

FINAL REPORT

Arkansas State Highway and Transportation Department

RESEARCH PEER EXCHANGE

October 1 – 4, 2007

Introduction

The Arkansas State Highway and Transportation Department hosted a Peer Exchange of its research program on October 1 – 4, 2007. The regulation instituting peer reviews (now peer exchanges) became effective on August 22, 1994. The authorizing language for these exchanges can be found in the Title 23 Code of Federal Regulations Part 420, Subpart B – Research, Development and Technology Transfer Program Management (Section 420.207 – Conditions for grant approval). The regulations state that, as a condition for grant approval:

(b) Each State shall conduct peer reviews of its RD&T program and should participate in the review of other States' programs on a periodic basis. To assist peer reviewers in completing a quality and performance effectiveness review, the State shall disclose to them information and documentation required to be collected and maintained under this subpart ... At least two members of the peer review team shall be selected from the FHWA list of qualified peer reviewers. The peer review team shall provide a written report of its findings to the State. The State shall forward a copy of the report to the FHWA Division Administrator with a written response to the peer review findings.

The Peer Exchange is a process wherein a team composed of State and Federal Research managers is invited to discuss and review the host state's Research program. Information from both the review team and the host agency is exchanged with the intent of improving the Research process in the host state as well as the team members' states.

Peer Exchange Team Members

The Peer Exchange team was composed of the following members:

| | |
|-------------------|--------------------------------------|
| * Mr. Jeff Brown | Alabama DOT |
| Mr. Dave Lippert | Illinois DOT |
| Mr. Bryan Hurst | Oklahoma DOT |
| Mr. Milt Fletcher | South Carolina DOT |
| Dr. Micah Hale | University of Arkansas, Fayetteville |
| Mr. Gary DalPorto | FHWA |

The AHTD Research Section participants were:

| | |
|---------------------|----------------------------------|
| Mr. Mark Bradley | Staff Research Engineer |
| Mr. Gary Bennett | Civil Engineer IV |
| Ms. Tamara Easley | Civil Engineer II |
| Ms. Karen McDaniels | Administrative Assistant II |
| Mr. Davin Webb | Research Information Coordinator |

Peer Exchange Team General Observations

The Team wishes to thank the AHTD for the opportunity to take part in this Peer Exchange. Items we wish to note as general observations are as follows:

- Overall impression of the Team is of a responsive research program geared toward meeting Department needs.
- Selection process produces projects in such a manner to insure high priority needs are funded.
- Project monitoring from inception to completion is a strength of the AHTD program.
- Attendance and participation in the AASHTO National Research Advisory Committee meeting is a positive for maintaining management quality of the research program.
- The Research Section has developed a good working relationship with Universities that conduct research for the AHTD.

Specific Focus Areas for the Peer Exchange

- Communicating with the Principal Investigator
- Implementation Procedures

Communicating with the Principal Investigator

Strengths:

- **Monthly Contact:** The use of a standard form creates consistency in the tracking of each project. It is a good idea to have a comments section for the Coordinator to voice their opinion on the progress and/or status of the project.
- **Research Manual Revisions:** The Research Manual is currently in the revision process. It is very important to focus on improved communication with everyone involved in the research process. The Who's Who section is a good addition. It is also important that the manual is more user-friendly.

- Final Report requirements: Making use of available technology and simplifying the number of copies required in exchange for electronic copies by pdf and cd.
- Problem Statement Solicitation: Incorporating ideas from within the Department as well as those from the Universities allows for a more diverse research program. It is also good that industry is involved through membership on the Advisory Council.
- Face-to-face contact efforts: The minimum quarterly meetings are a good goal. It is important to realize the effectiveness of meeting with the PI and allowing them to meet the coordinator.
- Video conferencing efforts: The ability to video conference within the Department allows for more efficient meetings. The use of the GoToMeeting software for web conferencing and teleconferencing also allows for more information to be distributed for the meeting attendees.

Opportunities and Actions:

- Video conferencing efforts: It would be more efficient if video conferencing could be used for those outside the Department, such as PIs at the Universities. In order for this to be accomplished, the firewall issues within the Department must be addressed.
- Research Workshop and/or Review: A Research Workshop would give the Research Section the opportunity to sit down with current and prospective PIs to discuss the research process. This would allow the PI to ask any questions about their responsibilities and allow the Research staff to clarify expectations and possible benefits from a research project. It would also allow the PI to express his/her concerns regarding the research process and/or projects. This would also allow the Research staff to discuss other issues such as budget, travel, equipment, reports and other issues that specifically affect the PI.
- Project Coordinator Workshop: A Coordinator Workshop would insure that all projects are being handled according to established protocol. It would allow new coordinators a chance to learn about the research process and remind current coordinators of proper procedures. Overall, it would encourage consistency of the Section's handling of research projects. The workshop will be scheduled in conjunction with the revision of the Research Manual.
- PI and Research Section ratings: This would allow the Research Section the ability to report to the research committees how each PI performs and handles research projects. It would also allow the PIs the opportunity to evaluate the effectiveness of the Department's research procedures and handling of projects.
- Timeliness of Final Reports: Each project is given a 90-day publication time to submit the final report for the project. Until the report is submitted, the Department holds 25 percent of the budget. Many projects extend past this 90-day period, and the Department

continues to hold the funds but cannot use the funds for any other purpose. This limits the Research Section's ability to begin new projects and diminishes the efficiency of the research process. PIs should not be awarded new projects due to excessive tardiness in submitting final reports on previous projects.

- **Involvement in Field Work:** The coordinator needs to maximize his/her involvement in the field work associated with the project.
- **Kick-off Meeting for new projects with PI:** Much like the Research Workshop, this would allow for open communication to start from the beginning of the project. This meeting would occur between the Project Coordinator and the PI at the start of the project to discuss expectations on both sides.
- **Include a Department sponsor on each submitted Problem Statement:** This would involve having Standing Subcommittee meetings prior to the Problem Statement deadline to discuss areas from the Department's standpoint that are in need of research. This would also involve encouraging potential PIs to coordinate with Department sponsor/champions on developing Problem Statements as well as encouraging Department sponsors/champions to go to potential PIs with issues and/or needs.
- **Problem Statement Solicitation sent to more industry representatives:** This could be accomplished by using industry representatives on the Advisory Council earlier in the Problem Statement process. This would also include creating an expanded database of industry contacts that would be notified during the Problem Statement solicitation. The Research Section will take the opportunity to make presentations to appropriate industry groups.
- **More information available through the internet:** This idea is to create more convenience for those outside of the Department to get information on projects and activities dealing with research. It would also allow for PIs to have access to forms and report formats that are required throughout the project. It would also be beneficial to have access to the most updated version of the Research Manual for reference.

Implementation Procedures

Strengths:

- **Implementation tracking system:** The current system that utilizes the Tracking Form, Tracking Record, and Implementation Survey allows the Research Section the means to fully track the implementation efforts of the Department.
- **Full-time Research Information Coordinator as recommended by the QIP team in 1995:** Having this position allows for more focus on implementation within the Department.

- **Emphasis on implementation throughout the project:** This emphasis has grown over the last two years. This emphasis begins with the presence of the Research Information Coordinator beginning with the first meeting of the project subcommittee.
- **Increased emphasis at the end of the project:** This is accomplished by the Implementation meeting that occurs before completion of the project. The result of this meeting is the Implementation Plan that focuses the final efforts of the project on the results that are expected by the Department.
- **TRC Summaries and presentation at Spring meeting:** This provides the Department the opportunity to understand the importance of implementation. It also allows the opportunity to showcase those projects that have been completed in that year.
- **Upper management involvement in implementation process:** This provides a process for more effective implementation.
- **Appropriate Department personnel involved in Research Subcommittees:** This insures that each project receives the focus and attention from the appropriate divisions within the Department.

Opportunities and Actions:

- **Consider the addition of a Technical Advisor from industry to selected project Subcommittees:** This would provide more opportunities for effective implementation of project results with industry applications. This will also assist in augmenting the dialogue between the Department and industry.
- **Presentations on implemented projects at TRC meetings:** This would showcase the value of research as well as highlight the successes in the implementation efforts.
- **Increase visibility by highlighting implementation-related activities:** This could be accomplished through the use of the Research Informer, the Centerline, and the Arkansas Highways Magazine.
- **Research Website:** An important partner in the Research program is the Mack-Blackwell Transportation Center (MBTC). The training portion of MBTC, the Center for Training Transportation Professionals (CTTP), might be a logical entity to maintain a website that further highlights the research findings and implementation efforts of the Department.
- **Review established procedures for tracking implementation:** During the update of the Research Manual, an implementation section will be developed and efforts will be made to streamline existing procedures where applicable.
- **Project Subcommittee completes Implementation Action Plan with recommendations from the PI:** Since the project subcommittee members are the champions of the project, they should take the lead role in encouraging implementation activities.

- Change six month implementation meeting to 75 percent completion of project time: This is to accommodate shorter projects (i.e. twelve months) that may not have significant findings at that stage of the project.
- Implementation Recommendation Memo from Subcommittee Chairman to the Research Implementation Committee: With the emphasis on implementation from the beginning of the project, the project subcommittee, through its Chairman, are the champions of the project and have the most impact on the implementation of the project. The Project Subcommittee Chairman should participate in the Research Implementation Committee meetings.
- Monitoring the progress of implementation recommendations: The Research Information Coordinator should be responsible for insuring that the recommendations of the project subcommittee are being followed and accomplished in a timely manner.
- Track implementation at six month intervals until full implementation: This replaces the three year time period previously established by the 1995 QIP team. This would also include a minimum one-year and maximum three-year tracking period.

Ideas that Team Members Can Take Home

Alabama DOT

- Include industry on Advisory Council
- Use monthly contact form
- Use standard quarterly report form
- Use video conference instead of meeting when possible
- Use web conferencing software (GoToMeeting) when possible
- Limit the number of no cost extensions
- Develop guidelines for how to monitor projects
- Have a meeting with the specific topic of implementation
- Have an implementation committee that includes higher and lower level management
- Develop implementation tracking forms (tracking form, survey form)

Oklahoma DOT

- Format of the Peer Exchange Meeting
- Monthly contact form
 - Especially project coordinator comments
- Quarterly reporting
- Final reporting
 - Hold 25% of funds for final
- GoToMeeting Software
- Research Workshop
- General responsibilities and guidelines
- Project Coordinator Workshop
- Orientation for new projects with PI
- FHWA subject matter expert on project subcommittees
- Revise Research Manual to include actual implementation process
- Implementation tracking system

South Carolina DOT

- Orientation for new PIs
- Video conferencing when appropriate; GoToMeeting software
- Reduce the number of hard copies of final reports down to two
- Implementation tracking system

Illinois DOT

- Monthly contact report: Good method to know project is being managed
- Web “GoToMeeting”: Will explore as productivity enhancement (no travel)

- Research workshop: Increases visibility and interest in research
- Implementation Tracking Record: Database format would be a benefit

University of Arkansas, Fayetteville

- Timeliness of Final Reports
 - Late reports may adversely affect future research projects
- Find a champion for your problem statements
 - Meet with AHTD personnel prior to submission of problem statements to determine research needs
- Encourage new faculty to read the pertinent sections of the Research Manual
- Encourage faculty, specifically new faculty, to visit with Research personnel for question and answer sessions

Acknowledgment:

The Arkansas State Highway and Transportation Department is appreciative of the work put forth by the Peer Exchange Team in making this exchange a valuable learning experience for the Research Section. The items discussed by the Peer Exchange Team have great potential benefit to the Department. Consideration for implementing the followings ideas will be made:

Consideration for Actions or Opportunities for Arkansas State Highway and Transportation Department:

Communicating with the Principal Investigator:

- Video conferencing efforts
- Research Workshop and/or Review
- Project Coordinator Workshop
- PI and Research Section ratings
- Involvement in Field Work
- Kick-off Meeting for new projects with PI
- Include a Department sponsor on each submitted Problem Statement
- Problem Statement Solicitation sent to more industry representatives

- More information available through the internet

Implementation Procedures:

- Consider the addition of a Technical Advisor from industry to selected project Subcommittees
- Presentations on implemented projects at TRC meetings
- Increase visibility by highlighting implementation-related activities
- Research Website
- Review established procedures for tracking implementation
- Project Subcommittee completes Implementation Action Plan with recommendations from the PI
- Change six month implementation meeting to 75 percent completion of project time
- Have Implementation Recommendation Memo from Subcommittee Chairman
- Monitoring the progress of implementation recommendations
- Track implementation at six month intervals until full implementation

2007 PEER EXCHANGE TEAM
 October 1 – 4, 2007
 Little Rock, Arkansas

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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
PEER EXCHANGE AGENDA
October 1 – 4, 2007
Little Rock, Arkansas

Monday – October 1, 2007

Morning and Afternoon, shuttle from Airport
Hospitality Room, Suite 1912, Will be Open for Arrivals Before Check-In Time

6:00pm Dinner/Kick-Off Session

Tuesday – October 2, 2007

7:30 Breakfast
8:30-10:00 Research General Overview - Mr. Mark Bradley
10:00-11:45 Communicating with the Principal Investigator – Ms. Tamara Easley
11:45-1:00 Lunch
1:00-4:00 Communicating with the Principal Investigator (continued)
6:00 Dinner
 Research Staff Work Session

Wednesday – October 3, 2007

7:30 Breakfast
8:30-11:45 Implementation Processes – Mr. Davin Webb
11:45-1:00 Lunch
1:00-4:00 Finalize Team Report
6:00 Dinner
 Research Staff Work Session

Thursday – October 4, 2007

7:30 Breakfast
9:00 Shuttle to Little Rock
10:00 Presentation to Department Administration