

FINAL REPORT
Arkansas State Highway and Transportation Department
RESEARCH PEER EXCHANGE
August 18 – 21, 2003

Introduction

The Arkansas State Highway and Transportation Department hosted a Peer Exchange of its research program on August 18-21, 2003. 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. Chris Abadie	Louisiana Transportation Research Center
Mr. Randy Battley	Mississippi DOT
Mr. Terry Swygert	South Carolina DOT
Mr. Rodger Rochelle	North Carolina DOT
Dr. Jim Gattis	University of Arkansas, Fayetteville
Mr. Gary DalPorto	FHWA Representative

The AHTD Research Section participants were:

Mr. Mark Bradley	Staff Research Engineer
Mr. David Pearce	Civil Engineer IV
Ms. Karen McDaniels	Administrative Assistant III
Ms. Carol Ward	Advanced Research Assistant
Mr. Mark Greenwood	Engineering Research Tech II
Ms. Kathy Upchurch	Engineering Research Tech

Focus Areas for the Peer Exchange

- Contract and Claim Reporting Requirements
- Implementation Procedures

Contract and Claim Reporting Requirements

Strengths:

The Peer team commends the progressive mindset of the Research Section, as evidenced by their steps to streamline the approval process and to reduce redundancy while maintaining quality. For example, the no-cost time extension approval process has been expedited by accepting the request via e-mail.

The Research Section has impressed the Peer team with their procedures to improve the accountability of researchers. For example, quarterly claims are not paid until the quarterly progress reports are received; as a result, principal investigators (PI) have been submitting quarterly reports in a timelier manner. The team anticipates that the enforcement of holding up to 25% of the total contract payment will encourage a prompt submission of the final report. This process encourages the coordinator to hold the PI fiscally responsible.

It is obvious that the Research Section has improved its partnering efforts with the Universities, as evidenced by inviting a University of Arkansas representative to participate in the Peer exchange, in order to get a broader perspective. Additionally, the Section has initiated quarterly meetings with University Department heads and will also begin quarterly meetings with Offices of Research and Sponsored Programs. These meetings have improved communications among all parties and are deemed necessary to effectively partner in the streamlining process.

The proposed revision to the project claim form (see attached) is specific and allows for ease in tracing charges per line item. The form appropriately separates PI and graduate/undergraduate student cost as well as implementation cost. The routing of the claim form for the required signatures apprises supervisors of the status of the project.

Opportunities:

- Eliminate the requirement for an annual renewal and extension agreement of previously approved multi-year projects.
- Review out-of-state travel authorization procedures in order to expedite the request and eliminate apparent redundancy that currently exists. Allow the Staff Research Engineer to approve travel that is already included in an approved contract.
- Create a separate line item in the SPR Part II work program for out-of-state travel funds for activity not directly related to performing the research, i.e., conferences, training, etc. If this were implemented, then this type of out-of-state travel reimbursement would be eliminated as a line item in the Research project budget.
- Eliminate the separate notification requirements in the event of a graduate student change. This information will continue to be submitted in the quarterly report.
- Re-evaluate the factors that led to the requirements for the current level of quarterly claim documentation to determine if that need still exists. None of the four states represented on the Peer team require such a high level of documentation; three of the four require a final audit at the completion of each project.
- Revise the Research Manual to reflect Federal regulations.
- Develop a PI rating system for effectiveness and timeliness to be utilized for future consultant selection. The PI should also be invited to report on the Department's effectiveness during the project.
- Revise the quarterly progress report to exclude estimated expenditures so the reports can be submitted promptly at the end of the quarter.
- Combine the salary and wage categories as one line item category in the contract budget. The amounts for the PI, graduate student, and wages can still be shown as sub-lines in the budget form. The participation and level of effort of Research team members are still shown in other parts of the proposal.

Implementation Procedures

Strengths:

The Research Section successfully brings implementation to the forefront during project inception. Implementation considerations are required in the proposal and the associated cost is included in the budget. These actions help prioritize projects that have the highest probability of immediate benefit to the Department.

Once the research has begun, the Research Section continues to focus on implementation. The PI, consulting with the project subcommittee, prepares an implementation report after a meeting held six months prior to the final report. This report is then forwarded to the Implementation Task Force for their consideration. The composition of the Implementation Task Force increases the probability of implementation. A formal mechanism exists for tracking implementation after completion of the projects.

The Research Section should be commended for their technology transfer efforts. Research staff makes research-in-progress (RIP) entries into the TRB database. All research proposals are posted on the Department's Intranet and remain for that year. The current efforts to upgrade the Research Section's library and related software will improve efficiency of use.

The Section now prepares and distributes one-page research summaries of completed projects to assure all transportation stakeholders are informed of research activities. A structured approach also exists for disseminating research results from other states.

Opportunities:

- Consider implementation as a criterion for selecting projects.
- Identify a research champion in the problem statement to increase the potential for implementation.
- Include members from other agencies with a potential interest in the project outcome on the project subcommittee.
- Emphasize implementation during the closeout meeting for the final report.
- Revise the implementation tracking form to meet the needs of the Department. Include specifics on how the projects are implemented and cost benefit ratio in the implementation checklist.
- Submit completed reports to the Department in Adobe pdf format and post these files both to TRIS and the Department's intranet website.
- Move the Research Section's existing intranet website to the Department's internet site for accessibility by other states. This is a practice in many states.
- Include implementation success stories in the annual Departmental report or monthly newsletter.
- Coordinate with the Department's Public Affairs Section to better advertise research projects in a positive way for the Department.

Peer Exchange Team Observations

Louisiana Transportation Research Center

First, I would like to thank Mark Bradley for the invitation and opportunity to share information in this forum. This was my first chance to participate in a peer exchange for another state and have found the experience rewarding.

There were many ideas presented this week in regard to implementation and university claims for reimbursement on research projects, some strengths of current processes were identified and some opportunities were listed, all of which are summarized well within this document. The Arkansas State Highway and Transportation Department should be commended on the current processes used in the identification of problems and the vehicle it provides to obtain solutions to these problems; a process that is inherently based in a sound research program. In each of the strengths discussed, one can find opportunities.

The Arkansas Research Section has an excellent team in place. The fact that the Arkansas Research Section solicited these as topic areas reinforces their commitment to the ultimate goal of implementation of research and to the business of getting that research done.

Mississippi DOT

It is apparent that the Arkansas State Highway and Transportation Department (AHTD) Research Section does an excellent job in identifying potential research projects. Numerous procedures in place ensure that needed research proposals receive the attention they deserve. Initial problem statement solicitation is directed to a wide array of entities. This coverage undoubtedly increases the amount of potential projects to select for funding. Additionally the AHTD Research Section performs Transportation Research Information System (TRIS) searches to eliminate those proposals that would duplicate previously performed research.

AHTD has formulated a wide range of standing committees (Pavement, Materials, Design, etc.) to review potential research problem statements. These committees prioritize the research problem statements with respect to Departmental need. The formation and review by the various Departmental standing committees ensures that those customers that would benefit from the funding of potential research projects have a voice in project selection. Additional input as to the need of the research is obtained from an Advisory Council that is composed of various transportation stakeholders. These stakeholders include members of Academia and Industry. A "straw poll" is submitted to the AHTD Research Section from the Advisory Council membership as to the priority of the proposed research.

The AHTD Research Section compiles all the information received from the various TRIS searches, standing committee reviews and Advisory Council input and formulates a prioritized list of need research for presentation to their Departmental Transportation Research Committee (TRC). Finally the top prioritized proposal submitters are invited to present to the TRC as to the necessity of their research idea. All these processes ensure that the AHTD Research Section continues to provide a valuable service to their customers.

South Carolina DOT

The Arkansas State Highway and Transportation Department's (AHTD) Research Section is a well-organized group with a highly competent staff. Projects are developed using a process that includes solicitation input and a thorough review from all areas of the Department, state universities, and industry. The Research Section is commended for doing an outstanding job with current and proposed procedures that ensure accountability of Principal Investigators conducting research for the Department. The Research Staff should also be commended for being very proactive in trying to streamline current contract and claims procedures where applicable. Like all the other participating states in this exchange, the AHTD Research Section is faced with the challenge of improving

implementation of research projects. However, steps currently being initiated and opportunities identified during the Peer Exchange should assist in this effort.

Some of the greatest opportunities for the AHTD Research Section include: eliminating certain requirements that appear to be redundant in the contract and claims procedures, reevaluating factors that led to the current high level of documentation required on quarterly claims, and moving the Research Section's existing intranet website to the Department's internet site for accessibility by other states.

Overall, the AHTD Research Staff appears to be a very efficient unit that is continually looking for ways to improve.

North Carolina DOT

The North Carolina DOT appreciates the invitation to participate in the Arkansas State Highway and Transportation Department (AHTD) Research Peer Exchange. The event was extremely well organized and afforded the team with an environment conducive to productive meetings and discussions.

The AHTD Research Section should be commended in their program efforts to date. In particular, their progressive approach to process improvement is apparent as is their partnering initiative with both the university research community and the Federal Highway Administration. Both of these parties were instrumental in the Peer Exchange.

Overall, the AHTD Research Section provides an effective avenue by which research can meet both the immediate and strategic needs of the AHTD. The annual research idea solicitation process is well structured and involves appropriate Department personnel. The AHTD Research Section is appropriately considering streamlining contract claim procedures that are currently the most stringent of the four team members' states. Implementation efforts effectively emphasize the consideration of implementation early and often throughout the life of a research project.

University of Arkansas, Fayetteville

The Peer exchange process is a constructive and worthwhile activity that allows the Research Section to seek ways to improve its service to AHTD. Other parts of this report convey the discussions conducted; a few items to emphasize follow.

A number of problems during the administration of a research project arise from actions or inaction by various parties at universities. Problem sources include:

1. principal investigator tardiness in submitting quarterly and final reports;
2. administrative processing procedures; and
3. administrative accounting procedures.

From this meeting and from outside experience, it is obvious that the Research Section is striving to continually improve and streamline processes to the extent possible, while still maintaining necessary documentation and accountability.

It is challenging to find a balance that produces a necessary amount of process documentation while avoiding procedures that while instituted for a good purpose, divert time away from producing a better research product. Meetings such as the Peer Exchange allow the different parties to explain specific opportunities for streamlining processes and procedures.

A high degree of unanimity was expressed among the peers for modifying the out-of-state travel procedures.

Realizing the capability to teleconference between AHTD and universities would be a positive step, and could increase research productivity by eliminating travel time and associated costs.

FHWA

The Research Section staff in its relationship with FHWA has always been highly professional. I have always been impressed with their willingness to try innovative ways to improve the management, conduct, and implementation of research.

Staff makes a concerted effort to seek input from their customers. This begins at the start of the problem identification process, which includes ratings of problem statements by the Advisory Council, the standing subcommittees, and the TRC. During the conduct of research, customer input from the researchers, the project subcommittee, and even FHWA is solicited and encouraged. During implementation of the project results, input from the user or customer is very important to the research staff.

Participation in this Peer Exchange has confirmed my long held belief that the Research Section does an outstanding job in monitoring research progress and wisely spending the SPR Part II funds. Researchers are held to a high standard of accountability in reimbursement claims and progress documentation. Monthly contacts and quarterly meetings by project coordinators help assure that project research goals are met in a timely manner.

It was with great pleasure to participate in the 1995 QIP team on the "Implementation of Research." Many of the recommendations from this team have been enthusiastically endorsed and implemented. However, there are some recommendations that have not been fully implemented due to time and monetary constraints. I look forward to assisting the research staff in pursuing the implementation opportunities identified from this Peer Exchange.

Ideas that Team Members Can Take Home

Louisiana Transportation Research Center

Let me share these few specific observations that I will bring home from the meeting:

- Arkansas' idea of an implementation plan that is formed through a meeting with project committee team members ideally six months before the final report is due is excellent.
- Publicizing research projects through public relations to foster local, and national news media coverage is something we all need to consider.
- "Partnership" with the University includes, "Partnership" with the business sections of the Department and the University.
- Performance measures should include ratings of the PI's that participate in transportation research and the PI's rating of the research process.

Mississippi DOT

- Implement a "final sales pitch" presentation by potential project PIs to MDOT Research Advisory Committee (RAC) members.
- Explore the possibility of adding Professional Development Hour credits as an incentive to attend RAC functions.
- Add a "Product Evaluation" line item in the annual Research Work Program.
- Require submission of quarterly reports for claim processing.
- Post potential problem statements and reviews on the Departmental intranet website.
- Explore the possibility of having a formal solicitation for research on a bi-annual basis as opposed to annually.
- Withhold a percentage of contract funds pending the receipt of an approved final report.
- Require PIs to submit an implementation report prior to project completion.
- Form an "Implementation Task Force" for post project activities.

South Carolina DOT

- Schedule quarterly meetings with appropriate University Chairs and Sponsored Programs and Research Directors to discuss current projects.
- Consider adding a line item to the Work Program to cover travel cost for the purpose of presenting papers on research projects that have been closed.
- Consider developing a standard Research Project Claim form similar to the one used by AHTD.
- Consider requiring a meeting to be held six months prior to the completion date of a research project to discuss plans and prepare a brief report detailing implementation.

- Develop an implementation form (checklist) to be completed by the research project's chairman at the end of the project.
- Include appropriate Research and Development Committee members in project implementation and/or closeout meetings.
- Require PIs to include a section on Benefit/Cost in the final report when appropriate.

North Carolina DOT

The Peer Exchange provided an excellent forum for sharing ideas and procedures. The event benefits all participants, not simply those from the host state. Specifically, the North Carolina DOT is eager to explore the inclusion of the following “take-home” items in its Research program:

- The preparation of one-page Research Summaries for rapid and effective dissemination of research results.
- The formal assignment of a research implementation champion for each research project.
- A minimum of monthly contacts between Research project managers and each principal investigator.
- Delaying the payment of each quarterly invoice until the associated quarterly progress report is submitted.
- Regular meetings with University Department Chairs and research administration personnel.
- A revised project budget template that better segregates those line items excluded from overhead calculations.
- The consideration of Follett Web Collect Plus software for library cataloging.

University of Arkansas, Fayetteville

A university representative is not in a position to request or implement changes in university policies or procedures, but is limited to reporting back to the university department. The following can be conveyed to other faculty members.

- The Research Section is investigating ways to simplify some of the contracting processes and claim.
- Principal investigators are delaying payment on their project claims when they do not submit their quarterly or final reports in a timely manner. Some consideration is being given to factoring in PI reporting performance when awarding new contracts.
- The Research Section has begun quarterly meetings with department heads. This helps identify and resolve problems.
- The AHTD district offices will soon be able to teleconference with the central office. The university should investigate the possibility of linking to this system.
- The University should request that it participate in the review and comment of the draft revised research manual.

FHWA

- I will become more involved in the project subcommittee meetings. I will assure that FHWA members attend and that implementation is an important item and part of the discussion at these meetings.
- I will assist the Research Section in the revision of the Research Manual.
- I will stress research implementation in my daily activities and will work closely with the Research Section to identify promising technology and seek special funding to help with implementation.
- I will encourage the use of line items in the Part II Work Program to assist AHTD in contact administration and implementation.

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:**Contract and Claim Reporting Requirements**

- Eliminate annual renewal and extension agreement on previously approved multi-year projects. Renewal and extension process will still apply if the project exceeds contracted time period and/or asking for an increase in project funding.
- Review out-of-state travel authorization procedures in order to expedite the request. Allow the Planning and Research Engineer to approve travel that is already included in an approved contract.
- Create a separate line item in the SPR Part II work program for out-of-state travel funds for activity not directly related to performing the research, i.e., conferences, training, etc. If this were implemented, then this type of out-of-state travel reimbursement would be eliminated as a line item in the Research project budget.
- Review the auditing process that requires the supporting documentation for quarterly claims.
- The Research Manual is currently being revised to reflect Federal and Departmental guidelines.
- Develop a PI rating system for effectiveness and timeliness to be utilized for future consultant selection. The PI is also invited to report on the Department's effectiveness during the project.
- Revise the quarterly progress report to exclude estimated expenditures to expedite the timeliness of reporting.

Implementation Procedures

- Consider implementation as a criterion for selecting projects.
- Include members from other State agencies on the project subcommittee where applicable.
- Emphasize implementation during the closeout meeting for the final report.
- Revise the implementation tracking form to meet the needs of the Department. Include specifics on how the projects are implemented and cost benefit ratio in the implementation forms.
- Submit completed reports to the Department in Adobe pdf format and post these files both to TRIS and the Department's intranet website.
- Move the Research Section's existing intranet website to the Department's internet site for accessibility by other states. This is a practice in many states.
- Include implementation or Research Section success stories in Department reports or newsletters.
- Coordinate with the Department's Public Affairs Section to better advertise research projects in a positive way for the Department.

PEER EXCHANGE ACTIVITIES

	Mon., 8/18	Tues., 8/19	Wed., 8/20	Thurs., 8/21
AM	The Austin Check in after 3:00 or Hospitality Suite 1311	Boardroom 2nd Floor	Boardroom 2nd Floor	Hospitality Suite 1311
	Morning & Afternoon Shuttle from Airport	7:30 - Breakfast Boardroom 2nd Floor	7:30 - Breakfast Boardroom 2nd Floor	6:30 - Breakfast Hospitality Suite 1311
		8:00 - 10:00 General Overview 10:15 - 11:45 Contract & Claim Procedures	8:00 - 11:45 Implementation Procedures	7:00 - Final Approval from Team 8:00 - Shuttle to AHTD in Little Rock 10:00 - Presentation To Department Administration
Lunch		11:45 - 1:00 Sunroom	11:45 - 1:00 Sunroom	
PM		1:00 - 4:00 Contract & Claim Procedures (continued)	1:00 - 4:00 Finalize Team Report	
	6:00 - The Austin Buffet at Restaurant "Gathering" Hospitality Suite 1311	6:00 - Dinner Doe's Work Session	6:00 - Dinner Cajun Boilers Work Session	

Peer Exchange Membership List

August 18-21, 2003
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Karen McDaniels
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Carol Ward
Advanced Research Asst.

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
PEER EXCHANGE AGENDA**

August 18-21, 2003
Hot Springs, Arkansas

Monday – August 18, 2003

Morning and Afternoon, shuttle from Airport
Hospitality Room, Suite 1311, Will be Open for Arrivals Before Check-In Time

6:00pm Gathering @ The AustinDinner (Buffet at Restaurant)
 This will be the Kick-Off Session

Tuesday – August 19, 2003

7:30 Breakfast – The Boardroom 2nd Floor
8:30-10:00 Research General Overview - Mr. Mark Bradley
10:00-11:45 Contract and Claim Procedures - Ms. Carol Ward
11:45-1:00 Lunch in Sunroom
1:00-4:00 Contract and Claim Procedures (continued)
6:00 Dinner at Doe's
 Research Staff Work Session

Wednesday – August 20, 2003

7:30 Breakfast – Boardroom 2nd Floor
8:30-11:45 Implementation Procedures - Ms. Kathy Upchurch
11:45-1:00 Lunch in Sunroom
1:00-4:00 Finalize Team Report
6:00 Dinner
 Research Staff Work Session

Thursday – August 21, 2003

6:30 Breakfast in Hospitality Suite 1311
7:00 Final Approval from Team
8:15 Shuttle to Little Rock
10:00 Presentation to Department Administration

