



Construction Peer Network Northwest Peer Exchange

Summary Report

July 9-10, 2013

Boise, Idaho



Hosted by the Idaho Transportation Department



1 Background

The Idaho Transportation Department (ITD) hosted the Construction Peer Network (CPN) Northwest Peer Exchange in Boise, Idaho on July 9-10, 2013. The CPN's purpose is to widely deploy proven, effective construction practices that will benefit the U.S. transportation system and the American people.

The CPN is a collaboration of the American Association of State Highway and Transportation Officials (AASHTO), the American Road and Transportation Builders Association (ARTBA), the Associated General Contractors of America (AGC), and the Federal Highway Administration (FHWA). The Peer Exchange was the fifth and final in a series of regional events aimed to showcase innovation in construction, allow peers to network and share information, and generate ideas for implementation of proven practices and processes.

Construction leaders from the States of Alaska, Idaho, Montana, Nebraska, North Dakota, Oregon, South Dakota, Washington, and Wyoming attended the peer exchange. State agency representatives and FHWA Division Office representatives from each State participated in the Peer Exchange. Representatives from the Western Federal Lands Highway Division also participated in the event. The list of attendees, along with contact information for each, is provided as an appendix to this document.

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Exchange topics for the Peer Exchange agenda were determined from State DOT survey responses using the CPN Program Information Tool (PI Tool). Based on analysis of the PI Tool results, lead states were identified to present their successful practices as a way to introduce a topic and initiate group roundtable discussions. The CPN User Guide and PI Tool describes the process for collecting the State construction information and can be accessed at:

<http://construction.transportation.org/Pages/ConstructionPeerNetworking.aspx>.

Table 1. Northwest Peer Exchange Agenda Topics

Agenda Topic	Construction 'Core Element' Category	Number of States Selecting as Peer Exchange Topic	Lead State
1. Using Innovative Methods to Resolve Contract Claims and Disputes	Contract Conflicts and Claims	3	Oregon
2. Establishing Project Staffing Qualifications – adequate experience, training, and certification	Establish Qualifications of Staff, Consultants, and Contractors	3	Idaho
3. Assessing Inspection Levels of Effort with Risk Based Processes	Inspection and Workmanship	6	South Dakota
4. Utilizing the Contractor's QC Most Effectively	Quality Assurance	3	FHWA Western Federal Lands
5. Implementing the Digital Jobsite	Documentation and Record Keeping	4	Wyoming

In addition to the five lead state presentations, the ITD presented on its use of technology and innovations in reconstruction of a local bridge. A facilitated open session covered 'Other Regional Priorities' including such topics as project closeout timelines, minimizing impacts from utility work, use of liquidated damages to motivate earlier start times based on notice to proceed, and construction safety. Participants discussed the important issues and challenges, potential solutions, and construction practices that show potential benefit to agencies and contractors.

The following section highlights findings and summarizes the Peer Exchange discussions for the ITD host state presentation, the five exchange topics, and the 'Other Regional Priorities' session. To promote further networking and information sharing, a roster of participants along with contact information is included as an appendix.

2 Ideas for Implementation – Key Takeaways from the Peer Exchange

The Peer Exchange produced several relevant and practical 'takeaways' identified by the group roundtable discussions. The following sections address 15 items that were highlighted by the group as practices that hold promise for future implementation within the States' construction programs. Web site links are provided for some of the practices currently in use by the northwest States, while other documents are posted to the ftp site for download along with the presentations.

Agenda Topic #1: Using Innovative Methods to Resolve Contract Claims and Disputes

1. Dispute Resolution Board (DRB) for Early Advice and to Settle Claims

A number of States use DRBs when a claim cannot be settled at the project or district level. Agencies can set up DRBs (especially on larger projects) where the team members visit the project at various times – gathering information, making recommendations, and staying current on project activities. On smaller projects the DRB can be “on call” for when claims arise. Costs for this activity are generally shared by the contractor and the DOT. Because of the cost, DRBs are typically used more often on larger, more costly projects. Though, regardless of project size, DRBs have been beneficial in settling many claims without the need for litigation. Members of the DRB are often former contractors, city engineers, DOT personnel, and attorneys.

Additional information on different States' approaches to using a DRB can be found below:

Alaska Special Provision for Design-Build – DRBs

http://www.dot.alaska.gov/comm/assets/DB/AppH_SpecialProvisions_rev1.pdf

Idaho Dispute Review Board Information

<http://apps.itd.idaho.gov/apps/DRBRoster/default.aspx>

Oregon Alternative Dispute Resolution Program

http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/pages/adr_program.aspx

2. Early and Aggressive Management of Claims using Formal 'Notice of Intent' (NOI) Procedure

As field staff seek to resolve issues and avoid conflict, appropriate notification of potential contract claims can be delayed rather than occurring early when they should. Contractors may not be submitting all the information required. To alleviate this issue, the North Dakota DOT developed a form for use immediately after an occurrence for which a contractor anticipates a claim. With positive notification, the DOT can then begin taking action on the claim and settle it in a timely manner. With the notice of intent, both the contractor and the DOT inspection staff keep more detailed records on related work and daily progress on all activities related to the potential claim. The additional recording keeping may be similar to that of force account work.

Additional information on North Dakota's approach to NOIs can be found below:

North Dakota Notice of Intent to File a Claim Form

<https://www.dot.nd.gov/forms/sfn16743.pdf>

3. Use of Warranties to Settle 'Materials Out of Specification' Claims

When contract materials do not meet the specifications, they can be removed and replaced at the contractor's expense. The DOT can also resolve this by accepting a reduced payment and leaving the materials in place, in which case the DOT may incur extra maintenance costs in the future. If a major dispute arises over the issue it can lead to litigation. A third way to settle this issue is for the contractor to provide a long term warranty. The use of a long term warranty in these cases has not been used extensively across the Nation. Nebraska and South Dakota reported they have done so in rare cases only involving out of specification materials. Such warranty agreements must include details on potential issues and how to resolve these issues arising during the warranty period. The use of a warranty in these cases has a potential drawback as many unknown issues could arise. This idea can be used as an alternate to settling out of specification material issues.

Additional information on South Dakota's Warranty Agreement for PCC Repair can be found on the ftp site.

Idaho Warranty Seal Coat Evaluation Guide

<http://www.itd.idaho.gov/design/contractors/Seal%20Coat%20Warranty.pdf>

4. Requiring a Formal and Timely Claims Procedure

When project claims occur, the contractor must be knowledgeable of the claims process and understand how and through what channels the claim must be presented. It is important that claims procedures are correctly followed; therefore, detailed procedures should be included in Section 100 of a DOT's standard specifications. Oregon presented its revised procedures developed with input from the contracting industry. The procedures include information on how claims of varying dollar ranges are handled (e.g., a \$10,000 claim will be handled differently than a \$100,000 claim) and what type of claim will be submitted.

Additional information on Oregon's approach can be found below:

Oregon Alternative Dispute Resolution Program

http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/pages/adr_program.aspx

Oregon Standard Specifications – see Section 00199 - Disagreements, Protests and Claims

http://www.oregon.gov/ODOT/HWY/SPECS/docs/08book/08_00100.pdf

5. Expert Constructability Review

Projects can benefit significantly from constructability reviews during the design phase. Such reviews make it possible for agencies both to identify early any potential construction challenges, and to facilitate contractor input, resulting in improved overall designs. WSDOT is one State that has a standing structures committee that discusses ideas for project constructability. This committee includes consulting engineers and reviews potential issues with pre-cast plants, sequencing, equipment size, access, drainage, and other potential constructability issues. This process can reduce the potential for future claims during construction.

Additional information on WSDOT's approach can be found below:

WSDOT/AGC Structures Constructability Review Checklist
<http://www.wsdot.wa.gov/NR/rdonlyres/BB11517C-4FD8-47DC-B0BE-FDAAC9CB447E/0/DesignReviewChecklist.pdf>

Agenda Topic #2: Establishing Project Staffing Qualifications – Adequate Experience, Training, and Certification

6. Mentoring Newer Inspectors

All DOTs are facing staffing reductions, and the inspection forces left in place are being required to perform more complex tasks. Many DOTs are forecasting a large turnover in staff because of retirements (up to 50 percent within the next 5 years), thus the need for workforce planning to maintain expertise within the agency. To worsen the situation, contractors also have experienced a high rate of turnover in their work force. Experience is gained primarily through on the job training, with knowledge being passed on by more experienced staff. Idaho sends more experienced inspectors to multiple projects to allow sharing of experiences with the newer inspectors. With the experienced inspectors serving as mentors to new inspectors, the learning time is reduced as they help ensure quality workmanship and provide reasoning and historical perspectives on why decisions are made certain ways. While this approach does not replace actual on hands experience, it provides more background and allows for enhanced learning and training. Oregon also has experienced inspectors who work for the headquarters Construction Section that provide training and also visit projects at critical times to assist less experienced inspectors.

Additional information on Idaho's approach can be found below (while designed for EITs, this concept could be applied by interested States to inspection mentoring programs as well):

Idaho Engineer-in-Training Manual – Mentoring Program
http://itd.idaho.gov/eit/pdf/EIT_MANUAL.pdf

Agenda Topic #3: Assessing Inspection Levels of Effort with Risk-Based Processes

7. Shifting Responsibility to the Contractor to Perform Quality Assurance

Because of reduction in staff, DOTs are shifting some inspection and testing work to contractors, while making sure the DOT performs adequate oversight and remains in responsible charge. Much of this transition began in the general area of QC testing for materials. With the contractor performing QC testing and the DOT following with an assurance test, some states are allowing the contractor to perform extra tests which can be used by the DOT as the assurance test. When these extra tests are performed, the DOT does check that the tests procedures are performed correctly. The assurance tests performed by the contractors testing personnel still must be verified with the results of the contractors QC testing. The procedure is the same – the only difference is who performs the assurance test.

Additional information on South Dakota’s Contractor Project Ownership Checklists can be found on the ftp site along with the peer exchange presentations.

8. Making the Contractor Responsible for the Preconstruction Conference

For many years the DOT has set up and controlled the agenda of the preconstruction conference; however, South Dakota has shifted the responsibility for organizing and conducting the preconstruction conference to the contractor. The contractor develops the agenda with consideration to the construction work to be accomplished in the field. In prior years the preconstruction conference centered on issues such as EEO, DBE, labor, and administrative issues, but these items are now being addressed in advance of the preconstruction conference via telephone and with forms developed by the SDDOT to address those issues.

Additional information on South Dakota’s approach can be found below:

See South Dakota Special Provision for Contractor Administered Preconstruction Meeting
<http://www.sddot.com/business/contractors/docs/Precon/ContractorAdminPrecon.pdf>

See South Dakota Authorization Form for Preconstruction Meeting
<http://www.sddot.com/business/contractors/docs/Precon/DOT270AuthorizationFormForPreconstructionMeeting.pdf>

Additional information on South Dakota’s preconstruction conference approach can be found on the ftp site along with the peer exchange presentations.

9. Use of Lump Sum Bid/Pay Items

Lump sum bid items are often used in design-build projects, and the practice is becoming more common on design-bid-build projects as well. Some DOTs, such as Washington DOT and South Dakota DOT have considered or are using lump sum bid items to reduce the amount of time required to measure and pay for completed work while still maintaining a quality end product. The lump sum process works well on specific types of items, but does not work for all bid items. For example, fencing is an item where lump sum bid/pay – as opposed to payment by the linear foot – may work well. Though, this does not necessarily reduce inspection needs.

Additional information on using lump sum bid/pay can be found below:

FHWA Alternative Payment and Progress Reporting Methods

<http://fhwainter.fhwa.dot.gov/programadmin/contracts/etgpayment.cfm>

10. Prequalification of Contractors

Most DOTs perform some type of contractor prequalification. States that do not have formal prequalification depend on the bonding company to help approve contractors. Every DOT that performs prequalification has different rules and requirements, but, in general, DOTs believe the benefit of prequalification lies in getting the contractor's attention if there are problems with the quality of work. Contractors believe prequalification may keep them from having to bid against "fly-by-night" contractors and helps level the playing field. The States discussed the parameters that should be used to evaluate contractors. The parameters often include current and historical financial information, but DOTs also find benefit in focusing on experience, quality, and timely completion in prequalifying contractors.

Additional information on Oregon's approach to contractor prequalification can be found below:

Oregon Prequalification Form

<http://www.oregon.gov/ODOT/CS/CONSTRUCTION/Pages/Prequalification.aspx>

Oregon Contractor Evaluation Form

ftp://ftp.odot.state.or.us/techserv/construction/Construction%20Forms/2884_Instructions.pdf

11. Risk-based Inspection

Reducing or streamlining inspections may be important in optimizing resource use, especially as agencies reduce staffing levels to match budget limitations. All items covered by standard specifications are important, though conducting inspections on some project activities on a typical inspection list may be less critical to safety or performance than others. Making a decision inspecting items that may have greater potential to impact key performance metrics is known as risk-based inspection for construction.

Materials testing is an area where risk-based assessment may provide benefits without sacrificing quality. In 2010, WSDOT performed a study on materials risk analysis which resulted in reduced testing for some items and increased visual inspection of others. This practice may prove more complicated for construction where deficiencies in workmanship are the concern as opposed to the statistical tests for materials as to whether they meet the specification. These are decisions that must be made individually by each DOT.

A change in the way inspection is performed can have a positive effect on the use of inspection forces. The DOT may take a more risk-based approach, limiting their detailed inspection to certain hold points, allowing contractors to work at the risk of having to redo work that does not meet the standard specifications. In general, this change has improved the industry as contractors have taken greater ownership of workmanship and material quality. Based on design-build project experiences, contractors indicated they can provide both QC and acceptance inspection and testing at a lower cost. Contractors have reduced inspection and testing costs by scheduling inspections at predetermined points on the construction timeline (such as checking reinforcing steel placement before placing concrete rather than watching the reinforcing steel actually being placed. When the contractor reaches a hold point, the DOT is notified and inspection is performed. This allows the DOT inspector to be involved in more activities and optimize resources. The hold points must be established as part of the standard specifications.

Additional information on WSDOT's report can be found below:

Washington Research Report on Materials Risk Analysis
<http://www.wsdot.wa.gov/research/reports/fullreports/745.1.pdf>

12. Traffic Control Evaluation

Some States have a daily penalty rate until a correction is made to an identified and documented improper traffic control setup. Idaho has a process in which a DOT employee covers all traffic control situations in the region, both monitoring outcomes and looking at the quality of the traffic control in place. The ITD has developed a rating index to obtain uniformity and plans to add a form for verification. Because the inspector is not assigned to a specific project, his observations are not biased toward that project.

Additional information Idaho's approach can be found below:

Idaho Work Zone Safety and Mobility Program
<https://itd.idaho.gov/highways/docs/Work%20Zone%20Safety%20and%20Mobility%20Program.pdf>

Agenda Topic #4: Utilizing Contractor's QC Most Effectively

13. Shifting Source Documentation from the DOT to the Contractor

Historically, DOTs have required source documentation for all items such as material or soil quantities. DOT inspectors take load tickets as materials are placed to provide for source documentation for quantity of material used on a project. DOTs may also consider allowing the contractor to collect tickets and provide summaries certifying the quantities for efficiency. A QC/QA plan with daily work reports is necessary to implement this practice, so that the DOT can provide adequate oversight. The contractor would also need to follow the construction manual requirements for inspection that would otherwise be performed by DOT personnel. The use of new equipment and methods to verify results could help with implementing this practice.

An example of South Dakota's standard notes and requirements for Contractor material checking and weight ticketing can be found on the ftp site.

Agenda Topic #5: Implementing the Digital Jobsite

14. Electronic Signatures – For Bidding, Record Keeping and Document Approvals

Several DOTs have focused on contract record keeping and documentation in early efforts to transition to the digital jobsite. Electronic document approval requires certified and traceable electronic signatures. Individual States have different regulations on the use and validity of electronic signatures with each DOT facing a variety of potential issues. Depending on state policy, some DOTs still maintain hard copy processes so as not to preclude any contractors due to their inability to meet electronic submission requirements (which might be caused by limited staff to perform these duties).

Some DOTs require electronic submittal of DBE information with the bid, while others are allowing submittals to be made within a pre-determined time period after the letting. North Dakota mandates electronic bidding with an outside bid service provider whom they worked with to customize a DBE folder (a blank form) where a bidder can list the DBE contractors and the dollar amount of work that they intend to use on a given project and submit that information with the electronic bid. The information provided in the folder at bid time is limited and all DBE information required can be submitted after the bid if preferred.

15. Software and Digital Device Applications

Some digital device applications for projects include:

- One State's pilot program shifted responsibility for as-built plans to the contractor. The contractor delivers electronic design files back to the DOT.
- One State implemented Windows-based tablets for inspection documentation.
- Contractors and DOTs have used multiple hardware sources, the latest being the iPad. There are concerns about the ruggedness of the devices due to conditions in the field.
- Some States are looking to a web-based system for electronic documentation.
- SiteManager is a contract administration tool used by a number of DOTs. There are a number of other tools being used by States for electronic documentation to supplement SiteManager.
- Electronic plan review is also a component of the digital jobsite that may be beneficial for agencies. Some States are using a software tool for electronic plan review.
- There is a shared review component within Adobe Acrobat that is being used in some DOTs. This appears to be taking care of version control issues with multiple personnel reviewing the same document at the same time.
- States are using 3D models and automated machine guidance (AMG) for construction efficiencies.

Additional information on Wyoming's AMG Specification can be found on the ftp site along with the peer exchange presentations.

Other Regional Priorities

In this session, the northwest States discussed several topics that they ranked as highest priorities outside of the established peer exchange agenda. Topics included project closeout timelines, minimizing impacts from utility work, use of liquidated damages to motivate earlier start times based on notice to proceed, and construction safety. The group discussed:

- Utility coordination challenges and anticipation of other issues such as higher than expected pavement impacts from subsurface investigation;
- How to quantify damages on a project so that accountability exists in a fair manner;
- Practices for releasing retainage and making final payments in a timely manner; and
- Decision-making practices for use of construction zone safety devices such as positive protection.

3 Appendix A – Peer Exchange Discussion Notes

This section provides additional notes following the organization of the agenda. The full agenda for the Peer Exchange is included as an appendix to this document, along with a roster of participants with contact information for each participant. This report is designed to facilitate additional networking and discussion on the topics summarized from the event.

After Idaho’s Host Agency Presentation, each discussion session that followed the presentations covered the questions below and the following notes are structured similarly.

- What other innovative practices (related to this topic) have you used?
- What are some of the challenges associated with expanding use?
- What actions can be taken to further implementation?

3.1 Host Agency Presentation – Johnson Creek Bridge Project

Dan Gorley with the Idaho Transportation Department presented on a local bridge rehabilitation project. He shared information on hydraulic issues with the bridge and scour on the footings that led to the need for replacement of the bridge. A challenge included environmental issues that created a situation where no work could be performed in the water. The bridge also could not be closed to traffic which provided for additional challenges. The contractor proposed an alternate solution for the bridge but it was determined that ITD code would best be followed using the original design. The contractor also proposed to cast the bridge in place as opposed to pre-fabrication of the bridge elements. Once construction began, additional environmental issues slowed progress by several weeks until it was determined that no local wildlife would be harmed by the construction activities. The Prefab Bridge Elements (PBES) lowered the environmental risk on site. A pre-construction meeting to discuss the design decisions helped increase communication across all parties involved.

Q&A

How does cost compare between pre-fab? 20-30% premium on pre-cast items.

During design, environmental collaboration – did construction industry get involved in process? The district handled most of the environmental process.

Was contractor still able to complete by the original completion date? The primary highway had a county construction project underway and haul routes had to be modified which increased costs – 2 or 3 days liquidated damages.

With so many constructability issues, would any contractors have become involved earlier if the process involved more construction input pre-bid? During design, ITD worked with pre-cast plants to get girders in for transportation to the site. ITD also worked with crane companies to make sure constructability issues were covered. Quality was an issue on some of the alternate approaches offered.

Given challenges such as remoteness of the area and environmental issues, would this be a good candidate project to bring contractor on board earlier during design process like with CMGC? New tools are legally available to ITD now that were not available when this project started – the first CMGC project will be in 2015.

WSDOT has a standing structures committee that discusses ideas for projects – consulting engineers, pre-cast plants, sequencing, sizes, access, etc. ITD does not prequalify contractors.

3.2 Topic 1: Using Innovative Methods to Resolve Contract Claims and Disputes

10:15am - 10:45am	Exchange Topic #1: Using Innovative Methods to Resolve Contract Claims and Disputes <ul style="list-style-type: none"> • ODOT's Claims Resolution Process 	Jeff Gower, Oregon DOT
10:45am - 11:45am	Participant Roundtable Discussion of Exchange Topic #1	Facilitator - John Ingram, Idaho Transportation Department

Jeff Gower with Oregon DOT presented on practices in Oregon that are designed to avoid claims before they happen, including partnering, the specification process, the existing claims process, data uses, and upcoming changes to these processes. One such practice involves monthly meetings with the Associated General Contractors and the director of the DOT. The prequalification focuses on the type of work being done and the ability of the contractor to perform the work. Financial information has been removed from the prequalification process. Measures are used to evaluate past performance and a failing score in any area can result in a corrective action plan to help contractors improve as a primary goal. The DOT also has a streamlined escalation process to help resolve disputes quickly.

Links to ODOT specifications are provided in the takeaways.

Q&A

Are consultants such as through the American Council of Engineering Companies (ACEC) invited as part of those meetings? Yes, the DOT has representatives from the consulting community included in monthly meetings as well.

Do the statistics include information claims that might be brought to a project manager? That information is not included in the summary data – only formal claims.

Claim can be thrown out if contractor doesn't submit required information – do you have the ability to audit information from the contractor? ODOT has used this process and audits have helped make changes to the process.

Do you use inside council from the attorney general's office to file litigation? Yes. Also mediation generally occurs as part of the litigation process.

Do you ever deal with false claims? ODOT had one claim where illegal activity was occurring but the contractor is no longer in business because of it. DOJ did not like the term “partnering”.

As part of the online submittal – if an entity suggests a change does everyone see it? It goes to the specification unit and is shared with the appropriate groups within the DOT.

What would be typical timeframe for claim review? It sometimes takes 6 months but 3 months would likely be the fastest that would be allowed by the procurement process.

Discussion: Alaska and Idaho and North Dakota use DRBs to evaluate claims. DRBs tend to have high cost and are labor intensive to set up. On larger dollar value projects they are more economical.

Idaho has a three member board with a prequalified list of potential candidates and names are randomly selected for it. The group will visit the project regularly and there is an on-site process for when a dispute arises.

CTR – Idaho’s DRBs are very valuable and provide an outlet to a fair judgment. Many disputes are settled within the DRB process and very few are submitted via formal process to the RE or higher levels within the DOT. The DRB is a shared expense and is bid as a line item.

Washington DOT has a similar process to ITDs with selection of a small group for the DRB. ITD includes a contingency amount in contracts to help cover cost of the DRB.

South Dakota DOT – does the pool of members for DRBs include all local personnel? There is a list maintained by ITD – may be former contractors, city engineers, other DOT personnel, and attorneys.

Is an evaluation of the DRB performed after the fact? This might be a process that shows useful information.

North Dakota has a notice of intent form – if a contractor intends to file a claim, they will need to file written notice on the form within 10 days of the occurrence. This also includes acknowledgement of receipt of the information by the DOT. This has helped in dealing with these issues.

South Dakota has a similar form but has issues with enforcing the timeline. Something may happen that affects the rest of the project but the claim may not come in until later. Realistically, this is an issue because it may not be fair to not consider a claim because of the timeline and circumstances. Claim information should be specific to the information provided in the notice.

Binding arbitration occurs after a claim is denied due to a contractor not following the process. Early resolution is important – the process outlined here may allow for denial of claims but may require more work later to resolve and may lead to litigation. In Idaho, there is no form but there has to be notice of intent ahead of a claim. Practice has shown that the arbitration process resolution is typically based on whether or not the process was followed.

Would this process not increase the number of claim form submittals if a hard line stance is taken on timing? CTR – multiple forms would be submitted with short duration timeline requirements for projects if that practice was more widespread. Jobsite progress meetings also help resolve project issues – weekly meetings also help.

Does claim submittal come up in the process for prequalification? Oregon DOT does not use this information. In Idaho, design-build processes include past performance questionnaires. Discussion ensued on whether or not to include claims information from past projects. ITD decided not to use this information as part of the process.

The prequalification process in South Dakota does not include claims information. Often, claims are legitimate requests for compensation for work performed that are easily resolved. Contractors working for private developers also must provide information on claims history as part of the qualification process.

Nebraska does not have a formalized process but uses warranties on projects where they include in the agreement how to resolve issues that might arise during the warranty period. The warranty period is being explored and evaluated but is currently planned for 10 years.

South Dakota also uses warranties and the agreement spells out the requirements. This can be shared with the other states for use.

Mediation is a useful tool if the claim is about a legal aspect of a contract as opposed to something construction or workmanship related. Idaho uses this practice.

Fixed cost items in the contract can also help minimize disputes (e.g. saw cutting for curbs, water for grading activities and how much will be needed, etc.).

Do agencies use unilateral change orders in the claims process for payment? Several States use this process. Contractors are not signing away rights to a claim by using this process. Including labor time makes this process more complicated because of overhead rates. Idaho has a 2012 specification (10903D) that outlines exactly what will be paid for home office overhead.

South Dakota provides the option of submitting information on how home office overhead is calculated or a percentage can be included. Often the percentage option will be taken.

3.3 Topic 2: Establishing Project Staffing Qualifications – Adequate Experience, Training, and Certification

1:00pm – 1:30pm	Exchange Topic #2: Establishing Project Staffing Qualifications - adequate experience, training and certification <ul style="list-style-type: none"> ITD Staffing Practices 	Frances Hood, Idaho Transportation Department
1:30pm – 2:30pm	Participant Roundtable Discussion of Exchange Topic #2	Facilitator – Jason Humphrey, South Dakota DOT

Fran Hood with the Idaho Department of Transportation presented on qualification requirements for inspection staff. Data from a recent survey of State agencies showed that nearly two-thirds of agencies require inspector qualifications. The survey also covered the strategies in use to ensure that staff members are adequately trained, as reported by agencies. ITD, in collaboration with the FHWA Idaho Division, developed an inspector qualification program concurrent with development of the sampler and tester program. Inspectors must be qualified by topic or practice area for each inspection activity.

The presentation also discussed some AASHTO Subcommittee on Construction activities. NCHRP 10-89 “Best Practices Guidebook for Optimal Construction Inspection” is currently underway and will include best practices being used.

Q&A

Q: Do you have a database system for tracking certifications for use on projects?

A: Yes, a commercial off the shelf product is used to track completed training.

Q: Do you allow consultants to be trained through this program?

A: Because the training is in-house, participants know the process and the training considers a basic knowledge for participants.

FHWA offers Federal Aid Essentials for Local Public Agencies as training modules for LPAs that cover more than 80 topics. TCCC materials are also consulted and utilized.

Q: Are material sampling/testing requirements separate or part of the inspection program?

A: They are separate; you can be qualified in sampling/testing without being qualified in inspection.

RE's are in responsible charge for the project but work closely with consultants. Idaho requires a quality assurance plan for design-build projects. ITD has handed resident office manager functions off to the contractor – they put together daily work reports, equipment sheets, etc. ITD is doing more quality assurance oversight.

Q: How many people outside the DOT will be certified through the ITD process?

A: Anyone who gets a contract pays to take the test for certification. ITD has trainers and provides proctors for tests.

For larger jobs, a consultant surveyor will work on behalf of ITD for quantities measurement.

Nebraska – inspector certification program is in the early stages of development.

Oregon – inspector certification program is similar to ITDs. Oregon allows for interested people external to the DOT to take training at a cost. South Dakota also has the same – certification is required prior to working. After four years, an inspector in South Dakota can test out of several topics based on field experience. FHWA Division Office staff will also take advantage of this training program.

Contractor – staff members have been sent to DOT training and it makes a difference when working on future projects.

Failures seem to arise because of missed inspection issues. Workmanship issues may create the greatest weaknesses in construction.

Contractor – generally do not run into issues with workmanship due to inspection. Expense to a contractor for inspectors can be very large because of a specification interpretation on the part of an inspector that causes an issue. The situation improves each year as the knowledge is shared among parties involved.

South Dakota sends personnel out to the field for training early on in their career.

North Dakota – uses a rotational training program that all engineers enter into. It has two levels – one is a two-year program while the other is six-months. This allows sharing of information on project responsibilities by group. North Dakota DOT is outsourcing 50-60% of work to consultants. North Dakota State University is developing training for inspection and construction oversight (2 ½ day course). They are also considering certifying consultants for inspection work.

How are others evaluating experience? South Dakota has consultants that are looking for the work but need to be certified. Often there will need to be experience in order to be certified. This is a challenge.

Consultants need but may not have a process for internal training for newly hired engineers and inspectors. This is needed to provide training and pass knowledge to new employees.

More experienced inspectors are sent to multiple projects because of concerns with losing expertise – these personnel can serve as a mentor to help ensure quality and workmanship. Oregon has a similar practice and they use these qualified personnel to teach others. Also, some use a consultant evaluation form for those that perform construction engineering – the evaluation is for the firm not the person.

New inspectors in Idaho work directly with an experienced person and are mentored as part of their training. This mitigates the issue of having an expense due to an oversight by an inspector.

Recruiting early and getting additional personnel into the construction industry to cover retirements is important to ensure continuity of knowledge and experience.

What programs do States have to recruit? Nebraska recruits interns to work in design. Washington State promotes careers through fairs and other venues at local schools to get involved in early education programs. Literature is available on this program. North Dakota has a retired engineer that runs a program to get students interested early in engineering through demonstrations and discussions.

AGC has been very active in promoting highway industry jobs to potential applicants. The construction industry has a definite cycle with lulls in the off season and it is difficult to get people back after they leave companies or agencies. Need to identify techniques to get others interested in various activities. Job fair flyers and other literature is something we can share with other states.

3.4 Topic 3: Assessing Inspection Levels of Effort with Risk-Based Processes

2:45pm – 3:15pm	Exchange Topic #3: Assessing Inspection Levels of Effort with Risk-Based Processes • Construction Project Checklists	Tammy Williams, South Dakota DOT
3:15pm – 4:15pm	Participant Roundtable Discussion of Exchange Topic #3	Facilitator – Cal Gendreau, North Dakota DOT

Tammy Williams from South Dakota DOT presented on Contractor Project ownership and joint process improvements with AGC. The checklists are used as part of this process and capture knowledge and experience of the contracting industry and the DOT as a tool for training the workforce. SDDOT also presented on new procedures for preconstruction meetings, which SDDOT has traditionally led but

contractors will lead them in the future. There is a need to have more focus on direct construction details and potential issues during these preconstruction meetings.

Q: Is the new process being used to help with project closeout?

A: No, this is a new process that has not been in place long.

Q: Did design staff members put together these checklists?

A: No, construction staff developed the information.

Q: When are utility issues addressed including relocation?

A: That is addressed at the preconstruction meeting.

Discussion:

Can you inspect end quality as a result of project checklists? Can we reduce some of our inspection levels of effort? This affects staffing needs.

A few States use a risk-based process for inspection, but most do not use it routinely. Training is needed for how to apply this practice.

Arizona uses "Quantlists" that prioritize the key items (high, medium, and low) for inspectors to focus on.

Surveying, utility problems, and others have been identified as higher risk items that need potentially more focus than others.

Risk based inspection on projects often occurs informally – the items are not documented. The important items must be covered or there will potentially be issues that arise. There is concern that this is not happening because it is not quantified.

Have States looked at classification of highway as a consideration for the types of inspection activities?

North Dakota is looking at not inspecting chip seal projects but looking to quality assurance after the project is complete. Also with pavement markings in a similar fashion, as it is a fairly low risk item. Idaho inspects pavement markings based on warranty. When failures occur, it is difficult to determine that the reason was due to the original project installation. Seal coat warranties are used and the failures are low now. Whether or not inspectors follow the striping operations depends on priorities and availability of staff.

Performance specifications are more risk based in allowing for various methods to be used that transfer risk to the contractor. Washington State DOT is going to performance based specifications for use on projects.

Design-build projects often use contractor QC. Projects are contractor inspected and certified to meet design requirements on many projects.

North Dakota provided flagger instructor training to AGC, who then trains and certifies flaggers in the State. This train-the-trainer model might apply to testing and certification of project material quantities, with haul summaries and a check against tickets.

Are States using cameras as part of their inspection process? For design-build, daily progress reports have a certification statement that all information is true and accurate.

Inspection models for building construction are on an “on call” or timed basis. This might apply to highway projects in that inspection activities could also be on a milestone basis for higher risk items.

Risk assessment in materials – use of non-structural concrete and non-structural pavements where contractors can provide samples to ensure that specifications are met. Washington State has a materials risk analysis process for acceptance or certification or visual acceptance that is available online. WSDOT dropped several items from inspection lists based on this analysis. For materials, this process works well – it may not work so well for construction where a deficiency is the concern as opposed to the statistical test for whether or not the material sample meets the specification.

When a project is completed, a performance bond is released. After that point, a warranty would apply.

Some agencies are progressing toward lump sum bid items to simplify final payments.

3.5 Topic 4: Utilizing Contractor’s QC Most Effectively

8:30am – 9:00am	Exchange Topic #4: Utilizing the Contractor’s QC Most Effectively <ul style="list-style-type: none">Western Federal Lands Quality Control Specification	Jim Rathke, FHWA Western Federal Lands
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Jim Rathke from FHWA’s Western Federal Lands Highway Division presented on contractor quality control and use of this information by project owners. This has occurred because of the need for quality as a priority with the people building the project. The presentation focused on the requirements from the Federal Acquisition Regulations (FAR) on inspection requirements and included information on nine contractor QC functions.

Q&A

Q: Do the contractor responsibilities include materials tests and QC both?

A: Yes, contractor is responsible for materials tests and submits results as part of QC documentation. Contractor also fills out contractor QC report.

Q: How do you address measurement of work with having inspectors on the project less?

A: FHWA verifies tickets for aggregate, contractor turns in pay notes, and inspectors verify pay notes and check in the field for verification.

Q: Are you using more GPS rovers for checks?

A: Yes, specifications are being adjusted and contract modifications are written to handle use.

Q: How is this included in projects?

A: Contractor bids QC as a line item in the contract.

Q: Do you use consultants for the QC work?

A: It can be through consultants – expectation is that the QC can stop the project if something is not correct.

Q: Do you have internal procedures for minimum requirements for verification of the contractor's inspection?

A: Take a split sample of test strip and run verification on the sample. 153 specification for contractor quality control.

Q: How does 80/20 get incorporated?

A: FHWA can inspect and have sample taken any time. Samples are kept until the project is over even if it is not tested immediately. All FHWA tests are quality assurance. FHWA may inspect 100% of the time if a contractor has consistently had issues.

Training can also be provided for contractor staff on this process at FHWA WFL.

Discussion:

Oregon and Washington are using contractor QC (some elements) for materials. Some agencies use their own QC data instead of contractor's QC.

Nebraska is beginning to transition into a QC program for concrete pavements. The idea is to model Superpave system where aggregates are controlled.

Wyoming has a structural concrete specification that incorporates a pay value for strength using contractor data.

South Dakota is using QC for asphalt pavements – need to see benefit of QC for concrete pavements.

Idaho uses design-build project as a pilot to start moving toward this practice. QA special provision for design-build requires QC/QA plan with daily work reports to shift responsibility to contractor. Required to follow construction manual with same types of requirements for inspection – contractor is required to follow same processes as would be used under a low bid project.

WSDOT checks workmanship consistently by checking QA inspector and ensuring they know to look at the right things. Quality management plans are used by the contractor and quality verification is performed by the DOT.

Oregon has a design-build practice for contractor QC similar to Washington State. Nebraska is not allowed by statute to use design-build contracts. A challenge exists in design-bid-build compared with design-build in allowing contractor QC given that engineering is on the other side of the table in design-build.

Idaho has the contractor survey to measure quantities so that they are stamped by a licensed surveyor. Some resident engineers may spot check measurements.

Design-build projects are lump sum so quantity payments are not an issue.

The dialogue may need to be about what an adequate level of inspection is, given that staffing levels are lower than they used to be and resources are not available in the same way as they have been in the past. We have to trust people in the field to understand what is happening daily and what the immediate concerns are for risk. They can then prioritize their activities and what to focus on.

North Dakota – challenge is in how to know material came to one project based on control of the source documents. WFL requires contractor to include specific details on the tickets they fill out about location, truck number, etc.

South Dakota – contractor takes tickets and provides a daily report of activity. WSDOT changed method of payment from tickets by the ton to by the mile which incentivized the contractor and eliminated the need for tickets. The State is also trending to lump sum and plan quantities for payments.

WSDOT uses thermal imaging for drilled shafts to look for anomalies. University of Florida has performed research and developed software that can be used for this activity.

Resistance to new technologies such as intelligent compaction may be due to lack of standards. These technologies could be used for acceptance.

Are any states incentivizing use of QC data by contractors? WSDOT places incentives on the contractor in design-build processes. Incentives may be in the range of 0.5%.

Do States require contractors to have a QC/QA program as part of prequalification requirements? North Dakota requires a QC plan to be submitted at the pre-bid meeting.

Idaho is using ground penetrating radar for concrete pavement depths – some have used this technology for compaction. Also thermal differentials, speed of paver, and temperatures are measured on a trial basis in Idaho using thermal imaging cameras (MOBA) behind pavers.

Maturity meters and remotely monitored survey instruments (information via web for movements on a slope face) are also being used by contractors in Washington State. Also a tool to identify the location and orientation of dowel bars has been used.

3.6 Other Regional Priorities - Ideas for Implementation (open session)

10:15am - 11:45am	Discussion on Other Regional Priorities (any topic)	Facilitator - Larry Christianson, SAIC
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Larry Christianson from SAIC facilitated this session, as the group brainstormed on topics that were of greatest interest to the group but not already covered in the agenda. The following sections highlight discussion notes for the topics selected.

Topics captured during brainstorming session:

- Performance measures, performance-based specifications, and MAP-21
- Consultant availability
- Safety
- Outsourcing versus in sourcing
- Assessing liquidated damages and motivating contractors for earlier starts based on award date
- More decentralized organizations
- Utility issues on projects and types of technologies used to minimize impacts
- How do utilities fall under environmental umbrella
- Project closeout – timeliness and final payment to contractor
- DBE requirements for fuel supply
- Asphalt and fuel escalation specifications and adjustments used (are they necessary)
- Delays related to railroad agreements
- Electronic signatures and acceptance of electronic files versus paper
- Public disclosure requests for information for projects

The group prioritized topics and discussed the top four as noted in the following sections.

Minimizing Impacts from Utility Work

If a utility company has to coordinate with a contractor the communication can often break down and there is interest in how utility impacts can be minimized.

ID – A good example is from a subsurface investigation the contractor created potholes all along a major arterial and ITD did not anticipate the extent of the utilities that were found. Normal practice would have been to assume all would have been relocated during construction but that would have created issues. A utility coordinator for projects can help clarify needs and potential issues. On another project with relocation during construction, a large claim was submitted due to utility delays. No subsurface utility investigation was conducted for this project. Utility groups have a monthly meeting and discuss coordination issues – they invite the State agency to this meeting. This was initiated by the utility groups.

SD – has an employee that coordinates directly with utilities. A utility coordination group also meets (DOT, utility, contractors) and discusses issues and roadblocks for each group. Contractors may not have been aware that it was their responsibility to coordinate with utilities, and utilities may not have been aware that the coordination was needed.

WY – implemented a plan reading course for utilities to provide training for providers. Advance notice and project schedule review has helped educate utilities.

Work zone training for utility companies is important also to ensure compliance with the MUTCD. Often the work duration will be shorter than the time required for proper traffic control.

North Dakota – a utility came forward and paid the extra costs for a portion of a project where a fix could be performed to minimize those impacts.

Some agencies pay for all utility relocation for projects. This is costly but allows better control of project schedules.

NHI updated the utility training and has a free web-based course with an instructor led component.

Specifications required a monthly utility meeting but contractor chose to have time set aside at a weekly meeting.

Liquidated Damages and Motivating Earlier Start Times after NTP

A best practice includes A+B bidding with liquidated damages as an incentive and disincentive.

Use of nested completion dates with the disincentive as a lane rental fee – traffic price adjustment specification.

South Dakota uses a substantial completion date (where traffic will no longer be impacted) and a full completion date – specification has liquidated damages for impacts. Punch list items are not construed to be a penalty. This is often based on traffic volume and user costs in addition to the liquidated damages rate.

Nebraska law does not allow the DOR to enforce penalties but can enforce damages. Showing damages is a challenge.

When EPA poses penalties they may be passed along to a contractor, but there must be documentation that shows the damages are based on something specific and documentation is required (such as for road user costs). Liquidated damages are based on State costs – if consultants are used this exceeds the basis and increases the costs.

Contractor – should be able to do a CPM schedule for every project no matter how small. Larger projects often are often easier to facilitate formal scheduling by the contractor.

Project Closeout Timelines

The time it takes to go through final quantity audits to make payments to others in a timely manner a challenge. In Oregon, the DOT releases retainage quarterly as bid items are completed.

The challenge in Idaho is that the material summary report needs to be developed and completed as early as possible to avoid delays later on.

South Dakota eliminates retainage to help allow contractor payments to be made faster. With a performance bond there may be no need for retainage. Also, a future project can have a collection from the same contractor if one is needed from a previous project.

Paperwork and documentation from contractors in a timely manner is needed to ensure faster project closeout.

Idaho recently started moving up final estimates – often the contractor has not supplied something to the tax commission that is required or final contract values do not match.

Construction Safety

Idaho commissioned a research project to develop guidelines for positive protection decision-making.

Construction safety training is needed – modules for personal protection and safety for staff (in addition to OSHA training). DOT responsibility is another challenge in that contractors are required to meet OSHA standards and requirements.

Use of safety rates to prequalify contractors? If contractors bring up an issue (such as traffic control) where they believe they need additional items how do States handle that?

In design-build projects, Idaho evaluates safety performance and rating of the contractor. Safety ratings may occur in the request for qualification stage of a project.

Washington State DOT adopted a contractor’s safety plan from a previous project on a statewide basis.

DOTs will pay for upgrades to traffic control that makes sense after award. Change order process may also handle the extra items.

Contractor – designated cell phone use areas on projects and a policy for separation of pedestrians and work vehicles. Also, class III high visibility apparel has been adopted by contractors for use all the time on projects. Daily kick-off meetings also occur on project sites where the DOT is invited to discuss planned activities for the day.

3.7 Topic 5: Implementing the Digital Jobsite

1:00pm - 1:30pm	<p>Exchange Topic #5: Implementing the Digital Jobsite</p> <ul style="list-style-type: none"> • WYDOT’s Electronic Documentation System (EDS) and GPS Modeling of Geopak Road Designs in Trimble Rovers 	Ken Keel and Charlie Bauer, Wyoming DOT
1:30pm - 2:30pm	Participant Roundtable Discussion of Exchange Topic #5	Facilitator - Jeff Carpenter, Washington DOT

Ken Keel and Charlie Bauer from Wyoming DOT gave a presentation on the State’s electronic documentation system and also on global positioning system modeling of road designs in rovers. A software vendor provided a resource for solutions to transitioning from paper plans to TIN models. New technologies have allowed for sure documentation in electronic form and these technologies measure quantities electronically. There are efficiencies with time and labor in using these electronic formats for documentation. Providing models to contractors is difficult in that some smaller contractors may want to use traditional staking practices.

Q: Do you use models in steel fabrication?

A: No, steel bridges are still designed using paper plans.

Q: Do you have an issue with providing model information to contractors?

A: GPS is not a requirement but is allowed as an option. WYDOT does not require use of various technologies in order to avoid precluding bidders.

Q: If contractors are going to build a model anyway would it not be best to have them build it off the DOT data?

A: There are challenges now with protocols for rovers and machines being able to recognize each other's data languages. The DOT does not have the staff to handle this issue.

Q: With subcontract approval, how do you handle verification that all federal aid requirements are incorporated?

A: They are certified and they will be able in the future to scan documents and send them through this system. If something is missing the DOT can send a message immediately back as notification.

Q: What kind of connectivity issues do you have?

A: Offices do have these issues where remote connection into offices is sometimes needed to provide assistance.

Discussion:

Electronic signatures are being used in some States, as they are figuring out which processes to apply it to and which vendor to go with.

If you have a digital signature it is more secure than a signature that has been notarized, do you need a notary? This is a challenge that States are working on.

Also want to be able to use electronic signatures for contracts and change orders to make the overall process more efficient.

Transitioning to digital from paper takes time and effort. Idaho is finding that about 75% of contractors are electronically savvy and open to ideas of using additional techniques within the digital jobsite for efficiency.

Some agencies use electronic bidding through a particular software vendor. This reduces costs to contractors in delivering a paper bid for a project.

South Dakota uses a fully automated bidding system and paper bids are not allowed. Networking with contractors during bid letting is something that is a trade off to the benefits of this process.

North Dakota has tailored some documentation through a proprietary software system to allow for DBE information to be included.

In one district in Idaho, the contractor is responsible for as-builts and the contractor delivers design files back to the DOT that were provided in electronic format originally from the DOT.

One state uses Windows based tablets for inspection documentation. Contractors have used multiple hardware sources, the latest being the iPad, and there are issues with the life of the devices based on field impacts.

XML is a language designed to allow for cross-format communication. Liability may be perceived but not necessary high risk based on sharing electronic models with contractors.

Varying CADD standards may be one reason why there is a hesitation to share CADD drawings – standards, reference files, etc.

District 2 in Idaho requires contractor to submit all files electronically. All correspondence and documentation is required to be submitted electronically.

Some states are looking to a web-based system for electronic documentation. SiteManager is a contract administration tool but is not an electronic documentation system. Electronic plan review is also something that may be beneficial for agencies to consider. Some States are using a software tool for electronic plan review. There is a shared review component within Adobe Acrobat that is being used. This takes care of version control issues with multiple reviews of documents.

4 Appendix B – Northwest CPN Peer Exchange Agenda

Day 1 Tuesday, July 9		Chris Schneider, FHWA (Moderator)
Time	Topic	Presenters / Facilitators
7:00am – 8:00am	Continental Breakfast	
8:00am – 8:30am	Welcoming Remarks	Jim Carpenter, Idaho Transportation Department Peter Hartman, FHWA – Idaho
8:30am – 8:45am	Self Introductions	All Participants
8:45am – 9:30am	Johnson Creek Bridge Project	Dan Gorley, ITD
9:30am – 10:00am	<ul style="list-style-type: none"> Summary of PI Tool Analysis & Results Peer Exchange Overview 	Tim Luttrell, SAIC Chris Schneider, FHWA
10:00am – 10:15am	Break	
10:15am – 10:45am	Exchange Topic #1: Using Innovative Methods to Resolve Contract Claims and Disputes <ul style="list-style-type: none"> ODOT’s Claims Resolution Process 	Jeff Gower, Oregon DOT
10:45am – 11:45am	Participant Roundtable Discussion of Exchange Topic #1	Facilitator – John Ingram, Idaho Transportation Department
11:45am – 1:00pm	Lunch	
1:00pm – 1:30pm	Exchange Topic #2: Establishing Project Staffing Qualifications - adequate experience, training and certification <ul style="list-style-type: none"> ITD Staffing Practices 	Frances Hood, Idaho Transportation Department
1:30pm – 2:30pm	Participant Roundtable Discussion of Exchange Topic #2	Facilitator – Jason Humphrey, South Dakota DOT
2:30pm – 2:45pm	Break	
2:45pm – 3:15pm	Exchange Topic #3: Assessing Inspection Levels of Effort with Risk-Based Processes <ul style="list-style-type: none"> Construction Project Checklists 	Tammy Williams, South Dakota DOT
3:15pm – 4:15pm	Participant Roundtable Discussion of Exchange Topic #3	Facilitator – Cal Gendreau, North Dakota DOT
4:15pm – 4:30pm	Discussion on Takeaways for Implementation	Dean Testa, Applied Pavement Technology
4:30pm	Adjourn	
Dinner on your own		

Day 2 – Wednesday, July 10		David Unkefer, FHWA (Moderator)
Time	Topic	Presenters / Facilitators
7:00am – 8:00am	Continental Breakfast	
8:00am – 8:30am	Recap of Day 1 Discussion – Challenges and Themes	Dean Testa, Applied Pavement Technology
8:30am – 9:00am	Exchange Topic #4: Utilizing the Contractor's QC Most Effectively <ul style="list-style-type: none"> Western Federal Lands Quality Control Specification 	Jim Rathke, FHWA Western Federal Lands
9:00am – 10:00am	Participant Roundtable Discussion of Exchange Topic #4	Facilitator – Andy Dearmont, Nebraska DOR
10:00am – 10:15am	Break	
10:15am – 11:45am	Discussion on Other Regional Priorities (any topic)	Facilitator – Larry Christianson, SAIC
11:45am – 1:00pm	Lunch	
1:00pm – 1:30pm	Exchange Topic #5: Implementing the Digital Jobsite <ul style="list-style-type: none"> WYDOT's Electronic Documentation System (EDS) and GPS Modeling of Geopak Road Designs in Trimble Rovers 	Ken Keel and Charlie Bauer, Wyoming DOT
1:30pm – 2:30pm	Participant Roundtable Discussion of Exchange Topic #5	Facilitator – Jeff Carpenter, Washington DOT
2:30pm – 2:45pm	Break	
2:45pm – 3:15pm	Discussion on Takeaways for Implementation	Dean Testa, Applied Pavement Technology
3:15pm – 3:30pm	Closing Remarks, Feedback on Peer Exchange, and Next Steps	Frances Hood, Idaho Transportation Department David Unkefer, FHWA
3:30pm	Adjourn	

5 Appendix C – Northwest CPN Peer Exchange Roster

Agency/Organization	Name	Position	Email Address
State Departments of Transportation			
Washington DOT	Jeff Carpenter	Director, Construction Division	carpenj@wsdot.wa.gov
Washington DOT	Dave Erickson	Construction Engineer	ericksd@wsdot.wa.gov
Montana DOT	Matt Strizich	Materials Engineer	mstrizich@mt.gov
Montana DOT	Lisa Durbin	Construction Administration Services Engineer	ldurbin@mt.gov
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North Dakota DOT	Cal Gendreau	Director of Construction Services	cgendrea@nd.gov
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Oregon DOT	Marjorie West	Region 1 Project Manager	marjorie.j.west@odot.state.or.us
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Idaho Transportation Department	Frances Hood	Design/Materials/Construction Engineer	frances.hood@itd.idaho.gov
Idaho Transportation Department	Shawna King	District 3 Resident Engineer	shawna.king@itd.idaho.gov
Idaho Transportation Department	Bryon Breen	District 3 Resident Engineer	bryon.breen@itd.idaho.gov
Idaho Transportation Department	James Orner	District 5 Resident Engineer	james.ornor@itd.idaho.gov
Idaho Transportation Department	Scott Malone	District 4 Engineering Manager	scott.malone@itd.idaho.gov
Idaho Transportation Department	Dan Gorley	Remote Prefabricated Elements and Systems Bridge Engineer	Dan.Gorley@itd.idaho.gov
Idaho Transportation Department	John Ingram	Construction Associate	john.ingram@itd.idaho.gov
Wyoming DOT	Ken Keel	Construction Staff Engineer	kenneth.keel@wyo.gov
Wyoming DOT	Charlie Bauer	Construction Staff Engineer	charlie.bauer@wyo.gov
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South Dakota DOT	Tammy Williams	Area Engineer	Tammy.williams@state.sd.us
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Alaska Department of Transportation	Frank Ganley	Engineer/Architect V	Frank.ganley@alaska.gov
Alaska Department of Transportation	Tom Dougherty	Engineer/Architect VI	Thomas.dougherty@alaska.gov
FHWA			
FHWA Washington Division	Susan Wimberly	Field Operations Team Leader	susan.wimberly@dot.gov

Agency/Organization	Name	Position	Email Address
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FHWA Nebraska Division	Jason Dietz	Field Operations Team Leader	jason.dietz@dot.gov
FHWA Nebraska Division	Nicholas Finch	Technical Services Team Leader	nick.finch@dot.gov
FHWA Alaska Division	Al Fletcher	Field Operations Engineer / Safety / Team Leader	al.fletcher@dot.gov
FHWA Western Federal Lands	Rich Barrows	Construction Engineer	rich.barrows@dot.gov
FHWA Western Federal Lands	Jim Rathke	Construction Operations Engineer	james.rathke@dot.gov
FHWA Headquarters	Bryan Cawley	Construction Management Team Leader	bryan.cawley@dot.gov
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FHWA Resource Center	Rob Elliott	CPM TST Manager	Rob.Elliott@dot.gov
FHWA Resource Center	David Unkefer	Construction & Project Management Engineer	david.unkefer@dot.gov
Contractors/Consultants			
AGC - BX Civil and Construction, Inc.	Dean Herll	Vice President, Construction	dpherll@bx-cc.com
AGC - Guy F. Atkinson Construction	Bob Adams	Regional Vice President	Bob.adams@atkn.com
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