



## LRRB Spring Strategy Meeting

March 18, 2015  
University of Minnesota  
Saint Anthony Falls Laboratory (SAFL)  
(<http://www.safl.umn.edu/>)  
Conference Room 217

# MINUTES (draft)

### **LRRB Members Present:**

Bruce Hasbargen (Chair), Beltrami County  
Mitch Rasmussen, MnDOT - State Aid  
Lyndon Robjent, Carver County  
Tim Stahl, Jackson County  
Steve Koehler, City of New Ulm  
Kaye Bieniek, Olmsted County  
Paul Oehme, City of Chanhassen (new)  
Tom Ravn, MnDOT - Construction Office  
Linda Taylor, MnDOT - Research Services  
Laurie McGinnis, U of M - CTS

### **Others Present:**

Debbie Sinclair, MnDOT - Research Services  
Hafiz Munir, MnDOT - Research Services  
Nick Busse, MnDOT - Research Services  
Dan Sullivan, MnDOT – Research Services  
Chris Kufner, MnDOT - Materials Office  
Brenda Thomas, U of M – CTS  
Mindy Carlson, U of M – CTS

## I. Call To Order

The meeting was called to order by Bruce Hasbargen. The agenda was approved by the Chair with no additional topics from the Board. Mitch Rasmussen replaced Julie Skallman as State Aid Engineer and LRRB member in December. Paul Oehme, City of Chanhassen, replaced John Powell. Brenda Thomas talked about the SAFL tour and encouraged Board members to attend as they would be highlighting LRRB projects.

***The minutes of the December 3-4, 2014, LRRB meeting were approved.***

***Motion: Steve Koehler, second by Bruce Hasbargen. Motion passed.***

The LRRB Roster was discussed noting the first terms for Lyndon Robjent and Tim Stahl would be expiring December 2015, Bruce Hasbargen's term as chair will also expire in December 2015 and Tom Ravn's appointment date required correction to 12-13-2013.

The RIC Roster was discussed noting that the first terms for Klayton Eckles, Dave Robley and Jeff Hulsether would be expiring December 2015. Guy Kohlhofer, with Dodge County, replaced Mitch Rasmussen.

**Action Item No. 1: Tom Ravn's appointment date will be updated to 12-23-13 on the LRRB Roster and the RIC Roster will be corrected to show Guy Kohlhofer is from Dodge County.**

**Pending Action Items from previous meetings not otherwise on agenda - Linda Taylor.**

**December Action Item No. 4:** Use the CTS Research Needs Focus Group contract to have CTS re-write LRRB Research Need Statement NS 395 on the topic of the *“Freight Overflow Impacts on the Local Road System,”* with input from Lyndon Robjent and Mitch Rasmussen.

This Item will be prepared for the Summer meeting in June.

**December Action Item No. 5:** Add John Powell to the TAP for the project *“The Transportation Futures Project: Planning for Technology Change.”*

John Powell resigned his position on the LRRB, so this project is currently looking for a member to replace him. This item was addressed on the agenda.

**December Action Item No. 6:** Joel Ullring and Guy Kohlhofer will develop the scope of work for an RIC consultant proposal to meet the need for base stabilization information as set forth in NS 400 and bring the proposal back to LRRB for funding consideration.

Guy was at the RIC meeting, but Joel was not. The base stabilization proposal (NS 400) needs to be brought to the Summer meeting.

**December Action Item No. 7:** Linda Taylor will contact Iowa DOT regarding co-funding for the Brian Brashaw proposal on NS 379 *“Cost-competitive Timber Bridge Designs for Long Term Performance”* especially for FY2017 tasks.

Linda has a funding request in to Iowa’s DOT, but their committee has not met. (**Staff note:** *Iowa’s DOT approved 50% of the funding and asked to have some Iowa bridges included. The project’s scope will be revised accordingly.*) Linda will provide an update at the Summer meeting.

**December Action Item No. 8:** Re-scope the proposal on Alternatives to Seal Coats (NS 397) as a TRS project leading to updating the Seal Coat Manual.

The Alternatives Seal Coats TRS project is currently in-progress.

II. Budget and Administration

Debbie Sinclair reviewed the current budget summary spreadsheets:

**Budget Status Report**

- INV 897 Developing Salt Tolerant Sod Mixtures – completed
- INV 910 Partially Grouted Riprap Lab Flume Study - amended to end 04/30/2015
- INV 930 Development and Integration of Advanced Timber Bridge Inspection Techniques for NBIS - completed (final invoice received Monday)
- INV 958 Rumble Strip Noise Evaluation – complete, pending Audit
- INV 959 TRS Chloride Free Snow and Ice Control Material -- completed
- Work plans are coming in for projects approved at December meeting
- Apportionment for FY16 is \$3,494,213 which is an increase of \$221,887 over FY15 amount.
- Currently funds available for FY16 are \$650,401. Available balance in FY15 is \$520,315; this will roll forward to FY16.

### **INV 999 Status Update**

LRRB Administrative Account, INV 999, has \$84,721 remaining. This doesn't include costs for the June meeting. An invoice for editorial publishing was just processed and is not included in the summary.

### **2015 LRRB Meetings**

An updated meeting list was provided. Note the Summer meeting in June is taking place at Anderson's Horseshoe Bay Lodge in Walker on June 17-18.

### **Amendment Review**

The amendment report covers October 2014 through March 2015. There was a total of 11 amendments, of which eight were time extensions.

### **Upcoming Conferences and Out-of-State Travels**

A handout of 2015 Conferences was provided in the meeting materials.

- 11th International Conference on Low Volume Roads in Pittsburgh, PA; July 12 - 15, 2015  
10 LRRB members/4 non-LRRB members

Bruce Hasbargen enjoyed this conference the last time he attended.

Kaye Bieniek, Ben Worel, Joel Ulring and Hafiz Munir plan to attend. Bruce Hasbargen and Tom Ravn can no longer attend. Chris Kufner requested that Bernard Izevbekhai attend.

#### **Action Item No. 2: MnDOT Research Services (RS) will remove Bruce Hasbargen and Tom Ravn and add Bernard Izevbekhai to the 11th International Conference on Low Volume Roads.**

- National Rural ITS Conference in Snowbird, UT; August 9-12, 2015  
2 LRRB members  
Steve Koehler will be attending.

A new conference has come up for approval:

- MAASTO Annual Meeting in Kansas City, MO; August 10-13, 2015

This is the Midwest states' version of the AASHTO conference that focuses mostly on policy, while the MAASTO Annual Meeting is more of a technical conference that is specific to the Midwest. The program for Kansas City has not yet been set. Minnesota will be hosting this meeting in 2016 and Mitch Rasmussen is on the Planning Committee and will be attending MAASTO's Annual Meeting in Kansas City.

Tim Stahl indicated there was interest from RIC members in attending.

***A motion was made by Tim Stahl, and seconded Bruce Hasbargen, to allow 2 LRRB members, 2 RIC members and possibly 1 MnDOT staff to attend the 2015 MAASTO Annual Meeting in Kansas City, MO. The motion passed.***

MnDOT State Aid pays for additional representatives from Minnesota County Engineers Association (MCEA) and the City Engineers Association of Minnesota (CEAM) to attend the MAASTO Annual Meeting.

#### **Action Item No. 3: Mitch Rasmussen will distribute the agenda for the 2015 MAASTO Annual Meeting and solicit interest to participate.**

There are two upcoming international conferences:

- European Transport Conference in Germany, September 28-30, 2015
- World Congress on Intelligent Transport Systems in France, October 5- 9, 2015

**Action Item No. 4: LRRB Members are requested to contact Bruce Hasbargen and “cc” Linda Taylor if you are interested in attending the European Transport or World Congress on ITS conferences.**

Debbie reminded the Board that there is an updated trip report form posted on the LRRB website, which was required as part of the legislative process. LRRB Members should be sure to complete the new section on the bottom of the form as it pertains to estimated costs and actual expenses.

**Action Item No. 5: Linda Taylor will send out the Username and Password to the LRRB members for the LRRB website. \*\*\*THIS ACTION ITEM IS COMPLETE\*\*\***

**Action Item No. 6: Reminder to LRRB Members to use the new trip report form for all out-of-state travel on the LRRB website.**

- NW Pavement Management Association Conference in Vancouver, WA; October 20-23, 2015

Lyndon Robjant indicated that Joel Ulring went to this in the past, however this conference did not include any eligibility information.

***A motion was made by Tim Stahl, and seconded Steve Koehler, to allow 2 LRRB members, 2 RIC members and possibly 1 MnDOT staff to attend the NW Pavement Management Association Conference in Vancouver, WA. The motion passed.***

**Action Item No. 7: MnDOT RS will add eligibility information for the NW Pavement Management Association Conference in Vancouver, WA.**

#### **Other Budget Business**

There was a request at the last LRRB meeting that it would be a good idea to have information about all the active projects in one place. Debbie explained that there was a document summarizing the projects, including their PIs and progress, in the front sleeve of the meeting materials binder.

### III. LRRB Outreach Committee and TERRA Update

#### **Outreach Updates**

Mitch Rasmussen provided an update on the LRRB Outreach Committee which has been added to these minutes as **Attachment 1**.

MnDOT Research Services staff have been working with their consultant to recently add the “Browse By Function/Topic” to the LRRB website at the request of the Board last Fall.

Bruce Hasbargen queried the Board to see how many members attended the session on Systems Preservation at the Minnesota Transportation Conference and many hands went up. Some members may have seen it twice as it was also given at the Pavement Conference.

**Action Item No. 8: MnDOT RS will request the PowerPoint presentation on the Systems Preservation Guide project from SRF and/or Sue Miller or Rick West to post on the LRRB website. \*\*\*THIS ACTION ITEM IS COMPLETE\*\*\***

**Next Outreach Meeting**

The next outreach meeting will be at the LRRB summer meeting, which is scheduled for June 17-18. (The subcommittee typically meets the night before the full board meeting.)

**MCEA Summer Conference (June 10-12, 2015) Outreach Opportunity**

Bruce Hasbargen explained that LRRB will have 45 minutes (from 10:30 am to 11:15 am at the County Engineer's Summer Conference on Friday, June 12) and was looking for ideas on information to present.

The group discussed several projects including the three highlighted projects on the back of the March newsletter (Benefits and Costs of Increasing Truck Load Limits, Investigation and Assessment of Colored Concrete Pavement and Traffic Sign Maintenance and Management Online Training Course), Timber Bridges, Salt Tolerant Sod, Systems Preservation and our own LRRB YouTube Channel.

**Action Item No. 9: Mitch Rasmussen will query the Outreach Committee for topics to be presented at the MCEA Summer Conference in June. \*\*\*THIS ACTION ITEM IS COMPLETE\*\*\***

IV. RIC Update

Tim Stahl updated the Board on the previous RIC meeting held March 3, 2015. His complete update was included in the meeting materials binder with his comments in blue and magenta. Below are the key discussion and action items.

**RIC Budget Review**

The Committee was seeking guidance from the LRRB on the length of contracts; are the contract three or five years in duration?

Linda Taylor explained that all state contracts are capped at five years.

The Committee was seeking guidance from the LRRB; they wanted to know on how to move forward with contract – open it up or go with existing consultant?

Debbie said that since this contract with SRF expires on June 19, 2016, that we will have to go out for bids. They would likely put it out for 3 years, with the option to extend it two years.

**Project Updates -- Major Equipment Life Cycle Cost Analysis (INV 950) – Doug Gransberg**  
Quite a few questions were generated, but the key item was what interest rate is chosen. Klayton Eckles had several questions regarding how interest rates were used in public organizations.

**Action Item No. 10: Lyndon Robient requested a copy of the spreadsheet tool for the Life Cycle Cost Analysis project. Tim Stahl will provide it to Lyndon and share with the LRRB members.**

**New Project Proposal -- Benefits of Minnesota TZD Efforts – Mike Flaagan**

Given the amount that is currently calculated for the value of a human life, a traffic signal would be required at every rural intersection. This is looking at a new way to promote the benefits of the TZD program. In 2003 the trend in traffic related fatalities (TRFs) was going up. Now that trend is going down. This project will attempt to quantify the value of that "gap" between the two trends.

**Action Item No. 11: MnDOT RS will add Quantifying the Benefits of the TZD program to the Summer Meeting, once the TRIG has had the opportunity to hear it.**

*[Staff note: MnDOT TRIG met on April 1 and did not fund this proposal.]*

**Research Projects funded by LRRB in December**

There were no people interested in the TL position for the Pothole Project (NS 382). Steve Koehler's name came up as a fine candidate or if necessary John Powell's replacement.

Does the project have a TL? Mark Krebsbach (Dakota County Engineer) was initially being considered. Todd Howard from Dakota County is the TL for the project.

V. FY16 Annual Program Funding Requests

**INV 999 Project Administration**

The board reviewed prior year's figures and the amounts for Supplies (printing, award & miscellaneous) and food at Focus Groups are decreasing by \$11,000 to reflect what has been spent in the past. Other budget items (meetings, consultants and travel expenses) were requested to stay at their current level for the next two years.

***There was a motion to fund INV 999 at \$124,000 made by Steve Koehler, and seconded by Laurie McGinnis. The motion passed.***

**Program Contingency**

This is currently \$50,000. Recommendation is to eliminate this for future years as it has not been needed for anything.

Bruce Hasbargen thought that this was a good idea to keep because sometimes there may be that need. Chris Kufner wanted to know if it rolled over; Linda Taylor answered that it does. The program has to spend whatever is rolled over, and we are always able to allocate the funding to the appropriate needs.

The Board decided to leave the program contingency as is.

**OPERA (Local Operational Research Assistance Program) Update**

CTS was asked by Julie Skallman to come up with new ideas to administer the program.

Mindy Carlson provided a program update, played a video of the City of Eden Prairie's recently completed project entitled: "Foam Adjustment Rings for Manholes," and made suggestions on how to better promote the OPERA program. OPERA is currently in the process of funding 4 projects totaling around \$23,000. There is still about \$47,000 and their contract ends June 30<sup>th</sup>. The biggest challenge every year is getting agencies to submit proposals. They've had a couple of years where they weren't able to allocate all of the funds because they didn't receive enough proposals to consider funding.

Agencies are interested in participating and they have valuable ideas to share, however, the process of submitting a proposal is just too cumbersome for this audience, the report writing can seem intimidating and they simply just don't have the time.

Mitch Rasmussen said to make the process much simpler. It doesn't matter if you're giving the group \$10,000 or \$1,000,000; the difficulty is that they would find it hard to sit down and write up the necessary one paragraph. Perhaps, it could be an idea generated by local city and county road maintenance staff, and it would fall on CTS to do the actual project write up.

Mindy shared one idea the OPERA committee has been discussing:

- Submit a completed project or one they are planning
- OEPRC committee would determine if it's worthwhile/other agencies would benefit
- Evaluate the best medium to disseminate the information (report, spec drawings, video, presentation, demos, training or newsletter articles)
- Work then falls to CTS to make the information usable
- Awards could be given to the agency for the project and their assistance in working with us to share the information

The OPERA committee will meet again in the next month to build on this idea, develop a formal scope, and propose it at the summer LRRB meeting.

Linda Taylor suggested two approaches:

1. Look to the NTREC (New Technology, Research and Equipment Committee) Program which is geared toward the MnDOT Maintenance Workers.  
<http://www.dot.state.mn.us/maintenance/pdf/research/ntrecmanual.pdf>
2. We should also be looking at completed LRRB/RIC projects to showcase the things that have already been done expanding on their scope and operation.

Kaye Bieniek talked about a project in Olmstead County where one shop built custom cabinets for all their signs to improve their operations. Bruce Hasbargen reiterated the question of "Could someone else (e.g., CTS) write up the actual proposal?"

To apply for OPERA funding, complete the brief proposal application form available at: <http://www.mnltap.umn.edu/about/programs/opera/apply/> and send completed proposals (in Word or PDF format) to Mindy Carlson at Minnesota LTAP at [carlson@umn.edu](mailto:carlson@umn.edu). Electronic submission is preferred but not required. If unable to submit electronically, please mail or fax (see form for details). There isn't a deadline to submit proposals, but FY15 funds are limited.

## VI. Program Support Contract Requests & Updates

### **INV 916 Tech Transfer (CTC) Update**

MnDOT RS currently has two contracts with CTC & Associates:

1. The first handles the At-A-Glance and the Technical Summaries (TSs)
2. The second handles the Transportation Research Syntheses (TRSs)  
Previously the work under this second was done under a Master Contract where time was saved by not having to do a separate RFP for each contract. Each TRS only required a Work Order. Going forward, this is going to take more time as each TRS will now require its own separate RFP/contract. There is approximately \$10,000 left on this TRS Contract, which is perhaps enough money for one or two more TRSs.

**Action Item No. 12: The Board was asked by Linda Taylor to forward any changes or suggestions on the At-A-Glance, TSs or TRSs to Nick Busse, MnDOT RS.**

### **LRRB Research Needs Focus Group FY16/17 Funding**

MnDOT RS currently has a two year contract for the Focus Groups that expires 08/31/2015. The recommendation in the past has been to alternate between the Metro area and an outstate location. They have usually been funded at \$12,500 and the request from MnDOT Research Services is to increase this amount to \$17,000 for a total of \$34,000 for the entire two year contract.

Laurie McGinnis wanted to know if this included the cost of writing up the needs statements and Linda Taylor confirmed that it does.

Laurie McGinnis and some other members wanted to know if there could be possible changes to the timing of when the Focus Groups are held. The group has looked into changing the timing in the past, but with the holidays in December and the solicitation process, there is really no other good time to hold them. It has helped in the past to connect the Focus Groups to an existing meeting. Bruce Hasbargen mentioned it was their area's county pre-screening boards in May, while Kaye Bieniek added that the last time it was held in her area it was connected with an existing D6 meeting.

Supplemented with the Idea Scale website, this method of gathering ideas should continue in some form or another. Bruce Hasbargen added that this was a good way to market the work of the LRRB, while Mitch felt this gets them thinking "research" during a time of year when other items begin to compete with their attention.

***There was a motion to approve funding for FY16/17 Research Needs Focus Groups at \$34,000 made by Kaye Bieniek, seconded by Steve Koehler. The motion passed.***

## VII. Other Funding Requests & Updates

### **NS 393 Installation of Insulation Over Centerline Culverts**

Bruce Hasbargen explained that the group asked for Greg Isaakson's input on the initial Research Needs Statement and it was his understanding that it did not quite meet the mark. Bruce thought that perhaps a full-blown research project was not even needed. One of the problems is that they are having problems with different materials in different parts of the state.

One of the current practices to get rid of the frost "dip" that Greg is talking about is excavate and backfill at a 20:1 slope so that the transition through the dip is very gradual, but this can be quite expensive for most centerline culvert replacements. MnDOT does not have any standard plates on "typical" culvert replacement.

Tim Stahl felt there was a need to find out whatever is available such as existing BMPs, and perhaps get MnDOT staff like Joel Ulring involved. Mitch Rasmussen added that we also need to clarify frost "humps" vs. frost "dips". Laurie McGinnis was more concerned with finding a new technique, and whether this was a Construction vs. Maintenance issue and Mitch felt she was on the right track. Chris Kufner was perhaps not even sure that insulation is the problem in these cases.

Linda Taylor suggested that we do a TRS with some of the technical writers at CTC & Associates seeing as there is money leftover in that contract. Linda noted that there needs to be a person to act as a resource to make sure that this happens and Bruce said that he is willing to assist Greg Isaakson. Tim Stahl agreed and said that we need to assess the existing information that is out there and if we can find a reasonable solution that maybe no further research is needed.



Linda Taylor said that we could do a Statement of Practices for the culvert replacement issues mentioned above, but that could cost up to \$10,000. Do we want to allocate a certain amount of money (\$5,000-\$6,000)? Money is in the existing budget for the project in the existing contract with CTC. Bruce Hasbargen will approve the TRS cost..

**Action Item No. 13: MnDOT RS will coordinate a conference call with CTC & Associates and key players (Greg Isaakson, Bruce Hasbargen & Joel Ulring) to flesh out a TRS work scope on the Centerline Culverts proposal (NS 393).**

## VIII. Funding Decisions

All funding decisions were made at the time of discussion.

## IX. Metro Focus Group

Brenda Thomas from CTS gave an update on where we are at with the Metro Area Focus Group to be held on the University of Minnesota campus on March 25<sup>th</sup> from 10:00 am to 12:00 noon with lunch provided. It was not held back-to-back with another meeting requiring attendance.

- Currently there are 13 people signed up (4 counties, 3 cities, 4 private consultants who may have contracts to act as city engineers and 2 state aid)
- The deadline for signing up is March 18th (this can be extended)
- Dan Erickson (Metro State Aide Engineer) has sent out the notice twice.
- Ted Schoenecker and Mitch Rasmussen have shared this information at various meetings that they have attended.
- Ideally we would like to see 20-30 people in attendance.

The groups that have signed up so far have chosen a diverse selection of topics. Chris Kufner and Tom Ravn did not recall getting a notice. Laurie McGinnis felt it is good when the Board members can advocate for LRRB outreach activities like this.

**Action Item No. 14: Mitch Rasmussen will reach out to Metro Cities/Counties; Brenda Thomas will resend the notice and be sure to include the Maplewood Lab, Materials, State Aid and MnDOT Research Services. \*\*\*THIS ACTION ITEM IS COMPLETE\*\*\***

## X. TAP Member Needs

Hafiz Munir noted a couple of projects that John Powell is remaining on as a TAP member.

- INV 963: Stakeholder Attitudes, Knowledge and Engagement in Local Road Systems Planning Decision-Making (99008, WO #143) was in need of TL with John Powell leaving. Bruce Hasbargen confirmed that he can be the new TL.

Mitch Rasmussen recommended that a representative from a city be on the TAP because they're connected at a grass-roots level in a way that counties are not. Paul Oehme said that a lot of this information was geared toward the work he already does in Chanhassen and would be willing to serve on the TAP. This is especially timely because the MN 101 Bridge over the Minnesota River is in that area and would be a great project for soliciting local input.

- Julie Skallman's responsibility as a TL for the following projects will be transferred to Mitch:
  - OPERA
  - Contract 99008, WO 161 Local Technical Assistance Program (LTAP), FY 2015
  - Online Culvert Design, Inspection & Maintenance Course
- MnDOT RS staff have at times sometime run into issues trying to find people to serve as TAP members. MnDOT RS staff do not want to be seen as pushing too much. It would work better to have the assistance of the LRRB & Mitch Rasmussen to recruit TAP members.

Julie Skallman had an excellent mental list and was good at finding new engineers; Mitch will try and continue that effort. Steve Koehler added that MnDOT RS staff do a great job with the TAPs including every one he has been a part of. Mitch Rasmussen said it won't be long before everyone in Minnesota is hooked up via Microsoft Lync and don't have to do too much driving for TAP meetings.

## XI. Project Updates and Presentations

### **INV 944 MN Steel Culvert Pipe Service Life Map**

Barbara Heitkamp gave a presentation on the service life of steel culverts. The goal of this project is to develop a steel pipe service life map for the state of Minnesota.

The current method for estimating steel pipe life is for the designer to take field samples for soil pH and electrical resistivity. Although this method is desirable, time and expense restrictions often make sampling impractical. The project was at the stage where the information presented was very preliminary therefore no copies of the PowerPoint were made available as handouts. The end result of the project would be different maps of the state for different pipe materials and gauges. The next step is to try and make this information more user-friendly and available.

### **INV 932 Determination of Effective Impervious Area in Urban Watersheds**

John Gulliver gave a presentation on determination of the effective impervious area in urban watersheds. The goal of this project is to develop a method to accurately estimate the effective impervious area (EIA) using recently developed GIS databases. When the group wanted to know why you would want to know the EIA. John explained if you know your EIA and soil groups, you can take this information into an ungauged watershed and more accurately predict runoff volume.

Can this be used to estimate runoff for the Rational Method (RM)? John explained that the RM is best used for peak runoff rates and this is better at estimating runoff volume.

Will this require MnDOT's Drainage Manual be updated? John explained that the manual is being updated for several reasons, and this could possibly be added as one of them. With a typical climate change scenario predicting a 100-yr event at 8" instead of 6" of storm rainfall depth, the increase in runoff volumes is 30% to 40%. If we can more properly analyze the effective impervious area of watersheds, we will save money up front by sizing pipes correctly.

Will this result in smaller pipes and pond sizes? The short answer is "Yes"; but it is more important that additional knowledge is being brought into the process.

### **INV 951 Transportation Investment and Economic Development in Minnesota**

Jerry Zhao gave a presentation on investing in transportation and what effect it has on economic development in Minnesota. The goal of this project is to conduct a statewide study at

the county-level to look at the effects of local road development on different property types (residential, commercial, industrials, etc.).

Were there any surprises in your results? Yes, when comparing local roads with the trunk highway system, the regional impacts were/are larger than expected.

Who was the TL? The TL was Julie Skallman (now it will be Mitch Rasmussen).

With regard to the Return on Investment table, how do you feel about the Standard Deviation and such a large variation between the MIN and MAX value? It was somewhat surprising.

### **INV 958 Rumble Strip Noise Evaluation**

Ed Terhaar gave a presentation on the evaluation of sound levels from three types of longitudinal rumble strips installed along the edge of two-lane rural roads in Polk County, Minnesota. The goal of this project is to identify a design that provides maximum safety by capturing the driver's attention through tactile and sound levels while minimizing the external noise generated.

The three types tested included strip designs from California, Pennsylvania and Minnesota. Overall, the Minnesota design was the loudest.

Was there any feedback to see if one design works better than another? The California strip provided adequate driver feedback while generating less exterior noise than the Minnesota strip. Pennsylvania strip did not provide much driver feedback, although it did generate less exterior noise than either the California or Minnesota strips.

What are the next steps? Potential future studies could include wider strips to address the heavy commercial tire bridging that occurred with the 8-inch strips. Additional studies could also evaluate different width centerline strips and other vehicle types (e.g., motorcycle safety).

Is the cost to install these measureable? Initially, there is a cost when you have to purchase/modify the equipment, but then the cost comes down considerably.

## **XII. LRRB Strategic Plan Update**

The board discussed whether or not they needed to update the Strategic Plan. Linda Taylor and Laurie McGinnis confirmed that the subcommittee did a lot of work last time.

Laurie wanted to share that she felt the next update may not require such a great level of effort, given how much time and effort went into the last update. Linda Taylor reminded members that the most recent effort included updated operating manuals for the LRRB and RIC. These changes were also incorporated into the LRRB website with the creation of a member-only portion. In the past, the Strategic Plan update process has been using a sub-committee.

Tim Stahl and Steve Koehler thought that the members could take a look at this and defer further action until June. Linda Taylor suggested waiting a year to give Mitch time in his new position.

Laurie McGinnis also reminded members that the subcommittee spent time last year assessing the funding splits by strategic category (research, implementation, education and administration) to see how the current funding aligns with the Strategic Goals set out in the Strategic Plan. She presented that assessment to the Board at the June 2014 meeting. Laurie offered to revisit that

at this June's meeting when she presents the follow-up work illustrating a detailed breakdown of the research funding by category -- basic, applied, and development.

Mitch is considering three options:

1. Pulling Julie Skallman back in as a quasi-consultant for input on the process;
2. Proceed with the Strategic Plan as scheduled recognizing this time it will be more of an update requiring less effort than last time; or
3. Deferring this effort for one year

**Action Item No. 15: The LRRB Members will review the Strategic Plan & Operating Procedures and come back with a recommendation for the Board at the Summer meeting.**

### XIII. Round Robin

#### Tim Stahl

Tim gave an update on the Timber Bridge Project. Bruce Hasbargen is the TL and Brian Brashaw (UMD's Natural Resources Research Institute) is the PI. The first TAP meeting was held a few weeks ago. There are very few new timber bridges within Minnesota. St. Louis County appears to have the most. Materials from ALAMCO Wood Products in Albert Lea are being used competitively compared to concrete materials for bridges being built on the East coast. Ron Benson, recently moved to Stonebrooke, is on the TAP. Quick Summary: Can there be a cost effective and durable timber bridge to compete with a concrete one and can standard plans be developed using timber as an alternative option.

#### Chris Kufner

Chris wanted to convey his extreme pleasure at being a part of this group. He was excited to report the NCAT partnership is really moving along well. Connecticut and Michigan committed \$1,000,000 over three years for pavement preservation and cracking studies. Colorado, Washington & Wisconsin are looking to join in. Setting up a pooled fund for actual research to begin on the rework of TERRA to guide and direct the mission of MnROAD. This is an information sharing effort with up to \$150,000.

#### Tom Ravn

Mike Leegard (MnDOT's Claims Engineer) is sort of known for forwarding/advancing ideas ahead of their time. How do we transfer knowledge down to the staff left behind to do the work? Kraft Foods uses the MASK process to capture and export knowledge. In years past, Tom noted staff were given 10 years to progress to a Senior Transportation Worker. Now it seems like they are expected to make that progression in a much shorter period of time. The result of this knowledge retention process would be the development a set of guidelines for state and local engineers to use when attempting to capture knowledge from staff leaving key technical positions and export it to the staff left behind to do the work. This process might be similar to what was done with updating the State Aid *Concrete Pavement Rehabilitation Best Practices Manual*.

#### Laurie McGinnis

The CTS Research Conference is May 20-21, 2015

First Day Plenary Sessions:

- 100<sup>th</sup> Anniversary of the Panama Canal Expansion (Myths & Realities)
- Reducing Traffic Congestion (TomTom, global leader in navigation & mapping products)

Second Day Two Focused Workshops:

- Roadway Safety Institute Showcase (Safety Innovations for Today & Tomorrow) (all day)
- Transit Transformers (half-day)

Bruce Hasbargen

Just got back from the Pavement Recycling Conference in France where they have very differing views on taking things a step back and seeing if the material they are using should be there in the first place (i.e., can it be properly recycled if used). Mitch added that more and more scrutiny is being asked on Out-of-Country travel. Mitch recommended when filling out your Out-Of-State Travel trip reports to focus on what is useful about the training and include what it is that you cannot get on a domestic trips (i.e., whether or not they are able to recycle tires in Europe is a huge deal).

**Action Item No. 16: Linda Taylor will check with Mark Norman at TRB to see when the PowerPoints are going to be posted from the TRB Annual Conference. \*\*\*THIS ACTION ITEM IS COMPLETE.\*\*\***

**Action Item No. 17: Remember to submit your LRRB Trip Reports from the TRB Annual Conference.**

Steve Koehler

Steve inquired about evening activities planned for the Summer meeting in June. Jeff Hulsether will have his pontoon available and has offered to take members of the group (room for 9 or 10 people) out to cruise the lake and/or fishing. Jeff also recommends nearby Tianna Golf Course for the golfers and is willing to assist with lining up evening tee times.

Kaye Bieniek

1. A couple of updates:

- Stabilized Full Depth Reclamation – Guy is the TL
- Roundabout Myths YouTube Video – interview questions and video script have been drafted
- 3D Lidar – need TAP members with traffic, surveying and design experience
  - Darryl Pettis with LeSuer County
  - Wes Leopalt may be interested
  - Bruce Hasbargen recommended the surveyor from Goodhue County might be a good addition

2. Sue Miller (TL on the Systems Preservation Project) wanted to give us a “heads up”

- Please be aware that they have had some time extensions and amendments for scope changes
- She’s very excited about the project. Each of the 5 counties are taking slightly different approaches and tailoring the efforts to best suit their county’s needs
- This was a classic case of where you go in thinking one thing and leave thinking another
- Been a really good tool to engage their citizenry

XIV. Adjourn

***There was a request for a motion to adjourn the meeting.***

***Motion: Tom Ravn, second by Paul Oehme. Motion passed; the meeting was adjourned.***

Action Items  
2015 LRRB Spring Meeting

- Action Item No. 1:** Tom Ravn's appointment date will be updated to 12-23-13 on the LRRB Roster and the RIC Roster will be corrected to show Guy Kohlnhofer is from Dodge County.
- Action Item No. 2:** MnDOT RS will remove Bruce Hasbargen and Tom Ravn and add Bernard Izevbekhai to the 11th International Conference on Low Volume Roads.
- Action Item No. 3:** Mitch Rasmussen will distribute the agenda for the 2016 MAASTO Annual Meeting and solicit interest to participate.
- Action Item No. 4:** LRRB Members are requested to contact Bruce Hasbargen and "cc" Linda Taylor if you are interested in attending the European Transport or World Congress on ITS conferences.
- Action Item No. 5:** Linda Taylor will send out the Username and Password to the LRRB members for the LRRB website. **\*\*\*THIS ACTION ITEM IS COMPLETE\*\*\***
- Action Item No. 6:** Reminder to LRRB Members to use the new trip report form on the LRRB website for all out-of-state travel (<http://www.lrrb.org/members>).
- Action Item No. 7:** MnDOT RS will add eligibility information for the NW Pavement Management Association Conference in Vancouver, WA.
- Action Item No. 8:** MnDOT RS will request the PowerPoint presentation on the Systems Preservation Guide project from SRF and/or Sue Miller or Rick West to post on the LRRB website. **\*\*\*THIS ACTION ITEM IS COMPLETE\*\*\***
- Action Item No. 9:** Mitch Rasmussen will query the Outreach Committee for topics to be presented at the MCEA Summer Conference in June. **\*\*\*THIS ACTION ITEM IS COMPLETE\*\*\***
- Action Item No. 10:** Lyndon Robjert requested a copy of the spreadsheet tool for the Life Cycle Cost Analysis project. Tim Stahl will provide it to Lyndon and share with the LRRB members.
- Action Item No. 11:** MnDOT RS will add Quantifying the Benefits of the TZD program to the Summer Meeting, once the TRIG has had the opportunity to hear it.
- Action Item No. 12:** The Board was asked by Linda Taylor to forward any changes or suggestions on the At-A-Glance, TSs or TRSs to Nick Busse, MnDOT Research Services.
- Action Item No. 13:** MnDOT RS will coordinate a conference call with CTC & Associates and key players (Greg Isaakson, Bruce Hasbargen & Joel Ullring) to flesh out a TRS work scope on the Centerline Culverts proposal (NS 393).
- Action Item No. 14:** Mitch Rasmussen will reach out to Metro Cities and Counties; Brenda Thomas will resend the notice and be sure to include the Maplewood Lab, Materials, State Aid and MnDOT Research Services. **\*\*\*THIS ACTION ITEM IS COMPLETE\*\*\***
- Action Item No. 15:** The LRRB Members will review the Strategic Plan & Operating Procedures and come back with a recommendation for the Board at the Summer meeting.
- Action Item No. 16:** Linda Taylor will check with Mark Norman at TRB to see when the PowerPoints are going to be posted from the TRB Annual Conference. **\*\*\*THIS ACTION ITEM IS COMPLETE\*\*\***
- Action Item No. 17:** Remember to submit your LRRB Trip Reports from the TRB Annual Conference.

## **Attachment 1 to LRRB Spring 2015 Meeting Minutes**

### **Outreach Committee Update**

#### **Outreach Updates**

##### **The FY2014 At-A-Glance**

- Now available on the LRRB website. New version features categorized projects.

##### **LRRB website**

- Technical summaries now listed underneath research reports for each project.
- HNTB is adding a “browse by topic” function that should be finished in the coming weeks.
- February RIC Update newsletter now available.
- New web articles
  - October 2014 – Colored concrete
  - December 2014 – Uncontrolled pedestrian crossings
  - February 2015 – Traffic sign online course

##### **YouTube Videos**

- New videos in production: “Roundabout Myths,” “Rumble Strips,” “Winter Chemicals” and “Ineffective Specialty Signs”
- The LRRB now has its own YouTube channel. (Previously, LRRB videos were posted on the MnDOT Research channel.)

##### **National Article**

- The outreach committee identified the national article topic for 2015 – highlighting all Traffic Sign Maintenance/Management related projects. Online training, updated handbook, sign retroreflectivity and sign life expectancy projects.
- SRF is working to identify magazines to consider publishing the article.

#### **Recent Outreach Events**

##### **City Engineers Association of Minnesota (CEAM) Conference**

- LRRB update general session presentation: Jeff Hulsether, Mike Marti and Renae Kuehl presented the LRRB program overview and highlighted the OPERA program, and specific projects: Pedestrian Crossings: Uncontrolled Locations, Impact of Heavy Vehicles on Local Roads, Colored Concrete Deterioration and Traffic Sign Maintenance & Management Online Course
- Concurrent session presentation: Renae Kuehl presented on the Traffic Sign Maintenance & Management Online Course

##### **Minnesota County Engineers Association (MCEA) Conference**

- LRRB update general session presentation: Bruce Hasbargen, Mike Marti and Renae Kuehl presented the “LRRB Jeopardy” with topics: Younger Driver toolkit, Traffic Sign Maintenance & Management Online Course, LRRB history, YouTube Videos, and Miscellaneous LRRB projects

##### **Minnesota’s Transportation Conference**

- LRRB booth featuring new graphic panels and a video screen showing LRRB videos. MnDOT provided staff and material support.
- SRF developed cards to hand out advertising new videos on the LRRB website.
- SRF organized a session and presentation materials for a panel session on the LRRB funded “System Preservation” study.

*Bruce Hasbargen queried the Board to see how many members attended this session and many hands went up. Some members may have seen it twice as it was also given at the Pavement Conference.*

**TERRA Pavement Conference**

- LRRB table featuring LRRB video display, handouts, etc.
- SRF developed a presentation on the LRRB funded “System Preservation” project for Rick West and Sue Miller.

**Action Item No. 3: MnDOT RS will request the PowerPoint presentation on the Systems Preservation Guide project from SRF and/or Sue Miller or Rick West to post on the LRRB website. \*\*\*THIS ACTION ITEM IS COMPLETE\*\*\***

**Items for Discussion**

1. Does the LRRB want to produce more videos? If so, how much funding to authorize? Should we solicit new topic ideas?
2. What conferences/events does the board wish to support this year?