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Iowa DOT Project Management Peer Exchange

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Iowa DOT Project Management Peer Exchange

Final Report July 2016



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16. Abstract

This project supported the planning and conduct of a two-day Iowa Department of Transportation–hosted peer exchange for state agencies that have implemented some or all of the suggested strategies outlined in the Second Strategic Highway Research Program–sponsored project R10, Project Management Strategies for Complex Projects. Presentations were made by participating states, and several opportunities were provided for directed discussion. General themes emerging from the presentations and discussions were identified as follows:

- 1. To implement improvements in project management processes, agency leadership needs to decide that a new approach to project management is worth pursuing and then dedicate resources to developing a project management plan.
- 2. The change to formalized project management and 5DPM requires a culture shift in agencies from segmented "silo" processes to collaborative, cooperative processes that prioritize good communication and collaboration.
- 3. Agencies need trained project managers who are empowered to execute the project management plan, as well as properly trained functional staff.
- 4. Project management can be centralized or decentralized with equal effect.
- 5. After an agency's project management plan and structure are developed, software tools and other resources should be implemented to support the plan and structure.
- 6. All projects will benefit from enhanced project management, but the project management plan should specify appropriate approaches for several project levels as defined by factors in addition to dollar value.
- 7. Project management should be included in an agency's project development manual.

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IOWA DOT PROJECT MANAGEMENT PEER EXCHANGE

Final Report July 2016

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ACKNOWLEDGMENTS

The research team would like to acknowledge the Iowa Department of Transportation (DOT) for sponsoring this project and the Federal Highway Administration for state planning and research (SPR) funds used for this project. In addition, we want to thank Judy Thomas at Iowa State University's Institution for Transportation and Kate Murphy at the Iowa DOT who worked tirelessly to make the peer exchange happen.

EXECUTIVE SUMMARY

This project supported the planning and conduct of a two-day, Iowa Department of Transportation (DOT) hosted peer exchange for personnel from Iowa and other state DOTs that have implemented strategies identified in the Second Strategic Highway Research Program (SHRP 2) project R10, Project Management Strategies for Complex Projects, specifically strategies related to Five Dimensional Project Management (5DPM). The objectives of the peer exchange were to promote a transfer of knowledge and to capture lessons learned that can be incorporated into the Iowa DOT Project Development Process Manual.

The peer exchange consisted of two parts: (1) an Iowa DOT presentation on the state of project management at the agency followed by breakout discussions and (2) presentations by other recipients of SHRP 2 Implementation Assistance Program funding related to the R10 project, each followed by question-and-answer and discussion. Several themes emerged as best practices:

Agency-level decision and support. To implement changes and improvements in project management processes, agency leadership needs to decide that a new approach to project management is worth pursuing and then dedicate resources to development of a project management plan.

Culture shift. The change to formalized project management and 5DPM requires a culture shift in agencies from segmented "silo" processes to collaborative, cooperative processes that prioritize good communication and working together to address issues as they arise.

Project managers. Agencies need trained project managers who are empowered to execute the project management plan, as well as properly trained functional staff.

Location. Project management can be centralized or decentralized with equal effect. Each agency should decide whether to centralize or decentralize and then develop a plan and structure that support that decision.

Project management vs. tools. Project management is not a software or other tool; it is a philosophy. After the project management plan and structure are developed, tools and other resources (e.g., software, checklists, operating procedures) should be implemented to support the plan and structure.

Project levels. All projects will benefit from enhanced project management, but the project management plan should specify appropriate approaches for several project levels as defined by factors in addition to dollar value.

Documentation. Project management should be included in an agency's project development manual as either a single chapter (perhaps most appropriate for implementation on high-level projects) and/or throughout the manual (perhaps most appropriate for implementation at all project levels).

INTRODUCTION

The Iowa Department of Transportation (DOT) was selected to receive User Incentive funding from the Federal Highway Administration (FHWA) for the second Strategic Highway Research Program (SHRP 2) Implementation Assistance Program (IAP). Through the IAP, the Iowa DOT implemented results from the SHRP 2 project R10, Project Management Strategies for Complex Projects (R10), on the Council Bluffs Interstate System (CBIS). Additionally, the Iowa DOT is interested in developing a statewide policy for managing projects based on the R10 outline and on lessons learned from implementing R10.

Thus, in May 2016 the Iowa DOT hosted the Project Management Peer Exchange for personnel from the Iowa DOT and other DOTs that have implemented some or all of the R10 strategies. The objectives of the peer exchange were to promote a transfer of knowledge and to capture and reflect on lessons learned from various users in order to utilize this information in the development of a project management chapter for the Iowa DOT Project Development Process Manual.

Following is basic information about the peer exchange:

Date: May 3–4, 2016 Host: Iowa DOT

Location: West Des Moines, Iowa

Participating agencies:

- American Association of State Highway and Transportation Officials
- FHWA, Federal Lands
- FHWA
- Volpe Center, U.S. DOT
- Iowa, Georgia, Massachusetts, Michigan, Minnesota, New Mexico, and Wisconsin departments of transportation

The peer exchange agenda is included as Appendix A.

OVERVIEW OF SHRP 2 R10

The shift in U.S. transportation infrastructure needs has largely been from building new infrastructure to replacing, expanding, or renewing existing infrastructure. The project management issues involved with infrastructure renewal are markedly different from the issues for new construction, furthering the need for a change in project management approaches for renewing the nation's infrastructure. Not only are infrastructure renewal projects more complicated by their nature, but also the situation has been exacerbated by years of under-funded maintenance and replacement. In other words, what would have been a complex process under ideal circumstances has been made even more challenging because of the need for rapid renewal to avert infrastructure failures. Adding to the challenge is the fact that complexity can evolve from the interaction of many factors, not all of which will manifest themselves on each project.

Rapid-renewal projects cover a wide spectrum of project types, varying in engineering complexity, size, modality, jurisdictional control, financing approach, contract type, and delivery method. Each project calls for a distinct project management style with teams comprised of different resident skill sets required to successfully complete the project.

The objective of the SHRP 2 R10 research program was to determine the specific requirements for successfully managing complex rapid-renewal projects. The ultimate goal of the research was to develop a comprehensive training and development program to enable project partners to work more cooperatively on such projects.

Traditional project management theory is based on optimizing the trade-off between cost, schedule, and technical requirements. The R10 researchers found an increased effect of project context and financing on design, cost, and schedule. The result is the need to manage all these factors as separate and equal dimensions, which results in five-dimensional project management (5DPM). As shown in Figure 1, 5DPM extends traditional three-dimensional project management by adding the dimensions of context and financing.

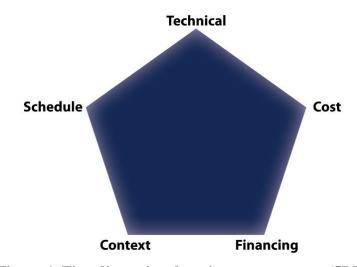


Figure 1. Five-dimensional project management (5DPM)

PEER EXCHANGE

The Institute for Transportation (InTrans) worked with the Iowa DOT to prepare for a two-day peer exchange in May 2016. A total of 53 people, representing 11 agencies, two universities, and one consultant, attended the peer exchange; the list of participants is attached as Appendix B.

After the initial welcome and introductions, the peer exchange consisted of two parts (see Appendix A). The first part, on the morning of the first day, was facilitated by the Iowa DOT and consisted of a presentation on the state of project management at the Iowa DOT followed by breakout discussions. The remainder of the peer exchange (the afternoon of the first day and the entire second day) focused on presentations by recipients of the SHRP 2 Implementation

Assistance Program related to the R10 project. Each presentation was followed by a question and answer session.

Breakout Discussions

The Iowa DOT identified three topics that were important to explore in greater detail during the peer exchange. To enable discussion of these topics, the peer exchange participants were distributed among six tables, each with a facilitator, and each table was assigned one topic. Within each topic, several subjects had been pre-identified to facilitate discussion. Table facilitators were charged with encouraging the discussion, taking notes, and reporting to the rest of the peer exchange participants at the end of the discussion period.

Topic 1: PMO Structure, Role Organizational Integration

Directional discussion subjects:

- Location, role, authority of office
- Staffing and tools
- Infrastructure focus or broader (IT, strategic initiatives)
- Human resources implications (knowledge management, leadership development)

Report from discussion:

- Location, role, authority of office
 - Location
 - One DOT developed a group of project managers just focused on bridge redesign and replacement projects at this point
 - Was previously centralized but have split the state into three regions, design is at the regional level, there is a regional lead project manager that assigns work to the regional project development engineers
 - Centralized makes coordination easier, training consistent, training of others by the project manager
 - Decentralization means the project manager is closer to the customer, fits the district structure, local communication and coordination of relationships, reporting relationships easier to manage, design and construction integration
 - o Project manager role includes
 - Owns the project
 - Owns the budget
 - Should walk the site with the contractor, resident engineer, and design engineer
 - Finding funding, etc., for scope changes or smaller additions
 - Reviews schedules to make sure they are realistic
 - Holds people to set deadlines

- Holds meeting with high level engineers to scope projects weekly (utilities, bridge, design, field, etc.) to define what might be needed for a project and help define the project scope
- Work with construction and district throughout the project life-cycle
- Regular schedule updates
- Contracts, scope, fees, signing invoices
- Monitor deadlines and milestones
- Sole responsibility for managing the project
- o Project manager authority
 - District oversight (but still have pushback)
 - Can find funding, etc., for scope changes or smaller additions without getting additional permission
 - The first Friday of every month the designers have to submit schedule updates, even if the dates do not change; the project manager is responsible and a list of missed dates is made to track areas that are consistently missing deadlines
 - If a consultant writes a narrative then the project manager signs off
 - Add resources (spend funds)
 - Change work scope with approvals
 - Flexibility to get the job done

• Staffing and tools

- Project development engineers within the districts, a team of project managers, and the regional lead project manager
- In design a large group of project managers that get projects assigned across districts based on workload, then there are a series or project managers that focus on complex projects
- When staffing is outsourced this can help with coordination and scheduling (software and training)
- When staffing is in-house the owner is seen as the face of the project, the agency interests are better protected, and there is leadership of coordinated activities
- Tools
 - Project management checklist with things that have to be done before letting (originally designed by the chief engineer's section)
 - Series of standard operating procedures including public hearings, advertising, etc.
 - Database to track spending
 - Custom software and off-the-shelf software are common
 - Standard operating procedures
- Human resources implications
 - Not all project managers are professional engineers
 - Project managers are not technical experts but can rely on standard operating procedures to make sure that appropriate technical reviews are being completed

- Project managers need to leverage resources for technical plan review
- Project managers have to know how to navigate politics
- Project managers are assigned projects based on project complexity and experience to match skills
- o Project managers from outside the DOT may be able to think outside the DOT box

Key takeaways:

- Project managers
 - Need training
 - Clarity of roles and responsibilities
 - Responsibility and authority for scope, schedule, budget and can make adjustments as appropriate
 - Do not have to be engineers but need to be able to navigate the system and think outside the box and can operate outside of the box when necessary
 - Need to be collaborative with all groups and if handoffs are needed then conduct a physical walk-through of the project
 - o Dedicated to a project or a few projects
- Need standard operating procedures
- Monthly reporting on budget and schedule to hold people accountable and to track project progress
- Realistic schedules are important
- Emphasis on parallel rather than linear project development
 - o Move from a production mindset to a strategic agency objective

Topic 2: Project Identification, Classification, Prioritization

Directional discussion subjects:

- How are projects identified/classified/prioritized? Who? What process?
- Level of project management effort on high risk/high exposure vs. "run of the mill"
- Number of priority projects
- Resource allocation, internal and/or external, level of detail (down to the individual?)
- Integration with asset management and program

Report from discussion:

- Programming and prioritization
 - o Chief district engineer helps decide on prioritization
 - Regional managers make decisions if in-house resources are used or the project is outsourced
 - o Regionally responsible for programing and managing

- Regional/district based identification and management, sometimes identification is political with larger projects
- o Backbone system that is required for economic viability is the top priority
- Sometimes it feels like decisions are made based on the next performance measure and not the best engineering decision
- o A transportation asset management plan (TAMP) is used
- Identification of complexity and resource allocation
 - o Backbone committee
 - Coordinate mega, major, interstate projects
 - Each mega project has its own team that is supplemented by consultant staff (co-located)
 - Identification at regional/district level
 - Project managers on all scales of projects
 - Cost analysis to decide what is consulted out
 - o Planning office
 - Needs to be identified early
 - o Project managers should determine resource needs
 - o Project managers that are outsourced are not always the best solution
 - o Project management effort needs to correspond with the size and scope of the projects
- Project manager tools
 - o Project managers should meet together often
 - Talk about lessons learned
 - Share resources
 - o Proactive management
 - o Regular project team meetings
 - Project managers should oversee the technical leads and can help pull technical resources in design and construction
 - o Have a lead project manager and then an assistant or junior project manager
 - The assistant or junior project manager can be a consultant or in-house resource
 - Consider assistance staff on major projects
 - o Plan for the handoff between functional leads and project managers
 - Monthly estimates
 - o Temporary help
 - o Empowerment with adequate authority and ability to assign resources

Key takeaways:

- Regional prioritization of "normal" projects is OK but there is a different system for more complex/major projects
- Develop a way to determine a level for a project
 - Consider three levels
 - Roles and responsibilities might be different for each

- Not based solely on project cost
- o Helps define resource needs
- Project managers for all projects, but some projects are the project manager's only project
 - Consider support staff for the highest level projects
- Proactive management of projects
- Use a holistic approach to project management
 - o Type of staff and how staff is allocated
 - Everyone on the team needs to understand that project management does not work in silos and needs to think of the project as a whole

Topic 3: Portfolio Management

Directional discussion subjects:

- Decision pathways; who has what authority in adjusting targets, resources
- Communication framework for decisions, coordination of respective offices (environment, design, bridge, ROW, construction)
- One project manager from identification through construction? Hand offs
- Field/central office roles

Report from discussion:

• Roles

- The project manager makes the decisions
- o The project manager has the authority to negotiate scope and fees
- The design project manager and the construction project manager walk through the project to make sure the intent of the design is understood and answer questions
- o Construction project managers get involved at 60% design
- Districts have project managers that report to a senior project manager which reports to the assistant district engineer
- Approvals within a framework of the scope, budget, and schedule are made by the project manager
 - Disagreements are elevated to upper management for decision making
- Clearly define roles for all team members (and train on these roles)
- o Develop and oversee resource plan
- When developing the schedule, there should not be a "standard answer" but one that is appropriate and customized for the project

Tools

- There should not be a focus on the tool, rather that tool should support the project managers and the concept of project management
- o Project delivery guide

- Standard operating procedures
- Weekly tracking of project
 - Assigned schedule
 - Cost estimates revised at 25%, 50%, 75%, and 100%
 - Right of way not part of project estimate
 - Develop an in-house system
 - Monthly/quarterly meetings to track projects but take care that these do not encourage finger pointing but encourage the staff to be honest about issues
 - Have subject matter experts provide feedback on schedules before they get loaded into the tracking system for buy-in and representation
- o Primavera 6 that is resource loaded
 - Projects are rolled up so the resource needs can be forecasted for four years
 - Rolling exercise completed every two years
- Annual meetings with all district engineers, project managers, and upper management to discuss the schedules, projects, etc.; this helps set the program
- o The scope, budget, schedule framework is set early
- Leverage asset management
- Communication and interpersonal skills are at least as important as technical knowledge
- Train project managers

Key takeaways:

- Project managers need defined roles and authority regarding the project scope, schedule, budget, and resources
 - Development of a resource loaded schedule is helpful
 - o All functional leads are involved in developing and committing to the schedule
 - Monthly reports on project status are needed
 - There needs to be coordination between development and construction project managers
 - o Communication skills are critical
- There is a need to change the mindset to one of "one team" rather than silos

SHRP 2 R10 Presentations

The remainder of the peer exchange was dedicated to presentations from the other agencies and their experiences with the 5DPM process. Each presentation was followed by a period for questions and answers and discussion.

Notes from presentations and discussion:

- Communication is important
- Setting priorities is important
- Agencies seem to work in a design centric process; consider changing to a construction centric process
- Integrate 5DPM into the entire project development manual (throughout the process) rather than just one chapter or only on complex projects
 - Develop a matrix of standard operating procedures (inventory what is already happening) and determine how 5DPM can enhance these procedures
 - o Extrapolated 5DPM to the entire program
 - For broad implementation play down the abstractness of 5DPM and share/institute what applies; even start with just a few tools here and there
 - o 5DPM should sharpen the current process
- Project managers need to own the project and be empowered
 - Allow them to streamline the process
- Collect lessons learned at handoffs and make all project managers available at handoffs
- The 5DPM process really opens eyes of those involved in what is really going on with the project
- The typical DOT mindset is plug and chug and pass it along; there is no thought about what makes this project a success
- Look at risks within the five dimensions
- Update the complexity map biannually to help realign focus
- Consider 5DPM as a training tool for newer engineers
 - Have newly hired engineers involved with more experienced engineers and sit down and talk together and hear the discussion
- 5DPM brings issues out earlier in project development
- 5DPM should be introduced at or before 25% of plan development
- The point to looking at the five dimensions is not to produce a complexity map; the real value is the conversation and interaction that is required
- Defining success in the five dimensions is important for guiding the rest of the project development process
- Context factors are present on all projects, just amplified on complex projects

Key takeaways:

- Leadership needs to lay out a plan
- Need dedicated project managers with good communication skills
- Need a good training program for project managers and functional staff
- Frequent and honest reporting is essential
- There is a culture shift that needs to happen to be successful
 - o Team
 - Accountability
 - o Accept risk of failure and stop the tendency to blame others

Themes

Several themes are evident from the two-day peer exchange.

Decision and Support

The first theme is that there needs to be a decision to change the status quo of an agency to improve project management. Many agencies present at the peer exchange had varying levels of change taking place within their organizations. These changes may be limited to only a few projects or may be agency wide; however, there seemed to be a general consensus by attendees that even limited implementation is beneficial and that the concepts should be integrated throughout project development of all projects.

Within each of the agencies that are beginning to see changes in project management, there are various levels of support. In many instances, support is currently limited to a few staff at different levels of the agency. It is important to recognize that change takes buy-in and support from all levels of the organization.

In order to implement changes in project management, agency leadership needs to decide that a new approach to project management is worth pursuing. Once this decision has been made, the leadership needs to lay out a plan and dedicate resources to development of the plan. This plan should be clearly stated. The plan should address many of the other identified themes as well as other issues.

Culture Shift

Another theme is the general feeling among agencies represented at the peer exchange that often the work within the agencies is very segmented and that programs and projects are developed within silos. This is counter to effective project management principles and the 5DPM approach. The 5DPM approach is a very cooperative and collaborative process. In order to make this culture shift, agencies need to change the tendency to blame others and to be risk adverse. When concerns are brought forth in a timely manner, they can be dealt with and, rather than finger

pointing, an atmosphere of dealing with the issue not the messenger needs to be fostered. Additionally, teams need to be formed that work together and communicate rather than work in silos. Possibly the greatest benefit of 5DPM is the communication aspect. The conversation and interaction among the team members will help produce more realistic schedules, estimates, and scopes and will allow for development of plans for working with the contextual and financial aspects of the project.

Project Managers

Dedicated project managers are needed. Project managers need to be empowered to make decisions and execute the project management plan. Project managers should be trained, and there should be a clear identification of roles, responsibilities, and authorities. Project managers will also need the support of others within the agency. This includes functional staff who have been trained and who practice from the same identification of roles, responsibilities, and authority matrix as the project managers. Once a project manager has been developed, there is a need to maintain project management skills. This may include additional training or mentoring.

The project manager needs to be a true project leader. Many responsibilities may be assigned to project managers, and many skills are needed; perhaps the most important is communication. Project managers need to be proactive and often innovative. Project managers should be assigned projects based on their experience and strengths.

Location

There are advantages and challenges to both centralized and decentralized project managers. There did not seem to be a consensus regarding which is the most effective. This is a decision that needs to be made within each agency and then a structure developed to support the decision.

Project Management vs. Tools

The focus of project management should be project management, not tools. The project management structure should be developed around project management and practices, not around tools. Tools should be implemented to support the project management structure, not the opposite. In other words, project management is not a software or other tool, it is a philosophy. Additionally, tools are not only software or other technology; they can include guidebooks, checklists, operating procedures, etc.

Types of Projects

It is beneficial to develop appropriate project management approaches for several levels of projects. The different levels require different intensities of project management. All projects will benefit from enhanced project management. Consider three to four levels of projects. These project levels should be defined by other factors in addition to dollar value. An examination of the five dimensions will help in developing the criteria for levels. The lowest level projects may

be covered in short, well defined management steps and include checklists. Higher levels of projects may require more intense management with longer, more frequent meetings of the entire team in which they discuss the project as a whole, possibly in multi-day workshops. In these cases, checklists may be a starting point but the project team needs to think beyond the checklist to find solutions.

Documentation

Information regarding project management should be integrated into the agency's project development manual. Integration may include a single chapter or incorporation throughout the manual. The single chapter approach is perhaps more appropriate for implementation of project management on only the high-level projects. Incorporation throughout the manual is perhaps more appropriate for implementation of project management through all levels of projects.

APPENDIX A: PEER EXCHANGE AGENDA

Agenda: May 3, 2016

8:00 Welcome and Introductions

John Selmer, Iowa DOT, Carlos Figueroa, FHWA, Pam Hutton, AASHTO

8:15 Iowa - Current State of Practice

Deanna Maifield, Iowa DOT

8:45 Table Break Out Discussions and Format

John Selmer, Iowa DOT

9:00 PMO Structure, Role Organizational Integration

Facilitators: Charlie Purcell and Jim Nelson, Iowa DOT

- Location, Role, Authority of Office
- Staffing and Tools
- Infrastructure Focus or broader (IT, Strategic Initiatives)
- HR Implications Knowledge management, Leadership Development

Project Identification, Classification, Prioritization

Facilitators: Brad Hofer and Linda Narigon, Iowa DOT

- How are projects identified/classified/prioritized? Who? What process?
- Level of Project Management Effort on High Risk\High Exposure Vs. "Run of the Mill"
- # of Priority Projects
- Resource Allocation, Internal and/or External, Level of Detail (down to the individual?)
- Integration with Asset Management and Program

Portfolio Management

Facilitators: Deanna Maifield and Bhooshan Karnik, Iowa DOT

- Decision Pathways; who has what authority in adjusting targets, resources
- Communication Framework for decisions, Coordination of respective offices (Environment, Design, Bridge, ROW, Construction)
- One PM from Identification through Construction? Hand offs
- Field/Central Office Roles?

10:00 Break

10:30 Report Out

Table Facilitators

11:30 Q/A and Lessons Learned

John Selmer, Iowa DOT

Noon Lunch

1:00	Moderator Welcome Back Kevin Chesnik, ARA	
1:15	Summary of R10 Complex Project Management Applications Kevin Chesnik and Doug Gransberg, ARA	s to Date
2:15	Question and Answer Session	
2:30	Break	
2:45	Moderator Welcome Back Doug Gransberg	
3:00	Massachusetts DOT Application of R10 Isidoro Perez, Joseph Pavao Jr., Steve McLaughlin, MassDOT	
3:45	Question and Answer Session	
4:00	Capture Participants' Lessons Learned Doug Gransberg	
4:20	Day 1 Closing Remarks and Instructions for Day 2 Kevin Chesnik	
4:30	Adjourn	
Agend	la:	May 4, 2016
7:45	Sign-in	
8:00	Moderator Welcome Back Doug Gransberg	
8:15	Georgia DOT Application of R10 Binh Bui, Georgia DOT	Darryl Van Meter and
9:00	Question and Answer Session	
9:15	Capture Participants' Lessons Learned Doug Gransberg	
9:35	Break	
9:50	Moderator Welcome Back Kevin Chesnik	
10:00	Michigan DOT Application of R10 Terry Stepanski, Michigan DOT	

10:45	Question and Answer Session
11:05	Capture Participants' Lessons Learned Kevin Chesnik
11:25	FHWA Federal Lands Highway Division Application of R10 Allen Teikari and Brent Coe, Federal Lands
12:10	Question and Answer Session
12:20	Capture Participants' Lessons Learned Kevin Chesnik
12:30	Lunch
1:30	Moderator Welcome Back Doug Gransberg
1:45	New Mexico DOT Application of R10 Michael Smelker
2:30	Question and Answer Session
2:45	Capture Participants' Lessons Learned Doug Gransberg
3:00	Break
3:15	Peer Exchange Summary Kevin Chesnik and Doug Gransberg
3:30	Additional Question and Answer Session
3:50	Next Steps and Closing Remarks Carlos Figueroa
4:00	Adiourn

APPENDIX B: PEER EXCHANGE ROSTER

A. New Mexico

- 1. Michael Smelker, P.E. NMDOT Asst. Region Design Manager
- 2. Luis Melgoza, FHWA NM R10 Coordinator

B. Georgia

- 3. Darryl D. VanMeter, P.E., GDOT State Innovative Delivery Engineer
- 4. Bihn Bui, GDOT Research Implementation Manager
- 5. Dr. Baabak Ashuri, Georgia Tech
- 6. Kia Mostaan, Ph.D. Candidate, Georgia Tech

C. Massachusetts

- 7. Isidoro Pérez, MassDOT Highway Deputy Administrator
- 8. Joseph Pavao Jr., MassDOT
- 9. Steve McLaughlin, MasssDOT
- 10. Jim Hoyle, P.E. FHWA MA R10 Coordinator

D. Michigan

- 11. Terry Stepanski, P.E. MDOT I-94 Major Project Manager
- 12. Amelia Hayes FHWA MI R10 Coordinator

E. FHWA Fed. Lands

- 13. Brent Coe, P.E. WFL Project Management Branch Chief
- 14. Allen Teikari, EFL Highway Design Branch Chief

F. R10 Facilitators

- 15. Kevin Chesnik, P.E. ARA R10 Facilitator
- 16. Doug Gransberg, Ph.D., P.E. ARA R10 Facilitator

G. FHWA Resource Center

17. Leslie Lahndt, Ph.D., P.E. FHWA Resource Center Project Management Engineer

H. FHWA Iowa Division

- 18. Andrew Wilson, FHWA Iowa Major Projects Manager
- 19. Joe Jurasic, P.E. FHWA Iowa Construction/Transportation Engineer

I. USDOT Volpe Center

- 20. Amy Nagel, USDOT Volpe Marketing/Communications Specialist
- 21. Elizabeth Deysher, USDOT Volpe Marketing/Communications Project Manager

J. FHWA Headquarters

22. Carlos F. Figueroa, P.E., FHWA R09/R10 Program Manager

K. AASHTO

23. Pamela Hutton, P.E. AASHTO SHRP2 Implementation Manager

L. Minnesota

- 24. Tim Zamzow, MnDOT Proj Mgmt Shared Serv Center Lead, D 4, 6, 7 and 8
- 25. Chris Roy, MnDOT Director, Office of Project Management and Technical Support
- 26. Peter Harff, MNDOT District 7 Project Manager

M. Wisconsin

- 27. Scott Lawry WisDOT Bur. of Project Dev., Proposal Management Section Chief
- 28. Julie Millard WisDOT Bur. of Project Dev., Project Management Unit Supervisor
- 39. Sharon Bremser WisDOT Bur. of Project Dev., Consultant Services Section, Suprv.

N. Iowa DOT

- 30. Mitch Dillavou, Hwy Division Director
- 31. John Selmer, P&T Division Director
- 32. Jim Schnoebelen, District Engineer- 6
- 33. Charlie Purcell, Project Delivery Bureau Chief
- 34. Dan Redmond, D4 DCE
- 35. Mike Kennerly, Design Office Director
- 36. Deanna Maifield, Asst. Design Engineer Manager
- 37. Bhooshan Karnik, Consultant Management Engineer
- 38. Shane Tymkowicz, Asst DE 3
- 39. Jim Nelson, Bridge, Manager
- 40. Jim Muetzel, D4 CBIS PM
- 41. Wes Mayberry, OLE CBIS Segment 4 PM
- 42. Linda Narigon, Design Forever Green PM
- 43. Tammy Nicholson, OLE Office Director
- 44. Brad Hofer, Location, Manager
- 45. Danny Zeiman, Location Engineer
- 46. Kent Nicholson, Design Supervisor
- 47. Shawn Blaesing, Office of Maintenance
- 48. Mark Swenson, Project Scheduling Engineer
- 49. Cathy Cutler, D6 Planner
- 50. Brian Smith, Design Supervisor
- 51. Kate Murphy, P&T Division
- 52. Dr. Jennifer Shane, ISU/InTrans