WAQTC QAC COMMITTEE
2019 WINTER MEETING MINUTES

CHAIR: SEAN PARKER, ODOT
RECORDER: DESNA BERGOLD, D B CONSULTING

DATE: JAN. 28TH THROUGH FEB. 1ST
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: VIRGINIA BOARDROOM, ELDORADO, RENO, NV

ATTENDEES:

SEAN PARKER, ODOT, CHAIR
MISTY MINER, MDOT, VICE CHAIR
DAN GETTMAN, AKDOT & PF
CHRISTOPHER P. RUSSELL, CDOT
KEVIN BURNS, WSDOT
GILBERT ARREDONDO, UDOT
MEGAN CHATFIELD, WFL-FHWA
DAVID MARIMAN, WFL-FHWA
SONYA PUTERBAUGH, AASHTO RE:SOURCE

ABSENT:

BRIAN IKEHARA, HDOT
MIKE COPELAND, ITD

MEETING ITEMS:

REVIEWS OF AASHTO REVISIONS AND QAC PROPOSED REVISIONS FOR EACH PROCEDURE

1. Revisions to Embankment/Base and In-Place Density Test Methods
    a. T 265, Moisture Content of Soil
    b. T 99, Moisture/Density Relations
        i. Status of 2016 proposal
        ii. Density symbol in calculations – W_1 and W, in T 310 it is d and T 121 it is D
    c. T 180, Moisture/Density Relations
        i. Status of 2016 proposal
        ii. Density symbol in calculations – W_1 and W, in T 310 it is d and T 121 it is D
    d. R 75, Developing a Family of Curves
    e. T 272, One-Point Method
        i. Status of 2017 proposal
    f. T 85, G_{sb}
    g. T 310, In-place Density and Moisture Content of Soil-Aggregate
    h. T 355 In-place Density of Asphalt
        i. Status of 2017 proposal
        ii. Figures are fuzzy – Desna
2. Revisions to Concrete AASHTO Test Methods
    a. R 60, Sampling Concrete
    b. T 309, Temperature
        i. 8.4.1, large size aggregate – Desna
    c. T 119, Slump
        i. Status of 2017 proposal
    d. T 121, Density
    e. T 152, Air Content
        i. Status of 2018 proposal

f. T 23, Test Specimens
    i. Status of 2018 proposal
g. R 39, Making and Curing Concrete Test Specimens in the Lab
    i. Status of 2018 proposal

3. Revisions to Aggregate AASHTO Test Methods
    a. R 90, Sampling Aggregate Products
    b. R 76, Reduction
    c. T 255, Moisture Content of Aggregate
    d. T 11, Washing
        i. Status of 2015 proposal
    e. T 27, Sieve Analysis
        i. Status of 2018 proposal
    f. T 335, Fractured Particles
    g. T 176, Sand Equivalent
    h. T 113, Lightweight Particles
        i. Status of 2015 proposal
4. Revisions to Asphalt AASHTO Test Methods
    a. T 168, Sampling HMA
        i. Status of 2017 proposal
    b. R 47, Reducing HMA
        i. Status of 2018 proposal
        ii. HMA to Asphalt Mixtures
    c. T 329, Moisture Content
    d. T 308, Asphalt Content
    e. T 209, G_{mm}
        i. Status of 2014 proposal
    f. T 166, G_{mb}
    g. R 66, Sampling Asphalt Material
    h. T 30, Sieve Analysis
        i. Status of 2018 proposal
    i. T 312, Gyratory
    j. R 35, Superpave Volumetric Design
5. Other AASHTO:
    a. Constant Mass
        i. Status of 2017 proposal
    b. R 18, Quality Management Systems
        i. Status of 2017 proposal
        ii. Brian Johnson will be working on this, contribute through him (midyear webinar)
    c. R 25, Technician Training and Qualification Programs
        i. 2018 balloted revisions
        ii. Status of the 2015 proposed revisions
    d. R 89, Accreditation Bodies
        i. New 2018 Standard Practice
    e. T 344, Evaluation of SGC
        i. Assignment from 2018 Winter meeting – Kevin Burns
    f. T 134, Moisture / Density Soils
        i. Recommendations – this was addressed at the 2018 COMP meeting
    g. T 283, Lottman
        i. Redraft – recommendations – Desna
    h. Proposed revision presentations at the Annual meeting

i. T 240, Rolling Thin Film Oven Aging of Asphalt Binder – requested review of NCHRP report

WAQTC ITEMS

6. Administrative Manual
    a. Administrative questions – Chris
7. TM 15, Granular Materials Draft – Randy
8. Operations Manual
9. TM 14, Asphalt Mixture Laboratory Prepared Test Specimens
10. AASHTO Copyright – from Board August meeting – Sean
11. SCC Module Workplan
12. FOP for AASHTO TP 118 – summer meeting
13. Archiving historical documents – Desna and Megan
14. Exams and ASTM requirements – Desna and Sonya
15. Humphres Method – next step – Randy and Megan
16. Review of AASHTO methods to present to the Board
17. Report from Executive Board meetings – Sean Parker
18. AASHTO COMP TS 'Friend'
19. Brochure – Replace Quotes from Garth and Scott?
20. Other presentation platforms – Misty and Desna – summer meeting
21. PowerPoint recommendations from trainers – summer meeting
22. PowerPoint review and revision assignments – summer meeting
    a. Photos for Specific Gravity are dark – Chris
23. Flat and Elongated TM – Sean
24. Laboratory Test Methods Qualification – propose as long-term goal?
25. WAQTC TM 13, Volumetric Properties of Hot Mix Asphalt (HMA)
    a. Change to Asphalt Mixtures?
26. Executive Board Spring meeting
27. Nominate a QAC representative to attend the AASHTO COMP annual meeting

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
WELCOME	Sean Parker, ODOT and Qualification Advisory Committee (QAC) Chair, welcomed the committee members to Reno. He then asked everyone to introduce themselves. Megan Chatfield, WFL-FHWA, introduced David Mariman, WFL-FHWA, who will be replacing her on the QAC.	
EMBANKMENT/BASE AND IN-PLACE DENSITY TEST METHODS		
T 265	*AASHTO T 265; Laboratory Determination of Moisture Content of Soils* *No proposed revisions to the AASHTO method.*	
T 99 AND T 180	*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* <u>Status of previous proposals</u> WAQTC proposed revisions to T 99 and T 180 in 2016. These revisions are included in the 2018 AASHTO Standards. In 2018, WAQTC assisted AASHTO re:source with revision proposals addressing the use of the extruder. These revisions were balloted on Rolling Ballot 3 with no negative votes. <u>Revision Discussion</u> While developing the calculations section for the Field Operating Procedure (FOP) for AASHTO T 272, Desna Bergold, D B Consulting and WAQTC Coordinator, searched AASHTO materials for a common variable for density. She found that T 272 did not use a variable, T 99 and T 180 use *W* in the method and *D* in the Annex, T 121 uses *D*, and T 310 uses *d* in the method. There may be other variations. The committee agreed that it would be best to use the same variable when representing density of a material throughout the test methods.	

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T 99 AND T 180	A common variable in physics and engineering to denote density of material is ρ (rho). This variable is used in T 355 and Annex A2 of T 310. <u>Revision proposal</u> • Replace the variables *W* and *D* with ρ to represent density in calculations. *Revisions to T 99 and T 180 will be presented to the Executive Board for approval and submittal to AASHTO.*	SEAN PARKER
R 75	*AASHTO R 75; Developing a Family of Curves* *No proposed revisions to the AASHTO method.*	
T 272	*AASHTO T 272; One-Point Method for Determining Maximum Dry Density and Optimum Moisture* <u>Status of previous proposal</u> WAQTC proposed revisions to this method in 2017. These revisions are included in the 2018 AASHTO Standards. *No new proposed revisions to the AASHTO method.*	
T 85	*T 85, Specific Gravity of Coarse Aggregate* *No proposed revisions to the AASHTO method.*	
T 310	*T 310; In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)* <u>Report on recent ballots</u> Revisions to T 310 were balloted to the Committee on Materials and Pavement (COMP) on 2018 Rolling Ballot 3. From ballot: Deleted reporting calibration date in the reporting section to address concerns presented to AASHTO re:source. This does not change the calibration requirements.	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
T 310	There were no negative votes. Revision Discussion See revision discussion for T 99 and T 180. Revision proposal • Replace the variable *d* in the method with *ρ* to represent density in calculations. *Revisions to T 310 will be presented to the Executive Board for approval and submittal to AASHTO.*	SEAN PARKER
T 355	*T 355; In-place Density of Asphalt Mixtures by Nuclear Methods* Status of previous proposal WAQTC proposed revisions to this method in 2017. These revisions are included in the 2018 AASHTO Standards. *No new proposed revisions to the AASHTO method.*	
CONCRETE TEST METHODS		
R 60	*R 60; Sampling Freshly Mixed Concrete* *No proposed revisions to the AASHTO method.*	
T 309	*T 309; Temperature of Freshly Mixed Hydraulic Cement Concrete* Revision discussion Recently, confusion over the intent of Section 8.4.1 has resurfaced. In Section 8.4, the test method requires the technician to complete the temperature measurement within 5 minutes of obtaining the sample. In Section 8.4.1, it states: 'Concrete containing aggregate of a nominal maximum size greater than 75 mm (3 in.) may require up to 20 minutes for the transfer of heat from the aggregate to the mortar after batching.' This statement has often	

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T 309	been interpreted as a contradiction to Section 8.4 by allowing up to 20 minutes to complete the temperature measurement. Another interpretation is that if the criteria in Section 8.4.1 are met, the temperature is to be taken in the forms at least 20 minutes after batching. The committee questioned the value of the statement as aggregate greater than 3 in. is rarely used in transportation construction and haul time to sample time is rarely less than 20 minutes. <u>Revision proposal</u> Remove confusing statement addressing large size aggregate with a recommendation that if 8.4.1 were to remain in place, further action should be clarified. *Revisions to T 309 will be presented to the Executive Board for approval and submittal to AASHTO.*	SEAN PARKER
119	*T 119, Slump of Hydraulic Cement Concrete* <u>Status of previous proposal</u> WAQTC proposed revisions to this method in 2017. These revisions are included in the 2018 AASHTO Standards. *No new proposed revisions to the AASHTO method.*	
T 121	*T 121; Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete* <u>Status of previous proposal</u> In 2018, WAQTC proposed that the vibrator requirements be revised to match *T 23-17; Making and Curing Concrete Test Specimens in the Field.* This revision was approved on concurrent ballot and is moving forward. <u>Revision discussion</u> See revision discussion for T 99 and T 180 for density variable proposal.	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
T 121	Sean pointed out that this test method is still in paragraph format and should be reformatted into a step method. Also, the committee has had discussions in the past concerning the cement content calculation, which does not account for other cementitious materials. A task force was formed to revise the test method to address these issues. Misty Miner, MDT, Gilbert Arredondo, UDOT, and Sean volunteered to be members of the task force. Desna will assist as necessary. Sean will discuss the next step in the revision process with the task force members. <u>Action item</u> The task force will develop a process and make assignments for revising the test method. Proposed revisions should be distributed before the 2020 Winter meeting. <u>Revision proposal</u> • Replace the variable *D* with ρ to represent density in calculations. *Revisions to T 121 will be presented to the Executive Board for approval and submittal to AASHTO.* *Task force will draft further revisions to present to the QAC by the 2020 Winter meeting.*	MISTY MINER GILBERT ARREDONDO SEAN PARKER
T 152	*T 152; Air Content of Freshly Mixed Concrete by the Pressure Method* <u>Status of previous proposal</u> In 2018, WAQTC proposed that the vibrator requirements be revised to match *T 23-17; Making and Curing Concrete Test Specimens in the Field.* This revision was approved on concurrent ballot and is moving forward. *No new proposed revisions to the AASHTO method.*	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
T 23	*T 23; Making and Curing Concrete Test Specimens in the Field* Status of previous proposal In 2018, WAQTC proposed revisions to correct the tamping rod length in Table 1 and revise the Test Method (T) to a Practice (R). These revisions were approved on concurrent ballot and is moving forward. *No new proposed revisions to the AASHTO method.*	
R 39	*R 39, Making and Curing Concrete Test Specimens in the Laboratory* Status of previous proposal In 2018, WAQTC proposed extensive revisions; adding steps for Self-consolidating Concrete (SCC), matching requirements in T 23, and further corrections to comply with AASHTO Style Manual. These revisions were approved on concurrent ballot and is moving forward. *No new proposed revisions to the AASHTO method.*	
AGGREGATE TEST METHODS		
R 90	*AASHTO R 90, Sampling Aggregate Products* Status of previous proposal In 2016, WAQTC proposed a new 'A' practice, wholly owned by AASHTO, to replace the 'C' method owned by ASTM. This new practice has been published in the 2018 AASHTO Standards. *No new proposed revisions to the AASHTO method.*	
R 76	*R 76; Reducing Samples of Aggregate to Testing Size* *No proposed revisions to the AASHTO practice.*	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
T 255	*T 255, Total Evaporable Moisture Content for Aggregates* *No proposed revisions to the AASHTO method.*	
T 11	*T 11; Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing* <u>Status of previous proposal</u> WAQTC proposed revisions to this method in 2015 to address the use of the automatic washer which was mentioned in a note. A task force was formed to consider the issue in depth. Garth Newman, formerly ITD and QAC Chair, was a member of the Task Force. According to the AASHTO meeting minutes, the task force's recommendation was to be balloted on Rolling Ballot 3 but was not included. Sonya Puterbaugh, AASHTO re:source, said that there had been a recent turnover in the Technical Subcommittee (TS) Chair position. She volunteered to contact Casey Soneira, AASHTO, to determine what steps to take. Sonya was informed by Casey that Matthew Beeson, TS 1c Chair, has been made aware of the issue and will take care of it. *Discussion item, no further action necessary.* *No new proposed revisions to the AASHTO method.*	
T 27	*T 27; Sieve Analysis of Fine and Coarse Aggregates* <u>Status of previous proposal</u> In 2018, WAQTC proposed moving discussions of overloading sieves, shaker time, and sieving efficiency into Annexes. This proposal was balloted on Rolling Ballot 3 and there was one negative vote. The committee will wait to see if the TS 1c Chair will ask WAQTC to address the negative vote and the other comments. *No new proposed revisions to the AASHTO method.*	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
T 335	*T 335; Determining the Percentage of Fracture in Coarse Aggregate* *No proposed revisions to the AASHTO method.*	
T 176	*T 176; Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test* <u>Discussion item</u> Kevin Burns, WSDOT, pointed out that in Section 4.1, Apparatus, the dimensions shown in the Figure 1 table do not agree with those shown in the diagrams. It was suggested that the WAQTC Executive Board inform the Test Method's Champion of the issue. Kevin indicated that he would provide a detailed list of the discrepancies. David asked if there is a designated hierarchy for internal conflicts in AASHTO Standards. Sonya contacted a colleague and was told that there was nothing addressing this kind of conflict. <u>Action item</u> Kevin will supply a list of Figure 1 discrepancies. Sean will present it to the Executive Board with a recommendation to forward it to the Test Method's Champion and the TS 1a Chair. *Kevin Burns will provide a list of the discrepancies in Figure 1.* *Sean Parker will forward Figure 1 discrepancy list to the Executive Board.*	KEVIN BURNS SEAN PARKER
T 113	*T 113; Lightweight Pieces in Aggregate* <u>Status of previous proposal</u> WAQTC proposed revisions to this method in 2015. The revisions were balloted and there were some comments that needed to be addressed. Sean worked with the TS members and redrafted the proposal to address the comments. These revisions are included in the 2018 AASHTO Standards. *No new proposed revisions to the AASHTO method.*	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
ASPHALT TEST METHODS		
T 168	*T 168; Sampling Bituminous Paving Mixtures* <u>Status of previous proposal</u> WAQTC proposed a new 'A' practice, wholly owned by AASHTO, to replace the 'C' method owned by ASTM, in 2017. At the same time another practice was proposed with significant differences. A Task Force was created to resolve the differences and merge the two proposals. The new practice was balloted on Rolling Ballot 3 with no negative votes. <u>Action item</u> Assuming that the new R XYZ will be published in 2019, Desna will start revising the training materials for approval at the July meeting. The committee reviewed the balloted practice and determined that the following sampling methods need to be added or updated in the training materials: • Paver auger • Windrow • Plate without a cookie cutter • Stockpile *Desna will draft revisions to the training materials for review and revision before the July meeting*. *No new proposed revisions to the AASHTO method.*	DESNA BERGOLD
R 47	*R 47; Hot Mix Asphalt (HMA) to Testing Size* <u>Status of previous proposal</u> In 2018, WAQTC proposed revisions that include changing the term HMA to asphalt mixtures, maximum temperature for heating equipment, and adding heating of equipment in Sections 10.1 and 12.1. The revisions were balloted on Rolling Ballot 3 with no negative votes.	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
R 47	Action item Assuming that the revisions will be published in 2019, Desna will start revising the training materials for approval at the July meeting. *Desna will draft revisions to the training materials for review and revision before the July meeting*. *No new proposed revisions to the AASHTO method.*	DESNA BERGOLD
T 329	*T 329; Moisture Content of Hot Mix Asphalt (HMA) by Oven Method* *No proposed revisions to the AASHTO method.*	
T 308	*T 308; Determining the Asphalt Binder Content of Asphalt Mixtures by the Ignition Method* *No proposed revisions to the AASHTO method.*	
T 209	*T 209; Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)* Status of previous proposal WAQTC proposed extensive revisions to this method in 2014. A task force was formed to address comments and negative votes. The result was balloted concurrently on Rolling Ballot 3. There were no negative results. Action item Assuming that the revisions will be published in 2019, Desna will start revising the training materials for approval at the July meeting. *Desna will draft revisions to the training materials for review and revision before the July meeting*. *No new proposed revisions to the AASHTO method.*	DESNA BERGOLD

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
T 166	*T 166; Bulk Specific Gravity (G_{mb}) of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens* <u>Discussion item</u> Megan said that 15 seconds to remove the specimen from the water bath, surface dry, determine and record the mass is excessive. A significant amount of water could drain from the pores before the specimen is on the scale. She asked if the committee knew why 15 seconds is allowed. Desna remembered that the time limit for drying the specimen was 5 seconds (2012) but that someone proposed the longer time frame to AASHTO. There were some comments and the results are the 15 seconds for the entire process. Megan is considering researching the time frame for possible future revision proposal. Kevin suggested replacing *ASTM D7227/D7227M, Standard Practice for Rapid Drying of Compacted Asphalt Specimens Using Vacuum Drying Apparatus* with *AASHTO R 79, Vacuum Drying Compacted Asphalt Specimens* as an option to dry specimens. Desna indicated that the currently published AASHTO Standards refers to R 79. The most current version Kevin was able to obtain from IHS refers to D7227. The committee reviewed the documents in the Web-based Publication and found that in T 166-16 the reference to the ASTM method was changed to the AASHTO method before the 2017 publication. The revisions were unmarked, and the revision date was unchanged. Kevin will follow up with IHS. *Discussion items, no action necessary at this time*. *No proposed revisions to the AASHTO method.*	
R 66	*R 66; Sampling Asphalt Materials* *No proposed revisions to the AASHTO method.*	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
T 30	*T 30; Mechanical Analysis of Extracted Aggregate* <u>Status of previous proposal</u> In 2018, WAQTC proposed moving discussions of overloading sieves, shaker time, and sieving efficiency into Annexes. This proposal was balloted on Rolling Ballot 3 and there was one negative vote. The committee will wait to see if the TS 2c Chair will ask WAQTC to address the negative vote and other comments. *Discussion item, no action necessary.* *No new proposed revisions to the AASHTO method.*	
T 312	*Mixture Specimens by Means of the Superpave Gyratory Compactor* *No proposed revisions to the AASHTO method.*	
R 35	*R 35; Superpave Volumetric Design for Asphalt Mixtures* *No proposed revisions to the AASHTO method.*	
OTHER AASHTO		
CONSTANT MASS	*PP XX – Determining Constant Mass* <u>Status of previous proposal</u> In 2017, WAQTC proposed a new standard to on determining constant mass. Many test methods and practices use the term without a definition or a discussion on how to achieve it. The new standard was COMP balloted on Rolling Ballot 1 there were no negative votes but there were some comments. The committee will wait to see if the TS 5c Chair will ask WAQTC to address the comments. *Discussion item, no action necessary.*	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
R 18	*R 18, Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories* Status of previous proposal WAQTC proposed revisions to this method in 2017. These revisions were published in 2018. Request for input Brian Johnson, AASHTO re:source, will be working on an update to this standard practice and asks that any suggestions or revision be sent to him at bjohnson@aashtoresource.org. *Discussion item, no action necessary.*	
R 25	*R 25, Technician Training and Qualification Programs* Status of previous proposal In 2015, WAQTC proposed revisions to R 25. The revisions included adding references to the Appendixes and corresponding references in the reference section, removing 'flexible' from Section 3.1, and adding 'subordinates' to the Section 7.2, *Examination Controls and Integrity*. These revisions were balloted in the Technical Section and approved. The full SOM ballot was held for anticipated revisions from FHWA. Those revisions were not balloted until 2018. The WAQTC revisions were not included. The committee would like to re-propose the 2015 revisions. Revision proposal • Add the following references in Section 2 and Appendixes — R 47, Reducing Samples of Hot Mix Asphalt (HMA) to Testing Size — R 75, Family of Curves — T 30, Mechanical Analysis of Extracted Aggregate — T 265, Laboratory Determination of Moisture Content of Soils — T 272, One-Point Method for Determining Maximum Dry Density and Optimum Moisture	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
R 25	— T 310, In-Place Density and Moisture Content of Soil and Soil-Aggregate by the Nuclear Methods (shallow Depth) — T 335, Determining the Percentage of Fracture in Coarse Aggregate • Remove the term 'flexible' from Section 3.1 bullet 2 • Add 'or immediate subordinate' in Section 7.2 *Revisions to R 25 will be presented to the Executive Board for approval and submittal to AASHTO.*	SEAN PARKER
R 89	*R 89, Accreditation Bodies Operating in the Fields of Construction Materials Testing and Inspection* <u>Discussion item</u> This is a new Standard Practice that describes the requirements for accreditation bodies that evaluate and accredit agencies that perform construction materials testing and inspection such as AASHTO re:source and CCRL. *Discussion item, no action necessary.*	
T 344	*T 344, Evaluation of Superpave Gyratory Compactor (SGC) Internal Angle of Gyration Using Simulated Loading* <u>Action item follow up</u> At the 2018 Winter meeting, Garth Newman asked for assistance in revising this method in accordance with the new *Process for Revision Proposals to AASHTO*. At that time Randy Mawdsley, WSDOT, contacted Kevin who agreed to assist Garth. As Garth is no longer a member of this committee and the new ITD representative was unable to attend, Kevin recommended tabling work on this method. *Revision efforts on this test method are tabled. No action required.*	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
T 134	*T 134, Moisture–Density Relations of Soil–Cement Mixtures* <u>Discussion item</u> Garth asked that revisions to this method be added to the agenda in early 2018. He felt that this method repeats much of T 99 and T 180 and could reference one of them, especially in listing the equipment. Revisions to this proposal were proposed before WAQTC addressed them. Revision were balloted on Rolling Ballot 3, there was one negative with comments that appear to be easily addressed. *Discussion item, no action necessary.*	
T 283	*T 283, Resistance of Compacted Asphalt Mixtures to Moisture* <u>Action item follow up</u> Desna was asked to draft revisions to this method addressing the paragraph formatting and the order of the process during the 2018 Summer meeting. The committee reviewed Desna's revisions and recommended removal of Section 8, *Preparation of Field Mixed, Field Compacted Specimens (Cores),* and a few adjustments to determining the specimen height and diameter. The committee members then discussed how much more effort to put into addressing this method. Most member agencies do not use T 283 to determine moisture susceptibility, removing the method and replacing it with an agency method or *T 324, Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures* when specifying *M 323, Superpave Volumetric Mix Design*. Revising this method was originally suggested by, and assigned to, Garth. Sean decided that he would contact ITD and get input on the revisions so far and then determine further action. The committee doesn't want to lose the revisions drafted to this point.	

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	Action item Desna will incorporate the revision suggested by the committee and send to Sean. Sean will contact Mike Santi, ITD and a member of the Executive Board, for input on the proposed revisions. He will then determine if the proposal will be presented to the Executive Board this year. *Desna Bergold will revise the method based on committee comments.* *Sean Parker will follow up with ITD and determine whether the proposal will be submitted to the Executive Board for consideration this year.*	DESNA BERGOLD SEAN PARKER
T 88	*T 88, Particle Size Analysis of Soils* Discussion item While discussing the problems with Figure 1 in T 176, Megan mentioned that she had noticed similar issues with the apparatus section of T 88. She indicated that she had a list in her office. It was decided to proceed as for T 176, the WAQTC Executive Board should inform the Test Method's Champion of the issue. Action item Megan will supply a list of apparatus discrepancies. Sean will present it to the Executive Board with a recommendation to forward it to the Test Method's Champion and the TS 1a Chair. *Megan Chatfield will provide a list of discrepancies in apparatus.* *Sean parker will forward apparatus list to the Executive Board.*	MEGAN CHATFIELD SEAN PARKER
REVISION PRESENTATION AT THE ANNUAL MEETING	Discussion item During the AASHTO COMP Annual Meeting a revision proposal was presented in a TS break out session. Presenting revision proposals at the annual meeting is an option WAQTC has never	

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	explored. Providing the TS Chair agrees, a WAQTC representative may want to present revisions during the meeting. The committee agreed that this is be a good idea. Sean will ask the Executive Board to consider this option. *Sean Parker will discuss presenting revision proposal during the TS breakout sessions with the Executive Board.*	SEAN PARKER
REVIEW OF AASHTO METHODS TO PRESENT TO THE BOARD	Revisions to the following methods will be presented to the Executive Board during the 2019 Spring Meeting: • *R 25, Technician Training and Qualification Programs* • *T 88, Particle Size Analysis of Soils* • *T 99, Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop T 121; Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete* • *T 121; Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete* • *T 176; Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test* • *T 180, Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop T 283, Resistance of Compacted Asphalt Mixtures to Moisture* • *T 309; Temperature of Freshly Mixed Hydraulic Cement Concrete* • *T 310; In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)*	
T 240	*T 240, Effect of Heat and Air on a Moving Film of Asphalt Binder (Rolling Thin-Film Oven Test)* <u>Request for input</u> Lyndi Blackburn, TS Chair 2b, contacted Sean and asked if he would distribute a recent NCHRP report, *Project 20-07/Task 400:*	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
	Effect of Elevation on Rolling Thin Film Oven Aging of Asphalt Binder, to the WAQTC member agencies for comment. Sean distributed the report and Desna is compiling the responses for Sean to return to Lyndi. Lyndi would like feedback by the TS 2b mid-year meeting which has not been scheduled yet. Sean suggested that any further comments be sent to Desna by Feb. 28. If the meeting is to be held sooner, Desna will follow up with those who have not responded. *Provide feedback on the NCHRP report to Desna by Feb. 28th.* *Sean Parker will send responses to Lyndi Blackburn, TS 2b Chair.*	QAC MEMBERS DESNA BERGOLD SEAN PARKER
WAQTC ISSUES		
ADMIN. MANUAL	*WAQTC Administration Manual* Christopher Russell, CDOT, sent an email to the committee members asking how they dealt with various situations while administering their qualification program. <u>Written Exams</u> CDOT has had technicians who do not speak English or speak English as a second language register for the written exams and fail. Chris asked if other agencies had experienced this and how it was resolved. Gilbert indicated they had a few instances where reading the question to the individual helped them understand it well enough to answer. Chris indicated that he had instructed employers that if they supply the translator, CDOT will supply a separate testing opportunity. The committee members agreed that this seems to a reasonable accommodation. Chris also indicated that they had some technicians with learning disabilities who obviously knew the material but were unable to pass the exams. CDOT had supplied these technicians with a	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
	separate testing opportunity with no time limits and they were able to pass. Chris asked for other suggestions. The committee suggested that Chris consult his agency's guidelines for disability accommodations. <u>Verification of Work Experience</u> CDOT has had issues with technicians who are not prepared to certify even though CDOT requires at least two-months training and experience. These technician's often take the exams multiple times before passing, adding a burden on the program. Chris asked how other member agencies handle this situation. Some agencies spell out a minimum waiting period before a technician can take the course and examinations again. They also may require documentation of training hours and experience. Additional requirements must be included in an agency's *Registration, Policies, and Information Handbook* (RPIH). The RPIH is very similar to the *Administration Manual* but directed to the technician and should include agency specific information and requirements. <u>Procedure to Revoke Certification</u> During a recent FHWA audit CDOT was made aware that they do not have a system in place to revoke certifications when necessary. He asks what the other member agencies have done. The *Revocation, Suspension, or Denial of Certification* section of the *Administration Manual* is the basis of member agencies' policies and procedures concerning technicians who commit *negligence* or *abuse*. Sean offered to share information on ODOT's policies and their Agency Qualification Committee. Chris thanked the committee members for their assistance. *Discussion item, no action necessary.*	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
OPERATIONS MANUAL	The *Operations Manual* has been a work in progress for many years. It is intended as a guideline and information for QAC and Executive Board members. The 'approved operations manual docs' are included in the annual training materials update. Operations Manual Contents: • Process for revision proposals to AASHTO Standards • Roles and Responsibilities of QAC members • Roles and Responsibilities of Board members • TTQP Examiner Orientation • TTQP Reciprocity Questionnaire • WAQTC Events Calendar (Word) • WAQTC Events Calendar (Excel Timeline) • WAQTC QAC Chair/Vice Chair Process • WAQTC Training Materials Update Process (Word) • WAQTC Training Materials Update Process (Excel Timeline) During the meeting Desna realized that the *FOP Library Work Plan* (attached) is not included in the *Operations Manual.* She will add it and other content as it is developed. *Desna Bergold will add* FOP Library Work Plan *to the Operations Manual.*	DESNA BERGOLD
TM 14	*WAQTC TM 14, Asphalt Mixture Laboratory Prepared Test Specimen* <u>Action item follow up</u> The committee has been working on a new standard practice for preparing asphalt mixture test specimens in the laboratory for use by member agencies. The most recent version was reviewed to address comments from some of the agencies' asphalt labs. There is a lot of confusion over Note 2 which discusses aggregate batching and an optional method to employ. Sean and Kevin offered to work on the	

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	aggregate batching section and move it and the examples to an Appendix. *Sean Parker and Kevin Burns will draft revisions to the aggregate batching discussion and example. Draft to be ready for review May 28th.*	SEAN PARKER KEVIN BURNS
AASHTO COPYRIGHT	<u>Action item follow up</u> While developing a Self-consolidating Concrete (SCC) qualification module workplan, the committee grew concerned with infringing on the AASHTO copyright. The methods that WAQTC would use to create training materials are in a step by step concise format. WAQTC's training materials would look very similar, if not identical in some places. The Executive Board discussed the issue with AASHTO at the annual meeting. AASHTO representatives determined that the current WAQTC training materials do not infringe AASHTO's copyright. AASHTO was asked to provide a letter giving permission to use the AASHTO SCC methods to develop the qualification module. Permission was granted. Sean shared the letter with the committee. *Discussion item, no action necessary.*	
SCC MODULE	*Self-consolidating Concrete (SCC) Qualification Module* With the copyright issue resolved, work on the SCC qualification module can begin. The committee reviewed the workplan developed over the last several meetings. The following test methods will be included in the SCC qualification module: • T 347, Slump Flow of Self-Consolidating Concrete (SCC) • T 351, Visual Stability Index (VSI) of Self-Consolidating Concrete (SCC) • T 345, Passing Ability of Self-Consolidating Concrete (SCC) by J-Ring	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
	These methods were selected by polling the member agencies. The next step is to develop FOP short forms from the AASHTO test methods. Sean pointed out that while drafting the short forms it would be good to start developing Review Questions, Performance Exam Checklists, and written exam questions. <u>Action item</u> Misty volunteered to draft materials for T 351, Dan Gettman, AKDOT, will draft materials for T 347, and Gilbert will draft materials for T 345. The draft materials will be sent to Desna by April 15th. Desna volunteered to begin drafting SCC Basics and the review of the Concrete module. She will also create the PowerPoint Master slides. All members were asked to begin collecting pictures and any other content that would be helpful. *Misty Miner, Dan Gettman, and Gilbert Arredondo will have FOP short form drafts for T 351, T 347, and T 345 respectively to Desna by April 15th.* *Misty, Dan, and Gilbert will begin drafting Review Questions, Performance Exam Checklist, and written exam questions* *Desna Bergold will draft SCC Basics and Concrete review.* *All committee members are asked to begin collecting pictures for PowerPoint and Student FOP.*	MISTY MINER DAN GETTMAN GILBERT ARREDONDO DESNA BERGOLD QAC MEMBERS
TP 118	*TP 118, Characterization of the Air-Void System of Freshly Mixed Concrete by the Sequential Pressure Method* At the 2018 Summer meeting Dan asked if the committee would be interested in developing training on the Super Air-Meter. The discussion was tabled until the Winter meeting. Currently none of the member agencies specify system air metric (SAM) values from this procedure for mix designing or field acceptance. Dan informed the committee that AkDOT will be	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
	specifying SAM values for some mixes during the upcoming construction season and will be using this procedure. Megan said that the FHWA mobile concrete trailer demonstrates this method and if anyone is interested, they have research and white papers she could provide. The committee was uncertain about developing an FOP for a method most states are not using. Dan volunteered to provide an FOP for the FOP library, possibly by the Summer meeting. *Dan Gettman will Champion an FOP for T 118 for the FOP Library.*	DAN GETTMAN
ARCHIVING HISTORICAL DOCUMENTS	<u>Action item follow up</u> The QAC has been working on archiving the documents and media that Garth had been keeping. Garth sent the paper files to Western Federal Lands and Megan had them scanned and sent to Sean along with a jump drive. Garth sent Desna the CDs of past training materials and the introductory video on VHS. Desna loaded the CDs onto a jump drive for Sean and a Dropbox folder. Sean and Desna do not know what to do with the original files and CDs. This will need to be determined in the future. *Discussion item, no action necessary.*	
EXAMS AND ASTM REQUIREMENTS	<u>Action Item follow up</u> During the 2018 Winter Meeting, Sonya asked if WAQTC considers the minimum requirements for exams outlined in *ASTM D3740, Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; D3666, Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials;* and *E329, Agencies Engaged in Construction Inspection, Testing, or Special Inspection.*	

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	Desna reviewed the standards and developed a list of the requirements in these specifications for the committee's review. <u>Discussion item</u> Sonya told the committee that there have been some laboratories seeking ASTM D3740 accreditation with WAQTC certifications. AASHTO re:source cannot accept WAQTC certification because re:source has not been able to confirm that the written exams meet the requirements in ASTM D3740. Section 7.5 requires written exams to include questions on 'significance of the test or inspection method, sampling, specimen preparation, procedure, and reporting results.' The committee discussed the benefits of establishing compliance with D3740. It would be helpful to laboratories in member states. The committee decided to ask the Executive Board if the WAQTC Embankment and Base written exams could be reviewed by Sonya or someone else at AASHTO re:source to verify compliance. WAQTC may also decide to adjust some questions to improve their exams for compliance. It was suggested that if the Executive Board agrees to share the written exams with AASHTO re:source, WAQTC should request a signed confidentiality agreement. *Sean Parker will discuss sharing the Embankment and Base written exams with AASHTO re:source with the Executive Board.*	SEAN PARKER
HUMPHRES METHOD	*WAQTC TM 15, Laboratory Maximum Density of Granular Soils and Soils Aggregates* <u>Action item follow up</u> Randy Mawdsley, WSDOT, drafted a new Test Method based on WSDOT TM 606 and WFL's Humphres Method. Desna reformatted and cleaned it up. The committee reviewed the draft. The committee worked on the new TM 15 during the meeting to ensure that the various methods used by ITD, AKDOT, WSDOT, and WFL, are covered.	DAVID MARIMAN MEGAN CHATFIELD

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
	There is still considerable work to do on the apparatus and the calculation sections. <u>Action item</u> A subcommittee was formed of David and Megan for WFL, Kevin and Randy for WSDOT, and Dan for AKDOT. Desna will support and facilitate the subcommittee. Sean would like to be copied on the subcommittee's correspondence. *The TM 15 subcommittee, David Mariman, Megan Chatfield, Kevin Burns, Randy Mawdsley, and Dan Gettman will draft the apparatus and calculations sections.*	KEVIN BURNS RANDY MAWDSLEY DAN GETTMAN DESNA BERGOLD
REPORT FROM EXECUTIVE BOARD MEETINGS	Sean lead a brief discussion of the August Board meeting agenda items. *Discussion item, no action necessary.*	
AASHTO COMP TS FRIEND	<u>Action item follow up</u> Desna was asked to find out how someone can become a friend of the AASTHO Technical Subcommittees. Contact Casey Soneira, AASHTO, at csoneira@aashto.org and request to become a friend. The subcommittees with WAQTC related test methods are: • 1a – Soil and Unbound Recycled Materials • 1b – Geotechnical Exploration, Instrumentation, Stabilization and Field Testing • 1c – Aggregates • 2c – Asphalt-Aggregate Mixtures • 2d – Proportioning Asphalt-Aggregate Mixtures • 3b – Fresh Concrete	

Topic	Discussion / *Decision*	ACTION REQUIRED BY:
	All Technical Subcommittees are listed at AASHTO Technical Subcommittees, the headings link to a list of test methods in the subcommittee. *Anyone who wishes to become friends of an AASHTO TS will send a list of the subcommittees to Casey Soneira and request to become a friend.*	QAC MEMBERS
BROCHURE	Discussion item The WAQTC Brochure includes quotes from Garth and Scott Andrus, UDOT, neither of which is working with WAQTC anymore. Desna asked if the group wanted to consider replacing the quotes. Sean said the Executive Board would need to decide but that he would be in favor of replacing them. The committee thought that statements from AASHTO TS Chairs and representatives from private firms may be useful. It was also recommended that the brochure briefly list WAQTC's accomplishments such as revisions to existing AASHTO standards and new standards adopted by AASHTO. Misty suggested that the Executive Board be asked to inquire about including the WAQTC brochure in the AASHTO Annual Meeting agenda packet. Misty also suggested that the QAC members that attend the AASHTO Annual meeting have WAQTC business cards to distribute. Desna volunteered to put together a template layout if someone wanted to print a few cards. She may be able to print a few before the meeting if need be. *The Executive Board will be asked how they would like the brochure to be revised and to provide guidance on how to proceed.*	SEAN PARKER
OTHER PRESENTATION PLATFORMS	Action item follow up During the 2018 Summer meeting Desna and Misty were asked to explore other presentation platforms. They provided a list of programs with a brief summary. The major benefits of these platforms are ease in creating presentations and collaborating on	

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	presentation content. Not of much benefit to WAQTC training materials. Gilbert shared one of the training videos that UDOT is developing. UDOT has built themselves a studio and are working on with commentary for the video. The committee was very impressed with the quality of the video. Gilbert said he will keep the committee updated on their progress. *Gilbert Arredondo will update the QAC on training video progress.*	GILBERT ARREDONDO
POWERPOINT AND FIGURES	*Training Materials Graphics review* Desna asked Vicki Sims, D B Consulting and Avalon Graphics, to briefly review the Concrete methods and make recommendations. She said she could quickly clean up the 'five-minute time limit' and the 'concrete components' graphics. Desna suggested that she could ask Vicki to review the rest of the training materials. The committee agreed. <u>Action item follow up</u> Sean asked that committee members and their trainers review the PowerPoint presentations for recommendations for improvement at the 2018 Summer meeting. Desna has kept a list of the recommendations and will have the corrections drafted by the 2019 Summer meeting. *Vicki Sims will review training materials for possible improvements to the graphics. She will also draft requested corrections.*	VICKI SIMS (D B CONSULTING)
FLAT AND ELONGATED TM	*Flat and Elongated Test Method* Many agencies are using agency specific test methods based on the ASTM method. The committee would like to develop a test method for the FOP library so that member agencies may use the same procedure.	

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	Sean volunteered to draft an FOP based on the ODOT method and send it for review. *Sean Parker will draft a test method for determining flat and elongated particles in coarse aggregate for review.*	SEAN PARKER
LABORATORY TEST METHODS	<u>Discussion item</u> During the 2018 Summer meeting, Desna asked if WAQTC was interested in branching out into laboratory qualifications. Many agencies rely on private laboratories to perform mix designs, both asphalt mixture and concrete. She suggested that SuperPave consensus properties be addressed. Sean agreed and thought that training and qualifications on *AASHTO T 84, Specific Gravity and Absorption of Fine Aggregate* would be useful for all agencies. Kevin is interested in an FOP for *AASHTO T 304, Uncompacted Void Content of Fine Aggregate.* Sean thought that these test methods may be good to consider for the FOP library. The committee would be interested in the Executive Board's thoughts on the methods for the library and a Laboratory Qualification Module. *Discuss laboratory related FOPs for the FOP library and a Laboratory Qualification Module as a long-term goal.*	SEAN PARKER
2018 PLANNED WORK	<u>Discussion item</u> The committee discussed the *2018 Planned Work* in the WAQTC Strategic Plan, most of them are ongoing efforts or accomplished items. The committee would like the Executive Board to discuss QAC short term goals or work items at the Spring meeting. *Discuss QAC short-term goals and work items with the Executive Board.*	SEAN PARKER
TM 13	*WAQTC TM 13; Volumetric Properties of Hot Mix Asphalt (HMA)* Desna asked if the committee would approve the change from HMA to Asphalt Mixtures in TM 13 as most AASHTO	

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	Standards, and therefore WAQTC training materials, have made this modification. The committee agreed. *Desna Bergold will draft revisions to TM 13 for the 2019 Summer meeting.*	DESNA BERGOLD
EXECUTIVE BOARD SPRING MEETING	The Executive Board Spring meeting is scheduled to be held April 17th and 18th in Lincoln Nebraska.	
AASHTO COMP ANNUAL MEETING	The QAC Chair and Vice Chair are invited to attend the AASHTO COMP Annual meeting. Gilbert volunteered to be an alternate in case either won't be able to attend.	
OTHER ITEMS	<u>Discussion item</u> Sean indicated that ODOT's aggregate section had some issues with *T 21 Organic Impurities in Fine Aggregates for Concrete*. They felt that Section 10, *Interpretation of Results*, is confusing. It states than when the supernatant liquid is darker than the standard organic plate No. 3 or the standard solution further testing shall be made. They felt that the method should indicate what those further tests should be or some other guidance. This method is unusual as test methods do not usually state a pass or fail threshold. David pointed out that Section 3, *Significance and Use,* advises to perform *T 71, Effect of Organic Impurities in Fine Aggregate on Strength of Mortar* and references *M 6, Fine Aggregate for Hydraulic Cement Concrete*. *Discussion item, no action necessary.*	

Self-consolidating Concrete Module Development Work Plan

Test Methods:

T 347, Slump Flow of Self-Consolidating Concrete (SCC)

T 351, Visual Stability Index (VSI) of Self-Consolidating Concrete (SCC)

T 345, Passing Ability of Self-Consolidating Concrete (SCC) by J-Ring

1. Develop Short Form FOPs from AASHTO procedures (discussed at 2018 Winter meeting, recommended to have all the training modules formatted the same)
2. Develop Student FOPs from AASHTO procedures
    a. Draft Significance section for Student
3. Request pictures for Student Manual and PowerPoint from member agencies
4. Draft:
    a. Change to Foreword
    b. Basics of SCC
    c. Review of CTT
    d. FOP Review questions
    e. Performance exams
    f. Written exam questions
    g. Table of contents
    h. Appendix
5. Develop PowerPoint presentations
6. Incorporate into Administration Manual and RPIH when approved

WAQTC Field Operating Procedure Library Work Plan

The majority of this effort will be outside the established committee 'in person' semi-annual meetings.

1. An agency or agencies (champion(s)) wants to propose a method
    a. The draft must be created around an AASHTO procedure
    b. The procedure must be consistent with mission of this group
2. Initial submittal: draft short form is sent to the QAC with adequate time for review and balloting prior to an established meeting
    a. QAC members will provide feedback and comments to the champion(s)
    b. All corrections and responses to feedback will be made.
    c. Corrected procedure will be 'balloted' at least one month before the meeting
    d. Vote yes, no, or abstain
        i. A no vote requires an explanation.
        ii. Abstention is appropriate if QAC representative's agency is not intending to use the FOP.
3. FOP meeting - ballot response and final disposition
    a. All no votes are discussed and found to be 'persuasive' or 'non-persuasive.'
    b. Final editing of approved document directed by the QAC chair.
4. The QAC determines whether the test method is included in the library
    a. Final editing of approved document directed by the QAC chair.
5. The champion(s) develop and submit further optional materials:
    a. Student manual
    b. Performance checklist
    c. PowerPoint
    d. Written exam questions (not posted)
    e. Any optional materials are developed after the short form is accepted by a new developer (s) all the developers become co-champions
6. Maintenance of the FOP – Champion(s) are responsible:
    a. Tracking AASHTO changes (annually)
    b. Update FOP to remain consistent with AASHTO
    c. Committee review of updates
7. When a FOP champion departs from the QAC
    a. The champion's replacement decides whether to assume these duties
    b. If this individual will not assume the duties for the FOP
        i. Open the position to volunteers
            1. Co-champions
            2. Other stakeholders
    c. If no champion is assigned the FOP is 'discontinued'

d. Removed from library after three years

Proposed disclaimer on the web page: These Field Operating Procedures are to be used for training purposes only unless specifically identified in a contract document.