

WAQTC QAC COMMITTEE MEETING MINUTES

LEADER: GARTH NEWMAN, ITD
FACILITATOR: DESNA BERGOLD, D B CONSULTING

DATE: JULY 18TH THROUGH 22ND, 2016
TIME: 1:00 TO 5:00 PM MON, 8:00 AM TO 5:00 PM TUES. THRU THUR., 8:00 AM TO 12:00 NOON FRI
LOCATION: VANCOUVER , WA

ATTENDING:
 GARTH NEWMAN, ITD, SEAN PARKER, ODOT, VICE
 CHAIR CHAIR
 DAN GETTMAN, AKDOT & GILBERT ARREDONDO, UDOT
 PF RANDY MAWDSLEY, WSDOT
 CHRISTOPHER P. RUSSELL, MEGAN CHATFIELD, WFL-FHWA
 CDOT KEVIN BURNS, WSDOT
 MISTY MINER, MDOT

ABSENT:
 BRIAN LEGAN, NMDOT

MEETING ITEMS:

REVIEWS OF AASHTO REVISIONS AND QAC PROPOSED REVISIONS FOR EACH PROCEDURE

1. Revisions to Embankment/Base and In-Place Density Field Operating Procedures
 - a. T 255/T 265, Moisture Content of Aggregate and Soil
 - i. Correction to FOP moisture content example calculation – Garth
 - ii. Adding Constant Mass check table in the performance exam – Garth
 - iii. AASHTO revised to reference R 76 and E 11 (formerly M 92)
 - b. T 99/T 180, Moisture/Density Relations
 - i. Annex revision compaction – Garth – draft sent 5/11
 - ii. Disagreement of mass recording accuracy in Steps 1 and 6. – Dan
 - iii. AASHTO revised to reference E 11 (formerly M 92)
 - c. New R 75; Developing a Family of Curves
 - d. T 272, One-Point Method
 - i. Revision to the practical exam. – Garth
 - e. T 85, G_{sb}
 - i. Format calculations the same as in other FOPs, A, B, and C are on one line – Desna
 - ii. AASHTO revised to reference R 76 and E 11 (formerly M 92)
 - f. Humphres
 - g. T 310, In-place Density and Moisture Content of Soil-Aggregate
 - i. No AASHTO revisions
 - h. T 355, In-place Density of HMA
 - i. Remove ‘English’ from Core Correlation example.
 - ii. Test method name to match AASHTO – In-place Density of Asphalt Mixtures by Nuclear Method – Garth
 - iii. AASHTO added an optional 180 degree rotation of the gauge
 - i. Exams
 - j. PowerPoint
2. Revision to Concrete Field Operating Procedures
 - a. Revisions in AASHTO Test Methods
 - b. TM 2, Sampling Concrete
 - c. T 309, Temperature
 - i. No AASHTO revisions
 - d. T 119, Slump
 - i. No AASTHO revisions
 - ii. Use of the terms ‘mold’ and ‘cone’ interchangeably, should verbiage be consistent? – Dan
 - iii. Large size aggregate discrepancy – Sean

- iv. Garth proposed fix – draft sent 5/11:
- e. T 121, Density
 - i. PowerPoint Slides 19 and 20 misleading as to the proper use of the strike-off plate – Rich
 - ii. AASHTO revised to include Self-consolidating – draft sent 5/11
 - iii. Proposed addition to ‘Note’ under Table 1 – Sean – sent 6/14
- f. T 152, Air Content
 - i. Large size aggregate discrepancy – Sean
 - ii. AASHTO revised to include Self-consolidating – draft sent 5/11
- g. T 23, Test Specimens
- h. Exams
 - i. Ex. 1 Q 27 ‘round’ to ‘round-ended’ – Rich
 - ii. Ex. 2 Q 27 – proposed new question – Rich
 - iii. No AASHTO revisions
- i. PowerPoint
 - i. Back_present first slide - Rich
- 3. Revision to Aggregate Field Operating Procedures
 - a. Revisions in AASHTO Test Methods
 - b. T 2, Sampling Aggregate
 - i. Loader sampling – Linda – WSDOT – draft sent 5/11
 - ii. Manual calls for 3 increments (exactly), while the performance exams say “at least 3.” - Dan
 - iii. AASHTO revised to reference R 76
 - c. R 76, Reduction
 - i. AASHTO changed to a ‘Standard Practice’ R 76
 - d. T 255, Moisture Content of Aggregate
 - i. Adding Constant Mass check table in the performance exam – Garth
 - ii. AASHTO revised to reference R 76 and E 11 (formerly M 92)
 - e. T 11/T 27, Sieve Analysis
 - i. New examples – Rich
 - ii. Revisions to FOP – Rich
 - iii. AASHTOs revised for referencing
 - f. T 176, Sand Equivalent
 - i. Presentation Slide #8 2nd bullet needs to match and include language from the student manual – page Aggregate 8-3 under control. – Gilbert
 - ii. AASHTO revised to reference R 76 and E 11 (formerly M 92)
 - g. T 335, Fractured Particles
 - i. AASHTO revised to reference R 76 and E 11 (formerly M 92)
 - h. Exams
 - i. New calculation inputs – agg. On file from Rich
 - ii. Exam 2, Question 18 – needs revising – Linda Hughes
 - i. PowerPoint
- 4. Revision to Asphalt I Field Operating Procedures
 - a. Revisions in AASHTO Test Methods
 - b. T 168, Sampling HMA
 - i. AASHTO Changed reference R 76
 - c. R 47, Reducing
 - i. No AASHTO revisions
 - d. T 329, Moisture Content
 - i. Adding Constant Mass check table in the performance exam – Garth
 - ii. No AASHTO revisions
 - e. T 308, Asphalt Content
 - i. AASHTO revisions – temperature range for ignition ovens
 - f. T 209, G_{mm}

- i. General: the bowl method does not include the cover so the steps to weigh and record are erroneous – Garth
 - ii. The order of ‘open valve; turn off pump’ could lead to water being introduced to the pump. – Linda
 - iii. Step 12A calls for a temperature of $77 \pm 1.8^\circ\text{F}$ should be $77 \pm 2^\circ\text{F}$ – Sean
 - iv. What is the status of revisions proposed to AASHTO in 2014?
 - v. AASHTO reconfirmed with minor editorial revisions.
 - g. T 166, G_{mb}
 - i. Internal temperature of cooled the specimen - Randy
 - ii. AASHTO revisions
 - 1. Revised definition as per WAQTC proposal
 - h. R 66, Sampling Bituminous Material
 - i. Emulsified sample size – from Winter meeting
 - ii. AASHTO revisions
 - 1. Emulsified sample to 1 qt.
 - 2. Sampling during Asphalt Binder production added.
 - 3. Other revisions consistent with the FOP.
 - i. T 30, Sieve Analysis
 - i. No AASHTO revisions
 - j. Exams
 - k. PowerPoint
- 5. Revision to Asphalt II Field Operating Procedures
 - a. Revisions in AASHTO Test Methods
 - b. T 312, Gyrotory
 - i. Compaction temperature **range** – Linda Hughes – draft sent 5/11
 - ii. No AASHTO revisions
 - c. R 35, Superpave Volumetric Design
 - d. TM 13, Volumetric Properties
 - i. HMA to Asphalt mixtures
 - ii. Reporting of percent aggregate and subsequent use in the performance exams – Garth
 - e. Exams
 - f. PowerPoint
- 6. Terminology chapter in all manuals
 - a. Symbols such as G_{mm} – Desna
 - b. STD for SHA under Owner – Desna
- 7. Foreword in all manuals: “Each module is in loose-leaf form.” – Desna
- 8. Copyright in the front of each manual.
- 9. Other AASHTO revisions
 - a. *R 18, Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories* - revisions seem inconsistent with ‘editorials’ – discussion – Randy
 - b. *R 67, Sampling Asphalt Mixtures after Compaction (Obtaining Cores)*
 - i. Added ‘Sample marking tool’ and ‘Package Containers’
 - ii. Revisions to 4.5, 4.6, and 5.1
 - iii. Required to measure ‘According to ASTM D 3549
- 10. Revision review assignments
- 11. Examiner Orientation – document sent 5/19/16
- 12. SCC qualification module – spreadsheet sent 5/19/16
- 13. AASHTO SOM balloting process – from winter meeting, Garth to report
- 14. FOP Library
- 15. Report from Executive Committee meetings – Garth Newman
 - a. Prioritized 2016 ‘Planned Work’ from the Strategic Plan – Executive Board
- 16. Archiving WAQTC historical documents
- 17. Location of upcoming meetings

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
Welcome		
Opening discussion	<p>Garth Newman, ITD and Qualification Advisory Committee (QAC) Chair, welcomed the attendees to Vancouver. He told everyone that 20 years ago, four states met to develop a common training program. Originally named the Northern Alliance for Quality Transportation Construction (NAQTC) it eventually became the Western Alliance for Quality Transportation Construction (WAQTC). Garth then asked everyone to introduce themselves and include a little summary of their experience.</p> <p>After the introductions, Garth explained the purpose of each of the QAC meetings. The Summer meeting is to address additions, revisions, and proposals to the training materials and the Winter meeting is to discuss revisions to AASHTO test methods, practices, and specifications. Both meetings may include WAQTC and QAC business as necessary. The revisions that the committee drafts during the Winter meeting are presented to the Executive Board, who then proposes them to the AASHTO Subcommittee on Materials (SOM). Garth wants this committee to know that the WAQTC has developed considerable influence with the AASHTO SOM and has proposed many of the recent new methods AASHTO has adopted.</p>	
REVIEW OF THE TRAINING MATERIALS AND REVISIONS FOR EACH PROCEDURE		
EMBANKMENT/BASE AND IN-PLACE DENSITY (E&B/IPD)		
T 255/T 265	<p><i>Field Operating Procedure (FOP) for T 255/T 265, Moisture Content of Aggregate and Soil</i></p> <p>AASHTO T 255 was revised to change the reference <i>M 92; Wire Cloth Sieves for Testing Purposes</i>, which was discontinued, to <i>ASTM E 11; Woven Wire Test Sieve Cloth and Test Sieves</i>. This revision was made throughout the AASHTO methods. As the FOP does not refer to this method there was no need to address this revision.</p> <p>Garth proposed adding a Table at the end of the performance exam to input values for the constant mass checks and the percent moisture. The committee discussed the value of requiring the examiner to complete this section during the performance exam. They decided that it was not necessary to include this step. <i>The performance exam will not be revised.</i></p> <p>In 2015, the AASHTO T 265 was revised to redefine constant mass; the allowable mass loss is now 0.1 percent after an additional 1 hour of drying. The FOP will be revised to reflect this change.</p> <p>Revisions to the training materials include: New revision date Revision in Step 3 and the example; same allowable mass loss for both aggregate and soil Correction in the student example</p>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<p>Revision in the Performance exam for allowable mass loss to soil Revisions to the PowerPoint to revise allowable mass loss to soil</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
T 99/T 180	<p><i>FOP for AASHTO T 99; Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop and T 180; Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop</i></p> <p>The AASHTO test methods were not revised in 2016.</p> <p>Garth proposed a revision in the Annex to include a calculation for the percent compaction of the in-place density determined in the FOP for AASHTO T 310. The committee felt that a better place for this calculation and example is the FOP for T 310. <i>This revision will not be included in the FOP for AASHTO T 99/T 180 but will be introduced into the FOP for AASHTO T 310.</i></p> <p>Dan Gettman, AKDOT, proposed a correction to Step 1, the accuracy to which the mass of the mold is recorded is different than the accuracy of the subsequent mass determination in step 6. Step 1 will be corrected.</p> <p>The committee noticed that the terms ‘adjusted maximum density’ and ‘corrected maximum density’ are used interchangeably and would prefer using just one term. As the title of the Annex is ‘Correction of Maximum Dry Density and . . .,’ the term ‘corrected maximum density’ was selected to be used throughout.</p> <p>Revisions to the training materials include: Step 1 of the procedure will be revised The term ‘corrected maximum density’ was selected to be used throughout.</p> <p>These revisions are considered editorial.</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
New R 75	<p><i>FOP for R 75; Developing a Family of Curves</i></p> <p>AASHTO adopted the WAQTC proposed practice as a full standard in 2016. Garth asked Desna Bergold, D B Consulting, to develop the new training materials that the committee reviewed.</p> <p>The committee decided that, as the WAQTC developed the original practice, the language from AASHTO R 75 could be used for the FOP.</p>	

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	<p>Garth pointed out the larger issue: How will this practice be incorporated into the qualifications? The committee determined that the classroom training for R 75 would be included in both <i>Embankment and Base</i> and <i>In-place Density</i> qualifications, but only the <i>Embankment and Base</i> would include written and performance exams. Since the new practice covers what was formerly in <i>AASHTO T 272</i> concerning the development of a Family of Curves, it was also determined that the FOP for <i>AASHTO T 272</i> was no longer necessary in the <i>Embankment and Base</i> qualification and would only be in the <i>In-place Density</i> qualification.</p> <p>The committee wrote questions for the exam independently, and then reviewed them during the meeting. Desna will incorporate the approved questions into the written exams and distribute for review. Any extra questions will be kept in the ‘exam pool’ for possible future use.</p> <p>Sean Parker, ODOT and Vice Chair, will create three performance exam graphs and send them to Gilbert Arredondo, UDOT, and Desna for preliminary review by August 12. Desna will draft a Performance Exam Checklist for review by Sean and Gilbert by August 12. The drafts will then be sent to the committee by August 16. Final review responses will be due by August 22.</p> <p><i>Classroom training for AASHTO R 75 will be included in both Embankment and Base and In-place Density qualifications but only the Embankment and Base would include written and performance exams.</i></p> <p><i>Sean Parker will develop three Performance Exam graphs, Desna Bergold will draft the Performance Exam Checklist, and Gilbert Arredondo will provide preliminary review by August 12th.</i></p> <p><i>Desna will incorporate approved questions into the Embankment and Base written exams and distribute for review.</i></p> <p><i>The committee members will provide final review and approval before the materials are incorporated into the training.</i></p>	<p>SEAN PARKER</p> <p>GILBERT ARREDONDO</p> <p>DESNA BERGOLD</p>
T 272	<p><i>FOP for AASHTO T 272; One-point Method for Determining Maximum Dry Density and Optimum Moisture</i></p> <p><i>AASHTO T 272</i> was revised according to WAQTC’s proposal and the adoption of R 75. As discussed under R 75, the FOP for T 272 will be presented in the classroom and exams required under the <i>In-place Density</i> qualification.</p> <p>The FOP was revised to reflect the new AASHTO.</p>	

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	<p>Because the development of the Family of Curves is now a Standard Practice, there were some written exam questions that were no longer applicable. The development of new exam questions followed the same process as those for R 75.</p> <p>Garth proposed a revision to Step 2 of the Performance Exam. Step 2 implies that all samples that are 'damp' must be dried. The committee agreed it should read 'If necessary, the sample dried until friable . . .'</p> <p>Revisions to the training materials include:</p> <ul style="list-style-type: none"> New AASHTO date, new revision date Adding steps of the procedure for pounding the one-point Adding a process to compare a one-point determination to a single curve New example calculations Revision to the performance exam checklist PowerPoint to match other revisions <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
T 85	<p><i>FOP for AASHTO T 85; Specific Gravity and Absorption of Coarse Aggregate</i></p> <p>The AASHTO method was editorially revised to reference <i>R 76; Reducing Samples of Aggregate to Testing Size</i> formerly <i>AASHTO T 248</i>. The WAQTC FOPs will be updated with the new reference.</p> <p>Desna proposed a revision to the calculations section. Currently the definitions of the variables for the formulas are on a single line in the paragraph above the formulas. This is not consistent with the FOP's usual formatting, where the variables are defined below the formula. The new formatting was approved.</p> <p>Revisions to the training materials include:</p> <ul style="list-style-type: none"> New revision date Updated reference to the FOP for AASHTO R 76 Reformatting the calculations section <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
Humphres	<p><i>Use of AKDOT & PF ATM 212, ITD 74, WSDOT TM 606, or WFLD Humphres Curve</i></p> <p>Garth pointed out that the graph in the FOP is not the most current method of determining a density standard using these methods. He asked if Randy Mawdsley, WSDOT, could provide an example of the spreadsheet WSDOT uses. The spreadsheet will be included in addition to the graph. Randy will provide the spreadsheet.</p>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<p>Revisions to the training materials include: New revision date Addition of a spreadsheet in the FOP and PowerPoint</p> <p><i>Randy Mawdsley will provide an example of a spreadsheet WSDOT uses for inclusion in the training materials.</i></p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	<p>RANDY MAWDSLEY</p> <p>DESNA BERGOLD</p>
T 310	<p><i>FOP for AASHTO T 310; In-place Density and Moisture Content of Soil and Soil-aggregate by Nuclear Methods</i></p> <p>There are no revisions to the AASHTO method in 2016.</p> <p>Garth proposed a revision in the Annex of the FOP for T 99/T 180 to include a calculation for the percent compaction of the in-place density from the FOP for AASHTO T 310. The committee agreed this would be better in the FOP for T 310.</p> <p>Revisions to the training materials include: Adding a calculation example for the percent compaction in the FOP and the PowerPoint</p> <p>These revisions are considered editorial.</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	<p>DESNA BERGOLD</p>
T 355	<p><i>FOP for T 355, In-place Density of Asphalt Mixtures by Nuclear Method</i></p> <p>The AASHTO method was revised with an alternate method, 180 degree rotation of the gauge between 1-minute readings and direction on placement of the gauge at the beginning of the 90 degree method. <i>The committee decided that the 180 degree option would not be included in the training materials.</i></p> <p>Revisions to the training materials include: New AASHTO date, new revision date Removal of the designation 'English' from Core Correlation example Revising the FOP name to match the AASHTO – <i>In-place Density of Asphalt Mixtures by Nuclear Method</i> Add 'perpendicular to roller passes' in step 2 of procedure</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	<p>DESNA BERGOLD</p>

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
Exams	<p>The committee developed new questions for the FOPs for AASHTO R 75 and T 272.</p> <p><i>Desna Bergold will incorporate the new questions into the written exams for In-place Density and distribute for review by August 12. Committee members will have responses to Desna by August 26.</i></p> <p><i>Committee members: refer to the exam errata for specific revisions.</i></p>	<p>DESNA BERGOLD</p> <p>QAC MEMBERS</p>
CONCRETE		
TM 2	<p><i>FOP for WAQTC TM 2; Sampling of Freshly Mixed Concrete</i></p> <p>There are no revisions to the AASHTO method in 2016.</p> <p>No revisions to the FOP were proposed.</p> <p><i>The FOP will not be revised.</i></p>	
T 309	<p><i>FOP for T 309; Temperature of Freshly Mixed Portland Cement Concrete</i></p> <p>There are no revisions to the AASHTO method in 2016.</p> <p>No revisions to the FOP were proposed.</p> <p><i>The FOP will not be revised.</i></p>	
T 119	<p><i>FOP for T 119; Slump of Hydraulic Concrete</i></p> <p>There are no revisions to the AASHTO method in 2016.</p> <p>Dan Gettman, AKDOT, pointed out that the procedure uses the terms ‘mold’ and ‘cone’ interchangeably, he suggested that only one term be used for consistency. The committee decided that the term ‘mold’ was the most accurate with the ‘mold’ being described in apparatus.</p> <p>Sean requested clarification in what size aggregate is considered too large for the procedure thus requiring wet sieving. This verbiage was revised to be a clearer.</p> <p>Revisions to the training materials include:</p> <ul style="list-style-type: none"> New revision date Changing the term ‘cone’ to ‘mold’ throughout all training materials Clarification in Scope and Step 1 of the procedure concerning large aggregate <p><i>These revisions will be included in the 2016 training materials.</i></p>	<p>DESNA BERGOLD</p>

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
T 121	<p><i>FOP for AASHTO T 121; Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete</i></p> <p>The AASHTO method was revised to include a means to perform the test on Self-consolidating Concrete (SCC). Garth requested that Desna draft a revision to the FOP.</p> <p>Sean proposed a sentence in the first note, under Table 1 <i>Dimensions of Measures</i>, to address aggregate sizes that are not listed in the table.</p> <p>These proposals were reviewed and approved by the committee.</p> <p>Revisions to the training materials include: New AASHTO date, new revision date Steps for use on SCC in FOP and PowerPoint Sentence in note addressing aggregate not specifically listed</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
PowerPoint	<p>Rich Giessel, AKDOT, had sent in a request to review Slides 19 and 20, the pictures do not seem to show the proper use of the strike-off plate. The committee determined that better pictures would be appropriate.</p> <p>Misty Miner, MDT, offered to supply new pictures, which she immediately sent to Desna.</p> <p><i>Desna will revise the pictures in the slides.</i></p>	DESNA BERGOLD
T 152	<p><i>FOP for T 152; Air Content of Freshly Mixed Concrete by the Pressure Method</i></p> <p>The AASHTO method was revised to include a means to perform the test on SCC. Garth requested that Desna draft a revision to the FOP to cover this.</p> <p>Sean suggested removing the sentence in Scope that covered wet sieving the concrete as it was addressed in step 1 of the procedure.</p> <p>These proposals were reviewed and approved by the committee.</p> <p>Revisions to the training materials include: New AASHTO date, new revision date Steps for SCC in FOP and PowerPoint Redundant sentence in Scope removed.</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
T 23	<p><i>FOP for AASHTO T 23; Making and Curing Concrete Test Specimens in the Field</i></p> <p>There are no revisions to the AASHTO method in 2016.</p> <p>In the FOP, the section ‘Procedure – Transporting Specimens’ states the specimens will be transported ‘after 24 to 48 hours.’ It was determined that it doesn’t clearly state that they should be transported between 24 and 48 hours. This section was revised for clarity and tone.</p> <p>Revisions to the training materials include: Clearer language in the Transporting section</p> <p>These revisions are considered editorial.</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
Exams	<i>Committee members: refer to the exam errata for specific revisions.</i>	
<u>Aggregate</u>		
T 2	<p><i>FOP for AASHTO T 2; Sampling of Aggregates</i></p> <p>The AASHTO method was editorially revised to reference <i>R 76; Reducing Samples of Aggregate to Testing Size</i> formerly <i>AASHTO T 248</i>. The reference is not in the FOP.</p> <p>Linda Hughes, WSDOT, had proposed a new section for sampling from the stockpile based on the AASHTO T 2 (ASTM D 75) Loader sampling. These revisions were approved.</p> <p>Dan pointed out that in the FOP ‘Roadway Method B (In-place)’ the manual calls for 3 increments (exactly), while the Performance Exams say ‘at least 3.’ The committee agreed that the FOP should be revised to say ‘at least.’</p> <p>The committee drafted revisions to the performance exam to cover the addition. They would also like the members to draft exam questions for future use.</p> <p>Revisions to the training materials include: New revision date Inclusion of loader sampling from a stockpile in FOP, Performance Exams, and PowerPoint Revision in Roadway Method B</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
R 76	<p><i>FOP for AASHTOR 76; Reducing Samples of Aggregate to Testing Size</i></p> <p>The AASHTO Method of Test T 248 has been designated a Standard Practice, <i>R 76; Reducing Samples of Aggregate to Testing Size</i>. There were no other revisions. The FOP will be revised to match.</p> <p>No other revisions to the FOP were proposed.</p> <p>Revisions to the training materials include: New AASHTO date, new revision date Change to FOP for AASHTO R 76 in all materials</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
T 255	<p><i>FOP for AASHTO T 255; Total Evaporable Moisture Content of Aggregate by Drying</i></p> <p>There are no revisions to the AASHTO method in 2016.</p> <p>No revisions to the FOP were proposed.</p> <p><i>The FOP will not be revised.</i></p>	
T 11/T 27	<p><i>FOP for AASHTO T 27 /T 11; Sieve Analysis of Fine and Coarse Aggregates and Materials Finer Than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing</i></p> <p>The AASHTO methods were editorially revised to reference <i>R 76; Reducing Samples of Aggregate to Testing Size</i> formerly <i>AASHTO T 248</i>. The FOP will be revised to reference the FOP for R 76.</p> <p>Rich Giessel proposed revisions to the ‘Check Sum’ sections; upon review, the committee discovered a larger issue.</p> <p>The ‘Check Sum’ section is under the Calculations heading but as presented it presupposes many steps that should be covered in the Procedure section. The committee drafted steps in the Procedure and included the ‘Check Sum’ formula in each optional method (A, B, or C) under Calculations.</p> <p>The committee determined that the intertwined method options (A, B, and C) should be developed as independent processes for the next training materials update. Desna was assigned drafting this revision and distributing it for review and approval after the QAC Winter meeting and before next year’s meeting.</p> <p>Revisions to the training materials include: New revision date</p>	

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Topic	Discussion / Decision	ACTION REQUIRED BY:
	<p>Steps in Procedures for checking sieving loss or gain ‘Check Sum’ formula in all methods Updated reference to the FOP for AASHTO R 76</p> <p><i>These revisions will be included in the 2016 training materials.</i></p> <p><i>Desna will draft the methods to be complete and send out for review for the 2017 update (after the winter meeting).</i></p>	DESNA BERGOLD
T 335	<p><i>FOP for AASHTO T 335; Determining the Percentage of Fracture in Coarse Aggregate</i></p> <p>The AASHTO method was editorially revised to reference R 76; <i>Reducing Samples of Aggregate to Testing Size</i> formerly AASHTO T 248. The FOP will be revised to reference the FOP for AASHTO R 76.</p> <p>No other revisions to the FOP were proposed.</p> <p>Revisions to the training materials include: New revision date Updated reference to the FOP for R 76</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
T 176	<p><i>FOP for AASHTO T 176; Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test</i></p> <p>The AASHTO method was editorially revised to reference R 76; <i>Reducing Samples of Aggregate to Testing Size</i> formerly AASHTO T 248. The FOP will be revised to reference the FOP for AASHTO R 76.</p> <p>No revisions to the FOP were proposed</p> <p>Revisions to the training materials include: New revision date Updated reference to the FOP for AASHTO R 76 Revision in PowerPoint to remove confusing bullet from slide No. 8</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
Exams	<i>Committee members: refer to the exam errata for specific revisions.</i>	

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ASPHALT I AND II		
Basics of Asphalt	<p>The <i>Basics of Asphalt</i> section in both Asphalt I and Asphalt II is out of date. Desna proposed revisions to remove viscosity graded binder language and include more on Performance Graded (PG) asphalt binders. Other proposed revisions were to be consistent with other training materials.</p> <p>The committee reviewed and approved proposed revisions.</p> <p><i>These revisions will be included in both Asphalt I and Asphalt II in the 2016 training materials.</i></p>	DESNA BERGOLD
T 168	<p><i>FOP for AASHTO T 168; Sampling Bituminous Paving Mixtures</i></p> <p>There are no revisions to the AASHTO method in 2016.</p> <p>No revisions to the FOP were proposed.</p> <p><i>The FOP will not be revised.</i></p>	
R 47	<p><i>FOP for AASHTO R 47; Reducing Samples of Hot Mix Asphalt (HMA) to Testing Size</i></p> <p>There are no revisions to the AASHTO method in 2016.</p> <p>No revisions to the FOP were proposed.</p> <p><i>The FOP will not be revised.</i></p>	
T 329	<p><i>FOP for AASHTO T 329; Moisture Content of Asphalt Mixtures by Oven Method</i></p> <p>There are no revisions to the AASHTO method in 2016.</p> <p>The committee determined that there was a contradiction in Step 1 of the procedure. The step instructed that the oven should be preheated to a different temperature than that required to dry the sample. This step has been corrected.</p> <p>Revisions to the training materials include: New revision date Revision to step 1 in the procedure</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
T 308	<p><i>FOP for AASHTO T 308; Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method</i></p> <p>The AASHTO method was revised to include a temperature range for</p>	

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	<p>the ignition ovens both in apparatus and in the procedure.</p> <p>Revisions to the training materials include: New revision date Range for ignition oven in apparatus and procedure</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
T 209	<p><i>FOP for AASHTO T 209; Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)</i></p> <p>The AASHTO method was reconfirmed with minor editorial revisions.</p> <p>Garth pointed out that the bowl method does not use a ‘cover’ so that the instruction in 3 and 5 to determine the mass of the container and cover is not applicable to the bowl method. After much discussion, those committee members familiar with the pycnometer / volumetric flask method determined it was not necessary to include the cover in the mass determinations for that method. Requirements to include the cover will be removed.</p> <p>Randy expressed WSDOT’s concern about the order of releasing the vacuum (open the valve, turn off pump) introduced last year. They feel that opening the valve before turning off the pump could introduce water into the pump and damage it. Sean had felt strongly that reversing the order would also cause problems. Randy then proposed a rate at which the vacuum should be released, this addressed both issues. Introducing the rate at which the vacuum is released, instead of instructing to ‘open the valve’ was approved.</p> <p>Misty provided a picture of a manometer to be included in the PowerPoint that may help illustrate the rate.</p> <p>Sean pointed out that in step 12A and 14A the temperature ranges do not agree. The correct range is $77 \pm 2^{\circ}\text{F}$. It was also noticed that the range for thermometer in accuracy in apparatus and the temperature during standardization should be $77 \pm 1^{\circ}\text{F}$.</p> <p>Revisions to the training materials include: New AASHTO date, new revision date Remove ‘cover’ from steps 3 and 5 Rate at which vacuum is released Temperature ranges Add picture to PowerPoint</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD

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Other discussion concerning T 209	<p>Garth explained that the revisions WAQTC proposed to AASHTO for this method in 2014 are still being discussed in a Technical Section Task Force, of which he is a member. He will follow up during the upcoming AASHTO SOM meeting on the status of the proposed revisions.</p> <p><i>Garth will discuss WAQTC proposed revisions to the AASHTO T 209 with the Tech Section Task Force.</i></p>	GARTH NEWMAN
T 166	<p><i>FOP for AASHTO T 166; Bulk Specific Gravity (G_{mb}) of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens</i></p> <p>The AASHTO test method was revised as proposed by WAQTC. The definition for bulk specific gravity was updated.</p> <p>Desna proposed a revision to the method to address a discrepancy in the definition of constant mass in the terminology section and Method C 'Rapid Test.'. She also proposed including the steps to reach constant mass in the procedures.</p> <p>These revisions were approved.</p> <p>Revisions to the training materials include: New AASHTO date, new revision date Generic constant mass definition Steps to reach constant mass in the procedures that include the specific parameters required</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
Other discussion related to T 166	<p>The AASHTO method states 'cool the specimen to room temperature . . .' Randy informed the committee that WSDOT has been informed by their AMRL representative that they interpret this to mean the internal temperature of the specimen. This poses a problem because it would be impossible to determine internal temperature without voiding the specimen and results.</p> <p><i>Discussion only, no action required.</i></p>	
R 66	<p><i>FOP for AASHTO R 66; Sampling Asphalt Materials</i></p> <p>The AASHTO practice was revised; the revision changed the sample size of emulsified asphalt to 1 qt. from 1 gal. Other revisions to the AASHTO include adding sampling during asphalt binder production and flushing devices before sampling. These revisions do not impact the FOP.</p> <p>Revisions to the training materials include: New AASHTO date, new revision date</p>	

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	<i>These revisions will be included in the 2016 training materials.</i>	DESNA BERGOLD
T 30	<p><i>FOP for AASHTO T 30; Mechanical Analysis of Extracted Aggregate</i></p> <p>There are no revisions to the AASHTO method in 2016.</p> <p>The committee clarified the steps for checking mass loss or gain from sieving.</p> <p>Revisions to the training materials include: New revision date Clarification of the steps for ‘Check Sum’ Cleaned up the Calculations section</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
T 312	<p><i>FOP for AASHTO T 312; Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor</i></p> <p>There are no revisions to the AASHTO method in 2016.</p> <p>Randy presented Linda’s revision to address the use of the term ‘compaction temperature,’ this should actually be a compaction temperature range.</p> <p>Revisions to the training materials include: New revision date Change ‘compaction temperature’ to ‘compaction temperature range’ Revisions to verbiage</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
TM 13	<p><i>WAQTC TM 13; Volumetric Properties of Hot Mix Asphalt (HMA)</i></p> <p>Garth pointed out that the accuracy of the values in the Report section are different than those used in the subsequent calculations that use those values.</p> <p>The committee decided to show in the examples values calculated to the accuracy that is used in subsequent calculation on the Practical Exam (5 decimal places) and then show the reported values as ‘Reported.’ All the examples were revised to show the required accuracy of the input values.</p> <p>Revisions to the training materials include: New revision date</p>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<p>Clarification in the example calculations</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
Exams	<i>Committee members: refer to the exam errata for specific revisions.</i>	
OTHER TRAINING MATERIALS		
Terminology section	<p>The same <i>Terminology</i> section is in the front of every module's training manual. Desna drafted revisions to this section as it hasn't been updated in quite a while. The committee reviewed the revisions and approved the update</p> <p>Revisions to the training materials include: Symbols for terms as in TM 13 State Transportation Department (STD) for State Highway Agency (SHA) as in Code of Federal Regulations Specific gravity updates, etc. (please see the errata in the training materials for all the revisions)</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
Foreword	<p>The same <i>Foreword</i> section is in the front of every module's training manual.</p> <p>The foreword states 'Each module is in loose-leaf form.' Not every agency presents the materials this way and, with electronic files, some may not be printed at all. The main issue is to indicate that it is the participant's responsibility to ensure the manual remains current.</p> <p>Revisions to the training materials include: Striking the 'loose-leaf' language</p> <p><i>These revisions will be included in the 2016 training materials.</i></p>	DESNA BERGOLD
Copyright in front of manuals	<p>The same <i>Copyright</i> document is in the front of every module's training manual.</p> <p>This document appears outdated. Garth pointed out that the copyright is currently being updated by the Board. The committee asked Garth, as the Copyright Officer, to work with the Board and revise the document for the manual.</p> <p><i>Garth Newman will work with the Executive Board to revise the Copyright document for the manuals.</i></p>	GARTH NEWMAN
Usage	<p>Desna wanted to discuss adopting the trend in the AASHTO methods, changing the term 'minutes' to the abbreviation 'min.' Desna withdrew this item; in referring to the AASHTO Style Manual she discovered that 'minutes,' spelled out, is the preferred usage. It is</p>	

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	<p>unknown why AASHTO is not following the AASHTO Style Manual.</p> <p>In reviewing the 2012 AASHTO Manual, Desna noticed that the 2012 edition had different page numbers than those referenced in the WAQTC Style Guide. She will update these references in the Style Manual for posting.</p> <p><i>Desna will revise the WAQTC Style Guide with current AASHTO cross-referencing.</i></p>	DESNA BERGOLD
Revisions Review Assignments	<p>The revision review assignments are as follows:</p> <p>EB/DTT: Chris Russell and Randy Mawdsley / Kevin Burns</p> <p>Concrete: Misty Miner and Dan Gettman</p> <p>Aggregate: Gilbert Arredondo and Sean Parker</p> <p>Asphalt: Garth Newman and Megan Chatfield, WFL</p> <p>Administration Manual and RPIH: Garth Newman</p> <p>Input revisions in all written exams: All committee members</p> <p>The committee members will review all the training materials: student and short form FOPs, Review Questions, Performance Exams, Written Exams, and PowerPoint presentations for the module they are assigned.</p> <p>Any corrections will be sent to Desna.</p> <p>Desna will send the revisions out by the first week of Sept. Review Deadline is Sept. 23rd.</p> <p><i>Committee members will review the draft revisions of the modules assigned. Corrections will be sent to Desna.</i></p>	<p>COMMITTEE MEMBERS</p> <p>DESNA BERGOLD</p>
OTHER AASHTO REVISIONS		
R 18	<p><i>R 18, Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories</i></p> <p>Randy expressed WSDOT's concern with the revisions to AASHTO R 18. Specifically, section 6.7.2 subsection .5:</p> <p><i>Test Records</i>—The laboratory shall maintain test records that contain sufficient information to permit verification of any test reports. Records pertaining to testing shall include original observations, calculations, derived data, and an identification of personnel involved in sampling and testing. The laboratory</p>	

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	<p>shall prepare test reports that clearly and accurately present the following information: Deviations from, additions to, or exclusions from the test method;</p> <p>One concern is that a reference to an agency standard test method on each test report would not be sufficient. Where an agency has established revisions to the test method, the possible need to reprint all of the deviations could result in each test report being many pages of redundant information.</p> <p>The committee felt that it would be good to ask the Board to request clarification from AMRL during the upcoming AASHTO SOM meeting.</p> <p>A letter to the AMRL Quality Manager requesting clarification and guidance was drafted. The letter will be on the Board meeting agenda for review, and, if approved, sent to AMRL.</p> <p><i>Desna will add item to the Executive Board meeting agenda.</i></p> <p><i>Garth Newman and Sean Parker will present the request to the Executive Board.</i></p>	<p>DESNA BERGOLD</p> <p>GARTH NEWMAN</p> <p>SEAN PARKER</p>
R 67	<p><i>R 67, Sampling Asphalt Mixtures after Compaction (Obtaining Cores)</i></p> <p>The AASHTO method was revised in 2016. Revisions include adding ‘Sample marking tool’ and ‘Package Containers’ in apparatus and requiring the core be measured ‘according to ASTM D 3549.’</p> <p><i>No action required.</i></p>	
OTHER QAC		
Examiner orientation	<p>During the QAC Winter meeting the committee determined that Desna and Gilbert would draft an Examiner Orientation Checklist and Signature document for review. The intent would be to satisfy two of the listed ‘Planned Work’ items from the <i>Strategic Plan</i>:</p> <ul style="list-style-type: none"> • Identify exam proctor and trainer qualification requirements • Develop a work plan for training of exam proctors <p>The checklist was derived from the WAQTC Administration Manual which has well-defined requirements for examiners and examinations.</p> <p>As the committee reviewed the list, the requirement on the checklist to ‘Observe only one examinee performing a test at a time’ was discussed. In referencing the manual it was found that it actually requires:</p>	

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	<p>‘The performance examination will occur in the direct presence of the Examiner. All steps of the method must be performed, except that certain steps may be accelerated when properly explained to the Examiner.’</p> <p>The orientation checklist was revised to read ‘Observe all steps of the method.’</p> <p>The orientation would be required before any performance examiner would be allowed to conduct exams and the examiner’s signature documents that the examiner understood what is being required. Frequency of re-orientation has yet to be determined.</p> <p>The revised Examiner Orientation Checklist and Signature document will be presented to the Board for review and, if approved, included in the Operations Manual.</p> <p><i>Garth Newman and Sean Parker will present the approved Examiner Orientation Checklist and Signature to the Executive Board.</i></p>	<p>GARTH NEWMAN</p> <p>SEAN PARKER</p>
SCC qualification module	<p>During the Jan. QAC meeting the committee discussed the pros and cons of training and qualifying technicians on testing Self-Consolidating Concrete (SCC) at the request of Matt Strizich, MDT and former Executive Board Chair.</p> <p>The WAQTC member agencies were polled on what test procedures they require for acceptance of SCC. As there were significant differences in how the material was tested and accepted, Garth proposed that the Board be consulted on how to proceed.</p> <p><i>Desna Bergold will add item to the Executive Board meeting agenda.</i></p> <p><i>Garth Newman and Sean Parker will present the request to the Executive Board</i></p>	<p>DESNA BERGOLD</p> <p>GARTH NEWMAN</p> <p>SEAN PARKER</p>
AASHTO SOM balloting process	<p>The AASHTO SOM revision balloting process has significantly changed this year. Garth was asked to determine what those changes were and how they affect the QAC.</p> <p>From the schedule in the new AASHTO Standards:</p> <p><i>The Materials Book is updated three times per year, in mid-April, mid-June, and mid-August.</i></p> <ul style="list-style-type: none"> <i>The April release updates the sections on Hydraulic Cements, Concrete, Concrete-Related Materials, Pavement Serviceability, Environmental Quality, and Quality Assurance.</i> 	

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	<ul style="list-style-type: none"> <i>The June release updates the sections on General Manufactured Materials.</i> <i>The August release updates the sections on Geotechnical, Bituminous Materials, and Mixtures.</i> <p>Garth emailed Evan Rothblatt, AASHTO Program Manager, to ask if this schedule will change. Evan supplied more detailed information including mid-year and production schedules.</p> <p>The committee discussed the possibility that the QAC training materials revision schedule may need to be adjusted to address updates in the August release.</p> <p>The committee determined that the AASHTO SOM meeting may provide more information. The Board will be alerted to the potential problem.</p> <p><i>Desna Bergold will add item to the Executive Board meeting agenda.</i></p> <p><i>Garth Newman and Sean Parker will discuss the AASHTO and QAC schedules with the Executive Board</i></p>	<p>DESNA BERGOLD</p> <p>GARTH NEWMAN</p> <p>SEAN PARKER</p>
FOP Library	<p><i>AASHTO T 90; Determining the Plastic Limit and Plasticity Index of Soils</i></p> <p>The AASHTO method was updated in 2016. Dan is the champion for this FOP for the FOP library. Dan will update the FOP.</p> <p><i>Dan Gettman will update the FOP for T 90 for inclusion in the FOP library.</i></p>	<p>DAN GETTMAN</p>
<p>REPORT FROM EXECUTIVE MEETING PRIORITIZED 2016 "PLANNED WORK" FROM STRATEGIC PLAN</p>		
Strategic Plan	<p>The committee reviewed the current Strategic Plan with special attention to the prioritized 'Planned Work' list:</p> <ol style="list-style-type: none"> 1. Continue work on 'on-going' activities 2. Evaluate existing training materials for needed improvements / updates 3. Develop Roles and Responsibilities guide for QAC and Executive Board members 4. Identify Exam Proctor and Trainer Qualification requirements 5. Develop a Work Plan for Training of Exam Proctors 6. Support task force work on online training 7. Evaluate the need for WAQTC training on Equipment Calibration, Standardization and Checks Process 8. Develop a Work Plan for Reciprocity Audits of Member Agencies 	

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Topic	Discussion / Decision	ACTION REQUIRED BY:
Number 1 and 2	<p><i>Continue work on 'on-going' activities and Evaluate existing training materials for needed improvements / updates</i></p> <p>Under 'On-going Activities' there is an item 'Evaluate training materials every 5-years.' The committee would like to propose that this item be 'yearly' to reflect current practice.</p> <p><i>Desna Bergold will propose this revision on the 2017 Strategic Plan.</i></p>	DESNA BERGOLD
Number 3	<p><i>Develop Roles and Responsibilities guide for QAC and Executive Board members</i></p> <p>The QAC Member <i>Roles and Responsibilities Guide</i> is complete. A proposal for the Board Member <i>Roles and Responsibilities Guide</i> is on the agenda for the upcoming meeting.</p> <p><i>No action required.</i></p>	
Numbers 4 and 5	<p><i>Identify Exam Proctor and Trainer Qualification requirements and Develop a Work Plan for Training of Exam Proctors</i></p> <p>These were discussed under the Examiner Orientation topic above.</p> <p><i>Executive Board to decide on outcome.</i></p>	EXECUTIVE BOARD
Number 6	<p><i>Support task force work on online training</i></p> <p>This was discussed during the Executive Board Spring meeting, the minutes were reviewed. Matt Strizich volunteered to poll the member agencies to determine who is still interested in pursuing WAQTC online training to determine next step. The QAC does not have that information.</p> <p><i>The QAC will wait for instruction on this item.</i></p>	
Number 7	<p><i>Evaluate the need for WAQTC training on Equipment Calibration, Standardization and Checks Process</i></p> <p>The committee would like to request clarification on this item. Calibrations are performed by companies external to the agency. What type of training on standardization and checks would be covered?</p> <p><i>Desna Bergold will add item to the Executive Board meeting agenda.</i></p> <p><i>Garth Newman and Sean Parker will the Executive Board for clarification on this Planned Work.</i></p>	DESNA BERGOLD GARTH NEWMAN SEAN PARKER

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
Number 8	<p><i>Develop a Work Plan for Reciprocity Audits of Member Agencies</i></p> <p>The committees have adopted the Reciprocity Questionnaire. This has been distributed and a report will be generated.</p> <p><i>The QAC considers this item complete, if the Executive Board agrees this will be moved to the 2016 Completed Items on the 2017 Strategic Plan.</i></p>	DESNA BERGOLD
Archiving historical documents / list of documents / Garth's	<p>During the QAC Winter meeting it was decided that Garth will send the hard copy documents to Brad Neitzke, WFL, and the old training cd's to Desna.</p> <p><i>Garth Newman will complete this task.</i></p>	GARTH NEWMAN
Meeting locations	<p>The committee will propose Reno, NV, for the location of the Winter meeting to be held January 30th through February 3rd for Board approval</p> <p>They will also propose Portland / Vancouver for the Summer meeting, the dates to be discussed at the Board meeting.</p> <p><i>The locations of the next meetings and dates of the Summer meeting will be on the Executive Committee agenda.</i></p>	DESNA BERGOLD