



ASSOCIATED GENERAL CONTRACTORS of ALASKA **2006 AGC “Chapter of the Year”**

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July 18, 2007

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Division of Design & Engineering Services
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Juneau, Alaska 99801-7898

Delivered by Email: james.green@akaska.gov

Re: Proposed Changes to Alaska Standard Specifications for Airport Construction March 2006 Edition.

Dear Mr. Green:

This letter is in response to your Email transmittal of June 23, 2007 addressing various proposed changes to the Alaska standard Specifications for Airport Construction, Item P-401 Plant Hot Mix Asphalt. I would like to thank you for providing Associated General Contractors of Alaska (AGC) and the Alaska construction industry the opportunity to review and comment on ADOT&PF's proposed changes to the Alaska Standard Specifications for Airport Construction.

Our members have reviewed the proposed changes identified in your email dated June 23, 2007 and offer the following comments.

401-1.3 DEFINITIONS, Cold Joint:

Comment: Change the temperature from 160°F to 150°F as has been used in Central Region.

401-2.1 AGGREGATE: b. Fine Aggregate, (2) Sand Equivalent:

Comment: a) Change values to read ≥ 35 and ≥ 25 when natural sand must be used.

b) Add language that the requirement may be waived if a mix design can meet design specifications.

401-2.3 ASPHALT CEMENT:

- Comment:**
- a) Identify the storage tanks loaded independently from the supplier's certification of the batch tank.
 - b) On P-401-4 at the top of the page under "*The following Documents shall be furnished at delivery:*" (b) and (c) are duplicates. One of them is enough. Just add certified test reports to (c).
 - c) On P-401-4 at the bottom of the page next to the last paragraph starting with "*Anti-stripping agent*" T283 in AASHTO should be allowed.

401-3.2 JOB MIX DESIGN: TABLE 4 HOT MIX ASPHALT AGGREGATE:

- Comment:**
- a) Don't use the FAA gradations, use what has historically been used. Note that the band width on the #200 is not wide enough (should be 0-7%); the tolerance does not extend beyond the broad band.
 - b) **Table 2, Asphalt Cement Content**, on page P-401-6, % minimum, both columns. Change the 5.0% minimum to 4.5% minimum. We often have mix designs that meet all the necessary criteria for table 2 that have an optimum asphalt content below 5.0% optimum AC by weight of total mix. (using 3.5% total voids) Lowering AC to 4.5% would reduce costs for the Department and therefore, the taxpayer. No indication is given as to whether the 5.0% indicates percent weight of total aggregate or percent weight of total mix.
 - c) **Table 4, Hot Mix Asphalt Aggregate:** on page P-401-7
 - 1) The new broad bands for Type I, II, and III gradations are too restrictive; the existing gradation banks for Type II and III from the 2004 Blue Book Standard Specifications should not be altered.
 - 2) The number 200 sieve size broad band tolerances should be changed from 3-6 percent passing to 3-8 percent passing to accommodate the sentence below the table that states that "*The limits for the No. 200 sieve will be confined by the master grading bank in Table 4.*" Otherwise, the contractor will be forced to wash their asphalt fines to meet the specifications. This will increase the costs of processing the aggregate as well as dramatically increasing the optimum asphalt cement content of the mix, costing the Department an unnecessary increase in mix cost.

401-3.3 RECYCLED HOT MIX ASPHALT:

- Comment:**
- a) RAP should always be allowed under the surface course, not if allowed by the Engineer. The percentage added to virgin mix should only be limited to the plant used to make hot mix, not the 30% specified as this will give better economy to everyone. Technology is in place to use RAP on top lift paving, Alaska needs to stay abreast of industry trends with regard to HMA recycling.
 - b) On page P-401-7 third paragraph from the bottom starting with “*The JMD shall meet the requirements...*” The recommendation here is what other states and FHWA are doing. They are not requiring a mix design if the recycle hot mix asphalt is below 20%. Industry has many studies to support this fact. By making it so difficult for the contractor to use RAP, they will just not use it. RAP is a good material and the use should be encouraged.
 - c) On page P-401-7 the last paragraph starting with “*The recycled hot mix asphalt will be evaluated separately but will be sampled, tested...*” How do you test it? The roads now have polymer and that is not recoverable with trike or toluene. This statement needs to be better defined. If it is related, only to the size of RAP then it should state that. One can only test the size of RAP.

401-3.4 TEST SECTION:

- Comment:**
- a) Start this specification with “If required by the Engineer and” prior to full production....as many projects do not need a test strip.
 - b) This entire page regarding a Test Section is cumbersome and mathematically indefensible. Statistical Analysis does not recognize the population size of three samples as a viable population for providing statistical analysis. The Department might consider adding a sentence to this section authorizing the deletion of the test section if the Engineer determines that it will not be necessary.

401-4.1 WEATHER LIMITATIONS:

- Comment:** Add to the last sentence: “in writing by the Engineer based on specific weather and temperature conditions.”

401-4.10 TRANSPORTING, PLACING AND FINISHING:

Comment: 3RD paragraph, delete the last sentence, “*Compaction shall be finished before the surface temperature reaches 160°F.*” Density is an incentive / disincentive issue, and finish rollers may have to stay on the mat at temperatures less than this.

401.4.12 JOINTS:

Comment: Last paragraph, would like a pay item for joint adhesive and surface sealant not incidental to the mix price.

401-4.13 SURFACE REQUIREMENTS AND TOLERANCE:

Comment: The application of an asphalt surface sealant does not take into account the application of thermo-plastic markings, which are applied and compacted during mix placement and compaction, thereby making the application of an asphalt surface sealant impossible without affecting the adhesion properties of the thermo-plastic markings, or covering the markings themselves.

401-4.14 TEMPERATURE REQUIREMENTS:

Comment: Delete this spec or set an upper limit of 320°F (unmodified asphalt) to reject mix, but don’t use the mix design temperature.

401-5.1 ACCEPTANCE SAMPLING AND TESTING:

Comment: a) The MSG for the first lot of a project should continue to come from the mix design MSG. Additionally, the MSG for the second lot should come from the first subplot of the Lot 1, the MSG for the third lot should come from the first subplot of the Lot 2, etc. Utilizing this sequence for the MSG determination would help eliminate the lag time that we often see where as a lot will be completely paved out before the contractor even knows what the target MSG is for that lot. The contractor must know what the ADOT target MSG is before the pavement is placed so that the correct compactive effort can be given to match the MSG for the pavement being placed. This is especially important because the MSG can vary by up to two percent from one MSG to the next.

- b) The line beginning with “1,500 to 4,999 ton lot size”:
1. Use 500 ton sublots only, and allow retests if there are out of spec test results. or

2. Increase to "Under 3,000 ton lot size." Increasing the lot size to 3,000 tons would eliminate the conflicts that often arise on those smaller 2,000 ton projects where too few samples in the population density often wreak havoc with the price adjustment statistical analysis.

c) **Sampling, (4) Asphalt Cement Property:**

1. Allow Contractor to retain the 2nd sample not send it to an "AASHTO accredited lab" as the only AASHTO accredited lab (to test asphalt cement) in Alaska is the Central Region materials lab.
2. Who will pay for the charges to deliver and store the second sample. The current system of leaving the second sample, properly labeled by aDOT, with the contractor at their designated hot plant storage rack, works well. Why change it and add additional costs to the activity. The Department has complete custody of the first and third samples.
3. The last sentence needs to be clarified.

d) (b) **Testing, (3) Density:**

This spec does not allow the mix design MSG to be used for the first lot. We would like the specs changed so it does. If possible, change spec so that the last sample of a lot will be used to generate the MSG of the subsequent lot so the density standard will be timely.

401-5.2 ACCEPTANCE CRITERIA:, (b) Acceptance Criteria, (3) Thickness:

Comment:

- a) This specification should be removed because all aviation projects require that asphalt surface meet a final design elevation.
- b) Regarding the setting of the thickness tolerance of 1/8 inch per two inch thickness of mat will deny the ability of adjusting each lift of paving to increase smoothness and adjust the tolerances already set for finish line and grade. No tolerance can be assigned to individual core thickness. Additionally, it will be impossible to accurately map the area covered by individual cores to determine the payment reduction per the sentence on page P-401-23 that states "*Hot mix asphalt placed in thickness greater than tolerance indicated in Subsection 401-5.2.b(3) will be considered subsidiary and the unit prices of hot mix asphalt and asphalt cement used in the greater thickness will not be*

paid by the Department". The current specification for paragraph 401-8.1 that states "*The wuanntity of hot mix asphalt paid for will not exceed 105 percent of the weight determined on the basis of the average core density, the specified neat line thickness, and the completed area of hot mix asphalt.*" The current specification adequately covers the desire of the Department to prevent unwanted over-runs on the P-401 item.

These standar specifications do not address Type V Superpave JMD's, and they should do so, unless the Department wishes to continue adding them in the specials for TSAIA, etc.

401-6.3 QUALITY CONTROL TESTING: (a) Asphalt Cement Content:

Comment: a) The part added is "*and Asphalt Cement Property.*" How does a contractor test the material that is using M320 as the specification? Are they going to have a DSR or RTFO? A minimum of two tests for each batch. What test can a field lab do and WHY? This should be removed.

401-6.5 CONTROL CHARTS:

Comment: It is recommended that this subsection be rewritten so a MS Excel (or similar) summary sheet can be used. The summary sheet would reflect all QC tesats and calculate the average, standard deviation and range. No one uses this specification as it is written.

401-8.1 HOT MIX ASPHALT:

Comment: (see comments to 401-5.2 above) PAB must be project/regional specific. Significant difference in cost between Anchorage and Point Hope.

NOTE: Please insert ASTM D3244 as the governing method to resolve out of specification asphalt cement test results.

401-8.2 ASPHALT CEMENT, (a) Basis of Adjusted Payment for Asphalt Cement Property, TABLE 9. ASPHALT CEMENT PROPERTY PAY REDUCTION FACTORS:

Comment: a) Table 9 is all wrong. The ranges are to narrow. The reproducibility of the tests is very large and yet only the toughness and tenacity address this issue. There is no way that any supplier is going to agree to supply asphalt with 1 number difference on the DSR when the minimum reproducibility for the original DSR is 26%.

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- b) There needs to be a part in here after TABLE 9 that talks about running the one before and after until an on-specification test is achieved.
- c) TABLE needs to be rewritten. The aggregate testing gets running averages and the asphalt must pass each sample?

401-8.4 PAYMENT:

Comment: Add a pay item for longitudinal joint construction.

Please contact me if you have any questions on the above comments.

Sincerely,

ASSOCIATED GENERAL CONTRACTORS
OF ALASKA



R.D. "Monty" Montgomery, Assistant Executive Director

cc: AGC's ADOT & PF Subcommittee Members
AGC's Joint Alaska Asphalt Task Force Members
Glen Knickerbocker, AGC's President
Roger Hickel, Chairperson, AGC's External Relations Committee
Dick Cattnach, AGC's Executive Director