

# STRATEGIC PLAN AND OPERATING PROCEDURES 2012



**LRRB**  
LOCAL  
ROAD RESEARCH  
BOARD

**...MAKING A DIFFERENCE**

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## FORWARD

This manual provides operating information for the [Minnesota Local Road Research Board \(LRRB\)](#). It presents the LRRB strategic plan, includes information about procedures, highlights the organization's history and provides examples of [LRRB projects](#).

This manual documents LRRB procedures, policies, and plans in one convenient place. For use primarily by [LRRB members](#), it offers a one-stop resource detailing goals and strategies, membership, voting, project development, implementation, and other operational issues.

Because information contained in this manual changes from time to time, LRRB staff will distribute updated pages at the first LRRB meeting of every year, or as other update timetables may dictate. Please note the publication dates on pages for the most up-to-date information.

We welcome feedback on the content and usefulness of this document, and encourage members to alert us to the need for updates or the need for new information.

# **PART I**

## **BACKGROUND**

## HISTORY

For more than 50 years, the [LRRB](#) has brought important developments to transportation engineers throughout the state. Those developments range from new ways to determine pavement strength to an economical method for recycling asphalt from old pavement to new pavement. Today, the LRRB remains true to its important mission: supporting and sharing the latest in transportation research applications with the state's city and county engineers. These activities include a focus on implementation.

Established in 1959 through state legislation, the LRRB has sponsored more than 200 individual research projects over the last 15 years on a variety of topics. Current LRRB-funded research falls primarily into the following categories: design, construction, maintenance/operations, environmental compatibility, administration, and implementation. See pages 6 and 7 for tables categorizing research projects according to their research emphasis.

## LEGISLATION

In 1959, the [Minnesota Legislature](#) established funding from the state aid allocation for the purposes of supporting research on problems of specific interest to local road engineers. The legislation, [Chapter 162.06 subd. 4](#) and [Chapter 162.12 subd. 4](#), also established the LRRB to manage activities. The original legislation stated that LRRB allocate those funds "...solely for the purpose of conducting research in the methods of and materials for the construction and maintenance of county state-aid highways and municipal state-aid streets". The 1959 legislation set the funding level at  $\frac{1}{4}$  of 1 percent of the state aid allocation and mandated that the [Commissioner of Transportation](#) oversee the administration of these funds. In 1974, the Minnesota Legislature modified the original legislation by adding a research focus to improve the design and

environmental compatibility of state-aid highways, streets, and appurtenances. It also allowed for constructing research elements and reconstructing or replacing research elements that fail. In addition, the legislation broadened the [LRRB](#)'s scope to include conducting programs for implementing and monitoring research results.

The latest change in the LRRB legislation occurred in 1994, when the funding level was increased from  $\frac{1}{4}$  of one percent to its current level of  $\frac{1}{2}$  of one percent of the state aid allocation, effectively doubling LRRB's funding capabilities.

## **MISSION**

According to Minnesota statutes, LRRB funding must support the following purposes:

- ◆ research to improve the design, construction, maintenance/operations, and environmental compatibility of state-aid highways and streets and appurtenances;
- ◆ construction of research elements and reconstruction or replacement of research elements that fail; and
- ◆ programs for implementing and monitoring research results.

The following statement reflects the LRRB's mission:

The LRRB serves local road transportation practitioners through:

- ◆ development of new initiatives,
- ◆ acquisition of and application of new knowledge, and
- ◆ exploration and implementation of new technologies.

## **TRANSPORTATION RESEARCH IN MINNESOTA**

TRANSPORTATION research in Minnesota involves extensive and productive collaborations among state agencies, city and county staff, the [University of Minnesota](#), [Minnesota State Colleges & Universities](#), and private industry. The LRRB was developed to provide a mechanism to fund transportation research which benefits the local state aid system

The LRRB may provide sole research funding for projects, or provide collaborative match funds with: MnDOT, other State agencies, cities, counties, University of Minnesota (ITS Institute), MnSCU, other Universities and Federal research efforts. These financial collaborations take place through a number of formal and informal partnerships. The LRRB, MnDOT Research Services staff, and CTS assist with the identification of match funding opportunities.

The LRRB uses a collaborative process to manage research projects. Researchers from MnDOT, the University of Minnesota, Minnesota State Colleges and Universities and consulting firms conduct the research, and report on the results. A Technical Advisory Panel (TAP) made of City/County Staff, other state agencies (MPCA, MnDOT, DPS etc.) staff, and other expert volunteers monitor the research. RS monitors the research performance and reports on the research activities to the LRRB.

Once the research is completed, the LRRB [Research Implementation Committee \(RIC\)](#), which includes county and city engineers, University of Minnesota [Center for Transportation Studies](#) (CTS) personnel, and [Minnesota Department of Transportation](#) (MnDOT) research and administration personnel, may then contract with a private engineering consultant for implementation of a research project.



**PART II**

**STRATEGIC PLAN**

## I. RESEARCH GOALS AND STRATEGIES

In October 1995, the [LRRB](#) developed a strategic plan to guide future research decisions. A major update in September 2000 added the goal of environmental compatibility, and the document is reviewed and updated as needed by the LRRB at the summer meeting. The document is intended to be a living document, with RS providing necessary updates at board meetings, e.g. LRRB program, conference sheets, and RIC program etc.

The plan identifies four strategic planning research categories to track and report on LRRB projects: Design, Construction, Maintenance/Operations, and Environmental Compatibility. The following table gives general examples, and specific projects may fall into more than one category.

<b>DESIGN (GOAL 1)</b>	<b>CONSTRUCTION (GOAL 2)</b>
Community Impact	Equipment
Constructability	Management System
Economic Development	Materials
Economic Efficiency	Partnering
Engineering	Physical Development of Project
Environmental	Quality
Financing	Tools
Geometrics	Work Zone Safety
Individual Impact	
Materials	
Project Need	
Planning	
Public Involvement	
Right of Way	
Safety	
Social	

<b>MAINTENANCE/OPERATIONS (GOAL 3)</b>	<b>ENVIRONMENTAL COMPATIBILITY (GOAL 4)</b>
Equipment	Community & Social Environment
Level of Service to Public	Economic Environment
Life Cycle Costing	Individual Environment
Maximize Service Life of Project	Natural Environment
Methods and Materials	Mitigating Environmental Impacts
Pavement Management	Planning
Preserve Investment	Social Environment
Privatization	
Protect Investment	
Responding to Public	
Safety	
Snow removal	
Staffing	
Traffic Operations	

The [LRRB](#) recognizes the need for and seeks to fund both basic and applied research including knowledge building and problem solving research projects.

The LRRB developed basic definitions for design, construction, and maintenance/operations categories, outlined the following strategic goals and strategies for design, construction, maintenance/operations, and environmental compatibility, and added a fifth goal to help determine research needs. Each year these goals and strategies are reviewed and updated as needed.

## **Goal 1 - Design Research**

The [LRRB](#) shall solicit and sponsor research projects that improve the design of Minnesota's local government transportation system.

Definition: Design is the process and product of determining the need for and nature of a proposed transportation system project.

- Strategy 1A      Conduct research that emphasizes the preservation and maintenance of transportation infrastructure and system sustainability.
- Strategy 1B      Conduct research on design standards that are safe and affordable.
- Strategy 1C      Conduct research on pavements containing recycled or non-traditional materials.
- Strategy 1D      Conduct research on right-of-way management such as access, utilities, and vegetation.
- Strategy 1E      Conduct research on load capacity of local roads.
- Strategy 1F      Conduct research on relationships among multiple modes, mobility, ADA and access to land use.

## **Goal 2 - Construction Research**

The [LRRB](#) shall solicit and sponsor research projects that improve the construction of Minnesota's local government transportation system.

Definition: Construction is the process and product used for the implementation of the plans and specifications from the transportation system design process.

- Strategy 2A      Conduct research on alternative construction contracting methods (best value/low bid/design-build/alternate bids).

- Strategy 2B Conduct research on material and construction process quality control and construction automation.
- Strategy 2C Conduct research on best practices for project management technology.
- Strategy 2D Evaluate technical and economic feasibility of new construction products, materials and processes.

### **Goal 3 - Maintenance/Operations Research**

The [LRRB](#) shall solicit and sponsor research projects that improve the maintenance/operations of the local government transportation system.

Definition: Maintenance/Operations are the process and products used to operate and maintain the transportation system investment.

- Strategy 3A Conduct research on neighborhood traffic capacity and safety management.
- Strategy 3B Conduct research on Intelligent Transportation Systems (ITS) for local transportation systems.
- Strategy 3C Conduct research on proactive preventative maintenance versus reactive maintenance.
- Strategy 3D Conduct research on the economics of alternative maintenance strategies and partnerships.
- Strategy 3E Conduct research on specialized maintenance equipment, materials, and products.
- Strategy 3F Conduct research on snow removal and ice control including anti-icing methods.

## Goal 4 – Environmental Compatibility

The [LRRB](#) shall solicit and sponsor research projects that relate to Environmental Compatibility of roads and the maintenance of the local transportation system.

Definition: Environmental Compatibility is the integration of the local transportation system into the community to minimize adverse environmental impacts while contributing to economic and social compatibility.

### Strategy 4A

Conduct research related to the effects of design, construction, and maintenance on the natural environment.

### Strategy 4B

Conduct research related to the impacts of design, construction, operations and maintenance on the individual, such as impacts on individual safety, travel, health, etc.

### Strategy 4C

Conduct research on the economic effects of design, construction, operations and maintenance, such as access management studies and right-of-way acquisitions.

### Strategy 4D

Conduct research on the community aspects of design, construction, operations and maintenance, such as neighborhood cohesion, equity, vitality and social structure.

### Strategy 4E

Conduct research on mitigating environmental impacts of public roadway infrastructure at the source, such as porous/pervious pavements, quiet pavements, warm asphalts, culverts, etc.

## II. IMPLEMENTATION GOALS AND STRATEGIES

### A) Funding Guidelines

The [LRRB](#) identified implementation as a strategic planning category during its strategic planning process. The Board will fund implementation, training and information activities for research to improve transportation.

The LRRB will fund curriculum development and start-up implementation costs, but ultimately expects training programs to be self-supporting. The primary organization utilize for training will be Local Technical Assistance Program (LTAP).

### B) Implementation Task Development

The LRRB recognizes the importance of moving research results into practice. The LRRB works through its Research Implementation Committee ([RIC](#)) to make information available and to transfer research results into practical applications. Look for more details about the RIC in Part III, Operating Procedures, and Implementation Activities. The RIC and its staff coordinate implementation task development.

RIC members include four county and two city engineers, the MnDOT Deputy State Aid Engineer, a MnDOT District State Aid Engineer, a MnDOT Research Management Engineer, a MnDOT's Expert Office representative, and a University of Minnesota LTAP Director. Additional staff from [MnDOT RS](#) and the [University of Minnesota CTS](#) provides support services.

The [RIC](#) uses a variety of media to reach engineers and others with new developments, including DVDs, CD-ROMs, streaming videos, web-based tools, written reports, pamphlets, seminars, workshops, field demonstrations, presentations, and the [LRRB](#) web site.

## **Goal 1 - Implementation Needs and Processes**

The [LRRB](#) shall ensure that selected research projects are likely to have implemental results and that coordinated processes and resources are in place for helping local governments implement those results and other innovations.

- Strategy 1A      Include implementation in all research needs solicitation.
- Strategy 1B      Ensure the incorporation of implementation planning into the research process and the development of implementation plans for completed research.
- Strategy 1C      Continue to sponsor a [RIC](#) that plans, directs, and administers implementation projects.
- Strategy 1D      Continue to sponsor LTAP to provide training, technical assistance, and information to local agency personnel.
- Strategy 1E      Continue to fund [Minnesota Transportation Libraries \(MTL\)](#) (MnDOT, LRRB and CTS partnership).

## **Goal 2 - Local Government Agencies Outreach**

The [LRRB](#) shall ensure that local government employees and officials are informed of research results and other innovations, are able to exchange information on innovations in a timely manner, and are trained in the application of innovations.

- Strategy 2A      Sponsor [LTAP](#) activities such as courses, [Circuit Training and Assistance Program \(CTAP\)](#), publications, electronic information, best practices, and syntheses for local government personnel.
- Strategy 2B      Sponsor [RIC](#) multi-media products such as videos, manuals, publications, etc.
- Strategy 2C      Sponsor [Minnesota Transportation Libraries \(MTL\)](#) services such



as information requests, dissemination of reports, web site, etc.

- Strategy 2D Support special conferences and events that feature new transportation technologies and innovative practices.
- Strategy 2E Support the publication of research reports, status reports of research in progress, syntheses, and other written materials.
- Strategy 2G Maintain an interactive web site that highlights LRRB research projects and links to other related information.

### **Goal 3 - Technology and Product Development**

The [LRRB](#) shall ensure the development of research results into technologies and products that can be used by local agencies.

- Strategy 3A Support field trials of research results.
- Strategy 3B Ensure the development of new standards and specifications for new technologies and products.
- Strategy 3C Promote public/private partnerships for technology and product development.
- Strategy 3D Support technical assistance activities that help local agencies employees implement new technologies and products.
- Strategy 3E Sponsor the [Operational Research Assistance \(OPERA\)](#) program.

### III. ADMINISTRATIVE GOALS AND STRATEGIES

The [LRRB](#)'s administrative strategic goals and strategies focus on the following issues: open participation to the LRRB process and products, support services to ensure an effective and efficient program, and leadership and evaluation to ensure that the overall program meets the needs of its customers.

#### Goal 1 - Participation

The LRRB shall ensure that all local governments have access to LRRB processes and opportunities to participate in LRRB activities.

- Strategy 1A      Prepare annual summary of activities and make the summary available to all local governments via the LRRB web site.
- Strategy 1B      Solicit participation of local government staff in research, implementation, and administrative activities.
- Strategy 1C      Continue to sponsor an outreach committee to communicate LRRB activities and accomplishments.
- Strategy 1E      Participate in other partnerships such as Minnesota County Engineers Association (MCEA), City Engineers Association of Minnesota (CEAM), [Transportation Engineering and Road Research Alliance \(TERRA\)](#), the Intelligent Transportation Systems (ITS) Institute and [Iowa Highway Research Board \(IHRB\)](#).

#### Goal 2 - Support Services

The [LRRB](#) shall ensure that support services exist to help achieve research and implementation goals in timely and cost effective ways.

- Strategy 2A      Provide funding for [MnDOT's RS](#) for administrative support staffing to the LRRB and [RIC](#).

- Strategy 2B Provide funding for MnDOT's [Office of Materials](#) for research and technical assistance support staffing to LRRB and RIC.
- Strategy 2C Provide funding for [MnDOT's library](#) staff, material, and equipment that support LRRB activities and constituents.
- Strategy 2D Provide funding for MnDOT's [Office of Maintenance](#) for Circuit Training and Assistance Program ([CTAP](#)).
- Strategy 2E Provide funding for MnDOT's MnROAD Operations.
- Strategy 2F Provide funding for the LTAP base program.
- Strategy 2G Support research at the [Minnesota Road Research Facility \(MnROAD\)](#).

### **Goal 3 - Leadership and Evaluation**

The LRRB provides leadership to ensure that the overall program meets the needs of its customers and its committees.

- Strategy 3A Solicit local government leaders to be active members of the LRRB.
- Strategy 3B Sponsor and encourage participation of the LRRB and appropriate MnDOT research and administrative support staff at conferences and events to learn new approaches that would benefit Minnesota local governments.
- Strategy 3C Sponsor program evaluation and feedback activities.

**PART III**

**OPERATING PROCEDURES**

## **MEMBERSHIP**

### **General**

LRRB membership includes four county and two city engineers, who may serve a maximum of two, four-year terms. MnDOT members include the State Aid Engineer, the representative from MnDOT Expert Office, and the RS Director, who is the ex-officio secretary, and all are voting members. A University of Minnesota [CTS](#) representative serves as the 10th member. The MnDOT's Expert Office representative serves one, four year term. The State Aid Engineer, RS Director, and CTS Director have indefinite terms. The Commissioner appoints members in a process described in [Minnesota Rules 8820.3200](#) .

When a new member is appointed to fill the term of an outgoing LRRB member with less than two years remaining in service time, the new member is eligible for an additional two full terms. If the period remaining is two years or more, that time will be counted as one full term toward eligibility.

### **Responsibilities**

Members are expected to attend meetings and prepare for the meetings by reviewing appropriate material before the LRRB meetings. No substitutes, representatives or proxy of voting members are allowed.

LRRB members serve as representatives of local road practitioners and are committed to carrying out LRRB's mission. They make presentations about the LRRB during appropriate meetings of local transportation practitioners, and staff the LRRB booth at various conferences and trade shows.

LRRB members actively support local transportation practitioners through their participation in the active solicitation of research and implementation topics and identification of Technical Advisory Panel (TAP) participants.

The LRRB nominates and elects a Chair, who oversees and leads the LRRB meetings. The Chair is responsible for organizing ad hoc committees as necessary to review or further develop LRRB issues, naming committee members and appointing committee chairs. In addition to these responsibilities, the Chair or their designated LRRB member also represents the LRRB on the LTAP steering committee and on research governance committees such as TERRA and the ITS Institute Board. The Chair serves the LRRB for a period of up to three years.

### **Voting**

The LRRB uses generally accepted meeting procedures, requires a minimum quorum of six (6) members of which four (4) must be from a county or city, and operates on a majority vote to approve expenditure of LRRB funds and to make policy decisions. Polling of members shall be kept to a minimum and used only as necessary for action required before the next regular scheduled LRRB meeting, and such action shall be presented to the LRRB for affirmation at the next available LRRB meeting.

## **RESEARCH PROJECT DEVELOPMENT**

### **Needs Identification**

The research needs identification process plays a key role in developing an effective research program. As the first step to initiating a research project and developing the overall research program, identifying the "right" research topics directly impacts the program's success, as well as the potential for each project's implementation. Again, the LRRB recognizes the need for, and seeks to fund, both basic and applied research projects including knowledge building and problem solving projects.

Involving the transportation practitioner is fundamental to the needs of the identification process and helps ensure selection of the right research, and implementation of the research results.

Problem statements may also be submitted by county and city engineers at any time throughout the year. Once a problem statement is received, RS will report back at the next LRRB meeting for board review and discussion. Forms are available on the [LRRB](#) web site.

### **Knowledge Building Priorities**

The LRRB recognizes the need for both knowledge-building and problem-solving research. Knowledge Building Priorities generate research that addresses long-term, complex issues to advance the state of knowledge on critical transportation topics. Knowledge Building Priorities engage LRRB members and other local government practitioners in identifying long-term challenges that can benefit from research. CTS leads the Knowledge-Building Priorities efforts, in partnership with LRRB and MnDOT RS. LRRB will consider innovative research proposals in response to Knowledge Building Priorities from University of Minnesota faculty and research staff. Knowledge Building Priorities are updated every 4-5 years.

### **Proposals**

The LRRB collects and funds research proposals on an annual cycle based mostly from an annual solicitation submitted by county and city engineers or individual board members. The proposals selected for funding by the LRRB, are annually brought forward to the Commissioner of Transportation for final review.

The LRRB also accepts off-cycle proposals on an ongoing, case-by-case basis but the proposal must be championed and sponsored by an LRRB member. Members must submit all proposals to RS for consideration at subsequent LRRB meetings. All proposals submitted for consideration must use the standard form.

<http://www.dot.state.mn.us/research/documents/2013ProposalTemplatefinal.doc>

Proposals not submitted in this format and on schedule will be considered only at the discretion of the LRRB Chair.

## **Work Plans and Contracts**

All projects funded by the LRRB must have a work plan before contract funds can be expended. The work plan will be kept on file by the RS.

The project's Principal Investigator (PI) is responsible for the development of the project work plan, which also identifies who will write the final report. RS staff keeps a copy of the work plan and reports to the LRRB on work plan development status. The RS staff will assist LRRB in developing the Technical Advisory Panel (TAP). RS will assign the administrative liaison and work with LRRB member to identify and assign the technical liaison (TL). The RS staff will assist the PI in concurrence with the TAP to approve the work plan. The TL will approve and accept contractual deliverables. In most cases, the AL will assemble and conduct TAP meetings, and provide technical support to the project. TAP guidelines are available on the LRRB website, along with other basic guidelines.

The TAP helps guide and monitor the development of each LRRB project. The TAP shall include at a minimum an LRRB board member, as a member or friend to the panel, or a local representative, and one or more professionals who possess a background in the research area or an interest in the research topic. The TAP meets as necessary to ensure that the project follows the work plan and maintains progress. The TAP is also responsible for the technical review of a project's findings, deliverables, and final report.

RS and the LRRB board collaborate on potential TAP members to identify and solicit volunteers from the transportation practitioner community to serve on TAPs. In addition, RS staff handles administrative responsibilities for each project, including contract compliance when applicable with the assignment of the Administrative Liaison (AL).



## **Reports**

A final report must be completed for all projects funded by the LRRB. The details and the length of the report varies depending on the type of project.

## **Implementation**

The TAP, as part of its project responsibilities, should identify marketing, outreach, and implementation opportunities to move project findings into practice.

The LRRB uses the Research Implementation Committee (RIC) to facilitate the implementation of research finding through various methods (i.e. LTAP/CTAP program, training courses, manual etc.).

## **Evaluation**

Although evaluation often comes as the final step in the research process, planning for evaluation occurs during the entire research process, with three key milestones. The first occurs during the research proposal process, which involves an evaluation of proposal's value. The second happens after completion of the research project to determine if the project accomplished its goals and if results can be implemented. The third takes place after implementation of research results to see the applied impact of the research.

## **IMPLEMENTATION ACTIVITIES**

### **Research Implementation Committee (RIC)**

The LRRB works through its RIC to make research information available and to transfer research results into practical applications. The RIC focuses on implementing the results of transportation research. Its members are four county and two city engineers, the MnDOT Deputy State Aid Engineer, a MnDOT District State-Aid Engineer, a MnDOT Research Management Engineer a MnDOT Expert Office representative, and a University of Minnesota, LTAP Director. Other support staff includes MnDOT

Research Services and Office of Materials, and the University of Minnesota, CTS. At least one local agency member must also be a member of the LRRB to ensure the link between the LRRB and the committee.

The RIC membership is subject to term limits. The Local Engineer Chair of the RIC is selected to serve a maximum of a single, 3 year term. All local members are selected to serve a maximum of a two, 4 year term. Terms for non-local members are indefinite, with the exception of the District State Aid Engineer and MnDOT Expert Office representative whose terms will cycle every 4 years. See LRRB website for current RIC membership list and the Orientation Manual.

The RIC uses a variety of methods to reach engineers and others with new developments, including but not limited to presentations, videos, written reports, pamphlets, seminars, workshops, field demonstrations, web-based technology, and on-site visits.

The LRRB continues to look for new ways to turn research results into applications that save money or improve practice. These efforts include exploring new communication technologies and alternative methods of delivering on-site training and assistance.

### **Minnesota Transportation Libraries**

A collaborative effort of the LRRB, CTS, and MnDOT, the Minnesota Transportation Libraries make transportation-related information more readily accessible by providing services through the [MnDOT Library](#), the [CTS Library](#), and other Knowledge Networks.

The two libraries work together to offer library and information services to the state's transportation community. These services include literature searches on transportation topics and assistance with reference and research questions. With access to an international catalog of resources, library staff can identify, locate, and borrow transportation-related information materials from libraries around the world for local use. Library staff catalog LRRB and other project reports, videos, and other materials and

add this information to this same international catalog. As a result, Minnesota's research products can be identified by researchers and practitioners around the globe.

### **Local Technical Assistance Program (LTAP)**

A collaborative effort by the LRRB, the Federal Highway Administration (FHWA), MnDOT, and the University of Minnesota's CTS provides support and direction for a variety of transportation implementation activities. The [LTAP](#) is composed of a national network of centers – one in every state, Puerto Rico, and regional centers serving tribal governments. The LTAP national network maintains important links to national research implementation and technology transfer efforts. The LTAP mission is to foster a safe, efficient, environmentally sound transportation system by improving skills and knowledge of local transportation providers through training, technical assistance, and technology transfer.

Under the LTAP Program, FHWA offers each center base funding with the requirement of each to secure matching funds at the local/state level. The LRRB matches federal funding for the Minnesota LTAP Program to support its base program services, including delivery of ongoing and subsidized training workshops, quarterly publications of the Technology Exchange newsletter, maintenance of a customer database of more than 6,500 customers, library lending and reference services, and information and technical assistance referral.

In addition to matching base program funds, the LRRB uses “continuing program funds” to annually support continued, in-demand LTAP services that extend beyond the base services. These continuing activities include:

- Maintenance Research Expos
- Circuit Trainer Assistance Program (CTAP), and
- Student Transportation Career Expos

The LTAP also requests special program funds for priority research implementation and training needs as identified by the LTAP Program Steering Committee, chaired by the Director of the State Aid Division.

The Minnesota LTAP Program closely supports all LRRB research implementation and technology transfer initiatives through its participation and membership on the RIC, its partnerships with RS and MnDOT Maintenance Research, and its collaboration with many MnDOT technical offices to participate in cooperative local agency technology transfer and training initiatives.

Minnesota LTAP, in working with its national, state and local transportation agency partners, provides a wide range of tools and strategies to effectively implement research, share best practices and develop new knowledge and skills. These tools broadly include workshops and interactive web-based training, conferences and key expert discussions, product demonstrations, best practice manuals and technical resource guides, and web-based resources and electronic news items. The LRRB has supported a broad range of training and communications outreach tools to support its research implementation goals.

## **LRRB ACTIVITY ADMINISTRATION**

### **General**

Investigation 999 serves as LRRB's administrative account. Expenditures from this account provide funding for administrative support, program development, and work not covered by a specific LRRB investigation. The following lists items funded under Investigation 999:

- ◆ LRRB and RIC meeting expenses
- ◆ Conference travel and registration expenses for LRRB sponsor events including lodging, transportation, food, and other miscellaneous expenses.
- ◆ Publication expenses for videos, DVDs, CD-ROM, and other technology transfer products from LRRB research
- ◆ Consultant contract services for editorial review of published reports, development of transportation research synthesis and technology summaries, marketing products, maintenance and support of website, and other activities related to the research program.

- ◆ Miscellaneous expenses to cover printing of materials and purchasing of program support items.

At the annual programming meeting, the LRRB allocates sufficient funds to support the INV 999 initiatives for the upcoming year.

### **LRRB Subcommittees and Program**

In addition to the LRRB's RIC Committee, there are two subcommittees and an operational research program of LRRB members and staff to carry out the LRRB operations.

#### **The Outreach Subcommittee**

This committee includes LRRB members and staff from MnDOT and LTAP. The LRRB established this committee to increase the awareness of LRRB functions and products within the transportation community. This committee meets as needed to review current LRRB marketing practices and public relations strategies. They oversee the Outreach contract, identify research highlights for technical publications (local and national), newsletters, articles, website, and give presentations at conferences, expos and other professional events.

#### **The Strategic Planning Subcommittee**

This committee includes LRRB members and staff from MnDOT. This committee meets at least every 3 years to review the current LRRB strategic plan and revise or add strategies to reflect the latest transportation needs. The updated strategic plan is discussed and approved by the full LRRB.

#### **The Operational Research Assistance (OPERA) Program**

This program exists to promote innovations in operations and maintenance methods, materials and equipment. The program funds projects up to \$10,000. Project selection is conducted by the [OPERA](#) program selection committee meeting as needed. A

requirement of the program is a written report which is due upon completion of the project.

### **Staff Support**

Research Services administers the budget and research program for the LRRB. RS staff provide contract administration, financial management (at both the program level and of individual projects), communications and logistics management (arranging meetings, record keeping, purchase orders), reporting and technology transfer. This includes applying our full research management methodology from identifying research needs and facilitating proposals to guiding LRRB projects to closeout and implementation.

Staff is also activity involved in the subcommittee activities and provides administrative support for these committees.

RS provides administrative support necessary to facilitate quarterly meetings, sponsored travel, conference registration, process expense reports and purchase orders, etc. to support LRRB initiatives and activities.

RS assembles and submits the LRRB's annual report of approved research projects to the Commissioner of Transportation by February 1st.

[Office of Materials](#) and Manager of Road Research Section serve the LRRB in the role of technical advisor and interfaces between TERRA and MnROAD program. At the LRRB's request, the office's staff aids and advises the LRRB on topics related to materials design, construction, and maintenance. Staff insight into current state-of-the-art developments helps the LRRB to make sound, technically correct decisions. In addition, the Office of Materials conducts research and provides technical support for LRRB projects.

Other similar offices within MnDOT provide technical support for LRRB projects.

The CTS Director of Research Administration serves LRRB in the role of technical advisor and liaison with the University of Minnesota professors.

[Center for Transportation Studies \(CTS\), University of Minnesota](#)

CTS staff serve the LRRB in the role of research administration support. CTS staff coordinate the University of Minnesota's annual research RFP, facilitate the development of Knowledge Building Priorities, communicate information about University of Minnesota research, and connect LRRB members with researchers who serve as expert advisors and conduct research for the LRRB. The CTS Director of Research Administration attends LRRB meetings to coordinate with Board members on the above items.

**Meetings**

The LRRB meets five times annually (Spring, Summer, Fall and two Winter meetings). The LRRB also may call additional programming meetings. Meetings are typically scheduled on normal workdays. The meeting room layout allows the LRRB members to interact directly with other members and provides priority seating to the LRRB members and key staff and background seating for additional support staff, guests, and others. Lunches and breaks are typically provided.

The LRRB generally schedules subsequent meeting date(s) at the previous LRRB meeting. Unless the LRRB otherwise directs, LRRB staff determines the meeting site, make arrangements, and distributes the agenda, previous meeting minutes, and other pertinent information 2 weeks before the meeting.

At every meeting, the current program is distributed for the board's review. This program review includes a financial update documenting available funds. Brief presentations from research investigators and presentations requesting additional funding may be heard at each meeting and if time is available, tours of transportation research sites and facilities or interesting transportation test sections may be arranged.

### Strategy Meeting – Spring

The Spring meeting functions as a programming meeting and strategy identification meeting. At this meeting, the LRRB makes decisions on ongoing funding commitments, INV999 budget, and as needed RIC funding. Information on projects completed during the past year is provided and members are encouraged to review this information prior to the Summer meeting where a focus on implementation strategies is conducted.

CTS will identify and invite a University of Minnesota researcher (or researchers) to attend this meeting, to dialogue with the LRRB members on a Knowledge Building Priority topic chosen by the Board. The discussion will help LRRB members learn more about the state of research in this topic area and flesh out some specific research problems related to the topic. The dialogue will help researchers develop stronger, more focused Knowledge Building research proposals in response to the annual RFP.

### Project Review Meeting – Summer

The summer meeting is a joint meeting between the LRRB and the RIC members. This two-day summer meeting takes place outside of the metro area, typically in a current LRRB member's city or county. When possible, LRRB staff arranges a field tour of a nearby research installation or project site. This meeting includes formal adoption of the upcoming year's strategic plan. During this meeting, the LRRB uses focus group feedback and completed research reports to determine research needs for the upcoming RFP and implementation strategies for the RIC. Information on projects completed during the past year is provided.

The LRRB reviews Knowledge Building Priority summaries each year between formal updates, to communicate emerging issues that supplement the summaries, as needed. CTS staff will facilitate the review and update of the summaries.



## Program Review Meeting – Fall

The fall meeting focuses on the status of active and ongoing LRRB projects. An update on the research RFP is provided and any information relevant to the upcoming programming meeting is distributed.

## Programming Meetings– Winter

### *November Meeting*

The first winter meeting focuses on reviewing the LRRB member's top ranked research proposals received during the RFP process and identifies those proposals for which presentations will be heard at the formal meeting.

### *December Meeting*

The second winter meeting is reserved for identifying those projects that the LRRB will fund in the upcoming calendar year. At this meeting, LRRB members hear brief presentations from the research investigators. The LRRB members have the opportunity to ask the researchers questions at the conclusion of each presentation. The LRRB then votes on funded projects. The LRRB may schedule an additional meeting, if necessary, to complete the programming task.

Unless otherwise directed by the LRRB, the sharing ratio for LRRB-funded projects will stay fairly consistent with the standard breakdown of: County - 76.32 percent and Municipal - 23.68 percent.

## Knowledge Building Priorities Workshops

Every 4-5 years, in late spring or summer, CTS works with LRRB and RS to organize a workshop for local government practitioners and University of Minnesota researchers, to generate research needs and opportunities for Knowledge Building Priorities. CTS staff

document workshop discussions and write one-page Knowledge Building Priority summaries that are communicated to University of Minnesota researchers in the annual research RFP.

### **Annual Report**

Each year, RS prepares and submits an annual report for submittal by the LRRB to the Commissioner of Transportation. The report includes a table that lists the active and completed LRRB-funded projects for that fiscal year. The report also includes technical summaries of completed projects.

RS prepares the report, which reflects those projects funded at the previous programming meetings, to the Commissioner by February 1st. The LRRB Chair, the State-Aid LRRB representative, and the LRRB Secretary sign the cover letter that accompanies the report.

### **Funding Cycle**

Each year, the County Screening Board and the City Screening Committee recommend to the Commissioner of Transportation a sum of money that the Commissioner of Transportation shall set aside from the county state-aid highway fund and the municipal state-aid street fund. According to Minnesota statutes, the amount set aside from each of these funds shall not exceed 1/2 of one percent of the preceding year's apportionment sum.

The LRRB's funding cycle is based on the calendar year. Yearly funds set aside for the LRRB can be carried forward for one year. Any balance remaining in the research accounts at the end of each year from the sum set aside for the year immediately previous, are transferred back to the county and municipal state aid highway funds. The LRRB annual budget has grown from about \$86,000 in 1960 to a current budget of approximately \$3.0 million.

**Evaluation**

RS will collect, summarize, and present information on proposed research projects and assist the LRRB in selecting the appropriate research projects for funding. At the completion of the research project, the TAP determines if the research project accomplished its objectives. The TAP also looks at the implementation potential of the project. The LRRB and RIC receive the post-research project evaluation information for appropriate action. Finally, RS works with local government transportation practitioners after implementation of research results to determine the research's ultimate impact. The LRRB receives this information on a regular basis.