



**Wednesday, Thursday and Friday ○ April 27<sup>th</sup> – 29<sup>th</sup> 2022 ○ Lincoln, NE**

**Task Force 13 and Midwest Pooled Fund Program - Joint Meeting & Discussion**

**WEDNESDAY April 27<sup>th</sup>, 2022 – 7:00 pm to 9:30 pm**

**Moderator – Dr. Ron Faller, MwRSF**

- 6:45 pm – 7:00 pm** Arrival w/ Refreshments & Snacks:  
UNL City Campus Union – Platte River Room  
1400 R St, Lincoln, NE. 68588
- 7:00 pm – 7:20 pm** Welcome & Introductions - Sign-in Sheet or through QR Code w/ Survey Monkey
- 20 mins**                    **Connecticut DOT, Development of GIS Guardrail Inventory Data**  
Presenter – David Kilpatrick, Connecticut DOT
- Walk through of Connecticut’s Data Collection and Asset Inventory
  - Crash Test Repository Review
  - Accident Damage Assessment
  - Development of Roadside Safety Barrier Planning APP
    - Creates a listing of products needed to order based on input from user
    - Future, possibly populate from QPL to include parts diagrams
- 25 mins**                    **Discussion regarding state DOT and the QPL Process**  
Presenters - John Durkos, Road Systems & Karla Lechtenberg, MwRSF
- Universal State QPL/APL – Durkos
    - Overview presented of the ATSSA activities to date.
    - Showed an example of the two-page form developed through ATSSA
    - ATSSA mailing on April 21<sup>st</sup>, 2022 to 50 states
  - MwRSF Pooled Fund MASH Clearing House – Lechtenberg
    - For hardware developed by the fund.
    - Access to clearing house still being determined.
    - During search, there will be links to various reports, letters, data, etc.
    - Spirited discussion concerning adoption and who/how to host a national database of information and how to fund?
      - “Voices” from online participants
      - Workzone Clearing House discussion and its inception
      - Multiple websites with duplicate information exist



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**25 mins**

**Update of Status of NCHRP Project 22-40 (AASHTO M180)**

Panel Member Presenter – Greg Neece, Trinity Highway

Presentation courtesy of Chuck Plaxico of RoadSafe and authorized by

Christopher McKenney of NCHRP / NAS / TRB

- **Changes that may be of interest to users but have limited impact to the use of the standard**
  - Switched from metric to U.S. customary units as the standard measurement units.
  - Added discussion of roll forming vs press forming for sheet steel components (Section 7.1).
  - Added a disclaimer that mating fasteners shall be coated by the same zinc coating process with no mixed processes in a lot (Section 9.2.1)
  - Added discussion of prevention and repair of wet storage stain (i.e., white rust) (Sections 9.1.1.4 and 9.3.1).
  - Added a note discussing that Type IV sheet steel components and weathering steel hardware can become fused, leading to difficulty in repairing short sections of guardrail (Section 9.1.3).
  - Combining metric and U.S. customary fastener drawings into a single figure (Figure 1).
  - Changed the title of the standard.
- **Changes that may impact the use of this standard**
  - Inclusion of additional sheet steel components i.e., w-beam terminal connector, thrie beam terminal connector and asymmetrical transition
  - Inclusion of additional fasteners (i.e., high-strength bolts, plain round washers, hardened washers) and separation of the bolts and nuts into their own distinct sections.
  - Inclusion of steel guardrail posts.
  - Inclusion of **anchor** wire rope and swage fittings.
  - Reference to A568 Table 4 has been added to Section 3.2 for base metal tolerance (thickness).
  - Include specification for manufacture and marking of curved guardrail beam.
  - Revised section 8.1 to increase the minimum allowable % elongation of the base metal used to construct sheet steel components from 12% to 16%.
  - Disallowing the “one grade less” clause from AASHTO M 111 (ASTM A123)
  - Revised Section 9.5 to reference Specification ASTM A780/A780M replacement of Federal Specification TT-P-641 and DOD-P-21035.
  - Revised traceability marking requirements for guardrail beam to separately identify heat number and coating lot, with marking for coating lot being optional.
  - Dimensioning details for standard post bolt and splice bolt slots have been added to Figures 2 and 3.
- Several follow up questions – primarily on the implementation timeframe



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**35 mins**

**Cable Barrier Supply Chain Discussion**

Presenters – Ron Faulkenberry, Gibraltar Global & Jim Hoenin, Bekaert Corp

Participants – Shane Fansler, Guardian Cbl Systems & Richard Butler, Brifen

- Ron took us through the history of the current issue, which is result of supply chain, employee shortages, COVID-19, mill outages – both planned and unplanned, demand for RV/Autos/Appliances, as well as additional use of raw products related to IJJC, etc
- Lead-times have gone from ~6 weeks to 20-30 weeks. Pricing of the raw steel utilized in cable has increased 300+%.
- Ron told us of the results of seeking a Buy America waiver and the recent clarification letter issued in last couple of weeks in regards to Buy America requirements. The guidance will not solve the current issues.
- How do you eat an elephant? One bite at a time.
- Jim provided a virtual presentation which documents shortages are a result of many factors – Tariffs, Unplanned Mill Outages, Planned Mill, Outages, COVID, Russia/Ukraine and Build Back Better.
- Production run rates for Wire Rod (worldwide) are today still at 80% of the pre-Covid output. Less for Buy America mills.
- Prediction for the next 2 years ...
  - Impact of environmental pressures on mills in the USA – “Buy America”
  - Consolidation of still mills
  - Continued evolution of trade barriers and timing.
  - RPOF/IJJC materials also require Buy America cable/wire and currently requires a large portion of the available production.
  - Richard indicates that their company has made strategic purchases over the past few years, locking in tonnage per month at an agreed upon index price.
  - Shane indicates that even with “Allocated “steel restrictions they were able to ship monthly.
  - Beginning in April 2022, Guardian’s steel restrictions are being lifted and they will be back to full capacity and shipping.
  - Due to this reason, as well capital expenditures in process currently – 2022 shipments will reach 300% over 2021 for Guardian Cable. They are expecting 2023 to be 25% shipments over 2022 output.



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**25 mins**

**Update to Scoping MASH to a performance specification**

Presenters - Erik Emerson, WisDOT & Jim McDonald, AASHTO

- Jim led off providing a history and reasoning for the desire to go to a performance specification. Then proceeded into the desired outcomes and benefits.
- Progress ...
  - Study reviewed by various AASHTO committees last summer
  - Held two webinars with states and industry in June 2021
- Resolves ...
  - Develop a work plan to look into the issues and concerns
  - Work with public and private sector partners to define implementation roles and responsibilities and encourage a long-standing commitment.
- Next Steps ...
  - Funding for project has been identified and approved
  - Proposal to establish a technical service program for the state DOTs to provide MASH implementation and technical expertise. (May 2022) This would be voluntarily funded by the State DOTs, if they see value.
  - AASHTO is in discussions with TTI to have them continue the work they did from the development of the Scoping Study to the conversion of the MASH document.
- Erik Expectations:
  - Just because MASH changes does not mean MASH implementation changes!
  - Agencies want flexibilities
  - AASHTO wants simplification
    - Tables and text in MASH – sometimes don't agree
    - Different types of soils used by different labs
    - Pick a word to use and stick to it throughout the document.
    - Make it easier to maintain.
    - Standardize the measurement and display of the information in the test reports.
    - May need more hardware categories.
    - If there is no test matrix, can something be MASH complaint?
    - Devices that perhaps should be retired – Break-a-away utility poles, sloped ends.

Meeting wrapped up at 9:35pm ...

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Thursday, April 28<sup>th</sup>, 2022

Venue - Embassy Suites, Lincoln, NE

## MEETING NOTES

- **8:00 a.m. Meeting Began**
  - Short history/discussion of TF13
  - Short recap of previous evening's joint session
  - Recap of agenda for next two days
  - Begin Task Force 13 Meeting – Introductions
- **8:35 a.m. TF13 Business items** Durkos  
Neece  
Smith
  - Approval of 10-2020, 04-2021 & 09-2021 minutes
  - Treasurer's Report
- **8:40 a.m. Contract for Website Services** Lohrey
  - Subcommittee #1 Publications Maintenance**
    - [www.tf13.org](http://www.tf13.org) is the main website
    - Review of website activities and how to navigate it
    - 8 systems added since the Fall 2021 meeting, with FHWA letters
    - 1 terminal (BIB) added ... no FHWA letter
    - 1 sign support ...
    - 1 Transition, Weak Post to Strong Post ... no FHWA letter
    - 3 WZ Products, all with FHWA letters
    - Majority of FHWA letters are for proprietary letters, non-proprietary trending towards state certifications.
    - MASH "Compliance" is no longer exclusively determined by the FHWA.
    - What should the criteria for including systems/products in the TF13 Guide be?
      - Discussion on various aspects / options. Such as:
        - Systems deemed MASH-compliant by a single DOT?
        - By Multiple DOTs? How Many?
        - Is there formal process used by Pooled-Fund groups to designate systems as MASH compliant?
        - Widespread Use? e.g. Buried-in-Backslope (BIB) Terminal
        - Allow Simulation/Engineering without Crash Testing?
    - How to define new systems vs variations of existing systems?
      - Discussion on various aspects / options. Such as:
        - MGS with Omitted Post
        - MGS with various curbs & curb locations
        - Common Barriers on Various Slopes
        - Stiffened GR Sections. Are they 3 separate Systems: A, B, and transition between them?
        - Assign unique designator to each variation?

9:58 a.m. BREAK



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**Subcommittee Meetings - Discuss Goals, Tasks & Assignments**

- **10:20 a.m. Subcommittee - Session A**
  - **#2 - Barrier Hardware Review Groups** Pyde/Eicher  
New co-chairs for this meeting, goals are to reset the SC  
Conduct gap analysis/review and take care of the low hanging fruit, asap.  
Working with Lohry to identify the inconsistency with current designators, such as “Thrie” or “Independent” to describe Crash Cushions.  
Likely need to update the categories to reflect gating / non-gating / redirective terminology to be in line with AASHTO RDG.  
Don / George is asking for each of the manufacturers review the website, in next 30-60 days, for needed corrections – photos, drawings, availability, new products, contact information, etc.
- **10:40 a.m. Subcommittee - Session B & C (30 minutes each)**
  - **#3 - Bridge Railing & Transition Hardware** Ghioldi  
Background of committee and current status  
135 systems in the guide currently, 25 are MASH.  
Decision made to not include the weight per LF for Bridge Railing systems, going forward. It appears largely unused by persons searching the guide and the information is not reported in the test reports – thus the sub-committee has to do extensive calculations for approvals for bridge railing, with no apparent benefit.
  - **#11 - Delineation** Hare  
Review of previous sub-committee meeting notes.  
Discussion on purpose of the committee – going forward. Previous sessions were primarily focused on the “managed lane delineation products”.  
NTPEP is considered the gate keeper of the testing criteria.  
Desire to possibly list the products on the TF13 website which have conducted performance testing.  
Look at possibility of discussion or expanding into (taller) barrier mounted delineation, due to possibility of safety issues – when impacted.
- **11:30 a.m. LUNCH**



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- 1:00 p.m. Subcommittee - **Session D**
  - #7 - **Certification of Test Facilities (Virtual & In-Person)** Lechtenberg

Lab Attendees: Jim Kovar (TTI), Allen Beavers (SwRI), Karla Lechtenberg (MwRSF), Mat Parisi / Ben Metzger (Calspan), Mat McNeil (Holmes Solutions), Tim Mortenson (E-Tech), Eliseo Campos Hernandez (Safe Technologies), Chris Story (FOIL), Bob Meline / David Whitesel (CalTRANS)

Lance Bullard has announced he is stepping down as co-chair – Thanks Lance for many years of service.

Nomination of Jim Kovar as co-chair of this sub-committee

ILC:

Satisfy proficiency testing requirement of laboratory accreditation

Must have 5 year plan and Labs determine schedule

Choose an area of interest to conduct a comparison task that all interested labs can participate in

On the 5 year ILC schedule, it was agreed to flop the scheduled ILC for 22-23 with the scheduled ILC for 21-22, **see below** for details

Interlaboratory Comparison Task	Time Period	Lead Organization
Lab interpretation of test results and evidence according to MASH evaluation criteria	2021-2022	MwRSF
Impact Speed, Impact Angle, Exit Speed, Exit Angle, Loss of Contact, WW, Parallel Time, Film Speed, Etc.	2022-2023	Safe Technologies, Inc. (STI)
Documentation of ballasting locations and their weights	2023-2024	E-Tech Testing Services, Inc. (E-TECH)
Uncertainty in Measurement	2024-2025	Caltrans
OIV, ORD, THIV, PHD, ASI, Roll, Pitch, Yaw	2025-2026	TTI
How impact speed is calculated	2026-2027	Turner-Fairbank Highway Research Center (FOIL)
SUT box attachment, ballasting, length of truck, etc. Is hydraulic lifting kit OK?	2027-2028	Southwest Research
CIP selection of given barrier system and selection of angle for test with a range (potentially CIP for 3-34/36/37 & angle for 3-32/3-33)	2028-2029	TBD



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Labs shared their recent audit experiences  
1100C questions from Holmes Solutions and availability  
Calspan agreed to become involved in the process  
Standardization of Reports – such as Test summary sheets; Critical test parameters; IS, OIV, ORA, Roll, Yaw; Evaluation criteria; Limits/boundary values; Key elements table; Test article damage summary; Soil strength evaluation; Exit box; ASI  
Standardization of Test Videos – such as Orientation, Scale, Duration of Event  
Observation: Date on Summary Sheet / Table is not easily readable by text scanners

- **2:05 p.m. Subcommittees Sessions E & F (30 minutes each)**
  - **#5 - Sign, Luminaire & Traffic Signal Support Hardware** Lohrey/Jollo  
Until the various NCHRP projects (03-119, 22-43, 22-55, 15-67) are finalized providing guidance, exact testing matrix are difficult to define.  
One new sign support FHWA letter issued.
  - **#6 - Work Zone Hardware** Shewmaker/Perry  
41 WZ products in the guide, 4 of which was added in 2021.  
9 FHWA letters issued for WZ during 2021 and to date in 2022.

**American Traffic Safety Services Association (“ATSSA”)** Perry  
ITS Updates  
  04/14 Fuel cost and inflation letter to DOTs  
  04/18 ATSSA Materials Shortage Survey  
  04/21 ATSSA Letter QPL / APL Standardized Form  
Legislative Briefing and Fly in June 13-14, 2022  
MidYear Meeting in Providence, RI August 23-26, 2022  
Traffic Control Device Student Challenge  
W-Beam Guardrail Identification & Repair Guidelines, 2022 Edition – available online.  
Printed copies were available for attendees.

- **3:25 p.m. Update from the *Midwest Pooled Fund Program Meeting*** Bielenberg
  - Overview and priority of funded projects in 2022 program  
Guidelines for Flaring Thrie-Beam Approach Guardrail Transitions – Phase 4, 15:1 flare – two tests, both failed. Solution might be flare at 20:1?  
Modification / Evaluation of MGS Long Span with Increased (31.25ft) Span Length – mixed results to date  
Generic End Terminal Design – Development and Evaluation ... tangent energy-absorbing TL3 design. Head design almost finalized.  
Co-Ordinate / Collaborate with Vehicle Manufacturers – Electric Vehicles and changes to mass, CG, Fleet Updates, etc.  
Continued Revisions to MwRSF Pooled Fund Q/A Website – Funding to update responses as more is learned over the last 20 years.  
FY2023 Research Program





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End Terminals Adjacent to Curbs

Phase 1 LS-Dyna simulation

Only 50ft compression tangent terminals were modeled

Modeling for 3-30, 3-31, 3-32, 3-33 - NCHRP 350, as well as MASH

2", 4", 6" sloped and vertical curb

Minimal effect on MASH 3-31 - 4" & 6" affects the yaw in 3-30 and 3-32

Full scale testing with 4" or shorter sloped curbs recommended

Phase 2 MASH crash testing of curb

Installation issues, due to the forward parts being buried

RSI has agreed to collaborate with project – 3" height adjustment

Rail face flush with 4" C-Type curb.

Tests to be run in May 2022 – with two wheels ramped up in the advance of the 4" curb and 2 wheels essentially "at grade".

• **3:55 p.m. Update Subcommittee #9 - Marketing**

Mauer/Perry

Newsletter topics to be investigated for Fall addition:

TF13/AASHTO 5-year Memorandum of Understanding ("MOU")

Number of 1<sup>st</sup> time attendees at this meeting and total number, including virtual

Provide historical perspective of TF13 meetings (since 1969, 2 per year)

Fee based podcasting of future meetings

Announce the leadership changes of several TF13 sub-committees

#2-Barrier Hardware: George Eicher & Don Pyde

#3-Bridge Railing – the addition of Tony Ghiodi

#7-Test Facilities – the addition of Jim Kovar

Retired associates: Greg Schertz, John Reid

Dates of future 2022 industry meetings, such as ATSSA, AKD20 & Fall TF13.

• **4:10 p.m. Adjournment for Day 1**



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- **4:15 p.m. Task Force 13 Executive Meeting (Began at 4:15, concluded at 5:15pm):**  
Present at meeting was P.L.S. (collectively known as “The Eric Triad”), Don, Greg, Rick, Mike, Tony, Greg, John & Karla
  - Possibility of broadcasting the meeting virtually and charging. Everyone in agreement.
  - Updating the website – significant accomplishments in last year
    - More work needed:  
Guides use PHP software which is no longer supported and we are on the earliest version of the unsupported software.  
Find or reengage a person/company to convert the database.
  - Sunsetting SCs (#4, #8, #10) to be removed from active subcommittees section accessed from Home page and placed in archived section and ensure the historical information goes into the archives. New archive icon to be added to Home page.
    - Possibility of reaching out to the computer simulation community to see if there is value to reviving #10 – withOUT accreditation.
  - Tony Ghioldi has volunteered to become co-chair of SC#3 with Kurt. Voted and passed.
  - Jim Kovar has volunteered to become co-chair of SC#7 with Karla. Voted and passed.
  - Perry possibly leaving SC#6. Eric to discuss with Shew about possible nominations.
  - Discussion took place about a method to engage more DOTs with TF13.



## TASK FORCE 13

[www.TF13.org](http://www.TF13.org)

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**Friday, April 29<sup>th</sup>, 2022**

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- **8:00 a.m. Begin Task Force Meeting – Day 2**
  - In addition to the in person attendees, there was 23 attendees that joined us virtually.
- **8:00 a.m. Affiliated Committee/Activity Reports**
  - **Update on status of Task Force 13 Membership and Structure** Durkos  
John provided an update to the TF13 organization structure and history  
Renewed MOU with AASHTO announced
  
  - **TRB Committee AKD20 Roadside Safety (20m)** Donahue  
Currently 23 members and 640 friends of AKD20 committee  
Several subcommittees
    - (1) Computational Mechanics
    - (2) International Research Activities
    - (3) In Service Performance EvaluationAKD20 Activities
    - 101<sup>st</sup> Meeting held in January 2022
      - 21 papers reviewed
      - Various workshops
      - Young professionals gathering
      - 3 subcommittees met
      - 17 papers presented
      - Stonex Award posthumously presented to H. Clay Gabler
    - Mid Year 2021 Meeting  
Held virtually in July 2021, over 4 days  
Prioritized 48 proposals for consideration by TCRS  
3 of the 5 proposals submitted, were funded
    - Mid Year 2022 Meeting with AASHTO COD/TCRS and others  
August 7<sup>th</sup>, 2022 (Sunday) to August 10<sup>th</sup> (Wednesday) in KCS
    - IRSC, scheduled for 2024 – contact Dick Albin should you desire to assist in the planning
    - While Nick Artimovich was online he left us with a comment about his previous secretary role with TF13, in regards to his detailed and long meeting minutes. A quote from Mark Twain ... “If I had more time, I would have written a shorter letter.”
  
  - **AASHTO Technical Committee on Roadside Safety Activities** Durkos  
Information provided by Erik Emerson, AASHTO-TCRS, Vice-Chair
    - Rewriting the RDG.
    - Getting ready to work on rewriting MASH.
    - Getting ready for summer meeting.



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**Update of ongoing research projects related to Roadside Safety and/or Safety Hardware**

**The remainder of the meeting was offered both virtually and in person.**

**• 9:00 a.m. NCHRP projects update**

Durkos

From information provided by David Jared Senior Program Officer – NAS

Seven Senior Program Officers manage multiple NCHRP projects related to roadside safety hardware

Jared has published/posted 20 reports pertinent to TF13 activities since March 2020, with ... 6 pending publications and 4 pending approval to be published

Jared liaising with AASHTO-TCRS/TRB AKD20 (Roadside Safety) Joint Technical Committee

Four categories of NCHRP research most pertinent to TF13 activities

15-: General Design

17-: Safety

20-: Special (-07, AASHTO Standing Comm. on Highways)

22-: Vehicle Barrier Systems

Reports pertinent to TF13 in these categories have been published in the last six months

- 17-45, 17-50, 17-58, and 22-27 are published (web only documents)

Completed, publication pending:

- 15-53: Roadside Barrier Designs Near Bridge Ends with Restricted Rights of Way [McKenney]
- 17-54: Consideration of Roadside Features in the *HSM*
- 17-79: Safety Effects of Raising Speed Limits to 75 mph and Higher
- 22-12(03): Recommended Guidelines for the Selection of TL-2 through TL-5 Bridge Rails
- 22-20(02): Design Guidelines for TL-3 through TL-5 Roadside Barrier Systems Placed on MSE Retaining Walls
- 22-26: Serious/Fatal Motorcycle Crashes with Barriers

Completed:

- 17- 43: Long-Term Roadside Crash Data Collection Program
- 17-82: Proposed Guidance for Fixed Objects in the *RDG*
- 22-33: Multi-State ISPEs of Roadside Safety Hardware
- 22-34: Determination of Zone of Intrusion Envelopes under MASH Impact Conditions for Barrier Attachments [Crichton-Sumners]

Active:

- 17-11(03): Development of Clear Recovery Area Guidelines
- 17-71A: Highway Safety Manual, 2<sup>nd</sup> Ed. (HSM2) [Retting]
- 20-07(383): Review and update of the AASHTO RDG [on hold]
- 22-29B: Perf. of Long. Barriers on Curved, Superelevated Off-Ramps [Barcen]
- 22-35: Evaluation of Bridge Rail Systems to Confirm MASH Compliance [Abu-Hawash]
- 22-37: Dev. of MASH Barrier to Shield Peds, Bicyclists, et al. from Vehicles [Hartell]



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- 22-38: TL-3 Deflection Reduction Guidelines for 31-in. Guardrail
- 22-39: Guardrail Perf. at Various Offsets from Curb MASH TL-3 Applications
- 22-40: Update to AASHTO M 180-18 and Associated Guardrail Specs [McKenney]
- 22-43: Proposed AASHTO Guidelines for Implem. of MASH for Sign Supports, Breakaway Poles, and WZTC Devices [Abu-Hawash]
- 22-44: Transp. Agency Data Coll. Practice for Use w/ISPEs [Barcena]

Pending:

- 15-79: Guidelines for Non-Std. Roadside Hardware Installations
- 22-32A: Methods to Evaluate Side Impacts for Next Ed. MASH
- 22-50: Crashworthiness of Roadside Hardw. on Curbed Roadways
- 22-51: Evaluating MASH 2016 Soil Specs. and Procedures [McKenney]
- 22-54: MASH Hardware Eval. w/New Proposed Test Vehicles
- 22-55: Implementation of MASH Surrogate Test Vehicles for Sign Supports, Breakaway Poles, and WZTC Devices [Abu-Hawash]

Other information:

- NCHRP FY23 program pending
  - AASHTO Research & Innovation (R&I) committee met April 14-15 to prepare NCHRP FY23 program
  - Program approval by AASHTO Board of Directors pending
- NCHRP FY23 projects TBA this summer

- **9:30 a.m. Texas A&M Transportation Institute** Kovar  
 Thrie Beam System at Fixed Object
  - Two options – quarter post and half post spacing simulated
  - Utilizes both Wx15# and 8.5# posts
  - After discussion, a decision was made to create a 6' 3" post gap at the fixed object (bridge pier), with rail located 24" in front of pier to allow for foundations.
  - MASH 3-10 and 3-11 conducted with quarter post spacing and it was successful

MASH TL4 Concrete Median Barrier with Fence Mounted on Top

- 3-11 and 4-12 tests ran, 4-12 was unsuccessful

Review and Investigation of W-Beam Guardrail with Curbs

- Review of literature, state survey, etc to learn of the current state of practice.
- 62% of respondents indicated guidance was needed on high speed roadways
- 77% of respondents indicated guidance was needed on low speed roadways

- **9:45 a.m. CCSA/George Mason University** Tahan  
 Computer Simulation and validation of Stone Face Wall Barriers
  - Developed the model and then validated at FOIL with 3-10 & 3-11
  - Height evaluations for 2270P, the heights below 29" would result in a failure
  - Built a stoned face barrier wall and ran 3-30 and 3-31 – both successful

- **10:10 a.m. BREAKdancing**



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- **10:25 a.m. Recent research MASH TrafficBarrier & BridgeRail w/Soundwall** Rasmussen/Ayton  
Objective to design an integrated traffic and noise barrier that meets TL3 & TL4  
Tested at Safe Roads Research and Development Test Facility @ 1hr North of Toronto  
Both ground Mounted and Structure Mounted options  
Designed for Restricted Roadway conditions  
Conducted FEA to optimize size and location of system and select CIP(s)  
Conducted MASH TL4 structure mounted crash test 4-10, 4-11, 4-12 – all successful.  
Durisol Acrylite® Soundstop MASH TL-4 Noise Barrier (FHWA B-352, Dec 14/20 and TF-13 SGR71a)  
Durisol Aluminum MASH TL-4 System (Submitted to FHWA)  
Conducted MASH testing of a ground mounted (W10x33# posts in concrete footings at 15ft spacing) noise barrier added to existing TL3 crash tested single slope traffic barrier  
crash test 3-10, 3-11, 4-12 – all successful  
MASH TL-3 Crash-Tested Noise Barrier (FHWA B-357, May 9/21 and TF-13 SGR72a)  
MASH TL-4 Crash-Tested Noise Barrier (Submitted to FHWA)
  
- **10:45 a.m Midwest Roadside Safety Facility** Rosenbaugh  
MGS (12” block) adjacent to a 2:1 Slope – Wisconsin DOT was sponsor
  - Ran MASH 3-10 and 3-11. Options to reduce dynamic deflections, by utilizing different length posts.
  - Question was asked about use of 8” blocks. Answered: They see no concerns.  
TL-4 Open Concrete Rail (39” height)
  - KS, IA, SD, VA, NE DOTs sponsored the research
  - MASH 4-10, 4-11, and 4-12 tests were ran and were successful  
Hawaii 34” Aesthetic Concrete Bridge Wall with Pedestrian Rail Tube
    - 3-10 and 3-11 test were ran and were successful. Aloha Hawaii.
  - Hawaii 34” Aesthetic Concrete Bridge Wall w/o elevated sidewalk w/ Ped Rail Tube
    - 3-11 test was ran and successful
    - Conclusion – the railing with or without the elevated sidewalk is acceptable
  
- **11:15 a.m. New/Old Business** Durkos
  - Location/Dates of Various 2022 Industry Meetings.
    - August 7-10, AKD20 joint meeting with AASHTO TCRS/COD in KC
    - August 23-26 ATSSA in Providence, RI
    - Fall TF13 Meeting, not yet planned
  - Executive Committee Summary was given. See page #10.
  - Review of Task Force 13 “To Do List”, generated from meeting
    - Tentatively book hotel for the 3<sup>rd</sup> week of April 2023 in Lincoln
    - Confirm TTI Pooled Fund projected dates in September / October 2022
    - Collect various industry dates for various meetings and publish on website
    - Obtain a listing of attendees needing PDH certificates and issue
    - Karla to provide person/company who converted MwRSF database
    - Add TF13 History/Timeline to the website
    - Revise TF13 web site Home Page with archive icon
  
- **11:25 a.m. Adjournment**