 Meeting  
Of the AASHTO/AGC/ARTBA Joint Committee  
Task Force 13

May 1 and 2, 2003, College Station, Texas

THURSDAY, MAY 1, 2003

Co-Chair **Pat Collins** welcomed members to the Spring 2003 meeting at College Station. Following introduction of the officers of the task force and of all attendees, he summarized the charge of the task force as to standardize highway and bridge hardware. Progress during recent years meetings has been slow due to the lack of funding. Because the new highway act may increase funding set aside for safety projects, our progress may benefit.

The Task Force has published guidelines on standardizing Drainage guidelines, luminaire support, barriers, and sign supports. We are also working on developing guidance in the areas of Rail-Highway crossings, work zones, guardrail to bridgerail transitions, and certification of crash test facilities. But beyond the formal work of the Task Force and its subcommittees is the networking and exchange of ideas that naturally comes about when industry professionals gather in settings such as this.

**Collins** then asked for a motion to approve the minutes of the St. Louis meeting held in the fall of 2002. The motion was made, seconded, and approved. A moment of silence was observed for long-time Task Force member **Dennis Havranek** who passed away in March. Task Force Secretary **Nick Artimovich** then summarized the activities of each of the subcommittees.

Co-Chair **John Durkos** gave a presentation on the Task Force's Forging Ahead to the future. The slides also focused on prominent members of the past, particularly our former Chair **Arthur Dinitz** who fortunately will remain active with the Task Force as he is still Co-Chair of the AASHTO/AGC/ARTBA Joint Committee Subcommittee on New Materials and Technologies.

**SUBCOMMITTEES / BREAKOUT SESSIONS**

**Nancy Berry**, Co-Chair of **Subcommittee # 1 – Publications**, was unable to attend the meeting, so **Dinitz** took the opportunity to discuss funding. The estimated traffic fatalities for 2002 are the highest since 1990. It has also been estimated that the total cost of all traffic crashes in this country is approximately \$230.6 Billion per year. It would seem to be in the public interest if a portion of that money would be spent to improve highway and roadside safety and reduce that toll. The country's next highway bill may very well include increased R&D funding for the FHWA. At the recent NASHTO meeting Dinitz learned that the administration's bill will carry more funding for highway safety.

Unfortunately, AASHTO hasn't been of much help in funding Task Force publications. Tony Kane of AASHTO has the OK to hire two more engineers to handle the work of his committee and we can hope that this increased emphasis will translate to increased assistance for Task Force efforts. The Joint Committee discussed a website in conjunction with FHWA, which is

another cause for optimism. For the short term, however, the Task Force needs to continue to pursue Pooled Fund studies and volunteer efforts to move our publications forward.

**Collins** discussed future Federal funding. On May 14, the US DoT posted their proposal, which may be viewed at: <http://www.fhwa.dot.gov/reauthorization/safetea.htm>, however it is not certain that a multi-year bill can be passed during this session and we may be working under continuing resolutions until Congress completes its work. AASHTO is hoping for \$32 Billion per year, growing to \$40 Billion, however the initial administration bill proposes initial outlays of \$29 billion growing to \$32 billion. The administration's bill is one of many reauthorization proposals being floated. One proposal hopes to balance the donor/donee state funding. Transit interests want part of safety funding. Whenever the money does become available, states with projects ready to go will have an advantage.

Three concurrent breakout sessions of six subcommittee meetings were then held, and at the end the co-chairs summarized the activities for the Task Force. Although the presentations were made in seemingly random order, your Secretary will document them in numerical order, as is his bent.

**Durkos** recounted the discussions in **Subcommittee #2 – Barrier Hardware**. The new Co-Chairs of this subcommittee will be **Bob Takach** and **Will Longstreet**. The function of the subcommittee is now as an agent to oversee the contractor doing the revisions. The format of the document and drawings was discussed. Most states use Microstation but all the manufacturers use AutoCad, although posting in PDF is also an option. It was thought desirable to add photographs to the descriptions. Examples of different drawing formats will be posted on the FHWA website for review by members who will then vote on a preferred format.

**Mark Bloschock** summarized **Subcommittee #3 – Bridge Rails and Transitions**. Their goal is to publish a booklet with photographs of crash tested bridge railings. They are looking at the work underway by California. Crash test videos of a thrie-beam transition and a TL2 transition were showed. On April 30 a Wyoming DOT box beam transition was tested. They also discussed the use of concrete anchors for attaching railings to bridge decks.

**Subcommittee #4 – Drainage Hardware** is currently inactive. Task Force members interested in this subject who haven't attended any recent meetings are urged to contact **Collins** or **Durkos** to discuss the continuation of this subcommittee. **Durkos** will initiate communication.

**Gregg Fredrick** recounted the activities of **Subcommittee #5- Sign and Luminaire Supports**. The subcommittee's review of the Ground Mounted Sign Support Guide is complete. **Artimovich** needs to provide the latest information on hardware accepted since the 1998 edition was published. The new edition will also distinguish between uni-directional and omni-directional hardware – FHWA will do the initial review of this topic. The Luminaire Support Guide is being revised through a pooled fund study that is headed by Wyoming DOT. The scope of work has been prepared and is to be reviewed by the pooled fund states. Several challenges and new features were discussed, including the migration of proprietary devices to generic products when the patents expire.

**Barry Stephens** reported on **Subcommittee #6 – Work Zone Hardware**. The subcommittee has decided that the National Work Zone Safety Information Clearinghouse (see: <http://wzsafety.tamu.edu/> ) is already a repository of, or link to, nearly all appropriate work zone hardware information. Over the last two meetings the Clearinghouse has been the subject of presentations and demonstrations. Since our last meeting several members have visited the Clearinghouse web site tasked with finding certain information. Their comments on how easy/difficult it was to navigate through the site have been given to Dr. Ullmann for his consideration in revising the site.

**Ron Faller** presented a summary for **Subcommittee #7 – Certification of Test Facilities** . First, it was discussed that the crash testing laboratories need to review and comment on the NACLA laboratory accreditation document that was provided by Harry Taylor by June 1, 2003. Subsequently, FHWA will implement those comments into a revised document which may be made available for re-review in a more formal manner. Once all reviews have been completed, it has been generally agreed upon that testing laboratories will have two (2) years to become accredited according to the ISO 17025 guidelines and also meet FHWA's NACLA document and/or other additional requirements (i.e., making internal laboratory audit results available to FHWA, note any key changes in personnel to oversight bodies, and provide results from ILC's and PTP's to FHWA).

It was also discussed that Subcommittee No. 7 of AASHTO TF 13 will continue to exist even after laboratory accreditation is achieved by all of the laboratories. In addition, Subcommittee No. 7 will supervise, manage, and operate the ILC's since they are easily done and a valuable component of laboratory accreditation. The NACLA document will no longer identify separate accreditation requirements for facilities crash testing Category I or II work-zone devices. Category I test facilities or those capable of self-certifying will be monitored by the FHWA. It was also discussed that appeal procedures will be handled by both FHWA and the third-party accrediting body. These FHWA procedures are to be determined in the future.

Subcommittee No. 7 is to continue inter-laboratory collaborations on occupant compartment deformation procedures but not damage levels since OCD versus injury level is under investigation by NHTSA. Items discussed for collaboration include: (1) transmission type in test vehicles; (2) seat removal and/or modification in test vehicles; (3) OCD measurement procedures; and (4) floorpan separation in 2000P test vehicles. Next, it was discussed that laboratories begin to evaluate their data acquisition systems using NHTSA's waveform generator and their methodologies for selecting zero and start point in data processing and analysis. Finally, the need was discussed for Subcommittee No. 7 to publish a packet which contains the results from the prior ILC's which can be used as documentation for participation in an ILC program.

**Lance Bullard** of **Subcommittee #8 – Rail Highway Crossing Hardware** showed the brochure that was put together listing the various state DOT rail-highway points-of-contact (based on inquiries to every state by **Rick Mauer**), and manufacturers of the hardware, and other related organizations. It is ready to be posted on the Internet

## **SPECIAL SUBCOMMITTEES**

**Bloschock** reported that the **Marketing Subcommittee** had worked on attracting new AASHTO members and noted that **Longstreet** of PennDot has not only joined the Task Force recently but is already a subcommittee co-chair. **Andy Artar** thanked **Durkos** for arranging to have the retractable phone/data cords imprinted for this meeting.

**Dinitz** spoke regarding the **New Standardization Areas Subcommittee** for **Clarence Mabin**. **Durkos and Dinitz** again addressed the area of Drainage Products. **Bloschock** was asked to get in touch with his contacts in the plastic pipe industry and ask them if they see a need for updating the Task Forces publication “A Guide to Standardized Highway Drainage Products” which currently includes no plastic pipe. He also noted that bridge scuppers and other structure drainage features are an issue as is fiber reinforced concrete pipe.

## **AFFILIATED ORGANIZATIONS**

**Donna Clark of ATSSA** brought us up to date on the activities of the American Traffic Safety Services Association. Their stated purpose is “to advance roadway safety” and approach it from a number of fronts. Recently they worked with OSHA to develop a brochure for the safety of workers placing cones and other channelizers from the back of a moving truck. On the training side, over 300 have received Guardrail Installer Training, and the Level II GIT course is in preparation. Task Force 13 members have been assisting ATSSA in this effort through their review of the draft. The next meeting of the Guardrail Committee will be August 15, 2003. ATSSA’s next annual Traffic Expo will be in San Antonio, TX, from February 1 to 4, 2004. The National Work Zone Memorial has been exhibited at numerous sites throughout the country and was featured at the National Work Zone Awareness Week last April. ATSSA has also promoted increased funding for highway safety through 288 - The Roadway Safety and Congestion Mitigation Improvements Act.

**Gregg Fredrick** reported that the **AASHTO Subcommittee on Bridges and Structures** would be meeting June 1-5, 2003, in Albuquerque, NM. (see <http://nmshtd.state.nm.us/bridge/> ). They have also surveyed the states on the Sign and Luminaire support guide, and are looking at future research needs to address the states input.

The Task Force adjourned for the day at approximately 4:30 pm.

## EXECUTIVE BOARD MEETING Thursday Afternoon

Board members present were: **Pat Collins, John Durkos, John LaTurner, Mark Bloschock, Hossein Ghara, Will Longstreet, Bob Takach, Dick Albin, Art Dinitz, Gregg Fredrick, Barry Stephens, Ron Faller, Dean Alberson, Rick Mauer, Andy Artar, and Nick Artimovich.**

The Fall Meeting of the Task Force will be on September 22 and 23 at the Holiday Inn Chateau Lemoyne in New Orleans, LA, in conjunction with the AASHTO Task Force for Roadside Safety (which will meet until Sept. 26.) The room rate will be \$95 per night and a block of rooms has been reserved under "Task Force 13." As the site of future Fall meetings is properly driven by the AASHTO group, TF13 needs to develop sites for Spring meetings. The following sites were suggested and will be investigated: Reno, Nevada; Sarasota, Florida; and Chicago, Illinois. TFRS is considering Columbia, SC for the fall of 2004 and Toronto, Ontario, for Fall 2005.

**Collins** and **Durkos** want to meet with AASHTO leadership to discuss TF13 publications. **Dinitz** offered to arrange the meeting.

**LaTurner** had prepared various pages for a Task Force 13 website and **Artimovich** had offered the services of the FHWA web site as a host until AASHTO or the Joint Committee could take over. One of the constraints that FHWA is under is that all material that is to be posted on the agency's internet must be accessible to disabled users. This means that any Task Force material must be in a format that can be "read" by software that can translate the information into the spoken voice. Much of our material consists of drawings, which are housed efficiently in PDF files. PDF is not an "accessible" format. **Bullard** agreed to take **LaTurner's** pages and put them on the TTI website for review and comment by members.

There was further discussion of the Drainage Products Subcommittee, and **Bloschock** agreed to contact industry members he has been dealing with.

The need for a budget for the Task Force as a whole and for the individual subcommittees was discussed in order to petition AASHTO or any other source for funding. The problem statement prepared by **Faller** for his subcommittee's work could be followed by the other subcommittees. **LaTurner** suggested that we ought to research the dollar value of standardization and be able to show the cost/benefit to the nation's highway industry.

The Executive Board Meeting was adjourned. Task Force members enjoyed an evening tour at a local winery followed by dinner. Past Chair Arthur Dinitz was honored for his tireless efforts leading TF-13 over the last five years. If it weren't for the fact that Dinitz plans to continue attending meetings of the Task Force, the members would dearly miss him.

FRIDAY, MAY 2, 2003

**Update of Recent NCHRP Projects Related to Safety Hardware.**

**Chuck Niessner** described the various projects and their current status. Those of you viewing the electronic version of these minutes should be able to click on the project number below and be linked directly to the NCHRP page describing the project. Otherwise you may go to [www4.trb.org/trb/crp.nsf](http://www4.trb.org/trb/crp.nsf) and look for NCHRP.

Project #	Project Title
<a href="#">16-04</a>	Design Guidelines for Safe and Aesthetic Roadside Treatments in Urban Areas (Posted date: 8/21/02) (Pending)
<a href="#">17-10(2)</a>	Structural Supports for Highway Signs, Luminaires, and Traffic Signals (Active)
<a href="#">17-11</a>	Determination of Safe/Cost Effective Roadside Slopes and Associated Clear Distances (Active)
<a href="#">17-14</a>	Improved Guidelines for Median Safety (Active)
<a href="#">17-22</a>	Identification of Vehicular Impact Conditions Associated with Serious Ran-Off-Road Crashes (Active)
<a href="#">17-24</a>	Use of Event Data Recorder (EDR) Technology for Roadside Crash Data Analysis (Active)
<a href="#">22-09</a>	Improved Procedures for Cost-Effectiveness Analysis of Roadside Safety Features (Completed)
<a href="#">22-12</a>	Guidelines for the Selection, Installation, and Maintenance of Highway-Safety Features (Completed)
<a href="#">22-13</a>	Performance of Roadside Barriers (Completed)
<a href="#">22-13(2)</a>	Expansion and Analysis of In-Service Barrier Performance Data and Planning for Establishment of a Database (Completed)
<a href="#">22-14(02)</a>	Improved Procedures for Safety-Performance Evaluation of Roadside Features (Active)
<a href="#">22-15</a>	Improving the Compatibility of Vehicles and Roadside Safety Hardware (Active)
<a href="#">22-16</a>	Development of an Improved Roadside Barrier System (Completed)
<a href="#">22-17</a>	Recommended Guidelines for Curbs and Curb-Barrier Combinations (Active)
<a href="#">22-18</a>	Crashworthy Work-Zone Traffic Control Devices (Active)
<a href="#">22-19</a>	Aesthetic Concrete Barrier and Bridge Rail Designs (Active)
<a href="#">22-20</a>	Development of AASHTO LRFD Design Methodology and Load Transfer Mechanism for MSE Walls with Top-Mounted Traffic Barrier/Anchor Slab Under Vehicular Impact Load (Anticipated)

AASHTO is holding a Safety Leadership Forum to get commitment from state DOT CEOs for safety efforts. The guidelines for this push on safety are being published as NCRHP Report 500.

## FHWA ISSUES

**Harry W. Taylor** spoke on three issues of concern to the Federal Highway Administration. The first two were announcements of FHWA positions and the third was a request for comments.

1. Reports submitted to FHWA for acceptance were not meeting the requirements of NCHRP Report 350 and the 7/25/97 memo on FHWA acceptance procedures. Of particular concern was a lack of an accurate and precise description. Taylor warned that FHWA may begin to return inadequate/incomplete reports to the submitter to complete which means that the report when resubmitted would go to the end of queue.
2. TMA impact severity – FHWA is considering requiring that the value for the IS be the preferable of equal to or greater than the target value.
3. Draft policy on acceptance of patented products. - The draft policy stated two administrative approaches:

In the first case, FHWA's practice has been to generate letters of acceptance for products that have been crash tested and met the evaluation criteria in NCHRP Report 350. There have been recent situations where the tested product appears similar to previously accepted hardware that was tested for others. From now on FHWA will include a standard provision in our acceptance letters disclaiming any liability in the event of patent conflicts.

In the second case, FHWA has also been asked to accept devices that have not been crash tested, but are similar enough to tested products that FHWA believes the devices would also meet the crash test criteria. Where the device is truly a generic device, such as a wood breakaway sign post, there is no difficulty beyond specifying the species of wood and the size and location of holes, if any. Proprietary / patented products cause us additional difficulty as we are not in a position to rule on who has the right to own/market any particular device, nor to what extent we should become involved in the acceptance process, if at all.

The draft FHWA policy was distributed via email prior to the meeting and it is also being attached to this agenda. A concern expressed was that by allowing equivalence FHWA was allowing some vendors to "piggyback" on others crash testing. Some comments offered strongly favored FHWA requiring crash testing of all devices, even if "identical" to those made by others. Not only is it considered safer to verify that the "new" manufacturer's device is, indeed, identical, it is considered fairer to the "original" manufacturer who had to spend her/his money to have the tests run. Instead of a full series of crash tests some recommended an intermediate number of tests. It was asked if FHWA was going to review previously issued acceptance letters. **Taylor** said no unless it was an obvious oversight on FHWA's part. Taylor also requested that they send in their comments and recommendations to him, **Artimovich**, or **Richard Powers**.

Individual comments expressed at the meeting:

**LaTurner** expressed concern that FHWA is being asked to evaluate small details that might not be apparent to observers of the device or to reviewers of the drawings / specifications, but that might be critical to successful crash performance. **Stephens** strongly expressed similar concerns.

**Dinitz** noted that the situation involves a human making an engineering judgment on equivalency, whereas years ago we chose to follow the crash test route. He is of the opinion that all hardware should be crash tested, and that FHWA should include a clause that would hold it harmless against any claim resulting from the acceptance.

**Alberson** stated that it is sometimes difficult for a manufacturer to know if changes to his/her own crash-tested product will have an adverse affect on safety performance. It is hard to see how differences between products from competing manufacturers can be accurately evaluated.

**Leo Yodock** asked that our acceptance letters spell out whether the acceptance follows crash testing or if is based on an equivalency determination.

**Larry Leahy** believes this is not as much a patent issue as it is a question of newcomers getting the benefit of crash tests that were paid for by others in the industry.

**Dinitz** gave an example of where a good idea became popular and was quickly copied. The original formula for epoxies was very effective, but many copied the two-part adhesive idea with very mixed results. It is not always easy to prove that two products are equivalent until they have been put in use for some time.

**Durkos** noted that if something is so old that its patent has expired, then it isn't likely to have been crash tested under Report 350 criteria.

### **NEW / OLD BUSINESS**

**Collins** reported on the discussions regarding the location of future meetings that was detailed in the Exec Board minutes.

### **TECHNICAL PRESENTATIONS**

**Owen Denman, Barrier Systems, Inc.**, showed test and operating videos of the Safe-guard Link system, a temporary portable barrier designed for use in work zones, but having application in permanent situations also.

**Charlie McDevitt, FHWA**, presented test video on safer utility pole and guy installations. An energy absorbing fiberglass utility pole and two varieties of breakaway guy wire connections were shown.

**Dr. Gerald Ullman** reported on the updates that he is working on for the National Work Zone Safety Information Clearinghouse. TF13 members provided input on improving the user-friendliness of the site following Dr. Ullman's talk to us at a prior meeting. The clearinghouse staff has corrected some inconsistencies, others are hard-wired into the system and will take some time to correct. The clearinghouse may be accessed via <http://wzsafety.tamu.edu>



**Ron Faller, Midwest Roadside Safety Facility,** showed a crash test of a light pole mounted on top of a concrete barrier. Although the expectation was that the truck's cab would be redirected by the safety shape and the box would contact the pole, the truck's front axle was knocked out, and the truck's front end rode up on top of the barrier. The vehicle struck the pole with its bumper. The pole sheared off and landed close to its origin. The test was quite interesting, though more so because of the unexpected performance of the truck. Representatives of other test houses noted that they have noticed different performance of the various models in that truck manufacturers line.

**John Durkos, Road Systems, Inc.,** showed the results of crash testing of a cable – to – w-beam barrier transition. The test resulted after a contractor had ignored project plans to transition from cable, past a generic w-beam terminal, thence to a bridgerail. The contractor substituted an RSI “FLEAT” device. The State asked for assurance that this installation would meet Report 350, hence the test. The test documentation will be submitted to FHWA in the near future.

**Hossein Ghara, Louisiana Department of Transportation and Development,** gave a presentation on high performance concrete used in bridges. The Department is able to save money by using HPC because a row of girders can be eliminated.

At the conclusion of the Technical Presentations a caravan of vehicles proceeded to the TTI crash test site where we witnessed a 20 degree, 100 kmh test of a 2000P vehicle into a thrie-beam to Jersey-shaped concrete bridge parapet transition.

**The Task Force wishes to express its sincere thanks to Roger Bligh and his TTI team for preparing an excellent venue for our meeting.**

## **Task Force 13 Executive Board**

All individuals on the Task Force 13 roster / mailing list are considered members of the Task Force. For purposes of reporting to the AASHTO/AGC/ARTBA Joint Committee Subcommittee on New Materials and Technologies, the following members of the Task Force 13 Executive Board are listed:

Co-Chair Patrick Collins, Wyoming DoT	307-777-4484
Co-Chair John Durkos, Road Systems, Inc.	330-346-0721
Secretary, Nick Artimovich, FHWA	202-366-1331
Chairman Emeritus, Arthur Dinitz, Transpo Industries, Inc.	914-636-1000

Co-Chairs, Special Subcommittee on Marketing	
Andy Artar, Gregory Highway Products	330-477-4800
Mark Bloschock, TX DoT	512-416-2178

Chair, Special Subcommittee on New Standardization Areas	
Clarence Mabin, Custom Engineering, Inc.	816-350-1473

Co-Chairs, Subcommittee # 1 Publications:	
Nancy Berry, Virginia DOT	804-786-2543
Matt Leahy, Xcessories Squared	217-438-3535

Co-Chairs, Subcommittee # 2 Barrier Hardware:	
Will Longstreet, Penn. DOT	717-783-7476
Bob Takach of Trinity Industries	330-545-4373

Co-Chairs, Subcommittee # 3 Bridge Railing and Transition Hardware:	
Mark Bloschock, TX DoT	512-416-2178
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Co-Chairs, Subcommittee # 5 Sign and Luminaire Support Hardware:	
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Mike Stenko, Transpo	914-636-1000

Co-Chairs, Subcommittee # 6 Work Zone Hardware:	
Hossein Ghara, Louisiana DOTD	225-379-1302
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Co-Chairs, Subcommittee # 7 Certification of Test Facilities:	
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Co-Chairs, Subcommittee # 8 Rail Highway Crossing Hardware,	
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